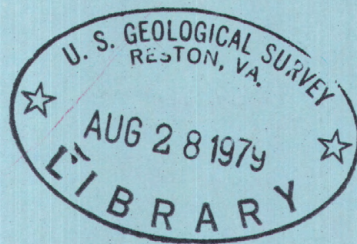


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Water Resources Data for Oregon Water Year 1977



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-77-1

Prepared in cooperation with the Oregon Water Resources
Department and with other agencies

CALENDAR FOR WATER YEAR 1977

1976

OCTOBER

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Water Resources Data for Oregon Water Year 1977



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-77-1

**Prepared in cooperation with the Oregon Water Resources
Department and with other agencies**

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

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P.O. Box 3202
Portland, Oregon 97208

1978

PREFACE

This report was prepared by the U.S. Geological Survey in cooperation with the State of Oregon and with other agencies by personnel of the Oregon district of the Water Resources Division under the supervision of S. F. Kapustka, District Chief, and W. H. Robinson, Regional Hydrologist, Western Region.

This report is one of a series issued State by State under the general direction of J. S. Cragwall, Jr., Chief Hydrologist, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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GAGING STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED

VII

LETTER AFTER STATION NAME DESIGNATES TYPE OF DATA:
(D) DISCHARGE, (E) ELEVATION OR CONTENTS, (C) CHEMICAL,
(B) BIOLOGICAL AND MICROBIOLOGICAL, (T) WATER TEMPERATURE,
(S) SEDIMENT, (J) TURBIDITY

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WATER RESOURCES DATA FOR OREGON, 1977

INTRODUCTION

Water resources data for the 1977 water year for Oregon consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water-levels and water quality of wells and springs. This report contains discharge records for 283 gaging stations; stage only records for 10 gaging stations; stage and contents for 45 lakes and reservoirs; water quality for 79 gaging stations, and water levels for 97 observation wells. Also included are data for 157 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Oregon.

Records of discharge of streams, and contents (or stage) of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through water year 1960, these water-supply papers were in an annual series and then in a multi-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels are published from 1935 to 1974 in a series of water-supply papers entitled, "Ground-Water Levels in the United States."

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report OR-77-1." Water-Data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22151.

COOPERATION

The U.S. Geological Survey and organizations of the State of Oregon have had cooperative agreements for the systematic collection of surface-water records since 1905. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

Oregon Water Resources Department, James E. Sexson, Director.

Oregon Department of Fish and Wildlife, John R. Donaldson,
Director.

Oregon State Highway Division, F.B. Klaboe, Administrator.

Coos, Douglas, Lane, and Multnomah Counties.

Cities of Coos Bay-North Bend, Corvallis, Eugene, Lakeside,
McMinnville, Medford, Portland.

Columbia Region Association of Governments, Rogue Valley
Council of Governments.

Burnt River Irrigation District.

Assistance in the form of funds or services was given by the Forest Service, Soil Conservation Service, U.S. Department of Agriculture; Corps of Engineers, U.S. Army; Bonneville Power Administration, Bureau of Reclamation, Fish and Wildlife Service, Environmental Protection Agency, Bureau of Land Management, and National Park Service, U.S. Department of the Interior; National Weather Service, U.S. Department of Commerce; Eugene Water & Electric Board; Pacific Power & Light Co.; Portland General Electric Co.; Idaho Power Co., Idaho; Cowlitz County & Clark County Public Utility Districts, Washington.

HYDROLOGIC CONDITIONS

As the 1977 water year began streamflow was below average during October. During November the mountain snowpack was almost non-existent and public and private utilities as well as others dependent on reservoir and snow storage for water supply and hydroelectric power were becoming increasingly concerned and streamflow was in the below-normal range as a result of below-normal precipitation.

During December, streamflow continued to decrease and remained in the below normal range.

In January, streamflow increased seasonally, except in the Willamette River basin, but remained below the normal range for the 4th consecutive month, reflecting the persistence of drought conditions. In the Umpqua River basin the monthly mean discharge at the index station near Elkton was the lowest in 72 years of record. In the Wilson River basin, the monthly mean discharge was the lowest in 47 years of record.

During February streamflow remained below the normal range for the 5th consecutive month reflecting the persistence of drought conditions in all parts of State. The impact of this unusually dry weather was felt by the ski industry, which applied for disaster relief in order to continue operations. At least two major ski areas had to suspend operation for lack of good snow base.

Precipitation for the month of March was above normal and some improvement in the ground-water levels and a noticeable increase in streamflow was seen.

During the period of April through August the severity of drought conditions continued. Several eastern Oregon counties were declared disaster areas. Livestock and crop losses were estimated at several million dollars.

Some relief from drought conditions in northwestern Oregon occurred with the increase in precipitation during September, but streamflow remained below the normal range at the end of the water year.

Geological Survey records indicate the 1977 drought was the most severe since streamflow records have been maintained in Oregon.

The recent drought resulted in record or near record minimum yearly runoff throughout Oregon during the 1977 Water Year as indicated by the following tables.

Eastern Oregon Index Stations

| <u>Gaging Sta.</u> | <u>Previous record low</u> | <u>1977</u> |
|------------------------------------|----------------------------|---------------|
| John Day River at Service Creek | 465,000 ac-ft (1934) | 448,000 ac-ft |
| Grande Ronde River at La Grande | 102,100 ac-ft (1966) | 104,700 ac-ft |
| Chewaucan River near Paisley | 24,700 ac-ft (1931) | 28,420 ac-ft |

Western Oregon Index Stations

| | | |
|------------------------------|------------------------|-----------------|
| Wilson River at Tillamook | 531,300 ac-ft (1941) | 379,600 ac-ft |
| Umpqua River | 2,280,000 ac-ft (1931) | 1,680,000 ac-ft |

In spite of the extreme severity of the drought record instantaneous or daily low flows appeared to be the exception rather than the rule throughout most of Oregon. One such exception was South Umpqua near Brockway where the flow dipped to 16 ft³/s, the lowest flow ever recorded in the 42 years that river has been gaged. The previous instantaneous low was 25 ft³/s in 1973.

The most dramatic flow figures resulting from the drought are the extremely low magnitude of the annual peaks in Western Oregon. For example the lowest annual peak flow previously recorded in 61 years on the Umpqua River near Elkton was 33,100 ft³/s. The 1977 annual peak was 13,100 ft³/s, much less than one-half the 33,100 ft³/s recorded in 1915.

One anomaly that resulted from the drought was that the minimum and the maximum flow for the year occurred in the same month on some rivers in Oregon. For example on the Applegate River at Copper, the minimum flow for the year, 19 ft³/s occurred on September 12-15 and the maximum flow for the year, 857 ft³/s occurred September 28.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System of Units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multicelled plants containing chlorophyll and lacking roots, stems, and leaves.

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that may be used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C \pm 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warmblooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C \pm 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within

48 hours at $35^{\circ}\text{C} + 1.0^{\circ}\text{C}$ on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Benthic organisms (invertebrates) are animals inhabiting the bottom of an aquatic environment. They include a number of different types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are frequently used as indicators of environmental quality because many have restricted mobility during their aquatic life phase, as well as a relatively long lifespan which allows for response to prevailing and changing water-quality conditions. Many benthic organisms inhabit specific types of environments which, if changed, result in changes in the composition of the benthic community.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, used for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the weight per unit area or volume of habitat.

Ash weight is the weight or amount of residue present after the residue from the dry weight determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash weight values of zooplankton and phytoplankton are expressed as g/m^3 (grams per cubic meter), and periphyton and benthic organisms in g/m^2 (grams per square meter).

Dry weight refers to the weight of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the weight remains unchanged. This weight represents the total organic matter, ash and sediment, in the sample. Dry weight values are expressed in the same units as ash weight.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Cfs-day ($\text{ft}^3/\text{s-day}$) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, or 2,445 cubic meters. It represents a runoff of approximately 0.0372 inch from 1 square mile or 0.3468 millimeter from 1 square kilometer.

Chemical oxygen demand (COD) indicates the quantity of oxidizable compounds in water and varies with water composition(s), temperature, period of contact, and other factors.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuing water-quality record station is a specified site which meets one or all conditions listed.

1. Where chemical samples are collected daily or monthly for 10 or more months during the water year.
2. Where water-temperature records include observations taken one or more times daily.
3. Where sediment discharge records include those periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, total fluids) that passes a given point within a given period of time.

Mean discharge is the arithmetic average of discharge during a specific period.

Instantaneous discharge is the discharge at a given time.

Dissolved refers to the amount of a substance present in true chemical solution. In practice, however, the term includes all forms of the substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (colloidal) suspended particles. Analyses are performed on filtered samples.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per liter (UG/L, ug/l) is a unit expressing the concentration of chemical constituents in solution as weight (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/l) is a unit for expressing the concentrations of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/l, and is based on the mass of sediment per liter of water-sediment mixture.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, usually milliliters (ml) or liters (l).

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually millimeters (ml) or liters (l). Number of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited stream-flow or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined either by sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

| Classification | Size (mm) | Method of analysis |
|----------------|-----------------|-------------------------|
| Clay..... | 0.00024 - 0.004 | Sedimentation. |
| Silt..... | .004 - .062 | Sedimentation. |
| Sand..... | .062 - 2.0 | Sedimentation or sieve. |
| Gravel..... | 2.0 - 64.0 | Sieve. |

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent of total is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While consisting primarily of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per ml of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per ml of sample.

Plankton is the floating (or weakly swimming) animal or plant life in a body of water consisting chiefly of minute plants (as diatoms and blue-green algae) and of minute animals (as protozoan, entomostracans, and various larvae).

Runoff in inches (IN.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. It is computed by multiplying discharge times mg/l times 0.0027.

Total sediment discharge is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharge during a given time (Colby and Hembree, 1955).

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/l).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating farmland.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height and the volume of water flowing in a channel, expressed as volume per unit of time.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with kingdom and ending with

species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

| | |
|---------------------|--------------------------|
| Kingdom..... | Animal |
| Phylum..... | Arthropoda |
| Class..... | Insecta |
| Order..... | Emphemeroptera |
| Family..... | Ephemeridae |
| Genus..... | <u>Hexagenia</u> |
| <u>Species.....</u> | <u>Hexagenia limbata</u> |

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or a digital mechanism that records water temperature in digital format on punched paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Total (as used in tables of chemical analyses) refers to the amount of a substance that is present both in solution and in suspension. Analyses are performed on representative samples of water-suspended sediment mixtures.

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Jackson turbidity units (JTU).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the

sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the summary "REVISIONS" paragraph to refer to previously published State annual hydrologic data reports.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQUAN) is an accounting network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated in the network design. Areal configuration of the network is based on river-basin accounting units designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of water-quality conditions nationwide on a year-to-year basis and (2) to detect and assess long-term changes in stream quality.

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Pesticides are chemical compounds used to control the growth of undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Since the first application of DDT as an insecticide in the early 1930's, there have been almost 60,000 pesticide formulations registered, each containing at least one of the approximately 800 different basic pesticide compounds. The United States annually produces about 1 billion pounds. Chlorinated hydrocarbon pesticides are still commonly used in many areas of the country, although efforts are being made to replace many of them with more specific, fast-acting, and easily degradable compounds.

Radiochemical program is a network of regularly sampled water-quality stations where additional samples are collected monthly or twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Radioisotopes are isotope forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus. For example: Ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, with the natural mixture having atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron (Rose, 1966). There are 275 isotopes of the 81 stable elements in addition to more than 800 radioactive isotopes.

Radioisotopes that are determined in this program are natural uranium in ug/l (micrograms per liter), radium as radium-226 in PC/L (pCi/l, picocuries per liter), gross beta radiation as equivalent strontium/yttrium-90 or cesium-137 in PC/L, and gross alpha radiation as micrograms of uranium equivalent per liter (ug/l). Gross alpha and beta radioactivity associated with the fine-grained (silt- and clay-sized) sediments in the samples are also determined.

A picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.2 dpm (disintegrations per minute).

DOWNSTREAM ORDER AND STATION NUMBER

Stations are listed in downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all main-stream stations are

listed before the first main-stream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of stations in the front of this report, the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each water-quality station, gaging station, and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicated downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 14105700 which appears just to the left of the station name, includes the 2-digit part number "14" plus the 6-digit downstream order number "105700." In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and Computation of Data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals; and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder which gives a continuous graph of the fluctuations (for digital recorders, a tape punched at 15-, 30-, or 60-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks on the measurement of stream discharge. Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods.

For a stream-gaging station, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined

by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage heights to the rating table gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other causes. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. Information required for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in determining discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. Discharge over spillways is computed from a stage-discharge relation curve defined by discharge measurements. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, good record at adjoining stations, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated on the basis of operator's log, good record at adjoining stations, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of hydrologic data. For gaging stations on streams or canals, a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs, a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gage, general remarks, average discharge, and extremes of published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published, along with the current records, in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge are affected by the revision, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only the peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given.

The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the topographic Division of the Geological Survey, unless otherwise qualified.

Information pertaining to the accuracy of the discharge records, and to conditions that affect the natural flow at the gaging station, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is also given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given: First, the extremes for the period of record; second, information available outside the period of record; and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a non-recording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR: if they are all independent peaks (including the maximum for the year) above the selected base, with the time of occurrence and corresponding gage heights, are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

Skeleton rating tables are published, immediately following EXTREMES, for stream-gaging stations where they serve a useful purpose and the dates of applicability can be easily identified.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but it is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of Data

The accuracy of discharge data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent, "good" within 10 percent, and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s, to tenths between 1.0 and 10 ft³/s, to whole numbers between 10 and 1,000 ft³/s, and to three significant figures greater than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumptive use, regulation, evaporation, or other factors. For such stations, discharge in cubic feet per second per square mile and runoff in inches are not published unless satisfactory adjustments can be made for such effects. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or unadjusted losses (consumptive use, evaporation, seepage, etc.) are large in comparison with the observed discharge.

Other Data Available

Monthly records for several ungaged sites are given in a separate section following the gaged sites. The accuracy of records for ungaged sites is generally lower than that for gaged sites, depending on the precision of the computation method and the accuracy of data used in the computations.

For most gaging stations, unpublished, detailed information, on file in the district office, includes discharge measurements, gage-height records, and rating tables. Many gaging-station records in Oregon through 1967 have been analyzed to determine several statistical summaries: (1) the number of days in each year that the daily discharge was between selected limits (duration tables), (2) the lowest mean discharge for selected numbers of consecutive days in each year, and (3) the highest mean discharge for selected numbers of consecutive days in each year.

Records of Discharge Collected by Agencies Other than the Geological Survey

Other Federal and State agencies have collected discharge data at other sites in Oregon during the current water year. Although these records have not been published by the U.S. Geological Survey, the Office of Water Data Coordination, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA., 22092, maintains an index of these sites and will furnish information about them.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Computation of Data

Records of surface water quality are listed in downstream order by station number. The data generally are collected at or near gaging stations, and are reported immediately following other records for those stations. Water-quality data for most ungaged sites are listed with the records for other surface-water stations, in regular downstream order. The exceptions are the less detailed data for several ungaged sites, which are grouped separately in the section titled "Analyses of samples collected at water-quality partial-record stations."

The descriptive headings for detailed records of surface-water quality give periods of record for the various categories of data, extremes for certain pertinent data, and general remarks. For less detailed records, only the overall period of record is listed.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey publications on Techniques of Water-Resources Investigations, which are listed on page 28.

One stream-water sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample for the accurate determination of mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. Where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the published records consist of daily maximum, minimum, and mean values. More detailed records may be obtained from the district office.

Since October 1967, the U.S. Geological Survey has used the metric system for reporting data on chemical constituents and concentrations of suspended sediment. Chemical constituents are now reported in milligrams per liter (mg/l) except for certain minor elements that are reported in micrograms per liter (ug/l). Suspended sediment is reported in milligrams per liter and water temperatures in degrees Celsius (°C). In water with a density of 1,000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. To convert temperature in degrees Celsius to degrees Fahrenheit, see table 1 on page 23.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definitions of terms," page 5.)

Table 1.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*
(Temperature reported to nearest 0.5°C)

| °C | °F | °C | °F | °C | °F | °C | °F | °C | °F |
|-----|----|------|----|------|----|------|-----|------|-----|
| 0.0 | 32 | 10.0 | 50 | 20.0 | 68 | 30.0 | 86 | 40.0 | 104 |
| .5 | 33 | 10.5 | 51 | 20.5 | 69 | 30.5 | 87 | 40.5 | 105 |
| 1.0 | 34 | 11.0 | 52 | 21.0 | 70 | 31.0 | 88 | 41.0 | 106 |
| 1.5 | 35 | 11.5 | 53 | 21.5 | 71 | 31.5 | 89 | 41.5 | 107 |
| 2.0 | 36 | 12.0 | 54 | 22.0 | 72 | 32.0 | 90 | 42.0 | 108 |
| 2.5 | 36 | 12.5 | 54 | 22.5 | 72 | 32.5 | 90 | 42.5 | 108 |
| 3.0 | 37 | 13.0 | 55 | 23.0 | 73 | 33.0 | 91 | 43.0 | 109 |
| 3.5 | 38 | 13.5 | 56 | 23.5 | 74 | 33.5 | 92 | 43.5 | 110 |
| 4.0 | 39 | 14.0 | 57 | 24.0 | 75 | 34.0 | 93 | 44.0 | 111 |
| 4.5 | 40 | 14.5 | 58 | 24.5 | 76 | 34.5 | 94 | 44.5 | 112 |
| 5.0 | 41 | 15.0 | 59 | 25.0 | 77 | 35.0 | 95 | 45.0 | 113 |
| 5.5 | 42 | 15.5 | 60 | 25.5 | 78 | 35.5 | 96 | 45.5 | 114 |
| 6.0 | 43 | 16.0 | 61 | 26.0 | 79 | 36.0 | 97 | 46.0 | 115 |
| 6.5 | 44 | 16.5 | 62 | 26.5 | 80 | 36.5 | 98 | 46.5 | 116 |
| 7.0 | 45 | 17.0 | 63 | 27.0 | 81 | 37.0 | 99 | 47.0 | 117 |
| 7.5 | 45 | 17.5 | 63 | 27.5 | 81 | 37.5 | 99 | 47.5 | 117 |
| 8.0 | 46 | 18.0 | 64 | 28.0 | 82 | 38.0 | 100 | 48.0 | 118 |
| 8.5 | 47 | 18.5 | 65 | 28.5 | 83 | 38.5 | 101 | 48.5 | 119 |
| 9.0 | 48 | 19.0 | 66 | 29.0 | 84 | 39.0 | 102 | 49.0 | 120 |
| 9.5 | 49 | 19.5 | 67 | 29.5 | 85 | 39.5 | 103 | 49.5 | 121 |

$$^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32) \text{ or } ^{\circ}\text{F} = 9/5 (^{\circ}\text{C}) + 32.$$

Solutes

The methods of collecting and analyzing water samples to determine the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). If the mixture of solutes throughout the stream cross section is homogeneous, one sample can adequately define the water quality at a given time. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge depending on the source of material and the turbulence and mixing of the stream. Some sites must be sampled at several vertical intervals across the channel to determine the solute load accurately.

At chemical-quality stations where monitors are installed, the records consist of daily maximum, minimum, and mean values for each constituent measured. More detailed records (hourly values) may be obtained from the district office of the U.S. Geological Survey at the address given on page IV of this report.

Water temperature

Water temperatures are measured at most of the water-quality stations. The water temperatures for daily stations are taken when a sample is collected, at about the same time each day. Large streams have small diurnal temperature changes; shallow streams may have a daily range of several degrees and may closely follow the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are used maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section or a single sample at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or concentration, samples may have been collected twice daily or, in some instances, hourly. The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment discharges observed for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions at the times of observations only, such data are useful in establishing seasonal relations between quality and streamflow for predicting long-term sediment-discharge characteristics of the stream.

In addition to records of the quantities of suspended sediment, records of periodic measurements of particle-size distribution of suspended sediment and bed material are included.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of Data

The observation-well program in Oregon, begun in 1928, was continued through 1977 in cooperation with the Oregon Water Resources Department. During the period 1962-65, the number of wells in the observation-well network was increased from 102 to about 840. Observation wells in the program are part of a basic national network for providing a historical record of water-level changes in selected aquifers in the nation. Most of the wells are measured periodically by personnel of the Oregon Water Resources Department. Measurements are made in most of the wells three or four times a year to obtain records of the effects of pumping and seasonal changes in ground-water storage. The measurements are generally made in winter and spring before pumping begins, during the pumping season, and at the end of the pumping season. Water-level measurements in 97 representative wells in the Oregon observation-well network are included in this report; the locations of these wells are shown in figure .

Each well is identified by means of a 15-digit number that is based on the grid system of latitude and longitude. The first six digits represent degrees, minutes, and seconds of north latitude; the next seven digits are degrees, minutes, and seconds of west longitude; and the last two numbers are sequential numbers assigned in the order the wells are inventoried in a 1-second quadrangle. Each well is also identified by a local well number that provides continuity with older reports and local needs.

Well Descriptions

For each well, the well description includes, if available, the following information: Latitude-longitude number, local well number, owner, method of construction, use of well, aquifer name or lithology, diameter of casing, depth of well, depth interval perforated or screened, altitude of land surface datum (lsd) above mean sea level (msl), and a description of the measuring point.

The depth of the well at the time it was inventoried is given in the well description, and any subsequent changes also are described. Well diameter reported is the inside of the innermost well casing at land surface.

Water Levels

Measurements are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Water-level measurements in this report are given in feet below land-surface datum unless otherwise indicated. Those water levels that are above land-surface datum are preceded by a plus (+) sign. Land-surface datum is a datum plane that is approximately at land surface at each well. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Most measurements are reported to a hundredth of a foot; others are reported only to a tenth of a foot or a larger unit. Water levels determined by air line are less accurate than those measured by other methods; therefore, these water levels are reported only to the nearest half a foot.

The highest and lowest water levels measured at each well for the period of record are reported. These are intended to represent static water levels, but the lowest levels reported for some wells may reflect recent pumping.

Hydrographs

Hydrographs show fluctuations of water levels during 1956-77 in 15 selected observation wells. Generally, water levels are highest during the wet winter and spring months and lowest during the dry summer and autumn months. Water levels are shown on the hydrographs in feet below the land surface at the well.

Well-Numbering System

Local designations of wells discussed in this report are based on the official system for the rectangular subdivision of public lands, referenced to the Willamette base line and meridian. The number indicates the location of the well by township, range, section, and its position within the section. A graphic illustration of this method of well numbering is shown on page 27. The numbers indicate the township, the range, and the section, respectively, in which the well is located.

The letters following the section number locate the well within the section. The first letter denotes the quarter section (160 acres); the second, the quarter-quarter section (40 acres); and the third, the quarter-quarter-quarter section (10 acres). Where two or more wells are in the same 10-acre subdivision, serial numbers are added after the third letter. The section number and three-letter position indicator are shown on the location map adjacent to the well symbol. Within a county, the wells are arranged in sequential order based on increasing numbers for township and range and are shown on the map (fig. 5) by section number. For example well 27S/18E-21aaa is in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.27 S., R.18 E., in Lake County, and will be labeled as 21AAA.

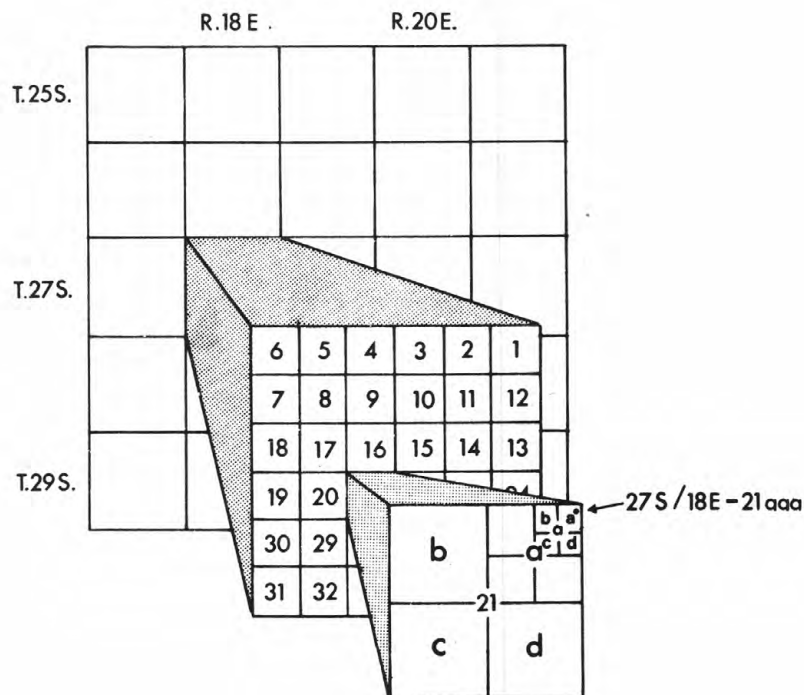


Figure 1.--Local identifier well-numbering system.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office). Prices are effective January 1978 but are subject to change.

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

- 1-D1. WATER TEMPERATURE-INFLUENTIAL FACTORS, FIELD MEASUREMENT, AND DATA PRESENTATION, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages. \$1.60.
- 1-D2. GUIDELINES FOR COLLECTION AND FIELD ANALYSIS OF GROUND-WATER SAMPLES FOR SELECTED UNSTABLE CONSTITUENTS, by W.W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages. \$0.85.
- 2-D1. APPLICATION OF SURFACE GEOPHYSICS TO GROUND-WATER INVESTIGATIONS, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. \$1.90.
- 2-E1. APPLICATION OF BOREHOLE GEOPHYSICS TO WATER-RESOURCES INVESTIGATIONS, by W.S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. \$1.75.
- 3-A1. GENERAL FIELD AND OFFICE PROCEDURES FOR INDIRECT DISCHARGE MEASUREMENTS, by M.A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages. \$1.00.
- 3-A2. MEASUREMENT OF PEAK DISCHARGE BY THE SLOPE-AREA METHOD, by Tate Dalrymple and M.A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. \$0.35.
- 3-A3. MEASUREMENT OF PEAK DISCHARGE AT CULVERTS BY INDIRECT METHODS, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. \$0.40.
- 3-A4. MEASUREMENT OF PEAK DISCHARGE AT WIDTH CONTRACTIONS BY INDIRECT METHODS, by H.F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. \$1.00.
- 3-A5. MEASUREMENT OF PEAK DISCHARGE AT DAMS BY INDIRECT METHODS, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. \$0.35.
- 3-A6. GENERAL PROCEDURE FOR GAGING STREAMS, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968. 13 pages. \$1.00.
- 3-A7. STAGE MEASUREMENTS AT GAGING STATIONS, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. \$1.40.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

- 3-A8. DISCHARGE MEASUREMENTS AT GAGING STATIONS, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. \$1.25.
- 3-A11. MEASUREMENT OF DISCHARGE BY MOVING-BOAT METHOD, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. \$1.20.
- 3-A12. FLUOROMETRIC PROCEDURES FOR DYE TRACING, by J.F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. \$0.35. Not currently available.
- 3-B1. AQUIFER-TEST DESIGN, OBSERVATION, AND DATA ANALYSIS, by R.W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. \$0.70.
- 3-B2. INTRODUCTION TO GROUND-WATER HYDRAULICS, A PROGRAMED TEXT FOR SELF-INSTRUCTION, by G.D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages. \$2.50.
- 3-C1. FLUVIAL SEDIMENT CONCEPTS, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. \$0.65.
- 3-C2. FIELD METHODS FOR MEASUREMENT OF FLUVIAL SEDIMENT, by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages. \$2.50.
- 3-C3. COMPUTATION OF FLUVIAL-SEDIMENT DISCHARGE, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. \$2.10.
- 4-A1. SOME STATISTICAL TOOLS IN HYDROLOGY, by H.C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages. \$1.60.
- 4-A2. FREQUENCY CURVES, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. \$0.35.
- 4-B1. LOW-FLOW INVESTIGATIONS, by H.C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages. \$0.65.
- 4-B2. STORAGE ANALYSES FOR WATER SUPPLY, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. \$0.75.
- 4-B3. REGIONAL ANALYSES OF STREAMFLOW CHARACTERISTICS, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. \$0.65.
- 4-D1. COMPUTATION OF RATE AND VOLUME OF STREAM DEPLETION BY WELLS, by C.T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. \$1.10.
- 5-A1. METHODS FOR COLLECTION AND ANALYSIS OF WATER SAMPLES FOR DISSOLVED MINERALS AND GASES, by Eugene Brown, M.W. Skougstad, and M.J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. \$2.40.
- 5-A2. DETERMINATION OF MINOR ELEMENTS IN WATER BY EMISSION SPECTROSCOPY, by P.R. Barnett and E.C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. \$0.80.
- 5-A3. METHODS FOR ANALYSIS OF ORGANIC SUBSTANCES IN WATER, by D.F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. \$0.90.

WATER RESOURCES DATA FOR OREGON, 1977

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

- 5-A4.* METHODS FOR COLLECTION AND ANALYSIS OF AQUATIC BIOLOGICAL AND MICROBIOLOGICAL SAMPLES, edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. \$20.00.
- 5-A5.* METHODS FOR DETERMINATION OF RADIOACTIVE SUBSTANCES IN WATER AND FLUVIAL SEDIMENTS, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages. \$16.00.
- 5-C1. LABORATORY THEORY AND METHODS FOR SEDIMENT ANALYSIS, by H.P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. \$2.10.
- 7-C1. FINITE DIFFERENCE MODEL FOR AQUIFER SIMULATION IN TWO DIMENSIONS WITH RESULTS OF NUMERICAL EXPERIMENTS, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages. \$2.30.
- 8-A1. METHODS OF MEASURING WATER LEVELS IN DEEP WELL, By M.S. Garber and F.C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages. \$0.70.
- 8-B2. CALIBRATION AND MAINTENANCE OF VERTICAL-AXIS TYPE CURRENT METERS, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. \$1.10.

*These publications are available ONLY from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. They are in loose-leaf format and are subscription items. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this is a subscription item.

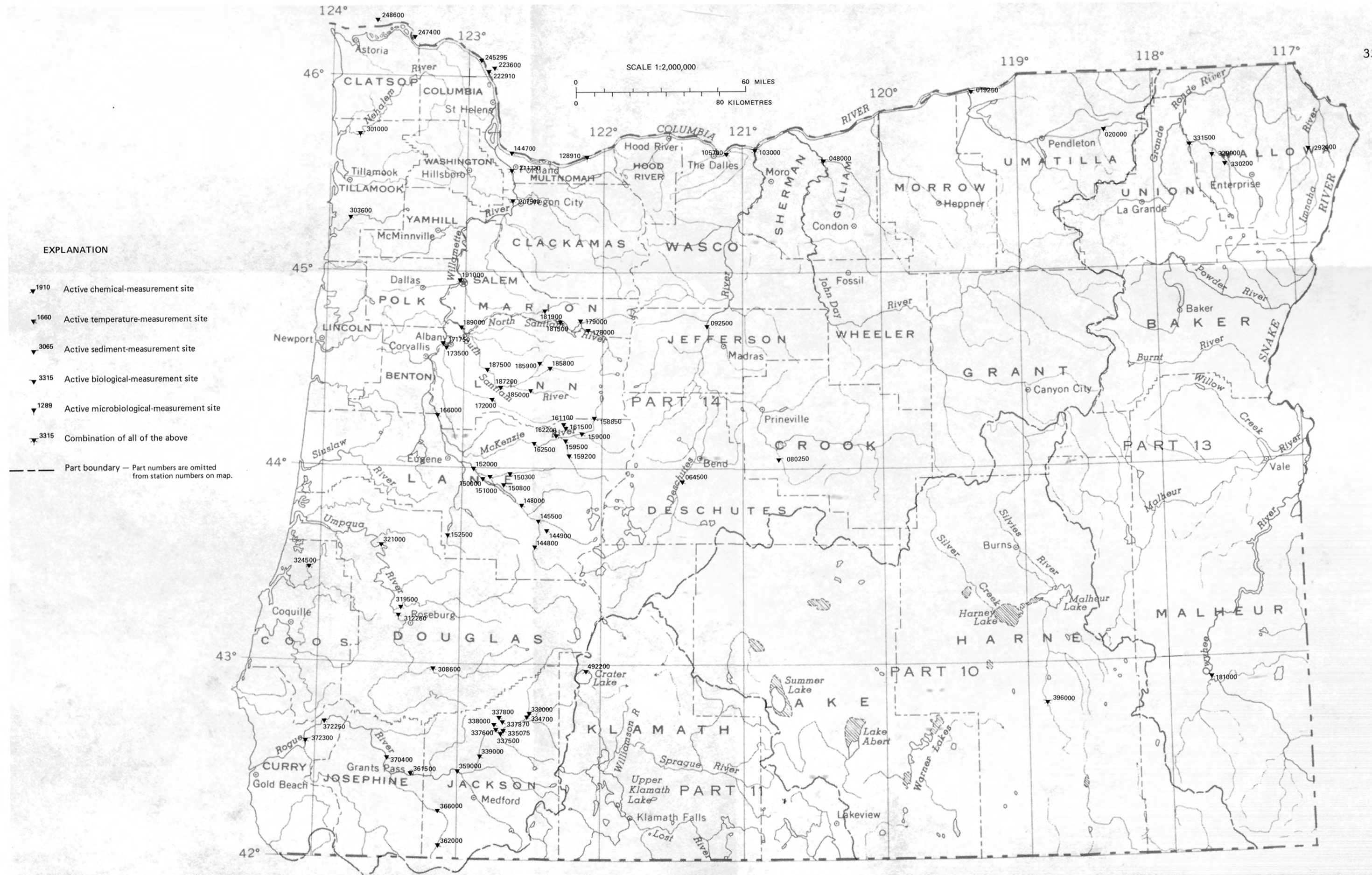


Figure 3.--Map of Oregon showing sites where water-quality data were obtained.

THE GREAT BASIN

WARNER LAKES BASIN

10366000 TWENTYMILE CREEK NEAR ADEL, OR

LOCATION.--Lat 42°04'20", long 119°57'42", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.25, T.40 S., R.23 E., Lake County, Hydrologic Unit 17120007, on left bank 1.5 mi (2.4 km) downstream from Twelvemile Creek and 8 mi (13 km) southwest of Adel.

DRAINAGE AREA.--194 mi² (502 km²), including 46 mi² (119 km²) in Cowhead Lake area.

PERIOD OF RECORD.--March 1910 to July 1916, December 1917 to September 1919, and March 1921 to June 1922 (published as "near Warner Lake"), September 1940 to November 1944, March 1945 to current year.

REVISED RECORDS.--WSP 1090: 1945. WSP 1514: 1951-53, 1954(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,560.83 ft (1,390.141 m) above mean sea level. Prior to Sept. 21, 1940, nonrecording gage or water-stage recorder at sites within 1 mi (2 km) downstream at various datums. Sept. 21, 1940, to Nov. 30, 1944, water-stage recorder at site 1.8 mi (2.9 km) upstream at different datums. Mar. 12, 1945, to June 28, 1952, water-stage recorder at site 70 ft (21 m) upstream at datum 0.88 ft (0.268 m) higher.

REMARKS.--Records good except those for winter periods, which are fair. Some regulation by pumpage from Cowhead Lake. Diversions in Oregon for irrigation above station; considerable diversions for irrigation in Cowhead Lake area in California.

AVERAGE DISCHARGE.--42 years (water years 1911-15, 1919, 1941-44, 1946-77), 51.3 ft³/s (1.453 m³/s), 37,170 acre-ft/yr (45.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft³/s (104 m³/s) Dec. 23, 1964, gage height, 16.1 ft (4.91 m), from rating curve extended above 920 ft³/s (26.1 m³/s) on basis of contracted-opening measurement of 3,260 ft³/s (92.3 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 92 ft³/s (2.61 m³/s) May 12, gage height, 2.84 ft (0.866 m), no peak above base of 510 ft³/s (14.4 m³/s); minimum daily, 0.45 ft³/s (0.013 m³/s) Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|-------|------|-----------|---------|---------|-------------|-------|-------|------|------|------|
| 1 | 4.1 | 4.5 | 4.8 | 2.6 | .53 | 3.7 | 5.8 | 5.5 | 5.3 | 2.6 | 1.8 | 2.1 |
| 2 | 4.1 | 4.5 | 4.8 | 2.8 | .45 | 3.6 | 6.2 | 4.9 | 5.7 | 4.1 | 1.5 | 1.8 |
| 3 | 4.1 | 4.3 | 3.5 | 3.0 | .50 | 4.1 | 5.8 | 5.1 | 4.9 | 4.1 | 2.2 | 1.5 |
| 4 | 4.1 | 4.2 | 5.6 | 2.9 | .53 | 4.2 | 6.1 | 6.4 | 4.7 | 3.5 | 2.2 | 1.5 |
| 5 | 4.1 | 4.5 | 4.8 | 2.6 | .82 | 4.4 | 7.3 | 6.1 | 4.5 | 3.0 | 2.2 | 1.5 |
| 6 | 4.1 | 4.5 | 4.8 | 2.4 | 1.0 | 4.8 | 8.2 | 6.6 | 4.4 | 3.0 | 2.6 | 1.5 |
| 7 | 4.1 | 4.3 | 3.5 | 2.2 | 1.0 | 5.0 | 8.2 | 6.4 | 5.4 | 3.0 | 2.6 | 1.5 |
| 8 | 4.1 | 4.2 | 4.8 | 2.0 | 1.5 | 5.3 | 9.5 | 6.4 | 6.6 | 3.0 | 2.6 | 1.5 |
| 9 | 4.1 | 5.0 | 5.6 | 2.2 | 1.5 | 11 | 12 | 7.8 | 5.8 | 2.6 | 2.6 | 1.6 |
| 10 | 4.1 | 5.5 | 3.5 | 2.4 | 1.8 | 7.6 | 8.7 | 6.3 | 4.9 | 2.6 | 2.2 | 1.7 |
| 11 | 4.1 | 5.5 | 3.0 | 2.6 | 1.8 | 5.8 | 6.8 | 6.4 | 3.9 | 2.2 | 1.8 | 1.6 |
| 12 | 4.1 | 5.6 | 3.5 | 2.9 | 2.2 | 5.9 | 6.1 | 46 | 2.7 | 2.2 | 1.5 | 1.7 |
| 13 | 4.1 | 4.8 | 2.6 | 2.7 | 2.2 | 4.3 | 5.8 | 19 | 2.4 | 2.2 | 1.8 | 1.6 |
| 14 | 3.5 | 6.8 | 3.0 | 2.5 | 3.0 | 4.5 | 6.0 | 11 | 2.4 | 2.2 | 1.8 | 1.7 |
| 15 | 3.5 | 6.7 | 3.0 | 2.3 | 2.6 | 5.1 | 5.2 | 7.2 | 2.6 | 2.2 | 1.8 | 1.7 |
| 16 | 3.5 | 6.0 | 2.6 | 2.3 | 3.5 | 4.6 | 5.6 | 5.1 | 2.1 | 1.5 | 1.8 | 3.1 |
| 17 | 4.1 | 6.1 | 1.8 | 2.4 | 3.5 | 4.7 | 5.7 | 7.8 | 2.7 | 1.5 | 1.8 | 4.0 |
| 18 | 3.5 | 5.7 | 1.7 | 2.6 | 4.1 | 4.5 | 5.3 | 21 | 3.6 | 1.5 | 1.8 | 3.5 |
| 19 | 4.1 | 5.2 | 1.7 | 2.9 | 4.1 | 5.4 | 4.8 | 16 | 5.4 | 1.8 | 2.2 | 3.3 |
| 20 | 4.1 | 5.1 | 1.7 | 3.2 | 4.8 | 6.3 | 4.4 | 9.3 | 7.4 | 1.8 | 1.8 | 3.5 |
| 21 | 4.1 | 5.0 | 1.7 | 3.6 | 6.4 | 7.0 | 4.3 | 8.4 | 6.3 | 1.8 | 1.8 | 2.6 |
| 22 | 4.1 | 5.3 | 1.8 | 4.1 | 5.6 | 9.1 | 4.3 | 6.7 | 5.0 | 2.2 | 1.8 | 2.6 |
| 23 | 4.1 | 5.0 | 1.9 | 4.1 | 4.8 | 11 | 4.3 | 6.5 | 4.1 | 2.2 | 1.3 | 2.1 |
| 24 | 4.1 | 4.8 | 2.0 | 2.6 | 11 | 8.7 | 4.2 | 8.2 | 3.5 | 1.8 | 1.5 | 2.7 |
| 25 | 5.6 | 4.8 | 2.1 | 2.6 | 8.9 | 7.1 | 3.9 | 8.7 | 3.5 | 1.5 | 3.2 | 2.9 |
| 26 | 5.2 | 4.8 | 2.2 | 4.0 | 4.7 | 5.9 | 4.5 | 8.6 | 3.5 | 1.8 | 4.4 | 2.5 |
| 27 | 4.1 | 3.0 | 2.2 | 4.7 | 3.9 | 6.2 | 4.6 | 9.7 | 3.0 | 1.8 | 3.5 | 1.7 |
| 28 | 4.2 | 3.5 | 3.7 | 3.6 | 4.5 | 5.9 | 4.4 | 8.9 | 3.0 | 1.5 | 2.8 | 1.9 |
| 29 | 4.5 | 4.0 | 3.5 | 2.6 | --- | 5.4 | 4.2 | 6.4 | 3.0 | 1.8 | 2.6 | 6.7 |
| 30 | 4.6 | 4.8 | 3.0 | 1.9 | --- | 5.7 | 4.5 | 4.9 | 3.0 | 1.8 | 2.4 | 5.8 |
| 31 | 4.5 | --- | 2.7 | 1.3 | --- | 5.1 | --- | 5.1 | --- | 1.5 | 2.1 | --- |
| TOTAL | 128.7 | 148.0 | 97.1 | 86.6 | 91.23 | 181.9 | 176.7 | 292.4 | 125.3 | 70.3 | 68.0 | 73.4 |
| MEAN | 4.15 | 4.93 | 3.13 | 2.79 | 3.26 | 5.87 | 5.89 | 9.43 | 4.18 | 2.27 | 2.19 | 2.45 |
| MAX | 5.6 | 6.8 | 5.6 | 4.7 | 11 | 11 | 12 | 46 | 7.4 | 4.1 | 4.4 | 6.7 |
| MIN | 3.5 | 3.0 | 1.7 | 1.3 | .45 | 3.6 | 3.9 | 4.9 | 2.1 | 1.5 | 1.3 | 1.5 |
| AC-FT | 255 | 294 | 193 | 172 | 181 | 361 | 350 | 580 | 249 | 139 | 135 | 146 |
| CAL YR 1976 TOTAL | 7584.10 | | | MEAN 20.7 | MAX 500 | MIN 1.7 | AC-FT 15040 | | | | | |
| WTR YR 1977 TOTAL | 1539.63 | | | MEAN 4.22 | MAX 46 | MIN .45 | AC-FT 3050 | | | | | |

WARNER LAKES BASIN

10371500 DEEP CREEK ABOVE ADEL, OR

LOCATION.--Lat 42°11'21", long 120°00'02", in SW¼NW¼ sec.15, T.39 S., R.23 E., Lake County, Hydrologic Unit 17120007, on left bank 700 ft (213 m) downstream from Drake Creek and 5 mi (8 km) west of Adel.

DRAINAGE AREA.--249 mi² (645 km²).

PERIOD OF RECORD.--September 1922 to September 1923, October 1929 to current year. Monthly discharge only October 1929 to September 1932, published in WSP 1314.

GAGE.--Water-stage recorder. Datum of gage is 4,980.34 ft (1,518.008 m) above mean sea level (State Highway Department bench mark). Sept. 8 to Dec. 20, 1922, nonrecording gage. Dec. 21, 1922, to Sept. 30, 1923, and Oct. 11, 1929, to Dec. 23, 1964, water-stage recorder at site 700 ft (213 m) downstream at different datums. Jan. 20 to Sept. 30, 1965, nonrecording gage at site 2,000 ft (610 m) downstream at different datum.

REMARKS.--Records good except those for winter periods, which are fair. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--49 years, 128 ft³/s (3.625 m³/s), 92,740 acre-ft/yr (114 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,420 ft³/s (267 m³/s) Dec. 23, 1964, gage height, 10.64 ft (3.243 m), from floodmark, from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of slope-area measurements at 7.3 ft (2.2 m) and of peak flow; minimum, 1.7 ft³/s (0.048 m³/s) July 20, 27-29, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 221 ft³/s (6.26 m³/s) Apr. 8, gage height, 2.12 ft (0.646 m), no peak above base of 600 ft³/s (17.0 m³/s); minimum, 3.3 ft³/s (0.093 m³/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|--------|-------|-------|-------|
| 1 | 19 | 21 | 24 | 18 | 18 | 27 | 27 | 14 | 73 | 7.6 | 3.7 | 5.7 |
| 2 | 22 | 22 | 24 | 18 | 17 | 29 | 26 | 17 | 77 | 10 | 3.7 | 6.9 |
| 3 | 24 | 22 | 25 | 18 | 17 | 22 | 28 | 19 | 73 | 13 | 4.0 | 7.2 |
| 4 | 23 | 22 | 25 | 17 | 17 | 25 | 49 | 35 | 71 | 11 | 4.2 | 7.2 |
| 5 | 22 | 22 | 20 | 15 | 17 | 26 | 75 | 34 | 66 | 11 | 4.2 | 8.0 |
| 6 | 21 | 22 | 22 | 14 | 17 | 24 | 98 | 29 | 61 | 9.0 | 4.2 | 7.6 |
| 7 | 20 | 21 | 24 | 13 | 17 | 25 | 115 | 27 | 61 | 8.0 | 4.6 | 6.9 |
| 8 | 20 | 21 | 19 | 12 | 19 | 26 | 128 | 39 | 81 | 7.6 | 5.0 | 6.9 |
| 9 | 20 | 21 | 19 | 15 | 19 | 27 | 69 | 45 | 68 | 7.2 | 5.0 | 6.9 |
| 10 | 19 | 21 | 18 | 17 | 20 | 28 | 51 | 110 | 58 | 6.5 | 4.6 | 6.9 |
| 11 | 20 | 21 | 21 | 19 | 20 | 34 | 55 | 130 | 57 | 6.1 | 4.0 | 6.9 |
| 12 | 20 | 22 | 24 | 22 | 21 | 24 | 63 | 130 | 52 | 5.7 | 4.0 | 6.9 |
| 13 | 20 | 20 | 23 | 20 | 22 | 29 | 77 | 130 | 45 | 5.7 | 4.0 | 6.9 |
| 14 | 19 | 26 | 26 | 18 | 23 | 26 | 57 | 128 | 39 | 5.7 | 4.0 | 6.9 |
| 15 | 19 | 28 | 24 | 17 | 25 | 24 | 55 | 90 | 36 | 5.3 | 4.2 | 7.6 |
| 16 | 19 | 29 | 25 | 17 | 26 | 24 | 58 | 81 | 28 | 5.0 | 4.0 | 9.5 |
| 17 | 21 | 26 | 24 | 19 | 28 | 25 | 55 | 86 | 23 | 4.2 | 4.0 | 14 |
| 18 | 21 | 24 | 23 | 21 | 33 | 30 | 45 | 77 | 17 | 4.0 | 4.0 | 14 |
| 19 | 21 | 21 | 22 | 24 | 33 | 22 | 40 | 66 | 20 | 4.0 | 4.0 | 12 |
| 20 | 22 | 21 | 20 | 27 | 33 | 24 | 39 | 60 | 34 | 4.0 | 4.6 | 13 |
| 21 | 22 | 21 | 19 | 21 | 33 | 30 | 25 | 73 | 37 | 4.0 | 4.6 | 14 |
| 22 | 23 | 21 | 18 | 25 | 25 | 58 | 20 | 71 | 29 | 4.2 | 4.2 | 13 |
| 23 | 23 | 19 | 18 | 23 | 29 | 84 | 18 | 106 | 23 | 3.7 | 4.0 | 12 |
| 24 | 23 | 20 | 18 | 21 | 27 | 41 | 17 | 123 | 18 | 3.7 | 4.6 | 17 |
| 25 | 27 | 23 | 18 | 20 | 33 | 39 | 18 | 102 | 15 | 3.7 | 6.5 | 19 |
| 26 | 25 | 22 | 18 | 20 | 25 | 37 | 16 | 84 | 13 | 3.7 | 18 | 13 |
| 27 | 23 | 19 | 18 | 20 | 25 | 49 | 14 | 138 | 12 | 3.7 | 11 | 12 |
| 28 | 23 | 18 | 18 | 20 | 25 | 34 | 13 | 98 | 10 | 3.7 | 7.6 | 13 |
| 29 | 23 | 24 | 18 | 20 | --- | 30 | 12 | 79 | 9.0 | 3.7 | 6.5 | 49 |
| 30 | 23 | 26 | 18 | 20 | --- | 25 | 11 | 68 | 8.0 | 3.7 | 6.1 | 36 |
| 31 | 21 | --- | 18 | 24 | --- | 25 | --- | 61 | --- | 3.7 | 6.1 | --- |
| TOTAL | 668 | 666 | 651 | 595 | 664 | 973 | 1374 | 2350 | 1214.0 | 182.1 | 163.2 | 365.9 |
| MEAN | 21.5 | 22.2 | 21.0 | 19.2 | 23.7 | 31.4 | 45.8 | 75.8 | 40.5 | 5.87 | 5.26 | 12.2 |
| MAX | 27 | 29 | 26 | 27 | 33 | 84 | 128 | 138 | 81 | 13 | 18 | 49 |
| MIN | 19 | 18 | 18 | 12 | 17 | 22 | 11 | 14 | 8.0 | 3.7 | 3.7 | 5.7 |
| AC-FT | 1320 | 1320 | 1290 | 1180 | 1320 | 1930 | 2730 | 4660 | 2410 | 361 | 324 | 726 |

CAL YR 1976 TOTAL 34741.0 MEAN 94.9 MAX 585 MIN 12 AC-FT 68910
WTR YR 1977 TOTAL 9866.2 MEAN 27.0 MAX 138 MIN 3.7 AC-FT 19570

WARNER LAKES BASIN

37

10378500 HONEY CREEK NEAR PLUSH, OR

LOCATION.--Lat 42°25'30", long 119°55'20", in SW¼SW¼ sec.20, T.36 S., R.24 E., Lake County, Hydrologic Unit 17120007, on right bank 700 ft (213 m) upstream from mouth of canyon, 1 mi (1.6 km) northwest of Plush, and 4 mi (6.4 km) downstream from Twelvemile Creek.

DRAINAGE AREA.--170 mi² (440 km²), approximately.

PERIOD OF RECORD.--May 1909 to September 1914 (prior to January 1910, gage heights only), March to May 1915, March to September 1921, March to June 1922, May 1930 to current year. Monthly discharge only May 1930 to September 1949, published in WSP 1314.

REVISED RECORDS.--WSP 1564: 1911-12. WSP 1714: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,552.60 ft (1,387.632 m) above mean sea level. Dec. 24, 1964, to Sept. 30, 1965, non-recording gage at site 100 ft (30 m) downstream at different datums. See WSP 1927 for history of changes prior to Dec. 24, 1964.

REMARKS.--Records good. Slight regulation by five small reservoirs, combined capacity, 870 acre-ft (1.07 hm³). Diversions for irrigation above station.

AVERAGE DISCHARGE.--51 years (water years 1911-14, 1931-77), 29.6 ft³/s (0.838 m³/s), 21,450 acre-ft/yr (26.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Dec. 23, 1964, gage height, 13.4 ft (4.08 m), from floodmark, from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of slope-area measurements at gage height 10.46 ft (3.188 m) and of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36 ft³/s (1.02 m³/s) Apr. 8, gage height, 2.62 ft (0.799 m), no peak above base of 200 ft³/s (5.66 m³/s); minimum, 0.21 ft³/s (0.006 m³/s) Aug. 24, but may have been less during period of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 1.1 | 3.2 | 1.6 | 2.4 | 4.4 | 3.1 | 6.1 | 7.5 | 5.6 | 2.0 | .31 | .33 |
| 2 | 1.1 | 3.1 | 1.6 | 1.5 | 4.2 | 2.5 | 5.6 | 7.2 | 5.0 | 2.3 | .31 | .31 |
| 3 | 1.2 | 3.1 | 1.7 | 1.2 | 4.2 | 2.7 | 5.6 | 6.6 | 4.8 | 1.4 | .33 | .29 |
| 4 | 1.6 | 2.9 | 6.1 | .95 | 4.4 | 2.6 | 6.3 | 7.8 | 4.3 | 1.4 | .33 | .37 |
| 5 | 1.7 | 2.9 | 4.5 | .80 | 4.4 | 4.0 | 9.2 | 7.8 | 4.1 | 1.4 | .37 | .37 |
| 6 | 1.7 | 2.9 | 3.2 | .70 | 4.8 | 4.8 | 16 | 8.0 | 3.7 | 1.3 | .40 | .37 |
| 7 | 1.6 | 2.9 | 3.0 | .65 | 5.2 | 5.0 | 24 | 7.8 | 3.7 | 1.2 | .40 | .37 |
| 8 | 1.6 | 2.9 | 2.9 | .60 | 5.4 | 4.8 | 26 | 7.5 | 4.0 | 1.1 | .40 | .35 |
| 9 | 1.7 | 2.9 | 2.8 | .65 | 4.8 | 5.2 | 17 | 8.6 | 3.8 | 1.1 | .40 | .37 |
| 10 | 1.6 | 3.1 | 2.6 | 2.5 | 4.9 | 3.8 | 10 | 19 | 4.5 | .93 | .40 | .43 |
| 11 | 1.6 | 3.2 | 2.7 | 3.5 | 5.2 | 3.5 | 11 | 16 | 6.1 | .65 | .40 | .40 |
| 12 | 1.6 | 3.2 | 2.9 | 4.5 | 5.6 | 4.8 | 13 | 14 | 4.5 | .51 | .37 | .43 |
| 13 | 1.7 | 3.1 | 2.9 | 4.2 | 6.0 | 3.5 | 14 | 17 | 4.0 | .48 | .40 | .43 |
| 14 | 1.7 | 3.4 | 2.9 | 4.1 | 6.3 | 4.0 | 12 | 24 | 4.1 | .48 | .43 | .43 |
| 15 | 1.7 | 3.5 | 2.9 | 4.0 | 6.6 | 5.9 | 11 | 19 | 4.0 | .45 | .43 | .45 |
| 16 | 1.8 | 3.4 | 2.9 | 4.0 | 6.9 | 4.5 | 12 | 16 | 3.4 | .43 | .33 | .59 |
| 17 | 1.9 | 3.4 | 2.9 | 4.0 | 7.5 | 4.3 | 12 | 14 | 2.8 | .37 | .33 | .54 |
| 18 | 1.9 | 3.2 | 2.7 | 4.0 | 5.6 | 4.5 | 9.6 | 17 | 2.7 | .35 | .33 | .51 |
| 19 | 2.0 | 3.2 | 2.5 | 4.0 | 5.4 | 5.0 | 8.6 | 13 | 2.6 | .37 | .33 | .54 |
| 20 | 2.1 | 2.5 | 2.2 | 4.2 | 6.6 | 4.8 | 8.0 | 10 | 2.5 | .40 | .33 | .62 |
| 21 | 2.2 | 2.3 | 2.2 | 4.5 | 6.3 | 4.3 | 8.0 | 8.9 | 2.6 | .33 | .33 | .65 |
| 22 | 2.3 | 2.0 | 2.2 | 5.0 | 5.6 | 5.2 | 7.5 | 8.0 | 2.4 | .37 | .40 | .65 |
| 23 | 2.4 | 2.0 | 2.5 | 4.5 | 4.1 | 5.9 | 7.2 | 8.0 | 2.0 | .37 | .31 | .62 |
| 24 | 2.4 | 1.9 | 2.7 | 4.0 | 4.0 | 6.6 | 6.9 | 10 | 1.7 | .33 | .25 | .62 |
| 25 | 2.7 | 1.9 | 3.0 | 3.9 | 5.4 | 5.9 | 6.3 | 9.6 | 1.4 | .33 | .35 | .69 |
| 26 | 2.7 | 1.8 | 3.7 | 3.9 | 4.8 | 5.2 | 6.3 | 8.3 | 1.2 | .31 | .35 | .59 |
| 27 | 2.7 | 1.6 | 3.3 | 3.9 | 4.0 | 5.4 | 6.1 | 12 | 1.0 | .31 | .27 | .59 |
| 28 | 2.7 | 1.6 | 3.0 | 4.1 | 4.8 | 5.2 | 5.9 | 9.6 | .85 | .33 | .35 | .62 |
| 29 | 2.7 | 1.6 | 2.6 | 4.4 | --- | 5.2 | 5.6 | 8.0 | .69 | .33 | .41 | .67 |
| 30 | 3.1 | 1.6 | 2.4 | 4.6 | --- | 6.1 | 5.9 | 6.9 | 1.6 | .35 | .33 | .60 |
| 31 | 3.1 | --- | 2.4 | 4.6 | --- | 5.4 | --- | 6.3 | --- | .33 | .33 | --- |
| TOTAL | 61.9 | 80.3 | 87.5 | 99.85 | 147.4 | 143.7 | 302.7 | 343.4 | 95.64 | 22.31 | 11.01 | 14.80 |
| MEAN | 2.00 | 2.68 | 2.82 | 3.22 | 5.26 | 4.64 | 10.1 | 11.1 | 3.19 | .72 | .36 | .49 |
| MAX | 3.1 | 3.5 | 6.1 | 5.0 | 7.5 | 6.6 | 26 | 24 | 6.1 | 2.3 | .43 | .69 |
| MIN | 1.1 | 1.6 | 1.6 | .60 | 4.0 | 2.5 | 5.6 | 6.3 | .69 | .31 | .25 | .29 |
| AC-FT | 123 | 159 | 174 | 198 | 292 | 285 | 600 | 681 | 190 | 44 | 22 | 29 |
| CAL YR 1976 | TOTAL | 5651.03 | MEAN | 15.4 | MAX | 120 | MIN | .73 | AC-FT | 11210 | | |
| WTR YR 1977 | TOTAL | 1410.51 | MEAN | 3.86 | MAX | 26 | MIN | .25 | AC-FT | 2800 | | |

ABERT LAKE BASIN

10384000 CHEWAUCAN RIVER NEAR PAISLEY, OR

LOCATION.--Lat 42°41'05", long 120°34'08", in SW 1/4 sec. 26, T.33 S., R.18 E., Lake County, Hydrologic Unit 17120006, on left bank 1.2 mi (1.9 km) downstream from Mill Creek and 1.4 mi (2.3 km) southwest of Paisley.

DRAINAGE AREA.--275 mi² (712 km²).

PERIOD OF RECORD.--April 1912 to September 1921, May 1924 to current year. Published as "above Conn ditch, near Paisley" April to September 1912 and May 1924 to September 1955, as "above Mill Creek, near Paisley" October 1912 to December 1913, and as "at Chewaucan Land & Cattle Co.'s gage, near Paisley" January to September 1914.

REVISED RECORDS.--WSP 860: Drainage area. WSP 1927: 1957-59.

GAGE.--Water-stage recorder. Datum of gage is 4,430 ft (1,350 m) above mean sea level (river-profile survey). See WSP 1734 for history of changes prior to Oct. 6, 1956.

REMARKS.--Records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--62 years, 143 ft³/s (4.050 m³/s), 103,600 acre-ft/yr (128 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,490 ft³/s (184 m³/s) Dec. 22, 1964, gage height, 8.35 ft (2.545 m), from rating curve extended above 900 ft³/s (25.5 m³/s) on basis of slope-area measurement of peak flow; no flow for part of each day Dec. 7, 1927, Dec. 12, 1932, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 108 ft³/s (3.06 m³/s) Apr. 8, no peak above base of 500 ft³/s (14.2 m³/s); maximum gage height, 1.74 ft (0.530 m) Jan. 14, backwater from ice; minimum discharge, 8.9 ft³/s (0.25 m³/s) July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|---------|---------|-------|-------|------|-------|------|------|
| 1 | 36 | 41 | 50 | 50 | 43 | 45 | 43 | 45 | 51 | 24 | 10 | 20 |
| 2 | 42 | 41 | 50 | 50 | 41 | 43 | 38 | 53 | 51 | 30 | 10 | 19 |
| 3 | 45 | 39 | 50 | 50 | 39 | 41 | 38 | 49 | 49 | 26 | 12 | 19 |
| 4 | 40 | 39 | 50 | 45 | 42 | 42 | 46 | 52 | 48 | 24 | 11 | 19 |
| 5 | 41 | 38 | 50 | 40 | 44 | 47 | 60 | 46 | 47 | 25 | 11 | 19 |
| 6 | 39 | 38 | 50 | 36 | 47 | 49 | 69 | 48 | 50 | 24 | 12 | 19 |
| 7 | 38 | 38 | 50 | 34 | 50 | 46 | 74 | 45 | 63 | 24 | 12 | 18 |
| 8 | 37 | 37 | 50 | 32 | 53 | 45 | 89 | 41 | 87 | 22 | 12 | 18 |
| 9 | 37 | 37 | 50 | 32 | 48 | 50 | 69 | 47 | 64 | 20 | 13 | 18 |
| 10 | 37 | 38 | 45 | 33 | 48 | 38 | 60 | 71 | 55 | 21 | 13 | 18 |
| 11 | 36 | 38 | 50 | 35 | 50 | 39 | 62 | 65 | 66 | 20 | 12 | 18 |
| 12 | 36 | 38 | 50 | 38 | 54 | 44 | 66 | 67 | 63 | 19 | 11 | 19 |
| 13 | 36 | 35 | 50 | 42 | 57 | 34 | 70 | 64 | 54 | 16 | 12 | 19 |
| 14 | 36 | 46 | 50 | 42 | 56 | 34 | 60 | 67 | 55 | 14 | 12 | 19 |
| 15 | 36 | 44 | 50 | 40 | 56 | 49 | 55 | 62 | 47 | 14 | 12 | 20 |
| 16 | 36 | 44 | 50 | 38 | 52 | 41 | 60 | 62 | 41 | 11 | 13 | 28 |
| 17 | 36 | 43 | 50 | 38 | 53 | 36 | 52 | 59 | 37 | 11 | 12 | 30 |
| 18 | 36 | 40 | 45 | 38 | 63 | 40 | 45 | 58 | 37 | 11 | 12 | 30 |
| 19 | 36 | 37 | 45 | 38 | 61 | 40 | 49 | 53 | 35 | 11 | 15 | 29 |
| 20 | 37 | 37 | 45 | 40 | 52 | 39 | 48 | 51 | 41 | 12 | 18 | 43 |
| 21 | 37 | 40 | 45 | 44 | 52 | 41 | 48 | 49 | 41 | 11 | 17 | 37 |
| 22 | 37 | 40 | 50 | 48 | 47 | 46 | 46 | 48 | 35 | 11 | 17 | 28 |
| 23 | 37 | 37 | 50 | 44 | 43 | 55 | 46 | 59 | 31 | 12 | 16 | 27 |
| 24 | 38 | 36 | 50 | 41 | 44 | 46 | 52 | 64 | 28 | 11 | 18 | 46 |
| 25 | 46 | 40 | 50 | 39 | 43 | 42 | 51 | 60 | 27 | 10 | 27 | 49 |
| 26 | 43 | 33 | 50 | 39 | 50 | 40 | 51 | 67 | 26 | 10 | 31 | 32 |
| 27 | 39 | 20 | 50 | 39 | 48 | 45 | 46 | 85 | 25 | 11 | 27 | 28 |
| 28 | 38 | 30 | 50 | 39 | 45 | 37 | 42 | 65 | 24 | 11 | 24 | 30 |
| 29 | 39 | 35 | 50 | 39 | --- | 34 | 40 | 57 | 23 | 9.6 | 23 | 69 |
| 30 | 40 | 45 | 50 | 42 | --- | 43 | 40 | 53 | 23 | 11 | 21 | 57 |
| 31 | 41 | --- | 50 | 45 | --- | 38 | --- | 51 | --- | 11 | 20 | --- |
| TOTAL | 1188 | 1144 | 1525 | 1250 | 1381 | 1309 | 1615 | 1763 | 1324 | 497.6 | 486 | 845 |
| MEAN | 38.3 | 38.1 | 49.2 | 40.3 | 49.3 | 42.2 | 53.8 | 56.9 | 44.1 | 16.1 | 15.7 | 28.2 |
| MAX | 46 | 46 | 50 | 50 | 63 | 55 | 89 | 85 | 87 | 30 | 31 | 69 |
| MIN | 36 | 20 | 45 | 32 | 39 | 34 | 38 | 41 | 23 | 9.6 | 10 | 18 |
| AC-FT | 2360 | 2270 | 3020 | 2480 | 2740 | 2600 | 3200 | 3500 | 2630 | 987 | 964 | 1680 |
| CAL YR 1976 | TOTAL | 39114.0 | MEAN | 107 | MAX 615 | MIN 20 | AC-FT | 77580 | | | | |
| WTR YR 1977 | TOTAL | 14327.6 | MEAN | 39.3 | MAX 89 | MIN 9.6 | AC-FT | 28420 | | | | |

SUMMER LAKE BASIN

39

10388001 ANA RIVER NEAR SUMMER LAKE, OR

LOCATION.--Lat 43°00'00", long 120°45'00", in SE¼ sec.6, T.30 S., R.17 E., Lake County, Hydrologic Unit 17120005, on left bank 300 ft (91 m) downstream from diversion dam and 2.0 mi (3.2 km) northeast of town of Summer Lake.

PERIOD OF RECORD.--October 1929 to September 1939 (river only); June to September 1928, April 1931 to July 1938, and April 1940 to September 1942 (irrigation season records for Summer Lake Canal only); June 1951 to current year. Prior to June 1951 monthly discharge only, published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 4,160 ft (1,268 m) from plans of Ana River diversion dam. Oct. 1, 1929, to Sept. 30, 1939, at site 80 ft (24 m) downstream at different datum.

REMARKS.--Records good. All records presented herein include flow in Summer Lake Canal which diverts 300 ft (91 m) above station for irrigation of lands along west side of Summer Lake. Flow regulated by gates at diversion dam. Source of stream is Ana River Springs, three-quarters of a mile above station, which are flooded over by pondage behind diversion dam.

AVERAGE DISCHARGE.--29 years (water years 1931-32, 1936, 1952-77), 91.8 ft³/s (2.600 m³/s), 66,510 acre-ft/yr (82.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 188 ft³/s (5.32 m³/s) Dec. 22, 1964, gage height, 2.81 ft (0.856 m), no flow in canal; minimum, 1.0 ft³/s (0.028 m³/s) Jan. 21, 22, 1970; minimum daily, 3.0 ft³/s (0.085 m³/s) Oct. 31, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 109 ft³/s (3.09 m³/s) May 10; minimum, 63 ft³/s (1.78 m³/s) Apr. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|------|------|-------|-------|------|------|
| 1 | 82 | 88 | 91 | 88 | 85 | 89 | 71 | 90 | 87 | 83 | 87 | 88 |
| 2 | 83 | 88 | 91 | 87 | 86 | 89 | 70 | 91 | 87 | 81 | 87 | 87 |
| 3 | 82 | 88 | 91 | 87 | 86 | 88 | 70 | 91 | 87 | 81 | 87 | 87 |
| 4 | 82 | 88 | 91 | 86 | 86 | 88 | 69 | 91 | 87 | 81 | 87 | 86 |
| 5 | 83 | 88 | 92 | 86 | 86 | 87 | 69 | 91 | 86 | 84 | 87 | 87 |
| 6 | 84 | 89 | 92 | 86 | 86 | 87 | 68 | 90 | 87 | 81 | 87 | 84 |
| 7 | 85 | 89 | 92 | 86 | 86 | 86 | 70 | 89 | 87 | 81 | 88 | 85 |
| 8 | 85 | 90 | 92 | 85 | 86 | 86 | 67 | 89 | 87 | 81 | 87 | 86 |
| 9 | 85 | 90 | 92 | 85 | 86 | 85 | 66 | 90 | 87 | 76 | 87 | 86 |
| 10 | 85 | 90 | 91 | 85 | 87 | 84 | 67 | 93 | 87 | 75 | 87 | 86 |
| 11 | 86 | 90 | 91 | 85 | 87 | 84 | 68 | 94 | 87 | 81 | 87 | 87 |
| 12 | 86 | 90 | 91 | 84 | 87 | 83 | 70 | 92 | 87 | 90 | 87 | 87 |
| 13 | 85 | 90 | 91 | 83 | 87 | 82 | 71 | 91 | 86 | 86 | 87 | 88 |
| 14 | 85 | 90 | 91 | 83 | 87 | 82 | 71 | 84 | 88 | 85 | 87 | 89 |
| 15 | 85 | 90 | 90 | 83 | 87 | 81 | 73 | 85 | 87 | 84 | 87 | 90 |
| 16 | 86 | 90 | 90 | 84 | 87 | 81 | 74 | 86 | 86 | 83 | 88 | 90 |
| 17 | 86 | 90 | 89 | 84 | 87 | 80 | 73 | 86 | 86 | 79 | 88 | 91 |
| 18 | 87 | 91 | 89 | 84 | 88 | 79 | 73 | 86 | 85 | 77 | 88 | 91 |
| 19 | 87 | 91 | 88 | 84 | 88 | 79 | 84 | 86 | 82 | 79 | 88 | 92 |
| 20 | 87 | 91 | 88 | 84 | 88 | 78 | 88 | 86 | 85 | 81 | 89 | 93 |
| 21 | 87 | 91 | 88 | 85 | 88 | 78 | 86 | 87 | 84 | 86 | 89 | 94 |
| 22 | 87 | 91 | 88 | 85 | 88 | 77 | 87 | 87 | 86 | 86 | 88 | 93 |
| 23 | 87 | 91 | 87 | 85 | 88 | 76 | 87 | 87 | 87 | 84 | 88 | 93 |
| 24 | 88 | 91 | 88 | 85 | 88 | 76 | 88 | 86 | 86 | 84 | 89 | 93 |
| 25 | 88 | 91 | 88 | 85 | 88 | 75 | 88 | 85 | 87 | 84 | 90 | 92 |
| 26 | 88 | 91 | 88 | 86 | 89 | 75 | 89 | 88 | 87 | 87 | 90 | 92 |
| 27 | 88 | 91 | 88 | 86 | 89 | 74 | 88 | 90 | 88 | 87 | 90 | 92 |
| 28 | 88 | 91 | 88 | 85 | 89 | 73 | 90 | 87 | 89 | 87 | 90 | 90 |
| 29 | 87 | 91 | 88 | 85 | --- | 73 | 90 | 83 | 87 | 87 | 91 | 86 |
| 30 | 87 | 91 | 89 | 85 | --- | 72 | 90 | 88 | 85 | 86 | 91 | 83 |
| 31 | 88 | --- | 88 | 85 | --- | 72 | --- | 88 | --- | 87 | 91 | --- |
| TOTAL | 2659 | 2701 | 2781 | 2636 | 2440 | 2499 | 2315 | 2737 | 2594 | 2574 | 2734 | 2668 |
| MEAN | 85.8 | 90.0 | 89.7 | 85.0 | 87.1 | 80.6 | 77.2 | 88.3 | 86.5 | 83.0 | 88.2 | 88.9 |
| MAX | 88 | 91 | 92 | 88 | 89 | 89 | 90 | 94 | 89 | 90 | 91 | 94 |
| MIN | 82 | 88 | 87 | 83 | 85 | 72 | 66 | 83 | 82 | 75 | 87 | 83 |
| AC-FT | 5270 | 5360 | 5520 | 5230 | 4840 | 4960 | 4590 | 5430 | 5150 | 5110 | 5420 | 5290 |
| CAL YR 1976 | TOTAL | 31583 | MEAN | 86.3 | MAX | 101 | MIN | 63 | AC-FT | 62640 | | |
| WTR YR 1977 | TOTAL | 31338 | MEAN | 85.9 | MAX | 94 | MIN | 66 | AC-FT | 62160 | | |

NOTE.--No gage-height record Jan. 29 to Mar. 1, Mar. 5 to Apr. 5.

SILVER LAKE BASIN

10390001 SILVER CREEK NEAR SILVER LAKE, OR

LOCATION.--Lat 43°06'50", long 121°03'59" in NE¼SW¼ sec.28, T.28 S., R.14 E., Lake County, Hydrologic Unit 17120005, on right bank 1.5 mi (2.4 km) downstream from diversion dam of Silver Lake Irrigation District, 1.5 mi (2.4 km) southwest of town of Silver Lake, and 3 mi (5 km) upstream from Bridge Creek.

DRAINAGE AREA.--180 mi² (466 km²), approximately.

PERIOD OF RECORD.--January 1905 to March 1907, January 1909 to September 1927, February to December 1928, February 1929 to current year.

REVISED RECORDS.--WSP 1564: 1906, 1910, 1921(M). WSP 1734: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Sept. 15, 1932. Datum of gage is 4,361.22 ft (1,329.300 m) above mean sea level. Prior to May 24, 1932, nonrecording gage or water-stage recorder at practically same location at datum 1.00 ft (0.305 m) higher, or nonrecording gage at diversion dam outlet 1.5 mi (2.4 km) upstream at different datum.

REMARKS.--Records fair. Flow regulated by reservoir, capacity, 800 acre-ft (986,000 m³), above diversion dam 1.5 mi (2.4 km) above station and by Thompson Valley Reservoir, capacity, 17,400 acre-ft (21.5 hm³), 11 mi (18 km) above station. Records given herein include flow in Silver Lake Irrigation District Canal which has diverted 1.5 mi (2.4 km) above station 1923-43, 1966-76.

AVERAGE DISCHARGE.--65 years (water years 1906, 1910-27, 1930-41, 1944-77), 30.0 ft³/s (0.850 m³/s), 21,740 acre-ft/yr (26.8 hm³/yr), including diversion by Silver Lake Irrigation District Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft³/s (51.0 m³/s) Mar. 20, 1907, gage height, 10.08 ft (3.072 m), present datum, from rating curve extended above 700 ft³/s (19.8 m³/s); maximum gage height, 10.3 ft (3.139 m) Dec. 22, 1964; no flow at times in 1931-32, 1934, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 48 ft³/s (1.36 m³/s) May 21-23; minimum daily, 1.1 ft³/s (0.031 m³/s) Mar. 5-13, 15-18, Mar. 21 to Apr. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-----------|---------|---------|-------------|-------|------|------|------|------|-------|
| 1 | 18 | 2.4 | 1.7 | 1.6 | 2.0 | 2.0 | 1.1 | 36 | 41 | 38 | 34 | 20 |
| 2 | 19 | 2.5 | 1.7 | 1.6 | 2.0 | 1.6 | 1.1 | 36 | 42 | 35 | 32 | 19 |
| 3 | 18 | 2.6 | 1.7 | 1.6 | 2.0 | 1.2 | 1.1 | 36 | 43 | 32 | 32 | 19 |
| 4 | 18 | 2.8 | 1.7 | 1.5 | 2.0 | 1.9 | 1.2 | 36 | 42 | 33 | 32 | 19 |
| 5 | 18 | 3.0 | 1.7 | 1.5 | 2.0 | 1.1 | 1.2 | 38 | 42 | 33 | 34 | 20 |
| 6 | 18 | 3.2 | 1.7 | 1.4 | 2.5 | 1.1 | 1.2 | 42 | 42 | 28 | 34 | 22 |
| 7 | 19 | 3.3 | 1.7 | 1.3 | 2.5 | 1.1 | 1.2 | 44 | 43 | 27 | 34 | 22 |
| 8 | 19 | 3.4 | 1.7 | 1.2 | 2.5 | 1.1 | 1.2 | 44 | 44 | 26 | 35 | 23 |
| 9 | 19 | 3.6 | 1.7 | 1.5 | 2.5 | 1.1 | 1.2 | 45 | 44 | 26 | 35 | 23 |
| 10 | 20 | 3.7 | 1.7 | 1.8 | 2.5 | 1.1 | 1.2 | 45 | 44 | 26 | 35 | 24 |
| 11 | 20 | 3.3 | 1.7 | 2.2 | 2.5 | 1.1 | 1.2 | 30 | 43 | 26 | 35 | 25 |
| 12 | 20 | 3.0 | 1.7 | 2.6 | 2.5 | 1.1 | 1.3 | 27 | 44 | 28 | 35 | 26 |
| 13 | 19 | 2.7 | 1.7 | 2.6 | 2.5 | 1.1 | 1.4 | 28 | 43 | 30 | 35 | 26 |
| 14 | 20 | 2.4 | 1.7 | 2.6 | 2.5 | 1.2 | 1.6 | 28 | 43 | 30 | 36 | 26 |
| 15 | 20 | 2.1 | 1.7 | 2.0 | 2.5 | 1.1 | 1.7 | 35 | 42 | 31 | 35 | 26 |
| 16 | 19 | 1.9 | 1.7 | 1.7 | 2.5 | 1.1 | 1.8 | 43 | 42 | 34 | 35 | 26 |
| 17 | 10 | 1.7 | 1.7 | 1.7 | 2.5 | 1.1 | 1.9 | 42 | 41 | 34 | 34 | 25 |
| 18 | 3.4 | 1.6 | 1.7 | 2.1 | 2.5 | 1.1 | 2.0 | 39 | 41 | 35 | 34 | 26 |
| 19 | 3.3 | 1.7 | 1.4 | 2.4 | 2.5 | 1.2 | 2.1 | 42 | 42 | 37 | 35 | 26 |
| 20 | 3.3 | 2.5 | 1.4 | 2.7 | 2.5 | 1.2 | 4.3 | 46 | 42 | 39 | 34 | 24 |
| 21 | 3.1 | 2.3 | 1.4 | 2.7 | 2.0 | 1.1 | 7.1 | 48 | 43 | 39 | 33 | 26 |
| 22 | 2.8 | 2.3 | 1.4 | 2.7 | 2.0 | 1.1 | 12 | 48 | 43 | 37 | 28 | 25 |
| 23 | 2.7 | 2.3 | 1.4 | 2.7 | 2.0 | 1.1 | 13 | 48 | 43 | 37 | 26 | 25 |
| 24 | 2.6 | 2.1 | 1.4 | 2.7 | 2.0 | 1.1 | 12 | 46 | 42 | 37 | 26 | 25 |
| 25 | 2.4 | 2.1 | 1.6 | 2.7 | 2.0 | 1.1 | 19 | 45 | 43 | 36 | 27 | 25 |
| 26 | 2.4 | 1.9 | 1.6 | 2.4 | 2.0 | 1.1 | 21 | 44 | 42 | 36 | 28 | 25 |
| 27 | 2.2 | 1.8 | 1.6 | 2.2 | 2.0 | 1.1 | 24 | 44 | 42 | 36 | 28 | 24 |
| 28 | 2.5 | 1.7 | 1.6 | 2.0 | 2.0 | 1.1 | 24 | 44 | 41 | 35 | 26 | 20 |
| 29 | 2.3 | 1.7 | 1.6 | 2.0 | --- | 1.1 | 31 | 43 | 41 | 35 | 24 | 15 |
| 30 | 2.4 | 1.7 | 1.6 | 2.0 | --- | 1.1 | 36 | 42 | 41 | 35 | 20 | 9.2 |
| 31 | 2.4 | --- | 1.6 | 2.0 | --- | 1.1 | --- | 41 | --- | 35 | 20 | --- |
| TOTAL | 351.8 | 73.3 | 50.2 | 63.7 | 63.5 | 36.7 | 230.1 | 1255 | 1271 | 1026 | 971 | 686.2 |
| MEAN | 11.3 | 2.44 | 1.62 | 2.05 | 2.27 | 1.18 | 7.67 | 40.5 | 42.4 | 33.1 | 31.3 | 22.9 |
| MAX | 20 | 3.7 | 1.7 | 2.7 | 2.5 | 2.0 | 36 | 48 | 44 | 39 | 36 | 26 |
| MIN | 2.2 | 1.6 | 1.4 | 1.2 | 2.0 | 1.1 | 1.1 | 27 | 41 | 26 | 20 | 9.2 |
| AC-FT | 698 | 145 | 100 | 126 | 126 | 73 | 456 | 2490 | 2520 | 2040 | 1930 | 1360 |
| CAL YR 1976 | TOTAL | 8579.1 | MEAN 23.4 | MAX 116 | MIN 1.4 | AC-FT 17020 | | | | | | |
| WTR YR 1977 | TOTAL | 6078.5 | MEAN 16.7 | MAX 48 | MIN 1.1 | AC-FT 12060 | | | | | | |

MALHEUR AND HARNEY LAKES BASIN

41

10393500 SILVIES RIVER NEAR BURNS, OR

LOCATION.--Lat 43°42'55", long 119°10'35", in NW¼NW¼ sec.31, T.21 S., R.30 E., Harney County, Hydrologic Unit 17120002, on left bank 5 mi (8 km) downstream from Emigrant Creek and 11 mi (18 km) northwest of Burns.

DRAINAGE AREA.--934 mi² (2,419 km²).

PERIOD OF RECORD.--May 1903 to July 1906, December 1908 to December 1912, March 1913 to September 1917 (irrigation seasons only), March 1918 to October 1920, March 1921 to July 1922 (irrigation seasons only), October 1922 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,195 ft (1,279 m) above mean sea level (river-profile survey). See WSP 1734 for history of changes prior to Oct. 4, 1951.

REMARKS.--Records good except those for December, January, and February, which are fair. No regulation. Diversions for irrigation above station during periods of high flow only.

AVERAGE DISCHARGE.--64 years (water years 1904-5, 1910-12, 1918-21, 1923-77), 164 ft³/s (4.644 m³/s), 118,800 acre-ft/yr (146 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,960 ft³/s (140 m³/s) Apr. 6, 1952, gage height, 15.2 ft (4.63 m); no flow July 19 to Sept. 22, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 124 ft³/s (3.51 m³/s) Apr. 8, gage height, 2.24 ft (0.683 m); minimum, 0.70 ft³/s (0.020 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|----------|------|------|-----------|----------|---------|------|--------------|-------|-------|-------|-------|
| 1 | 29 | 36 | 19 | 18 | 14 | 36 | 39 | 33 | 35 | 7.3 | 1.2 | 4.5 |
| 2 | 28 | 35 | 19 | 18 | 14 | 36 | 34 | 35 | 29 | 7.1 | 1.0 | 4.2 |
| 3 | 30 | 44 | 19 | 18 | 14 | 36 | 37 | 39 | 27 | 6.8 | .92 | 4.2 |
| 4 | 24 | 71 | 19 | 18 | 14 | 36 | 42 | 41 | 24 | 6.5 | .94 | 4.2 |
| 5 | 23 | 61 | 19 | 18 | 15 | 36 | 55 | 42 | 22 | 6.2 | .80 | 4.5 |
| 6 | 22 | 58 | 19 | 17 | 16 | 37 | 74 | 38 | 21 | 6.0 | .81 | 4.3 |
| 7 | 22 | 50 | 19 | 12 | 17 | 39 | 97 | 34 | 20 | 5.7 | .80 | 4.2 |
| 8 | 22 | 39 | 19 | 12 | 18 | 40 | 115 | 36 | 20 | 5.4 | .89 | 3.9 |
| 9 | 22 | 36 | 18 | 12 | 30 | 43 | 105 | 38 | 21 | 5.3 | .75 | 3.9 |
| 10 | 22 | 35 | 18 | 14 | 50 | 42 | 107 | 44 | 21 | 5.1 | .91 | 4.2 |
| 11 | 22 | 35 | 18 | 17 | 50 | 41 | 108 | 112 | 21 | 4.8 | 1.2 | 4.2 |
| 12 | 22 | 34 | 19 | 21 | 50 | 36 | 109 | 101 | 17 | 4.7 | 1.2 | 4.2 |
| 13 | 22 | 29 | 19 | 21 | 50 | 32 | 110 | 100 | 17 | 4.1 | .97 | 4.2 |
| 14 | 21 | 34 | 19 | 21 | 50 | 32 | 111 | 84 | 16 | 3.9 | .85 | 4.2 |
| 15 | 21 | 44 | 19 | 21 | 50 | 31 | 101 | 89 | 16 | 3.6 | 1.9 | 4.7 |
| 16 | 21 | 46 | 19 | 21 | 50 | 31 | 86 | 89 | 16 | 3.4 | 2.6 | 4.9 |
| 17 | 21 | 47 | 18 | 21 | 50 | 31 | 80 | 87 | 15 | 3.2 | 2.4 | 5.2 |
| 18 | 21 | 48 | 17 | 21 | 50 | 31 | 64 | 83 | 14 | 2.9 | 2.3 | 5.7 |
| 19 | 21 | 50 | 16 | 21 | 50 | 30 | 62 | 72 | 13 | 2.5 | 2.2 | 6.1 |
| 20 | 20 | 49 | 15 | 19 | 42 | 29 | 59 | 47 | 13 | 2.3 | 2.1 | 6.6 |
| 21 | 21 | 45 | 15 | 19 | 38 | 30 | 53 | 49 | 12 | 2.0 | 2.0 | 7.5 |
| 22 | 23 | 44 | 16 | 19 | 35 | 33 | 52 | 44 | 12 | 1.8 | 2.2 | 7.8 |
| 23 | 24 | 38 | 17 | 16 | 33 | 39 | 44 | 44 | 12 | 1.8 | 2.3 | 8.0 |
| 24 | 24 | 34 | 18 | 13 | 35 | 38 | 43 | 50 | 11 | 1.6 | 2.5 | 7.6 |
| 25 | 27 | 25 | 19 | 12 | 36 | 36 | 46 | 46 | 10 | 1.6 | 2.8 | 7.8 |
| 26 | 30 | 20 | 19 | 12 | 40 | 40 | 44 | 40 | 9.7 | 1.7 | 3.3 | 8.3 |
| 27 | 31 | 16 | 19 | 11 | 42 | 44 | 38 | 41 | 9.0 | 1.9 | 3.8 | 8.8 |
| 28 | 31 | 16 | 19 | 11 | 38 | 38 | 36 | 42 | 8.5 | 2.0 | 4.3 | 8.4 |
| 29 | 33 | 17 | 19 | 12 | --- | 37 | 34 | 44 | 8.0 | 1.8 | 4.5 | 8.2 |
| 30 | 35 | 18 | 19 | 14 | --- | 37 | 33 | 44 | 7.7 | 1.7 | 4.5 | 8.7 |
| 31 | 35 | --- | 19 | 14 | --- | 37 | --- | 42 | --- | 1.4 | 4.5 | --- |
| TOTAL | 770 | 1154 | 566 | 514 | 991 | 1114 | 2018 | 1730 | 497.9 | 116.1 | 63.44 | 173.2 |
| MEAN | 24.8 | 38.5 | 18.3 | 16.6 | 35.4 | 35.9 | 67.3 | 55.8 | 16.6 | 3.75 | 2.05 | 5.77 |
| MAX | 35 | 71 | 19 | 21 | 50 | 44 | 115 | 112 | 35 | 7.3 | 4.5 | 8.8 |
| MIN | 20 | 16 | 15 | 11 | 14 | 29 | 33 | 33 | 7.7 | 1.4 | .75 | 3.9 |
| AC-FT | 1530 | 2290 | 1120 | 1020 | 1970 | 2210 | 4000 | 3430 | 988 | 230 | 126 | 344 |
| CAL YR 1976 TOTAL | 55212.00 | | | MEAN 151 | MAX 1030 | MIN 12 | | AC-FT 109500 | | | | |
| WTR YR 1977 TOTAL | 9707.64 | | | MEAN 26.6 | MAX 115 | MIN .75 | | AC-FT 19260 | | | | |

SILVIES RIVER BASIN

COMBINED MONTHLY DISCHARGE OF EAST FORK SILVIES RIVER, WEST FORK SILVIES RIVER AND FLOOD BYPASS NEAR LAWEN, OR

The combined flow of the East Fork Silvies River, West Fork Silvies River, and flood bypass provide an estimate of the total flow entering Malheur Lake from the Silvies River Basin.

10395000 EAST FORK SILVIES RIVER NEAR LAWEN, OR.--Lat 43°25'35", long 118°48'05", in SW¼ sec.5, T.25 S., R.32½ E., Harney County, Hydrologic Unit 17120002, on left bank downstream side of road bridge, 1.6 mi (2.6 km) south of Lawen, and 15.2 mi (24.5 km) southeast of Burns. Records available March to June 1916, March 1972 to September 1976. October 1976 to current year (monthly estimated discharge only).

10395500 WEST FORK SILVIES RIVER NEAR LAWEN, OR.--Lat 43°23'00", long 118°50'03", in SE¼SW¼ sec.24, T.25 S., R.32 E., Harney County, Hydrologic Unit 17120002, near right bank on upstream side of bridge on county road, 4.9 mi (7.9 km) southwest of Lawen. Records available March to July 1916, April to July 1917, April to June 1919, April to June 1922, March 1972 to September 1976. October 1976 to current year (monthly estimated discharge only).

10395600 FLOOD BYPASS.--During heavy runoff periods flood water bypasses the East Fork Silvies River and West Fork Silvies River crossing the county road at several bridges and culverts between the East Fork and West Fork. Monthly estimated discharge record available March 1972 to current year.

REMARKS.--Records poor. East Fork and West Fork Silvies River are distributaries that originate at bifurcation of Silvies River 20 mi (32 km) upstream. Diversion by flooding for irrigation of many thousand acres above measuring points. Flows are estimated on the basis of periodic flow measurements, observations of no flow, and hydrographic comparison with upstream station.

Runoff in acre-feet

| | (10395000) East Fork Silvies River | (10395500) West Fork Silvies River | (10395600) Flood Bypass | Combined flow of East Fork Silvies West Fork Silvies and flood bypass |
|-------------------|--|--|----------------------------|--|
| October 1976..... | 10 | 210 | 0 | 220 |
| November..... | 230 | 70 | 0 | 300 |
| December..... | 40 | 0 | 0 | 40 |
| CAL YR 1976..... | 5,110 | 3,080 | 4,500 | 12,690 |
| January 1977..... | 0 | 0 | 0 | 0 |
| February..... | 0 | 0 | 0 | 0 |
| March..... | 0 | 0 | 0 | 0 |
| April..... | 0 | 0 | 0 | 0 |
| May..... | 0 | 0 | 0 | 0 |
| June..... | 0 | 0 | 0 | 0 |
| July..... | 0 | 0 | 0 | 0 |
| August..... | 0 | 0 | 0 | 0 |
| September..... | 0 | 0 | 0 | 0 |
| WTR YR 1977..... | 280 | 280 | 0 | 560 |

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR
(National stream-quality accounting network station)

LOCATION.--Lat 42°47'28", long 118°52'00", in NW¼NW¼ sec.20, T.32 S., R.32½ E., Harney County, Hydrologic Unit 17120003, Bureau of Land Management land, on left bank 1.5 mi (2.4 km) upstream from upper diversions for Malheur Migratory Waterfowl Refuge, 2.0 mi (3.2 km) downstream from Fish Creek, and 3.5 mi (5.6 km) southeast of Frenchglen.

DRAINAGE AREA.--200 mi² (518 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1911 to September 1913, March 1914 to September 1916, April 1917 to September 1921, August to November 1929, April to September 1930, December 1937 to current year. Monthly discharge only for some periods, published in WSP 1314. Published as "near Diamond" 1911-21. Records of discharge for January 1909 to September 1910 (published in WSP 270, 290, and 370, for a non-equivalent site as "near Diamond") have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 330: Drainage area (former site). WSP 860: Drainage area (present site). WSP 1564: 1938-39(M), 1942-43(M), 1948(M), 1951(P), 1952-53. WSP 1714: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,254 ft (1,297 m) above mean sea level (levels by Fish and Wildlife Service). Prior to December 1937, nonrecording gage at several sites within 2 mi (3 km) downstream at different datums. Dec. 6, 1937, to Feb. 14, 1938, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--47 years (water years 1912-13, 1915-16, 1918-21, 1939-77), 119 ft³/s (3.370 m³/s), 86,220 acre-ft/yr (106 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,830 ft³/s (80.1 m³/s) Feb. 28, 1972, gage height, 6.36 ft (1.939 m); minimum, 4.2 ft³/s (0.12 m³/s) Dec. 9, 1972, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 650 ft³/s (18.4 m³/s) and maximum discharge, 1,080 ft³/s (30.6 m³/s) June 7, gage height, 4.38 ft (1.335 m); minimum, 11 ft³/s (0.31 m³/s) Dec. 20, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|---------|--------|-------------|------|------|-------|------|------|------|
| 1 | 56 | 50 | 38 | 38 | 37 | 37 | 42 | 162 | 328 | 64 | 29 | 27 |
| 2 | 56 | 50 | 46 | 59 | 36 | 35 | 38 | 154 | 344 | 62 | 29 | 26 |
| 3 | 59 | 50 | 46 | 51 | 38 | 40 | 42 | 129 | 296 | 60 | 31 | 26 |
| 4 | 56 | 48 | 47 | 44 | 40 | 38 | 51 | 115 | 367 | 58 | 30 | 26 |
| 5 | 56 | 48 | 45 | 42 | 43 | 35 | 67 | 108 | 362 | 56 | 30 | 25 |
| 6 | 54 | 48 | 44 | 26 | 42 | 42 | 83 | 104 | 381 | 54 | 29 | 25 |
| 7 | 54 | 47 | 46 | 27 | 43 | 47 | 104 | 102 | 465 | 50 | 30 | 25 |
| 8 | 53 | 47 | 46 | 26 | 42 | 47 | 143 | 98 | 381 | 48 | 30 | 24 |
| 9 | 53 | 47 | 46 | 30 | 40 | 54 | 146 | 104 | 249 | 46 | 29 | 25 |
| 10 | 51 | 47 | 40 | 40 | 39 | 40 | 92 | 119 | 197 | 46 | 28 | 25 |
| 11 | 51 | 47 | 47 | 50 | 39 | 37 | 94 | 106 | 226 | 44 | 28 | 25 |
| 12 | 51 | 47 | 50 | 54 | 38 | 43 | 102 | 119 | 185 | 42 | 27 | 25 |
| 13 | 51 | 43 | 47 | 48 | 38 | 35 | 124 | 121 | 176 | 42 | 27 | 25 |
| 14 | 51 | 51 | 44 | 52 | 39 | 37 | 96 | 129 | 162 | 40 | 28 | 25 |
| 15 | 51 | 48 | 43 | 56 | 39 | 39 | 96 | 124 | 143 | 39 | 28 | 26 |
| 16 | 50 | 51 | 44 | 59 | 42 | 37 | 117 | 129 | 138 | 38 | 28 | 27 |
| 17 | 50 | 50 | 44 | 54 | 44 | 38 | 126 | 131 | 129 | 37 | 27 | 29 |
| 18 | 50 | 48 | 39 | 46 | 42 | 37 | 106 | 138 | 117 | 35 | 26 | 29 |
| 19 | 48 | 47 | 29 | 42 | 39 | 38 | 98 | 143 | 115 | 35 | 27 | 29 |
| 20 | 48 | 46 | 27 | 37 | 40 | 37 | 98 | 148 | 110 | 37 | 26 | 31 |
| 21 | 50 | 47 | 33 | 35 | 39 | 38 | 102 | 154 | 105 | 35 | 29 | 32 |
| 22 | 50 | 47 | 46 | 32 | 38 | 43 | 104 | 165 | 100 | 35 | 27 | 30 |
| 23 | 50 | 44 | 51 | 29 | 34 | 51 | 117 | 191 | 96 | 34 | 26 | 29 |
| 24 | 48 | 46 | 42 | 25 | 39 | 43 | 154 | 176 | 92 | 34 | 29 | 42 |
| 25 | 50 | 47 | 43 | 28 | 37 | 39 | 188 | 165 | 86 | 34 | 35 | 38 |
| 26 | 51 | 42 | 46 | 26 | 38 | 40 | 188 | 167 | 80 | 33 | 46 | 31 |
| 27 | 48 | 35 | 40 | 29 | 38 | 46 | 159 | 176 | 76 | 32 | 34 | 30 |
| 28 | 50 | 32 | 33 | 29 | 39 | 37 | 159 | 159 | 72 | 31 | 31 | 30 |
| 29 | 50 | 33 | 43 | 30 | --- | 43 | 156 | 154 | 68 | 30 | 30 | 54 |
| 30 | 50 | 35 | 37 | 39 | --- | 42 | 162 | 154 | 66 | 30 | 28 | 47 |
| 31 | 50 | --- | 34 | 41 | --- | 40 | --- | 200 | --- | 30 | 28 | --- |
| TOTAL | 1596 | 1368 | 1306 | 1224 | 1102 | 1255 | 3354 | 4344 | 5712 | 1291 | 910 | 888 |
| MEAN | 51.5 | 45.6 | 42.1 | 39.5 | 39.4 | 40.5 | 112 | 140 | 190 | 41.6 | 29.4 | 29.6 |
| MAX | 59 | 51 | 51 | 59 | 44 | 54 | 188 | 200 | 465 | 64 | 46 | 54 |
| MIN | 48 | 32 | 27 | 25 | 34 | 35 | 38 | 98 | 66 | 30 | 26 | 24 |
| AC-FT | 3170 | 2710 | 2590 | 2430 | 2190 | 2490 | 6650 | 8620 | 11330 | 2560 | 1800 | 1760 |
| CAL YR 1976 | TOTAL | 43746 | MEAN 120 | MAX 608 | MIN 27 | AC-FT 86770 | | | | | | |
| WTR YR 1977 | TOTAL | 24350 | MEAN 66.7 | MAX 465 | MIN 24 | AC-FT 48300 | | | | | | |

MALHEUR AND HARNEY LAKES BASIN

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.
 SPECIFIC CONDUCTANCE: October 1975 to current year.
 WATER TEMPERATURES: October 1975 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 219 micromhos July 23, 1976; minimum daily, 24 micromhos May 31, 1977.
 WATER TEMPERATURES: Maximum, 28.5°C July 31, 1977; minimum, 0.0°C many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 203 micromhos June 19; minimum daily, 24 micromhos May 31.
 WATER TEMPERATURES: Maximum, 28.5°C July 31, minimum recorded, 0.0°C many days in December and January.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM ..7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) | DIS- SOLVED SODIUM (NA) (MG/L) |
|-----------|------|--|-----------------------------|---------------|--|---|--|--|--|---|--|
| OCT 19... | 1000 | 51 | 2.0 | 7.4 | 89 | 82 | 89 | 26 | 8.6 | 3.3 | 4.9 |
| NOV 30... | 1115 | 48 | .0 | 7.2 | 81 | 81 | 815 | 27 | 8.9 | 3.7 | 5.7 |
| JAN 04... | 1200 | 42 | .0 | 7.4 | 79 | <1 | 811 | 29 | 7.8 | 3.2 | 5.0 |
| FEB 08... | 1125 | 41 | 1.0 | 7.3 | 85 | -- | 40 | 27 | 7.7 | 3.3 | 5.0 |
| MAR 08... | 1010 | 44 | 3.0 | 7.7 | 79 | 86 | 819 | 26 | 7.1 | 3.3 | 5.0 |
| APR 05... | 1000 | 72 | 9.0 | 7.6 | 71 | 89 | 88 | 23 | 7.2 | 3.2 | 5.1 |
| MAY 03... | 1145 | 131 | 7.5 | 7.3 | 62 | -- | -- | 20 | 6.9 | 2.8 | 3.5 |
| JUN 01... | 1200 | 314 | 13.0 | 7.4 | 42 | -- | 77 | 14 | 6.3 | 1.9 | 2.7 |
| JUL 06... | 1045 | 46 | 13.7 | 7.6 | 62 | 89 | 8570 | 23 | 8.0 | 3.2 | 4.7 |
| AUG 02... | 1040 | 27 | 19.0 | -- | 86 | 811 | 680 | 24 | 9.4 | 3.6 | 5.3 |
| 11... | 0945 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP 07... | 1030 | 25 | 15.0 | 8.0 | 84 | 88 | 190 | 27 | 7.4 | 3.6 | 5.6 |

| DATE | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA,MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) |
|-----------|--------------------------------------|-----------------------------------|--|---|--|--|--|---|---|------------------------------------|---|
| OCT 19... | 56 | 0 | 2.4 | 1.2 | .1 | .01 | .14 | .15 | .03 | 35 | 0 |
| NOV 30... | 48 | 0 | 11 | .7 | .2 | .68 | .23 | .91 | .10 | 37 | 0 |
| JAN 04... | 53 | 0 | 2.5 | 1.0 | .1 | .48 | .16 | .64 | .05 | 33 | 0 |
| FEB 08... | 51 | 0 | 1.1 | .9 | .1 | .42 | .18 | .60 | .05 | 33 | 0 |
| MAR 08... | 47 | 0 | 5.1 | 1.5 | .2 | .27 | .03 | .30 | .07 | 31 | 0 |
| APR 05... | 45 | 0 | 3.2 | 1.6 | .2 | .23 | .49 | .72 | .14 | 31 | 0 |
| MAY 03... | 38 | 0 | 2.4 | .7 | .1 | .11 | .07 | .18 | .04 | 29 | 0 |
| JUN 01... | 26 | 0 | 4.0 | 1.5 | .1 | .12 | 1.5 | 1.6 | 1.0 | 24 | 2 |
| JUL 06... | 53 | 0 | 2.9 | .6 | .1 | .03 | .00 | .03 | .01 | 33 | 0 |
| AUG 02... | 53 | 0 | 1.1 | 10 | .1 | .01 | .00 | .01 | .03 | 38 | 0 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | .03 | -- | -- |
| SEP 07... | 61 | 0 | .3 | .9 | .1 | .04 | .06 | .10 | .01 | 33 | 0 |

B: RESULTS BASED ON NON-IDEAL COLONY COUNT

MALHEUR AND HARNEY LAKES BASIN

45

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) | DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) | TUR- BID- ITY (JTU) | SUS- PEN- DED SEDI- MENT (MG/L) | SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | ALKA- LITY AS CAC03 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|---|--|---|--|--|------------------------------|--|---|--|--|---|
| OCT 19... | .4 | 72 | 75 | 9.99 | .10 | 3 | 8 | 1.1 | 61 | 46 | .7 |
| NOV 30... | .4 | 79 | 82 | 10.4 | .11 | 8 | 19 | 2.5 | 74 | 39 | -- |
| JAN 04... | .4 | 77 | 76 | 8.90 | .10 | 4 | 11 | 1.3 | 78 | 43 | .9 |
| FEB 08... | .4 | 79 | 71 | 8.75 | .11 | 6 | 10 | 1.1 | 95 | 42 | -- |
| MAR 08... | .4 | 74 | 73 | 8.79 | .10 | 20 | 13 | 1.5 | 86 | 39 | -- |
| APR 05... | .4 | 67 | 67 | 13.0 | .09 | 25 | 23 | 4.5 | 78 | 37 | 5.2 |
| MAY 03... | .3 | 49 | 56 | 17.3 | .07 | 10 | 23 | 8.1 | 78 | 31 | -- |
| JUN 01... | .2 | 43 | 44 | 36.5 | .06 | 120 | -- | -- | -- | 21 | -- |
| JUL 06... | .4 | 64 | 70 | 7.95 | .09 | 2 | 6 | .75 | 93 | 43 | .6 |
| AUG 02... | .4 | 70 | 81 | 5.14 | .10 | 2 | 5 | .37 | 94 | 43 | -- |
| SEP 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP 07... | .4 | 69 | 77 | 4.73 | .09 | 2 | 5 | .34 | 82 | 50 | -- |

| DATE | TOTAL IRON (FE) (UG/L) | DIS- SOLVED IRON (FE) (UG/L) | TOTAL MAN- GANESE (MN) (UG/L) | DIS- SOLVED MAN- GANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS- SOLVED ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | DIS- SOLVED CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | DIS- SOLVED CHRO- MIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|---------------------------------|--|---|--|------------------------------------|---|---|--|--|---|-----------------------------------|
| OCT 19... | 240 | 40 | 0 | 0 | 1 | 0 | <10 | 1 | 0 | 0 | <50 |
| JAN 04... | 470 | 40 | 10 | 10 | -- | 0 | <10 | 0 | 0 | 0 | <50 |
| APR 05... | 2500 | 110 | 60 | 20 | 0 | 0 | <10 | 0 | 0 | 0 | <50 |
| JUL 06... | 330 | 40 | 8 | 0 | 0 | 0 | <10 | 1 | 0 | 0 | <50 |

| DATE | DIS- SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS- SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS- SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS- SOLVED ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | DIS- SOLVED SELE- NIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS- SOLVED MERCURY (HG) (UG/L) |
|-----------|--|-----------------------------------|--|---------------------------------|--|---------------------------------|--|--|---|------------------------------------|---|
| OCT 19... | 0 | <10 | 1 | <100 | 2 | 10 | 10 | 0 | 0 | .0 | .0 |
| JAN 04... | 0 | 10 | 1 | <100 | 0 | 10 | 0 | 0 | 0 | .1 | .1 |
| APR 05... | 0 | 20 | 4 | <100 | 2 | 30 | 10 | 0 | 0 | .1 | .0 |
| JUL 06... | 0 | <10 | 2 | <100 | 4 | 8 | 2 | 4 | 0 | .0 | .0 |

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | OCT 19,76 1000 | NOV 30,76 1115 | JAN 4,77 1200 | FEB 8,77 1125 | MAY 3,77 1145 | | | | | |
|-------------------------------|-------------------|-------------------|------------------|------------------|------------------|--------------|--------------|--------------|--------------|--------------|
| TOTAL CELLS/ML | 360 | 1300 | 400 | 120 | 120 | | | | | |
| DIVERSITY: DIVISION | 0.0 | 1.0 | 0.0 | 1.0 | 0.2 | | | | | |
| ..CLASS | 0.0 | 1.0 | 0.0 | 1.0 | 0.2 | | | | | |
| ...ORDER | 0.0 | 1.1 | 0.0 | 1.0 | 0.5 | | | | | |
| ...FAMILY | 2.5 | 2.0 | 2.3 | 2.1 | 2.5 | | | | | |
|GENUS | 3.0 | 2.4 | 2.4 | 2.1 | 2.8 | | | | | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | | | |
|OOCYSTACEAE | | | | | | | | | | |
|ANKISTRODESMUS | -- | - | -- | - | -- | - | -- | - | -- | - |
|CHLORELLA | -- | - | -- | - | -- | - | -- | - | -- | - |
|SCENEDESMACEAE | | | | | | | | | | |
|SCENEDESMUS | -- | - | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | | | |
| ...CENTRALES | | | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | | | |
|MELOSIRA | -- | - | 12 | 1 | -- | - | -- | - | 5 | 4 |
| ..PENNALES | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | |
|ACHNANTHES | 27 | 8 | * | 0 | 8 | 2 | -- | - | 10 | 8 |
|COCCONEIS | 34 | 9 | * | 0 | 4 | 1 | 3 | 3 | 5 | 4 |
|RHOICOSPHENIA | 34 | 9 | * | 0 | 19 | 5 | -- | - | -- | - |
| ...CYMBELLACEAE | | | | | | | | | | |
|AMPHORA | -- | - | -- | - | -- | - | -- | - | 5 | 4 |
|CYMBELLA | 27 | 8 | 97 | 8 | 91# | 23 | 26# | 21 | 20# | 17 |
|RHOPALODIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...DIATOMACEAE | | | | | | | | | | |
|DIATOMA | -- | - | * | 0 | -- | - | -- | - | -- | - |
| ...EUNOTIACEAE | | | | | | | | | | |
|EUNOTIA | -- | - | -- | - | * | 0 | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | | | |
|FRAGILARIA | -- | - | -- | - | 4 | 1 | -- | - | -- | - |
|HANNAEA | 13 | 4 | * | 0 | 4 | 1 | -- | - | -- | - |
|SYNEDRA | 20 | 6 | 42 | 3 | 8 | 2 | 3 | 3 | -- | - |
| ...GOMPHONEMACEAE | | | | | | | | | | |
|GOMPHONEMA | 34 | 9 | * | 0 | 19 | 5 | -- | - | 10 | 8 |
| ...MERIDIONACEAE | | | | | | | | | | |
|MERIDION | -- | - | -- | - | * | 0 | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | | | |
|FRUSTULIA | -- | - | -- | - | -- | - | -- | - | -- | - |
|NAVICULA | 110# | 30 | 180 | 14 | 110# | 28 | 13 | 11 | 24# | 21 |
| ...PINNULARIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | | | | | |
|NITZSCHIA | 54# | 15 | 300# | 24 | 130# | 32 | 29# | 24 | 34# | 29 |
| ...SURIPELLACEAE | | | | | | | | | | |
|SURIPELLA | 7 | 2 | * | 0 | 4 | 1 | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | | | |
| ...CHROCCOCCALES | | | | | | | | | | |
|CHROCCOCCAEAE | | | | | | | | | | |
|AGMENELLUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...HORMOGONALES | | | | | | | | | | |
| ...OSCILLATORIACEAE | | | | | | | | | | |
|LYNGBYA | -- | - | 240# | 19 | -- | - | -- | - | -- | - |
|OSCILLATORIA | -- | - | 390# | 31 | -- | - | 49# | 39 | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | | | | | |
| ...EUGLENALES | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | |
|EUGLENA | -- | - | -- | - | -- | - | -- | - | 5 | 4 |
|TRACHELOMONAS | -- | - | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued
PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | JUN 1,77 1200 | JUL 6,77 1045 | AUG 2,77 1040 | SEP 7,77 1030 |
|---------------------|------------------|------------------|------------------|------------------|
| TOTAL CELLS/ML | 4500 | 220 | 2800 | 1600 |
| DIVERSITY: DIVISION | 1.0 | 0.6 | 0.7 | 0.6 |
| ..CLASS | 1.0 | 0.6 | 0.7 | 0.6 |
| ..ORDER | 1.0 | 0.6 | 0.7 | 0.6 |
| ...FAMILY | 1.8 | 2.8 | 1.1 | 2.6 |
|GENUS | 2.0 | 3.0 | 1.2 | 2.8 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | |
| ...OOCYSTACEAE | | | | | | | | |
|ANKISTRODESMUS | -- | - | -- | - | * 0 | | -- | - |
|CHLORELLA | * 0 | | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
|SCENEDESMUS | 57 | 1 | 12 | 6 | 21 | 1 | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCAEAE | | | | | | | | |
|MELOSIRA | * 0 | | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
|ACHNANTHES | * 0 | | -- | - | * 0 | | 42 | 3 |
| ...COCCONEIS | 86 | 2 | 12 | 6 | 36 | 1 | 210 | 13 |
| ...RHOICOSPHENIA | 170 | 4 | 27 | 13 | 21 | 1 | 56 | 3 |
| ...CYMBELLACEAE | | | | | | | | |
|AMPHORA | -- | - | 6 | 3 | -- | - | -- | - |
|CYMBELLA | 290 | 6 | 6 | 3 | 42 | 1 | 42 | 3 |
|RHOPALODIA | -- | - | -- | - | * 0 | | -- | - |
| ...DIATOMACEAE | | | | | | | | |
|DIATOMA | * 0 | | -- | - | 42 | 1 | 84 | 5 |
| ...EUNOTIACEAE | | | | | | | | |
|EUNOTIA | -- | - | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
|FRAGILARIA | 130 | 3 | -- | - | -- | - | -- | - |
|HANNAEA | 140 | 3 | -- | - | -- | - | -- | - |
|SYNEDRA | 43 | 1 | 21 | 10 | 100 | 4 | 28 | 2 |
| ...GOMPHONEMACEAE | | | | | | | | |
|GOMPHONEMA | 43 | 1 | 24 | 11 | 36 | 1 | 170 | 10 |
| ...MERIDIONACEAE | | | | | | | | |
|MERIDION | * 0 | | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
|FRUSTULIA | * 0 | | -- | - | -- | - | -- | - |
|NAVICULA | 290 | 6 | 40# | 18 | 78 | 3 | 490# | 30 |
|PINNULARIA | * 0 | | -- | - | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | | | |
|NITZSCHIA | 190 | 4 | 58# | 26 | 42 | 1 | 260# | 16 |
| ...SURIRELLACEAE | | | | | | | | |
|SURIRELLA | -- | - | -- | - | * 0 | | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | |
| ...CHROCOCCOCCALES | | | | | | | | |
| ...CHROCOCCOCCAEAE | | | | | | | | |
|AGMENELLUM | -- | - | -- | - | 21 | 1 | -- | - |
| ...HORMOGONALES | | | | | | | | |
| ...OSCILLATORIAEAE | | | | | | | | |
|LYNGBYA | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIA | 3000# | 67 | -- | - | 2300# | 84 | 250# | 15 |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | | | |
| ...EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
|EUGLENA | -- | - | -- | - | -- | - | -- | - |
| ...TRACHELOMONAS | -- | - | 12 | 6 | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

MALHEUR AND HARNEY LAKES BASIN

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | LENGTH OF EXPO- SURE (DAYS) | BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) | CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) |
|--------------|---|--|--|--|--|--|
| OCT 19... | 41 | 2626 | 1.67 | .287 | -- | -- |
| JAN 04... | -- | 1604 | .144 | .035 | -- | -- |
| JUL 06... | 35 | 2972 | -- | -- | .471 | .256 |

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 104 | 93 | 90 | 87 | 82 | 84 | 77 | 62 | 48 | 142 | 90 | 93 |
| 2 | 105 | 93 | 89 | 83 | 84 | 84 | 78 | 62 | 75 | 114 | 84 | 93 |
| 3 | 104 | 93 | 88 | 81 | 86 | 83 | 78 | 63 | 96 | 95 | 91 | 94 |
| 4 | 103 | 92 | 87 | 78 | 87 | 84 | 76 | 62 | 109 | 79 | 91 | 94 |
| 5 | 104 | 92 | 87 | 79 | 86 | 85 | 73 | 62 | 106 | 74 | 91 | 94 |
| 6 | 105 | 92 | 89 | 86 | 84 | 83 | 83 | 61 | 105 | 76 | 90 | 95 |
| 7 | 107 | 92 | 88 | 88 | 85 | 80 | 90 | 60 | 78 | 77 | 91 | --- |
| 8 | 116 | 92 | 86 | 90 | 84 | 80 | 93 | 59 | 74 | 78 | 91 | --- |
| 9 | 123 | 92 | 86 | 88 | 85 | 75 | 90 | 59 | 104 | 79 | 91 | --- |
| 10 | 121 | 92 | 87 | 85 | 85 | 78 | 95 | 55 | 108 | 82 | 91 | --- |
| 11 | 121 | 91 | 87 | 80 | 86 | 82 | 97 | 53 | 111 | 81 | 91 | --- |
| 12 | 107 | 92 | 87 | 76 | 86 | 82 | 95 | 52 | 118 | 81 | 92 | --- |
| 13 | 102 | 92 | 85 | 77 | 86 | 83 | 94 | 50 | 130 | 83 | 92 | --- |
| 14 | 98 | 91 | 85 | 78 | 86 | 83 | 94 | 48 | 147 | 83 | 92 | --- |
| 15 | 97 | 90 | 85 | 79 | 85 | 83 | 93 | 47 | 163 | 83 | 92 | --- |
| 16 | 95 | 90 | 85 | 79 | 83 | 83 | 89 | 45 | 177 | 83 | 92 | --- |
| 17 | 91 | 89 | 85 | 79 | 81 | 82 | 85 | 43 | 188 | 84 | 91 | --- |
| 18 | 92 | 90 | 87 | 78 | 83 | 82 | 83 | 42 | 195 | 86 | 92 | --- |
| 19 | 89 | 90 | 89 | 79 | 85 | 82 | 83 | 40 | 203 | 85 | 89 | --- |
| 20 | 90 | 89 | 91 | 81 | 85 | 83 | 83 | 38 | 199 | 86 | 89 | --- |
| 21 | 89 | 89 | 92 | 81 | 85 | 80 | 81 | 35 | 190 | 87 | 90 | --- |
| 22 | 90 | 89 | 90 | 80 | 86 | 79 | 78 | 33 | 184 | 86 | 90 | --- |
| 23 | 90 | 89 | 86 | 83 | 86 | 76 | 77 | 31 | 177 | 86 | 92 | --- |
| 24 | 90 | 88 | 86 | 87 | 86 | 76 | 74 | 31 | 175 | 87 | 91 | --- |
| 25 | 91 | 88 | 84 | 89 | 86 | 78 | 71 | 31 | 167 | 88 | 90 | --- |
| 26 | 92 | 89 | 82 | 89 | 86 | 79 | 71 | 30 | 166 | 89 | 89 | --- |
| 27 | 92 | 94 | 83 | 89 | 85 | 78 | 81 | 30 | 160 | 89 | 89 | --- |
| 28 | 92 | 99 | 85 | 88 | 83 | 79 | 80 | 30 | 162 | 88 | 91 | --- |
| 29 | 92 | 97 | 85 | 88 | --- | 79 | 70 | 29 | 165 | 88 | 92 | --- |
| 30 | 92 | 92 | 85 | 87 | --- | 78 | 65 | 28 | 158 | 89 | 93 | --- |
| 31 | 92 | --- | 87 | 85 | --- | 78 | --- | 24 | --- | 90 | 94 | --- |

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 14.5 | 10.5 | 9.5 | 6.0 | --- | --- | --- | --- | --- | --- | | |
| 2 | 12.5 | 9.0 | 12.0 | 6.0 | --- | --- | --- | --- | --- | --- | | |
| 3 | 14.5 | 7.5 | 11.0 | 5.0 | --- | --- | --- | --- | --- | --- | | |
| 4 | 13.5 | 6.0 | 10.0 | 4.5 | --- | --- | --- | --- | --- | --- | | |
| 5 | 14.0 | 6.0 | 10.0 | 4.0 | --- | --- | --- | --- | --- | --- | | |
| 6 | 15.0 | 7.5 | 10.0 | 4.5 | --- | --- | --- | --- | --- | --- | | |
| 7 | 15.0 | 7.0 | 9.0 | 5.0 | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 8 | 16.5 | 7.5 | 8.5 | 4.0 | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 9 | 16.5 | 8.5 | 8.5 | 3.5 | --- | --- | 0.0 | 0.0 | 5.5 | 1.0 | | |
| 10 | 16.0 | 8.5 | 8.5 | 3.0 | --- | --- | 0.0 | 0.0 | 7.0 | 1.0 | | |
| 11 | 15.0 | 8.0 | 7.0 | 3.0 | --- | --- | 0.0 | 0.0 | 6.5 | 1.0 | | |
| 12 | 14.0 | 6.0 | 7.5 | 2.0 | --- | --- | 0.0 | 0.0 | 8.5 | 0.5 | | |
| 13 | 14.0 | 6.0 | 6.0 | 0.5 | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 14 | 14.0 | 6.0 | 7.0 | 3.5 | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 15 | 13.0 | 5.5 | 8.0 | 4.0 | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 16 | 12.0 | 4.5 | 9.5 | 5.5 | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 17 | 11.0 | 4.5 | 10.0 | 5.0 | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 18 | 9.5 | 2.5 | 9.0 | 4.0 | --- | --- | --- | --- | --- | --- | | |
| 19 | 9.5 | 2.0 | 6.5 | 2.5 | --- | --- | --- | --- | --- | --- | | |
| 20 | 9.5 | 1.5 | 5.5 | --- | 0.0 | 0.0 | --- | --- | --- | --- | | |
| 21 | 10.0 | 2.0 | 5.0 | 1.0 | 0.0 | 0.0 | --- | --- | --- | --- | | |
| 22 | 10.0 | 3.5 | 6.0 | 1.5 | 0.0 | 0.0 | --- | --- | --- | --- | | |
| 23 | 10.0 | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 24 | 9.0 | 3.5 | --- | --- | --- | --- | --- | 0.0 | --- | --- | | |
| 25 | 9.0 | 4.5 | --- | --- | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 26 | 10.0 | 4.0 | --- | --- | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 27 | 9.0 | 2.5 | --- | --- | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 28 | 9.0 | 2.0 | --- | --- | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 29 | 7.5 | 3.5 | --- | --- | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 30 | 10.5 | 5.0 | --- | --- | --- | --- | 0.0 | 0.0 | --- | --- | | |
| 31 | 9.0 | 5.0 | --- | --- | --- | --- | 0.0 | 0.0 | --- | --- | | |
| MONTH | 16.5 | 1.5 | 12.0 | 0.5 | --- | --- | 0.0 | 0.0 | 8.5 | 0.5 | | |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-----|-----|-----|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | | | | | 14.0 | --- | 22.0 | 16.5 | 27.5 | 16.0 | 22.5 | 10.0 |
| 2 | | | | | 12.5 | 6.0 | 22.5 | 16.0 | 25.0 | 16.5 | 23.0 | 12.0 |
| 3 | | | | | 13.5 | 8.5 | 20.5 | 14.5 | 26.0 | 16.0 | 24.0 | 12.0 |
| 4 | | | | | 14.5 | 9.0 | 19.5 | 13.0 | 23.5 | 15.5 | 25.0 | 13.0 |
| 5 | | | | | 16.5 | 9.0 | 21.5 | 11.0 | 25.5 | 15.0 | 26.0 | 14.5 |
| 6 | | | | | 15.5 | 10.5 | 22.5 | 11.5 | 25.0 | 15.0 | 26.0 | 14.5 |
| 7 | | | | | 15.0 | 9.5 | 24.0 | 12.5 | 19.5 | 15.5 | 25.0 | 13.5 |
| 8 | | | | | 14.5 | 9.5 | 26.0 | 14.0 | 25.0 | 12.0 | 22.0 | 12.0 |
| 9 | | | | | 14.0 | 11.0 | 22.0 | 15.0 | 25.5 | 13.5 | 21.5 | 9.0 |
| 10 | | | | | 16.0 | 10.5 | 25.0 | 12.5 | 26.0 | 14.0 | 23.0 | 11.0 |
| 11 | | | | | 15.5 | 12.0 | 25.5 | 13.0 | 27.0 | 14.5 | 22.5 | 11.5 |
| 12 | | | | | 15.0 | 11.0 | 25.5 | 15.5 | 27.5 | 15.5 | 22.0 | 11.0 |
| 13 | | | | | 16.0 | 12.0 | 25.5 | 13.0 | 25.5 | 16.0 | 22.0 | 10.5 |
| 14 | | | | | 15.0 | 11.5 | 26.5 | 13.5 | 25.5 | 16.5 | 22.0 | 13.0 |
| 15 | | | | | 18.0 | 11.5 | 27.5 | 15.0 | 25.0 | 15.0 | 20.5 | 12.5 |
| 16 | | | | | 19.5 | 12.5 | 27.0 | 15.5 | 27.0 | 14.5 | 14.0 | 10.0 |
| 17 | | | | | 18.0 | 13.5 | 27.0 | 15.5 | 22.5 | 16.5 | 14.5 | 8.0 |
| 18 | | | | | 18.5 | 13.0 | 26.5 | 16.0 | 26.5 | 15.5 | 18.0 | 9.5 |
| 19 | | | | | 17.5 | 14.0 | 26.0 | 16.0 | 25.5 | 15.5 | 14.0 | 11.0 |
| 20 | | | | | 17.5 | 12.5 | 28.0 | 16.0 | 27.5 | 16.5 | 15.0 | 9.5 |
| 21 | | | | | 21.5 | 12.5 | 26.0 | 15.5 | 26.0 | 17.5 | 15.5 | 8.0 |
| 22 | | | | | 22.5 | 14.5 | 25.5 | 17.0 | 26.0 | 17.0 | 14.5 | 6.0 |
| 23 | | | | | 23.5 | 15.0 | 24.0 | 16.0 | 25.5 | 14.0 | 11.0 | 5.5 |
| 24 | | | | | 24.5 | 15.5 | 24.0 | 16.5 | 18.0 | 15.0 | 16.5 | 8.5 |
| 25 | | | | | 25.5 | 16.0 | 24.0 | 16.0 | 16.0 | 13.5 | 18.5 | 10.0 |
| 26 | | | | | 25.0 | 16.5 | 27.5 | 15.0 | 15.0 | 12.0 | 18.5 | 9.5 |
| 27 | | | | | 25.0 | 16.0 | 25.0 | 16.0 | 15.0 | 10.0 | 17.0 | 9.0 |
| 28 | | | | | 25.0 | 14.5 | 27.0 | 15.0 | 18.5 | 11.0 | 14.0 | 11.0 |
| 29 | | | | | 25.0 | 14.5 | 26.5 | 14.0 | 23.0 | 13.0 | 13.0 | 9.0 |
| 30 | | | | | 23.5 | 14.5 | 27.0 | 14.0 | 20.5 | 12.5 | 11.5 | 7.0 |
| 31 | | | | | --- | --- | 28.5 | 14.5 | 26.5 | 10.5 | --- | --- |
| MONTH | | | | | 25.5 | 6.0 | 28.5 | 11.0 | 27.5 | 10.0 | 26.0 | 5.5 |

MALHEUR AND HARNEY LAKES BASIN

10401500 DONNER UND BLITZEN RIVER NEAR VOLTAGE, OR

LOCATION.--Lat 43°15'05", long 118°50'42", in SW¼ sec.2, T.27 S., R.31 E., Harney County, Hydrologic Unit 17120003, in Malheur National Wildlife Refuge on right bank just downstream from Sodhouse diversion dam, 1.2 mi (1.9 km) southwest of refuge headquarters, and 2.8 mi (4.5 km) southwest of Voltage.

DRAINAGE AREA.--760 mi² (1,970 km²), approximately.

PERIOD OF RECORD.--February 1938 to September 1946, March 1972 to September 1977 (discontinued). Records for April 1916 to June 1919, published in WSP 440, 480, and 510, and March 1921 to June 1922, published in WSP 530 and 550, at site 1.5 mi (2.4 km) downstream, including diversions and overflow through 16 culverts crossing Sodhouse Lane, have been found to be in error and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 4,093.58 ft (1,247.723 m) above mean sea level (levels by Fish and Wildlife Service). Prior to June 16, 1939, nonrecording gage at site 30 ft (9 m) downstream, and Mar. 2 to Sept. 30, 1972, water-stage recorder at present site at datum 4.00 ft (1.219 m) higher, Oct. 1, 1972, to Mar. 4, 1977, water-stage recorder at present site at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good except those for period of no gage-height record and winter periods, which are fair. Some regulation by diversion dams. Many diversions above station for irrigation of lands above and below station.

AVERAGE DISCHARGE.--10 years (water years 1939-43, 1973-77), 84.6 ft³/s (2.396 m³/s), 61,290 acre-ft/yr (75.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 653 ft³/s (18.5 m³/s) Mar. 5, 1972, gage height, 6.30 ft (1.920 m), datum then in use; maximum gage height, 7.26 ft (2.212 m) Jan. 30, 1942, datum then in use; little or no flow at times June to August 1918 at site 1.5 mi (2.4 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 209 ft³/s (5.92 m³/s) Sept. 26, gage height, 6.55 ft (1.996 m); minimum, 3.1 ft³/s (0.088 m³/s) July 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 96 | 56 | 64 | 78 | 54 | 20 | 5.9 | 7.8 | 9.9 | 14 | 3.4 | 4.1 |
| 2 | 94 | 56 | 77 | 67 | 49 | 20 | 5.8 | 7.8 | 14 | 14 | 3.4 | 4.0 |
| 3 | 87 | 54 | 78 | 64 | 50 | 15 | 5.5 | 7.6 | 25 | 14 | 3.5 | 4.1 |
| 4 | 85 | 54 | 79 | 60 | 46 | 13 | 5.3 | 6.6 | 21 | 14 | 3.6 | 4.3 |
| 5 | 83 | 54 | 84 | 62 | 47 | 9.3 | 5.3 | 6.3 | 32 | 13 | 3.7 | 4.5 |
| 6 | 95 | 54 | 82 | 54 | 50 | 7.8 | 5.2 | 6.5 | 41 | 12 | 3.8 | 4.6 |
| 7 | 86 | 53 | 74 | 40 | 46 | 7.6 | 4.9 | 6.6 | 38 | 12 | 3.9 | 4.7 |
| 8 | 83 | 52 | 74 | 43 | 48 | 8.9 | 4.6 | 7.0 | 39 | 12 | 3.8 | 4.8 |
| 9 | 82 | 52 | 76 | 46 | 49 | 54 | 4.7 | 7.1 | 58 | 12 | 3.9 | 4.8 |
| 10 | 81 | 53 | 70 | 50 | 50 | 57 | 4.8 | 6.9 | 39 | 11 | 3.9 | 5.1 |
| 11 | 78 | 53 | 67 | 54 | 47 | 52 | 5.2 | 7.0 | 30 | 9.1 | 3.9 | 5.2 |
| 12 | 77 | 53 | 71 | 60 | 48 | 56 | 5.7 | 10 | 27 | 3.9 | 4.0 | 5.6 |
| 13 | 77 | 52 | 72 | 58 | 52 | 49 | 6.3 | 18 | 22 | 3.6 | 4.1 | 5.9 |
| 14 | 86 | 56 | 68 | 58 | 35 | 43 | 6.5 | 21 | 15 | 3.4 | 4.1 | 6.8 |
| 15 | 86 | 56 | 64 | 52 | 20 | 30 | 6.5 | 23 | 13 | 3.1 | 4.2 | 8.8 |
| 16 | 83 | 62 | 60 | 56 | 15 | 28 | 6.2 | 23 | 12 | 3.2 | 4.2 | 16 |
| 17 | 90 | 60 | 56 | 60 | 18 | 29 | 6.3 | 23 | 13 | 3.3 | 4.3 | 17 |
| 18 | 91 | 58 | 52 | 62 | 24 | 28 | 6.2 | 22 | 13 | 3.4 | 4.3 | 13 |
| 19 | 65 | 57 | 50 | 62 | 34 | 27 | 5.6 | 22 | 13 | 3.4 | 4.3 | 11 |
| 20 | 54 | 56 | 48 | 56 | 47 | 26 | 5.8 | 22 | 12 | 3.4 | 4.3 | 11 |
| 21 | 56 | 58 | 47 | 60 | 48 | 26 | 6.0 | 22 | 12 | 3.5 | 4.3 | 12 |
| 22 | 56 | 57 | 52 | 56 | 44 | 15 | 6.4 | 17 | 13 | 3.5 | 4.4 | 12 |
| 23 | 54 | 56 | 59 | 56 | 45 | 6.6 | 7.3 | 11 | 13 | 3.5 | 4.4 | 13 |
| 24 | 54 | 56 | 62 | 56 | 39 | 6.2 | 7.6 | 12 | 13 | 3.5 | 4.5 | 13 |
| 25 | 56 | 58 | 71 | 52 | 17 | 6.4 | 7.5 | 13 | 14 | 3.6 | 4.5 | 11 |
| 26 | 56 | 56 | 71 | 48 | 17 | 6.3 | 7.5 | 16 | 14 | 3.4 | 4.5 | 33 |
| 27 | 54 | 47 | 80 | 40 | 27 | 6.1 | 7.5 | 16 | 13 | 3.3 | 4.5 | 15 |
| 28 | 56 | 40 | 92 | 44 | 31 | 5.9 | 7.3 | 16 | 13 | 3.3 | 4.5 | 17 |
| 29 | 56 | 45 | 94 | 44 | --- | 6.0 | 7.3 | 13 | 14 | 3.4 | 4.4 | 35 |
| 30 | 56 | 54 | 87 | 46 | --- | 5.9 | 7.4 | 12 | 14 | 3.4 | 4.3 | 27 |
| 31 | 54 | --- | 77 | 50 | --- | 5.7 | --- | 11 | --- | 3.5 | 4.1 | --- |
| TOTAL | 2267 | 1628 | 2158 | 1694 | 1097 | 676.7 | 184.1 | 420.2 | 619.9 | 205.7 | 127.0 | 333.3 |
| MEAN | 73.1 | 54.3 | 69.6 | 54.6 | 39.2 | 21.8 | 6.14 | 13.6 | 20.7 | 6.64 | 4.10 | 11.1 |
| MAX | 96 | 62 | 94 | 78 | 54 | 57 | 7.6 | 23 | 58 | 14 | 4.5 | 35 |
| MIN | 54 | 40 | 47 | 40 | 15 | 5.7 | 4.6 | 6.3 | 9.9 | 3.1 | 3.4 | 4.0 |
| AC-FT | 4500 | 3230 | 4280 | 3360 | 2180 | 1340 | 365 | 833 | 1230 | 408 | 252 | 661 |

CAL YR 1976 TOTAL 32111.0 MEAN 87.7 MAX 411 MIN 10 AC-FT 63690
WTR YR 1977 TOTAL 11410.9 MEAN 31.3 MAX 96 MIN 3.1 AC-FT 22630

NOTE.--No gage-height record Oct. 20 to Dec. 1.

MALHEUR AND HARNEY LAKES BASIN

51

10401800 MALHEUR LAKE NEAR VOLTAGE, OR

LOCATION.--Lat 43°17'30", long 118°49'05", in NE¼NE¼ sec.25, T.26 S., R.31 E., Harney County, Hydrologic Unit 17120001, in Malheur National Wildlife Refuge, 2.0 mi (3.2 km) north of Voltage.

DRAINAGE AREA.--2,150 mi² (5,570 km²), approximately.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,088.52 ft (1,246.181 m) above mean sea level. Gage readings have been reduced to elevations above mean sea level.

REMARKS.--Many diversions on inflow streams for irrigation of many thousands of acres above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4,093.62 ft (1,247.735 m) Apr. 3, 1976; minimum recorded, 4,090.60 ft (1,246.815 m) Oct. 2, 3, 16, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation observed since 1938, 4,095.39 ft (1,248.275 m), occurred in 1952, from records of Malheur National Wildlife Refuge for staff gage in channel of Donner und Blitzen River; entire bed of lake dry September 1934.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4,093.19 ft (1,247.604 m) Feb. 5, 7, 9-11, 14; minimum recorded, 4,090.60 ft (1,246.815 m) Oct. 2, 3, 16.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|---------|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 4090.65 | | 4092.78 | 4092.95 | 4093.17 | --- | 4093.06 | 4092.70 | 4092.60 | 4092.19 | 4091.62 | --- |
| 2 | 4090.60 | | 4092.79 | 4092.97 | 4093.17 | --- | 4093.03 | 4092.68 | 4092.59 | 4092.20 | 4091.58 | --- |
| 3 | 4090.62 | | 4092.79 | 4092.98 | 4093.17 | --- | 4093.01 | 4092.68 | 4092.54 | 4092.17 | 4091.58 | --- |
| 4 | 4090.64 | | 4092.80 | 4092.99 | 4093.18 | --- | 4093.03 | 4092.68 | 4092.57 | 4092.16 | 4091.58 | --- |
| 5 | 4090.64 | | 4092.80 | 4092.99 | 4093.19 | --- | 4093.04 | 4092.71 | 4092.52 | 4092.14 | 4091.54 | --- |
| 6 | 4090.65 | | 4092.82 | 4092.99 | 4093.18 | --- | 4093.02 | 4092.75 | 4092.55 | 4092.11 | 4091.56 | --- |
| 7 | 4090.65 | | 4092.82 | 4093.01 | 4093.19 | --- | 4093.00 | 4092.73 | 4092.51 | 4092.10 | 4091.51 | --- |
| 8 | 4090.65 | | 4092.82 | 4093.02 | 4093.18 | --- | 4092.92 | 4092.76 | 4092.52 | 4092.05 | 4091.51 | 4091.04 |
| 9 | 4090.64 | | 4092.82 | 4093.03 | 4093.19 | 4093.13 | 4092.98 | 4092.75 | 4092.50 | 4092.04 | 4091.52 | 4091.03 |
| 10 | 4090.63 | | 4092.83 | 4093.04 | 4093.19 | 4093.13 | 4092.96 | 4092.75 | 4092.41 | 4092.02 | 4091.50 | 4091.02 |
| 11 | 4090.63 | | 4092.84 | 4093.05 | 4093.19 | 4093.14 | 4092.96 | 4092.79 | 4092.41 | 4092.00 | 4091.47 | 4090.99 |
| 12 | 4090.64 | | 4092.84 | 4093.05 | 4093.18 | 4093.14 | 4092.96 | 4092.77 | 4092.51 | 4091.97 | 4091.43 | 4090.97 |
| 13 | 4090.63 | | 4092.85 | 4093.06 | 4093.18 | 4093.13 | 4092.95 | 4092.76 | 4092.52 | 4091.96 | 4091.39 | 4091.02 |
| 14 | 4090.64 | | 4092.85 | 4093.07 | 4093.19 | 4093.14 | 4092.92 | 4092.75 | 4092.51 | 4091.95 | 4091.43 | 4091.05 |
| 15 | 4090.64 | | 4092.85 | 4093.07 | 4093.18 | 4093.14 | 4092.93 | 4092.72 | 4092.51 | 4091.93 | 4091.36 | 4091.07 |
| 16 | 4090.62 | | 4092.86 | 4093.08 | 4093.18 | 4093.14 | 4092.91 | 4092.69 | 4092.52 | 4091.88 | 4091.38 | 4091.07 |
| 17 | --- | | 4092.87 | 4093.09 | 4093.18 | 4093.11 | 4092.88 | 4092.68 | 4092.48 | 4091.85 | 4091.33 | 4091.04 |
| 18 | --- | | 4092.87 | 4093.10 | 4093.17 | 4093.08 | 4092.87 | 4092.69 | 4092.50 | 4091.84 | 4091.33 | 4091.02 |
| 19 | --- | | 4092.87 | 4093.10 | 4093.17 | 4093.07 | 4092.86 | 4092.69 | 4092.40 | 4091.84 | 4091.31 | 4090.99 |
| 20 | --- | | 4092.89 | 4093.10 | 4093.17 | 4093.07 | 4092.86 | 4092.69 | 4092.37 | 4091.80 | 4091.28 | 4090.99 |
| 21 | --- | | 4092.89 | 4093.11 | 4093.16 | 4093.10 | 4092.84 | 4092.68 | 4092.40 | 4091.79 | 4091.28 | 4091.02 |
| 22 | --- | | 4092.89 | 4093.11 | --- | 4093.09 | 4092.83 | 4092.63 | 4092.39 | 4091.79 | --- | 4091.00 |
| 23 | --- | | 4092.89 | 4093.12 | --- | 4093.01 | 4092.84 | 4092.63 | 4092.37 | 4091.75 | --- | 4091.00 |
| 24 | --- | | 4092.90 | 4093.13 | --- | 4093.08 | 4092.81 | 4092.65 | 4092.35 | 4091.77 | --- | 4091.02 |
| 25 | --- | | 4092.90 | 4093.13 | --- | 4093.09 | 4092.74 | 4092.61 | 4092.32 | 4091.77 | --- | 4091.01 |
| 26 | --- | | 4092.90 | 4093.14 | --- | 4093.04 | 4092.81 | 4092.63 | 4092.29 | 4091.75 | --- | 4091.07 |
| 27 | --- | | 4092.90 | 4093.14 | --- | 4092.96 | 4092.79 | 4092.64 | 4092.27 | 4091.72 | --- | 4091.07 |
| 28 | --- | | 4092.91 | 4093.15 | --- | 4092.96 | 4092.77 | 4092.67 | 4092.25 | 4091.74 | --- | 4091.07 |
| 29 | --- | | 4092.92 | 4093.15 | --- | 4093.02 | 4092.77 | 4092.63 | 4092.23 | 4091.69 | --- | 4091.07 |
| 30 | --- | | 4092.92 | 4093.16 | --- | 4093.05 | 4092.72 | 4092.62 | 4092.21 | 4091.67 | --- | 4091.06 |
| 31 | --- | | 4092.93 | 4093.17 | --- | 4093.00 | --- | 4092.58 | --- | 4091.64 | --- | --- |
| MEAN | --- | --- | 4092.86 | 4093.07 | --- | --- | 4092.90 | 4092.69 | 4092.44 | 4091.91 | --- | --- |
| MAX | --- | --- | 4092.93 | 4093.17 | --- | --- | 4093.06 | 4092.79 | 4092.60 | 4092.20 | --- | --- |
| MIN | --- | --- | 4092.78 | 4092.95 | --- | --- | 4092.72 | 4092.58 | 4092.21 | 4091.64 | --- | --- |

MALHEUR AND HARNEY LAKES BASIN

10401830 MALHEUR LAKE AT BREAK IN COLE ISLAND DIKE NEAR VOLTAGE, OR

LOCATION.--Lat 43°19'57", long 118°43'58", in NW¼ sec.11, T.26 S., R.32 E., Harney County, Hydrologic Unit 17120001, in Malheur National Wildlife Refuge, at southernmost break in Cole Island Dike on Malheur Lake, 6.0 mi (9.7 km) northeast of Voltage.

DRAINAGE AREA.--2,150 mi² (5,570 km²), approximately.

PERIOD OF RECORD.--March 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,090.23 ft (1,246.702 m) above mean sea level. Gage readings have been reduced to elevations above mean sea level.

REMARKS.--Many diversions on inflow streams for irrigation of many thousands of acres above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4,094.58 ft (1,248.028 m) Apr. 19, 1972; minimum observed, 4,090.73 ft (1,246.855 m) Oct. 17, 1973. Minimum elevations have been less than minimum observed at times during period of record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation observed since 1938, 4,095.39 ft (1,248.275 m), occurred in 1952, from records of Malheur National Wildlife Refuge for staff gage in channel of Donner und Blitzen River; entire bed of lake dry September 1934.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4,093.33 ft (1,247.647 m) Mar. 27; minimum recorded, 4,091.38 ft (1,247.053 m) Aug. 9, but may have been less during period Aug. 10 to Sept. 30.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----|
| 1 | --- | 4092.62 | 4092.79 | 4092.91 | 4093.06 | 4093.07 | 4093.07 | 4092.74 | 4092.66 | 4092.22 | 4091.63 | |
| 2 | --- | 4092.63 | 4092.79 | 4092.95 | 4093.06 | 4093.07 | 4093.05 | 4092.72 | 4092.55 | 4092.19 | 4091.61 | |
| 3 | --- | 4092.63 | 4092.80 | 4092.96 | 4093.06 | 4093.08 | 4093.03 | 4092.75 | 4092.56 | 4092.18 | 4091.59 | |
| 4 | --- | 4092.63 | 4092.80 | 4092.96 | 4093.06 | 4093.08 | 4093.03 | 4092.70 | 4092.54 | 4092.14 | 4091.57 | |
| 5 | --- | 4092.64 | 4092.81 | 4092.95 | 4093.06 | 4093.09 | 4093.02 | 4092.69 | 4092.52 | 4092.14 | 4091.55 | |
| 6 | --- | 4092.65 | 4092.81 | 4092.96 | 4093.06 | 4093.10 | 4092.98 | 4092.66 | 4092.51 | 4092.11 | 4091.53 | |
| 7 | --- | 4092.65 | 4092.82 | 4092.96 | 4093.06 | 4093.10 | 4092.97 | 4092.71 | 4092.51 | 4092.09 | 4091.53 | |
| 8 | --- | 4092.66 | 4092.83 | 4092.97 | 4093.06 | 4093.10 | 4093.01 | 4092.72 | 4092.49 | 4092.11 | 4091.50 | |
| 9 | --- | 4092.66 | 4092.83 | 4092.97 | 4093.07 | 4093.10 | 4092.93 | 4092.75 | 4092.48 | 4092.07 | --- | |
| 10 | --- | 4092.66 | 4092.83 | 4092.98 | 4093.07 | 4093.09 | 4092.92 | 4092.77 | 4092.47 | 4092.05 | --- | |
| 11 | --- | 4092.66 | 4092.83 | 4092.98 | 4093.07 | 4093.10 | 4092.91 | 4092.78 | 4092.45 | 4092.03 | --- | |
| 12 | --- | 4092.66 | 4092.84 | 4092.99 | 4093.08 | 4093.10 | 4092.91 | 4092.78 | 4092.45 | 4092.06 | --- | |
| 13 | --- | 4092.66 | 4092.84 | 4093.01 | 4093.08 | 4093.10 | 4092.91 | 4092.80 | 4092.48 | 4091.97 | --- | |
| 14 | --- | 4092.69 | 4092.85 | 4093.01 | 4093.09 | 4093.11 | 4092.89 | 4092.76 | 4092.49 | 4091.96 | --- | |
| 15 | --- | 4092.69 | 4092.85 | 4093.02 | 4093.09 | 4093.11 | 4092.89 | 4092.76 | 4092.48 | 4091.95 | --- | |
| 16 | --- | 4092.69 | 4092.86 | 4093.03 | 4093.09 | 4093.11 | 4092.88 | 4092.74 | 4092.44 | 4091.91 | --- | |
| 17 | --- | 4092.69 | 4092.86 | 4093.03 | 4093.08 | 4093.10 | 4092.86 | 4092.73 | 4092.45 | 4091.90 | --- | |
| 18 | --- | 4092.71 | 4092.86 | 4093.04 | 4093.08 | 4093.10 | 4092.84 | 4092.71 | 4092.43 | 4091.86 | --- | |
| 19 | --- | 4092.70 | 4092.86 | 4093.04 | 4093.08 | 4093.08 | 4092.83 | 4092.70 | 4092.43 | 4091.80 | --- | |
| 20 | 4092.58 | 4092.71 | 4092.87 | 4093.05 | 4093.08 | 4093.09 | 4092.82 | 4092.70 | 4092.41 | 4091.80 | --- | |
| 21 | 4092.58 | 4092.71 | 4092.87 | 4093.05 | 4093.08 | 4093.10 | 4092.82 | 4092.67 | 4092.38 | 4091.78 | --- | |
| 22 | 4092.59 | 4092.71 | 4092.87 | 4093.05 | 4093.07 | 4093.11 | 4092.82 | 4092.69 | 4092.36 | 4091.75 | --- | |
| 23 | 4092.58 | 4092.72 | 4092.88 | 4093.05 | 4093.07 | 4093.15 | 4092.80 | 4092.69 | 4092.34 | 4091.77 | --- | |
| 24 | 4092.61 | 4092.73 | 4092.88 | 4093.06 | 4093.07 | 4093.09 | 4092.81 | 4092.66 | 4092.31 | 4091.75 | --- | |
| 25 | 4092.61 | 4092.71 | 4092.88 | 4093.07 | 4093.07 | 4093.09 | 4092.85 | 4092.67 | 4092.30 | 4091.76 | --- | |
| 26 | 4092.59 | --- | 4092.88 | 4093.06 | 4093.06 | 4093.09 | 4092.76 | 4092.69 | 4092.27 | 4091.78 | --- | |
| 27 | 4092.60 | --- | 4092.90 | 4093.06 | 4093.07 | 4093.20 | 4092.75 | 4092.67 | 4092.25 | 4091.75 | --- | |
| 28 | 4092.60 | --- | 4092.90 | 4093.06 | 4093.08 | 4093.06 | 4092.77 | 4092.66 | 4092.23 | 4091.73 | --- | |
| 29 | 4092.60 | --- | 4092.91 | 4093.06 | --- | 4093.04 | 4092.74 | 4092.64 | 4092.20 | 4091.71 | --- | |
| 30 | 4092.61 | --- | 4092.91 | 4093.06 | --- | 4093.05 | 4092.74 | 4092.63 | 4092.18 | 4091.68 | --- | |
| 31 | --- | --- | 4092.91 | 4093.06 | --- | 4093.06 | --- | 4092.62 | --- | 4091.65 | --- | |
| MEAN | --- | --- | 4092.85 | 4093.01 | 4093.07 | 4093.09 | 4092.89 | 4092.71 | 4092.42 | 4091.92 | --- | --- |
| MAX | --- | --- | 4092.91 | 4093.07 | 4093.09 | 4093.20 | 4093.07 | 4092.80 | 4092.66 | 4092.22 | --- | --- |
| MIN | --- | --- | 4092.79 | 4092.91 | 4093.06 | 4093.04 | 4092.74 | 4092.62 | 4092.18 | 4091.65 | --- | --- |

MALHEUR AND HARNEY LAKES BASIN

53

10402000 MALHEUR LAKE OUTLET AT NARROWS, OR

LOCATION.--Lat 43°16'55", long 118°57'50", in SE¼ sec.26, T.26 S., R.30 E., Harney County, Hydrologic Unit 17120001, on highway bridge at The Narrows.

DRAINAGE AREA.--2,150 mi² (5,570 km²), approximately.

PERIOD OF RECORD.--May 1903 to July 1906, September 1909, March to September 1911, April to June 1912, April to August 1913, June 1914, gage heights only. March to July 1916, March 1972, September 1976, October 1976 to current year (monthly estimated discharge only).

REMARKS.--Records poor. Natural storage in Malheur Lake. Diversions for irrigation of thousands of acres above station. Outflow from Malheur Lake flows into Mud Lake when full spills over a sand reef, or is drained, into Harney Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 242 ft³/s (6.85 m³/s) Apr. 23, 1972; no flow for long periods each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed, 6.4 ft (1.95 m) May 12-16, 1904 (datum then in use, discharge not determined). A discharge of 841 ft³/s (23.8 m³/s) was measured May 5, 1943, gage height, 6.16 ft (1.878 m).

Runoff in acre-feet

| | |
|-------------------|-------|
| October 1976..... | 0 |
| November..... | 0 |
| December..... | 0 |
| CAL YR 1976..... | 3,810 |
| January 1977..... | 0 |
| February..... | 0 |
| March..... | 0 |
| April..... | 0 |
| May..... | 0 |
| June..... | 10 |
| July..... | 10 |
| August..... | 0 |
| September..... | 0 |
| WTR YR 1977..... | 20 |

MALHEUR AND HARNEY LAKES BASIN

10403000 SILVER CREEK NEAR RILEY, OR

LOCATION.--Lat 43°41'30", long 119°39'30", in E½ sec.1, T.22 S., R.25 E., Harney County, Hydrologic Unit 17120004, on right bank 0.4 mi (0.6 km) downstream from Rough Creek, 1.4 mi (2.3 km) upstream from Nicoll Creek, and 14 mi (23 km) northwest of Riley.

DRAINAGE AREA.--228 mi² (591 km²).

PERIOD OF RECORD.--June 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,450 ft (1,360 m), by barometer.

REMARKS.--Records good except those for winter periods, which are fair. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--26 years, 40.8 ft³/s (1.155 m³/s), 29,560 acre-ft/yr (36.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft³/s (51.3 m³/s) Dec. 22, 1964, gage height, 7.49 ft (2.283 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 304 ft³/s (8.61 m³/s) June 8, gage height, 3.56 ft (1.085 m), no peak above base of 350 ft³/s (9.91 m³/s); minimum, 0.37 ft³/s (0.010 m³/s) Aug. 21, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|-------|------|-------|-------|-------|-------|--------|-------|-------|-------|
| 1 | 4.0 | 4.8 | 3.8 | 2.9 | 1.6 | 5.4 | 7.3 | 8.2 | 7.6 | 6.8 | 1.5 | 1.1 |
| 2 | 5.0 | 4.8 | 5.2 | 3.7 | 1.5 | 5.4 | 7.3 | 8.8 | 7.6 | 7.1 | 1.4 | 1.1 |
| 3 | 6.3 | 4.6 | 4.8 | 3.6 | 1.5 | 5.4 | 7.3 | 9.4 | 7.3 | 6.3 | 1.3 | 1.0 |
| 4 | 5.2 | 4.4 | 4.4 | 3.2 | 1.5 | 5.6 | 9.4 | 9.4 | 7.3 | 6.1 | 1.1 | .90 |
| 5 | 4.8 | 4.4 | 4.1 | 2.5 | 1.6 | 5.9 | 14 | 8.8 | 6.8 | 6.8 | 1.0 | .85 |
| 6 | 4.6 | 4.4 | 3.8 | 2.0 | 1.9 | 5.9 | 21 | 8.5 | 6.6 | 6.3 | 1.0 | .70 |
| 7 | 4.4 | 4.4 | 4.0 | 2.1 | 2.1 | 5.9 | 36 | 8.8 | 16 | 5.4 | 1.1 | .65 |
| 8 | 4.4 | 4.2 | 4.3 | 1.9 | 2.3 | 6.1 | 37 | 9.7 | 232 | 4.8 | 1.4 | .56 |
| 9 | 4.2 | 4.2 | 4.6 | 1.8 | 2.5 | 6.1 | 28 | 9.4 | 156 | 4.6 | 1.3 | .56 |
| 10 | 4.2 | 4.2 | 3.5 | 1.7 | 2.7 | 5.9 | 23 | 12 | 104 | 4.4 | 1.1 | .52 |
| 11 | 4.2 | 4.0 | 3.7 | 1.6 | 2.9 | 6.6 | 23 | 16 | 75 | 4.2 | .90 | .56 |
| 12 | 4.2 | 4.2 | 3.5 | 1.6 | 3.1 | 5.4 | 22 | 17 | 60 | 3.8 | .80 | .65 |
| 13 | 4.2 | 4.6 | 3.7 | 1.5 | 3.4 | 5.0 | 22 | 14 | 48 | 3.5 | .75 | .65 |
| 14 | 4.0 | 4.2 | 3.4 | 1.6 | 3.7 | 5.6 | 19 | 12 | 42 | 3.3 | .75 | .65 |
| 15 | 4.0 | 5.4 | 3.5 | 1.4 | 4.0 | 5.9 | 17 | 11 | 35 | 2.8 | .96 | .90 |
| 16 | 4.0 | 5.6 | 3.4 | 1.5 | 4.4 | 5.8 | 18 | 11 | 30 | 2.6 | .90 | 1.0 |
| 17 | 4.0 | 5.4 | 3.3 | 1.6 | 5.1 | 5.4 | 16 | 11 | 26 | 2.3 | .85 | 1.5 |
| 18 | 3.8 | 5.0 | 3.1 | 1.8 | 5.6 | 5.0 | 14 | 11 | 23 | 2.4 | .80 | 1.6 |
| 19 | 3.8 | 4.6 | 3.1 | 1.7 | 5.9 | 6.6 | 13 | 10 | 21 | 2.4 | .75 | 1.7 |
| 20 | 3.6 | 4.6 | 3.1 | 1.6 | 5.9 | 6.6 | 12 | 9.7 | 19 | 2.4 | .61 | 1.6 |
| 21 | 3.8 | 4.0 | 3.1 | 1.7 | 6.3 | 6.6 | 12 | 9.1 | 17 | 2.2 | .52 | 1.6 |
| 22 | 4.2 | 4.8 | 3.6 | 1.5 | 5.9 | 7.6 | 12 | 9.1 | 15 | 2.1 | .61 | 1.5 |
| 23 | 4.2 | 5.0 | 4.0 | 1.4 | 5.6 | 7.9 | 11 | 10 | 13 | 2.2 | .52 | 1.5 |
| 24 | 4.2 | 5.0 | 2.9 | 1.4 | 5.4 | 9.4 | 11 | 11 | 12 | 2.4 | .65 | 2.1 |
| 25 | 4.6 | 3.8 | 3.6 | 1.3 | 5.4 | 10 | 10 | 9.7 | 11 | 4.6 | 1.4 | 2.4 |
| 26 | 4.8 | 2.7 | 3.8 | 1.2 | 5.4 | 8.5 | 10 | 9.4 | 9.7 | 4.6 | 1.9 | 2.0 |
| 27 | 4.6 | 2.4 | 3.6 | 1.0 | 5.6 | 8.5 | 9.1 | 13 | 9.1 | 3.0 | 1.8 | 1.8 |
| 28 | 4.2 | 2.0 | 3.0 | 1.1 | 5.4 | 9.4 | 8.8 | 11 | 8.2 | 2.3 | 1.5 | 2.0 |
| 29 | 4.6 | 2.2 | 3.1 | 1.1 | --- | 8.5 | 8.5 | 9.4 | 7.6 | 1.9 | 1.4 | 2.3 |
| 30 | 5.0 | 2.9 | 2.9 | 1.2 | --- | 8.5 | 8.2 | 8.8 | 7.1 | 1.7 | 1.2 | 2.3 |
| 31 | 4.8 | --- | 2.7 | 1.5 | --- | 7.1 | --- | 8.2 | --- | 1.6 | 1.1 | --- |
| TOTAL | 135.9 | 126.8 | 112.6 | 55.7 | 108.2 | 207.5 | 466.9 | 324.4 | 1039.9 | 116.9 | 32.87 | 38.25 |
| MEAN | 4.38 | 4.23 | 3.63 | 1.80 | 3.86 | 6.69 | 15.6 | 10.5 | 34.7 | 3.77 | 1.06 | 1.28 |
| MAX | 6.3 | 5.6 | 5.2 | 3.7 | 6.3 | 10 | 37 | 17 | 232 | 7.1 | 1.9 | 2.4 |
| MIN | 3.6 | 2.0 | 2.7 | 1.0 | 1.5 | 5.0 | 7.3 | 8.2 | 6.6 | 1.6 | .52 | .52 |
| AC-FT | 270 | 252 | 223 | 110 | 215 | 412 | 926 | 643 | 2060 | 232 | 65 | 76 |
| CAL YR 1976 | TOTAL | 13336.50 | MEAN | 36.4 | MAX | 466 | MIN | 2.0 | AC-FT | 26450 | | |
| WTR YR 1977 | TOTAL | 2765.92 | MEAN | 7.58 | MAX | 232 | MIN | .52 | AC-FT | 5490 | | |

NOTE.--No gage-height record Jan. 9 to Feb. 17.

ALVORD LAKE BASIN

55

10406500 TROUT CREEK NEAR DENIO, NV

LOCATION.--Lat 42°09'20", long 118°27'30", in SW¼ sec.26, T.39 S., R.36 E., Harney County, Hydrologic Unit 17120009, on right bank 0.4 mi (0.6 km) upstream from bridge at mouth of canyon, 5 mi (8 km) east of Trout Creek Ranch, and 14 mi (23 km) northeast of Denio.

DRAINAGE AREA.--88 mi² (228 km²), approximately.

PERIOD OF RECORD.--March 1911 to March 1912, April 1922 to November 1923, March 1925 to September 1931 (irrigation seasons only), April 1932 to current year. Prior to Oct. 1, 1961, published as "near Denio, Oreg."

REVISED RECORDS.--WSP 1564: 1932, 1933-34(M), 1938(M). WSP 1714: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,351.52 ft (1,326.343 m) above mean sea level. Mar. 25, 1911, to Mar. 31, 1912, non-recording gage at bridge 0.4 mi (0.6 km) downstream at different datum. Apr. 28, 1922, to June 14, 1932, water-stage recorder at site 10 ft (3 m) upstream at datum 0.50 ft (0.152 m) higher.

REMARKS.--Records good except those for winter periods, which are fair. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--46 years (water years 1923, 1933-77), 15.3 ft³/s (0.433 m³/s), 11,080 acre-ft/yr (13.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 470 ft³/s (13.3 m³/s) Aug. 1, 1933, gage height, 5.26 ft (1.603 m), from rating curve extended above 230 ft³/s (6.51 m³/s); minimum observed, 0.10 ft³/s (0.030 m³/s) Aug. 4, 1930, Aug. 1, Sept. 12, 28, 1934. Probably no flow at times Sept. 1-19, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 6.0 ft (1.83 m), caused by cloudburst, probably occurred in 1924 or 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32 ft³/s (0.91 m³/s) Apr. 8, no peak above base of 50 ft³/s (1.42 m³/s); maximum gage height, 3.97 ft (1.210 m) Jan. 11, backwater from ice; minimum discharge, 0.42 ft³/s (0.012 m³/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 5.5 | 6.5 | 4.5 | 10 | 4.2 | 4.2 | 4.3 | 5.5 | 11 | 2.2 | 1.1 | 1.7 |
| 2 | 5.7 | 6.7 | 6.0 | 10 | 4.2 | 4.1 | 4.7 | 5.6 | 10 | 5.4 | .99 | 1.6 |
| 3 | 6.3 | 6.7 | 6.8 | 11 | 4.2 | 4.0 | 5.4 | 5.8 | 9.2 | 6.1 | 1.2 | 1.5 |
| 4 | 6.1 | 6.7 | 6.8 | 10 | 4.4 | 4.4 | 6.1 | 5.5 | 8.9 | 4.7 | 1.9 | 1.4 |
| 5 | 6.1 | 6.7 | 6.8 | 9.0 | 4.6 | 4.4 | 7.0 | 7.1 | 8.5 | 3.7 | .90 | 1.4 |
| 6 | 6.3 | 6.7 | 6.8 | 7.5 | 4.8 | 4.4 | 9.2 | 7.2 | 7.5 | 2.9 | .79 | 1.3 |
| 7 | 6.5 | 6.5 | 6.8 | 6.2 | 5.0 | 4.9 | 11 | 6.8 | 7.0 | 2.4 | 2.1 | 1.2 |
| 8 | 6.3 | 6.5 | 5.0 | 6.0 | 5.3 | 5.3 | 15 | 5.9 | 7.2 | 2.1 | .92 | 1.1 |
| 9 | 6.3 | 6.5 | 4.0 | 6.2 | 5.4 | 5.9 | 22 | 6.1 | 7.8 | 1.9 | .67 | 1.4 |
| 10 | 6.1 | 6.5 | 3.3 | 6.5 | 5.4 | 5.7 | 12 | 7.7 | 6.7 | 2.0 | .55 | 1.4 |
| 11 | 6.1 | 6.5 | 3.5 | 7.5 | 5.4 | 5.0 | 11 | 7.0 | 7.8 | 2.3 | .70 | 1.4 |
| 12 | 6.1 | 6.5 | 4.5 | 7.7 | 5.5 | 4.5 | 9.8 | 6.6 | 6.8 | 2.5 | .52 | 1.3 |
| 13 | 6.1 | 6.1 | 6.0 | 7.9 | 5.4 | 4.1 | 9.8 | 7.1 | 5.9 | 2.7 | .50 | 1.3 |
| 14 | 6.1 | 6.7 | 8.0 | 8.1 | 5.3 | 4.1 | 7.5 | 7.1 | 5.9 | 2.8 | .53 | .95 |
| 15 | 6.1 | 6.7 | 8.0 | 8.4 | 5.0 | 4.1 | 7.5 | 7.8 | 5.9 | 2.3 | .59 | 1.2 |
| 16 | 6.1 | 7.0 | 8.2 | 8.2 | 5.1 | 4.1 | 9.6 | 9.9 | 5.5 | 2.0 | .56 | 1.7 |
| 17 | 6.3 | 7.3 | 8.4 | 7.8 | 4.8 | 4.1 | 16 | 11 | 5.0 | 1.7 | .55 | 2.6 |
| 18 | 6.3 | 7.3 | 9.0 | 7.8 | 4.7 | 4.1 | 9.6 | 11 | 4.4 | 1.9 | .63 | 2.3 |
| 19 | 6.3 | 7.0 | 9.5 | 7.4 | 4.6 | 4.1 | 6.9 | 9.6 | 4.0 | 2.1 | .66 | 2.1 |
| 20 | 6.5 | 7.0 | 10 | 7.0 | 4.2 | 4.4 | 6.7 | 9.8 | 4.5 | 2.7 | .63 | 2.4 |
| 21 | 6.5 | 7.0 | 10 | 6.2 | 4.0 | 4.8 | 6.7 | 9.6 | 4.3 | 2.9 | .64 | 2.8 |
| 22 | 7.0 | 7.0 | 10 | 5.6 | 3.8 | 4.8 | 7.6 | 9.9 | 3.9 | 2.9 | .63 | 2.7 |
| 23 | 7.5 | 6.7 | 10 | 5.2 | 3.4 | 4.8 | 8.2 | 13 | 3.3 | 2.8 | .61 | 2.7 |
| 24 | 6.3 | 6.5 | 10 | 4.7 | 3.7 | 4.8 | 9.8 | 13 | 3.1 | 2.6 | .72 | 2.8 |
| 25 | 6.3 | 6.0 | 11 | 4.5 | 4.0 | 4.8 | 11 | 13 | 2.8 | 2.4 | 2.2 | 2.9 |
| 26 | 6.3 | 5.0 | 12 | 4.4 | 4.3 | 4.5 | 7.1 | 13 | 2.7 | 2.3 | 3.7 | 2.7 |
| 27 | 6.3 | 4.0 | 12 | 4.2 | 4.5 | 4.3 | 6.3 | 15 | 3.0 | 2.1 | 2.8 | 2.6 |
| 28 | 6.3 | 3.4 | 11 | 4.1 | 4.4 | 4.3 | 5.6 | 14 | 2.5 | 1.6 | 2.3 | 2.4 |
| 29 | 6.3 | 3.4 | 11 | 4.1 | --- | 4.3 | 5.9 | 13 | 2.3 | .98 | 2.0 | 3.1 |
| 30 | 6.1 | 3.4 | 10 | 4.0 | --- | 4.3 | 5.9 | 12 | 2.4 | 1.3 | 1.8 | 3.3 |
| 31 | 5.9 | --- | 9.5 | 4.1 | --- | 4.3 | --- | 11 | --- | 1.2 | 1.8 | --- |
| TOTAL | 194.0 | 186.5 | 248.4 | 211.3 | 129.6 | 139.9 | 265.2 | 286.6 | 169.8 | 79.48 | 36.19 | 59.25 |
| MEAN | 6.26 | 6.22 | 8.01 | 6.82 | 4.63 | 4.51 | 8.84 | 9.25 | 5.66 | 2.56 | 1.17 | 1.98 |
| MAX | 7.5 | 7.3 | 12 | 11 | 5.5 | 5.9 | 22 | 15 | 11 | 6.1 | 3.7 | 3.3 |
| MIN | 5.5 | 3.4 | 3.3 | 4.0 | 3.4 | 4.0 | 4.3 | 5.5 | 2.3 | .98 | .50 | .95 |
| AC-FT | 385 | 370 | 493 | 419 | 257 | 277 | 526 | 568 | 337 | 158 | 72 | 118 |

CAL YR 1976 TOTAL 6536.20 MEAN 17.9 MAX 130 MIN 3.3 AC-FT 12960
WTR YR 1977 TOTAL 2006.22 MEAN 5.50 MAX 22 MIN .50 AC-FT 3980

NOTE.--No gage-height record Dec. 18 to Feb. 13.

CENTRAL VALLEY IN CALIFORNIA

GOOSE LAKE BASIN

11339500 DREWS CREEK NEAR LAKEVIEW, OR

LOCATION.--Lat 42°07'10", long 120°34'45", in NW¼NE¼ sec.10, T.40 S., R.18 E., Lake County, Hydrologic Unit 18020001, on left bank 10 ft (3 m) upstream from bridge, 2.0 mi (3.2 km) downstream from Willow Creek, 2.7 mi (4.3 km) downstream from Drews Dam, and 13 mi (21 km) southwest of Lakeview.

DRAINAGE AREA.--212 mi² (549 km²).

PERIOD OF RECORD.--January 1909 to September 1930 (yearly estimate only for water year 1920), March 1931 to September 1936 (irrigation seasons only), April 1937 to September 1938, March 1939 to October 1941, February 1942, April 1942 to September 1952, February 1953 to current year. Monthly discharge only October 1921 to September 1925, published in WSP 1315-A. Published as Drew Creek near Lakeview October 1918 to September 1959.

REVISED RECORDS.--WSP 1565: 1909-10, 1913, 1918(M). WRD Oreg. 1974: 1972(M). WSP 1735: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,827.0 ft (1,471.27 m) above mean sea level (levels by Bureau of Reclamation). See WSP 1931 for history of changes prior to July 4, 1953.

REMARKS.--Records good. Record herein, except average discharge, not adjusted for diversion by North Drews Canal. Since 1912, flow regulated by Drews Reservoir, capacity, 62,550 acre-ft (77.1 hm³). Diversion for irrigation above station, and since March 1914, North Drews Canal has diverted above station for irrigation of lands west of Lakeview.

AVERAGE DISCHARGE.--46 years (water years 1913-30, 1938, 1940-41, 1947, 1954-77), 72.1 ft³/s (2.042 m³/s), 52,240 acre-ft/yr (64.4 hm³/yr), including diversion by North Drews Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 3,000 ft³/s (85.0 m³/s) Mar. 1, 2, 1910, from rating curve extended above 1,200 ft³/s (34.0 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 86 ft³/s (2.44 m³/s) June 13, 14; maximum gage height recorded, 2.48 ft (0.756 m) Feb. 1, backwater from ice; minimum discharge, 0.46 ft³/s (0.013 m³/s) Apr. 6, 14, May 2, but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|--------|---------|--------|---------|--------|---------|--------|--------|--------|
| 1 | 24 | 1.1 | .96 | .95 | .72 | .72 | .58 | .64 | 37 | 67 | 15 | 9.8 |
| 2 | 1.9 | 1.1 | 1.1 | .95 | .72 | .72 | .58 | .74 | 48 | 64 | 15 | 9.3 |
| 3 | 1.4 | .96 | 1.1 | .95 | .72 | .72 | .58 | 7.9 | 52 | 64 | 15 | 10 |
| 4 | 1.2 | .96 | 1.1 | .95 | .72 | .72 | .58 | 7.9 | 57 | 63 | 14 | 10 |
| 5 | 1.4 | .96 | 1.1 | .95 | .72 | .72 | .58 | 7.6 | 63 | 61 | 14 | 9.3 |
| 6 | 1.2 | .83 | 1.1 | .60 | .72 | .72 | .58 | 7.6 | 69 | 61 | 14 | 8.8 |
| 7 | 1.1 | .83 | 1.1 | .60 | .72 | .72 | .64 | 7.9 | 70 | 62 | 16 | 7.2 |
| 8 | 1.1 | .70 | 1.1 | .60 | .72 | .72 | .64 | 7.9 | 74 | 49 | 15 | 6.1 |
| 9 | .96 | .70 | 1.1 | .60 | .72 | .72 | .83 | 8.8 | 78 | 41 | 14 | 5.0 |
| 10 | .96 | .70 | 1.1 | .60 | .72 | .72 | .64 | 6.5 | 79 | 41 | 15 | 5.3 |
| 11 | .96 | .70 | 1.1 | .60 | .72 | .72 | .58 | 1.4 | 79 | 41 | 13 | 5.0 |
| 12 | .96 | .83 | 1.1 | .60 | .72 | .72 | .52 | 1.2 | 79 | 40 | 12 | 5.3 |
| 13 | .96 | .83 | 1.1 | .60 | .72 | .72 | .52 | 1.1 | 81 | 40 | 11 | 5.3 |
| 14 | .96 | 1.1 | 1.1 | .60 | .72 | .72 | .46 | 1.1 | 84 | 39 | 11 | 5.3 |
| 15 | .83 | 1.1 | .95 | .60 | .72 | .72 | .52 | .96 | 82 | 35 | 11 | 5.8 |
| 16 | .83 | 1.1 | .95 | .60 | .72 | .58 | .58 | .83 | 82 | 35 | 13 | 5.3 |
| 17 | .83 | 1.1 | .95 | .60 | .72 | .58 | .52 | .70 | 75 | 35 | 13 | 6.1 |
| 18 | .83 | .96 | .95 | .60 | .72 | .58 | .52 | .70 | 73 | 31 | 13 | 6.1 |
| 19 | .83 | .96 | .95 | .60 | .72 | .58 | .52 | .70 | 73 | 27 | 13 | 5.0 |
| 20 | .83 | .83 | .95 | .60 | .72 | .58 | .58 | .70 | 72 | 27 | 12 | 3.8 |
| 21 | .83 | .83 | .95 | .60 | .72 | .58 | .58 | 3.6 | 68 | 27 | 11 | 3.3 |
| 22 | .83 | .83 | .95 | .60 | .72 | .58 | .58 | 4.1 | 67 | 26 | 10 | 3.0 |
| 23 | .83 | .83 | .95 | .60 | .72 | .58 | .70 | 4.3 | 67 | 22 | 9.8 | 4.1 |
| 24 | .83 | .83 | .95 | .60 | .72 | .58 | .83 | 4.6 | 66 | 19 | 11 | 7.2 |
| 25 | 1.1 | .83 | .95 | .60 | .72 | .58 | .96 | 8.8 | 64 | 20 | 11 | 6.8 |
| 26 | 1.1 | .83 | .95 | .60 | .72 | .58 | .96 | 15 | 62 | 21 | 11 | 5.0 |
| 27 | .96 | .83 | .95 | .60 | .72 | .58 | .83 | 14 | 63 | 22 | 11 | 4.1 |
| 28 | .96 | .83 | .95 | .60 | .72 | .58 | .58 | 14 | 63 | 22 | 11 | 3.8 |
| 29 | 1.1 | .96 | .95 | .60 | --- | .58 | .52 | 13 | 63 | 20 | 11 | 3.8 |
| 30 | 1.1 | .96 | .95 | .60 | --- | .58 | .52 | 23 | 64 | 15 | 11 | 3.3 |
| 31 | 1.1 | --- | .95 | .60 | --- | .58 | --- | 36 | --- | 15 | 10 | --- |
| TOTAL | 54.78 | 26.91 | 31.41 | 20.35 | 20.16 | 20.08 | 18.61 | 213.27 | 2054 | 1152 | 386.8 | 178.2 |
| MEAN | 1.77 | .90 | 1.01 | .66 | .72 | .65 | .62 | 6.88 | 68.5 | 37.2 | 12.5 | 5.94 |
| MAX | 24 | 1.1 | 1.1 | .95 | .72 | .72 | .96 | 36 | 84 | 67 | 16 | 10 |
| MIN | .83 | .70 | .95 | .60 | .72 | .58 | .46 | .64 | 37 | 15 | 9.8 | 3.0 |
| AC-FT | 109 | 53 | 62 | 40 | 40 | 40 | 37 | 423 | 4070 | 2280 | 767 | 353 |
| (†) | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 1,380 | 4,690 | 4,160 | 1,070 | 726 |
| (‡) | a21,160 | a21,580 | a21,050 | 20,940 | a21,430 | 22,070 | a21,840 | 20,230 | a10,480 | a3,360 | a1,470 | a583 |
| CAL YR 1976 | TOTAL | 8721.10 | MEAN | 23.8 | MAX | 96 | MIN | .70 | AC-FT | 17300 | AC-FT† | 21,350 |
| WTR YR 1977 | TOTAL | 4176.57 | MEAN | 11.4 | MAX | 84 | MIN | .46 | AC-FT | 8280 | AC-FT‡ | 12,070 |

† Diversion, in acre-feet, North Drews Canal.

‡ Monthend contents in acre-feet, of Drews Reservoir.

a Contents interpolated.

11340500 COTTONWOOD CREEK NEAR LAKEVIEW, OR

LOCATION.--Lat 42°14'05", long 120°30'05", in N½ sec.32, T.38 S., R.19 E., Lake County, Hydrologic Unit 18020001, on right bank 0.7 mi (1.1 km) downstream from Cottonwood Dam and 9 mi (14 km) northwest of Lakeview.

DRAINAGE AREA.--32.9 mi² (85.2 km²).

PERIOD OF RECORD.--November 1908 to September 1919, May 1924 to November 1935, March to December 1936, April to December 1937, April 1938 to November 1942, March to November 1943, March to October 1944, February to November 1945, March 1946 to current year. Monthly discharge only May 1924 to September 1925, published in WSP 1315-A.

REVISED RECORDS.--WSP 1565: 1910-11, 1919, 1929, 1937(M). WSP 1931: Drainage area (former site).

GAGE.--Water-stage recorder. Datum of gage is 4,949.37 ft (1,508.568 m) above mean sea level (levels by Bureau of Reclamation). Prior to June 1, 1919, and May 1, 1924, to June 3, 1932, nonrecording gage at several sites within 0.6 mi (1.0 km) upstream at different datums. June 1 to Sept. 30, 1919, and June 4, 1932, to Sept. 14, 1961, water-stage recorder at site 0.6 mi (1.0 km) upstream at different datums.

REMARKS.--Records good. Flow regulated since 1923 by Cottonwood Reservoir, capacity, 7,540 acre-ft (9.30 hm³). Since October 1961, 240 acre-ft (295,900 m³) unregulated storage in Cottonwood Meadows, 9 mi (14 km) upstream. Diversions for irrigation above station.

AVERAGE DISCHARGE.--56 years (water years 1910-19, 1925-35, 1939-42, 1947-77), 21.4 ft³/s (0.606 m³/s), 15,500 acre-ft/yr (19.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, between 500 and 1,000 ft³/s (14.2 and 28.3 m³/s) during period Apr. 26 to May 1, 1927, when natural flow, estimated as 170 ft³/s (4.81 m³/s), was augmented by water escaping from reservoir through break in outlet conduit near control gates; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46 ft³/s (1.30 m³/s) June 10-12; maximum gage height, 2.05 ft (0.625 m) Dec. 20 (backwater from ice); no flow Aug. 4-23, Sept. 1-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|--------|--------|--------|-------|--------|--------|-------|-------|------|--------|------|------|
| 1 | 5.0 | 1.5 | 1.0 | 1.2 | .72 | .96 | 1.1 | 1.3 | 12 | 18 | .01 | .00 |
| 2 | 1.3 | 1.5 | 1.0 | 1.2 | .72 | .96 | 1.1 | 1.2 | 13 | 14 | .01 | .00 |
| 3 | 1.3 | 1.4 | 1.0 | 1.2 | .72 | .96 | 1.1 | 1.1 | 17 | 14 | .01 | .00 |
| 4 | 1.3 | 1.4 | 1.0 | 1.3 | .72 | .96 | 1.1 | 1.0 | 24 | 14 | .00 | .00 |
| 5 | 1.3 | 1.4 | 1.0 | 1.4 | .72 | .96 | 1.1 | 1.0 | 28 | 14 | .00 | .00 |
| 6 | 1.3 | 1.4 | 1.0 | 1.4 | .72 | .96 | 1.0 | 1.0 | 34 | 15 | .00 | .00 |
| 7 | 1.3 | 1.2 | 1.0 | 1.4 | .72 | .96 | 1.0 | .96 | 38 | 16 | .00 | .00 |
| 8 | 1.3 | 1.2 | 1.0 | 1.4 | .78 | .96 | 1.0 | .96 | 38 | 16 | .00 | .00 |
| 9 | 1.3 | 1.2 | 1.0 | 1.4 | .78 | .96 | 1.1 | .96 | 38 | 14 | .00 | .00 |
| 10 | 1.3 | 1.2 | 1.0 | 1.2 | .78 | .96 | 1.0 | .96 | 44 | 13 | .00 | .00 |
| 11 | 1.3 | 1.2 | 1.1 | 1.2 | .78 | .96 | 1.0 | .96 | 46 | 12 | .00 | .00 |
| 12 | 1.3 | 1.2 | 1.1 | 1.2 | .84 | .96 | 1.0 | .96 | 46 | 10 | .00 | .00 |
| 13 | 1.3 | 1.1 | 1.1 | 1.2 | .84 | .96 | 1.0 | .90 | 44 | 8.9 | .00 | .00 |
| 14 | 1.3 | 1.0 | 1.1 | 1.2 | .84 | .96 | 1.0 | .90 | 44 | 7.8 | .00 | .00 |
| 15 | 1.4 | 1.0 | 1.1 | 1.2 | .84 | .96 | 1.0 | .90 | 44 | 6.4 | .00 | .00 |
| 16 | 1.4 | 1.0 | 1.1 | 1.2 | .84 | .96 | 1.0 | .90 | 32 | 4.4 | .00 | .02 |
| 17 | 1.4 | 1.0 | 1.1 | 1.2 | .84 | .96 | 1.1 | .90 | 28 | 2.4 | .00 | .02 |
| 18 | 1.4 | 1.0 | 1.1 | .96 | .84 | .96 | 1.1 | .90 | 28 | .72 | .00 | .02 |
| 19 | 1.4 | 1.0 | 1.1 | .90 | .84 | .96 | 1.1 | .90 | 26 | .31 | .00 | .04 |
| 20 | 1.4 | 1.0 | 1.2 | .84 | .84 | .96 | 1.2 | .84 | 29 | .17 | .00 | .06 |
| 21 | 1.4 | 1.0 | 1.2 | .84 | .90 | .96 | 1.2 | .84 | 29 | .13 | .00 | .15 |
| 22 | 1.4 | .96 | 1.2 | .78 | .90 | .96 | 1.2 | .84 | 29 | .07 | .00 | .25 |
| 23 | 1.4 | .96 | 1.2 | .76 | .90 | 1.0 | 1.2 | .84 | 28 | .05 | .00 | .25 |
| 24 | 1.4 | .96 | 1.2 | .74 | .90 | 1.0 | 1.2 | .84 | 24 | .03 | .02 | .34 |
| 25 | 1.4 | 1.0 | 1.2 | .72 | .90 | 1.0 | 1.3 | .84 | 23 | .02 | .09 | .31 |
| 26 | 1.4 | 1.0 | 1.2 | .72 | .90 | 1.0 | 1.3 | .84 | 22 | .02 | .04 | .22 |
| 27 | 1.3 | 1.0 | 1.3 | .72 | .90 | 1.0 | 1.3 | .84 | 23 | .01 | .03 | .19 |
| 28 | 1.3 | 1.0 | 1.3 | .72 | .96 | 1.0 | 1.3 | .84 | 22 | .01 | .03 | .22 |
| 29 | 1.4 | 1.0 | 1.3 | .72 | --- | 1.0 | 1.3 | .78 | 22 | .03 | .02 | .09 |
| 30 | 1.4 | 1.0 | 1.2 | .72 | --- | 1.0 | 1.3 | .78 | 19 | .01 | .01 | .15 |
| 31 | 1.4 | --- | 1.2 | .72 | --- | 1.1 | --- | 5.4 | --- | .01 | .01 | --- |
| TOTAL | 45.5 | 33.78 | 34.6 | 32.36 | 22.98 | 30.22 | 33.7 | 33.18 | 894 | 201.49 | .28 | 2.33 |
| MEAN | 1.47 | 1.13 | 1.12 | 1.04 | .82 | .97 | 1.12 | 1.07 | 29.8 | 6.50 | .009 | .078 |
| MAX | 5.0 | 1.5 | 1.3 | 1.4 | .96 | 1.1 | 1.3 | 5.4 | 46 | 18 | .09 | .34 |
| MIN | 1.3 | .96 | 1.0 | .72 | .72 | .96 | 1.0 | .78 | 12 | .01 | .00 | .00 |
| AC-FT | 90 | 67 | 69 | 64 | 46 | 60 | 67 | 66 | 1770 | 400 | .6 | 4.6 |
| (†) | a1,310 | a1,330 | a1,350 | 1,320 | a1,430 | a1,510 | 1,770 | 1,770 | 350 | a0 | 0 | 0 |

CAL YR 1976 TOTAL 4198.38 MEAN 11.5 MAX 54 MIN .96 AC-FT 8330
WTR YR 1977 TOTAL 1364.42 MEAN 3.74 MAX 46 MIN .00 AC-FT 2710

† Month-end contents, in acre-feet, of Cottonwood Reservoir.
a Contents interpolated.

KLAMATH RIVER BASIN

11492200 CRATER LAKE NEAR CRATER LAKE, OR
(Hydrologic bench-mark station)

LOCATION.--Lat 42°58'45", long 122°04'45", (unsurveyed) Crater Lake National Park and Vicinity Quadrangle, Klamath County, Hydrologic Unit 18010201, at boat harbor at end of trail in Cleetwood Cove and 6 mi (10 km) northeast of Crater Lake post office.

DRAINAGE AREA.--26.2 mi² (67.9 km²), of which 20.5 mi² (53.1 km²) is lake area at elevation 6,176 ft (1,882.4 m).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year. 1878 to September 1961 (fragmentary records) available in files of Portland district office.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level, unadjusted. Prior to September 1961, nonrecording gage and various reference points used near old boat landing at abandoned trail (Eagle Cove) directly across Lake.

REMARKS.--Crater Lake occupies the caldera of prehistoric Mount Mazama. It has no visible inlet or outlet. Over a period of years precipitation and runoff from snow melt on the walls of the crater are offset by seepage and evaporation. Records of accumulated annual precipitation, collected at the north rim of Crater Lake as part of the operation of this station, are published annually in reports of the National Weather Service.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 6,179.34 ft (1,883.463 m) Mar. 25, 1975; minimum observed, 6,163.2 ft (1,878.54 m) Sept. 10, 1942.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 6,180.5 ft (1,883.82 m), average of several observations of line of crustose lichens made between 1916 and 1960; that stage may have occurred near the close of the 19th century. The occurrence of living pine trees slightly higher suggests that the lake has not been materially higher for several centuries.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6,177.53 ft (1,882.911 m) Oct. 2; minimum, 6,173.62 ft (1,881.719 m) Sept. 23.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 6177.50 | 6177.11 | 6176.63 | 6176.14 | 6175.73 | 6175.61 | 6175.56 | 6175.21 | 6175.17 | 6174.98 | 6174.45 | 6173.95 |
| 2 | 6177.52 | 6177.08 | 6176.63 | 6176.18 | 6175.71 | 6175.63 | 6175.54 | 6175.22 | 6175.16 | 6174.96 | 6174.45 | 6173.93 |
| 3 | 6177.52 | 6177.07 | 6176.61 | 6176.18 | 6175.70 | 6175.61 | 6175.54 | 6175.29 | 6175.15 | 6174.95 | 6174.42 | 6173.91 |
| 4 | 6177.48 | 6177.05 | 6176.58 | 6176.16 | 6175.68 | 6175.61 | 6175.52 | 6175.30 | 6175.15 | 6174.92 | 6174.39 | 6173.88 |
| 5 | 6177.46 | 6177.04 | 6176.57 | 6176.14 | 6175.67 | 6175.59 | 6175.50 | 6175.31 | 6175.15 | 6174.88 | 6174.38 | 6173.88 |
| 6 | 6177.45 | 6177.02 | 6176.55 | 6176.11 | 6175.65 | 6175.57 | 6175.49 | 6175.30 | 6175.14 | 6174.88 | 6174.34 | 6173.86 |
| 7 | 6177.43 | 6177.00 | 6176.54 | 6176.09 | 6175.63 | 6175.61 | 6175.47 | 6175.29 | 6175.14 | 6174.86 | 6174.34 | 6173.83 |
| 8 | 6177.41 | 6176.98 | 6176.56 | 6176.07 | 6175.61 | 6175.63 | 6175.48 | 6175.29 | 6175.13 | 6174.84 | 6174.32 | 6173.82 |
| 9 | 6177.40 | 6176.96 | 6176.54 | 6176.05 | 6175.61 | 6175.68 | 6175.46 | 6175.31 | 6175.13 | 6174.82 | 6174.29 | 6173.80 |
| 10 | 6177.38 | 6176.95 | 6176.52 | 6176.05 | 6175.59 | 6175.68 | 6175.45 | 6175.31 | 6175.18 | 6174.80 | 6174.27 | 6173.79 |
| 11 | 6177.36 | 6176.92 | 6176.50 | 6176.02 | 6175.58 | 6175.66 | 6175.43 | 6175.31 | 6175.18 | 6174.79 | 6174.27 | 6173.77 |
| 12 | 6177.34 | 6176.90 | 6176.48 | 6176.02 | 6175.56 | 6175.70 | 6175.42 | 6175.30 | 6175.20 | 6174.77 | 6174.24 | 6173.74 |
| 13 | 6177.32 | 6176.90 | 6176.46 | 6176.02 | 6175.55 | 6175.72 | 6175.42 | 6175.29 | 6175.20 | 6174.77 | 6174.22 | 6173.73 |
| 14 | 6177.30 | 6176.91 | 6176.45 | 6176.02 | 6175.54 | 6175.68 | 6175.40 | 6175.29 | 6175.18 | 6174.74 | 6174.20 | 6173.70 |
| 15 | 6177.29 | 6176.93 | 6176.42 | 6175.98 | 6175.52 | 6175.67 | 6175.39 | 6175.29 | 6175.17 | 6174.72 | 6174.18 | 6173.68 |
| 16 | 6177.25 | 6176.92 | 6176.39 | 6175.97 | 6175.49 | 6175.67 | 6175.38 | 6175.30 | 6175.16 | 6174.71 | 6174.16 | 6173.65 |
| 17 | 6177.23 | 6176.90 | 6176.38 | 6175.96 | 6175.48 | 6175.64 | 6175.36 | 6175.29 | 6175.15 | 6174.70 | 6174.15 | 6173.65 |
| 18 | 6177.21 | 6176.88 | 6176.36 | 6175.95 | 6175.46 | 6175.63 | 6175.34 | 6175.27 | 6175.13 | 6174.67 | 6174.13 | 6173.66 |
| 19 | 6177.18 | 6176.88 | 6176.33 | 6175.93 | 6175.43 | 6175.63 | 6175.33 | 6175.25 | 6175.13 | 6174.65 | 6174.11 | 6173.70 |
| 20 | 6177.17 | 6176.86 | 6176.32 | 6175.92 | 6175.43 | 6175.63 | 6175.32 | 6175.23 | 6175.11 | 6174.64 | 6174.09 | 6173.70 |
| 21 | 6177.16 | 6176.84 | 6176.30 | 6175.90 | 6175.50 | 6175.61 | 6175.29 | 6175.23 | 6175.11 | 6174.63 | 6174.08 | 6173.65 |
| 22 | 6177.13 | 6176.83 | 6176.29 | 6175.88 | 6175.52 | 6175.61 | 6175.27 | 6175.23 | 6175.08 | 6174.61 | 6174.06 | 6173.63 |
| 23 | 6177.11 | 6176.82 | 6176.27 | 6175.86 | 6175.55 | 6175.61 | 6175.25 | 6175.23 | 6175.07 | 6174.59 | 6174.05 | 6173.70 |
| 24 | 6177.15 | 6176.80 | 6176.25 | 6175.86 | 6175.54 | 6175.61 | 6175.24 | 6175.22 | 6175.06 | 6174.61 | 6174.06 | 6173.77 |
| 25 | 6177.15 | 6176.77 | 6176.24 | 6175.81 | 6175.54 | 6175.59 | 6175.25 | 6175.22 | 6175.05 | 6174.58 | 6174.08 | 6173.79 |
| 26 | 6177.13 | 6176.73 | 6176.25 | 6175.80 | 6175.54 | 6175.58 | 6175.23 | 6175.24 | 6175.04 | 6174.57 | 6174.06 | 6173.77 |
| 27 | 6177.11 | 6176.70 | 6176.22 | 6175.79 | 6175.54 | 6175.61 | 6175.23 | 6175.23 | 6175.02 | 6174.55 | 6174.04 | 6173.80 |
| 28 | 6177.11 | 6176.68 | 6176.20 | 6175.79 | 6175.61 | 6175.61 | 6175.21 | 6175.22 | 6174.99 | 6174.54 | 6174.04 | 6173.92 |
| 29 | 6177.09 | 6176.66 | 6176.16 | 6175.77 | --- | 6175.59 | 6175.20 | 6175.20 | 6174.98 | 6174.50 | 6174.02 | 6173.90 |
| 30 | 6177.07 | 6176.65 | 6176.16 | 6175.75 | --- | 6175.57 | 6175.20 | 6175.20 | 6174.95 | 6174.48 | 6173.99 | 6173.86 |
| 31 | 6177.11 | --- | 6176.15 | 6175.75 | --- | 6175.57 | --- | 6175.18 | --- | 6174.47 | 6173.97 | --- |
| MEAN | 6177.27 | 6176.89 | 6176.40 | 6175.97 | 6175.57 | 6175.63 | 6175.37 | 6175.26 | 6175.12 | 6174.72 | 6174.19 | 6173.78 |
| MAX | 6177.52 | 6177.11 | 6176.63 | 6176.18 | 6175.73 | 6175.72 | 6175.56 | 6175.31 | 6175.20 | 6174.98 | 6174.45 | 6173.95 |
| MIN | 6177.07 | 6176.65 | 6176.15 | 6175.75 | 6175.43 | 6175.57 | 6175.20 | 6175.18 | 6174.95 | 6174.47 | 6173.97 | 6173.63 |
| CAL YR 1976 | MEAN | 6178.11 | MAX | 6179.04 | MIN | 6176.15 | | | | | | |
| WTR YR 1977 | MEAN | 6175.52 | MAX | 6177.52 | MIN | 6173.63 | | | | | | |

KLAMATH RIVER BASIN

11492200 CRATER LAKE NEAR CRATER LAKE, OR--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

WATER TEMPERATURES: October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.0°C on several days in 1967; minimum, 0.5°C on several days in 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.5°C Aug. 3-10, 21-24; minimum, 4.5°C many days during January to May.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | TEMPER- ATURE (DEG C) | DIS- SOLVED SILICA (SiO ₂) (MG/L) | DIS- SOLVED IRON (FE) (UG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) | DIS- SOLVED SODIUM (NA) (MG/L) | DIS- SOLVED PO- TAS- SIUM (K) (MG/L) | BICAR- BONATE (HCO ₃) (MG/L) | DIS- SOLVED SULFATE (SO ₄) (MG/L) |
|-------|------|-----------------------------|---|--|--|---|--|--|---|---|
| OCT | | | | | | | | | | |
| 15... | 1315 | 12.0 | 19 | 0 | 7.2 | 2.7 | 11 | 1.8 | 32 | 11 |
| JUN | | | | | | | | | | |
| 10... | 1245 | 7.5 | 17 | 10 | 9.2 | 2.6 | 11 | 1.8 | 35 | 9.8 |
| JUL | | | | | | | | | | |
| 13... | 1030 | 13.5 | 18 | 10 | 7.7 | 2.6 | 11 | 2.0 | 34 | 9.7 |
| SEP | | | | | | | | | | |
| 08... | 1230 | -- | 18 | 10 | 9.9 | 2.8 | 11 | 2.0 | 34 | 9.4 |

| DATE | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA+MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER AC-FT) |
|-------|---|--|---|---|------------------------------------|---|---|---|--|
| OCT | | | | | | | | | |
| 15... | 11 | .1 | .08 | .00 | 29 | 3 | .9 | 80 | .11 |
| JUN | | | | | | | | | |
| 10... | 11 | .1 | .01 | .01 | 34 | 5 | .8 | 80 | .11 |
| JUL | | | | | | | | | |
| 13... | 10 | .1 | -- | .00 | 30 | 2 | .9 | 78 | .11 |
| SEP | | | | | | | | | |
| 08... | 12 | .1 | -- | .01 | 36 | 8 | .8 | 82 | .11 |

KLAMATH RIVER BASIN

11492200 CRATER LAKE NEAR CRATER LAKE, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 12.0 | 12.0 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 |
| 2 | 12.0 | 12.0 | 9.5 | 9.0 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 |
| 3 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 |
| 4 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 |
| 5 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 |
| 6 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 7.0 | 5.5 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 7 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 8 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 9 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 10 | 12.0 | 12.0 | 9.0 | 9.0 | 7.0 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 11 | 12.0 | 12.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 12 | 12.0 | 12.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 5.0 | 4.5 | 5.0 | 5.0 |
| 13 | 12.0 | 12.0 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 14 | 12.0 | 12.0 | 9.0 | 8.5 | 6.5 | 6.5 | 5.0 | 4.5 | 5.0 | 5.0 | 5.0 | 5.0 |
| 15 | 12.0 | 11.5 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | 5.0 | 5.0 |
| 16 | 11.5 | 11.5 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | 5.0 | 4.5 |
| 17 | 11.5 | 11.5 | 8.5 | 8.5 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 18 | 11.5 | 11.5 | 8.5 | 8.5 | 6.5 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 19 | 11.5 | 11.0 | 8.5 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 20 | 11.0 | 11.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 21 | 11.0 | 11.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 22 | 11.0 | 11.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 23 | 11.0 | 11.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 24 | 11.0 | 10.5 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 25 | 10.5 | 10.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 26 | 10.0 | 10.0 | 8.0 | 8.0 | 6.0 | 6.0 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 27 | 10.0 | 9.5 | 8.0 | 7.0 | 6.0 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 28 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | 5.0 | 5.0 | 4.5 | 4.5 |
| 29 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | 4.5 | 4.5 |
| 30 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | 4.5 | 4.5 |
| 31 | 9.5 | 9.5 | --- | --- | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | 4.5 | 4.5 |
| MONTH | 12.0 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 5.5 | 4.5 | 5.0 | 4.5 | 5.0 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|-----|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 5.5 | 12.0 | 11.5 | 15.0 | 15.0 | 13.5 | 13.5 |
| 2 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 13.0 | 12.0 | 15.5 | 15.0 | 13.5 | 13.5 |
| 3 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 13.0 | 12.0 | 16.5 | 15.5 | 13.5 | 13.5 |
| 4 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 12.0 | 12.0 | 16.5 | 16.0 | 13.5 | 13.5 |
| 5 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 12.0 | 12.0 | 16.5 | 16.0 | 14.0 | 13.5 |
| 6 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 12.0 | 12.0 | 16.5 | 16.0 | 14.0 | 13.5 |
| 7 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 12.0 | 12.0 | 16.5 | 16.0 | 14.0 | 13.5 |
| 8 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 13.0 | 12.0 | 16.5 | 16.0 | 14.0 | 14.0 |
| 9 | 4.5 | 4.5 | 4.5 | 4.5 | 6.5 | 6.0 | 13.0 | 12.0 | 16.5 | 16.0 | 14.0 | 14.0 |
| 10 | 4.5 | 4.5 | 4.5 | 4.5 | 8.0 | 6.5 | 13.0 | 13.0 | 16.5 | 16.0 | 14.0 | 14.0 |
| 11 | 4.5 | 4.5 | 4.5 | 4.5 | 8.0 | 7.0 | 13.0 | 13.0 | 16.0 | 15.5 | 14.0 | 14.0 |
| 12 | 4.5 | 4.5 | 4.5 | 4.5 | 7.0 | 7.0 | 13.0 | 13.0 | 16.0 | 15.5 | 14.0 | 14.0 |
| 13 | 4.5 | 4.5 | 4.5 | 4.5 | 8.5 | 7.0 | 13.5 | 13.0 | 16.0 | 15.5 | 14.0 | 14.0 |
| 14 | 4.5 | 4.5 | 4.5 | 4.5 | 8.5 | 8.0 | 13.5 | 13.5 | 16.0 | 15.5 | 14.0 | 14.0 |
| 15 | 4.5 | 4.5 | 4.5 | 4.5 | 8.0 | 6.5 | 13.5 | 13.5 | 16.0 | 16.0 | 14.0 | 14.0 |
| 16 | 4.5 | 4.5 | 4.5 | 4.5 | 9.0 | 8.0 | 14.0 | 13.5 | 16.0 | 16.0 | 14.0 | 14.0 |
| 17 | 4.5 | 4.5 | 4.5 | 4.5 | 9.0 | 8.5 | 15.0 | 14.0 | 16.0 | 16.0 | 14.0 | 14.0 |
| 18 | 4.5 | 4.5 | 4.5 | 4.5 | 9.5 | 8.0 | 15.0 | 15.0 | 16.0 | 16.0 | 14.0 | 13.5 |
| 19 | 4.5 | 4.5 | 4.5 | 4.5 | 9.5 | 8.5 | 15.0 | 15.0 | 16.0 | 16.0 | 13.5 | 13.0 |
| 20 | 4.5 | 4.5 | 4.5 | 4.5 | 9.5 | 9.0 | 15.0 | 15.0 | 16.0 | 16.0 | 13.0 | 13.0 |
| 21 | 4.5 | 4.5 | 4.5 | 4.5 | 9.5 | 9.0 | 15.0 | 15.0 | 16.5 | 16.0 | 13.0 | 13.0 |
| 22 | 4.5 | 4.5 | 5.0 | 4.5 | 9.5 | 9.0 | 15.0 | 15.0 | 16.5 | 16.0 | 13.0 | 12.0 |
| 23 | 4.5 | 4.5 | 5.0 | 5.0 | 10.0 | 9.5 | 15.0 | 15.0 | 16.5 | 16.0 | 12.0 | 12.0 |
| 24 | 4.5 | 4.5 | 5.0 | 5.0 | 10.0 | 10.0 | 15.0 | 15.0 | 16.5 | 16.0 | 12.0 | 12.0 |
| 25 | 4.5 | 4.5 | 5.0 | 5.0 | 10.5 | 10.0 | 15.0 | 15.0 | 16.0 | 15.5 | 12.0 | 11.5 |
| 26 | 4.5 | 4.5 | 5.0 | 5.0 | 10.5 | 10.5 | 15.0 | 15.0 | 15.5 | 14.5 | 11.5 | 11.5 |
| 27 | 4.5 | 4.5 | 5.0 | 5.0 | 13.0 | 10.5 | 15.0 | 15.0 | 14.5 | 14.5 | 11.5 | 11.5 |
| 28 | 4.5 | 4.5 | 5.0 | 5.0 | 11.5 | 9.5 | 15.0 | 14.5 | 14.5 | 14.0 | 11.5 | 11.5 |
| 29 | 4.5 | 4.5 | 5.0 | 5.0 | 11.0 | 10.0 | 15.0 | 15.0 | 14.0 | 14.0 | 11.5 | 11.0 |
| 30 | 4.5 | 4.5 | 5.0 | 5.0 | 11.5 | 10.0 | 15.0 | 15.0 | 14.0 | 14.0 | 11.0 | 11.0 |
| 31 | --- | --- | 5.5 | 5.0 | --- | --- | 15.0 | 15.0 | 14.0 | 13.5 | --- | --- |
| MONTH | 4.5 | 4.5 | 5.5 | 4.5 | 13.0 | 5.5 | 15.0 | 11.5 | 16.5 | 13.5 | 14.0 | 11.0 |

KLAMATH RIVER BASIN

61

11493500 WILLAMSON RIVER NEAR KLAMATH AGENCY, OR

LOCATION.--Lat 42°44'25", long 121°50'00", in NW¼SW¼ sec.1, T.33 S., R.7 E., Klamath County, Hydrologic Unit 18010201, on right bank 250 ft (76 m) downstream from highway bridge, 0.6 mi (1.0 km) southwest of railroad station at Kirk, 10 mi (16 km) upstream from Spring Creek, and 10 mi (16 km) northeast of Klamath Agency.

DRAINAGE AREA.--1,290 mi² (3,340 km²), approximately.

PERIOD OF RECORD.--March 1908 to January 1909, April 1909 to June 1910, October 1954 to current year. Monthly discharge only June 1910, published in WSP 1315-B.

REVISED RECORDS.--WSP 1565: 1908-9.

GAGE.--Water-stage recorder. Datum of gage is 4,483.16 ft (1,366.467 m) above mean sea level. Mar. 25, 1908, to June 30, 1910, nonrecording gage or water-stage recorder at two sites about 0.5 mi (0.8 km) upstream at different datums. Oct. 1, 1954, to Sept. 30, 1955, water-stage recorder at present site at datum 2.05 ft (0.625 m) higher.

REMARKS.--Records good above 50 ft³/s (1.42 m³/s) and fair below. Flow affected by natural storage in Klamath Marsh. Small diversions above station for irrigation in vicinity of marsh.

AVERAGE DISCHARGE.--23 years (water years 1955-77), 214 ft³/s (6.060 m³/s), 155,000 acre-ft/yr (191 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,590 ft³/s (45.0 m³/s) Mar. 13, 1910, gage height, 3.7 ft (1.13 m), site and datum then in use, from rating curve extended above 800 ft³/s (22.7 m³/s); maximum gage height, 5.75 ft (1.753 m) Mar. 3, 1958; no flow at times during 1960-74, and 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 365 ft³/s (10.3 m³/s) Mar. 30, gage height, 4.55 ft (1.387 m); no flow July 28 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|----------|---------|---------|--------------|-------|-------|------|--------|------|------|
| 1 | 57 | 109 | 178 | 94 | 41 | 255 | 319 | 186 | 142 | 44 | .00 | .00 |
| 2 | 56 | 115 | 170 | 92 | 40 | 270 | 315 | 181 | 147 | 42 | .00 | .00 |
| 3 | 59 | 117 | 170 | 91 | 40 | 285 | 311 | 173 | 137 | 38 | .00 | .00 |
| 4 | 62 | 119 | 170 | 87 | 40 | 290 | 307 | 170 | 135 | 35 | .00 | .00 |
| 5 | 63 | 121 | 167 | 87 | 40 | 291 | 303 | 173 | 135 | 32 | .00 | .00 |
| 6 | 65 | 124 | 165 | 84 | 40 | 284 | 299 | 178 | 132 | 31 | .00 | .00 |
| 7 | 66 | 126 | 162 | 82 | 38 | 258 | 284 | 175 | 128 | 28 | .00 | .00 |
| 8 | 68 | 130 | 157 | 80 | 38 | 265 | 265 | 175 | 130 | 25 | .00 | .00 |
| 9 | 68 | 132 | 159 | 78 | 36 | 284 | 276 | 175 | 126 | 22 | .00 | .00 |
| 10 | 69 | 135 | 159 | 76 | 35 | 311 | 276 | 170 | 121 | 20 | .00 | .00 |
| 11 | 70 | 139 | 157 | 74 | 35 | 319 | 276 | 175 | 119 | 18 | .00 | .00 |
| 12 | 72 | 142 | 154 | 68 | 36 | 303 | 269 | 175 | 117 | 15 | .00 | .00 |
| 13 | 73 | 142 | 152 | 62 | 36 | 323 | 258 | 173 | 115 | 15 | .00 | .00 |
| 14 | 73 | 144 | 149 | 61 | 36 | 327 | 255 | 167 | 113 | 14 | .00 | .00 |
| 15 | 76 | 147 | 147 | 58 | 36 | 327 | 244 | 165 | 109 | 12 | .00 | .00 |
| 16 | 76 | 152 | 147 | 57 | 36 | 331 | 241 | 167 | 105 | 9.7 | .00 | .00 |
| 17 | 79 | 154 | 142 | 54 | 36 | 336 | 241 | 165 | 100 | 8.2 | .00 | .00 |
| 18 | 79 | 157 | 139 | 53 | 37 | 315 | 228 | 162 | 98 | 6.7 | .00 | .00 |
| 19 | 81 | 162 | 135 | 51 | 76 | 303 | 231 | 162 | 92 | 6.4 | .00 | .00 |
| 20 | 82 | 167 | 132 | 50 | 142 | 315 | 221 | 157 | 87 | 5.6 | .00 | .00 |
| 21 | 84 | 167 | 130 | 48 | 165 | 315 | 212 | 152 | 86 | 5.1 | .00 | .00 |
| 22 | 84 | 173 | 125 | 45 | 175 | 315 | 206 | 154 | 81 | 4.5 | .00 | .00 |
| 23 | 86 | 173 | 120 | 45 | 183 | 307 | 206 | 152 | 76 | 4.0 | .00 | .00 |
| 24 | 86 | 170 | 120 | 47 | 189 | 315 | 203 | 157 | 73 | 3.2 | .00 | .00 |
| 25 | 89 | 173 | 115 | 42 | 197 | 327 | 192 | 152 | 69 | 2.3 | .00 | .00 |
| 26 | 94 | 181 | 115 | 43 | 209 | 323 | 194 | 149 | 63 | 1.3 | .00 | .00 |
| 27 | 98 | 175 | 110 | 43 | 228 | 291 | 192 | 149 | 61 | .04 | .00 | .00 |
| 28 | 100 | 165 | 110 | 43 | 244 | 311 | 189 | 152 | 59 | .00 | .00 | .00 |
| 29 | 101 | 170 | 110 | 43 | --- | 323 | 186 | 152 | 54 | .00 | .00 | .00 |
| 30 | 105 | 173 | 105 | 44 | --- | 340 | 186 | 149 | 51 | .00 | .00 | .00 |
| 31 | 107 | --- | 98 | 43 | --- | 319 | --- | 147 | --- | .00 | .00 | --- |
| TOTAL | 2428 | 4454 | 4369 | 1925 | 2484 | 9478 | 7385 | 5089 | 3061 | 448.04 | .00 | .00 |
| MEAN | 78.3 | 148 | 141 | 62.1 | 88.7 | 306 | 246 | 164 | 102 | 14.5 | .000 | .000 |
| MAX | 107 | 181 | 178 | 94 | 244 | 340 | 319 | 186 | 147 | 44 | .00 | .00 |
| MIN | 56 | 109 | 98 | 42 | 35 | 255 | 186 | 147 | 51 | .00 | .00 | .00 |
| AC-FT | 4820 | 8830 | 8670 | 3820 | 4930 | 18800 | 14650 | 10090 | 6070 | 889 | .00 | .00 |
| CAL YR 1976 | TOTAL | 71847.00 | MEAN 196 | MAX 551 | MIN 11 | AC-FT 142500 | | | | | | |
| WTR YR 1977 | TOTAL | 41121.04 | MEAN 113 | MAX 340 | MIN .00 | AC-FT 81560 | | | | | | |

LOCATION.--Lat 42°26'50", long 121°14'15", in NW¼ sec.13, T.36 S., R.12 E., Klamath County, Hydrologic Unit 18010202, on right bank 1.6 mi (2.6 km) east of Beatty, and 4.6 mi (7.4 km) upstream from Sycan River.

PERIOD OF RECORD.--April to September 1912 and November 1912 to September 1913 (fragmentary), October 1913 to September 1915, February to November 1916, March 1917 to June 1918, May 1919 to October 1920, February 1921 to September 1926 (irrigation seasons only), October 1953 to current year. Monthly discharge only October 1913, published in WSP 1315-B. Prior to October 1917, published as "near Yainax."

GAGE.—Water-stage recorder. Datum of gage is 4,305.35 ft (1,312.271 m) above mean sea level. Apr. 19, 1912, to Feb. 19, 1914, nonrecording gage, Feb. 20, 1914, to Sept. 11, 1917, water-stage recorder, and Sept. 12, 1917, to Sept. 30, 1926, nonrecording gage, at site 2 mi (3 km) upstream at different datum.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,980 ft³/s (198 m³/s) Dec. 23, 1964, gage height, 12.19 ft (3.716 m); minimum, 56 ft³/s (1.59 m³/s) Aug. 11, 17, 1977.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 339 ft³/s (9.60 m³/s) June 8, 9, gage height, 4.04 ft (1.231 m); minimum, 56 ft³/s (1.59 m³/s) Aug. 11, 17.

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|----------|---------|--------|-------|--------|-------|------|------|------|------|
| 1 | 145 | 143 | 137 | 123 | 144 | 150 | 145 | 115 | 114 | 90 | 72 | 86 |
| 2 | 154 | 141 | 133 | 146 | 137 | 145 | 141 | 121 | 107 | 103 | 74 | 88 |
| 3 | 148 | 138 | 132 | 143 | 135 | 148 | 141 | 127 | 105 | 96 | 73 | 88 |
| 4 | 150 | 139 | 141 | 139 | 137 | 139 | 146 | 128 | 102 | 95 | 72 | 86 |
| 5 | 151 | 139 | 135 | 140 | 140 | 145 | 155 | 127 | 104 | 99 | 68 | 85 |
| 6 | 143 | 139 | 132 | 111 | 141 | 150 | 167 | 134 | 107 | 98 | 66 | 81 |
| 7 | 139 | 138 | 137 | 100 | 143 | 149 | 185 | 143 | 157 | 98 | 64 | 78 |
| 8 | 134 | 139 | 141 | 105 | 147 | 149 | 209 | 140 | 317 | 96 | 63 | 73 |
| 9 | 131 | 141 | 140 | 110 | 151 | 159 | 192 | 143 | 290 | 96 | 64 | 68 |
| 10 | 139 | 139 | 126 | 115 | 152 | 151 | 163 | 201 | 255 | 92 | 63 | 72 |
| 11 | 133 | 140 | 126 | 120 | 156 | 147 | 145 | 253 | 215 | 95 | 57 | 73 |
| 12 | 133 | 142 | 133 | 125 | 155 | 148 | 159 | 242 | 202 | 95 | 61 | 73 |
| 13 | 137 | 141 | 141 | 123 | 155 | 143 | 161 | 210 | 190 | 89 | 63 | 74 |
| 14 | 138 | 155 | 134 | 120 | 155 | 138 | 147 | 206 | 230 | 92 | 66 | 73 |
| 15 | 136 | 163 | 135 | 120 | 156 | 144 | 131 | 189 | 250 | 91 | 66 | 79 |
| 16 | 153 | 168 | 136 | 120 | 157 | 145 | 132 | 178 | 230 | 86 | 66 | 85 |
| 17 | 133 | 167 | 135 | 120 | 160 | 142 | 120 | 173 | 215 | 84 | 58 | 109 |
| 18 | 133 | 165 | 126 | 120 | 159 | 142 | 105 | 170 | 200 | 88 | 60 | 123 |
| 19 | 134 | 160 | 119 | 125 | 157 | 143 | 105 | 152 | 185 | 88 | 61 | 121 |
| 20 | 135 | 158 | 125 | 135 | 160 | 143 | 99 | 135 | 170 | 88 | 66 | 139 |
| 21 | 133 | 148 | 125 | 145 | 166 | 142 | 106 | 116 | 155 | 85 | 64 | 141 |
| 22 | 134 | 149 | 132 | 152 | 165 | 145 | 103 | 115 | 140 | 84 | 61 | 128 |
| 23 | 135 | 146 | 139 | 148 | 157 | 153 | 108 | 146 | 130 | 81 | 64 | 124 |
| 24 | 134 | 146 | 131 | 136 | 153 | 159 | 100 | 195 | 120 | 84 | 66 | 154 |
| 25 | 143 | 147 | 133 | 130 | 149 | 151 | 89 | 207 | 110 | 82 | 89 | 158 |
| 26 | 147 | 142 | 141 | 125 | 147 | 148 | 94 | 191 | 100 | 85 | 100 | 137 |
| 27 | 139 | 113 | 141 | 125 | 147 | 152 | 99 | 192 | 89 | 83 | 105 | 126 |
| 28 | 138 | 124 | 126 | 125 | 152 | 148 | 98 | 169 | 93 | 81 | 106 | 125 |
| 29 | 137 | 131 | 133 | 130 | --- | 144 | 94 | 153 | 102 | 74 | 101 | 228 |
| 30 | 141 | 141 | 140 | 138 | --- | 143 | 104 | 144 | 89 | 78 | 91 | 210 |
| 31 | 141 | --- | 131 | 143 | --- | 143 | --- | 131 | --- | 79 | 88 | --- |
| TOTAL | 4321 | 4342 | 4136 | 3957 | 4233 | 4548 | 3943 | 5046 | 4873 | 2755 | 2238 | 3285 |
| MEAN | 139 | 145 | 133 | 128 | 151 | 147 | 131 | 163 | 162 | 88.9 | 72.2 | 110 |
| MAX | 154 | 168 | 141 | 152 | 166 | 159 | 209 | 253 | 317 | 103 | 106 | 228 |
| MIN | 131 | 113 | 119 | 100 | 135 | 138 | 89 | 115 | 89 | 74 | 57 | 68 |
| AC-FT | 8570 | 8610 | 8200 | 7850 | 8400 | 9020 | 7820 | 10010 | 9670 | 5460 | 4440 | 6520 |
| CAL YR 1976 | TOTAL | 83198 | MEAN 227 | MAX 782 | MIN 82 | AC-FT | 165000 | | | | | |
| WTR YR 1977 | TOTAL | 47677 | MEAN 131 | MAX 317 | MIN 57 | AC-FT | 94570 | | | | | |

KLAMATH RIVER BASIN

63

11501000 SPRAGUE RIVER NEAR CHILOQUIN, OR

LOCATION.--Lat 42°35'05", long 121°50'55", in NE¼NW¼ sec.35, T.34 S., R.7 E., Klamath County, Hydrologic Unit 18010202, on right bank 1.0 mi (1.6 km) northeast of Chiloquin, 4.6 mi (7.4 km) upstream from Modoc Point Canal intake, and at mile 5.4 (8.7 km).

DRAINAGE AREA.--1,580 mi² (4,090 km²), approximately.

PERIOD OF RECORD.--July to October 1920, March 1921 to current year. Monthly discharge only July 1920, published in WSP 1315-B. Prior to October 1931, published as "at McCreedy Ranch, near Chiloquin."

REVISED RECORDS.--WSP 591: 1922(M). WSP 1011: 1943(M). WSP 1565: 1921-22.

GAGE.--Water-stage recorder. Datum of gage is 4,202.43 ft (1,280.901 m) above mean sea level. Prior to Oct. 1, 1931, nonrecording gage at site 12 mi (19 km) upstream at different datum.

REMARKS.--Records good. Regulation by ponding at irrigation dams. Diversions above station for irrigation.

AVERAGE DISCHARGE.--56 years (water years 1922-77), 572 ft³/s (16.20 m³/s), 414,400 acre-ft/yr (511 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,900 ft³/s (422 m³/s) Dec. 26, 1964, gage height, 10.37 ft (3.161 m); minimum daily, 50 ft³/s (1.42 m³/s) May 26, 27, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 388 ft³/s (11.0 m³/s) May 13; maximum gage height, 2.16 ft (0.658 m) Jan. 1, backwater from ice; minimum discharge, 117 ft³/s (3.31 m³/s) July 22, 23, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|------|-------|
| 1 | 277 | 310 | 320 | 280 | 301 | 325 | 310 | 199 | 259 | 152 | 131 | 197 |
| 2 | 272 | 310 | 325 | 301 | 305 | 330 | 305 | 207 | 250 | 167 | 141 | 197 |
| 3 | 282 | 310 | 330 | 315 | 310 | 325 | 310 | 215 | 241 | 167 | 152 | 197 |
| 4 | 287 | 310 | 330 | 295 | 301 | 320 | 301 | 228 | 219 | 178 | 156 | 189 |
| 5 | 296 | 305 | 305 | 290 | 296 | 320 | 287 | 241 | 215 | 201 | 145 | 193 |
| 6 | 301 | 305 | 320 | 270 | 301 | 315 | 310 | 241 | 207 | 197 | 141 | 197 |
| 7 | 301 | 305 | 315 | 270 | 310 | 325 | 296 | 250 | 203 | 178 | 148 | 186 |
| 8 | 291 | 305 | 310 | 280 | 315 | 325 | 296 | 250 | 223 | 174 | 152 | 182 |
| 9 | 296 | 305 | 315 | 280 | 320 | 335 | 325 | 254 | 228 | 163 | 152 | 174 |
| 10 | 291 | 305 | 320 | 290 | 325 | 335 | 355 | 268 | 301 | 159 | 148 | 170 |
| 11 | 291 | 305 | 310 | 300 | 335 | 340 | 350 | 287 | 368 | 145 | 152 | 159 |
| 12 | 287 | 305 | 290 | 310 | 330 | 335 | 315 | 335 | 358 | 145 | 141 | 152 |
| 13 | 287 | 310 | 305 | 310 | 330 | 330 | 291 | 382 | 344 | 145 | 141 | 163 |
| 14 | 291 | 315 | 305 | 310 | 330 | 330 | 291 | 377 | 320 | 145 | 145 | 178 |
| 15 | 287 | 315 | 330 | 300 | 335 | 325 | 296 | 340 | 306 | 145 | 138 | 178 |
| 16 | 287 | 315 | 320 | 290 | 335 | 315 | 272 | 335 | 292 | 152 | 145 | 186 |
| 17 | 287 | 325 | 300 | 285 | 330 | 320 | 241 | 320 | 274 | 152 | 156 | 193 |
| 18 | 291 | 330 | 295 | 280 | 335 | 320 | 232 | 310 | 269 | 148 | 163 | 209 |
| 19 | 301 | 330 | 290 | 285 | 335 | 315 | 237 | 301 | 265 | 141 | 159 | 238 |
| 20 | 296 | 330 | 290 | 285 | 335 | 315 | 232 | 291 | 243 | 134 | 156 | 256 |
| 21 | 296 | 320 | 295 | 285 | 340 | 315 | 228 | 268 | 230 | 141 | 152 | 265 |
| 22 | 296 | 320 | 310 | 285 | 350 | 305 | 215 | 254 | 226 | 131 | 141 | 265 |
| 23 | 296 | 315 | 320 | 285 | 355 | 320 | 215 | 263 | 222 | 131 | 148 | 269 |
| 24 | 291 | 315 | 320 | 290 | 345 | 330 | 207 | 268 | 205 | 134 | 163 | 274 |
| 25 | 296 | 310 | 310 | 290 | 330 | 340 | 215 | 296 | 189 | 141 | 170 | 269 |
| 26 | 296 | 310 | 315 | 280 | 325 | 335 | 203 | 345 | 182 | 127 | 170 | 274 |
| 27 | 301 | 301 | 301 | 275 | 320 | 320 | 190 | 350 | 197 | 120 | 174 | 296 |
| 28 | 310 | 277 | 290 | 275 | 330 | 310 | 190 | 340 | 174 | 120 | 178 | 310 |
| 29 | 315 | 250 | 290 | 280 | --- | 320 | 190 | 335 | 156 | 127 | 189 | 301 |
| 30 | 315 | 291 | 305 | 280 | --- | 315 | 190 | 305 | 148 | 145 | 197 | 292 |
| 31 | 315 | --- | 290 | 296 | --- | 310 | --- | 282 | --- | 141 | 197 | --- |
| TOTAL | 9126 | 9259 | 9571 | 8947 | 9109 | 10020 | 7895 | 8937 | 7314 | 4646 | 4841 | 6609 |
| MEAN | 294 | 309 | 309 | 289 | 325 | 323 | 263 | 288 | 244 | 150 | 156 | 220 |
| MAX | 315 | 330 | 330 | 315 | 355 | 340 | 355 | 382 | 368 | 201 | 197 | 310 |
| MIN | 272 | 250 | 290 | 270 | 296 | 305 | 190 | 199 | 148 | 120 | 131 | 152 |
| AC-FT | 18100 | 18370 | 18980 | 17750 | 18070 | 19870 | 15660 | 17730 | 14510 | 9220 | 9600 | 13110 |
| CAL YR 1976 | TOTAL | 163258 | MEAN | 446 | MAX | 1120 | MIN | 203 | AC-FT | 323800 | | |
| WTR YR 1977 | TOTAL | 96274 | MEAN | 264 | MAX | 382 | MIN | 120 | AC-FT | 191000 | | |

KLAMATH RIVER BASIN

11502500 WILLIAMSON RIVER BELOW SPRAGUE RIVER, NEAR CHILOQUIN, OR

LOCATION.--Lat 42°34'15", long 121°52'35", in NE¼NE¼ sec.4, T.35 S., R.7 E., Klamath County, Hydrologic Unit 18010202, on right bank 0.2 mi (0.3 km) downstream from Sprague River and 0.8 mi (1.3 km) southwest of Chiloquin.

DRAINAGE AREA.--3,000 mi² (7,770 km²), approximately.

PERIOD OF RECORD.--June 1917 to current year.

REVISED RECORDS.--WSP 981: 1938(M). WSP 1565: 1920(M), 1927(M), 1938.

GAGE.--Water-stage recorder. Datum of gage is 4,155.55 ft (1,266.612 m) above mean sea level. Prior to Sept. 1, 1923, at different datum.

REMARKS.--Records fair. Some regulation by diversion dams and logpond operations on Sprague River. Diversions for irrigation above station.

AVERAGE DISCHARGE.--60 years, 1,039 ft³/s (29.42 m³/s), 752,800 acre-ft/yr (928 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft³/s (456 m³/s) Dec. 26, 1964, gage height, 10.56 ft (3.219 m); minimum, 320 ft³/s (9.06 m³/s) Oct. 14, 1920.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) Mar. 25, gage height, 2.91 ft (0.887 m); minimum, 469 ft³/s (13.3 m³/s) July 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 676 | 803 | 839 | 700 | 617 | 946 | 984 | 676 | 768 | 548 | 487 | 542 |
| 2 | 668 | 803 | 847 | 733 | 610 | 956 | 975 | 684 | 742 | 554 | 499 | 542 |
| 3 | 676 | 812 | 847 | 742 | 604 | 965 | 975 | 700 | 733 | 554 | 511 | 542 |
| 4 | 692 | 812 | 847 | 742 | 597 | 956 | 965 | 700 | 700 | 560 | 524 | 542 |
| 5 | 700 | 812 | 830 | 725 | 597 | 975 | 946 | 720 | 692 | 578 | 505 | 536 |
| 6 | 708 | 812 | 839 | 597 | 597 | 965 | 946 | 730 | 684 | 572 | 499 | 542 |
| 7 | 708 | 812 | 830 | 624 | 604 | 956 | 928 | 759 | 668 | 554 | 505 | 530 |
| 8 | 708 | 812 | 830 | 646 | 610 | 956 | 900 | 742 | 692 | 548 | 511 | 524 |
| 9 | 708 | 812 | 839 | 638 | 617 | 975 | 928 | 759 | 692 | 536 | 505 | 524 |
| 10 | 708 | 821 | 821 | 668 | 617 | 984 | 975 | 794 | 759 | 530 | 505 | 511 |
| 11 | 700 | 821 | 812 | 684 | 631 | 1010 | 975 | 803 | 830 | 517 | 505 | 505 |
| 12 | 700 | 830 | 776 | 692 | 646 | 1000 | 928 | 847 | 812 | 517 | 499 | 505 |
| 13 | 700 | 839 | 803 | 692 | 660 | 994 | 891 | 900 | 803 | 511 | 499 | 511 |
| 14 | 708 | 847 | 821 | 692 | 676 | 1010 | 882 | 909 | 794 | 511 | 505 | 524 |
| 15 | 708 | 839 | 821 | 692 | 700 | 1000 | 874 | 874 | 776 | 511 | 487 | 524 |
| 16 | 708 | 847 | 821 | 668 | 725 | 1000 | 847 | 865 | 759 | 517 | 493 | 536 |
| 17 | 708 | 865 | 812 | 653 | 750 | 1000 | 803 | 839 | 742 | 511 | 505 | 542 |
| 18 | 717 | 865 | 785 | 638 | 776 | 1000 | 785 | 830 | 733 | 505 | 511 | 560 |
| 19 | 725 | 874 | 750 | 653 | 812 | 984 | 750 | 821 | 725 | 499 | 511 | 590 |
| 20 | 725 | 874 | 733 | 646 | 830 | 984 | 742 | 812 | 692 | 487 | 505 | 604 |
| 21 | 725 | 874 | 742 | 653 | 856 | 984 | 733 | 776 | 676 | 493 | 505 | 610 |
| 22 | 725 | 874 | 759 | 646 | 882 | 984 | 717 | 768 | 668 | 487 | 493 | 610 |
| 23 | 725 | 874 | 794 | 653 | 919 | 994 | 717 | 776 | 653 | 487 | 493 | 617 |
| 24 | 733 | 865 | 768 | 660 | 919 | 994 | 708 | 776 | 631 | 487 | 517 | 624 |
| 25 | 742 | 865 | 776 | 638 | 919 | 1010 | 750 | 803 | 610 | 499 | 524 | 617 |
| 26 | 759 | 865 | 785 | 597 | 928 | 1010 | 708 | 847 | 590 | 487 | 524 | 624 |
| 27 | 768 | 856 | 759 | 590 | 928 | 975 | 684 | 856 | 597 | 475 | 524 | 653 |
| 28 | 785 | 812 | 750 | 604 | 946 | 965 | 676 | 839 | 578 | 475 | 530 | 692 |
| 29 | 794 | 768 | 759 | 610 | --- | 984 | 668 | 839 | 554 | 475 | 536 | 676 |
| 30 | 794 | 812 | 750 | 610 | --- | 1000 | 660 | 821 | 548 | 493 | 548 | 660 |
| 31 | 803 | --- | 717 | 610 | --- | 994 | --- | 803 | --- | 499 | 542 | --- |
| TOTAL | 22404 | 25077 | 24662 | 20396 | 20573 | 30510 | 25020 | 24668 | 20901 | 15977 | 15807 | 17119 |
| MEAN | 723 | 836 | 796 | 658 | 735 | 984 | 834 | 796 | 697 | 515 | 510 | 571 |
| MAX | 803 | 874 | 847 | 742 | 946 | 1010 | 984 | 909 | 830 | 578 | 548 | 692 |
| MIN | 668 | 768 | 717 | 590 | 597 | 946 | 660 | 676 | 548 | 475 | 487 | 505 |
| AC-FT | 44440 | 49740 | 48920 | 40460 | 40810 | 60520 | 49630 | 48930 | 41460 | 31690 | 31350 | 33960 |

CAL YR 1976 TOTAL 354902 MEAN 970 MAX 1940 MIN 530 AC-FT 703900

WTR YR 1977 TOTAL 263114 MEAN 721 MAX 1010 MIN 475 AC-FT 521900

KLAMATH RIVER BASIN

65

11503000 ANNIE SPRING NEAR CRATER LAKE, OR

LOCATION.--Lat 42°52'20", long 122°10'00", unsurveyed, Klamath County, Hydrologic Unit 18010203, in Crater Lake National Park, at highway bridge 0.1 mi (0.16 km) downstream from source.

PERIOD OF RECORD.--June to September 1977. Discharge measurement and fragmentary gage-height record August to October 1913. Discharge measurements only Oct. 11, 1967, June 26, Sept. 13, 1968.

GAGE.--Water-stage recorder. Altitude of gage is 6,050 ft (1,844 m), from topographic map.

REMARKS.--Records good. Slight regulation by pumps 0.1 mi (0.16 km) upstream. Diversion for domestic use by National Park Service 0.1 mi (0.16 km) upstream.

COOPERATION.--Records of diversion by pumping furnished by National Park Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period June to September, 2.5 ft³/s (0.07 m³/s) June 12, gage height, 0.88 ft (0.268 m); minimum, 0.36 ft³/s (0.010 m³/s) Sept. 11, 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|-------|
| 1 | | | | | | | | | .88 | 1.3 | .70 | .56 |
| 2 | | | | | | | | | .91 | 1.3 | .74 | .56 |
| 3 | | | | | | | | | 1.0 | 1.2 | .77 | .51 |
| 4 | | | | | | | | | 1.1 | 1.2 | .67 | .49 |
| 5 | | | | | | | | | 1.2 | 1.2 | .70 | .54 |
| 6 | | | | | | | | | 1.2 | 1.1 | .70 | .56 |
| 7 | | | | | | | | | 1.7 | 1.1 | .70 | .54 |
| 8 | | | | | | | | | 2.0 | 1.1 | .70 | .51 |
| 9 | | | | | | | | | 2.2 | 1.1 | .70 | .54 |
| 10 | | | | | | | | | 2.2 | 1.0 | .70 | .51 |
| 11 | | | | | | | | | 2.3 | .99 | .67 | .54 |
| 12 | | | | | | | | | 2.4 | .99 | .67 | .54 |
| 13 | | | | | | | | | 2.3 | .95 | .64 | .54 |
| 14 | | | | | | | | | 2.3 | .95 | .67 | .51 |
| 15 | | | | | | | | | 2.2 | .95 | .64 | .51 |
| 16 | | | | | | | | | 2.2 | .95 | .67 | .54 |
| 17 | | | | | | | | | 2.2 | .91 | .64 | .54 |
| 18 | | | | | | | | | 2.1 | .88 | .64 | .54 |
| 19 | | | | | | | | | 2.0 | .88 | .64 | .56 |
| 20 | | | | | | | | | 1.9 | .88 | .62 | .54 |
| 21 | | | | | | | | | 1.9 | .88 | .64 | .54 |
| 22 | | | | | | | | | 1.9 | .84 | .59 | .51 |
| 23 | | | | | | | | | 1.7 | .80 | .62 | .56 |
| 24 | | | | | | | | | 1.7 | .84 | .62 | .51 |
| 25 | | | | | | | | | 1.7 | .77 | .59 | .51 |
| 26 | | | | | | | | | 1.6 | .77 | .62 | .51 |
| 27 | | | | | | | | | 1.5 | .77 | .62 | .51 |
| 28 | | | | | | | | | 1.4 | .77 | .56 | .54 |
| 29 | | | | | | | | | 1.4 | .70 | .62 | .51 |
| 30 | | | | | | | | | 1.3 | .74 | .59 | .51 |
| 31 | | | | | | | | | --- | .70 | .59 | --- |
| TOTAL | | | | | | | | | 52.39 | 29.51 | 20.24 | 15.89 |
| MEAN | | | | | | | | | 1.75 | .95 | .65 | .53 |
| MAX | | | | | | | | | 2.4 | 1.3 | .77 | .56 |
| MIN | | | | | | | | | .88 | .70 | .56 | .49 |
| AC-FT | | | | | | | | | 104 | 59 | 40 | 32 |

KLAMATH RIVER BASIN

11506000 "A" CANAL AT KLAMATH FALLS, OR

LOCATION.--Lat 42°12'20", long 121°48'05", in NE¼ sec.30, T.38 S., R.9 E., Klamath County, Hydrologic Unit 18010204, on left bank 300 ft (91 m) downstream from headgates of canal and 1.0 mi (1.6 km) northwest of Klamath Falls.

PERIOD OF RECORD.--October 1910 to current year. Published as "Klamath Main Canal" 1911-12.

GAGE.--Water-stage recorder. Datum of gage is 4,126.22 ft (1,257.672 m) above mean sea level, Bureau of Reclamation datum (levels by Bureau of Reclamation). Prior to May 1, 1923, water-stage recorder at site 0.2 mi (0.3 km) downstream at head of tunnel and at different datum. May 1, 1923, to Apr. 20, 1924, water-stage recorder at site 1.0 mi (1.6 km) downstream, just below tunnel, at different datum. Apr. 21, 1924, to Apr. 14, 1925, nonrecording gage at present site and datum.

REMARKS.--Records excellent. Canal diverts water from Upper Klamath Lake in NE¼ sec.30, T.38 S., R.9 E., for irrigation of lands east of Klamath River on both sides of Lost River. Most of return water reaches Lost River.

COOPERATION.--Gage-height record, and records of daily discharge furnished by Klamath Irrigation District.

AVERAGE DISCHARGE.--67 years, 267 ft³/s (7.56 m³/s), 193,400 acre-ft/yr (238 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,180 ft³/s (33.4 m³/s) June 24, 1961; no flow for several months in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|-----------|------|------|------|------|----------|----------|-------|--------|-------|-------|
| 1 | 559 | .00 | .00 | .00 | .00 | .00 | .00 | 847 | 786 | 1000 | 947 | 705 |
| 2 | 576 | .00 | .00 | .00 | .00 | .00 | .00 | 813 | 879 | 972 | 943 | 738 |
| 3 | 543 | .00 | .00 | .00 | .00 | .00 | .00 | 765 | 931 | 935 | 924 | 772 |
| 4 | 508 | .00 | .00 | .00 | .00 | .00 | 62 | 711 | 946 | 899 | 919 | 820 |
| 5 | 504 | .00 | .00 | .00 | .00 | .00 | 218 | 691 | 969 | 892 | 911 | 838 |
| 6 | 496 | .00 | .00 | .00 | .00 | .00 | 297 | 688 | 989 | 894 | 916 | 807 |
| 7 | 491 | .00 | .00 | .00 | .00 | .00 | 354 | 651 | 962 | 923 | 915 | 813 |
| 8 | 489 | .00 | .00 | .00 | .00 | .00 | 382 | 630 | 851 | 918 | 867 | 820 |
| 9 | 523 | .00 | .00 | .00 | .00 | .00 | 421 | 611 | 974 | 921 | 831 | 801 |
| 10 | 528 | .00 | .00 | .00 | .00 | .00 | 499 | 583 | 898 | 957 | 820 | 778 |
| 11 | 544 | .00 | .00 | .00 | .00 | .00 | 470 | 494 | 769 | 982 | 842 | 756 |
| 12 | 558 | .00 | .00 | .00 | .00 | .00 | 560 | 488 | 681 | 1000 | 892 | 772 |
| 13 | 569 | .00 | .00 | .00 | .00 | .00 | 703 | 504 | 616 | 1000 | 873 | 760 |
| 14 | 579 | .00 | .00 | .00 | .00 | .00 | 755 | 500 | 632 | 1010 | 841 | 750 |
| 15 | 193 | .00 | .00 | .00 | .00 | .00 | 797 | 491 | 646 | 1010 | 853 | 783 |
| 16 | .00 | .00 | .00 | .00 | .00 | .00 | 860 | 518 | 707 | 1000 | 853 | 738 |
| 17 | .00 | .00 | .00 | .00 | .00 | .00 | 884 | 463 | 775 | 1000 | 853 | 641 |
| 18 | .00 | .00 | .00 | .00 | .00 | .00 | 838 | 185 | 836 | 1010 | 846 | 557 |
| 19 | .00 | .00 | .00 | .00 | .00 | .00 | 823 | .00 | 831 | 1000 | 840 | 479 |
| 20 | .00 | .00 | .00 | .00 | .00 | .00 | 798 | 38 | 830 | 1010 | 861 | 390 |
| 21 | .00 | .00 | .00 | .00 | .00 | .00 | 774 | 396 | 899 | 1000 | 853 | 349 |
| 22 | .00 | .00 | .00 | .00 | .00 | .00 | 785 | 422 | 924 | 990 | 846 | 323 |
| 23 | .00 | .00 | .00 | .00 | .00 | .00 | 816 | 471 | 899 | 983 | 869 | 282 |
| 24 | .00 | .00 | .00 | .00 | .00 | .00 | 821 | 455 | 913 | 963 | 889 | 284 |
| 25 | .00 | .00 | .00 | .00 | .00 | .00 | 862 | 458 | 934 | 952 | 825 | 283 |
| 26 | .00 | .00 | .00 | .00 | .00 | .00 | 909 | 483 | 981 | 963 | 720 | 270 |
| 27 | .00 | .00 | .00 | .00 | .00 | .00 | 929 | 467 | 970 | 958 | 685 | 257 |
| 28 | .00 | .00 | .00 | .00 | .00 | .00 | 923 | 464 | 980 | 954 | 673 | 247 |
| 29 | .00 | .00 | .00 | .00 | --- | .00 | 886 | 496 | 1000 | 954 | 660 | 215 |
| 30 | .00 | .00 | .00 | .00 | --- | .00 | 869 | 549 | 1020 | 938 | 647 | 202 |
| 31 | .00 | --- | .00 | .00 | --- | .00 | --- | 661 | --- | 929 | 671 | --- |
| TOTAL | 7660.00 | .00 | .00 | .00 | .00 | .00 | 18295.00 | 15993.00 | 26028 | 29917 | 25885 | 17230 |
| MEAN | 247 | .000 | .000 | .000 | .000 | .000 | 610 | 516 | 868 | 965 | 835 | 574 |
| MAX | 579 | .00 | .00 | .00 | .00 | .00 | 929 | 847 | 1020 | 1010 | 947 | 838 |
| MIN | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 616 | 892 | 647 | 202 |
| AC-FT | 15190 | .00 | .00 | .00 | .00 | .00 | 36290 | 31720 | 51630 | 59340 | 51340 | 34180 |
| CAL YR 1976 | TOTAL | 138797.00 | MEAN | 379 | MAX | 1070 | MIN | .00 | AC-FT | 275300 | | |
| WTR YR 1977 | TOTAL | 141008.00 | MEAN | 386 | MAX | 1020 | MIN | .00 | AC-FT | 279700 | | |

11507001 UPPER KLAMATH LAKE NEAR KLAMATH FALLS, OR

LOCATION.--Lat 42°15'00", long 121°48'55", in NW¼SW¼ sec.19, T.38 S., R.9 E., Klamath County, Hydrologic Unit 18010203, at southeast end of lake, 1.4 mi (2.3 km) upstream from outlet and 2.5 mi (4.0 km) northwest of Main Street Bridge at Klamath Falls.

DRAINAGE AREA.--3,810 mi² (9,870 km²), approximately, including 26.2 mi² (67.9 km²) in closed basin of Crater Lake.

PERIOD OF RECORD.--May 1904 to September 1923 (gage heights only), October 1923 to current year. Monthend contents only October 1923 to September 1927, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 4,098.22 ft (1,249.137 m) above mean sea level, or 4,100.00 ft (1,249.680 m) above mean sea level, datum of Bureau of Reclamation. Gage readings have been reduced to elevations above mean sea level, datum of Bureau of Reclamation. See WSP 1735 for history of changes prior to Nov. 10, 1923. Since Oct. 1, 1974, supplementary water-stage recorders at sites 7 mi (11 km) north and 21 mi (34 km) northwest at same datum (water-surface transfer by Pacific Power and Light Co.).

REMARKS.--Reservoir is formed by concrete dam at outlet of natural lake, completed in 1921, replacing a temporary dam built in 1919; controlled storage began Apr. 15, 1919. Capacity, 523,700 acre-ft (646 km³) between elevations 4,136.0 ft (1,260.65 m) and 4,143.3 ft (1,262.88 m). Dead storage below elevation 4,136.0 ft (1,260.65 m) is 211,300 acre-ft (261 km³). Stored water may be diverted through "A" Canal for irrigation on land under Klamath project of Bureau of Reclamation, or released to Link River through dam or powerplants at Klamath Falls. Contents given herein represent those above elevation 4,136.0 ft (1,260.65 m). Prior to Oct. 1, 1973, contents given represented those above elevation 4,135.0 ft (1,260.35 m). Prior to Sept. 30, 1974, contents at end of month obtained by averaging elevations for last 3 days of month and first 3 days of following month to compensate for wind effect. Since Oct. 1, 1974, daily elevations are weighted mean of elevations at base and supplementary gages; contents at end of month are obtained from weighted midnight elevations of base and supplementary gages.

COOPERATION.--Capacity table furnished by Bureau of Reclamation, Klamath Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4,144.98 ft (1,263.390 m) about Apr. 20, 1904, from high-water marks; minimum recorded, 4,135.55 ft (1,260.516 m) Oct. 30, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 4,142.77 ft (1,262.716 m) Apr. 6; minimum daily, 4,139.26 ft (1,261.646 m) Sept. 23.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FEET)

| | | | | | |
|-------|---------|-------|---------|---------|---------|
| 4,136 | 0 | 4,139 | 193,700 | 4,142 | 414,400 |
| 4,137 | 61,300 | 4,140 | 262,600 | 4,143 | 498,300 |
| 4,138 | 127,000 | 4,141 | 335,400 | 4,143.3 | 523,700 |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|---------|---------|---------|---------|----------|---------|----------|---------|---------|
| 1 | 4141.46 | 4141.35 | 4140.76 | 4140.80 | 4140.96 | 4141.57 | 4142.73 | 4142.50 | 4142.73 | 4142.15 | 4140.80 | 4139.78 |
| 2 | 4141.46 | 4141.35 | 4140.74 | 4140.86 | 4140.95 | 4141.60 | 4142.70 | 4142.48 | 4142.72 | 4142.12 | 4140.70 | 4139.75 |
| 3 | 4141.45 | 4141.33 | 4140.73 | 4140.88 | 4140.96 | 4141.66 | 4142.72 | 4142.49 | 4142.68 | 4142.07 | 4140.72 | 4139.73 |
| 4 | 4141.44 | 4141.31 | 4140.71 | 4140.90 | 4140.96 | 4141.67 | 4142.74 | 4142.50 | 4142.65 | 4142.04 | 4140.65 | 4139.71 |
| 5 | 4141.42 | 4141.30 | 4140.70 | 4140.90 | 4140.98 | 4141.72 | 4142.75 | 4142.50 | 4142.64 | 4141.99 | 4140.60 | 4139.68 |
| 6 | 4141.42 | 4141.27 | 4140.69 | 4140.89 | 4140.98 | 4141.76 | 4142.77 | 4142.51 | 4142.61 | 4141.95 | 4140.60 | 4139.66 |
| 7 | 4141.41 | 4141.25 | 4140.68 | 4140.90 | 4141.00 | 4141.79 | 4142.74 | 4142.47 | 4142.59 | 4141.93 | 4140.56 | 4139.61 |
| 8 | 4141.40 | 4141.24 | 4140.68 | 4140.89 | 4141.01 | 4141.85 | 4142.74 | 4142.50 | 4142.61 | 4141.88 | 4140.52 | 4139.59 |
| 9 | 4141.39 | 4141.22 | 4140.68 | 4140.86 | 4141.02 | 4141.93 | 4142.75 | 4142.52 | 4142.59 | 4141.84 | 4140.50 | 4139.55 |
| 10 | 4141.37 | 4141.20 | 4140.68 | 4140.83 | 4141.03 | 4141.97 | 4142.74 | 4142.52 | 4142.57 | 4141.80 | 4140.48 | 4139.50 |
| 11 | 4141.36 | 4141.18 | 4140.68 | 4140.80 | 4141.06 | 4142.02 | 4142.74 | 4142.55 | 4142.61 | 4141.76 | 4140.38 | 4139.45 |
| 12 | 4141.34 | 4141.17 | 4140.68 | 4140.80 | 4141.06 | 4142.06 | 4142.75 | 4142.59 | 4142.62 | 4141.72 | 4140.36 | 4139.42 |
| 13 | 4141.33 | 4141.12 | 4140.68 | 4140.81 | 4141.08 | 4142.10 | 4142.76 | 4142.60 | 4142.62 | 4141.68 | 4140.32 | 4139.39 |
| 14 | 4141.32 | 4141.11 | 4140.68 | 4140.82 | 4141.10 | 4142.13 | 4142.72 | 4142.61 | 4142.63 | 4141.64 | 4140.29 | 4139.37 |
| 15 | 4141.32 | 4141.10 | 4140.67 | 4140.82 | 4141.12 | 4142.18 | 4142.69 | 4142.62 | 4142.63 | 4141.60 | 4140.29 | 4139.32 |
| 16 | 4141.33 | 4141.09 | 4140.68 | 4140.84 | 4141.14 | 4142.24 | 4142.69 | 4142.63 | 4142.63 | 4141.56 | 4140.23 | 4139.31 |
| 17 | 4141.33 | 4141.08 | 4140.69 | 4140.84 | 4141.16 | 4142.27 | 4142.67 | 4142.62 | 4142.61 | 4141.49 | 4140.13 | 4139.30 |
| 18 | 4141.34 | 4141.04 | 4140.69 | 4140.84 | 4141.18 | 4142.28 | 4142.64 | 4142.62 | 4142.59 | 4141.45 | 4140.04 | 4139.27 |
| 19 | 4141.33 | 4141.02 | 4140.70 | 4140.84 | 4141.20 | 4142.33 | 4142.63 | 4142.65 | 4142.58 | 4141.41 | 4140.06 | 4139.28 |
| 20 | 4141.33 | 4141.00 | 4140.70 | 4140.84 | 4141.22 | 4142.36 | 4142.62 | 4142.67 | 4142.56 | 4141.35 | 4140.04 | 4139.30 |
| 21 | 4141.34 | 4140.98 | 4140.69 | 4140.86 | 4141.25 | 4142.41 | 4142.58 | 4142.68 | 4142.55 | 4141.31 | 4139.98 | 4139.30 |
| 22 | 4141.35 | 4140.96 | 4140.70 | 4140.88 | 4141.30 | 4142.45 | 4142.56 | 4142.69 | 4142.53 | 4141.24 | 4139.95 | 4139.29 |
| 23 | 4141.34 | 4140.94 | 4140.71 | 4140.87 | 4141.33 | 4142.46 | 4142.57 | 4142.69 | 4142.50 | 4141.23 | 4139.93 | 4139.26 |
| 24 | 4141.33 | 4140.93 | 4140.72 | 4140.88 | 4141.36 | 4142.50 | 4142.57 | 4142.72 | 4142.49 | 4141.16 | 4139.88 | 4139.28 |
| 25 | 4141.35 | 4140.90 | 4140.72 | 4140.90 | 4141.40 | 4142.54 | 4142.51 | 4142.70 | 4142.44 | 4141.11 | 4139.88 | 4139.27 |
| 26 | 4141.37 | 4140.90 | 4140.73 | 4140.92 | 4141.44 | 4142.55 | 4142.53 | 4142.73 | 4142.41 | 4141.06 | 4139.87 | 4139.30 |
| 27 | 4141.37 | 4140.88 | 4140.74 | 4140.92 | 4141.48 | 4142.58 | 4142.52 | 4142.74 | 4142.38 | 4141.01 | 4139.84 | 4139.28 |
| 28 | 4141.38 | 4140.84 | 4140.75 | 4140.92 | 4141.52 | 4142.61 | 4142.50 | 4142.74 | 4142.32 | 4140.96 | 4139.83 | 4139.34 |
| 29 | 4141.37 | 4140.81 | 4140.77 | 4140.93 | --- | 4142.62 | 4142.49 | 4142.74 | 4142.26 | 4140.90 | 4139.82 | 4139.43 |
| 30 | 4141.36 | 4140.78 | 4140.78 | 4140.94 | --- | 4142.65 | 4142.50 | 4142.74 | 4142.21 | 4140.88 | 4139.82 | 4139.45 |
| 31 | 4141.34 | --- | 4140.79 | 4140.94 | --- | 4142.67 | --- | 4142.73 | --- | 4140.84 | 4139.80 | --- |
| MEAN | 4141.37 | 4141.09 | 4140.71 | 4140.87 | 4141.15 | 4142.18 | 4142.65 | 4142.61 | 4142.55 | 4141.52 | 4140.22 | 4139.44 |
| MAX | 4141.46 | 4141.35 | 4140.79 | 4140.94 | 4141.52 | 4142.67 | 4142.77 | 4142.74 | 4142.73 | 4142.15 | 4140.80 | 4139.78 |
| MIN | 4141.32 | 4140.78 | 4140.67 | 4140.80 | 4140.95 | 4141.57 | 4142.49 | 4142.47 | 4142.21 | 4140.84 | 4139.80 | 4139.26 |
| (+) | 361,500 | 319,700 | 319,700 | 331,700 | 375,700 | 472,800 | 456,800 | 476,200 | 433,400 | 319,700 | 250,700 | 225,700 |
| (-) | -11,800 | -41,800 | 0 | +12,000 | +44,000 | +97,100 | -16,000 | +19,400 | -42,800 | -113,700 | -69,000 | -25,000 |
| CAL YR 1976 | MEAN | 4141.61 | MAX | 4142.83 | MIN | 4140.67 | AC-FT† | -7,500 | | | | |
| WTR YR 1977 | MEAN | 4141.36 | MAX | 4142.77 | MIN | 4139.26 | AC-FT† | -147,600 | | | | |

† Contents in acre-feet at end of month.

‡ Change in contents, in acre-feet.

KLAMATH RIVER BASIN

11507501 LINK RIVER AT KLAMATH FALLS, OR

LOCATION.--Lat 42°13'25", long 121°47'35", in SW¼NW¼ sec.32, T.38 S., R.9 E., Klamath County, Hydrologic Unit 18010204, on right bank 600 ft (183 m) upstream from outlet of Keno Canal and 0.4 mi (0.6 km) upstream from Main Street Bridge at Klamath Falls.

DRAINAGE AREA.--3,810 mi² (9,870 km²), approximately, including 26.2 mi² (67.9 km²) in closed basin of Crater Lake.

PERIOD OF RECORD.--May 1904 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,083.71 ft (1,244.715 m) above mean sea level, or 4,085.50 ft (1,245.260 m) above mean sea level, datum of Bureau of Reclamation. Prior to Sept. 14, 1912, water-stage recorder or nonrecording gages at several sites within 0.5 mi (0.8 km) of present site at various datums. Sept. 14, 1912, to Nov. 23, 1923, at site 600 ft (183 m) downstream at datum 5.42 ft (1.652 m) lower. Nov. 24, 1923, to Nov. 15, 1961, at site on left bank at present datum.

REMARKS.--Records good. Flow regulated since 1919 by Upper Klamath Lake (see station 11507000). Large diurnal fluctuation caused by powerplant above station. Water diverted above station by main or "A" Canal of Klamath project (see station 11506000). Many other diversions above lake. All records presented herein include flow in Keno Canal which, since September 1908, has diverted from Upper Klamath Lake at Link River Dam for power generation, and returns flow to Link River below station.

AVERAGE DISCHARGE.--73 years, 1,599 ft³/s (45.28 m³/s), 1,158,000 acre-ft/yr (1.43 km³/yr), not adjusted for "A" Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,400 ft³/s (266 m³/s) May 12, 1904, gage height at Main Street Bridge, 7.30 ft (2.225 m), datum then in use, from floodmarks; minimum daily, 17 ft³/s (0.48 m³/s) Dec. 13, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,240 ft³/s (91.8 m³/s) Nov. 17; minimum daily, 98 ft³/s (2.78 m³/s) Mar. 5, 6, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| 1 | 925 | 1910 | 2280 | 1190 | 1270 | 101 | 589 | 487 | 436 | 1140 | 898 | 728 |
| 2 | 934 | 2110 | 2290 | 1090 | 1170 | 105 | 657 | 546 | 597 | 1040 | 972 | 657 |
| 3 | 925 | 2360 | 2180 | 1240 | 1240 | 152 | 719 | 572 | 640 | 721 | 1070 | 719 |
| 4 | 934 | 2360 | 2120 | 1270 | 1120 | 122 | 782 | 572 | 692 | 679 | 945 | 818 |
| 5 | 1080 | 2390 | 2050 | 1430 | 1160 | 98 | 865 | 665 | 855 | 672 | 999 | 827 |
| 6 | 1180 | 2370 | 1810 | 1380 | 1160 | 98 | 945 | 737 | 1050 | 570 | 866 | 791 |
| 7 | 1050 | 2390 | 1480 | 1410 | 1040 | 101 | 1090 | 597 | 773 | 817 | 838 | 855 |
| 8 | 1010 | 2420 | 1590 | 1840 | 1020 | 112 | 1190 | 436 | 226 | 832 | 857 | 955 |
| 9 | 1230 | 2480 | 1650 | 2570 | 1010 | 98 | 1030 | 411 | 226 | 834 | 847 | 895 |
| 10 | 1280 | 2390 | 1600 | 2530 | 901 | 119 | 1070 | 359 | 221 | 1010 | 772 | 895 |
| 11 | 1260 | 2320 | 1560 | 2210 | 835 | 112 | 847 | 285 | 226 | 504 | 821 | 845 |
| 12 | 1210 | 2400 | 1640 | 1420 | 843 | 108 | 881 | 266 | 226 | 555 | 868 | 719 |
| 13 | 1180 | 2470 | 1500 | 1140 | 816 | 105 | 953 | 272 | 226 | 773 | 753 | 719 |
| 14 | 955 | 2600 | 1310 | 1220 | 807 | 205 | 980 | 261 | 232 | 755 | 829 | 631 |
| 15 | 952 | 2570 | 1380 | 1150 | 734 | 112 | 953 | 305 | 266 | 728 | 619 | 791 |
| 16 | 973 | 2580 | 1310 | 1150 | 719 | 115 | 917 | 374 | 352 | 1050 | 529 | 657 |
| 17 | 1080 | 2840 | 1140 | 1140 | 589 | 105 | 917 | 331 | 478 | 1080 | 648 | 614 |
| 18 | 1130 | 2820 | 1280 | 1090 | 657 | 105 | 903 | 324 | 764 | 1060 | 648 | 521 |
| 19 | 1140 | 2670 | 1270 | 1230 | 737 | 105 | 782 | 337 | 597 | 1350 | 512 | 719 |
| 20 | 1050 | 2500 | 1430 | 1170 | 728 | 105 | 706 | 404 | 800 | 1220 | 572 | 1040 |
| 21 | 1070 | 2480 | 1390 | 976 | 728 | 108 | 757 | 445 | 623 | 1270 | 495 | 1090 |
| 22 | 1050 | 2500 | 1510 | 1060 | 631 | 156 | 689 | 436 | 521 | 1280 | 367 | 1130 |
| 23 | 1140 | 2420 | 1340 | 1100 | 572 | 200 | 542 | 580 | 487 | 1250 | 495 | 1040 |
| 24 | 1220 | 2400 | 1330 | 1160 | 529 | 200 | 650 | 538 | 935 | 1180 | 572 | 766 |
| 25 | 1080 | 2390 | 1320 | 1120 | 419 | 298 | 711 | 512 | 1090 | 1190 | 701 | 972 |
| 26 | 1090 | 2450 | 1190 | 1180 | 272 | 381 | 520 | 538 | 836 | 1170 | 436 | 1040 |
| 27 | 1080 | 2450 | 1300 | 1220 | 255 | 470 | 478 | 337 | 984 | 1130 | 396 | 1220 |
| 28 | 1460 | 2470 | 1310 | 1180 | 165 | 359 | 529 | 255 | 1100 | 1120 | 470 | 535 |
| 29 | 1810 | 2470 | 1250 | 1200 | --- | 324 | 529 | 344 | 1240 | 1090 | 453 | 244 |
| 30 | 1960 | 2450 | 1170 | 1210 | --- | 344 | 538 | 272 | 1220 | 1020 | 495 | 489 |
| 31 | 1930 | --- | 1200 | 1150 | --- | 428 | --- | 318 | --- | 872 | 728 | --- |
| TOTAL | 36368 | 73430 | 47180 | 41426 | 22127 | 5551 | 23719 | 13116 | 18919 | 29962 | 21471 | 23922 |
| MEAN | 1173 | 2448 | 1522 | 1336 | 790 | 179 | 791 | 423 | 631 | 967 | 693 | 797 |
| MAX | 1960 | 2840 | 2290 | 2570 | 1270 | 470 | 1190 | 737 | 1240 | 1350 | 1070 | 1220 |
| MIN | 925 | 1910 | 1140 | 976 | 165 | 98 | 478 | 255 | 221 | 504 | 367 | 244 |
| AC-FT | 72140 | 145600 | 93580 | 82170 | 43890 | 11010 | 47050 | 26020 | 37530 | 59430 | 42590 | 47450 |
| CAL YR 1976 | TOTAL | 484864 | MEAN | 1325 | MAX | 2840 | MIN | 266 | AC-FT | 961700 | | |
| WTR YR 1977 | TOTAL | 357191 | MEAN | 979 | MAX | 2840 | MIN | 98 | AC-FT | 708500 | | |

KLAMATH RIVER BASIN

69

11509500 KLAMATH RIVER AT KENO, OR

LOCATION.--Lat 42°08'00", long 121°57'40", in NW¼SE¼ sec.35, T.39 S., R.7 E., Klamath County, Hydrologic Unit 18010206, on left bank 1.7 mi (2.7 km) northwest of Keno and 4.5 mi (7.2 km) upstream from Spencer Creek.

DRAINAGE AREA.--3,920 mi² (10,200 km²), approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF RECORD.--June 1904 to December 1913, October 1929 to current year. Monthly discharge only October to December 1929, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 3,961 ft (1,207.3 m) above mean sea level (from river-profile survey). See WSP 1735 for history of changes prior to Nov. 6, 1954.

REMARKS.--Records good. Flow regulated since 1919 by Upper Klamath Lake (see station 11507001). Diversions for irrigation above station.

AVERAGE DISCHARGE.--57 years, 1,688 ft³/s (47.80 m³/s), 1,223,000 acre-ft/yr (1.51 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s (286 m³/s) Mar. 5, 1972, gage height, 12.73 ft (3.880 m); minimum, 26 ft³/s (0.74 m³/s) Sept. 23, 1956; minimum daily, 60 ft³/s (1.70 m³/s) May 19, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 15.3 ft (4.66 m), from floodmark (original datum), about May 10, 1904, discharge, 9,250 ft³/s (262 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,250 ft³/s (120 m³/s) Nov. 30, gage height, 9.03 ft (2.752 m); minimum, 244 ft³/s (6.91 m³/s) July 11; minimum daily, 254 ft³/s (7.19 m³/s) July 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| 1 | 1360 | 2240 | 2590 | 1130 | 1090 | 473 | 348 | 512 | 416 | 399 | 440 | 448 |
| 2 | 1360 | 2450 | 2570 | 1140 | 1090 | 409 | 348 | 557 | 416 | 406 | 440 | 448 |
| 3 | 1360 | 2700 | 2350 | 1290 | 1100 | 354 | 348 | 595 | 392 | 406 | 440 | 448 |
| 4 | 1360 | 2650 | 2100 | 1220 | 1100 | 333 | 348 | 591 | 366 | 402 | 440 | 444 |
| 5 | 1470 | 2650 | 2100 | 1330 | 1100 | 363 | 392 | 631 | 366 | 423 | 440 | 444 |
| 6 | 1470 | 2650 | 1830 | 1440 | 1090 | 433 | 448 | 690 | 363 | 455 | 440 | 440 |
| 7 | 1470 | 2650 | 1530 | 1510 | 1050 | 433 | 444 | 690 | 363 | 455 | 440 | 440 |
| 8 | 1400 | 2650 | 1590 | 1890 | 976 | 430 | 448 | 685 | 366 | 462 | 448 | 440 |
| 9 | 1440 | 2640 | 1640 | 2610 | 917 | 430 | 448 | 690 | 370 | 462 | 448 | 440 |
| 10 | 1450 | 2640 | 1630 | 2610 | 881 | 392 | 448 | 690 | 399 | 462 | 451 | 440 |
| 11 | 1450 | 2640 | 1630 | 2510 | 881 | 389 | 448 | 690 | 617 | 259 | 448 | 440 |
| 12 | 1470 | 2640 | 1640 | 1790 | 875 | 389 | 444 | 685 | 805 | 254 | 448 | 444 |
| 13 | 1470 | 2640 | 1460 | 1250 | 875 | 342 | 448 | 690 | 781 | 254 | 448 | 444 |
| 14 | 1470 | 2640 | 1270 | 1230 | 875 | 302 | 455 | 690 | 561 | 254 | 448 | 444 |
| 15 | 1470 | 2640 | 1340 | 1230 | 850 | 324 | 444 | 690 | 399 | 254 | 382 | 437 |
| 16 | 1470 | 2640 | 1420 | 1220 | 825 | 345 | 444 | 690 | 370 | 423 | 302 | 557 |
| 17 | 1470 | 2640 | 1410 | 1220 | 825 | 348 | 444 | 690 | 370 | 345 | 302 | 690 |
| 18 | 1510 | 2640 | 1400 | 1220 | 825 | 373 | 440 | 690 | 370 | 423 | 302 | 690 |
| 19 | 1480 | 2640 | 1400 | 1220 | 825 | 395 | 444 | 685 | 370 | 489 | 302 | 820 |
| 20 | 1480 | 2640 | 1400 | 1160 | 825 | 395 | 466 | 631 | 366 | 470 | 302 | 1040 |
| 21 | 1480 | 2640 | 1410 | 1100 | 825 | 370 | 504 | 595 | 366 | 528 | 302 | 1040 |
| 22 | 1470 | 2640 | 1400 | 1090 | 825 | 348 | 520 | 595 | 366 | 528 | 302 | 1040 |
| 23 | 1470 | 2640 | 1250 | 1090 | 800 | 351 | 520 | 617 | 366 | 528 | 299 | 912 |
| 24 | 1470 | 2640 | 1250 | 1090 | 718 | 351 | 516 | 680 | 386 | 528 | 360 | 728 |
| 25 | 1480 | 2640 | 1250 | 1090 | 635 | 348 | 520 | 680 | 402 | 520 | 437 | 728 |
| 26 | 1480 | 2650 | 1250 | 1090 | 586 | 348 | 520 | 747 | 406 | 485 | 433 | 891 |
| 27 | 1480 | 2650 | 1250 | 1090 | 582 | 348 | 520 | 662 | 402 | 440 | 433 | 1020 |
| 28 | 1890 | 2640 | 1250 | 1090 | 557 | 351 | 512 | 635 | 402 | 440 | 437 | 448 |
| 29 | 2240 | 2630 | 1200 | 1090 | --- | 351 | 512 | 635 | 399 | 440 | 437 | 297 |
| 30 | 2240 | 2630 | 1130 | 1090 | --- | 348 | 512 | 489 | 399 | 440 | 440 | 561 |
| 31 | 2240 | --- | 1130 | 1090 | --- | 348 | --- | 455 | --- | 437 | 448 | --- |
| TOTAL | 47820 | 78720 | 48070 | 42220 | 24403 | 11514 | 13653 | 19952 | 12720 | 13071 | 12439 | 18103 |
| MEAN | 1543 | 2624 | 1551 | 1362 | 872 | 371 | 455 | 644 | 424 | 422 | 401 | 603 |
| MAX | 2240 | 2700 | 2590 | 2610 | 1100 | 473 | 520 | 747 | 805 | 528 | 451 | 1040 |
| MIN | 1360 | 2240 | 1130 | 1090 | 557 | 302 | 348 | 455 | 363 | 254 | 299 | 297 |
| AC-FT | 94850 | 156100 | 95350 | 83740 | 48400 | 22840 | 27080 | 39570 | 25230 | 25930 | 24670 | 35910 |
| CAL YR 1976 | TOTAL | 500173 | MEAN | 1367 | MAX | 2730 | MIN | 252 | AC-FT | 992100 | | |
| WTR YR 1977 | TOTAL | 342685 | MEAN | 939 | MAX | 2700 | MIN | 254 | AC-FT | 679700 | | |

KLAMATH RIVER BASIN

11510700 KLAMATH RIVER BELOW JOHN C. BOYLE POWERPLANT, NEAR KENO, OR

LOCATION.--Lat 42°05'05", long 122°04'20", in SE¼SE¼ sec.14, T.40 S., R.6 E., Klamath County, Hydrologic Unit 18010206, on right bank 0.7 mi (1.1 km) downstream from John C. Boyle powerplant, 8 mi (13 km) downstream from Spencer Creek, and 8.5 mi (13.7 km) southwest of Keno.

DRAINAGE AREA.--4,080 mi² (10,570 km²), approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF RECORD.--January 1959 to current year. Prior to Oct. 1, 1961, published as "below Big Bend powerplant."

GAGE.--Water-stage recorder. Datum of gage is 3,274.82 ft (998.165 m) above mean sea level (levels by Pacific Power & Light Co.).

REMARKS.--Records good. Flow regulated by Upper Klamath Lake (see station 11507000). Large diurnal fluctuation caused by John C. Boyle powerplant and 2 powerplants below Upper Klamath Lake. Diversions for irrigation above station.

AVERAGE DISCHARGE.--18 years, 1,876 ft³/s (53.13 m³/s), 1,359,000 acre-ft/yr (1.68 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Mar. 5, 1972, gage height, 9.33 ft (2.844 m); minimum, 283 ft³/s (8.01 m³/s) Feb. 17, 1968; minimum daily, 317 ft³/s (8.98 m³/s) July 25, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,840 ft³/s (80.4 m³/s) Nov. 3-5, 11, 12, gage height, 5.72 ft (1.743 m); minimum, 336 ft³/s (9.52 m³/s) many days during June through September; minimum daily, 340 ft³/s (9.63 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|--------|--------|-------|-------|-------|-------|-------|-------|---------|-------|-------|
| 1 | 1520 | 2540 | 2780 | 1500 | 1290 | 730 | 585 | 772 | 615 | 650 | 656 | 700 |
| 2 | 1510 | 2500 | 2660 | 1210 | 1290 | 683 | 625 | 766 | 600 | 610 | 661 | 694 |
| 3 | 1510 | 2800 | 2420 | 1650 | 1200 | 635 | 625 | 865 | 645 | 610 | 656 | 650 |
| 4 | 1510 | 2810 | 2340 | 1500 | 1210 | 545 | 630 | 859 | 600 | 615 | 656 | 656 |
| 5 | 1520 | 2820 | 2330 | 1490 | 1220 | 590 | 630 | 846 | 590 | 610 | 661 | 656 |
| 6 | 1520 | 2810 | 2020 | 1540 | 1200 | 590 | 678 | 934 | 590 | 748 | 661 | 656 |
| 7 | 1710 | 2810 | 1820 | 1500 | 1160 | 672 | 672 | 934 | 600 | 790 | 661 | 650 |
| 8 | 1480 | 2810 | 1780 | 2140 | 1250 | 678 | 672 | 934 | 605 | 790 | 661 | 694 |
| 9 | 1680 | 2810 | 1780 | 2590 | 1120 | 865 | 718 | 941 | 610 | 683 | 661 | 694 |
| 10 | 1480 | 2810 | 1760 | 2610 | 1160 | 683 | 718 | 941 | 610 | 742 | 661 | 650 |
| 11 | 1680 | 2810 | 1770 | 2430 | 1150 | 635 | 808 | 941 | 656 | 431 | 661 | 650 |
| 12 | 1480 | 2810 | 1770 | 1860 | 1100 | 635 | 808 | 948 | 1140 | 343 | 661 | 650 |
| 13 | 1680 | 2810 | 1770 | 1450 | 1100 | 635 | 796 | 852 | 990 | 343 | 656 | 650 |
| 14 | 1480 | 2810 | 1530 | 1430 | 1090 | 667 | 760 | 934 | 969 | 340 | 661 | 656 |
| 15 | 1710 | 2810 | 1530 | 1430 | 1090 | 540 | 718 | 941 | 610 | 610 | 661 | 661 |
| 16 | 1500 | 2810 | 1530 | 1410 | 1050 | 540 | 718 | 941 | 565 | 700 | 522 | 826 |
| 17 | 1680 | 2810 | 1540 | 1420 | 1050 | 545 | 766 | 934 | 565 | 605 | 522 | 913 |
| 18 | 1480 | 2810 | 1540 | 1410 | 1050 | 540 | 766 | 941 | 560 | 565 | 522 | 913 |
| 19 | 2050 | 2810 | 1550 | 1430 | 1050 | 635 | 730 | 941 | 560 | 694 | 522 | 1000 |
| 20 | 1500 | 2810 | 1540 | 1390 | 1050 | 730 | 730 | 839 | 560 | 700 | 522 | 1120 |
| 21 | 1480 | 2810 | 1540 | 1310 | 1050 | 630 | 724 | 927 | 560 | 742 | 527 | 1140 |
| 22 | 1470 | 2810 | 1540 | 1290 | 1040 | 630 | 718 | 927 | 605 | 742 | 522 | 1420 |
| 23 | 1780 | 2810 | 1540 | 1310 | 1060 | 635 | 760 | 700 | 605 | 689 | 513 | 1110 |
| 24 | 1470 | 2810 | 1530 | 1310 | 1010 | 630 | 760 | 872 | 605 | 694 | 610 | 927 |
| 25 | 1680 | 2810 | 1540 | 1330 | 962 | 625 | 760 | 872 | 645 | 694 | 656 | 969 |
| 26 | 1470 | 2800 | 1510 | 1400 | 859 | 635 | 754 | 872 | 645 | 736 | 650 | 1150 |
| 27 | 1740 | 2800 | 1490 | 1310 | 865 | 630 | 754 | 808 | 645 | 650 | 650 | 1220 |
| 28 | 2010 | 2810 | 1210 | 1330 | 820 | 630 | 766 | 872 | 640 | 650 | 650 | 802 |
| 29 | 2220 | 2810 | 1500 | 1300 | --- | 630 | 766 | 872 | 689 | 700 | 650 | 364 |
| 30 | 2380 | 2810 | 1500 | 1290 | --- | 580 | 772 | 694 | 645 | 661 | 645 | 808 |
| 31 | 2430 | --- | 1250 | 1290 | --- | 585 | --- | 650 | --- | 656 | 650 | --- |
| TOTAL | 51810 | 83700 | 53910 | 47860 | 30546 | 19663 | 21687 | 27070 | 19524 | 19793 | 19228 | 24649 |
| MEAN | 1671 | 2790 | 1739 | 1544 | 1091 | 634 | 723 | 873 | 651 | 638 | 620 | 822 |
| MAX | 2430 | 2820 | 2780 | 2610 | 1290 | 865 | 808 | 948 | 1140 | 790 | 661 | 1420 |
| MIN | 1470 | 2500 | 1210 | 1210 | 820 | 540 | 585 | 650 | 560 | 340 | 513 | 364 |
| AC-FT | 102800 | 166000 | 106900 | 94930 | 60590 | 39000 | 43020 | 53690 | 38730 | 39260 | 38140 | 48890 |
| CAL YR 1976 TOTAL | 581379 | | MEAN | 1588 | MAX | 2820 | MIN | 364 | AC-FT | 1153000 | | |
| WTR YR 1977 TOTAL | 419440 | | MEAN | 1149 | MAX | 2620 | MIN | 340 | AC-FT | 832000 | | |

KLAMATH RIVER BASIN

71

11516530 KLAMATH RIVER BELOW IRON GATE DAM, CA

LOCATION.--Lat 41°55'41", long 122°26'35", in SE 1/4 sec. 17, T. 47 N., R. 5 W., Siskiyou County, Hydrologic Unit 18010206, on left bank 0.1 mi (0.2 km) downstream from Bogus Creek, 0.6 mi (1.0 km) downstream from Iron Gate Dam, and 5.9 mi (9.5 km) northeast of Hornbrook.

DRAINAGE AREA.--4,630 mi² (11,990 km²), approximately (not including Lost River and Lower Klamath Lake basins).

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,162.44 ft (659.112 m) above mean sea level (levels by Pacific Power and Light Co.).

REMARKS.--Records excellent. Flow regulated by Upper Klamath Lake, capacity, 523,700 acre-ft (646 hm³), other smaller reservoirs, and diversions above station. Iron Gate Dam 0.6 mi (1.0 km) upstream is a re-regulating reservoir (see sta 11516510). Records of chemical analyses and water temperatures for the current year are published in the California district report.

AVERAGE DISCHARGE.--17 years, 2,254 ft³/s (63.83 m³/s), 1,633,000 acre-ft/yr (2.01 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft³/s (833 m³/s) Dec. 22, 1964, gage height, 13.63 ft (4.154 m), from rating curve extended above 15,000 ft³/s (425 m³/s), on basis of slope-area measurement of maximum flow; minimum daily, 647 ft³/s (18.3 m³/s) Oct. 30, Nov. 6, 1960, Sept. 24, Oct. 1, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,120 ft³/s (88.4 m³/s) Nov. 14, 20, gage height, 5.33 ft (1.625 m); minimum daily, 706 ft³/s (20.0 m³/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|---------|-------|-------|
| 1 | 1610 | 2470 | 2940 | 1490 | 1480 | 727 | 729 | 1020 | 789 | 720 | 716 | 709 |
| 2 | 1610 | 2810 | 2880 | 1490 | 1400 | 723 | 728 | 1020 | 753 | 722 | 715 | 708 |
| 3 | 1600 | 2950 | 2580 | 1450 | 1330 | 738 | 728 | 1010 | 740 | 720 | 725 | 708 |
| 4 | 1600 | 3050 | 2460 | 1410 | 1320 | 735 | 728 | 1000 | 728 | 724 | 726 | 708 |
| 5 | 1790 | 3030 | 2430 | 1480 | 1330 | 723 | 728 | 1000 | 730 | 719 | 726 | 708 |
| 6 | 1790 | 3020 | 2340 | 1550 | 1330 | 719 | 728 | 1010 | 732 | 712 | 725 | 708 |
| 7 | 1800 | 3020 | 2040 | 1550 | 1330 | 723 | 726 | 1010 | 734 | 714 | 728 | 712 |
| 8 | 1790 | 3010 | 1990 | 1640 | 1330 | 723 | 729 | 1000 | 728 | 717 | 722 | 706 |
| 9 | 1800 | 3020 | 1980 | 1760 | 1330 | 726 | 729 | 1010 | 729 | 718 | 719 | 707 |
| 10 | 1800 | 3040 | 1960 | 1800 | 1330 | 723 | 730 | 1010 | 729 | 717 | 716 | 708 |
| 11 | 1800 | 3040 | 1970 | 2850 | 1320 | 722 | 731 | 1010 | 721 | 717 | 716 | 708 |
| 12 | 1800 | 3040 | 2000 | 2600 | 1320 | 723 | 730 | 1010 | 716 | 725 | 717 | 711 |
| 13 | 1800 | 3040 | 1920 | 2210 | 1320 | 722 | 727 | 1010 | 778 | 724 | 719 | 714 |
| 14 | 1800 | 3080 | 1760 | 1830 | 1330 | 722 | 727 | 1010 | 886 | 717 | 720 | 711 |
| 15 | 1800 | 3070 | 1750 | 1740 | 1330 | 721 | 728 | 1020 | 886 | 720 | 718 | 723 |
| 16 | 1800 | 3050 | 1750 | 1690 | 1330 | 727 | 728 | 1020 | 796 | 720 | 719 | 967 |
| 17 | 1800 | 3050 | 1750 | 1640 | 1330 | 724 | 762 | 1020 | 719 | 718 | 718 | 1330 |
| 18 | 1800 | 3050 | 1740 | 1550 | 1320 | 724 | 873 | 1020 | 719 | 720 | 713 | 1330 |
| 19 | 1800 | 3050 | 1740 | 1510 | 1320 | 723 | 848 | 1020 | 719 | 722 | 712 | 1340 |
| 20 | 1800 | 3080 | 1730 | 1520 | 1330 | 723 | 834 | 1020 | 715 | 723 | 715 | 1340 |
| 21 | 1800 | 3010 | 1660 | 1520 | 1330 | 723 | 798 | 1010 | 716 | 722 | 715 | 1340 |
| 22 | 1800 | 2970 | 1570 | 1520 | 1330 | 723 | 792 | 1020 | 721 | 723 | 715 | 1340 |
| 23 | 1800 | 2960 | 1570 | 1520 | 1330 | 727 | 791 | 1030 | 720 | 723 | 713 | 1340 |
| 24 | 1800 | 2960 | 1560 | 1520 | 1320 | 723 | 790 | 1020 | 722 | 723 | 716 | 1350 |
| 25 | 1800 | 2960 | 1550 | 1520 | 1330 | 723 | 799 | 1020 | 722 | 723 | 720 | 1340 |
| 26 | 1800 | 2950 | 1550 | 1520 | 1340 | 723 | 803 | 1020 | 723 | 724 | 718 | 1330 |
| 27 | 1800 | 2940 | 1550 | 1520 | 1340 | 723 | 798 | 1020 | 722 | 721 | 718 | 1330 |
| 28 | 1800 | 2930 | 1520 | 1500 | 1340 | 720 | 784 | 1020 | 723 | 712 | 713 | 1360 |
| 29 | 2170 | 2960 | 1490 | 1480 | --- | 719 | 731 | 1020 | 718 | 713 | 712 | 1380 |
| 30 | 2440 | 2960 | 1500 | 1480 | --- | 726 | 779 | 1010 | 718 | 715 | 709 | 1350 |
| 31 | 2430 | --- | 1490 | 1480 | --- | 731 | --- | 1010 | --- | 714 | 710 | --- |
| TOTAL | 56630 | 89570 | 58720 | 51340 | 37420 | 22452 | 22836 | 31450 | 22252 | 22302 | 22244 | 30416 |
| MEAN | 1827 | 2986 | 1894 | 1656 | 1336 | 724 | 761 | 1015 | 742 | 719 | 718 | 1014 |
| MAX | 2440 | 3080 | 2940 | 2850 | 1480 | 738 | 873 | 1030 | 886 | 725 | 728 | 1380 |
| MIN | 1600 | 2470 | 1490 | 1410 | 1320 | 719 | 726 | 1000 | 715 | 712 | 709 | 706 |
| AC-FT | 112300 | 177700 | 116500 | 101800 | 74220 | 44530 | 45300 | 62380 | 44140 | 44240 | 44120 | 60330 |
| CAL YR 1976 | TOTAL | 671773 | MEAN | 1835 | MAX | 3440 | MIN | 709 | AC-FT | 1332000 | | |
| WTR YR 1977 | TOTAL | 467632 | MEAN | 1281 | MAX | 3080 | MIN | 706 | AC-FT | 927500 | | |

COLUMBIA RIVER MAIN STEM

12472800 COLUMBIA RIVER BELOW PRIEST RAPIDS DAM, WA

LOCATION.--Lat 46°37'44", long 119°51'49", in SE¼NW¼ sec.7, T.13 N., R.24 E., Grant County, Hydrologic Unit 17020016, on left bank 2.6 mi (4.2 km) downstream from Priest Rapids Dam, 14.7 mi (23.7 km) south of Beverly, and at mile 394.5 (634.8 km).

DRAINAGE AREA.--96,000 mi² (249,000 km²), approximately.

PERIOD OF RECORD.--January 1917 to current year. January 1917 to September 1930, at site 3.4 mi (5.5 km) downstream, published as "at Vernita." October 1930 to July 27, 1959, at site 46.5 mi (74.8 km) upstream, published as "at Trinidad."

REVISED RECORDS.--WSP 1933: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to Oct. 1, 1930, nonrecording gages at site 3.4 mi (5.5 km) downstream at datum 388.7 ft (118.48 m) above mean sea level, unadjusted. Oct. 1, 1930, to July 27, 1959, water-stage recorder at site 46.5 mi (74.8 km) upstream at datum 499.3 ft (152.19 m) above mean sea level (river-profile survey).

REMARKS.--Records excellent. Diversions for irrigation of about 500,000 acres (2,020 km²) above station. Flow regulated by 10 major reservoirs and numerous smaller reservoirs and powerplants.

AVERAGE DISCHARGE.--60 years, 120,400 ft³/s (3,410 m³/s), 87,230,000 acre-ft/yr (108,000 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 692,600 ft³/s (19,600 m³/s) June 12, 1948, gage height, 59.35 ft (18.090 m), site and datum then in use; minimum, 4,120 ft³/s (117 m³/s) Feb. 10, 1932, gage height, 11.40 ft (3.475 m) site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1894, reached a discharge of about 740,000 ft³/s (21,000 m³/s), based on information obtained at other points.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 192,000 ft³/s (5,440 m³/s) May 9, elevation, 411.08 ft (125.297 m); minimum, 35,500 ft³/s (1,010 m³/s) July 2, elevation, 396.25 ft (120.777 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|----------|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|
| 1 | 99800 | 100000 | 127000 | 109000 | 118000 | 126000 | 93200 | 53500 | 122000 | 74600 | 82200 | 84700 |
| 2 | 101000 | 104000 | 90300 | 102000 | 123000 | 109000 | 70100 | 117000 | 127000 | 42700 | 80800 | 97300 |
| 3 | 96100 | 100000 | 84600 | 108000 | 130000 | 111000 | 48800 | 108000 | 98600 | 45100 | 99800 | 62900 |
| 4 | 114000 | 107000 | 91700 | 131000 | 110000 | 116000 | 60300 | 90100 | 59300 | 38900 | 83500 | 55900 |
| 5 | 99700 | 99300 | 79800 | 118000 | 109000 | 74900 | 65400 | 106000 | 43100 | 60600 | 83200 | 47900 |
| 6 | 108000 | 87200 | 101000 | 112000 | 88900 | 77600 | 76100 | 104000 | 77600 | 82500 | 61400 | 85000 |
| 7 | 102000 | 62500 | 99900 | 108000 | 118000 | 117000 | 62200 | 69000 | 81400 | 90500 | 56000 | 98800 |
| 8 | 101000 | 84100 | 83000 | 97800 | 92900 | 115000 | 67700 | 42100 | 69300 | 71200 | 89900 | 90900 |
| 9 | 104000 | 98200 | 88400 | 93000 | 86000 | 115000 | 55500 | 107000 | 77100 | 43600 | 91500 | 91300 |
| 10 | 91600 | 108000 | 92700 | 111000 | 85600 | 114000 | 63300 | 126000 | 79800 | 38400 | 71400 | 61900 |
| 11 | 107000 | 111000 | 76600 | 126000 | 88300 | 104000 | 55800 | 125000 | 51800 | 60700 | 91900 | 59200 |
| 12 | 114000 | 109000 | 80400 | 114000 | 77200 | 55700 | 69600 | 105000 | 52000 | 64000 | 87200 | 98400 |
| 13 | 121000 | 103000 | 109000 | 86400 | 72600 | 51700 | 73100 | 86700 | 84100 | 79900 | 85100 | 92900 |
| 14 | 115000 | 81600 | 97000 | 108000 | 91500 | 113000 | 75200 | 92800 | 83200 | 91400 | 56500 | 89300 |
| 15 | 100000 | 102000 | 92900 | 97700 | 103000 | 109000 | 67700 | 52700 | 81600 | 83600 | 94100 | 86900 |
| 16 | 108000 | 111000 | 100000 | 83600 | 86600 | 108000 | 73900 | 99400 | 99900 | 77000 | 91400 | 88400 |
| 17 | 101000 | 88000 | 111000 | 93600 | 104000 | 98100 | 48400 | 110000 | 109000 | 53100 | 85200 | 84700 |
| 18 | 109000 | 111000 | 104000 | 97500 | 97500 | 99700 | 76000 | 119000 | 66100 | 90800 | 73400 | 46000 |
| 19 | 116000 | 93900 | 96200 | 105000 | 66800 | 80500 | 86700 | 116000 | 68300 | 83200 | 85900 | 79400 |
| 20 | 106000 | 86900 | 108000 | 108000 | 59300 | 69900 | 84400 | 95400 | 86200 | 90400 | 65500 | 87600 |
| 21 | 103000 | 76700 | 111000 | 114000 | 116000 | 80600 | 91700 | 67500 | 94300 | 89500 | 49700 | 88100 |
| 22 | 113000 | 103000 | 118000 | 114000 | 105000 | 96800 | 86200 | 61100 | 87100 | 93000 | 95600 | 82700 |
| 23 | 102000 | 104000 | 99800 | 127000 | 116000 | 102000 | 64900 | 121000 | 60200 | 72100 | 73600 | 92300 |
| 24 | 89700 | 105000 | 101000 | 130000 | 112000 | 113000 | 50600 | 139000 | 81000 | 43200 | 83200 | 92300 |
| 25 | 116000 | 73900 | 82000 | 132000 | 119000 | 123000 | 79100 | 118000 | 66800 | 81700 | 75600 | 63800 |
| 26 | 93100 | 80100 | 54900 | 135000 | 82600 | 82600 | 72500 | 128000 | 60000 | 81800 | 78500 | 87000 |
| 27 | 115000 | 96300 | 87900 | 111000 | 71100 | 76300 | 70300 | 129000 | 92400 | 88600 | 58300 | 81100 |
| 28 | 122000 | 93500 | 115000 | 127000 | 106000 | 106000 | 64900 | 43600 | 77300 | 94500 | 59800 | 81100 |
| 29 | 113000 | 112000 | 112000 | 146000 | --- | 96700 | 68800 | 44500 | 69500 | 82800 | 87400 | 74200 |
| 30 | 118000 | 115000 | 107000 | 141000 | --- | 95200 | 62100 | 71400 | 58300 | 81900 | 77500 | 76800 |
| 31 | 72000 | --- | 116000 | 127000 | --- | 97600 | --- | 119000 | --- | 56200 | 92500 | --- |
| TOTAL | 3271000 | 2907200 | 3018100 | 3513600 | 2735900 | 3034900 | 2084500 | 2966800 | 2364300 | 2227500 | 2447600 | 2399800 |
| MEAN | 105500 | 96910 | 97360 | 113300 | 97710 | 97900 | 69480 | 95700 | 78810 | 71850 | 78950 | 79990 |
| MAX | 122000 | 115000 | 127000 | 146000 | 130000 | 126000 | 93200 | 139000 | 127000 | 94500 | 99800 | 98400 |
| MIN | 72000 | 62500 | 54900 | 83600 | 59300 | 51700 | 48400 | 42100 | 43100 | 38400 | 49700 | 46000 |
| AC-FT | 6488000 | 5766000 | 5986000 | 6969000 | 5427000 | 6020000 | 4135000 | 5885000 | 4690000 | 4418000 | 4855000 | 4760000 |
| CAL YR 1976 | TOTAL | 51888000 | MEAN | 141800 | MAX | 243000 | MIN | 39300 | AC-FT | 102900000 | | |
| WTR YR 1977 | TOTAL | 32971200 | MEAN | 90330 | MAX | 146000 | MIN | 38400 | AC-FT | 65400000 | | |

OWYHEE RIVER BASIN

73

13181000 OWYHEE RIVER NEAR ROME, OR

LOCATION.--Lat 42°52'02", long 117°38'52", in SE¼NE¼ sec.14, T.31 S., R.41 E., Malheur County, Hydrologic Unit 17050107, on right bank 0.5 mi (0.8 km) downstream from Jordan Creek, 2.6 mi (4.2 km) north of Rome, and at mile 122.4 (196.9 km).

DRAINAGE AREA.--About 8,000 mi² (20,700 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,344.20 ft (1,019.312 m) above mean sea level. Prior to Feb. 10, 1960, at datum 0.24 ft (0.073 m) lower.

REMARKS.--Water-discharge records good. Flow regulated by Antelope Reservoir, capacity, 70,000 acre-ft (86.3 hm³), increased in 1970, and Wild Horse Reservoir, capacity, 32,690 acre-ft (40.3 hm³), and numerous small reservoirs. Diversions above station for irrigation.

AVERAGE DISCHARGE.--28 years, 907 ft³/s (25.69 m³/s), 657,100 acre-ft/yr (810 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,500 ft³/s (949 m³/s) Dec. 24, 1964, gage height, 16.7 ft (5.09 m), from floodmark; minimum, 42 ft³/s (1.19 m³/s) Aug. 12, 1954, July 28, Aug. 5, 1961, July 31, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 675 ft³/s (19.1 m³/s) Apr. 6, gage height, 1.95 ft (0.594 m), no peak above base of 5,400 ft³/s (153 m³/s); minimum, 57 ft³/s (1.61 m³/s) July 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|------|------|
| 1 | 196 | 213 | 185 | 171 | 190 | 199 | 237 | 127 | 304 | 118 | 98 | 95 |
| 2 | 180 | 209 | 190 | 187 | 190 | 203 | 227 | 130 | 276 | 120 | 92 | 99 |
| 3 | 177 | 209 | 195 | 206 | 170 | 203 | 237 | 118 | 248 | 113 | 92 | 99 |
| 4 | 183 | 206 | 200 | 160 | 160 | 213 | 244 | 118 | 223 | 107 | 106 | 99 |
| 5 | 187 | 209 | 190 | 150 | 155 | 213 | 419 | 130 | 206 | 112 | 96 | 97 |
| 6 | 187 | 209 | 175 | 120 | 155 | 193 | 491 | 135 | 187 | 109 | 105 | 83 |
| 7 | 199 | 209 | 175 | 105 | 155 | 190 | 515 | 153 | 171 | 103 | 106 | 84 |
| 8 | 213 | 216 | 175 | 105 | 160 | 187 | 540 | 162 | 153 | 96 | 116 | 81 |
| 9 | 216 | 209 | 175 | 105 | 170 | 209 | 555 | 165 | 144 | 94 | 119 | 75 |
| 10 | 203 | 206 | 175 | 115 | 180 | 234 | 515 | 159 | 156 | 91 | 110 | 75 |
| 11 | 206 | 206 | 175 | 130 | 190 | 241 | 491 | 180 | 502 | 87 | 109 | 78 |
| 12 | 196 | 199 | 175 | 150 | 206 | 237 | 491 | 213 | 478 | 80 | 123 | 79 |
| 13 | 193 | 196 | 175 | 170 | 209 | 237 | 415 | 196 | 419 | 77 | 123 | 80 |
| 14 | 187 | 190 | 175 | 185 | 213 | 220 | 397 | 174 | 419 | 70 | 124 | 78 |
| 15 | 187 | 190 | 175 | 190 | 206 | 216 | 370 | 190 | 415 | 82 | 125 | 81 |
| 16 | 193 | 206 | 175 | 190 | 196 | 234 | 347 | 220 | 365 | 74 | 132 | 79 |
| 17 | 190 | 220 | 175 | 190 | 203 | 234 | 325 | 213 | 308 | 67 | 123 | 81 |
| 18 | 187 | 213 | 190 | 190 | 206 | 223 | 304 | 216 | 269 | 75 | 119 | 85 |
| 19 | 183 | 209 | 195 | 190 | 216 | 227 | 269 | 213 | 255 | 84 | 116 | 87 |
| 20 | 180 | 209 | 200 | 190 | 240 | 230 | 258 | 209 | 241 | 120 | 111 | 92 |
| 21 | 180 | 220 | 150 | 190 | 251 | 234 | 262 | 206 | 248 | 123 | 111 | 95 |
| 22 | 180 | 213 | 159 | 190 | 251 | 220 | 237 | 209 | 296 | 120 | 107 | 97 |
| 23 | 180 | 209 | 177 | 190 | 251 | 216 | 209 | 227 | 285 | 109 | 103 | 100 |
| 24 | 180 | 203 | 180 | 190 | 244 | 280 | 193 | 244 | 262 | 102 | 86 | 111 |
| 25 | 183 | 199 | 168 | 190 | 244 | 276 | 183 | 255 | 262 | 89 | 84 | 113 |
| 26 | 199 | 199 | 180 | 180 | 220 | 276 | 171 | 248 | 239 | 86 | 90 | 109 |
| 27 | 199 | 190 | 180 | 175 | 216 | 312 | 144 | 255 | 214 | 92 | 107 | 107 |
| 28 | 199 | 185 | 187 | 170 | 203 | 304 | 141 | 284 | 185 | 111 | 116 | 108 |
| 29 | 203 | 180 | 177 | 160 | --- | 276 | 133 | 308 | 163 | 94 | 115 | 118 |
| 30 | 209 | 180 | 180 | 160 | --- | 237 | 130 | 304 | 132 | 91 | 111 | 135 |
| 31 | 213 | --- | 165 | 170 | --- | 251 | --- | 312 | --- | 95 | 102 | --- |
| TOTAL | 5968 | 6111 | 5548 | 5164 | 5650 | 7225 | 9450 | 6273 | 8031 | 2991 | 3377 | 2800 |
| MEAN | 193 | 204 | 179 | 167 | 202 | 233 | 315 | 202 | 268 | 96.5 | 109 | 93.3 |
| MAX | 216 | 220 | 200 | 206 | 251 | 312 | 555 | 312 | 502 | 123 | 132 | 135 |
| MIN | 177 | 180 | 150 | 105 | 155 | 187 | 130 | 118 | 132 | 67 | 84 | 75 |
| AC-FT | 11840 | 12120 | 11000 | 10240 | 11210 | 14330 | 18740 | 12440 | 15930 | 5930 | 6700 | 5550 |
| CAL YR 1976 | TOTAL | 360262 | MEAN | 984 | MAX | 9220 | MIN | 127 | AC-FT | 714600 | | |
| WTR YR 1977 | TOTAL | 68588 | MEAN | 188 | MAX | 555 | MIN | 67 | AC-FT | 136000 | | |

OWYHEE RIVER BASIN

13181000 OWYHEE RIVER NEAR ROME, OR

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1972 to June 1977 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.5°C July 26-28, 1975; minimum, 0.0°C on several days in 1973, 1974, 1975.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 24.5°C June 6-9; minimum recorded, 0.5°C Feb. 8, 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 17.0 | 15.5 | 7.0 | 6.5 | | | | | --- | --- | 4.0 | 4.0 |
| 2 | 15.5 | 14.0 | 8.0 | 7.0 | | | | | --- | --- | 4.5 | 4.0 |
| 3 | 14.0 | 12.0 | 8.0 | 7.0 | | | | | --- | --- | 5.0 | 4.5 |
| 4 | 14.0 | 12.0 | 8.0 | 7.0 | | | | | --- | --- | 5.0 | 4.5 |
| 5 | 14.0 | 12.0 | 8.0 | 6.5 | | | | | --- | --- | 5.5 | 4.5 |
| 6 | 13.5 | 11.5 | 8.0 | 7.0 | | | | | --- | --- | 5.5 | 5.0 |
| 7 | 13.5 | 11.0 | 8.0 | 7.0 | | | | | --- | --- | 5.5 | 5.5 |
| 8 | 13.0 | 10.5 | 7.0 | 6.5 | | | | | 0.5 | 0.5 | 6.5 | 5.0 |
| 9 | 13.0 | 11.0 | 6.5 | 6.0 | | | | | 1.0 | 0.5 | 6.5 | 6.0 |
| 10 | 13.5 | 11.5 | 6.0 | 6.0 | | | | | 1.0 | 1.0 | 6.5 | 5.5 |
| 11 | 13.0 | 11.5 | 6.0 | 5.5 | | | | | 1.5 | 1.0 | 6.0 | 5.5 |
| 12 | 12.0 | 10.5 | 6.0 | 5.5 | | | | | 1.5 | 1.5 | 6.5 | 6.0 |
| 13 | 11.5 | 10.0 | 5.5 | 4.5 | | | | | 1.5 | 1.5 | 6.5 | 6.0 |
| 14 | 11.0 | 10.0 | 4.5 | 4.5 | | | | | 3.0 | 1.5 | 6.5 | 6.0 |
| 15 | 11.0 | 9.5 | 4.5 | 4.5 | | | | | 3.5 | 3.0 | 6.5 | 6.0 |
| 16 | 10.5 | 9.0 | 6.0 | 4.5 | | | | | 4.0 | 3.5 | 7.0 | 6.5 |
| 17 | 10.0 | 9.0 | 6.0 | 5.5 | | | | | 4.5 | 4.0 | 7.0 | 6.5 |
| 18 | 9.5 | 8.0 | 6.0 | 5.5 | | | | | 4.5 | 4.5 | 7.0 | 6.5 |
| 19 | 8.0 | 6.5 | 6.0 | 5.5 | | | | | 4.5 | 4.0 | 6.5 | 6.5 |
| 20 | 8.5 | 6.5 | 5.5 | 5.5 | | | | | 4.0 | 4.0 | 8.5 | 6.5 |
| 21 | 8.5 | 7.0 | 5.5 | 5.0 | | | | | 4.0 | 4.0 | 8.5 | 8.0 |
| 22 | 8.5 | 7.0 | 5.0 | 5.0 | | | | | 4.0 | 4.0 | 9.0 | 8.0 |
| 23 | 8.5 | 7.0 | 5.0 | 4.5 | | | | | 4.0 | 4.0 | 9.0 | 8.5 |
| 24 | 8.5 | 7.0 | 4.5 | 4.5 | | | | | 4.0 | 3.5 | 9.0 | 8.0 |
| 25 | 7.0 | 7.0 | 4.5 | 4.5 | | | | | 3.5 | 3.5 | 9.0 | 8.0 |
| 26 | 8.5 | 7.0 | 4.5 | 4.5 | | | | | 3.5 | 3.5 | 9.0 | 8.0 |
| 27 | 8.5 | 7.0 | 4.5 | --- | | | | | 4.5 | 3.5 | 9.0 | 6.0 |
| 28 | 8.0 | 6.5 | --- | --- | | | | | 4.5 | 4.0 | 6.0 | 6.0 |
| 29 | 7.0 | 6.5 | --- | --- | | | | | --- | --- | 6.0 | 6.0 |
| 30 | 8.0 | 6.5 | --- | --- | | | | | --- | --- | 6.0 | 6.0 |
| 31 | 8.0 | 7.0 | --- | --- | | | | | --- | --- | 6.0 | 6.0 |
| MONTH | 17.0 | 6.5 | 8.0 | 4.5 | | | | | 4.5 | 0.5 | 9.0 | 4.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|-----|--------|-----|-----------|-----|-----|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 6.5 | 6.0 | 18.0 | 16.5 | 20.5 | 19.0 | | | | | | |
| 2 | 6.5 | 6.0 | 17.0 | 16.0 | 20.5 | 18.5 | | | | | | |
| 3 | 8.5 | 6.5 | 16.5 | 14.5 | 20.5 | 18.5 | | | | | | |
| 4 | 10.0 | 8.0 | 14.5 | 13.5 | 22.0 | 20.0 | | | | | | |
| 5 | 10.5 | 9.0 | 14.5 | 13.5 | 23.5 | 21.0 | | | | | | |
| 6 | 11.0 | 10.0 | 14.0 | 13.0 | 24.5 | 22.0 | | | | | | |
| 7 | 10.5 | 10.0 | 14.5 | 13.5 | 24.5 | 23.0 | | | | | | |
| 8 | 10.5 | 10.0 | 14.5 | 13.5 | 24.5 | 23.0 | | | | | | |
| 9 | 11.0 | 10.0 | 14.5 | 14.0 | 24.5 | 22.0 | | | | | | |
| 10 | 11.0 | 10.0 | 14.5 | 13.5 | 22.0 | 20.5 | | | | | | |
| 11 | 11.0 | 10.0 | 14.0 | 13.5 | 20.5 | 19.5 | | | | | | |
| 12 | 11.0 | 10.0 | 15.0 | 14.0 | 20.5 | 19.5 | | | | | | |
| 13 | 11.0 | 10.5 | 16.5 | 14.5 | 20.5 | 19.0 | | | | | | |
| 14 | 10.5 | 10.0 | 16.5 | 15.5 | 19.5 | 18.5 | | | | | | |
| 15 | 11.0 | 10.0 | 15.5 | 14.5 | 20.5 | 18.5 | | | | | | |
| 16 | 10.5 | 10.0 | 14.5 | 14.0 | 21.0 | 19.0 | | | | | | |
| 17 | 10.5 | 10.0 | 14.5 | 14.0 | 21.0 | 19.0 | | | | | | |
| 18 | 11.0 | 10.0 | 15.5 | 14.5 | 21.0 | 19.0 | | | | | | |
| 19 | 11.0 | 10.0 | 16.0 | 15.0 | 21.0 | 20.0 | | | | | | |
| 20 | 11.0 | 10.0 | 17.0 | 15.5 | 20.5 | 20.0 | | | | | | |
| 21 | 11.5 | 11.0 | 18.0 | 16.5 | 21.0 | 19.0 | | | | | | |
| 22 | 12.0 | 11.0 | 18.5 | 17.0 | --- | --- | | | | | | |
| 23 | 14.0 | 12.0 | 18.5 | 16.5 | --- | --- | | | | | | |
| 24 | 15.0 | 13.5 | 16.5 | 16.0 | --- | --- | | | | | | |
| 25 | 15.0 | 14.5 | 17.0 | 16.0 | --- | --- | | | | | | |
| 26 | 15.0 | 13.5 | 17.0 | 16.0 | --- | --- | | | | | | |
| 27 | 15.5 | 13.5 | 16.5 | 15.5 | --- | --- | | | | | | |
| 28 | 16.0 | 14.0 | 18.0 | 15.5 | --- | --- | | | | | | |
| 29 | 18.0 | 15.5 | 18.5 | 16.5 | --- | --- | | | | | | |
| 30 | 18.0 | 16.0 | 19.0 | 17.0 | --- | --- | | | | | | |
| 31 | --- | --- | 20.5 | 18.0 | --- | --- | | | | | | |
| MONTH | 18.0 | 6.0 | 20.5 | 13.0 | 24.5 | 18.5 | | | | | | |

OWYHEE RIVER BASIN

75

13182500 LAKE OWYHEE NEAR NYSSA, OR

LOCATION.--Lat 43°38'30", long 117°14'30", in NW¼SE¼ sec.20, T.22 S., R.45 E., Malheur County, Hydrologic Unit 17050110, near left abutment on Owyhee Dam on Owyhee River, 21 mi (33.8 km) southwest of Nyssa, and at mile 28.5 (45.9 km).

DRAINAGE AREA.--11,160 mi² (28,900 km²), approximately.

PERIOD OF RECORD.--October 1932 to current year. Prior to October 1958, published as Owyhee Reservoir at Owyhee Dam, near Nyssa.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Oct. 1, 1965, non-recording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete arch-gravity dam, completed in September 1932; storage began Oct. 16, 1932. Capacity, 1,122,000 acre-ft (1,380 hm³) between elevations 2,367.50 ft (721.614 m) bottom of sluice gates and 2,670.00 ft (813.816 m) top of spillway gate, 715,000 acre-ft (882 hm³) between elevations 2,590.20 ft (789.493 m) diversion tunnel and 2,670.00 ft (813.816 m). Dead storage below elevation 2,367.50 ft (721.614 m) negligible. Figures given herein are contents above elevation 2,367.50 ft (721.614 m). Reservoir generally will not be drawn below elevation 2,590.2 ft (789.493 m) contents, 406,800 acre-ft (502 hm³), which project considers dead storage. Water is released through diversion tunnel to South Canal for irrigation of lands west of Snake River in vicinity of Homedale, Idaho, and to North Canal for irrigation of lands north and west of Owyhee River, and through sluice gates to river for Owyhee Canal, which diverts about 18 mi (29 km) downstream.

COOPERATION.--Capacity tables furnished by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,140,000 acre-ft (1,410 hm³) Apr. 15, 1952, elevation, 2,671.50 ft (814.273 m); minimum observed since full capacity was attained on May 7, 1936, 437,000 acre-ft (539 hm³) Oct. 1, 1961, elevation, 2,595.35 ft (791.063 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 931,600 acre-ft (1,150 hm³) Mar. 31, elevation, 2,653.99 ft (808.936 m); minimum, 583,900 acre-ft (720 hm³) Sept. 30, elevation, 2,616.44 ft (797.491 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept.30..... | 2,645.72 | 843,900 | - |
| Oct. 31..... | 2,645.66 | 843,300 | -600 |
| Nov. 30..... | 2,647.40 | 861,100 | +17,800 |
| Dec. 31..... | 2,649.02 | 878,000 | +16,900 |
| CAL YR 1976..... | - | - | -124,000 |
| Jan. 31..... | 2,650.66 | 895,400 | +17,400 |
| Feb. 28..... | 2,652.32 | 913,300 | +17,900 |
| Mar. 31..... | 2,653.98 | 931,400 | +18,100 |
| Apr. 30..... | 2,650.25 | 891,000 | -40,400 |
| May 31..... | 2,645.49 | 841,500 | -49,500 |
| June 30..... | 2,639.25 | 780,100 | -61,400 |
| July 31..... | 2,629.94 | 695,300 | -84,800 |
| Aug. 31..... | 2,620.82 | 618,600 | -76,700 |
| Sept.30..... | 2,616.44 | 583,900 | -34,700 |
| WTR YR 1977..... | - | - | -260,000 |

OWYHEE RIVER BASIN

13183000 OWYHEE RIVER BELOW OWYHEE DAM, OR

LOCATION.--Lat 43°39'17", long 117°15'16", in SE¼ sec.18, T.22 S., R.45 E., Malheur County, Hydrologic Unit 17050110, on left bank 0.8 mi (1.3 km) downstream from Owyhee Dam, 20 mi (32 km) southwest of Nyssa, and at mile 27.3 (43.9 km).

DRAINAGE AREA.--11,160 mi² (28,900 km²), approximately.

PERIOD OF RECORD.--February 1929 to current year.

REVISED RECORDS.--WSP 983: 1941-42. WSP 1397: 1930, 1933, 1946.

GAGE.--Water-stage recorder. Datum of gage is 2,343.67 ft (714.351 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Records good. Flow regulated since October 1932 by Lake Owyhee (see station 13182500), and by many smaller reservoirs. Diversion of 425,800 acre-ft (525 hm³) from Lake Owyhee during the year for irrigation of lands below station and outside the basin. Many smaller diversions above Lake Owyhee for irrigation above station.

COOPERATION.--Water-stage recorder inspected by irrigation district employees.

AVERAGE DISCHARGE.--45 years (water years 1933-77), 356 ft³/s (10.08 m³/s), 257,900 acre-ft/yr (318 hm³/yr), not adjusted for storage or diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s (649 m³/s) Apr. 15, 1952, gage height, 15.70 ft (4.785 m); no flow for part of Aug. 8, 9, 1932, when temporary diversion tunnel at Owyhee Dam was closed.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 152 ft³/s (4.30 m³/s) May 1, gage height, 1.94 ft (0.591 m); minimum, 1.9 ft³/s (0.054 m³/s) Feb. 1, gage height, 0.42 ft (0.128 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 73 | 2.5 | 2.5 | 2.7 | 2.6 | 2.4 | 77 | 150 | 76 | 106 | 98 | 100 |
| 2 | 73 | 2.4 | 2.5 | 2.7 | 2.6 | 2.4 | 70 | 150 | 76 | 109 | 98 | 98 |
| 3 | 73 | 2.4 | 2.5 | 2.9 | 2.5 | 2.5 | 69 | 150 | 86 | 111 | 98 | 98 |
| 4 | 73 | 2.4 | 2.6 | 2.9 | 2.5 | 2.4 | 69 | 94 | 97 | 113 | 98 | 98 |
| 5 | 73 | 2.4 | 2.6 | 2.7 | 2.5 | 2.3 | 69 | 71 | 97 | 113 | 98 | 98 |
| 6 | 71 | 2.4 | 2.6 | 2.7 | 2.5 | 2.3 | 69 | 71 | 97 | 111 | 98 | 98 |
| 7 | 71 | 2.4 | 2.6 | 2.7 | 2.7 | 2.3 | 69 | 73 | 97 | 112 | 98 | 84 |
| 8 | 71 | 2.4 | 2.6 | 2.6 | 2.7 | 2.3 | 69 | 73 | 97 | 111 | 98 | 69 |
| 9 | 73 | 2.4 | 2.6 | 2.6 | 2.6 | 2.4 | 70 | 73 | 97 | 112 | 98 | 69 |
| 10 | 71 | 2.5 | 2.6 | 2.6 | 2.6 | 2.4 | 70 | 73 | 97 | 110 | 98 | 60 |
| 11 | 70 | 2.4 | 2.6 | 2.7 | 2.6 | 2.4 | 104 | 74 | 97 | 110 | 98 | 54 |
| 12 | 70 | 2.4 | 2.6 | 2.7 | 2.6 | 2.4 | 132 | 74 | 98 | 110 | 98 | 54 |
| 13 | 35 | 2.4 | 2.6 | 2.6 | 2.6 | 2.4 | 130 | 74 | 97 | 108 | 98 | 55 |
| 14 | 3.2 | 2.6 | 2.5 | 2.6 | 2.6 | 2.4 | 128 | 74 | 86 | 95 | 98 | 54 |
| 15 | 3.0 | 2.4 | 2.5 | 2.5 | 2.6 | 2.4 | 128 | 74 | 77 | 95 | 97 | 54 |
| 16 | 2.8 | 2.4 | 2.5 | 2.5 | 2.6 | 2.4 | 128 | 74 | 78 | 97 | 97 | 53 |
| 17 | 2.8 | 2.4 | 2.5 | 2.5 | 2.6 | 2.4 | 128 | 74 | 78 | 97 | 97 | 53 |
| 18 | 2.8 | 2.3 | 2.5 | 2.5 | 2.6 | 2.4 | 128 | 74 | 80 | 97 | 97 | 52 |
| 19 | 3.0 | 2.3 | 2.5 | 2.5 | 2.5 | 2.4 | 128 | 74 | 78 | 97 | 97 | 53 |
| 20 | 2.6 | 2.3 | 2.5 | 2.5 | 2.5 | 2.4 | 128 | 74 | 81 | 97 | 98 | 45 |
| 21 | 2.4 | 2.3 | 2.4 | 2.5 | 2.5 | 2.4 | 136 | 74 | 86 | 95 | 100 | 32 |
| 22 | 2.4 | 2.4 | 2.4 | 2.5 | 2.5 | 2.4 | 145 | 76 | 91 | 95 | 100 | 34 |
| 23 | 2.4 | 2.5 | 2.4 | 2.5 | 2.5 | 2.4 | 145 | 77 | 97 | 95 | 98 | 34 |
| 24 | 2.4 | 2.5 | 2.3 | 2.5 | 2.4 | 2.5 | 147 | 77 | 104 | 98 | 98 | 34 |
| 25 | 2.9 | 2.5 | 2.4 | 2.5 | 2.4 | 2.5 | 147 | 77 | 104 | 102 | 100 | 34 |
| 26 | 2.9 | 2.5 | 2.5 | 2.5 | 2.4 | 3.3 | 147 | 77 | 103 | 104 | 100 | 33 |
| 27 | 2.7 | 2.5 | 2.6 | 2.5 | 2.4 | 3.3 | 147 | 76 | 102 | 104 | 100 | 33 |
| 28 | 2.7 | 2.5 | 2.7 | 2.5 | 2.4 | 3.4 | 147 | 76 | 104 | 100 | 100 | 32 |
| 29 | 2.6 | 2.6 | 2.7 | 2.5 | --- | 3.4 | 150 | 76 | 106 | 98 | 100 | 32 |
| 30 | 2.5 | 2.5 | 2.7 | 2.5 | --- | 36 | 150 | 76 | 106 | 98 | 100 | 31 |
| 31 | 2.5 | --- | 2.7 | 2.5 | --- | 78 | --- | 76 | --- | 98 | 100 | --- |
| TOTAL | 945.6 | 72.9 | 78.8 | 80.2 | 71.1 | 187.3 | 3424 | 2556 | 2770 | 3198 | 3051 | 1728 |
| MEAN | 30.5 | 2.43 | 2.54 | 2.59 | 2.54 | 6.04 | 114 | 82.5 | 92.3 | 103 | 98.4 | 57.6 |
| MAX | 73 | 2.6 | 2.7 | 2.9 | 2.7 | 78 | 150 | 150 | 106 | 113 | 100 | 100 |
| MIN | 2.4 | 2.3 | 2.3 | 2.5 | 2.4 | 2.3 | 69 | 71 | 76 | 95 | 97 | 31 |
| AC-FT | 1880 | 145 | 156 | 159 | 141 | 372 | 6790 | 5070 | 5490 | 6340 | 6050 | 3430 |
| MEAN† | 268 | 301 | 277 | 286 | 325 | 326 | 386 | 291 | 331 | 178 | 183 | 201 |
| AC-FT† | 16,470 | 17,940 | 17,060 | 17,560 | 18,040 | 20,070 | 22,940 | 17,900 | 19,720 | 10,920 | 11,270 | 11,980 |
| CAL YR 1976 | TOTAL | 215089.9 | MEAN | 588 | MAX | 6250 | MIN | 2.3 | AC-FT | 426600 | | |
| WTR YR 1977 | TOTAL | 18162.9 | MEAN | 49.8 | MAX | 150 | MIN | 2.3 | AC-FT | 36030 | | |

† Adjusted for diversions from Lake Owyhee and change in lake contents.

MALHEUR RIVER BASIN

77

13214000 MALHEUR RIVER NEAR DREWSEY, OR

LOCATION.--Lat 43°47'05", long 118°19'50", in NE¼SE¼ sec.31, T.20 S., R.36 E., Harney County, Hydrologic Unit 17050116, on left bank 300 ft (91 m) downstream from bridge on U.S. Highway 20, 0.5 mi (0.8 km) downstream from Cottonwood Creek, 3.0 mi (4.8 km) southeast of Drewsey, and at mile 129.0 (207.6 km).

DRAINAGE AREA.--910 mi² (2,360 km²), approximately.

PERIOD OF RECORD.--June 1920 to September 1921, November, December 1921, March, April 1922, April to September 1923, June 1926 to current year. Monthly discharge only for some periods, published in WSP 1317. March to September 1914 at site 13 mi (21 km) upstream; records not equivalent owing to inflow from several creeks.

REVISED RECORDS.--WSP 1093: 1927. WSP 1287: Drainage area. WSP 1397: 1921, 1927-31, 1937, drainage area (former site). WSP 1517: 1952.

GAGE.--Water-stage recorder. Datum of gage is 3,479.13 ft (1,060.439 m) above mean sea level. Prior to Apr. 27, 1923, water-stage recorder or nonrecording gage at site 0.5 mi (0.8 km) downstream at different datum. Apr. 27, 1923, to June 6, 1939, water-stage recorder at site 7 mi (11 km) downstream at different datum.

REMARKS.--Records good. Slight regulation by small reservoirs above station. Diversions for irrigation above station.

AVERAGE DISCHARGE.--51 years (water years 1927-77), 179 ft³/s (5.069 m³/s), 129,700 acre-ft/yr (160 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) Dec. 23, 1964, gage height, 13.50 ft (4.115 m), from rating curve extended above 4,500 ft³/s (127 m³/s) on basis of contracted-opening measurement at gage height 13.20 ft (4.023 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 342 ft³/s (9.69 m³/s) Apr. 8, gage height, 3.81 ft (1.161 m), no peak above base of 800 ft³/s (22.7 m³/s); minimum, 0.64 ft³/s (0.018 m³/s) July 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|------|------|------|------|--------|------|-------|--------|-------|--------|
| 1 | 45 | 67 | 62 | 60 | 54 | 69 | 32 | 19 | 27 | 10 | 1.0 | .91 |
| 2 | 52 | 67 | 66 | 49 | 58 | 64 | 21 | 22 | 18 | 8.5 | 1.2 | .91 |
| 3 | 49 | 71 | 61 | 46 | 55 | 63 | 9.5 | 25 | 24 | 6.0 | 1.2 | .82 |
| 4 | 52 | 74 | 67 | 42 | 58 | 64 | 27 | 29 | 23 | 5.1 | 1.4 | .73 |
| 5 | 48 | 71 | 71 | 36 | 69 | 66 | 54 | 45 | 23 | 4.2 | 1.4 | .82 |
| 6 | 60 | 71 | 71 | 32 | 57 | 69 | 74 | 28 | 21 | 2.6 | 1.2 | .73 |
| 7 | 58 | 72 | 64 | 32 | 57 | 74 | 147 | 19 | 21 | .82 | 1.2 | .73 |
| 8 | 58 | 72 | 72 | 32 | 60 | 69 | 221 | 33 | 24 | .73 | 1.4 | .73 |
| 9 | 60 | 72 | 74 | 32 | 60 | 74 | 157 | 43 | 26 | .73 | 1.6 | .91 |
| 10 | 62 | 72 | 72 | 38 | 63 | 69 | 98 | 64 | 27 | .82 | 1.4 | .91 |
| 11 | 67 | 71 | 62 | 50 | 64 | 61 | 76 | 64 | 28 | .91 | 2.0 | .82 |
| 12 | 64 | 69 | 65 | 72 | 64 | 61 | 66 | 67 | 31 | 1.8 | 2.6 | .82 |
| 13 | 62 | 67 | 65 | 72 | 69 | 57 | 61 | 64 | 31 | .82 | 2.6 | .82 |
| 14 | 62 | 69 | 65 | 72 | 74 | 48 | 61 | 54 | 32 | .73 | 2.6 | 1.0 |
| 15 | 64 | 71 | 65 | 72 | 79 | 54 | 51 | 40 | 58 | .82 | 2.0 | 1.2 |
| 16 | 64 | 79 | 65 | 72 | 83 | 64 | 37 | 36 | 66 | .82 | 2.0 | 1.4 |
| 17 | 62 | 88 | 65 | 72 | 84 | 63 | 43 | 36 | 60 | .91 | 3.3 | 1.6 |
| 18 | 64 | 78 | 50 | 72 | 83 | 55 | 43 | 36 | 55 | 1.0 | 3.3 | 2.0 |
| 19 | 60 | 78 | 42 | 72 | 76 | 46 | 35 | 35 | 49 | 1.2 | 3.3 | 2.2 |
| 20 | 56 | 72 | 42 | 72 | 73 | 46 | 28 | 34 | 46 | 1.2 | 2.8 | 2.0 |
| 21 | 61 | 71 | 42 | 46 | 76 | 46 | 27 | 31 | 41 | 1.2 | 1.8 | 2.0 |
| 22 | 60 | 71 | 45 | 46 | 73 | 45 | 25 | 32 | 37 | 1.6 | 1.0 | 2.6 |
| 23 | 62 | 71 | 52 | 46 | 66 | 52 | 25 | 34 | 34 | 2.6 | .82 | 4.5 |
| 24 | 61 | 71 | 58 | 40 | 61 | 49 | 21 | 36 | 29 | 2.8 | .82 | 8.0 |
| 25 | 62 | 71 | 58 | 38 | 64 | 41 | 21 | 40 | 25 | 2.6 | .91 | 11 |
| 26 | 71 | 69 | 52 | 38 | 63 | 40 | 21 | 46 | 22 | 2.4 | 1.2 | 17 |
| 27 | 74 | 54 | 60 | 38 | 67 | 44 | 21 | 57 | 19 | 2.4 | 1.0 | 15 |
| 28 | 67 | 46 | 60 | 38 | 71 | 45 | 21 | 60 | 16 | 2.4 | 1.0 | 16 |
| 29 | 64 | 48 | 69 | 40 | --- | 40 | 13 | 49 | 14 | 2.4 | 1.0 | 25 |
| 30 | 67 | 55 | 67 | 44 | --- | 40 | 15 | 40 | 12 | 1.4 | 1.0 | 26 |
| 31 | 67 | --- | 71 | 50 | --- | 32 | --- | 37 | --- | .91 | 1.0 | --- |
| TOTAL | 1885 | 2078 | 1900 | 1561 | 1881 | 1710 | 1551.5 | 1255 | 939 | 72.42 | 51.05 | 149.16 |
| MEAN | 60.8 | 69.3 | 61.3 | 50.4 | 67.2 | 55.2 | 51.7 | 40.5 | 31.3 | 2.34 | 1.65 | 4.97 |
| MAX | 74 | 88 | 74 | 72 | 84 | 74 | 221 | 67 | 66 | 10 | 3.3 | 26 |
| MIN | 45 | 46 | 42 | 32 | 54 | 32 | 9.5 | 19 | 12 | .73 | .82 | .73 |
| AC-FT | 3740 | 4120 | 3770 | 3100 | 3730 | 3390 | 3080 | 2490 | 1860 | 144 | 101 | 296 |
| CAL YR 1976 | TOTAL | 52088.10 | MEAN | 142 | MAX | 761 | MIN | 4.5 | AC-FT | 103300 | | |
| WTR YR 1977 | TOTAL | 15033.13 | MEAN | 41.2 | MAX | 221 | MIN | .73 | AC-FT | 29820 | | |

MALHEUR RIVER BASIN

13214500 WARMSPRINGS RESERVOIR NEAR RIVERSIDE, OR

LOCATION.--Lat 43°35'05", long 118°12'30", in SW¼ sec.8, T.23 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on Bureau of Reclamation lands, near right end of dam on Malheur River, 3 mi (5 km) northwest of Riverside, 4 mi (6 km) upstream from South Fork, and at mile 114.0 (183.4 km).

DRAINAGE AREA.--1,100 mi² (2,850 km²), approximately.

PERIOD OF RECORD.--January 1920 to October 1929, December 1929 to current year.

GAGE.--Water-stage recorder. Prior to May 29, 1964, nonrecording gage read daily or weekly. Datum of gage is 3,327.0 ft (1,014.07 m) above mean sea level (levels by Bureau of Reclamation); gage readings have been reduced to elevations above mean sea level.

REMARKS.--Reservoir is formed by concrete-arch dam. Storage began in 1919. Capacity, 191,000 acre-ft (236 hm³) between elevations 3,327.00 ft (1,014.070 m), bottom of outlet tunnel, and 3,406.00 ft (1,038.149 m), top of flashboards. Dead storage, 1,400 acre-ft (1.73 hm³) below elevation 3,327.00 ft (1,014.070 m) not included in records. Water used to irrigate lands on both sides of river between Namorf and Ontario.

COOPERATION.--Data for computing capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 196,100 acre-ft (242 hm³) Apr. 16, May 13, 1958, elevation, 3,407.10 ft (1,038.484 m); no contents Sept. 18 to Nov. 1, 1929, Aug. 26 to sometime in November 1935, Sept. 18 to Oct. 11, 1950, sometime in August to Sept. 30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 87,240 acre-ft (108 hm³) Apr. 6, elevation, 3,378.98 ft (1,029.913 m); minimum, no contents sometime in August to Sept. 30.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 3,372.06 | 66,070 | - |
| Oct. 31..... | 3,372.34 | 66,890 | +820 |
| Nov. 30..... | 3,373.88 | 71,440 | +4,550 |
| Dec. 31..... | 3,375.01 | 74,830 | +3,390 |
| CAL YR 1976..... | - | - | -50,670 |
| Jan. 31..... | - | a78,250 | +3,420 |
| Feb. 28..... | 3,377.87 | 83,700 | +5,450 |
| Mar. 31..... | 3,378.88 | 86,920 | +3,220 |
| Apr. 30..... | 3,374.21 | 72,430 | -14,490 |
| May 31..... | 3,367.83 | 54,240 | -18,190 |
| June 30..... | 3,357.23 | 29,460 | -24,780 |
| July 31..... | 3,332.15 | 851 | -28,610 |
| Aug. 31..... | - | 0 | -851 |
| Sept. 30..... | 3,327.00 | 0 | 0 |
| WTR YR 1977..... | - | - | -66,070 |

a Contents interpolated.

MALHEUR RIVER BASIN

79

13215000 MALHEUR RIVER BELOW WARMSPRINGS RESERVOIR, NEAR RIVERSIDE, OR

LOCATION.--Lat 43°34'15", long 118°12'05", in SW¼ sec.17, T.23 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank 1.0 mi (1.6 km) downstream from Warsprings Dam, 3.0 mi (4.8 km) upstream from South Fork, 4.0 mi (6.4 km) northwest of Riverside, and at mile 113.0 (181.8 km).

DRAINAGE AREA.--1,100 mi² (2,850 km²), approximately.

PERIOD OF RECORD.--January 1906 to March 1907 and December 1908 (gage heights only), January 1909 to September 1910, December 1914 to July 1917, March 1919 to current year. Monthly discharge only for some periods, published in WSP 1317. Figures of discharge for January 1906 to March 1907, published in WSP 272 and 370, have been found to be unreliable and should not be used. Published as Middle Fork of Malheur River at Riverside 1906-7, as Middle Fork of Malheur River above South Fork, at Riverside 1909-10, as Malheur River above South Fork, at Riverside in WSP 370, 1906-10, and as Malheur River at Warsprings reservoir site, near Riverside 1914-17.

REVISED RECORDS.--WSP 833: 1936. WSP 1063: 1942-45. WSP 1397: 1909-10, 1917. WSP 1447: 1955. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,305 ft (1,007 m), by barometer. See WSP 1317 or 1737 for history of changes prior to Sept. 29, 1949.

REMARKS.--Records good except those below 100 ft³/s (2.83 m³/s), which are fair. Flow completely regulated since November 1919 by Warsprings Reservoir (see station 13214500). Diversions for irrigation above station.

AVERAGE DISCHARGE.--58 years (water years 1920-77), 176 ft³/s (4.984 m³/s), 127,500 acre-ft/yr (157 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 7,200 ft³/s (204 m³/s) Mar. 1, 1910, gage height, 10.7 ft (3.26 m), site and datum then in use, from rating curve extended above 820 ft³/s (23.2 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 607 ft³/s (17.2 m³/s) May 1-3, July 5; maximum gage height, 5.14 ft (1.567 m) May 1; minimum daily discharge, 0.10 ft³/s (0.003 m³/s) Oct. 12 to Apr. 5, Sept. 19, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|----------|----------|---------|---------|--------------|---------|-------|-------|-------|-------|-------|
| 1 | 157 | .10 | .10 | .10 | .10 | .10 | .10 | 602 | 157 | 558 | 85 | 2.2 |
| 2 | 157 | .10 | .10 | .10 | .10 | .10 | .10 | 607 | 182 | 580 | 34 | 2.0 |
| 3 | 154 | .10 | .10 | .10 | .10 | .10 | .10 | 607 | 217 | 591 | 8.1 | 1.8 |
| 4 | 154 | .10 | .10 | .10 | .10 | .10 | .10 | 508 | 280 | 591 | 1.4 | 1.7 |
| 5 | 138 | .10 | .10 | .10 | .10 | .10 | .10 | 437 | 375 | 607 | 1.3 | 1.6 |
| 6 | 126 | .10 | .10 | .10 | .10 | .10 | 116 | 426 | 420 | 558 | 1.2 | 1.4 |
| 7 | 126 | .10 | .10 | .10 | .10 | .10 | 144 | 426 | 470 | 541 | 1.4 | 1.3 |
| 8 | 126 | .10 | .10 | .10 | .10 | .10 | 123 | 395 | 508 | 530 | 1.4 | 1.2 |
| 9 | 126 | .10 | .10 | .10 | .10 | .10 | 123 | 340 | 519 | 525 | 1.4 | 1.0 |
| 10 | 126 | .10 | .10 | .10 | .10 | .10 | 123 | 325 | 525 | 503 | 1.4 | .70 |
| 11 | 44 | .10 | .10 | .10 | .10 | .10 | 100 | 320 | 497 | 486 | 1.3 | .60 |
| 12 | .10 | .10 | .10 | .10 | .10 | .10 | 90 | 325 | 459 | 481 | 1.3 | .40 |
| 13 | .10 | .10 | .10 | .10 | .10 | .10 | 118 | 325 | 405 | 481 | 1.3 | .50 |
| 14 | .10 | .10 | .10 | .10 | .10 | .10 | 132 | 325 | 350 | 481 | 1.3 | .30 |
| 15 | .10 | .10 | .10 | .10 | .10 | .10 | 189 | 325 | 300 | 486 | 1.3 | .25 |
| 16 | .10 | .10 | .10 | .10 | .10 | .10 | 243 | 325 | 300 | 492 | 1.4 | .20 |
| 17 | .10 | .10 | .10 | .10 | .10 | .10 | 285 | 290 | 300 | 486 | 1.6 | .15 |
| 18 | .10 | .10 | .10 | .10 | .10 | .10 | 335 | 266 | 340 | 453 | 1.6 | .15 |
| 19 | .10 | .10 | .10 | .10 | .10 | .10 | 385 | 225 | 365 | 415 | 1.7 | .10 |
| 20 | .10 | .10 | .10 | .10 | .10 | .10 | 415 | 217 | 390 | 390 | 1.8 | .20 |
| 21 | .10 | .10 | .10 | .10 | .10 | .10 | 442 | 221 | 405 | 355 | 1.8 | .15 |
| 22 | .10 | .10 | .10 | .10 | .10 | .10 | 442 | 225 | 426 | 340 | 2.0 | .10 |
| 23 | .10 | .10 | .10 | .10 | .10 | .10 | 453 | 230 | 437 | 300 | 2.2 | .15 |
| 24 | .10 | .10 | .10 | .10 | .10 | .10 | 475 | 225 | 459 | 280 | 2.2 | .70 |
| 25 | .10 | .10 | .10 | .10 | .10 | .10 | 481 | 230 | 497 | 266 | 2.2 | 2.1 |
| 26 | .10 | .10 | .10 | .10 | .10 | .10 | 492 | 230 | 525 | 252 | 2.2 | 4.4 |
| 27 | .10 | .10 | .10 | .10 | .10 | .10 | 558 | 175 | 563 | 221 | 2.2 | 7.6 |
| 28 | .10 | .10 | .10 | .10 | .10 | .10 | 585 | 161 | 563 | 201 | 2.2 | 12 |
| 29 | .10 | .10 | .10 | .10 | --- | .10 | 596 | 150 | 552 | 178 | 2.8 | 15 |
| 30 | .10 | .10 | .10 | .10 | --- | .10 | 596 | 150 | 530 | 154 | 3.1 | 17 |
| 31 | .10 | --- | .10 | .10 | --- | .10 | --- | 154 | --- | 129 | 2.5 | --- |
| TOTAL | 1436.00 | 3.00 | 3.10 | 3.10 | 2.80 | 3.10 | 8041.50 | 9767 | 12316 | 12911 | 176.6 | 76.95 |
| MEAN | 46.3 | .10 | .10 | .10 | .10 | .10 | 268 | 315 | 411 | 416 | 5.70 | 2.57 |
| MAX | 157 | .10 | .10 | .10 | .10 | .10 | 596 | 607 | 563 | 607 | 85 | 17 |
| MIN | .10 | .10 | .10 | .10 | .10 | .10 | .10 | 150 | 157 | 129 | 1.2 | .10 |
| AC-FT | 2850 | 6.0 | 6.1 | 6.1 | 5.6 | 6.1 | 15950 | 19370 | 24430 | 25610 | 350 | 153 |
| CAL YR 1976 | TOTAL | 76687.80 | MEAN 210 | MAX 607 | MIN .10 | AC-FT 152100 | | | | | | |
| WTR YR 1977 | TOTAL | 44740.15 | MEAN 123 | MAX 607 | MIN .10 | AC-FT 88740 | | | | | | |

13216500 NORTH FORK MALHEUR RIVER ABOVE BEULAH RESERVOIR, NEAR BEULAH, OR

LOCATION.--Lat 43°57'01", long 118°10'28", in NW¼NE¼ sec.4, T.19 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank 500 ft (152 m) upstream from Beulah Reservoir, 2.5 mi (4.0 km) upstream from Warm Springs Creek, 3.5 mi (5.6 km) northwest of Beulah, and at mile 18.0 (29.0 km).

DRAINAGE AREA.--355 mi² (919 km²).

PERIOD OF RECORD.--January to September 1914 (published as "at Scott's Ranch, near Beulah"), June 1936 to current year. Published as "above Agency Valley Reservoir, near Beulah", June 1936 to September 1968.

REVISED RECORDS.--WSP 1934: 1960(M).

GAGE.--Water-stage recorder. Datum of gage is 3,349.4 ft (1,020.90 m) above mean sea level. Jan. 1 to Sept. 30, 1914, nonrecording gage and June 10, 1936, to Oct. 14, 1958, water-stage recorder at site 0.5 mi (0.8 km) upstream at different datums. Oct. 15, 1958, to Oct. 8, 1976, water-stage recorder at present site at datum 1.6 ft (0.49 m) higher.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--41 years (water years 1937-77), 129 ft³/s (3.653 m³/s), 93,460 acre-ft/yr (115 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,970 ft³/s (112 m³/s) Dec. 23, 1964, gage height, 9.90 ft (3.018 m), present datum, from floodmark, from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 11.0 ft (3.35 m), present datum, sometime during period Dec. 17-23, 1964 (ice jam); minimum discharge, 8.5 ft³/s (0.24 m³/s) Dec. 13, 1967, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 380 ft³/s (10.8 m³/s) Apr. 7, no peak above base of 500 ft³/s (14.2 m³/s); maximum recorded gage height, 3.22 ft (0.981 m) Nov. 28, backwater from ice; minimum discharge, 20 ft³/s (0.57 m³/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 54 | 60 | 49 | 47 | 59 | 57 | 55 | 88 | 83 | 46 | 28 | 41 |
| 2 | 54 | 61 | 51 | 51 | 62 | 54 | 53 | 98 | 82 | 47 | 32 | 39 |
| 3 | 55 | 60 | 54 | 61 | 57 | 57 | 65 | 110 | 81 | 41 | 28 | 38 |
| 4 | 54 | 59 | 68 | 50 | 56 | 55 | 85 | 130 | 80 | 36 | 27 | 38 |
| 5 | 54 | 58 | 58 | 40 | 53 | 54 | 103 | 110 | 80 | 43 | 29 | 36 |
| 6 | 55 | 58 | 50 | 30 | 58 | 58 | 220 | 80 | 80 | 45 | 32 | 34 |
| 7 | 55 | 57 | 58 | 25 | 59 | 59 | 380 | 88 | 79 | 41 | 32 | 36 |
| 8 | 50 | 56 | 62 | 25 | 57 | 60 | 320 | 105 | 78 | 34 | 30 | 36 |
| 9 | 47 | 56 | 62 | 25 | 58 | 64 | 260 | 125 | 78 | 35 | 28 | 36 |
| 10 | 49 | 56 | 54 | 27 | 59 | 59 | 210 | 150 | 78 | 38 | 24 | 36 |
| 11 | 49 | 55 | 51 | 30 | 60 | 53 | 195 | 100 | 77 | 40 | 25 | 36 |
| 12 | 51 | 54 | 52 | 32 | 59 | 60 | 180 | 86 | 76 | 40 | 26 | 37 |
| 13 | 52 | 53 | 56 | 35 | 61 | 54 | 170 | 78 | 76 | 39 | 30 | 37 |
| 14 | 54 | 56 | 52 | 38 | 63 | 49 | 158 | 76 | 76 | 41 | 37 | 37 |
| 15 | 52 | 60 | 53 | 38 | 62 | 56 | 145 | 72 | 75 | 37 | 36 | 38 |
| 16 | 52 | 68 | 56 | 38 | 61 | 58 | 135 | 69 | 70 | 36 | 34 | 40 |
| 17 | 54 | 61 | 52 | 37 | 61 | 60 | 128 | 68 | 62 | 35 | 33 | 41 |
| 18 | 54 | 59 | 40 | 36 | 61 | 57 | 122 | 68 | 61 | 37 | 33 | 42 |
| 19 | 53 | 58 | 42 | 35 | 58 | 57 | 113 | 70 | 64 | 38 | 33 | 42 |
| 20 | 54 | 56 | 38 | 35 | 58 | 58 | 108 | 72 | 65 | 38 | 32 | 46 |
| 21 | 56 | 58 | 40 | 35 | 59 | 57 | 102 | 76 | 59 | 31 | 34 | 44 |
| 22 | 58 | 56 | 57 | 35 | 57 | 60 | 96 | 80 | 55 | 34 | 29 | 44 |
| 23 | 57 | 56 | 70 | 36 | 51 | 68 | 92 | 86 | 54 | 37 | 28 | 44 |
| 24 | 56 | 55 | 62 | 37 | 58 | 62 | 87 | 94 | 50 | 37 | 37 | 47 |
| 25 | 62 | 58 | 56 | 37 | 51 | 60 | 83 | 100 | 43 | 38 | 45 | 47 |
| 26 | 65 | 51 | 66 | 36 | 58 | 60 | 82 | 106 | 42 | 36 | 45 | 46 |
| 27 | 60 | 31 | 64 | 35 | 53 | 62 | 81 | 98 | 42 | 36 | 39 | 45 |
| 28 | 59 | 30 | 53 | 35 | 57 | 56 | 80 | 94 | 42 | 34 | 37 | 47 |
| 29 | 59 | 30 | 42 | 35 | --- | 59 | 80 | 90 | 43 | 33 | 37 | 56 |
| 30 | 60 | 34 | 42 | 36 | --- | 60 | 80 | 86 | 42 | 30 | 38 | 48 |
| 31 | 59 | --- | 44 | 40 | --- | 55 | --- | 84 | --- | 27 | 43 | --- |
| TOTAL | 1703 | 1620 | 1654 | 1132 | 1626 | 1798 | 4068 | 2837 | 1973 | 1160 | 1021 | 1234 |
| MEAN | 54.9 | 54.0 | 53.4 | 36.5 | 58.1 | 58.0 | 136 | 91.5 | 65.8 | 37.4 | 32.9 | 41.1 |
| MAX | 65 | 68 | 70 | 61 | 63 | 68 | 380 | 150 | 83 | 47 | 45 | 56 |
| MIN | 47 | 30 | 38 | 25 | 51 | 49 | 53 | 68 | 42 | 27 | 24 | 34 |
| AC-FT | 3380 | 3210 | 3280 | 2250 | 3230 | 3570 | 8070 | 5630 | 3910 | 2300 | 2030 | 2450 |

CAL YR 1976 TOTAL 38571 MEAN 105 MAX 402 MIN 30 AC-FT 76510
WTR YR 1977 TOTAL 21826 MEAN 59.8 MAX 380 MIN 24 AC-FT 43290

NOTE.--No gage-height record Apr. 4 to May 12, May 16 to June 17.

MALHEUR RIVER BASIN

81

13217000 BEULAH RESERVOIR AT BEULAH, OR

LOCATION.--Lat 43°54'41", long 118°09'25", in SW¼SE¼ sec.15, T.19 S., R.37 E., Malheur County, Hydrologic Unit 17050116, in control house at dam on North Fork Malheur River, 0.2 mi (0.3 km) northwest of Beulah, and at mile 15.0 (24.1 km).

DRAINAGE AREA.--440 mi² (1,140 km²), approximately.

PERIOD OF RECORD.--December 1935 to current year. Prior to October 1968, published as Agency Valley Reservoir at Beulah.

REVISED RECORDS.--WSP 1397: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began December 1935. Capacity, 59,920 acre-ft (73.9 hm³) between elevations 3,263.21 ft (994.626 m), bottom of outlet tunnel, and 3,340.0 ft (1,018.03 m), top of spillway gates; with gates open the capacity is 32,220 acre-ft (39.7 hm³). No dead storage. Water is used for irrigation of lands below Juntura, on Vale project of Bureau of Reclamation.

COOPERATION.--Daily elevations Oct. 1 to June 11 furnished by Vale-Oregon Irrigation District, and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 62,770 acre-ft (77.4 hm³) May 3, 1941, elevation, 3,341.50 ft (1,018.489 m); no contents Sept. 17 to Oct. 13, 1950, Aug. 28 to Oct. 4, 1955, Aug. 13 to Oct. 1, 1961, Sept. 21 to Oct. 5, 1968, sometime Aug. 1-31 to Sept. 30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 31,820 acre-ft (39.2 hm³) Apr. 4, elevation, 3,322.70 ft (1,012.759 m); no contents, sometime Aug. 1-31 to Sept. 30.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 3,307.47 | 14,570 | - |
| Oct. 31..... | 3,308.13 | 15,160 | +590 |
| Nov. 30..... | 3,311.50 | 18,460 | +3,300 |
| Dec. 31..... | 3,314.45 | 21,600 | +3,140 |
| CAL YR 1976..... | - | - | +1,580 |
| Jan. 31..... | 3,317.15 | 24,750 | +3,150 |
| Feb. 28..... | 3,319.94 | 28,170 | +3,420 |
| Mar. 31..... | 3,322.42 | 31,440 | +3,270 |
| Apr. 30..... | 3,317.45 | 25,120 | -6,320 |
| May 31..... | 3,314.52 | 21,680 | -3,440 |
| June 30..... | 3,302.45 | 10,620 | -11,060 |
| July 31..... | 3,276.95 | 490 | -10,130 |
| Aug. 31..... | - | 0 | -490 |
| Sept. 30..... | - | 0 | 0 |
| WTR YR 1977..... | - | - | -14,570 |

MALHEUR RIVER BASIN

13217500 NORTH FORK MALHEUR RIVER AT BEULAH, OR

LOCATION.--Lat 43°54'28", long 118°09'08", in NW¼NE¼ sec.22, T.19 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank at Beulah, 0.3 mi (0.5 km) downstream from Agency Valley Dam, 12 mi (19 km) northwest of Juntura, and at mile 14.5 (23.3 km).

DRAINAGE AREA.--440 mi² (1,140 km²), approximately.

PERIOD OF RECORD.--June 1926 to current year. Published as "near Beulah" June 1926 to September 1935.

REVISED RECORDS.--WSP 1397: 1927-32, 1934, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,261.20 ft (994.014 m) above mean sea level. Prior to Apr. 25, 1926, water-stage recorder at site 1 mi (2 km) downstream at different datum. Apr. 25, 1936, to Sept. 30, 1949, nonrecording gage at site 20 ft (6 m) downstream at datum 1.0 ft (0.3 m) higher. Oct. 1, 1949, to June 30, 1964, at present site at datum 1.0 ft (0.3 m) higher.

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated since 1935 by Beulah Reservoir (see station 13217000). Diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years (water years 1936-77), 140 ft³/s (3.965 m³/s), 101,400 acre-ft/yr (125 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft³/s (198 m³/s) May 7, 1942, gage height, 8.4 ft (2.56 m) from floodmark, caused by failure of gates at Agency Valley Dam, from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 290 ft³/s (8.21 m³/s) Apr. 21, gage height, 3.27 ft (0.997 m); minimum, 0.01 ft³/s (<0.001 m³/s) sometime Jan. 6-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|----------|------|------|---------|---------|-------------|------|-------|-------|------|------|
| 1 | 108 | .18 | .18 | .12 | .09 | .10 | .20 | 272 | 193 | 250 | 140 | 41 |
| 2 | 110 | .18 | .18 | .13 | .09 | .14 | .20 | 276 | 238 | 250 | 120 | 39 |
| 3 | 112 | .16 | .18 | .13 | .09 | .18 | .20 | 265 | 250 | 247 | 98 | 37 |
| 4 | 112 | .16 | .18 | .13 | .10 | .16 | 90 | 238 | 256 | 241 | 40 | 36 |
| 5 | 112 | .14 | .18 | .12 | .10 | .14 | 114 | 214 | 256 | 241 | 33 | 36 |
| 6 | 110 | .14 | .16 | .12 | .10 | .14 | 110 | 178 | 256 | 238 | 35 | 33 |
| 7 | 110 | .14 | .16 | .11 | .10 | .13 | 114 | 122 | 253 | 235 | 37 | 34 |
| 8 | 110 | .14 | .16 | .10 | .10 | .13 | 114 | 104 | 253 | 235 | 33 | 34 |
| 9 | 110 | .14 | .16 | .09 | .10 | .13 | 116 | 102 | 253 | 232 | 32 | 35 |
| 10 | 112 | .16 | .14 | .08 | .10 | .14 | 118 | 94 | 253 | 235 | 26 | 36 |
| 11 | 35 | .16 | .16 | .08 | .10 | .14 | 118 | 68 | 253 | 232 | 28 | 38 |
| 12 | 3.6 | .14 | .14 | .08 | .10 | .14 | 110 | 36 | 253 | 229 | 28 | 38 |
| 13 | 1.6 | .14 | .14 | .08 | .10 | .16 | 106 | 33 | 253 | 226 | 31 | 38 |
| 14 | .80 | .16 | .16 | .08 | .10 | .16 | 135 | 34 | 250 | 223 | 42 | 38 |
| 15 | .56 | .16 | .16 | .08 | .10 | .16 | 173 | 52 | 250 | 223 | 39 | 38 |
| 16 | .42 | .16 | .14 | .08 | .10 | .14 | 185 | 66 | 250 | 220 | 37 | 40 |
| 17 | .32 | .14 | .13 | .08 | .10 | .14 | 217 | 66 | 259 | 220 | 36 | 41 |
| 18 | .28 | .14 | .13 | .08 | .10 | .14 | 241 | 66 | 269 | 214 | 35 | 42 |
| 19 | .28 | .16 | .13 | .08 | .10 | .14 | 253 | 55 | 269 | 214 | 34 | 42 |
| 20 | .25 | .16 | .13 | .08 | .09 | .14 | 276 | 50 | 265 | 211 | 33 | 45 |
| 21 | .25 | .14 | .13 | .09 | .08 | .13 | 286 | 66 | 265 | 205 | 34 | 44 |
| 22 | .22 | .14 | .14 | .09 | .08 | .13 | 286 | 76 | 265 | 203 | 31 | 43 |
| 23 | .20 | .14 | .13 | .09 | .08 | .13 | 283 | 110 | 262 | 198 | 29 | 43 |
| 24 | .20 | .14 | .12 | .09 | .08 | .13 | 283 | 128 | 262 | 195 | 35 | 44 |
| 25 | .20 | .14 | .12 | .08 | .07 | .13 | 283 | 130 | 259 | 190 | 45 | 45 |
| 26 | .20 | .14 | .12 | .08 | .07 | .13 | 279 | 148 | 259 | 188 | 45 | 45 |
| 27 | .20 | .14 | .12 | .08 | .07 | .13 | 279 | 155 | 256 | 183 | 39 | 44 |
| 28 | .18 | .16 | .12 | .08 | .08 | .13 | 276 | 135 | 253 | 178 | 38 | 45 |
| 29 | .18 | .16 | .12 | .09 | --- | .14 | 276 | 124 | 250 | 170 | 37 | 53 |
| 30 | .18 | .18 | .12 | .09 | --- | .16 | 272 | 126 | 250 | 163 | 38 | 48 |
| 31 | .18 | --- | .12 | .09 | --- | .18 | --- | 135 | --- | 155 | 43 | --- |
| TOTAL | 1151.30 | 4.54 | 4.46 | 2.88 | 2.57 | 4.37 | 5393.60 | 3724 | 7613 | 6644 | 1351 | 1215 |
| MEAN | 37.1 | .15 | .14 | .093 | .092 | .14 | 180 | 120 | 254 | 214 | 43.6 | 40.5 |
| MAX | 112 | .18 | .18 | .13 | .10 | .18 | 286 | 276 | 269 | 250 | 140 | 53 |
| MIN | .18 | .14 | .12 | .08 | .07 | .10 | .20 | 33 | 193 | 155 | 26 | 33 |
| AC-FT | 2280 | 9.0 | 8.8 | 5.7 | 5.1 | 8.7 | 10700 | 7390 | 15100 | 13180 | 2680 | 2410 |
| CAL YR 1976 | TOTAL | 39037.58 | MEAN | 107 | MAX 475 | MIN .05 | AC-FT 77430 | | | | | |
| WTR YR 1977 | TOTAL | 27110.72 | MEAN | 74.3 | MAX 286 | MIN .07 | AC-FT 53770 | | | | | |

MALHEUR RIVER BASIN

83

13220000 MALHEUR RIVER AT LITTLE VALLEY, NEAR HOPE, OR

LOCATION.--Lat 43°53'58", long 117°30'25", in SE¼SE¼ sec.24, T.19 S., R.42 E., Malheur County, Hydrologic Unit 17050117, on right bank 500 ft (152 m) downstream from highway bridge at Little Valley, 8 mi (13 km) southwest of Hope, 14 mi (23 km) southwest of Vale, and at mile 45.6 (73.4 km).

DRAINAGE AREA.--3,010 mi² (7,800 km²), approximately.

PERIOD OF RECORD.--April 1949 to current year.

REVISED RECORDS.--WSP 1217: 1949(M), 1950(M). WSP 1397: 1950. WSP 1737: 1952(M).

GAGE.--Water-stage recorder. Datum of gage is 2,424.03 ft (738.844 m) above mean sea level.

REMARKS.--Records good. Flow regulated by Warm Springs and Beulah Reservoirs (see stations 13214500 and 13217000). Vale-Oregon Canal diverted 108,800 acre-ft (134 hm³) above station at Namorf in sec.31, T.20 S., R.41 E., for supplying Bully Creek Reservoir and for irrigation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years, 195 ft³/s (5.522 m³/s), 141,300 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s (348 m³/s) Feb. 24, 1957, gage height, 11.5 ft (3.51 m), from floodmark, from rating curve extended above 5,500 ft³/s (156 m³/s) on basis of slope-area measurement of peak flow; minimum, 6.8 ft³/s (0.19 m³/s) Jan. 16, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--The two greatest floods occurred March 1894 and March 1910, on basis of records for former station near Namorf.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 380 ft³/s (10.8 m³/s) June 8, gage height, 3.47 ft (1.058 m); minimum daily, 7.4 ft³/s (0.21 m³/s) Jan. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|-------|---------|---------|--------|-------|------|------|------|------|
| 1 | 69 | 21 | 15 | 13 | 43 | 13 | 9.4 | 241 | 19 | 177 | 50 | 34 |
| 2 | 66 | 20 | 15 | 12 | 49 | 13 | 8.8 | 278 | 13 | 194 | 35 | 30 |
| 3 | 69 | 19 | 16 | 15 | 55 | 13 | 8.3 | 268 | 15 | 212 | 29 | 32 |
| 4 | 69 | 19 | 16 | 14 | 52 | 12 | 8.3 | 271 | 24 | 215 | 29 | 33 |
| 5 | 69 | 18 | 16 | 11 | 50 | 12 | 7.7 | 221 | 46 | 209 | 118 | 34 |
| 6 | 70 | 18 | 15 | 9.0 | 48 | 12 | 7.7 | 177 | 115 | 215 | 72 | 29 |
| 7 | 67 | 18 | 15 | 8.0 | 48 | 12 | 7.7 | 171 | 180 | 197 | 41 | 25 |
| 8 | 69 | 17 | 15 | 7.5 | 46 | 12 | 8.8 | 150 | 244 | 177 | 34 | 23 |
| 9 | 69 | 18 | 15 | 7.5 | 55 | 12 | 128 | 133 | 228 | 166 | 28 | 21 |
| 10 | 67 | 18 | 14 | 7.4 | 55 | 12 | 126 | 104 | 228 | 182 | 21 | 21 |
| 11 | 67 | 18 | 14 | 9.0 | 56 | 12 | 128 | 88 | 234 | 166 | 18 | 21 |
| 12 | 72 | 18 | 13 | 11 | 64 | 12 | 108 | 98 | 225 | 146 | 17 | 18 |
| 13 | 62 | 17 | 13 | 41 | 69 | 12 | 66 | 94 | 203 | 138 | 20 | 17 |
| 14 | 46 | 17 | 13 | 36 | 66 | 12 | 53 | 88 | 174 | 138 | 19 | 17 |
| 15 | 41 | 18 | 13 | 36 | 58 | 12 | 45 | 72 | 158 | 131 | 19 | 20 |
| 16 | 39 | 18 | 13 | 36 | 61 | 12 | 61 | 72 | 133 | 141 | 21 | 21 |
| 17 | 36 | 18 | 13 | 36 | 32 | 11 | 115 | 88 | 115 | 146 | 28 | 23 |
| 18 | 35 | 18 | 13 | 35 | 23 | 11 | 119 | 92 | 115 | 158 | 25 | 24 |
| 19 | 50 | 18 | 13 | 35 | 19 | 11 | 163 | 83 | 136 | 133 | 43 | 27 |
| 20 | 42 | 18 | 13 | 36 | 17 | 9.9 | 206 | 69 | 163 | 126 | 35 | 29 |
| 21 | 59 | 17 | 13 | 37 | 17 | 9.9 | 191 | 40 | 158 | 128 | 24 | 32 |
| 22 | 45 | 17 | 13 | 38 | 17 | 9.9 | 174 | 32 | 161 | 115 | 23 | 32 |
| 23 | 28 | 17 | 13 | 39 | 16 | 11 | 161 | 31 | 153 | 108 | 22 | 31 |
| 24 | 26 | 17 | 13 | 39 | 15 | 9.9 | 143 | 52 | 148 | 90 | 24 | 35 |
| 25 | 25 | 17 | 13 | 39 | 14 | 11 | 155 | 42 | 156 | 64 | 28 | 35 |
| 26 | 23 | 17 | 13 | 39 | 14 | 9.9 | 161 | 48 | 172 | 56 | 30 | 33 |
| 27 | 22 | 15 | 13 | 38 | 13 | 11 | 163 | 85 | 206 | 102 | 31 | 34 |
| 28 | 21 | 15 | 12 | 38 | 15 | 8.8 | 194 | 74 | 200 | 131 | 43 | 35 |
| 29 | 21 | 16 | 12 | 37 | --- | 9.4 | 218 | 43 | 180 | 104 | 41 | 37 |
| 30 | 21 | 15 | 13 | 37 | --- | 9.4 | 228 | 33 | 182 | 90 | 37 | 43 |
| 31 | 21 | --- | 13 | 39 | --- | 9.4 | --- | 27 | --- | 79 | 36 | --- |
| TOTAL | 1486 | 527 | 424 | 835.4 | 1087 | 347.5 | 3251.9 | 3365 | 4484 | 4434 | 1041 | 846 |
| MEAN | 47.9 | 17.6 | 13.7 | 26.9 | 38.8 | 11.2 | 108 | 109 | 149 | 143 | 33.6 | 28.2 |
| MAX | 72 | 21 | 16 | 41 | 69 | 13 | 228 | 278 | 244 | 215 | 118 | 43 |
| MIN | 21 | 15 | 12 | 7.4 | 13 | 8.8 | 7.7 | 27 | 13 | 56 | 17 | 17 |
| AC-FT | 2950 | 1050 | 841 | 1660 | 2160 | 689 | 6450 | 6670 | 8890 | 8790 | 2060 | 1680 |
| CAL YR 1976 | TOTAL | 46550.0 | MEAN | 127 | MAX 761 | MIN 12 | AC-FT | 92330 | | | | |
| WTR YR 1977 | TOTAL | 22128.8 | MEAN | 60.6 | MAX 278 | MIN 7.4 | AC-FT | 43890 | | | | |

MALHEUR RIVER BASIN

13226500 BULLY CREEK AT WARMSPRINGS, NEAR VALE, OR

LOCATION.--Lat 44°01'10", long 117°27'35", in SE¼NW¼ sec.9, T.18 S., R.43 E., Malheur County, Hydrologic Unit 17050118, on left bank 400 ft (122 m) downstream from Cottonwood Creek, 2.7 mi (4.3 km) upstream from Bully Creek Dam, 11.4 mi (18.3 km) northwest of Vale, and at mile 17.2 (27.7 km).

DRAINAGE AREA.--539 mi² (1,396 km²).

PERIOD OF RECORD.--September 1903 to February 1904, February 1905 to March 1907, February 1910, January 1911 to May 1917, March 1922 to June 1923, October 1963 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "near Vale" 1903, 1907, and as "above Vale" 1904-6, 1910.

REVISED RECORDS.--WSP 1317: Drainage area (former site). WSP 1397: 1904-6, 1911, 1914, 1915.

GAGE.--Water-stage recorder. Datum of gage is 2,527.21 ft (770.294 m) above mean sea level (Bureau of Reclamation bench mark). Prior to July 1, 1923, nonrecording gages within 0.5 mi (0.8 km) downstream at different datums.

REMARKS.--Records good. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--20 years (water years 1906, 1912-16, 1964-77), 40.3 ft³/s (1.141 m³/s), 29,200 acre-ft/yr (36.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft³/s (362 m³/s) Dec. 22, 1964, gage height, 8.68 ft (2.646 m), from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 120 ft³/s (3.40 m³/s) and maximum discharge, 316 ft³/s (8.95 m³/s) June 11, gage height, 2.40 ft (0.732 m); no flow at times July to September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-----------|---------|---------|-------------|-------|-------|--------|------|-------|------|
| 1 | 5.3 | 6.5 | 4.9 | 5.3 | 12 | 3.9 | .30 | .60 | 1.1 | .50 | .00 | .30 |
| 2 | 5.7 | 6.5 | 5.7 | 6.5 | 11 | 2.7 | .24 | .80 | 1.3 | .65 | .00 | .24 |
| 3 | 5.7 | 6.5 | 6.5 | 9.6 | 9.5 | 2.4 | .27 | .75 | .80 | .75 | .06 | .18 |
| 4 | 5.7 | 7.0 | 9.0 | 7.0 | 8.5 | 1.9 | .21 | .75 | 1.3 | .75 | .03 | .12 |
| 5 | 5.7 | 8.0 | 7.2 | 5.0 | 7.5 | 1.7 | .40 | .65 | .70 | 1.3 | .09 | .09 |
| 6 | 5.7 | 9.6 | 6.6 | 4.0 | 8.0 | 1.5 | .21 | .30 | 1.3 | 1.3 | .21 | .06 |
| 7 | 5.7 | 9.6 | 7.5 | 4.0 | 8.5 | 1.1 | .27 | .45 | 2.7 | 1.1 | .09 | .06 |
| 8 | 6.1 | 9.0 | 8.6 | 4.0 | 8.5 | .80 | .45 | .70 | 4.2 | .45 | .09 | .03 |
| 9 | 6.5 | 9.0 | 7.5 | 4.3 | 8.5 | .60 | .50 | .95 | 1.7 | .12 | .27 | .06 |
| 10 | 5.7 | 9.0 | 6.2 | 5.0 | 8.5 | .50 | .45 | .80 | 1.1 | .21 | .50 | .09 |
| 11 | 5.7 | 9.6 | 7.1 | 5.5 | 8.6 | .50 | .40 | .95 | 30 | .00 | .35 | .12 |
| 12 | 6.1 | 9.6 | 4.6 | 6.0 | 9.0 | .55 | .45 | 1.7 | 45 | .45 | .21 | .12 |
| 13 | 6.5 | 8.0 | 6.5 | 6.5 | 9.6 | .50 | .55 | 1.3 | 6.1 | .55 | .15 | .12 |
| 14 | 7.0 | 8.5 | 7.1 | 7.0 | 10 | .27 | .65 | .50 | 2.7 | .60 | .30 | .12 |
| 15 | 6.1 | 8.0 | 5.7 | 7.5 | 11 | .24 | .65 | .35 | 3.0 | .24 | .55 | .12 |
| 16 | 6.1 | 9.0 | 4.5 | 6.5 | 10 | .21 | .65 | .35 | 1.5 | .00 | .35 | .55 |
| 17 | 5.3 | 9.0 | 4.2 | 6.7 | 10 | .30 | .70 | .65 | .80 | .00 | .21 | .00 |
| 18 | 5.3 | 9.0 | 4.5 | 7.2 | 10 | .35 | .80 | .60 | .70 | .00 | .12 | .00 |
| 19 | 6.1 | 9.6 | 4.2 | 6.6 | 9.0 | .21 | .95 | .80 | .60 | .09 | .00 | .00 |
| 20 | 3.9 | 9.6 | 3.9 | 6.8 | 7.5 | .24 | .80 | 1.1 | .65 | .00 | .12 | .00 |
| 21 | 3.6 | 9.6 | 5.3 | 8.0 | 8.0 | .21 | .80 | .95 | .65 | .15 | .21 | .00 |
| 22 | 3.6 | 9.6 | 7.0 | 7.0 | 4.9 | .27 | .65 | 1.1 | .55 | .21 | .24 | .00 |
| 23 | 5.3 | 9.6 | 8.5 | 8.0 | 3.7 | .24 | .50 | .70 | .60 | .06 | .27 | .00 |
| 24 | 5.7 | 9.0 | 8.0 | 6.8 | 3.3 | .24 | .45 | .60 | .60 | .00 | .60 | .00 |
| 25 | 6.1 | 8.5 | 7.5 | 7.5 | 2.4 | .50 | .80 | .50 | .60 | .00 | 2.2 | .00 |
| 26 | 6.1 | 6.5 | 9.0 | 8.2 | 2.7 | .50 | .45 | .75 | .60 | .00 | 2.7 | .03 |
| 27 | 7.5 | 3.3 | 8.0 | 8.0 | 3.0 | .21 | .55 | 2.4 | .50 | .00 | 2.4 | .00 |
| 28 | 5.7 | 4.4 | 5.7 | 7.5 | 3.6 | .21 | .50 | 1.5 | .50 | .00 | 2.4 | .06 |
| 29 | 5.7 | 6.1 | 4.9 | 7.0 | --- | .18 | .30 | 1.3 | .45 | .24 | 1.5 | .35 |
| 30 | 6.5 | 5.3 | 4.9 | 7.0 | --- | .18 | .27 | 1.3 | .45 | .03 | .60 | .35 |
| 31 | 6.1 | --- | 5.0 | 8.0 | --- | .21 | --- | .75 | --- | .00 | .45 | --- |
| TOTAL | 177.8 | 242.5 | 195.8 | 204.0 | 216.8 | 23.42 | 15.17 | 26.90 | 112.75 | 9.75 | 17.27 | 3.17 |
| MEAN | 5.74 | 8.08 | 6.32 | 6.58 | 7.74 | .76 | .51 | .87 | 3.76 | .31 | .56 | .11 |
| MAX | 7.5 | 9.6 | 9.0 | 9.6 | 12 | 3.9 | .95 | 2.4 | 45 | 1.3 | 2.7 | .55 |
| MIN | 3.6 | 3.3 | 3.9 | 4.0 | 2.4 | .18 | .21 | .30 | .45 | .00 | .00 | .00 |
| AC-FT | 353 | 481 | 388 | 405 | 430 | 46 | 30 | 53 | 224 | 19 | 34 | 6.3 |
| CAL YR 1976 | TOTAL | 5739.70 | MEAN 15.7 | MAX 320 | MIN .50 | AC-FT 11380 | | | | | | |
| WTR YR 1977 | TOTAL | 1245.33 | MEAN 3.41 | MAX 45 | MIN .00 | AC-FT 2470 | | | | | | |

MALHEUR RIVER BASIN

85

13226800 BULLY CREEK RESERVOIR NEAR VALE, OR

LOCATION.--Lat 44°00'50", long 117°23'45", in SE¼SW¼ sec.12, T.18 S., R.43 E., Malheur County, Hydrologic Unit 17050118, U.S. Bureau of Reclamation land, in control chamber at dam on Bully Creek, 8.0 mi (12.9 km) northwest of Vale, and at mile 12.5 (20.1 km).

DRAINAGE AREA.--547 mi² (1,417 km²).

PERIOD OF RECORD.--February 1963 to current year.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began Feb. 1, 1963. Capacity, 29,980 acre-ft (37.0 hm³) between elevations 2,456.58 ft (748.766 m), outlet works, and 2,516.00 ft (766.877 m), spillway crest. Dead storage, 1,650 acre-ft (2.03 hm³) below elevation 2,456.58 ft (748.766 m). Figures given herein do not include dead storage. Water used for irrigation lands of Vale-Oregon Irrigation District. Bully Creek Reservoir feed canal diverts from Malheur River by way of Vale Oregon canal (see station 13220000).

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents not determined, occurred during period Apr. 4 to May 2, 1969, elevation, above 2,516.00 ft (766.877 m), spillway crest; no usable contents at times in 1973, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 15,860 acre-ft (19.6 hm³) Apr. 14, elevation, 2,499.40 ft (761.817 m); no usable contents observed Aug. 31, Sept. 30.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 2,483.3 | 6,700 | - |
| Oct. 31..... | - | a8,080 | +1,380 |
| Nov. 30..... | - | a10,450 | +2,370 |
| Dec. 31..... | - | a12,260 | +1,810 |
| CAL YR 1976..... | - | - | -1,940 |
| Jan. 31..... | 2,494.90 | 12,840 | +580 |
| Feb. 28..... | 2,496.20 | 13,680 | +840 |
| Mar. 31..... | 2,498.10 | 14,950 | +1,270 |
| Apr. 30..... | 2,496.70 | 14,000 | -950 |
| May 31..... | 2,491.50 | 10,780 | -3,220 |
| June 30..... | 2,482.20 | 6,260 | -4,520 |
| July 31..... | 2,466.90 | 1,700 | -4,560 |
| Aug. 31..... | - | 0 | -1,700 |
| Sept. 30..... | - | 0 | 0 |
| WTR YR 1977..... | - | - | -6,700 |

a Contents interpolated.

BURNT RIVER BASIN

13269300 NORTH FORK BURNT RIVER NEAR WHITNEY, OR

LOCATION.--Lat 44°36'00", long 118°15'10", in NE¼ sec.23, T.11 S., R.36 E., Baker County, Hydrologic Unit 17050202, Wallowa Whitman National Forest, on right bank 950 ft (290 m) upstream from Petticoat Creek, 1.0 mi (1.6 km) downstream from U.S. Bureau of Reclamation damsite, 4.5 mi (7.2 km) southeast of Whitney, and 11.5 mi (18.5 km) northwest of Unity.

DRAINAGE AREA.--110 mi² (285 km²), approximately.

PERIOD OF RECORD.--June 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,000 ft (1,220 m), from topographic map.

REMARKS.--Records good. Some regulation from irrigation and mining operations upstream. A transmountain diversion from headwaters of Middle Fork John Day River delivers as much as 12 ft³/s (0.34 m³/s) to North Fork Burnt River above station.

AVERAGE DISCHARGE.--13 years, 49.8 ft³/s (1.410 m³/s), 36,080 acre-ft/yr (44.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft³/s (33.7 m³/s) Apr. 6, 1971, gage height, 4.31 ft (1.314 m); maximum gage height, 4.95 ft (1.509 m) Jan. 29, 1965 (ice jam); minimum discharge, 0.14 ft³/s (0.004 m³/s) Aug. 15, 1977, but may have been less when stage fell below inlets July 19 to Aug. 17, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 74 ft³/s (2.10 m³/s) Apr. 7, no peak above base of 400 ft³/s (11.3 m³/s); maximum gage height, 1.84 ft (0.561 m) Mar. 13 (ice jam); minimum discharge, 0.14 ft³/s (0.004 m³/s) Aug. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 3.1 | 4.8 | 5.3 | 3.6 | 3.3 | 6.3 | 9.5 | 8.2 | 6.3 | 1.7 | .50 | 1.2 |
| 2 | 3.3 | 5.0 | 5.3 | 4.0 | 3.3 | 6.6 | 11 | 9.9 | 7.0 | 2.0 | .37 | 1.1 |
| 3 | 3.8 | 5.0 | 4.8 | 4.0 | 3.3 | 6.6 | 14 | 11 | 7.4 | 1.8 | .37 | 1.0 |
| 4 | 3.8 | 4.8 | 5.0 | 4.1 | 3.3 | 6.6 | 25 | 12 | 7.8 | 1.7 | .37 | .84 |
| 5 | 3.8 | 4.8 | 4.8 | 3.8 | 3.1 | 6.4 | 38 | 12 | 7.4 | 1.4 | .27 | .84 |
| 6 | 3.5 | 4.8 | 4.2 | 3.3 | 3.1 | 6.6 | 38 | 11 | 7.8 | 1.4 | .37 | .84 |
| 7 | 3.5 | 4.8 | 4.5 | 2.9 | 3.3 | 7.0 | 46 | 13 | 10 | 1.4 | .57 | .74 |
| 8 | 3.3 | 4.8 | 4.2 | 3.3 | 3.5 | 7.4 | 53 | 13 | 16 | 1.3 | .50 | .65 |
| 9 | 3.3 | 4.8 | 4.2 | 2.9 | 4.0 | 7.8 | 44 | 9.5 | 16 | 1.2 | .50 | .84 |
| 10 | 3.5 | 4.5 | 3.8 | 3.0 | 4.5 | 8.6 | 31 | 9.5 | 15 | 1.1 | .37 | .92 |
| 11 | 3.5 | 4.5 | 3.7 | 3.4 | 4.5 | 7.6 | 28 | 11 | 15 | 1.0 | .27 | .92 |
| 12 | 3.3 | 4.2 | 3.5 | 3.8 | 4.8 | 7.4 | 27 | 11 | 18 | 1.0 | .27 | .84 |
| 13 | 3.3 | 4.0 | 3.6 | 4.0 | 5.3 | 5.6 | 29 | 12 | 18 | .92 | .19 | .84 |
| 14 | 3.5 | 4.0 | 3.7 | 4.0 | 5.6 | 6.0 | 25 | 11 | 18 | .92 | .19 | .74 |
| 15 | 3.5 | 7.8 | 3.8 | 3.7 | 6.0 | 6.6 | 22 | 10 | 16 | .84 | .19 | .74 |
| 16 | 3.5 | 8.2 | 3.8 | 3.6 | 6.6 | 7.4 | 20 | 10 | 16 | .74 | .27 | .84 |
| 17 | 3.5 | 7.0 | 3.5 | 4.0 | 7.0 | 6.6 | 19 | 9.5 | 9.9 | .65 | .92 | .84 |
| 18 | 3.5 | 6.0 | 3.3 | 4.2 | 7.4 | 6.6 | 16 | 8.6 | 9.5 | .74 | .92 | .84 |
| 19 | 3.5 | 5.6 | 3.3 | 4.2 | 8.2 | 7.4 | 15 | 7.8 | 8.6 | .74 | .92 | 1.0 |
| 20 | 3.5 | 5.0 | 3.4 | 4.5 | 7.8 | 7.0 | 14 | 7.0 | 8.2 | .65 | 1.0 | 1.3 |
| 21 | 3.8 | 5.3 | 3.8 | 4.8 | 7.4 | 8.2 | 15 | 6.6 | 6.6 | .65 | 1.0 | 1.3 |
| 22 | 4.0 | 5.3 | 4.3 | 4.8 | 6.6 | 12 | 14 | 6.3 | 6.3 | .65 | 1.0 | 1.4 |
| 23 | 4.0 | 4.8 | 4.2 | 4.8 | 6.0 | 22 | 13 | 7.4 | 5.3 | .74 | .92 | 1.6 |
| 24 | 4.0 | 4.2 | 3.8 | 4.5 | 5.6 | 14 | 14 | 8.2 | 4.5 | .84 | 1.0 | 1.7 |
| 25 | 4.8 | 3.5 | 3.3 | 4.5 | 5.6 | 16 | 14 | 8.2 | 3.8 | .92 | 1.1 | 1.7 |
| 26 | 5.6 | 2.5 | 3.5 | 4.2 | 6.0 | 13 | 13 | 11 | 2.9 | 1.0 | 1.1 | 1.8 |
| 27 | 4.8 | 2.2 | 3.5 | 4.2 | 6.3 | 12 | 12 | 13 | 2.5 | .92 | 1.0 | 1.8 |
| 28 | 4.5 | 3.5 | 3.1 | 4.0 | 6.3 | 10 | 11 | 10 | 2.1 | .84 | 1.0 | 1.8 |
| 29 | 4.5 | 4.0 | 3.2 | 4.0 | --- | 9.5 | 10 | 8.6 | 2.0 | .65 | 1.0 | 2.1 |
| 30 | 4.5 | 4.8 | 3.1 | 3.8 | --- | 12 | 9.9 | 7.4 | 1.7 | .57 | 1.2 | 2.0 |
| 31 | 4.5 | --- | 3.0 | 3.5 | --- | 10 | --- | 7.0 | --- | .50 | 1.2 | --- |
| TOTAL | 118.5 | 144.5 | 120.5 | 121.4 | 147.9 | 276.8 | 650.4 | 300.7 | 275.6 | 31.48 | 20.85 | 35.07 |
| MEAN | 3.82 | 4.82 | 3.89 | 3.92 | 5.28 | 8.93 | 21.7 | 9.70 | 9.19 | 1.02 | .67 | 1.17 |
| MAX | 5.6 | 8.2 | 5.3 | 4.8 | 8.2 | 22 | 53 | 13 | 18 | 2.0 | 1.2 | 2.1 |
| MIN | 3.1 | 2.2 | 3.0 | 2.9 | 3.1 | 5.6 | 9.5 | 6.3 | 1.7 | .50 | .19 | .65 |
| AC-FT | 235 | 287 | 239 | 241 | 293 | 549 | 1290 | 596 | 547 | 62 | 41 | 70 |
| CAL YR 1976 | TOTAL | 18923.40 | MEAN | 51.7 | MAX | 740 | MIN | 2.2 | AC-FT | 37530 | | |
| WTR YR 1977 | TOTAL | 2243.70 | MEAN | 6.15 | MAX | 53 | MIN | .14 | AC-FT | 4450 | | |

BURNT RIVER BASIN

87

13270800 SOUTH FORK BURNT RIVER ABOVE BARNEY CREEK, NEAR UNITY, OR

LOCATION.--Lat 44°24'23", long 118°18'02", in NW¼SE¼ sec.28, T.13 S., R.36 E., Baker County, Hydrologic Unit 17050202, Wallowa Whitman National Forest, on right bank 300 ft (91 m) upstream from Barney Creek and 6 mi (10 km) southwest of Unity.

DRAINAGE AREA.--38.5 mi² (99.7 km²).

PERIOD OF RECORD.--March 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,347.06 ft (1,324.984 m) above mean sea level (levels by Bureau of Reclamation). Prior to July 18, 1963, nonrecording gage at site 6 ft (2 m) upstream at datum 0.16 ft (0.049 m) higher.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 28.0 ft³/s (0.793 m³/s), 20,290 acre-ft/yr (25.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 186 ft³/s (5.27 m³/s) Apr. 29, 1965, gage height, 1.98 ft (0.604 m); maximum gage height, 3.57 ft (1.088 m) Jan. 10, 1974 (backwater from ice); minimum discharge, 12 ft³/s (0.34 m³/s) Jan. 23, 24, 1969, Dec. 8, 1972, Dec. 26, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29 ft³/s (0.82 m³/s) Apr. 7, gage height, 1.17 ft (0.357 m); maximum gage height, 1.60 ft (0.488 m) Jan. 6 (backwater from ice); minimum discharge, 16 ft³/s (0.45 m³/s) Nov. 27, Jan. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|--------|--------|-------|-------|------|------|------|------|------|
| 1 | 23 | 24 | 24 | 22 | 20 | 20 | 19 | 24 | 22 | 19 | 19 | 19 |
| 2 | 23 | 23 | 24 | 23 | 21 | 20 | 19 | 24 | 21 | 20 | 19 | 19 |
| 3 | 23 | 23 | 24 | 23 | 21 | 20 | 20 | 23 | 21 | 19 | 19 | 19 |
| 4 | 22 | 23 | 24 | 23 | 21 | 20 | 21 | 22 | 21 | 19 | 19 | 18 |
| 5 | 23 | 23 | 24 | 21 | 21 | 20 | 23 | 22 | 21 | 19 | 19 | 19 |
| 6 | 23 | 23 | 24 | 17 | 21 | 20 | 24 | 22 | 21 | 19 | 19 | 19 |
| 7 | 23 | 23 | 24 | 17 | 21 | 20 | 25 | 23 | 23 | 19 | 19 | 19 |
| 8 | 23 | 23 | 24 | 18 | 21 | 20 | 25 | 22 | 24 | 19 | 19 | 18 |
| 9 | 23 | 23 | 24 | 17 | 21 | 20 | 24 | 22 | 22 | 19 | 19 | 18 |
| 10 | 23 | 23 | 23 | 17 | 21 | 20 | 23 | 23 | 21 | 19 | 19 | 14 |
| 11 | 23 | 23 | 23 | 19 | 21 | 19 | 23 | 23 | 22 | 19 | 19 | 18 |
| 12 | 23 | 23 | 22 | 20 | 21 | 20 | 23 | 23 | 22 | 19 | 19 | 18 |
| 13 | 23 | 23 | 23 | 21 | 21 | 19 | 24 | 23 | 23 | 19 | 19 | 18 |
| 14 | 23 | 23 | 23 | 22 | 21 | 19 | 23 | 22 | 24 | 19 | 19 | 19 |
| 15 | 23 | 24 | 23 | 22 | 21 | 20 | 23 | 22 | 22 | 19 | 19 | 19 |
| 16 | 23 | 24 | 23 | 22 | 21 | 20 | 23 | 22 | 22 | 19 | 19 | 19 |
| 17 | 23 | 23 | 22 | 22 | 21 | 20 | 22 | 22 | 21 | 19 | 19 | 19 |
| 18 | 23 | 23 | 22 | 22 | 21 | 20 | 22 | 22 | 21 | 19 | 19 | 19 |
| 19 | 23 | 23 | 21 | 22 | 21 | 19 | 21 | 22 | 21 | 19 | 19 | 19 |
| 20 | 23 | 23 | 21 | 22 | 21 | 19 | 22 | 22 | 21 | 19 | 19 | 19 |
| 21 | 23 | 23 | 23 | 21 | 21 | 19 | 22 | 22 | 20 | 19 | 19 | 19 |
| 22 | 23 | 23 | 24 | 21 | 21 | 20 | 23 | 22 | 20 | 19 | 19 | 19 |
| 23 | 23 | 22 | 23 | 20 | 21 | 20 | 24 | 23 | 20 | 19 | 19 | 19 |
| 24 | 23 | 22 | 23 | 20 | 21 | 19 | 25 | 23 | 19 | 19 | 19 | 19 |
| 25 | 25 | 23 | 23 | 19 | 21 | 19 | 25 | 22 | 19 | 19 | 20 | 19 |
| 26 | 24 | 21 | 23 | 19 | 21 | 19 | 25 | 24 | 19 | 19 | 20 | 19 |
| 27 | 23 | 18 | 23 | 19 | 20 | 20 | 23 | 23 | 19 | 19 | 19 | 19 |
| 28 | 23 | 22 | 22 | 18 | 20 | 19 | 23 | 22 | 19 | 19 | 19 | 20 |
| 29 | 23 | 25 | 22 | 19 | --- | 19 | 23 | 22 | 19 | 19 | 19 | 19 |
| 30 | 23 | 25 | 22 | 19 | --- | 19 | 23 | 22 | 19 | 19 | 20 | 19 |
| 31 | 23 | --- | 21 | 19 | --- | 19 | --- | 22 | --- | 19 | 19 | --- |
| TOTAL | 715 | 687 | 711 | 626 | 585 | 607 | 685 | 697 | 629 | 590 | 592 | 564 |
| MEAN | 23.1 | 22.9 | 22.9 | 20.2 | 20.9 | 19.6 | 22.8 | 22.5 | 21.0 | 19.0 | 19.1 | 18.8 |
| MAX | 25 | 25 | 24 | 23 | 21 | 20 | 25 | 24 | 24 | 20 | 20 | 20 |
| MIN | 18 | 18 | 21 | 17 | 20 | 19 | 19 | 22 | 19 | 19 | 19 | 18 |
| AC-FT | 1420 | 1360 | 1410 | 1240 | 1160 | 1200 | 1360 | 1380 | 1250 | 1170 | 1170 | 1120 |
| CAL YR 1976 | TOTAL | 10333 | MEAN 28.2 | MAX 76 | MIN 18 | AC-FT | 20500 | | | | | |
| WTR YR 1977 | TOTAL | 7688 | MEAN 21.1 | MAX 25 | MIN 17 | AC-FT | 15250 | | | | | |

BURNT RIVER BASIN

13272500 UNITY RESERVOIR NEAR UNITY, OR

LOCATION.--Lat 44°30'13", long 118°10'45", in SE¼SW¼ sec.21, T.12 S., R.37 E., Baker County, Hydrologic Unit 17050202, at spillway near right end of dam on Burnt River, 4.4 mi (7.1 km) north of Unity, and at mile 63.6 (102.3 km).

DRAINAGE AREA.--309 mi² (800 km²).

PERIOD OF RECORD.--March 1938 to current year.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (Bureau of Reclamation bench mark). Prior to Nov. 4, 1941, reference mark or mercury pressure gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway and outlet works, completed by Bureau of Reclamation in 1937; storage began Feb. 19, 1938. Capacity, 25,200 acre-ft (31.1 hm³) between elevations 3,776.5 ft (1,151.08 m), bottom of outlet gates, and 3,820.0 ft (1,164.34 m), top of radial gates on spillway when closed. Dead storage, 600 acre-ft (740,000 m³) below elevations 3,776.5 ft (1,151.08 m). Records given herein represent usable contents. Water used for irrigation in the Burnt River Irrigation District near Hereford and Bridgeport.

COOPERATION.--Data for computing capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 26,770 acre-ft (33.0 hm³) May 21, 1971, elevation, 3,821.62 ft (1,164.830 m); no contents Sept. 5 to Oct. 4, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 16,390 acre-ft (20.2 hm³) Apr. 19, elevation, 3,809.62 ft (1,161.172 m); minimum observed, 653 acre-ft (805,000 m³) Aug. 20, elevation, 3,780.30 ft (1,152.235 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet)† | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|----------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 3,796.30 | 7,340 | - |
| Oct. 31..... | 3,795.30 | 6,780 | -560 |
| Nov. 30..... | 3,798.64 | 8,750 | +1,970 |
| Dec. 31..... | 3,801.36 | 10,480 | +1,730 |
| CAL YR 1976..... | - | - | -630 |
| Jan. 31..... | 3,804.00 | 12,260 | +1,780 |
| Feb. 28..... | 3,805.98 | 13,670 | +1,410 |
| Mar. 31..... | 3,808.54 | 15,550 | +1,880 |
| Apr. 30..... | 3,808.80 | 15,760 | +210 |
| May 31..... | 3,801.76 | 10,740 | -5,020 |
| June 30..... | 3,797.22 | 7,880 | -2,860 |
| July 31..... | 3,788.30 | 3,250 | -4,630 |
| Aug. 31..... | 3,781.20 | 858 | -2,392 |
| Sept. 30..... | 3,783.08 | 1,340 | +482 |
| WTR YR 1977..... | - | - | -6,000 |

† Gages read between 0700 and 0900 hrs.

BURN'T RIVER BASIN

89

13273000 BURN'T RIVER NEAR HEREFORD, OR

LOCATION.--Lat 44°30'14", long 118°10'35", in SE¼ sec.21, T.12 S., R.37 E., Baker County, Hydrologic Unit 17050202, on left bank 800 ft (244 m) downstream from Unity Dam, 0.4 mi (0.6 km) upstream from Van Cleve ditch, 7 mi (11 km) west of Hereford, and at mile 63.5 (102.2 km).

DRAINAGE AREA.--309 mi² (800 km²).

PERIOD OF RECORD.--March to September 1915, April to September 1916, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 903: 1939. WSP 1397: 1916, 1930, 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 3,758.19 ft (1,145.496 m) above mean sea level. Oct. 1, 1943, to Oct. 31, 1966, water-stage recorder at site 450 ft (137 m) downstream at datum 1.44 ft (0.439 m) lower. See WSP 1317 or 1737 for history of changes prior to Oct. 1, 1943.

REMARKS.--Records good. Flow regulated since 1938 by Unity Reservoir (see sta 13272500). Diversions for irrigation above station.

AVERAGE DISCHARGE.--49 years (water years 1929-77), 83.4 ft³/s (2.362 m³/s), 60,420 acre-ft/yr (74.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft³/s (62.9 m³/s) Apr. 17, 1943, gage height, 8.79 ft (2.679 m), present datum, from rating curve extended above 1,300 ft³/s (36.8 m³/s); maximum gage height, 9.29 ft (2.832 m), present datum, Apr. 16, 1943, just before concrete control washed out; no flow at times; minimum discharge before construction of Unity Dam, 1.6 ft³/s (0.045 m³/s) Aug. 31, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 151 ft³/s (4.28 m³/s) May 2, gage height, 3.82 ft (1.164 m); minimum, 0.01 ft³/s (<0.001 m³/s) Sept. 21-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|----------|-----------|---------|---------|-------------|--------|------|------|------|---------|------|
| 1 | 90 | 11 | 11 | 3.1 | 3.1 | 4.2 | 2.3 | 118 | 42 | 78 | 81 | .18 |
| 2 | 81 | 12 | 11 | 3.1 | 1.9 | 4.2 | 2.4 | 143 | 38 | 73 | 88 | .18 |
| 3 | 76 | 12 | 11 | 3.0 | 1.9 | 4.0 | 2.4 | 142 | 36 | 74 | 82 | .16 |
| 4 | 83 | 11 | 11 | 3.0 | 2.3 | 3.4 | 2.5 | 140 | 31 | 71 | 78 | .18 |
| 5 | 79 | 11 | 11 | 3.0 | 1.9 | 2.5 | 2.2 | 138 | 31 | 65 | 89 | .18 |
| 6 | 88 | 8.9 | 11 | 3.0 | 1.7 | 2.5 | 1.8 | 135 | 42 | 61 | 84 | .18 |
| 7 | 89 | 7.9 | 11 | 3.1 | 2.0 | 2.5 | 1.9 | 130 | 52 | 60 | 72 | .14 |
| 8 | 89 | 8.5 | 11 | 3.0 | 2.2 | 2.7 | 1.7 | 126 | 55 | 53 | 71 | .16 |
| 9 | 89 | 9.2 | 11 | 3.0 | 2.4 | 2.7 | 1.4 | 125 | 68 | 48 | 72 | .18 |
| 10 | 89 | 9.6 | 11 | 3.0 | 2.5 | 2.8 | 1.3 | 123 | 68 | 51 | 68 | .16 |
| 11 | 38 | 9.6 | 11 | 3.0 | 2.5 | 2.7 | 1.1 | 117 | 58 | 60 | 65 | .18 |
| 12 | 8.5 | 8.9 | 11 | 3.0 | 2.5 | 2.3 | 1.1 | 114 | 55 | 63 | 64 | .20 |
| 13 | 9.9 | 8.2 | 11 | 3.0 | 2.7 | 2.3 | .94 | 108 | 62 | 66 | 64 | .22 |
| 14 | 11 | 7.9 | 11 | 3.0 | 2.8 | 2.3 | .94 | 112 | 56 | 76 | 68 | .22 |
| 15 | 11 | 7.9 | 9.9 | 3.0 | 2.8 | 2.2 | .88 | 111 | 56 | 91 | 68 | .94 |
| 16 | 9.9 | 8.2 | 7.7 | 3.0 | 2.8 | 2.2 | .67 | 111 | 56 | 98 | 74 | .72 |
| 17 | 10 | 9.2 | 7.7 | 3.1 | 3.0 | 2.3 | .58 | 111 | 56 | 89 | 80 | .13 |
| 18 | 11 | 9.2 | 7.7 | 3.1 | 3.0 | 2.3 | .58 | 106 | 59 | 92 | 80 | .11 |
| 19 | 11 | 9.9 | 7.7 | 3.1 | 3.0 | 2.2 | 15 | 101 | 61 | 93 | 73 | .09 |
| 20 | 12 | 9.6 | 7.7 | 3.1 | 3.0 | 2.2 | 21 | 101 | 62 | 95 | 33 | .08 |
| 21 | 12 | 9.6 | 7.9 | 3.3 | 3.1 | 2.2 | 22 | 101 | 65 | 101 | .23 | .02 |
| 22 | 13 | 8.9 | 7.9 | 3.1 | 3.3 | 2.3 | 34 | 97 | 69 | 118 | .22 | .02 |
| 23 | 12 | 8.5 | 7.9 | 3.3 | 3.3 | 1.9 | 39 | 96 | 75 | 108 | .22 | .01 |
| 24 | 11 | 8.2 | 7.9 | 3.3 | 3.3 | 2.0 | 42 | 94 | 75 | 88 | .23 | .07 |
| 25 | 11 | 9.2 | 7.9 | 3.3 | 3.8 | 2.0 | 48 | 90 | 74 | 97 | .23 | .13 |
| 26 | 11 | 10 | 7.9 | 3.3 | 4.2 | 2.0 | 47 | 78 | 75 | 104 | .23 | .18 |
| 27 | 11 | 9.9 | 8.2 | 3.3 | 4.0 | 2.2 | 60 | 71 | 85 | 94 | .23 | .22 |
| 28 | 9.6 | 10 | 6.3 | 3.3 | 4.2 | 2.2 | 67 | 66 | 83 | 79 | .23 | .23 |
| 29 | 13 | 11 | 3.3 | 3.3 | --- | 2.2 | 85 | 57 | 80 | 83 | .22 | .23 |
| 30 | 18 | 11 | 3.1 | 3.3 | --- | 2.2 | 104 | 56 | 80 | 86 | .23 | .23 |
| 31 | 15 | --- | 3.3 | 3.3 | --- | 2.3 | --- | 50 | --- | 83 | .35 | --- |
| TOTAL | 1121.9 | 286.0 | 274.0 | 96.8 | 79.2 | 78.0 | 610.69 | 3268 | 1805 | 2498 | 1456.62 | 5.93 |
| MEAN | 36.2 | 9.53 | 8.84 | 3.12 | 2.83 | 2.52 | 20.4 | 105 | 60.2 | 80.6 | 47.0 | .20 |
| MAX | 90 | 12 | 11 | 3.3 | 4.2 | 4.2 | 104 | 143 | 85 | 118 | 89 | .94 |
| MIN | 8.5 | 7.9 | 3.1 | 3.0 | 1.7 | 1.9 | .58 | 50 | 31 | 48 | .22 | .01 |
| AC-FT | 2230 | 567 | 543 | 192 | 157 | 155 | 1210 | 6480 | 3580 | 4950 | 2890 | 12 |
| CAL YR 1976 | TOTAL | 34084.90 | MEAN 93.1 | MAX 502 | MIN 3.1 | AC-FT 67610 | | | | | | |
| WTR YR 1977 | TOTAL | 11580.14 | MEAN 31.7 | MAX 143 | MIN .01 | AC-FT 22970 | | | | | | |

BURNT RIVER BASIN

13274200 BURNT RIVER NEAR BRIDGEPORT, OR

LOCATION.--Lat 44°32'27", long 117°41'10", in NW¼NW¼ sec.10, T.12 S., R.41 E., Baker County, Hydrologic Unit 17050202, on left bank 0.5 mi (0.8 km) downstream from Dark Canyon, 4.6 mi (7.4 km) upstream from Deer Creek, 5.0 mi (8.0 km) northeast of Bridgeport, and at mile 37.1 (59.7 km).

DRAINAGE AREA.--650 mi² (1,680 km²), approximately.

PERIOD OF RECORD.--October 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,223.22 ft (982.437 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated since 1938 by Unity Reservoir (see station 13272500). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--21 years, 105 ft³/s (2.974 m³/s), 76,070 acre-ft/yr (93.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft³/s (45.3 m³/s) Apr. 9, 1971, gage height, 6.40 ft (1.951 m); minimum, 5.2 ft³/s (0.15 m³/s) Dec. 5, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 117 ft³/s (3.31 m³/s) Oct. 7; maximum gage height, 1.99 ft (0.607 m) Dec. 20, ice jam; minimum discharge, 6.6 ft³/s (0.19 m³/s) Mar. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|-------|------|------|------|------|-------|-------|------|-------|
| 1 | 92 | 35 | 25 | 18 | 15 | 20 | 18 | 27 | 41 | 26 | 34 | 17 |
| 2 | 99 | 36 | 24 | 19 | 16 | 19 | 18 | 25 | 37 | 28 | 37 | 19 |
| 3 | 98 | 37 | 24 | 19 | 15 | 19 | 19 | 31 | 34 | 24 | 35 | 15 |
| 4 | 98 | 36 | 24 | 19 | 14 | 19 | 18 | 39 | 28 | 28 | 34 | 14 |
| 5 | 99 | 34 | 23 | 14 | 14 | 17 | 18 | 39 | 28 | 32 | 28 | 14 |
| 6 | 109 | 34 | 21 | 12 | 14 | 19 | 18 | 37 | 27 | 42 | 30 | 13 |
| 7 | 114 | 34 | 18 | 11 | 15 | 19 | 19 | 42 | 24 | 47 | 34 | 13 |
| 8 | 112 | 32 | 15 | 10 | 17 | 19 | 18 | 32 | 27 | 41 | 37 | 11 |
| 9 | 112 | 33 | 13 | 9.5 | 16 | 19 | 18 | 31 | 24 | 36 | 34 | 11 |
| 10 | 113 | 32 | 12 | 11 | 15 | 18 | 17 | 43 | 23 | 35 | 28 | 11 |
| 11 | 109 | 32 | 12 | 13 | 16 | 17 | 18 | 46 | 26 | 36 | 28 | 9.8 |
| 12 | 97 | 32 | 12 | 17 | 17 | 17 | 18 | 41 | 28 | 35 | 27 | 9.0 |
| 13 | 64 | 31 | 12 | 17 | 17 | 17 | 18 | 34 | 26 | 30 | 26 | 9.0 |
| 14 | 56 | 31 | 13 | 15 | 15 | 17 | 19 | 28 | 32 | 27 | 26 | 8.7 |
| 15 | 52 | 32 | 14 | 14 | 16 | 16 | 18 | 28 | 32 | 25 | 24 | 9.0 |
| 16 | 47 | 34 | 16 | 14 | 18 | 16 | 17 | 31 | 34 | 19 | 18 | 11 |
| 17 | 44 | 34 | 16 | 15 | 18 | 16 | 17 | 34 | 28 | 19 | 18 | 12 |
| 18 | 42 | 34 | 15 | 14 | 17 | 16 | 16 | 38 | 26 | 24 | 20 | 12 |
| 19 | 40 | 34 | 14 | 14 | 17 | 16 | 14 | 37 | 26 | 24 | 21 | 12 |
| 20 | 39 | 33 | 13 | 15 | 18 | 16 | 13 | 31 | 28 | 18 | 23 | 11 |
| 21 | 39 | 32 | 14 | 16 | 18 | 16 | 21 | 33 | 24 | 23 | 24 | 12 |
| 22 | 39 | 32 | 15 | 13 | 19 | 16 | 29 | 35 | 20 | 20 | 23 | 11 |
| 23 | 38 | 32 | 14 | 14 | 18 | 17 | 25 | 39 | 20 | 27 | 22 | 11 |
| 24 | 38 | 31 | 13 | 16 | 18 | 17 | 32 | 42 | 23 | 31 | 17 | 11 |
| 25 | 38 | 31 | 14 | 16 | 17 | 17 | 29 | 43 | 26 | 27 | 20 | 10 |
| 26 | 37 | 30 | 16 | 16 | 18 | 18 | 29 | 56 | 23 | 26 | 21 | 11 |
| 27 | 36 | 18 | 17 | 15 | 21 | 18 | 27 | 59 | 23 | 31 | 23 | 11 |
| 28 | 37 | 20 | 16 | 14 | 18 | 17 | 24 | 52 | 21 | 33 | 21 | 14 |
| 29 | 36 | 22 | 15 | 14 | --- | 18 | 25 | 48 | 19 | 32 | 20 | 14 |
| 30 | 35 | 24 | 14 | 14 | --- | 17 | 24 | 45 | 22 | 27 | 20 | 12 |
| 31 | 35 | --- | 16 | 13 | --- | 17 | --- | 43 | --- | 28 | 18 | --- |
| TOTAL | 2044 | 942 | 500 | 451.5 | 467 | 540 | 614 | 1189 | 800 | 901 | 791 | 358.5 |
| MEAN | 65.9 | 31.4 | 16.1 | 14.6 | 16.7 | 17.4 | 20.5 | 38.4 | 26.7 | 29.1 | 25.5 | 12.0 |
| MAX | 114 | 37 | 25 | 19 | 21 | 20 | 32 | 59 | 41 | 47 | 37 | 19 |
| MIN | 35 | 18 | 12 | 9.5 | 14 | 16 | 13 | 25 | 19 | 18 | 17 | 8.7 |
| AC-FT | 4050 | 1870 | 992 | 896 | 926 | 1070 | 1220 | 2360 | 1590 | 1790 | 1570 | 711 |
| CAL YR 1976 | TOTAL | 39767.0 | MEAN | 109 | MAX | 666 | MIN | 12 | AC-FT | 78880 | | |
| WTR YR 1977 | TOTAL | 9598.0 | MEAN | 26.3 | MAX | 114 | MIN | 8.7 | AC-FT | 19040 | | |

BURNT RIVER BASIN

91

13275000 BURNT RIVER AT HUNTINGTON, OR

LOCATION.--Lat 44°21'30", long 117°16'20", in NE¼ sec.13, T.14 S., R.44 E., Baker County, Hydrologic Unit 17050202, on right bank 0.5 mi (0.8 km) northwest of Huntington and at mile 2.9 (4.7 km).

DRAINAGE AREA.--1,093 mi² (2,831 km²).

PERIOD OF RECORD.--September 1928 to September 1932, October 1956 to September 1959, June 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,104.75 ft (641.528 m) above mean sea level. Sept. 13, 1928, to Sept. 30, 1932, nonrecording gage at site 200 ft (61 m) upstream at different datum. Oct. 1, 1956, to Sept. 30, 1959, water-stage recorder and Oct. 1, 1959, to Aug. 20, 1962, crest-stage gage.

REMARKS.--Records good except those for December and January, which are fair. Flow regulated since 1938 by Unity Reservoir (see station 13272500). Diversions for irrigation above station.

AVERAGE DISCHARGE.--22 years, 130 ft³/s (3.682 m³/s), 94,180 acre-ft/yr (116 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft³/s (62.9 m³/s) Dec. 22, 1964, gage height, 5.94 ft (1.811 m); maximum gage height, 6.80 ft (2.073 m) Feb. 3, 1963 (ice jam); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 235 ft³/s (6.66 m³/s) June 7; maximum gage height, 2.31 ft (0.704 m) Dec. 21 (ice jam); minimum discharge, 2.5 ft³/s (0.071 m³/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| 1 | 93 | 68 | 64 | 52 | 42 | 42 | 35 | 14 | 27 | 13 | 12 | 14 |
| 2 | 99 | 68 | 64 | 50 | 39 | 40 | 32 | 15 | 25 | 12 | 5.6 | 13 |
| 3 | 106 | 68 | 58 | 45 | 39 | 42 | 30 | 17 | 22 | 11 | 10 | 11 |
| 4 | 106 | 69 | 54 | 41 | 40 | 41 | 31 | 19 | 19 | 11 | 9.9 | 12 |
| 5 | 102 | 68 | 55 | 34 | 41 | 40 | 31 | 23 | 17 | 10 | 8.8 | 13 |
| 6 | 107 | 67 | 51 | 28 | 41 | 40 | 30 | 25 | 15 | 9.0 | 15 | 13 |
| 7 | 114 | 66 | 55 | 28 | 42 | 41 | 28 | 30 | 37 | 13 | 23 | 9.2 |
| 8 | 117 | 64 | 60 | 27 | 42 | 41 | 28 | 26 | 49 | 12 | 19 | 4.9 |
| 9 | 119 | 63 | 61 | 27 | 44 | 42 | 25 | 23 | 38 | 12 | 17 | 6.3 |
| 10 | 119 | 64 | 57 | 28 | 40 | 40 | 22 | 25 | 28 | 12 | 15 | 8.2 |
| 11 | 117 | 63 | 50 | 31 | 41 | 38 | 22 | 26 | 23 | 11 | 13 | 9.9 |
| 12 | 114 | 63 | 46 | 40 | 40 | 38 | 21 | 25 | 28 | 11 | 11 | 9.5 |
| 13 | 96 | 62 | 48 | 43 | 41 | 35 | 20 | 25 | 28 | 7.8 | 7.5 | 9.2 |
| 14 | 77 | 62 | 45 | 39 | 40 | 33 | 20 | 25 | 28 | 7.5 | 8.5 | 4.0 |
| 15 | 66 | 62 | 48 | 36 | 38 | 32 | 19 | 28 | 30 | 4.9 | 9.5 | 5.3 |
| 16 | 64 | 63 | 46 | 40 | 38 | 32 | 19 | 27 | 29 | 4.0 | 12 | 7.5 |
| 17 | 64 | 64 | 44 | 43 | 38 | 33 | 18 | 25 | 30 | 4.6 | 13 | 11 |
| 18 | 63 | 63 | 45 | 43 | 40 | 31 | 20 | 25 | 27 | 5.6 | 15 | 11 |
| 19 | 64 | 62 | 43 | 40 | 39 | 33 | 21 | 26 | 21 | 12 | 13 | 9.9 |
| 20 | 66 | 62 | 41 | 45 | 39 | 33 | 19 | 28 | 22 | 10 | 14 | 11 |
| 21 | 67 | 62 | 45 | 47 | 43 | 32 | 20 | 34 | 22 | 9.5 | 14 | 18 |
| 22 | 73 | 61 | 50 | 47 | 45 | 31 | 18 | 31 | 31 | 9.2 | 15 | 19 |
| 23 | 71 | 61 | 52 | 39 | 42 | 30 | 18 | 28 | 25 | 9.9 | 15 | 17 |
| 24 | 71 | 61 | 54 | 42 | 41 | 27 | 14 | 39 | 22 | 8.2 | 15 | 17 |
| 25 | 72 | 61 | 54 | 47 | 39 | 27 | 12 | 35 | 21 | 4.6 | 15 | 17 |
| 26 | 71 | 57 | 54 | 45 | 40 | 27 | 11 | 38 | 20 | 4.6 | 16 | 17 |
| 27 | 68 | 43 | 52 | 43 | 39 | 29 | 14 | 59 | 18 | 6.3 | 17 | 17 |
| 28 | 68 | 46 | 45 | 42 | 41 | 30 | 15 | 57 | 16 | 7.8 | 18 | 17 |
| 29 | 71 | 52 | 45 | 40 | --- | 31 | 15 | 52 | 15 | 8.2 | 17 | 21 |
| 30 | 68 | 56 | 47 | 38 | --- | 31 | 15 | 47 | 14 | 7.1 | 16 | 20 |
| 31 | 69 | --- | 50 | 36 | --- | 31 | --- | 33 | --- | 11 | 15 | --- |
| TOTAL | 2642 | 1851 | 1583 | 1226 | 1134 | 1073 | 643 | 930 | 747 | 279.8 | 424.8 | 372.9 |
| MEAN | 85.2 | 61.7 | 51.1 | 39.5 | 40.5 | 34.6 | 21.4 | 30.0 | 24.9 | 9.03 | 13.7 | 12.4 |
| MAX | 119 | 69 | 64 | 52 | 45 | 42 | 35 | 59 | 49 | 13 | 23 | 21 |
| MIN | 63 | 43 | 41 | 27 | 38 | 27 | 11 | 14 | 14 | 4.0 | 5.6 | 4.0 |
| AC-FT | 5240 | 3670 | 3140 | 2430 | 2250 | 2130 | 1280 | 1840 | 1480 | 555 | 843 | 740 |

| | | | | | | | | |
|-------------|-------|---------|-----------|---------|-----|-----|-------|-------|
| CAL YR 1976 | TOTAL | 50213.0 | MEAN 137 | MAX 778 | MIN | 41 | AC-FT | 99600 |
| WTR YR 1977 | TOTAL | 12906.5 | MEAN 35.4 | MAX 119 | MIN | 4.0 | AC-FT | 25600 |

POWDER RIVER BASIN

13275300 POWDER RIVER NEAR SUMPTER, OR

LOCATION.--Lat 44°40'20", long 117°59'40", in NE¼NE¼ sec.25, T.10 S., R.38 E., Baker County, Hydrologic Unit 17050203, Wallowa Whitman National Forest, on left bank 1,200 ft (366 m) downstream from Mason Dam, 1.4 mi (2.3 km) upstream from California Gulch, 10.9 mi (17.4 km) southwest of Baker, and at mile 123.2 (198.2 km).

DRAINAGE AREA.--168 mi² (435 km²), approximately. Prior to Oct. 1, 1970, 170 mi² (440 km²) at cableway, 0.5 mi (0.8 km) downstream.

PERIOD OF RECORD.--April 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,898.47 ft (1,188.254 m) above mean sea level (Bureau of Reclamation bench mark). Prior to July 29, 1965, nonrecording gage at datum 1.03 ft (0.314 m) higher.

REMARKS.--Records good. Flow completely regulated since Oct. 31, 1967, by Phillips Lake, active capacity, 90,540 acre-ft (112 hm³). Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--12 years, 106 ft³/s (3.002 m³/s), 76,800 acre-ft/yr (94.7 hm³/yr), not adjusted for storage in Phillips Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 971 ft³/s (27.5 m³/s) Apr. 30, 1965, gage height, 4.43 ft (1.350 m); no flow Nov. 12, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 1,600 ft³/s (45.3 m³/s), approximately, Mar. 20, 1910, based on comparison with records for station downstream, near Baker.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 284 ft³/s (8.04 m³/s) May 10, 11; maximum gage height, 3.12 ft (0.951 m) June 30, July 1; minimum discharge, 6.7 ft³/s (0.19 m³/s) sometime during period Oct. 1-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|------|------|---------|---------|-------|-------|------|-------|------|------|
| 1 | 8.9 | 11 | 11 | 11 | 11 | 11 | 11 | 158 | 97 | 277 | 178 | 121 |
| 2 | 8.9 | 11 | 11 | 11 | 11 | 11 | 11 | 175 | 100 | 267 | 175 | 102 |
| 3 | 8.8 | 11 | 11 | 11 | 11 | 11 | 11 | 196 | 117 | 239 | 170 | 102 |
| 4 | 8.8 | 11 | 11 | 11 | 11 | 11 | 11 | 202 | 114 | 226 | 155 | 102 |
| 5 | 8.7 | 11 | 11 | 11 | 11 | 11 | 11 | 211 | 114 | 190 | 155 | 104 |
| 6 | 8.7 | 11 | 11 | 11 | 11 | 11 | 11 | 217 | 121 | 141 | 155 | 102 |
| 7 | 8.6 | 11 | 11 | 11 | 11 | 11 | 11 | 217 | 136 | 136 | 155 | 102 |
| 8 | 8.6 | 11 | 11 | 11 | 11 | 11 | 11 | 220 | 136 | 163 | 132 | 102 |
| 9 | 8.6 | 11 | 11 | 11 | 11 | 11 | 11 | 223 | 136 | 170 | 108 | 102 |
| 10 | 8.6 | 11 | 11 | 11 | 11 | 11 | 11 | 246 | 134 | 170 | 80 | 100 |
| 11 | 9.4 | 11 | 11 | 11 | 11 | 11 | 13 | 274 | 125 | 168 | 89 | 100 |
| 12 | 10 | 11 | 11 | 11 | 11 | 11 | 24 | 246 | 104 | 163 | 97 | 100 |
| 13 | 10 | 11 | 11 | 11 | 11 | 11 | 29 | 235 | 102 | 165 | 97 | 100 |
| 14 | 10 | 11 | 11 | 11 | 11 | 11 | 29 | 239 | 104 | 170 | 97 | 82 |
| 15 | 10 | 11 | 11 | 11 | 11 | 11 | 29 | 239 | 114 | 168 | 98 | 73 |
| 16 | 10 | 11 | 11 | 11 | 11 | 11 | 32 | 235 | 134 | 163 | 112 | 73 |
| 17 | 10 | 11 | 11 | 11 | 11 | 11 | 45 | 232 | 153 | 163 | 125 | 73 |
| 18 | 11 | 11 | 11 | 11 | 11 | 11 | 58 | 229 | 158 | 168 | 136 | 73 |
| 19 | 11 | 11 | 11 | 11 | 11 | 11 | 67 | 217 | 158 | 196 | 148 | 72 |
| 20 | 11 | 11 | 11 | 11 | 11 | 11 | 60 | 217 | 160 | 193 | 121 | 127 |
| 21 | 11 | 11 | 11 | 11 | 11 | 11 | 54 | 217 | 170 | 181 | 129 | 129 |
| 22 | 11 | 11 | 11 | 11 | 11 | 11 | 70 | 220 | 173 | 158 | 160 | 29 |
| 23 | 11 | 11 | 11 | 11 | 11 | 11 | 70 | 220 | 170 | 158 | 193 | 21 |
| 24 | 11 | 11 | 11 | 11 | 11 | 11 | 70 | 214 | 160 | 158 | 208 | 21 |
| 25 | 11 | 11 | 11 | 11 | 11 | 11 | 72 | 193 | 175 | 158 | 175 | 20 |
| 26 | 11 | 11 | 11 | 11 | 11 | 11 | 85 | 160 | 178 | 158 | 155 | 20 |
| 27 | 10 | 11 | 11 | 11 | 11 | 11 | 121 | 136 | 187 | 153 | 143 | 13 |
| 28 | 10 | 11 | 11 | 11 | 11 | 11 | 123 | 139 | 235 | 143 | 143 | 11 |
| 29 | 10 | 11 | 11 | 11 | --- | 11 | 139 | 139 | 235 | 148 | 139 | 11 |
| 30 | 11 | 11 | 11 | 11 | --- | 11 | 158 | 114 | 242 | 170 | 123 | 11 |
| 31 | 11 | --- | 11 | 11 | --- | 11 | --- | 95 | --- | 173 | 123 | --- |
| TOTAL | 307.6 | 330 | 341 | 341 | 308 | 341 | 1458 | 6275 | 4442 | 5454 | 4274 | 2198 |
| MEAN | 9.92 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 48.6 | 202 | 148 | 176 | 138 | 73.3 |
| MAX | 11 | 11 | 11 | 11 | 11 | 11 | 158 | 274 | 242 | 277 | 208 | 129 |
| MIN | 8.6 | 11 | 11 | 11 | 11 | 11 | 11 | 95 | 97 | 136 | 80 | 11 |
| AC-FT | 610 | 655 | 676 | 676 | 611 | 676 | 2890 | 12450 | 8810 | 10820 | 8480 | 4360 |
| CAL YR 1976 | TOTAL | 42527.20 | MEAN | 116 | MAX 510 | MIN .10 | AC-FT | 84350 | | | | |
| WTR YR 1977 | TOTAL | 26069.60 | MEAN | 71.4 | MAX 277 | MIN 8.6 | AC-FT | 51710 | | | | |

POWDER RIVER BASIN

93

13286700 POWDER RIVER NEAR RICHLAND, OR

LOCATION.--Lat 44°46'40", long 117°17'30", in SE¼ sec.14, T.9 S., R.44 E., Baker County, Hydrologic Unit 17050203, on left bank 0.4 mi (0.6 km) upstream from Upper Timber Canyon, 6.0 mi (9.7 km) west of Richland, and at mile 20.3 (32.7 km).

DRAINAGE AREA.--1,310 mi² (3,390 km²), approximately.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,277.42 ft (694.158 m) above mean sea level.

REMARKS.--Records good except those for winter periods and no gage-height record, which are fair. Regulation by several reservoirs, the largest being Phillips Lake since Oct. 31, 1967, active capacity, 90,540 acre-ft (112 hm³), and Thief Valley Reservoir, capacity, 17,400 acre-ft (21.5 hm³). Diversions for irrigation above and below station.

AVERAGE DISCHARGE.--20 years, 247 ft³/s (6.995 m³/s), 179,000 acre-ft/yr (221 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,470 ft³/s (98.3 m³/s) Jan. 31, 1965, gage height, 6.68 ft (2.036 m); maximum gage height, 9.29 ft (2.832 m) Jan. 15, 1974 (ice jam); minimum discharge, 0.80 ft³/s (0.023 m³/s) Aug. 11, 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 156 ft³/s (4.42 m³/s) Mar. 10, gage height, 1.73 ft (0.527 m); maximum gage height, 3.34 ft (1.018 m) Feb. 21 (ice jam); minimum discharge, 1.7 ft³/s (0.048 m³/s) July 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|----------|------|------|-----------|----------|---------|--------------|------|------|-------|-------|-------|
| 1 | 97 | 86 | 92 | 82 | 60 | 137 | 113 | 15 | 29 | 12 | 9.5 | 36 |
| 2 | 115 | 88 | 94 | 78 | 66 | 139 | 128 | 16 | 24 | 10 | 8.6 | 24 |
| 3 | 123 | 88 | 96 | 88 | 64 | 142 | 121 | 17 | 22 | 13 | 10 | 21 |
| 4 | 119 | 88 | 100 | 70 | 62 | 146 | 115 | 16 | 21 | 16 | 13 | 19 |
| 5 | 119 | 88 | 86 | 60 | 60 | 139 | 105 | 17 | 19 | 17 | 14 | 19 |
| 6 | 119 | 88 | 80 | 56 | 70 | 139 | 92 | 16 | 19 | 21 | 16 | 16 |
| 7 | 126 | 88 | 100 | 60 | 66 | 142 | 65 | 15 | 21 | 21 | 16 | 15 |
| 8 | 126 | 88 | 110 | 56 | 74 | 144 | 44 | 16 | 25 | 19 | 17 | 14 |
| 9 | 130 | 88 | 100 | 58 | 86 | 146 | 30 | 17 | 22 | 13 | 16 | 12 |
| 10 | 126 | 88 | 90 | 66 | 80 | 154 | 31 | 18 | 23 | 10 | 33 | 11 |
| 11 | 123 | 88 | 80 | 76 | 82 | 146 | 25 | 17 | 24 | 11 | 15 | 9.5 |
| 12 | 123 | 88 | 68 | 84 | 90 | 142 | 21 | 18 | 25 | 9.1 | 11 | 11 |
| 13 | 121 | 88 | 76 | 90 | 94 | 135 | 17 | 18 | 24 | 5.6 | 12 | 11 |
| 14 | 121 | 90 | 70 | 80 | 90 | 130 | 13 | 19 | 29 | 5.6 | 13 | 8.2 |
| 15 | 121 | 92 | 68 | 74 | 86 | 128 | 12 | 21 | 32 | 4.4 | 17 | 8.6 |
| 16 | 121 | 94 | 74 | 90 | 96 | 126 | 12 | 20 | 33 | 5.6 | 27 | 15 |
| 17 | 121 | 94 | 66 | 86 | 90 | 123 | 12 | 21 | 31 | 3.3 | 22 | 11 |
| 18 | 119 | 92 | 64 | 78 | 96 | 123 | 14 | 23 | 29 | 3.3 | 19 | 11 |
| 19 | 119 | 92 | 62 | 68 | 90 | 119 | 13 | 25 | 31 | 3.6 | 16 | 10 |
| 20 | 121 | 94 | 60 | 72 | 94 | 130 | 14 | 24 | 35 | 3.6 | 24 | 12 |
| 21 | 111 | 94 | 70 | 68 | 100 | 128 | 14 | 23 | 36 | 2.7 | 23 | 13 |
| 22 | 65 | 94 | 84 | 66 | 110 | 130 | 13 | 25 | 32 | 2.0 | 25 | 13 |
| 23 | 45 | 94 | 82 | 76 | 94 | 132 | 13 | 26 | 29 | 2.2 | 25 | 12 |
| 24 | 39 | 94 | 86 | 60 | 100 | 132 | 14 | 27 | 25 | 2.5 | 23 | 11 |
| 25 | 37 | 94 | 84 | 86 | 88 | 132 | 13 | 25 | 20 | 3.8 | 24 | 12 |
| 26 | 37 | 94 | 92 | 84 | 94 | 121 | 12 | 26 | 15 | 11 | 26 | 14 |
| 27 | 70 | 62 | 84 | 80 | 110 | 126 | 13 | 34 | 14 | 16 | 25 | 25 |
| 28 | 88 | 84 | 80 | 72 | 126 | 130 | 14 | 38 | 15 | 11 | 29 | 24 |
| 29 | 88 | 92 | 66 | 70 | --- | 119 | 15 | 38 | 13 | 7.0 | 31 | 25 |
| 30 | 88 | 94 | 74 | 68 | --- | 115 | 14 | 33 | 13 | 11 | 30 | 26 |
| 31 | 84 | --- | 62 | 62 | --- | 107 | --- | 34 | --- | 9.1 | 32 | --- |
| TOTAL | 3162 | 2686 | 2500 | 2264 | 2418 | 4102 | 1132 | 698 | 730 | 285.4 | 622.1 | 469.3 |
| MEAN | 102 | 89.5 | 80.6 | 73.0 | 86.4 | 132 | 37.7 | 22.5 | 24.3 | 9.21 | 20.1 | 15.6 |
| MAX | 130 | 94 | 110 | 90 | 126 | 154 | 128 | 38 | 36 | 21 | 33 | 36 |
| MIN | 37 | 62 | 60 | 56 | 60 | 107 | 12 | 15 | 13 | 2.0 | 8.6 | 8.2 |
| AC-FT | 6270 | 5330 | 4960 | 4490 | 4800 | 8140 | 2250 | 1380 | 1450 | 566 | 1230 | 931 |
| CAL YR 1976 TOTAL | 101046.0 | | | MEAN 276 | MAX 1300 | MIN 35 | AC-FT 200400 | | | | | |
| WTR YR 1977 TOTAL | 21068.8 | | | MEAN 57.7 | MAX 154 | MIN 2.0 | AC-FT 41790 | | | | | |

NOTE.--No gage-height record Apr. 25 to May 25.

POWDER RIVER BASIN

13288200 EAGLE CREEK ABOVE SKULL CREEK, NEAR NEW BRIDGE, OR

LOCATION.--Lat 44°52'50", long 117°15'10", in SE¼ sec.7, T.8 S., R.45 E., Baker County, Hydrologic Unit 17050203, Wallowa-Whitman National Forest, on left bank 0.5 mi (0.8 km) upstream from Skull Creek, 6.5 mi (10.5 km) northwest of New Bridge, and at mile 10.5 (16.9 km).

DRAINAGE AREA.--156 mi² (404 km²).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (853 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are fair. No regulation. Some diversions above station for irrigation and one small interbasin diversion for irrigation supply. All diversions are small compared to flow at station during irrigation season.

AVERAGE DISCHARGE.--20 years, 323 ft³/s (9.147 m³/s), 234,000 acre-ft/yr (289 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,310 ft³/s (150 m³/s) July 12, 1975, gage height, 5.06 ft (1.542 m), from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 6.88 ft (2.097 m) Jan. 25, 1962 (ice jam); minimum daily discharge, 30 ft³/s (0.85 m³/s) Nov. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) June 7, no peak above base of 1,700 ft³/s (48.1 m³/s); maximum gage height, 3.59 ft (1.094 m) Jan. 31, ice jam; minimum daily discharge, 30 ft³/s (0.85 m³/s) Nov. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|--------------|-------|-------|-------|------|------|------|
| 1 | 93 | 87 | 80 | 50 | 70 | 67 | 68 | 414 | 404 | 113 | 60 | 78 |
| 2 | 99 | 93 | 86 | 54 | 64 | 63 | 65 | 409 | 414 | 113 | 59 | 70 |
| 3 | 99 | 93 | 80 | 58 | 70 | 65 | 67 | 335 | 348 | 109 | 59 | 67 |
| 4 | 95 | 87 | 84 | 60 | 80 | 63 | 72 | 278 | 424 | 107 | 57 | 63 |
| 5 | 93 | 85 | 72 | 48 | 88 | 63 | 84 | 248 | 535 | 107 | 57 | 63 |
| 6 | 89 | 85 | 66 | 48 | 94 | 65 | 100 | 230 | 577 | 100 | 59 | 62 |
| 7 | 85 | 84 | 72 | 50 | 100 | 65 | 156 | 213 | 642 | 97 | 60 | 60 |
| 8 | 84 | 82 | 64 | 45 | 88 | 65 | 201 | 197 | 558 | 93 | 59 | 59 |
| 9 | 82 | 82 | 72 | 47 | 94 | 68 | 170 | 197 | 430 | 89 | 57 | 59 |
| 10 | 80 | 82 | 68 | 48 | 100 | 63 | 156 | 270 | 348 | 87 | 60 | 60 |
| 11 | 78 | 80 | 70 | 52 | 90 | 62 | 167 | 237 | 318 | 84 | 57 | 60 |
| 12 | 78 | 80 | 72 | 60 | 85 | 65 | 191 | 213 | 297 | 84 | 55 | 59 |
| 13 | 77 | 80 | 84 | 68 | 67 | 62 | 210 | 223 | 266 | 85 | 57 | 57 |
| 14 | 77 | 78 | 82 | 78 | 63 | 62 | 185 | 255 | 252 | 84 | 59 | 57 |
| 15 | 75 | 82 | 87 | 82 | 63 | 63 | 194 | 227 | 227 | 82 | 59 | 59 |
| 16 | 75 | 91 | 87 | 78 | 65 | 63 | 223 | 210 | 217 | 78 | 57 | 65 |
| 17 | 73 | 91 | 84 | 86 | 65 | 63 | 227 | 201 | 204 | 78 | 55 | 65 |
| 18 | 73 | 85 | 68 | 78 | 65 | 65 | 217 | 194 | 188 | 80 | 55 | 63 |
| 19 | 80 | 84 | 50 | 68 | 65 | 65 | 201 | 188 | 188 | 78 | 55 | 70 |
| 20 | 87 | 80 | 38 | 60 | 65 | 63 | 197 | 182 | 176 | 77 | 55 | 109 |
| 21 | 87 | 80 | 74 | 58 | 68 | 63 | 194 | 185 | 161 | 75 | 55 | 85 |
| 22 | 87 | 80 | 84 | 60 | 67 | 65 | 201 | 201 | 150 | 73 | 55 | 78 |
| 23 | 85 | 78 | 66 | 56 | 63 | 70 | 297 | 339 | 142 | 73 | 55 | 75 |
| 24 | 85 | 78 | 70 | 56 | 65 | 67 | 399 | 326 | 132 | 77 | 62 | 78 |
| 25 | 91 | 78 | 80 | 58 | 63 | 65 | 435 | 282 | 119 | 78 | 78 | 80 |
| 26 | 91 | 72 | 94 | 56 | 65 | 67 | 430 | 301 | 115 | 73 | 84 | 82 |
| 27 | 89 | 57 | 86 | 52 | 65 | 68 | 404 | 297 | 109 | 68 | 75 | 77 |
| 28 | 87 | 30 | 66 | 50 | 67 | 65 | 409 | 270 | 117 | 68 | 70 | 139 |
| 29 | 87 | 58 | 60 | 50 | --- | 67 | 419 | 230 | 117 | 67 | 73 | 270 |
| 30 | 87 | 74 | 50 | 54 | --- | 65 | 414 | 223 | 113 | 65 | 97 | 164 |
| 31 | 85 | --- | 45 | 58 | --- | 67 | --- | 252 | --- | 62 | 93 | --- |
| TOTAL | 2633 | 2376 | 2241 | 1826 | 2064 | 2009 | 6753 | 7827 | 8288 | 2604 | 1948 | 2433 |
| MEAN | 84.9 | 79.2 | 72.3 | 58.9 | 73.7 | 64.8 | 225 | 252 | 276 | 84.0 | 62.8 | 81.1 |
| MAX | 99 | 93 | 94 | 86 | 100 | 70 | 435 | 414 | 642 | 113 | 97 | 270 |
| MIN | 73 | 30 | 38 | 45 | 63 | 62 | 65 | 182 | 109 | 62 | 55 | 57 |
| AC-FT | 5220 | 4710 | 4450 | 3620 | 4090 | 3980 | 13390 | 15520 | 16440 | 5170 | 3860 | 4830 |
| CAL YR 1976 | TOTAL | 101310 | MEAN 277 | MAX 1320 | MIN 30 | AC-FT 200900 | | | | | | |
| WTR YR 1977 | TOTAL | 43002 | MEAN 118 | MAX 642 | MIN 30 | AC-FT 85290 | | | | | | |

IMNAHA RIVER BASIN

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13292000 IMNAHA RIVER AT IMNAHA, OR

LOCATION.--Lat 45°33'45", long 116°50'00", in SW¼ sec.16, T.1 N., R.48 E., Wallowa County, Hydrologic Unit 17060102, on left bank at Imnaha, 0.3 mi (0.5 km) downstream from Big Sheep Creek, and at mile 19.3 (31.1 km).

DRAINAGE AREA.--622 mi² (1,611 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 833: 1938. WSP 1397: 1929, 1932(M), 1949. WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,941.14 ft (591.659 m) above mean sea level. Prior to Aug. 6, 1934, nonrecording gage at site 0.25 mi (0.40 km) upstream at different datum. Aug. 6-31, 1934, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. No regulation. Diversions for irrigation above station. Water is diverted from Big Sheep Creek and tributaries above station for irrigation in Wallowa River basin.

AVERAGE DISCHARGE.--49 years, 510 ft³/s (14.44 m³/s), 369,500 acre-ft/yr (456 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s (286 m³/s) Jan. 17, 1974, gage height, 7.86 ft (2.396 m), from rating curve extended above 3,500 ft³/s (99.1 m³/s); minimum observed, 16 ft³/s (0.45 m³/s) Nov. 22, 1931, result of freezeup; minimum daily, 25 ft³/s (0.71 m³/s) Nov. 22, 23, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) June 5, gage height, 3.29 ft (1.003 m), no peak above base of 1,600 ft³/s (45.3 m³/s); minimum, 39 ft³/s (1.10 m³/s) Nov. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|------|------|----------|----------|--------|--------------|-------|-------|------|------|------|
| 1 | 141 | 136 | 102 | 74 | 80 | 110 | 136 | 461 | 680 | 165 | 87 | 108 |
| 2 | 151 | 141 | 110 | 73 | 90 | 106 | 134 | 437 | 812 | 168 | 87 | 96 |
| 3 | 163 | 139 | 106 | 94 | 100 | 106 | 134 | 392 | 645 | 158 | 89 | 93 |
| 4 | 151 | 136 | 125 | 106 | 102 | 106 | 143 | 344 | 657 | 160 | 87 | 89 |
| 5 | 148 | 132 | 118 | 102 | 104 | 100 | 173 | 307 | 799 | 168 | 84 | 87 |
| 6 | 146 | 132 | 98 | 87 | 108 | 106 | 222 | 293 | 786 | 155 | 91 | 85 |
| 7 | 141 | 129 | 134 | 72 | 104 | 110 | 286 | 279 | 767 | 146 | 89 | 84 |
| 8 | 139 | 127 | 134 | 82 | 110 | 118 | 414 | 272 | 748 | 134 | 87 | 82 |
| 9 | 136 | 127 | 129 | 94 | 110 | 123 | 461 | 266 | 622 | 134 | 84 | 82 |
| 10 | 134 | 127 | 112 | 90 | 112 | 116 | 392 | 340 | 505 | 132 | 82 | 82 |
| 11 | 132 | 127 | 114 | 110 | 106 | 102 | 368 | 356 | 442 | 127 | 80 | 80 |
| 12 | 132 | 127 | 106 | 130 | 106 | 112 | 356 | 322 | 428 | 123 | 77 | 79 |
| 13 | 132 | 123 | 114 | 140 | 106 | 112 | 397 | 311 | 405 | 123 | 77 | 77 |
| 14 | 132 | 121 | 104 | 143 | 102 | 102 | 344 | 337 | 397 | 118 | 76 | 77 |
| 15 | 132 | 127 | 104 | 139 | 104 | 98 | 318 | 318 | 368 | 112 | 74 | 79 |
| 16 | 129 | 127 | 118 | 139 | 106 | 108 | 340 | 333 | 340 | 108 | 74 | 98 |
| 17 | 129 | 129 | 110 | 139 | 106 | 121 | 333 | 314 | 314 | 108 | 73 | 121 |
| 18 | 127 | 129 | 94 | 134 | 104 | 112 | 318 | 356 | 300 | 112 | 73 | 100 |
| 19 | 127 | 127 | 67 | 125 | 104 | 112 | 300 | 388 | 293 | 114 | 71 | 93 |
| 20 | 127 | 125 | 50 | 114 | 104 | 108 | 286 | 456 | 283 | 108 | 71 | 143 |
| 21 | 127 | 123 | 96 | 112 | 116 | 108 | 296 | 510 | 266 | 104 | 70 | 151 |
| 22 | 127 | 125 | 112 | 110 | 114 | 108 | 311 | 541 | 249 | 98 | 73 | 146 |
| 23 | 127 | 123 | 123 | 108 | 108 | 121 | 384 | 628 | 237 | 104 | 73 | 125 |
| 24 | 125 | 123 | 114 | 74 | 104 | 125 | 495 | 760 | 222 | 108 | 82 | 118 |
| 25 | 132 | 123 | 110 | 76 | 100 | 121 | 562 | 680 | 207 | 123 | 106 | 121 |
| 26 | 141 | 116 | 127 | 77 | 104 | 121 | 556 | 639 | 202 | 112 | 106 | 118 |
| 27 | 134 | 71 | 125 | 80 | 104 | 127 | 480 | 657 | 191 | 106 | 106 | 114 |
| 28 | 132 | 45 | 96 | 70 | 106 | 132 | 456 | 657 | 183 | 98 | 94 | 121 |
| 29 | 129 | 80 | 87 | 68 | --- | 125 | 475 | 645 | 175 | 94 | 94 | 269 |
| 30 | 132 | 100 | 71 | 74 | --- | 121 | 470 | 611 | 168 | 93 | 106 | 222 |
| 31 | 132 | --- | 65 | 78 | --- | 125 | --- | 578 | --- | 91 | 127 | --- |
| TOTAL | 4187 | 3617 | 3275 | 3114 | 2924 | 3522 | 10340 | 13788 | 12691 | 3804 | 2650 | 3340 |
| MEAN | 135 | 121 | 106 | 100 | 104 | 114 | 345 | 445 | 423 | 123 | 85.5 | 111 |
| MAX | 163 | 141 | 134 | 143 | 116 | 132 | 562 | 760 | 812 | 168 | 127 | 269 |
| MIN | 125 | 45 | 50 | 68 | 80 | 98 | 134 | 266 | 168 | 91 | 70 | 77 |
| AC-FT | 8300 | 7170 | 6500 | 6180 | 5800 | 6990 | 20510 | 27350 | 25170 | 7550 | 5260 | 6620 |
| CAL YR 1976 TOTAL | 165637 | | | MEAN 453 | MAX 2430 | MIN 45 | AC-FT 328500 | | | | | |
| WTR YR 1977 TOTAL | 67252 | | | MEAN 184 | MAX 812 | MIN 45 | AC-FT 133400 | | | | | |

13292000 IMNAHA RIVER AT IMNAHA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1965 to September 1968, May 1976 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 27.0°C July 23, 1977; minimum, 0.0°C on many days during winter periods each year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.0°C July 23; minimum, 0.0°C on many days during winter periods.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 16.0 | 11.5 | 9.5 | 8.0 | 0.5 | 0.0 | 0.5 | 0.0 | 0.5 | 0.0 | 5.5 | 3.0 |
| 2 | 15.0 | 12.5 | 9.5 | 8.0 | 0.5 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 5.5 | 3.0 |
| 3 | 13.0 | 10.5 | 10.5 | 9.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 5.0 | 2.0 |
| 4 | 12.5 | 8.5 | 9.0 | 7.0 | 1.0 | 0.5 | 0.0 | 0.0 | 1.0 | 0.0 | 8.0 | 3.0 |
| 5 | 11.0 | 8.0 | 8.5 | 5.5 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 7.5 | 2.0 |
| 6 | 13.5 | 9.0 | 9.0 | 7.0 | 1.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.5 | 8.0 | 4.0 |
| 7 | 12.5 | 8.0 | 8.0 | 6.0 | 2.0 | 1.0 | 0.0 | 0.0 | 1.5 | 0.0 | 6.5 | 5.5 |
| 8 | 13.5 | 8.0 | 9.0 | 6.5 | 4.0 | 1.5 | 0.0 | 0.0 | 2.0 | 0.5 | 7.5 | 4.5 |
| 9 | 14.0 | 9.0 | 9.0 | 7.0 | 3.0 | 2.0 | 0.0 | 0.0 | 3.5 | 1.5 | 7.5 | 5.0 |
| 10 | 14.5 | 10.0 | 8.0 | 5.5 | 2.0 | 0.0 | 0.0 | 0.0 | 5.5 | 1.5 | 5.0 | 2.5 |
| 11 | 15.0 | 11.5 | 7.5 | 6.0 | 3.0 | 1.5 | 0.0 | 0.0 | 5.0 | 1.5 | 5.5 | 0.0 |
| 12 | 13.0 | 9.0 | 6.5 | 3.5 | 1.0 | 0.0 | 0.0 | 0.0 | 5.5 | 3.0 | 7.0 | 2.5 |
| 13 | 13.0 | 7.5 | 3.5 | 1.5 | 2.0 | 0.5 | 0.0 | 0.0 | 6.5 | 3.0 | 5.0 | 2.0 |
| 14 | 12.0 | 8.0 | 3.5 | 0.5 | 1.0 | 0.0 | 1.0 | 0.0 | 5.0 | 1.0 | 4.5 | 1.0 |
| 15 | 11.0 | 6.5 | 6.0 | 2.0 | 0.5 | 0.0 | 1.5 | 0.5 | 5.0 | 0.5 | 6.0 | 1.0 |
| 16 | 10.0 | 6.0 | 9.5 | 6.0 | 3.5 | 0.5 | 1.5 | 1.0 | 7.0 | 3.0 | 5.5 | 1.0 |
| 17 | 9.0 | 5.5 | 10.0 | 6.5 | 3.0 | 1.5 | 1.5 | 1.0 | 6.5 | 2.5 | 5.0 | 2.5 |
| 18 | 7.5 | 3.5 | 9.5 | 7.5 | 1.0 | 0.0 | 2.0 | 1.0 | 7.5 | 3.5 | 5.5 | 2.0 |
| 19 | 6.5 | 2.5 | 7.5 | 4.5 | 0.0 | 0.0 | 2.0 | 1.0 | 6.5 | 2.0 | 6.5 | 3.0 |
| 20 | 7.0 | 3.0 | 4.5 | 2.5 | 0.0 | 0.0 | 1.5 | 0.5 | 7.5 | 2.5 | 6.0 | 1.5 |
| 21 | 7.0 | 3.0 | 4.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.5 | 5.5 | 3.5 | 7.5 | 3.5 |
| 22 | 8.0 | 5.0 | 6.0 | 4.0 | 0.0 | 0.0 | 1.5 | 0.5 | 5.5 | 2.5 | 11.0 | 3.5 |
| 23 | 8.0 | 4.5 | 4.0 | 2.0 | 1.0 | 0.0 | 2.0 | 0.5 | 6.0 | 2.5 | 9.5 | 5.5 |
| 24 | 8.0 | 5.0 | 6.0 | 2.0 | 1.0 | 0.0 | 1.5 | 0.0 | 5.0 | 1.5 | 8.0 | 3.5 |
| 25 | 7.5 | 7.0 | 5.5 | 3.0 | 2.5 | 0.5 | 1.5 | 0.0 | 4.0 | 2.0 | 9.5 | 3.0 |
| 26 | 9.5 | 7.0 | 3.0 | 0.5 | 4.0 | 2.0 | 0.5 | 0.0 | 4.0 | 1.5 | 6.5 | 4.0 |
| 27 | 7.5 | 4.5 | 0.0 | 0.0 | 3.0 | 0.5 | 0.0 | 0.0 | 5.5 | 2.5 | 7.5 | 2.5 |
| 28 | 8.5 | 4.5 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 7.0 | 4.5 | 5.5 | 2.0 |
| 29 | 8.0 | 5.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 5.5 | 2.0 |
| 30 | 8.0 | 5.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 9.5 | 2.5 |
| 31 | 8.5 | 6.0 | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 6.0 | 4.0 |
| MONTH | 16.0 | 2.5 | 10.5 | 0.0 | 4.0 | 0.0 | 2.0 | 0.0 | 7.5 | 0.0 | 11.0 | 0.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 5.5 | 4.0 | 14.0 | 10.5 | 16.0 | 12.5 | 20.5 | 16.5 | 26.0 | 16.5 | --- | --- |
| 2 | 8.5 | 3.0 | 14.5 | 11.0 | 14.0 | 9.5 | 23.0 | 15.5 | 23.0 | 17.5 | --- | --- |
| 3 | 8.5 | 5.5 | 11.0 | 9.5 | 15.0 | 11.0 | 21.5 | 14.5 | 24.5 | 18.0 | --- | --- |
| 4 | 14.0 | 4.5 | 10.5 | 6.5 | 18.0 | 12.0 | 17.0 | 13.5 | 26.0 | 17.0 | --- | --- |
| 5 | 15.0 | 6.5 | 10.0 | 5.0 | 18.5 | 13.0 | 17.0 | 10.5 | 24.5 | 17.5 | --- | --- |
| 6 | 14.5 | 7.0 | 10.0 | 6.5 | 19.0 | 14.5 | 20.5 | 12.5 | 24.0 | 17.0 | --- | --- |
| 7 | 14.0 | 7.5 | 15.0 | 8.0 | 18.0 | 15.5 | 22.0 | 12.5 | 24.5 | 16.0 | --- | --- |
| 8 | 11.0 | 7.5 | 12.0 | 9.0 | 17.0 | 14.0 | 22.0 | 14.0 | 24.5 | 17.0 | 20.5 | --- |
| 9 | 8.5 | 6.0 | 13.5 | 8.5 | 15.5 | 11.0 | 22.5 | 16.0 | 25.0 | 16.5 | 19.0 | 11.5 |
| 10 | 10.5 | 4.5 | 14.5 | 10.5 | 16.5 | 13.0 | 23.0 | 14.5 | 25.5 | 17.0 | 19.0 | 11.5 |
| 11 | 9.0 | 5.5 | 13.0 | 9.0 | 17.5 | 13.5 | 23.5 | 15.0 | 26.0 | 17.0 | 19.5 | 12.5 |
| 12 | 12.0 | 5.5 | 13.5 | 9.5 | 16.5 | 13.5 | 23.5 | 17.0 | 26.0 | 16.5 | 20.0 | 12.5 |
| 13 | 9.0 | 6.5 | 17.0 | 11.0 | 17.0 | 14.0 | 23.5 | 14.0 | 26.0 | 16.5 | 19.5 | 11.5 |
| 14 | 10.5 | 5.0 | 14.0 | 10.0 | 17.0 | 13.5 | 24.0 | 14.5 | 23.5 | 17.5 | 18.5 | 13.0 |
| 15 | 12.0 | 5.0 | 12.0 | 7.5 | 19.0 | 12.5 | 25.5 | 16.0 | 26.0 | 17.5 | 17.5 | 14.5 |
| 16 | 9.5 | 5.5 | 10.0 | 7.5 | 19.5 | 13.0 | 26.0 | 17.0 | 26.0 | 17.5 | 14.5 | 12.5 |
| 17 | 10.5 | 4.0 | 8.0 | 7.0 | 21.0 | 13.5 | 21.5 | 18.0 | 24.5 | 17.0 | 15.5 | 11.0 |
| 18 | 10.0 | 4.0 | 10.0 | 7.0 | 22.0 | 15.0 | 18.5 | 17.5 | 26.0 | 17.0 | 17.0 | 12.5 |
| 19 | 10.5 | 5.0 | 12.0 | 8.5 | 21.5 | 16.5 | 24.5 | 16.0 | 24.5 | 17.0 | 15.0 | 13.0 |
| 20 | 11.5 | 5.0 | 13.5 | 7.5 | 20.5 | 15.5 | 26.0 | 17.0 | 26.0 | 18.0 | 14.5 | 12.5 |
| 21 | 10.5 | 7.0 | 12.5 | 9.5 | 22.0 | 15.0 | 24.0 | 18.0 | 22.0 | 18.0 | 13.0 | 10.5 |
| 22 | 13.5 | 7.0 | 13.5 | 9.0 | 22.5 | 15.5 | 24.0 | 18.0 | 24.0 | 17.5 | 13.0 | 9.5 |
| 23 | 15.0 | 8.0 | 13.0 | 11.0 | 23.5 | 15.5 | 27.0 | 18.0 | 22.0 | 15.0 | 11.0 | 8.0 |
| 24 | 14.5 | 8.5 | 10.5 | 9.0 | 23.5 | 16.0 | 21.5 | 19.0 | 18.5 | 16.5 | 12.5 | 9.5 |
| 25 | 13.0 | 9.0 | 12.0 | 7.0 | 24.5 | 16.5 | 25.0 | 17.0 | 19.5 | 15.0 | 12.5 | 9.5 |
| 26 | 13.5 | 9.0 | 10.5 | 8.5 | 23.5 | 16.0 | 25.0 | 18.5 | 16.5 | 15.0 | 14.5 | 9.0 |
| 27 | 13.5 | 7.5 | 10.5 | 6.5 | 23.0 | 16.5 | 26.5 | 17.5 | 17.5 | 13.5 | 14.0 | 10.0 |
| 28 | 14.0 | 8.5 | 10.5 | 7.0 | 23.5 | 15.0 | 26.0 | 18.5 | --- | 13.0 | 13.5 | 11.5 |
| 29 | 13.0 | 9.5 | 12.5 | 6.5 | 23.0 | 16.5 | 24.0 | 16.0 | --- | --- | 13.5 | 10.5 |
| 30 | 14.5 | 9.5 | 12.5 | 7.5 | 23.5 | 14.5 | 24.5 | 15.0 | --- | --- | 10.5 | 9.0 |
| 31 | --- | --- | 16.5 | 10.0 | --- | --- | 25.5 | 16.0 | --- | --- | --- | --- |
| MONTH | 15.0 | 3.0 | 17.0 | 5.0 | 24.5 | 9.5 | 27.0 | 10.5 | 26.0 | 13.0 | 20.5 | 8.0 |

GRANDE RONDE RIVER BASIN

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13318050 MEADOW CREEK BELOW SMITH CREEK, NEAR STARKEY, OR

LOCATION.--Lat 45°17'29", long 118°36'12", in SE¼NW¼ sec.19, T.3 S., R.34 E., Union County, Hydrologic Unit 17060104, in Starkey Experimental Forest, on left bank 10 ft (3 m) downstream from bridge, 25 ft (8 m) downstream from Smith Creek, 8.5 mi (13.7 km) northwest of starkey, and 24 mi (39 km) west of LaGrande.

DRAINAGE AREA.--33.2 mi² (86.0 km²).

PERIOD OF RECORD.--July to September 1977.

GAGE.--Water-stage recorder. Altitude of gage is 4,060 ft (1,237 m), from topographic map.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July to September, 7.2 ft³/s (0.20 m³/s) Sept. 28, gage height, 2.04 ft (0.622 m), no peak above base of 170 ft³/s (4.81 m³/s); minimum, 0.42 ft³/s (0.012 m³/s) Aug. 18, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|------|
| 1 | | | | | | | | | | 2.4 | .82 | 2.7 |
| 2 | | | | | | | | | | 2.4 | .82 | 2.4 |
| 3 | | | | | | | | | | 2.2 | .82 | 2.2 |
| 4 | | | | | | | | | | 2.9 | .74 | 2.0 |
| 5 | | | | | | | | | | 2.9 | .66 | 1.9 |
| 6 | | | | | | | | | | 2.5 | .66 | 1.6 |
| 7 | | | | | | | | | | 2.4 | .66 | 1.5 |
| 8 | | | | | | | | | | 2.0 | .66 | 1.3 |
| 9 | | | | | | | | | | 2.0 | .66 | 1.3 |
| 10 | | | | | | | | | | 1.9 | .60 | 1.3 |
| 11 | | | | | | | | | | 1.7 | .60 | 1.3 |
| 12 | | | | | | | | | | 1.7 | .53 | 1.2 |
| 13 | | | | | | | | | | 1.7 | .53 | 1.2 |
| 14 | | | | | | | | | | 1.6 | .53 | 1.2 |
| 15 | | | | | | | | | | 1.5 | .60 | 1.2 |
| 16 | | | | | | | | | | 1.3 | .60 | 1.2 |
| 17 | | | | | | | | | | 1.3 | .53 | 1.2 |
| 18 | | | | | | | | | | 1.6 | .47 | 1.3 |
| 19 | | | | | | | | | | 1.7 | .47 | 1.3 |
| 20 | | | | | | | | | | 1.5 | .53 | 1.9 |
| 21 | | | | | | | | | | 1.2 | .53 | 2.5 |
| 22 | | | | | | | | | | 1.2 | .53 | 2.7 |
| 23 | | | | | | | | | | 1.1 | .47 | 2.4 |
| 24 | | | | | | | | | | 1.1 | 1.3 | 4.0 |
| 25 | | | | | | | | | | 1.2 | 1.9 | 3.3 |
| 26 | | | | | | | | | | 1.5 | 3.8 | 2.9 |
| 27 | | | | | | | | | | 1.1 | 2.5 | 2.5 |
| 28 | | | | | | | | | | 1.0 | 2.0 | 4.2 |
| 29 | | | | | | | | | | .91 | 2.7 | 5.9 |
| 30 | | | | | | | | | | .91 | 5.0 | 5.0 |
| 31 | | | | | | | | | | .82 | 4.0 | --- |
| TOTAL | | | | | | | | | | 51.24 | 37.22 | 66.6 |
| MEAN | | | | | | | | | | 1.65 | 1.20 | 2.22 |
| MAX | | | | | | | | | | 2.9 | 5.0 | 5.9 |
| MIN | | | | | | | | | | .82 | .47 | 1.2 |
| CFSM | | | | | | | | | | .05 | .04 | .07 |
| IN. | | | | | | | | | | .06 | .04 | .07 |
| AC-FT | | | | | | | | | | 102 | 74 | 132 |

GRANDE RONDE RIVER BASIN

13318060 MEADOW CREEK ABOVE BEAR CREEK, NEAR STARKEY, OR

LOCATION.--Lat 45°16'04", long 118°31'25", in NE¼SW¼ sec.26, T.3 S., R.34 E., Union County, Hydrologic Unit 17060104, in Starkey Experimental Forest, on left bank 0.2 mi (0.3 km) upstream from bridge, 1.5 mi (2.4 km) upstream from Bear Creek, 4.5 mi (7.2 km) northwest of Starkey, and 21 mi (34 km) west of LaGrande.

DRAINAGE AREA.--48.2 mi² (124.8 km²).

PERIOD OF RECORD.--July to September 1977.

GAGE.--Water-stage recorder. Altitude of gage is 3,710 ft (1,131 m), from topographic map.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July to September, 8.7 ft³/s (0.25 m³/s) Sept. 29, gage height, 1.89 ft (0.576 m), no peak above base of 230 ft³/s (6.51 m³/s); minimum daily, 0.52 ft³/s (0.015 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|-------|
| 1 | | | | | | | | | | 3.4 | 1.6 | 4.4 |
| 2 | | | | | | | | | | 3.4 | 1.5 | 3.9 |
| 3 | | | | | | | | | | 3.2 | 1.6 | 3.4 |
| 4 | | | | | | | | | | 3.9 | 1.3 | 3.2 |
| 5 | | | | | | | | | | 4.2 | 1.1 | 3.0 |
| 6 | | | | | | | | | | 4.2 | 1.2 | 2.6 |
| 7 | | | | | | | | | | 3.9 | 1.1 | 2.4 |
| 8 | | | | | | | | | | 3.4 | .97 | 2.4 |
| 9 | | | | | | | | | | 3.4 | .97 | 2.4 |
| 10 | | | | | | | | | | 3.2 | .86 | 2.4 |
| 11 | | | | | | | | | | 3.0 | .86 | 2.3 |
| 12 | | | | | | | | | | 3.0 | .67 | 2.3 |
| 13 | | | | | | | | | | 2.8 | .67 | 2.3 |
| 14 | | | | | | | | | | 2.8 | .57 | 2.3 |
| 15 | | | | | | | | | | 2.6 | .76 | 2.1 |
| 16 | | | | | | | | | | 2.4 | .67 | 2.1 |
| 17 | | | | | | | | | | 2.4 | .56 | 2.3 |
| 18 | | | | | | | | | | 3.2 | .52 | 2.3 |
| 19 | | | | | | | | | | 3.4 | .54 | 2.4 |
| 20 | | | | | | | | | | 3.0 | .54 | 2.8 |
| 21 | | | | | | | | | | 2.8 | .54 | 4.2 |
| 22 | | | | | | | | | | 2.6 | .54 | 4.2 |
| 23 | | | | | | | | | | 2.3 | .54 | 3.6 |
| 24 | | | | | | | | | | 2.3 | 1.9 | 5.1 |
| 25 | | | | | | | | | | 2.4 | 3.2 | 4.7 |
| 26 | | | | | | | | | | 2.8 | 5.1 | 4.2 |
| 27 | | | | | | | | | | 2.4 | 4.2 | 3.9 |
| 28 | | | | | | | | | | 2.1 | 3.4 | 5.7 |
| 29 | | | | | | | | | | 2.1 | 4.2 | 8.2 |
| 30 | | | | | | | | | | 2.1 | 6.9 | 6.9 |
| 31 | | | | | | | | | | 1.9 | 6.1 | --- |
| TOTAL | | | | | | | | | | 90.6 | 55.18 | 104.0 |
| MEAN | | | | | | | | | | 2.92 | 1.78 | 3.47 |
| MAX | | | | | | | | | | 4.2 | 6.9 | 8.2 |
| MIN | | | | | | | | | | 1.9 | .52 | 2.1 |
| CFSM | | | | | | | | | | .06 | .04 | .07 |
| IN. | | | | | | | | | | .07 | .04 | .08 |
| AC-FT | | | | | | | | | | 180 | 109 | 206 |

GRANDE RONDE RIVER BASIN

99

13318800 GRANDE RONDE RIVER AT HILGARD, OR

LOCATION:--Lat-45°20'21", long 118°14'35", in NE¼NE¼ sec.1, T.3 S., R.36 E., Union County, Hydrologic Unit 17060104, on left bank 8.8 mi (14.2 km) northwest of La Grande, 1.6 mi (2.6 km) upstream from Fivepoint Creek, and at mile 171.3 (275.6 km).

DRAINAGE AREA.--555 mi² (1,437 km²).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,993.62 ft (912.455 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are fair. Slight regulation by city of La Grande reservoir on Beaver Creek, capacity, about 900 acre-ft (1.11 hm³). Diversions for irrigation above station. Since 1909, city of La Grande has diverted about 3 ft³/s (0.08 m³/s) from Beaver Creek above station for domestic water supply.

AVERAGE DISCHARGE.--11 years, 292 ft³/s (8.269 m³/s), 211,600 acre-ft/yr (261 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,740 ft³/s (134 m³/s) Mar. 13, 1972, gage height, 7.18 ft (2.188 m); maximum gage height, 12.25 ft (3.734 m) Jan. 15, 1974 (ice jam); minimum discharge, 9.6 ft³/s (0.27 m³/s) Aug. 17, 18, 23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 30, 1965, reached a stage of about 9 ft (2.74 m), from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,560 ft³/s (44.2 m³/s) Apr. 7, gage height, 4.89 ft (1.490 m), no peak above base of 1,700 ft³/s (48.1 m³/s); minimum, 15 ft³/s (0.42 m³/s) Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|--------------|-------|-------|-------|------|------|------|
| 1 | 35 | 46 | 34 | 31 | 31 | 52 | 164 | 400 | 348 | 61 | 26 | 42 |
| 2 | 40 | 53 | 36 | 33 | 29 | 49 | 161 | 416 | 334 | 61 | 25 | 34 |
| 3 | 62 | 53 | 35 | 30 | 31 | 48 | 178 | 411 | 295 | 57 | 24 | 30 |
| 4 | 49 | 48 | 40 | 28 | 32 | 46 | 315 | 405 | 285 | 61 | 22 | 27 |
| 5 | 44 | 45 | 39 | 25 | 28 | 46 | 457 | 368 | 280 | 71 | 22 | 26 |
| 6 | 42 | 44 | 40 | 23 | 32 | 50 | 654 | 334 | 271 | 66 | 22 | 24 |
| 7 | 40 | 43 | 42 | 21 | 37 | 67 | 1030 | 315 | 285 | 57 | 26 | 23 |
| 8 | 39 | 42 | 44 | 22 | 42 | 88 | 1290 | 310 | 334 | 52 | 24 | 22 |
| 9 | 38 | 40 | 40 | 24 | 47 | 95 | 1050 | 339 | 261 | 49 | 21 | 21 |
| 10 | 37 | 40 | 37 | 22 | 52 | 82 | 798 | 353 | 219 | 49 | 19 | 21 |
| 11 | 38 | 40 | 34 | 26 | 60 | 71 | 693 | 373 | 196 | 46 | 19 | 20 |
| 12 | 38 | 39 | 32 | 31 | 68 | 74 | 654 | 384 | 199 | 44 | 18 | 21 |
| 13 | 37 | 36 | 33 | 30 | 78 | 62 | 693 | 416 | 207 | 43 | 18 | 20 |
| 14 | 36 | 31 | 29 | 28 | 62 | 62 | 623 | 400 | 227 | 40 | 17 | 20 |
| 15 | 35 | 48 | 26 | 27 | 64 | 56 | 546 | 373 | 223 | 38 | 19 | 20 |
| 16 | 36 | 56 | 31 | 30 | 66 | 59 | 587 | 363 | 178 | 37 | 22 | 21 |
| 17 | 36 | 61 | 30 | 34 | 62 | 57 | 532 | 358 | 157 | 36 | 19 | 23 |
| 18 | 34 | 53 | 28 | 31 | 59 | 56 | 457 | 368 | 142 | 37 | 18 | 23 |
| 19 | 33 | 50 | 27 | 29 | 56 | 62 | 411 | 348 | 130 | 45 | 16 | 23 |
| 20 | 34 | 45 | 26 | 28 | 54 | 64 | 379 | 348 | 136 | 42 | 16 | 26 |
| 21 | 36 | 44 | 27 | 30 | 52 | 64 | 389 | 334 | 119 | 36 | 16 | 35 |
| 22 | 37 | 46 | 28 | 28 | 49 | 73 | 411 | 324 | 109 | 34 | 16 | 38 |
| 23 | 36 | 42 | 30 | 27 | 48 | 111 | 494 | 363 | 102 | 35 | 15 | 35 |
| 24 | 36 | 36 | 27 | 26 | 46 | 97 | 594 | 363 | 93 | 36 | 17 | 42 |
| 25 | 40 | 48 | 31 | 24 | 45 | 99 | 646 | 329 | 86 | 35 | 25 | 46 |
| 26 | 50 | 35 | 37 | 23 | 45 | 106 | 638 | 343 | 78 | 40 | 35 | 40 |
| 27 | 46 | 16 | 35 | 23 | 44 | 124 | 539 | 400 | 74 | 42 | 42 | 37 |
| 28 | 43 | 30 | 32 | 21 | 50 | 109 | 481 | 384 | 69 | 33 | 35 | 38 |
| 29 | 42 | 32 | 30 | 20 | --- | 104 | 445 | 368 | 66 | 30 | 33 | 57 |
| 30 | 42 | 33 | 29 | 23 | --- | 90 | 411 | 353 | 62 | 28 | 39 | 57 |
| 31 | 43 | --- | 30 | 26 | --- | 111 | --- | 339 | --- | 26 | 59 | --- |
| TOTAL | 1234 | 1275 | 1019 | 824 | 1369 | 2334 | 16720 | 11282 | 5565 | 1367 | 745 | 912 |
| MEAN | 39.8 | 42.5 | 32.9 | 26.6 | 48.9 | 75.3 | 557 | 364 | 186 | 44.1 | 24.0 | 30.4 |
| MAX | 62 | 61 | 44 | 34 | 78 | 124 | 1290 | 416 | 348 | 71 | 59 | 57 |
| MIN | 33 | 16 | 26 | 20 | 28 | 46 | 161 | 310 | 62 | 26 | 15 | 20 |
| AC-FT | 2450 | 2530 | 2020 | 1630 | 2720 | 4630 | 33160 | 22380 | 11040 | 2710 | 1480 | 1810 |
| CAL YR 1976 | TOTAL | 126790 | MEAN 346 | MAX 2990 | MIN 16 | AC-FT 251500 | | | | | | |
| WTR YR 1977 | TOTAL | 44646 | MEAN 122 | MAX 1290 | MIN 15 | AC-FT 88560 | | | | | | |

GRANDE RONDE RIVER BASIN

13319000 GRANDE RONDE RIVER AT LA GRANDE, OR

LOCATION.--Lat 45°20'47", long 118°07'26", in NW¼SE¼ sec.36, T.2 S., R.37 E., Union County, Hydrologic Unit 17060104, on right bank 1.8 mi (2.9 km) northwest of La Grande, 5.7 mi (9.2 km) downstream from Fivepoint Creek, and at mile 164.0 (263.9 km).

DRAINAGE AREA.--678 mi² (1,756 km²).

PERIOD OF RECORD.--October 1903 to September 1915, February 1918 to September 1923, October 1925 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "at Hilgard" 1903-15.

REVISED RECORDS.--WSP 768: 1933. WSP 1397: 1904-11, 1913, 1915, 1919-20, 1922-23, 1926, 1929-31, 1936-37, 1939, 1942.
WSP 1737: Drainage area. WRD Oreg. 1974: 1973(M).

GAGE.--Water-stage recorder. Datum of gage is 2,826.25 ft (861.441 m) above mean sea level. Nov. 6, 1903, to Sept. 30, 1915, nonrecording gage at site 5.5 mi (8.8 km) upstream at various datums. Feb. 16, 1918, to June 28, 1923, and Oct. 1, 1925, to Nov. 23, 1931, nonrecording gage at site 0.7 mi (1.1 km) downstream at various datums. Nov. 24, 1931, to Oct. 8, 1965, water-stage recorder at site 0.3 mi (0.5 km) upstream at datum 4.61 ft (1.405 m) higher.

REMARKS.--Records good except those for winter periods, which are fair. Since 1915, slight regulation by city of La Grande reservoir on Beaver Creek, capacity, about 900 acre-ft (1.11 hm³). Diversions for irrigation above station. Since 1909, city of La Grande has diverted about 3 ft³/s (0.08 m³/s) from Beaver Creek above station for domestic water supply.

AVERAGE DISCHARGE.--69 years, 380 ft³/s (10.76 m³/s), 275,300 acre-ft/yr (339 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s (399 m³/s) Jan. 30, 1965, gage height, 11.44 ft (3.487 m), site and datum then in use, from rating curve extended above 7,200 ft³/s (204 m³/s); minimum, 3.9 ft³/s (0.11 m³/s) Aug. 26, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,060 ft³/s (58.3 m³/s) Apr. 8, gage height, 5.69 ft (1.734 m), no peak above base of 2,100 ft³/s (59.5 m³/s); minimum, 13 ft³/s (0.37 m³/s) Nov. 27, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|------|----------|----------|--------|--------------|-------|-------|-------|------|------|------|
| 1 | 38 | 50 | 42 | 40 | 33 | 71 | 211 | 451 | 400 | 74 | 28 | 54 |
| 2 | 44 | 57 | 44 | 42 | 31 | 60 | 225 | 463 | 389 | 74 | 26 | 44 |
| 3 | 65 | 59 | 43 | 38 | 33 | 54 | 228 | 463 | 346 | 71 | 27 | 39 |
| 4 | 57 | 54 | 49 | 34 | 35 | 50 | 411 | 459 | 326 | 74 | 26 | 36 |
| 5 | 50 | 50 | 43 | 31 | 32 | 48 | 636 | 415 | 319 | 86 | 23 | 34 |
| 6 | 47 | 47 | 46 | 28 | 37 | 59 | 909 | 381 | 297 | 83 | 24 | 31 |
| 7 | 44 | 46 | 49 | 25 | 41 | 81 | 1340 | 349 | 306 | 74 | 30 | 29 |
| 8 | 43 | 42 | 52 | 27 | 46 | 105 | 1670 | 339 | 356 | 65 | 28 | 28 |
| 9 | 40 | 43 | 47 | 30 | 51 | 116 | 1330 | 374 | 288 | 59 | 25 | 27 |
| 10 | 39 | 44 | 43 | 27 | 58 | 100 | 1010 | 389 | 244 | 56 | 22 | 27 |
| 11 | 39 | 44 | 39 | 33 | 66 | 83 | 888 | 427 | 219 | 53 | 21 | 26 |
| 12 | 39 | 44 | 37 | 41 | 74 | 94 | 828 | 431 | 219 | 48 | 20 | 25 |
| 13 | 39 | 42 | 38 | 38 | 82 | 72 | 877 | 467 | 225 | 47 | 19 | 25 |
| 14 | 38 | 34 | 35 | 35 | 70 | 72 | 780 | 443 | 247 | 43 | 19 | 23 |
| 15 | 36 | 47 | 33 | 32 | 72 | 65 | 672 | 411 | 244 | 40 | 20 | 23 |
| 16 | 36 | 62 | 41 | 39 | 75 | 67 | 714 | 408 | 200 | 36 | 27 | 24 |
| 17 | 36 | 67 | 38 | 44 | 72 | 67 | 641 | 404 | 175 | 35 | 22 | 27 |
| 18 | 35 | 60 | 36 | 40 | 70 | 65 | 555 | 415 | 154 | 36 | 19 | 28 |
| 19 | 34 | 57 | 34 | 37 | 68 | 78 | 484 | 400 | 144 | 44 | 18 | 28 |
| 20 | 35 | 53 | 32 | 35 | 65 | 80 | 447 | 393 | 148 | 44 | 18 | 29 |
| 21 | 38 | 50 | 35 | 39 | 62 | 80 | 447 | 381 | 135 | 35 | 18 | 42 |
| 22 | 39 | 51 | 37 | 36 | 61 | 87 | 472 | 371 | 124 | 33 | 18 | 46 |
| 23 | 39 | 48 | 40 | 33 | 59 | 144 | 569 | 415 | 114 | 33 | 18 | 44 |
| 24 | 38 | 42 | 33 | 31 | 58 | 135 | 682 | 427 | 105 | 34 | 19 | 50 |
| 25 | 42 | 51 | 40 | 28 | 58 | 127 | 753 | 378 | 100 | 33 | 26 | 60 |
| 26 | 54 | 42 | 49 | 26 | 57 | 139 | 736 | 393 | 92 | 35 | 43 | 50 |
| 27 | 53 | 17 | 45 | 26 | 57 | 168 | 612 | 480 | 89 | 46 | 50 | 47 |
| 28 | 48 | 38 | 41 | 24 | 72 | 142 | 546 | 459 | 84 | 36 | 44 | 48 |
| 29 | 46 | 39 | 38 | 22 | --- | 131 | 506 | 443 | 80 | 33 | 42 | 71 |
| 30 | 46 | 41 | 35 | 25 | --- | 116 | 467 | 415 | 78 | 30 | 46 | 80 |
| 31 | 46 | --- | 37 | 29 | --- | 146 | --- | 400 | --- | 30 | 72 | --- |
| TOTAL | 1323 | 1421 | 1251 | 1015 | 1595 | 2902 | 20646 | 12844 | 6247 | 1520 | 858 | 1145 |
| MEAN | 42.7 | 47.4 | 40.4 | 32.7 | 57.0 | 93.6 | 688 | 414 | 208 | 49.0 | 27.7 | 38.2 |
| MAX | 65 | 67 | 52 | 44 | 82 | 168 | 1670 | 480 | 400 | 86 | 72 | 80 |
| MIN | 34 | 17 | 32 | 22 | 31 | 48 | 211 | 339 | 78 | 30 | 18 | 23 |
| AC-FT | 2620 | 2820 | 2480 | 2010 | 3160 | 5760 | 40950 | 25480 | 12390 | 3010 | 1700 | 2270 |
| CAL YR 1976 TOTAL | 169903 | | MEAN 464 | MAX 4440 | MIN 17 | AC-FT 337000 | | | | | | |
| WTR YR 1977 TOTAL | 52767 | | MEAN 145 | MAX 1670 | MIN 17 | AC-FT 104700 | | | | | | |

GRANDE RONDE RIVER BASIN

101

13320000 CATHERINE CREEK NEAR UNION, OR

LOCATION.—Lat. 45°09'20", long 117°46'26", in NW¼SE¼ sec. 2, T.5 S., R.40 E., Union County, Hydrologic Unit 17060104, on right bank 3.0 mi (4.8 km) downstream from Little Catherine Creek, 5.5 mi (8.8 km) southeast of Union, and at mile 25.4 (40.9 km).

DRAINAGE AREA.—105 mi² (272 km²).

PERIOD OF RECORD.—May 1906 to May 1907 (gage heights only), August 1911 to December 1912, March to September 1915, February 1918 to September 1919, October 1925 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 1397: 1912-13, 1919, 1926, 1928-33, 1937, 1939, 1940(M), 1941-43, 1950.

GAGE.—Water-stage recorder. Datum of gage is 3,081.76 ft (939.320 m) above mean sea level (Oregon State Highway Department bench mark). Prior to Nov. 28, 1938, nonrecording gage at several sites within 1.8 mi (2.9 km) of present site at various datums. Nov. 28, 1938, to May 16, 1939, water-stage recorder at site 400 ft (122 m) downstream at datum 4.29 ft (1.308 m) lower.

REMARKS.—Records good except those for winter periods, which are fair. No regulation. Several small diversions for irrigation above station. Since 1937, diversion to Big Creek in Powder River basin provides a small part of the water used for irrigation in that basin.

AVERAGE DISCHARGE.—54 years (water years 1912, 1919, 1926-77), 118 ft³/s (3.342 m³/s), 85,490 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,740 ft³/s (49.3 m³/s) May 27, 1948, gage height, 4.57 ft (1.393 m); minimum, 6.5 ft³/s (0.18 m³/s) Feb. 4, 1955, result of freezeup; minimum daily, 8 ft³/s (0.23 m³/s) Nov. 7, 1925.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 475 ft³/s (13.5 m³/s) June 8, gage height, 2.56 ft (0.780 m), no peak above base of 500 ft³/s (14.2 m³/s); minimum, 8.8 ft³/s (0.25 m³/s) Jan. 26, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|---------|--------|-------------|------|------|------|------|------|------|
| 1 | 26 | 32 | 25 | 25 | 26 | 25 | 32 | 157 | 159 | 46 | 22 | 28 |
| 2 | 36 | 37 | 29 | 24 | 26 | 25 | 31 | 147 | 155 | 47 | 22 | 25 |
| 3 | 31 | 33 | 28 | 22 | 28 | 25 | 33 | 137 | 145 | 45 | 22 | 23 |
| 4 | 29 | 30 | 32 | 22 | 28 | 24 | 39 | 121 | 159 | 46 | 21 | 21 |
| 5 | 28 | 29 | 27 | 17 | 27 | 25 | 55 | 111 | 179 | 47 | 21 | 21 |
| 6 | 28 | 28 | 29 | 14 | 27 | 25 | 83 | 102 | 188 | 44 | 21 | 20 |
| 7 | 27 | 27 | 31 | 23 | 26 | 26 | 131 | 96 | 200 | 41 | 22 | 19 |
| 8 | 26 | 26 | 29 | 22 | 28 | 28 | 167 | 94 | 263 | 39 | 21 | 18 |
| 9 | 26 | 26 | 29 | 19 | 28 | 28 | 145 | 96 | 171 | 37 | 20 | 18 |
| 10 | 26 | 26 | 25 | 16 | 29 | 26 | 127 | 120 | 147 | 37 | 19 | 18 |
| 11 | 26 | 26 | 24 | 21 | 27 | 25 | 121 | 111 | 141 | 36 | 19 | 18 |
| 12 | 25 | 26 | 24 | 25 | 28 | 26 | 125 | 107 | 131 | 35 | 18 | 18 |
| 13 | 25 | 25 | 25 | 24 | 26 | 27 | 129 | 111 | 123 | 35 | 18 | 18 |
| 14 | 25 | 25 | 22 | 23 | 26 | 27 | 112 | 111 | 114 | 34 | 18 | 17 |
| 15 | 25 | 29 | 23 | 20 | 25 | 25 | 111 | 103 | 105 | 32 | 18 | 18 |
| 16 | 25 | 34 | 26 | 25 | 25 | 25 | 116 | 102 | 98 | 31 | 17 | 21 |
| 17 | 25 | 31 | 23 | 27 | 25 | 25 | 111 | 98 | 87 | 31 | 17 | 21 |
| 18 | 25 | 30 | 22 | 27 | 25 | 26 | 103 | 105 | 83 | 31 | 17 | 21 |
| 19 | 25 | 28 | 20 | 25 | 25 | 26 | 94 | 102 | 80 | 31 | 17 | 21 |
| 20 | 26 | 25 | 18 | 22 | 26 | 26 | 93 | 100 | 75 | 30 | 17 | 30 |
| 21 | 25 | 25 | 20 | 24 | 29 | 27 | 93 | 100 | 71 | 29 | 16 | 26 |
| 22 | 26 | 25 | 22 | 26 | 27 | 29 | 103 | 100 | 66 | 28 | 17 | 24 |
| 23 | 25 | 25 | 23 | 25 | 25 | 33 | 139 | 147 | 63 | 27 | 16 | 22 |
| 24 | 26 | 25 | 20 | 25 | 25 | 31 | 171 | 147 | 59 | 29 | 22 | 25 |
| 25 | 30 | 25 | 23 | 23 | 24 | 31 | 188 | 135 | 57 | 31 | 27 | 26 |
| 26 | 31 | 25 | 25 | 22 | 24 | 32 | 183 | 152 | 54 | 30 | 44 | 25 |
| 27 | 29 | 18 | 28 | 23 | 25 | 32 | 164 | 152 | 53 | 27 | 31 | 23 |
| 28 | 29 | 24 | 27 | 24 | 26 | 31 | 159 | 155 | 51 | 25 | 25 | 30 |
| 29 | 29 | 26 | 26 | 19 | --- | 32 | 162 | 147 | 49 | 25 | 31 | 48 |
| 30 | 29 | 26 | 25 | 21 | --- | 31 | 162 | 143 | 48 | 24 | 48 | 35 |
| 31 | 29 | --- | 24 | 24 | --- | 31 | --- | 143 | --- | 23 | 37 | --- |
| TOTAL | 843 | 817 | 774 | 699 | 736 | 855 | 3482 | 3752 | 3374 | 1053 | 701 | 698 |
| MEAN | 27.2 | 27.2 | 25.0 | 22.5 | 26.3 | 27.6 | 116 | 121 | 112 | 34.0 | 22.6 | 23.3 |
| MAX | 36 | 37 | 32 | 27 | 29 | 33 | 188 | 157 | 263 | 47 | 48 | 48 |
| MIN | 25 | 18 | 18 | 14 | 24 | 24 | 31 | 94 | 48 | 23 | 16 | 17 |
| AC-FT | 1670 | 1620 | 1540 | 1390 | 1460 | 1700 | 6910 | 7440 | 6690 | 2090 | 1390 | 1380 |
| CAL YR 1976 | TOTAL | 43396 | MEAN 119 | MAX 757 | MIN 18 | AC-FT 86080 | | | | | | |
| WTR YR 1977 | TOTAL | 17784 | MEAN 48.7 | MAX 263 | MIN 14 | AC-FT 35270 | | | | | | |

GRANDE RONDE RIVER BASIN

13323500 GRANDE RONDE RIVER NEAR ELGIN, OR

LOCATION.--Lat 45°30'45", long 117°55'35", in NW¼ sec.3, T.1 S., R.39 E., Union County, Hydrologic Unit 17060104, on right bank 700 ft (213 m) upstream from abandoned highway bridge, 1.5 mi (2.4 km) downstream from Willow Creek, 3.6 mi (5.8 km) south of Elgin, and at mile 104.2 (167.7 km).

DRAINAGE AREA.--1,250 mi² (3,240 km²), approximately.

PERIOD OF RECORD.--August 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,660.31 ft (810.862 m) above mean sea level.

REMARKS.--Records good. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--22 years, 660 ft³/s (18.69 m³/s), 478,200 acre-ft/yr (590 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,480 ft³/s (184 m³/s) Feb. 2, 1965, gage height, 13.79 ft (4.203 m); no flow Aug. 20-24, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred in 1894 and 1917, based on Corps of Engineers flood profiles. Flood in May 1948 reached an elevation of 2,672.9 ft (814.70 m) on Corps of Engineers gage at bridge 700 ft (213 m) downstream, discharge, 5,690 ft³/s (161 m³/s), result of discharge measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,820 ft³/s (51.5 m³/s) Apr. 9, gage height, 6.58 ft (2.006 m); minimum, 2.6 ft³/s (0.074 m³/s) Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|------|------|------|-------|-------|-------|-------|--------|-------|--------|
| 1 | 67 | 100 | 70 | 75 | 75 | 127 | 277 | 569 | 724 | 15 | 8.8 | 21 |
| 2 | 68 | 106 | 79 | 74 | 76 | 132 | 346 | 544 | 710 | 13 | 8.8 | 30 |
| 3 | 76 | 113 | 82 | 76 | 78 | 137 | 355 | 560 | 672 | 13 | 8.0 | 30 |
| 4 | 90 | 120 | 86 | 78 | 80 | 145 | 387 | 589 | 628 | 24 | 8.0 | 28 |
| 5 | 96 | 118 | 82 | 78 | 83 | 145 | 582 | 576 | 598 | 28 | 9.2 | 26 |
| 6 | 96 | 112 | 89 | 74 | 83 | 135 | 806 | 541 | 560 | 26 | 10 | 24 |
| 7 | 112 | 109 | 101 | 72 | 85 | 139 | 1130 | 501 | 550 | 23 | 11 | 23 |
| 8 | 109 | 106 | 94 | 72 | 87 | 150 | 1600 | 480 | 611 | 18 | 11 | 17 |
| 9 | 115 | 103 | 100 | 75 | 89 | 172 | 1790 | 480 | 635 | 14 | 11 | 14 |
| 10 | 125 | 100 | 104 | 80 | 98 | 185 | 1580 | 492 | 573 | 11 | 8.8 | 11 |
| 11 | 120 | 98 | 78 | 86 | 146 | 176 | 1320 | 523 | 504 | 9.2 | 7.2 | 11 |
| 12 | 115 | 97 | 56 | 91 | 152 | 158 | 1170 | 557 | 445 | 9.2 | 6.3 | 11 |
| 13 | 101 | 98 | 61 | 98 | 152 | 162 | 1110 | 605 | 403 | 8.4 | 5.2 | 8.8 |
| 14 | 90 | 97 | 61 | 103 | 152 | 148 | 1100 | 635 | 384 | 7.6 | 4.5 | 6.9 |
| 15 | 78 | 94 | 83 | 107 | 143 | 145 | 1010 | 641 | 390 | 7.6 | 4.3 | 6.9 |
| 16 | 68 | 100 | 98 | 112 | 127 | 137 | 930 | 618 | 352 | 7.2 | 3.9 | 7.6 |
| 17 | 66 | 115 | 100 | 113 | 112 | 134 | 926 | 598 | 308 | 7.2 | 3.5 | 9.6 |
| 18 | 66 | 125 | 94 | 113 | 101 | 139 | 854 | 598 | 250 | 6.6 | 2.9 | 12 |
| 19 | 68 | 130 | 93 | 112 | 100 | 145 | 759 | 605 | 195 | 6.3 | 2.6 | 14 |
| 20 | 70 | 137 | 90 | 110 | 98 | 162 | 676 | 589 | 176 | 6.9 | 2.8 | 19 |
| 21 | 75 | 127 | 86 | 110 | 106 | 164 | 628 | 582 | 160 | 6.9 | 2.8 | 23 |
| 22 | 87 | 117 | 82 | 109 | 110 | 156 | 602 | 579 | 139 | 6.6 | 3.1 | 25 |
| 23 | 96 | 113 | 80 | 104 | 100 | 164 | 605 | 585 | 120 | 6.3 | 3.5 | 35 |
| 24 | 94 | 107 | 78 | 100 | 106 | 202 | 693 | 672 | 100 | 6.0 | 3.5 | 44 |
| 25 | 89 | 101 | 79 | 93 | 113 | 214 | 828 | 703 | 79 | 5.7 | 3.5 | 71 |
| 26 | 101 | 103 | 87 | 91 | 112 | 216 | 880 | 714 | 62 | 5.7 | 4.5 | 96 |
| 27 | 103 | 90 | 97 | 86 | 100 | 230 | 872 | 798 | 53 | 5.7 | 6.9 | 90 |
| 28 | 104 | 75 | 98 | 82 | 107 | 262 | 780 | 835 | 42 | 5.7 | 6.9 | 100 |
| 29 | 103 | 79 | 104 | 76 | --- | 250 | 676 | 839 | 25 | 6.6 | 8.0 | 103 |
| 30 | 101 | 70 | 97 | 75 | --- | 236 | 621 | 809 | 21 | 6.6 | 12 | 106 |
| 31 | 101 | --- | 82 | 75 | --- | 232 | --- | 763 | --- | 6.6 | 15 | --- |
| TOTAL | 2850 | 3160 | 2671 | 2800 | 2971 | 5299 | 25893 | 19180 | 10469 | 329.6 | 207.5 | 1023.8 |
| MEAN | 91.9 | 105 | 86.2 | 90.3 | 106 | 171 | 863 | 619 | 349 | 10.6 | 6.69 | 34.1 |
| MAX | 125 | 137 | 104 | 113 | 152 | 262 | 1790 | 839 | 724 | 28 | 15 | 106 |
| MIN | 66 | 70 | 56 | 72 | 75 | 127 | 277 | 480 | 21 | 5.7 | 2.6 | 6.9 |
| AC-FT | 5650 | 6270 | 5300 | 5550 | 5890 | 10510 | 51360 | 38040 | 20770 | 654 | 412 | 2030 |
| CAL YR 1976 | TOTAL | 293194.0 | MEAN | 801 | MAX | 4850 | MIN | 30 | AC-FT | 581600 | | |
| WTR YR 1977 | TOTAL | 76853.9 | MEAN | 211 | MAX | 1790 | MIN | 2.6 | AC-FT | 152400 | | |

13325000 EAST FORK WALLOWA RIVER NEAR JOSEPH, OR

LOCATION.--Lat 45°16'20", long 117°12'35", in NE¼ sec.29, T.3 S., R.45 E., Wallowa County, Hydrologic Unit 17060105, on left bank 0.2 mi (0.3 km) upstream from confluence with West Fork, 1.0 mi (1.6 km) upstream from Wallowa Lake, 5.5 mi (8.8 km) south of Joseph, and at mile 55.0 (88.5 km).

DRAINAGE AREA.--10.3 mi² (26.7 km²).

PERIOD OF RECORD.--July 1924 to current year. Prior to October 1952, records published separately as East Fork Wallowa River near Joseph and Wallowa Falls powerplant tailrace near Joseph.

REVISED RECORDS.--WSP 1247: 1931, 1937(M), 1948-49, records for river station; 1948, records for tailrace station. WSP 1737: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,517.69 ft (1,376.992 m) above mean sea level (Pacific Power & Light Co. bench mark). Prior to Apr. 8, 1950, nonrecording gage at same site and datum.

REMARKS.--Records good. All records presented herein include flow in Wallowa Falls powerplant tailrace of Pacific Power & Light Co. Most of low flow is diverted at dam 1.5 mi (2.4 km) upstream into a conduit 1.0 mi (1.6 km) above Wallowa Falls powerhouse and discharged into West Fork 0.4 mi (0.6 km) below powerhouse.

AVERAGE DISCHARGE.--53 years, 21.6 ft³/s (0.612 m³/s), 28.48 in/yr (723 mm/yr), 15,650 acre-ft/yr (19.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 450 ft³/s (12.7 m³/s) July 25, 1937 (no flow in powerplant tailrace), from rating curve extended above 80 ft³/s (2.27 m³/s); minimum daily, 6.2 ft³/s (0.18 m³/s) Feb. 21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 151 ft³/s (4.28 m³/s) June 7; minimum daily, 6.2 ft³/s (0.18 m³/s) Feb. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-----------|--------|---------|-----------|----------|-------------|------|------|-------|-------|
| 1 | 16 | 14 | 12 | 11 | 10 | 10 | 9.5 | 25 | 34 | 13 | 10 | 9.4 |
| 2 | 17 | 14 | 12 | 12 | 10 | 10 | 9.5 | 25 | 40 | 13 | 10 | 9.0 |
| 3 | 17 | 14 | 12 | 12 | 10 | 10 | 9.5 | 20 | 37 | 13 | 10 | 9.0 |
| 4 | 16 | 14 | 13 | 11 | 9.5 | 10 | 9.7 | 18 | 55 | 13 | 10 | 8.8 |
| 5 | 16 | 14 | 13 | 10 | 9.5 | 10 | 10 | 15 | 81 | 13 | 9.4 | 8.9 |
| 6 | 16 | 14 | 13 | 11 | 9.5 | 10 | 11 | 15 | 86 | 13 | 9.6 | 8.8 |
| 7 | 16 | 14 | 13 | 11 | 9.4 | 10 | 12 | 15 | 89 | 12 | 10 | 8.8 |
| 8 | 16 | 14 | 13 | 11 | 9.6 | 11 | 12 | 14 | 80 | 12 | 9.4 | 8.7 |
| 9 | 15 | 13 | 12 | 11 | 9.7 | 11 | 11 | 15 | 53 | 12 | 9.8 | 8.4 |
| 10 | 15 | 13 | 13 | 10 | 9.6 | 11 | 11 | 18 | 42 | 12 | 9.4 | 8.4 |
| 11 | 15 | 13 | 12 | 11 | 9.3 | 12 | 11 | 15 | 36 | 12 | 8.8 | 8.4 |
| 12 | 14 | 14 | 12 | 11 | 9.6 | 10 | 11 | 14 | 33 | 12 | 8.9 | 8.4 |
| 13 | 14 | 13 | 12 | 11 | 9.6 | 9.6 | 11 | 16 | 30 | 12 | 9.0 | 8.5 |
| 14 | 13 | 13 | 12 | 11 | 9.5 | 9.0 | 10 | 16 | 28 | 12 | 9.0 | 8.3 |
| 15 | 14 | 12 | 12 | 11 | 10 | 8.9 | 11 | 15 | 26 | 12 | 9.0 | 8.9 |
| 16 | 14 | 13 | 13 | 11 | 9.7 | 9.4 | 11 | 14 | 25 | 11 | 8.9 | 10 |
| 17 | 14 | 14 | 12 | 11 | 9.8 | 9.7 | 11 | 15 | 23 | 11 | 9.0 | 9.7 |
| 18 | 14 | 13 | 12 | 11 | 9.8 | 9.7 | 11 | 15 | 23 | 11 | 9.1 | 9.1 |
| 19 | 14 | 13 | 12 | 11 | 9.8 | 9.6 | 11 | 15 | 22 | 11 | 8.7 | 11 |
| 20 | 14 | 13 | 12 | 11 | 9.7 | 9.7 | 11 | 15 | 21 | 11 | 8.7 | 11 |
| 21 | 14 | 12 | 12 | 11 | 6.2 | 10 | 11 | 16 | 20 | 11 | 8.9 | 10 |
| 22 | 14 | 12 | 12 | 11 | 9.2 | 9.8 | 13 | 17 | 19 | 11 | 8.9 | 10 |
| 23 | 14 | 12 | 12 | 10 | 10 | 9.6 | 15 | 24 | 18 | 11 | 9.2 | 9.7 |
| 24 | 14 | 12 | 12 | 10 | 10 | 9.9 | 19 | 21 | 16 | 12 | 11 | 10 |
| 25 | 14 | 12 | 12 | 11 | 10 | 9.6 | 20 | 19 | 16 | 12 | 11 | 10 |
| 26 | 14 | 11 | 12 | 11 | 10 | 9.4 | 21 | 20 | 15 | 13 | 11 | 9.7 |
| 27 | 14 | 11 | 12 | 11 | 10 | 9.4 | 21 | 19 | 15 | 12 | 9.8 | 9.4 |
| 28 | 14 | 11 | 12 | 11 | 10 | 9.7 | 23 | 19 | 15 | 11 | 9.6 | 14 |
| 29 | 14 | 9.9 | 12 | 10 | --- | 9.9 | 25 | 18 | 13 | 11 | 10 | 14 |
| 30 | 14 | 11 | 12 | 10 | --- | 10 | 25 | 20 | 14 | 11 | 12 | 12 |
| 31 | 14 | --- | 12 | 10 | --- | 9.5 | --- | 28 | --- | 11 | 10 | --- |
| TOTAL | 454 | 382.9 | 379 | 336 | 269.0 | 307.4 | 407.2 | 551 | 1025 | 367 | 298.1 | 290.3 |
| MEAN | 14.6 | 12.8 | 12.2 | 10.8 | 9.61 | 9.92 | 13.6 | 17.8 | 34.2 | 11.8 | 9.62 | 9.68 |
| MAX | 17 | 14 | 13 | 12 | 10 | 12 | 25 | 28 | 89 | 13 | 12 | 14 |
| MIN | 13 | 9.9 | 12 | 10 | 6.2 | 8.9 | 9.5 | 14 | 13 | 11 | 8.7 | 8.3 |
| CFSM | 1.42 | 1.24 | 1.18 | 1.05 | .93 | .96 | 1.32 | 1.73 | 3.32 | 1.15 | .93 | .94 |
| IN. | 1.64 | 1.38 | 1.37 | 1.21 | .97 | 1.11 | 1.47 | 1.99 | 3.70 | 1.33 | 1.08 | 1.05 |
| AC-FT | 901 | 759 | 752 | 666 | 534 | 610 | 808 | 1090 | 2030 | 728 | 591 | 576 |
| CAL YR 1976 | TOTAL | 8017.5 | MEAN 21.9 | MAX 72 | MIN 7.1 | CFSM 2.13 | IN 28.96 | AC-FT 15900 | | | | |
| WTR YR 1977 | TOTAL | 5066.9 | MEAN 13.9 | MAX 89 | MIN 6.2 | CFSM 1.35 | IN 18.30 | AC-FT 10050 | | | | |

GRANDE RONDE RIVER BASIN

13326000 WALLOWA LAKE NEAR JOSEPH, OR

LOCATION.--Lat 45°20'10", long 117°13'15", in NW¼ sec.5, T.3 S., R.45 E., Wallowa County, Hydrologic Unit 17060105, at spillway near right end of Wallowa Lake dam on Wallowa River, 1.3 mi (2.1 km) southeast of Joseph, and at mile 50.2 (80.8 km).

DRAINAGE AREA.--50.8 mi² (131.6 km²).

PERIOD OF RECORD.--November 1903 to July 1906 (gage height only), January 1912 to March 1914, May to September 1915 (gage heights and change in contents only), October 1925 to June 1926, December 1926 to current year. Monthend contents only for some periods, published in WSP 1317. November 1903 to March 1905 published as Wallowa River at Joseph. Change in contents for January 1912 to March 1914 and May to September 1915 published with records for Wallowa River at Joseph.

REVISED RECORDS.--WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,355.66 ft (1,327.605 m) above mean sea level. Prior to Oct. 1, 1925, nonrecording gage at several sites within 0.5 mi (0.8 km) of present site at different datums. Oct. 1, 1925, to June 30, 1926, Dec. 1, 1926, to May 18, 1961, nonrecording gage near left end of dam at same datum.

REMARKS.--Reservoir is formed by concrete dam. Capacity, 42,750 acre-ft (52.7 hm³) between gage heights 0.0 (sill of outlet gates) and 26.8 ft (8.169 m), spillway crest. About 5,300 acre-ft (6.53 hm³) dead storage above outlet gates, because channel is about 3.4 ft (1.036 m) above outlet gates. Dead storage below outlet gates not known. Records are based on capacities above outlet gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 47,830 acre-ft (59.0 hm³) June 5-7, 1957, gage height, 29.85 ft (9.098 m); minimum observed, 4,790 acre-ft (5.91 hm³) Oct. 10, 1929, gage height, 3.10 ft (0.945 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 39,430 acre-ft (48.6 hm³) June 11, gage height, 24.80 ft (7.559 m); minimum, 10,690 acre-ft (13.2 hm³) Sept. 18-20, gage height, 6.90 ft (2.103 m).

MONTHEND GAGE HEIGHT AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Gage height (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|-----------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 18.59 | 29,250 | - |
| Oct. 31..... | 18.50 | 29,110 | -140 |
| Nov. 30..... | 18.56 | 29,210 | +100 |
| Dec. 31..... | 18.73 | 29,480 | +270 |
| CAL YR 1976..... | - | - | -2,130 |
| Jan. 31..... | 18.87 | 29,710 | +230 |
| Feb. 28..... | 19.31 | 30,430 | +720 |
| Mar. 31..... | 19.99 | 31,530 | +1,100 |
| Apr. 30..... | 22.17 | 35,100 | +3,570 |
| May 31..... | 21.90 | 34,660 | -440 |
| June 30..... | 21.06 | 33,280 | -1,380 |
| July 31..... | 13.30 | 20,770 | -12,510 |
| Aug. 31..... | 7.25 | 11,240 | -9,530 |
| Sept. 30..... | 7.63 | 11,840 | +600 |
| WTR YR 1977..... | - | - | -17,410 |

13327500 WALLOWA RIVER AT JOSEPH, OR

LOCATION.--Lat 45°20'15", long 117°13'35", in NW¼ sec.5, T.3 S., R.45 E., Wallowa County, Hydrologic Unit 17060105, on left bank 0.2 mi (0.3 km) downstream from Wallowa Lake dam, 1.1 mi (1.8 km) south of Joseph, and at mile 50.0 (80.4 km).

DRAINAGE AREA.--50.9 mi² (131.8 km²).

PERIOD OF RECORD.--November 1903 to August 1907, June 1908 to March 1914, May to September 1915, December 1926 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "near Joseph" 1911.

REVISED RECORDS.--WSP 1397: 1906. WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,326.86 ft (1,318.827 m) above mean sea level. Nov. 12, 1903, to Sept. 25, 1915, nonrecording gage at several sites at lake outlet or near present site at different datums.

REMARKS.--Records good. Monthly discharge adjusted for storage in Wallowa Lake (see station 13326000) and diversion from Wallowa Lake by Silver Lake ditch. Silver Lake ditch diverts at Wallowa Lake dam for irrigation northeast of Joseph. City of Joseph Diverts less than 1.0 ft³/s (0.028 m³/s) from Wallowa Lake for municipal use.

AVERAGE DISCHARGE.--50 years (water years 1928-77), 133 ft³/s (3.767 m³/s), 35.48 in/yr (901 mm/yr), 96,360 acre-ft/yr (119 hm³/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft³/s (43.9 m³/s) June 10, 1969, gage height, 5.15 ft (1.570 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 303 ft³/s (8.58 m³/s) June 26, gage height, 3.11 ft (0.948 m); minimum, 16 ft³/s (0.45 m³/s) Mar. 11 to Apr. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| 1 | 54 | 37 | 32 | 28 | 24 | 17 | 16 | 43 | 110 | 244 | 168 | 64 |
| 2 | 53 | 37 | 32 | 28 | 24 | 17 | 16 | 41 | 114 | 236 | 164 | 53 |
| 3 | 53 | 37 | 32 | 28 | 23 | 17 | 16 | 41 | 114 | 233 | 181 | 50 |
| 4 | 53 | 37 | 29 | 28 | 18 | 17 | 16 | 41 | 110 | 231 | 191 | 50 |
| 5 | 53 | 37 | 28 | 28 | 18 | 17 | 16 | 94 | 110 | 214 | 203 | 57 |
| 6 | 53 | 36 | 28 | 28 | 18 | 17 | 17 | 113 | 124 | 183 | 205 | 59 |
| 7 | 54 | 37 | 28 | 28 | 18 | 17 | 17 | 126 | 155 | 176 | 208 | 58 |
| 8 | 54 | 36 | 28 | 28 | 18 | 17 | 20 | 141 | 185 | 176 | 205 | 52 |
| 9 | 54 | 36 | 27 | 27 | 18 | 17 | 23 | 145 | 205 | 181 | 197 | 50 |
| 10 | 54 | 36 | 27 | 27 | 18 | 17 | 23 | 157 | 210 | 183 | 193 | 49 |
| 11 | 54 | 36 | 27 | 27 | 18 | 16 | 23 | 163 | 212 | 172 | 189 | 50 |
| 12 | 54 | 36 | 27 | 28 | 18 | 16 | 23 | 166 | 212 | 170 | 189 | 49 |
| 13 | 54 | 36 | 27 | 28 | 18 | 16 | 23 | 168 | 233 | 163 | 181 | 49 |
| 14 | 54 | 36 | 27 | 28 | 18 | 16 | 23 | 178 | 238 | 164 | 172 | 49 |
| 15 | 54 | 36 | 27 | 28 | 17 | 16 | 23 | 174 | 236 | 176 | 164 | 52 |
| 16 | 54 | 35 | 28 | 28 | 17 | 16 | 23 | 170 | 236 | 201 | 157 | 54 |
| 17 | 54 | 35 | 28 | 28 | 17 | 16 | 23 | 168 | 257 | 214 | 150 | 58 |
| 18 | 54 | 34 | 28 | 28 | 17 | 16 | 23 | 139 | 266 | 238 | 127 | 58 |
| 19 | 54 | 34 | 28 | 26 | 17 | 16 | 23 | 104 | 268 | 240 | 116 | 58 |
| 20 | 54 | 34 | 28 | 24 | 17 | 16 | 23 | 69 | 275 | 233 | 117 | 57 |
| 21 | 53 | 34 | 28 | 24 | 17 | 16 | 23 | 74 | 275 | 238 | 116 | 51 |
| 22 | 53 | 34 | 28 | 24 | 17 | 16 | 23 | 90 | 273 | 242 | 108 | 42 |
| 23 | 53 | 34 | 28 | 24 | 17 | 16 | 23 | 113 | 287 | 244 | 108 | 37 |
| 24 | 39 | 34 | 28 | 24 | 17 | 16 | 23 | 110 | 294 | 236 | 102 | 35 |
| 25 | 33 | 34 | 28 | 24 | 17 | 16 | 23 | 107 | 291 | 233 | 97 | 35 |
| 26 | 33 | 34 | 28 | 24 | 17 | 16 | 23 | 114 | 298 | 216 | 101 | 35 |
| 27 | 33 | 34 | 28 | 24 | 17 | 16 | 23 | 110 | 287 | 199 | 92 | 35 |
| 28 | 33 | 33 | 28 | 24 | 17 | 16 | 23 | 102 | 271 | 189 | 90 | 35 |
| 29 | 33 | 32 | 28 | 24 | --- | 16 | 23 | 90 | 255 | 187 | 86 | 33 |
| 30 | 33 | 32 | 28 | 24 | --- | 16 | 35 | 101 | 255 | 185 | 83 | 32 |
| 31 | 36 | --- | 28 | 24 | --- | 16 | --- | 105 | --- | 178 | 71 | --- |
| TOTAL | 1507 | 1053 | 874 | 815 | 507 | 506 | 652 | 3557 | 6656 | 6375 | 4531 | 1446 |
| MEAN | 48.6 | 35.1 | 28.2 | 26.3 | 18.1 | 16.3 | 21.7 | 115 | 222 | 206 | 146 | 48.2 |
| MAX | 54 | 37 | 32 | 28 | 24 | 17 | 35 | 178 | 298 | 244 | 208 | 64 |
| MIN | 33 | 32 | 27 | 24 | 17 | 16 | 16 | 41 | 110 | 163 | 71 | 32 |
| AC-FT | 2990 | 2090 | 1730 | 1620 | 1010 | 1000 | 1290 | 7060 | 13200 | 12640 | 8990 | 2870 |
| MEAN† | 51.7 | 41.8 | 35.8 | 33.0 | 33.5 | 36.6 | 83.7 | 119 | 241 | 50.7 | 34.1 | 64.7 |
| CFSM† | 1.02 | .82 | .70 | .65 | .66 | .72 | 1.64 | 2.34 | 4.73 | 1.00 | .67 | 1.27 |
| IN.† | 1.17 | .92 | .81 | .75 | .68 | .83 | 1.83 | 2.70 | 5.28 | 1.15 | .77 | 1.42 |
| AC-FT† | 3,180 | 2,490 | 2,200 | 2,030 | 1,860 | 2,250 | 4,980 | 7,310 | 14,340 | 3,120 | 2,100 | 3,850 |

CAL YR 1976 TOTAL 44340 MEAN 121 MAX 384 MIN 27 AC-FT 87950 MEAN† 132 CFSM† 2.59 IN.† 35.2 AC-FT† 96,400
WTR YR 1977 TOTAL 28479 MEAN 78.0 MAX 298 MIN 16 AC-FT 56490 MEAN† 68.8 CFSM† 1.35 IN.† 18.3 AC-FT† 49,700

† Adjusted for change in contents of Wallowa Lake and diversion by Silver Lake ditch.

GRANDE RONDE RIVER BASIN

13329500 HURRICANE CREEK NEAR JOSEPH, OR

LOCATION.--Lat 45°20'15", long 117°17'30", in NE¼ sec.3, T.3 S., R.44 E., Wallowa County, Hydrologic Unit 17060105, on left bank 350 ft (107 m) upstream from intake of Moonshine ditch, 3.5 mi (5.6 km) southwest of Joseph, and at mile 7.5 (12.1 km).

DRAINAGE AREA.--29.6 mi² (76.7 km²).

PERIOD OF RECORD.--April to September 1915, April 1924 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1915, 1925-28. WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,500 ft (1,370 m), by barometer. Apr. 27 to Sept. 3, 1915, nonrecording gage at site 250 ft (76 m) downstream at different datum. Apr. 23, 1924, to June 13, 1933, water-stage recorder at site 150 ft (46 m) downstream at different datum.

REMARKS.--Records poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--53 years, 74.1 ft³/s (2.099 m³/s), 34.00 in/yr (864 mm/yr), 53,690 acre-ft/yr (66.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) June 9, 1948, gage height, 3.55 ft (1.082 m); maximum gage height, 6.94 ft (2.115 m) June 4, 1977, backwater from debris; minimum discharge, 2.8 ft³/s (0.079 m³/s) Mar. 2, 1955, result of ice jam upstream; minimum daily, 6.0 ft³/s (0.17 m³/s) Jan. 6, Apr. 13, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 378 ft³/s (10.7 m³/s) June 4, no peak above base of 400 ft³/s (11.3 m³/s); maximum gage height, 6.94 ft (2.115 m) June 4, backwater from debris; minimum discharge, 12 ft³/s (0.34 m³/s), many days in February and March.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 31 | 23 | 18 | 16 | 13 | 12 | 13 | 145 | 158 | 50 | 33 | 33 |
| 2 | 35 | 25 | 19 | 16 | 13 | 12 | 13 | 136 | 232 | 49 | 33 | 31 |
| 3 | 34 | 24 | 19 | 16 | 13 | 12 | 13 | 87 | 190 | 49 | 33 | 29 |
| 4 | 33 | 23 | 19 | 16 | 13 | 12 | 14 | 68 | 223 | 49 | 33 | 29 |
| 5 | 32 | 23 | 19 | 16 | 13 | 12 | 15 | 57 | 136 | 48 | 32 | 28 |
| 6 | 31 | 22 | 19 | 16 | 13 | 12 | 17 | 49 | 210 | 46 | 32 | 27 |
| 7 | 31 | 23 | 20 | 16 | 13 | 12 | 24 | 45 | 241 | 44 | 31 | 27 |
| 8 | 30 | 22 | 19 | 16 | 12 | 12 | 30 | 42 | 232 | 44 | 31 | 27 |
| 9 | 29 | 21 | 19 | 16 | 12 | 12 | 27 | 43 | 142 | 44 | 31 | 27 |
| 10 | 29 | 21 | 18 | 16 | 12 | 12 | 26 | 54 | 109 | 44 | 31 | 27 |
| 11 | 29 | 22 | 18 | 16 | 12 | 12 | 27 | 48 | 100 | 42 | 31 | 27 |
| 12 | 29 | 21 | 18 | 16 | 12 | 12 | 30 | 46 | 104 | 42 | 31 | 26 |
| 13 | 29 | 20 | 18 | 16 | 13 | 12 | 34 | 62 | 104 | 41 | 31 | 26 |
| 14 | 28 | 20 | 18 | 16 | 13 | 12 | 30 | 79 | 102 | 40 | 30 | 25 |
| 15 | 27 | 21 | 18 | 16 | 13 | 12 | 31 | 58 | 107 | 40 | 30 | 25 |
| 16 | 26 | 24 | 17 | 16 | 13 | 12 | 34 | 51 | 109 | 39 | 29 | 27 |
| 17 | 26 | 24 | 17 | 16 | 13 | 12 | 35 | 48 | 102 | 39 | 29 | 27 |
| 18 | 25 | 23 | 16 | 15 | 13 | 12 | 34 | 46 | 95 | 39 | 29 | 26 |
| 19 | 24 | 21 | 14 | 15 | 13 | 12 | 34 | 43 | 91 | 38 | 29 | 27 |
| 20 | 24 | 20 | 13 | 15 | 13 | 12 | 34 | 43 | 83 | 38 | 29 | 31 |
| 21 | 24 | 20 | 14 | 15 | 13 | 12 | 36 | 48 | 79 | 37 | 29 | 30 |
| 22 | 24 | 19 | 15 | 15 | 13 | 13 | 44 | 55 | 75 | 37 | 28 | 29 |
| 23 | 24 | 19 | 16 | 15 | 12 | 13 | 68 | 85 | 67 | 38 | 28 | 28 |
| 24 | 23 | 19 | 16 | 14 | 12 | 13 | 107 | 81 | 61 | 39 | 32 | 28 |
| 25 | 24 | 19 | 16 | 14 | 12 | 13 | 133 | 67 | 58 | 38 | 31 | 29 |
| 26 | 23 | 17 | 17 | 14 | 12 | 13 | 133 | 67 | 57 | 38 | 31 | 27 |
| 27 | 23 | 15 | 17 | 14 | 12 | 13 | 120 | 62 | 53 | 35 | 30 | 27 |
| 28 | 23 | 15 | 16 | 14 | 12 | 13 | 125 | 59 | 51 | 35 | 30 | 49 |
| 29 | 23 | 16 | 16 | 14 | --- | 13 | 139 | 54 | 50 | 34 | 34 | 54 |
| 30 | 23 | 16 | 16 | 13 | --- | 13 | 139 | 49 | 50 | 34 | 43 | 36 |
| 31 | 23 | --- | 16 | 13 | --- | 13 | --- | 102 | --- | 33 | 36 | --- |
| TOTAL | 839 | 618 | 531 | 472 | 353 | 382 | 1559 | 1979 | 3471 | 1263 | 970 | 889 |
| MEAN | 27.1 | 20.6 | 17.1 | 15.2 | 12.6 | 12.3 | 52.0 | 63.8 | 116 | 40.7 | 31.3 | 29.6 |
| MAX | 35 | 25 | 20 | 16 | 13 | 13 | 139 | 145 | 241 | 50 | 43 | 54 |
| MIN | 23 | 15 | 13 | 13 | 12 | 12 | 13 | 42 | 50 | 33 | 28 | 25 |
| CFSM | .92 | .70 | .58 | .51 | .43 | .42 | 1.76 | 2.16 | 3.92 | 1.38 | 1.06 | 1.00 |
| IN. | 1.05 | .78 | .67 | .59 | .44 | .48 | 1.96 | 2.49 | 4.36 | 1.59 | 1.22 | 1.12 |
| AC-FT | 1660 | 1230 | 1050 | 936 | 700 | 758 | 3090 | 3930 | 6880 | 2510 | 1920 | 1760 |

CAL YR 1976 TOTAL 28316 MEAN 77.4 MAX 318 MIN 13 CFMS 2.62 IN 35.59 AC-FT 56160
WTR YR 1977 TOTAL 13326 MEAN 36.5 MAX 241 MIN 12 CFMS 1.23 IN 16.75 AC-FT 26430

NOTE.--No gage-height record Jan. 6 to Feb. 3.

13329900 WALLOWA RIVER AT WALLOWA, OR

LOCATION.--Lat 45°33'20", long 117°28'45", in SW¼ sec.20, T.1 N., R.43 E., Wallowa County, Hydrologic Unit 17060105, on right bank upstream side of bridge on county road 2.8 mi (4.5 km) east of Wallowa, and at mile 26.5 (42.6 km).

DRAINAGE AREA.--Indeterminate.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1976 to current year.

REMARKS.--Temperature recorder clock stopped Jan. 6 to Feb. 16, June 5 to July 27.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURES: Maximum, 21.5°C July 27, 1977; minimum recorded, 0.0°C Jan. 5, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 21.5°C July 27; minimum recorded, 0.0°C Jan. 5.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 14.0 | 10.0 | 10.0 | 8.5 | 4.5 | 2.0 | 3.0 | 1.5 | --- | --- | 6.5 | 4.0 |
| 2 | 13.5 | 11.0 | 10.0 | 9.0 | 4.0 | 2.0 | 3.5 | 2.5 | --- | --- | 6.0 | 4.0 |
| 3 | 11.0 | 9.0 | 10.0 | 8.5 | 5.0 | 2.0 | 3.0 | 2.5 | --- | --- | 6.0 | 4.5 |
| 4 | 11.0 | 7.0 | 9.5 | 5.5 | 5.5 | 4.0 | 3.0 | 1.5 | --- | --- | 8.0 | 4.0 |
| 5 | 11.0 | 8.0 | 9.0 | 6.5 | 4.0 | 2.0 | 1.5 | 0.0 | --- | --- | 8.0 | 3.5 |
| 6 | 13.5 | 10.0 | 8.5 | 6.5 | 4.5 | 2.5 | --- | --- | --- | --- | 8.0 | 4.5 |
| 7 | 12.0 | 8.0 | 9.0 | 6.5 | 6.5 | 4.5 | --- | --- | --- | --- | 7.5 | 6.0 |
| 8 | 12.5 | 8.0 | 9.5 | 7.5 | 5.0 | 4.0 | --- | --- | --- | --- | 7.0 | 4.0 |
| 9 | 13.0 | 8.5 | 9.5 | 7.5 | 5.0 | 4.0 | --- | --- | --- | --- | 7.5 | 4.5 |
| 10 | 12.5 | 9.0 | 9.0 | 6.5 | 4.0 | 2.0 | --- | --- | --- | --- | 6.5 | 3.0 |
| 11 | 12.5 | 9.5 | 8.5 | 6.0 | 4.5 | 3.0 | --- | --- | --- | --- | 6.5 | 2.5 |
| 12 | 11.5 | 8.0 | 7.0 | 5.0 | 3.5 | 1.5 | --- | --- | --- | --- | 6.0 | 4.0 |
| 13 | 12.0 | 7.5 | 6.5 | 4.0 | 3.5 | 2.0 | --- | --- | --- | --- | 6.0 | 2.5 |
| 14 | 11.5 | 7.5 | 5.0 | 3.0 | 3.0 | 1.0 | --- | --- | --- | --- | 7.0 | 2.5 |
| 15 | 10.5 | 6.5 | 7.0 | 4.5 | 3.5 | 1.0 | --- | --- | --- | --- | 7.0 | 3.0 |
| 16 | 10.5 | 6.5 | 9.5 | 7.0 | 4.0 | 2.0 | --- | --- | 7.5 | --- | 7.0 | 3.5 |
| 17 | 9.5 | 6.5 | 9.0 | 7.0 | 3.5 | 1.0 | --- | --- | 7.5 | 4.0 | 7.0 | 3.5 |
| 18 | 8.5 | 5.0 | 9.0 | 7.5 | 3.5 | 1.0 | --- | --- | 8.5 | 5.0 | 7.5 | 4.0 |
| 19 | 8.5 | 4.5 | 7.0 | 5.5 | 2.5 | 1.0 | --- | --- | 7.5 | 3.5 | 6.5 | 5.0 |
| 20 | 9.0 | 5.0 | 6.0 | 3.5 | 2.0 | 0.5 | --- | --- | 6.5 | 3.0 | 7.5 | 3.5 |
| 21 | 8.5 | 5.0 | 6.5 | 5.0 | 4.0 | 2.0 | --- | --- | 5.0 | 4.0 | 8.0 | 4.5 |
| 22 | 9.0 | 6.0 | 7.5 | 6.0 | 4.5 | 3.0 | --- | --- | 7.5 | 4.0 | 11.0 | 5.0 |
| 23 | 9.0 | 6.0 | 6.0 | 4.0 | 5.0 | 3.0 | --- | --- | 6.5 | 3.5 | 8.5 | 5.5 |
| 24 | 8.5 | 6.5 | 6.5 | 4.0 | 3.5 | 1.5 | --- | --- | 6.5 | 3.5 | 7.5 | 4.5 |
| 25 | 8.5 | 7.5 | 6.5 | 4.0 | 4.5 | 3.0 | --- | --- | 5.5 | 3.5 | 9.0 | 3.5 |
| 26 | 10.0 | 7.5 | 3.5 | 2.5 | 5.0 | 4.5 | --- | --- | 6.0 | 3.0 | 8.0 | 5.0 |
| 27 | 8.5 | 5.0 | 2.0 | 0.5 | 5.5 | 3.5 | --- | --- | 7.0 | 4.5 | 7.0 | 3.5 |
| 28 | 8.5 | 5.0 | 3.5 | 1.0 | 3.5 | 1.0 | --- | --- | 6.5 | 5.0 | 6.0 | 3.0 |
| 29 | 9.0 | 6.0 | 5.5 | 4.0 | 3.0 | 1.0 | --- | --- | --- | --- | 6.5 | 4.0 |
| 30 | 9.0 | 7.0 | 4.5 | 2.0 | 3.0 | 1.0 | --- | --- | --- | --- | 10.0 | 4.0 |
| 31 | 9.0 | 6.5 | --- | --- | 2.0 | 1.0 | --- | --- | --- | --- | 7.0 | 5.5 |
| MONTH | 14.0 | 4.5 | 10.0 | 0.5 | 6.5 | 0.5 | 3.5 | 0.0 | 8.5 | 3.0 | 11.0 | 2.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 8.0 | 4.5 | 14.5 | 9.5 | 16.0 | 10.0 | --- | --- | 21.5 | 13.0 | 16.0 | 9.5 |
| 2 | 7.5 | 3.5 | 15.0 | 10.5 | 15.0 | 7.0 | --- | --- | 18.0 | 13.5 | 16.0 | 11.5 |
| 3 | 10.0 | 6.0 | 12.0 | 8.0 | 15.5 | 10.0 | --- | --- | 21.0 | 13.5 | 17.0 | 13.0 |
| 4 | 13.0 | 5.0 | 12.0 | 7.0 | 18.5 | 11.5 | --- | --- | 21.0 | 13.5 | 17.5 | 13.0 |
| 5 | 14.0 | 6.5 | 12.0 | 6.5 | --- | --- | --- | --- | 21.5 | 13.5 | 19.0 | 14.5 |
| 6 | 14.5 | 7.0 | 11.0 | 7.5 | --- | --- | --- | --- | 21.0 | 13.5 | 18.0 | 13.0 |
| 7 | 14.5 | 7.0 | 17.0 | 8.5 | --- | --- | --- | --- | 20.5 | 13.0 | 17.0 | 12.5 |
| 8 | 13.0 | 7.5 | 15.0 | 8.0 | --- | --- | --- | --- | 20.5 | 13.5 | 16.5 | 11.5 |
| 9 | 11.5 | 6.0 | 14.5 | 9.0 | --- | --- | --- | --- | 21.0 | 13.0 | 16.0 | 10.0 |
| 10 | 12.0 | 5.0 | 13.5 | 10.0 | --- | --- | --- | --- | 20.5 | 13.5 | 16.5 | 10.5 |
| 11 | 12.5 | 6.5 | 14.5 | 7.5 | --- | --- | --- | --- | 21.5 | 13.5 | 16.5 | 11.0 |
| 12 | 13.5 | 5.5 | 14.0 | 9.0 | --- | --- | --- | --- | 21.0 | 13.0 | 16.5 | 10.5 |
| 13 | 11.0 | 7.0 | 17.5 | 9.5 | --- | --- | --- | --- | 21.0 | 13.5 | 16.5 | 10.5 |
| 14 | 12.0 | 4.5 | 13.0 | 9.0 | --- | --- | --- | --- | 18.5 | 14.0 | 15.5 | 11.5 |
| 15 | 12.0 | 6.0 | 12.0 | 7.0 | --- | --- | --- | --- | 20.5 | 14.0 | 15.5 | 11.5 |
| 16 | 11.0 | 7.0 | 9.5 | 7.5 | --- | --- | --- | --- | 21.0 | 13.5 | 13.0 | 11.5 |
| 17 | 12.0 | 4.5 | 10.0 | 7.5 | --- | --- | --- | --- | 20.5 | 13.5 | 14.0 | 11.0 |
| 18 | 10.5 | 5.0 | 10.5 | 8.0 | --- | --- | --- | --- | 20.5 | 14.0 | 14.5 | 11.5 |
| 19 | 11.5 | 5.5 | 15.0 | 8.5 | --- | --- | --- | --- | 20.0 | 14.0 | 13.5 | 11.5 |
| 20 | 12.5 | 5.5 | 14.5 | 8.5 | --- | --- | --- | --- | 21.5 | 14.5 | 13.5 | 11.5 |
| 21 | 12.0 | 7.5 | 16.0 | 10.5 | --- | --- | --- | --- | 19.0 | 15.0 | 12.0 | 10.5 |
| 22 | 15.0 | 7.5 | 16.5 | 9.0 | --- | --- | --- | --- | 19.0 | 14.5 | 13.5 | 9.5 |
| 23 | 16.5 | 8.5 | 12.5 | 10.5 | --- | --- | --- | --- | 19.0 | 12.0 | 10.5 | 8.5 |
| 24 | 17.0 | 8.0 | 14.0 | 9.5 | --- | --- | --- | --- | 16.0 | 14.0 | 13.0 | 10.0 |
| 25 | 15.0 | 8.5 | 14.5 | 8.0 | --- | --- | --- | --- | 16.5 | 13.0 | 12.0 | 10.0 |
| 26 | 15.5 | 8.0 | 11.5 | 8.0 | --- | --- | --- | --- | 15.0 | 13.0 | 13.5 | 9.5 |
| 27 | 15.5 | 7.0 | 13.0 | 7.5 | --- | --- | 21.5 | --- | 15.5 | 11.5 | 12.0 | 9.5 |
| 28 | 16.0 | 9.0 | 13.5 | 8.0 | --- | --- | 19.5 | 14.5 | 14.5 | 12.0 | 12.0 | 11.0 |
| 29 | 16.0 | 9.5 | 16.5 | 7.5 | --- | --- | 19.0 | 13.0 | 15.0 | 13.0 | 11.5 | 10.0 |
| 30 | 15.5 | 9.5 | 16.5 | 9.0 | --- | --- | 20.0 | 11.5 | 13.0 | 11.5 | 11.5 | 9.5 |
| 31 | --- | --- | 19.0 | 11.5 | --- | --- | 21.0 | 13.0 | 13.0 | 9.5 | --- | --- |
| MONTH | 17.0 | 3.5 | 19.0 | 6.5 | 18.5 | 7.0 | 21.5 | 11.5 | 21.5 | 9.5 | 19.0 | 8.5 |

GRANDE RONDE RIVER BASIN

13330000 LOSTINE RIVER NEAR LOSTINE, OR

LOCATION.--Lat 45°26'20", long 117°25'35", in NW¼ sec.34, T.1 S., R.43 E., Wallowa County, Hydrologic Unit 17060105, on left bank 3.5 mi (5.6 km) south of Lostine and at mile 10.0 (16.1 km).

DRAINAGE AREA.--70.9 mi² (183.6 km²).

PERIOD OF RECORD.--August 1912 to March 1914, April to September 1915, July 1925 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1913, 1942. WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,650 ft (1,110 m), by barometer. See WSP 1317 or 1737 for history of changes prior to Dec. 16, 1953.

REMARKS.--Records excellent except those for period January through March, which are poor. Minam Lake Reservoir, capacity, 440 acre-ft (0.54 hm³), has stored and diverted flow from Minam River since 1917 for irrigation in Lostine River basin. Diversions for irrigation above station.

AVERAGE DISCHARGE.--53 years (water years 1913, 1926-77), 195 ft³/s (5.522 m³/s), 141,300 acre-ft per/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,550 ft³/s (72.2 m³/s) June 16, 1974, gage height, 7.55 ft (2.301 m); minimum, 7.5 ft³/s (0.21 m³/s) Mar. 2, 1966, result of freezeup; minimum daily, 10 ft³/s (0.28 m³/s) Nov. 28-30, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,100 ft³/s (31.2 m³/s) and maximum discharge, 1,230 ft³/s (34.8 m³/s) June 5, gage height, 5.09 ft (1.551 m); minimum, 14 ft³/s (0.40 m³/s) Nov. 27, but may have been less during period of no gage-height record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|-------|------|------|------|------|------|------|-------|-------|------|------|------|
| 1 | 43 | 57 | 25 | 22 | 21 | 19 | 21 | 441 | 499 | 102 | 36 | 73 |
| 2 | 49 | 64 | 25 | 23 | 21 | 18 | 22 | 439 | 531 | 99 | 35 | 62 |
| 3 | 53 | 63 | 26 | 23 | 20 | 17 | 21 | 317 | 454 | 89 | 50 | 54 |
| 4 | 49 | 48 | 26 | 22 | 20 | 18 | 24 | 236 | 658 | 88 | 49 | 50 |
| 5 | 47 | 42 | 25 | 17 | 19 | 17 | 29 | 195 | 892 | 84 | 48 | 48 |
| 6 | 46 | 40 | 23 | 16 | 19 | 20 | 37 | 172 | 959 | 76 | 48 | 46 |
| 7 | 44 | 39 | 27 | 17 | 20 | 22 | 52 | 156 | 1000 | 70 | 49 | 43 |
| 8 | 43 | 37 | 29 | 18 | 21 | 22 | 91 | 144 | 983 | 68 | 46 | 40 |
| 9 | 41 | 37 | 30 | 19 | 22 | 23 | 75 | 146 | 662 | 65 | 44 | 38 |
| 10 | 40 | 36 | 28 | 22 | 23 | 22 | 63 | 179 | 508 | 64 | 42 | 36 |
| 11 | 39 | 36 | 28 | 22 | 23 | 23 | 71 | 164 | 426 | 61 | 40 | 36 |
| 12 | 39 | 36 | 26 | 23 | 22 | 20 | 79 | 152 | 413 | 60 | 38 | 34 |
| 13 | 38 | 32 | 24 | 23 | 20 | 22 | 93 | 188 | 400 | 59 | 36 | 33 |
| 14 | 36 | 32 | 21 | 23 | 18 | 21 | 83 | 238 | 374 | 55 | 35 | 31 |
| 15 | 36 | 34 | 20 | 24 | 17 | 26 | 88 | 186 | 350 | 53 | 34 | 32 |
| 16 | 36 | 49 | 22 | 24 | 18 | 24 | 108 | 167 | 340 | 51 | 32 | 37 |
| 17 | 36 | 51 | 20 | 23 | 18 | 21 | 106 | 149 | 317 | 51 | 30 | 39 |
| 18 | 34 | 47 | 19 | 23 | 19 | 20 | 109 | 148 | 300 | 54 | 28 | 36 |
| 19 | 34 | 43 | 18 | 23 | 18 | 19 | 109 | 137 | 284 | 54 | 26 | 38 |
| 20 | 35 | 37 | 17 | 23 | 19 | 22 | 111 | 138 | 257 | 49 | 26 | 68 |
| 21 | 35 | 38 | 19 | 22 | 19 | 24 | 121 | 149 | 238 | 47 | 25 | 65 |
| 22 | 35 | 38 | 23 | 22 | 18 | 24 | 137 | 171 | 223 | 47 | 25 | 60 |
| 23 | 33 | 35 | 23 | 20 | 17 | 22 | 208 | 247 | 202 | 47 | 24 | 54 |
| 24 | 33 | 35 | 20 | 21 | 17 | 21 | 317 | 238 | 183 | 48 | 32 | 58 |
| 25 | 36 | 36 | 23 | 21 | 17 | 22 | 405 | 202 | 167 | 53 | 40 | 60 |
| 26 | 35 | 26 | 26 | 20 | 17 | 21 | 410 | 208 | 156 | 50 | 49 | 59 |
| 27 | 53 | 16 | 26 | 20 | 18 | 20 | 371 | 198 | 141 | 46 | 47 | 58 |
| 28 | 59 | 17 | 20 | 19 | 19 | 22 | 374 | 186 | 127 | 43 | 41 | 135 |
| 29 | 58 | 27 | 22 | 18 | --- | 20 | 403 | 172 | 120 | 41 | 67 | 246 |
| 30 | 55 | 26 | 21 | 19 | --- | 25 | 416 | 172 | 109 | 39 | 107 | 169 |
| 31 | 53 | --- | 18 | 20 | --- | 23 | --- | 263 | --- | 37 | 93 | --- |
| TOTAL | 1303 | 1154 | 720 | 652 | 540 | 660 | 4554 | 6298 | 12273 | 1850 | 1322 | 1838 |
| MEAN | 42.0 | 38.5 | 23.2 | 21.0 | 19.3 | 21.3 | 152 | 203 | 409 | 59.7 | 42.6 | 61.3 |
| MAX | 59 | 64 | 30 | 24 | 23 | 26 | 416 | 441 | 1000 | 102 | 107 | 246 |
| MIN | 33 | 16 | 17 | 16 | 17 | 17 | 21 | 137 | 109 | 37 | 24 | 31 |
| AC-FT | 2580 | 2290 | 1430 | 1290 | 1070 | 1310 | 9030 | 12490 | 24340 | 3670 | 2620 | 3650 |
| CAL YR 1976 TOTAL | 73711 | | | | | | | | | | | |
| MEAN 201 | | | | | | | | | | | | |
| MAX 1150 | | | | | | | | | | | | |
| MIN 16 | | | | | | | | | | | | |
| AC-FT 146200 | | | | | | | | | | | | |
| WTR YR 1977 TOTAL | 33164 | | | | | | | | | | | |
| MEAN 90.9 | | | | | | | | | | | | |
| MAX 1000 | | | | | | | | | | | | |
| MIN 16 | | | | | | | | | | | | |
| AC-FT 65780 | | | | | | | | | | | | |

NOTE.--No gage-height record Jan. 1 to Mar. 3.

13330200 LOSTINE RIVER AT LOSTINE, OR

LOCATION.—Lat 45°29'47", long 117°26'20", in NE¼ sec. 9, T.1 S., R.43 E., Wallowa County, Hydrologic Unit 17060105, on right bank at upstream side of bridge on Oregon State Highway 82, 0.5 mi (0.8 km) northeast of Lostine, and at mile 31.3 (50.4 km).

DRAINAGE AREA.—Indeterminate.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURES: May 1976 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—

WATER TEMPERATURES: Maximum, 21.0°C July 20, 23, 1977; minimum, 0.0°C many days during winter periods.

EXTREMES FOR CURRENT YEAR.—

WATER TEMPERATURES: Maximum, 21.0°C July 20, 23; minimum, 0.0°C many days during winter periods.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 14.0 | 9.5 | 8.0 | 6.5 | 1.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 5.5 | 1.5 |
| 2 | 13.0 | 10.0 | 8.5 | 7.0 | 1.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.0 | 5.0 | 2.0 |
| 3 | 10.5 | 8.0 | 7.5 | 6.5 | 1.0 | 0.0 | 0.5 | 0.5 | 1.0 | 0.0 | 5.0 | 2.0 |
| 4 | 10.5 | 6.0 | 7.5 | 4.5 | 1.5 | 0.5 | 1.0 | 0.0 | 0.5 | 0.0 | 7.5 | 1.5 |
| 5 | 10.0 | 6.5 | 7.5 | 4.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 7.5 | 1.0 |
| 6 | 12.5 | 8.5 | 7.0 | 4.0 | 1.0 | 0.0 | 0.0 | 0.0 | 3.0 | 1.0 | 6.5 | 2.5 |
| 7 | 11.5 | 6.5 | 7.0 | 4.0 | 2.5 | 1.0 | 0.0 | 0.0 | 2.5 | 0.0 | 6.0 | 4.0 |
| 8 | 11.5 | 7.0 | 8.0 | 5.0 | 2.5 | 1.0 | 0.0 | 0.0 | 2.0 | 0.5 | 5.5 | 1.5 |
| 9 | 12.5 | 7.5 | 8.0 | 5.5 | 2.5 | 0.5 | 0.0 | 0.0 | 3.5 | 1.5 | 7.0 | 2.0 |
| 10 | 12.0 | 8.0 | 7.5 | 4.0 | 1.5 | 0.0 | 0.0 | 0.0 | 4.0 | 1.5 | 5.0 | 0.5 |
| 11 | 12.0 | 8.5 | 7.0 | 3.5 | 1.5 | 0.0 | 0.0 | 0.0 | 4.5 | 2.0 | 5.0 | 0.0 |
| 12 | 11.0 | 7.0 | 5.5 | 2.5 | 0.5 | 0.0 | 0.0 | 0.0 | 4.5 | 3.0 | 4.5 | 1.5 |
| 13 | 11.0 | 6.5 | 3.5 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 | 5.0 | 2.5 | 4.5 | 0.0 |
| 14 | 10.5 | 6.5 | 2.0 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 5.0 | 1.0 | 5.5 | 0.0 |
| 15 | 9.5 | 6.0 | 4.5 | 1.0 | 0.5 | 0.0 | 0.0 | 0.0 | 4.5 | 1.0 | 5.0 | 0.0 |
| 16 | 9.0 | 5.5 | 6.5 | 4.5 | 1.0 | 0.0 | 2.0 | 0.0 | 5.0 | 1.5 | 6.0 | 1.0 |
| 17 | 8.5 | 5.0 | 7.0 | 4.5 | 0.5 | 0.0 | 3.0 | 2.0 | 5.0 | 1.5 | 7.0 | 1.5 |
| 18 | 7.5 | 3.5 | 7.0 | 4.5 | 0.5 | 0.0 | 3.0 | 2.0 | 6.5 | 2.5 | 7.0 | 1.5 |
| 19 | 7.5 | 3.5 | 5.0 | 2.5 | 0.0 | 0.0 | 3.0 | 1.5 | 5.5 | 1.0 | 5.5 | 2.5 |
| 20 | 7.5 | 3.5 | 4.0 | 1.0 | 0.0 | 0.0 | 2.0 | 0.5 | 5.0 | 1.0 | 7.5 | 0.5 |
| 21 | 7.0 | 3.5 | 4.0 | 2.0 | 0.5 | 0.0 | 2.0 | 0.5 | 3.0 | 1.5 | 7.5 | 2.0 |
| 22 | 8.0 | 4.0 | 5.5 | 3.0 | 1.0 | 0.5 | 2.5 | 1.0 | 5.5 | 1.0 | 11.0 | 3.0 |
| 23 | 7.5 | 4.0 | 4.0 | 1.0 | 1.5 | 0.5 | 2.5 | 0.0 | 5.5 | 1.0 | 6.5 | 3.5 |
| 24 | 7.0 | 4.0 | 4.0 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 | 5.5 | 1.0 | 6.5 | 2.5 |
| 25 | 6.5 | 5.5 | 4.5 | 0.5 | 2.0 | 0.5 | 1.0 | 0.0 | 3.5 | 1.0 | 8.5 | 2.5 |
| 26 | 7.5 | 5.0 | 1.0 | 0.0 | 2.5 | 2.0 | 1.0 | 0.0 | 4.5 | 0.5 | 7.5 | 4.0 |
| 27 | 6.5 | 3.0 | 0.0 | 0.0 | 3.0 | 1.0 | 0.0 | 0.0 | 5.5 | 2.0 | 6.0 | 2.5 |
| 28 | 6.0 | 2.5 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 6.0 | 2.5 | 5.0 | 1.0 |
| 29 | 6.5 | 3.5 | 1.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | --- | --- | 5.0 | 2.5 |
| 30 | 8.0 | 4.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 9.0 | 2.5 |
| 31 | 7.0 | 4.5 | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 6.5 | 3.5 |
| MONTH | 14.0 | 2.5 | 8.5 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 6.5 | 0.0 | 11.0 | 0.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-----|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.0 | 2.5 | --- | --- | 12.0 | 7.0 | 17.0 | 12.5 | 20.0 | 13.0 | 15.5 | 8.5 |
| 2 | 7.0 | 2.0 | --- | --- | 11.0 | 5.0 | 17.5 | 11.0 | 16.5 | 13.0 | 15.0 | 10.5 |
| 3 | 9.0 | 5.0 | --- | --- | 11.0 | 6.5 | 18.0 | 11.0 | 19.5 | 13.0 | 16.0 | 12.0 |
| 4 | --- | 5.0 | --- | --- | 12.5 | 7.0 | 13.5 | 11.0 | 19.5 | 13.5 | 17.5 | 12.5 |
| 5 | --- | --- | --- | --- | 13.5 | 7.0 | 15.0 | 8.0 | 19.5 | 13.5 | 18.5 | 13.5 |
| 6 | --- | --- | --- | --- | 12.0 | 7.0 | 17.0 | 9.0 | 18.5 | 13.5 | 17.5 | 12.5 |
| 7 | --- | --- | --- | --- | 11.0 | 7.5 | 18.5 | 9.5 | 19.5 | 12.5 | 16.5 | 11.5 |
| 8 | --- | --- | --- | --- | 12.0 | 7.5 | 19.0 | 11.0 | 19.5 | 13.0 | 15.5 | 10.5 |
| 9 | --- | --- | --- | --- | 12.0 | 6.0 | 18.0 | 12.5 | 19.5 | 12.5 | 15.0 | 9.0 |
| 10 | --- | --- | --- | --- | 12.5 | 7.5 | 18.0 | 10.5 | 20.0 | 13.0 | 15.5 | 9.5 |
| 11 | --- | --- | --- | --- | 11.5 | 8.0 | 18.5 | 11.0 | 20.0 | 13.5 | 15.5 | 10.0 |
| 12 | --- | --- | 11.0 | --- | 12.5 | 8.5 | 18.0 | 12.5 | 20.0 | 13.0 | 15.5 | 10.0 |
| 13 | --- | --- | 14.5 | 7.5 | 12.0 | 9.0 | 18.0 | 10.5 | 19.5 | 13.0 | 15.5 | 10.0 |
| 14 | --- | --- | 9.0 | 6.5 | 11.0 | 8.5 | 19.0 | 11.5 | 17.5 | 13.5 | 15.0 | 10.5 |
| 15 | --- | --- | 8.0 | 4.5 | 12.5 | 7.5 | 20.0 | 12.5 | 19.5 | 13.5 | 14.0 | 11.0 |
| 16 | --- | --- | 7.0 | 4.0 | 14.5 | 8.0 | 20.0 | 13.0 | 20.0 | 13.5 | 12.5 | 10.5 |
| 17 | --- | --- | 7.5 | 5.0 | 15.5 | 8.5 | 17.0 | 13.0 | 19.5 | 13.0 | 13.0 | 9.5 |
| 18 | --- | --- | 8.0 | 5.5 | 16.0 | 9.5 | 15.5 | 13.5 | 20.0 | 13.5 | 13.0 | 10.0 |
| 19 | --- | --- | 10.5 | 5.5 | 15.0 | 11.0 | 20.0 | 12.0 | 19.0 | 13.5 | 13.0 | 10.5 |
| 20 | --- | --- | 12.0 | 5.5 | 14.0 | 10.0 | 21.0 | 12.5 | 20.0 | 14.0 | 12.5 | 10.0 |
| 21 | --- | --- | 13.0 | 7.5 | 15.5 | 10.0 | 20.5 | 14.0 | 17.5 | 14.0 | 10.5 | 9.0 |
| 22 | --- | --- | 13.0 | 6.5 | 16.5 | 10.5 | 19.5 | 13.5 | 18.0 | 13.5 | 11.0 | 8.0 |
| 23 | --- | --- | 10.0 | 7.5 | 16.5 | 10.5 | 21.0 | 14.0 | 18.0 | 11.5 | 8.5 | 6.5 |
| 24 | --- | --- | 9.5 | 6.5 | 17.5 | 10.0 | 17.5 | 14.0 | 15.5 | 13.0 | 12.0 | 8.0 |
| 25 | --- | --- | 10.5 | 5.5 | 19.0 | 11.5 | 19.5 | 13.0 | 15.5 | 12.0 | 11.0 | 8.0 |
| 26 | --- | --- | 8.5 | 6.0 | 18.5 | 12.0 | 20.5 | 14.0 | 15.0 | 12.0 | 11.5 | 7.5 |
| 27 | --- | --- | 10.5 | 5.0 | 18.5 | 12.0 | 20.5 | 14.0 | 14.0 | 10.5 | 10.5 | 7.5 |
| 28 | --- | --- | 10.0 | 5.0 | 19.5 | 11.0 | 19.0 | 14.0 | 13.5 | 11.0 | 10.0 | 9.5 |
| 29 | --- | --- | 12.5 | 5.0 | 18.0 | 11.5 | 18.0 | 12.0 | 13.5 | 12.0 | 9.0 | 8.0 |
| 30 | --- | --- | 12.5 | 6.0 | 19.0 | 10.5 | 18.5 | 11.5 | 12.5 | 10.5 | 9.0 | 7.0 |
| 31 | --- | --- | 15.0 | 8.0 | --- | --- | 19.5 | 12.0 | 12.0 | 8.5 | --- | --- |
| MONTH | 9.0 | 2.0 | 15.0 | 4.0 | 19.5 | 5.0 | 21.0 | 8.0 | 20.0 | 8.5 | 18.5 | 6.5 |

GRANDE RONDE RIVER BASIN

13330500 BEAR CREEK NEAR WALLOWA, OR

LOCATION.--Lat 45°31'37", long 117°33'05", in NW 1/4 sec.34, T.1 N., R.42 E., Wallowa County, Hydrologic Unit 17060105, on right bank 30 ft (9 m) downstream from road bridge, 3.0 mi (4.8 km) southwest of Wallowa, and at mile 4.4 (7.1 km).

DRAINAGE AREA.--68 mi² (176 km²), approximately.

PERIOD OF RECORD.--April to September 1915, April 1924 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1915, 1927, 1929-30, 1932, 1936-40, 1945, 1949.

GAGE.--Water-stage recorder. Altitude of gage is 3,250 ft (991 m), by barometer. Apr. 13 to Sept. 16, 1915, nonrecording gage at site 1.0 mi (1.6 km) upstream at different datum. Apr. 22, 1924, to Nov. 2, 1931, water-stage recorder at site 1.5 mi (2.4 km) upstream at different datum.

REMARKS.--Records good except those for December, January and February, which are fair. No regulation. Diversions for irrigation above station. Water for irrigation in Lostine River basin diverted from Little Bear Creek, a tributary above station, in sec.32, T.1 S., R.43 E.

AVERAGE DISCHARGE.--53 years (water years 1925-77), 113 ft³/s (3.200 m³/s), 81,870 acre-ft/yr (101 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,730 ft³/s (49.0 m³/s) June 15, 1974; maximum gage height, 3.82 ft (1.164 m) Apr. 22, 1936 (from floodmark); minimum daily discharge, 3 ft³/s (0.085 m³/s) Jan. 20, Feb. 1, 1937.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 600 ft³/s (17.0 m³/s) and maximum discharge, 653 ft³/s (18.5 m³/s) June 6, gage height, 2.72 ft (0.829 m); minimum, 4.9 ft³/s (0.139 m³/s) Dec. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-----------|---------|---------|-------------|------|------|-------|------|-------|------|
| 1 | 14 | 15 | 14 | 10 | 11 | 10 | 13 | 250 | 310 | 32 | 12 | 25 |
| 2 | 17 | 16 | 14 | 10 | 10 | 9.7 | 12 | 243 | 290 | 31 | 11 | 21 |
| 3 | 16 | 17 | 13 | 11 | 11 | 9.7 | 14 | 191 | 250 | 29 | 11 | 19 |
| 4 | 15 | 16 | 13 | 10 | 12 | 9.7 | 15 | 144 | 331 | 28 | 11 | 18 |
| 5 | 15 | 16 | 12 | 9.0 | 11 | 9.7 | 17 | 120 | 420 | 29 | 11 | 17 |
| 6 | 15 | 16 | 13 | 9.4 | 10 | 10 | 25 | 105 | 460 | 27 | 11 | 15 |
| 7 | 15 | 16 | 13 | 10 | 9.6 | 11 | 58 | 94 | 466 | 24 | 12 | 14 |
| 8 | 14 | 16 | 14 | 10 | 9.4 | 12 | 92 | 92 | 466 | 22 | 11 | 14 |
| 9 | 14 | 15 | 14 | 11 | 9.2 | 13 | 96 | 94 | 310 | 21 | 10 | 13 |
| 10 | 14 | 15 | 14 | 9.0 | 9.2 | 11 | 94 | 109 | 243 | 20 | 10 | 13 |
| 11 | 14 | 15 | 13 | 10 | 10 | 11 | 90 | 105 | 205 | 19 | 10 | 12 |
| 12 | 14 | 15 | 12 | 12 | 11 | 10 | 96 | 102 | 191 | 18 | 9.7 | 12 |
| 13 | 14 | 14 | 12 | 13 | 10 | 10 | 109 | 120 | 191 | 17 | 9.4 | 12 |
| 14 | 13 | 18 | 12 | 15 | 9.6 | 10 | 92 | 144 | 171 | 17 | 9.4 | 12 |
| 15 | 13 | 16 | 11 | 16 | 9.4 | 11 | 90 | 116 | 153 | 16 | 9.4 | 12 |
| 16 | 13 | 16 | 10 | 15 | 9.7 | 11 | 105 | 107 | 139 | 15 | 9.1 | 12 |
| 17 | 13 | 19 | 9.2 | 13 | 9.7 | 10 | 90 | 96 | 125 | 15 | 8.8 | 13 |
| 18 | 13 | 20 | 11 | 12 | 9.7 | 11 | 86 | 96 | 113 | 16 | 8.8 | 12 |
| 19 | 13 | 18 | 12 | 11 | 9.7 | 11 | 81 | 92 | 105 | 17 | 8.6 | 13 |
| 20 | 13 | 17 | 13 | 10 | 9.7 | 11 | 77 | 98 | 94 | 15 | 8.6 | 16 |
| 21 | 13 | 16 | 13 | 11 | 10 | 11 | 83 | 118 | 85 | 14 | 8.6 | 16 |
| 22 | 13 | 16 | 13 | 11 | 9.4 | 12 | 94 | 144 | 76 | 14 | 8.6 | 16 |
| 23 | 12 | 16 | 12 | 10 | 9.4 | 12 | 147 | 194 | 67 | 14 | 8.6 | 17 |
| 24 | 12 | 15 | 12 | 10 | 9.4 | 12 | 208 | 191 | 60 | 14 | 11 | 20 |
| 25 | 14 | 12 | 11 | 10 | 9.4 | 12 | 246 | 165 | 54 | 15 | 13 | 22 |
| 26 | 13 | 9.8 | 11 | 9.1 | 9.4 | 12 | 239 | 165 | 50 | 14 | 16 | 24 |
| 27 | 13 | 8.2 | 10 | 10 | 9.7 | 14 | 201 | 156 | 45 | 14 | 13 | 24 |
| 28 | 13 | 9.4 | 9.2 | 10 | 11 | 12 | 201 | 147 | 40 | 13 | 12 | 44 |
| 29 | 13 | 12 | 10 | 11 | --- | 12 | 218 | 139 | 37 | 12 | 16 | 85 |
| 30 | 13 | 13 | 10 | 10 | --- | 12 | 232 | 141 | 35 | 12 | 25 | 71 |
| 31 | 13 | --- | 11 | 8.8 | --- | 12 | --- | 191 | --- | 12 | 31 | --- |
| TOTAL | 424 | 453.4 | 371.4 | 337.3 | 278.6 | 344.8 | 3221 | 4269 | 5582 | 576 | 364.6 | 614 |
| MEAN | 13.7 | 15.1 | 12.0 | 10.9 | 9.95 | 11.1 | 107 | 138 | 186 | 18.6 | 11.8 | 21.1 |
| MAX | 17 | 20 | 14 | 16 | 12 | 14 | 246 | 250 | 466 | 32 | 31 | 85 |
| MIN | 12 | 8.2 | 9.2 | 8.8 | 9.2 | 9.7 | 12 | 92 | 35 | 12 | 8.6 | 12 |
| AC-FT | 841 | 899 | 737 | 669 | 553 | 684 | 6390 | 8470 | 11070 | 1140 | 723 | 1260 |
| CAL YR 1976 | TOTAL | 42545.8 | MEAN 116 | MAX 629 | MIN 8.2 | AC-FT 84390 | | | | | | |
| WTR YR 1977 | TOTAL | 16856.1 | MEAN 46.2 | MAX 466 | MIN 8.2 | AC-FT 33430 | | | | | | |

GRANDE RONDE RIVER BASIN

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13331500 MINAM RIVER AT MINAM, OR
(Hydrologic bench-mark station)

LOCATION.--Lat 45°37'12", long 117°43'32", in SW¼SW¼ sec.29, T.2 N., R.41 E., Wallowa County, Hydrologic Unit 17060105, on left bank 2.3 mi (3.7 km) downstream from Squaw Creek, 0.3 mi (0.5 km) west of Minam, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--240 mi² (622 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1912 to March 1914, September 1965 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 2,540.48 ft (774.338 m) above mean sea level. June 1912 to March 1914, nonrecording gage at approximately same site at different datum.

REMARKS.--Water-discharge records good except those for winter periods and no gage-height record, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--13 years, 473 ft³/s (13.40 m³/s), 26.76 in/yr (680 mm/yr), 342,700 acre-ft/yr (423 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,260 ft³/s (177 m³/s) June 16, 1974, gage height, 6.89 ft (2.100 m); maximum gage height, 7.3 ft (2.23 m) May 28, 1913, datum then in use; minimum discharge, 10 ft³/s (0.28 m³/s) Dec. 6, 1972, Jan. 10, 1973, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,450 ft³/s (41.1 m³/s) and maximum discharge, 2,140 ft³/s (60.6 m³/s) June 8, gage height, 4.08 ft (1.244 m); minimum, 28 ft³/s (0.79 m³/s) Nov. 28, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|-----------|----------|--------------|-------|------|------|------|
| 1 | 82 | 84 | 50 | 64 | 64 | 62 | 74 | 880 | 886 | 199 | 73 | 118 |
| 2 | 90 | 96 | 54 | 64 | 62 | 62 | 76 | 860 | 964 | 196 | 71 | 100 |
| 3 | 111 | 109 | 52 | 70 | 60 | 63 | 82 | 560 | 839 | 187 | 71 | 90 |
| 4 | 96 | 92 | 52 | 64 | 58 | 63 | 90 | 450 | 964 | 181 | 70 | 82 |
| 5 | 92 | 86 | 50 | 58 | 56 | 62 | 100 | 400 | 1280 | 184 | 66 | 76 |
| 6 | 88 | 82 | 54 | 50 | 54 | 63 | 160 | 370 | 1510 | 169 | 66 | 71 |
| 7 | 84 | 80 | 94 | 51 | 56 | 65 | 220 | 340 | 1650 | 161 | 71 | 68 |
| 8 | 82 | 78 | 86 | 54 | 54 | 66 | 320 | 320 | 1700 | 153 | 68 | 65 |
| 9 | 80 | 78 | 76 | 60 | 58 | 75 | 340 | 350 | 1220 | 145 | 65 | 63 |
| 10 | 78 | 78 | 71 | 54 | 62 | 68 | 320 | 370 | 985 | 140 | 63 | 62 |
| 11 | 76 | 76 | 68 | 56 | 54 | 73 | 300 | 360 | 852 | 135 | 62 | 60 |
| 12 | 76 | 75 | 64 | 66 | 46 | 66 | 320 | 350 | 780 | 130 | 60 | 59 |
| 13 | 75 | 73 | 64 | 70 | 48 | 66 | 350 | 392 | 736 | 125 | 59 | 57 |
| 14 | 73 | 66 | 64 | 80 | 50 | 62 | 310 | 457 | 687 | 120 | 57 | 56 |
| 15 | 71 | 80 | 58 | 90 | 54 | 60 | 300 | 401 | 628 | 116 | 57 | 56 |
| 16 | 70 | 86 | 54 | 80 | 56 | 65 | 350 | 387 | 583 | 111 | 56 | 60 |
| 17 | 70 | 113 | 49 | 70 | 58 | 63 | 320 | 357 | 534 | 106 | 54 | 66 |
| 18 | 68 | 96 | 56 | 60 | 60 | 59 | 310 | 374 | 497 | 109 | 53 | 65 |
| 19 | 66 | 92 | 64 | 54 | 58 | 62 | 290 | 361 | 462 | 116 | 52 | 65 |
| 20 | 66 | 84 | 70 | 52 | 58 | 60 | 280 | 396 | 447 | 104 | 52 | 106 |
| 21 | 66 | 78 | 72 | 48 | 60 | 63 | 300 | 428 | 405 | 98 | 52 | 111 |
| 22 | 68 | 80 | 70 | 46 | 58 | 65 | 350 | 462 | 374 | 94 | 52 | 98 |
| 23 | 68 | 78 | 68 | 47 | 60 | 70 | 520 | 617 | 340 | 94 | 52 | 88 |
| 24 | 68 | 78 | 66 | 48 | 58 | 73 | 760 | 681 | 315 | 94 | 57 | 94 |
| 25 | 73 | 75 | 66 | 56 | 56 | 71 | 860 | 594 | 295 | 102 | 94 | 100 |
| 26 | 82 | 68 | 64 | 50 | 56 | 73 | 800 | 605 | 271 | 96 | 106 | 104 |
| 27 | 76 | 46 | 64 | 54 | 57 | 76 | 700 | 594 | 253 | 94 | 120 | 44 |
| 28 | 76 | 42 | 60 | 56 | 62 | 76 | 740 | 594 | 235 | 84 | 90 | 111 |
| 29 | 76 | 58 | 62 | 62 | --- | 72 | 780 | 566 | 225 | 80 | 104 | 249 |
| 30 | 76 | 54 | 64 | 58 | --- | 74 | 840 | 561 | 212 | 78 | 132 | 212 |
| 31 | 75 | --- | 70 | 56 | --- | 70 | --- | 572 | --- | 76 | 175 | --- |
| TOTAL | 2398 | 2361 | 1976 | 1848 | 1593 | 2068 | 11562 | 15009 | 21129 | 3877 | 2280 | 2706 |
| MEAN | 77.4 | 78.7 | 63.7 | 59.6 | 56.9 | 66.7 | 385 | 484 | 704 | 125 | 73.5 | 90.2 |
| MAX | 111 | 113 | 94 | 90 | 64 | 76 | 660 | 880 | 1700 | 199 | 175 | 249 |
| MIN | 66 | 42 | 49 | 46 | 46 | 59 | 74 | 320 | 212 | 76 | 52 | 56 |
| CFSM | .32 | .33 | .27 | .25 | .24 | .28 | 1.60 | 2.02 | 2.93 | .52 | .31 | .38 |
| IN. | .37 | .37 | .31 | .29 | .25 | .32 | 1.79 | 2.33 | 3.27 | .60 | .35 | .42 |
| AC-FT | 4760 | 4680 | 3920 | 3670 | 3160 | 4100 | 22970 | 29770 | 41910 | 7690 | 4520 | 5370 |
| CAL YR 1976 | TOTAL | 174924 | MEAN 478 | MAX 2250 | MIN 42 | CFSM 1.99 | IN 27.11 | AC-FT 347000 | | | | |
| WTR YR 1977 | TOTAL | 68807 | MEAN 189 | MAX 1700 | MIN 42 | CFSM .79 | IN 10.67 | AC-FT 136500 | | | | |

NOTE.--No gage-height record Mar. 28 to May 12.

GRANDE RONDE RIVER BASIN

13331500 MINAM RIVER AT MINAM, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1965 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 27.0°C July 23, 27, 1977; minimum, 0.0°C on many days during winter periods each year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.0°C July 23, 27; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED IRON (FE) (UG/L) |
|-------|------|---|-----------------------------|---------------|------------------------------------|--|--|--|--|--|
| NOV | | | | | | | | | | |
| 02... | 1000 | 104 | 8.1 | 7.3 | 12.1 | 49 | 85 | 817 | 17 | 10 |
| DEC | | | | | | | | | | |
| 08... | 1030 | 80 | .5 | 7.6 | 13.2 | 52 | 81 | 88 | 19 | 10 |
| 27... | 1100 | 80 | .5 | 7.1 | 14.3 | 52 | <1 | 812 | 18 | 10 |
| JAN | | | | | | | | | | |
| 31... | 1010 | 60 | .1 | 6.8 | 14.5 | 56 | 86 | <1 | 21 | 30 |
| MAR | | | | | | | | | | |
| 01... | 0900 | 63 | .3 | 7.5 | 13.9 | 53 | <1 | 83 | 18 | 20 |
| 28... | 1200 | 72 | 3.0 | 7.4 | 13.0 | 55 | -- | B230 | 20 | 40 |
| APR | | | | | | | | | | |
| 25... | 1130 | 681 | 6.6 | 7.4 | 11.5 | 31 | 82 | 84 | 11 | 40 |
| JUN | | | | | | | | | | |
| 06... | 1115 | 1380 | 10.1 | -- | 10.7 | 25 | 89 | 24 | 8.8 | 50 |
| 28... | 1130 | 212 | 20.0 | 7.4 | 9.9 | 34 | 83 | 52 | -- | -- |
| JUL | | | | | | | | | | |
| 26... | 0930 | 95 | 18.7 | 7.7 | 9.3 | 48 | 812 | -- | 16 | 0 |
| AUG | | | | | | | | | | |
| 03... | 1805 | 71 | 25.2 | 8.3 | 7.3 | 50 | 815 | -- | 17 | 40 |
| 30... | 1045 | 92 | 13.5 | 7.3 | 10.8 | 47 | -- | 81 | 15 | 20 |
| SEP | | | | | | | | | | |
| 12... | 1330 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) | DIS- SOLVED SODIUM (NA) (MG/L) | DIS- SOLVED PO- TAS- SIUM (K) (MG/L) | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) |
|-------|--|---|--|--|--------------------------------------|-----------------------------------|--|---|--|---|
| NOV | | | | | | | | | | |
| 02... | 6.1 | 1.6 | 2.2 | 1.0 | 34 | 0 | 2.6 | 1.1 | .1 | .01 |
| DEC | | | | | | | | | | |
| 08... | 6.9 | 1.7 | 2.6 | .9 | 26 | 0 | 5.8 | .6 | .0 | .09 |
| 27... | 6.5 | 1.6 | 2.4 | .9 | 35 | 0 | 2.7 | .6 | .1 | .02 |
| JAN | | | | | | | | | | |
| 31... | 7.5 | 1.7 | 2.8 | 1.0 | 36 | 0 | 4.4 | .5 | .1 | .11 |
| MAR | | | | | | | | | | |
| 01... | 6.4 | 1.8 | 5.4 | 1.8 | 32 | 0 | 2.9 | .5 | .1 | .01 |
| 28... | 6.3 | 1.8 | 2.5 | 1.0 | 33 | 0 | 3.4 | 1.7 | .0 | .05 |
| APR | | | | | | | | | | |
| 25... | 3.8 | .6 | 1.4 | .8 | 17 | 0 | 2.8 | .4 | .1 | .08 |
| JUN | | | | | | | | | | |
| 06... | 4.5 | .3 | 1.0 | .6 | 12 | -- | 3.0 | .3 | .0 | .00 |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 26... | 7.3 | 1.6 | 2.4 | 1.2 | 29 | 0 | 2.2 | .3 | .1 | -- |
| AUG | | | | | | | | | | |
| 03... | 6.5 | 1.3 | 2.5 | 1.5 | 31 | -- | 1.0 | .5 | .1 | -- |
| 30... | 7.0 | 1.3 | 2.3 | 1.2 | 28 | 0 | 1.2 | .4 | .0 | -- |
| SEP | | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | .01 |

B: RESULTS BASED ON NON-IDEAL COLONY COUNT

GRANDE RONDE RIVER BASIN

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13331500 MINAM RIVER AT MINAM, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA,MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) | SUS- PENDE SEDIM- ENT (MG/L) | SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) |
|--------------|---|------------------------------------|---|---|---|--|--|--|---|
| NOV 02... | .01 | 22 | 0 | .2 | 49 | 13.8 | .07 | 3 | .84 |
| DEC 08... | .00 | 24 | 3 | .2 | 51 | 11.0 | .07 | 8 | 1.7 |
| 27... | .01 | 23 | 0 | .2 | 50 | 10.8 | .07 | 0 | .00 |
| JAN 31... | .03 | 26 | 0 | .2 | 57 | 9.23 | .08 | -- | -- |
| MAR 01... | -- | 23 | 0 | .5 | 53 | 9.14 | .07 | 2 | .35 |
| 28... | .00 | 23 | 0 | .2 | 53 | 10.4 | .07 | 3 | .59 |
| APR 25... | .03 | 12 | 0 | .2 | 30 | 55.2 | .04 | 41 | 75 |
| JUN 06... | .02 | 12 | 3 | .1 | 24 | 89.4 | .03 | 12 | 45 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 4 | 2.3 |
| JUL 26... | .01 | 25 | 1 | .2 | 45 | 11.6 | .06 | 2 | .52 |
| AUG 03... | .02 | 22 | 0 | .2 | 46 | 8.82 | .06 | -- | -- |
| 30... | .02 | 23 | 0 | .2 | 42 | 10.4 | .06 | 5 | 1.2 |
| SEP 12... | .01 | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | DIS- SOLVED ARSENIC (AS) (UG/L) | DIS- SOLVED BARIUM (BA) (UG/L) | DIS- SOLVED CAD- MIUM (CD) (UG/L) | HEXA- VALENT CHRO- MIUM (CR6) (UG/L) | DIS- SOLVED COBALT (CO) (UG/L) | DIS- SOLVED COPPER (CU) (UG/L) | DIS- SOLVED IRON (FE) (UG/L) |
|--------------|---|--|--|---|--|--|--|
| APR 25... | 0 | 0 | 0 | 0 | 0 | 2 | 40 |

| DATE | DIS- SOLVED LEAD (PB) (UG/L) | DIS- SOLVED NICKEL (NI) (UG/L) | DIS- SOLVED SILVER (AG) (UG/L) | DIS- SOLVED ZINC (ZN) (UG/L) | DIS- SOLVED ALUM- INUM (AL) (UG/L) | DIS- SOLVED MERCURY (HG) (UG/L) |
|--------------|--|--|--|--|---|---|
| APR 25... | 2 | 1 | 0 | 10 | 30 | .0 |

13331500 MINAM RIVER AT MINAM, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 15.5 | 10.0 | 9.5 | 7.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 |
| 2 | 14.5 | 11.0 | 9.0 | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | 11.5 | 9.0 | 9.5 | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 12.0 | 6.0 | 9.0 | 6.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| 5 | 11.0 | 6.0 | 8.5 | 5.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 |
| 6 | 14.0 | 8.0 | 7.0 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| 7 | 13.0 | 6.0 | 6.5 | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 |
| 8 | 12.0 | 6.0 | 8.0 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| 9 | 13.5 | 6.5 | 8.5 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| 10 | 13.5 | 8.0 | 7.5 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| 11 | 14.0 | 8.5 | 6.5 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| 12 | 12.0 | 6.5 | 5.5 | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| 13 | 12.0 | 5.5 | 5.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| 14 | 11.5 | 5.5 | 4.5 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| 15 | 10.5 | 4.5 | 4.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| 16 | 10.0 | 4.5 | 6.5 | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| 17 | 9.5 | 4.0 | 7.5 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| 18 | 8.5 | 3.0 | 7.5 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 | 0.5 |
| 19 | 7.0 | 3.0 | 5.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 | 1.5 |
| 20 | 7.0 | 3.0 | 4.5 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 | 0.5 |
| 21 | 7.0 | 3.0 | 3.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.5 | 1.5 |
| 22 | 8.5 | 3.0 | 5.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.5 | 2.0 |
| 23 | 8.0 | 3.5 | 3.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 1.5 |
| 24 | 7.0 | 4.0 | 2.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 6.0 | 0.5 |
| 25 | 8.0 | 6.0 | 4.5 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.0 | 0.0 |
| 26 | 8.5 | 4.5 | 3.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 5.0 | 1.5 |
| 27 | 8.5 | 3.5 | 5.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 4.0 | 1.0 |
| 28 | 8.0 | 3.5 | 3.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 0.0 |
| 29 | 8.0 | 4.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 5.0 | 1.0 |
| 30 | 9.0 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 9.0 | 0.0 |
| 31 | 7.0 | 4.5 | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 3.5 | 1.0 |
| MONTH | 15.5 | 3.0 | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 9.0 | 0.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 6.0 | 1.5 | 9.0 | 6.5 | 12.0 | 9.0 | 21.0 | 14.5 | 26.0 | 15.5 | 18.0 | 9.0 |
| 2 | 6.5 | 0.5 | 8.0 | 7.0 | 10.5 | 6.5 | 20.5 | 13.0 | 21.5 | 16.5 | 19.5 | 11.5 |
| 3 | 10.0 | 3.0 | 7.0 | 5.0 | 10.0 | 7.5 | 20.0 | 13.0 | 25.0 | 16.5 | 21.5 | 14.0 |
| 4 | 13.0 | 2.0 | 6.5 | 3.5 | 13.5 | 9.0 | 15.5 | 11.0 | 25.0 | 16.5 | 24.5 | 15.5 |
| 5 | 12.5 | 2.5 | 8.0 | 3.5 | 14.0 | 8.5 | 15.5 | 8.5 | 25.5 | 17.0 | 24.5 | 17.5 |
| 6 | 11.0 | 2.0 | 6.5 | 4.0 | 13.0 | 9.0 | 19.5 | 9.0 | 22.5 | 16.0 | 24.0 | 15.5 |
| 7 | 10.5 | 2.0 | 10.0 | 4.5 | 13.5 | 9.5 | 21.0 | 10.0 | 24.5 | 16.5 | 22.0 | 14.0 |
| 8 | 5.5 | 2.0 | 11.5 | 5.5 | 12.5 | 8.5 | 22.5 | 12.0 | 24.0 | 16.0 | 20.5 | 13.0 |
| 9 | 8.0 | 2.5 | 11.0 | 6.5 | 12.0 | 8.0 | 21.5 | 15.0 | 23.5 | 15.5 | 18.0 | 10.5 |
| 10 | 9.5 | 2.5 | 11.5 | 7.5 | 12.5 | 9.5 | 22.0 | 12.5 | 21.5 | 16.0 | 17.0 | 10.0 |
| 11 | 9.0 | 4.0 | 10.5 | 6.0 | 13.0 | 9.5 | 23.5 | 13.5 | 24.0 | 16.5 | 18.0 | 11.0 |
| 12 | 10.5 | 3.0 | 10.0 | 7.0 | 15.0 | 9.0 | 22.0 | 15.5 | 24.0 | 15.5 | 17.0 | 11.0 |
| 13 | 8.0 | 4.5 | 14.0 | 7.0 | 12.5 | 10.5 | 22.5 | 13.0 | 24.0 | 16.0 | 16.5 | 10.5 |
| 14 | 10.0 | 3.0 | 10.5 | 7.0 | 14.0 | 9.5 | 24.0 | 13.0 | 21.5 | 17.0 | 15.5 | 11.5 |
| 15 | 9.5 | 3.5 | 9.0 | 5.5 | 14.5 | 9.0 | 25.0 | 14.5 | 23.5 | 16.5 | 15.0 | 11.5 |
| 16 | 9.0 | 4.0 | 7.0 | 5.5 | 16.0 | 10.0 | 25.0 | 15.5 | 24.0 | 16.5 | 14.5 | 11.5 |
| 17 | 9.5 | 2.0 | 6.5 | 5.0 | 17.0 | 10.0 | 20.5 | 17.0 | 23.5 | 16.5 | 14.5 | 10.0 |
| 18 | 8.0 | 2.5 | 7.0 | 5.0 | 18.0 | 11.0 | 19.0 | 16.0 | 23.5 | 16.5 | 14.5 | 11.0 |
| 19 | 8.5 | 3.0 | 11.5 | 5.0 | 17.0 | 12.5 | 23.5 | 14.0 | 23.0 | 17.0 | 13.0 | 11.0 |
| 20 | 9.0 | 3.0 | 11.5 | 5.5 | 16.0 | 10.5 | 25.5 | 15.0 | 24.0 | 18.0 | 14.5 | 11.0 |
| 21 | 9.0 | 5.5 | 11.5 | 7.5 | 19.5 | 12.5 | 26.0 | 17.5 | 23.5 | 18.5 | 12.0 | 9.0 |
| 22 | 13.0 | 5.0 | 13.5 | 7.0 | 19.5 | 13.0 | 25.5 | 16.0 | 24.5 | 18.0 | 13.5 | 7.0 |
| 23 | 12.0 | 5.5 | 10.5 | 7.5 | 20.0 | 13.0 | 27.0 | 17.5 | 20.0 | 14.0 | 9.0 | 6.5 |
| 24 | 11.5 | 5.5 | 10.0 | 6.0 | 20.5 | 12.5 | 21.5 | 18.0 | 20.5 | 16.5 | 12.5 | 8.0 |
| 25 | 9.5 | 5.5 | 10.5 | 5.5 | 21.5 | 14.5 | 25.0 | 16.0 | 18.5 | 15.0 | 11.5 | 8.0 |
| 26 | 10.0 | 5.5 | 7.5 | 5.5 | 19.5 | 14.0 | 26.0 | 17.5 | 16.5 | 14.0 | 14.5 | 8.0 |
| 27 | 10.0 | 4.5 | 8.5 | 4.0 | 21.0 | 14.0 | 27.0 | 17.0 | 17.0 | 12.0 | 11.5 | 8.0 |
| 28 | 11.0 | 5.5 | 8.5 | 5.0 | 21.5 | 12.5 | 24.5 | 17.5 | 15.0 | 12.5 | 12.0 | 10.0 |
| 29 | 10.5 | 7.0 | 11.5 | 4.5 | 21.0 | 14.0 | 23.5 | 14.5 | 15.5 | 13.5 | 11.5 | 9.5 |
| 30 | 10.0 | 6.5 | 11.5 | 6.0 | 22.0 | 12.5 | 25.0 | 13.5 | 14.5 | 11.5 | 10.5 | 8.0 |
| 31 | --- | --- | 14.0 | 8.0 | --- | --- | 25.0 | 14.5 | 13.5 | 9.5 | --- | --- |
| MONTH | 13.0 | 0.5 | 14.0 | 3.5 | 22.0 | 6.5 | 27.0 | 8.5 | 26.0 | 9.5 | 24.5 | 6.5 |

GRANDE RONDE RIVER BASIN

115

13332500 GRANDE RONDE RIVER AT RONDOWA, OR

LOCATION.--Lat 45°43'36", long 117°46'59", in SW¼NW¼ sec.23, T.3 N., R.40 E., Wallowa County, Hydrologic Unit 17060106, on right bank at Rondowa, 500 ft (152 m) downstream from Wallowa River, 13 mi (21 km) northeast of Elgin, and at mile 81.4 (131.0 km).

DRAINAGE AREA.--2,555 mi² (6,617 km²).

PERIOD OF RECORD.--October 1926 to current year.

REVISED RECORDS.--WSP 1093: 1928-29, 1932-33, 1936, 1938, 1939(M), 1943. WSP 1397: 1927. WSP 1447: 1927.

GAGE.--Water-stage recorder. Datum of gage is 2,281.87 ft (695.514 m) above mean sea level.

REMARKS.--Records excellent. Flow slightly regulated by Wallowa Lake (see station 13326000) and small reservoirs. Diversions for irrigation above station, chiefly in vicinity of La Grande, Enterprise, and Wallowa; one transbasin diversion from Sheep Creek in Imnaha River basin for irrigation in Wallowa Valley.

AVERAGE DISCHARGE.--51 years, 2,134 ft³/s (60.43 m³/s), 1,546,000 acre-ft/yr (1.91 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s (700 m³/s) Jan. 30, 1965, gage height, 10.93 ft (3.331 m); minimum, 179 ft³/s (5.07 m³/s) Aug. 24, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,940 ft³/s (140 m³/s) June 8, gage height, 4.34 ft (1.323 m), no peak above base of 6,200 ft³/s (176 m³/s); minimum, 179 ft³/s (5.07 m³/s) Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|--------|--------|--------|---------|-------|-------|
| 1 | 579 | 636 | 425 | 445 | 455 | 548 | 801 | 2430 | 2830 | 475 | 252 | 587 |
| 2 | 604 | 678 | 440 | 470 | 450 | 534 | 866 | 2510 | 3190 | 440 | 241 | 540 |
| 3 | 661 | 695 | 470 | 475 | 440 | 540 | 885 | 2370 | 2730 | 415 | 245 | 516 |
| 4 | 661 | 670 | 534 | 465 | 430 | 548 | 951 | 2070 | 2760 | 435 | 241 | 492 |
| 5 | 653 | 645 | 480 | 425 | 430 | 534 | 1230 | 1840 | 3600 | 504 | 249 | 480 |
| 6 | 645 | 620 | 465 | 320 | 440 | 534 | 1600 | 1690 | 3830 | 486 | 241 | 475 |
| 7 | 653 | 595 | 548 | 340 | 435 | 556 | 2120 | 1570 | 4000 | 465 | 260 | 440 |
| 8 | 653 | 587 | 548 | 340 | 440 | 595 | 2880 | 1500 | 4280 | 445 | 256 | 430 |
| 9 | 636 | 595 | 548 | 360 | 450 | 678 | 3030 | 1530 | 3420 | 420 | 260 | 420 |
| 10 | 653 | 595 | 522 | 405 | 475 | 653 | 2700 | 1620 | 2800 | 390 | 252 | 410 |
| 11 | 628 | 587 | 510 | 480 | 556 | 604 | 2420 | 1640 | 2400 | 385 | 260 | 395 |
| 12 | 636 | 579 | 450 | 475 | 595 | 595 | 2230 | 1570 | 2220 | 375 | 256 | 351 |
| 13 | 620 | 571 | 440 | 492 | 612 | 587 | 2250 | 1670 | 2150 | 351 | 245 | 356 |
| 14 | 620 | 571 | 425 | 492 | 579 | 556 | 2150 | 1860 | 2000 | 330 | 249 | 338 |
| 15 | 604 | 579 | 440 | 498 | 540 | 540 | 1970 | 1770 | 1880 | 317 | 252 | 321 |
| 16 | 595 | 595 | 475 | 516 | 522 | 534 | 1970 | 1780 | 1780 | 296 | 237 | 330 |
| 17 | 587 | 661 | 470 | 522 | 516 | 540 | 1880 | 1740 | 1600 | 275 | 215 | 385 |
| 18 | 587 | 645 | 460 | 492 | 498 | 548 | 1730 | 1860 | 1450 | 287 | 197 | 400 |
| 19 | 595 | 645 | 435 | 498 | 486 | 579 | 1580 | 1840 | 1300 | 291 | 186 | 425 |
| 20 | 595 | 628 | 425 | 498 | 480 | 587 | 1470 | 1800 | 1250 | 283 | 193 | 516 |
| 21 | 595 | 612 | 455 | 486 | 522 | 579 | 1450 | 1820 | 1100 | 275 | 201 | 620 |
| 22 | 587 | 595 | 460 | 486 | 534 | 587 | 1450 | 1880 | 990 | 260 | 204 | 579 |
| 23 | 604 | 579 | 498 | 480 | 504 | 636 | 1690 | 2120 | 875 | 260 | 193 | 540 |
| 24 | 612 | 571 | 465 | 445 | 492 | 678 | 2120 | 2400 | 801 | 252 | 204 | 612 |
| 25 | 620 | 571 | 480 | 450 | 498 | 678 | 2650 | 2220 | 730 | 275 | 271 | 620 |
| 26 | 636 | 556 | 498 | 465 | 492 | 670 | 2810 | 2250 | 670 | 308 | 343 | 661 |
| 27 | 620 | 460 | 534 | 425 | 492 | 739 | 2570 | 2430 | 636 | 300 | 380 | 628 |
| 28 | 628 | 410 | 498 | 425 | 522 | 765 | 2380 | 2400 | 587 | 279 | 334 | 730 |
| 29 | 620 | 460 | 460 | 410 | --- | 739 | 2400 | 2320 | 540 | 279 | 375 | 1240 |
| 30 | 604 | 435 | 445 | 400 | --- | 721 | 2370 | 2230 | 504 | 268 | 522 | 1150 |
| 31 | 604 | --- | 415 | 420 | --- | 747 | --- | 2200 | --- | 264 | 730 | --- |
| TOTAL | 19195 | 17626 | 14718 | 13900 | 13885 | 18929 | 58603 | 60930 | 58903 | 10685 | 8544 | 15987 |
| MEAN | 619 | 588 | 475 | 448 | 496 | 611 | 1953 | 1965 | 1963 | 345 | 276 | 533 |
| MAX | 661 | 695 | 548 | 522 | 612 | 765 | 3030 | 2510 | 4280 | 504 | 730 | 1240 |
| MIN | 579 | 410 | 415 | 320 | 430 | 534 | 801 | 1500 | 504 | 252 | 186 | 321 |
| AC-FT | 38070 | 34960 | 29190 | 27570 | 27540 | 37550 | 116200 | 120900 | 116800 | 21190 | 16950 | 31710 |
| CAL YR 1976 | TOTAL | 940016 | MEAN | 2568 | MAX | 11800 | MIN | 410 | AC-FT | 1865000 | | |
| WTR YR 1977 | TOTAL | 311905 | MEAN | 855 | MAX | 4280 | MIN | 186 | AC-FT | 618700 | | |

GRANDE RONDE RIVER BASIN

13333000 GRANDE RONDE RIVER AT TROY, OR

LOCATION.--Lat 45°56'47", long 117°26'54", in NE¼NW¼ sec.4, T.5 N., R.43 E., Wallowa County, Hydrologic Unit 17060106, on left bank 500 ft (152 m) downstream from bridge at Troy, 600 ft (183 m) downstream from Wenaha River, and at mile 45.2 (72.7 km).

DRAINAGE AREA.--3,275 mi² (8,482 km²).

PERIOD OF RECORD.--August 1944 to current year. Monthly discharge only August 1944, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1946(M), 1948-50.

GAGE.--Water-stage recorder. Datum of gage is 1,585.98 ft (483.407 m) above mean sea level. Aug. 17, 1944, to Sept. 30, 1949, non-recording gage at site 500 ft (152 m) upstream at datum 10.85 ft (3.307 m) lower. Oct. 1, 1949, to Sept. 5, 1963, water-stage recorder at site 500 ft (152 m) upstream at datum 1.15 ft (0.351 m) higher.

REMARKS.--Records excellent. Flow slightly regulated by Wallowa Lake (see sta 13326000) and small reservoirs. Diversions for irrigation above station, chiefly in vicinity of La Grande, Enterprise, and Wallowa; one transbasin diversion from Big Sheep and tributaries in Imnaha River basin for irrigation in Wallowa Valley.

AVERAGE DISCHARGE.--33 years, 3,117 ft³/s (88.3 m³/s), 2,258,000 acre-ft/yr (2.78 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,200 ft³/s (1,200 m³/s) Dec. 23, 1964, gage height, 11.25 ft (3.429 m); minimum, 344 ft³/s (9.74 m³/s) Aug. 19-21, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,420 ft³/s (153 m³/s) June 8, gage height, 5.19 ft (1.582 m), no peak above base of 9,000 ft³/s (255 m³/s); minimum, 344 ft³/s (9.74 m³/s) Aug. 19-21, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-------|-------|-------|-------|--------|--------|--------|---------|-------|-------|
| 1 | 780 | 920 | 676 | 651 | 877 | 807 | 1150 | 2930 | 3000 | 676 | 428 | 835 |
| 2 | 793 | 920 | 676 | 640 | 821 | 793 | 1180 | 2980 | 3540 | 626 | 409 | 740 |
| 3 | 849 | 920 | 701 | 640 | 793 | 793 | 1210 | 2980 | 3150 | 602 | 409 | 714 |
| 4 | 877 | 920 | 767 | 640 | 793 | 780 | 1270 | 2720 | 3030 | 602 | 409 | 676 |
| 5 | 877 | 877 | 727 | 620 | 767 | 767 | 1590 | 2350 | 3870 | 663 | 409 | 651 |
| 6 | 863 | 849 | 688 | 614 | 767 | 767 | 2210 | 2150 | 4240 | 688 | 418 | 638 |
| 7 | 849 | 835 | 767 | 651 | 740 | 821 | 2980 | 1980 | 4450 | 651 | 418 | 602 |
| 8 | 877 | 821 | 793 | 651 | 740 | 877 | 3960 | 1860 | 4750 | 626 | 428 | 579 |
| 9 | 849 | 821 | 780 | 701 | 727 | 982 | 4130 | 1940 | 4100 | 602 | 428 | 567 |
| 10 | 863 | 835 | 753 | 753 | 714 | 997 | 3710 | 2000 | 3260 | 579 | 418 | 567 |
| 11 | 849 | 835 | 740 | 800 | 780 | 905 | 3260 | 2070 | 2810 | 545 | 418 | 556 |
| 12 | 835 | 821 | 701 | 840 | 849 | 877 | 2980 | 1980 | 2580 | 545 | 418 | 533 |
| 13 | 835 | 807 | 638 | 880 | 863 | 863 | 2960 | 2020 | 2440 | 533 | 418 | 511 |
| 14 | 821 | 807 | 651 | 930 | 835 | 835 | 2830 | 2190 | 2330 | 511 | 409 | 501 |
| 15 | 807 | 821 | 651 | 951 | 780 | 793 | 2580 | 2170 | 2190 | 490 | 409 | 490 |
| 16 | 793 | 863 | 676 | 951 | 753 | 780 | 2530 | 2110 | 2070 | 469 | 409 | 479 |
| 17 | 780 | 891 | 701 | 920 | 753 | 780 | 2460 | 2130 | 1900 | 448 | 390 | 522 |
| 18 | 780 | 935 | 740 | 891 | 740 | 793 | 2260 | 2210 | 1720 | 459 | 371 | 567 |
| 19 | 780 | 905 | 701 | 891 | 727 | 835 | 2070 | 2280 | 1540 | 469 | 353 | 579 |
| 20 | 780 | 877 | 688 | 863 | 714 | 849 | 1920 | 2170 | 1480 | 459 | 344 | 626 |
| 21 | 793 | 863 | 793 | 835 | 753 | 835 | 1860 | 2170 | 1360 | 448 | 362 | 793 |
| 22 | 807 | 849 | 753 | 793 | 793 | 849 | 1860 | 2210 | 1210 | 428 | 362 | 780 |
| 23 | 807 | 835 | 767 | 780 | 767 | 905 | 2110 | 2350 | 1110 | 428 | 362 | 740 |
| 24 | 821 | 821 | 753 | 753 | 727 | 951 | 2580 | 2790 | 997 | 428 | 371 | 807 |
| 25 | 877 | 821 | 714 | 727 | 727 | 966 | 3150 | 2620 | 935 | 438 | 399 | 821 |
| 26 | 905 | 793 | 753 | 780 | 740 | 951 | 3440 | 2550 | 877 | 459 | 522 | 835 |
| 27 | 849 | 727 | 767 | 753 | 714 | 1060 | 3210 | 2830 | 835 | 490 | 590 | 835 |
| 28 | 849 | 701 | 740 | 701 | 767 | 1130 | 2960 | 2790 | 793 | 448 | 545 | 877 |
| 29 | 849 | 676 | 688 | 676 | --- | 1080 | 2910 | 2720 | 740 | 448 | 556 | 1280 |
| 30 | 835 | 701 | 701 | 676 | --- | 1050 | 2910 | 2620 | 714 | 438 | 767 | 1470 |
| 31 | 835 | --- | 688 | 780 | --- | 1060 | --- | 2530 | --- | 428 | 951 | --- |
| TOTAL | 25764 | 25067 | 22332 | 23732 | 21521 | 27531 | 76230 | 73400 | 68021 | 16124 | 13900 | 21171 |
| MEAN | 831 | 836 | 720 | 766 | 769 | 888 | 2541 | 2368 | 2267 | 520 | 448 | 706 |
| MAX | 905 | 935 | 793 | 951 | 877 | 1130 | 4130 | 2980 | 4750 | 688 | 951 | 1470 |
| MIN | 780 | 676 | 638 | 614 | 714 | 767 | 1150 | 1860 | 714 | 428 | 344 | 479 |
| AC-FT | 51100 | 49720 | 44300 | 47070 | 42690 | 54610 | 151200 | 145600 | 134900 | 31980 | 27570 | 41990 |
| CAL YR 1976 | TOTAL | 1269727 | MEAN | 3469 | MAX | 16900 | MIN | 638 | AC-FT | 2519000 | | |
| WTR YR 1977 | TOTAL | 414793 | MEAN | 1136 | MAX | 4750 | MIN | 344 | AC-FT | 822700 | | |

SNAKE RIVER BASIN

117

13353000 SNAKE RIVER BELOW ICE HARBOR DAM, WA

LOCATION.--Lat 46°14'53", long 118°52'43", in NE¼SW¼, sec.24, T.9 N., R.31 E., Walla Walla County, Hydrologic Unit 17060110, in powerhouse forebay pier P-1 on south side of Bay 1 at Ice Harbor Dam, 8.0 mi (12.9 km) northeast of Burbank, and at mile 9.7 (15.6 km).

DRAINAGE AREA.--108,500 mi² (281,000 km²), approximately.

PERIOD OF RECORD.--October 1907 to March 1917 (gage heights only October 1907 to August 1909), March 1962 to current year. Published as "at Burbank" prior to 1911 and as "near Burbank" 1912-17. Chemical analyses October 1965 to September 1969, October 1971 to September 1972. For records collected at site 7.5 mi (12.1 km) downstream see station 13353200.

REVISED RECORDS.--WSP 1317: Drainage area.

GAGE.--Watt-hour meters on each turbine in Ice Harbor Dam powerhouse. Elevations are at mean sea level datum. Oct. 2, 1907, to Mar. 31, 1917, nonrecording gage at site approximately 2 mi (3.2 km) downstream at datum 300 ft (91 m) higher. Mar. 23, 1962, to Sept. 30, 1968, water-stage recorder 1.0 mi (1.6 km) downstream at mean sea level datum.

REMARKS.--Records computed from power output, flow over spillway, flow through fish ladder, and lockage records at Ice Harbor Dam. Diversions above station for irrigation of over 4,090,000 acres (16,600 km²). Flow regulated by Lake Sacajawea and many storage reservoirs and powerplants upstream.

COOPERATION.--Records furnished by Corps of Engineers. Records not reviewed but three discharge measurements made by the Geological Survey to verify turbine and spillway ratings.

AVERAGE DISCHARGE.--22 years (water years 1910-16, 1963-77) 56,450 ft³/s (1,599 m³/s), 40,900,000 acre-ft/yr (50,400 hm³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 312,000 ft³/s (8,840 m³/s) June 19, 1974; no flow momentarily Aug. 27, 1965 (result of testing at Ice Harbor Dam).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1948, reached an elevation of 361.9 ft (110.31 m) at a site 0.7 mi (1.1 km) downstream from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 95,300 ft³/s (2,700 m³/s) May 3; maximum forebay elevation, 440.04 ft (134.12 m) Jan. 31; minimum discharge, 100 ft³/s (2.83 m³/s) part of each day Feb. 16, 19, 20, 23, 26, 27, Mar. 4-6, 8-20, 22-24; minimum forebay elevation, 436.71 ft (133.11 m) June 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|----------|---------|---------|------------|------------|----------|----------------|---------|---------|---------|--------|--------|
| 1 | 35900 | 28600 | 35000 | 10900 | 26200 | 20800 | 22200 | 52300 | 41200 | 29900 | 21100 | 14100 |
| 2 | 25000 | 31100 | 38500 | 22600 | 37400 | 34800 | 15100 | 54200 | 42400 | 22100 | 21500 | 18300 |
| 3 | 24100 | 23100 | 38900 | 39600 | 38700 | 24000 | 9300 | 47400 | 58000 | 23500 | 27500 | 17400 |
| 4 | 35200 | 27600 | 35100 | 34400 | 31900 | 38300 | 27700 | 60200 | 37100 | 19900 | 11800 | 8500 |
| 5 | 36800 | 29400 | 32300 | 42800 | 11200 | 16400 | 23700 | 55300 | 39600 | 24800 | 7300 | 14100 |
| 6 | 32600 | 32500 | 32300 | 39800 | 20600 | 12900 | 18600 | 44500 | 48700 | 17700 | 6400 | 34400 |
| 7 | 30300 | 30900 | 30400 | 38000 | 34900 | 39700 | 26800 | 23200 | 57200 | 24700 | 6400 | 8900 |
| 8 | 26500 | 34300 | 43100 | 28500 | 29900 | 16800 | 23200 | 11700 | 61900 | 20700 | 19900 | 13700 |
| 9 | 13900 | 26500 | 32100 | 11100 | 33000 | 28100 | 21000 | 47100 | 57300 | 3900 | 16300 | 11800 |
| 10 | 30600 | 26800 | 41100 | 34500 | 25700 | 19300 | 37500 | 39600 | 43400 | 6800 | 7900 | 7700 |
| 11 | 34300 | 31200 | 30500 | 28500 | 24400 | 29400 | 39500 | 33900 | 45500 | 48300 | 11700 | 6300 |
| 12 | 32100 | 27000 | 34300 | 30200 | 11600 | 26100 | 34300 | 38500 | 25900 | 20800 | 9000 | 12100 |
| 13 | 37600 | 23900 | 37600 | 25900 | 15400 | 18300 | 29900 | 38500 | 41700 | 22500 | 7200 | 14600 |
| 14 | 32900 | 24300 | 35400 | 32200 | 30200 | 29000 | 40800 | 19800 | 48600 | 26900 | 6400 | 17100 |
| 15 | 32900 | 31600 | 42700 | 25600 | 23700 | 29200 | 30100 | 41400 | 43600 | 20900 | 15600 | 17500 |
| 16 | 30700 | 28200 | 33500 | 24200 | 18000 | 25900 | 20700 | 43600 | 50200 | 8000 | 14900 | 27500 |
| 17 | 17400 | 25900 | 31000 | 33800 | 20800 | 16600 | 15100 | 36200 | 27000 | 7900 | 18700 | 8000 |
| 18 | 43600 | 30700 | 8500 | 27100 | 21000 | 18100 | 38900 | 24900 | 21900 | 21500 | 20800 | 6500 |
| 19 | 31200 | 29900 | 8400 | 39600 | 26100 | 25400 | 34900 | 34800 | 15300 | 24100 | 21700 | 15800 |
| 20 | 36700 | 26100 | 38400 | 32200 | 21200 | 13200 | 24500 | 22700 | 35500 | 18900 | 6400 | 6300 |
| 21 | 35300 | 32500 | 37200 | 34500 | 21000 | 36200 | 25200 | 35500 | 28600 | 19800 | 6900 | 12200 |
| 22 | 29900 | 32000 | 33900 | 20700 | 29500 | 22900 | 18100 | 31000 | 23800 | 16900 | 27100 | 14300 |
| 23 | 16400 | 31100 | 27800 | 20000 | 20100 | 24700 | 13600 | 43800 | 39300 | 9400 | 21700 | 20000 |
| 24 | 10800 | 33200 | 27800 | 32400 | 17500 | 20100 | 22200 | 41000 | 36600 | 10700 | 13400 | 11800 |
| 25 | 19400 | 33200 | 23100 | 38300 | 33900 | 18800 | 42300 | 49900 | 23600 | 21900 | 17100 | 13900 |
| 26 | 25500 | 34600 | 20800 | 36500 | 13000 | 7100 | 50000 | 52300 | 13300 | 20100 | 14700 | 26500 |
| 27 | 27400 | 35000 | 31200 | 32700 | 15200 | 8200 | 53100 | 51000 | 34900 | 15300 | 11200 | 28400 |
| 28 | 34900 | 35000 | 36100 | 32400 | 29900 | 31000 | 44500 | 33900 | 30800 | 10700 | 6800 | 25400 |
| 29 | 34300 | 34900 | 36800 | 32100 | --- | 26400 | 47700 | 39700 | 30500 | 19100 | 18900 | 25600 |
| 30 | 24600 | 32500 | 30900 | 18400 | --- | 28400 | 49700 | 32100 | 29400 | 10000 | 7000 | 22300 |
| 31 | 14300 | --- | 30500 | 27600 | --- | 29300 | --- | 54500 | --- | 3300 | 12200 | --- |
| TOTAL | 893100 | 903600 | 995200 | 927100 | 682000 | 735400 | 900200 | 1234500 | 1132800 | 571000 | 435500 | 481000 |
| MEAN | 28810 | 30120 | 32100 | 29910 | 24360 | 23720 | 30010 | 39820 | 37760 | 18420 | 14050 | 16030 |
| MAX | 43600 | 35000 | 43100 | 42800 | 38700 | 39700 | 53100 | 60200 | 61900 | 48300 | 27500 | 34400 |
| MIN | 10800 | 23100 | 8400 | 10900 | 11200 | 7100 | 9300 | 11700 | 13300 | 3300 | 6400 | 6300 |
| AC-FT | 1771000 | 1792000 | 1974000 | 1839000 | 1353000 | 1459000 | 1786000 | 2449000 | 2247000 | 1133000 | 863800 | 954100 |
| CAL YR 1976 TOTAL | 23319700 | | | MEAN 63720 | MAX 191000 | MIN 8100 | AC-FT 46250000 | | | | | |
| WTR YR 1977 TOTAL | 9891400 | | | MEAN 27100 | MAX 61900 | MIN 3300 | AC-FT 19620000 | | | | | |

LOWER COLUMBIA RIVER BASIN

WALLA WALLA RIVER BASIN

14010000 SOUTH FORK WALLA WALLA RIVER NEAR MILTON, OR

LOCATION.--Lat 45°49'48", long 118°10'08", in NE¼ sec.15, T.4 N., R.37 E., Umatilla County, Hydrologic Unit 17070102, on right bank 1.0 mi (1.6 km) downstream from Elbow Creek, 13 mi (21 km) southeast of Milton, and at mile 59.1 (95.1 km).

DRAINAGE AREA.--63 mi² (163 km²), approximately.

PERIOD OF RECORD.--February to October 1903, August 1906 to November 1917, May 1931 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "12 mi (19 km) above Milton" 1903 and as "above Pacific Power & Light Co.'s intake near Milton" 1907-10.

REVISED RECORDS.--WSP 964: Drainage area. WSP 1398: 1912, 1940, drainage area at former site.

GAGE.--Water-stage recorder. Altitude of gage is 2,050 ft (625 m) from river-profile map. Prior to Mar. 23, 1934, water-stage recorder or nonrecording gage at several sites within 1.5 mi (2.4 km) of present site at various datums.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--56 years (water years 1908-17, 1932-77), 178 ft³/s (5.041 m³/s), 38.37 in/yr (975 mm/yr), 129,000 acre-ft/yr (159 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,530 ft³/s (71.6 m³/s) Jan. 29, 1965, gage height, 5.60 ft (1.707 m); minimum, 72 ft³/s (2.04 m³/s) Feb. 14, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage about 6 ft (2 m) Mar. 31, 1931, present site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 530 ft³/s (15.0 m³/s) Apr. 8, gage height, 2.67 ft (0.814 m), no peak above base of 600 ft³/s (17.0 m³/s); minimum, 108 ft³/s (3.06 m³/s) July 11-13, 16, 17, 20-23, Aug. 18, 20-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|----------|---------|---------|-----------|----------|--------------|------|------|------|------|
| 1 | 130 | 145 | 125 | 140 | 118 | 155 | 209 | 244 | 161 | 115 | 112 | 127 |
| 2 | 137 | 142 | 125 | 140 | 116 | 151 | 203 | 270 | 159 | 115 | 112 | 122 |
| 3 | 132 | 140 | 125 | 140 | 115 | 152 | 197 | 262 | 155 | 115 | 112 | 120 |
| 4 | 132 | 137 | 125 | 140 | 115 | 148 | 221 | 237 | 152 | 117 | 112 | 117 |
| 5 | 132 | 137 | 125 | 138 | 118 | 148 | 289 | 220 | 150 | 115 | 115 | 115 |
| 6 | 132 | 135 | 125 | 138 | 115 | 157 | 360 | 208 | 147 | 115 | 115 | 115 |
| 7 | 130 | 135 | 134 | 138 | 115 | 178 | 433 | 197 | 147 | 112 | 115 | 112 |
| 8 | 130 | 135 | 131 | 135 | 118 | 203 | 424 | 197 | 147 | 112 | 115 | 112 |
| 9 | 130 | 130 | 129 | 135 | 118 | 235 | 341 | 204 | 137 | 112 | 112 | 112 |
| 10 | 127 | 127 | 127 | 135 | 122 | 215 | 299 | 202 | 137 | 110 | 112 | 112 |
| 11 | 127 | 125 | 127 | 135 | 122 | 188 | 276 | 197 | 135 | 110 | 115 | 112 |
| 12 | 127 | 125 | 127 | 138 | 128 | 175 | 270 | 194 | 135 | 110 | 112 | 112 |
| 13 | 130 | 125 | 127 | 140 | 135 | 167 | 280 | 190 | 132 | 110 | 112 | 112 |
| 14 | 130 | 125 | 125 | 138 | 132 | 162 | 259 | 186 | 132 | 112 | 112 | 110 |
| 15 | 130 | 131 | 125 | 138 | 130 | 157 | 244 | 178 | 130 | 110 | 112 | 110 |
| 16 | 130 | 137 | 125 | 140 | 128 | 155 | 247 | 176 | 127 | 110 | 112 | 112 |
| 17 | 130 | 135 | 125 | 142 | 128 | 153 | 234 | 176 | 127 | 110 | 112 | 110 |
| 18 | 130 | 140 | 125 | 142 | 130 | 155 | 224 | 190 | 127 | 115 | 112 | 110 |
| 19 | 130 | 134 | 124 | 142 | 128 | 155 | 212 | 178 | 127 | 112 | 110 | 115 |
| 20 | 130 | 132 | 123 | 142 | 132 | 155 | 210 | 175 | 125 | 110 | 110 | 115 |
| 21 | 130 | 130 | 123 | 142 | 140 | 153 | 213 | 174 | 122 | 110 | 110 | 125 |
| 22 | 127 | 130 | 124 | 142 | 135 | 158 | 233 | 171 | 122 | 110 | 110 | 115 |
| 23 | 127 | 130 | 126 | 142 | 132 | 183 | 277 | 182 | 120 | 110 | 110 | 117 |
| 24 | 127 | 130 | 123 | 142 | 130 | 186 | 303 | 172 | 120 | 110 | 117 | 130 |
| 25 | 142 | 128 | 127 | 140 | 133 | 178 | 312 | 167 | 120 | 112 | 115 | 122 |
| 26 | 145 | 127 | 140 | 137 | 132 | 179 | 296 | 175 | 117 | 112 | 150 | 115 |
| 27 | 140 | 124 | 137 | 134 | 135 | 193 | 269 | 168 | 117 | 112 | 122 | 117 |
| 28 | 135 | 125 | 137 | 130 | 154 | 197 | 254 | 170 | 117 | 112 | 120 | 132 |
| 29 | 135 | 125 | 140 | 126 | --- | 187 | 254 | 165 | 115 | 112 | 117 | 137 |
| 30 | 135 | 125 | 142 | 122 | --- | 180 | 250 | 160 | 115 | 112 | 179 | 142 |
| 31 | 135 | --- | 140 | 120 | --- | 192 | --- | 159 | --- | 112 | 140 | --- |
| TOTAL | 4084 | 3946 | 3983 | 4253 | 3554 | 5350 | 8093 | 5944 | 3974 | 3471 | 3641 | 3534 |
| MEAN | 132 | 132 | 128 | 137 | 127 | 173 | 270 | 192 | 132 | 112 | 117 | 118 |
| MAX | 145 | 145 | 142 | 142 | 154 | 235 | 433 | 270 | 161 | 117 | 179 | 142 |
| MIN | 127 | 124 | 123 | 120 | 115 | 148 | 197 | 159 | 115 | 110 | 110 | 110 |
| CFSM | 2.10 | 2.10 | 2.03 | 2.18 | 2.02 | 2.75 | 4.29 | 3.05 | 2.10 | 1.78 | 1.86 | 1.87 |
| IN. | 2.41 | 2.33 | 2.35 | 2.51 | 2.10 | 3.16 | 4.78 | 3.51 | 2.35 | 2.05 | 2.15 | 2.09 |
| AC-FT | 8100 | 7830 | 7900 | 8440 | 7050 | 10610 | 16050 | 11790 | 7880 | 6880 | 7220 | 7010 |
| CAL YR 1976 | TOTAL | 77567 | MEAN 212 | MAX 635 | MIN 123 | CFSM 3.37 | IN 45.80 | AC-FT 153900 | | | | |
| WTR YR 1977 | TOTAL | 53827 | MEAN 147 | MAX 433 | MIN 110 | CFSM 2.33 | IN 31.78 | AC-FT 106800 | | | | |

WALLA WALLA RIVER BASIN

119

14010800 NORTH FORK WALLA WALLA RIVER NEAR MT. TON-FREEWATER, OR

LOCATION.--Lat 45°53'06", long 118°11'06", in SE¼NW¼ sec.28, T.5 N., R.37 E., Umatilla County, Hydrologic Unit 17070102, on right bank 2.8 mi (4.5 km) downstream from Little Meadow Canyon, 8.9 mi (14.3 km) southeast of Milton-Freewater, and at mile 5.6 (9.0 km).

DRAINAGE AREA.--34.4 mi² (89.1 km²).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,940 ft (591 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--8 years, 55.2 ft³/s (1.563 m³/s), 21.79 in/yr (553 mm/yr), 39,990 acre-ft/yr (49.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft³/s (29.5 m³/s) Jan. 25, 1975, gage height, 6.58 ft (2.006 m), from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of discharge measurement at gage height 5.67 ft (1.728 m) and slope-area measurement at gage height 6.30 ft (1.920 m); minimum, 4.9 ft³/s (0.14 m³/s) Sept. 5, 12, 13, Oct. 17-19, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 278 ft³/s (7.87 m³/s) Apr. 7, gage height, 4.93 ft (1.503 m), no peak above base of 300 ft³/s (8.50 m³/s); minimum, 6.1 ft³/s (0.17 m³/s) Aug. 10-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-------|-------|------|------|------|------|-------|-------|-------|-------|
| 1 | 7.6 | 19 | 9.0 | 13 | 14 | 32 | 45 | 35 | 21 | 7.9 | 6.6 | 21 |
| 2 | 8.7 | 16 | 9.2 | 12 | 13 | 29 | 44 | 37 | 21 | 7.9 | 7.0 | 16 |
| 3 | 8.2 | 12 | 9.1 | 11 | 13 | 29 | 44 | 43 | 20 | 7.9 | 6.9 | 14 |
| 4 | 8.0 | 11 | 9.0 | 10 | 12 | 28 | 65 | 39 | 19 | 8.2 | 6.9 | 12 |
| 5 | 7.9 | 10 | 8.8 | 10 | 12 | 30 | 106 | 34 | 18 | 8.2 | 6.9 | 11 |
| 6 | 7.8 | 10 | 8.7 | 9.5 | 12 | 40 | 147 | 32 | 17 | 7.9 | 6.9 | 10 |
| 7 | 7.7 | 9.7 | 10 | 9.0 | 11 | 70 | 210 | 30 | 17 | 7.6 | 6.8 | 9.7 |
| 8 | 7.6 | 9.4 | 11 | 9.0 | 11 | 99 | 240 | 29 | 16 | 7.4 | 6.7 | 9.2 |
| 9 | 7.6 | 9.3 | 11 | 9.2 | 11 | 115 | 186 | 29 | 16 | 7.4 | 6.7 | 9.0 |
| 10 | 7.7 | 9.2 | 10 | 9.3 | 12 | 88 | 150 | 29 | 15 | 7.3 | 6.6 | 8.7 |
| 11 | 7.8 | 9.0 | 10 | 9.6 | 13 | 57 | 127 | 28 | 15 | 7.3 | 6.4 | 8.3 |
| 12 | 7.8 | 9.0 | 10 | 10 | 14 | 44 | 121 | 28 | 17 | 7.3 | 6.4 | 8.0 |
| 13 | 8.0 | 9.0 | 9.8 | 11 | 15 | 38 | 119 | 27 | 15 | 7.3 | 6.4 | 7.9 |
| 14 | 8.0 | 9.0 | 9.7 | 12 | 15 | 32 | 109 | 26 | 14 | 7.2 | 6.4 | 7.7 |
| 15 | 8.0 | 9.5 | 10 | 12 | 14 | 29 | 97 | 26 | 13 | 7.1 | 6.4 | 7.4 |
| 16 | 7.9 | 11 | 9.8 | 15 | 14 | 27 | 94 | 26 | 12 | 6.9 | 6.7 | 7.4 |
| 17 | 8.0 | 14 | 9.7 | 20 | 14 | 27 | 83 | 25 | 12 | 7.4 | 6.6 | 7.4 |
| 18 | 8.0 | 16 | 9.7 | 25 | 15 | 27 | 70 | 25 | 11 | 8.0 | 6.6 | 7.2 |
| 19 | 8.0 | 14 | 9.7 | 30 | 15 | 27 | 60 | 25 | 11 | 7.8 | 6.7 | 7.4 |
| 20 | 8.0 | 12 | 9.0 | 28 | 16 | 27 | 57 | 25 | 11 | 7.4 | 6.6 | 7.6 |
| 21 | 8.0 | 11 | 9.5 | 26 | 16 | 26 | 53 | 25 | 10 | 7.2 | 6.7 | 7.9 |
| 22 | 8.0 | 10 | 9.4 | 24 | 16 | 27 | 58 | 25 | 10 | 7.1 | 6.7 | 7.9 |
| 23 | 8.0 | 10 | 9.4 | 21 | 16 | 40 | 68 | 25 | 9.8 | 7.0 | 6.7 | 7.5 |
| 24 | 8.1 | 10 | 9.4 | 20 | 15 | 44 | 76 | 25 | 9.1 | 7.1 | 7.7 | 8.8 |
| 25 | 17 | 10 | 10 | 18 | 15 | 39 | 77 | 25 | 9.0 | 7.0 | 7.7 | 9.0 |
| 26 | 22 | 10 | 21 | 17 | 16 | 37 | 68 | 25 | 8.7 | 6.9 | 18 | 8.3 |
| 27 | 13 | 9.3 | 20 | 16 | 20 | 46 | 55 | 24 | 8.5 | 6.8 | 14 | 8.0 |
| 28 | 11 | 9.3 | 18 | 15 | 28 | 50 | 45 | 24 | 8.3 | 6.8 | 11 | 9.4 |
| 29 | 9.8 | 9.3 | 17 | 15 | --- | 42 | 41 | 23 | 8.2 | 6.8 | 10 | 14 |
| 30 | 9.5 | 9.3 | 16 | 14 | --- | 37 | 37 | 23 | 8.1 | 6.8 | 41 | 15 |
| 31 | 9.1 | --- | 15 | 14 | --- | 39 | --- | 22 | --- | 6.7 | 30 | --- |
| TOTAL | 281.8 | 326.3 | 347.9 | 474.6 | 408 | 1322 | 2752 | 864 | 400.7 | 227.6 | 292.7 | 292.7 |
| MEAN | 9.09 | 10.9 | 11.2 | 15.3 | 14.6 | 42.6 | 91.7 | 27.9 | 13.4 | 7.34 | 9.44 | 9.76 |
| MAX | 22 | 19 | 21 | 30 | 28 | 115 | 240 | 43 | 21 | 8.2 | 41 | 21 |
| MIN | 7.6 | 9.0 | 8.7 | 9.0 | 11 | 26 | 37 | 22 | 8.1 | 6.7 | 6.4 | 7.2 |
| CFSM | .26 | .32 | .33 | .45 | .42 | 1.24 | 2.67 | .81 | .39 | .21 | .27 | .28 |
| IN. | .30 | .35 | .38 | .51 | .44 | 1.43 | 2.98 | .93 | .43 | .25 | .32 | .32 |
| AC-FT | 559 | 647 | 690 | 941 | 809 | 2620 | 5460 | 1710 | 795 | 451 | 581 | 581 |
| CAL YR 1976 | TOTAL | 17409.8 | MEAN | 47.6 | MAX | 253 | MIN | 7.4 | CFSM | 1.38 | IN | 18.83 |
| WTR YR 1977 | TOTAL | 7990.3 | MEAN | 21.9 | MAX | 240 | MIN | 6.4 | CFSM | .64 | IN | 8.64 |
| | | | | | | | | | AC-FT | 34530 | AC-FT | 15850 |

COLUMBIA RIVER MAIN STEM

14019200 COLUMBIA RIVER AT McNARY DAM, NEAR UMATILLA, OR

LOCATION.--Lat 45°56'05", long 119°17'45", in NE¼ sec.10, T.5 N., R.28 E., Umatilla County, Hydrologic Unit 17070101, in powerhouse forebay between generator units 2 and 3 at McNary Dam, 2.5 mi (4.0 km) northeast of Umatilla, 3.0 mi (4.8 km) upstream from Umatilla River, and at mile 292.0 (469.8 km).

DRAINAGE AREA.--214,000 mi² (554,300 km²), approximately.

PERIOD OF RECORD.--October 1950 to current year. Gage-height records collected at site at Umatilla since 1876 are contained in reports of U.S. Weather Bureau. Prior to October 1966, published as "below McNary Dam."

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1966, at site 1.2 mi (1.9 km) downstream (tailwater) at datum 240.04 ft (73.164 m) above mean sea level.

REMARKS.--Records computed from power output and flow over spillway at McNary Dam. Considerable regulation by many reservoirs upstream. Diurnal fluctuation caused by powerplant and gates at McNary Dam since beginning of operation in April 1953. Many diversions for irrigation above station.

COOPERATION.--Daily discharge records furnished by Corps of Engineers. Two discharge measurements made and records reviewed by Geological Survey.

AVERAGE DISCHARGE.--27 years, 185,200 ft³/s (5,245 m³/s), 134,200,000 acre-ft/yr (165 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 818,000 ft³/s (23,200 m³/s) June 2, 1956, elevation, 277.01 ft (84.433 m), at site 1.2 mi (1.9 km) downstream; maximum daily discharge, 798,000 ft³/s (22,600 m³/s) June 2, 1956; minimum daily discharge, 39,500 ft³/s (1,120 m³/s) July 10, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1894, reached an elevation of 284.2 ft (86.62 m), and that of May 31, 1948, reached an elevation of about 280 ft (85.3 m), both at site 1.2 mi (1.9 km) downstream from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 183,000 ft³/s (5,180 m³/s) May 27; maximum forebay elevation, 339.8 ft (103.57 m) Mar. 12; minimum daily discharge, 39,500 ft³/s (1,120 m³/s) July 10; minimum forebay elevation, 337.1 ft (102.75 m) May 13, June 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|----------|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|
| 1 | 125000 | 133000 | 157000 | 122000 | 156000 | 132000 | 127000 | 107000 | 161000 | 86800 | 113000 | 107000 |
| 2 | 128000 | 137000 | 147000 | 124000 | 165000 | 140000 | 99500 | 136000 | 160000 | 104000 | 115000 | 115000 |
| 3 | 112000 | 127000 | 119000 | 162000 | 174000 | 137000 | 71700 | 160000 | 175000 | 63300 | 109000 | 101000 |
| 4 | 177000 | 138000 | 121000 | 141000 | 155000 | 153000 | 84300 | 174000 | 112000 | 69200 | 121000 | 71800 |
| 5 | 141000 | 140000 | 121000 | 164000 | 118000 | 112000 | 87600 | 143000 | 101000 | 66000 | 88000 | 70800 |
| 6 | 145000 | 114000 | 132000 | 168000 | 96000 | 88600 | 95200 | 150000 | 97100 | 93800 | 72800 | 118000 |
| 7 | 125000 | 113000 | 117000 | 161000 | 154000 | 145000 | 94900 | 122000 | 148000 | 91900 | 81500 | 99300 |
| 8 | 148000 | 119000 | 134000 | 115000 | 135000 | 132000 | 81500 | 64000 | 142000 | 114000 | 81700 | 104000 |
| 9 | 131000 | 119000 | 125000 | 111000 | 131000 | 132000 | 80500 | 130000 | 138000 | 63200 | 112000 | 107000 |
| 10 | 115000 | 144000 | 125000 | 131000 | 117000 | 138000 | 92400 | 161000 | 120000 | 39500 | 91500 | 89200 |
| 11 | 127000 | 129000 | 117000 | 149000 | 114000 | 128000 | 100000 | 167000 | 109000 | 98200 | 89700 | 60500 |
| 12 | 144000 | 137000 | 118000 | 157000 | 86100 | 118000 | 99100 | 159000 | 87200 | 103000 | 113000 | 104000 |
| 13 | 152000 | 123000 | 137000 | 122000 | 104000 | 83200 | 118000 | 152000 | 118000 | 84300 | 83600 | 113000 |
| 14 | 161000 | 125000 | 139000 | 132000 | 115000 | 130000 | 115000 | 93800 | 137000 | 111000 | 71500 | 115000 |
| 15 | 143000 | 129000 | 138000 | 123000 | 122000 | 118000 | 115000 | 107000 | 112000 | 117000 | 106000 | 110000 |
| 16 | 116000 | 136000 | 142000 | 115000 | 109000 | 155000 | 93400 | 130000 | 154000 | 86900 | 116000 | 118000 |
| 17 | 138000 | 139000 | 140000 | 132000 | 124000 | 109000 | 67500 | 156000 | 153000 | 74400 | 99900 | 102000 |
| 18 | 157000 | 130000 | 109000 | 125000 | 118000 | 130000 | 96900 | 146000 | 114000 | 95200 | 110000 | 71600 |
| 19 | 146000 | 119000 | 116000 | 142000 | 122000 | 122000 | 119000 | 144000 | 81000 | 117000 | 93400 | 75300 |
| 20 | 148000 | 119000 | 147000 | 155000 | 83500 | 82300 | 110000 | 117000 | 97300 | 112000 | 84700 | 96700 |
| 21 | 131000 | 116000 | 144000 | 128000 | 104000 | 113000 | 113000 | 119000 | 134000 | 112000 | 66200 | 102000 |
| 22 | 134000 | 128000 | 150000 | 137000 | 144000 | 115000 | 110000 | 89000 | 106000 | 105000 | 96700 | 101000 |
| 23 | 120000 | 131000 | 146000 | 145000 | 129000 | 120000 | 92200 | 141000 | 107000 | 86500 | 116000 | 117000 |
| 24 | 110000 | 148000 | 128000 | 176000 | 124000 | 133000 | 83000 | 163000 | 125000 | 65900 | 101000 | 106000 |
| 25 | 125000 | 132000 | 111000 | 169000 | 145000 | 132000 | 100000 | 182000 | 103000 | 78600 | 101000 | 99100 |
| 26 | 136000 | 111000 | 92500 | 171000 | 120000 | 109000 | 138000 | 173000 | 69200 | 105000 | 92400 | 109000 |
| 27 | 142000 | 129000 | 119000 | 161000 | 93500 | 81600 | 120000 | 183000 | 122000 | 105000 | 79700 | 115000 |
| 28 | 153000 | 120000 | 148000 | 160000 | 133000 | 117000 | 122000 | 131000 | 121000 | 96900 | 64600 | 106000 |
| 29 | 153000 | 167000 | 136000 | 171000 | --- | 132000 | 109000 | 80200 | 99500 | 115000 | 106000 | 115000 |
| 30 | 147000 | 149000 | 141000 | 157000 | --- | 122000 | 116000 | 98100 | 112000 | 91700 | 90300 | 108000 |
| 31 | 89400 | --- | 152000 | 156000 | --- | 125000 | --- | 151000 | --- | 74300 | 94000 | --- |
| TOTAL | 4219400 | 3901000 | 4068500 | 4482000 | 3491100 | 3784700 | 3051700 | 4229100 | 3615300 | 2830600 | 2961200 | 3027300 |
| MEAN | 136100 | 130000 | 131200 | 144600 | 124700 | 122100 | 101700 | 136400 | 120500 | 91310 | 95520 | 100900 |
| MAX | 177000 | 167000 | 157000 | 174000 | 174000 | 155000 | 138000 | 183000 | 175000 | 117000 | 121000 | 118000 |
| MIN | 89400 | 111000 | 92500 | 111000 | 83500 | 81600 | 67500 | 64000 | 69200 | 39500 | 64600 | 60500 |
| AC-FT | 8369000 | 7738000 | 8070000 | 8890000 | 6925000 | 7507000 | 6053000 | 8388000 | 7171000 | 5614000 | 5874000 | 6005000 |
| CAL YR 1976 | TOTAL | 77234900 | MEAN | 211000 | MAX | 414000 | MIN | 89400 | AC-FT | 153200000 | | |
| WTR YR 1977 | TOTAL | 43661900 | MEAN | 119600 | MAX | 183000 | MIN | 39500 | AC-FT | 86600000 | | |

LOWER COLUMBIA RIVER BASIN

121

14019250 COLUMBIA RIVER AT UMATILLA, OR

LOCATION.--Lat 45°55'53", long 119°19'39", in SW¼NW¼ sec.9, T.5 N., R.28 E., Umatilla County, Hydrologic Unit 17070101, near center span on upstream side of bridge at Umatilla, and at mile 290.5 (467.4 km).

DRAINAGE AREA.--214,000 mi² (554,300 km²), approximately.

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 22.5°C Aug. 17, 1977; minimum, 1.0°C Feb. 7, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.5°C Aug. 17; minimum, 2.0°C Jan. 12-15.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM (7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | CHLORO- PHYLL A (UG/L) | CHLORO- PHYLL B (UG/L) | CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) | CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) |
|-------|------|-------------------------|-----------------------------|---------------|------------------------------------|--|--|--|------------------------------|------------------------------|---|---|
| OCT | | | | | | | | | | | | |
| 20... | 0900 | 148000 | 14.5 | 8.5 | 10.0 | 161 | <1 | 87 | 9.27 | 3.63 | -- | -- |
| DEC | | | | | | | | | | | | |
| 02... | 0900 | 147100 | 7.0 | 8.0 | 12.2 | 197 | 84 | 81 | .000 | .000 | -- | -- |
| 30... | 1000 | 140800 | 5.7 | 8.2 | 12.2 | 191 | 82 | 22 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 27... | 1000 | 160500 | 2.7 | 7.9 | 13.5 | 187 | 82 | 21 | -- | -- | .027 | .000 |
| MAR | | | | | | | | | | | | |
| 04... | 1000 | 152900 | 4.2 | 8.3 | 13.1 | 210 | 88 | 81 | -- | -- | -- | -- |
| 24... | 0930 | 132700 | 5.6 | 8.0 | 13.5 | 186 | <1 | <1 | -- | -- | .120 | .000 |
| APR | | | | | | | | | | | | |
| 26... | 1600 | 137800 | 11.0 | 8.5 | 12.7 | 212 | <1 | 80 | 7.17 | 2.09 | -- | -- |
| MAY | | | | | | | | | | | | |
| 25... | 0900 | 182200 | 13.5 | 8.4 | -- | 160 | <1 | 84 | 23.9 | 5.32 | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | 1000 | 86800 | 19.3 | -- | 9.7 | 142 | <1 | 84 | 7.60 | .953 | -- | -- |
| 28... | 1000 | 96900 | 19.8 | 8.4 | 9.6 | 150 | <1 | <1 | .455 | .000 | -- | -- |
| AUG | | | | | | | | | | | | |
| 31... | 1200 | 94000 | 19.4 | 8.1 | 9.0 | 142 | 81 | <1 | -- | -- | -- | -- |

| DATE | CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) | DIS- SOLVED SILICA (SIO2) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL AMMONIA NITRO- GEN (N) (MG/L) | TOTAL ORGANIC NITRO- GEN (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) |
|-------|---|--|--|--|--|--|---|---|---|--|--|
| OCT | | | | | | | | | | | |
| 20... | 4 | 6.2 | .20 | .03 | .22 | .25 | .45 | .02 | 2.3 | 88 | 35200 |
| DEC | | | | | | | | | | | |
| 02... | 15 | 7.7 | .23 | .00 | .15 | .15 | .38 | .03 | 1.3 | 120 | 47700 |
| 30... | -- | 8.7 | .32 | .00 | .45 | .45 | .77 | .03 | 1.4 | 113 | 43000 |
| JAN | | | | | | | | | | | |
| 27... | 8 | 8.9 | .31 | .00 | .12 | .12 | .43 | .03 | 12 | 110 | 47700 |
| MAR | | | | | | | | | | | |
| 04... | 12 | 6.3 | .18 | .00 | .50 | .50 | .68 | .01 | 1.4 | 105 | 43300 |
| 24... | 7 | 6.6 | .18 | .02 | .28 | .30 | .48 | .02 | 1.2 | 116 | 41600 |
| APR | | | | | | | | | | | |
| 26... | 13 | 20 | .09 | .04 | .21 | .25 | .34 | .01 | 1.9 | 112 | 41700 |
| MAY | | | | | | | | | | | |
| 25... | 15 | 11 | .00 | .06 | .65 | .71 | .71 | .05 | 1.9 | 90 | 44300 |
| JUL | | | | | | | | | | | |
| 01... | 0 | 3.8 | .01 | .05 | .00 | .05 | .06 | .02 | 2.0 | 77 | 18000 |
| 28... | 0 | 3.3 | .01 | .01 | .22 | .23 | .24 | .01 | 1.9 | 87 | 22800 |
| AUG | | | | | | | | | | | |
| 31... | 6 | 5.3 | .10 | .04 | .09 | .13 | .23 | .01 | -- | 80 | 20300 |

LOWER COLUMBIA RIVER BASIN

14019250 COLUMBIA RIVER AT UMATILLA, OR—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | DIS- SOLVED SOLIDS (TONS PER AC-FT) | TOTAL ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | TOTAL COPPER (CU) (UG/L) | TOTAL IRON (FE) (UG/L) | TOTAL LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | TOTAL NON- FILT- RABLE RESIDUE (MG/L) |
|-----------|--|------------------------------------|---|--|-----------------------------------|---------------------------------|---------------------------------|---------------------------------|--|------------------------------------|--|
| OCT 20... | .12 | 2 | <10 | 0 | <10 | 280 | <100 | 30 | 0 | .0 | 0 |
| DEC 02... | .16 | 2 | <10 | 0 | 30 | 110 | 100 | 30 | 0 | .0 | 0 |
| 30... | .15 | 2 | <10 | 0 | <10 | 150 | <100 | 30 | 0 | .0 | 4 |
| JAN 27... | .15 | 1 | <10 | 0 | <10 | 170 | <100 | 40 | 0 | .0 | 0 |
| MAR 04... | .14 | 3 | <10 | 0 | <10 | 200 | <100 | 30 | 0 | .0 | 0 |
| 24... | .16 | 0 | <10 | 0 | <10 | 220 | <100 | 30 | 0 | .0 | 0 |
| APR 26... | .15 | 1 | <10 | 0 | 20 | 150 | 100 | 90 | 0 | .0 | 8 |
| MAY 25... | .12 | -- | <10 | 10 | 10 | 180 | <100 | 70 | 0 | .0 | 8 |
| JUL 01... | .10 | 1 | <10 | 10 | 10 | 130 | <100 | 60 | 0 | .0 | 2 |
| 28... | .12 | 1 | <10 | 10 | 20 | 480 | <100 | 50 | 0 | .0 | 78 |
| AUG 31... | .11 | 0 | <10 | 10 | 20 | 150 | <100 | 20 | 0 | .0 | 4 |

| DATE | TOTAL CAL- CIUM (CA) (MG/L) | TOTAL MAG- NE- SIUM (MG) (MG/L) | TOTAL PO- TAS- SIUM (K) (MG/L) | TOTAL SODIUM (NA) (MG/L) | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | OIL AND GREASE (MG/L) |
|-----------|---|--|---|-----------------------------------|--------------------------------------|-----------------------------------|--|---|--------------------------------|
| OCT 20... | -- | -- | -- | -- | 68 | 0 | 11 | 3.0 | 0 |
| JAN 27... | 24 | 6.2 | 1.5 | 6.8 | 87 | 0 | 20 | 3.3 | 0 |
| APR 26... | 24 | 6.4 | 1.3 | 7.3 | 94 | 0 | 19 | 4.4 | 0 |
| JUL 28... | 31 | 4.7 | 1.1 | 0.9 | 72 | 0 | 12 | 1.9 | 0 |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 19.0 | 18.0 | 13.0 | 12.5 | 7.5 | 7.5 | 5.5 | 5.0 | 2.5 | 2.5 | 4.0 | 4.0 |
| 2 | 18.5 | 18.0 | 12.5 | 12.5 | 7.5 | 7.5 | 5.0 | 5.0 | 2.5 | 2.5 | 4.0 | 4.0 |
| 3 | 18.0 | 17.5 | 12.5 | 12.5 | 7.5 | 7.5 | 4.5 | 4.5 | 2.5 | 2.5 | 4.5 | 4.0 |
| 4 | 18.0 | 17.5 | 12.5 | 12.5 | 7.5 | 7.0 | 4.5 | 4.5 | 2.5 | 2.5 | 4.5 | 4.0 |
| 5 | 17.0 | 16.5 | 13.0 | 12.5 | 7.0 | 7.0 | 4.5 | 4.0 | 2.5 | 2.5 | 4.0 | 4.0 |
| 6 | 17.0 | 16.5 | 13.0 | 12.5 | 7.0 | 7.0 | 4.0 | 4.0 | 2.5 | 2.5 | 4.0 | 4.0 |
| 7 | 17.0 | 16.0 | 12.5 | 12.5 | 7.0 | 7.0 | 4.0 | 3.5 | 2.5 | 2.5 | 4.5 | 4.0 |
| 8 | 17.0 | 16.0 | 12.5 | 12.5 | 7.0 | 7.0 | 3.5 | 3.5 | 2.5 | 2.5 | 4.5 | 4.5 |
| 9 | 16.5 | 16.0 | 12.5 | 12.5 | 7.0 | 7.0 | 3.5 | 3.0 | 2.5 | 2.5 | 5.0 | 4.5 |
| 10 | 17.0 | 16.5 | 12.5 | 12.5 | 7.5 | 7.0 | 3.0 | 2.5 | 3.0 | 2.5 | 5.0 | 5.0 |
| 11 | 17.0 | 16.5 | 12.5 | 12.5 | 7.5 | 7.0 | 2.5 | 2.5 | 3.0 | 3.0 | 5.0 | 5.0 |
| 12 | 16.5 | 16.0 | 12.5 | 12.0 | 7.0 | 7.0 | 2.5 | 2.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 13 | 16.5 | 15.5 | 12.0 | 12.0 | 7.0 | 7.0 | 2.0 | 2.0 | 3.5 | 3.0 | 4.5 | 4.5 |
| 14 | 17.0 | 16.0 | 12.0 | 11.5 | 7.0 | 7.0 | 2.5 | 2.0 | 4.0 | 3.5 | 4.5 | 4.5 |
| 15 | 16.5 | 16.0 | 11.5 | 11.5 | 7.0 | 6.5 | 2.5 | 2.0 | 4.0 | 4.0 | 4.5 | 4.5 |
| 16 | 16.0 | 15.5 | 11.5 | 11.5 | 6.5 | 6.5 | 2.5 | 2.5 | 4.5 | 4.0 | 5.0 | 4.5 |
| 17 | 16.0 | 15.5 | 11.5 | 11.0 | 6.5 | 6.5 | 2.5 | 2.5 | 4.5 | 4.5 | 5.0 | 4.5 |
| 18 | 15.5 | 15.0 | 11.5 | 11.5 | 6.5 | 6.5 | 3.0 | 2.5 | 4.5 | 4.0 | 5.0 | 5.0 |
| 19 | 15.0 | 14.5 | 11.5 | 11.0 | 6.5 | 6.5 | 3.0 | 3.0 | 4.5 | 4.0 | 5.0 | 5.0 |
| 20 | 14.5 | 14.0 | 11.5 | 11.5 | 6.5 | 6.0 | 3.5 | 3.0 | 4.5 | 4.0 | 5.0 | 5.0 |
| 21 | 14.5 | 14.0 | 11.5 | 11.0 | 6.0 | 6.0 | 3.5 | 3.5 | 4.5 | 4.5 | 5.0 | 5.0 |
| 22 | 14.5 | 13.5 | 11.0 | 10.5 | 6.0 | 6.0 | 3.5 | 3.5 | 4.5 | 4.5 | 5.5 | 5.0 |
| 23 | 14.0 | 13.5 | 10.5 | 10.0 | 6.0 | 6.0 | 3.5 | 3.5 | 4.5 | 4.0 | 5.5 | 5.5 |
| 24 | 14.0 | 13.5 | 10.0 | 10.0 | 6.0 | 6.0 | 3.5 | 3.5 | 4.5 | 4.0 | 5.5 | 5.5 |
| 25 | 13.5 | 13.5 | 10.0 | 9.5 | 6.0 | 5.5 | 3.5 | 3.0 | 4.5 | 4.0 | 6.0 | 5.5 |
| 26 | 14.0 | 13.0 | 9.5 | 9.0 | 6.0 | 5.5 | 3.0 | 3.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 27 | 13.5 | 12.5 | 9.0 | 9.0 | 6.0 | 5.5 | 3.0 | 3.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 28 | 13.0 | 12.5 | 9.0 | 8.5 | 5.5 | 5.5 | 3.0 | 3.0 | 4.0 | 4.0 | 6.0 | 6.0 |
| 29 | 13.0 | 12.5 | 8.5 | 8.5 | 5.5 | 5.5 | 3.0 | 2.5 | --- | --- | 6.0 | 6.0 |
| 30 | 13.0 | 13.0 | 8.0 | 7.5 | 5.5 | 5.5 | 2.5 | 2.5 | --- | --- | 6.5 | 6.0 |
| 31 | 13.0 | 13.0 | --- | --- | 5.5 | 5.5 | 2.5 | 2.5 | --- | --- | 6.5 | 6.0 |
| MONTH | 19.0 | 12.5 | 13.0 | 7.5 | 7.5 | 5.5 | 5.5 | 2.0 | 4.5 | 2.5 | 6.5 | 4.0 |

LOWER COLUMBIA RIVER BASIN

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14019250 COLUMBIA RIVER AT UMATILLA, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 6.5 | 6.5 | 11.5 | 11.5 | 13.5 | 13.5 | 19.5 | 19.0 | 20.5 | 20.0 | 19.0 | 19.0 |
| 2 | 6.5 | 6.5 | 12.0 | 11.5 | 14.5 | 13.5 | 19.5 | 19.0 | 20.5 | 20.0 | 19.0 | 19.0 |
| 3 | 7.0 | 6.5 | 12.0 | 11.5 | 14.5 | 14.0 | 19.0 | 19.0 | 20.5 | 20.0 | 19.0 | 19.0 |
| 4 | 7.0 | 6.5 | 12.0 | 12.0 | 14.0 | 13.5 | 19.0 | 19.0 | 20.5 | 20.0 | 19.0 | 19.0 |
| 5 | 7.5 | 7.0 | 12.0 | 11.5 | 14.5 | 14.0 | 19.0 | 19.0 | 21.0 | 20.5 | 19.0 | 19.0 |
| 6 | 7.5 | 7.0 | 11.5 | 11.0 | 15.0 | 14.0 | 19.0 | 18.5 | 21.5 | 20.5 | 19.5 | 19.0 |
| 7 | 8.0 | 7.5 | 11.0 | 11.0 | 15.0 | 14.5 | 19.0 | 18.5 | 21.5 | 21.0 | 19.5 | 19.0 |
| 8 | 8.5 | 8.0 | 11.0 | 11.0 | 15.0 | 14.0 | 19.0 | 18.5 | 21.5 | 21.0 | 19.5 | 19.0 |
| 9 | 8.5 | 8.0 | 11.5 | 11.0 | 16.5 | 15.0 | 18.5 | 18.0 | 21.0 | 20.5 | 19.5 | 19.5 |
| 10 | 9.0 | 8.5 | 11.5 | 11.0 | 16.5 | 16.0 | 18.5 | 18.0 | 21.5 | 21.0 | 19.5 | 19.5 |
| 11 | 9.5 | 9.0 | 11.5 | 11.0 | 16.5 | 16.5 | 18.5 | 18.5 | 21.5 | 21.0 | 19.5 | 19.5 |
| 12 | 9.5 | 9.0 | 12.5 | 11.5 | 16.5 | 16.5 | 18.5 | 18.5 | 22.0 | 21.5 | 19.5 | 19.0 |
| 13 | 9.5 | 9.0 | 12.5 | 12.0 | 17.5 | 16.5 | 18.5 | 18.5 | 21.5 | 21.5 | 19.0 | 19.0 |
| 14 | 9.5 | 9.0 | 12.0 | 12.0 | 17.5 | 17.0 | 19.0 | 18.5 | 21.5 | 21.0 | 19.0 | 18.5 |
| 15 | 9.5 | 9.0 | 12.0 | 12.0 | 17.0 | 16.5 | 19.5 | 19.0 | 22.0 | 21.0 | 19.0 | 18.5 |
| 16 | 9.5 | 9.5 | 12.5 | 12.0 | 17.5 | 17.0 | 19.5 | 19.0 | 22.5 | 21.5 | 19.0 | 18.5 |
| 17 | 9.5 | 9.5 | 12.0 | 12.0 | 17.5 | 17.0 | 19.0 | 19.0 | 22.5 | 22.0 | 18.5 | 18.5 |
| 18 | 9.5 | 9.5 | 12.0 | 12.0 | 17.5 | 17.0 | 19.5 | 19.0 | 22.0 | 22.0 | 18.5 | 18.5 |
| 19 | 9.5 | 9.5 | 12.0 | 12.0 | 17.5 | 17.0 | 19.5 | 19.0 | 22.0 | 22.0 | 18.5 | 18.5 |
| 20 | 9.5 | 9.5 | 12.0 | 12.0 | 18.0 | 17.0 | 19.5 | 19.0 | 22.0 | 22.0 | 18.5 | 18.0 |
| 21 | 9.5 | 9.5 | 12.5 | 12.0 | 18.0 | 17.5 | 19.5 | 19.0 | 22.0 | 21.5 | 18.0 | 18.0 |
| 22 | 10.0 | 9.5 | 13.0 | 12.5 | 18.5 | 18.0 | 19.0 | 19.0 | 22.0 | 21.5 | --- | --- |
| 23 | 10.0 | 9.5 | 13.0 | 12.5 | 18.5 | 18.0 | 19.5 | 19.0 | 22.0 | 22.0 | --- | --- |
| 24 | 10.5 | 10.0 | 13.5 | 13.0 | 19.0 | 18.5 | 19.5 | 19.0 | 22.0 | 21.5 | --- | --- |
| 25 | 10.5 | 10.0 | 13.5 | 13.5 | 19.0 | 18.5 | 20.0 | 19.5 | 21.5 | 21.0 | --- | --- |
| 26 | 10.5 | 10.0 | 13.5 | 13.0 | 19.0 | 18.5 | 20.0 | 19.5 | 21.0 | 20.5 | --- | --- |
| 27 | 11.5 | 10.5 | 13.0 | 13.0 | 19.0 | 18.5 | 20.5 | 19.5 | 20.5 | 20.5 | --- | --- |
| 28 | 11.5 | 11.0 | 13.0 | 13.0 | 20.0 | 19.0 | 19.5 | 19.0 | 20.5 | 20.0 | --- | --- |
| 29 | 11.5 | 11.0 | 13.0 | 13.0 | 20.0 | 19.0 | 20.0 | 19.5 | 20.0 | 19.5 | --- | --- |
| 30 | 11.5 | 11.5 | 13.0 | 13.0 | 20.0 | 19.5 | 20.0 | 20.0 | 19.5 | 19.0 | --- | --- |
| 31 | --- | --- | 13.5 | 13.0 | --- | --- | 20.0 | 20.0 | 19.0 | 19.0 | --- | --- |
| MONTH | 11.5 | 6.5 | 13.5 | 11.0 | 20.0 | 13.5 | 20.5 | 18.0 | 22.5 | 19.0 | 19.5 | 18.0 |

UMATILLA RIVER BASIN

14020000 UMATILLA RIVER ABOVE MEACHAM CREEK, NEAR GIBBON, OR

LOCATION.--Lat 45°43'11", long 118°19'20", in SE¼SW¼ sec.21, T.3 N., R.36 E., Umatilla County, Hydrologic Unit 17070103, Umatilla Indian Reservation, on right bank 0.8 mi (1.3 km) downstream from Ryan Creek, 2.2 mi (3.5 km) upstream from Meacham Creek, 2.5 mi (4.0 km) northeast of Gibbon, and at mile 83.1 (133.7 km).

DRAINAGE AREA.--131 mi² (339 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1933 to current year.

REVISED RECORDS.--WSP 1935: 1946-48(M), 1950(M), 1953(M), 1956-59(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,854.81 ft (565.346 m) above mean sea level. Prior to June 27, 1939, at site 1 mi (2 km) downstream at datum 43.94 ft (13.393 m) lower.

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--44 years, 226 ft³/s (6.400 m³/s), 23.43 in/yr (595 mm/yr), 163,700 acre-ft/yr (202 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,930 ft³/s (168 m³/s) Jan. 25, 1975, gage height, 9.18 ft (2.798 m), from rating curve extended above 3,500 ft³/s (99.1 m³/s); maximum gage height, 9.50 ft (2.896 m) Jan. 29, 1965; minimum discharge, 16 ft³/s (0.45 m³/s) Nov. 9, 1965, momentary regulation from unknown source.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft³/s (36.0 m³/s) Apr. 7, no peak above base of 1,400 ft³/s (39.6 m³/s); maximum gage height, 5.03 ft (1.533 m) Dec. 8, backwater from ice; minimum daily discharge, 38 ft³/s (1.08 m³/s) Jan. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|----------|----------|--------|-----------|----------|--------------|------|------|------|------|
| 1 | 48 | 64 | 53 | 54 | 64 | 164 | 346 | 242 | 134 | 50 | 47 | 71 |
| 2 | 52 | 65 | 53 | 54 | 62 | 155 | 306 | 266 | 129 | 52 | 49 | 63 |
| 3 | 51 | 63 | 53 | 54 | 60 | 149 | 294 | 278 | 118 | 50 | 49 | 56 |
| 4 | 50 | 62 | 53 | 53 | 60 | 137 | 430 | 259 | 112 | 53 | 47 | 54 |
| 5 | 51 | 60 | 53 | 47 | 59 | 152 | 607 | 238 | 105 | 54 | 47 | 52 |
| 6 | 50 | 59 | 54 | 41 | 59 | 231 | 750 | 221 | 99 | 54 | 47 | 50 |
| 7 | 48 | 59 | 57 | 39 | 59 | 294 | 936 | 203 | 94 | 52 | 49 | 49 |
| 8 | 48 | 59 | 57 | 38 | 59 | 319 | 992 | 194 | 94 | 50 | 47 | 48 |
| 9 | 48 | 58 | 60 | 40 | 60 | 341 | 711 | 214 | 87 | 50 | 47 | 48 |
| 10 | 48 | 57 | 57 | 43 | 62 | 290 | 535 | 203 | 81 | 50 | 45 | 48 |
| 11 | 48 | 57 | 56 | 47 | 64 | 221 | 477 | 200 | 77 | 50 | 45 | 48 |
| 12 | 49 | 57 | 56 | 55 | 65 | 191 | 466 | 191 | 77 | 50 | 45 | 46 |
| 13 | 48 | 57 | 53 | 58 | 72 | 170 | 499 | 185 | 77 | 49 | 45 | 45 |
| 14 | 47 | 57 | 54 | 62 | 76 | 149 | 435 | 179 | 75 | 50 | 45 | 45 |
| 15 | 49 | 61 | 54 | 66 | 73 | 143 | 395 | 161 | 71 | 50 | 45 | 46 |
| 16 | 49 | 61 | 54 | 70 | 71 | 137 | 405 | 155 | 68 | 49 | 45 | 46 |
| 17 | 49 | 61 | 54 | 86 | 71 | 132 | 368 | 152 | 66 | 49 | 45 | 46 |
| 18 | 50 | 62 | 54 | 105 | 73 | 137 | 337 | 170 | 64 | 53 | 45 | 46 |
| 19 | 50 | 59 | 53 | 122 | 74 | 146 | 298 | 158 | 63 | 53 | 45 | 50 |
| 20 | 51 | 58 | 53 | 116 | 75 | 149 | 282 | 152 | 61 | 50 | 45 | 50 |
| 21 | 51 | 57 | 52 | 105 | 88 | 140 | 290 | 149 | 60 | 50 | 45 | 56 |
| 22 | 52 | 57 | 52 | 95 | 89 | 161 | 310 | 146 | 59 | 49 | 45 | 55 |
| 23 | 52 | 56 | 53 | 87 | 85 | 263 | 391 | 164 | 57 | 49 | 45 | 52 |
| 24 | 52 | 56 | 52 | 81 | 78 | 249 | 445 | 152 | 57 | 49 | 52 | 68 |
| 25 | 77 | 56 | 53 | 76 | 77 | 214 | 445 | 140 | 56 | 49 | 52 | 69 |
| 26 | 86 | 55 | 63 | 73 | 76 | 203 | 395 | 155 | 54 | 47 | 74 | 63 |
| 27 | 65 | 54 | 62 | 70 | 79 | 224 | 328 | 153 | 53 | 47 | 62 | 60 |
| 28 | 59 | 53 | 60 | 68 | 120 | 228 | 294 | 153 | 53 | 47 | 56 | 70 |
| 29 | 57 | 53 | 59 | 67 | --- | 203 | 282 | 148 | 52 | 47 | 56 | 90 |
| 30 | 57 | 53 | 57 | 64 | --- | 191 | 259 | 139 | 50 | 47 | 114 | 137 |
| 31 | 57 | --- | 56 | 63 | --- | 238 | --- | 133 | --- | 47 | 96 | --- |
| TOTAL | 1649 | 1746 | 1710 | 2099 | 2010 | 6121 | 13308 | 5653 | 2303 | 1546 | 1621 | 1727 |
| MEAN | 53.2 | 58.2 | 55.2 | 67.7 | 71.8 | 197 | 444 | 182 | 76.8 | 49.9 | 52.3 | 57.6 |
| MAX | 86 | 65 | 63 | 122 | 120 | 341 | 992 | 278 | 134 | 54 | 114 | 137 |
| MIN | 47 | 53 | 52 | 38 | 59 | 132 | 259 | 133 | 50 | 47 | 45 | 45 |
| CFSM | .41 | .44 | .42 | .52 | .55 | 1.50 | 3.39 | 1.39 | .59 | .38 | .40 | .44 |
| IN. | .47 | .50 | .49 | .60 | .57 | 1.74 | 3.78 | 1.61 | .65 | .44 | .46 | .49 |
| AC-FT | 3270 | 3460 | 3390 | 4160 | 3990 | 12140 | 26400 | 11210 | 4570 | 3070 | 3220 | 3430 |
| CAL YR 1976 | TOTAL | 88378 | MEAN 241 | MAX 1310 | MIN 37 | CFSM 1.84 | IN 25.10 | AC-FT 175300 | | | | |
| WTR YR 1977 | TOTAL | 41493 | MEAN 114 | MAX 992 | MIN 38 | CFSM .87 | IN 11.78 | AC-FT 82300 | | | | |

14020000 UMATILLA RIVER ABOVE MEACHAM CREEK, NEAR GIBBON, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1959 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.0°C July 13, 15, 21, 1961; minimum, 0.0°C on several days during winter period in 1960, 1962-64, 1968, 1969, 1973.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.5°C July 26, 27; minimum, 2.0°C Dec. 23, Jan. 28.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 15.0 | 12.0 | 10.0 | 9.5 | 3.5 | 3.0 | 4.0 | 3.5 | 3.5 | 3.5 | 4.5 | 4.0 |
| 2 | 14.5 | 13.0 | 10.0 | 9.5 | 3.5 | 3.0 | 3.5 | 3.0 | 3.5 | 3.5 | 5.0 | 4.0 |
| 3 | 14.0 | 11.5 | 10.0 | 9.5 | 3.5 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 | 4.5 | 3.5 |
| 4 | 12.0 | 10.0 | 9.5 | 9.5 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.0 | 5.5 | 4.0 |
| 5 | 13.0 | 10.0 | 9.5 | 9.0 | 3.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 | 5.5 | 4.0 |
| 6 | 13.0 | 10.5 | 9.5 | 9.0 | 4.5 | 3.5 | 3.0 | 3.0 | 3.5 | 3.5 | 5.5 | 4.5 |
| 7 | 13.0 | 10.0 | 9.0 | 8.5 | 5.0 | 4.5 | 3.0 | 3.0 | 3.5 | 3.5 | 5.0 | 4.5 |
| 8 | 13.5 | 10.5 | 9.0 | 8.5 | 5.0 | 4.5 | 3.0 | 3.0 | 4.0 | 3.0 | 5.0 | 4.0 |
| 9 | 13.5 | 10.5 | 8.5 | 8.0 | 5.0 | 4.5 | 3.0 | 3.0 | 5.0 | 3.5 | 5.0 | 4.5 |
| 10 | 13.5 | 10.5 | 8.5 | 8.0 | 4.5 | 4.5 | 3.0 | 3.0 | 5.5 | 4.0 | 5.0 | 4.0 |
| 11 | 13.5 | 11.5 | 8.5 | 8.0 | 5.0 | 4.5 | 3.0 | 3.0 | 5.5 | 4.5 | 5.0 | 3.5 |
| 12 | 12.0 | 10.0 | 8.5 | 8.0 | 4.5 | 4.5 | --- | --- | 6.0 | 5.0 | 4.0 | 4.0 |
| 13 | 12.0 | 10.0 | 8.0 | 6.0 | 4.5 | 4.0 | --- | --- | 6.0 | 4.5 | 4.0 | 3.5 |
| 14 | 11.0 | 9.5 | 6.5 | 6.0 | 4.5 | 4.0 | --- | --- | 4.5 | 4.0 | 5.5 | 4.0 |
| 15 | 10.5 | 8.5 | 7.0 | 6.0 | 4.5 | 4.5 | 4.0 | 3.5 | 5.0 | 4.0 | 5.0 | 4.0 |
| 16 | 10.5 | 8.5 | 8.5 | 7.0 | 5.0 | 4.5 | 4.5 | 4.0 | 5.5 | 4.5 | 5.0 | 4.5 |
| 17 | 9.5 | 8.0 | 9.0 | 8.0 | 4.5 | 4.0 | 4.5 | 4.5 | 5.5 | 4.5 | 5.0 | 4.5 |
| 18 | 8.5 | 6.5 | 8.5 | 8.0 | 4.5 | 4.0 | 4.5 | 4.0 | 5.5 | 4.5 | 5.0 | 4.0 |
| 19 | 8.5 | 6.5 | 8.0 | 6.0 | 4.0 | 3.5 | 4.5 | 4.0 | 5.5 | 4.5 | 5.0 | 4.5 |
| 20 | 8.0 | 6.5 | 6.0 | 5.0 | 3.5 | 3.0 | 4.5 | 4.0 | 5.5 | 4.5 | 5.0 | 4.5 |
| 21 | 8.5 | 6.5 | 6.0 | 5.5 | 3.5 | 3.0 | 4.5 | 4.0 | 5.0 | 4.5 | 6.0 | 4.5 |
| 22 | 8.5 | 7.0 | 6.0 | 5.5 | 3.5 | 3.0 | 4.5 | 4.0 | 5.0 | 4.5 | 8.5 | 5.0 |
| 23 | 8.5 | 7.0 | 5.5 | 5.0 | 3.0 | 2.0 | 4.0 | 4.0 | 5.0 | 4.5 | 6.0 | 5.0 |
| 24 | 9.0 | 8.0 | 6.0 | 5.0 | 3.5 | 3.0 | 4.0 | 4.0 | 5.0 | 4.5 | 6.0 | 4.5 |
| 25 | 9.0 | 9.0 | 6.0 | 5.0 | 4.0 | 3.5 | 4.0 | 3.5 | 4.5 | 4.5 | 7.0 | 4.5 |
| 26 | 9.5 | 8.5 | 5.0 | 3.5 | 4.0 | 4.0 | 3.5 | 3.0 | 5.0 | 4.5 | 5.5 | 5.0 |
| 27 | 8.5 | 7.0 | 3.5 | 3.0 | 4.5 | 4.0 | 3.5 | 3.0 | 5.0 | 4.5 | 5.5 | 4.5 |
| 28 | 8.5 | 7.0 | 4.5 | 3.0 | 4.0 | 3.5 | 3.0 | 2.0 | 5.0 | 4.5 | 4.5 | 3.5 |
| 29 | 9.5 | 8.0 | 4.5 | 4.0 | 3.5 | 3.5 | 3.0 | 3.0 | --- | --- | 5.5 | 4.0 |
| 30 | 8.5 | 8.0 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 | 3.0 | --- | --- | 7.0 | 4.5 |
| 31 | 9.5 | 8.0 | --- | --- | 3.5 | 3.5 | 3.5 | 3.0 | --- | --- | 5.0 | 5.0 |
| MONTH | 15.0 | 6.5 | 10.0 | 3.0 | 5.0 | 2.0 | 4.5 | 2.0 | 6.0 | 3.0 | 8.5 | 3.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 5.5 | 5.0 | 10.5 | 7.0 | 12.0 | 9.0 | 20.0 | 15.0 | 23.0 | 15.0 | 16.5 | 11.0 |
| 2 | 6.5 | 5.0 | 9.5 | 8.5 | 14.5 | 8.0 | 20.0 | 13.5 | 20.5 | 16.0 | 16.0 | 12.0 |
| 3 | 9.0 | 5.5 | 8.5 | 7.0 | 11.5 | 9.5 | 19.0 | 14.0 | 23.0 | 15.5 | 17.0 | 13.5 |
| 4 | 9.0 | 5.0 | 8.0 | 6.5 | 16.5 | 11.0 | 16.0 | 13.5 | 22.0 | 16.0 | 18.5 | 14.5 |
| 5 | 8.5 | 5.0 | 10.0 | 6.0 | 19.5 | 11.0 | 17.0 | 12.0 | 22.0 | 16.0 | 18.5 | 15.0 |
| 6 | 8.5 | 5.0 | 7.0 | 6.0 | 18.0 | 13.0 | 19.5 | 12.0 | 21.5 | 15.5 | 18.0 | 13.5 |
| 7 | 8.5 | 5.5 | 10.5 | 6.0 | 20.5 | 13.5 | 20.5 | 12.0 | 21.5 | 15.5 | 16.5 | 12.0 |
| 8 | 6.0 | 5.5 | 11.5 | 6.5 | 19.0 | 13.5 | 20.5 | 13.5 | 22.0 | 15.0 | 16.0 | 12.0 |
| 9 | 6.5 | 5.5 | 11.0 | 6.5 | 17.0 | 11.0 | 19.5 | 14.5 | 21.5 | 15.0 | 16.0 | 11.0 |
| 10 | 8.0 | 5.5 | 9.0 | 8.0 | 18.0 | 11.0 | 20.0 | 14.0 | 22.0 | 15.5 | 16.0 | 11.0 |
| 11 | 8.0 | 5.5 | 10.0 | 7.0 | 18.0 | 12.0 | 21.0 | 13.5 | 22.0 | 15.5 | 16.0 | 11.5 |
| 12 | 9.0 | 5.0 | 10.5 | 7.0 | 19.5 | 12.0 | 19.0 | 14.5 | 22.0 | 15.5 | 15.5 | 11.5 |
| 13 | 7.0 | 6.0 | 13.0 | 7.0 | 16.0 | 13.5 | 20.5 | 13.0 | 22.0 | 15.5 | 16.0 | 11.0 |
| 14 | 8.5 | 5.5 | 11.0 | 8.0 | 18.5 | 12.0 | 21.0 | 13.5 | 21.5 | 16.0 | 15.0 | 11.5 |
| 15 | 8.0 | 5.5 | 11.0 | 7.0 | 19.5 | 12.0 | 21.5 | 14.0 | 22.0 | 16.0 | 14.5 | 12.0 |
| 16 | 7.0 | 6.0 | 10.0 | 8.0 | 20.0 | 12.0 | --- | 15.0 | 22.0 | 16.0 | 13.0 | 11.5 |
| 17 | 9.0 | 5.5 | 8.5 | 8.0 | 20.5 | 12.0 | --- | 16.0 | 22.0 | 15.5 | 13.0 | 10.0 |
| 18 | 6.5 | 5.0 | 9.0 | 8.0 | 20.5 | 13.0 | 18.5 | 15.5 | 22.0 | 16.0 | 14.0 | 12.0 |
| 19 | 8.0 | 4.5 | 14.0 | 7.0 | 20.0 | 14.0 | 21.5 | 14.0 | 22.0 | 16.5 | 13.5 | 12.0 |
| 20 | 8.5 | 4.5 | 13.5 | 7.0 | 19.5 | 13.5 | 22.0 | 15.0 | 22.0 | 16.5 | 13.5 | 12.0 |
| 21 | 7.0 | 6.0 | 13.5 | 9.0 | 21.0 | 14.5 | 21.5 | 15.5 | 21.0 | 17.0 | 13.5 | 11.0 |
| 22 | 11.0 | 6.0 | 14.5 | 8.0 | 20.5 | 15.0 | 22.0 | 15.5 | 20.5 | 16.5 | 13.0 | 10.5 |
| 23 | 11.0 | 6.0 | 11.0 | 9.0 | 21.5 | 13.5 | 23.0 | 15.5 | 19.0 | 15.0 | 11.0 | 10.0 |
| 24 | 11.5 | 6.0 | 13.5 | 8.5 | 21.5 | 13.5 | 20.0 | 17.0 | 18.0 | 16.0 | 12.0 | 10.5 |
| 25 | 10.0 | 6.5 | 13.5 | 8.0 | 22.0 | 14.5 | 23.0 | 15.5 | 16.5 | 15.0 | 12.0 | 10.5 |
| 26 | 10.5 | 6.5 | 10.0 | 8.5 | 21.0 | 14.0 | 23.5 | 16.0 | 15.5 | 15.0 | 13.0 | 10.0 |
| 27 | 11.0 | 5.5 | 11.5 | 7.0 | 21.0 | 14.5 | 23.5 | 15.5 | 18.0 | 14.5 | 11.5 | 10.5 |
| 28 | 11.0 | 6.0 | 11.0 | 7.0 | 22.0 | 14.0 | 21.0 | 16.0 | 15.5 | 14.0 | 11.5 | 11.0 |
| 29 | 11.5 | 7.0 | 14.0 | 6.5 | 21.0 | 14.5 | 21.0 | 14.5 | 15.0 | 14.5 | 12.0 | 11.0 |
| 30 | 10.5 | 7.0 | 12.0 | 7.0 | 21.5 | 13.5 | 21.5 | 15.0 | 14.5 | 13.0 | 11.5 | 10.5 |
| 31 | --- | --- | 15.5 | 9.5 | --- | --- | 22.0 | 14.5 | 14.5 | 11.5 | --- | --- |
| MONTH | 11.5 | 4.5 | 15.5 | 6.0 | 22.0 | 8.0 | 23.5 | 12.0 | 23.0 | 11.5 | 18.5 | 10.0 |

UMATILLA RIVER BASIN

14020300 MEACHAM CREEK AT GIBBON, OR

LOCATION.--Lat 45°41'20", long 118°21'20", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.3 N., R.36 E., Umatilla County, Hydrologic Unit 17070103, on left bank 250 ft (76 m) downstream from Union Pacific railroad bridge, 0.9 mi (1.4 km) southeast of Gibbon, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--176 mi² (456 km²).

PERIOD OF RECORD.--August 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,803.05 ft (549.570 m) above mean sea level.

REMARKS.--Records good. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,750 ft³/s (77.9 m³/s) Dec. 7, 1975, gage height, 5.35 ft (1.631 m); minimum, 7.1 ft³/s (0.20 m³/s) Aug. 11-14, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1975, reached a stage of 7.21 ft (2.198 m), from floodmark, discharge, about 8,200 ft³/s (230 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,460 ft³/s (41.3 m³/s) Apr. 7, gage height, 4.80 ft (1.463 m), no peak above base of 1,600 ft³/s (45.3 m³/s); minimum, 7.1 ft³/s (0.20 m³/s) Aug. 11-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|------|-------|------|------|-------|--------|-------|
| 1 | 12 | 20 | 16 | 20 | 25 | 87 | 214 | 143 | 101 | 18 | 9.5 | 16 |
| 2 | 13 | 20 | 16 | 20 | 24 | 95 | 230 | 145 | 95 | 18 | 9.5 | 15 |
| 3 | 13 | 19 | 16 | 20 | 24 | 99 | 214 | 155 | 85 | 17 | 9.5 | 15 |
| 4 | 13 | 19 | 16 | 20 | 23 | 95 | 293 | 160 | 77 | 17 | 8.9 | 16 |
| 5 | 12 | 19 | 16 | 18 | 23 | 101 | 544 | 145 | 70 | 16 | 8.4 | 15 |
| 6 | 12 | 19 | 17 | 19 | 22 | 145 | 742 | 136 | 65 | 15 | 8.4 | 15 |
| 7 | 12 | 19 | 18 | 18 | 22 | 181 | 987 | 127 | 60 | 15 | 8.9 | 15 |
| 8 | 12 | 19 | 18 | 15 | 22 | 190 | 1050 | 120 | 56 | 15 | 7.9 | 14 |
| 9 | 12 | 19 | 19 | 16 | 21 | 201 | 709 | 125 | 51 | 15 | 7.9 | 13 |
| 10 | 12 | 18 | 18 | 16 | 21 | 187 | 500 | 129 | 46 | 15 | 7.9 | 13 |
| 11 | 12 | 18 | 18 | 16 | 21 | 157 | 426 | 136 | 43 | 14 | 7.5 | 13 |
| 12 | 12 | 17 | 18 | 17 | 21 | 140 | 389 | 131 | 41 | 14 | 7.5 | 13 |
| 13 | 11 | 17 | 18 | 19 | 21 | 125 | 410 | 129 | 38 | 13 | 7.5 | 13 |
| 14 | 11 | 17 | 18 | 19 | 22 | 108 | 358 | 123 | 37 | 13 | 7.9 | 12 |
| 15 | 11 | 17 | 18 | 20 | 22 | 95 | 311 | 112 | 35 | 13 | 7.9 | 12 |
| 16 | 11 | 17 | 19 | 23 | 23 | 90 | 325 | 108 | 33 | 13 | 7.9 | 12 |
| 17 | 11 | 16 | 18 | 26 | 24 | 83 | 289 | 106 | 30 | 13 | 7.9 | 12 |
| 18 | 12 | 17 | 18 | 28 | 25 | 82 | 256 | 112 | 29 | 13 | 7.9 | 12 |
| 19 | 12 | 17 | 18 | 28 | 25 | 85 | 220 | 108 | 27 | 13 | 7.9 | 13 |
| 20 | 12 | 17 | 18 | 26 | 26 | 90 | 201 | 106 | 26 | 12 | 7.9 | 14 |
| 21 | 11 | 17 | 17 | 26 | 28 | 92 | 195 | 103 | 25 | 11 | 7.9 | 15 |
| 22 | 11 | 17 | 18 | 26 | 32 | 93 | 195 | 97 | 24 | 11 | 7.9 | 15 |
| 23 | 11 | 17 | 19 | 26 | 36 | 150 | 249 | 106 | 23 | 11 | 8.4 | 14 |
| 24 | 12 | 17 | 18 | 26 | 37 | 190 | 285 | 112 | 22 | 11 | 9.5 | 19 |
| 25 | 16 | 17 | 19 | 26 | 37 | 173 | 298 | 103 | 21 | 11 | 10 | 19 |
| 26 | 18 | 17 | 21 | 26 | 39 | 167 | 264 | 108 | 20 | 11 | 13 | 19 |
| 27 | 16 | 17 | 19 | 26 | 40 | 181 | 220 | 125 | 20 | 11 | 11 | 19 |
| 28 | 16 | 16 | 19 | 26 | 54 | 184 | 187 | 123 | 19 | 10 | 11 | 22 |
| 29 | 18 | 16 | 19 | 26 | --- | 167 | 167 | 120 | 19 | 10 | 11 | 26 |
| 30 | 19 | 16 | 19 | 25 | --- | 150 | 157 | 112 | 19 | 10 | 19 | 26 |
| 31 | 19 | --- | 19 | 25 | --- | 162 | --- | 104 | --- | 10 | 19 | --- |
| TOTAL | 405 | 528 | 558 | 688 | 760 | 4145 | 10885 | 3769 | 1257 | 409 | 292.3 | 467 |
| MEAN | 13.1 | 17.6 | 18.0 | 22.2 | 27.1 | 134 | 363 | 122 | 41.9 | 13.2 | 9.43 | 15.6 |
| MAX | 19 | 20 | 21 | 28 | 54 | 201 | 1050 | 160 | 101 | 18 | 19 | 26 |
| MIN | 11 | 16 | 16 | 15 | 21 | 82 | 157 | 97 | 19 | 10 | 7.5 | 12 |
| CFSM | .07 | .10 | .10 | .13 | .15 | .76 | 2.06 | .69 | .24 | .08 | .05 | .09 |
| IN. | .09 | .11 | .12 | .15 | .16 | .88 | 2.30 | .80 | .27 | .09 | .06 | .10 |
| AC-FT | 803 | 1050 | 1110 | 1360 | 1510 | 8220 | 21590 | 7480 | 2490 | 811 | 580 | 926 |
| CAL YR 1976 | TOTAL | 79418.0 | MEAN | 217 | MAX | 1860 | MIN | 11 | CFSM | 1.23 | IN | 16.79 |
| WTR YR 1977 | TOTAL | 24163.3 | MEAN | 66.2 | MAX | 1050 | MIN | 7.5 | CFSM | .38 | IN | 5.11 |
| | | | | | | | | | | AC-FT | 157500 | |
| | | | | | | | | | | AC-FT | 47930 | |

14021000 UMATILLA RIVER AT PENDLETON, OR

LOCATION.--Lat 45°40'20", long 118°47'30", in NW¼NE¼ sec.10, T.2 N., R.32 E., Umatilla County, Hydrologic Unit 17070103, on wingwall 0.3 mi (0.5 km) downstream from Main Street bridge at Pendleton, 1.5 mi (2.4 km) downstream from Wildhorse Creek, 2.8 mi (4.5 km) upstream from McKay Creek, and at mile 55.2 (88.8 km).

DRAINAGE AREA.--637 mi² (1,650 km²).

PERIOD OF RECORD.--February 1891 to July 1892, May 1903 to June 1905 (gage heights and discharge measurements only June to December 1904), October 1934 to current year. Monthly discharge only February 1891 to July 1892, published in WSP 1318.

REVISED RECORDS.--WSP 1398: 1904, 1937.

GAGE.--Water-stage recorder. Altitude of gage is 1,050 ft (320 m), from topographic map. Apr. 24 to Aug. 26, 1959, nonrecording gage and Aug. 27, 1959, to Feb. 4, 1965, water-stage recorder at same site at datum of 1,067.01 ft (325.225 m). Feb. 5 to Nov. 18, 1965, wire-weight gage at Main Street bridge site. Nov. 19, 1965, to Mar. 28, 1967, water-stage recorder at site 0.7 mi (1.1 km) upstream at datum of 1,067.60 ft (325.404 m) and Nov. 19, 1965, to Sept. 30, 1969, at site 0.7 mi (1.1 km) upstream at datum of 1,064.02 ft (324.313 m). See WSP 1738 for history of changes prior to Apr. 24, 1959.

REMARKS.--Records good. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years (water years 1935-77), 500 ft³/s (14.16 m³/s), 362,200 acre-ft/yr (447 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s (439 m³/s) Jan. 30, 1965, gage height, 9.40 ft (2.865 m), datum then in use; minimum, 10 ft³/s (0.28 m³/s) July 13-16, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 17,000 ft³/s (481 m³/s) Dec. 14, 1882 (date and discharge from data furnished by Corps of Engineers). Flood of May 30, 31, 1906, reached a stage of 11.0 ft (3.35 m), 1934-58 site and datum, but before channel was improved, discharge, 15,500 ft³/s (439 m³/s), estimated by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,500 ft³/s (70.8 m³/s) Apr. 8, gage height, 7.16 ft (2.182 m), no peak above base of 3,500 ft³/s (99.1 m³/s); minimum, 20 ft³/s (0.57 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|--------------|-------|-------|------|------|------|------|
| 1 | 56 | 86 | 76 | 84 | 99 | 260 | 616 | 395 | 240 | 54 | 29 | 97 |
| 2 | 58 | 89 | 76 | 84 | 99 | 319 | 650 | 395 | 240 | 54 | 29 | 82 |
| 3 | 59 | 89 | 76 | 82 | 97 | 346 | 616 | 420 | 215 | 54 | 30 | 76 |
| 4 | 61 | 89 | 76 | 78 | 97 | 332 | 731 | 437 | 207 | 55 | 28 | 71 |
| 5 | 58 | 86 | 76 | 74 | 95 | 353 | 1070 | 403 | 194 | 60 | 28 | 65 |
| 6 | 58 | 84 | 76 | 70 | 93 | 446 | 1380 | 367 | 168 | 58 | 29 | 55 |
| 7 | 51 | 82 | 78 | 66 | 93 | 624 | 1750 | 353 | 156 | 55 | 35 | 54 |
| 8 | 52 | 82 | 80 | 62 | 93 | 668 | 2080 | 339 | 147 | 53 | 31 | 53 |
| 9 | 52 | 82 | 82 | 60 | 93 | 686 | 1610 | 339 | 141 | 45 | 27 | 54 |
| 10 | 54 | 82 | 82 | 60 | 93 | 659 | 1230 | 346 | 129 | 46 | 26 | 54 |
| 11 | 51 | 82 | 80 | 62 | 93 | 539 | 1060 | 346 | 124 | 48 | 26 | 50 |
| 12 | 48 | 82 | 78 | 68 | 93 | 446 | 956 | 346 | 121 | 39 | 26 | 46 |
| 13 | 52 | 80 | 78 | 76 | 95 | 388 | 983 | 339 | 117 | 42 | 27 | 45 |
| 14 | 52 | 80 | 78 | 86 | 101 | 346 | 911 | 325 | 117 | 42 | 26 | 46 |
| 15 | 54 | 84 | 78 | 96 | 106 | 319 | 821 | 313 | 115 | 38 | 27 | 48 |
| 16 | 59 | 84 | 78 | 110 | 101 | 295 | 821 | 289 | 108 | 38 | 29 | 49 |
| 17 | 63 | 82 | 74 | 125 | 106 | 283 | 749 | 283 | 101 | 39 | 28 | 51 |
| 18 | 63 | 82 | 76 | 134 | 108 | 260 | 686 | 301 | 97 | 48 | 27 | 53 |
| 19 | 65 | 84 | 74 | 139 | 106 | 277 | 599 | 289 | 93 | 50 | 28 | 53 |
| 20 | 67 | 84 | 74 | 147 | 106 | 289 | 539 | 271 | 86 | 41 | 24 | 60 |
| 21 | 70 | 82 | 74 | 139 | 112 | 283 | 505 | 260 | 82 | 43 | 25 | 60 |
| 22 | 72 | 82 | 74 | 134 | 124 | 277 | 505 | 250 | 78 | 37 | 28 | 67 |
| 23 | 77 | 80 | 72 | 126 | 129 | 374 | 608 | 260 | 76 | 34 | 26 | 67 |
| 24 | 79 | 78 | 78 | 121 | 129 | 505 | 722 | 307 | 69 | 37 | 34 | 69 |
| 25 | 86 | 78 | 80 | 117 | 126 | 463 | 758 | 265 | 69 | 41 | 39 | 86 |
| 26 | 94 | 76 | 89 | 112 | 129 | 412 | 686 | 260 | 71 | 37 | 53 | 86 |
| 27 | 86 | 76 | 91 | 108 | 129 | 437 | 582 | 295 | 67 | 32 | 63 | 84 |
| 28 | 79 | 74 | 89 | 106 | 150 | 488 | 514 | 295 | 57 | 30 | 54 | 115 |
| 29 | 79 | 74 | 89 | 104 | --- | 454 | 454 | 289 | 55 | 31 | 55 | 108 |
| 30 | 79 | 74 | 86 | 101 | --- | 420 | 420 | 265 | 54 | 31 | 86 | 129 |
| 31 | 82 | --- | 86 | 99 | --- | 454 | --- | 255 | --- | 31 | 126 | --- |
| TOTAL | 2016 | 2449 | 2454 | 3030 | 2995 | 12702 | 25612 | 9897 | 3594 | 1343 | 1149 | 2033 |
| MEAN | 65.0 | 81.6 | 79.2 | 97.7 | 107 | 410 | 854 | 319 | 120 | 43.3 | 37.1 | 67.8 |
| MAX | 94 | 89 | 91 | 147 | 150 | 686 | 2080 | 437 | 240 | 60 | 126 | 129 |
| MIN | 48 | 74 | 72 | 60 | 93 | 260 | 420 | 250 | 54 | 30 | 24 | 45 |
| AC-FT | 4000 | 4860 | 4870 | 6010 | 5940 | 25190 | 50800 | 19630 | 7130 | 2660 | 2280 | 4030 |
| CAL YR 1976 | TOTAL | 200307 | MEAN 547 | MAX 3430 | MIN 44 | AC-FT 397300 | | | | | | |
| WTR YR 1977 | TOTAL | 69274 | MEAN 190 | MAX 2080 | MIN 24 | AC-FT 137400 | | | | | | |

UMATILLA RIVER BASIN

14022200 NORTH FORK MCKAY CREEK NEAR PILOT ROCK, OR

LOCATION.--Lat 45°30'24", long 118°36'57", in NE¼SE¼ sec.1, T.1 S., R.33 E., Umatilla County, Hydrologic Unit 17070103, Umatilla Indian Reservation, on left bank 10 mi (16 km) northeast of Pilot Rock and at mile 0.5 (0.8 km).

DRAINAGE AREA.--48.6 mi² (125.9 km²).

PERIOD OF RECORD.--May 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,870 ft (570 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft³/s (56.1 m³/s) Jan. 25, 1975, gage height, 8.48 ft (2.585 m), from floodmark, from rating curve extended above 150 ft³/s (4.25 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.30 ft³/s (0.008 m³/s) July 15, 1975 (result of temporary dam construction upstream).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 134 ft³/s (3.79 m³/s) Mar. 8, gage height, 2.09 ft (0.637 m), no peak above base of 290 ft³/s (8.21 m³/s); minimum, 0.33 ft³/s (0.009 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|-----------|---------|---------|-------------|--------|-------|------|-------|-------|------|
| 1 | 1.0 | 2.8 | 2.8 | 3.5 | 3.8 | 30 | 69 | 8.6 | 7.8 | 1.0 | .67 | 1.7 |
| 2 | 1.1 | 2.8 | 2.5 | 3.5 | 3.8 | 28 | 68 | 9.4 | 8.2 | 1.0 | .67 | 1.9 |
| 3 | 1.1 | 2.8 | 2.5 | 3.5 | 3.5 | 32 | 69 | 10 | 7.1 | 1.0 | .71 | 1.9 |
| 4 | 1.1 | 2.5 | 2.5 | 3.3 | 3.1 | 31 | 80 | 12 | 6.7 | 1.1 | .67 | 1.8 |
| 5 | 1.1 | 2.8 | 2.5 | 3.2 | 3.1 | 45 | 85 | 11 | 6.1 | 1.1 | .67 | 1.7 |
| 6 | 1.0 | 2.5 | 2.5 | 3.1 | 3.1 | 82 | 87 | 9.4 | 5.5 | 1.0 | .67 | 1.6 |
| 7 | 1.0 | 2.5 | 2.8 | 3.0 | 2.8 | 115 | 92 | 9.0 | 5.2 | .96 | .76 | 1.5 |
| 8 | 1.0 | 2.5 | 3.1 | 2.8 | 2.8 | 112 | 89 | 8.2 | 5.2 | .96 | .76 | 1.5 |
| 9 | 1.0 | 2.5 | 3.3 | 2.8 | 3.1 | 115 | 71 | 8.2 | 4.6 | .90 | .71 | 1.5 |
| 10 | 1.0 | 2.8 | 3.1 | 2.8 | 3.1 | 86 | 58 | 9.0 | 4.0 | .90 | .71 | 1.4 |
| 11 | 1.1 | 2.8 | 3.1 | 3.0 | 3.5 | 63 | 51 | 11 | 3.5 | .90 | .67 | 1.4 |
| 12 | 1.1 | 2.8 | 3.1 | 3.4 | 3.5 | 53 | 46 | 11 | 3.3 | .90 | .64 | 1.3 |
| 13 | 1.1 | 2.8 | 3.1 | 4.0 | 4.0 | 45 | 48 | 11 | 3.3 | .85 | .67 | 1.3 |
| 14 | 1.1 | 2.8 | 2.8 | 4.0 | 3.8 | 39 | 43 | 9.9 | 3.1 | .71 | .67 | 1.3 |
| 15 | 1.1 | 3.5 | 2.8 | 4.6 | 3.5 | 35 | 37 | 9.4 | 2.8 | .85 | .71 | 1.2 |
| 16 | 1.2 | 3.3 | 2.8 | 6.4 | 3.5 | 32 | 37 | 9.4 | 2.3 | .76 | .71 | 1.3 |
| 17 | 1.2 | 3.5 | 2.8 | 9.0 | 3.3 | 28 | 31 | 9.0 | 2.1 | .80 | .71 | 1.3 |
| 18 | 1.2 | 4.6 | 2.8 | 10 | 3.3 | 28 | 28 | 9.4 | 1.9 | .90 | .67 | 1.3 |
| 19 | 1.3 | 4.3 | 2.8 | 11 | 3.3 | 31 | 24 | 8.2 | 1.8 | .90 | .67 | 1.5 |
| 20 | 1.4 | 3.8 | 2.5 | 9.4 | 3.3 | 32 | 22 | 7.4 | 1.7 | .85 | .67 | 1.8 |
| 21 | 1.4 | 3.5 | 2.6 | 8.6 | 4.6 | 31 | 20 | 7.1 | 1.6 | .80 | .67 | 1.7 |
| 22 | 1.4 | 3.5 | 2.5 | 7.4 | 5.5 | 42 | 20 | 6.4 | 1.5 | .76 | .71 | 1.7 |
| 23 | 1.5 | 3.3 | 2.8 | 6.7 | 5.2 | 66 | 19 | 8.2 | 1.5 | .76 | .67 | 1.7 |
| 24 | 1.5 | 3.3 | 2.5 | 5.8 | 4.9 | 57 | 18 | 8.2 | 1.3 | .76 | 1.0 | 3.1 |
| 25 | 2.1 | 3.1 | 3.1 | 5.5 | 4.6 | 50 | 16 | 7.1 | 1.3 | .80 | 1.1 | 5.2 |
| 26 | 2.3 | 3.1 | 4.9 | 4.9 | 4.6 | 47 | 14 | 9.0 | 1.2 | .80 | 2.1 | 4.6 |
| 27 | 2.1 | 2.8 | 5.2 | 4.6 | 5.2 | 60 | 12 | 9.9 | 1.2 | .76 | 1.5 | 4.3 |
| 28 | 1.9 | 2.8 | 4.6 | 4.3 | 21 | 48 | 11 | 9.9 | 1.1 | .76 | 1.2 | 5.8 |
| 29 | 1.9 | 2.8 | 4.3 | 4.0 | --- | 40 | 9.9 | 9.0 | 1.1 | .76 | 1.1 | 10 |
| 30 | 1.9 | 2.8 | 4.0 | 3.8 | --- | 35 | 9.0 | 8.6 | 1.1 | .76 | 2.5 | 14 |
| 31 | 2.1 | --- | 3.8 | 3.5 | --- | 40 | --- | 7.8 | --- | .71 | 2.1 | --- |
| TOTAL | 42.3 | 91.7 | 96.5 | 155.4 | 122.8 | 1578 | 1283.9 | 281.7 | 99.1 | 26.77 | 28.44 | 82.3 |
| MEAN | 1.36 | 3.06 | 3.11 | 5.01 | 4.39 | 50.9 | 42.8 | 9.09 | 3.30 | .86 | .92 | 2.74 |
| MAX | 2.3 | 4.6 | 5.2 | 11 | 21 | 115 | 92 | 12 | 8.2 | 1.1 | 2.5 | 14 |
| MIN | 1.0 | 2.5 | 2.5 | 2.8 | 2.8 | 28 | 9.0 | 6.4 | 1.1 | .71 | .64 | 1.2 |
| AC-FT | 84 | 182 | 191 | 308 | 244 | 3130 | 2550 | 559 | 197 | 53 | 56 | 163 |
| CAL YR 1976 | TOTAL | 14631.23 | MEAN 40.0 | MAX 440 | MIN .85 | AC-FT 29020 | | | | | | |
| WTR YR 1977 | TOTAL | 3888.91 | MEAN 10.7 | MAX 115 | MIN .64 | AC-FT 7710 | | | | | | |

UMATILLA RIVER BASIN

129

14022500 MCKAY CREEK NEAR PILOT ROCK, OR

LOCATION.--Lat 45°32'57", long 118°46'24", in NW¼SE¼ sec.23, T.1 N., R.32 E., Umatilla County, Hydrologic Unit 17070103, on left bank 500 ft (152 m) upstream from county road bridge, 5.5 mi (8.8 km) northeast of Pilot Rock, and at mile 8.2 (13.2 km).

DRAINAGE AREA.--180 mi² (466 km²).

PERIOD OF RECORD.--May to August 1921, October 1926 to June 1928, December 1928 to July 1929, October 1929 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1398: 1928-29, 1933, 1940.

GAGE.--Water-stage recorder. Datum of gage is 1,343.60 ft (409.529 m) above mean sea level. See WSP 1318 or 1738 for history of changes prior to Apr. 9, 1941. Apr. 9, 1941, to July 24, 1963, at site 1,000 ft (305 m) downstream at datum 7.92 ft (2.414 m) lower.

REMARKS.--Records good. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--49 years (water years 1927, 1930-77), 98.4 ft³/s (2.787 m³/s), 71,290 acre-ft/yr (87.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft³/s (210 m³/s) Jan. 30, 1965, gage height, 8.40 ft (2.560 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 481 ft³/s (13.6 m³/s) Apr. 7, gage height, 3.19 ft (0.972 m), no peak above base of 840 ft³/s (23.8 m³/s); no flow at times in July and August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|-------|-------|------|------|------|------|--------|-------|------|------|
| 1 | 1.1 | 2.6 | 2.8 | 6.1 | 12 | 44 | 156 | 28 | 25 | .90 | .00 | 1.1 |
| 2 | 1.2 | 3.1 | 2.8 | 6.0 | 12 | 44 | 166 | 29 | 25 | .90 | .00 | 1.5 |
| 3 | 1.2 | 3.3 | 2.7 | 5.8 | 12 | 54 | 155 | 32 | 22 | .30 | .00 | 1.7 |
| 4 | 1.3 | 3.3 | 2.7 | 5.6 | 12 | 52 | 185 | 39 | 21 | .10 | .00 | 1.7 |
| 5 | 1.3 | 5.3 | 2.7 | 5.4 | 11 | 63 | 229 | 36 | 18 | .30 | .00 | 1.8 |
| 6 | 1.3 | 6.0 | 2.7 | 4.9 | 11 | 140 | 268 | 32 | 16 | .30 | .00 | 1.8 |
| 7 | 1.3 | 2.0 | 2.7 | 4.7 | 11 | 266 | 333 | 31 | 15 | .40 | .00 | 1.7 |
| 8 | 1.3 | 1.7 | 2.8 | 4.6 | 11 | 284 | 351 | 30 | 14 | .10 | .00 | 1.7 |
| 9 | 1.3 | 1.7 | 2.9 | 4.6 | 10 | 265 | 261 | 29 | 12 | .30 | .00 | 1.6 |
| 10 | 1.3 | 1.7 | 3.2 | 5.0 | 10 | 203 | 184 | 29 | 10 | .00 | .00 | 1.6 |
| 11 | 1.4 | 1.7 | 3.3 | 5.6 | 10 | 146 | 161 | 34 | 9.7 | .00 | .00 | 1.5 |
| 12 | 1.4 | 2.5 | 3.3 | 6.6 | 11 | 122 | 150 | 37 | 9.0 | .00 | .00 | 1.5 |
| 13 | 1.4 | 2.7 | 3.8 | 7.5 | 11 | 111 | 154 | 37 | 7.9 | .20 | .00 | 1.2 |
| 14 | 1.4 | 2.9 | 3.3 | 8.2 | 11 | 94 | 143 | 35 | 7.5 | .00 | .00 | 1.2 |
| 15 | 1.4 | 3.1 | 3.3 | 8.0 | 11 | 85 | 131 | 32 | 6.2 | .00 | .00 | 1.2 |
| 16 | 1.5 | 3.3 | 3.3 | 9.0 | 10 | 81 | 133 | 31 | 4.7 | .10 | .00 | 1.4 |
| 17 | 1.5 | 4.4 | 3.3 | 11 | 10 | 80 | 118 | 31 | 3.7 | .10 | .00 | 1.8 |
| 18 | 1.5 | 5.3 | 4.2 | 14 | 10 | 77 | 97 | 32 | 2.4 | .20 | .00 | 1.9 |
| 19 | 1.5 | 6.2 | 4.3 | 17 | 10 | 86 | 78 | 29 | 1.2 | .10 | .00 | 1.9 |
| 20 | 1.5 | 5.9 | 3.1 | 18 | 10 | 92 | 72 | 27 | 1.1 | .00 | .00 | 1.7 |
| 21 | 1.6 | 6.1 | 2.8 | 16 | 11 | 93 | 67 | 24 | 1.0 | .00 | .00 | 1.7 |
| 22 | 1.6 | 6.1 | 3.1 | 15 | 12 | 100 | 59 | 22 | 1.3 | .00 | .00 | 1.8 |
| 23 | 1.7 | 6.1 | 3.3 | 15 | 11 | 150 | 61 | 24 | 1.4 | .00 | .00 | 2.0 |
| 24 | 2.2 | 5.1 | 3.7 | 14 | 11 | 143 | 62 | 27 | 1.4 | .00 | .00 | 2.2 |
| 25 | 2.3 | 2.2 | 4.7 | 13 | 12 | 124 | 61 | 24 | 1.3 | .00 | .00 | 2.3 |
| 26 | 2.3 | 2.6 | 5.9 | 12 | 12 | 118 | 54 | 25 | 1.2 | .00 | .10 | 2.8 |
| 27 | 2.6 | 2.8 | 6.1 | 13 | 13 | 129 | 46 | 32 | .70 | .00 | .00 | 2.6 |
| 28 | 2.8 | 2.9 | 6.1 | 12 | 20 | 118 | 41 | 32 | .80 | .00 | .00 | 3.4 |
| 29 | 2.5 | 2.8 | 6.1 | 12 | --- | 99 | 35 | 31 | .60 | .00 | .00 | 4.7 |
| 30 | 2.5 | 2.8 | 6.1 | 12 | --- | 86 | 31 | 29 | .70 | .10 | .40 | 7.2 |
| 31 | 2.5 | --- | 6.1 | 12 | --- | 85 | --- | 27 | --- | .00 | .00 | --- |
| TOTAL | 51.7 | 108.2 | 117.2 | 303.6 | 318 | 3634 | 4042 | 937 | 241.80 | 4.40 | .50 | 62.2 |
| MEAN | 1.67 | 3.61 | 3.78 | 9.79 | 11.4 | 117 | 135 | 30.2 | 8.06 | .14 | .016 | 2.07 |
| MAX | 2.8 | 6.2 | 6.1 | 18 | 20 | 284 | 351 | 39 | 25 | .90 | .40 | 7.2 |
| MIN | 1.1 | 1.7 | 2.7 | 4.6 | 10 | 44 | 31 | 22 | .60 | .00 | .00 | 1.1 |
| AC-FT | 103 | 215 | 232 | 602 | 631 | 7210 | 8020 | 1860 | 480 | 8.7 | 1.0 | 123 |
| CAL YR 1976 | TOTAL | 38716.90 | MEAN | 106 | MAX | 1310 | MIN | 1.1 | AC-FT | 76790 | | |
| WTR YR 1977 | TOTAL | 9820.60 | MEAN | 26.9 | MAX | 351 | MIN | .00 | AC-FT | 19480 | | |

UMATILLA RIVER BASIN

14023000 MCKAY RESERVOIR NEAR PENDLETON, OR

LOCATION.--Lat 45°36'28", long 118°47'30", in SE¼ sec.34, T.2 N., R.32 E., Umatilla County, Hydrologic Unit 17070103, on Bureau of Reclamation land, near right end of McKay Dam on McKay Creek, 4.0 mi (6.4 km) south of Pendleton, and at mile 4.9 (7.9 km).

DRAINAGE AREA.--186 mi² (482 km²).

PERIOD OF RECORD.--December 1927 to current year.

REVISED RECORDS.--WSP 1154: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.16 ft (0.049 m) above mean sea level. Prior to Nov. 6, 1973, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by gravel-fill dam with concrete facing, completed in 1926; storage began in 1927. Usable capacity, 73,830 acre-ft (91.0 hm³), between gage heights 1,182.0 ft (360.27 m), floor of trashrack structure, and 1,322.0 ft (402.95 m) top of spillway gates. Dead storage, about 6 acre-ft (7,400 m³), included in records. Water is used for irrigation of land along McKay Creek and Umatilla River.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 73,840 acre-ft (91.0 hm³) June 9, 1950, gage height, 1,322.0 ft (402.95 m); no usable contents Sept. 7, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 31,400 acre-ft (38.7 hm³) June 8, 9, gage height, 1,276.91 ft (389.202 m); minimum, 1,430 acre-ft (1.76 hm³) Aug. 23, 24, gage height, 1,208.69 ft (368.409 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 1,242.78 | 12,240 | - |
| Oct. 31..... | 1,241.81 | 11,820 | -420 |
| Nov. 30..... | 1,242.12 | 11,970 | +150 |
| Dec. 31..... | 1,242.96 | 12,330 | +360 |
| CAL YR 1976..... | - | - | -19,960 |
| Jan. 31..... | 1,245.10 | 13,290 | +960 |
| Feb. 28..... | 1,246.78 | 14,060 | +770 |
| Mar. 31..... | 1,261.52 | 21,730 | +7,670 |
| Apr. 30..... | 1,274.42 | 29,700 | +7,970 |
| May 31..... | 1,276.61 | 31,190 | +1,490 |
| June 30..... | 1,258.20 | 19,670 | -11,520 |
| July 31..... | 1,232.56 | 8,080 | -11,590 |
| Aug. 31..... | 1,209.06 | 1,480 | -6,600 |
| Sept. 30..... | 1,209.77 | 1,580 | +100 |
| WTR YR 1977..... | - | - | -10,660 |

UMATILLA RIVER BASIN

131

14023500 MCKAY CREEK NEAR PENDLETON, OR

LOCATION.--Lat 45°36'34", long 118°47'55", in SE¼NW¼ sec.34, T.2 N., R.32 E., Umatilla County, Hydrologic Unit 17070103, on right bank 35 ft (11 m) upstream from diversion dam, 0.2 mi (0.3 km) downstream from McKay Dam, 4.5 mi (7.2 km) south of Pendleton, and at mile 4.7 (7.6 km).

DRAINAGE AREA.--186 mi² (482 km²).

PERIOD OF RECORD.--November 1918 to May 1919, October 1919 to September 1923, October 1924 to September 1927, November 1927 to September 1943, April 1944 to October 1947 (irrigation seasons only), March 1948 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1154: Drainage area. WSP 1398: 1923.

GAGE.--Water-stage recorder. Concrete control since Mar. 23, 1928. Datum of gage is 1,163.71 ft (354.699 m) above mean sea level (Bureau of Reclamation bench mark). See WSP 1318 or 1738 for history of changes prior to Nov. 16, 1948.

REMARKS.--Records good. Flow completely regulated since 1927 by McKay Reservoir (see station 14023000). Many diversions for irrigation above station. Since 1932, records have excluded flow in Elder ditch which, since 1953, has diverted not over 1.5 ft³/s (0.042 m³/s) at station for irrigation during season and up to 1 ft³/s (0.03 m³/s) seepage from reservoir, for stock water at other times.

AVERAGE DISCHARGE.--40 years (water years 1933-43, 1949-77), 93.1 ft³/s (2.637 m³/s), 67,450 acre-ft/yr (83.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 3,250 ft³/s (92.0 m³/s) Feb. 10, 1921, gage height, 4.4 ft (1.34 m), site and datum then in use, from rating curve extended above 1,200 ft³/s (34.0 m³/s); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 365 ft³/s (10.3 m³/s) July 19, 20, gage height, 1.48 ft (0.451 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|----------|------|------|---------|---------|--------|-------|--------|-------|---------|------|
| 1 | 102 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 306 | 146 | .00 |
| 2 | 73 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 306 | 135 | .00 |
| 3 | 52 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 302 | 133 | .00 |
| 4 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 302 | 133 | .00 |
| 5 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 11 | 8.0 | 235 | 138 | .00 |
| 6 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 11 | 8.0 | 115 | 158 | .00 |
| 7 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 104 | 158 | .00 |
| 8 | .00 | .00 | .00 | .00 | .00 | .00 | 5.9 | 9.5 | 8.0 | 104 | 146 | .00 |
| 9 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 9.5 | 113 | 104 | 140 | .00 |
| 10 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 221 | 104 | 138 | .00 |
| 11 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 225 | 104 | 143 | .00 |
| 12 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 225 | 102 | 152 | .00 |
| 13 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 225 | 102 | 152 | .00 |
| 14 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 225 | 102 | 135 | .00 |
| 15 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 7.0 | 249 | 102 | 128 | .00 |
| 16 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 7.0 | 290 | 104 | 130 | .00 |
| 17 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 7.0 | 306 | 111 | 140 | .00 |
| 18 | .00 | .00 | .00 | .00 | .00 | .00 | 11 | 8.0 | 306 | 174 | 138 | .00 |
| 19 | .00 | .00 | .00 | .00 | .00 | .00 | 12 | 9.5 | 302 | 298 | 138 | .00 |
| 20 | .00 | .00 | .00 | .00 | .00 | .00 | 12 | 9.5 | 302 | 360 | 140 | .00 |
| 21 | .00 | .00 | .00 | .00 | .00 | .00 | 12 | 8.0 | 298 | 355 | 140 | .00 |
| 22 | .00 | .00 | .00 | .00 | .00 | .00 | 12 | 8.0 | 298 | 350 | 138 | .00 |
| 23 | .00 | .00 | .00 | .00 | .00 | .00 | 13 | 8.0 | 298 | 278 | 94 | .00 |
| 24 | .00 | .00 | .00 | .00 | .00 | .00 | 12 | 8.0 | 282 | 140 | .00 | .00 |
| 25 | .00 | .00 | .00 | .00 | .00 | .00 | 8.0 | 8.0 | 270 | 143 | .00 | .00 |
| 26 | .00 | .00 | .00 | .00 | .00 | .00 | 9.5 | 8.0 | 267 | 138 | .00 | .00 |
| 27 | .00 | .00 | .00 | .00 | .00 | .00 | 11 | 8.0 | 278 | 143 | .00 | .00 |
| 28 | .00 | .00 | .00 | .00 | .00 | .00 | 11 | 8.0 | 294 | 149 | .00 | .00 |
| 29 | .00 | .00 | .00 | .00 | --- | .00 | 11 | 8.0 | 290 | 146 | .00 | .00 |
| 30 | .00 | .00 | .00 | .00 | --- | .00 | 9.5 | 8.0 | 298 | 149 | .00 | .00 |
| 31 | .00 | --- | .00 | .00 | --- | .00 | --- | 8.0 | --- | 149 | .00 | --- |
| TOTAL | 227.00 | .00 | .00 | .00 | .00 | .00 | 235.40 | 264.5 | 5926.0 | 5681 | 3193.00 | .00 |
| MEAN | 7.32 | .000 | .000 | .000 | .000 | .000 | 7.85 | 8.53 | 198 | 183 | 103 | .000 |
| MAX | 102 | .00 | .00 | .00 | .00 | .00 | 13 | 11 | 306 | 360 | 158 | .00 |
| MIN | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.0 | 8.0 | 102 | .00 | .00 |
| AC-FT | 450 | .00 | .00 | .00 | .00 | .00 | 467 | 525 | 11750 | 11270 | 6330 | .00 |
| CAL YR 1976 | TOTAL | 44829.00 | MEAN | 122 | MAX 596 | MIN .00 | AC-FT | 88920 | | | | |
| WTR YR 1977 | TOTAL | 15526.90 | MEAN | 42.5 | MAX 360 | MIN .00 | AC-FT | 30800 | | | | |

UMATILLA RIVER BASIN

14026000 UMATILLA RIVER AT YOAKUM, OR

LOCATION.--Lat 45°40'40", long 119°02'00", in SW¼ sec.2, T.2 N., R.30 E., Umatilla County, Hydrologic Unit 17070103, at left bank on downstream side of highway bridge, 0.5 mi (0.8 km) northeast of Yoakum, 2.5 mi (4.0 km) downstream from abandoned Furnish Reservoir, 12.0 mi (19.3 km) downstream from Birch Creek, and at mile 37.7 (60.7 km).

DRAINAGE AREA.--1,280 mi² (3,320 km²), approximately.

PERIOD OF RECORD.--May 1903 to current year. Published as "above Furnish Reservoir, near Yoakum" October 1916 to September 1934.

REVISED RECORDS.--WSP 794: 1906(M). WSP 1398: 1904-6, 1908-9, 1922-23, 1926, 1936.

GAGE.--Water-stage recorder. Datum of gage is 768.21 ft (234.150 m) above mean sea level. See WSP 1318 or 1738 for history of changes prior to Oct. 21, 1948.

REMARKS.--Records good. Slight regulation by Furnish Reservoir 1910-34, capacity, 3,900 acre-ft (4.81 hm³) prior to filling with silt. Flow regulated to some extent since 1927 by McKay Reservoir (see station 14023000). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--74 years, 670 ft³/s (18.97 m³/s), 485,400 acre-ft/yr (598 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) May 30, 1906, gage height, about 15.0 ft (4.57 m), site and datum then in use, from floodmarks, from rating curve extended above 6,600 ft³/s (187 m³/s); minimum, 12 ft³/s (0.34 m³/s) Aug. 10-12, 1908, Aug. 4, 1910.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,790 ft³/s (79.0 m³/s) Apr. 8, gage height, 5.14 ft (1.567 m), no peak above base of 3,600 ft³/s (102 m³/s); minimum, 45 ft³/s (1.27 m³/s) Sept. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|-------|-------|-------|------|------|
| 1 | 233 | 109 | 94 | 105 | 117 | 226 | 529 | 400 | 304 | 364 | 170 | 109 |
| 2 | 220 | 109 | 94 | 100 | 117 | 300 | 624 | 400 | 304 | 364 | 159 | 88 |
| 3 | 210 | 107 | 94 | 98 | 117 | 325 | 559 | 435 | 292 | 364 | 162 | 81 |
| 4 | 194 | 107 | 92 | 96 | 115 | 312 | 630 | 457 | 277 | 364 | 159 | 74 |
| 5 | 170 | 104 | 92 | 92 | 115 | 308 | 1050 | 430 | 258 | 355 | 156 | 67 |
| 6 | 153 | 104 | 90 | 88 | 115 | 368 | 1460 | 386 | 240 | 255 | 182 | 62 |
| 7 | 140 | 102 | 94 | 84 | 115 | 591 | 1830 | 364 | 223 | 230 | 185 | 57 |
| 8 | 125 | 102 | 98 | 78 | 115 | 686 | 2360 | 355 | 210 | 220 | 179 | 54 |
| 9 | 115 | 100 | 100 | 74 | 113 | 716 | 1890 | 355 | 210 | 210 | 159 | 56 |
| 10 | 107 | 98 | 100 | 72 | 113 | 724 | 1420 | 364 | 329 | 197 | 153 | 56 |
| 11 | 100 | 98 | 98 | 74 | 111 | 578 | 1170 | 386 | 333 | 188 | 153 | 53 |
| 12 | 92 | 98 | 96 | 78 | 111 | 469 | 1040 | 391 | 329 | 182 | 164 | 47 |
| 13 | 88 | 98 | 96 | 84 | 109 | 420 | 1100 | 382 | 325 | 173 | 167 | 46 |
| 14 | 83 | 96 | 96 | 94 | 107 | 373 | 1010 | 368 | 325 | 167 | 156 | 46 |
| 15 | 79 | 96 | 96 | 105 | 107 | 329 | 878 | 350 | 329 | 164 | 148 | 47 |
| 16 | 75 | 96 | 96 | 120 | 107 | 308 | 844 | 329 | 364 | 162 | 142 | 47 |
| 17 | 74 | 96 | 96 | 140 | 107 | 300 | 804 | 329 | 382 | 207 | 153 | 50 |
| 18 | 74 | 96 | 96 | 160 | 107 | 277 | 724 | 329 | 373 | 135 | 156 | 54 |
| 19 | 72 | 96 | 94 | 170 | 107 | 292 | 624 | 329 | 368 | 296 | 153 | 54 |
| 20 | 72 | 96 | 94 | 175 | 107 | 300 | 541 | 316 | 373 | 368 | 162 | 62 |
| 21 | 72 | 96 | 92 | 180 | 107 | 296 | 505 | 296 | 368 | 364 | 153 | 62 |
| 22 | 72 | 96 | 90 | 170 | 111 | 289 | 499 | 292 | 368 | 364 | 153 | 65 |
| 23 | 72 | 96 | 90 | 160 | 117 | 346 | 578 | 300 | 359 | 342 | 150 | 70 |
| 24 | 72 | 96 | 88 | 150 | 125 | 517 | 693 | 342 | 355 | 191 | 70 | 70 |
| 25 | 72 | 96 | 90 | 145 | 130 | 481 | 756 | 316 | 333 | 185 | 46 | 77 |
| 26 | 77 | 96 | 105 | 140 | 132 | 440 | 716 | 312 | 325 | 182 | 59 | 87 |
| 27 | 122 | 96 | 110 | 135 | 135 | 451 | 617 | 355 | 329 | 170 | 62 | 85 |
| 28 | 120 | 96 | 110 | 130 | 140 | 505 | 523 | 350 | 350 | 176 | 60 | 90 |
| 29 | 117 | 94 | 110 | 125 | --- | 469 | 457 | 346 | 350 | 176 | 59 | 102 |
| 30 | 113 | 94 | 105 | 120 | --- | 420 | 425 | 337 | 355 | 176 | 88 | 117 |
| 31 | 111 | --- | 105 | 117 | --- | 400 | --- | 316 | --- | 173 | 115 | --- |
| TOTAL | 3496 | 2964 | 3001 | 3659 | 3229 | 12816 | 26856 | 11017 | 9640 | 7464 | 4233 | 2035 |
| MEAN | 113 | 98.8 | 96.8 | 118 | 115 | 413 | 895 | 355 | 321 | 241 | 137 | 67.8 |
| MAX | 233 | 109 | 110 | 180 | 140 | 724 | 2360 | 457 | 382 | 368 | 185 | 117 |
| MIN | 72 | 94 | 88 | 72 | 107 | 226 | 425 | 292 | 210 | 135 | 46 | 46 |
| AC-FT | 6930 | 5880 | 5950 | 7260 | 6400 | 25420 | 53270 | 21850 | 19120 | 14800 | 8400 | 4040 |

CAL YR 1976 TOTAL 282867 MEAN 773 MAX 4910 MIN 72 AC-FT 561100
WTR YR 1977 TOTAL 90410 MEAN 248 MAX 2360 MIN 46 AC-FT 179300

NOTE.--No gage-height record Dec. 26 to Jan. 30.

UMATILLA RIVER BASIN

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14032000 BUTTER CREEK NEAR PINE CITY, OR

LOCATION.--Lat 45°32'40", long 119°18'40", in SW¼ sec.22, T.1 N., R.28 E., Morrow County, Hydrologic Unit 17070103, on right bank 0.5 mi (0.8 km) downstream from Mattlock Canyon, 6.0 mi (9.7 km) southeast of Pine City, 15 mi (24 km) southwest of Echo, and at mile 8.4 (13.5 km).

DRAINAGE AREA.--291 mi² (754 km²).

PERIOD OF RECORD.--April to June 1928, November 1928 to June 1929, October 1929 to September 1930, January 1931 to September 1932, February to June 1933, October 1933 to September 1941, January to June 1942, October 1942 to current year. Prior to October 1945, monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1218: 1950(M).

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft (427 m) by barometer. Prior to Oct. 1, 1944, at datum 1.1 ft (0.34 m) higher and Oct. 1, 1944, to Sept. 6, 1949, at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records good. No regulation. Several small diversions for irrigation above station. Water is diverted into headwaters, of Butter Creek from Fivemile Creek, a tributary of Camas Creek in John Day River basin, for irrigation below station.

AVERAGE DISCHARGE.--45 years (water years 1930, 1932, 1934-41, 1943-77), 25.1 ft³/s (0.711 m³/s), 18,180 acre-ft/yr (22.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,800 ft³/s (108 m³/s) Feb. 21, 1949, gage height, 12.4 ft (3.78 m), present datum, from floodmark, from rating curve extended above 440 ft³/s (12.5 m³/s) on basis of computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 108 ft³/s (3.06 m³/s) Apr. 8, gage height, 2.75 ft (0.838 m), no peak above base of 200 ft³/s (5.66 m³/s); no flow July 31 to Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-------|-------|-------|-------|------|------|--------|-------|------|------|
| 1 | 2.3 | 4.4 | 5.5 | 6.4 | 6.8 | 6.0 | 18 | 20 | 9.2 | .66 | .00 | .26 |
| 2 | 2.3 | 3.8 | 5.5 | 6.8 | 6.8 | 7.6 | 20 | 23 | 9.2 | .54 | .00 | .26 |
| 3 | 2.3 | 3.8 | 6.4 | 6.0 | 6.8 | 10 | 21 | 28 | 10 | .58 | .00 | .26 |
| 4 | 2.5 | 4.1 | 7.2 | 6.4 | 6.4 | 10 | 34 | 28 | 8.0 | .54 | .00 | .26 |
| 5 | 2.3 | 4.4 | 6.8 | 5.2 | 6.4 | 8.8 | 42 | 25 | 7.2 | .62 | .00 | .24 |
| 6 | 2.5 | 4.4 | 6.8 | 4.9 | 6.4 | 8.8 | 42 | 21 | 6.8 | .58 | .00 | .22 |
| 7 | 2.6 | 4.4 | 6.8 | 4.7 | 6.4 | 9.6 | 52 | 20 | 5.7 | .62 | .00 | .22 |
| 8 | 2.6 | 4.4 | 6.8 | 4.6 | 6.4 | 11 | 72 | 21 | 4.9 | .58 | .00 | .20 |
| 9 | 2.6 | 4.4 | 7.2 | 4.7 | 6.4 | 12 | 64 | 19 | 4.7 | .58 | .00 | .11 |
| 10 | 2.6 | 4.4 | 7.2 | 5.0 | 6.4 | 13 | 50 | 20 | 5.5 | .50 | .00 | .17 |
| 11 | 2.5 | 4.4 | 7.2 | 6.0 | 6.4 | 12 | 45 | 24 | 4.9 | .46 | .00 | .20 |
| 12 | 2.5 | 4.9 | 7.2 | 7.0 | 6.4 | 12 | 34 | 26 | 4.7 | .46 | .00 | .22 |
| 13 | 2.5 | 4.9 | 7.2 | 8.0 | 6.8 | 12 | 34 | 27 | 4.4 | .34 | .00 | .22 |
| 14 | 2.5 | 4.9 | 7.2 | 8.5 | 6.8 | 11 | 36 | 25 | 4.4 | .34 | .00 | .22 |
| 15 | 2.5 | 5.2 | 7.2 | 9.0 | 7.2 | 11 | 36 | 23 | 5.7 | .42 | .00 | .20 |
| 16 | 2.5 | 5.5 | 6.8 | 10 | 7.2 | 11 | 37 | 22 | 4.4 | .44 | .00 | .22 |
| 17 | 2.3 | 5.7 | 6.8 | 12 | 7.2 | 12 | 36 | 19 | 3.3 | .45 | .00 | .26 |
| 18 | 2.5 | 5.7 | 6.8 | 14 | 7.2 | 12 | 32 | 19 | 3.1 | .43 | .00 | .28 |
| 19 | 2.5 | 5.5 | 6.8 | 8.4 | 6.8 | 12 | 26 | 18 | 3.1 | .38 | .00 | .30 |
| 20 | 2.8 | 5.5 | 7.2 | 8.0 | 7.2 | 11 | 23 | 15 | 2.6 | .28 | .00 | .30 |
| 21 | 3.0 | 5.5 | 6.8 | 8.0 | 7.2 | 11 | 22 | 13 | 2.5 | .24 | .00 | .28 |
| 22 | 3.0 | 5.7 | 6.8 | 7.6 | 7.2 | 11 | 22 | 12 | 2.1 | .22 | .00 | .28 |
| 23 | 3.0 | 5.7 | 6.8 | 7.2 | 7.2 | 12 | 23 | 12 | 1.8 | .22 | .00 | .30 |
| 24 | 3.1 | 5.7 | 6.8 | 7.2 | 7.2 | 16 | 26 | 14 | 1.4 | .17 | .00 | .42 |
| 25 | 3.3 | 6.0 | 7.2 | 7.2 | 6.4 | 14 | 31 | 12 | 1.1 | .15 | .00 | .50 |
| 26 | 3.3 | 5.7 | 7.2 | 9.2 | 6.0 | 14 | 31 | 12 | .88 | .15 | .00 | .50 |
| 27 | 3.8 | 5.5 | 7.2 | 7.2 | 6.4 | 15 | 28 | 13 | .79 | .20 | .00 | .50 |
| 28 | 4.4 | 5.2 | 7.2 | 6.8 | 6.4 | 16 | 24 | 13 | .79 | .17 | .00 | .62 |
| 29 | 4.1 | 5.7 | 7.2 | 6.4 | --- | 16 | 23 | 12 | .66 | .08 | .00 | .79 |
| 30 | 3.8 | 5.7 | 6.8 | 6.0 | --- | 16 | 23 | 11 | .70 | .05 | .30 | .70 |
| 31 | 3.6 | --- | 6.8 | 6.8 | --- | 16 | --- | 11 | --- | .00 | .34 | --- |
| TOTAL | 88.1 | 151.1 | 213.4 | 225.2 | 188.4 | 369.8 | 1007 | 578 | 124.52 | 11.45 | .64 | 9.51 |
| MEAN | 2.84 | 5.04 | 6.88 | 7.26 | 6.73 | 11.9 | 33.6 | 18.6 | 4.15 | .37 | .021 | .32 |
| MAX | 4.4 | 6.0 | 7.2 | 14 | 7.2 | 16 | 72 | 28 | 10 | .66 | .34 | .79 |
| MIN | 2.3 | 3.8 | 5.5 | 4.6 | 6.0 | 6.0 | 18 | 11 | .66 | .00 | .00 | .11 |
| AC-FT | 175 | 300 | 423 | 447 | 374 | 733 | 2000 | 1150 | 247 | 23 | 1.3 | 19 |
| CAL YR 1976 | TOTAL | 8858.84 | MEAN | 24.2 | MAX | 200 | MIN | .30 | AC-FT | 17570 | | |
| WTR YR 1977 | TOTAL | 2967.12 | MEAN | 8.13 | MAX | 72 | MIN | .00 | AC-FT | 5890 | | |

UMATILLA RIVER BASIN

PRINCIPAL DIVERSIONS FROM UMATILLA RIVER BETWEEN YOAKUM AND UMATILLA GAGING STATIONS, OR

The following canals divert water from Umatilla River between Yoakum and Umatilla, in Umatilla County, Hydrologic Unit 17070103:

14027000 FURNISH CANAL NEAR ECHO diverts from right bank of Umatilla River in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.3 N., R.30 E., for irrigation in vicinity of Stanfield. Records available March 1921 to current year (prior to October 1929 and March 1935 to September 1937 irrigation seasons only). Monthly figures only for irrigation seasons 1921-25, published in WSP 1318.

14029000 UMATILLA PROJECT FEED CANAL NEAR ECHO diverts from right bank of Umatilla River in SW $\frac{1}{4}$ sec.22, T.3 N., R.29 E., and delivers water to Cold Springs Reservoir, capacity, 52,380 acre-ft (64.4 hm³) of Bureau of Reclamation. Records available October 1920 to current year (incomplete 1928, 1943-44).

14030000 ALLEN CANAL AT ECHO diverts from right bank of Western Land Canal, 0.5 mi (0.8 km) downstream from headgate of that canal in SW $\frac{1}{4}$ sec.16, T.3 N., R.29 E., for irrigation west of Echo. Records available May 1921 to current year (irrigation seasons only in most years). Monthly figures only October to December 1923, published in WSP 1318. Published as Western Land & Irrigation Co.'s canal at Echo 1921-39.

14030500 WESTERN LAND CANAL NEAR ECHO diverts from left bank of Umatilla River in NE $\frac{1}{4}$ sec.21, T.3 N., R.29 E., for irrigation west of Echo and Stanfield. Gage is 1 mi (2 km) downstream from intake. Records available May 1921 to current year (irrigation seasons only in many years). Published as Western Land & Irrigation Co.'s canal at Echo 1921-39.

14031500 MAXWELL CANAL NEAR HERMISTON diverts from right bank of Umatilla River in SW $\frac{1}{4}$ sec.28, T.4 N., R.28 E., for irrigation near Hermiston; at times it receives water from Cold Springs Reservoir. Records available March 1921 to current year (irrigation seasons only in most years). REVISIONS (WATER YEARS).--WSP 1398: 1921.

14032500 WEST DIVISION MAIN CANAL NEAR UMATILLA diverts from left bank of Umatilla River in SW $\frac{1}{4}$ sec.28, T.5 N., R.28 E., for irrigation near Irrigon and Boardman. Records of monthly figures April 1921 to current year (incomplete October 1925 to March 1927) Published as "Main canal, west division Umatilla project" 1921, 1923. REVISIONS (WATER YEARS).--WSP 1398: 1923.

Water diverted by all of these canals is used for irrigation of lands on both sides of Umatilla River near and below Echo, except that diverted by West Division main canal which is applied to land along Columbia River in vicinity of Irrigon.

Several small canals also divert water between Yoakum and Umatilla, but no records for these were obtained.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| MONTH | FURNISH CANAL | UMATILLA PROJECT FEED CANAL | ALLEN CANAL | WESTERN LAND CANAL | MAXWELL CANAL | WEST DIVISION MAIN CANAL |
|------------------|------------------|--------------------------------|----------------|-----------------------|------------------|-----------------------------|
| OCTOBER..... | 444 | 371 | 632 | 2,760 | 1,110 | 5,050 |
| NOVEMBER..... | 0 | 4,880 | 0 | 0 | 0 | 0 |
| DECEMBER..... | 0 | 4,430 | 0 | 0 | 0 | 0 |
| JANUARY..... | 0 | 2,570 | 0 | 0 | 0 | 0 |
| FEBRUARY..... | 0 | 5,770 | 0 | 0 | 0 | 0 |
| MARCH..... | 2,910 | 7,690 | 355 | 6,020 | 508 | 3,570 |
| APRIL..... | 6,500 | 13,030 | 1,040 | 11,890 | 3,780 | 8,830 |
| MAY..... | 5,520 | 4,430 | 1,030 | 9,850 | 2,490 | 5,850 |
| JUNE..... | 6,240 | 1,020 | 499 | 9,820 | 1,830 | 3,730 |
| JULY..... | 5,810 | 0 | 1,020 | 5,560 | 1,610 | 3,560 |
| AUGUST..... | 3,800 | 0 | 1,160 | 1,990 | 1,250 | 2,810 |
| SEPTEMBER..... | 0 | 0 | 340 | 2,860 | 1,330 | 2,430 |
| WTR YR 1977..... | 31,220 | 44,180 | 6,070 | 50,750 | 13,900 | 35,820 |

NOTE.--No gage-height record for months of little or no flow and short periods at other times.

UMATILLA RIVER BASIN

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14033500 UMATILLA RIVER NEAR UMATILLA, OR

LOCATION.--Lat 45°54'11", long 119°19'33", in SW 1/4 sec. 21, T.5 N., R.28 E., Umatilla County, Hydrologic Unit 17070103, on left bank 1.6 mi (2.6 km) downstream from West Division main canal of Umatilla project, 1.2 mi (1.9 km) southeast of Umatilla, and at mile 2.1 (3.4 km).

DRAINAGE AREA.--2,290 mi² (5,930 km²), approximately.

PERIOD OF RECORD.--October 1903 to current year.

REVISED RECORDS.--WSP 794: Drainage area. WSP 1398: 1909, 1911, 1914, 1928, 1935.

GAGE.--Water-stage recorder. Datum of gage is 330.47 ft (100.727 m) above mean sea level. Oct. 21, 1903, to Jan. 25, 1931, non-recording gage.

REMARKS.--Records good. Some regulation since 1927 by McKay Reservoir (see station 14023000). Many diversions above station for irrigation of lands above and below station; Brownell Canal diverts below station. Diversions since 1908 to Cold Springs Reservoir, an off-channel reservoir, capacity, 52,380 acre-ft (64.6 hm³).

AVERAGE DISCHARGE.--50 years (water years 1928-77), 441 ft³/s (12.49 m³/s), 319,500 acre-ft/yr (394 hm³/yr). Water years prior to 1928 not included in computation of average discharge owing to increased regulation and diversion since 1927.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,800 ft³/s (561 m³/s) Jan. 30, 1965, gage height, 10.75 ft (3.277 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,020 ft³/s (57.2 m³/s) Apr. 8, gage height, 4.39 ft (1.338 m), no peak above base of 3,100 ft³/s (87.8 m³/s); minimum, 0.14 ft³/s (0.004 m³/s) Sept. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|--------|------|------|------|------|--------|--------|-------|------|------|------|-------|
| 1 | 4.4 | 160 | 102 | 89 | 117 | 86 | 1.3 | .96 | 2.4 | 2.8 | 3.2 | 3.0 |
| 2 | 4.2 | 124 | 102 | 91 | 117 | 313 | 1.1 | .85 | 2.2 | 2.9 | 3.2 | 3.0 |
| 3 | 3.7 | 121 | 108 | 89 | 108 | 390 | 2.4 | .90 | 1.8 | 2.9 | 3.2 | 3.0 |
| 4 | 3.6 | 121 | 156 | 89 | 94 | 405 | 2.3 | .80 | 2.0 | 3.0 | 3.2 | 2.9 |
| 5 | 3.6 | 117 | 168 | 86 | 86 | 376 | 37 | .75 | 1.9 | 2.8 | 3.2 | 2.8 |
| 6 | 3.7 | 117 | 152 | 94 | 86 | 383 | 533 | .75 | 1.8 | 2.8 | 3.2 | 2.8 |
| 7 | 3.7 | 117 | 149 | 97 | 84 | 458 | 974 | .85 | 1.8 | 2.9 | 3.0 | 2.6 |
| 8 | 3.7 | 117 | 149 | 94 | 84 | 607 | 1500 | .85 | 1.7 | 3.0 | 3.0 | 2.6 |
| 9 | 7.0 | 114 | 134 | 111 | 86 | 542 | 1430 | .80 | 1.7 | 3.0 | 2.9 | 2.6 |
| 10 | 11 | 111 | 105 | 105 | 86 | 405 | 899 | 1.1 | 1.6 | 3.0 | 2.9 | 2.6 |
| 11 | 7.0 | 114 | 100 | 105 | 89 | 307 | 515 | .90 | 1.6 | 2.9 | 2.8 | 2.5 |
| 12 | 3.7 | 111 | 97 | 124 | 86 | 172 | 356 | .85 | 1.6 | 2.9 | 2.8 | 2.5 |
| 13 | 3.7 | 111 | 97 | 141 | 84 | 105 | 313 | .96 | 1.5 | 2.9 | 2.8 | 2.5 |
| 14 | 3.7 | 111 | 94 | 160 | 79 | 62 | 343 | .90 | 1.5 | 2.8 | 2.9 | 2.5 |
| 15 | 3.6 | 111 | 94 | 172 | 79 | 48 | 356 | .96 | 1.4 | 2.8 | 2.9 | 2.3 |
| 16 | 19 | 111 | 94 | 172 | 84 | 16 | 307 | .96 | 1.8 | 2.9 | 2.9 | 2.3 |
| 17 | 52 | 108 | 94 | 181 | 81 | 1.5 | 257 | .96 | 2.8 | 3.2 | 2.9 | 2.3 |
| 18 | 60 | 108 | 94 | 190 | 79 | 6.4 | 117 | 1.6 | 2.8 | 3.3 | 2.9 | 2.4 |
| 19 | 77 | 105 | 91 | 218 | 79 | 14 | 60 | 2.5 | 2.7 | 3.3 | 2.9 | 2.3 |
| 20 | 84 | 105 | 91 | 223 | 72 | 6.7 | 24 | 2.4 | 2.6 | 3.3 | 2.9 | 2.3 |
| 21 | 70 | 108 | 91 | 213 | 81 | 2.0 | 2.5 | 2.3 | 2.7 | 3.3 | 2.9 | 2.2 |
| 22 | 58 | 108 | 91 | 203 | 81 | 1.9 | 1.9 | 2.4 | 2.8 | 3.2 | 2.9 | 2.2 |
| 23 | 64 | 105 | 94 | 190 | 84 | 1.9 | 1.5 | 2.6 | 2.8 | 3.2 | 3.0 | 2.2 |
| 24 | 72 | 105 | 91 | 168 | 84 | 1.8 | 2.0 | 2.5 | 2.8 | 3.0 | 3.0 | 1.3 |
| 25 | 131 | 105 | 91 | 149 | 84 | 1.8 | 2.1 | 2.4 | 2.7 | 3.0 | 2.9 | .27 |
| 26 | 164 | 105 | 94 | 134 | 84 | 1.8 | 5.4 | 2.5 | 2.7 | 3.0 | 2.8 | .24 |
| 27 | 181 | 102 | 91 | 131 | 84 | 1.5 | 2.2 | 2.4 | 2.7 | 3.0 | 2.7 | .14 |
| 28 | 160 | 102 | 91 | 127 | 86 | 29 | 1.8 | 2.4 | 2.7 | 3.0 | 2.4 | .35 |
| 29 | 141 | 102 | 91 | 124 | --- | 31 | 1.4 | 2.4 | 2.6 | 3.0 | 2.8 | .35 |
| 30 | 160 | 102 | 91 | 121 | --- | 2.0 | 1.1 | 2.3 | 2.8 | 3.2 | 4.0 | .31 |
| 31 | 160 | --- | 91 | 117 | --- | 1.5 | --- | 2.4 | --- | 3.2 | 3.0 | --- |
| TOTAL | 1723.3 | 3358 | 3278 | 4308 | 2428 | 4779.8 | 8050.0 | 48.20 | 66.5 | 93.5 | 92.1 | 61.36 |
| MEAN | 55.6 | 112 | 106 | 139 | 86.7 | 154 | 268 | 1.55 | 2.22 | 3.02 | 2.97 | 2.05 |
| MAX | 181 | 160 | 168 | 223 | 117 | 607 | 1500 | 2.6 | 2.8 | 3.3 | 4.0 | 3.0 |
| MIN | 3.6 | 102 | 91 | 86 | 72 | 1.5 | 1.1 | .75 | 1.4 | 2.8 | 2.4 | .14 |
| AC-FT | 3420 | 6660 | 6500 | 8540 | 4820 | 9480 | 15970 | 96 | 132 | 185 | 183 | 122 |

CAL YR 1976 TOTAL 183089.80 MEAN 500 MAX 4010 MIN 3.1 AC-FT 363200
WTR YR 1977 TOTAL 28286.76 MEAN 77.5 MAX 1500 MIN .14 AC-FT 56110

WILLOW CREEK BASIN

14034500 WILLOW CREEK AT HEPPNER, OR

LOCATION.--Lat 45°21'02", long 119°32'56", in SE¼NW¼ sec.35, T.2 S., R.26 E., Morrow County, Hydrologic Unit 17070104, on right bank at Heppner, 100 ft (30 m) upstream from Court Street bridge, 800 ft (244 m) southeast of Morrow County courthouse, 0.3 mi (0.5 km) downstream from Balm Fork and at mile 52.2 (84.0 km).

DRAINAGE AREA.--87 mi² (225 km²), approximately.

PERIOD OF RECORD.--May 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,952.73 ft (595.192 m) above mean sea level.

REMARKS.--Records fair. No regulation. Many diversions for irrigation above station. Part of flow of Ditch Creek (John Day River basin) is diverted to Willow Creek above station.

AVERAGE DISCHARGE.--26 years, 18.1 ft³/s (0.513 m³/s), 13,110 acre-ft/yr (16.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 812 ft³/s (23.0 m³/s) May 10, 1957, gage height, 6.15 ft (1.875 m), from rating curve extended above 230 ft³/s (6.51 m³/s); maximum gage height, 6.46 ft (1.969 m) May 25, 1971, backwater from Shobe Canyon; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, about 36,000 ft³/s (1,020 m³/s) June 14, 1903, result of slope-area measurement (see WSP 96). Discharge for flood of Feb. 22, 1949, was 1,700 ft³/s (48.1 m³/s), result of slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 74 ft³/s (2.10 m³/s) Apr. 8, gage height, 2.45 ft (0.747 m), no peak above base of 170 ft³/s (4.81 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 1 | .63 | .46 | 1.2 | 1.3 | 1.3 | 5.9 | 7.3 | 12 | 2.6 | .34 | .01 | .64 |
| 2 | .52 | .52 | 1.2 | 1.2 | 1.4 | 5.6 | 8.6 | 20 | 3.7 | .21 | .08 | .07 |
| 3 | .52 | .74 | 1.1 | 1.1 | 1.1 | 8.4 | 10 | 22 | 3.5 | .32 | .11 | .06 |
| 4 | .63 | 1.8 | 1.1 | 1.0 | .67 | 6.6 | 17 | 18 | 3.9 | .20 | .00 | .05 |
| 5 | .52 | 1.3 | 1.5 | 1.0 | .65 | 7.6 | 30 | 13 | 3.7 | .17 | .02 | .05 |
| 6 | .36 | .80 | 1.7 | .95 | .65 | 7.7 | 37 | 11 | 2.8 | .15 | .07 | .04 |
| 7 | .36 | 1.1 | 1.9 | .95 | .68 | 8.4 | 48 | 11 | 2.4 | .14 | .31 | .03 |
| 8 | .30 | 1.3 | 2.6 | .95 | .69 | 10 | 58 | 9.8 | 1.9 | .10 | .06 | .02 |
| 9 | .28 | 1.5 | 3.1 | 1.0 | .70 | 11 | 37 | 7.7 | 2.4 | .07 | .12 | .02 |
| 10 | .26 | 1.4 | 3.3 | 1.2 | .71 | 9.9 | 23 | 12 | 1.8 | .07 | .51 | .03 |
| 11 | .25 | 1.2 | 3.0 | 1.4 | .84 | 8.9 | 21 | 14 | 1.3 | .13 | .63 | .06 |
| 12 | .21 | 1.1 | 2.8 | 1.6 | .88 | 9.1 | 22 | 18 | 1.5 | .11 | .55 | .05 |
| 13 | .25 | 1.1 | 2.6 | 1.7 | .99 | 8.1 | 24 | 18 | 1.8 | .09 | .22 | .01 |
| 14 | .25 | 1.1 | 2.4 | 1.9 | 1.5 | 7.1 | 23 | 18 | 1.7 | .07 | .08 | .01 |
| 15 | .23 | 1.1 | 2.8 | 2.1 | 1.8 | 7.0 | 22 | 18 | 1.8 | .08 | .08 | .00 |
| 16 | .19 | 1.8 | 2.4 | 2.6 | 1.6 | 6.5 | 25 | 16 | 3.3 | .08 | .07 | .00 |
| 17 | .19 | 2.0 | 2.4 | 3.1 | 2.0 | 6.1 | 23 | 14 | 3.3 | .07 | .04 | .01 |
| 18 | .19 | 2.6 | 2.2 | 3.2 | 2.0 | 5.6 | 21 | 12 | 2.5 | .07 | .06 | .01 |
| 19 | .21 | 2.2 | 1.9 | 3.2 | 1.5 | 5.4 | 17 | 9.5 | 2.3 | .08 | .01 | .06 |
| 20 | .21 | 1.8 | 1.0 | 2.5 | .44 | 4.9 | 15 | 8.3 | 2.0 | .07 | .05 | .00 |
| 21 | .21 | 1.8 | 1.2 | 2.1 | .15 | 4.7 | 14 | 6.7 | 1.9 | .06 | .04 | .04 |
| 22 | .21 | 1.7 | 1.5 | 1.9 | .52 | 3.9 | 13 | 3.3 | 1.6 | .06 | .05 | .00 |
| 23 | .23 | 1.5 | 2.2 | 1.9 | .77 | 3.3 | 15 | 6.7 | 1.1 | .05 | .02 | .01 |
| 24 | .25 | 1.5 | 2.0 | 1.9 | 1.3 | 4.6 | 17 | 6.7 | .86 | .05 | .10 | .01 |
| 25 | .26 | 1.4 | 2.0 | 1.6 | 1.2 | 4.8 | 15 | 5.2 | .53 | .03 | .15 | .01 |
| 26 | 2.2 | 1.4 | 3.0 | 1.7 | .77 | 4.5 | 29 | 5.4 | .38 | .01 | .12 | .01 |
| 27 | 1.3 | 1.0 | 2.8 | 1.6 | 2.0 | 4.4 | 28 | 6.2 | .34 | .02 | .09 | .01 |
| 28 | .36 | .80 | 1.8 | 1.4 | 4.7 | 5.6 | 26 | 5.2 | .43 | .05 | .10 | .03 |
| 29 | .41 | 1.2 | 1.4 | 1.3 | --- | 6.0 | 24 | 1.7 | .29 | .10 | .14 | .09 |
| 30 | .41 | 1.2 | 1.4 | 1.3 | --- | 5.4 | 16 | 1.3 | .24 | .10 | .13 | .30 |
| 31 | .46 | --- | 1.4 | 1.3 | --- | 6.1 | --- | 1.8 | --- | .02 | .80 | --- |
| TOTAL | 12.86 | 40.42 | 62.9 | 51.95 | 33.51 | 203.1 | 685.9 | 332.5 | 57.87 | 3.17 | 4.82 | 1.73 |
| MEAN | .41 | 1.35 | 2.03 | 1.68 | 1.20 | 6.55 | 22.9 | 10.7 | 1.93 | .10 | .16 | .058 |
| MAX | 2.2 | 2.6 | 3.3 | 3.2 | 4.7 | 11 | 58 | 22 | 3.9 | .34 | .80 | .64 |
| MIN | .19 | .46 | 1.0 | .95 | .15 | 3.3 | 7.3 | 1.3 | .24 | .01 | .00 | .00 |
| AC-FT | 26 | 80 | 125 | 103 | 66 | 403 | 1360 | 660 | 115 | 6.3 | 9.6 | 3.4 |
| CAL YR 1976 | TOTAL | 7077.06 | MEAN | 19.3 | MAX | 320 | MIN | .12 | AC-FT | 14040 | | |
| WTR YR 1977 | TOTAL | 1490.73 | MEAN | 4.08 | MAX | 58 | MIN | .00 | AC-FT | 2960 | | |

WILLOW CREEK BASIN

137

14034800 RHEA CREEK NEAR HEPPNER, OR

LOCATION.--Lat 45°15'41", long 119°37'02", in NE¼SE¼ sec.31, T.3 S., R.26 E., Morrow County, Hydrologic Unit 17070104, on right bank 1.3 mi (2.1 km) downstream from Sanford Canyon, 8 mi (13 km) southwest of Heppner, and at mile 25.2 (40.5 km).

DRAINAGE AREA.--120 mi² (311 km²), approximately.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,320 ft (707 m), from topographic map. Prior to May 28, 1976, at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records good. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--17 years, 17.5 ft³/s (0.496 m³/s), 12,680 acre-ft/yr (15.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,280 ft³/s (36.2 m³/s) June 10, 1969, gage height, 7.05 ft (2.149 m), site and datum then in use, from rating curve extended above 130 ft³/s (3.68 m³/s) on basis of slope-area measurement at gage height 6.72 ft (2.048 m); maximum gage height, 7.41 ft (2.259 m) Dec. 22, 1964, site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 54 ft³/s (1.53 m³/s) Apr. 7, 8, gage height, 1.88 ft (0.573 m), no peak above base of 230 ft³/s (6.51 m³/s); no flow July 22 to Aug. 27, Aug. 29, 30, Sept. 3-18, 20-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|------|------|-----------|---------|---------|-------------|-------|-------|------|------|-------|
| 1 | .52 | 1.7 | 2.7 | 2.3 | 2.8 | 7.7 | 14 | 4.9 | 3.8 | .24 | .00 | .75 |
| 2 | .76 | 2.5 | 2.1 | 2.2 | 3.0 | 5.9 | 15 | 8.6 | 4.0 | .28 | .00 | .03 |
| 3 | 1.1 | 2.5 | 2.4 | 2.3 | 2.8 | 7.6 | 19 | 7.9 | 4.0 | .24 | .00 | .00 |
| 4 | 1.0 | 2.6 | 2.6 | 2.4 | 2.7 | 5.0 | 28 | 2.8 | 4.0 | .15 | .00 | .00 |
| 5 | 1.0 | 2.4 | 2.4 | 2.1 | 2.7 | 6.9 | 35 | 2.6 | 3.5 | .15 | .00 | .00 |
| 6 | .95 | 2.3 | 2.8 | 2.0 | 2.6 | 11 | 41 | 2.6 | 3.7 | .36 | .00 | .00 |
| 7 | .87 | 2.3 | 3.0 | 1.9 | 2.7 | 15 | 43 | 2.5 | 2.9 | .23 | .00 | .00 |
| 8 | .85 | 2.2 | 3.4 | 1.8 | 2.7 | 8.2 | 41 | 2.5 | 2.9 | .20 | .00 | .00 |
| 9 | .62 | 2.3 | 3.5 | 1.9 | 3.2 | 7.9 | 31 | 6.0 | 3.4 | .21 | .00 | .00 |
| 10 | .09 | 2.3 | 3.3 | 2.0 | 3.6 | 6.9 | 25 | 9.8 | 2.7 | .28 | .00 | .00 |
| 11 | .12 | 2.4 | 3.2 | 2.5 | 4.5 | 6.0 | 22 | 8.2 | 1.7 | .24 | .00 | .00 |
| 12 | .10 | 2.3 | 2.8 | 3.4 | 3.8 | 7.1 | 18 | 11 | 2.2 | .23 | .00 | .00 |
| 13 | .09 | 2.1 | 3.2 | 3.8 | 4.8 | 6.3 | 19 | 9.8 | 2.3 | .20 | .00 | .00 |
| 14 | .12 | 2.2 | 2.7 | 4.3 | 3.0 | 6.3 | 17 | 9.7 | 1.9 | .18 | .00 | .00 |
| 15 | .19 | 2.4 | 3.4 | 4.4 | 1.7 | 6.5 | 15 | 8.5 | 2.0 | .15 | .00 | .00 |
| 16 | .26 | 3.4 | 3.1 | 4.6 | 2.2 | 6.9 | 16 | 9.2 | 1.9 | .08 | .00 | .00 |
| 17 | .21 | 2.9 | 3.5 | 4.9 | 1.7 | 6.6 | 13 | 8.9 | 1.6 | .03 | .00 | .00 |
| 18 | .25 | 3.3 | 3.1 | 5.7 | 1.8 | 6.5 | 12 | 7.9 | 1.4 | .06 | .00 | .00 |
| 19 | .37 | 3.2 | 2.3 | 6.4 | 1.7 | 6.1 | 11 | 6.4 | 1.2 | .06 | .00 | .14 |
| 20 | .38 | 2.9 | 1.9 | 4.8 | 2.5 | 6.1 | 10 | 4.5 | 1.2 | .05 | .00 | .00 |
| 21 | .40 | 2.7 | 2.4 | 4.3 | 4.0 | 6.1 | 9.8 | 4.5 | 1.5 | .03 | .00 | .00 |
| 22 | .65 | 2.6 | 3.0 | 4.0 | 4.2 | 6.5 | 8.3 | 3.8 | 1.5 | .00 | .00 | .00 |
| 23 | .71 | 2.6 | 2.8 | 3.3 | 2.9 | 9.5 | 6.2 | 4.2 | .84 | .00 | .00 | .00 |
| 24 | .83 | 2.5 | 3.3 | 3.0 | 2.5 | 8.6 | 7.3 | 4.2 | .42 | .00 | .00 | .76 |
| 25 | 1.3 | 2.5 | 3.1 | 2.7 | 3.4 | 6.7 | 7.1 | 4.2 | .33 | .00 | .00 | 1.5 |
| 26 | 2.9 | 2.4 | 3.5 | 2.6 | 5.1 | 6.9 | 6.4 | 4.2 | .26 | .00 | .00 | .49 |
| 27 | 2.0 | 2.0 | 3.5 | 2.6 | 4.7 | 10 | 5.7 | 5.0 | .25 | .00 | .00 | .35 |
| 28 | 1.4 | 2.2 | 2.4 | 3.2 | 7.1 | 11 | 4.7 | 4.2 | .20 | .00 | .06 | .22 |
| 29 | 1.4 | 2.4 | 2.3 | 2.4 | --- | 11 | 3.9 | 4.2 | .21 | .00 | .00 | 7.2 |
| 30 | 1.5 | 2.6 | 2.3 | 2.4 | --- | 9.5 | 3.7 | 4.5 | .22 | .00 | .00 | 4.5 |
| 31 | 1.5 | --- | 2.2 | 2.5 | --- | 11 | --- | 3.8 | --- | .00 | .68 | --- |
| TOTAL | 24.44 | 74.7 | 88.2 | 98.7 | 90.4 | 243.3 | 508.1 | 181.1 | 58.03 | 3.67 | .74 | 15.94 |
| MEAN | .79 | 2.49 | 2.85 | 3.18 | 3.23 | 7.85 | 16.9 | 5.84 | 1.93 | .12 | .024 | .53 |
| MAX | 2.9 | 3.4 | 3.5 | 6.4 | 7.1 | 15 | 43 | 11 | 4.0 | .36 | .68 | 7.0 |
| MIN | .09 | 1.7 | 1.9 | 1.8 | 1.7 | 5.0 | 3.7 | 2.5 | .20 | .00 | .00 | .00 |
| AC-FT | 48 | 148 | 175 | 196 | 179 | 483 | 1010 | 359 | 115 | 7.3 | 1.5 | 32 |
| CAL YR 1976 TOTAL | 5861.03 | | | MEAN 16.0 | MAX 253 | MIN .00 | AC-FT 11630 | | | | | |
| WTR YR 1977 TOTAL | 1387.32 | | | MEAN 3.80 | MAX 43 | MIN .00 | AC-FT 2750 | | | | | |

WILLOW CREEK BASIN

14036000 WILLOW CREEK NEAR ARLINGTON, OR

LOCATION.--Lat 45°45'12", long 120°00'35", in NE¼SW¼ sec.12, T.3 N., R.22 E., Gilliam County, Hydrologic Unit 17070104, on right bank at bridge on discontinued highway, 3.8 mi (6.1 km) downstream from Eightmile Canyon, 10 mi (16 km) east of Arlington, and at mile 3.7 (6.0 km).

DRAINAGE AREA.--850 mi² (2,200 km²), approximately.

PERIOD OF RECORD.--March to July 1906, August 1960 to current year. Records for March to August 1905 at site just upstream from Eightmile Canyon not equivalent owing to diversions and inflow.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 291.26 ft (88.776 m) above mean sea level. Mar. 1 to July 21, 1906, nonrecording gage at site 2.6 mi (4.2 km) upstream at different datum. Aug. 24, 1960, to July 1, 1964, water-stage recorder at site 430 ft (131 m) downstream at same datum.

REMARKS.--Records fair. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--17 years, 28.4 ft³/s (0.804 m³/s), 20,580 acre-ft/yr (25.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s (479 m³/s) probably occurred Jan. 14, 1974, gage height, 11.18 ft (3.408 m), from floodmark, from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurement at gage height 11.05 ft (3.368 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26 ft³/s (0.74 m³/s) Nov. 5, gage height, 3.35 ft (1.021 m), no peak above base of 400 ft³/s (11.3 m³/s); no flow many days during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|-------|-------|------|------|-------|-------|-------|-------|-------|
| 1 | 1.7 | 2.9 | 1.4 | 1.2 | 1.0 | .17 | .09 | .62 | .62 | 0 | .09 | 1.7 |
| 2 | .03 | 2.2 | 1.2 | 1.2 | 2.6 | .17 | .09 | .88 | .88 | .03 | .06 | 1.7 |
| 3 | .01 | .62 | 1.2 | 1.2 | 2.2 | .13 | .09 | .88 | .74 | .17 | .13 | 1.2 |
| 4 | .09 | .51 | 1.2 | 1.0 | 2.0 | .13 | .09 | .74 | 2.0 | .22 | 1.7 | .62 |
| 5 | .62 | 5.3 | 1.2 | .88 | 2.6 | .13 | .09 | .51 | .51 | .09 | 1.2 | .41 |
| 6 | 0 | 3.2 | 1.2 | .74 | 2.2 | .41 | .09 | .88 | .51 | .17 | .62 | .41 |
| 7 | .09 | 1.4 | 1.2 | .88 | 1.0 | .33 | .09 | 1.4 | .41 | .22 | 2.9 | .41 |
| 8 | 0 | 1.7 | 1.2 | .88 | 1.0 | .13 | .06 | 2.2 | 1.7 | .41 | .74 | .62 |
| 9 | 0 | 2.0 | 1.2 | .92 | .88 | .03 | .06 | 2.0 | 1.0 | .62 | .51 | 4.8 |
| 10 | 0 | 2.0 | 1.0 | .80 | .88 | 0 | .04 | 1.2 | .74 | .22 | 1.2 | 4.0 |
| 11 | 0 | 2.0 | 1.0 | .62 | .51 | 0 | 0 | 2.9 | .41 | 0 | 1.4 | 3.2 |
| 12 | 0 | 2.2 | 1.0 | .33 | .51 | 0 | 0 | 1.4 | .88 | 0 | .88 | 3.6 |
| 13 | 0 | 2.2 | 1.2 | .17 | .33 | 0 | 0 | 1.0 | 1.2 | .17 | .41 | 4.8 |
| 14 | 0 | 2.2 | 1.2 | .33 | .27 | 0 | .06 | .88 | .74 | .06 | .06 | .88 |
| 15 | 0 | 2.2 | 1.2 | .88 | .22 | 0 | .09 | 1.7 | 0 | .13 | .33 | .27 |
| 16 | 0 | 2.9 | 1.2 | .88 | .27 | 0 | .06 | 1.7 | .17 | .74 | .62 | .22 |
| 17 | .02 | 2.2 | 1.4 | 2.0 | .27 | 0 | .09 | .88 | .17 | .33 | .17 | .27 |
| 18 | .09 | 2.2 | 1.4 | 9.0 | .27 | .17 | .13 | 1.7 | .17 | .27 | .22 | .27 |
| 19 | .17 | 2.2 | 1.4 | 7.4 | .17 | .27 | .13 | .74 | .17 | .41 | .74 | .27 |
| 20 | .13 | 2.2 | 1.2 | 3.6 | .22 | .51 | .62 | .41 | .22 | .51 | 2.2 | .22 |
| 21 | .13 | 2.2 | 1.2 | 3.6 | .22 | .04 | .62 | .27 | 1.2 | .51 | 2.9 | .22 |
| 22 | .09 | 2.6 | 1.2 | 1.4 | .13 | 0 | .04 | .41 | 2.6 | .51 | 1.4 | .27 |
| 23 | .09 | 2.6 | 1.2 | 1.0 | .13 | .03 | .09 | .74 | 2.6 | .27 | 3.2 | .33 |
| 24 | .09 | 2.2 | 1.2 | .88 | .13 | .09 | .51 | .74 | 2.6 | .51 | .88 | .41 |
| 25 | .22 | 1.7 | 1.2 | 1.2 | .13 | .09 | .41 | .17 | 2.9 | .74 | .41 | .41 |
| 26 | .74 | 2.0 | 1.7 | .74 | .62 | .13 | .27 | .33 | 2.2 | 1.7 | 2.9 | .41 |
| 27 | .62 | 2.0 | 2.0 | .74 | .13 | .09 | .33 | .22 | .51 | 1.7 | .74 | .41 |
| 28 | .74 | 2.0 | 1.2 | .74 | .74 | .09 | .62 | .27 | .22 | 1.0 | .88 | .33 |
| 29 | .88 | 1.7 | 1.0 | .74 | --- | .09 | .74 | .88 | .41 | .22 | .62 | .33 |
| 30 | 2.6 | 1.4 | 1.2 | .74 | --- | .09 | .74 | .62 | .22 | .13 | 1.2 | .51 |
| 31 | 2.2 | --- | 1.2 | .62 | --- | .09 | --- | .04 | --- | .13 | .74 | --- |
| TOTAL | 11.35 | 64.73 | 38.5 | 47.31 | 21.63 | 3.41 | 6.34 | 29.31 | 28.70 | 12.19 | 32.05 | 33.50 |
| MEAN | .37 | 2.16 | 1.24 | 1.53 | .77 | .11 | .21 | .95 | .96 | .39 | 1.03 | 1.12 |
| MAX | 2.6 | 5.3 | 2.0 | 9.0 | 2.6 | .51 | .74 | 2.9 | 2.9 | 1.7 | 3.2 | 4.8 |
| MIN | 0 | .51 | 1.0 | .17 | .13 | 0 | 0 | .04 | 0 | 0 | .06 | .22 |
| AC-FT | 23 | 128 | 76 | 94 | 43 | 6.8 | 13 | 58 | 57 | 24 | 64 | 66 |
| CAL YR 1976 | TOTAL | 8183.89 | MEAN | 22.4 | MAX | 445 | MIN | 0 | AC-FT | 16230 | | |
| WTR YR 1977 | TOTAL | 329.02 | MEAN | .90 | MAX | 9.0 | MIN | 0 | AC-FT | 653 | | |

14037500 STRAWBERRY CREEK ABOVE SLIDE CREEK, NEAR PRAIRIE CITY, OR

LOCATION.--Lat 44°20'30", long 118°39'20", in SE¼NW¼ sec.20, T.14 S., R.34 E., Grant County, Hydrologic Unit 17070201, on left bank 100 ft (30 m) upstream from Slide Creek, 8.5 mi (13.7 km) south of Prairie City, and at mile 9.0 (14.5 km).

DRAINAGE AREA.--7.00 mi² (18.13 km²).

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1944, published as "above South Fork, near Prairie City."

REVISED RECORDS.--WSP 1488: 1932-33. WSP 1738: Drainage area.

GAGE.--Water-stage recorder and log control. Datum of gage is 4,909.57 ft (1,496.437 m) above mean sea level.

REMARKS.--Records good. Flow affected by natural storage in Strawberry Lake. No diversion above station.

AVERAGE DISCHARGE.--47 years, 12.7 ft³/s (0.360 m³/s), 24.64 in/yr (626 mm/yr), 9,200 acre-ft/yr (11.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 274 ft³/s (7.76 m³/s) June 14, 1974, gage height, 2.20 ft (0.671 m), from rating curve extended above 190 ft³/s (5.38 m³/s); maximum gage height, 3.23 ft (0.985 m) May 24, 1956 (backwater from logs); minimum discharge, 1.0 ft³/s (0.028 m³/s) Mar. 20, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30 ft³/s (0.85 m³/s) June 9-11, gage height, 1.63 ft (0.497 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Jan. 6, Feb. 1 to Mar. 12, Mar. 16 to Apr. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|------|------|-----------|--------|---------|-----------|----------|------------|-------|------|------|
| 1 | 3.5 | 2.8 | 2.6 | 2.2 | 1.5 | 1.5 | 1.5 | 8.1 | 16 | 12 | 3.5 | 2.2 |
| 2 | 3.5 | 2.8 | 2.4 | 2.2 | 1.5 | 1.5 | 1.5 | 8.5 | 17 | 12 | 3.3 | 2.2 |
| 3 | 3.5 | 2.6 | 2.4 | 2.2 | 1.5 | 1.5 | 1.7 | 8.5 | 17 | 11 | 3.3 | 2.2 |
| 4 | 3.3 | 2.6 | 2.4 | 2.2 | 1.5 | 1.5 | 1.7 | 8.5 | 20 | 11 | 3.3 | 2.2 |
| 5 | 3.3 | 2.8 | 2.4 | 1.8 | 1.5 | 1.5 | 1.7 | 8.5 | 23 | 10 | 3.3 | 2.2 |
| 6 | 3.3 | 2.8 | 2.4 | 1.5 | 1.5 | 1.5 | 1.8 | 8.5 | 25 | 9.5 | 3.3 | 2.0 |
| 7 | 3.3 | 2.8 | 2.6 | 1.7 | 1.5 | 1.5 | 2.2 | 8.5 | 27 | 9.0 | 3.3 | 2.0 |
| 8 | 3.3 | 2.8 | 2.6 | 1.9 | 1.5 | 1.5 | 2.8 | 8.1 | 29 | 8.5 | 3.1 | 2.0 |
| 9 | 3.3 | 2.8 | 2.6 | 1.7 | 1.5 | 1.5 | 2.6 | 8.5 | 30 | 8.5 | 3.1 | 2.0 |
| 10 | 3.2 | 2.8 | 2.6 | 1.7 | 1.5 | 1.5 | 2.4 | 8.5 | 30 | 8.1 | 3.1 | 2.0 |
| 11 | 3.1 | 2.8 | 2.6 | 1.8 | 1.5 | 1.5 | 2.6 | 8.5 | 30 | 7.6 | 2.8 | 2.0 |
| 12 | 3.1 | 2.8 | 2.4 | 1.8 | 1.5 | 1.5 | 2.6 | 8.5 | 28 | 7.2 | 2.8 | 1.8 |
| 13 | 3.1 | 2.8 | 2.4 | 1.8 | 1.5 | 1.6 | 2.8 | 9.0 | 27 | 6.8 | 2.8 | 1.8 |
| 14 | 3.1 | 2.8 | 2.4 | 1.8 | 1.5 | 1.8 | 2.8 | 9.0 | 24 | 6.4 | 3.1 | 1.8 |
| 15 | 3.3 | 2.8 | 2.4 | 1.8 | 1.5 | 1.6 | 2.8 | 9.0 | 23 | 6.4 | 2.8 | 1.8 |
| 16 | 3.3 | 2.8 | 2.4 | 1.7 | 1.5 | 1.5 | 3.1 | 9.0 | 22 | 6.0 | 2.8 | 1.8 |
| 17 | 3.2 | 2.8 | 2.4 | 1.7 | 1.5 | 1.5 | 3.1 | 9.0 | 20 | 6.0 | 2.4 | 1.8 |
| 18 | 3.1 | 2.8 | 2.4 | 1.7 | 1.5 | 1.5 | 3.1 | 8.5 | 19 | 5.6 | 2.4 | 1.8 |
| 19 | 3.1 | 2.6 | 2.4 | 1.7 | 1.5 | 1.5 | 3.1 | 8.5 | 18 | 5.3 | 2.4 | 2.0 |
| 20 | 3.1 | 2.6 | 2.4 | 1.7 | 1.5 | 1.5 | 3.1 | 9.0 | 18 | 5.0 | 2.4 | 2.0 |
| 21 | 3.1 | 2.6 | 2.4 | 1.7 | 1.5 | 1.5 | 3.1 | 9.0 | 17 | 5.0 | 2.4 | 2.0 |
| 22 | 3.1 | 2.6 | 2.4 | 1.7 | 1.5 | 1.5 | 3.5 | 10 | 17 | 4.7 | 2.2 | 2.0 |
| 23 | 3.0 | 2.6 | 2.4 | 1.7 | 1.5 | 1.5 | 3.8 | 11 | 16 | 4.7 | 2.2 | 2.2 |
| 24 | 3.0 | 2.6 | 2.4 | 1.7 | 1.5 | 1.5 | 4.7 | 11 | 15 | 4.1 | 2.6 | 2.4 |
| 25 | 2.8 | 2.6 | 2.4 | 1.7 | 1.5 | 1.5 | 5.6 | 11 | 15 | 4.1 | 2.4 | 2.2 |
| 26 | 2.8 | 2.4 | 2.2 | 1.7 | 1.5 | 1.5 | 6.0 | 12 | 14 | 3.8 | 2.6 | 2.2 |
| 27 | 2.6 | 2.0 | 2.2 | 1.7 | 1.5 | 1.5 | 6.0 | 12 | 14 | 3.8 | 2.4 | 2.2 |
| 28 | 2.6 | 2.1 | 2.2 | 1.7 | 1.5 | 1.5 | 6.4 | 12 | 13 | 3.5 | 2.4 | 3.1 |
| 29 | 2.6 | 2.3 | 2.2 | 1.7 | --- | 1.5 | 6.8 | 12 | 13 | 3.5 | 2.2 | 3.1 |
| 30 | 2.6 | 2.4 | 2.2 | 1.8 | --- | 1.5 | 7.2 | 12 | 12 | 3.5 | 2.4 | 3.1 |
| 31 | 2.6 | --- | 2.2 | 1.8 | --- | 1.5 | --- | 13 | --- | 3.5 | 2.2 | --- |
| TOTAL | 95.8 | 79.4 | 74.4 | 55.5 | 42.0 | 47.0 | 102.1 | 297.2 | 609 | 206.1 | 85.3 | 64.1 |
| MEAN | 3.09 | 2.65 | 2.40 | 1.79 | 1.50 | 1.52 | 3.40 | 9.59 | 20.3 | 6.65 | 2.75 | 2.14 |
| MAX | 3.5 | 2.8 | 2.6 | 2.2 | 1.5 | 1.8 | 7.2 | 13 | 30 | 12 | 3.5 | 3.1 |
| MIN | 2.6 | 2.0 | 2.2 | 1.5 | 1.5 | 1.5 | 1.5 | 8.1 | 12 | 3.5 | 2.2 | 1.8 |
| CFSM | .44 | .38 | .34 | .26 | .21 | .22 | .49 | 1.37 | 2.90 | .95 | .39 | .31 |
| IN. | .51 | .42 | .40 | .29 | .22 | .25 | .54 | 1.58 | 3.24 | 1.10 | .45 | .34 |
| AC-FT | 190 | 157 | 148 | 110 | 83 | 93 | 203 | 589 | 1210 | 409 | 169 | 127 |
| CAL YR 1976 TOTAL | 4083.4 | | | MEAN 11.2 | MAX 63 | MIN 2.0 | CFSM 1.60 | IN 21.70 | AC-FT 8100 | | | |
| WTR YR 1977 TOTAL | 1757.9 | | | MEAN 4.82 | MAX 30 | MIN 1.5 | CFSM .69 | IN 9.34 | AC-FT 3490 | | | |

JOHN DAY RIVER BASIN

14038530 JOHN DAY RIVER NEAR JOHN DAY, OR

LOCATION.--Lat 44°25'10", long 118°54'10", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.13 S., R.32 E., Grant County, Hydrologic Unit 17070201, on left bank 800 ft (244 m) downstream from Dog Creek, 2.5 mi (4.0 km) east of John Day, and at mile 251.0 (403.9 km).

DRAINAGE AREA.--386 mi² (1,000 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,130.56 ft (954.195 m) above mean sea level.

REMARKS.--Records good except those for May to September, which are fair. Some regulation from irrigation ditches upstream. Many diversions above station for irrigation.

AVERAGE DISCHARGE.--9 years, 194 ft³/s (5.494 m³/s), 140,600 acre-ft/yr (173 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,830 ft³/s (165 m³/s) June 9, 1969, gage height, 10.80 ft (3.292 m), from floodmark; minimum, 3.5 ft³/s (0.099 m³/s) Aug. 26-28, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 251 ft³/s (7.11 m³/s) June 7, gage height, 4.10 ft (1.250 m), no peak above base of 800 ft³/s (22.7 m³/s); minimum daily, 4.5 ft³/s (0.13 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|------|------|------|-------|--------|-------|------|
| 1 | 70 | 86 | 92 | 86 | 84 | 93 | 101 | 31 | 58 | 24 | 24 | 23 |
| 2 | 78 | 86 | 92 | 89 | 84 | 87 | 97 | 65 | 75 | 24 | 23 | 23 |
| 3 | 84 | 84 | 92 | 89 | 80 | 86 | 99 | 70 | 73 | 23 | 14 | 23 |
| 4 | 82 | 82 | 92 | 89 | 82 | 87 | 105 | 77 | 73 | 23 | 12 | 23 |
| 5 | 80 | 82 | 92 | 67 | 82 | 91 | 109 | 78 | 78 | 25 | 11 | 23 |
| 6 | 77 | 82 | 92 | 38 | 84 | 103 | 115 | 78 | 89 | 27 | 11 | 23 |
| 7 | 80 | 84 | 98 | 58 | 87 | 103 | 129 | 126 | 135 | 29 | 11 | 23 |
| 8 | 80 | 84 | 100 | 58 | 99 | 105 | 143 | 115 | 175 | 33 | 11 | 23 |
| 9 | 71 | 84 | 100 | 68 | 101 | 105 | 135 | 111 | 129 | 33 | 11 | 23 |
| 10 | 73 | 84 | 98 | 80 | 93 | 99 | 113 | 120 | 113 | 33 | 7.6 | 23 |
| 11 | 75 | 86 | 93 | 95 | 87 | 89 | 109 | 133 | 107 | 29 | 6.7 | 23 |
| 12 | 75 | 86 | 93 | 130 | 91 | 97 | 105 | 148 | 111 | 33 | 4.5 | 23 |
| 13 | 73 | 87 | 93 | 150 | 95 | 91 | 111 | 143 | 113 | 35 | 6.7 | 23 |
| 14 | 73 | 97 | 93 | 145 | 89 | 89 | 105 | 124 | 126 | 34 | 8.5 | 23 |
| 15 | 73 | 95 | 93 | 120 | 86 | 87 | 97 | 126 | 105 | 42 | 9.4 | 24 |
| 16 | 71 | 103 | 95 | 110 | 89 | 86 | 99 | 135 | 95 | 46 | 8.0 | 31 |
| 17 | 70 | 97 | 95 | 100 | 93 | 84 | 97 | 135 | 80 | 45 | 6.7 | 40 |
| 18 | 70 | 95 | 89 | 96 | 91 | 86 | 95 | 129 | 68 | 42 | 7.0 | 49 |
| 19 | 71 | 93 | 80 | 94 | 89 | 87 | 89 | 120 | 58 | 33 | 11 | 44 |
| 20 | 71 | 91 | 84 | 90 | 89 | 87 | 80 | 105 | 53 | 34 | 12 | 67 |
| 21 | 71 | 93 | 94 | 87 | 91 | 82 | 77 | 87 | 42 | 30 | 15 | 55 |
| 22 | 77 | 93 | 94 | 89 | 93 | 84 | 71 | 89 | 36 | 30 | 22 | 48 |
| 23 | 75 | 91 | 92 | 87 | 86 | 86 | 65 | 111 | 34 | 32 | 22 | 36 |
| 24 | 75 | 91 | 90 | 78 | 87 | 91 | 61 | 122 | 33 | 33 | 25 | 82 |
| 25 | 89 | 91 | 94 | 76 | 86 | 78 | 54 | 118 | 31 | 31 | 30 | 82 |
| 26 | 97 | 87 | 94 | 77 | 87 | 80 | 48 | 140 | 28 | 30 | 34 | 77 |
| 27 | 86 | 70 | 94 | 73 | 87 | 78 | 42 | 148 | 25 | 32 | 23 | 73 |
| 28 | 86 | 70 | 90 | 71 | 95 | 84 | 35 | 118 | 24 | 32 | 22 | 82 |
| 29 | 86 | 88 | 88 | 76 | --- | 80 | 30 | 99 | 24 | 29 | 22 | 109 |
| 30 | 84 | 88 | 86 | 84 | --- | 80 | 26 | 89 | 24 | 31 | 23 | 80 |
| 31 | 84 | --- | 82 | 82 | --- | 82 | --- | 68 | --- | 26 | 23 | --- |
| TOTAL | 2407 | 2630 | 2854 | 2732 | 2487 | 2747 | 2642 | 3358 | 2215 | 983 | 477.1 | 1301 |
| MEAN | 77.6 | 87.7 | 92.1 | 88.1 | 88.8 | 88.6 | 88.1 | 108 | 73.8 | 31.7 | 15.4 | 43.4 |
| MAX | 97 | 103 | 100 | 150 | 101 | 105 | 143 | 148 | 175 | 46 | 34 | 109 |
| MIN | 70 | 70 | 80 | 38 | 80 | 78 | 26 | 31 | 24 | 23 | 4.5 | 23 |
| AC-FT | 4770 | 5220 | 5660 | 5420 | 4930 | 5450 | 5240 | 6660 | 4390 | 1950 | 946 | 2580 |
| CAL YR 1976 | TOTAL | 64237.0 | MEAN | 176 | MAX | 706 | MIN | 22 | AC-FT | 127400 | | |
| WTR YR 1977 | TOTAL | 26833.1 | MEAN | 73.5 | MAX | 175 | MIN | 4.5 | AC-FT | 53220 | | |

JOHN DAY RIVER BASIN

141

14040500 JOHN DAY RIVER AT PICTURE GORGE, NEAR DAYVILLE, OR

LOCATION.--Lat 44°31'15", long 119°37'30", in SW¼ sec.17, T.12 S., R.26 E., Grant County, Hydrologic Unit 17070201, on right bank 0.7 mi (1.1 km) upstream from Rock Creek, 5.5 mi (8.8 km) northwest of Dayville, and at mile 205.1 (330.0 km).

DRAINAGE AREA.--1,680 mi² (4,350 km²), approximately.

PERIOD OF RECORD.--April 1926 to current year. Monthly discharge only April 1926, published in WSP 1318.

REVISED RECORDS.--WSP 1218: 1950. WSP 1348: Drainage area. WSP 1448: 1926, 1928, 1932(M), 1936.

GAGE.--Water-stage recorder. Datum of gage is 2,229.84 ft (679.655 m) above mean sea level. Prior to Oct. 11, 1926, nonrecording gage and Oct. 11, 1926, to Sept. 30, 1930, water-stage recorder at same site at datum 2.50 ft (0.762 m) higher. Oct. 1, 1930, to Aug. 28, 1970, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--51 years, 464 ft³/s (13.14 m³/s), 336,200 acre-ft/yr (415 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft³/s (231 m³/s) Dec. 22, 1964, gage height, 14.97 ft (4.563 m); minimum, 1.0 ft³/s (0.028 m³/s) for several days in August and September 1930, Aug. 8, 9, 1936, Sept. 9, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 958 ft³/s (27.1 m³/s) June 8, gage height, 6.35 ft (1.935 m), from floodmarks, no peak above base of 1,800 ft³/s (51.0 m³/s); minimum, 3.9 ft³/s (0.11 m³/s) July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|----------|-------|-------|----------|----------|---------|--------------|-------|-------|-------|-------|------|
| 1 | 119 | 173 | 167 | 165 | 175 | 188 | 219 | 60 | 219 | 48 | 13 | 17 |
| 2 | 132 | 171 | 171 | 169 | 173 | 188 | 228 | 66 | 202 | 45 | 11 | 14 |
| 3 | 145 | 169 | 167 | 186 | 169 | 196 | 219 | 87 | 200 | 41 | 11 | 16 |
| 4 | 150 | 165 | 175 | 180 | 167 | 196 | 252 | 101 | 175 | 35 | 10 | 15 |
| 5 | 151 | 167 | 175 | 158 | 165 | 192 | 287 | 126 | 165 | 33 | 9.0 | 15 |
| 6 | 164 | 165 | 169 | 67 | 169 | 194 | 314 | 140 | 160 | 31 | 8.0 | 14 |
| 7 | 162 | 162 | 175 | 86 | 173 | 204 | 380 | 167 | 228 | 28 | 7.6 | 13 |
| 8 | 160 | 162 | 184 | 127 | 180 | 213 | 461 | 259 | 686 | 26 | 7.6 | 12 |
| 9 | 153 | 160 | 194 | 116 | 200 | 224 | 501 | 259 | 419 | 23 | 7.4 | 13 |
| 10 | 143 | 162 | 194 | 137 | 196 | 222 | 409 | 331 | 320 | 22 | 7.4 | 13 |
| 11 | 146 | 162 | 184 | 190 | 198 | 204 | 349 | 403 | 279 | 21 | 7.4 | 12 |
| 12 | 145 | 162 | 186 | 261 | 192 | 198 | 306 | 454 | 274 | 21 | 7.6 | 12 |
| 13 | 141 | 164 | 184 | 277 | 190 | 202 | 298 | 482 | 254 | 20 | 7.4 | 13 |
| 14 | 137 | 171 | 180 | 266 | 188 | 192 | 303 | 461 | 269 | 18 | 6.7 | 16 |
| 15 | 132 | 188 | 182 | 235 | 176 | 194 | 274 | 413 | 259 | 17 | 6.5 | 16 |
| 16 | 134 | 196 | 182 | 209 | 175 | 192 | 259 | 409 | 235 | 15 | 6.3 | 17 |
| 17 | 137 | 198 | 184 | 207 | 176 | 186 | 247 | 419 | 224 | 14 | 6.5 | 21 |
| 18 | 138 | 192 | 176 | 200 | 175 | 186 | 226 | 409 | 209 | 14 | 6.7 | 24 |
| 19 | 141 | 188 | 164 | 196 | 165 | 188 | 209 | 367 | 171 | 13 | 6.5 | 26 |
| 20 | 141 | 186 | 153 | 198 | 164 | 186 | 192 | 337 | 141 | 8.7 | 6.2 | 28 |
| 21 | 145 | 184 | 162 | 190 | 178 | 180 | 180 | 287 | 137 | 4.9 | 6.2 | 30 |
| 22 | 138 | 182 | 188 | 186 | 186 | 182 | 153 | 240 | 127 | 5.1 | 6.0 | 32 |
| 23 | 151 | 180 | 184 | 182 | 178 | 190 | 129 | 245 | 104 | 5.1 | 5.8 | 39 |
| 24 | 146 | 182 | 180 | 169 | 175 | 204 | 124 | 284 | 84 | 5.8 | 6.7 | 49 |
| 25 | 160 | 180 | 175 | 165 | 175 | 204 | 112 | 279 | 71 | 6.9 | 7.6 | 81 |
| 26 | 184 | 178 | 186 | 162 | 175 | 198 | 106 | 295 | 67 | 8.3 | 8.3 | 83 |
| 27 | 188 | 158 | 186 | 157 | 169 | 196 | 91 | 430 | 63 | 9.2 | 9.0 | 76 |
| 28 | 176 | 146 | 178 | 169 | 182 | 202 | 84 | 409 | 60 | 14 | 10 | 83 |
| 29 | 176 | 155 | 175 | 169 | --- | 200 | 75 | 364 | 56 | 13 | 14 | 96 |
| 30 | 178 | 169 | 173 | 169 | --- | 192 | 64 | 320 | 50 | 13 | 22 | 119 |
| 31 | 175 | --- | 162 | 182 | --- | 190 | --- | 274 | --- | 13 | 18 | --- |
| TOTAL | 4688 | 5177 | 5495 | 5530 | 4984 | 6083 | 7051 | 9177 | 5908 | 592.0 | 273.4 | 1015 |
| MEAN | 151 | 173 | 177 | 178 | 178 | 196 | 235 | 296 | 197 | 19.1 | 8.82 | 33.8 |
| MAX | 188 | 198 | 194 | 277 | 200 | 224 | 501 | 482 | 686 | 48 | 22 | 119 |
| MIN | 119 | 146 | 153 | 67 | 164 | 180 | 64 | 60 | 50 | 4.9 | 5.8 | 12 |
| AC-FT | 9300 | 10270 | 10900 | 10970 | 9890 | 12070 | 13990 | 18200 | 11720 | 1170 | 542 | 2010 |
| CAL YR 1976 TOTAL | 167495.0 | | | MEAN 458 | MAX 1880 | MIN 60 | AC-FT 332200 | | | | | |
| WTR YR 1977 TOTAL | 55973.4 | | | MEAN 153 | MAX 686 | MIN 4.9 | AC-FT 111000 | | | | | |

14042500 CAMAS CREEK NEAR UKIAH, OR

LOCATION.--Lat 45°09'25", long 118°49'10", in SE¼SE¼ sec.3, T.5 S., R.32 E., Umatilla County, Hydrologic Unit 17070202, on right bank 1.2 mi (1.9 km) upstream from Cable Creek, 5.8 mi (9.3 km) east of Ukiah, and at mile 18.7 (30.1 km).

DRAINAGE AREA.--121 mi² (313 km²).

PERIOD OF RECORD.--May 1914 to September 1917, November 1919 to July 1920, November 1920 to June 1924, March 1932 to June 1940 (fragmentary), November 1940 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "above Cable Creek, near Ukiah" 1914-17, 1919-24.

REVISED RECORDS.--WSP 1448: 1916, 1920, 1922(M), 1924.

GAGE.--Water-stage recorder. Datum of gage is 3,588.61 ft (1,093.808 m) above mean sea level (levels by State Highway Department). May 1, 1914, to June 30, 1924, nonrecording gage and Mar. 1, 1932, to July 2, 1940, water-stage recorder at site 1.2 mi (1.9 km) downstream at different datum.

REMARKS.--Records good except those for period of no gage-height record and winter period, which are fair. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--41 years (water years 1915-17, 1922-23, 1942-77), 95.0 ft³/s (2.690 m³/s), 68,830 acre-ft/yr (84.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,840 ft³/s (109 m³/s) Jan. 30, 1965, gage height, 5.21 ft (1.588 m); maximum gage height, 5.24 ft (1.597 m) Feb. 3, 1963 (ice jam); minimum discharge recorded, 1.0 ft³/s (0.028 m³/s) Aug. 9, 1932, June 24 to July 2, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 550 ft³/s (15.6 m³/s) and maximum discharge, 1,050 ft³/s (29.7 m³/s) Apr. 7, gage height, 2.99 ft (0.911 m); minimum, 3.0 ft³/s (0.085 m³/s) Aug. 11, 12, but may have been less during period of ice effect Dec. 28 to Mar. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|-------|-------|
| 1 | 5.0 | 9.0 | 7.2 | 6.2 | 6.0 | 13 | 48 | 105 | 88 | 11 | 4.0 | 12 |
| 2 | 8.5 | 11 | 7.8 | 6.0 | 6.0 | 13 | 45 | 126 | 88 | 11 | 4.3 | 10 |
| 3 | 10 | 9.5 | 8.2 | 5.6 | 5.0 | 12 | 73 | 142 | 77 | 10 | 3.7 | 9.5 |
| 4 | 7.6 | 8.5 | 9.4 | 5.4 | 4.6 | 11 | 153 | 142 | 70 | 13 | 3.5 | 9.0 |
| 5 | 6.8 | 8.1 | 8.6 | 4.0 | 4.8 | 11 | 272 | 131 | 62 | 15 | 3.5 | 8.5 |
| 6 | 6.4 | 7.6 | 8.4 | 3.2 | 5.6 | 12 | 438 | 121 | 55 | 12 | 3.5 | 7.6 |
| 7 | 6.0 | 7.6 | 8.8 | 3.4 | 5.8 | 13 | 636 | 119 | 51 | 11 | 3.5 | 7.6 |
| 8 | 6.0 | 7.2 | 8.6 | 3.2 | 5.6 | 15 | 676 | 121 | 101 | 9.5 | 3.7 | 7.2 |
| 9 | 5.6 | 7.2 | 8.8 | 3.1 | 7.4 | 14 | 506 | 129 | 81 | 9.5 | 3.5 | 7.2 |
| 10 | 5.6 | 7.2 | 7.0 | 3.3 | 7.0 | 13 | 365 | 136 | 68 | 8.5 | 3.5 | 7.2 |
| 11 | 5.6 | 7.2 | 5.8 | 3.5 | 7.4 | 12 | 323 | 150 | 58 | 8.1 | 3.5 | 7.2 |
| 12 | 5.6 | 6.8 | 5.2 | 6.0 | 8.4 | 11 | 314 | 179 | 52 | 8.5 | 3.5 | 6.8 |
| 13 | 5.6 | 6.0 | 5.8 | 7.2 | 8.8 | 13 | 342 | 170 | 62 | 7.6 | 3.7 | 6.8 |
| 14 | 5.3 | 7.2 | 5.4 | 7.0 | 7.2 | 16 | 284 | 153 | 55 | 6.8 | 4.0 | 6.8 |
| 15 | 5.3 | 9.0 | 5.6 | 6.4 | 7.4 | 14 | 256 | 136 | 51 | 6.4 | 5.3 | 6.8 |
| 16 | 5.3 | 13 | 5.8 | 7.0 | 8.0 | 14 | 280 | 129 | 43 | 6.4 | 5.3 | 6.4 |
| 17 | 5.3 | 11 | 5.2 | 6.6 | 7.2 | 14 | 241 | 136 | 35 | 6.0 | 5.0 | 6.8 |
| 18 | 5.3 | 10 | 5.6 | 7.2 | 6.8 | 13 | 199 | 131 | 31 | 6.8 | 4.6 | 6.8 |
| 19 | 5.3 | 9.0 | 5.0 | 6.8 | 6.4 | 14 | 170 | 119 | 28 | 6.8 | 5.0 | 7.2 |
| 20 | 5.6 | 8.6 | 4.6 | 6.2 | 6.8 | 16 | 153 | 107 | 27 | 6.4 | 5.0 | 7.6 |
| 21 | 5.6 | 8.4 | 4.8 | 6.0 | 7.4 | 20 | 153 | 101 | 24 | 6.0 | 5.0 | 9.0 |
| 22 | 5.6 | 8.2 | 5.8 | 5.8 | 8.2 | 35 | 164 | 94 | 21 | 5.6 | 5.6 | 10 |
| 23 | 5.6 | 8.0 | 6.0 | 5.8 | 7.0 | 54 | 195 | 114 | 20 | 5.3 | 5.0 | 9.0 |
| 24 | 6.0 | 8.0 | 5.6 | 5.6 | 7.8 | 47 | 216 | 107 | 18 | 5.0 | 6.4 | 12 |
| 25 | 9.0 | 7.8 | 6.2 | 5.4 | 8.8 | 47 | 216 | 96 | 17 | 5.3 | 9.0 | 11 |
| 26 | 12 | 7.6 | 6.8 | 4.1 | 9.4 | 55 | 189 | 110 | 15 | 6.0 | 17 | 9.0 |
| 27 | 9.5 | 3.8 | 6.0 | 3.8 | 10 | 73 | 155 | 126 | 14 | 5.6 | 13 | 8.5 |
| 28 | 8.1 | 5.0 | 5.4 | 3.9 | 12 | 58 | 134 | 124 | 13 | 5.0 | 10 | 12 |
| 29 | 7.6 | 5.8 | 5.4 | 4.0 | --- | 50 | 121 | 114 | 12 | 4.3 | 10 | 17 |
| 30 | 7.6 | 6.8 | 5.2 | 4.4 | --- | 47 | 112 | 103 | 12 | 4.3 | 15 | 13 |
| 31 | 7.6 | --- | 5.0 | 5.2 | --- | 50 | --- | 94 | --- | 4.0 | 15 | --- |
| TOTAL | 205.9 | 240.1 | 199.0 | 161.3 | 202.8 | 800 | 7429 | 3865 | 1349 | 236.7 | 192.6 | 265.5 |
| MEAN | 6.64 | 8.00 | 6.42 | 5.20 | 7.24 | 25.8 | 248 | 125 | 45.0 | 7.64 | 6.21 | 8.85 |
| MAX | 12 | 13 | 9.4 | 7.2 | 12 | 73 | 676 | 179 | 101 | 15 | 17 | 17 |
| MIN | 5.0 | 3.8 | 4.6 | 3.1 | 4.6 | 11 | 45 | 94 | 12 | 4.0 | 3.5 | 6.4 |
| AC-FT | 408 | 476 | 395 | 320 | 402 | 1590 | 14740 | 7670 | 2680 | 469 | 382 | 527 |

CAL YR 1976 TOTAL 33969.1 MEAN 92.8 MAX 1010 MIN 3.8 AC-FT 67380
WTR YR 1977 TOTAL 15146.9 MEAN 41.5 MAX 676 MIN 3.1 AC-FT 30040

NOTE.--No gage-height record Nov. 17 to Dec. 27.

JOHN DAY RIVER BASIN

143

14044000 MIDDLE FORK JOHN DAY RIVER AT RITTER, OR

LOCATION.--Lat 44°53'20", long 119°08'25", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.8 S., R.30 E., Grant County, Hydrologic Unit 17070203, on left bank 0.2 mi (0.3 km) south of Ritter, 0.8 mi (1.3 km) downstream from Twelvemile Creek, and at mile 14.9 (24.0 km).

DRAINAGE AREA.--515 mi² (1,334 km²).

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 739: 1931. WSP 1218: 1950. WSP 1448: 1930-32, 1937, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,544.56 ft (775.582 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are fair. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years, 241 ft³/s (6.825 m³/s), 174,600 acre-ft/yr (215 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,730 ft³/s (134 m³/s) Jan. 30, 1965, gage height, 8.39 ft (2.557 m), from rating curve extended above 2,200 ft³/s (62.3 m³/s); maximum gage height, 9.13 ft (2.783 m) Feb. 1, 1963, ice jam; minimum discharge, 0.90 ft³/s (0.025 m³/s) Aug. 19, 20, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,000 ft³/s (28.3 m³/s) and maximum discharge, 1,270 ft³/s (36.0 m³/s) June 7, gage height, 5.18 ft (1.579 m); minimum, 10 ft³/s (0.28 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|----------|--------|--------------|-------|-------|------|------|------|------|
| 1 | 38 | 49 | 44 | 41 | 39 | 65 | 97 | 239 | 239 | 35 | 14 | 33 |
| 2 | 39 | 52 | 48 | 42 | 40 | 60 | 110 | 331 | 242 | 34 | 14 | 30 |
| 3 | 39 | 53 | 49 | 41 | 41 | 60 | 126 | 306 | 221 | 33 | 15 | 27 |
| 4 | 41 | 51 | 58 | 39 | 43 | 61 | 189 | 278 | 218 | 40 | 14 | 26 |
| 5 | 41 | 50 | 59 | 34 | 47 | 55 | 273 | 247 | 221 | 46 | 14 | 24 |
| 6 | 42 | 49 | 52 | 30 | 50 | 61 | 325 | 226 | 218 | 39 | 13 | 23 |
| 7 | 42 | 48 | 58 | 32 | 52 | 66 | 406 | 216 | 321 | 34 | 13 | 22 |
| 8 | 38 | 48 | 58 | 31 | 54 | 80 | 495 | 236 | 513 | 31 | 14 | 21 |
| 9 | 37 | 48 | 59 | 30 | 54 | 86 | 447 | 223 | 296 | 29 | 15 | 20 |
| 10 | 37 | 47 | 54 | 32 | 56 | 82 | 309 | 228 | 236 | 27 | 15 | 20 |
| 11 | 37 | 47 | 44 | 38 | 58 | 67 | 264 | 255 | 203 | 24 | 14 | 21 |
| 12 | 37 | 47 | 38 | 50 | 63 | 68 | 250 | 287 | 210 | 23 | 13 | 21 |
| 13 | 39 | 46 | 35 | 54 | 66 | 59 | 267 | 281 | 220 | 21 | 13 | 21 |
| 14 | 38 | 48 | 40 | 50 | 70 | 60 | 258 | 267 | 200 | 21 | 12 | 20 |
| 15 | 37 | 54 | 48 | 48 | 75 | 57 | 221 | 244 | 160 | 21 | 12 | 20 |
| 16 | 38 | 71 | 57 | 50 | 71 | 57 | 228 | 236 | 130 | 20 | 13 | 22 |
| 17 | 37 | 72 | 50 | 49 | 66 | 60 | 218 | 236 | 110 | 19 | 13 | 24 |
| 18 | 37 | 61 | 39 | 50 | 66 | 59 | 194 | 236 | 96 | 21 | 11 | 24 |
| 19 | 37 | 57 | 21 | 52 | 59 | 61 | 175 | 221 | 88 | 22 | 11 | 26 |
| 20 | 37 | 54 | 22 | 49 | 63 | 61 | 162 | 211 | 84 | 21 | 12 | 31 |
| 21 | 38 | 52 | 38 | 47 | 63 | 60 | 158 | 203 | 74 | 18 | 12 | 37 |
| 22 | 37 | 53 | 45 | 48 | 64 | 64 | 165 | 206 | 68 | 17 | 13 | 37 |
| 23 | 38 | 52 | 48 | 52 | 54 | 92 | 191 | 234 | 62 | 15 | 13 | 37 |
| 24 | 37 | 51 | 50 | 50 | 59 | 91 | 228 | 250 | 54 | 14 | 15 | 43 |
| 25 | 42 | 51 | 52 | 47 | 54 | 83 | 273 | 228 | 50 | 16 | 23 | 52 |
| 26 | 61 | 48 | 50 | 42 | 53 | 81 | 281 | 236 | 47 | 17 | 30 | 44 |
| 27 | 58 | 26 | 49 | 38 | 54 | 85 | 250 | 302 | 44 | 19 | 39 | 39 |
| 28 | 52 | 23 | 52 | 33 | 62 | 83 | 234 | 267 | 40 | 18 | 34 | 39 |
| 29 | 49 | 29 | 50 | 35 | --- | 80 | 228 | 239 | 37 | 16 | 29 | 52 |
| 30 | 48 | 40 | 45 | 37 | --- | 74 | 228 | 221 | 36 | 15 | 30 | 52 |
| 31 | 48 | --- | 40 | 39 | --- | 86 | --- | 213 | --- | 14 | 34 | --- |
| TOTAL | 1276 | 1477 | 1452 | 1310 | 1596 | 2164 | 7250 | 7603 | 4738 | 740 | 537 | 908 |
| MEAN | 41.2 | 49.2 | 46.8 | 42.3 | 57.0 | 69.8 | 242 | 245 | 158 | 23.9 | 17.3 | 30.3 |
| MAX | 61 | 72 | 59 | 54 | 75 | 92 | 495 | 331 | 513 | 46 | 39 | 52 |
| MIN | 37 | 23 | 21 | 30 | 39 | 55 | 97 | 203 | 36 | 14 | 11 | 20 |
| AC-FT | 2530 | 2930 | 2880 | 2600 | 3170 | 4290 | 14380 | 15080 | 9400 | 1470 | 1070 | 1800 |
| CAL YR 1976 | TOTAL | 94196 | MEAN 257 | MAX 1510 | MIN 21 | AC-FT 186800 | | | | | | |
| WTR YR 1977 | TOTAL | 31051 | MEAN 85.1 | MAX 513 | MIN 11 | AC-FT 61590 | | | | | | |

JOHN DAY RIVER BASIN

14046000 NORTH FORK JOHN DAY RIVER AT MONUMENT, OR

LOCATION.--Lat 44°48'50", long 119°25'50", in SE¼ sec.2, T.9 S., R.27 E., Grant County, Hydrologic Unit 17070202, on right bank just downstream from entrance to canyon, 0.7 mi (1.1 km) downstream from Cottonwood Creek, 0.8 mi (1.3 km) west of Monument, and at mile 15.3 (24.6 km).

DRAINAGE AREA.--2,520 mi² (6,530 km²), approximately.

PERIOD OF RECORD.--March 1925 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 754: 1932(M). WSP 1448: 1927, 1931(M), 1949.

GAGE.--Water-stage recorder. Datum of gage is 1,959.64 ft (597.298 m) above mean sea level. Prior to Nov. 24, 1925, nonrecording gage and Nov. 24, 1925, to Oct. 16, 1928, water-stage recorder at datum 1.10 ft (0.335 m) higher. Oct. 17, 1928, to Sept. 30, 1930, water-stage recorder at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records excellent except those for December and January, which are fair. Very slight regulation by small reservoirs upstream. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--52 years, 1,217 ft³/s (34.47 m³/s), 881,700 acre-ft/yr (1.09 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s (946 m³/s) Jan. 30, 1965, gage height, 18.45 ft (5.624 m), from rating curve extended above 17,000 ft³/s (481 m³/s); minimum, 6 ft³/s (0.17 m³/s) sometime during period Nov. 2-13, 1936 (result of freezeup); minimum daily, 17 ft³/s (0.48 m³/s) Dec. 12, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,420 ft³/s (96.9 m³/s) Apr. 9, gage height, 6.37 ft (1.942 m), no peak above base of 5,300 ft³/s (150 m³/s); minimum, 47 ft³/s (1.33 m³/s) Aug. 20, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|------|------|-------|-------|-------|-------|-------|--------|------|------|
| 1 | 155 | 197 | 137 | 152 | 120 | 292 | 474 | 1370 | 1110 | 245 | 84 | 169 |
| 2 | 160 | 207 | 134 | 152 | 130 | 269 | 528 | 1710 | 1170 | 229 | 82 | 144 |
| 3 | 165 | 225 | 137 | 150 | 135 | 257 | 607 | 1770 | 1090 | 221 | 78 | 124 |
| 4 | 170 | 225 | 140 | 110 | 140 | 261 | 878 | 1720 | 1050 | 221 | 76 | 108 |
| 5 | 175 | 207 | 150 | 86 | 145 | 249 | 1130 | 1520 | 1050 | 237 | 73 | 99 |
| 6 | 180 | 197 | 160 | 80 | 152 | 245 | 1480 | 1390 | 1050 | 249 | 69 | 90 |
| 7 | 175 | 190 | 193 | 84 | 155 | 301 | 2040 | 1300 | 1160 | 233 | 65 | 84 |
| 8 | 172 | 187 | 211 | 82 | 160 | 432 | 2990 | 1300 | 1890 | 211 | 65 | 78 |
| 9 | 166 | 184 | 241 | 82 | 181 | 534 | 3010 | 1300 | 1480 | 190 | 65 | 76 |
| 10 | 160 | 181 | 233 | 82 | 190 | 540 | 2230 | 1470 | 1170 | 175 | 65 | 73 |
| 11 | 157 | 181 | 190 | 94 | 207 | 402 | 1910 | 1690 | 1020 | 166 | 62 | 71 |
| 12 | 155 | 178 | 169 | 110 | 218 | 345 | 1740 | 1950 | 1020 | 155 | 59 | 73 |
| 13 | 155 | 175 | 126 | 150 | 225 | 340 | 1890 | 1810 | 955 | 144 | 56 | 71 |
| 14 | 155 | 172 | 150 | 170 | 218 | 287 | 1790 | 1620 | 1040 | 139 | 54 | 69 |
| 15 | 155 | 169 | 155 | 190 | 218 | 283 | 1580 | 1490 | 1010 | 131 | 54 | 69 |
| 16 | 150 | 218 | 172 | 180 | 221 | 265 | 1660 | 1420 | 862 | 124 | 56 | 71 |
| 17 | 150 | 292 | 184 | 175 | 221 | 269 | 1600 | 1380 | 742 | 121 | 61 | 76 |
| 18 | 150 | 278 | 152 | 180 | 229 | 269 | 1410 | 1350 | 663 | 116 | 59 | 84 |
| 19 | 150 | 241 | 121 | 180 | 225 | 274 | 1250 | 1270 | 600 | 113 | 53 | 88 |
| 20 | 150 | 229 | 84 | 170 | 225 | 278 | 1150 | 1180 | 594 | 129 | 48 | 90 |
| 21 | 147 | 211 | 93 | 150 | 253 | 274 | 1140 | 1130 | 564 | 124 | 50 | 101 |
| 22 | 152 | 200 | 101 | 140 | 261 | 278 | 1170 | 1110 | 510 | 108 | 48 | 137 |
| 23 | 157 | 200 | 125 | 140 | 225 | 390 | 1380 | 1160 | 462 | 101 | 48 | 134 |
| 24 | 160 | 193 | 140 | 130 | 214 | 474 | 1660 | 1310 | 420 | 101 | 57 | 142 |
| 25 | 166 | 184 | 150 | 120 | 207 | 432 | 1920 | 1170 | 378 | 101 | 67 | 160 |
| 26 | 190 | 197 | 160 | 110 | 200 | 408 | 1940 | 1140 | 350 | 108 | 95 | 184 |
| 27 | 229 | 144 | 140 | 105 | 197 | 432 | 1710 | 1450 | 325 | 126 | 124 | 166 |
| 28 | 211 | 104 | 130 | 100 | 233 | 462 | 1530 | 1340 | 301 | 134 | 157 | 166 |
| 29 | 197 | 78 | 135 | 100 | --- | 402 | 1460 | 1240 | 278 | 111 | 134 | 172 |
| 30 | 190 | 111 | 140 | 105 | --- | 384 | 1400 | 1140 | 261 | 99 | 121 | 229 |
| 31 | 190 | --- | 152 | 110 | --- | 378 | --- | 1090 | --- | 90 | 131 | --- |
| TOTAL | 5194 | 5755 | 4705 | 3969 | 5505 | 10706 | 46657 | 43290 | 24575 | 4752 | 2316 | 3398 |
| MEAN | 168 | 192 | 152 | 128 | 197 | 345 | 1555 | 1396 | 819 | 153 | 74.7 | 113 |
| MAX | 229 | 292 | 241 | 190 | 261 | 540 | 3010 | 1950 | 1890 | 249 | 157 | 229 |
| MIN | 147 | 78 | 84 | 80 | 120 | 245 | 474 | 1090 | 261 | 90 | 48 | 69 |
| AC-FT | 10300 | 11420 | 9330 | 7870 | 10920 | 21240 | 92540 | 85870 | 48740 | 9430 | 4590 | 6740 |
| CAL YR 1976 | TOTAL | 478065 | MEAN | 1306 | MAX | 7530 | MIN | 78 | AC-FT | 948200 | | |
| WTR YR 1977 | TOTAL | 160822 | MEAN | 441 | MAX | 3010 | MIN | 48 | AC-FT | 319000 | | |

JOHN DAY RIVER BASIN

145

14046500 JOHN DAY RIVER AT SERVICE CREEK, OR

LOCATION.--Lat 44°47'38", long 120°00'20", in NW¼NE¼ sec.18, T.9 S., R.23 E., Wheeler County, Hydrologic Unit 17070204, on left bank 0.2 mi (0.3 km) downstream from bridge on State Highway 207, 0.8 mi (1.3 km) downstream from Service Creek, 0.5 mi (0.8 km) southwest of town of Service Creek, and at mile 156.7 (252.1 km).

DRAINAGE AREA.--5,090 mi² (13,200 km²), approximately.

PERIOD OF RECORD.--March 1925 to September 1926, October 1929 to current year. Monthly discharge only March 1925 to September 1926, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,632.42 ft (497.562 m) above mean sea level. See WSP 1738 for history of changes prior to Feb. 24, 1957.

REMARKS.--Records excellent except those for January, which are fair. Very slight regulation by several small reservoirs above station. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--49 years, 1,815 ft³/s (51.40 m³/s), 1,315,000 acre-ft/yr (1.62 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft³/s (1,140 m³/s) Dec. 23, 1964, gage height, 17.85 ft (5.441 m), from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of slope-area measurement of peak flow; minimum, 6.0 ft³/s (0.17 m³/s) Aug. 23, 24, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,860 ft³/s (109 m³/s) Apr. 9, gage height, 6.09 ft (1.856 m), no peak above base of 7,300 ft³/s (207 m³/s); minimum, 18 ft³/s (0.51 m³/s) Aug. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|--------|--------|-------|---------|------|------|
| 1 | 284 | 400 | 284 | 341 | 357 | 515 | 665 | 1500 | 1350 | 252 | 64 | 119 |
| 2 | 284 | 407 | 314 | 346 | 346 | 556 | 770 | 1650 | 1400 | 227 | 56 | 153 |
| 3 | 308 | 413 | 314 | 346 | 357 | 548 | 824 | 2040 | 1390 | 215 | 53 | 150 |
| 4 | 352 | 426 | 352 | 340 | 352 | 540 | 1010 | 1980 | 1270 | 208 | 53 | 125 |
| 5 | 388 | 419 | 388 | 310 | 346 | 523 | 1280 | 1830 | 1220 | 208 | 45 | 109 |
| 6 | 357 | 407 | 441 | 280 | 369 | 507 | 1720 | 1660 | 1230 | 223 | 42 | 99 |
| 7 | 352 | 400 | 413 | 260 | 357 | 515 | 2270 | 1570 | 1280 | 227 | 39 | 86 |
| 8 | 346 | 394 | 394 | 240 | 376 | 609 | 3110 | 1560 | 2040 | 204 | 39 | 76 |
| 9 | 341 | 388 | 419 | 220 | 388 | 738 | 3600 | 1610 | 2640 | 183 | 36 | 71 |
| 10 | 335 | 388 | 433 | 230 | 426 | 824 | 3040 | 1790 | 1760 | 171 | 30 | 67 |
| 11 | 319 | 382 | 413 | 260 | 441 | 770 | 2480 | 2320 | 1450 | 156 | 33 | 66 |
| 12 | 314 | 382 | 352 | 300 | 455 | 637 | 2240 | 2530 | 1270 | 150 | 29 | 62 |
| 13 | 308 | 382 | 341 | 360 | 462 | 609 | 2210 | 2550 | 1320 | 144 | 29 | 61 |
| 14 | 308 | 382 | 319 | 420 | 462 | 581 | 2340 | 2320 | 1240 | 136 | 25 | 62 |
| 15 | 303 | 388 | 352 | 450 | 448 | 548 | 2050 | 2080 | 1280 | 128 | 25 | 61 |
| 16 | 298 | 407 | 357 | 430 | 455 | 540 | 1920 | 1950 | 1190 | 117 | 24 | 71 |
| 17 | 298 | 455 | 357 | 410 | 455 | 515 | 2050 | 1870 | 1000 | 104 | 25 | 76 |
| 18 | 303 | 515 | 352 | 420 | 455 | 515 | 1830 | 1830 | 889 | 99 | 23 | 80 |
| 19 | 303 | 491 | 308 | 400 | 455 | 515 | 1620 | 1750 | 781 | 91 | 24 | 93 |
| 20 | 308 | 462 | 275 | 390 | 448 | 515 | 1440 | 1610 | 686 | 86 | 30 | 102 |
| 21 | 308 | 448 | 279 | 380 | 462 | 515 | 1350 | 1490 | 665 | 86 | 27 | 107 |
| 22 | 314 | 426 | 294 | 370 | 515 | 507 | 1360 | 1400 | 609 | 93 | 23 | 130 |
| 23 | 314 | 419 | 319 | 360 | 507 | 531 | 1410 | 1410 | 548 | 82 | 19 | 162 |
| 24 | 335 | 419 | 352 | 350 | 469 | 675 | 1720 | 1590 | 484 | 69 | 22 | 177 |
| 25 | 341 | 413 | 382 | 340 | 455 | 707 | 2010 | 1580 | 448 | 69 | 20 | 197 |
| 26 | 363 | 400 | 407 | 330 | 441 | 665 | 2150 | 1440 | 394 | 89 | 28 | 240 |
| 27 | 407 | 407 | 433 | 330 | 441 | 646 | 2050 | 1650 | 363 | 86 | 48 | 284 |
| 28 | 433 | 330 | 394 | 340 | 455 | 686 | 1770 | 1900 | 325 | 78 | 82 | 279 |
| 29 | 413 | 289 | 382 | 340 | --- | 696 | 1630 | 1720 | 294 | 107 | 117 | 298 |
| 30 | 407 | 261 | 376 | 352 | --- | 646 | 1570 | 1560 | 270 | 89 | 128 | 298 |
| 31 | 400 | --- | 369 | 341 | --- | 618 | --- | 1440 | --- | 73 | 114 | --- |
| TOTAL | 10444 | 12100 | 11165 | 10586 | 11955 | 18512 | 55489 | 55180 | 31086 | 4250 | 1352 | 3961 |
| MEAN | 337 | 403 | 360 | 341 | 427 | 597 | 1850 | 1780 | 1036 | 137 | 43.6 | 132 |
| MAX | 433 | 515 | 441 | 450 | 515 | 824 | 3600 | 2550 | 2640 | 252 | 128 | 298 |
| MIN | 284 | 261 | 275 | 220 | 346 | 507 | 665 | 1400 | 270 | 69 | 19 | 61 |
| AC-FT | 20720 | 24000 | 22150 | 21000 | 23710 | 36720 | 110100 | 109400 | 61660 | 8430 | 2680 | 7860 |
| CAL YR 1976 | TOTAL | 676919 | MEAN | 1850 | MAX | 9100 | MIN | 183 | AC-FT | 1343000 | | |
| WTR YR 1977 | TOTAL | 226080 | MEAN | 619 | MAX | 3600 | MIN | 19 | AC-FT | 448400 | | |

JOHN DAY RIVER BASIN

14047390 ROCK CREEK ABOVE WHYTE PARK, NEAR CONDON, OR

LOCATION.--Lat 45°15'53", long 120°01'15", in NE¼SW¼ sec.36, T.3 S., R.22 E., Gilliam County, Hydrologic Unit 17070204, on left bank 0.2 mi (0.3 km) upstream from Whyte Park, 8.0 mi (12.9 km) northeast of Condon, and at mile 40.8 (65.6 km).

DRAINAGE AREA.--297 mi² (769 km²).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,714.50 ft (522.580 m) above mean sea level (Soil Conservation Service temporary bench mark).

REMARKS.--Records good. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 351 ft³/s (9.94 m³/s) Apr. 9, 1976, gage height, 5.81 ft (1.771 m); minimum, 0.08 ft³/s (0.002 m³/s) Aug. 17, 19, 20, 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 218 ft³/s (6.17 m³/s) Aug. 6, gage height, 5.55 ft (1.692 m), no peak above base of 220 ft³/s (6.23 m³/s); minimum, 0.08 ft³/s (0.002 m³/s) Aug. 17, 19, 20, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 1 | 2.4 | 2.8 | 3.8 | 3.9 | 3.9 | 8.3 | 14 | 4.1 | 7.6 | .51 | .20 | .11 |
| 2 | 2.4 | 2.8 | 3.9 | 3.9 | 4.1 | 9.0 | 18 | 4.3 | 7.3 | .45 | .21 | .11 |
| 3 | 2.1 | 2.8 | 3.9 | 3.8 | 3.9 | 9.0 | 20 | 4.6 | 7.3 | .45 | .20 | .11 |
| 4 | 2.1 | 2.8 | 3.8 | 4.1 | 3.9 | 9.0 | 37 | 5.0 | 6.9 | .57 | .20 | .11 |
| 5 | 2.3 | 2.8 | 3.8 | 3.3 | 4.1 | 8.3 | 59 | 5.0 | 6.1 | .57 | .21 | .11 |
| 6 | 2.3 | 2.8 | 3.6 | 4.0 | 4.4 | 7.9 | 81 | 5.3 | 5.3 | .57 | 5.5 | .11 |
| 7 | 2.1 | 2.9 | 3.8 | 4.1 | 4.4 | 8.6 | 71 | 6.9 | 4.3 | .51 | .36 | .10 |
| 8 | 2.1 | 3.0 | 3.8 | 4.0 | 4.4 | 12 | 58 | 7.3 | 3.8 | .40 | .18 | .10 |
| 9 | 2.1 | 3.0 | 4.1 | 4.0 | 4.1 | 16 | 40 | 7.3 | 3.8 | .33 | .15 | .10 |
| 10 | 2.1 | 3.0 | 3.9 | 4.7 | 4.4 | 17 | 31 | 16 | 3.5 | .33 | .14 | .10 |
| 11 | 2.1 | 3.0 | 4.1 | 4.5 | 4.8 | 16 | 25 | 45 | 3.3 | .30 | .14 | .10 |
| 12 | 2.0 | 3.0 | 4.3 | 5.0 | 5.3 | 14 | 22 | 45 | 3.5 | .27 | .14 | .10 |
| 13 | 2.0 | 3.0 | 4.6 | 5.4 | 5.8 | 14 | 19 | 38 | 3.2 | .27 | .12 | .10 |
| 14 | 2.0 | 3.5 | 4.3 | 5.6 | 6.9 | 13 | 18 | 28 | 3.0 | .25 | .14 | .10 |
| 15 | 1.8 | 3.6 | 4.3 | 5.3 | 7.6 | 11 | 17 | 24 | 2.7 | .23 | .12 | .10 |
| 16 | 2.0 | 3.9 | 4.3 | 5.0 | 7.6 | 9.8 | 15 | 22 | 2.3 | .21 | .12 | .11 |
| 17 | 2.0 | 3.9 | 4.3 | 5.0 | 7.6 | 10 | 13 | 21 | 2.4 | .21 | .11 | .11 |
| 18 | 2.0 | 4.1 | 4.1 | 5.5 | 7.2 | 9.4 | 12 | 19 | 2.0 | .23 | .11 | .12 |
| 19 | 2.0 | 4.3 | 3.5 | 5.0 | 6.9 | 9.8 | 11 | 17 | 2.0 | .23 | .11 | .12 |
| 20 | 2.1 | 4.1 | 3.3 | 5.5 | 6.6 | 9.0 | 9.8 | 15 | 1.8 | .20 | .10 | .14 |
| 21 | 2.1 | 4.1 | 3.4 | 5.3 | 6.6 | 9.0 | 9.4 | 13 | 1.7 | .20 | .11 | .14 |
| 22 | 2.1 | 4.1 | 3.4 | 5.0 | 6.6 | 9.0 | 8.3 | 11 | 1.3 | .20 | .10 | .14 |
| 23 | 2.1 | 4.1 | 3.3 | 5.0 | 6.6 | 9.4 | 7.3 | 11 | .89 | .20 | .12 | .14 |
| 24 | 2.3 | 4.6 | 3.5 | 5.0 | 6.3 | 12 | 6.3 | 12 | .99 | .20 | .15 | .15 |
| 25 | 2.4 | 4.6 | 3.8 | 5.0 | 6.3 | 13 | 5.8 | 12 | .79 | .20 | .16 | .15 |
| 26 | 2.4 | 4.3 | 3.9 | 4.6 | 6.1 | 13 | 5.0 | 12 | .79 | .20 | .16 | .15 |
| 27 | 2.4 | 4.1 | 3.9 | 4.6 | 6.1 | 14 | 4.8 | 11 | .63 | .20 | .15 | .15 |
| 28 | 2.5 | 3.6 | 4.1 | 3.6 | 6.6 | 16 | 4.3 | 12 | .63 | .18 | .12 | .16 |
| 29 | 2.5 | 3.6 | 3.9 | 3.9 | --- | 16 | 4.1 | 11 | .57 | .20 | .11 | .18 |
| 30 | 2.5 | 3.8 | 3.9 | 3.8 | --- | 15 | 3.8 | 9.4 | .57 | .20 | .12 | .16 |
| 31 | 2.7 | --- | 3.9 | 4.1 | --- | 14 | --- | 8.3 | --- | .20 | .11 | --- |
| TOTAL | 68.0 | 106.0 | 120.5 | 141.5 | 159.1 | 361.5 | 649.9 | 462.5 | 90.96 | 9.27 | 9.97 | 3.68 |
| MEAN | 2.19 | 3.53 | 3.89 | 4.56 | 5.68 | 11.7 | 21.7 | 14.9 | 3.03 | .30 | .32 | .12 |
| MAX | 2.7 | 4.6 | 4.6 | 5.6 | 7.6 | 17 | 81 | 45 | 7.6 | .57 | 5.5 | .18 |
| MIN | 1.8 | 2.8 | 3.3 | 3.3 | 3.9 | 7.9 | 3.8 | 4.1 | .57 | .18 | .10 | .10 |
| AC-FT | 135 | 210 | 239 | 281 | 316 | 717 | 1290 | 917 | 180 | 18 | 20 | 7.3 |
| CAL YR 1976 | TOTAL | 11019.12 | MEAN | 30.1 | MAX | 305 | MIN | .23 | AC-FT | 21860 | | |
| WTR YR 1977 | TOTAL | 2182.88 | MEAN | 5.98 | MAX | 81 | MIN | .10 | AC-FT | 4330 | | |

JOHN DAY RIVER BASIN

147

14048000 JOHN DAY RIVER AT McDONALD FERRY, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°35'16", long 120°24'30", in NE¼NW¼ sec.11, T.1 N., R.19 E., Sherman County, Hydrologic Unit 17070204, on left bank at McDonald Ferry, 0.8 mi (1.3 km) downstream from Rock Creek, 10 mi (16 km) east of Klondike, and at mile 20.9 (33.6 km).

DRAINAGE AREA.--7,580 mi² (19,600 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1904 to current year. Prior to Oct. 1, 1930, published as "at McDonald."

REVISED RECORDS.--WSP 1094: 1894(M), 1932(M). WSP 1448: 1908-9, 1912, 1916, 1920(M), 1922, 1932.

GAGE.--Water-stage recorder. Datum of gage is 392.27 ft (119.564 m) above mean sea level. Prior to Aug. 30, 1930, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those below 10 ft³/s (0.28 m³/s), which are poor. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--72 years (water years 1906-77), 1,999 ft³/s (56.61 m³/s), 1,448,000 acre-ft/yr (1.79 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft³/s (1,210 m³/s) Dec. 24, 1964, gage height, 13.59 ft (4.142 m), from floodmark, from rating curve extended above 11,000 ft³/s (312 m³/s) on basis of slope-area measurement of peak flow; no flow for part of Sept. 2, 1966, Aug. 15 to Sept. 16, 1973, Aug. 13, 14, 19-25, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1894 reached a stage of 12.8 ft (3.90 m), from floodmarks, discharge, 39,100 ft³/s (1,110 m³/s), from rating curve extended above 22,000 ft³/s (623 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,750 ft³/s (106 m³/s) Apr. 10, gage height, 4.73 ft (1.442 m), no peak above base of 6,900 ft³/s (195 m³/s); no flow Aug. 13, 14, 19-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-----------|-------|-------|-------|-------|--------|--------|-------|---------|--------|--------|
| 1 | 300 | 446 | 350 | 405 | 373 | 446 | 638 | 1500 | 1460 | 261 | 48 | 2.8 |
| 2 | 294 | 432 | 305 | 392 | 386 | 432 | 622 | 1460 | 1380 | 230 | 43 | 1.9 |
| 3 | 272 | 432 | 280 | 405 | 379 | 467 | 638 | 1470 | 1320 | 220 | 45 | 2.8 |
| 4 | 272 | 432 | 300 | 386 | 379 | 519 | 733 | 1800 | 1360 | 200 | 45 | 60 |
| 5 | 277 | 432 | 347 | 373 | 379 | 526 | 807 | 1860 | 1290 | 185 | 35 | 113 |
| 6 | 311 | 446 | 354 | 245 | 386 | 511 | 1060 | 1820 | 1200 | 181 | 30 | 129 |
| 7 | 360 | 446 | 386 | 230 | 373 | 504 | 1400 | 1680 | 1180 | 167 | 28 | 145 |
| 8 | 373 | 446 | 453 | 230 | 373 | 497 | 1900 | 1580 | 1160 | 162 | 23 | 124 |
| 9 | 354 | 432 | 432 | 240 | 386 | 489 | 2770 | 1490 | 1450 | 162 | 13 | 109 |
| 10 | 347 | 426 | 432 | 250 | 392 | 534 | 3510 | 1610 | 2560 | 162 | 5.3 | 91 |
| 11 | 341 | 419 | 432 | 280 | 392 | 655 | 3160 | 1750 | 1900 | 162 | 2.8 | 85 |
| 12 | 335 | 419 | 453 | 320 | 419 | 751 | 2520 | 2090 | 1520 | 149 | .10 | 75 |
| 13 | 329 | 412 | 453 | 360 | 439 | 707 | 2250 | 2350 | 1330 | 137 | .00 | 65 |
| 14 | 317 | 419 | 426 | 400 | 446 | 613 | 2100 | 2520 | 1270 | 124 | .00 | 65 |
| 15 | 323 | 419 | 379 | 440 | 453 | 561 | 2240 | 2300 | 1210 | 105 | 2.6 | 60 |
| 16 | 323 | 426 | 373 | 460 | 460 | 581 | 2090 | 2120 | 1190 | 98 | 5.3 | 51 |
| 17 | 329 | 426 | 360 | 470 | 453 | 526 | 1870 | 1930 | 1190 | 91 | 2.8 | 51 |
| 18 | 323 | 432 | 386 | 480 | 439 | 511 | 1960 | 1840 | 1070 | 88 | .30 | 62 |
| 19 | 323 | 453 | 379 | 450 | 446 | 497 | 1860 | 1790 | 903 | 75 | .00 | 68 |
| 20 | 323 | 519 | 419 | 450 | 439 | 489 | 1650 | 1730 | 826 | 65 | .00 | 68 |
| 21 | 329 | 526 | 392 | 450 | 446 | 497 | 1460 | 1600 | 742 | 60 | .00 | 68 |
| 22 | 335 | 497 | 272 | 430 | 446 | 504 | 1340 | 1490 | 672 | 51 | .00 | 62 |
| 23 | 335 | 482 | 311 | 420 | 453 | 504 | 1290 | 1410 | 622 | 40 | .00 | 82 |
| 24 | 335 | 467 | 335 | 410 | 482 | 497 | 1280 | 1380 | 565 | 32 | .00 | 95 |
| 25 | 347 | 453 | 354 | 390 | 489 | 504 | 1450 | 1390 | 504 | 30 | .00 | 121 |
| 26 | 347 | 453 | 379 | 380 | 460 | 613 | 1730 | 1580 | 446 | 28 | .40 | 129 |
| 27 | 366 | 439 | 399 | 360 | 446 | 681 | 1990 | 1450 | 399 | 35 | .30 | 162 |
| 28 | 366 | 432 | 419 | 340 | 460 | 647 | 2010 | 1380 | 360 | 78 | .70 | 200 |
| 29 | 405 | 432 | 432 | 360 | --- | 630 | 1790 | 1790 | 323 | 88 | 1.9 | 250 |
| 30 | 446 | 432 | 446 | 370 | --- | 663 | 1600 | 1730 | 288 | 51 | 8.7 | 311 |
| 31 | 453 | --- | 419 | 380 | --- | 681 | --- | 1600 | --- | 43 | 5.3 | --- |
| TOTAL | 10490 | 13327 | 11857 | 11556 | 11874 | 17257 | 51718 | 53490 | 31690 | 3560 | 346.50 | 2908.5 |
| MEAN | 338 | 444 | 382 | 373 | 424 | 557 | 1724 | 1725 | 1056 | 115 | 11.2 | 97.0 |
| MAX | 453 | 526 | 453 | 480 | 489 | 751 | 3510 | 2520 | 2560 | 261 | 48 | 311 |
| MIN | 272 | 412 | 272 | 230 | 373 | 432 | 622 | 1380 | 288 | 28 | .00 | 1.9 |
| AC-FT | 20810 | 26430 | 23520 | 22920 | 23550 | 34230 | 102600 | 106100 | 62860 | 7060 | 687 | 5770 |
| CAL YR 1976 | TOTAL | 695065.00 | MEAN | 1899 | MAX | 9510 | MIN | 190 | AC-FT | 1379000 | | |
| WTR YR 1977 | TOTAL | 220074.00 | MEAN | 603 | MAX | 3510 | MIN | .00 | AC-FT | 436500 | | |

14048000 JOHN DAY RIVER AT McDONALD FERRY, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1911-12, 1960-68, 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1975 to current year.

WATER TEMPERATURES: October 1962 to September 1968, October 1975 to current year.

SEDIMENT CONCENTRATIONS: October 1962 to September 1968.

SEDIMENT DISCHARGE: October 1962 to September 1968.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 390 micromhos/cm Aug. 12, 1976; minimum daily recorded, 106 micromhos/cm May 26, 1976.

WATER TEMPERATURES: Maximum, 32.0°C Aug. 10, 1968; minimum, 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 69,200 mg/l Dec. 22, 1964; minimum daily, 1 mg/l June 18, 19, 27, 1968.

SEDIMENT DISCHARGE: Maximum daily, 3,800,000 tons (3,447,000 tonnes) Dec. 22, 1964; minimum daily, 0.11 ton (0.10 tonne), Aug. 7, 1968.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 356 micromhos/cm Sept. 19; minimum daily recorded, 84 micromhos/cm May 8.

WATER TEMPERATURES: Maximum, 33.0°C Aug. 12; minimum, 0.0°C many days in December to February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | DIS- SOLVED SILICA (SIO ₂) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) | DIS- SOLVED SODIUM (NA) (MG/L) |
|-----------|---|--|---|---|--|--|--|--|---|--|---|--|
| OCT 19... | 1200 | 834 | 9.0 | 9.2 | 11.4 | 312 | 28 | 814 | 16 | 27 | 13 | 18 |
| DEC 01... | 1000 | 411 | .2 | 8.3 | 15.1 | 254 | H17 | 20 | 24 | 25 | 11 | 14 |
| 29... | 1405 | 430 | 1.8 | 8.5 | 14.8 | 267 | 100 | -- | 26 | 26 | 11 | 15 |
| JAN 26... | 1200 | 368 | .3 | 8.5 | 14.9 | 231 | 85 | 160 | 24 | 22 | 9.9 | 13 |
| MAR 03... | 1200 | 451 | 5.5 | 8.5 | 11.3 | 243 | 83 | 70 | 22 | 22 | 9.7 | 13 |
| 23... | 1200 | 489 | 9.9 | 8.5 | 11.3 | 235 | H25 | 53 | 24 | 23 | 9.7 | 12 |
| APR 19... | 1400 | 2040 | 13.1 | 7.6 | 10.7 | 130 | H14 | 22 | 26 | 13 | 5.3 | 6.5 |
| MAY 24... | 1400 | 1390 | 18.0 | 8.5 | -- | 157 | H12 | 67 | 27 | 15 | 6.4 | 7.7 |
| JUN 28... | 1300 | 388 | 22.9 | 8.7 | 9.6 | 194 | 76 | 50 | 19 | 21 | 8.9 | 11 |
| JUL 27... | 1000 | 45 | 24.1 | 9.1 | 9.8 | 282 | H26 | 81 | 7.7 | 20 | 11 | 20 |
| AUG 30... | 1500 | 23 | 22.6 | 9.1 | 11.4 | 274 | 42 | 38 | 21 | 21 | 12 | 25 |
| SEP 22... | 1500 | 64 | 19.0 | 9.2 | 13.8 | 337 | 84 | 38 | 13 | 20 | 16 | 29 |
| DATE | BICAR- BONATE (HCO ₃) (MG/L) | CAR- BONATE (CO ₃) (MG/L) | DIS- SOLVED SULFATE (SO ₄) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA,MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO |
| OCT 19... | 178 | 0 | 10 | 3.0 | .2 | .01 | .26 | .27 | .01 | 120 | 0 | .7 |
| DEC 01... | 150 | 0 | 11 | 2.7 | .1 | .03 | .86 | .89 | .05 | 110 | 0 | .6 |
| 29... | 158 | 0 | 11 | 2.6 | .2 | .04 | .23 | .27 | .03 | 110 | 0 | .6 |
| JAN 26... | 141 | 0 | 10 | 2.5 | .1 | .02 | .14 | .16 | .01 | 96 | 0 | .6 |
| MAR 03... | 131 | 2 | 8.7 | 2.4 | .1 | .03 | .12 | .15 | .02 | 95 | 0 | .6 |
| 23... | 138 | 1 | 8.5 | 2.5 | .1 | .01 | .34 | .35 | .04 | 97 | 0 | .5 |
| APR 19... | 70 | 0 | 4.8 | 1.3 | .1 | .01 | .29 | .30 | .12 | 54 | 0 | .4 |
| MAY 24... | 93 | 0 | 6.7 | 1.7 | .1 | .03 | .90 | .93 | .08 | 64 | 0 | .4 |
| JUN 28... | 120 | 1 | 7.7 | 2.4 | .1 | .02 | .73 | .75 | .04 | 89 | 0 | .5 |
| JUL 27... | 150 | 0 | 8.5 | 3.2 | .2 | .02 | .43 | .45 | .00 | 95 | 0 | .9 |
| AUG 30... | 170 | 4 | 11 | 5.8 | .2 | .05 | .69 | .74 | .03 | 100 | 0 | 1.1 |
| SEP 22... | 190 | 6 | 10 | 5.4 | .2 | .01 | -- | -- | .02 | 120 | 0 | 1.2 |

B: RESULTS BASED ON NON-IDEAL COLONY COUNT

JOHN DAY RIVER BASIN

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14048000 JOHN DAY RIVER AT McDONALD FERRY, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS-SOLVED SOLIDS (TONS PER DAY) | DIS-SOLVED SOLIDS (TONS PER AC-FT) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SUSPENDED SEDIMENT DISCHARGE (T/DAY) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | TOTAL NON-FILTERABLE RESIDUE (MG/L) | ALKALINITY AS CaCO3 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|---|--|----------------------------------|------------------------------------|-----------------|---------------------------|--------------------------------------|--|-------------------------------------|----------------------------|---------------------------------|
| OCT 19... | 172 | 177 | 387 | .23 | 4 | 10 | 23 | 92 | 9 | 146 | 2.2 |
| DEC 01... | 150 | 164 | 166 | .20 | 9 | 15 | 17 | 79 | 20 | 123 | -- |
| 29... | 173 | 172 | 201 | .24 | 5 | 17 | 20 | 86 | 10 | 130 | -- |
| JAN 26... | 141 | 153 | 140 | .19 | 10 | 14 | 14 | 96 | 7 | 116 | 1.3 |
| MAR 03... | 144 | 146 | 175 | .20 | 7 | 13 | 16 | 97 | 5 | 111 | -- |
| 23... | 152 | 150 | 201 | .21 | 10 | 22 | 29 | 92 | 14 | 115 | -- |
| APR 19... | 96 | 93 | 529 | .13 | 30 | 114 | 628 | 87 | 106 | 57 | 5.4 |
| MAY 24... | 104 | 112 | 390 | .14 | 9 | 30 | 113 | 88 | 24 | 76 | -- |
| JUN 28... | 127 | 132 | 133 | .17 | 9 | 12 | 13 | 94 | 3 | 100 | -- |
| JUL 27... | 151 | 147 | 18.6 | .21 | 2 | -- | -- | -- | 80 | 120 | 3.1 |
| AUG 30... | 174 | 187 | 10.9 | .24 | 1 | 3 | .19 | 90 | 9 | 150 | -- |
| SEP 22... | 185 | 197 | 32.3 | .25 | 2 | 3 | .52 | 90 | 8 | 170 | -- |

| DATE | TOTAL IRON (FE) (UG/L) | DIS-SOLVED IRON (FE) (UG/L) | TOTAL MANGANESE (MN) (UG/L) | DIS-SOLVED MANGANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS-SOLVED ARSENIC (AS) (UG/L) | TOTAL CADMIUM (CD) (UG/L) | DIS-SOLVED CADMIUM (CD) (UG/L) | TOTAL CHROMIUM (CR) (UG/L) | DIS-SOLVED CHROMIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|------------------------|-----------------------------|-----------------------------|----------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|----------------------------|---------------------------------|--------------------------|
| OCT 19... | 410 | 10 | 30 | 10 | 1 | 0 | 0 | 0 | 20 | 0 | 0 |
| JAN 26... | 1200 | 40 | 20 | 10 | 1 | 1 | <10 | 0 | 0 | 0 | <50 |
| APR 19... | 3200 | 140 | 80 | 10 | 1 | 0 | <10 | 0 | 10 | 0 | <50 |
| JUL 27... | 350 | 10 | 20 | 0 | 1 | 1 | <10 | 1 | 0 | 0 | <50 |

| DATE | DIS-SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS-SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) | TOTAL SELENIUM (SE) (UG/L) | DIS-SOLVED SELENIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS-SOLVED MERCURY (HG) (UG/L) |
|-----------|-------------------------------|--------------------------|-------------------------------|------------------------|-----------------------------|------------------------|-----------------------------|----------------------------|---------------------------------|---------------------------|--------------------------------|
| OCT 19... | 0 | 7 | 6 | 7 | 4 | 30 | 10 | -- | 0 | .0 | .0 |
| JAN 26... | 0 | 20 | 2 | <100 | 1 | 10 | 0 | 0 | 0 | .2 | .1 |
| APR 19... | 0 | 10 | 8 | <100 | 3 | 20 | 20 | 0 | 0 | .6 | .0 |
| JUL 27... | 0 | 20 | 5 | <100 | 1 | 40 | 0 | 0 | 0 | .0 | .0 |

JOHN DAY RIVER BASIN

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

PESTICIDE ANALYSES

| DATE | TOTAL ALDRIN (UG/L) | TOTAL LINDANE (UG/L) | TOTAL CHLOR-DANE (UG/L) | TOTAL DDD (UG/L) | TOTAL DDE (UG/L) | TOTAL DDT (UG/L) | TOTAL DI-ELDRIN (UG/L) | TOTAL ENDRIN (UG/L) | TOTAL ETHION (UG/L) | TOTAL TOX-APHENE (UG/L) | TOTAL HEPTA-CHLOR (UG/L) | TOTAL HEPTA-CHLOR EPOXIDE (UG/L) |
|------------|------------------------|-------------------------|----------------------------|---------------------|---------------------|---------------------|---------------------------|------------------------|------------------------|----------------------------|-----------------------------|-------------------------------------|
| DEC , 1976 | | | | | | | | | | | | |
| 01... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MAR , 1977 | | | | | | | | | | | | |
| 03... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MAY | | | | | | | | | | | | |
| 24... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| AUG | | | | | | | | | | | | |
| 30... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

| DATE | TOTAL METH-OXY-CHLOR (UG/L) | TOTAL MALA-THION (UG/L) | TOTAL PARA-THION (UG/L) | TOTAL DI-AZINON (UG/L) | TOTAL METHYL PARA-THION (UG/L) | TOTAL ATRA-ZINE (UG/L) | SIMA-ZINE TOTAL COUL-SON COND. (UG/L) | TOTAL 2,4-D (UG/L) | TOTAL 2,4,5-T (UG/L) | TOTAL SILVEX (UG/L) | TOTAL TRI-THION (UG/L) | TOTAL METHYL TRI-THION (UG/L) |
|------------|--------------------------------|----------------------------|----------------------------|---------------------------|-----------------------------------|---------------------------|---|-----------------------|-------------------------|------------------------|---------------------------|----------------------------------|
| DEC , 1976 | | | | | | | | | | | | |
| 01... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MAR , 1977 | | | | | | | | | | | | |
| 03... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MAY | | | | | | | | | | | | |
| 24... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| AUG | | | | | | | | | | | | |
| 30... | ND | ND | ND | ND | ND | ND | ND | -- | -- | -- | ND | ND |

ND: SPECIFICALLY LOOKED FOR BUT NOT DETECTED

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | LENGTH OF EXPO- SURE (DAYS) | BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) | CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) |
|--------------|---|--|--|--|--|--|
| OCT 19... | 28 | 2132 | .144 | .050 | -- | -- |
| MAY 24... | -- | 17440 | -- | -- | .009 | .003 |

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | OCT 19,76 1200 | DEC 1,76 1000 | DEC 29,76 1405 | JAN 26,77 1030 |
|---------------------|-------------------|------------------|-------------------|-------------------|
| TOTAL CELLS/ML | 1100 | 860 | 360 | 95 |
| DIVERSITY: DIVISION | 0.8 | 0.7 | 1.0 | 0.8 |
| ..CLASS | 0.8 | 0.7 | 1.0 | 0.8 |
| ...ORDER | 1.7 | 0.7 | 1.1 | 1.2 |
| ...FAMILY | 2.6 | 2.9 | 2.6 | 2.5 |
|GENUS | 2.7 | 3.1 | 2.6 | 2.6 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | |
| ...HYDRODICTYACEAE | | | | | | | | |
|PEDIASTRUM | -- | - | -- | - | -- | - | 16# | 17 |
| ...OOCYSTACEAE | | | | | | | | |
|ANKISTRODESMUS | -- | - | -- | - | -- | - | -- | - |
|KIRCHNERIELLA | 130 | 12 | -- | - | -- | - | -- | - |
|OOCYSTIS | 22 | 2 | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
|CRUCIGENIA | 43 | 4 | -- | - | -- | - | -- | - |
| ...SCENEDESMUS | -- | - | 94 | 11 | 12 | 3 | -- | - |
| ...TETRASPORALES | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | |
|SPHAEROCYSTIS | -- | - | -- | - | -- | - | -- | - |
| ...VOLVOCEAE | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
|CHLAMYDOMONAS | 22 | 2 | -- | - | 9 | 3 | 4 | 4 |
| ...ZYGNEMATALES | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | |
|COSMARIUM | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | |
| ...CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
|CYCLOTELLA | 460# | 41 | -- | - | 3 | 1 | 4 | 4 |
|STEPHANODISCUS | -- | - | -- | - | * | 0 | -- | - |
| ...PENNALES | | | | | | | | |
|ACHNANTHACEAE | | | | | | | | |
|ACHNANTHES | -- | - | -- | - | -- | - | * | 0 |
|COCCONEIS | 22 | 2 | 31 | 4 | 3 | 1 | * | 0 |
|RHOICOSPHENIA | -- | - | 8 | 1 | * | 0 | -- | - |
| ...CYMBELLACEAE | | | | | | | | |
|AMPHORA | -- | - | -- | - | -- | - | 4 | 4 |
|CYMBELLA | 22 | 2 | -- | - | 6 | 2 | * | 0 |
|EPITHEMIA | -- | - | 110 | 13 | 12 | 3 | 4 | 4 |
|RHOPALODIA | -- | - | -- | - | -- | - | * | 0 |
| ...DIATOMACEAE | | | | | | | | |
|DIATOMA | 22 | 2 | 79 | 9 | 34 | 9 | * | 0 |
| ...FRAGILARIACEAE | | | | | | | | |
|FRAGILARIA | -- | - | -- | - | * | 0 | * | 0 |
| ...SYNEDRA | -- | - | 63 | 7 | 24 | 7 | 8 | 9 |
| ...GOMPHONEMACEAE | | | | | | | | |
|GOMPHONEMA | 43 | 4 | 31 | 4 | 9 | 3 | 4 | 4 |
|NAVICULACEAE | | | | | | | | |
|AMPHIPLEURA | -- | - | -- | - | -- | - | * | 0 |
|GYROSIGMA | -- | - | 24 | 3 | * | 0 | -- | - |
|NAVICULA | 170# | 16 | 280# | 33 | 12 | 3 | 8 | 9 |
|PINNULARIA | -- | - | -- | - | -- | - | -- | - |
| ...NITZSCHACEAE | | | | | | | | |
|HANTZSCHIA | -- | - | -- | - | * | 0 | * | 0 |
| ...NITZSCHIA | 130 | 12 | 79 | 9 | 170# | 47 | 41# | 43 |
| ...SURIRELLACEAE | | | | | | | | |
|SURIRELLA | -- | - | 24 | 3 | 3 | 1 | * | 0 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | |
| ...CHROCOCCOCCALES | | | | | | | | |
| ...CHROCOCCACEAE | | | | | | | | |
|AGMENELLUM | -- | - | -- | - | -- | - | -- | - |
|ANACYSTIS | -- | - | -- | - | -- | - | -- | - |
| ...HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
|ANABAENA | -- | - | -- | - | 3 | 1 | -- | - |
| ...OSCILLATORIA | | | | | | | | |
|OSCILLATORIA | -- | - | -- | - | 61# | 17 | -- | - |
| ...CHROCOCCOCCALES | | | | | | | | |
| ...CHROCOCCACEAE | | | | | | | | |
|GOMPHOSPHERA | -- | - | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | | | |
| ...EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
|EUGLENA | 22 | 2 | -- | - | -- | - | -- | - |
|PHACUS | -- | - | 8 | 1 | -- | - | -- | - |
|TRACHELOMONAS | -- | - | 24 | 3 | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14048000 JOHN DAY RIVER AT McDONALD FERRY, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | MAY 24,77 1400 | JUN 28,77 1300 | JUL 27,77 1000 | SEP 22,77 1500 |
|---------------------|-------------------|-------------------|-------------------|-------------------|
| TOTAL CELLS/ML | 8900 | 620 | 510 | 2700 |
| DIVERSITY: DIVISION | 0.0 | 0.9 | 1.2 | 0.6 |
| ..CLASS | 0.0 | 0.9 | 1.2 | 0.6 |
| ...ORDER | 1.0 | 1.8 | 1.3 | 0.6 |
| ...FAMILY | 1.6 | 2.0 | 1.9 | 0.8 |
|GENUS | 1.6 | 2.0 | 2.3 | 0.8 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | |
| ...HYDRODICTYACEAE | | | | | | | | |
|PEDIASTRUM | -- | - | -- | - | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
|ANKISTRODESMUS | -- | - | -- | - | -- | - | 47 | 2 |
|KIRCHNERIELLA | -- | - | 37 | 6 | -- | - | 16 | 1 |
| ...OOCYSTIS | -- | - | -- | - | 37 | 7 | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
|CRUCIGENIA | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMUS | -- | - | 19 | 3 | -- | - | 2400# | 87 |
| ...TETRASPORALES | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | |
| ...SPHAEROCYSTIS | -- | - | 19 | 3 | -- | - | -- | - |
| ...VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ...CHLAMYDOMONAS | -- | - | -- | - | -- | - | -- | - |
| ...ZYGNEMATALES | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | |
| ...COSMARIUM | -- | - | 6 | 1 | 6 | 1 | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | |
| ...CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ...CYCLOTELLA | 4100# | 46 | -- | - | -- | - | 94 | 3 |
|STEPHANODISCUS | -- | - | -- | - | -- | - | -- | - |
| ...PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
|ACHNANTHES | | | | | 9 | 2 | -- | - |
| ...COCCONEIS | 88 | 1 | 25 | 4 | 48 | 9 | * | 0 |
| ...RHODOSPHENIA | 88 | 1 | -- | - | -- | - | -- | - |
| ...CYMBELLACEAE | | | | | | | | |
|AMPHORA | 180 | 2 | -- | - | -- | - | -- | - |
|CYMBELLA | 88 | 1 | -- | - | -- | - | -- | - |
|EPITHEMIA | -- | - | -- | - | 34 | 7 | * | 0 |
|RHOPALODIA | -- | - | -- | - | -- | - | -- | - |
| ...DIATOMACEAE | | | | | | | | |
|DIATOMA | -- | - | -- | - | 11 | 2 | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
|FRAGILARIA | -- | - | -- | - | -- | - | -- | - |
| ...SYNEDRA | -- | - | 6 | 1 | 6 | 1 | -- | - |
| ...GOMPHONEMATACEAE | | | | | | | | |
|GOMPHONEMA | 260 | 3 | -- | - | 20 | 4 | -- | - |
| ...NAVICULACEAE | | | | | | | | |
|AMPHIPLEURA | -- | - | -- | - | -- | - | -- | - |
|GYROSIGMA | -- | - | -- | - | -- | - | -- | - |
| ...NAVICULA | 260 | 3 | -- | - | 9 | 2 | -- | - |
| ...PINNULARIA | -- | - | 6 | 1 | -- | - | -- | - |
| ...NITZSCHIA | | | | | | | | |
|NITZSCHIA | 3900# | 43 | -- | - | 9 | 2 | 16 | 1 |
| ...SURIPELLACEAE | | | | | | | | |
| ...SURIPELLA | -- | - | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | |
| ...CHROCOCCOCCALES | | | | | | | | |
| ...CHROCOCCOCCAEAE | | | | | | | | |
|AGMENELLUM | -- | - | -- | - | 290# | 57 | -- | - |
| ...ANACYSTIS | -- | - | -- | - | 34 | 7 | 160 | 6 |
| ...HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
|ANABAENA | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIA | | | | | | | | |
|OSCILLATORIA | -- | - | 260# | 41 | -- | - | -- | - |
| ...CHROCOCCOCCALES | | | | | | | | |
| ...GOMPHOSPHAERIA | -- | - | 250# | 40 | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | | | |
| ...EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
|EUGLENA | -- | - | -- | - | -- | - | -- | - |
| ...PHACUS | -- | - | -- | - | -- | - | -- | - |
| ...TRACHELOMONAS | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 287 | 314 | 255 | 259 | 238 | 228 | 221 | 92 | 125 | | --- | 270 |
| 2 | 288 | 311 | 261 | 259 | 239 | 224 | 222 | 94 | 129 | | --- | 271 |
| 3 | 299 | 308 | 264 | 258 | 241 | 224 | 225 | 93 | 135 | | --- | 269 |
| 4 | 300 | 304 | --- | 260 | 243 | 226 | 224 | 92 | 141 | | --- | 269 |
| 5 | 295 | 303 | --- | 263 | 245 | 230 | 225 | 95 | 144 | | --- | 255 |
| 6 | 291 | 297 | --- | 266 | 248 | 233 | 228 | 91 | 138 | | --- | 260 |
| 7 | 294 | 294 | --- | 269 | 250 | 236 | 235 | 86 | 121 | | --- | 293 |
| 8 | 302 | 295 | --- | 272 | 252 | 238 | 219 | 84 | 117 | | --- | 297 |
| 9 | 311 | 294 | --- | 274 | 257 | 237 | 194 | 93 | 112 | | --- | 296 |
| 10 | 315 | 292 | --- | 279 | 267 | 233 | 174 | 101 | 117 | | --- | 317 |
| 11 | 318 | 292 | --- | 291 | 267 | 235 | 160 | 97 | 130 | | --- | 336 |
| 12 | 319 | 290 | --- | 302 | 266 | 241 | 133 | 103 | 129 | | --- | 338 |
| 13 | 318 | 286 | --- | 309 | 265 | 239 | 125 | 113 | 133 | | --- | 338 |
| 14 | 316 | 282 | --- | 312 | 262 | 240 | 126 | 122 | 149 | | --- | 337 |
| 15 | 312 | 280 | --- | 310 | 261 | 239 | 129 | 126 | 164 | | --- | 338 |
| 16 | 308 | 284 | --- | 307 | 259 | 234 | 130 | 129 | 178 | | --- | 343 |
| 17 | 309 | 286 | --- | 304 | 258 | 223 | 129 | 134 | 194 | | --- | 347 |
| 18 | 313 | 288 | --- | 302 | 255 | 221 | 129 | 140 | 192 | | --- | 353 |
| 19 | 315 | 289 | --- | 301 | 250 | 221 | 130 | 144 | --- | | --- | 356 |
| 20 | 316 | 285 | --- | 294 | 245 | 224 | 133 | 150 | --- | | --- | 354 |
| 21 | 317 | 283 | --- | 279 | 243 | 229 | 134 | 154 | --- | | --- | 345 |
| 22 | 318 | 282 | --- | 260 | 239 | 230 | 144 | 160 | --- | | --- | 336 |
| 23 | 318 | 280 | --- | 244 | 238 | 234 | 147 | 160 | --- | | --- | 330 |
| 24 | 319 | 277 | --- | 235 | 236 | 235 | 146 | 162 | --- | | --- | 325 |
| 25 | 319 | 276 | --- | 231 | 235 | 240 | 149 | 164 | --- | | --- | 325 |
| 26 | 318 | 270 | --- | 231 | 234 | 246 | 145 | 179 | --- | | --- | 327 |
| 27 | 316 | 262 | --- | 232 | 233 | 247 | 133 | 172 | --- | | --- | 326 |
| 28 | 315 | 257 | --- | 233 | 232 | 242 | 118 | 151 | --- | | --- | 322 |
| 29 | 314 | 255 | 266 | 233 | --- | 238 | 104 | 133 | --- | | --- | 323 |
| 30 | 313 | 254 | 262 | 234 | --- | 235 | 95 | 126 | --- | | 272 | 333 |
| 31 | 315 | --- | 261 | 236 | --- | 228 | --- | 125 | --- | | 271 | --- |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 21.5 | 19.0 | 12.0 | 10.5 | 0.0 | 0.0 | 0.5 | 0.0 | 1.0 | 0.0 | 7.5 | 5.0 |
| 2 | 19.5 | 15.0 | 12.5 | 11.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 5.5 | 4.0 |
| 3 | 15.0 | 12.5 | 12.5 | 11.0 | 0.0 | 0.0 | 0.5 | 0.0 | 1.0 | 0.5 | 6.5 | 5.0 |
| 4 | 15.0 | 11.5 | --- | 10.0 | 0.5 | 0.0 | 0.5 | 0.0 | 1.0 | 0.5 | 8.0 | 4.5 |
| 5 | 15.5 | 13.0 | --- | --- | 0.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.5 | 9.0 | 5.0 |
| 6 | 17.0 | 13.5 | --- | --- | 1.5 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 8.5 | 7.0 |
| 7 | 16.5 | 13.5 | --- | --- | 4.0 | 1.5 | 0.0 | 0.0 | 1.0 | 1.0 | 8.5 | 6.5 |
| 8 | 17.0 | 13.5 | --- | --- | 5.0 | 4.0 | 0.0 | 0.0 | 2.0 | 1.0 | 8.0 | 6.5 |
| 9 | 17.5 | 14.5 | --- | --- | 4.5 | 3.5 | 0.0 | 0.0 | 3.5 | 1.0 | 9.0 | 6.0 |
| 10 | 17.0 | 15.0 | --- | --- | 4.0 | 3.0 | 0.0 | 0.0 | 6.5 | 3.0 | 8.0 | 5.0 |
| 11 | 17.5 | 14.5 | --- | --- | 4.0 | 2.5 | 0.0 | 0.0 | 7.5 | 5.5 | 8.5 | 5.5 |
| 12 | 17.0 | 14.0 | --- | --- | 2.5 | 1.5 | 0.0 | 0.0 | 9.0 | 6.5 | 8.5 | 7.0 |
| 13 | 16.5 | 13.5 | --- | --- | 3.0 | 1.5 | 0.0 | 0.0 | 9.5 | 7.5 | 8.5 | 5.5 |
| 14 | 15.5 | 13.5 | --- | --- | 2.0 | 1.5 | 0.0 | 0.0 | 8.0 | 5.5 | 7.0 | 5.0 |
| 15 | 14.0 | 11.5 | --- | --- | 3.0 | 1.5 | 0.0 | 0.0 | 8.0 | 5.0 | 8.5 | 4.5 |
| 16 | 13.5 | 10.5 | --- | --- | 2.0 | 1.5 | 0.0 | 0.0 | 9.0 | 6.0 | 8.0 | 5.5 |
| 17 | 12.5 | 10.0 | --- | --- | 2.0 | 0.5 | --- | --- | 10.0 | 7.5 | 8.0 | 4.5 |
| 18 | 11.0 | 9.0 | --- | --- | 2.5 | 1.0 | --- | --- | 10.0 | 7.5 | 8.5 | 6.0 |
| 19 | 10.5 | 8.0 | --- | --- | 1.5 | 0.0 | --- | --- | 9.5 | 6.5 | 9.0 | 6.5 |
| 20 | 10.0 | 7.5 | --- | --- | 0.0 | 0.0 | --- | --- | 8.0 | 6.5 | 9.0 | 5.5 |
| 21 | 10.0 | 7.5 | --- | --- | 0.0 | 0.0 | --- | --- | 7.0 | 5.5 | 10.0 | 6.5 |
| 22 | 10.5 | 8.0 | --- | --- | 0.0 | 0.0 | --- | --- | 7.0 | 5.5 | 12.5 | 7.5 |
| 23 | 10.0 | 8.5 | --- | --- | 1.0 | 0.0 | --- | --- | 6.5 | 4.5 | 11.0 | 8.5 |
| 24 | 9.5 | 9.0 | --- | --- | 0.5 | 0.0 | --- | --- | 7.5 | 5.5 | 10.5 | 7.0 |
| 25 | 10.5 | 9.0 | --- | --- | 1.0 | 0.0 | --- | --- | 6.5 | 5.0 | 11.5 | 7.5 |
| 26 | 11.0 | 8.5 | --- | --- | 2.5 | 1.0 | --- | --- | 5.5 | 4.5 | 11.5 | 8.0 |
| 27 | 10.5 | 8.5 | --- | --- | 3.5 | 2.5 | 1.0 | 0.0 | 7.5 | 4.5 | 10.0 | 7.5 |
| 28 | 9.5 | 8.0 | --- | --- | 2.0 | 1.0 | 0.5 | 0.0 | 7.5 | 6.5 | 10.0 | 6.0 |
| 29 | 9.5 | 8.0 | --- | --- | 1.5 | 1.5 | 0.5 | 0.0 | --- | --- | 10.0 | 6.0 |
| 30 | 9.5 | 8.0 | --- | --- | 1.5 | 1.0 | 0.0 | 0.0 | --- | --- | 11.5 | 7.0 |
| 31 | 11.0 | 8.0 | --- | --- | 1.0 | 0.0 | 0.5 | 0.0 | --- | --- | 10.0 | 7.5 |
| MONTH | 21.5 | 7.5 | 12.5 | 10.0 | 5.0 | 0.0 | 1.0 | 0.0 | 10.0 | 0.0 | 12.5 | 4.0 |

JOHN DAY RIVER BASIN

14048000 JOHN DAY RIVER AT MCDONALD FERRY, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 10.5 | 7.0 | 17.0 | 16.0 | 18.5 | 16.5 | 24.0 | 19.0 | 29.5 | 22.5 | 26.0 | 14.5 |
| 2 | 12.0 | 7.5 | 17.5 | 15.0 | 20.0 | 15.5 | 20.5 | 16.0 | 30.0 | 22.5 | 21.0 | 15.0 |
| 3 | 14.0 | 9.0 | 16.0 | 13.5 | 19.0 | 17.5 | 20.0 | 15.5 | 28.5 | 22.5 | 24.0 | 16.5 |
| 4 | 16.0 | 11.0 | 15.0 | 12.5 | 19.5 | 17.0 | 19.0 | 14.5 | 28.5 | 21.0 | 23.5 | 18.5 |
| 5 | 17.0 | 12.5 | 15.5 | 12.0 | 23.0 | 17.5 | 18.0 | 13.5 | 29.0 | 22.0 | 23.0 | 19.0 |
| 6 | 18.0 | 13.5 | 14.0 | 12.0 | 26.0 | 21.0 | 20.5 | 14.0 | 28.5 | 21.5 | 22.5 | 17.5 |
| 7 | 18.5 | 15.0 | 12.5 | 11.5 | 26.0 | 22.5 | 23.0 | 17.0 | 30.0 | 22.0 | 21.5 | 17.5 |
| 8 | 16.0 | 13.5 | 15.5 | 10.0 | 22.5 | 20.0 | 23.5 | 19.0 | 30.0 | 22.5 | 20.0 | 15.0 |
| 9 | 14.5 | 12.0 | 17.0 | 13.0 | 23.5 | 19.0 | 20.0 | 16.5 | 30.0 | 21.0 | 21.0 | 15.5 |
| 10 | 13.5 | 11.0 | 15.5 | 12.0 | 23.0 | 20.0 | 20.5 | 14.5 | 28.5 | 21.5 | 22.0 | 16.0 |
| 11 | 14.0 | 11.0 | 15.0 | 11.0 | 21.0 | 19.0 | 23.0 | 16.5 | 31.0 | 20.5 | 23.0 | 16.5 |
| 12 | 14.5 | 11.0 | 16.5 | 12.0 | 23.5 | 18.5 | 20.5 | 17.0 | 33.0 | 21.0 | 23.0 | 17.5 |
| 13 | 14.0 | 11.5 | 17.0 | 13.5 | 25.0 | 20.0 | 21.0 | 15.0 | 30.5 | 21.5 | 24.0 | 17.0 |
| 14 | 13.5 | 10.0 | 16.5 | 13.5 | 24.5 | 21.0 | 23.5 | 17.0 | 29.0 | 19.0 | 20.5 | 17.0 |
| 15 | 14.5 | 12.0 | 16.5 | 13.5 | 23.5 | 20.0 | 24.5 | 19.0 | 31.5 | 19.0 | 18.5 | 14.0 |
| 16 | 14.0 | 12.0 | 15.5 | 12.5 | 25.0 | 19.5 | 23.5 | 19.0 | 31.0 | 21.5 | 19.5 | 13.5 |
| 17 | 14.0 | 11.0 | 16.0 | 12.5 | 25.0 | 21.0 | 21.5 | 18.5 | 31.5 | 21.0 | 18.0 | 13.5 |
| 18 | 13.5 | 10.5 | 17.5 | 13.0 | 26.0 | 21.5 | 22.5 | 17.0 | 28.5 | 20.5 | 17.0 | 14.5 |
| 19 | 14.0 | 10.0 | 18.0 | 14.0 | 23.5 | 20.5 | 22.5 | 16.0 | 30.0 | 18.5 | 18.5 | 15.0 |
| 20 | 14.0 | 11.0 | 19.5 | 15.0 | 22.5 | 19.0 | 26.0 | 19.5 | 30.5 | 20.0 | 18.0 | 14.0 |
| 21 | 14.0 | 12.0 | 19.5 | 16.5 | 24.0 | 19.0 | 25.5 | 20.0 | 26.5 | 20.0 | --- | --- |
| 22 | 16.5 | 12.0 | 19.5 | 15.5 | --- | 20.0 | 26.0 | 19.5 | 23.0 | 16.0 | --- | --- |
| 23 | 17.5 | 13.5 | 17.5 | 14.5 | --- | --- | 27.0 | 20.0 | 21.0 | 16.5 | --- | --- |
| 24 | 19.5 | 15.0 | 19.0 | 15.0 | --- | --- | 26.5 | 22.0 | 23.5 | 17.0 | --- | --- |
| 25 | 19.5 | 15.5 | 19.5 | 15.5 | --- | --- | 26.0 | 21.0 | 19.0 | 16.0 | --- | --- |
| 26 | 18.0 | 14.0 | 18.5 | 16.0 | --- | --- | 27.5 | 20.5 | 22.0 | 15.5 | --- | --- |
| 27 | 18.5 | 14.5 | 18.0 | 15.0 | --- | --- | 29.0 | 21.0 | 21.5 | 13.5 | --- | --- |
| 28 | 18.5 | 15.0 | 17.5 | 14.0 | 23.0 | --- | 23.0 | 18.5 | 23.0 | 16.0 | --- | --- |
| 29 | 18.5 | 15.5 | 18.5 | 14.0 | 22.5 | 16.5 | 22.5 | 17.0 | 19.0 | 14.5 | --- | --- |
| 30 | 17.5 | 15.5 | 18.5 | 15.5 | 26.0 | 19.5 | 26.5 | 18.0 | 23.5 | 15.0 | --- | --- |
| 31 | --- | --- | 19.5 | 17.0 | --- | --- | 29.0 | 20.5 | 23.0 | 14.5 | --- | --- |
| MONTH | 19.5 | 7.0 | 19.5 | 10.0 | 26.0 | 15.5 | 29.0 | 13.5 | 33.0 | 13.5 | 26.0 | 13.5 |

DESCHUTES RIVER BASIN

153

14050000 DESCHUTES RIVER BELOW SNOW CREEK, NEAR LA PINE, OR

LOCATION.--Lat 43°48'51", long 121°46'33", in NW¼ sec.28, T.20 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, on left bank at flow line of Crane Prairie Reservoir, 20 ft (6 m) downstream from Snow Creek, 300 ft (91 m) upstream from highway bridge, and 17 mi (27 km) northwest of La Pine.

DRAINAGE AREA.--132 mi² (342 km²), including Sparks, Elk, and Mud Lake basins, which have no surface outflow to Deschutes River; hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only October 1937, published in WSP 1318. Published as "near Lapine" 1937-64.

REVISED RECORDS.--WSP 1248: 1951.

GAGE.--Water-stage recorder. Altitude of gage is 4,445 ft (1,355 m), from elevation of Crane Prairie Reservoir when slack water extended to gage. Prior to Sept. 10, 1938, nonrecording gage at site 450 ft (137 m) downstream at different datum.

REMARKS.--Records good. No regulation. Crater Creek Canal diverts water to Tumalo Creek basin from tributaries of Soda Creek. Stream is spring fed and peak discharge may occur several months after the precipitation which caused it.

AVERAGE DISCHARGE.--40 years, 155 ft³/s (4.390 m³/s), 112,300 acre-ft/yr (138 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480 ft³/s (13.6 m³/s) Aug. 19, 1974, gage height, 3.17 ft (0.966 m); maximum gage height, 4.12 ft (1.256 m) Jan. 21, 1943 (ice jam); minimum discharge, 40 ft³/s (1.13 m³/s) sometime during period Dec. 22, 1959, to Mar. 2, 1960, result of freezeup; minimum daily, 55 ft³/s (1.56 m³/s) for many days April to June 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 270 ft³/s (7.65 m³/s) Oct. 1, gage height, 1.90 ft (0.579 m); minimum, 70 ft³/s (1.98 m³/s) Sept. 16-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 1 | 267 | 219 | 165 | 135 | 107 | 93 | 91 | 85 | 84 | 79 | 78 | 73 |
| 2 | 267 | 217 | 165 | 138 | 107 | 91 | 89 | 85 | 84 | 79 | 78 | 73 |
| 3 | 264 | 215 | 165 | 138 | 107 | 91 | 89 | 85 | 84 | 79 | 79 | 73 |
| 4 | 261 | 213 | 165 | 135 | 107 | 89 | 89 | 85 | 84 | 81 | 79 | 73 |
| 5 | 258 | 210 | 159 | 135 | 105 | 89 | 89 | 87 | 84 | 79 | 79 | 73 |
| 6 | 255 | 207 | 156 | 133 | 103 | 89 | 89 | 89 | 84 | 81 | 79 | 73 |
| 7 | 249 | 204 | 156 | 132 | 103 | 89 | 91 | 89 | 84 | 81 | 79 | 73 |
| 8 | 243 | 204 | 159 | 131 | 103 | 91 | 91 | 89 | 84 | 81 | 79 | 73 |
| 9 | 240 | 204 | 159 | 129 | 103 | 93 | 89 | 91 | 84 | 82 | 79 | 73 |
| 10 | 239 | 201 | 156 | 128 | 103 | 91 | 89 | 93 | 84 | 84 | 79 | 73 |
| 11 | 239 | 207 | 153 | 128 | 101 | 91 | 89 | 89 | 84 | 84 | 78 | 73 |
| 12 | 238 | 207 | 153 | 128 | 101 | 91 | 89 | 89 | 84 | 84 | 75 | 72 |
| 13 | 238 | 204 | 153 | 128 | 99 | 91 | 89 | 87 | 84 | 84 | 76 | 72 |
| 14 | 237 | 204 | 153 | 125 | 99 | 89 | 87 | 87 | 84 | 82 | 78 | 72 |
| 15 | 237 | 204 | 150 | 125 | 99 | 89 | 85 | 87 | 82 | 82 | 76 | 72 |
| 16 | 236 | 201 | 150 | 123 | 97 | 89 | 85 | 87 | 81 | 82 | 76 | 70 |
| 17 | 236 | 198 | 150 | 123 | 95 | 89 | 84 | 85 | 81 | 82 | 76 | 70 |
| 18 | 235 | 198 | 145 | 123 | 95 | 89 | 84 | 84 | 82 | 81 | 76 | 70 |
| 19 | 234 | 192 | 143 | 121 | 95 | 89 | 84 | 84 | 82 | 81 | 78 | 70 |
| 20 | 234 | 189 | 143 | 119 | 95 | 89 | 84 | 84 | 82 | 81 | 78 | 70 |
| 21 | 233 | 189 | 143 | 119 | 95 | 89 | 84 | 84 | 81 | 79 | 76 | 70 |
| 22 | 233 | 186 | 143 | 117 | 93 | 89 | 84 | 85 | 81 | 79 | 76 | 70 |
| 23 | 232 | 186 | 143 | 117 | 93 | 89 | 84 | 85 | 81 | 79 | 76 | 72 |
| 24 | 232 | 183 | 140 | 117 | 93 | 87 | 84 | 84 | 79 | 81 | 79 | 73 |
| 25 | 231 | 183 | 140 | 115 | 93 | 87 | 85 | 84 | 79 | 81 | 76 | 73 |
| 26 | 231 | 177 | 140 | 113 | 93 | 87 | 85 | 84 | 78 | 81 | 75 | 72 |
| 27 | 229 | 174 | 140 | 113 | 93 | 91 | 85 | 84 | 78 | 79 | 75 | 72 |
| 28 | 227 | 174 | 138 | 111 | 93 | 89 | 85 | 84 | 78 | 79 | 73 | 75 |
| 29 | 225 | 174 | 138 | 111 | --- | 87 | 85 | 84 | 79 | 79 | 73 | 72 |
| 30 | 223 | 168 | 138 | 111 | --- | 89 | 85 | 84 | 79 | 78 | 73 | 72 |
| 31 | 221 | --- | 135 | 109 | --- | 89 | --- | 84 | --- | 76 | 73 | --- |
| TOTAL | 7424 | 5892 | 4636 | 3830 | 2770 | 2775 | 2602 | 2667 | 2459 | 2500 | 2380 | 2162 |
| MEAN | 239 | 196 | 150 | 124 | 98.9 | 89.5 | 86.7 | 86.0 | 82.0 | 80.6 | 76.8 | 72.1 |
| MAX | 267 | 219 | 165 | 138 | 107 | 93 | 91 | 93 | 84 | 84 | 79 | 75 |
| MIN | 221 | 168 | 135 | 109 | 93 | 87 | 84 | 84 | 78 | 76 | 73 | 70 |
| AC-FT | 14730 | 11690 | 9200 | 7600 | 5490 | 5500 | 5160 | 5290 | 4880 | 4960 | 4720 | 4290 |

CAL YR 1976 TOTAL 67038 MEAN 183 MAX 292 MIN 100 AC-FT 133000
WTR YR 1977 TOTAL 42097 MEAN 115 MAX 267 MIN 70 AC-FT 83500

DESCHUTES RIVER BASIN

14050500 CULTUS RIVER ABOVE CULTUS CREEK, NEAR LAPINE, OR

LOCATION.--Lat 43°49'06", long 121°47'40", near line between secs.20 and 29, T.20 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, Deschutes National Forest, on left bank at highway culvert, 2 mi (3 km) upstream from Cultus Creek, and 18 mi (29 km) northwest of La Pine.

DRAINAGE AREA.--16.5 mi² (42.7 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--October 1922 to September 1925, October 1937 to current year. Monthly discharge only October 1937, published in WSP 1318. Prior to Oct. 1, 1964, published as "near Lapine."

REVISED RECORDS.--WSP 1448: 1923-25, 1947.

GAGE.--Water-stage recorder and cement bag control. Altitude of gage is 4,450 ft (1,356 m), by barometer. Oct. 1, 1922, to Sept. 30, 1925, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Records good. No regulation or diversions above station.

AVERAGE DISCHARGE.--43 years, 63.8 ft³/s (1.807 m³/s), 46,220 acre-ft/yr (57.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 178 ft³/s (5.04 m³/s) May 31, 1956, gage height, 1.04 ft (0.317 m); maximum gage height, 1.32 ft (0.402 m) May 16, 1972 (backwater from Crane Prairie Reservoir); minimum discharge, 26 ft³/s (0.74 m³/s) May 26-31, Nov. 23 to Dec. 4, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 81 ft³/s (2.29 m³/s) Oct. 1, gage height, 0.94 ft (0.287 m); minimum, 34 ft³/s (0.96 m³/s) Sept. 24-26, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|---------|--------|-------------|------|------|------|------|------|------|
| 1 | 81 | 75 | 69 | 63 | 53 | 52 | 47 | 44 | 44 | 41 | 40 | 37 |
| 2 | 79 | 73 | 69 | 63 | 53 | 52 | 47 | 44 | 44 | 41 | 39 | 36 |
| 3 | 79 | 73 | 69 | 63 | 52 | 49 | 47 | 44 | 44 | 41 | 40 | 36 |
| 4 | 77 | 73 | 69 | 63 | 52 | 49 | 47 | 44 | 44 | 43 | 40 | 37 |
| 5 | 77 | 73 | 69 | 61 | 52 | 49 | 47 | 44 | 46 | 43 | 40 | 37 |
| 6 | 77 | 73 | 69 | 61 | 51 | 49 | 47 | 44 | 44 | 41 | 40 | 36 |
| 7 | 77 | 71 | 67 | 59 | 51 | 49 | 47 | 44 | 44 | 41 | 40 | 36 |
| 8 | 77 | 71 | 67 | 59 | 51 | 49 | 47 | 46 | 46 | 43 | 40 | 36 |
| 9 | 75 | 71 | 65 | 59 | 50 | 50 | 47 | 44 | 46 | 43 | 40 | 35 |
| 10 | 75 | 71 | 65 | 59 | 50 | 50 | 47 | 44 | 46 | 43 | 40 | 35 |
| 11 | 75 | 71 | 67 | 57 | 50 | 50 | 47 | 44 | 46 | 44 | 41 | 35 |
| 12 | 75 | 69 | 67 | 57 | 49 | 50 | 47 | 44 | 44 | 44 | 41 | 35 |
| 13 | 75 | 69 | 65 | 57 | 49 | 50 | 47 | 44 | 44 | 44 | 41 | 35 |
| 14 | 73 | 69 | 65 | 57 | 49 | 50 | 47 | 44 | 44 | 43 | 41 | 35 |
| 15 | 73 | 69 | 65 | 59 | 49 | 50 | 46 | 44 | 44 | 43 | 41 | 35 |
| 16 | 73 | 67 | 65 | 59 | 49 | 49 | 46 | 44 | 44 | 44 | 41 | 35 |
| 17 | 73 | 67 | 67 | 59 | 49 | 49 | 46 | 43 | 43 | 44 | 41 | 35 |
| 18 | 73 | 67 | 67 | 59 | 49 | 49 | 44 | 43 | 43 | 44 | 41 | 35 |
| 19 | 71 | 67 | 65 | 59 | 49 | 49 | 44 | 43 | 41 | 44 | 43 | 35 |
| 20 | 71 | 67 | 65 | 59 | 50 | 49 | 44 | 43 | 41 | 43 | 41 | 35 |
| 21 | 71 | 67 | 65 | 59 | 52 | 49 | 44 | 43 | 41 | 43 | 41 | 35 |
| 22 | 73 | 69 | 63 | 59 | 52 | 49 | 44 | 44 | 41 | 41 | 40 | 35 |
| 23 | 73 | 69 | 65 | 57 | 52 | 49 | 44 | 44 | 43 | 41 | 40 | 35 |
| 24 | 75 | 69 | 65 | 57 | 52 | 49 | 43 | 44 | 43 | 40 | 40 | 34 |
| 25 | 75 | 69 | 65 | 56 | 52 | 49 | 43 | 43 | 41 | 40 | 39 | 34 |
| 26 | 75 | 69 | 65 | 56 | 52 | 49 | 43 | 43 | 41 | 40 | 39 | 34 |
| 27 | 75 | 69 | 63 | 56 | 52 | 50 | 44 | 43 | 41 | 40 | 40 | 35 |
| 28 | 75 | 69 | 63 | 54 | 52 | 49 | 44 | 43 | 41 | 40 | 39 | 35 |
| 29 | 75 | 69 | 65 | 54 | --- | 47 | 44 | 43 | 41 | 40 | 39 | 35 |
| 30 | 75 | 69 | 65 | 53 | --- | 47 | 44 | 43 | 41 | 40 | 39 | 34 |
| 31 | 75 | --- | 63 | 53 | --- | 47 | --- | 44 | --- | 40 | 37 | --- |
| TOTAL | 2323 | 2094 | 2043 | 1806 | 1423 | 1527 | 1365 | 1355 | 1296 | 1302 | 1244 | 1057 |
| MEAN | 74.9 | 69.8 | 65.9 | 58.3 | 50.8 | 49.3 | 45.5 | 43.7 | 43.2 | 42.0 | 40.1 | 35.2 |
| MAX | 81 | 75 | 69 | 63 | 53 | 52 | 47 | 46 | 46 | 44 | 43 | 37 |
| MIN | 71 | 67 | 63 | 53 | 49 | 47 | 43 | 43 | 41 | 40 | 37 | 34 |
| AC-FT | 4610 | 4150 | 4050 | 3580 | 2820 | 3030 | 2710 | 2690 | 2570 | 2580 | 2470 | 2100 |
| CAL YR 1976 | TOTAL | 27179 | MEAN 74.3 | MAX 100 | MIN 57 | AC-FT 53910 | | | | | | |
| WTR YR 1977 | TOTAL | 18835 | MEAN 51.6 | MAX 81 | MIN 34 | AC-FT 37360 | | | | | | |

DESCHUTES RIVER BASIN

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14051000 CULTUS CREEK ABOVE CRANE PRAIRIE RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°49'17", long 121°49'22", in SW¼ sec.19, T.20 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, on left bank 1,000 ft (305 m) upstream from highway bridge, 1.0 mi (1.6 km) downstream from Cultus Lake, and 19 mi (31 km) northwest of La Pine.

DRAINAGE AREA.--33.2 mi² (86.0 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--March to September 1924 (published as "above Crane Prairie, near Lapine"), October 1937 to current year. Monthly discharge only October 1937 to September 1949, published in WSP 1318. Records for October 1923 to February 1924, published in WSP 594, have been found to be unreliable and should not be used. Published as "near Lapine" 1937-64.

REVISED RECORDS.--WSP 1568: 1957. WRD Oreg. 1973: 1972. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Altitude of gage is 4,545 ft (1,385 m), by barometer. Mar. 1 to Sept. 30, 1924, nonrecording gage at site 100 ft (30 m) upstream at different datum.

REMARKS.--Records good. Some regulation by fish screens at Cultus Lake since 1962. No diversion above station.

AVERAGE DISCHARGE.--40 years (water years 1938-77), 23.0 ft³/s (0.651 m³/s), 16,660 acre-ft/yr (20.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 336 ft³/s (9.52 m³/s) Dec. 25, 1964, gage height, 4.15 ft (1.265 m), from floodmark, from rating curve extended above 90 ft³/s (2.55 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft³/s (0.71 m³/s) June 8; maximum gage height, 1.94 ft (0.591 m) Apr. 6, backwater from ice; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|-------|-------|-----------|--------|---------|-------------|-------|-------|-------|------|------|
| 1 | 1.8 | .65 | .65 | .10 | .00 | .02 | .02 | 3.8 | 18 | 7.9 | .30 | .00 |
| 2 | 2.0 | .65 | .65 | .10 | .00 | .02 | .02 | 4.9 | 18 | 7.1 | .25 | .00 |
| 3 | 1.8 | .65 | .50 | .20 | .00 | .02 | .02 | 6.7 | 18 | 6.3 | .15 | .00 |
| 4 | 1.4 | .65 | .50 | .25 | .00 | .02 | .04 | 7.5 | 19 | 5.9 | .06 | .00 |
| 5 | 1.4 | .65 | .40 | .20 | .00 | .02 | .15 | 8.3 | 19 | 5.2 | .02 | .00 |
| 6 | 1.3 | .65 | .40 | .15 | .00 | .02 | 8.3 | 8.8 | 21 | 4.5 | .01 | .00 |
| 7 | 1.1 | .65 | .40 | .10 | .00 | .02 | 3.8 | 8.8 | 23 | 4.2 | .01 | .00 |
| 8 | 1.1 | .65 | .30 | .08 | .00 | .02 | 2.2 | 9.2 | 24 | 4.2 | .01 | .00 |
| 9 | 1.1 | .65 | .30 | .08 | .00 | .02 | 1.8 | 9.7 | 23 | 3.5 | .00 | .00 |
| 10 | 1.1 | .50 | .30 | .08 | .00 | .02 | 1.6 | 11 | 23 | 2.9 | .00 | .00 |
| 11 | .95 | .50 | .40 | .08 | .00 | .02 | 1.6 | 12 | 23 | 2.7 | .00 | .00 |
| 12 | .95 | .50 | .65 | .08 | .00 | .02 | 1.6 | 12 | 22 | 2.4 | .00 | .00 |
| 13 | .80 | .65 | .50 | .08 | .00 | .02 | 1.8 | 13 | 22 | 2.0 | .01 | .00 |
| 14 | .80 | .65 | .40 | .08 | .00 | .02 | 1.8 | 13 | 21 | 1.8 | .01 | .00 |
| 15 | .65 | .80 | .30 | .08 | .00 | .02 | 1.8 | 14 | 21 | 1.6 | .01 | .00 |
| 16 | .65 | .80 | .25 | .06 | .01 | .02 | 1.8 | 14 | 20 | 1.4 | .01 | .00 |
| 17 | .50 | .80 | .25 | .04 | .01 | .02 | 1.6 | 14 | 19 | 1.3 | .00 | .00 |
| 18 | .40 | .80 | .20 | .02 | .01 | .02 | 1.6 | 14 | 18 | 1.1 | .00 | .00 |
| 19 | .40 | .80 | .20 | .02 | .01 | .01 | 1.4 | 14 | 17 | .95 | .00 | .00 |
| 20 | .30 | .80 | .25 | .02 | .01 | .01 | 1.4 | 14 | 16 | .80 | .00 | .00 |
| 21 | .30 | .80 | .40 | .02 | .02 | .01 | 1.4 | 14 | 16 | .65 | .00 | .00 |
| 22 | .25 | .65 | .30 | .02 | .01 | .02 | 1.4 | 14 | 15 | .65 | .00 | .00 |
| 23 | .25 | .65 | .40 | .02 | .01 | .02 | 1.4 | 16 | 15 | .50 | .00 | .00 |
| 24 | .30 | .65 | .30 | .02 | .01 | .02 | 1.6 | 16 | 14 | .65 | .02 | .00 |
| 25 | .65 | .65 | .25 | .02 | .01 | .02 | 1.8 | 17 | 13 | 1.4 | .02 | .00 |
| 26 | .50 | .50 | .30 | .04 | .01 | .02 | 1.8 | 17 | 12 | 1.3 | .01 | .00 |
| 27 | .50 | .40 | .50 | .06 | .02 | .02 | 2.0 | 17 | 11 | 1.3 | .00 | .00 |
| 28 | .50 | .35 | .30 | .06 | .06 | .02 | 2.2 | 18 | 9.7 | 1.1 | .00 | .00 |
| 29 | .50 | .45 | .30 | .06 | --- | .02 | 2.4 | 18 | 8.8 | .65 | .00 | .00 |
| 30 | .50 | .60 | .20 | .06 | --- | .02 | 2.9 | 17 | 8.3 | .50 | .00 | .00 |
| 31 | .50 | --- | .10 | .02 | --- | .02 | --- | 18 | --- | .40 | .00 | --- |
| TOTAL | 25.25 | 19.15 | 11.15 | 2.30 | .20 | .59 | 53.25 | 394.7 | 527.8 | 76.85 | .90 | .00 |
| MEAN | .81 | .64 | .36 | .074 | .007 | .019 | 1.78 | 12.7 | 17.6 | 2.48 | .029 | .000 |
| MAX | 2.0 | .80 | .65 | .25 | .06 | .02 | 8.3 | 18 | 24 | 7.9 | .30 | .00 |
| MIN | .25 | .35 | .10 | .02 | .00 | .01 | .02 | 3.8 | 8.3 | .40 | .00 | .00 |
| AC-FT | 50 | 38 | 22 | 4.6 | .4 | 1.2 | 106 | 783 | 1050 | 152 | 1.8 | .00 |
| CAL YR 1976 TOTAL | 8331.15 | | | MEAN 22.8 | MAX 90 | MIN .10 | AC-FT 16520 | | | | | |
| WTR YR 1977 TOTAL | 1112.14 | | | MEAN 3.05 | MAX 24 | MIN .00 | AC-FT 2210 | | | | | |

14052000 DEER CREEK ABOVE CRANE PRAIRIE RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°48'48", long 121°50'18", in SE¼SW¼ sec.25, T.20 S., R.7 E., Deschutes County, Hydrologic Unit 17070301, on right bank 150 ft (146 m) downstream from highway bridge, 1.2 mi (1.9 km) downstream from Little Cultus Lake, and 19 mi (31 km) northwest of La Pine.

DRAINAGE AREA.--21.5 mi² (55.7 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--February to September 1924 (published as "above Crane Prairie, near Lapine"), October 1937 to current year. Monthly discharge only October 1937 to September 1949, published in WSP 1318. Records for October 1923 to January 1924, published in WSP 594, have been found to be unreliable and should not be used. Published as "near Lapine" 1937-64.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and wooden weir control. Altitude of gage is 4,520 ft (1,378 m), by barometer. Feb. 1 to Sept. 30, 1924, nonrecording gage at site 75 ft (23 m) upstream at various datums. Oct. 1, 1937, to Sept. 30, 1938, water-stage recorder at bridge 150 ft (46 m) upstream at different datum. Oct. 1, 1938, to Aug. 13, 1968, water-stage recorder and wooden weir control at present site and datum 0.60 ft (0.183 m) higher.

REMARKS.--Records good except those for November to March, which are poor. No regulation or diversion above station.

AVERAGE DISCHARGE.--40 years (water years 1938-77), 7.58 ft³/s (0.215 m³/s), 5,490 acre-ft/yr (6.77 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 200 ft³/s (5.66 m³/s), estimated, Dec. 25, 1964; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8.2 ft³/s (0.23 m³/s) May 9, gage height, 1.59 ft (0.485 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| 1 | .00 | .50 | .50 | .50 | .45 | .40 | .75 | 3.6 | 4.8 | .00 | .20 | .78 |
| 2 | .00 | .60 | .50 | .50 | .40 | .25 | .70 | 4.8 | 4.3 | .00 | .10 | .60 |
| 3 | .00 | .60 | .50 | .50 | .45 | .20 | .70 | 5.7 | 4.2 | .00 | .00 | .20 |
| 4 | .00 | .60 | .50 | .45 | .50 | .20 | .78 | 6.9 | 4.3 | .00 | .00 | .30 |
| 5 | .10 | .60 | .50 | .40 | .50 | .20 | .86 | 7.8 | 4.5 | .00 | .10 | .20 |
| 6 | .10 | .60 | .50 | .40 | .50 | .25 | .86 | 8.0 | 4.8 | .00 | .00 | .00 |
| 7 | .10 | .60 | .50 | .35 | .50 | .30 | .94 | 7.5 | 4.8 | .00 | .10 | .00 |
| 8 | .10 | .50 | .50 | .30 | .50 | .60 | 1.1 | 7.3 | 4.5 | .00 | .20 | .00 |
| 9 | .10 | .50 | .55 | .35 | .60 | .30 | 1.2 | 6.9 | 4.2 | .00 | .10 | .00 |
| 10 | .10 | .50 | .60 | .40 | .65 | .25 | 1.1 | 7.3 | 3.7 | .00 | .00 | .00 |
| 11 | .10 | .40 | .60 | .45 | .70 | .50 | 1.3 | 7.1 | 3.3 | .00 | .00 | .00 |
| 12 | .10 | .40 | .65 | .50 | .70 | .70 | 1.3 | 6.9 | 3.1 | .00 | .00 | .00 |
| 13 | .10 | .50 | .70 | .55 | .70 | .60 | 1.4 | 6.5 | 2.8 | .00 | .90 | .00 |
| 14 | .10 | .50 | .70 | .55 | .60 | .55 | 1.6 | 6.3 | 2.7 | .00 | 2.4 | .00 |
| 15 | .10 | .94 | .70 | .50 | .50 | .60 | 1.6 | 6.1 | 2.3 | .00 | 2.0 | .00 |
| 16 | .10 | .94 | .70 | .50 | .50 | .65 | 1.8 | 6.1 | 2.0 | .00 | 1.2 | .00 |
| 17 | .10 | .94 | .70 | .50 | .40 | .65 | 1.8 | 6.1 | 2.0 | .00 | .10 | .00 |
| 18 | .10 | .94 | .70 | .50 | .30 | .65 | 1.6 | 5.9 | 1.8 | .00 | .00 | .00 |
| 19 | .10 | .94 | .70 | .50 | .30 | .65 | 1.6 | 5.5 | 1.7 | .00 | .00 | .00 |
| 20 | .10 | .86 | .70 | .45 | .20 | .70 | 1.5 | 5.2 | 1.4 | .00 | .00 | .00 |
| 21 | .10 | .86 | .65 | .40 | .20 | .75 | 1.4 | 5.1 | 1.3 | .00 | .00 | .00 |
| 22 | .10 | .78 | .60 | .45 | .20 | .85 | 1.4 | 5.1 | 1.3 | .00 | .00 | .00 |
| 23 | .10 | .78 | .50 | .50 | .20 | .75 | 1.5 | 5.7 | 1.2 | .00 | .00 | .00 |
| 24 | .20 | .70 | .50 | .45 | .20 | .70 | 1.6 | 5.7 | 1.0 | .00 | 3.0 | .20 |
| 25 | .30 | .60 | .55 | .40 | .20 | .70 | 1.6 | 5.7 | 1.0 | .00 | 4.3 | .20 |
| 26 | .20 | .50 | .60 | .40 | .20 | .80 | 1.7 | 6.3 | .86 | .00 | 4.0 | .00 |
| 27 | .20 | .40 | .70 | .40 | .30 | .70 | 1.8 | 6.3 | .50 | .30 | 2.1 | .00 |
| 28 | .20 | .40 | .70 | .40 | .60 | .65 | 1.9 | 6.1 | .10 | .86 | 2.4 | .60 |
| 29 | .20 | .45 | .70 | .40 | --- | .80 | 2.3 | 5.9 | .10 | 1.2 | 2.2 | .30 |
| 30 | .20 | .50 | .65 | .40 | --- | 1.2 | 2.4 | 5.4 | .10 | .86 | 2.5 | .40 |
| 31 | .20 | --- | .60 | .45 | --- | .90 | --- | 5.1 | --- | .60 | 1.2 | --- |
| TOTAL | 3.60 | 18.93 | 18.75 | 13.80 | 12.05 | 18.00 | 42.09 | 189.9 | 74.66 | 3.82 | 29.10 | 3.78 |
| MEAN | .12 | .63 | .60 | .45 | .43 | .58 | 1.40 | 6.13 | 2.49 | .12 | .94 | .13 |
| MAX | .30 | .94 | .70 | .55 | .70 | 1.2 | 2.4 | 8.0 | 4.8 | 1.2 | 4.3 | .78 |
| MIN | .00 | .40 | .50 | .30 | .20 | .20 | .70 | 3.6 | .10 | .00 | .00 | .00 |
| AC-FT | 7.1 | 38 | 37 | 27 | 24 | 36 | 83 | 377 | 148 | 7.6 | 58 | 7.5 |

CAL YR 1976 TOTAL 2743.00 MEAN 7.49 MAX 46 MIN .00 AC-FT 5440
WTR YR 1977 TOTAL 428.48 MEAN 1.17 MAX 8.0 MIN .00 AC-FT 850

DESCHUTES RIVER BASIN

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14052500 QUINN RIVER NEAR LA PINE, OR

LOCATION.--Lat 43°47'03", long 121°50'06", in SW¼NW¼ sec.1, T.21 S., R.7 E., Deschutes County, Hydrologic Unit 17070302, Deschutes National Forest, on left bank at flow line of Crane Prairie Reservoir, 150 ft (46 m) downstream from springs at head of river, and 18 mi (29 km) northwest of La Pine.

PERIOD OF RECORD.--June 1922 to September 1925, October 1937 to current year. Published as "above Crane Prairie Reservoir near Lapine" 1922-25, and as "near Lapine" 1937-64. Monthly discharge only October 1937, published in WSP 1318.

REVISED RECORDS.--WSP 1448: 1939, 1941.

GAGE.--Water-stage recorder and log control. Datum of gage is 4,442.1 ft (1,353.95 m) above mean sea level, based on elevation of Crane Prairie Reservoir when slack water reached station. June 1, 1922, to Sept. 30, 1925, nonrecording gage at site 150 ft (46 m) downstream at different datum.

REMARKS.--Records good. No regulation or diversion above station. Normal flow is entirely from springs 150 ft (46 m) upstream.

AVERAGE DISCHARGE.--43 years, 24.5 ft³/s (0.694 m³/s), 17,750 acre-ft/yr (21.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59 ft³/s (1.67 m³/s) July 4, 1949, gage height, 1.97 ft (0.600 m); maximum gage height, 3.92 ft (1.195 m) June 25, 1943 (backwater from Crane Prairie Reservoir); practically no flow Nov. 14, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29 ft³/s (0.82 m³/s) Oct. 1-6; maximum gage height, 1.88 ft (0.573 m) Apr. 11 (backwater from Crane Prairie Reservoir); minimum discharge, 6.0 ft³/s (0.17 m³/s) Sept. 20-22, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|------|------|------|-------|-------|-------|-------|
| 1 | 29 | 25 | 21 | 18 | 16 | 17 | 17 | 16 | 12 | 11 | 11 | 7.4 |
| 2 | 29 | 25 | 21 | 19 | 16 | 17 | 17 | 15 | 12 | 11 | 11 | 7.4 |
| 3 | 29 | 25 | 21 | 19 | 16 | 18 | 17 | 15 | 12 | 11 | 11 | 6.7 |
| 4 | 29 | 25 | 21 | 18 | 16 | 18 | 17 | 15 | 11 | 11 | 11 | 6.7 |
| 5 | 29 | 25 | 21 | 18 | 16 | 18 | 17 | 15 | 11 | 11 | 11 | 6.7 |
| 6 | 29 | 25 | 21 | 18 | 18 | 18 | 16 | 15 | 11 | 11 | 11 | 6.7 |
| 7 | 28 | 25 | 21 | 18 | 18 | 18 | 16 | 14 | 11 | 11 | 9.8 | 6.7 |
| 8 | 28 | 25 | 21 | 18 | 18 | 18 | 16 | 14 | 11 | 11 | 11 | 6.7 |
| 9 | 28 | 25 | 20 | 18 | 18 | 18 | 16 | 14 | 9.8 | 11 | 9.8 | 6.7 |
| 10 | 28 | 25 | 20 | 18 | 17 | 18 | 16 | 14 | 9.8 | 11 | 9.8 | 6.7 |
| 11 | 28 | 25 | 20 | 18 | 17 | 18 | 16 | 14 | 9.8 | 11 | 9.8 | 6.7 |
| 12 | 28 | 25 | 20 | 19 | 16 | 18 | 15 | 14 | 9.8 | 11 | 9.8 | 6.7 |
| 13 | 28 | 25 | 21 | 19 | 16 | 18 | 15 | 14 | 11 | 11 | 9.8 | 6.7 |
| 14 | 28 | 25 | 21 | 19 | 16 | 18 | 15 | 14 | 11 | 11 | 9.8 | 6.7 |
| 15 | 28 | 25 | 21 | 19 | 16 | 18 | 15 | 14 | 11 | 11 | 8.0 | 6.7 |
| 16 | 27 | 25 | 20 | 19 | 16 | 18 | 15 | 14 | 11 | 11 | 8.0 | 6.7 |
| 17 | 27 | 24 | 20 | 19 | 16 | 18 | 15 | 14 | 11 | 11 | 8.0 | 6.7 |
| 18 | 27 | 24 | 20 | 18 | 16 | 18 | 16 | 14 | 11 | 11 | 8.0 | 6.7 |
| 19 | 26 | 24 | 20 | 18 | 17 | 18 | 16 | 13 | 12 | 11 | 8.0 | 6.7 |
| 20 | 26 | 24 | 19 | 17 | 17 | 17 | 15 | 13 | 12 | 11 | 8.0 | 6.0 |
| 21 | 26 | 24 | 19 | 17 | 18 | 17 | 15 | 13 | 12 | 11 | 8.0 | 6.0 |
| 22 | 26 | 23 | 19 | 17 | 18 | 17 | 15 | 13 | 11 | 11 | 8.0 | 6.0 |
| 23 | 26 | 23 | 19 | 17 | 18 | 17 | 15 | 13 | 11 | 11 | 7.4 | 6.7 |
| 24 | 26 | 23 | 19 | 17 | 18 | 17 | 15 | 13 | 11 | 11 | 7.4 | 6.0 |
| 25 | 25 | 23 | 19 | 17 | 18 | 17 | 15 | 12 | 11 | 11 | 7.4 | 6.7 |
| 26 | 25 | 21 | 19 | 17 | 17 | 17 | 15 | 12 | 11 | 11 | 7.4 | 6.7 |
| 27 | 25 | 21 | 19 | 17 | 17 | 17 | 15 | 12 | 11 | 11 | 7.4 | 6.7 |
| 28 | 25 | 21 | 19 | 17 | 18 | 17 | 16 | 11 | 11 | 11 | 7.4 | 6.7 |
| 29 | 25 | 21 | 19 | 17 | --- | 17 | 16 | 12 | 11 | 11 | 7.4 | 6.7 |
| 30 | 25 | 21 | 18 | 17 | --- | 17 | 16 | 12 | 11 | 11 | 7.4 | 6.7 |
| 31 | 25 | --- | 18 | 17 | --- | 17 | --- | 12 | --- | 11 | 7.4 | --- |
| TOTAL | 838 | 717 | 617 | 554 | 474 | 544 | 471 | 420 | 331.2 | 341 | 276.2 | 199.6 |
| MEAN | 27.0 | 23.9 | 19.9 | 17.9 | 16.9 | 17.5 | 15.7 | 13.5 | 11.0 | 11.0 | 8.91 | 6.65 |
| MAX | 29 | 25 | 21 | 19 | 18 | 18 | 17 | 16 | 12 | 11 | 11 | 7.4 |
| MIN | 25 | 21 | 18 | 17 | 16 | 17 | 15 | 11 | 9.8 | 11 | 7.4 | 6.0 |
| AC-FT | 1660 | 1420 | 1220 | 1100 | 940 | 1080 | 934 | 833 | 657 | 676 | 548 | 396 |
| CAL YR 1976 | TOTAL | 11223.0 | MEAN | 30.7 | MAX | 41 | MIN | 18 | AC-FT | 22260 | | |
| WTR YR 1977 | TOTAL | 5783.0 | MEAN | 15.8 | MAX | 29 | MIN | 6.0 | AC-FT | 11470 | | |

DESCHUTES RIVER BASIN

14053000 CHARLTON CREEK ABOVE CRANE PRAIRIE RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°46'51", long 121°50'06", in NE¼SW¼ sec.1, T.21 S., R.7 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, on left bank 3.0 mi (4.8 km) northwest of Crane Prairie Dam and 18.0 mi (29.0 km) northwest of La Pine.

DRAINAGE AREA.--15.6 mi² (40.4 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--May and June 1923, October 1937 to September 1951, May to September 1952, May to September 1953, May 1954 to September 1955, May 1956 to October 1962, May 1963 to November 1964, April to December 1965, February to November 1966, March 1967 to December 1970, March 1971 to January 1972, March 1972 to current year. Monthly discharge only prior to October 1949, published in WSP 1318. Prior to Oct. 1, 1964, published as "near Lapine."

GAGE.--Water-stage recorder. Datum of gage is 4,458.70 ft (1,359.012 m) above mean sea level. May 1 to June 30, 1923, nonrecording gage at about same site at different datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--30 years (water years 1938-51, 1955, 1957-62, 1964, 1968-70, 1973-77), 1.40 ft³/s (0.040 m³/s), 1,010 acre-ft/yr (1.25 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54 ft³/s (1.53 m³/s) June 12, 1950, gage height, 1.53 ft (0.466 m), from rating curve extended above 27 ft³/s (0.76 m³/s); maximum gage height, 2.39 ft (0.728 m) Mar. 9, 1957 (ice jam); no flow for several months each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 (discharge not determined) may have exceeded peak of record.

EXTREMES FOR CURRENT YEAR.--No flow during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|------|------|-----|-----|-----|-----|-------|-----|-----|-----|
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| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC-FT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CAL YR 1976 | TOTAL | 471.81 | MEAN | 1.29 | MAX | 17 | MIN | 0 | AC-FT | 936 | | |
| WTR YR 1977 | TOTAL | 0.00 | MEAN | .000 | MAX | .00 | MIN | 0 | AC-FT | 0 | | |

DESCHUTES RIVER BASIN

161

14053500 CRANE PRAIRIE RESERVOIR NEAR LA PINE, OR

LOCATION.--Lat 43°45'20", long 121°47'00", in SW¹/₄NW¹/₄ sec.16, T.21 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, on control structure at Crane Prairie Dam on Deschutes River, 15.0 mi (24.1 km) northwest of La Pine, and at mile 238.3 (383.4 km).

DRAINAGE AREA.--254 mi² (658 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--November 1922 to November 1935, April to December 1936, April 1937 to current year. Prior to Oct. 1, 1964, published as "near Lapine."

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1318: 1925, 1940-41, 1950. WSP 1448: 1925(M,m), 1940(m), 1950(m).

GAGE.--Water-stage recorder. Datum of gage is 4,400.0 ft (1,341.120 m) above mean sea level (levels by Bureau of Reclamation); gage readings have been adjusted to elevations above mean sea level. Prior to July 13, 1940, nonrecording gage, at site 150 ft (45.7 m) upstream at same datum. July 13, 1940, to Sept. 15, 1966, nonrecording gage, at present site and datum.

REMARKS.--Reservoir originally formed by earthfill dam completed in 1922, reconstructed as rock-faced, earthfill dam in 1940. Capacity, 55,340 acre-ft (68.2 hm³) between elevation 4,424.0 ft (1,348.44 m) lip of fish-screen structure and 4,445.0 ft (1,354.84 m) crest of spillway. Some dead storage in isolated pools in reservoir at stages below 4,428 ft (1,349.7 m) and natural flow passing through reservoir when outlet gates are open prevents withdrawal of remaining storage to elevation of sill of gates. Crater Creek Canal diverts water to Tumalo Creek basin from tributaries of Soda Creek above station. Released water diverted from Deschutes River near Bend for irrigation near Bend and Redmond.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 60,500 acre-ft (74.6 hm³) June 5-7, 1943, elevation, 4,446.0 ft (1,355.14 m); no usable contents at times.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 50,270 acre-ft (62.0 hm³) Apr. 11, elevation, 4,443.96 ft (1,354.519 m); minimum, 13,730 acre-ft (16.9 hm³) Sept. 12, 13, elevation, 4,434.88 ft (1,351.751 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept.30..... | 4,438.59 | 27,020 | - |
| Oct. 31..... | - | a28,490 | +1,470 |
| Nov. 30..... | - | a33,360 | +4,870 |
| Dec. 31..... | 4,440.89 | 36,400 | +3,040 |
| CAL YR 1976..... | - | - | -19,030 |
| Jan. 31..... | 4,442.00 | 41,230 | +4,830 |
| Feb. 28..... | 4,442.86 | 45,130 | +3,900 |
| Mar. 31..... | 4,443.72 | 49,140 | +4,010 |
| Apr. 30..... | 4,442.41 | 43,090 | -6,050 |
| May 31..... | 4,439.07 | 28,900 | -14,190 |
| June 30..... | 4,438.53 | 26,790 | -2,110 |
| July 31..... | 4,436.54 | 19,390 | -7,400 |
| Aug. 31..... | 4,434.96 | 13,980 | -5,410 |
| Sept.30..... | 4,435.71 | 16,500 | +2,520 |
| WTR YR 1977..... | - | - | -10,520 |

a Contents interpolated.

DESCHUTES RIVER BASIN

14054000 DESCHUTES RIVER BELOW CRANE PRAIRIE RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°45'13", long 121°46'57", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.21 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, Deschutes National Forest, on left bank 0.1 mi (0.2 km) downstream from Crane Prairie Dam, 15 mi (24 km) northwest of La Pine, and at mile 238.2 (383.3 km).

DRAINAGE AREA.--254 mi² (658 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--August 1907 to November 1908 and August 1912 to September 1913 (fragmentary), October 1913 to September 1917, February 1922 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1949, published as "at Crane Prairie, near Lapine." Published as "near Lapine" 1949-64.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1318: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 4,419.78 ft (1,347.149 m) above mean sea level (Pacific Power & Light Co. bench mark). Aug. 15, 1907, to Sept. 30, 1917, and Feb. 23 to June 8, 1922, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datums. June 9, 1922, to May 9, 1932, nonrecording gage or water-stage recorder at present site and datum.

REMARKS.--Records good. Flow regulated since 1922 by Crane Prairie Reservoir (see sta 14053500). No diversion above station.

AVERAGE DISCHARGE.--59 years, 214 ft³/s (6.060 m³/s), 155,000 acre-ft/yr (191 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s (33.1 m³/s) July 28, 1947, gage height, 3.34 ft (1.018 m); minimum, 0.90 ft³/s (0.026 m³/s) Mar. 14-21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 418 ft³/s (11.8 m³/s) May 12, gage height, 1.97 ft (0.600 m); minimum, 0.90 ft³/s (0.026 m³/s) Mar. 14-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-----------|----------|---------|---------|--------------|--------|-------|------|-------|-------|------|
| 1 | 317 | 217 | 150 | 82 | 29 | 22 | 2.6 | 282 | 135 | 138 | 239 | 104 |
| 2 | 317 | 220 | 150 | 82 | 22 | 22 | 2.6 | 282 | 135 | 138 | 239 | 104 |
| 3 | 317 | 220 | 150 | 82 | 22 | 22 | 2.6 | 282 | 135 | 138 | 239 | 104 |
| 4 | 317 | 179 | 150 | 82 | 22 | 18 | 2.6 | 286 | 135 | 138 | 239 | 104 |
| 5 | 317 | 148 | 150 | 82 | 22 | 9.4 | 2.8 | 339 | 135 | 138 | 236 | 104 |
| 6 | 314 | 150 | 150 | 80 | 22 | 9.4 | 2.8 | 414 | 135 | 138 | 236 | 104 |
| 7 | 314 | 150 | 150 | 80 | 22 | 9.4 | 2.8 | 410 | 138 | 135 | 236 | 104 |
| 8 | 314 | 150 | 150 | 80 | 22 | 9.4 | 3.0 | 410 | 138 | 135 | 233 | 104 |
| 9 | 310 | 150 | 150 | 80 | 22 | 4.6 | 3.0 | 410 | 138 | 135 | 227 | 104 |
| 10 | 310 | 150 | 153 | 80 | 22 | 1.4 | 3.0 | 410 | 138 | 135 | 227 | 104 |
| 11 | 310 | 150 | 153 | 80 | 22 | 1.4 | 58 | 406 | 138 | 135 | 227 | 104 |
| 12 | 310 | 150 | 153 | 80 | 22 | 1.2 | 185 | 410 | 138 | 191 | 227 | 70 |
| 13 | 310 | 148 | 153 | 80 | 22 | 1.2 | 185 | 414 | 138 | 236 | 230 | 43 |
| 14 | 310 | 148 | 153 | 80 | 22 | 1.0 | 182 | 410 | 138 | 236 | 233 | 43 |
| 15 | 307 | 150 | 153 | 80 | 22 | .90 | 174 | 410 | 138 | 239 | 208 | 43 |
| 16 | 303 | 150 | 153 | 80 | 22 | .90 | 174 | 406 | 138 | 239 | 179 | 43 |
| 17 | 303 | 150 | 153 | 58 | 22 | .90 | 174 | 406 | 138 | 239 | 185 | 43 |
| 18 | 293 | 153 | 153 | 44 | 22 | .90 | 174 | 403 | 138 | 236 | 185 | 43 |
| 19 | 268 | 153 | 153 | 43 | 22 | .90 | 174 | 403 | 138 | 236 | 182 | 43 |
| 20 | 259 | 153 | 153 | 42 | 22 | .90 | 236 | 406 | 138 | 236 | 182 | 43 |
| 21 | 259 | 153 | 153 | 39 | 22 | 2.0 | 289 | 403 | 138 | 239 | 182 | 43 |
| 22 | 214 | 153 | 153 | 39 | 22 | 3.4 | 289 | 403 | 138 | 239 | 182 | 43 |
| 23 | 217 | 153 | 153 | 39 | 22 | 3.0 | 289 | 406 | 138 | 239 | 182 | 43 |
| 24 | 214 | 150 | 153 | 39 | 22 | 3.0 | 289 | 414 | 138 | 233 | 135 | 43 |
| 25 | 214 | 150 | 153 | 39 | 22 | 3.0 | 286 | 286 | 138 | 233 | 104 | 43 |
| 26 | 214 | 150 | 153 | 39 | 22 | 3.0 | 286 | 220 | 138 | 233 | 104 | 43 |
| 27 | 214 | 150 | 153 | 39 | 22 | 3.0 | 286 | 220 | 138 | 233 | 104 | 43 |
| 28 | 214 | 150 | 116 | 39 | 22 | 3.0 | 286 | 220 | 138 | 233 | 104 | 43 |
| 29 | 214 | 150 | 82 | 39 | --- | 3.0 | 282 | 220 | 138 | 236 | 104 | 44 |
| 30 | 214 | 150 | 82 | 39 | --- | 3.0 | 282 | 166 | 138 | 242 | 104 | 44 |
| 31 | 217 | --- | 82 | 39 | --- | 2.8 | --- | 135 | --- | 242 | 104 | --- |
| TOTAL | 8525 | 4748 | 4466 | 1906 | 623 | 170.00 | 4607.8 | 10692 | 4122 | 6193 | 5798 | 1990 |
| MEAN | 275 | 158 | 144 | 61.5 | 22.3 | 5.48 | 154 | 345 | 137 | 200 | 187 | 66.3 |
| MAX | 317 | 220 | 153 | 82 | 29 | 22 | 289 | 414 | 138 | 242 | 239 | 104 |
| MIN | 214 | 148 | 82 | 39 | 22 | .90 | 2.6 | 135 | 135 | 135 | 104 | 43 |
| AC-FT | 16910 | 9420 | 8860 | 3780 | 1240 | 337 | 9140 | 21210 | 8180 | 12280 | 11500 | 3950 |
| CAL YR 1976 | TOTAL | 103047.00 | MEAN 282 | MAX 600 | MIN 82 | AC-FT 204400 | | | | | | |
| WTR YR 1977 | TOTAL | 53840.80 | MEAN 148 | MAX 414 | MIN .90 | AC-FT 106800 | | | | | | |

DESCHUTES RIVER BASIN

163

14054500 BROWN CREEK NEAR LA PINE, OR

LOCATION.--Lat 43°42'57", long 121°48'10", in NE¼SW¼ sec.29, T.21 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, on right bank at highway crossing and 15 mi (24 km) northwest of La Pine.

DRAINAGE AREA.--21 mi² (54 km²), approximately, hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--May 1922 to September 1925, July 1938 to current year. Monthly discharge only July 1938 to September 1949, published in WSP 1318. Prior to Oct. 1, 1964, published as "near Lapine."

REVISED RECORDS.--WSP 1448: 1922-24.

GAGE.--Water-stage recorder. Altitude of gage is 4,370 ft (1,332 m), from topographic map. May 24, 1922, to Sept. 30, 1925, non-recording gage, and July 1, 1938, to Nov. 1, 1945, water-stage recorder, at site 0.4 mi (0.6 km) downstream at different datums. Nov. 2, 1945, to Aug. 25, 1971, water-stage recorder at site 0.8 mi (1.3 km) upstream at datum 4,372.94 ft (1,332.872 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--42 years, 39.4 ft³/s (1.116 m³/s), 28,550 acre-ft/yr (35.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 104 ft³/s (2.95 m³/s) Aug. 4, 1956, gage height, 1.64 ft (0.500 m); maximum gage height, 2.15 ft (0.655 m) Jan. 2, 1974, backwater from ice or debris; minimum discharge, 16 ft³/s (0.453 m³/s) July 22-25, 1941, and at times December 1941 to March 1942.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 51 ft³/s (1.44 m³/s) Oct. 25; maximum gage height, 0.74 ft (0.226 m) Oct. 25; minimum discharge, 26 ft³/s (0.74 m³/s) July 21-23, July 25 to Aug. 23, Aug. 25-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 50 | 48 | 45 | 41 | 37 | 33 | 33 | 39 | 29 | 28 | 26 | 28 |
| 2 | 50 | 48 | 44 | 41 | 37 | 33 | 33 | 36 | 29 | 28 | 26 | 28 |
| 3 | 50 | 48 | 44 | 40 | 36 | 33 | 33 | 33 | 29 | 27 | 26 | 28 |
| 4 | 50 | 47 | 44 | 40 | 36 | 33 | 33 | 32 | 29 | 27 | 26 | 28 |
| 5 | 49 | 47 | 44 | 40 | 36 | 33 | 36 | 31 | 29 | 27 | 26 | 28 |
| 6 | 49 | 47 | 44 | 40 | 36 | 33 | 36 | 31 | 29 | 27 | 26 | 28 |
| 7 | 49 | 47 | 44 | 40 | 36 | 33 | 36 | 31 | 29 | 27 | 26 | 28 |
| 8 | 49 | 47 | 44 | 40 | 36 | 33 | 36 | 31 | 29 | 27 | 26 | 28 |
| 9 | 49 | 47 | 44 | 40 | 35 | 33 | 36 | 31 | 29 | 27 | 26 | 28 |
| 10 | 49 | 47 | 44 | 40 | 35 | 33 | 36 | 33 | 29 | 27 | 26 | 28 |
| 11 | 49 | 47 | 44 | 39 | 35 | 33 | 38 | 31 | 29 | 27 | 26 | 28 |
| 12 | 49 | 47 | 44 | 39 | 35 | 33 | 38 | 31 | 29 | 27 | 26 | 28 |
| 13 | 49 | 47 | 44 | 39 | 35 | 33 | 38 | 31 | 29 | 27 | 26 | 28 |
| 14 | 48 | 47 | 43 | 39 | 34 | 33 | 38 | 30 | 29 | 27 | 26 | 28 |
| 15 | 48 | 47 | 43 | 39 | 34 | 33 | 38 | 30 | 29 | 27 | 26 | 28 |
| 16 | 48 | 47 | 42 | 39 | 34 | 33 | 38 | 30 | 29 | 27 | 26 | 28 |
| 17 | 48 | 46 | 42 | 39 | 34 | 33 | 38 | 30 | 29 | 27 | 26 | 28 |
| 18 | 48 | 46 | 42 | 39 | 34 | 33 | 38 | 30 | 28 | 27 | 26 | 29 |
| 19 | 48 | 46 | 42 | 39 | 34 | 33 | 38 | 30 | 28 | 27 | 26 | 29 |
| 20 | 48 | 46 | 42 | 39 | 33 | 33 | 38 | 30 | 28 | 27 | 26 | 29 |
| 21 | 48 | 46 | 42 | 39 | 33 | 33 | 41 | 30 | 28 | 26 | 26 | 29 |
| 22 | 48 | 46 | 42 | 39 | 33 | 33 | 41 | 30 | 28 | 26 | 26 | 29 |
| 23 | 48 | 46 | 42 | 38 | 33 | 33 | 41 | 30 | 28 | 26 | 26 | 29 |
| 24 | 49 | 46 | 42 | 38 | 33 | 33 | 41 | 30 | 28 | 27 | 27 | 29 |
| 25 | 51 | 46 | 41 | 38 | 33 | 33 | 41 | 30 | 28 | 26 | 26 | 29 |
| 26 | 48 | 45 | 41 | 38 | 33 | 33 | 41 | 30 | 28 | 26 | 26 | 29 |
| 27 | 48 | 45 | 41 | 38 | 33 | 33 | 40 | 30 | 28 | 26 | 26 | 29 |
| 28 | 48 | 45 | 41 | 38 | 33 | 33 | 39 | 29 | 28 | 26 | 26 | 32 |
| 29 | 48 | 45 | 41 | 37 | --- | 33 | 38 | 29 | 28 | 26 | 26 | 29 |
| 30 | 48 | 45 | 41 | 37 | --- | 33 | 38 | 29 | 28 | 26 | 26 | 29 |
| 31 | 48 | --- | 41 | 37 | --- | 33 | --- | 29 | --- | 26 | 27 | --- |
| TOTAL | 1509 | 1394 | 1324 | 1209 | 966 | 1023 | 1129 | 957 | 857 | 829 | 808 | 856 |
| MEAN | 48.7 | 46.5 | 42.7 | 39.0 | 34.5 | 33.0 | 37.6 | 30.9 | 28.6 | 26.7 | 26.1 | 28.5 |
| MAX | 51 | 48 | 45 | 41 | 37 | 33 | 41 | 39 | 29 | 28 | 27 | 32 |
| MIN | 48 | 45 | 41 | 37 | 33 | 33 | 33 | 29 | 28 | 26 | 26 | 28 |
| AC-FT | 2990 | 2760 | 2630 | 2400 | 1920 | 2030 | 2240 | 1900 | 1700 | 1640 | 1600 | 1700 |

CAL YR 1976 TOTAL 16386 MEAN 44.8 MAX 51 MIN 41 AC-FT 32500
WTR YR 1977 TOTAL 12861 MEAN 35.2 MAX 51 MIN 26 AC-FT 25510

NOTE.--No gage-height record Dec. 17 to Apr. 22.

DESCHUTES RIVER BASIN

14056000 WICKIUP RESERVOIR NEAR LA PINE, OR

LOCATION.--Lat 43°41'02", long 121°41'20", in SW¼NE¼ sec.7, T.22 S., R.9 E., Deschutes County, Hydrologic Unit 17070301, in Deschutes National Forest, in gate-chamber structure at Wickiup Dam on Deschutes River, 9.0 mi (14.5 km) west of La Pine, and at mile 226.8 (364.9 km).

DRAINAGE AREA.--482 mi² (1,250 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--December 1942 to current year. Prior to Oct. 1, 1964, published as "near Lapine."

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Jan. 15, 1945, non-recording gages at nearby sites at same datum.

REMARKS.--Reservoir is formed by rock-faced, earthfill dam completed in 1949. Some storage began in December 1942, capacity, 182,100 acre-ft (225 hm³) between elevations 4,265.0 ft (1,299.97 m), no storage, and 4,336.0 ft (1,321.61 m) crest of spillway, with earth plug to elevation 4,339.0 ft (1,322.53 m). Crater Creek Canal diverts water above station to Tumalo Creek basin. Released water is diverted from Deschutes River at Bend for irrigation near Madras.

COOPERATION.--Daily elevations furnished by North Unit Irrigation District, and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 204,000 acre-ft (252 hm³) Apr. 8, 1974, elevation, 4,338.01 ft (1,322.225 m); minimum observed since reservoir first filled in March 1949, 534 acre-ft (0.66 hm³), revised on basis of computer expanded capacity table dated June 1970, Oct. 18, 1952, elevation, 4,270.86 ft (1,301.758 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 203,100 acre-ft (250 hm³) Mar. 28, elevation, 4,337.93 ft (1,322.201 m); minimum observed, 48,300 acre-ft (59.6 hm³) Sept. 23, elevation, 4,309.82 ft (1,313.633 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 4,327.05 | 108,000 | - |
| Oct. 31..... | 4,329.25 | 122,500 | +14,500 |
| Nov. 30..... | 4,332.08 | 144,800 | +22,300 |
| Dec. 31..... | 4,333.59 | 158,400 | +13,600 |
| CAL YR 1976..... | - | - | -21,000 |
| Jan. 31..... | 4,334.94 | 171,300 | +12,900 |
| Feb. 28..... | 4,336.81 | 190,700 | +19,400 |
| Mar. 31..... | 4,337.92 | 202,900 | +12,200 |
| Apr. 30..... | 4,336.12 | 183,400 | -19,500 |
| May 31..... | 4,335.56 | 177,600 | -5,800 |
| June 30..... | 4,330.06 | 128,500 | -49,100 |
| July 31..... | 4,323.21 | 88,100 | -40,400 |
| Aug. 31..... | 4,316.15 | 64,500 | -23,600 |
| Sept. 30..... | 4,310.49 | 49,800 | -14,700 |
| WTR YR 1977..... | - | - | -58,200 |

DESCHUTES RIVER BASIN

165

14056500 DESCHUTES RIVER BELOW WICKIUP RESERVOIR, NEAR LA PINE, OR

LOCATION.--Lat 43°41'10", long 121°41'13", in NW¼NE¼ sec.7, T.22 S., R.9 E., Deschutes County, Hydrologic Unit 17070301, on left bank 1,000 ft (305 m) downstream from Wickiup Dam, 9 mi (14 km) west of La Pine, and at mile 226.4 (364.3 km).

DRAINAGE AREA.--483 mi² (1,251 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--June 1938 to current year. Monthly discharge only June 1938, published in WSP 1318. Published as "near Lapine" 1938-64.

REVISED RECORDS.--WSP 1448: 1944(m), 1947-51(m).

GAGE.--Water-stage recorder. Datum of gage is 4,257.41 ft (1,297.659 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Records good. Flow regulated by Crane Prairie Reservoir (see station 14053500), and since 1942 by Wickiup Reservoir (see station 14056500). Some leakage from Crane Prairie and Wickiup Reservoirs does not pass station. Some spill bypassed station in 1955. Crater Creek canal diverts water above station to Tumalo Creek basin.

AVERAGE DISCHARGE.--39 years, 753 ft³/s (21.32 m³/s), 545,500 acre-ft/yr (673 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,280 ft³/s (64.6 m³/s) July 28 to Aug. 1, 1956, July 31, Aug. 1, 2, 1962; minimum, 1.9 ft³/s (0.054 m³/s) Nov. 10, 1973; minimum daily, 10 ft³/s (0.28 m³/s) Jan. 17, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) June 30 to July 3; maximum gage height, 6.37 ft (1.942 m) July 2; minimum discharge, 31 ft³/s (0.88 m³/s) Feb. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|---------|--------------|-------|-------|-------|-------|-------|-------|
| 1 | 1050 | 283 | 422 | 374 | 135 | 40 | 458 | 1160 | 1160 | 1650 | 1430 | 959 |
| 2 | 1060 | 283 | 422 | 374 | 95 | 40 | 528 | 1130 | 1300 | 1650 | 1430 | 963 |
| 3 | 1060 | 288 | 428 | 374 | 93 | 40 | 648 | 1050 | 1430 | 1650 | 1430 | 966 |
| 4 | 1060 | 290 | 428 | 377 | 93 | 38 | 653 | 977 | 1450 | 1640 | 1430 | 1020 |
| 5 | 1060 | 288 | 428 | 380 | 95 | 40 | 865 | 977 | 1450 | 1620 | 1430 | 1100 |
| 6 | 1070 | 290 | 428 | 377 | 95 | 40 | 896 | 963 | 1440 | 1510 | 1430 | 1150 |
| 7 | 1060 | 293 | 425 | 377 | 95 | 38 | 984 | 942 | 1470 | 1440 | 1420 | 1180 |
| 8 | 1040 | 270 | 425 | 377 | 95 | 38 | 980 | 928 | 1480 | 1400 | 1390 | 1230 |
| 9 | 1020 | 238 | 425 | 377 | 97 | 38 | 956 | 889 | 1400 | 1390 | 1360 | 1260 |
| 10 | 996 | 240 | 422 | 380 | 97 | 38 | 959 | 658 | 1350 | 1390 | 1360 | 1260 |
| 11 | 889 | 240 | 422 | 380 | 99 | 38 | 959 | 551 | 1390 | 1430 | 1350 | 1260 |
| 12 | 882 | 243 | 425 | 383 | 101 | 38 | 963 | 571 | 1390 | 1450 | 1360 | 1260 |
| 13 | 882 | 245 | 428 | 389 | 103 | 40 | 977 | 592 | 1380 | 1470 | 1370 | 1260 |
| 14 | 865 | 245 | 428 | 353 | 103 | 40 | 1030 | 749 | 1380 | 1470 | 1370 | 1260 |
| 15 | 816 | 245 | 428 | 302 | 109 | 87 | 992 | 784 | 1370 | 1470 | 1330 | 1270 |
| 16 | 823 | 248 | 428 | 300 | 109 | 208 | 1000 | 774 | 1360 | 1480 | 1300 | 1260 |
| 17 | 823 | 250 | 428 | 302 | 97 | 255 | 1080 | 718 | 1390 | 1470 | 1300 | 1210 |
| 18 | 795 | 250 | 425 | 305 | 66 | 293 | 1050 | 725 | 1570 | 1470 | 1280 | 1180 |
| 19 | 704 | 253 | 425 | 308 | 74 | 323 | 992 | 798 | 1580 | 1470 | 1250 | 1070 |
| 20 | 475 | 357 | 422 | 302 | 72 | 323 | 966 | 945 | 1590 | 1460 | 1250 | 935 |
| 21 | 263 | 431 | 422 | 302 | 72 | 323 | 959 | 1200 | 1590 | 1470 | 1260 | 728 |
| 22 | 268 | 431 | 425 | 305 | 72 | 344 | 966 | 1290 | 1580 | 1460 | 1240 | 735 |
| 23 | 265 | 428 | 425 | 310 | 72 | 353 | 970 | 1270 | 1590 | 1460 | 1210 | 721 |
| 24 | 270 | 428 | 422 | 308 | 51 | 374 | 992 | 1230 | 1600 | 1450 | 1160 | 672 |
| 25 | 273 | 428 | 422 | 288 | 38 | 383 | 992 | 1200 | 1610 | 1450 | 1070 | 676 |
| 26 | 275 | 428 | 422 | 258 | 38 | 380 | 1010 | 1100 | 1620 | 1450 | 952 | 679 |
| 27 | 278 | 425 | 419 | 210 | 40 | 380 | 1020 | 1040 | 1630 | 1440 | 945 | 679 |
| 28 | 265 | 422 | 419 | 180 | 40 | 425 | 996 | 1040 | 1640 | 1440 | 945 | 651 |
| 29 | 265 | 422 | 395 | 180 | --- | 452 | 976 | 1050 | 1640 | 1440 | 945 | 268 |
| 30 | 278 | 419 | 383 | 178 | --- | 455 | 1120 | 1140 | 1650 | 1430 | 945 | 79 |
| 31 | 283 | --- | 380 | 180 | --- | 458 | --- | 1150 | --- | 1430 | 959 | --- |
| TOTAL | 21413 | 9601 | 13046 | 9790 | 2346 | 6362 | 27937 | 29591 | 44480 | 45900 | 38901 | 28941 |
| MEAN | 691 | 320 | 421 | 316 | 83.8 | 205 | 931 | 955 | 1483 | 1481 | 1255 | 965 |
| MAX | 1070 | 431 | 428 | 389 | 135 | 458 | 1120 | 1290 | 1650 | 1650 | 1430 | 1270 |
| MIN | 263 | 238 | 380 | 178 | 38 | 38 | 458 | 551 | 1160 | 1390 | 945 | 79 |
| AC-FT | 42470 | 19040 | 25880 | 19420 | 4650 | 12620 | 55410 | 58690 | 88230 | 91040 | 77160 | 57400 |
| CAL YR 1976 | TOTAL | 325143 | MEAN 888 | MAX 2060 | MIN 238 | AC-FT 644900 | | | | | | |
| WTR YR 1977 | TOTAL | 278308 | MEAN 762 | MAX 1650 | MIN 38 | AC-FT 552000 | | | | | | |

DESCHUTES RIVER BASIN

14057500 FALL RIVER NEAR LA PINE, OR

LOCATION.--Lat 43°47'48", long 121°34'18", in NW¼SE¼ sec.31, T.20 S., R.10 E., Deschutes County, Hydrologic Unit 17070301, on left bank 50 ft (15 m) downstream from pond spillway at State fish hatchery, 9 mi (14 km) northeast of La Pine, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--45.1 mi² (116.8 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--July 1938 to current year. Records for May to September 1912 at site 3 mi (4.8 km) downstream not equivalent owing to difference in drainage area. Prior to Oct. 1, 1964, published as "near Lapine."

REVISED RECORDS.--WSP 984: 1938-42(M,m).

GAGE.--Water-stage recorder. Altitude of gage is 4,220 ft (1,286 m), by barometer.

REMARKS.--Records excellent. Diversion only to ponds at fish hatchery 50 ft (15 m) above station, from which water returns to river above station. Stream is spring fed and momentary extremes are caused by operation of fish hatchery.

AVERAGE DISCHARGE.--39 years, 153 ft³/s (4.333 m³/s), 110,800 acre-ft/yr (137 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 254 ft³/s (7.19 m³/s) June 5, 1965, gage height, 2.02 ft (0.616 m); minimum, 67 ft³/s (1.90 m³/s) sometime during period Sept. 20-30, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 209 ft³/s (5.92 m³/s) Oct. 30, gage height, 1.69 ft (0.515 m); minimum, 126 ft³/s (3.57 m³/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|----------|---------|---------|--------------|------|------|------|------|------|------|
| 1 | 175 | 171 | 164 | 163 | 158 | 158 | 156 | 151 | 150 | 145 | 144 | 136 |
| 2 | 175 | 169 | 164 | 164 | 158 | 158 | 156 | 150 | 148 | 145 | 142 | 136 |
| 3 | 174 | 169 | 164 | 164 | 158 | 158 | 155 | 151 | 148 | 144 | 141 | 136 |
| 4 | 174 | 169 | 164 | 164 | 158 | 158 | 155 | 151 | 148 | 144 | 141 | 135 |
| 5 | 174 | 169 | 164 | 164 | 156 | 158 | 155 | 151 | 148 | 144 | 141 | 135 |
| 6 | 174 | 169 | 164 | 163 | 156 | 158 | 155 | 151 | 148 | 142 | 141 | 135 |
| 7 | 174 | 169 | 164 | 163 | 156 | 158 | 155 | 151 | 148 | 142 | 141 | 133 |
| 8 | 174 | 169 | 164 | 163 | 156 | 158 | 155 | 151 | 147 | 142 | 141 | 132 |
| 9 | 174 | 169 | 164 | 163 | 156 | 158 | 155 | 153 | 147 | 142 | 141 | 132 |
| 10 | 174 | 169 | 164 | 163 | 156 | 158 | 153 | 153 | 147 | 142 | 141 | 132 |
| 11 | 174 | 169 | 164 | 163 | 156 | 158 | 151 | 153 | 147 | 142 | 141 | 132 |
| 12 | 172 | 169 | 164 | 163 | 158 | 158 | 151 | 153 | 147 | 142 | 141 | 132 |
| 13 | 172 | 169 | 164 | 163 | 158 | 158 | 151 | 153 | 147 | 142 | 141 | 132 |
| 14 | 172 | 169 | 163 | 163 | 158 | 158 | 151 | 151 | 147 | 142 | 141 | 132 |
| 15 | 172 | 167 | 163 | 161 | 158 | 158 | 151 | 151 | 147 | 142 | 141 | 132 |
| 16 | 172 | 167 | 163 | 161 | 158 | 158 | 151 | 150 | 148 | 142 | 141 | 132 |
| 17 | 172 | 167 | 163 | 161 | 158 | 158 | 151 | 150 | 148 | 142 | 141 | 132 |
| 18 | 172 | 167 | 163 | 161 | 158 | 158 | 150 | 150 | 148 | 142 | 139 | 133 |
| 19 | 172 | 167 | 163 | 161 | 158 | 158 | 151 | 150 | 148 | 142 | 139 | 133 |
| 20 | 172 | 167 | 163 | 161 | 158 | 158 | 150 | 150 | 147 | 145 | 139 | 133 |
| 21 | 172 | 167 | 163 | 159 | 159 | 156 | 151 | 150 | 147 | 144 | 139 | 133 |
| 22 | 172 | 166 | 163 | 159 | 158 | 156 | 151 | 151 | 147 | 144 | 139 | 133 |
| 23 | 172 | 166 | 163 | 159 | 159 | 156 | 151 | 151 | 147 | 144 | 139 | 133 |
| 24 | 172 | 166 | 161 | 159 | 158 | 156 | 151 | 151 | 147 | 144 | 139 | 133 |
| 25 | 172 | 166 | 161 | 159 | 158 | 156 | 151 | 151 | 147 | 145 | 139 | 133 |
| 26 | 172 | 166 | 161 | 158 | 158 | 156 | 151 | 151 | 147 | 145 | 138 | 133 |
| 27 | 171 | 166 | 161 | 158 | 158 | 156 | 151 | 151 | 147 | 144 | 138 | 133 |
| 28 | 171 | 166 | 161 | 158 | 158 | 156 | 150 | 151 | 147 | 144 | 138 | 133 |
| 29 | 171 | 166 | 163 | 158 | --- | 156 | 150 | 150 | 145 | 144 | 138 | 133 |
| 30 | 171 | 166 | 163 | 158 | --- | 156 | 150 | 150 | 145 | 144 | 138 | 133 |
| 31 | 171 | --- | 163 | 158 | --- | 156 | --- | 150 | --- | 144 | 136 | --- |
| TOTAL | 5351 | 5031 | 5056 | 4995 | 4412 | 4876 | 4565 | 4681 | 4419 | 4441 | 4339 | 3995 |
| MEAN | 173 | 168 | 163 | 161 | 158 | 157 | 152 | 151 | 147 | 143 | 140 | 133 |
| MAX | 175 | 171 | 164 | 164 | 159 | 158 | 156 | 153 | 150 | 145 | 144 | 136 |
| MIN | 171 | 166 | 161 | 158 | 156 | 156 | 150 | 150 | 145 | 142 | 136 | 132 |
| AC-FT | 10610 | 9980 | 10030 | 9910 | 8750 | 9670 | 9050 | 9280 | 8770 | 8810 | 8610 | 7920 |
| CAL YR 1976 | TOTAL | 64749 | MEAN 177 | MAX 187 | MIN 161 | AC-FT 128400 | | | | | | |
| WTR YR 1977 | TOTAL | 56161 | MEAN 154 | MAX 175 | MIN 132 | AC-FT 111400 | | | | | | |

DESCHUTES RIVER BASIN

167

14059500 CRESCENT LAKE NEAR CRESCENT, OR

LOCATION.--Lat 43°30'05", long 121°58'20", in SW¼ sec.11, T.24 S., R.6 E., Klamath County, Hydrologic Unit 17070302, Deschutes National Forest, on outlet works at dam on Crescent Creek, 0.8 mi (1.3 km) south of town of Crescent Lake, 14.0 mi (22.5 km) west of Crescent, and at mile 30.0 (48.3 km).

DRAINAGE AREA.--60.7 mi² (157 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--August 1922 to current year.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1318: 1922-31. WSP 1448: 1923-31(M,m).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Oct. 1, 1956, nonrecording gage at nearby site at datum 4,825.16 ft (1,470.709 m), above mean sea level. Oct. 1, 1956, to Sept. 12, 1966, nonrecording gage, at present site and datum.

REMARKS.--Reservoir originally formed by dam of earth and logs completed in 1922, reconstructed as earthfill dam in 1956. Capacity, 117,200 acre-ft (145 hm³) between elevations 4,821.5 ft (1,469.59 m), sill of outlet gate and 4,853.0 ft (1,479.19 m), crest of spillway. Maximum allowable storage, 86,050 acre-ft (106 hm³) elevation, 4,845.32 ft (1,476.854 m). Dead storage about 500,000 acre-ft (616 hm³) Oregon Game Commission survey. Records given herein represent usable contents. Water surface probably cannot be lowered below elevation 4,823.4 ft (1,470.17 m) owing to natural flow through reservoir. Released water is diverted from Deschutes River at Bend for irrigation near Tumalo.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 93,010 acre-ft (115 hm³) June 6, 1975, elevation, 4,847.09 ft (1,477.393 m); minimum observed, 9,640 acre-ft (11.9 hm³) Oct. 21, 1931, elevation, 4,827.91 ft (1,471.547 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 71,380 acre-ft (88.0 hm³) Apr. 10, elevation, 4,841.54 ft (1,475.701 m); minimum, 33,110 acre-ft (40.8 hm³) Sept. 16, 17, elevation, 4,831.34 ft (1,472.592 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 4,838.35 | 59,160 | - |
| Oct. 31..... | 4,838.95 | 61,440 | +2,280 |
| Nov. 30..... | 4,839.71 | 64,340 | +2,900 |
| Dec. 31..... | 4,840.27 | 66,500 | +2,160 |
| CAL YR 1976..... | - | - | -13,470 |
| Jan. 31..... | 4,840.74 | 68,280 | +1,780 |
| Feb. 28..... | 4,841.10 | 69,680 | +1,400 |
| Mar. 31..... | 4,841.51 | 71,260 | +1,580 |
| Apr. 30..... | 4,841.25 | 70,260 | -1,000 |
| May 31..... | 4,839.80 | 64,690 | -5,570 |
| June 30..... | 4,838.01 | 57,870 | -6,820 |
| July 31..... | 4,834.75 | 45,620 | -12,250 |
| Aug. 31..... | 4,832.26 | 36,440 | -9,180 |
| Sept. 30..... | 4,831.66 | 34,270 | -2,170 |
| WTR YR 1977..... | - | - | -24,890 |

DESCHUTES RIVER BASIN

14060000 CRESCENT CREEK AT CRESCENT LAKE, NEAR CRESCENT, OR

LOCATION.--Lat 43°30'11", long 121°58'20", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.11, T.24 S., R.6 E., Klamath County, Hydrologic Unit 17070302, Deschutes National Forest, on left bank 400 ft (122 m) downstream from Crescent Lake Dam, 0.5 mi (0.8 km) south of town of Crescent Lake, 14 mi (23 km) west of Crescent, and at mile 29.9 (48.1 km).

DRAINAGE AREA.--60.7 mi² (157.2 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--January to September 1911 (gage heights and discharge measurements only), January 1912 to July 1915, July to September 1927, May 1928 to current year. Published as Crescent Lake outlet near Crescent January 1911 to September 1912, and as Crescent Creek at outlet of Crescent Lake, near Crescent October 1913 to July 1915.

REVISED RECORDS.--WSP 1218: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 4,819.96 ft (1,469.124 m) above mean sea level. See WSP 1935 for history of changes prior to Sept. 11, 1956.

REMARKS.--Records good. Flow regulated since 1922 by Crescent Lake (see station 14059500). No diversion above station.

AVERAGE DISCHARGE.--51 years (water years 1913-14, 1929-77), 58.8 ft³/s (1.665 m³/s), 42,600 acre-ft/yr (52.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 313 ft³/s (8.86 m³/s) July 9, 1929, Aug. 9, 1936; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 208 ft³/s (5.89 m³/s) June 29 to July 1, gage height, 2.46 ft (0.750 m); no flow Sept. 17-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|------|------|------|------|-------|------|-------|-------|------|---------|
| 1 | 22 | 1.2 | 1.4 | 2.3 | 2.5 | 2.5 | 2.5 | 106 | 158 | 208 | 185 | 140 |
| 2 | 22 | 1.2 | 1.4 | 2.3 | 2.5 | 2.5 | 2.5 | 106 | 158 | 207 | 183 | 134 |
| 3 | 22 | 1.4 | 1.4 | 2.3 | 2.5 | 2.5 | 2.5 | 105 | 158 | 205 | 182 | 132 |
| 4 | 22 | 1.4 | 1.6 | 2.3 | 2.5 | 2.5 | 2.3 | 105 | 157 | 204 | 183 | 133 |
| 5 | 22 | 1.4 | 1.6 | 2.3 | 2.5 | 2.5 | 2.3 | 105 | 157 | 203 | 182 | 134 |
| 6 | 22 | 1.4 | 1.6 | 2.3 | 2.5 | 2.3 | 2.5 | 105 | 157 | 202 | 176 | 133 |
| 7 | 22 | 1.4 | 1.6 | 2.3 | 2.5 | 2.3 | 2.5 | 105 | 157 | 200 | 169 | 132 |
| 8 | 22 | 1.4 | 1.6 | 2.5 | 2.5 | 2.5 | 2.5 | 105 | 157 | 200 | 168 | 130 |
| 9 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 2.5 | 104 | 156 | 199 | 167 | 130 |
| 10 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 2.5 | 104 | 156 | 198 | 167 | 129 |
| 11 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 9.6 | 104 | 156 | 196 | 164 | 123 |
| 12 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 18 | 104 | 155 | 195 | 163 | 121 |
| 13 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 18 | 104 | 153 | 194 | 162 | 120 |
| 14 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 18 | 104 | 153 | 194 | 158 | 120 |
| 15 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 18 | 104 | 153 | 192 | 157 | 119 |
| 16 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 18 | 104 | 152 | 191 | 157 | 56 |
| 17 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 18 | 104 | 152 | 190 | 156 | .00 |
| 18 | 22 | 1.2 | 1.6 | 2.5 | 2.5 | 2.5 | 18 | 104 | 152 | 189 | 151 | .00 |
| 19 | 22 | 1.4 | 1.6 | 2.5 | 2.5 | 2.5 | 18 | 104 | 152 | 187 | 149 | .00 |
| 20 | 22 | 1.4 | 1.8 | 2.8 | 2.5 | 2.5 | 18 | 104 | 152 | 186 | 149 | .00 |
| 21 | 22 | 1.4 | 1.8 | 2.8 | 2.5 | 2.3 | 18 | 120 | 152 | 185 | 149 | .00 |
| 22 | 22 | 1.4 | 1.8 | 2.8 | 2.5 | 2.3 | 18 | 161 | 151 | 183 | 147 | .00 |
| 23 | 22 | 1.4 | 1.8 | 2.8 | 2.5 | 2.3 | 18 | 159 | 151 | 182 | 146 | .00 |
| 24 | 22 | 1.4 | 1.8 | 2.8 | 2.5 | 2.3 | 18 | 159 | 151 | 181 | 145 | .00 |
| 25 | 22 | 1.4 | 1.8 | 2.8 | 2.5 | 2.5 | 18 | 159 | 150 | 178 | 146 | .00 |
| 26 | 15 | 1.4 | 2.0 | 2.8 | 2.5 | 2.5 | 55 | 159 | 150 | 177 | 144 | .00 |
| 27 | 1.2 | 1.4 | 2.0 | 2.8 | 2.5 | 2.5 | 107 | 159 | 149 | 182 | 144 | .00 |
| 28 | 1.2 | 1.4 | 2.3 | 2.8 | 2.5 | 2.5 | 107 | 159 | 149 | 189 | 144 | .00 |
| 29 | 1.2 | 1.4 | 2.3 | 2.8 | --- | 2.5 | 106 | 159 | 176 | 189 | 144 | .00 |
| 30 | 1.2 | 1.4 | 2.3 | 2.8 | --- | 2.5 | 106 | 159 | 208 | 186 | 143 | .00 |
| 31 | 1.2 | --- | 2.3 | 2.8 | --- | 2.5 | --- | 159 | --- | 185 | 143 | --- |
| TOTAL | 571.0 | 39.6 | 53.8 | 79.7 | 70.0 | 76.3 | 767.2 | 3802 | 4688 | 5957 | 4923 | 1986.00 |
| MEAN | 18.4 | 1.32 | 1.74 | 2.57 | 2.50 | 2.46 | 25.6 | 123 | 156 | 192 | 159 | 66.2 |
| MAX | 22 | 1.4 | 2.3 | 2.8 | 2.5 | 2.5 | 107 | 161 | 208 | 208 | 185 | 140 |
| MIN | 1.2 | 1.2 | 1.4 | 2.3 | 2.5 | 2.3 | 2.3 | 104 | 149 | 177 | 143 | .00 |
| AC-FT | 1130 | 79 | 107 | 158 | 139 | 151 | 1520 | 7540 | 9300 | 11820 | 9760 | 3940 |
| CAL YR 1976 | TOTAL | 32296.00 | MEAN | 88.2 | MAX | 268 | MIN | 1.2 | AC-FT | 64060 | | |
| WTR YR 1977 | TOTAL | 23013.60 | MEAN | 63.1 | MAX | 208 | MIN | .0 | AC-FT | 45650 | | |

DESCHUTES RIVER BASIN

169

14063000 LITTLE DESCHUTES RIVER NEAR LA PINE, OR

LOCATION.--Lat 43°41'21", long 121°30'06", in SW¼SW¼ sec.2, T.22 S., R.10 E., Deschutes County, Hydrologic Unit 17070302, on right bank 10 ft (3 m) downstream from highway bridge at former town of Rosland, 1.1 mi (1.8 km) north of La Pine, and at mile 26.8 (43.1 km).

DRAINAGE AREA.--859 mi² (2,225 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--September 1910 to January 1911, March, April, August 1911, March to September 1912, June to October 1913, June to November 1918, August to October 1920, May 1924 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as Deschutes River near Lapine 1910-12, as East Fork Deschutes River near Lapine 1913-20, and as Little Deschutes River near Lapine 1924-64.

REVISED RECORDS.--WSP 1218: 1950.

GAGE.--Water-stage recorder. Datum of gage is 4,192.81 ft (1,277.968 m) above mean sea level. Sept. 1, 1910, to Aug. 31, 1911, nonrecording gage at present site at different datum. Mar. 1 to Sept. 30, 1912, nonrecording gage at site 1.2 mi (1.9 km) downstream at different datum. June 1, 1913, to Sept. 28, 1928, nonrecording gage and Sept. 29, 1928, to Sept. 30, 1931, water-stage recorder at present site at different datums.

REMARKS.--Records good. Flow regulated since 1922 by Crescent Lake (see station 14063000). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--53 years (water years 1925-77), 207 ft³/s (5.862 m³/s), 150,000 acre-ft/yr (185 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,660 ft³/s (104 m³/s) Dec. 25, 1964, gage height, 8.18 ft (2.493 m); minimum, 8 ft³/s (0.227 m³/s) Sept. 2, 3, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 227 ft³/s (6.43 m³/s) May 24, gage height, 3.72 ft (1.134 m); minimum, 32 ft³/s (0.91 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|----------|---------|--------|--------------|------|-------|-------|-------|------|------|
| 1 | 106 | 83 | 72 | 64 | 70 | 68 | 57 | 129 | 186 | 172 | 166 | 144 |
| 2 | 105 | 87 | 75 | 68 | 70 | 69 | 55 | 174 | 185 | 195 | 166 | 143 |
| 3 | 104 | 89 | 76 | 74 | 70 | 67 | 57 | 195 | 185 | 198 | 165 | 140 |
| 4 | 104 | 87 | 79 | 74 | 70 | 61 | 57 | 206 | 188 | 198 | 158 | 138 |
| 5 | 104 | 83 | 77 | 70 | 70 | 61 | 69 | 195 | 187 | 195 | 157 | 134 |
| 6 | 103 | 81 | 74 | 65 | 70 | 64 | 73 | 185 | 187 | 194 | 160 | 131 |
| 7 | 102 | 80 | 75 | 56 | 70 | 68 | 73 | 174 | 197 | 192 | 156 | 128 |
| 8 | 101 | 80 | 80 | 54 | 70 | 76 | 78 | 165 | 206 | 191 | 158 | 125 |
| 9 | 99 | 79 | 75 | 60 | 70 | 88 | 80 | 162 | 207 | 189 | 157 | 123 |
| 10 | 99 | 76 | 74 | 65 | 70 | 86 | 73 | 189 | 205 | 187 | 153 | 123 |
| 11 | 98 | 77 | 65 | 70 | 70 | 73 | 64 | 199 | 203 | 186 | 150 | 122 |
| 12 | 96 | 76 | 73 | 70 | 70 | 73 | 63 | 197 | 210 | 184 | 150 | 120 |
| 13 | 96 | 75 | 70 | 70 | 70 | 71 | 70 | 183 | 205 | 180 | 150 | 116 |
| 14 | 95 | 76 | 69 | 70 | 70 | 66 | 71 | 169 | 205 | 179 | 150 | 116 |
| 15 | 94 | 79 | 73 | 70 | 70 | 67 | 71 | 160 | 209 | 176 | 151 | 116 |
| 16 | 93 | 80 | 73 | 70 | 70 | 65 | 71 | 156 | 193 | 175 | 149 | 116 |
| 17 | 93 | 81 | 70 | 70 | 70 | 62 | 68 | 154 | 182 | 173 | 145 | 117 |
| 18 | 92 | 82 | 70 | 70 | 70 | 61 | 57 | 147 | 172 | 173 | 147 | 73 |
| 19 | 92 | 79 | 69 | 70 | 69 | 59 | 57 | 149 | 167 | 174 | 151 | 48 |
| 20 | 92 | 76 | 66 | 70 | 66 | 58 | 54 | 144 | 164 | 172 | 150 | 41 |
| 21 | 93 | 75 | 63 | 70 | 63 | 57 | 50 | 138 | 161 | 171 | 145 | 40 |
| 22 | 93 | 76 | 68 | 70 | 64 | 57 | 50 | 127 | 156 | 172 | 141 | 38 |
| 23 | 92 | 80 | 69 | 70 | 61 | 65 | 50 | 183 | 150 | 171 | 137 | 34 |
| 24 | 95 | 78 | 61 | 70 | 65 | 76 | 50 | 222 | 145 | 174 | 143 | 39 |
| 25 | 104 | 76 | 66 | 65 | 61 | 72 | 50 | 225 | 143 | 175 | 163 | 40 |
| 26 | 115 | 76 | 69 | 62 | 59 | 69 | 56 | 213 | 141 | 172 | 163 | 38 |
| 27 | 116 | 70 | 69 | 65 | 61 | 65 | 58 | 211 | 134 | 167 | 161 | 39 |
| 28 | 100 | 61 | 69 | 68 | 63 | 72 | 104 | 211 | 124 | 164 | 161 | 49 |
| 29 | 89 | 71 | 69 | 70 | --- | 65 | 120 | 200 | 119 | 171 | 158 | 67 |
| 30 | 85 | 70 | 68 | 70 | --- | 60 | 121 | 194 | 119 | 171 | 154 | 69 |
| 31 | 83 | --- | 66 | 70 | --- | 57 | --- | 189 | --- | 167 | 150 | --- |
| TOTAL | 3033 | 2339 | 2192 | 2100 | 1892 | 2078 | 2027 | 5545 | 5235 | 5558 | 4765 | 2767 |
| MEAN | 97.8 | 78.0 | 70.7 | 67.7 | 67.6 | 67.0 | 67.6 | 179 | 175 | 179 | 154 | 92.2 |
| MAX | 116 | 89 | 80 | 74 | 70 | 88 | 121 | 225 | 210 | 198 | 166 | 144 |
| MIN | 83 | 61 | 61 | 54 | 59 | 57 | 50 | 127 | 119 | 164 | 137 | 34 |
| AC-FT | 6020 | 4640 | 4350 | 4170 | 3750 | 4120 | 4020 | 11000 | 10380 | 11020 | 9450 | 5490 |
| CAL YR 1976 | TOTAL | 90851 | MEAN 248 | MAX 552 | MIN 61 | AC-FT 180200 | | | | | | |
| WTR YR 1977 | TOTAL | 39531 | MEAN 108 | MAX 225 | MIN 34 | AC-FT 78410 | | | | | | |

DESCHUTES RIVER BASIN

14064500 DESCHUTES RIVER AT BENHAM FALLS, NEAR BEND, OR

LOCATION.--Lat 43°55'49", long 121°24'39", in SW¼NE¼ sec.16, T.19 S., R.11 E., Deschutes County, Hydrologic Unit 17070301, Deschutes National Forest, on right bank 0.5 mi (0.8 km) upstream from Benham Falls, 10 mi (16 km) southwest of Bend, and at mile 181.4 (291.9 km).

DRAINAGE AREA.--1,759 mi² (4,556 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1906 to September 1913, April to September 1914, August to December 1920, April to September 1921, February 1924 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "at West's ranch, near Lava" April 1906 to February 1909, April to September 1914. Records for January 1905 to March 1906 and October 1913 to September 1914, published under present name in WSP 370 and 394, have been found to be unreliable and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 4,142.10 ft (1,262.512 m) above mean sea level (Bureau of Reclamation bench mark). See WSP 1738 for history of changes prior to Nov. 20, 1958.

REMARKS.--Water-discharge records good. Flow regulated by Crane Prairie Reservoir, Crescent Lake, and Wickiup Reservoir (see elsewhere in this report). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--60 years (water years 1907-13, 1925-77), 1,424 ft³/s (40.33 m³/s), 1,032,000 acre-ft/yr (1.27 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s), estimated, Nov. 27, 1909 (gage height not determined); minimum, 363 ft³/s (10.3 m³/s) Jan. 20, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,310 ft³/s (65.4 m³/s) July 4, 5; maximum gage height, 5.59 ft (1.734 m) July 4; minimum discharge, 654 ft³/s (18.5 m³/s) Mar. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|--------|---------|--------|-------|
| 1 | 1700 | 941 | 1050 | 1000 | 796 | 669 | 1040 | 1720 | 1800 | 2230 | 2070 | 1590 |
| 2 | 1700 | 937 | 1050 | 1010 | 768 | 669 | 1040 | 1770 | 1800 | 2270 | 2070 | 1590 |
| 3 | 1700 | 937 | 1060 | 1000 | 700 | 672 | 1100 | 1770 | 1910 | 2300 | 2070 | 1590 |
| 4 | 1690 | 937 | 1070 | 1000 | 693 | 665 | 1210 | 1710 | 2030 | 2310 | 2060 | 1590 |
| 5 | 1690 | 932 | 1060 | 1000 | 693 | 665 | 1240 | 1660 | 2060 | 2310 | 2060 | 1640 |
| 6 | 1690 | 932 | 1060 | 905 | 693 | 662 | 1420 | 1650 | 2070 | 2300 | 2060 | 1700 |
| 7 | 1690 | 928 | 1060 | 928 | 697 | 662 | 1480 | 1630 | 2090 | 2220 | 2060 | 1730 |
| 8 | 1690 | 928 | 1070 | 1010 | 704 | 669 | 1560 | 1590 | 2100 | 2160 | 2060 | 1760 |
| 9 | 1660 | 914 | 1070 | 982 | 708 | 679 | 1570 | 1570 | 2120 | 2100 | 2030 | 1800 |
| 10 | 1640 | 874 | 1050 | 1040 | 716 | 683 | 1550 | 1560 | 2070 | 2080 | 2000 | 1830 |
| 11 | 1630 | 869 | 1050 | 1080 | 720 | 686 | 1550 | 1350 | 2030 | 2070 | 2000 | 1830 |
| 12 | 1540 | 869 | 1050 | 1050 | 724 | 676 | 1550 | 1270 | 2040 | 2090 | 1990 | 1830 |
| 13 | 1510 | 869 | 1050 | 1020 | 724 | 672 | 1550 | 1270 | 2060 | 2120 | 1980 | 1830 |
| 14 | 1510 | 874 | 1060 | 1020 | 724 | 672 | 1570 | 1280 | 2060 | 2130 | 2000 | 1830 |
| 15 | 1490 | 869 | 1060 | 977 | 724 | 669 | 1610 | 1400 | 2040 | 2130 | 2000 | 1830 |
| 16 | 1450 | 874 | 1060 | 919 | 732 | 683 | 1580 | 1430 | 2050 | 2120 | 1980 | 1830 |
| 17 | 1440 | 874 | 1070 | 914 | 732 | 776 | 1580 | 1410 | 2040 | 2120 | 1940 | 1830 |
| 18 | 1440 | 878 | 1060 | 919 | 728 | 832 | 1650 | 1360 | 2050 | 2120 | 1930 | 1810 |
| 19 | 1420 | 874 | 1060 | 923 | 693 | 856 | 1610 | 1360 | 2160 | 2120 | 1920 | 1770 |
| 20 | 1350 | 874 | 1050 | 928 | 690 | 892 | 1560 | 1420 | 2190 | 2120 | 1880 | 1650 |
| 21 | 1180 | 959 | 1060 | 928 | 690 | 892 | 1530 | 1550 | 2200 | 2120 | 1880 | 1520 |
| 22 | 968 | 1060 | 1060 | 923 | 686 | 896 | 1520 | 1780 | 2210 | 2110 | 1870 | 1310 |
| 23 | 959 | 1070 | 1070 | 928 | 683 | 910 | 1520 | 1890 | 2200 | 2110 | 1860 | 1290 |
| 24 | 955 | 1070 | 1060 | 932 | 683 | 928 | 1530 | 1890 | 2210 | 2120 | 1840 | 1290 |
| 25 | 977 | 1070 | 1060 | 932 | 679 | 955 | 1540 | 1880 | 2210 | 2100 | 1810 | 1230 |
| 26 | 973 | 1060 | 1070 | 914 | 658 | 968 | 1550 | 1870 | 2210 | 2100 | 1780 | 1230 |
| 27 | 968 | 1050 | 1070 | 874 | 658 | 973 | 1560 | 1780 | 2220 | 2090 | 1620 | 1230 |
| 28 | 973 | 1040 | 1070 | 836 | 672 | 973 | 1570 | 1710 | 2230 | 2080 | 1600 | 1250 |
| 29 | 959 | 1050 | 1070 | 796 | --- | 1000 | 1570 | 1700 | 2230 | 2070 | 1600 | 1240 |
| 30 | 937 | 1050 | 1040 | 796 | --- | 1040 | 1580 | 1710 | 2230 | 2070 | 1590 | 968 |
| 31 | 941 | --- | 1010 | 796 | --- | 1040 | --- | 1770 | --- | 2070 | 1590 | --- |
| TOTAL | 42420 | 28463 | 32810 | 29280 | 19768 | 24684 | 44490 | 49710 | 62920 | 66460 | 59200 | 47418 |
| MEAN | 1368 | 949 | 1058 | 945 | 706 | 796 | 1483 | 1604 | 2097 | 2144 | 1910 | 1581 |
| MAX | 1700 | 1070 | 1070 | 1080 | 796 | 1040 | 1650 | 1890 | 2230 | 2310 | 2070 | 1830 |
| MIN | 937 | 869 | 1010 | 796 | 658 | 662 | 1040 | 1270 | 1800 | 2070 | 1590 | 968 |
| AC-FT | 84140 | 56460 | 65080 | 58080 | 39210 | 48960 | 88250 | 98600 | 124800 | 131800 | 117400 | 94050 |
| CAL YR 1976 | TOTAL | 622343 | MEAN | 1700 | MAX | 2750 | MIN | 869 | AC-FT | 1234000 | | |
| WTR YR 1977 | TOTAL | 507623 | MEAN | 1391 | MAX | 2310 | MIN | 658 | AC-FT | 1007000 | | |

14064500 DESCHUTES RIVER AT BENHAM FALLS, NEAR BEND, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1967 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 17.0°C on several days in 1968, 1971, and 1974; minimum, 0.0°C Jan. 23, 26, 1969, Jan. 9, 10, 1973, Feb. 5-8, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.0°C Aug. 19, 20; minimum, 1.5°C Jan. 5-12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 11.0 | 10.5 | 6.0 | 6.0 | 3.5 | 3.0 | 3.5 | 3.5 | 4.0 | 3.5 | 5.5 | 4.5 |
| 2 | 11.0 | 10.5 | 6.5 | 6.0 | 3.5 | 3.0 | 3.5 | 2.0 | 4.0 | 3.5 | 5.0 | 4.5 |
| 3 | 10.5 | 9.5 | 6.5 | 6.5 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 3.5 | 4.5 | 4.0 |
| 4 | 10.0 | 9.5 | 6.5 | 6.5 | 3.5 | 3.0 | 3.0 | 3.0 | 4.5 | 3.5 | 5.0 | 4.0 |
| 5 | 9.5 | 9.0 | 6.5 | 6.0 | 3.5 | 3.5 | 3.0 | 1.5 | 4.5 | 4.0 | 5.5 | 4.5 |
| 6 | 9.5 | 9.0 | 6.5 | 6.0 | 3.5 | 3.5 | 1.5 | 1.5 | 4.0 | 4.0 | 5.5 | 5.0 |
| 7 | 10.0 | 9.5 | 6.0 | 6.0 | 4.0 | 3.5 | 1.5 | 1.5 | 4.5 | 4.0 | 5.5 | 5.0 |
| 8 | 10.0 | 9.5 | 6.0 | 6.0 | 4.0 | 4.0 | 1.5 | 1.5 | 4.5 | 4.0 | 5.0 | 5.0 |
| 9 | 9.5 | 9.0 | 6.0 | 6.0 | 4.0 | 3.5 | 1.5 | 1.5 | 5.0 | 4.5 | 5.0 | 5.0 |
| 10 | 9.5 | 9.0 | 6.0 | 5.5 | 4.0 | 3.5 | 1.5 | 1.5 | 5.0 | 4.5 | 5.5 | 4.5 |
| 11 | 9.0 | 9.0 | 6.0 | 5.5 | 3.5 | 3.0 | 1.5 | 1.5 | 5.5 | 4.5 | 5.5 | 5.0 |
| 12 | 9.0 | 8.5 | 5.5 | 5.5 | 3.0 | 3.0 | 3.0 | 1.5 | 5.5 | 5.0 | 5.5 | 5.5 |
| 13 | 8.5 | 8.0 | 5.5 | 5.0 | 3.5 | 3.0 | 3.5 | 3.0 | 5.5 | 5.0 | 5.5 | 5.0 |
| 14 | 8.5 | 8.0 | 5.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 | 5.5 | 5.0 | 5.5 | 4.5 |
| 15 | 8.5 | 8.0 | 6.0 | 5.0 | 3.5 | 3.5 | 3.5 | 3.0 | 5.5 | 5.0 | 5.5 | 5.0 |
| 16 | 8.5 | 8.0 | 6.5 | 6.0 | 3.5 | 3.5 | 3.5 | 3.0 | 5.5 | 5.0 | 6.0 | 5.5 |
| 17 | 8.5 | 7.0 | 6.5 | 6.5 | 3.5 | 3.5 | 3.5 | 3.0 | 5.5 | 5.0 | 6.0 | 5.5 |
| 18 | 7.0 | 6.5 | 6.5 | 6.5 | 3.5 | 3.0 | 3.5 | 3.5 | 5.5 | 5.0 | 6.0 | 5.5 |
| 19 | 7.0 | 6.5 | 6.5 | 6.0 | 3.5 | 3.0 | 3.5 | 3.5 | 5.5 | 5.0 | 5.5 | 5.0 |
| 20 | 7.0 | 6.5 | 6.0 | 5.5 | 3.0 | 2.0 | 3.5 | 3.0 | 5.5 | 5.0 | 5.5 | 4.5 |
| 21 | 7.0 | 6.5 | 5.5 | 5.0 | 3.0 | 3.0 | 3.5 | 3.0 | 5.5 | 5.0 | 6.5 | 5.0 |
| 22 | 7.0 | 6.5 | 5.0 | 5.0 | 3.0 | 3.0 | 3.5 | 3.5 | 5.0 | 4.5 | 6.5 | 6.0 |
| 23 | 6.5 | 6.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.5 | 3.0 | 5.0 | 4.5 | 6.5 | 6.0 |
| 24 | 6.5 | 6.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.5 | 3.0 | 4.5 | 4.0 | 6.0 | 5.5 |
| 25 | 6.0 | 6.0 | 5.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.5 | 4.0 | 5.5 | 4.5 |
| 26 | 6.0 | 6.0 | 5.0 | 4.0 | 3.5 | 3.0 | 3.0 | 2.0 | 4.5 | 4.0 | 5.5 | 5.0 |
| 27 | 6.0 | 5.5 | 4.0 | 3.5 | 3.5 | 3.5 | 3.0 | 2.0 | 5.5 | 4.0 | 5.0 | 5.0 |
| 28 | 6.0 | 5.5 | 3.5 | 2.0 | 3.5 | 3.5 | 3.0 | 2.0 | 5.5 | 5.5 | 5.0 | 4.5 |
| 29 | 6.0 | 6.0 | 3.0 | 3.0 | 3.5 | 3.5 | 3.5 | 2.0 | --- | --- | 4.5 | 4.5 |
| 30 | 6.5 | 6.0 | 3.0 | 3.0 | 3.5 | 3.5 | 3.5 | 3.0 | --- | --- | 4.5 | 4.0 |
| 31 | 6.0 | 6.0 | --- | --- | 3.5 | 3.5 | 3.5 | 3.0 | --- | --- | 4.5 | 4.5 |
| MONTH | 11.0 | 5.5 | 6.5 | 2.0 | 4.0 | 2.0 | 3.5 | 1.5 | 5.5 | 3.5 | 6.5 | 4.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 5.0 | 4.5 | 9.5 | 9.5 | 13.5 | 13.0 | 15.0 | 14.0 | 15.5 | 15.0 | 14.0 | 13.0 |
| 2 | 6.0 | 5.0 | 9.5 | 9.0 | 13.5 | 12.0 | 15.0 | 14.0 | 15.5 | 15.0 | 13.5 | 12.0 |
| 3 | 6.5 | 6.0 | 10.0 | 9.5 | 13.5 | 13.0 | 14.5 | 14.0 | 15.5 | 14.5 | 14.0 | 13.0 |
| 4 | 8.0 | 6.5 | 10.0 | 9.0 | 14.0 | 13.0 | 14.0 | 13.5 | 15.5 | 14.5 | 14.0 | 13.5 |
| 5 | 8.5 | 7.0 | 9.0 | 8.5 | 15.0 | 14.0 | 13.5 | 13.5 | 15.5 | 14.5 | 14.5 | 13.5 |
| 6 | 8.5 | 7.0 | 8.5 | 8.0 | 15.0 | 14.5 | 14.0 | 13.5 | 15.0 | 14.5 | 14.5 | 13.5 |
| 7 | 8.5 | 8.0 | 8.5 | 8.5 | 15.0 | 14.0 | 14.5 | 14.0 | 15.0 | 14.5 | 14.0 | 13.5 |
| 8 | 8.5 | 8.0 | 9.0 | 8.5 | 14.5 | 14.0 | 15.0 | 14.0 | 14.5 | 14.0 | 13.5 | 13.0 |
| 9 | 8.5 | 7.0 | 9.0 | 9.0 | 14.5 | 14.0 | 15.0 | 14.0 | 15.0 | 14.0 | 13.0 | 12.0 |
| 10 | 8.0 | 7.0 | 9.0 | 8.0 | 14.0 | 13.0 | 14.5 | 13.5 | 15.0 | 14.0 | 13.0 | 12.0 |
| 11 | 9.0 | 7.0 | 8.5 | 8.0 | 14.0 | 13.5 | 15.0 | 14.0 | 15.0 | 14.0 | 13.0 | 12.0 |
| 12 | 9.0 | 8.0 | 9.0 | 8.5 | 13.5 | 13.0 | 15.0 | 14.5 | 15.5 | 14.0 | 13.0 | 12.0 |
| 13 | 9.0 | 8.5 | 10.5 | 9.0 | 13.5 | 13.5 | 15.0 | 14.0 | 15.5 | 14.0 | 13.0 | 12.0 |
| 14 | 8.5 | 7.0 | 10.5 | 10.0 | 14.0 | 13.0 | 15.0 | 14.0 | 15.0 | 14.5 | 13.0 | 12.0 |
| 15 | 9.0 | 8.0 | 10.5 | 9.5 | 14.0 | 13.5 | 15.5 | 14.5 | 15.0 | 14.5 | 13.0 | 12.0 |
| 16 | 9.0 | 8.0 | 10.0 | 9.0 | 14.5 | 13.5 | 15.5 | 14.5 | 15.0 | 14.5 | 12.0 | 11.0 |
| 17 | 9.0 | 8.0 | 10.0 | 9.5 | 14.0 | 13.5 | 15.0 | 14.0 | 15.5 | 14.5 | 11.0 | 11.0 |
| 18 | 8.5 | 8.0 | 10.0 | 9.5 | 14.0 | 13.5 | 15.0 | 14.0 | 15.5 | 14.5 | 11.0 | 11.0 |
| 19 | 8.5 | 8.0 | 11.0 | 9.5 | 14.0 | 14.0 | 14.5 | 13.5 | 16.0 | 15.0 | 11.0 | 10.5 |
| 20 | 8.5 | 8.0 | 13.0 | 11.0 | 14.0 | 13.5 | 14.5 | 14.0 | 16.0 | 14.5 | 11.0 | 10.5 |
| 21 | 8.5 | 8.0 | 13.0 | 11.5 | 14.0 | 13.0 | 14.5 | 14.0 | 15.5 | 14.5 | 11.0 | 10.5 |
| 22 | 8.5 | 8.0 | 12.0 | 11.0 | 15.0 | 14.0 | 14.5 | 14.0 | 15.5 | 14.5 | 10.5 | 10.0 |
| 23 | 9.0 | 8.5 | 11.0 | 10.5 | 15.5 | 15.0 | 15.0 | 14.5 | 15.0 | 14.5 | 10.5 | 10.0 |
| 24 | 9.0 | 8.5 | 11.0 | 11.0 | 15.0 | 14.5 | 15.0 | 14.0 | 14.5 | 14.5 | 10.0 | 9.5 |
| 25 | 10.0 | 9.0 | 11.0 | 11.0 | 15.5 | 14.5 | 14.5 | 13.5 | 14.0 | 13.0 | 10.0 | 10.0 |
| 26 | 9.5 | 9.0 | 11.0 | 10.5 | 15.0 | 14.5 | 15.5 | 14.0 | 13.5 | 12.0 | 10.0 | 10.0 |
| 27 | 10.5 | 9.5 | 11.0 | 10.5 | 15.0 | 14.5 | 15.5 | 15.0 | 13.0 | 12.0 | 10.0 | 10.0 |
| 28 | 10.5 | 9.5 | 11.0 | 9.5 | 15.0 | 14.5 | 15.5 | 15.0 | 13.0 | 12.0 | 10.0 | 9.5 |
| 29 | 10.0 | 9.0 | 12.0 | 10.5 | 15.0 | 14.5 | 15.5 | 14.5 | 13.5 | 13.0 | 9.5 | 9.0 |
| 30 | 9.5 | 9.0 | 12.0 | 11.0 | 15.0 | 14.0 | 15.0 | 14.0 | 14.0 | 13.5 | 9.5 | 9.0 |
| 31 | --- | --- | 13.5 | 11.5 | --- | --- | 15.5 | 14.5 | 14.0 | 13.5 | --- | --- |
| MONTH | 10.5 | 4.5 | 13.5 | 8.0 | 15.5 | 12.0 | 15.5 | 13.5 | 16.0 | 12.0 | 14.5 | 9.0 |

DESCHUTES RIVER BASIN

DIVERSIONS FROM DESCHUTES RIVER NEAR BEND, OR

The following six canals, all in Deschutes County, Hydrologic Unit 17070301, are the only diversions from Deschutes River between gaging stations at Benham Falls and below Bend.

- 14065500 ARNOLD CANAL NEAR BEND diverts at mile 174.5 (280.8 km) from right bank at head of Lava Island, in SW $\frac{1}{4}$ sec.27, T.18 S., R.11 E.; water used for irrigation southeast of Bend. Records available, October 1912 to current year.
- 14066500 CENTRAL OREGON CANAL ABOVE PILOT BUTTE CANAL, NEAR BEND diverts at mile 169.5 (272.7 km) from right bank in NE $\frac{1}{4}$ sec.13, T.18 S., R.11 E.; water used for irrigation east of Bend. Beginning Oct. 1, 1932, record obtained upstream from intake of Pilot Butte Canal. Records available, October 1932 to current year.
- 14068500 DESCHUTES COUNTY MUNICIPAL IMPROVEMENT DISTRICT CANAL AT BEND diverts at mile 165.8 (266.8 km) from left bank in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.17 S., R.12 E., at Bend; water stored in Crescent Lake for Tumalo project is diverted by this canal and supplements flow in Tumalo project feed canal for irrigation near Tumalo. Records available, May 1923 to current year.
- 14069000 NORTH UNIT MAIN CANAL NEAR BEND diverts at mile 164.8 (265.2 km) from right bank in NE $\frac{1}{4}$ sec.29, T.17 S., R.12 E.; water used for irrigation near Madras. Records available, October 1945 to current year.
- 14069500 NORTH CANAL NEAR BEND diverts at mile 164.8 (265.2 km) from right bank in NE $\frac{1}{4}$ sec.29, T.17 S., R.12 E.; water used for irrigation north of Bend, mostly near Redmond. Records available, June 1913 to current year.
- 14070000 SWALLEY CANAL NEAR BEND diverts at mile 164.8 (265.2 km) from right bank in NE $\frac{1}{4}$ sec.29, T.17 S., R.12 E.; water used for irrigation north of Bend. Records available, 1913 to current year.
- Records of monthly discharge of these canals, published as a group, are available from October 1926 to current year; records for each canal published separately prior to 1926.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| MONTH | DESCHUTES COUNTY | | | | | | TOTAL |
|------------------|------------------|----------------------------|--|--------------------------|----------------|------------------|---------|
| | ARNOLD CANAL | CENTRAL OREGON CANAL | MUNICIPAL IMPROVEMENT DISTRICT CANAL | NORTH UNIT MAIN CANAL | NORTH CANAL | SWALLEY CANAL | |
| OCTOBER..... | 2,560 | 17,570 | 2,610 | 18,290 | 16,810 | 4,050 | 61,890 |
| NOVEMBER..... | 448 | 2,370 | 0 | 0 | 1,830 | 732 | 5,380 |
| DECEMBER..... | 325 | 1,720 | 0 | 0 | 1,310 | 680 | 4,040 |
| JANUARY..... | 379 | 2,770 | 0 | 0 | 1,740 | 417 | 5,310 |
| FEBRUARY..... | 557 | 2,820 | 0 | 0 | 2,460 | 722 | 6,560 |
| MARCH..... | 486 | 2,700 | 0 | 6,990 | 2,300 | 538 | 13,010 |
| APRIL..... | 1,940 | 21,700 | 2,070 | 27,020 | 20,050 | 3,300 | 76,080 |
| MAY..... | 5,470 | 26,440 | 7,050 | 17,320 | 26,850 | 5,850 | 88,980 |
| JUNE..... | 6,580 | 29,690 | 7,390 | 35,170 | 29,190 | 7,050 | 115,070 |
| JULY..... | 7,320 | 31,210 | 8,610 | 36,090 | 30,700 | 6,710 | 120,640 |
| AUGUST..... | 7,140 | 31,170 | 8,580 | 24,520 | 30,670 | 7,320 | 109,400 |
| SEPTEMBER..... | 5,620 | 27,820 | 5,420 | 15,480 | 26,430 | 5,640 | 86,410 |
| WTR YR 1977..... | 38,830 | 198,000 | 41,730 | 180,900 | 190,300 | 43,010 | 692,770 |

DESCHUTES RIVER BASIN

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14070500 DESCHUTES RIVER BELOW BEND, OR

LOCATION.--Lat 44°04'59", long 121°18'24", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.17 S., R.12 E., Deschutes County, Hydrologic Unit 17070301, on right bank 0.4 mi (0.6 km) downstream from North Canal, 0.5 mi (0.8 km) north of Bend city limits, and at mile 164.4 (264.5 km).

DRAINAGE AREA.--1,899 mi² (4,918 km²).

PERIOD OF RECORD.--October 1914 to current year.

REVISED RECORDS.--WSP 1318: 1916-18(M), 1926(M), 1931(M).

GAGE.--Water-stage recorder. Datum of gage is 3,503.96 ft (1,068.007 m) above mean sea level. Prior to Oct. 1, 1931, water-stage recorder at site 200 ft (61 m) downstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for August and September, which are fair. Flow regulated by powerplant at Bend, Crescent Lake, Crane Prairie Reservoir, and Wickiup Reservoir (see elsewhere in this report). Six large canals and several small ditches divert water above station for irrigation.

AVERAGE DISCHARGE.--63 years, 518 ft³/s (14.67 m³/s), 375,300 acre-ft/yr (463 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,820 ft³/s (79.9 m³/s) Dec. 27, 1964, gage height, 4.90 ft (1.494 m); maximum gage height, 5.38 ft (1.640 m) Dec. 15, 1932 (backwater from ice); minimum discharge, 1.0 ft³/s (0.028 m³/s) Aug. 25, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge near this site since 1905, 4,820 ft³/s (137 m³/s) Nov. 27, 1909.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft³/s (30.3 m³/s) Dec. 14; maximum gage height, 3.94 ft (1.201 m) Jan. 9 (backwater from ice); minimum discharge, 8.0 ft³/s (0.23 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|--------------|------|------|------|------|------|------|
| 1 | 61 | 886 | 1000 | 940 | 739 | 624 | 475 | 37 | 27 | 32 | 26 | 28 |
| 2 | 68 | 908 | 996 | 948 | 739 | 618 | 455 | 35 | 27 | 34 | 26 | 30 |
| 3 | 52 | 900 | 1000 | 940 | 672 | 624 | 303 | 37 | 27 | 37 | 26 | 28 |
| 4 | 50 | 908 | 1020 | 940 | 654 | 618 | 194 | 37 | 30 | 37 | 26 | 28 |
| 5 | 50 | 900 | 1010 | 940 | 654 | 618 | 47 | 35 | 30 | 38 | 27 | 28 |
| 6 | 50 | 900 | 1020 | 886 | 654 | 618 | 44 | 35 | 28 | 38 | 27 | 27 |
| 7 | 64 | 893 | 1010 | 825 | 654 | 624 | 40 | 35 | 28 | 35 | 27 | 27 |
| 8 | 86 | 893 | 1020 | 920 | 660 | 624 | 40 | 35 | 28 | 28 | 27 | 27 |
| 9 | 81 | 886 | 1020 | 900 | 660 | 630 | 40 | 34 | 27 | 27 | 27 | 27 |
| 10 | 57 | 844 | 1010 | 948 | 666 | 636 | 38 | 110 | 27 | 26 | 27 | 31 |
| 11 | 113 | 837 | 988 | 1010 | 642 | 612 | 38 | 152 | 30 | 26 | 27 | 31 |
| 12 | 92 | 816 | 964 | 996 | 630 | 582 | 38 | 49 | 31 | 26 | 26 | 31 |
| 13 | 59 | 781 | 956 | 924 | 356 | 310 | 38 | 52 | 31 | 30 | 26 | 31 |
| 14 | 55 | 618 | 956 | 908 | 104 | 109 | 38 | 44 | 31 | 27 | 26 | 31 |
| 15 | 54 | 475 | 972 | 760 | 77 | 75 | 40 | 97 | 28 | 27 | 26 | 31 |
| 16 | 54 | 475 | 1010 | 606 | 34 | 63 | 40 | 81 | 28 | 30 | 26 | 32 |
| 17 | 50 | 490 | 988 | 600 | 47 | 160 | 37 | 55 | 27 | 28 | 26 | 32 |
| 18 | 77 | 582 | 964 | 400 | 285 | 445 | 59 | 40 | 27 | 28 | 25 | 32 |
| 19 | 97 | 830 | 624 | 320 | 606 | 732 | 47 | 35 | 27 | 28 | 26 | 32 |
| 20 | 140 | 690 | 425 | 307 | 594 | 781 | 41 | 40 | 28 | 28 | 25 | 72 |
| 21 | 122 | 624 | 425 | 405 | 594 | 781 | 38 | 30 | 31 | 27 | 24 | 46 |
| 22 | 149 | 725 | 612 | 718 | 606 | 788 | 35 | 30 | 32 | 27 | 27 | 40 |
| 23 | 350 | 711 | 964 | 858 | 630 | 510 | 35 | 30 | 32 | 27 | 33 | 40 |
| 24 | 858 | 746 | 980 | 865 | 636 | 375 | 37 | 31 | 31 | 27 | 32 | 40 |
| 25 | 872 | 956 | 1000 | 865 | 630 | 430 | 40 | 30 | 31 | 27 | 28 | 35 |
| 26 | 872 | 956 | 1010 | 865 | 618 | 445 | 38 | 30 | 32 | 27 | 31 | 29 |
| 27 | 865 | 948 | 1010 | 823 | 612 | 455 | 38 | 28 | 32 | 27 | 30 | 35 |
| 28 | 865 | 956 | 1010 | 802 | 624 | 450 | 40 | 28 | 31 | 31 | 31 | 70 |
| 29 | 858 | 1000 | 1010 | 753 | --- | 465 | 38 | 28 | 32 | 27 | 31 | 104 |
| 30 | 823 | 996 | 996 | 739 | --- | 500 | 37 | 27 | 32 | 26 | 31 | 101 |
| 31 | 837 | --- | 956 | 739 | --- | 505 | --- | 27 | --- | 26 | 31 | --- |
| TOTAL | 8881 | 24130 | 28926 | 24450 | 15077 | 15807 | 2468 | 1394 | 883 | 909 | 854 | 1176 |
| MEAN | 286 | 804 | 933 | 789 | 538 | 510 | 82.3 | 45.0 | 29.4 | 29.3 | 27.5 | 39.2 |
| MAX | 872 | 1000 | 1020 | 1010 | 739 | 788 | 475 | 152 | 32 | 38 | 33 | 104 |
| MIN | 50 | 475 | 425 | 307 | 34 | 63 | 35 | 27 | 27 | 26 | 24 | 27 |
| AC-FT | 17620 | 47860 | 57370 | 48500 | 29910 | 31350 | 4900 | 2760 | 1750 | 1800 | 1690 | 2330 |
| CAL YR 1976 | TOTAL | 200097 | MEAN 547 | MAX 1470 | MIN 37 | AC-FT 396900 | | | | | | |
| WTR YR 1977 | TOTAL | 124955 | MEAN 342 | MAX 1020 | MIN 24 | AC-FT 247800 | | | | | | |

DESCHUTES RIVER BASIN

14073001 TUMALO CREEK NEAR BEND, OR

LOCATION.--Lat 44°05'16", long 121°22'18", in NW¼SE¼ sec.23, T.17 S., R.11 E., Deschutes County, Hydrologic Unit 17070301, on left bank 0.25 mi (0.40 km) upstream from diversion to Tumalo feed canal, 3.0 mi (4.8 km) northwest of Bend, and at mile 3.1 (5.0 km).

DRAINAGE AREA.--47.3 mi² (123 km²).

PERIOD OF RECORD.--October 1913 to December 1921, February, April to November 1922, March 1923 to current year. Published as "below Bend" 1949-50.

REVISED RECORDS.--WSP 864: 1937. WSP 1218: Drainage area. WSP 1448: 1923(M), 1927-29(M), 1935(M), 1942(M). WDR OR-75-1: 1974(M).

GAGE.--Water-stage recorder. Datum of gage is 3,566.82 ft (1,087.167 m) above mean sea level. Prior to Apr. 27, 1915, nonrecording gage and Apr. 27, 1915, to Sept. 30, 1918, water-stage recorder or nonrecording gage at same site and datum.

REMARKS.--Records good. All records given herein include flow in Columbia Southern Canal, which diverts 8 mi (13 km) above station for irrigation of land near Tumalo. No flow in the canal Oct. 12 to Apr. 24, Sept. 21-30. Crater Creek Canal diverts flow of tributaries of Soda Creek into head of Tumalo Creek. Diversion above station for municipal supply of Bend began Dec. 15, 1926, and averaged 8.2 ft³/s (0.23 m³/s) for water year 1977.

AVERAGE DISCHARGE.--59 years (water years 1914, 1917-21, 1924-35, 1937-77), 102 ft³/s (2.889 m³/s), 73,900 acre-ft/yr (91.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,140 ft³/s (32.3 m³/s) Nov. 9, 1968 (no flow in canal), from rating curve extended above 780 ft³/s (22.1 m³/s) on basis of slope-area measurement at 3.45 ft (1.052 m); minimum daily, 25 ft³/s (0.71 m³/s) Jan. 3, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 421 ft³/s (11.9 m³/s) June 6; minimum daily, 32 ft³/s (0.91 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|------|------|-------|-------|------|------|
| 1 | 65 | 93 | 60 | 60 | 59 | 59 | 53 | 93 | 137 | 39 | 41 | 43 |
| 2 | 73 | 87 | 60 | 56 | 59 | 59 | 52 | 93 | 150 | 40 | 36 | 39 |
| 3 | 71 | 77 | 60 | 54 | 59 | 57 | 53 | 90 | 144 | 42 | 35 | 38 |
| 4 | 70 | 75 | 60 | 52 | 59 | 60 | 55 | 81 | 220 | 44 | 35 | 38 |
| 5 | 68 | 73 | 59 | 52 | 59 | 57 | 57 | 79 | 293 | 42 | 35 | 37 |
| 6 | 61 | 71 | 59 | 52 | 59 | 57 | 60 | 75 | 305 | 41 | 35 | 36 |
| 7 | 75 | 71 | 59 | 52 | 59 | 57 | 60 | 73 | 279 | 37 | 36 | 34 |
| 8 | 67 | 69 | 60 | 52 | 59 | 59 | 68 | 69 | 222 | 37 | 39 | 35 |
| 9 | 65 | 69 | 59 | 52 | 59 | 59 | 60 | 66 | 174 | 37 | 36 | 35 |
| 10 | 66 | 69 | 60 | 52 | 59 | 59 | 57 | 70 | 142 | 39 | 34 | 35 |
| 11 | 48 | 69 | 59 | 56 | 59 | 57 | 55 | 67 | 116 | 36 | 33 | 35 |
| 12 | 66 | 68 | 60 | 59 | 60 | 57 | 52 | 65 | 99 | 36 | 33 | 34 |
| 13 | 66 | 68 | 60 | 59 | 64 | 57 | 57 | 64 | 100 | 38 | 34 | 33 |
| 14 | 64 | 69 | 60 | 59 | 62 | 57 | 53 | 62 | 101 | 37 | 39 | 34 |
| 15 | 64 | 85 | 60 | 59 | 60 | 55 | 55 | 63 | 93 | 37 | 36 | 37 |
| 16 | 64 | 83 | 62 | 59 | 62 | 55 | 62 | 63 | 84 | 38 | 33 | 40 |
| 17 | 64 | 73 | 62 | 59 | 60 | 57 | 57 | 61 | 77 | 40 | 34 | 41 |
| 18 | 64 | 73 | 60 | 59 | 59 | 55 | 53 | 59 | 75 | 44 | 32 | 46 |
| 19 | 66 | 71 | 60 | 59 | 59 | 55 | 53 | 57 | 74 | 42 | 35 | 44 |
| 20 | 66 | 71 | 60 | 57 | 59 | 55 | 53 | 56 | 68 | 38 | 35 | 33 |
| 21 | 66 | 71 | 60 | 57 | 59 | 55 | 53 | 64 | 69 | 36 | 34 | 45 |
| 22 | 66 | 69 | 59 | 57 | 59 | 55 | 57 | 74 | 65 | 39 | 34 | 44 |
| 23 | 66 | 68 | 59 | 60 | 59 | 57 | 59 | 87 | 55 | 39 | 33 | 45 |
| 24 | 69 | 68 | 60 | 60 | 59 | 55 | 66 | 79 | 51 | 45 | 48 | 57 |
| 25 | 71 | 68 | 62 | 60 | 59 | 55 | 81 | 80 | 50 | 44 | 51 | 62 |
| 26 | 69 | 68 | 61 | 60 | 59 | 55 | 75 | 82 | 49 | 41 | 52 | 57 |
| 27 | 71 | 66 | 60 | 60 | 59 | 57 | 73 | 72 | 47 | 43 | 46 | 49 |
| 28 | 71 | 70 | 60 | 60 | 60 | 59 | 83 | 68 | 42 | 40 | 55 | 75 |
| 29 | 71 | 80 | 60 | 60 | --- | 59 | 84 | 66 | 43 | 39 | 60 | 64 |
| 30 | 71 | 69 | 59 | 60 | --- | 55 | 81 | 70 | 42 | 38 | 55 | 50 |
| 31 | 75 | --- | 66 | 60 | --- | 53 | --- | 86 | --- | 40 | 48 | --- |
| TOTAL | 2079 | 2181 | 1865 | 1773 | 1667 | 1758 | 1837 | 2234 | 3466 | 1228 | 1222 | 1295 |
| MEAN | 67.1 | 72.7 | 60.2 | 57.2 | 59.5 | 56.7 | 61.2 | 72.1 | 116 | 39.6 | 39.4 | 43.2 |
| MAX | 75 | 93 | 66 | 60 | 64 | 60 | 84 | 93 | 305 | 45 | 60 | 75 |
| MIN | 48 | 66 | 59 | 52 | 59 | 53 | 52 | 56 | 42 | 36 | 32 | 33 |
| AC-FT | 4120 | 4330 | 3700 | 3520 | 3310 | 3490 | 3640 | 4430 | 6870 | 2440 | 2420 | 2570 |
| CAL YR 1976 | TOTAL | 38747 | MEAN | 106 | MAX | 357 | MIN | 48 | AC-FT | 76850 | | |
| WTR YR 1977 | TOTAL | 22605 | MEAN | 61.9 | MAX | 305 | MIN | 32 | AC-FT | 44840 | | |

DESCHUTES RIVER BASIN

175

14075000 SQUAW CREEK NEAR SISTERS, OR

LOCATION.--Lat 44°14'02", long 121°33'57", in SE¼SW¼ sec.29, T.15 S., R.10 E., Deschutes County, Hydrologic Unit 17070301, on right bank 800 ft (244 m) upstream from intake of McAllister ditch, 4 mi (6 km) south of Sisters, and at mile 26.8 (43.1 km).

DRAINAGE AREA.--54.8 mi² (141.9 km²).

PERIOD OF RECORD.--July 1906 to October 1918, June to August 1919, October 1919 to September 1920, May 1921 to September 1924 (no winter records), April 1925 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1218: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,490 ft (1,064 m), by barometer. July 1, 1906, to May 29, 1913, nonrecording gage at site 1,000 ft (305 m) downstream at different datum, below intake of McAllister ditch (records include flow in McAllister ditch). May 30, 1913, to Sept. 2, 1915, nonrecording gage and Mar. 24, 1916, to Oct. 5, 1928, water-stage recorder at site 300 ft (91 m) downstream at different datum. Oct. 6, 1928, to Nov. 7, 1967, water-stage recorder at site 200 ft (61 m) downstream at datum 2.64 ft (0.805 m) lower.

REMARKS.--Records good. No regulation. A canal near mouth of Pole Creek, a tributary above station, diverts entire flow of that creek for irrigation of lands near Sisters.

AVERAGE DISCHARGE.--65 years (water years 1907-18, 1920, 1926-77), 106 ft³/s (3.002 m³/s), 76,800 acre-ft/yr (94.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge since 1909, 1,980 ft³/s (56.1 m³/s) Dec. 23, 1964, from rating curve extended above 280 ft³/s (7.93 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, about 8.75 ft (2.667 m), over top of gage Nov. 22, 1909, site and datum then in use (discharge not determined); minimum discharge, 14 ft³/s (0.40 m³/s) Mar. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 380 ft³/s (10.8 m³/s) June 4, no peak above base of 470 ft³/s (13.3 m³/s); maximum gage height, 3.71 ft (1.131 m) Jan. 10, backwater from ice; minimum discharge, 30 ft³/s (0.85 m³/s) Mar. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 80 | 85 | 53 | 42 | 73 | 37 | 36 | 82 | 140 | 74 | 75 | 55 |
| 2 | 82 | 76 | 51 | 41 | 66 | 40 | 36 | 81 | 114 | 73 | 77 | 54 |
| 3 | 75 | 65 | 51 | 41 | 49 | 39 | 37 | 74 | 104 | 65 | 75 | 64 |
| 4 | 72 | 62 | 50 | 38 | 52 | 41 | 40 | 61 | 246 | 56 | 74 | 72 |
| 5 | 71 | 60 | 50 | 37 | 53 | 40 | 42 | 55 | 245 | 52 | 74 | 69 |
| 6 | 70 | 59 | 50 | 36 | 45 | 38 | 43 | 52 | 222 | 50 | 73 | 60 |
| 7 | 70 | 58 | 50 | 35 | 38 | 40 | 48 | 49 | 201 | 53 | 72 | 60 |
| 8 | 70 | 57 | 50 | 35 | 39 | 40 | 50 | 48 | 175 | 60 | 70 | 54 |
| 9 | 70 | 57 | 50 | 36 | 39 | 39 | 44 | 50 | 137 | 64 | 69 | 50 |
| 10 | 69 | 56 | 50 | 37 | 40 | 40 | 41 | 57 | 121 | 62 | 70 | 51 |
| 11 | 68 | 56 | 49 | 39 | 40 | 41 | 41 | 50 | 95 | 68 | 72 | 51 |
| 12 | 66 | 55 | 49 | 41 | 42 | 38 | 42 | 48 | 94 | 73 | 77 | 51 |
| 13 | 66 | 55 | 49 | 44 | 44 | 41 | 46 | 49 | 104 | 67 | 78 | 51 |
| 14 | 65 | 56 | 49 | 50 | 43 | 43 | 42 | 52 | 103 | 68 | 76 | 52 |
| 15 | 65 | 78 | 49 | 54 | 42 | 40 | 45 | 48 | 89 | 70 | 71 | 49 |
| 16 | 64 | 67 | 48 | 56 | 41 | 39 | 51 | 46 | 84 | 72 | 73 | 46 |
| 17 | 63 | 62 | 46 | 58 | 41 | 39 | 45 | 46 | 80 | 74 | 74 | 45 |
| 18 | 62 | 63 | 46 | 59 | 40 | 36 | 43 | 47 | 82 | 84 | 75 | 57 |
| 19 | 62 | 60 | 41 | 43 | 40 | 36 | 42 | 47 | 86 | 73 | 78 | 53 |
| 20 | 61 | 60 | 38 | 42 | 41 | 36 | 42 | 55 | 82 | 72 | 75 | 50 |
| 21 | 61 | 60 | 42 | 42 | 39 | 36 | 45 | 70 | 88 | 77 | 78 | 46 |
| 22 | 61 | 58 | 47 | 41 | 37 | 38 | 48 | 71 | 88 | 78 | 72 | 44 |
| 23 | 60 | 58 | 53 | 42 | 42 | 38 | 51 | 68 | 79 | 84 | 70 | 51 |
| 24 | 64 | 58 | 52 | 56 | 40 | 37 | 58 | 61 | 77 | 81 | 103 | 56 |
| 25 | 63 | 57 | 57 | 67 | 40 | 37 | 69 | 60 | 81 | 77 | 84 | 61 |
| 26 | 62 | 56 | 62 | 62 | 39 | 37 | 67 | 67 | 80 | 74 | 71 | 50 |
| 27 | 59 | 57 | 46 | 58 | 41 | 39 | 65 | 57 | 78 | 73 | 52 | 51 |
| 28 | 59 | 58 | 42 | 78 | 42 | 37 | 71 | 52 | 75 | 74 | 69 | 70 |
| 29 | 59 | 64 | 37 | 85 | --- | 40 | 77 | 53 | 76 | 67 | 82 | 56 |
| 30 | 59 | 58 | 45 | 74 | --- | 38 | 76 | 57 | 74 | 69 | 101 | 50 |
| 31 | 72 | --- | 44 | 70 | --- | 36 | --- | 82 | --- | 72 | 62 | --- |
| TOTAL | 2050 | 1831 | 1496 | 1539 | 1228 | 1196 | 1483 | 1795 | 3400 | 2156 | 2322 | 1629 |
| MEAN | 66.1 | 61.0 | 48.3 | 49.6 | 43.9 | 38.6 | 49.4 | 57.9 | 113 | 69.5 | 74.9 | 54.3 |
| MAX | 82 | 85 | 62 | 85 | 73 | 43 | 77 | 82 | 246 | 84 | 103 | 72 |
| MIN | 59 | 55 | 37 | 35 | 37 | 36 | 36 | 46 | 74 | 50 | 52 | 44 |
| AC-FT | 4070 | 3630 | 2970 | 3050 | 2440 | 2370 | 2940 | 3560 | 6740 | 4280 | 4610 | 3230 |

CAL YR 1976 TOTAL 38101 MEAN 104 MAX 403 MIN 37 AC-FT 75570
WTR YR 1977 TOTAL 22125 MEAN 60.6 MAX 246 MIN 35 AC-FT 43880

NOTE.--No gage-height record Nov. 18 to Dec. 18.

DESCHUTES RIVER BASIN

14076500 DESCHUTES RIVER NEAR CULVER, OR

LOCATION.--Lat 44°29'56", long 121°19'12", in NW¼SE¼ sec.29, T.12 S., R.12 E., Jefferson County, Hydrologic Unit 17070301, on right bank 2.5 mi (4.0 km) downstream from Squaw Creek, 6.0 mi (9.7 km) southwest of Culver, and at mile 120.6 (194.0 km).

DRAINAGE AREA.--2,705 mi² (7,006 km²).

PERIOD OF RECORD.--July 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,980 ft (603 m) above mean sea level (river-profile survey). July 14, 1952, to Sept. 30, 1961, at site 4.1 mi (6.6 km) downstream at different datum.

REMARKS.--Records excellent. Slight regulation by Crescent Lake and Crane Prairie and Wickiup Reservoirs (see elsewhere in this report). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--25 years, 927 ft³/s (26.25 m³/s), 671,600 acre-ft/yr (828 hm³).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,680 ft³/s (189 m³/s) Dec. 24, 1964, gage height, 10.00 ft (3.048 m), from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 418 ft³/s (11.8 m³/s) July 7, 8, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) Jan. 10, gage height, 4.67 ft (1.423 m); minimum, 477 ft³/s (13.5 m³/s) Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|-------|-------|----------|---------|--------------|-------|-------|-------|-------|-------|
| 1 | 566 | 1380 | 1550 | 1510 | 1300 | 1110 | 1050 | 502 | 493 | 493 | 489 | 511 |
| 2 | 566 | 1440 | 1520 | 1520 | 1290 | 1100 | 999 | 505 | 521 | 493 | 486 | 505 |
| 3 | 563 | 1410 | 1540 | 1510 | 1270 | 1110 | 995 | 508 | 543 | 493 | 486 | 508 |
| 4 | 549 | 1400 | 1550 | 1490 | 1220 | 1110 | 824 | 499 | 536 | 499 | 486 | 508 |
| 5 | 543 | 1390 | 1580 | 1470 | 1220 | 1140 | 703 | 502 | 720 | 502 | 489 | 505 |
| 6 | 540 | 1390 | 1570 | 1400 | 1220 | 1150 | 599 | 502 | 720 | 493 | 486 | 496 |
| 7 | 540 | 1380 | 1570 | 1340 | 1220 | 1150 | 589 | 502 | 665 | 499 | 489 | 496 |
| 8 | 566 | 1350 | 1580 | 1390 | 1220 | 1160 | 579 | 502 | 595 | 499 | 489 | 499 |
| 9 | 576 | 1410 | 1580 | 1390 | 1220 | 1160 | 589 | 499 | 563 | 496 | 489 | 496 |
| 10 | 576 | 1410 | 1580 | 1460 | 1220 | 1160 | 582 | 505 | 540 | 496 | 489 | 493 |
| 11 | 553 | 1390 | 1560 | 1520 | 1220 | 1170 | 576 | 556 | 511 | 493 | 489 | 496 |
| 12 | 612 | 1390 | 1530 | 1560 | 1180 | 1090 | 556 | 615 | 496 | 489 | 489 | 496 |
| 13 | 612 | 1350 | 1520 | 1530 | 1180 | 1070 | 517 | 521 | 499 | 489 | 489 | 496 |
| 14 | 559 | 1340 | 1460 | 1470 | 812 | 727 | 517 | 508 | 496 | 493 | 493 | 493 |
| 15 | 553 | 1130 | 1450 | 1460 | 632 | 609 | 514 | 502 | 493 | 502 | 493 | 493 |
| 16 | 549 | 1090 | 1480 | 1230 | 589 | 585 | 511 | 527 | 493 | 499 | 489 | 493 |
| 17 | 549 | 1070 | 1510 | 1180 | 543 | 546 | 508 | 543 | 489 | 499 | 489 | 496 |
| 18 | 546 | 1100 | 1500 | 1120 | 530 | 645 | 508 | 505 | 489 | 502 | 489 | 508 |
| 19 | 563 | 1270 | 1480 | 874 | 870 | 1090 | 514 | 499 | 489 | 502 | 486 | 508 |
| 20 | 592 | 1400 | 1070 | 835 | 1080 | 1260 | 530 | 489 | 489 | 499 | 486 | 508 |
| 21 | 635 | 1220 | 1010 | 839 | 1080 | 1290 | 514 | 493 | 489 | 493 | 486 | 524 |
| 22 | 619 | 1270 | 1020 | 1060 | 1080 | 1300 | 521 | 489 | 489 | 493 | 480 | 530 |
| 23 | 635 | 1250 | 1380 | 1350 | 1090 | 1300 | 511 | 489 | 489 | 489 | 483 | 508 |
| 24 | 999 | 1220 | 1510 | 1400 | 1110 | 936 | 511 | 489 | 486 | 489 | 493 | 508 |
| 25 | 1320 | 1320 | 1560 | 1420 | 1110 | 944 | 511 | 489 | 486 | 489 | 499 | 511 |
| 26 | 1320 | 1420 | 1600 | 1400 | 1110 | 980 | 521 | 486 | 486 | 493 | 505 | 514 |
| 27 | 1320 | 1430 | 1580 | 1390 | 1100 | 999 | 511 | 486 | 486 | 493 | 505 | 521 |
| 28 | 1320 | 1470 | 1570 | 1370 | 1100 | 995 | 502 | 486 | 486 | 489 | 514 | 517 |
| 29 | 1360 | 1530 | 1580 | 1330 | --- | 995 | 502 | 489 | 489 | 486 | 508 | 549 |
| 30 | 1340 | 1550 | 1570 | 1300 | --- | 1030 | 502 | 493 | 489 | 489 | 517 | 592 |
| 31 | 1330 | --- | 1530 | 1320 | --- | 1050 | --- | 493 | --- | 486 | 514 | --- |
| TOTAL | 23471 | 40170 | 46090 | 41438 | 29816 | 31961 | 17866 | 15673 | 15715 | 15319 | 15274 | 15278 |
| MEAN | 757 | 1339 | 1487 | 1337 | 1065 | 1031 | 596 | 506 | 524 | 494 | 493 | 509 |
| MAX | 1360 | 1550 | 1600 | 1560 | 1300 | 1300 | 1050 | 615 | 720 | 502 | 517 | 592 |
| MIN | 540 | 1070 | 1010 | 835 | 530 | 546 | 502 | 486 | 486 | 486 | 480 | 493 |
| AC-FT | 46550 | 79680 | 91420 | 82190 | 59140 | 63390 | 35440 | 31090 | 31170 | 30390 | 30300 | 30300 |
| CAL YR 1976 TOTAL | 414704 | | | 1133 | MAX 2210 | MIN 540 | AC-FT 822600 | | | | | |
| WTR YR 1977 TOTAL | 308071 | | | 844 | MAX 1600 | MIN 480 | AC-FT 611100 | | | | | |

DESCHUTES RIVER BASIN

177

14079500 CROOKED RIVER NEAR POST, OR

LOCATION.--Lat 44°07'00", long 120°15'00", in NE¼ sec.7, T.17 S., R.21 E., Crook County, Hydrologic Unit 17070304, on left bank 0.3 mi (0.5 km) downstream from North Fork, 12 mi (19 km) southeast of Post, and at mile 113.7 (182.9 km).

DRAINAGE AREA.--2,160 mi² (5,590 km²), approximately, of which 500 mi² (1,300 km²) is probably noncontributing.

PERIOD OF RECORD.--November 1908 to May 1911, December 1939 to September 1960, July 1968 to July 1973. Records for June to August 1911, published in WSP 312, have been found unreliable and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 3,476.25 ft (1,059.561 m) above mean sea level. Nov. 9, 1908, to Aug. 31, 1911, non-recording gage at site 0.2 mi (0.3 km) downstream at different datum. Dec. 30, 1939, to Sept. 30, 1960, water-stage recorder at site 0.7 mi (1.1 km) downstream at different datum.

REMARKS.--Records good. No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--24 years (water years 1941-60, 1969-72), 337 ft³/s (9.544 m³/s), 244,200 acre-ft/yr (301 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s (326 m³/s) Jan. 18, 1971, gage height, 9.61 ft (2.929 m), from rating curve extended above 4,800 ft³/s (136 m³/s) on basis of slope-area measurement of peak flow; minimum, 2.7 ft³/s (0.076 m³/s) Aug. 7, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1964, reached a stage of 15.00 ft (4.572 m) at nonequivalent site 23 mi (37 km) downstream, discharge, 19,700 ft³/s (558 m³/s).

EXTREMES FOR PERIOD OCTOBER 1972 TO JULY 1973.--Maximum daily discharge, 802 ft³/s (22.7 m³/s) Apr. 13; maximum gage height, 6.21 ft (1.893 m) Dec. 22, backwater from ice; minimum daily discharge, 5.0 ft³/s (0.14 m³/s) July 25, 28, 29.

REVISIONS.--Revised figures of discharge for the water year 1973, superseding those published in the report for 1973 are given herein.

DISCHARGE* IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|-------|------|-------|-------|------|-------|-------|-----|-----|
| 1 | 25 | 67 | 74 | 113 | 140 | 624 | 335 | 249 | 39 | 11 | | |
| 2 | 22 | 67 | 72 | 105 | 110 | 546 | 282 | 221 | 37 | 12 | | |
| 3 | 19 | 80 | 80 | 100 | 103 | 445 | 270 | 228 | 34 | 14 | | |
| 4 | 21 | 82 | 70 | 90 | 108 | 355 | 335 | 294 | 31 | 14 | | |
| 5 | 24 | 80 | 60 | 85 | 120 | 310 | 465 | 395 | 27 | 14 | | |
| 6 | 26 | 82 | 60 | 80 | 143 | 320 | 516 | 375 | 23 | 12 | | |
| 7 | 27 | 82 | 55 | 80 | 135 | 298 | 470 | 286 | 21 | 12 | | |
| 8 | 27 | 80 | 55 | 75 | 130 | 294 | 450 | 260 | 20 | 10 | | |
| 9 | 27 | 76 | 55 | 75 | 118 | 325 | 505 | 239 | 19 | 12 | | |
| 10 | 31 | 74 | 60 | 90 | 135 | 395 | 528 | 214 | 15 | 13 | | |
| 11 | 38 | 72 | 70 | 100 | 188 | 430 | 630 | 185 | 14 | 13 | | |
| 12 | 41 | 72 | 70 | 150 | 167 | 345 | 700 | 164 | 15 | 13 | | |
| 13 | 45 | 70 | 70 | 286 | 149 | 282 | 802 | 146 | 15 | 12 | | |
| 14 | 58 | 70 | 80 | 576 | 152 | 256 | 770 | 125 | 14 | 13 | | |
| 15 | 88 | 69 | 90 | 375 | 152 | 242 | 644 | 118 | 13 | 14 | | |
| 16 | 44 | 70 | 120 | 618 | 155 | 263 | 552 | 115 | 14 | 14 | | |
| 17 | 40 | 72 | 120 | 658 | 167 | 278 | 516 | 105 | 16 | 14 | | |
| 18 | 39 | 72 | 120 | 465 | 152 | 242 | 440 | 95 | 13 | 14 | | |
| 19 | 39 | 74 | 150 | 282 | 130 | 263 | 435 | 78 | 14 | 8.0 | | |
| 20 | 39 | 72 | 200 | 185 | 128 | 278 | 425 | 66 | 16 | 11 | | |
| 21 | 40 | 72 | 600 | 197 | 128 | 340 | 360 | 57 | 16 | 9.0 | | |
| 22 | 40 | 66 | 450 | 179 | 125 | 365 | 365 | 51 | 14 | 10 | | |
| 23 | 41 | 67 | 370 | 194 | 123 | 310 | 425 | 48 | 13 | 12 | | |
| 24 | 41 | 66 | 300 | 146 | 130 | 405 | 415 | 55 | 14 | 8.0 | | |
| 25 | 41 | 70 | 260 | 143 | 185 | 522 | 425 | 86 | 13 | 5.0 | | |
| 26 | 39 | 76 | 228 | 152 | 232 | 552 | 440 | 84 | 14 | 6.0 | | |
| 27 | 40 | 72 | 197 | 270 | 290 | 470 | 455 | 66 | 14 | 6.0 | | |
| 28 | 51 | 86 | 170 | 460 | 435 | 400 | 385 | 58 | 13 | 5.0 | | |
| 29 | 57 | 82 | 152 | 564 | --- | 330 | 320 | 51 | 12 | 5.0 | | |
| 30 | 57 | 78 | 140 | 480 | --- | 335 | 282 | 47 | 9.5 | 6.0 | | |
| 31 | 58 | --- | 120 | 274 | --- | 375 | --- | 44 | --- | 10 | | |
| TOTAL | 1225 | 2218 | 4718 | 7647 | 4430 | 11195 | 13942 | 4605 | 542.5 | 332.0 | | |
| MEAN | 39.5 | 73.9 | 152 | 247 | 158 | 361 | 465 | 149 | 18.1 | 10.7 | | |
| MAX | 88 | 86 | 600 | 658 | 435 | 624 | 802 | 395 | 39 | 14 | | |
| MIN | 19 | 66 | 55 | 75 | 103 | 242 | 270 | 44 | 9.5 | 5.0 | | |
| AC-FT | 2430 | 4400 | 9360 | 15170 | 8790 | 22210 | 27650 | 9130 | 1080 | 659 | | |

CAL YR 1972 TOTAL 137752.7 MEAN 376 MAX 6130 MIN 5.9 AC-FT 273200

DESCHUTES RIVER BASIN

14080250 BEAR CREEK NEAR PRINEVILLE, OR

LOCATION.--Lat 44°03'40", long 120°43'54", in SE¼ sec.30, T.17 S., R.17 E., Crook County, Hydrologic Unit 17070304, on left bank upstream side of State Highway 27 bridge over Bear Creek, 17 mi (27.4 km) south of Prineville.

DRAINAGE AREA.--205 mi² (531 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,280 ft (1,000 m), from topographic map.

REMARKS.--Water-discharge records poor. Flow regulated by reservoirs upstream. Diversion for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 848 ft³/s (24.0 m³/s) Aug. 6, 1976, gage height, 7.01 ft (2.137 m); minimum, 0.16 ft³/s (0.005 m³/s) June 28, June 30 to July 1, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 693 ft³/s (19.6 m³/s) June 7, gage height, 6.49 ft (1.978 m); minimum, 0.25 ft³/s (0.007 m³/s) July 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|------|------|-----------|---------|---------|-----------|--------|------------|-------|------|------|
| 1 | 2.9 | 1.7 | 1.6 | 1.6 | 1.2 | 1.1 | 1.1 | 1.2 | 1.3 | .41 | 1.6 | 1.9 |
| 2 | 2.9 | 1.7 | 1.6 | 1.6 | 1.3 | 1.1 | 1.1 | 1.3 | 1.3 | .46 | 1.6 | 1.9 |
| 3 | 3.0 | 1.7 | 1.7 | 1.6 | 1.2 | 1.0 | 1.1 | 1.3 | 1.3 | .41 | 1.6 | 1.8 |
| 4 | 2.9 | 1.6 | 1.6 | 1.6 | 1.3 | 1.0 | 1.1 | 1.3 | 1.3 | .41 | 1.6 | 1.8 |
| 5 | 2.9 | 1.6 | 1.7 | 1.6 | 1.3 | 1.0 | 1.1 | 1.3 | 1.2 | .36 | 1.6 | 1.8 |
| 6 | 3.0 | 1.6 | 1.7 | 1.3 | 1.3 | 1.0 | 1.1 | 1.3 | 1.3 | .36 | 1.6 | 1.8 |
| 7 | 3.0 | 1.6 | 1.7 | 1.3 | 1.3 | 1.0 | 1.1 | 1.3 | 87 | .41 | 1.6 | 1.8 |
| 8 | 3.0 | 1.6 | 1.8 | 1.3 | 1.3 | 1.0 | 1.1 | 1.3 | 18 | .36 | 1.6 | 1.8 |
| 9 | 2.2 | 1.6 | 1.8 | 1.2 | 1.3 | 1.0 | 1.1 | 1.3 | 5.4 | .36 | 1.7 | 1.8 |
| 10 | 1.8 | 1.5 | 1.7 | 1.2 | 1.3 | 1.0 | 1.1 | 1.5 | 5.2 | .36 | 1.7 | 1.9 |
| 11 | 1.8 | 1.7 | 1.7 | 1.2 | 1.3 | 1.1 | 1.1 | 1.5 | 4.4 | .41 | 1.7 | 1.9 |
| 12 | 1.8 | 1.6 | 1.7 | 1.2 | 1.3 | 1.1 | 1.1 | 1.4 | 4.2 | .41 | 1.7 | 1.9 |
| 13 | 1.8 | 1.6 | 1.7 | 1.2 | 1.2 | 1.1 | 1.1 | 1.3 | .75 | .41 | 1.7 | 1.9 |
| 14 | 1.8 | 1.6 | 1.7 | 1.2 | 1.2 | 1.2 | 1.1 | 1.3 | .75 | .41 | 1.7 | 2.0 |
| 15 | 1.8 | 1.6 | 1.7 | 1.2 | 1.1 | 1.2 | 1.1 | 1.4 | .70 | .41 | 1.7 | 1.9 |
| 16 | 1.8 | 1.6 | 1.9 | 1.2 | 1.1 | 1.2 | 1.1 | 1.4 | .70 | .46 | 1.7 | 1.9 |
| 17 | 1.8 | 1.5 | 1.9 | 1.2 | 1.1 | 1.2 | 1.1 | 1.3 | .70 | .46 | 1.7 | 1.9 |
| 18 | 1.8 | 1.5 | 1.7 | 1.2 | 1.1 | 1.2 | 1.2 | 1.3 | .63 | .46 | 1.7 | 1.9 |
| 19 | 1.8 | 1.5 | 1.7 | 1.2 | 1.1 | 1.2 | 1.2 | 1.3 | .69 | .41 | 1.7 | 1.9 |
| 20 | 1.8 | 1.5 | 1.7 | 1.2 | 1.1 | 1.2 | 1.3 | 1.1 | .63 | .46 | 1.7 | 1.9 |
| 21 | 1.7 | 1.5 | 1.6 | 1.2 | 1.1 | 1.2 | 1.3 | 1.3 | .57 | .41 | 1.7 | 1.8 |
| 22 | 1.7 | 1.5 | 1.6 | 1.2 | 1.1 | 1.2 | 1.3 | 1.3 | .57 | .41 | 1.7 | 1.8 |
| 23 | 1.7 | 1.5 | 1.6 | 1.2 | 1.1 | 1.1 | 1.2 | 1.3 | .55 | 1.7 | 1.7 | 1.8 |
| 24 | 1.7 | 1.5 | 1.6 | 1.2 | 1.1 | 1.1 | 1.2 | 1.4 | .55 | 1.7 | 1.7 | 1.8 |
| 25 | 1.7 | 1.6 | 1.5 | 1.2 | 1.1 | 1.1 | 1.2 | 1.4 | .52 | 1.7 | 1.7 | 1.8 |
| 26 | 1.7 | 1.5 | 1.5 | 1.1 | 1.1 | 1.1 | 1.2 | 1.3 | .46 | 1.7 | 1.7 | 1.8 |
| 27 | 1.7 | 1.6 | 1.5 | 1.1 | 1.1 | 1.1 | 1.2 | 1.3 | .41 | 1.6 | 1.7 | 1.8 |
| 28 | 1.7 | 1.7 | 1.5 | 1.1 | 1.1 | 1.1 | 1.2 | 1.3 | .46 | 1.6 | 1.7 | 1.8 |
| 29 | 1.7 | 1.6 | 1.5 | 1.1 | --- | 1.1 | 1.2 | 1.3 | .46 | 1.5 | 1.8 | 1.9 |
| 30 | 1.7 | 1.6 | 1.6 | 1.1 | --- | 1.1 | 1.2 | 1.3 | .41 | 1.5 | 1.8 | 1.9 |
| 31 | 1.7 | --- | 1.6 | 1.2 | --- | 1.1 | --- | 1.3 | --- | 1.6 | 1.8 | --- |
| TOTAL | 64.3 | 47.5 | 51.4 | 39.0 | 33.2 | 34.2 | 34.6 | 40.9 | 142.41 | 23.62 | 52.2 | 55.6 |
| MEAN | 2.07 | 1.58 | 1.66 | 1.26 | 1.19 | 1.10 | 1.15 | 1.32 | 4.75 | .76 | 1.68 | 1.85 |
| MAX | 3.0 | 1.7 | 1.9 | 1.6 | 1.3 | 1.2 | 1.3 | 1.5 | 87 | 1.7 | 1.8 | 2.0 |
| MIN | 1.7 | 1.5 | 1.5 | 1.1 | 1.1 | 1.0 | 1.1 | 1.1 | .41 | .36 | 1.6 | 1.8 |
| CFSM | .01 | .008 | .008 | .006 | .006 | .005 | .006 | .006 | .02 | .004 | .008 | .009 |
| IN. | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .03 | .00 | .01 | .01 |
| AC-FT | 128 | 94 | 102 | 77 | 66 | 68 | 69 | 81 | 282 | 47 | 104 | 110 |
| CAL YR 1976 TOTAL | 1804.11 | | | MEAN 4.93 | MAX 244 | MIN .20 | CFSM .02 | IN .33 | AC-FT 3580 | | | |
| WTR YR 1977 TOTAL | 618.93 | | | MEAN 1.70 | MAX 87 | MIN .36 | CFSM .008 | IN .11 | AC-FT 1230 | | | |

DESCHUTES RIVER BASIN

179

14080250 BEAR CREEK NEAR PRINEVILLE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1975 to September 1976 (discontinued).

SUSPENDED SEDIMENT DISCHARGE: October 1975 to current year.

REMARKS.--Random temperature measurements were made at time of sediment sampling and are available at the district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum observed, 21.0°C July 23, Aug. 10, 1976; minimum observed, 0.0°C Nov. 18, 1975, Feb. 4, 1976.

SEDIMENT CONCENTRATIONS: Maximum daily, 35,000 mg/l Aug. 6, 1976; minimum daily, 15 mg/l Oct. 30 to Nov. 8, 1976.

SEDIMENT DISCHARGE: Maximum daily, 43,000 tons (39,000 tonnes) Aug. 6, 1976; minimum daily, 0.03 tons (0.03 tonnes) June 28 to July 1, 1976.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 7,480 mg/l June 7; minimum daily, 15 mg/l Oct. 30 to Nov. 8.

SEDIMENT DISCHARGE: Maximum daily, 7,800 tons (7,076 tonnes) June 7; minimum daily, 0.06 tons (.05 tonnes) Nov. 4-8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED IRON (FE) (UG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) | DIS- SOLVED SODIUM (NA) (MG/L) | DIS- SOLVED PO- TAS- SIUM (K) (MG/L) |
|--------------|--|--|--|---|--|--|--|---|--|--|--|--|
| JUL 22... | 1400 | .42 | 23.5 | 8.8 | 12.2 | 610 | 36 | 20 | 50 | 26 | 47 | 2.2 |
| DATE | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA,MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) |
| JUL 22... | 360 | 0 | 25 | 8.9 | .3 | .06 | 230 | 0 | 1.3 | 373 | .42 | .51 |
| DATE | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN | SUS. SED. FALL DIAM. % FINER THAN |
| JUN 07... | .002 MM | .004 MM | .008 MM | .016 MM | .031 MM | .062 MM | .125 MM | .250 MM | .500 MM | | | |
| JUN 07... | 34 | 49 | 69 | 89 | 96 | 98 | 99 | 99 | 99 | 100 | | |

14080250 BEAR CREEK NEAR PRINEVILLE, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) |
|---------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|
| OCTOBER | | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 48 | 0.38 | 15 | 0.07 | 128 | 0.55 | 107 | 0.46 | 104 | 0.34 | 90 | 0.27 |
| 2 | 46 | 0.36 | 15 | 0.07 | 125 | 0.54 | 106 | 0.46 | 107 | 0.38 | 86 | 0.26 |
| 3 | 44 | 0.36 | 15 | 0.07 | 124 | 0.57 | 106 | 0.46 | 109 | 0.35 | 84 | 0.23 |
| 4 | 42 | 0.33 | 15 | 0.06 | 123 | 0.53 | 110 | 0.48 | 105 | 0.37 | 100 | 0.27 |
| 5 | 40 | 0.31 | 15 | 0.06 | 120 | 0.55 | 115 | 0.50 | 100 | 0.35 | 110 | 0.30 |
| 6 | 39 | 0.32 | 15 | 0.06 | 117 | 0.54 | 125 | 0.44 | 108 | 0.38 | 107 | 0.29 |
| 7 | 38 | 0.31 | 15 | 0.06 | 111 | 0.51 | 101 | 0.35 | 117 | 0.41 | 103 | 0.28 |
| 8 | 37 | 0.30 | 15 | 0.06 | 100 | 0.49 | 100 | 0.35 | 114 | 0.40 | 99 | 0.27 |
| 9 | 37 | 0.22 | 30 | 0.13 | 109 | 0.53 | 99 | 0.32 | 110 | 0.39 | 102 | 0.28 |
| 10 | 37 | 0.18 | 25 | 0.10 | 112 | 0.51 | 98 | 0.32 | 106 | 0.37 | 105 | 0.28 |
| 11 | 37 | 0.18 | 94 | 0.43 | 240 | 1.1 | 103 | 0.33 | 112 | 0.39 | 108 | 0.32 |
| 12 | 37 | 0.18 | 95 | 0.41 | 245 | 1.1 | 109 | 0.35 | 118 | 0.41 | 108 | 0.32 |
| 13 | 36 | 0.17 | 97 | 0.42 | 142 | 0.65 | 115 | 0.37 | 120 | 0.39 | 109 | 0.32 |
| 14 | 36 | 0.17 | 89 | 0.38 | 123 | 0.56 | 103 | 0.33 | 116 | 0.38 | 109 | 0.35 |
| 15 | 36 | 0.17 | 83 | 0.36 | 123 | 0.56 | 91 | 0.29 | 108 | 0.32 | 109 | 0.35 |
| 16 | 36 | 0.17 | 77 | 0.33 | 122 | 0.63 | 92 | 0.30 | 100 | 0.30 | 109 | 0.35 |
| 17 | 35 | 0.17 | 83 | 0.34 | 122 | 0.63 | 92 | 0.30 | 106 | 0.31 | 108 | 0.35 |
| 18 | 35 | 0.17 | 89 | 0.36 | 119 | 0.55 | 91 | 0.29 | 112 | 0.33 | 108 | 0.35 |
| 19 | 35 | 0.17 | 95 | 0.38 | 115 | 0.53 | 90 | 0.29 | 118 | 0.35 | 107 | 0.35 |
| 20 | 34 | 0.17 | 101 | 0.41 | 111 | 0.51 | 90 | 0.29 | 115 | 0.34 | 107 | 0.35 |
| 21 | 34 | 0.16 | 108 | 0.44 | 105 | 0.45 | 89 | 0.29 | 112 | 0.33 | 106 | 0.34 |
| 22 | 34 | 0.16 | 111 | 0.45 | 97 | 0.42 | 94 | 0.30 | 109 | 0.32 | 106 | 0.34 |
| 23 | 34 | 0.16 | 114 | 0.46 | 110 | 0.48 | 99 | 0.32 | 101 | 0.30 | 105 | 0.31 |
| 24 | 33 | 0.15 | 116 | 0.47 | 129 | 0.56 | 99 | 0.32 | 93 | 0.28 | 107 | 0.32 |
| 25 | 32 | 0.15 | 118 | 0.51 | 138 | 0.56 | 99 | 0.32 | 85 | 0.25 | 110 | 0.33 |
| 26 | 27 | 0.12 | 119 | 0.48 | 124 | 0.50 | 99 | 0.29 | 90 | 0.27 | 113 | 0.34 |
| 27 | 23 | 0.11 | 123 | 0.53 | 108 | 0.44 | 107 | 0.32 | 94 | 0.28 | 116 | 0.34 |
| 28 | 19 | 0.09 | 128 | 0.59 | 93 | 0.38 | 119 | 0.35 | 99 | 0.29 | 117 | 0.35 |
| 29 | 16 | 0.07 | 136 | 0.59 | 97 | 0.39 | 113 | 0.34 | --- | --- | 118 | 0.35 |
| 30 | 15 | 0.07 | 134 | 0.58 | 102 | 0.44 | 107 | 0.32 | --- | --- | 119 | 0.35 |
| 31 | 15 | 0.07 | --- | --- | 107 | 0.46 | 101 | 0.33 | --- | --- | 120 | 0.36 |
| TOTAL | --- | 6.10 | --- | 9.66 | --- | 17.22 | --- | 10.78 | --- | 9.58 | --- | 9.87 |

| DAY | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) |
|-------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|
| APRIL | | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 138 | 0.41 | 112 | 0.36 | 112 | 0.39 | 106 | 0.12 | 115 | 0.50 | 73 | 0.37 |
| 2 | 155 | 0.46 | 112 | 0.39 | 111 | 0.39 | 105 | 0.13 | 115 | 0.50 | 74 | 0.38 |
| 3 | 142 | 0.42 | 111 | 0.39 | 111 | 0.39 | 105 | 0.12 | 115 | 0.50 | 75 | 0.36 |
| 4 | 128 | 0.38 | 111 | 0.39 | 111 | 0.39 | 105 | 0.12 | 115 | 0.50 | 76 | 0.37 |
| 5 | 113 | 0.34 | 110 | 0.39 | 110 | 0.36 | 102 | 0.10 | 114 | 0.49 | 77 | 0.37 |
| 6 | 100 | 0.30 | 110 | 0.39 | 110 | 0.39 | 109 | 0.11 | 114 | 0.49 | 78 | 0.38 |
| 7 | 103 | 0.31 | 110 | 0.39 | 7480 | 7800 | 109 | 0.12 | 114 | 0.49 | 79 | 0.38 |
| 8 | 106 | 0.31 | 109 | 0.38 | 129 | 3.2 | 110 | 0.11 | 113 | 0.49 | 80 | 0.39 |
| 9 | 109 | 0.32 | 109 | 0.38 | 110 | 1.6 | 110 | 0.11 | 113 | 0.52 | 81 | 0.39 |
| 10 | 111 | 0.33 | 109 | 0.44 | 110 | 1.5 | 111 | 0.11 | 113 | 0.52 | 82 | 0.42 |
| 11 | 110 | 0.33 | 108 | 0.44 | 110 | 1.3 | 112 | 0.12 | 112 | 0.51 | 83 | 0.43 |
| 12 | 109 | 0.32 | 108 | 0.41 | 110 | 1.2 | 112 | 0.12 | 112 | 0.51 | 84 | 0.43 |
| 13 | 106 | 0.31 | 108 | 0.38 | 110 | 0.22 | 113 | 0.13 | 112 | 0.51 | 85 | 0.44 |
| 14 | 103 | 0.31 | 107 | 0.38 | 109 | 0.22 | 114 | 0.13 | 112 | 0.51 | 86 | 0.46 |
| 15 | 100 | 0.30 | 107 | 0.40 | 109 | 0.21 | 114 | 0.13 | 112 | 0.51 | 87 | 0.45 |
| 16 | 99 | 0.29 | 107 | 0.40 | 109 | 0.21 | 115 | 0.14 | 111 | 0.51 | 88 | 0.45 |
| 17 | 98 | 0.29 | 107 | 0.38 | 109 | 0.21 | 116 | 0.14 | 110 | 0.50 | 88 | 0.45 |
| 18 | 98 | 0.32 | 108 | 0.38 | 109 | 0.19 | 116 | 0.14 | 110 | 0.50 | 89 | 0.46 |
| 19 | 97 | 0.31 | 108 | 0.38 | 108 | 0.20 | 117 | 0.13 | 109 | 0.50 | 89 | 0.46 |
| 20 | 97 | 0.34 | 109 | 0.32 | 108 | 0.18 | 117 | 0.15 | 107 | 0.49 | 89 | 0.46 |
| 21 | 99 | 0.35 | 109 | 0.38 | 108 | 0.17 | 118 | 0.13 | 105 | 0.48 | 89 | 0.43 |
| 22 | 98 | 0.34 | 110 | 0.39 | 108 | 0.17 | 118 | 0.13 | 103 | 0.47 | 89 | 0.43 |
| 23 | 99 | 0.32 | 111 | 0.39 | 107 | 0.16 | 118 | 0.54 | 100 | 0.46 | 89 | 0.44 |
| 24 | 100 | 0.32 | 111 | 0.42 | 107 | 0.16 | 118 | 0.54 | 97 | 0.45 | 90 | 0.44 |
| 25 | 101 | 0.33 | 112 | 0.42 | 107 | 0.15 | 117 | 0.54 | 93 | 0.43 | 90 | 0.44 |
| 26 | 103 | 0.33 | 113 | 0.40 | 107 | 0.13 | 117 | 0.54 | 90 | 0.41 | 90 | 0.44 |
| 27 | 105 | 0.34 | 114 | 0.40 | 107 | 0.12 | 117 | 0.51 | 87 | 0.40 | 90 | 0.44 |
| 28 | 107 | 0.35 | 113 | 0.40 | 106 | 0.13 | 116 | 0.50 | 84 | 0.39 | 90 | 0.44 |
| 29 | 107 | 0.35 | 112 | 0.39 | 106 | 0.13 | 116 | 0.47 | 81 | 0.39 | 90 | 0.46 |
| 30 | 108 | 0.35 | 112 | 0.39 | 106 | 0.12 | 116 | 0.47 | 78 | 0.38 | 90 | 0.46 |
| 31 | --- | --- | 112 | 0.39 | --- | --- | 116 | 0.50 | 76 | 0.37 | --- | --- |
| TOTAL | --- | 10.08 | --- | 12.14 | --- | 7814.19 | --- | 7.35 | --- | 14.68 | --- | 12.71 |

14080400 PRINEVILLE RESERVOIR NEAR PRINEVILLE, OR

LOCATION.--Lat 44°06'50", long 120°46'50", in SW 1/4 sec. 11, T.17 S., R.16 E., Crook County, Hydrologic Unit 17070304, at right end of Prineville Dam on Crooked River, 13.8 mi (22.2 km) south of Prineville, and at mile 72.5 (116.7 km).

DRAINAGE AREA.--2,700 mi² (6,990 km²) approximately, of which 500 mi² (1,300 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Aug. 13, 1969, non-recording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam with ungated concrete spillway and concrete outlet tunnel controlled by two 4-ft (1.2 m) by 6-ft (1.8 m) regulating gates. Storage began in December 1960. Total capacity at elevation 3,234.80 ft (985.967 m), crest of spillway, is 154,700 acre-ft (191 hm³), of which 152,800 acre-ft (188 hm³) is active storage above 3,114.00 ft (949.147 m), proposed minimum pool. Reservoir used for flood control, irrigation, and recreation. Figures given herein represent active storage.

COOPERATION.--Gage inspected and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 165,800 acre-ft (204 hm³) Dec. 27, 1964, elevation, 3,238.95 ft (987.232 m); minimum, 38,100 acre-ft (47.0 hm³) Sept. 30, 1977, elevation, 3,178.00 ft (968.654 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 106,000 acre-ft (131 hm³) Oct. 1, elevation, 3,217.18 ft (980.596 m); minimum, 38,100 acre-ft (47.0 hm³) Sept. 30, elevation, 3,178.00 ft (968.654 m).

Capacity table (elevation, in feet, and usable contents, in acre-feet)

| | | | |
|-------|--------|-------|---------|
| 3,175 | 34,600 | 3,210 | 90,400 |
| 3,180 | 40,600 | 3,215 | 101,100 |
| 3,185 | 47,400 | 3,220 | 112,600 |
| 3,190 | 54,700 | 3,230 | 138,700 |
| 3,195 | 62,600 | 3,235 | 153,400 |
| 3,200 | 71,200 | 3,239 | 165,900 |
| 3,205 | 80,400 | | |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 3216.99 | 3212.40 | 3211.05 | 3211.10 | 3211.33 | 3212.75 | 3214.33 | 3213.88 | 3215.35 | 3207.95 | 3197.77 | 3185.98 |
| 2 | 3216.84 | 3212.35 | 3211.10 | 3211.10 | 3211.35 | 3212.77 | 3214.35 | 3213.84 | 3215.07 | 3207.70 | 3197.41 | 3185.66 |
| 3 | 3216.70 | 3212.23 | 3211.18 | 3211.10 | 3211.37 | 3212.87 | 3214.41 | 3213.72 | 3214.80 | 3207.45 | 3196.97 | 3185.24 |
| 4 | 3216.60 | 3212.20 | 3211.20 | 3211.10 | 3211.40 | 3212.90 | 3214.51 | 3213.56 | 3214.53 | 3207.22 | 3196.35 | 3185.17 |
| 5 | 3216.50 | 3212.10 | 3211.23 | 3211.09 | 3211.45 | 3213.00 | 3214.61 | 3213.44 | 3214.32 | 3207.00 | 3196.10 | 3184.80 |
| 6 | 3216.39 | 3211.95 | 3211.23 | 3211.07 | 3211.47 | 3213.00 | 3214.72 | 3213.35 | 3214.04 | 3206.78 | 3195.72 | 3184.46 |
| 7 | 3216.24 | 3211.80 | 3211.28 | 3211.03 | 3211.54 | 3213.05 | 3214.93 | 3213.35 | 3213.79 | 3206.48 | 3195.30 | 3184.00 |
| 8 | 3216.03 | 3211.66 | 3211.33 | 3211.02 | 3211.57 | 3213.08 | 3215.16 | 3213.24 | 3213.52 | 3206.19 | 3194.96 | 3183.90 |
| 9 | 3215.91 | 3211.51 | 3211.33 | 3211.00 | 3211.65 | 3213.15 | 3215.24 | 3213.23 | 3213.25 | 3205.82 | 3194.61 | 3183.65 |
| 10 | 3215.70 | 3211.42 | 3211.35 | 3210.96 | 3211.73 | 3213.24 | 3215.32 | 3213.13 | 3213.00 | 3205.50 | 3194.21 | 3183.34 |
| 11 | 3215.52 | 3211.31 | 3211.35 | 3210.96 | 3211.75 | 3213.31 | 3215.34 | 3213.33 | 3212.75 | 3205.28 | 3193.74 | 3183.10 |
| 12 | 3215.36 | 3211.19 | 3211.35 | 3210.96 | 3211.80 | 3213.38 | 3215.40 | 3214.27 | 3212.48 | 3204.92 | 3193.37 | 3182.78 |
| 13 | 3215.20 | 3211.01 | 3211.38 | 3210.95 | 3211.87 | 3213.41 | 3215.41 | 3214.74 | 3212.20 | 3204.52 | 3192.94 | 3182.50 |
| 14 | 3215.06 | 3210.92 | 3211.38 | 3210.95 | 3211.95 | 3213.48 | 3215.42 | 3215.06 | 3211.88 | 3204.20 | 3192.60 | 3182.00 |
| 15 | 3214.85 | 3210.93 | 3211.38 | 3210.95 | 3212.00 | 3213.51 | 3215.46 | 3215.22 | 3211.54 | 3203.80 | 3192.21 | 3181.55 |
| 16 | 3214.70 | 3210.93 | 3211.36 | 3210.95 | 3212.07 | 3213.53 | 3215.46 | 3215.37 | 3211.20 | 3203.48 | 3191.92 | 3181.22 |
| 17 | 3214.53 | 3210.99 | 3211.30 | 3210.95 | 3212.15 | 3213.58 | 3215.40 | 3215.50 | 3210.98 | 3203.16 | 3191.46 | 3180.88 |
| 18 | 3214.36 | 3211.02 | 3211.30 | 3210.95 | 3212.17 | 3213.61 | 3215.34 | 3215.59 | 3210.65 | 3202.78 | 3191.11 | 3180.55 |
| 19 | 3214.21 | 3211.05 | 3211.28 | 3210.96 | 3212.25 | 3213.74 | 3215.25 | 3215.64 | 3210.35 | 3202.45 | 3190.75 | 3180.30 |
| 20 | 3214.05 | 3211.10 | 3211.21 | 3211.00 | 3212.33 | 3213.76 | 3215.15 | 3215.77 | 3210.10 | 3202.12 | 3190.34 | 3180.02 |
| 21 | 3213.92 | 3211.18 | 3211.20 | 3211.03 | 3212.36 | 3213.80 | 3215.15 | 3215.77 | 3209.93 | 3201.72 | 3189.92 | 3179.72 |
| 22 | 3213.73 | 3211.18 | 3211.20 | 3211.05 | 3212.43 | 3213.84 | 3215.04 | 3215.78 | 3209.72 | 3201.30 | 3189.34 | 3179.42 |
| 23 | 3213.59 | 3211.18 | 3211.18 | 3211.10 | 3212.45 | 3213.90 | 3214.91 | 3215.78 | 3209.52 | 3201.10 | 3189.17 | 3179.14 |
| 24 | 3213.43 | 3211.15 | 3211.17 | 3211.15 | 3212.47 | 3213.92 | 3214.86 | 3215.81 | 3209.32 | 3200.60 | 3188.82 | 3178.90 |
| 25 | 3213.30 | 3211.12 | 3211.15 | 3211.20 | 3212.53 | 3214.02 | 3214.69 | 3215.83 | 3209.10 | 3200.30 | 3188.32 | 3178.70 |
| 26 | 3213.16 | 3211.10 | 3211.10 | 3211.23 | 3212.55 | 3214.07 | 3214.60 | 3215.84 | 3208.90 | 3199.90 | 3188.11 | 3178.41 |
| 27 | 3213.10 | 3211.07 | 3211.10 | 3211.23 | 3212.57 | 3214.13 | 3214.46 | 3215.84 | 3208.72 | 3199.63 | 3187.66 | 3178.24 |
| 28 | 3212.93 | 3211.07 | 3211.10 | 3211.25 | 3212.73 | 3214.14 | 3214.35 | 3215.91 | 3208.55 | 3199.16 | 3187.30 | 3178.15 |
| 29 | 3212.78 | 3211.06 | 3211.10 | 3211.25 | --- | 3214.22 | 3214.18 | 3215.91 | 3208.35 | 3198.78 | 3186.90 | 3178.06 |
| 30 | 3212.60 | 3211.05 | 3211.10 | 3211.27 | --- | 3214.25 | 3214.03 | 3215.81 | 3208.20 | 3198.43 | 3186.60 | 3178.00 |
| 31 | 3212.40 | --- | 3211.10 | 3211.30 | --- | 3214.33 | --- | 3215.61 | --- | 3198.06 | 3186.16 | --- |
| MEAN | 3214.73 | 3211.37 | 3211.23 | 3211.07 | 3211.97 | 3213.54 | 3214.92 | 3214.81 | 3211.54 | 3203.35 | 3191.88 | 3181.59 |
| MAX | 3216.99 | 3212.40 | 3211.38 | 3211.30 | 3212.73 | 3214.33 | 3215.46 | 3215.91 | 3215.35 | 3207.95 | 3197.77 | 3185.98 |
| MIN | 3212.40 | 3210.92 | 3211.05 | 3210.95 | 3211.33 | 3212.75 | 3214.03 | 3213.13 | 3208.20 | 3198.06 | 3186.16 | 3178.00 |
| (†) | 95,410 | 92,560 | 92,660 | 93,080 | 96,120 | 99,590 | 98,930 | 102,400 | 86,720 | 67,790 | 49,050 | 38,100 |
| (‡) | -10,590 | -2,850 | +100 | +420 | +3,040 | +3,470 | -660 | +3,470 | -15,680 | -18,930 | -18,740 | -10,950 |
| CAL YR 1976 | MEAN | 3221.37 | MAX | 3237.81 | MIN | 3210.92 | AC-FT ‡ | -630 | | | | |
| WTR YR 1977 | MEAN | 3207.66 | MAX | 3216.99 | MIN | 3178.00 | AC-FT ‡ | -67,900 | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

DESCHUTES RIVER BASIN

14080500 CROOKED RIVER NEAR PRINEVILLE, OR

LOCATION.--Lat 44°06'50", long 120°47'40", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.10, T.17 S., R.16 E., Crook County, Hydrologic Unit 17070304, on right bank 0.4 mi (0.6 km) downstream from Prineville Dam, 13.6 mi (21.9 km) south of Prineville, and at mile 72.1 (116.0 km).

DRAINAGE AREA.--2,700 mi² (7,000 km²), approximately, of which 500 mi² (1,300 km²) is probably noncontributing.

PERIOD OF RECORD.--November 1908 to September 1914, March 1941 to current year. Published as "near Prineville" 1908-12, as "at Hoffman's ranch, near Prineville" 1913-14, and as "above Hoffman Dam, near Prineville" March 1941 to September 1960. The estimate of monthly mean discharge for October 1908, published in WSP 370, has been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1448: 1909-13, 1914(M), drainage area (at sites prior to Apr. 24, 1961). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 3,070.85 ft (935.995 m) above mean sea level (levels by Bureau of Reclamation.) Prior to September 1914, nonrecording gage at several sites from 9 mi (14 km) to 23 mi (37 km) downstream at various datums. Mar. 26, 1941, to Apr. 23, 1961, water-stage recorder at site 5.5 mi (8.8 km) downstream at different datum.

REMARKS.--Records good. Flow completely regulated since December 1960 by Prineville Reservoir (see station 14080400). Diversions for irrigation above station. Discharge not adjusted for storage or release from Prineville Reservoir as evaporation from reservoir at times exceeds natural flow.

AVERAGE DISCHARGE.--24 years (water years 1910-14, 1942-60), 378 ft³/s (10.70 m³/s), 273,700 acre-ft/yr (337 hm³/yr); 17 years (water years 1961-77), 296 ft³/s (8.38 m³/s), 214,500 acre-ft/yr (264 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,410 ft³/s (238 m³/s) Mar. 26, 1952, gage height, 8.2 ft (2.50 m), from floodmark, site and datum then in use; no flow Aug. 13-21, 1959, Jan. 3-5, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 396 ft³/s (11.2 m³/s) Dec. 20, gage height, 3.92 ft (1.195 m); minimum, 8.0 ft³/s (0.23 m³/s) Dec. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|--------------|------|------|-------|-------|-------|-------|
| 1 | 246 | 200 | 49 | 62 | 34 | 35 | 34 | 203 | 306 | 193 | 316 | 244 |
| 2 | 246 | 145 | 50 | 62 | 34 | 35 | 34 | 189 | 327 | 193 | 340 | 251 |
| 3 | 246 | 145 | 50 | 62 | 33 | 35 | 35 | 176 | 338 | 193 | 338 | 220 |
| 4 | 246 | 145 | 50 | 62 | 34 | 34 | 35 | 176 | 343 | 193 | 332 | 220 |
| 5 | 246 | 145 | 57 | 61 | 34 | 34 | 35 | 176 | 343 | 193 | 332 | 220 |
| 6 | 246 | 200 | 66 | 61 | 34 | 34 | 35 | 173 | 340 | 235 | 332 | 218 |
| 7 | 246 | 245 | 66 | 61 | 34 | 34 | 35 | 165 | 340 | 314 | 332 | 218 |
| 8 | 246 | 245 | 65 | 61 | 34 | 34 | 68 | 165 | 340 | 322 | 332 | 218 |
| 9 | 246 | 245 | 64 | 61 | 34 | 34 | 114 | 165 | 340 | 322 | 332 | 218 |
| 10 | 246 | 245 | 64 | 61 | 34 | 34 | 98 | 118 | 340 | 322 | 332 | 218 |
| 11 | 246 | 244 | 64 | 61 | 34 | 34 | 98 | 78 | 340 | 322 | 332 | 218 |
| 12 | 246 | 240 | 64 | 61 | 34 | 34 | 114 | 78 | 340 | 319 | 316 | 229 |
| 13 | 246 | 240 | 80 | 61 | 34 | 34 | 140 | 79 | 363 | 319 | 303 | 244 |
| 14 | 244 | 162 | 91 | 61 | 34 | 34 | 139 | 79 | 378 | 319 | 303 | 244 |
| 15 | 244 | 48 | 91 | 61 | 34 | 34 | 146 | 79 | 378 | 327 | 303 | 244 |
| 16 | 244 | 48 | 91 | 62 | 34 | 34 | 158 | 79 | 378 | 332 | 303 | 242 |
| 17 | 244 | 48 | 77 | 62 | 34 | 35 | 158 | 79 | 340 | 332 | 303 | 242 |
| 18 | 244 | 48 | 86 | 62 | 34 | 35 | 158 | 79 | 309 | 332 | 303 | 240 |
| 19 | 245 | 49 | 88 | 62 | 34 | 35 | 158 | 79 | 240 | 329 | 303 | 220 |
| 20 | 245 | 48 | 89 | 52 | 34 | 35 | 158 | 89 | 203 | 329 | 303 | 227 |
| 21 | 245 | 63 | 89 | 38 | 34 | 35 | 158 | 103 | 203 | 329 | 303 | 231 |
| 22 | 245 | 98 | 89 | 38 | 34 | 35 | 158 | 103 | 203 | 338 | 301 | 208 |
| 23 | 245 | 98 | 89 | 38 | 35 | 35 | 158 | 103 | 203 | 346 | 298 | 174 |
| 24 | 245 | 97 | 88 | 38 | 35 | 35 | 158 | 103 | 203 | 346 | 298 | 162 |
| 25 | 245 | 97 | 88 | 38 | 35 | 35 | 160 | 103 | 205 | 329 | 298 | 152 |
| 26 | 245 | 97 | 88 | 38 | 35 | 35 | 160 | 103 | 205 | 316 | 286 | 151 |
| 27 | 245 | 86 | 75 | 38 | 35 | 35 | 171 | 103 | 199 | 316 | 279 | 140 |
| 28 | 245 | 64 | 63 | 39 | 35 | 35 | 203 | 176 | 193 | 314 | 274 | 110 |
| 29 | 245 | 64 | 63 | 42 | --- | 34 | 203 | 226 | 193 | 314 | 272 | 85 |
| 30 | 245 | 59 | 64 | 42 | --- | 35 | 203 | 226 | 193 | 314 | 256 | 66 |
| 31 | 245 | --- | 63 | 38 | --- | 35 | --- | 251 | --- | 314 | 244 | --- |
| TOTAL | 7603 | 3958 | 2261 | 1646 | 957 | 1071 | 3682 | 4104 | 8626 | 9316 | 9499 | 6074 |
| MEAN | 245 | 132 | 72.9 | 53.1 | 34.2 | 34.5 | 123 | 132 | 288 | 301 | 306 | 202 |
| MAX | 246 | 245 | 91 | 62 | 35 | 35 | 203 | 251 | 378 | 346 | 340 | 251 |
| MIN | 244 | 48 | 49 | 38 | 33 | 34 | 34 | 78 | 193 | 193 | 244 | 66 |
| AC-FT | 15080 | 7850 | 4480 | 3260 | 1900 | 2120 | 7300 | 8140 | 17110 | 18480 | 18840 | 12050 |
| CAL YR 1976 | TOTAL | 108080 | MEAN 295 | MAX 2060 | MIN 36 | AC-FT 214400 | | | | | | |
| WTR YR 1977 | TOTAL | 58797 | MEAN 161 | MAX 378 | MIN 33 | AC-FT 116600 | | | | | | |

DESCHUTES RIVER BASIN

183

14087400 CROOKED RIVER BELOW OPAL SPRINGS, NEAR CULVER, OR

LOCATION.--Lat 44°29'33", long 121°17'50", in NW¼NE¼ sec.33, T.12 S., R.12 E., Jefferson County, Hydrologic Unit 17070305, on right bank 0.2 mi (0.3 km) downstream from Opal Springs, 4.8 mi (7.7 km) southwest of Culver, and at mile 6.7 (10.8 km).

DRAINAGE AREA.--4,300 mi² (11,100 km²), approximately, of which 500 mi² (1,300 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,953.60 ft (595.457 m) above mean sea level (Portland General Electric Co. bench mark).

REMARKS.--Records excellent. Flow regulated since December 1960 by Prineville Reservoir (see station 14080400) and Ochoco Reservoir, capacity, 47,500 acre-ft (58.6 hm³). Many diversions for irrigation above station. Practically all of the summer flow comes from Opal Springs and other springs within 15 mi (24 km) above station. Simultaneous records (1961-63) at former gaging station 5.6 mi (9.0 km) downstream indicated over 15 percent increase to summer flow from springs below this station.

AVERAGE DISCHARGE.--16 years, 1,540 ft³/s (43.61 m³/s), 1,116,000 acre-ft/yr (1.38 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft³/s (189 m³/s) Dec. 24, 1964, gage height, 9.36 ft (2.853 m); minimum, 912 ft³/s (25.8 m³/s) Aug. 13-15, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,710 ft³/s (48.4 m³/s) Oct. 22, gage height, 2.93 ft (0.893 m); minimum, 1,110 ft³/s (31.4 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|
| 1 | 1420 | 1530 | 1320 | 1310 | 1270 | 1230 | 1210 | 1180 | 1170 | 1170 | 1200 | 1290 |
| 2 | 1460 | 1450 | 1310 | 1310 | 1260 | 1230 | 1210 | 1200 | 1170 | 1160 | 1200 | 1260 |
| 3 | 1480 | 1440 | 1310 | 1310 | 1260 | 1220 | 1210 | 1230 | 1180 | 1170 | 1180 | 1250 |
| 4 | 1490 | 1440 | 1310 | 1310 | 1260 | 1220 | 1210 | 1200 | 1180 | 1180 | 1180 | 1230 |
| 5 | 1500 | 1440 | 1310 | 1300 | 1260 | 1230 | 1210 | 1210 | 1190 | 1180 | 1190 | 1230 |
| 6 | 1510 | 1450 | 1300 | 1270 | 1260 | 1240 | 1180 | 1220 | 1210 | 1180 | 1200 | 1210 |
| 7 | 1530 | 1530 | 1320 | 1290 | 1260 | 1240 | 1180 | 1210 | 1210 | 1170 | 1180 | 1200 |
| 8 | 1530 | 1530 | 1320 | 1300 | 1260 | 1230 | 1180 | 1220 | 1220 | 1220 | 1180 | 1190 |
| 9 | 1530 | 1530 | 1320 | 1300 | 1260 | 1220 | 1170 | 1240 | 1200 | 1200 | 1200 | 1190 |
| 10 | 1530 | 1530 | 1310 | 1310 | 1260 | 1220 | 1200 | 1250 | 1190 | 1200 | 1180 | 1180 |
| 11 | 1530 | 1530 | 1310 | 1320 | 1250 | 1230 | 1260 | 1560 | 1200 | 1200 | 1170 | 1190 |
| 12 | 1530 | 1530 | 1320 | 1310 | 1250 | 1230 | 1210 | 1340 | 1200 | 1190 | 1170 | 1190 |
| 13 | 1570 | 1530 | 1310 | 1310 | 1250 | 1230 | 1170 | 1300 | 1230 | 1190 | 1190 | 1190 |
| 14 | 1570 | 1530 | 1320 | 1310 | 1250 | 1240 | 1170 | 1240 | 1220 | 1170 | 1170 | 1180 |
| 15 | 1560 | 1500 | 1340 | 1300 | 1250 | 1240 | 1200 | 1230 | 1230 | 1170 | 1190 | 1190 |
| 16 | 1570 | 1360 | 1350 | 1300 | 1260 | 1230 | 1160 | 1240 | 1210 | 1160 | 1200 | 1200 |
| 17 | 1560 | 1340 | 1350 | 1340 | 1260 | 1230 | 1160 | 1200 | 1220 | 1160 | 1170 | 1210 |
| 18 | 1580 | 1330 | 1340 | 1340 | 1260 | 1230 | 1180 | 1190 | 1230 | 1200 | 1190 | 1200 |
| 19 | 1590 | 1330 | 1330 | 1350 | 1260 | 1240 | 1190 | 1200 | 1200 | 1200 | 1170 | 1230 |
| 20 | 1600 | 1330 | 1340 | 1380 | 1250 | 1250 | 1190 | 1180 | 1190 | 1190 | 1190 | 1240 |
| 21 | 1620 | 1320 | 1380 | 1370 | 1250 | 1250 | 1200 | 1170 | 1180 | 1190 | 1190 | 1240 |
| 22 | 1650 | 1330 | 1390 | 1370 | 1240 | 1240 | 1230 | 1170 | 1170 | 1190 | 1190 | 1260 |
| 23 | 1640 | 1370 | 1430 | 1320 | 1240 | 1240 | 1220 | 1190 | 1180 | 1200 | 1180 | 1280 |
| 24 | 1600 | 1380 | 1360 | 1270 | 1220 | 1230 | 1200 | 1200 | 1190 | 1200 | 1190 | 1250 |
| 25 | 1560 | 1380 | 1350 | 1270 | 1210 | 1220 | 1200 | 1190 | 1190 | 1220 | 1220 | 1260 |
| 26 | 1540 | 1360 | 1350 | 1270 | 1210 | 1220 | 1200 | 1180 | 1170 | 1220 | 1260 | 1260 |
| 27 | 1540 | 1360 | 1340 | 1260 | 1230 | 1230 | 1180 | 1160 | 1190 | 1210 | 1280 | 1250 |
| 28 | 1540 | 1360 | 1340 | 1270 | 1240 | 1240 | 1160 | 1170 | 1190 | 1200 | 1280 | 1250 |
| 29 | 1540 | 1330 | 1320 | 1260 | --- | 1240 | 1160 | 1170 | 1180 | 1190 | 1320 | 1310 |
| 30 | 1540 | 1330 | 1320 | 1270 | --- | 1240 | 1170 | 1200 | 1190 | 1190 | 1300 | 1270 |
| 31 | 1540 | --- | 1320 | 1270 | --- | 1220 | --- | 1180 | --- | 1190 | 1310 | --- |
| TOTAL | 47950 | 42700 | 41340 | 40470 | 34990 | 38200 | 35770 | 37820 | 35880 | 36860 | 37420 | 36900 |
| MEAN | 1547 | 1423 | 1334 | 1305 | 1250 | 1232 | 1192 | 1220 | 1196 | 1189 | 1207 | 1230 |
| MAX | 1650 | 1530 | 1430 | 1380 | 1270 | 1250 | 1260 | 1560 | 1230 | 1220 | 1320 | 1310 |
| MIN | 1420 | 1320 | 1300 | 1260 | 1210 | 1220 | 1160 | 1160 | 1170 | 1160 | 1170 | 1180 |
| AC-FT | 95110 | 84700 | 82000 | 80270 | 69400 | 75770 | 70950 | 75020 | 71170 | 73110 | 74220 | 73190 |
| CAL YR 1976 | TOTAL | 571380 | MEAN | 1561 | MAX | 3800 | MIN | 1250 | AC-FT | 1133000 | | |
| WTR YR 1977 | TOTAL | 466300 | MEAN | 1278 | MAX | 1650 | MIN | 1160 | AC-FT | 924900 | | |

DESCHUTES RIVER BASIN

14088000 LAKE CREEK NEAR SISTERS, OR

LOCATION.--Lat 44°25'35", long 121°43'30", in NE¼SW¼ sec.24, T.13 S., R.8 E., Deschutes County, Hydrologic Unit 17070301, on left bank 300 ft (91 m) downstream from Suttle Lake and 13 mi (21 km) northwest of Sisters.

DRAINAGE AREA.--22.2 mi² (57.5 km²).

PERIOD OF RECORD.--June to November 1911, March to September 1912, May to October 1913, April 1915 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1124: 1943, 1947. WSP 1218: Drainage area. WSP 1448: 1916(M), 1925.

GAGE.--Water-stage recorder. Datum of gage is 3,431.68 ft (1,045.976 m) above mean sea level. Prior to Apr. 1, 1916, nonrecording gage at two sites 400 ft (122 m) upstream at different datums. Apr. 1, 1916, to Oct. 12, 1928, nonrecording gage or water-stage recorder at site 640 ft (195 m) downstream at different datum. Oct. 13, 1928, to Aug. 13, 1967, water-stage recorder at site 600 ft (183 m) downstream at datum 1.61 ft (0.491 m) lower.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--62 years (water years 1916-77), 52.8 ft³/s (1.495 m³/s), 38,250 acre-ft/yr (47.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, Dec. 23, 1964; maximum daily discharge, 500 ft³/s (14.2 m³/s) Dec. 23, 1964; minimum discharge, 1.0 ft³/s (0.028 m³/s) Nov. 4, 5, 1940; minimum daily, 8 ft³/s (0.23 m³/s) Nov. 5, 1940, Oct. 6, 1942.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 52 ft³/s (1.47 m³/s) May 10, gage height, 2.28 ft (0.695 m); minimum, 24 ft³/s (0.68 m³/s) Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|---------|--------|-------------|------|------|------|------|------|------|
| 1 | 35 | 38 | 36 | 36 | 36 | 42 | 35 | 41 | 42 | 34 | 30 | 29 |
| 2 | 35 | 37 | 36 | 39 | 35 | 38 | 33 | 42 | 40 | 32 | 30 | 29 |
| 3 | 34 | 36 | 36 | 38 | 35 | 37 | 32 | 45 | 42 | 31 | 29 | 29 |
| 4 | 33 | 35 | 37 | 37 | 35 | 34 | 31 | 45 | 42 | 31 | 29 | 29 |
| 5 | 33 | 34 | 36 | 37 | 35 | 34 | 31 | 46 | 41 | 31 | 29 | 29 |
| 6 | 33 | 34 | 37 | 36 | 35 | 34 | 32 | 44 | 41 | 32 | 29 | 28 |
| 7 | 33 | 34 | 38 | 36 | 35 | 43 | 32 | 43 | 42 | 32 | 29 | 28 |
| 8 | 34 | 34 | 40 | 36 | 35 | 46 | 33 | 43 | 40 | 33 | 28 | 27 |
| 9 | 34 | 34 | 45 | 36 | 35 | 45 | 33 | 42 | 39 | 32 | 28 | 28 |
| 10 | 33 | 34 | 40 | 36 | 34 | 40 | 33 | 46 | 40 | 31 | 28 | 29 |
| 11 | 32 | 34 | 38 | 36 | 35 | 35 | 33 | 42 | 37 | 31 | 28 | 29 |
| 12 | 33 | 34 | 38 | 37 | 34 | 37 | 33 | 42 | 39 | 31 | 29 | 29 |
| 13 | 33 | 34 | 37 | 38 | 35 | 35 | 35 | 41 | 39 | 31 | 29 | 29 |
| 14 | 32 | 36 | 37 | 37 | 35 | 33 | 33 | 42 | 39 | 30 | 29 | 29 |
| 15 | 33 | 39 | 37 | 36 | 34 | 33 | 34 | 43 | 37 | 31 | 28 | 28 |
| 16 | 33 | 37 | 37 | 36 | 35 | 33 | 35 | 42 | 37 | 31 | 29 | 28 |
| 17 | 32 | 36 | 37 | 35 | 34 | 33 | 34 | 42 | 38 | 30 | 31 | 28 |
| 18 | 32 | 36 | 37 | 36 | 34 | 34 | 35 | 40 | 37 | 30 | 30 | 31 |
| 19 | 32 | 34 | 36 | 36 | 34 | 34 | 32 | 40 | 36 | 30 | 27 | 33 |
| 20 | 32 | 34 | 36 | 36 | 35 | 33 | 30 | 39 | 36 | 31 | 28 | 32 |
| 21 | 32 | 38 | 37 | 36 | 37 | 32 | 35 | 40 | 36 | 30 | 29 | 30 |
| 22 | 33 | 45 | 37 | 36 | 40 | 32 | 27 | 40 | 35 | 31 | 27 | 29 |
| 23 | 32 | 40 | 38 | 36 | 37 | 33 | 29 | 43 | 36 | 30 | 27 | 31 |
| 24 | 34 | 39 | 37 | 35 | 36 | 33 | 34 | 42 | 35 | 31 | 33 | 33 |
| 25 | 42 | 36 | 37 | 35 | 36 | 32 | 35 | 41 | 35 | 32 | 34 | 32 |
| 26 | 37 | 36 | 39 | 35 | 35 | 33 | 35 | 44 | 34 | 32 | 33 | 31 |
| 27 | 34 | 36 | 39 | 35 | 35 | 39 | 36 | 44 | 33 | 31 | 30 | 31 |
| 28 | 33 | 36 | 37 | 35 | 39 | 37 | 37 | 43 | 33 | 29 | 29 | 34 |
| 29 | 33 | 36 | 36 | 35 | --- | 33 | 38 | 41 | 33 | 28 | 31 | 32 |
| 30 | 33 | 36 | 36 | 35 | --- | 32 | 39 | 42 | 34 | 29 | 31 | 30 |
| 31 | 36 | --- | 36 | 36 | --- | 33 | --- | 43 | --- | 30 | 29 | --- |
| TOTAL | 1040 | 1082 | 1160 | 1119 | 990 | 1102 | 1004 | 1313 | 1128 | 958 | 910 | 894 |
| MEAN | 33.5 | 36.1 | 37.4 | 36.1 | 35.4 | 35.5 | 33.5 | 42.4 | 37.6 | 30.9 | 29.4 | 29.8 |
| MAX | 42 | 45 | 45 | 39 | 40 | 46 | 39 | 46 | 42 | 34 | 34 | 34 |
| MIN | 32 | 34 | 36 | 35 | 34 | 32 | 27 | 39 | 33 | 28 | 27 | 27 |
| AC-FT | 2060 | 2150 | 2300 | 2220 | 1960 | 2190 | 1990 | 2600 | 2240 | 1900 | 1800 | 1770 |
| CAL YR 1976 | TOTAL | 21161 | MEAN 57.8 | MAX 166 | MIN 32 | AC-FT 41970 | | | | | | |
| WTR YR 1977 | TOTAL | 12700 | MEAN 34.8 | MAX 46 | MIN 27 | AC-FT 25190 | | | | | | |

DESCHUTES RIVER BASIN

185

14091500 METOLIUS RIVER NEAR GRANDVIEW, OR

LOCATION.--Lat 44°37'33", long 121°28'55", in SE¼SW¼ sec.12, T.11 S., R.10 E., Jefferson County, Hydrologic Unit 17070301, Deschutes National Forest, on right bank 1.0 mi (1.6 km) upstream from maximum controlled pool of Lake Billy Chinook, 15.0 mi (24.1 km) northwest of Culver, and at mile 13.6 (21.9 km).

DRAINAGE AREA.--316 mi² (818 km²), at cableway 1.0 mi (1.6 km) downstream, where all discharge measurements are made. Hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--April 1910 to February 1912 (gage heights and discharge measurements only), March 1912 to December 1913, October 1921 to current year. Published as "at Hubbard's ranch, near Sisters" 1910, and as "at Hubbard's ranch, near Grandview" 1910-13.

REVISED RECORDS.--WSP 1448: 1913.

GAGE.--Water-stage recorder. Datum of gage is 1,974.36 ft (601.785 m) above mean sea level (levels by Portland General Electric Co.). Prior to Dec. 31, 1913, nonrecording gage at site 2.3 mi (3.7 km) upstream at different datum. Oct. 1, 1921, to May 3, 1949, nonrecording gage and May 4, 1949, to June 18, 1963, water-stage recorder at site 2.7 mi (4.3 km) downstream at datum 64 ft (19.5 m) lower.

REMARKS.--Records excellent. No regulation. Many small diversions for irrigation above station. Stream is spring fed. Records herein are for measuring site.

AVERAGE DISCHARGE.--57 years (water years 1913, 1922-77), 1,499 ft³/s (42.45 m³/s), 1,086,000 acre-ft/yr (1.34 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,530 ft³/s (213 m³/s) Dec. 24, 1964, gage height, 6.81 ft (2.076 m); minimum, 1,080 ft³/s (30.6 m³/s) Feb. 17, 1932, Oct. 2-31, Nov. 6, 7, 10-14, 1942.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,610 ft³/s (45.6 m³/s) June 8, gage height, 1.73 ft (0.527 m); minimum, 1,240 ft³/s (35.1 m³/s) Sept. 17, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|-------|
| 1 | 1510 | 1570 | 1420 | 1390 | 1350 | 1360 | 1330 | 1350 | 1410 | 1320 | 1300 | 1270 |
| 2 | 1520 | 1530 | 1420 | 1400 | 1350 | 1340 | 1320 | 1370 | 1380 | 1310 | 1300 | 1270 |
| 3 | 1510 | 1500 | 1420 | 1390 | 1350 | 1350 | 1320 | 1380 | 1370 | 1300 | 1300 | 1290 |
| 4 | 1490 | 1480 | 1420 | 1390 | 1350 | 1340 | 1320 | 1360 | 1480 | 1300 | 1300 | 1330 |
| 5 | 1490 | 1470 | 1420 | 1370 | 1350 | 1340 | 1330 | 1350 | 1500 | 1290 | 1300 | 1300 |
| 6 | 1490 | 1470 | 1410 | 1340 | 1340 | 1340 | 1330 | 1350 | 1520 | 1280 | 1300 | 1280 |
| 7 | 1490 | 1460 | 1410 | 1370 | 1340 | 1350 | 1340 | 1340 | 1560 | 1290 | 1290 | 1270 |
| 8 | 1490 | 1460 | 1430 | 1360 | 1340 | 1380 | 1350 | 1330 | 1570 | 1290 | 1300 | 1270 |
| 9 | 1490 | 1450 | 1420 | 1340 | 1340 | 1380 | 1320 | 1320 | 1480 | 1300 | 1290 | 1260 |
| 10 | 1490 | 1450 | 1410 | 1390 | 1350 | 1350 | 1310 | 1350 | 1420 | 1290 | 1290 | 1260 |
| 11 | 1490 | 1450 | 1410 | 1390 | 1350 | 1340 | 1310 | 1340 | 1410 | 1300 | 1300 | 1260 |
| 12 | 1480 | 1450 | 1410 | 1390 | 1350 | 1340 | 1310 | 1330 | 1400 | 1310 | 1300 | 1260 |
| 13 | 1480 | 1450 | 1410 | 1390 | 1350 | 1340 | 1330 | 1330 | 1400 | 1300 | 1300 | 1260 |
| 14 | 1480 | 1450 | 1410 | 1380 | 1340 | 1330 | 1320 | 1320 | 1400 | 1300 | 1310 | 1260 |
| 15 | 1480 | 1490 | 1410 | 1380 | 1340 | 1330 | 1320 | 1320 | 1390 | 1300 | 1300 | 1260 |
| 16 | 1470 | 1500 | 1410 | 1370 | 1340 | 1330 | 1320 | 1320 | 1380 | 1300 | 1300 | 1250 |
| 17 | 1470 | 1470 | 1410 | 1370 | 1340 | 1330 | 1310 | 1310 | 1370 | 1310 | 1300 | 1250 |
| 18 | 1470 | 1480 | 1410 | 1370 | 1340 | 1330 | 1310 | 1310 | 1380 | 1320 | 1300 | 1270 |
| 19 | 1470 | 1460 | 1400 | 1370 | 1340 | 1330 | 1310 | 1310 | 1380 | 1300 | 1300 | 1270 |
| 20 | 1470 | 1450 | 1400 | 1370 | 1340 | 1320 | 1310 | 1310 | 1370 | 1300 | 1300 | 1260 |
| 21 | 1460 | 1450 | 1400 | 1370 | 1360 | 1320 | 1310 | 1340 | 1370 | 1310 | 1310 | 1260 |
| 22 | 1460 | 1450 | 1400 | 1370 | 1350 | 1320 | 1310 | 1340 | 1340 | 1300 | 1290 | 1250 |
| 23 | 1460 | 1450 | 1400 | 1360 | 1350 | 1330 | 1310 | 1340 | 1360 | 1310 | 1280 | 1260 |
| 24 | 1480 | 1450 | 1400 | 1360 | 1340 | 1320 | 1320 | 1330 | 1350 | 1310 | 1330 | 1300 |
| 25 | 1540 | 1440 | 1400 | 1360 | 1340 | 1320 | 1350 | 1330 | 1350 | 1310 | 1320 | 1280 |
| 26 | 1490 | 1430 | 1420 | 1350 | 1340 | 1320 | 1360 | 1350 | 1350 | 1310 | 1310 | 1260 |
| 27 | 1480 | 1420 | 1410 | 1360 | 1340 | 1350 | 1340 | 1350 | 1340 | 1300 | 1260 | 1260 |
| 28 | 1470 | 1420 | 1400 | 1360 | 1370 | 1340 | 1350 | 1340 | 1330 | 1300 | 1300 | 1300 |
| 29 | 1470 | 1420 | 1400 | 1350 | --- | 1330 | 1350 | 1330 | 1340 | 1290 | 1320 | 1280 |
| 30 | 1470 | 1420 | 1390 | 1350 | --- | 1320 | 1350 | 1330 | 1320 | 1290 | 1380 | 1270 |
| 31 | 1480 | --- | 1390 | 1360 | --- | 1330 | --- | 1350 | --- | 1300 | 1290 | --- |
| TOTAL | 45990 | 43840 | 43670 | 42470 | 37680 | 41450 | 39770 | 41430 | 42060 | 40340 | 40390 | 38120 |
| MEAN | 1484 | 1461 | 1409 | 1370 | 1346 | 1337 | 1326 | 1336 | 1402 | 1301 | 1303 | 1271 |
| MAX | 1540 | 1570 | 1430 | 1400 | 1370 | 1380 | 1360 | 1380 | 1570 | 1320 | 1380 | 1330 |
| MIN | 1460 | 1420 | 1390 | 1340 | 1340 | 1320 | 1310 | 1310 | 1320 | 1280 | 1280 | 1250 |
| AC-FT | 91220 | 86960 | 86620 | 84240 | 74740 | 82220 | 78880 | 82180 | 83430 | 80010 | 80110 | 75610 |
| CAL YR 1976 TOTAL | 605330 | | | 1654 | 2470 | 1340 | | | 1201000 | | | |
| WTR YR 1977 TOTAL | 497210 | | | 1362 | 1570 | 1250 | | | 986200 | | | |

DESCHUTES RIVER BASIN

14092100 LAKE BILLY CHINOOK NEAR METOLIUS, OR

LOCATION.--Lat 44°36'14", long 121°16'40", in SW¼NE¼ sec.22, T.11 S., R.12 E., Jefferson County, Hydrologic Unit 17070301, Warm Springs Indian Reservation, near left end of Round Butte Dam on Deschutes River, 5.0 mi (8.0 km) west of Metolius, and at mile 110.6 (178.0 km).

DRAINAGE AREA.--7,490 mi² (19,400 km²), approximately.

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Portland General Electric Co.).

REMARKS.--Reservoir is formed by rockfill dam completed in June 1964 by Portland General Electric Co.; storage began Jan. 2, 1964. Total capacity is 534,700 acre-ft (659 hm³) at elevation 1,945.0 ft (592.84 m) proposed upper limit of operation, and usable capacity is 273,900 acre-ft (337 hm³) between elevations 1,860.0 ft (566.93 m), proposed lower limit of operation, and 1,945.0 ft (592.84 m). Reservoir used for power generation under FPC license 2030. Figures given herein represent total contents.

COOPERATION.--Gage readings and capacity table furnished by Portland General Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 538,700 acre-ft (664 hm³) July 15, 16, 1972, elevation, 1,946.00 ft (593.141 m); minimum observed since first filling, 431,100 acre-ft (531 hm³) Feb. 13, 1972, elevation, 1,917.13 ft (584.341 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 534,700 acre-ft (659 hm³) June 5, elevation, 1,944.98 ft (592.830 m); minimum observed, 504,600 acre-ft (622 hm³) Jan. 11, elevation, 1,937.21 ft (590.462 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 1,944.45 | 532,600 | - |
| Oct. 31..... | 1,942.20 | 523,700 | -8,900 |
| Nov. 30..... | 1,943.66 | 529,400 | +5,700 |
| Dec. 31..... | 1,943.97 | 530,700 | +1,300 |
| CAL YR 1976..... | - | - | -3,000 |
| Jan. 31..... | 1,938.93 | 511,200 | -19,500 |
| Feb. 28..... | 1,944.38 | 532,300 | +21,100 |
| Mar. 31..... | 1,940.39 | 516,800 | -15,500 |
| Apr. 30..... | 1,940.54 | 517,300 | +500 |
| May 31..... | 1,944.51 | 532,800 | +15,500 |
| June 30..... | 1,944.35 | 532,200 | -600 |
| July 31..... | 1,944.59 | 533,100 | +900 |
| Aug. 31..... | 1,944.23 | 531,700 | -1,400 |
| Sept. 30..... | 1,944.58 | 533,100 | +1,400 |
| WTR YR 1977..... | - | - | +500 |

DESCHUTES RIVER BASIN

187

14092500 DESCHUTES RIVER NEAR MADRAS, OR

LOCATION.--Lat 44°43'34", long 121°14'45", in SE¼SW¼ sec.1, T.10 S., R.12 E., Jefferson County, Hydrologic Unit 17070306, on right bank 400 ft (122 m) downstream from reregulating dam, 2.7 mi (4.3 km) downstream from Pelton Dam, 8.5 mi (13.7 km) northwest of Madras, and at mile 100.1 (161.1 km).

DRAINAGE AREA.--7,820 mi² (20,250 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to current year.

REVISED RECORDS.--WSP 1398: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,390.25 ft (423.748 m) above mean sea level (levels by Portland General Electric Co.). See WSP 1738 for history of changes prior to Nov. 23, 1957.

REMARKS.--Water-discharge records excellent. Diurnal fluctuation caused by Lake Simtustus and reregulating reservoir since 1957, combined capacity for normal operation, 6,500 acre-ft (8.01 hm³). Some winter and spring runoff stored in Ochoco Reservoir, capacity, 47,500 acre-ft (58.6 hm³), in Crescent Lake, Crane Prairie and Wickiup Reservoirs, combined capacity, 354,600 acre-ft (437 hm³), and since 1960, in Prineville Reservoir, capacity, 152,800 acre-ft (188 hm³), and since 1964, in Lake Billy Chinook, capacity, 534,700 acre-ft (659 hm³). Large diversions in upper basin for irrigation.

AVERAGE DISCHARGE.--54 years, 4,475 ft³/s (126.7 m³/s), 3,242,000 acre-ft/yr (4.00 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft³/s (447 m³/s) Dec. 28, 1964, gage height, 6.29 ft (1.917 m); maximum gage height, 6.89 ft (2.100 m) Jan. 1, 1943, site and datum then in use; minimum discharge, 1,200 ft³/s (34.0 m³/s) Dec. 13, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,450 ft³/s (211 m³/s) Jan. 26, gage height, 4.08 ft (1.244 m); minimum, 3,110 ft³/s (88.1 m³/s) May 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| 1 | 4430 | 4810 | 4530 | 5570 | 4230 | 4530 | 5380 | 3800 | 3570 | 3800 | 3850 | 3940 |
| 2 | 4330 | 5380 | 4970 | 5990 | 4760 | 5050 | 5320 | 3800 | 3690 | 3660 | 3920 | 3800 |
| 3 | 4300 | 5320 | 4940 | 5990 | 4920 | 5740 | 5160 | 3830 | 3800 | 3710 | 3830 | 3730 |
| 4 | 4280 | 5320 | 4920 | 6080 | 4350 | 5880 | 4330 | 3780 | 3760 | 3760 | 3830 | 3690 |
| 5 | 4330 | 5400 | 4970 | 6510 | 4380 | 5820 | 3970 | 3850 | 3730 | 3690 | 3850 | 3710 |
| 6 | 4250 | 5630 | 5290 | 6810 | 5110 | 5400 | 4130 | 3830 | 4250 | 3730 | 3830 | 3850 |
| 7 | 4200 | 5600 | 4970 | 6840 | 4730 | 5050 | 4040 | 3780 | 4350 | 3780 | 3800 | 3800 |
| 8 | 4180 | 5460 | 4940 | 6840 | 4350 | 4230 | 4010 | 3800 | 4280 | 3800 | 3850 | 3730 |
| 9 | 4180 | 5680 | 5000 | 6370 | 3900 | 4040 | 3940 | 3660 | 4130 | 3800 | 3920 | 3730 |
| 10 | 4130 | 5630 | 4940 | 5770 | 3940 | 4060 | 3920 | 3620 | 4010 | 3830 | 3800 | 3660 |
| 11 | 4180 | 5630 | 4870 | 5430 | 3990 | 4080 | 3900 | 3600 | 3990 | 3870 | 3830 | 3660 |
| 12 | 4230 | 5540 | 4920 | 5050 | 3940 | 4110 | 3800 | 3600 | 3990 | 3850 | 3760 | 3600 |
| 13 | 4380 | 5520 | 5000 | 4840 | 3940 | 4080 | 3640 | 3570 | 4040 | 3920 | 3690 | 3600 |
| 14 | 4300 | 4630 | 5110 | 4760 | 3970 | 4330 | 3550 | 3550 | 4010 | 3760 | 3690 | 3660 |
| 15 | 4380 | 4480 | 5130 | 4870 | 3870 | 4840 | 3620 | 3600 | 4110 | 3730 | 3800 | 3690 |
| 16 | 4450 | 4760 | 5080 | 4160 | 3760 | 4760 | 3660 | 3640 | 3940 | 3800 | 3870 | 3710 |
| 17 | 4430 | 5380 | 5050 | 4060 | 3710 | 3850 | 3600 | 3570 | 3900 | 3780 | 3850 | 3710 |
| 18 | 4630 | 5660 | 5050 | 3920 | 3710 | 3660 | 3600 | 3620 | 3800 | 3870 | 3830 | 3710 |
| 19 | 5240 | 5430 | 5130 | 3660 | 3550 | 3690 | 3550 | 3570 | 3800 | 3970 | 3900 | 3710 |
| 20 | 5210 | 4530 | 5050 | 3600 | 3280 | 3620 | 3570 | 3570 | 3760 | 3900 | 3920 | 3730 |
| 21 | 5210 | 4040 | 5080 | 3570 | 3310 | 3920 | 3570 | 3550 | 3830 | 3940 | 3920 | 3900 |
| 22 | 5270 | 4040 | 5080 | 3570 | 3420 | 5430 | 3600 | 3600 | 3870 | 3850 | 4010 | 3920 |
| 23 | 5380 | 4060 | 5110 | 4040 | 3760 | 5460 | 3660 | 3600 | 3830 | 3800 | 3970 | 3920 |
| 24 | 5380 | 4200 | 4890 | 4660 | 3800 | 5460 | 3660 | 3600 | 3920 | 3830 | 3850 | 3920 |
| 25 | 5270 | 4300 | 4840 | 5430 | 3990 | 5020 | 3780 | 3620 | 3990 | 3780 | 3900 | 3900 |
| 26 | 5350 | 4330 | 4790 | 6960 | 4250 | 4500 | 3870 | 3550 | 4010 | 3830 | 3870 | 3920 |
| 27 | 5270 | 4730 | 4810 | 6660 | 4480 | 4300 | 3830 | 3570 | 3850 | 3830 | 3940 | 3870 |
| 28 | 5380 | 4890 | 4840 | 5350 | 4580 | 4480 | 3850 | 3550 | 3760 | 3870 | 3920 | 3900 |
| 29 | 4970 | 4040 | 4840 | 4840 | --- | 5210 | 3800 | 3530 | 3830 | 3900 | 4080 | 3970 |
| 30 | 4550 | 4080 | 4810 | 4530 | --- | 5320 | 3830 | 3530 | 3800 | 3900 | 4160 | 3940 |
| 31 | 4580 | --- | 5020 | 4330 | --- | 5320 | --- | 3570 | --- | 3780 | 4110 | --- |
| TOTAL | 144650 | 148500 | 153970 | 161060 | 113980 | 145240 | 118140 | 112910 | 117600 | 118320 | 120350 | 113580 |
| MEAN | 4666 | 4950 | 4967 | 5195 | 4071 | 4685 | 3938 | 3642 | 3920 | 3817 | 3882 | 3786 |
| MAX | 5380 | 5680 | 5290 | 6960 | 5110 | 5880 | 5380 | 3850 | 4350 | 3970 | 4160 | 3970 |
| MIN | 4130 | 4040 | 4530 | 3570 | 3280 | 3620 | 3550 | 3530 | 3570 | 3660 | 3690 | 3600 |
| AC-FT | 286900 | 294500 | 305400 | 319500 | 226100 | 288100 | 234300 | 224000 | 233300 | 234700 | 238700 | 225300 |
| CAL YR 1976 | TOTAL | 1868620 | MEAN | 5106 | MAX | 7350 | MIN | 4040 | AC-FT | 3706000 | | |
| WTR YR 1977 | TOTAL | 1568300 | MEAN | 4297 | MAX | 6960 | MIN | 3280 | AC-FT | 3111000 | | |

DESCHUTES RIVER BASIN

14092500 DESCHUTES RIVER NEAR MADRAS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.0°C occurred during period Aug. 1 to Sept. 30, 1974; minimum, 4.5°C Jan. 23, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 14.0°C Aug. 12-31; minimum, 4.5°C Jan. 23.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 13.5 | 13.5 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 6.5 | 6.5 |
| 2 | 13.5 | 13.0 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.0 | 5.0 | 6.5 | 6.5 |
| 3 | 13.5 | 13.0 | 10.5 | 10.5 | 9.0 | 8.5 | 6.5 | 6.5 | 5.0 | 5.0 | 6.5 | 6.5 |
| 4 | 13.0 | 13.0 | 10.5 | 10.5 | 8.5 | 8.5 | 6.5 | 6.5 | 5.5 | 5.0 | 6.5 | 6.0 |
| 5 | 13.0 | 13.0 | 10.5 | 10.5 | 8.5 | 8.5 | 6.5 | 6.0 | 5.5 | 5.5 | 6.0 | 6.0 |
| 6 | 13.0 | 13.0 | 10.5 | 10.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.5 | 5.5 | 6.0 | 6.0 |
| 7 | 13.0 | 13.0 | 10.5 | 10.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.5 | 5.5 | 6.0 | 6.0 |
| 8 | 13.0 | 13.0 | 10.5 | 10.5 | 8.5 | 8.5 | 6.0 | 6.0 | 5.5 | 5.5 | 6.0 | 6.0 |
| 9 | 13.0 | 12.0 | 10.5 | 10.5 | 8.5 | 8.0 | 6.0 | 6.0 | 5.5 | 5.5 | 6.5 | 6.0 |
| 10 | 13.0 | 12.0 | 10.5 | 10.5 | 8.5 | 8.0 | 6.0 | 6.0 | 6.0 | 5.5 | 6.5 | 6.0 |
| 11 | 13.0 | 12.0 | 10.5 | 10.5 | 8.0 | 8.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.5 | 6.0 |
| 12 | 12.0 | 11.5 | 10.5 | 10.5 | 8.0 | 8.0 | 6.0 | 5.5 | 6.0 | 6.0 | 6.5 | 6.5 |
| 13 | 11.5 | 11.5 | 10.5 | 10.0 | 8.0 | 7.0 | 5.5 | 5.5 | 6.0 | 6.0 | 6.5 | 6.0 |
| 14 | 11.5 | 11.5 | 10.5 | 10.0 | 8.0 | 7.0 | 5.5 | 5.5 | 6.0 | 6.0 | 6.5 | 6.0 |
| 15 | 11.5 | 11.5 | 10.5 | 10.0 | 7.0 | 7.0 | 5.5 | 5.5 | 6.0 | 6.0 | 6.5 | 6.0 |
| 16 | 11.5 | 11.5 | 10.5 | 10.0 | 7.0 | 7.0 | 5.5 | 5.5 | 6.0 | 6.0 | 6.5 | 6.0 |
| 17 | 11.5 | 11.5 | 10.5 | 10.0 | 7.0 | 7.0 | 5.5 | 5.5 | 6.0 | 6.0 | 6.5 | 6.5 |
| 18 | 11.5 | 11.5 | 10.5 | 10.0 | 7.0 | 7.0 | 5.5 | 5.5 | 6.0 | 6.0 | 6.5 | 6.5 |
| 19 | 11.5 | 11.0 | 10.0 | 10.0 | 7.0 | 7.0 | 5.5 | 5.0 | 6.5 | 6.0 | 6.5 | 6.5 |
| 20 | 11.5 | 11.0 | 10.0 | 10.0 | 7.0 | 7.0 | 5.0 | 5.0 | 6.5 | 6.5 | 6.5 | 6.5 |
| 21 | 11.0 | 11.0 | 10.0 | 10.0 | 7.0 | 7.0 | 5.0 | 5.0 | 6.5 | 6.5 | 6.5 | 6.5 |
| 22 | 11.0 | 11.0 | 10.0 | 9.5 | 7.0 | 7.0 | 5.0 | 5.0 | 6.5 | 6.5 | 6.5 | 6.5 |
| 23 | 11.0 | 11.0 | 10.0 | 9.5 | 7.0 | 7.0 | 5.0 | 4.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 24 | 11.0 | 11.0 | 10.0 | 9.5 | 7.0 | 7.0 | 5.0 | 5.0 | 6.5 | 6.0 | 6.5 | 6.5 |
| 25 | 11.0 | 11.0 | 9.5 | 9.5 | 7.0 | 7.0 | 5.0 | 5.0 | 6.5 | 6.0 | 6.5 | 6.5 |
| 26 | 11.0 | 11.0 | 9.5 | 9.5 | 7.0 | 7.0 | 5.0 | 5.0 | 6.5 | 6.0 | 6.5 | 6.5 |
| 27 | 11.0 | 11.0 | 9.5 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 6.5 | 6.5 | 6.5 | 6.5 |
| 28 | 11.0 | 10.5 | 9.5 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | 6.5 | 6.5 | 6.5 | 6.5 |
| 29 | 11.0 | 10.5 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | --- | --- | 6.5 | 6.5 |
| 30 | 11.0 | 10.5 | 9.0 | 9.0 | 7.0 | 7.0 | 5.0 | 5.0 | --- | --- | 6.5 | 6.5 |
| 31 | 11.0 | 10.5 | --- | --- | 7.0 | 6.5 | 5.0 | 5.0 | --- | --- | 6.5 | 6.5 |
| MONTH | 13.5 | 10.5 | 10.5 | 9.0 | 9.0 | 6.5 | 6.5 | 4.5 | 6.5 | 5.0 | 6.5 | 6.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-----|-----|------|------|------|------|------|--------|------|-----------|-----|-----|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 6.5 | 6.5 | 8.5 | 8.5 | 9.5 | 9.5 | 11.5 | 11.5 | 13.0 | 13.0 | | |
| 2 | 6.5 | 6.5 | 8.5 | 8.5 | 9.5 | 9.5 | 11.5 | 11.5 | 13.0 | 13.0 | | |
| 3 | 6.5 | 6.5 | 8.5 | 8.5 | 9.5 | 9.5 | 11.5 | 11.5 | 13.0 | 13.0 | | |
| 4 | 6.5 | 6.5 | 9.0 | 8.5 | 9.5 | 9.5 | 11.5 | 11.5 | 13.0 | 13.0 | | |
| 5 | 7.0 | 6.5 | 8.5 | 8.5 | 10.0 | 9.5 | 11.5 | 11.5 | 13.0 | 13.0 | | |
| 6 | 7.0 | 7.0 | 8.5 | 8.0 | 10.0 | 10.0 | 11.5 | 11.5 | 13.5 | 13.0 | | |
| 7 | 8.0 | 7.0 | 8.5 | 8.0 | 10.0 | 10.0 | 11.5 | 11.5 | 13.5 | 13.5 | | |
| 8 | 8.0 | 8.0 | 8.5 | 8.0 | 10.0 | 10.0 | 11.5 | 11.5 | 13.5 | 13.5 | | |
| 9 | 8.0 | 7.0 | 8.5 | 8.5 | 10.0 | 10.0 | 11.5 | 11.5 | 13.5 | 13.5 | | |
| 10 | 8.0 | 7.0 | 8.5 | 8.5 | 10.0 | 10.0 | 11.5 | 11.5 | 13.5 | 13.5 | | |
| 11 | 8.0 | 8.0 | 8.5 | 8.5 | 10.0 | 10.0 | 11.5 | 11.5 | 13.5 | 13.5 | | |
| 12 | 8.0 | 7.0 | 9.0 | 8.5 | 10.0 | 10.0 | 12.0 | 11.5 | 14.0 | 13.5 | | |
| 13 | 8.0 | 8.0 | 9.0 | 8.5 | 10.0 | 10.0 | 12.0 | 12.0 | 14.0 | 14.0 | | |
| 14 | 8.0 | 8.0 | 9.0 | 8.5 | 10.0 | 10.0 | 12.0 | 12.0 | 14.0 | 14.0 | | |
| 15 | 8.0 | 8.0 | 9.0 | 9.0 | 10.0 | 10.0 | 12.0 | 12.0 | 14.0 | 14.0 | | |
| 16 | 8.0 | 8.0 | 9.0 | 9.0 | 10.0 | 10.0 | 13.0 | 12.0 | 14.0 | 14.0 | | |
| 17 | 8.0 | 8.0 | 9.0 | 9.0 | 10.0 | 10.0 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 18 | 8.5 | 8.0 | 9.0 | 9.0 | 10.5 | 10.5 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 19 | 9.0 | 8.5 | 9.0 | 9.0 | 11.0 | 11.0 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 20 | 8.5 | 8.5 | 9.5 | 9.0 | 11.0 | 11.0 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 21 | 8.5 | 8.5 | 9.5 | 9.0 | 11.0 | 11.0 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 22 | 8.5 | 8.5 | 9.5 | 9.0 | 11.0 | 11.0 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 23 | 8.5 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 24 | 8.5 | 8.5 | 9.5 | 9.0 | 11.0 | 11.0 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 25 | 8.5 | 8.5 | 9.5 | 9.5 | 11.0 | 11.0 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 26 | 9.0 | 8.5 | 9.5 | 9.5 | 11.5 | 11.0 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 27 | 9.0 | 8.5 | 9.5 | 9.5 | 11.5 | 11.5 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 28 | 9.0 | 8.5 | 10.0 | 9.5 | 11.5 | 11.5 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 29 | 8.5 | 8.5 | 10.0 | 9.0 | 11.5 | 11.5 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 30 | 8.5 | 8.5 | 9.5 | 9.5 | 11.5 | 11.5 | 13.0 | 13.0 | 14.0 | 14.0 | | |
| 31 | --- | --- | 9.5 | 9.5 | --- | --- | 13.0 | 13.0 | 14.0 | 14.0 | | |
| MONTH | 9.0 | 6.5 | 10.0 | 8.0 | 11.5 | 9.5 | 13.0 | 11.5 | 14.0 | 13.0 | | |

DESCHUTES RIVER BASIN

189

14092885 SHITIKE CREEK BELOW WOLFORD CANYON, NEAR WARM SPRINGS, OR

LOCATION.--Lat 44°46'20", long 121°18'15", in NW¼SE¼ sec.21, T.9 S., R.12 E., Jefferson County, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on left bank at bridge crossing 2.3 mi (3.7 km) upstream from Tenino Creek, and 2.1 mi (3.4 km) northwest of Warm Springs.

DRAINAGE AREA.--75.8 mi² (196.3 km²).

PERIOD OF RECORD.--October 1974 to current year. Records for June 1911 to October 1916, April 1923 to September 1928, and October 1972 to September 1974 (see station 14093000) at sites downstream not equivalent owing to difference in drainage areas.

GAGE.--Water-stage recorder. Altitude of gage is 1,600 ft (488 m), from topographic map.

REMARKS.--Records good. No regulation. Some diversion for irrigation and Warm Springs water supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 979 ft³/s (27.73 m³/s) Dec. 4, 1975, gage height, 6.57 ft (2.003 m); minimum, 29 ft³/s (0.82 m³/s) Aug. 12, 16-20, 22, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 157 ft³/s (4.45 m³/s) June 8, no peak above base of 400 ft³/s (11.3 m³/s); maximum gage height, 4.82 ft (1.469 m) Jan. 9; minimum discharge, 29 ft³/s (0.82 m³/s) Aug. 12, 16-20, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|---------|--------|-----------|----------|-------------|------|------|------|------|
| 1 | 54 | 65 | 43 | 45 | 42 | 40 | 42 | 69 | 69 | 45 | 33 | 43 |
| 2 | 54 | 60 | 47 | 45 | 40 | 39 | 40 | 71 | 79 | 45 | 32 | 40 |
| 3 | 54 | 56 | 45 | 43 | 39 | 39 | 40 | 74 | 68 | 45 | 32 | 39 |
| 4 | 53 | 54 | 43 | 44 | 38 | 39 | 40 | 69 | 93 | 43 | 32 | 38 |
| 5 | 50 | 52 | 43 | 44 | 38 | 39 | 42 | 65 | 118 | 43 | 32 | 38 |
| 6 | 48 | 50 | 43 | 42 | 38 | 39 | 43 | 58 | 116 | 42 | 33 | 38 |
| 7 | 48 | 48 | 43 | 40 | 36 | 40 | 45 | 56 | 128 | 40 | 33 | 35 |
| 8 | 48 | 48 | 45 | 40 | 38 | 46 | 50 | 53 | 139 | 40 | 32 | 35 |
| 9 | 48 | 46 | 46 | 40 | 38 | 45 | 53 | 51 | 100 | 40 | 32 | 35 |
| 10 | 48 | 46 | 43 | 40 | 38 | 42 | 53 | 54 | 79 | 40 | 32 | 34 |
| 11 | 48 | 46 | 43 | 40 | 39 | 40 | 51 | 56 | 81 | 39 | 30 | 34 |
| 12 | 48 | 46 | 43 | 42 | 39 | 42 | 50 | 56 | 79 | 38 | 30 | 33 |
| 13 | 46 | 46 | 45 | 44 | 39 | 40 | 50 | 53 | 76 | 38 | 32 | 33 |
| 14 | 44 | 46 | 45 | 46 | 39 | 40 | 50 | 51 | 74 | 38 | 33 | 33 |
| 15 | 44 | 49 | 45 | 48 | 40 | 39 | 49 | 51 | 71 | 36 | 32 | 33 |
| 16 | 44 | 63 | 45 | 50 | 40 | 39 | 50 | 51 | 68 | 36 | 30 | 33 |
| 17 | 44 | 53 | 45 | 47 | 40 | 39 | 49 | 50 | 65 | 36 | 30 | 34 |
| 18 | 44 | 56 | 45 | 43 | 39 | 39 | 49 | 49 | 66 | 36 | 30 | 35 |
| 19 | 44 | 51 | 45 | 43 | 39 | 39 | 47 | 47 | 69 | 36 | 30 | 36 |
| 20 | 44 | 49 | 40 | 42 | 39 | 39 | 46 | 47 | 71 | 35 | 30 | 35 |
| 21 | 44 | 47 | 58 | 42 | 42 | 39 | 46 | 49 | 66 | 35 | 30 | 42 |
| 22 | 44 | 47 | 46 | 42 | 40 | 39 | 46 | 61 | 71 | 34 | 30 | 46 |
| 23 | 44 | 47 | 43 | 40 | 39 | 39 | 46 | 61 | 66 | 34 | 30 | 45 |
| 24 | 44 | 46 | 46 | 39 | 39 | 39 | 47 | 58 | 56 | 35 | 34 | 60 |
| 25 | 50 | 46 | 43 | 39 | 39 | 39 | 57 | 56 | 58 | 36 | 42 | 58 |
| 26 | 65 | 45 | 45 | 38 | 39 | 39 | 71 | 57 | 56 | 35 | 45 | 56 |
| 27 | 60 | 43 | 50 | 38 | 39 | 45 | 68 | 60 | 53 | 34 | 42 | 50 |
| 28 | 56 | 45 | 49 | 38 | 42 | 43 | 65 | 57 | 50 | 33 | 40 | 53 |
| 29 | 54 | 45 | 47 | 38 | --- | 42 | 68 | 53 | 50 | 33 | 40 | 54 |
| 30 | 54 | 45 | 47 | 38 | --- | 40 | 71 | 51 | 47 | 33 | 45 | 53 |
| 31 | 60 | --- | 46 | 51 | --- | 40 | --- | 51 | --- | 33 | 49 | --- |
| TOTAL | 1530 | 1486 | 1402 | 1311 | 1097 | 1248 | 1524 | 1745 | 2282 | 1166 | 1057 | 1231 |
| MEAN | 49.4 | 49.5 | 45.2 | 42.3 | 39.2 | 40.3 | 50.8 | 56.3 | 76.1 | 37.6 | 34.1 | 41.0 |
| MAX | 65 | 65 | 58 | 51 | 42 | 46 | 71 | 74 | 139 | 45 | 49 | 60 |
| MIN | 44 | 43 | 40 | 38 | 36 | 39 | 40 | 47 | 47 | 33 | 30 | 33 |
| CFSM | .65 | .65 | .60 | .56 | .52 | .53 | .67 | .74 | 1.00 | .50 | .45 | .54 |
| IN. | .75 | .73 | .69 | .64 | .54 | .61 | .75 | .86 | 1.12 | .57 | .52 | .60 |
| AC-FT | 3030 | 2950 | 2780 | 2600 | 2180 | 2480 | 3020 | 3460 | 4530 | 2310 | 2100 | 2440 |
| CAL YR 1976 | TOTAL | 36249 | MEAN 99.0 | MAX 342 | MIN 40 | CFSM 1.31 | IN 17.79 | AC-FT 71900 | | | | |
| WTR YR 1977 | TOTAL | 17079 | MEAN 46.8 | MAX 139 | MIN 30 | CFSM .62 | IN 8.38 | AC-FT 33880 | | | | |

NOTE.--No gage-height record Oct. 3 to Nov. 11.

DESCHUTES RIVER BASIN

14097100 WARM SPRINGS RIVER NEAR KAHNEETA HOT SPRINGS, OR

LOCATION.--Lat 44°51'24", long 121°08'55", in SE¼SW¼ sec.23, T.8 S., R.13 E., Wasco County, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on right bank at mile 4.6 (7.4 km).

DRAINAGE AREA.--526 mi² (1,362 km²).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft (427 m), from topographic map.

REMARKS.--Records excellent. No regulation. Diversions above station.

AVERAGE DISCHARGE.--5 years, 453 ft³/s (12.83 m³/s), 11.70 in/yr (2,972 mm/yr), 328,200 acre-ft/yr (405 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,350 ft³/s (180 m³/s) Jan. 16, 1974, gage height, 8.68 ft (2.646 m); minimum, 227 ft³/s (6.43 m³/s) Aug. 15, 16, Sept. 6, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 495 ft³/s (14.0 m³/s) Jan. 11, 12, gage height, 2.01 ft (0.613 m), no peak above base of 1,700 ft³/s (48.1 m³/s); minimum, 189 ft³/s (5.35 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|-------|-------|---------|----------|----------|-------|--------|-------|-------|
| 1 | 285 | 309 | 274 | 263 | 263 | 282 | 278 | 289 | 263 | 220 | 210 | 213 |
| 2 | 289 | 318 | 271 | 271 | 263 | 278 | 282 | 289 | 263 | 220 | 210 | 213 |
| 3 | 285 | 305 | 278 | 267 | 263 | 274 | 278 | 293 | 267 | 220 | 207 | 213 |
| 4 | 289 | 296 | 278 | 267 | 260 | 271 | 278 | 314 | 274 | 220 | 207 | 213 |
| 5 | 289 | 293 | 278 | 263 | 260 | 267 | 278 | 305 | 278 | 220 | 207 | 213 |
| 6 | 285 | 289 | 278 | 249 | 260 | 267 | 278 | 296 | 278 | 224 | 210 | 213 |
| 7 | 285 | 289 | 282 | 260 | 260 | 274 | 282 | 289 | 274 | 220 | 210 | 210 |
| 8 | 285 | 282 | 282 | 260 | 260 | 296 | 285 | 285 | 267 | 220 | 210 | 207 |
| 9 | 285 | 285 | 293 | 280 | 260 | 305 | 289 | 278 | 263 | 217 | 207 | 210 |
| 10 | 285 | 285 | 285 | 290 | 263 | 293 | 285 | 285 | 260 | 217 | 207 | 210 |
| 11 | 285 | 285 | 278 | 300 | 267 | 282 | 282 | 289 | 256 | 217 | 207 | 210 |
| 12 | 285 | 285 | 274 | 300 | 267 | 278 | 278 | 285 | 256 | 217 | 207 | 207 |
| 13 | 282 | 285 | 282 | 300 | 271 | 278 | 278 | 278 | 252 | 217 | 210 | 207 |
| 14 | 282 | 289 | 278 | 285 | 267 | 274 | 278 | 274 | 249 | 217 | 207 | 207 |
| 15 | 282 | 289 | 278 | 274 | 263 | 271 | 278 | 274 | 245 | 213 | 210 | 207 |
| 16 | 282 | 296 | 278 | 278 | 263 | 267 | 278 | 274 | 242 | 213 | 207 | 207 |
| 17 | 282 | 293 | 278 | 278 | 263 | 263 | 278 | 271 | 238 | 217 | 207 | 213 |
| 18 | 282 | 289 | 278 | 278 | 263 | 263 | 274 | 271 | 238 | 217 | 203 | 217 |
| 19 | 282 | 289 | 274 | 282 | 260 | 267 | 271 | 267 | 234 | 217 | 207 | 220 |
| 20 | 282 | 285 | 271 | 278 | 263 | 267 | 267 | 263 | 231 | 217 | 207 | 213 |
| 21 | 285 | 285 | 267 | 274 | 267 | 263 | 267 | 263 | 234 | 213 | 207 | 213 |
| 22 | 285 | 282 | 267 | 271 | 271 | 263 | 267 | 267 | 227 | 213 | 207 | 217 |
| 23 | 285 | 282 | 271 | 267 | 267 | 267 | 267 | 271 | 227 | 213 | 207 | 217 |
| 24 | 285 | 282 | 271 | 267 | 267 | 271 | 267 | 271 | 224 | 213 | 213 | 227 |
| 25 | 318 | 282 | 274 | 263 | 263 | 267 | 271 | 267 | 224 | 217 | 231 | 231 |
| 26 | 318 | 278 | 278 | 249 | 263 | 263 | 285 | 267 | 224 | 217 | 238 | 224 |
| 27 | 296 | 271 | 293 | 252 | 263 | 278 | 282 | 271 | 220 | 213 | 224 | 220 |
| 28 | 289 | 267 | 282 | 263 | 278 | 293 | 282 | 274 | 220 | 210 | 220 | 231 |
| 29 | 289 | 274 | 282 | 260 | --- | 282 | 282 | 271 | 220 | 210 | 220 | 227 |
| 30 | 289 | 274 | 278 | 256 | --- | 274 | 289 | 263 | 220 | 210 | 217 | 231 |
| 31 | 289 | --- | 271 | 256 | --- | 271 | --- | 263 | --- | 210 | 217 | --- |
| TOTAL | 8916 | 8613 | 8602 | 8401 | 7398 | 8509 | 8334 | 8617 | 7368 | 6699 | 6558 | 6461 |
| MEAN | 288 | 287 | 277 | 271 | 264 | 274 | 278 | 278 | 246 | 216 | 212 | 215 |
| MAX | 318 | 318 | 293 | 300 | 278 | 305 | 289 | 314 | 278 | 224 | 238 | 231 |
| MIN | 282 | 267 | 267 | 249 | 260 | 263 | 267 | 263 | 220 | 210 | 203 | 207 |
| CFSM | .55 | .55 | .53 | .52 | .50 | .52 | .53 | .53 | .47 | .41 | .40 | .41 |
| IN. | .63 | .61 | .61 | .59 | .52 | .60 | .59 | .61 | .52 | .47 | .46 | .46 |
| AC-FT | 17680 | 17080 | 17060 | 16660 | 14670 | 16880 | 16530 | 17090 | 14610 | 13290 | 13010 | 12820 |
| CAL YR 1976 | TOTAL | 178833 | MEAN 489 | MAX | 2570 | MIN 267 | CFSM .93 | IN 12.65 | AC-FT | 354700 | | |
| WTR YR 1977 | TOTAL | 94476 | MEAN 259 | MAX | 318 | MIN 203 | CFSM .49 | IN 6.68 | AC-FT | 187400 | | |

DESCHUTES RIVER BASIN

191

14097200 WHITE RIVER NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°10'40", long 121°34'30", in NE¼SW¼ sec.32, T.4 S., R.10 E., Wasco County, Hydrologic Unit 17070306, in Mount Hood National Forest, on left bank at Faith Spring, 1.4 mi (2.3 km) above Klip Creek, and at mile 33.3 (53.6 km).

DRAINAGE AREA.--40.7 mi² (105.4 km²).

PERIOD OF RECORD.--July 1969 to current year.

REVISED RECORDS.--WRD Oreg. 1972: 1970.

GAGE.--Water-stage recorder. Altitude of gage is 2,740 ft (835 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--8 years, 168 ft³/s (4.758 m³/s), 56.06 in/yr (1,424 mm/yr), 121,700 acre-ft/yr (150 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,060 ft³/s (58.3 m³/s) Jan. 25, 1975, gage height, 5.62 ft (1.713 m); minimum, 20 ft³/s (0.57 m³/s) Jan. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 272 ft³/s (7.70 m³/s) Apr. 25, gage height, 3.07 ft (0.936 m), no peak above base of 600 ft³/s (17.0 m³/s); minimum, 20 ft³/s (0.57 m³/s) Jan. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|------|------|-------|--------|-------|-------|
| 1 | 60 | 73 | 51 | 44 | 45 | 60 | 84 | 197 | 119 | 73 | 54 | 51 |
| 2 | 66 | 69 | 52 | 42 | 44 | 55 | 79 | 218 | 111 | 70 | 51 | 45 |
| 3 | 62 | 70 | 51 | 41 | 44 | 52 | 79 | 225 | 111 | 67 | 50 | 46 |
| 4 | 55 | 72 | 51 | 39 | 43 | 52 | 89 | 200 | 132 | 65 | 50 | 54 |
| 5 | 51 | 70 | 51 | 37 | 43 | 54 | 104 | 177 | 125 | 63 | 50 | 55 |
| 6 | 54 | 70 | 51 | 36 | 43 | 55 | 130 | 158 | 125 | 60 | 51 | 52 |
| 7 | 54 | 69 | 49 | 35 | 43 | 59 | 179 | 148 | 127 | 59 | 50 | 49 |
| 8 | 56 | 66 | 54 | 34 | 42 | 69 | 221 | 141 | 121 | 63 | 46 | 47 |
| 9 | 55 | 65 | 50 | 34 | 43 | 66 | 182 | 139 | 111 | 65 | 46 | 46 |
| 10 | 58 | 63 | 47 | 34 | 46 | 60 | 153 | 156 | 106 | 63 | 47 | 49 |
| 11 | 58 | 62 | 49 | 34 | 47 | 58 | 146 | 146 | 102 | 66 | 50 | 49 |
| 12 | 51 | 59 | 47 | 35 | 52 | 58 | 146 | 137 | 99 | 67 | 54 | 47 |
| 13 | 52 | 58 | 47 | 35 | 59 | 56 | 156 | 134 | 99 | 62 | 59 | 47 |
| 14 | 54 | 58 | 47 | 36 | 50 | 54 | 141 | 141 | 95 | 63 | 60 | 46 |
| 15 | 52 | 66 | 49 | 40 | 49 | 54 | 137 | 134 | 92 | 65 | 60 | 46 |
| 16 | 51 | 67 | 50 | 47 | 49 | 52 | 141 | 127 | 89 | 65 | 62 | 46 |
| 17 | 49 | 63 | 49 | 54 | 51 | 52 | 127 | 134 | 87 | 67 | 60 | 46 |
| 18 | 46 | 66 | 49 | 62 | 49 | 54 | 123 | 130 | 87 | 69 | 60 | 51 |
| 19 | 46 | 56 | 46 | 62 | 47 | 55 | 117 | 127 | 85 | 62 | 62 | 56 |
| 20 | 47 | 55 | 45 | 58 | 49 | 54 | 117 | 130 | 85 | 62 | 65 | 60 |
| 21 | 49 | 55 | 45 | 54 | 50 | 54 | 117 | 141 | 85 | 66 | 67 | 75 |
| 22 | 49 | 54 | 44 | 52 | 49 | 58 | 121 | 132 | 85 | 63 | 72 | 72 |
| 23 | 49 | 54 | 45 | 50 | 46 | 63 | 148 | 130 | 82 | 62 | 72 | 73 |
| 24 | 52 | 54 | 43 | 50 | 47 | 60 | 197 | 121 | 79 | 62 | 69 | 97 |
| 25 | 81 | 55 | 47 | 47 | 47 | 59 | 244 | 119 | 81 | 62 | 66 | 95 |
| 26 | 62 | 51 | 62 | 46 | 46 | 60 | 231 | 123 | 79 | 60 | 79 | 89 |
| 27 | 55 | 47 | 63 | 49 | 55 | 73 | 209 | 121 | 79 | 56 | 47 | 84 |
| 28 | 54 | 50 | 52 | 46 | 72 | 79 | 200 | 117 | 76 | 59 | 49 | 87 |
| 29 | 54 | 51 | 50 | 45 | --- | 72 | 206 | 111 | 78 | 56 | 58 | 90 |
| 30 | 52 | 51 | 47 | 45 | --- | 69 | 215 | 109 | 72 | 55 | 70 | 102 |
| 31 | 65 | --- | 45 | 45 | --- | 72 | --- | 111 | --- | 55 | 65 | --- |
| TOTAL | 1699 | 1819 | 1528 | 1368 | 1350 | 1848 | 4539 | 4434 | 2904 | 1952 | 1801 | 1852 |
| MEAN | 54.8 | 60.6 | 49.3 | 44.1 | 48.2 | 59.6 | 151 | 143 | 96.8 | 63.0 | 58.1 | 61.7 |
| MAX | 81 | 73 | 63 | 62 | 72 | 79 | 244 | 225 | 132 | 73 | 79 | 102 |
| MIN | 46 | 47 | 43 | 34 | 42 | 52 | 79 | 109 | 72 | 55 | 46 | 45 |
| CFSM | 1.35 | 1.49 | 1.21 | 1.08 | 1.18 | 1.46 | 3.71 | 3.51 | 2.38 | 1.55 | 1.43 | 1.52 |
| IN. | 1.55 | 1.66 | 1.40 | 1.25 | 1.23 | 1.69 | 4.15 | 4.05 | 2.65 | 1.78 | 1.65 | 1.69 |
| AC-FT | 3370 | 3610 | 3030 | 2710 | 2680 | 3670 | 9000 | 8790 | 5760 | 3870 | 3570 | 3670 |
| CAL YR 1976 | TOTAL | 56143 | MEAN | 153 | MAX | 596 | MIN | 43 | CFSM | 3.76 | IN | 51.31 |
| WTR YR 1977 | TOTAL | 27094 | MEAN | 74.2 | MAX | 244 | MIN | 34 | CFSM | 1.82 | IN | 24.76 |
| | | | | | | | | | AC-FT | 111400 | AC-FT | 53740 |

DESCHUTES RIVER BASIN

14101500 WHITE RIVER BELOW TYGH VALLEY, OR

LOCATION.--Lat 45°14'30", long 121°05'38", in NE¼NE¼ sec.7, T.4 S., R.14 E., Wasco County, Hydrologic Unit 17070306, on left bank 200 ft (61 m) downstream from former Pacific Power & Light Co. powerplant at White River Falls, 3.9 mi (6.3 km) east of town of Tygh Valley, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--417 mi² (1,080 km²).

PERIOD OF RECORD.--October 1917 to current year.

REVISED RECORDS.--WSP 1448: 1920, 1923, 1927-28, drainage area. WSP 1935: 1956.

GAGE.--Water-stage recorder. Datum of gage is 870.15 ft (265.222 m) above mean sea level (levels by Pacific Power & Light Co.). Prior to July 28, 1931, at site 750 ft (229 m) downstream at different datum. July 28, 1931, to Sept. 30, 1954, at site 700 ft (213 m) downstream at different datums.

REMARKS.--Records good. No regulation. Diversions above station for irrigation.

AVERAGE DISCHARGE.--60 years, 429 ft³/s (12.15 m³/s), 310,800 acre-ft/yr (383 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft³/s (377 m³/s) Jan. 6, 1923, gage height, about 13.3 ft (4.05 m), site and datum then in use, from rating curve extended above 5,000 ft³/s (142 m³/s); minimum, 7.5 ft³/s (0.21 m³/s) Aug. 31, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 369 ft³/s (10.5 m³/s) Apr. 26, gage height, 2.52 ft (0.768 m), no peak above base of 1,600 ft³/s (45.3 m³/s); minimum, 69 ft³/s (1.95 m³/s) Sept. 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|------|------|----------|----------|---------|--------------|-------|------|------|------|------|
| 1 | 134 | 169 | 115 | 110 | 140 | 140 | 157 | 304 | 190 | 117 | 96 | 98 |
| 2 | 136 | 162 | 113 | 110 | 136 | 131 | 159 | 312 | 188 | 117 | 93 | 95 |
| 3 | 136 | 154 | 123 | 100 | 131 | 134 | 154 | 336 | 180 | 115 | 93 | 96 |
| 4 | 129 | 147 | 123 | 100 | 131 | 125 | 162 | 320 | 199 | 117 | 93 | 104 |
| 5 | 127 | 145 | 119 | 95 | 131 | 127 | 172 | 290 | 202 | 109 | 91 | 96 |
| 6 | 127 | 143 | 119 | 95 | 131 | 125 | 199 | 268 | 196 | 105 | 96 | 91 |
| 7 | 127 | 140 | 121 | 90 | 129 | 129 | 241 | 251 | 188 | 102 | 95 | 85 |
| 8 | 127 | 140 | 123 | 90 | 129 | 150 | 320 | 245 | 185 | 104 | 88 | 83 |
| 9 | 127 | 138 | 129 | 90 | 129 | 147 | 301 | 235 | 174 | 107 | 83 | 80 |
| 10 | 125 | 138 | 121 | 90 | 129 | 134 | 261 | 245 | 167 | 107 | 81 | 78 |
| 11 | 129 | 131 | 119 | 90 | 136 | 125 | 241 | 248 | 159 | 105 | 81 | 77 |
| 12 | 123 | 129 | 117 | 90 | 136 | 125 | 235 | 222 | 152 | 107 | 81 | 75 |
| 13 | 119 | 134 | 119 | 90 | 150 | 125 | 245 | 216 | 152 | 105 | 83 | 72 |
| 14 | 119 | 136 | 119 | 95 | 136 | 121 | 235 | 216 | 152 | 104 | 85 | 71 |
| 15 | 119 | 143 | 119 | 100 | 129 | 119 | 222 | 213 | 147 | 104 | 81 | 69 |
| 16 | 119 | 157 | 121 | 110 | 125 | 115 | 232 | 207 | 143 | 105 | 80 | 69 |
| 17 | 119 | 147 | 121 | 145 | 123 | 115 | 219 | 205 | 140 | 107 | 78 | 71 |
| 18 | 119 | 152 | 119 | 147 | 123 | 119 | 213 | 207 | 140 | 111 | 78 | 72 |
| 19 | 117 | 136 | 115 | 162 | 121 | 121 | 202 | 202 | 138 | 113 | 78 | 77 |
| 20 | 119 | 129 | 113 | 152 | 115 | 117 | 202 | 205 | 138 | 107 | 80 | 80 |
| 21 | 123 | 125 | 109 | 147 | 121 | 111 | 202 | 210 | 136 | 109 | 83 | 83 |
| 22 | 121 | 125 | 113 | 143 | 121 | 115 | 205 | 216 | 140 | 113 | 85 | 88 |
| 23 | 119 | 125 | 115 | 140 | 117 | 125 | 222 | 210 | 136 | 109 | 81 | 88 |
| 24 | 117 | 125 | 115 | 136 | 117 | 125 | 261 | 199 | 131 | 107 | 89 | 91 |
| 25 | 147 | 125 | 115 | 131 | 115 | 121 | 332 | 190 | 131 | 109 | 95 | 98 |
| 26 | 169 | 123 | 134 | 121 | 115 | 121 | 344 | 190 | 127 | 113 | 119 | 98 |
| 27 | 154 | 113 | 147 | 131 | 119 | 154 | 320 | 190 | 127 | 104 | 100 | 95 |
| 28 | 147 | 109 | 129 | 131 | 147 | 157 | 297 | 193 | 123 | 104 | 95 | 96 |
| 29 | 143 | 117 | 125 | 134 | --- | 147 | 293 | 188 | 123 | 102 | 115 | 98 |
| 30 | 140 | 117 | 121 | 129 | --- | 140 | 316 | 182 | 119 | 96 | 127 | 100 |
| 31 | 143 | --- | 111 | 136 | --- | 138 | --- | 182 | --- | 98 | 111 | --- |
| TOTAL | 4020 | 4074 | 3722 | 3630 | 3582 | 3998 | 7164 | 7097 | 4623 | 3332 | 2814 | 2574 |
| MEAN | 130 | 136 | 120 | 117 | 128 | 129 | 239 | 229 | 154 | 107 | 90.8 | 85.8 |
| MAX | 169 | 169 | 147 | 162 | 150 | 157 | 344 | 336 | 202 | 117 | 127 | 104 |
| MIN | 117 | 109 | 109 | 90 | 115 | 111 | 154 | 182 | 119 | 96 | 78 | 69 |
| AC-FT | 7970 | 8080 | 7380 | 7200 | 7100 | 7930 | 14210 | 14080 | 9170 | 6610 | 5580 | 5110 |
| CAL YR 1976 TOTAL | 155429 | | | MEAN 425 | MAX 2560 | MIN 109 | AC-FT 308300 | | | | | |
| WTR YR 1977 TOTAL | 50630 | | | MEAN 139 | MAX 344 | MIN 69 | AC-FT 100400 | | | | | |

DESCHUTES RIVER BASIN

193

14103000 DECHUTES RIVER AT MOODY, NEAR BIGGS, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°37'20", long 120°54'05", in SW¼SE¼ sec.26, T.2 N., R.15 E., Sherman County, Hydrologic Unit 17070306, on right bank at Moody, 4.0 mi (6.4 km) southwest of Biggs, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--10,500 mi² (27,200 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1897 to December 1899 (published as "near Moro"), July 1906 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 754: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 167.54 ft (51.066 m) above mean sea level. Oct. 19, 1897, to Dec. 31, 1899, non-recording gage at site 10 mi (16 km) upstream at different datum. July 22, 1906, to July 18, 1930, nonrecording gage at site 300 ft (91 m) downstream at datum 0.50 ft (0.152 m) lower.

REMARKS.--Water-discharge records good. Some fluctuation caused by regulation at Lake Simtustus since 1957. Some winter and spring runoff stored in Ochoco Reservoir, capacity, 46,420 acre-ft (57.2 hm³), in Crescent Lake, Crane Prairie and Wickiup Reservoirs, combined capacity, 323,390 acre-ft (399 hm³), and since 1960, in Prineville Reservoir (see station 14080400), and since 1964 in Lake Billy Chinook (see station 14092100). Large diversions in upper river basin for irrigation.

AVERAGE DISCHARGE.--73 years, 5,823 ft³/s (164.9 m³/s), 4,219,000 acre-ft/yr (5.20 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,500 ft³/s (2,140 m³/s) Dec. 22, 1964, gage height, 11.80 ft (3.597 m), from rating curve extended above 47,000 ft³/s (1,330 m³/s); minimum, 2,400 ft³/s (68.0 m³/s) Dec. 5, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,840 ft³/s (222 m³/s) Jan. 27, gage height, 3.51 ft (1.070 m); minimum, 3,470 ft³/s (98.3 m³/s) Feb. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|--------|--------|-----------|-----------|----------|---------------|--------|--------|--------|--------|--------|
| 1 | 4970 | 5090 | 4450 | 5540 | 4660 | 5000 | 5770 | 4420 | 4000 | 4060 | 3970 | 4390 |
| 2 | 4970 | 5640 | 5190 | 6220 | 4690 | 4930 | 5840 | 4420 | 3970 | 3970 | 4090 | 4210 |
| 3 | 4810 | 5940 | 5380 | 6420 | 5250 | 5740 | 5770 | 4450 | 4120 | 3880 | 4120 | 4030 |
| 4 | 4870 | 5880 | 5380 | 6490 | 5220 | 6250 | 5410 | 4450 | 4240 | 3940 | 4000 | 4000 |
| 5 | 4810 | 5880 | 5350 | 6490 | 4540 | 6280 | 4630 | 4420 | 4270 | 4000 | 4000 | 3940 |
| 6 | 4810 | 5940 | 5410 | 7100 | 4970 | 6180 | 4420 | 4420 | 4270 | 3880 | 4000 | 3940 |
| 7 | 4720 | 6250 | 5740 | 7200 | 5440 | 5640 | 4690 | 4390 | 4780 | 3970 | 4030 | 4120 |
| 8 | 4720 | 5980 | 5350 | 7240 | 5000 | 5350 | 4540 | 4390 | 4840 | 3970 | 4000 | 4030 |
| 9 | 4690 | 6080 | 5440 | 7240 | 4540 | 4570 | 4600 | 4330 | 4810 | 4000 | 4060 | 3970 |
| 10 | 4660 | 6180 | 5380 | 6520 | 4240 | 4450 | 4510 | 4210 | 4540 | 4000 | 4060 | 4000 |
| 11 | 4630 | 6110 | 5380 | 6150 | 4300 | 4420 | 4450 | 4240 | 4450 | 4030 | 4000 | 3910 |
| 12 | 4690 | 6080 | 5350 | 5810 | 4360 | 4480 | 4390 | 4150 | 4420 | 4090 | 4000 | 3880 |
| 13 | 4780 | 6080 | 5350 | 5510 | 4300 | 4480 | 4270 | 4090 | 4420 | 4060 | 3910 | 3820 |
| 14 | 4840 | 5810 | 5480 | 5310 | 4330 | 4420 | 4090 | 4030 | 4420 | 4120 | 3880 | 3820 |
| 15 | 4780 | 5030 | 5570 | 5280 | 4300 | 4870 | 4000 | 4060 | 4390 | 3970 | 3850 | 3910 |
| 16 | 4870 | 4900 | 5540 | 5250 | 4180 | 5190 | 4090 | 4090 | 4420 | 3940 | 3940 | 3940 |
| 17 | 4900 | 5510 | 5510 | 4450 | 4060 | 4970 | 4090 | 4090 | 4300 | 3970 | 4000 | 3970 |
| 18 | 4930 | 6050 | 5480 | 4450 | 4030 | 4090 | 4030 | 4030 | 4210 | 4030 | 3970 | 4000 |
| 19 | 5350 | 6180 | 5510 | 4300 | 4000 | 3970 | 4030 | 4060 | 4120 | 4120 | 3970 | 4030 |
| 20 | 5770 | 5710 | 5510 | 4000 | 3760 | 3970 | 4000 | 3970 | 4120 | 4210 | 4060 | 4030 |
| 21 | 5770 | 4750 | 5440 | 3940 | 3560 | 3940 | 3970 | 3940 | 4090 | 4150 | 4060 | 4090 |
| 22 | 5770 | 4450 | 5510 | 3910 | 3590 | 4570 | 4000 | 3940 | 4120 | 4150 | 4120 | 4240 |
| 23 | 5840 | 4450 | 5510 | 3940 | 3760 | 5880 | 4030 | 4030 | 4180 | 4090 | 4180 | 4300 |
| 24 | 5910 | 4510 | 5440 | 4540 | 4090 | 5880 | 4150 | 4030 | 4090 | 4000 | 4120 | 4360 |
| 25 | 5910 | 4660 | 5280 | 5250 | 4090 | 5810 | 4180 | 4030 | 4210 | 4060 | 4090 | 4330 |
| 26 | 5910 | 4720 | 5280 | 6320 | 4420 | 5280 | 4390 | 4000 | 4300 | 4030 | 4210 | 4300 |
| 27 | 5910 | 4720 | 5250 | 7690 | 4660 | 4810 | 4480 | 3970 | 4300 | 4060 | 4150 | 4330 |
| 28 | 5880 | 5380 | 5280 | 6490 | 4900 | 4720 | 4390 | 3970 | 4120 | 4030 | 4210 | 4300 |
| 29 | 5910 | 5060 | 5280 | 5510 | --- | 5220 | 4420 | 3910 | 4030 | 4090 | 4270 | 4330 |
| 30 | 5280 | 4450 | 5250 | 5190 | --- | 5740 | 4390 | 3940 | 4060 | 4090 | 4420 | 4390 |
| 31 | 5090 | --- | 5250 | 4900 | --- | 5710 | --- | 3910 | --- | 4090 | 4480 | --- |
| TOTAL | 160750 | 163470 | 166520 | 174650 | 123240 | 156810 | 134020 | 128380 | 128610 | 125050 | 126220 | 122910 |
| MEAN | 5185 | 5449 | 5372 | 5634 | 4401 | 5058 | 4467 | 4141 | 4287 | 4034 | 4072 | 4097 |
| MAX | 5910 | 6250 | 5740 | 7690 | 5440 | 6280 | 5840 | 4450 | 4840 | 4210 | 4480 | 4390 |
| MIN | 4630 | 4450 | 4450 | 3910 | 3560 | 3940 | 3970 | 3910 | 3970 | 3880 | 3850 | 3820 |
| AC-FT | 318800 | 324200 | 330300 | 346400 | 244400 | 311000 | 265800 | 254600 | 255100 | 248000 | 250400 | 243800 |
| CAL YR 1976 TOTAL | 2278200 | | | MEAN 6225 | MAX 12300 | MIN 4450 | AC-FT 4519000 | | | | | |
| WTR YR 1977 TOTAL | 1710630 | | | MEAN 4687 | MAX 7690 | MIN 3560 | AC-FT 3393000 | | | | | |

DESCHUTES RIVER BASIN

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1911-12, 1953-58, 1962 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURES: December 1952 to February 1954, November 1954 to September 1958, June 1962 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 208 micromhos/cm Nov. 24, 1975; minimum, 63 micromhos/cm Dec. 5, 1975.

WATER TEMPERATURES: Maximum, 22.0°C July 12, 13, 1964; minimum, 0.5°C Dec. 30, 1955.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 183 micromhos/cm Oct. 3; minimum, 72 micromhos/cm Jan. 9.

WATER TEMPERATURES: Maximum, 21.5°C Aug. 4, 13, 20; minimum recorded, 4.0°C Jan. 5, 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) | DIS- SOLVED SODIUM (NA) (MG/L) |
|-------|------|--|-----------------------------|---------------|------------------------------------|--|--|--|--|--|---|--|
| OCT | | | | | | | | | | | | |
| 19... | 1500 | 5740 | 12.0 | 7.8 | 13.0 | 141 | 210 | 170 | 31 | 9.5 | 6.0 | 12 |
| DEC | | | | | | | | | | | | |
| 01... | 1430 | 5080 | 6.0 | 8.2 | 14.2 | 120 | 810 | <1 | 29 | 7.7 | 5.2 | 11 |
| 29... | 0930 | 5260 | 6.2 | 8.3 | 12.8 | 134 | 83 | 145 | 30 | 8.1 | 5.4 | 11 |
| JAN | | | | | | | | | | | | |
| 26... | 1530 | 6320 | 4.6 | 8.3 | 13.4 | 137 | <1 | 85 | 30 | 8.2 | 5.5 | 12 |
| MAR | | | | | | | | | | | | |
| 02... | 1600 | 4870 | 6.9 | 8.7 | 13.0 | 133 | 84 | 816 | 29 | 7.7 | 5.7 | 12 |
| 23... | 1445 | 5842 | 10.0 | 8.8 | 12.2 | 132 | 85 | 87 | 29 | 7.7 | 5.3 | 11 |
| APR | | | | | | | | | | | | |
| 20... | 1200 | 4000 | 10.1 | 8.2 | 11.2 | 130 | <1 | 818 | 29 | 7.7 | 5.2 | 10 |
| MAY | | | | | | | | | | | | |
| 24... | 1100 | 4150 | 14.1 | 8.1 | 13.8 | 121 | 84 | 812 | 4.2 | 7.4 | 5.0 | 10 |
| JUN | | | | | | | | | | | | |
| 28... | 1830 | 5080 | 19.9 | 8.2 | 11.6 | 118 | 87 | 84 | 25 | 7.0 | 5.4 | 10 |
| JUL | | | | | | | | | | | | |
| 26... | 1530 | 4090 | 20.5 | 8.8 | 11.3 | 147 | 83 | 816 | 26 | 7.7 | 5.1 | 11 |
| SEP | | | | | | | | | | | | |
| 01... | 1500 | 4420 | 17.0 | -- | 15.4 | 128 | 87 | 8500 | 29 | 7.5 | 5.1 | 10 |
| 20... | 1400 | 4000 | 16.0 | 7.9 | 11.5 | 133 | 85 | 440 | 29 | 11 | 5.3 | 11 |

| DATE | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA, MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO |
|-------|--------------------------------------|-----------------------------------|--|---|--|--|--|---|---|-------------------------------------|---|---|
| OCT | | | | | | | | | | | | |
| 19... | 73 | 0 | 3.0 | 2.4 | .1 | .10 | .22 | .32 | .07 | 48 | 0 | .8 |
| DEC | | | | | | | | | | | | |
| 01... | 67 | 0 | 3.2 | 2.0 | .1 | .14 | .39 | .53 | .09 | 41 | 0 | .8 |
| 29... | 68 | 0 | 4.0 | 2.2 | .1 | .19 | .27 | .46 | .09 | 42 | 0 | .7 |
| JAN | | | | | | | | | | | | |
| 26... | 81 | 0 | 5.1 | 2.6 | .2 | .18 | 1.1 | 1.3 | .08 | 43 | 0 | .8 |
| MAR | | | | | | | | | | | | |
| 02... | 79 | 0 | 3.9 | 2.5 | .2 | .17 | .05 | .22 | .06 | 43 | 0 | .8 |
| 23... | 74 | -- | 3.9 | 2.3 | .1 | .00 | .28 | .28 | .08 | 41 | 0 | .7 |
| APR | | | | | | | | | | | | |
| 20... | 69 | 0 | 5.1 | 2.1 | .1 | .00 | .12 | .12 | .08 | 41 | 0 | .7 |
| MAY | | | | | | | | | | | | |
| 24... | 71 | 0 | 4.3 | 2.3 | .2 | .01 | .48 | .49 | .10 | 39 | 0 | .7 |
| JUN | | | | | | | | | | | | |
| 28... | 68 | 0 | 2.7 | 2.5 | .1 | .01 | .70 | .71 | .07 | 40 | 0 | .7 |
| JUL | | | | | | | | | | | | |
| 26... | 71 | 0 | 1.9 | 2.0 | .1 | .00 | .26 | .26 | .05 | 40 | 0 | .8 |
| SEP | | | | | | | | | | | | |
| 01... | 70 | -- | .5 | 2.1 | .1 | .11 | .44 | .55 | .12 | 40 | 0 | .7 |
| 20... | 72 | 0 | 3.5 | 2.4 | .1 | .10 | -- | -- | .09 | 49 | 0 | .7 |

B: RESULTS BASED ON NON-IDEAL COLONY COUNT

DESCHUTES RIVER BASIN

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14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) | DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) | TUR- BID- ITY (JTU) | SUS- PENDE SEDI- MENT (MG/L) | SUS- PENDE SEDI- MENT CHARGE (T/DAY) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | TOTAL NON- FILT- RABLE RESIDUE (MG/L) | ALKA- LINITY AS CAC03 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|--|--|--|--|------------------------------|--|---|--|--|--|---|
| OCT 19... | 91 | 102 | 1410 | .12 | 2 | 29 | 449 | 70 | 0 | 60 | 1.0 |
| DEC 01... | 87 | 93 | 1190 | .12 | 3 | -- | -- | -- | 9 | 55 | -- |
| 29... | 108 | 96 | 1530 | .15 | 2 | 6 | 85 | 50 | 3 | 56 | -- |
| JAN 26... | 96 | 105 | 1640 | .13 | 2 | 14 | 239 | 34 | 3 | 66 | .6 |
| MAR 02... | 100 | 102 | 1320 | .14 | 3 | 19 | 250 | 38 | 0 | 65 | -- |
| 23... | 100 | 98 | 1580 | .14 | 3 | 11 | 174 | 40 | 6 | 61 | -- |
| APR 20... | 92 | 95 | 994 | .13 | 2 | 10 | 108 | 56 | 12 | 57 | .8 |
| MAY 24... | 83 | 70 | 930 | .11 | 1 | 12 | 134 | 53 | 3 | 58 | -- |
| JUN 28... | 81 | 88 | 1110 | .11 | 3 | 8 | 110 | 48 | 2 | 56 | -- |
| JUL 26... | 73 | 91 | 806 | .10 | 2 | 16 | 177 | 58 | -- | 58 | 1.8 |
| SEP 01... | 73 | 91 | 871 | .10 | 25 | 66 | 788 | 94 | 66 | 57 | -- |
| 20... | 83 | 100 | 896 | .11 | 6 | 22 | 238 | 84 | 9 | 59 | -- |

| DATE | TOTAL IRON (FE) (UG/L) | DIS- SOLVED IRON (FE) (UG/L) | TOTAL MAN- GANESE (MN) (UG/L) | DIS- SOLVED MAN- GANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS- SOLVED ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | DIS- SOLVED CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | DIS- SOLVED CHRO- MIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|---------------------------------|--|---|--|------------------------------------|---|---|--|--|---|-----------------------------------|
| OCT 19... | 290 | 0 | 10 | 10 | 1 | 1 | 0 | 0 | <10 | 0 | 0 |
| JAN 26... | 190 | 30 | 0 | 0 | 2 | 1 | <10 | 0 | 0 | 0 | <50 |
| APR 20... | 130 | 60 | 10 | 0 | 1 | 0 | <10 | 0 | 0 | 0 | <50 |
| JUL 26... | 100 | 20 | 20 | 0 | 2 | 0 | <10 | 1 | 0 | 0 | <50 |

| DATE | DIS- SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS- SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS- SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS- SOLVED ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | DIS- SOLVED SELE- NIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS- SOLVED MERCURY (HG) (UG/L) |
|-----------|--|-----------------------------------|--|---------------------------------|--|---------------------------------|--|--|---|------------------------------------|---|
| OCT 19... | 0 | 11 | 5 | 14 | 2 | 30 | 0 | -- | 0 | .0 | .0 |
| JAN 26... | 0 | <10 | 4 | <100 | 0 | 30 | 0 | 0 | 0 | .2 | .0 |
| APR 20... | 0 | <10 | 4 | <100 | 3 | 20 | 10 | 0 | 0 | .0 | .0 |
| JUL 26... | 0 | 10 | 4 | <100 | 8 | 10 | 4 | 0 | 0 | .1 | .1 |

DESCHUTES RIVER BASIN

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | OCT 19,76 1500 | DEC 1,76 1430 | DEC 29,76 0930 | JAN 26,77 1530 | | | | |
|-------------------------------|-------------------|------------------|-------------------|-------------------|--------------|--------------|--------------|--------------|
| TOTAL CELLS/ML | 2800 | 200 | 280 | 4900 | | | | |
| DIVERSITY: DIVISION | 0.6 | 1.0 | 0.0 | 0.1 | | | | |
| ..CLASS | 0.6 | 1.0 | 0.0 | 0.1 | | | | |
| ...ORDER | 0.8 | 1.4 | 1.0 | 0.6 | | | | |
| ...FAMILY | 2.6 | 2.2 | 1.9 | 2.8 | | | | |
|GENUS | 2.6 | 2.3 | 2.3 | 3.1 | | | | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | |
| ...VOLVOCALES | | | | | | | | |
|CHLAMYDOMONADACEAE | | | | | | | | |
|CHLAMYDOMONAS | 30 | 1 | -- | - | -- | - | -- | - |
| ...ZYGNEMATALES | | | | | | | | |
|ZYGNEMATAACEAE | | | | | | | | |
|MOUGEOTIA | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | |
| ...CENTRALES | | | | | | | | |
|COSCINODISCACEAE | | | | | | | | |
|CYCLOTELLA | -- | - | -- | - | 3 | 1 | 97 | 2 |
|MELOSIRA | -- | - | * 0 | | 16 | 6 | -- | - |
|STEPHANODISCUS | 89 | 3 | 25 | 12 | 84# | 30 | 390 | 8 |
| ..PENNALES | | | | | | | | |
|ACHNANTHACEAE | | | | | | | | |
|ACHNANTHES | -- | - | 5 | 2 | 3 | 1 | -- | - |
|COCCONEIS | -- | - | * 0 | | * 0 | | 240 | 5 |
|RHOICOSPHENIA | 240 | 9 | 5 | 2 | * 0 | | 97 | 2 |
|CYMBELLACEAE | | | | | | | | |
|AMPHORA | -- | - | -- | - | -- | - | -- | - |
|CYMBELLA | -- | - | 2 | 1 | * 0 | | -- | - |
|EPITHEMIA | 120 | 4 | 2 | 1 | -- | - | 240 | 5 |
|DIATOMACEAE | | | | | | | | |
|DIATOMA | 1200# | 41 | 2 | 1 | 19 | 7 | 630 | 13 |
|FRAGILARIACEAE | | | | | | | | |
|ASTERIONELLA | -- | - | -- | - | -- | - | -- | - |
|FRAGILARIA | 210 | 7 | 2 | 1 | 120# | 42 | 1600# | 33 |
|SYNEDRA | -- | - | -- | - | 3 | 1 | 97 | 2 |
|GOMPHONEMATAACEAE | | | | | | | | |
|GOMPHONEIS | -- | - | -- | - | -- | - | -- | - |
|GOMPHONEMA | 30 | 1 | 15 | 7 | 6 | 2 | 540 | 11 |
|NAVICULACEAE | | | | | | | | |
|NAVICULA | 420 | 15 | 12 | 6 | 6 | 2 | 190 | 4 |
|NEIDIUM | -- | - | -- | - | -- | - | -- | - |
|STAURONEIS | -- | - | -- | - | -- | - | 49 | 1 |
|NITZSCHIA | | | | | | | | |
|NITZSCHIA | -- | - | -- | - | * 0 | | -- | - |
|NITZSCHIA | -- | - | 20 | 10 | 19 | 7 | 580 | 12 |
|TABELLARIACEAE | | | | | | | | |
|TABELLARIA | 150 | 5 | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | |
| ...CHROCCOCCALES | | | | | | | | |
|CHROCCOCCACEAE | | | | | | | | |
|ANACYSTIS | -- | - | -- | - | -- | - | -- | - |
| ...HORMOGONALES | | | | | | | | |
|NOSTOCACEAE | | | | | | | | |
|ANABAENA | 360 | 13 | -- | - | -- | - | -- | - |
|OSCILLATORIA | | | | | | | | |
|LYNGBYA | -- | - | -- | - | -- | - | -- | - |
|OSCILLATORIA | -- | - | 110# | 54 | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | | | |
| ...EUGLENALES | | | | | | | | |
|EUGLENACEAE | | | | | | | | |
|TRACHELOMONAS | -- | - | -- | - | -- | - | 97 | 2 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | MAY 24,77 1100 | JUN 28,77 1830 | JUL 26,77 1530 | SEP 20,77 1400 | | | | |
|-------------------------------|-------------------|-------------------|-------------------|-------------------|--------------|--------------|--------------|--------------|
| TOTAL CELLS/ML | 14000 | 2600 | 3700 | 320 | | | | |
| DIVERSITY: DIVISION | 1.0 | 1.0 | 0.1 | 0.4 | | | | |
| ..CLASS | 1.0 | 1.0 | 0.1 | 0.4 | | | | |
| ...ORDER | 1.7 | 1.4 | 1.1 | 1.2 | | | | |
| ...FAMILY | 2.4 | 1.8 | 2.3 | 2.2 | | | | |
|GENUS | 2.7 | 2.4 | 3.2 | 2.5 | | | | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | |
| ...VOLVOCALES | | | | | | | | |
|CHLAMYDOMONADACEAE | | | | | | | | |
|CHLAMYDOMONAS | -- | - | -- | - | -- | - | -- | - |
| ...ZYGNEATALES | | | | | | | | |
|ZYGNEMATACEAE | | | | | | | | |
|MOUGEOTIA | -- | - | -- | - | -- | - | 25 | 8 |
| CHRYSOPHYTA | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | |
| ...CENTRALES | | | | | | | | |
|COSCINODISCAEAE | | | | | | | | |
|CYCLOTELLA | 4400# | 32 | 750# | 29 | 230 | 6 | -- | - |
|MELOSIRA | -- | - | 56 | 2 | 940# | 25 | 62# | 19 |
|STEPHANODISCUS | 150 | 1 | 390# | 15 | 690# | 18 | 37 | 12 |
| ...PENNALES | | | | | | | | |
|ACHNANTHACEAE | | | | | | | | |
|ACHNANTHES | 75 | 1 | -- | - | 57 | 2 | -- | - |
|COCCONEIS | 150 | 1 | 56 | 2 | 110 | 3 | -- | - |
|RHOICOSPHENIA | 300 | 2 | 28 | 1 | 200 | 5 | -- | - |
| ...CYMBELLACEAE | | | | | | | | |
|AMPHORA | -- | - | -- | - | 29 | 1 | -- | - |
|CYMBELLA | 150 | 1 | 14 | 1 | 140 | 4 | -- | - |
|EPITHEMIA | -- | - | 28 | 1 | 110 | 3 | -- | - |
| ...DIATOMACEAE | | | | | | | | |
|DIATOMA | 900 | 7 | 56 | 2 | 660# | 18 | 6 | 2 |
| ...FRAGILARIACEAE | | | | | | | | |
|ASTERIONELLA | 75 | 1 | -- | - | -- | - | -- | - |
|FRAGILARIA | -- | - | 140 | 5 | -- | - | 120# | 38 |
|SYNEDRA | -- | - | -- | - | -- | - | -- | - |
| ...GOMPHONEMACEAE | | | | | | | | |
|GOMPHONEIS | 150 | 1 | -- | - | -- | - | -- | - |
|GOMPHONEMA | 230 | 2 | 14 | 1 | 200 | 5 | 6 | 2 |
| ...NAVICULACEAE | | | | | | | | |
|NAVICULA | 380 | 3 | 14 | 1 | 140 | 4 | 43 | 13 |
|NEIDIUM | -- | - | -- | - | 57 | 2 | -- | - |
|STAURONEIS | -- | - | -- | - | -- | - | -- | - |
| ...NITZSCHACEAE | | | | | | | | |
|NANTZSCHIA | -- | - | -- | - | -- | - | -- | - |
|NITZSCHIA | 1700 | 12 | 28 | 1 | 110 | 3 | 18 | 6 |
| ...TABELLARIACEAE | | | | | | | | |
|TABELLARIA | -- | - | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | |
| ...CHROCCOCCALES | | | | | | | | |
|CHROCCOCCAEAE | | | | | | | | |
|ANACYSTIS | 230 | 2 | -- | - | -- | - | -- | - |
| ...HORMOGONALES | | | | | | | | |
|NOSTOCACEAE | | | | | | | | |
|ANABAENA | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | |
|LYNGBYA | 4100# | 30 | -- | - | -- | - | -- | - |
|OSCILLATORIA | 750 | 5 | 1000# | 39 | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | | | |
| ...EUGLENALES | | | | | | | | |
|EUGLENACEAE | | | | | | | | |
|TRACHELOMONAS | -- | - | -- | - | 57 | 2 | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

DESCHUTES RIVER BASIN

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | LENGTH OF EXPO- SURE (DAYS) | BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) | CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) |
|--------------|---|--|--|--|--|--|
| OCT 19... | 76 | 143 | 7.51 | 1.04 | -- | -- |
| DEC 29... | 28 | 2545 | .393 | .309 | -- | -- |
| MAY 24... | 34 | 10450 | -- | -- | .067 | .009 |
| SEP 01... | 37 | 34930 | -- | -- | .229 | 2.16 |

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 178 | 140 | 124 | 126 | 134 | 133 | 126 | 119 | 116 | 131 | 141 | 133 |
| 2 | 182 | 139 | 124 | 116 | 130 | 133 | 129 | 119 | 114 | 130 | 146 | 128 |
| 3 | 183 | 136 | 124 | 118 | 130 | 134 | 126 | 120 | 111 | 130 | 145 | 125 |
| 4 | 180 | 133 | 125 | 126 | 136 | 137 | 123 | 122 | 112 | 132 | 143 | 125 |
| 5 | 177 | 133 | 127 | 118 | 140 | 136 | 121 | 123 | 110 | 135 | 147 | 128 |
| 6 | 177 | 133 | 129 | 91 | 143 | 133 | 120 | 124 | 108 | 131 | 143 | 132 |
| 7 | 178 | 132 | 138 | 76 | 145 | 133 | 122 | 126 | 108 | 137 | 139 | 132 |
| 8 | 161 | 133 | 142 | 74 | 146 | 132 | 120 | 124 | 107 | 136 | 141 | 135 |
| 9 | 145 | 128 | 143 | 72 | 155 | 131 | 116 | 122 | 108 | 138 | 140 | 141 |
| 10 | 140 | 122 | 145 | 74 | 168 | 130 | 115 | 123 | 107 | 136 | 145 | 146 |
| 11 | 140 | 122 | 144 | 79 | 172 | 129 | 115 | 123 | 109 | 136 | 146 | 146 |
| 12 | 141 | 119 | 143 | 82 | 167 | 129 | 115 | 126 | 107 | 139 | 143 | 138 |
| 13 | 142 | 115 | 146 | 91 | 161 | 132 | 116 | 128 | 108 | 138 | 135 | 135 |
| 14 | 144 | 113 | 146 | 96 | 149 | 132 | 119 | 131 | 110 | 134 | 135 | 130 |
| 15 | 145 | 114 | 151 | 108 | 138 | 132 | 118 | 128 | 109 | 133 | 135 | 131 |
| 16 | 144 | 121 | 149 | 117 | 130 | 133 | 121 | 129 | 107 | 138 | 139 | 126 |
| 17 | 144 | 126 | 148 | 130 | 125 | 132 | 118 | 127 | 109 | 142 | 140 | 127 |
| 18 | 145 | 125 | 156 | 151 | 127 | 130 | 121 | 125 | 107 | 138 | 138 | 130 |
| 19 | 145 | 122 | 152 | 151 | --- | 133 | 121 | 126 | 107 | 138 | 137 | 130 |
| 20 | 146 | 118 | 141 | 153 | --- | 132 | 124 | 125 | 109 | 141 | 140 | 137 |
| 21 | 148 | 121 | 136 | 172 | --- | 132 | 123 | 123 | 109 | 142 | 143 | --- |
| 22 | 146 | 126 | 129 | 167 | --- | 131 | 122 | 121 | 111 | 143 | 138 | 139 |
| 23 | 144 | 127 | 129 | 154 | --- | 131 | 123 | 126 | 112 | 140 | 138 | 135 |
| 24 | 143 | 133 | 124 | 160 | 127 | 129 | 119 | 128 | 110 | 143 | 140 | 136 |
| 25 | 143 | 142 | 125 | 159 | 127 | 129 | 120 | 120 | 113 | 150 | 143 | 133 |
| 26 | 142 | 140 | 127 | 132 | 130 | 126 | 121 | 123 | 112 | 150 | 137 | 130 |
| 27 | 141 | 135 | 143 | 120 | 131 | 126 | 120 | 120 | 113 | 145 | 137 | 127 |
| 28 | 142 | 132 | 131 | 119 | 132 | 126 | 121 | 115 | 123 | 149 | 137 | 126 |
| 29 | 143 | 129 | 130 | 119 | --- | 124 | 120 | 112 | 119 | 148 | 137 | 125 |
| 30 | 143 | 124 | 132 | 122 | --- | 124 | 119 | 113 | 126 | 148 | 134 | 123 |
| 31 | 141 | --- | 127 | 130 | --- | 124 | --- | 108 | --- | 145 | 136 | --- |

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 16.5 | 15.0 | 12.5 | 11.5 | 6.0 | 5.5 | 5.5 | 5.5 | 5.0 | 4.5 | 8.5 | 7.0 |
| 2 | 16.0 | 15.0 | 12.5 | 12.0 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 7.0 | 6.0 |
| 3 | 14.5 | 13.5 | 12.5 | 11.5 | 6.5 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 7.5 | 6.0 |
| 4 | 14.5 | 12.5 | 12.0 | 11.0 | 7.0 | 6.5 | 6.0 | 5.0 | 5.5 | 5.0 | 8.0 | 6.0 |
| 5 | 14.5 | 12.5 | 12.0 | 12.0 | 6.5 | 6.5 | 5.0 | 4.0 | 5.5 | 5.0 | 8.5 | 6.5 |
| 6 | 15.0 | 13.0 | 12.0 | 11.5 | 7.5 | 6.5 | --- | --- | 5.5 | 5.0 | 8.5 | 7.5 |
| 7 | 15.5 | 13.5 | 12.0 | 11.0 | 8.0 | 7.0 | --- | --- | 5.5 | 5.5 | 8.5 | 7.5 |
| 8 | 15.5 | 13.5 | 12.5 | 11.5 | 8.0 | 7.5 | --- | --- | 5.5 | 5.0 | 8.5 | 7.5 |
| 9 | 15.0 | 13.5 | 12.0 | 11.0 | 7.5 | 7.0 | --- | --- | 6.5 | 5.5 | 8.5 | 7.0 |
| 10 | 15.0 | 13.5 | 12.0 | 11.0 | 7.0 | 6.5 | --- | --- | 8.0 | 6.0 | 8.5 | 6.5 |
| 11 | 15.0 | 13.0 | 11.5 | 11.0 | 7.0 | 6.5 | --- | --- | 8.0 | 7.0 | 8.5 | 6.5 |
| 12 | 15.0 | 13.0 | 10.5 | 10.0 | 6.5 | 6.0 | --- | --- | 8.5 | 7.0 | 8.5 | 7.5 |
| 13 | 14.5 | 12.5 | 10.0 | 9.5 | 7.0 | 6.0 | --- | --- | 9.0 | 8.0 | 8.5 | 7.0 |
| 14 | 14.0 | 12.5 | 10.0 | 9.0 | 6.5 | 6.5 | --- | --- | 8.0 | 7.0 | 7.0 | 6.0 |
| 15 | 13.5 | 12.0 | 10.5 | 9.5 | 7.0 | 6.5 | --- | --- | 7.5 | 6.5 | 8.5 | 6.0 |
| 16 | 13.0 | 11.5 | 11.5 | 10.5 | 7.0 | 6.5 | --- | --- | 8.5 | 6.5 | 8.5 | 7.0 |
| 17 | 12.5 | 11.5 | 11.5 | 11.0 | 6.5 | 6.5 | --- | --- | 9.0 | 7.5 | 8.5 | 6.5 |
| 18 | 12.0 | 10.5 | 11.0 | 10.5 | 7.0 | 6.5 | --- | --- | 9.0 | 7.0 | 9.5 | 7.0 |
| 19 | 11.5 | 10.0 | 10.5 | 9.5 | 6.5 | 6.0 | --- | --- | 8.5 | 7.0 | 9.0 | 8.0 |
| 20 | 11.5 | 10.5 | 9.5 | 9.0 | 6.0 | 5.5 | --- | --- | 8.0 | 7.0 | 9.0 | 7.0 |
| 21 | 11.5 | 10.5 | 9.0 | 8.5 | 5.5 | 5.5 | --- | --- | 7.5 | 6.5 | 9.0 | 7.0 |
| 22 | 12.0 | 10.5 | 9.5 | 8.5 | 5.5 | 5.5 | --- | --- | 8.5 | 6.5 | 10.5 | 8.0 |
| 23 | 12.0 | 11.0 | 8.5 | 8.0 | 6.0 | 5.5 | --- | --- | 7.0 | 6.0 | 10.0 | 8.5 |
| 24 | 11.5 | 11.0 | 9.0 | 8.5 | 6.0 | 5.5 | --- | --- | 7.0 | 6.0 | 9.5 | 7.5 |
| 25 | 11.5 | 11.0 | 9.0 | 8.5 | 6.5 | 6.0 | --- | --- | 7.0 | 6.0 | 10.0 | 7.5 |
| 26 | 12.0 | 11.0 | 8.5 | 7.0 | 7.5 | 6.5 | --- | --- | 7.0 | 6.0 | 10.5 | 8.0 |
| 27 | 12.0 | 10.5 | 7.0 | 6.0 | 7.5 | 7.0 | 5.5 | 4.5 | 8.5 | 6.5 | 10.0 | 8.0 |
| 28 | 11.5 | 10.5 | 6.5 | 5.5 | 7.0 | 6.5 | 5.0 | 4.5 | 8.0 | 7.5 | 9.5 | 7.5 |
| 29 | 11.5 | 10.5 | 7.0 | 6.0 | 6.5 | 6.0 | 5.0 | 4.5 | --- | --- | 9.5 | 7.0 |
| 30 | 11.5 | 10.5 | 6.0 | 5.5 | 6.0 | 6.0 | 4.5 | 4.0 | --- | --- | 10.5 | 7.5 |
| 31 | 12.0 | 11.0 | --- | --- | 6.0 | 5.5 | 5.0 | 4.5 | --- | --- | 9.0 | 8.0 |
| MONTH | 16.5 | 10.0 | 12.5 | 5.5 | 8.0 | 5.5 | 6.0 | 4.0 | 9.0 | 4.5 | 10.5 | 6.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 10.0 | 7.5 | 13.0 | 12.0 | 16.0 | 14.0 | 20.0 | 17.5 | 21.0 | 17.5 | 17.0 | 14.5 |
| 2 | 10.5 | 8.0 | 13.5 | 12.0 | 16.5 | 13.5 | 19.0 | 16.0 | 21.0 | 18.0 | 16.0 | 15.0 |
| 3 | 12.0 | 8.5 | 14.0 | 12.0 | 15.0 | 14.0 | 18.0 | 15.5 | 21.0 | 18.0 | 17.0 | 15.0 |
| 4 | 12.5 | 9.5 | 13.0 | 11.5 | 15.5 | 13.5 | 17.5 | 14.5 | 21.5 | 18.0 | 19.0 | 16.5 |
| 5 | 13.5 | 10.0 | 13.5 | 11.0 | 18.5 | 13.5 | 17.0 | 14.0 | 21.0 | 18.0 | 19.0 | 16.0 |
| 6 | 13.5 | 10.5 | 12.5 | 10.5 | 20.0 | 16.0 | 18.0 | 13.5 | 20.5 | 18.0 | 18.5 | 16.0 |
| 7 | 14.0 | 11.0 | 11.5 | 10.5 | 19.5 | 17.0 | 19.0 | 15.0 | 20.5 | 17.5 | 17.5 | 15.5 |
| 8 | 12.5 | 11.0 | 13.5 | 10.0 | 18.0 | 15.0 | 19.0 | 16.0 | 21.0 | 18.0 | 17.5 | 14.5 |
| 9 | 11.5 | 9.5 | 15.0 | 12.0 | 18.5 | 14.5 | 18.5 | 16.0 | 21.0 | 17.5 | 17.0 | 14.5 |
| 10 | 10.5 | 8.5 | 14.0 | 11.5 | 18.0 | 14.5 | 19.0 | 15.0 | 20.5 | 17.5 | 17.0 | 14.5 |
| 11 | 12.5 | 9.5 | 13.5 | 10.5 | 17.0 | 15.0 | 20.0 | 16.0 | 21.0 | 17.5 | 17.5 | 14.5 |
| 12 | 13.0 | 10.0 | 15.0 | 11.0 | 18.0 | 14.5 | 18.5 | 16.0 | 21.0 | 17.5 | 18.0 | 15.0 |
| 13 | 12.5 | 10.5 | 15.5 | 12.5 | 19.0 | 15.0 | 19.5 | 15.5 | 21.5 | 18.0 | 18.0 | 15.0 |
| 14 | 12.5 | 9.0 | 15.5 | 12.5 | 19.0 | 15.5 | 20.0 | 16.0 | 20.5 | 18.5 | 17.5 | 15.5 |
| 15 | 12.5 | 10.0 | 15.0 | 12.5 | 18.5 | 15.5 | 20.5 | 17.0 | 21.0 | 18.0 | 16.0 | 14.5 |
| 16 | 12.5 | 10.5 | 14.5 | 12.0 | 19.0 | 15.0 | 20.0 | 17.0 | 21.0 | 18.0 | 16.5 | 14.0 |
| 17 | 12.5 | 9.5 | 15.0 | 12.0 | 19.0 | 15.5 | 19.0 | 17.0 | 21.0 | 18.5 | 15.5 | 14.0 |
| 18 | 12.0 | 9.0 | 16.5 | 12.5 | 20.0 | 16.5 | 18.5 | 15.5 | 20.5 | 18.0 | 15.5 | 14.5 |
| 19 | 12.0 | 9.0 | 17.0 | 13.5 | 19.5 | 16.5 | 18.5 | 15.0 | 21.0 | 18.5 | 16.5 | 14.5 |
| 20 | 12.0 | 9.5 | 18.0 | 14.5 | 19.0 | 16.0 | 19.5 | 15.5 | 21.5 | 18.5 | 16.0 | 14.5 |
| 21 | 12.0 | 10.5 | 17.0 | 15.0 | 19.5 | 15.5 | 20.5 | 16.5 | 20.5 | 18.5 | 16.0 | 14.0 |
| 22 | 14.0 | 10.5 | 17.5 | 14.5 | 20.0 | 17.0 | 20.5 | 17.0 | 20.0 | 17.5 | 15.5 | 13.0 |
| 23 | 14.5 | 11.5 | 16.0 | 14.0 | 19.5 | 16.5 | 20.5 | 17.5 | 18.5 | 17.0 | 14.5 | 13.5 |
| 24 | 15.5 | 12.5 | 15.5 | 13.5 | 20.5 | 16.5 | 19.5 | 18.0 | 18.5 | 16.5 | 15.0 | 13.0 |
| 25 | 15.5 | 13.0 | 15.5 | 12.5 | 20.5 | 17.0 | 19.0 | 17.0 | 17.0 | 15.5 | 15.5 | 13.5 |
| 26 | 15.0 | 12.0 | 15.5 | 13.0 | 20.0 | 16.5 | 20.5 | 17.0 | 17.0 | 14.5 | 16.0 | 13.5 |
| 27 | 15.0 | 11.5 | 14.5 | 12.5 | 20.0 | 16.5 | 21.0 | 17.5 | 16.5 | 14.0 | 15.0 | 14.0 |
| 28 | 15.0 | 12.5 | 14.5 | 12.0 | 20.0 | 16.5 | 19.5 | 17.0 | 17.0 | 15.0 | 14.0 | 13.5 |
| 29 | 15.0 | 12.5 | 15.5 | 11.5 | 20.0 | 16.0 | 19.5 | 16.5 | 16.5 | 15.0 | 14.0 | 13.0 |
| 30 | 14.0 | 12.5 | 15.0 | 13.5 | 20.5 | 16.5 | 20.0 | 16.5 | 17.5 | 15.0 | 14.0 | 12.5 |
| 31 | --- | --- | 16.0 | 14.0 | --- | --- | 21.0 | 17.0 | 17.5 | 15.0 | --- | --- |
| MONTH | 15.5 | 7.5 | 18.0 | 10.0 | 20.5 | 13.5 | 21.0 | 13.5 | 21.5 | 14.0 | 19.0 | 12.5 |

COLUMBIA RIVER MAIN STEM

14105700 COLUMBIA RIVER AT THE DALLES, OR

LOCATION.--Lat 45°36'27", long 121°10'20", in SW¼SW¼ sec.34, T.2 N., R.13 E., Wasco County, Hydrologic Unit 17070105, Corps of Engineers land, on left bank 0.3 mi (0.5 km) downstream from Mill Creek, 2.6 mi (4.2 km) downstream from The Dalles Dam, and at mile 188.9 (303.9 km).

DRAINAGE AREA.--237,000 mi² (614,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1857 to September 1877 (annual maximum only, at Lower Cascades Landing, published in WSP 1318), June 1878 to current year. Published as "near The Dalles" 1936-56.

REVISED RECORDS.--WSP 534: 1920(m). WSP 1094: 1894. WSP 1248: 1866, 1888, 1899, 1909. WSP 1518: 1876(M).

GAGE.--Acoustic velocity meter (AVM) with water-stage and velocity-index recorder. Datum of gage is at mean sea level. See WSP 1738 for history of changes prior to Mar. 16, 1957. Mar. 16, 1957, to Sept. 30, 1968, water-stage recorder at site 0.4 mi (0.6 km) upstream at same datum.

REMARKS.--Water-discharge records fair. Considerable regulation by many large reservoirs. Diurnal fluctuations caused by powerplant and gates at The Dalles Dam. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--99 years, 194,100 ft³/s (5,497 m³/s), 140,600,000 acre-ft/yr (173 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (1858-77), 1,240,000 ft³/s (35,100 m³/s) June 6, 1894, gage height, 106.5 ft (32.46 m); minimum (1878-1977), 12,100 ft³/s (343 m³/s) Apr. 16, 1968 (recorded by AVM due to closure of John Day dam).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 213,000 ft³/s (6,030 m³/s) Jan. 25; maximum gage height, 79.44 ft (24.213 m) June 3; minimum daily discharge, 53,900 ft³/s (1,530 m³/s) July 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|----------|---------|---------|-------------|------------|-----------|-----------------|---------|---------|---------|---------|---------|
| 1 | 135000 | 135000 | 170000 | 112000 | 156000 | 126000 | 126000 | 103000 | 168000 | 76400 | 105000 | 95300 |
| 2 | 121000 | 135000 | 156000 | 103000 | 171000 | 124000 | 109000 | 142000 | 164000 | 82900 | 118000 | 81900 |
| 3 | 110000 | 129000 | 136000 | 175000 | 171000 | 143000 | 76200 | 154000 | 168000 | 70400 | 103000 | 94500 |
| 4 | 176000 | 139000 | 84900 | 147000 | 142000 | 124000 | 100000 | 151000 | 105000 | 72500 | 126000 | 81000 |
| 5 | 188000 | 145000 | 93900 | 179000 | 121000 | 120000 | 98000 | 148000 | 84500 | 76900 | 106000 | 71300 |
| 6 | 169000 | 111000 | 124000 | 146000 | 78200 | 117000 | 98000 | 150000 | 129000 | 86500 | 82500 | 112000 |
| 7 | 143000 | 116000 | 123000 | 178000 | 142000 | 134000 | 91100 | 128000 | 141000 | 82900 | 78500 | 124000 |
| 8 | 150000 | 127000 | 134000 | 130000 | 141000 | 120000 | 81500 | 120000 | 161000 | 97000 | 83900 | 100000 |
| 9 | 101000 | 130000 | 121000 | 96200 | 131000 | 116000 | 79600 | 136000 | 153000 | 80400 | 94700 | 107000 |
| 10 | 97800 | 145000 | 121000 | 131000 | 121000 | 127000 | 71700 | 137000 | 148000 | 53900 | 88800 | 75600 |
| 11 | 146000 | 135000 | 119000 | 141000 | 116000 | 125000 | 115000 | 146000 | 108000 | 100000 | 102000 | 65600 |
| 12 | 151000 | 127000 | 120000 | 158000 | 108000 | 122000 | 106000 | 142000 | 90900 | 104000 | 99000 | 95900 |
| 13 | 164000 | 124000 | 149000 | 136000 | 77500 | 125000 | 115000 | 134000 | 131000 | 96600 | 79600 | 105000 |
| 14 | 159000 | 131000 | 139000 | 136000 | 125000 | 135000 | 127000 | 122000 | 145000 | 99400 | 58300 | 116000 |
| 15 | 190000 | 129000 | 136000 | 112000 | 121000 | 121000 | 125000 | 127000 | 152000 | 116000 | 108000 | 116000 |
| 16 | 130000 | 132000 | 139000 | 107000 | 125000 | 175000 | 97000 | 143000 | 156000 | 65500 | 117000 | 113000 |
| 17 | 102000 | 136000 | 156000 | 139000 | 110000 | 121000 | 65600 | 145000 | 144000 | 82300 | 99000 | 92600 |
| 18 | 174000 | 128000 | 117000 | 123000 | 108000 | 135000 | 105000 | 129000 | 112000 | 118000 | 97200 | 78400 |
| 19 | 175000 | 122000 | 105000 | 127000 | 111000 | 128000 | 102000 | 105000 | 83600 | 110000 | 107000 | 109000 |
| 20 | 140000 | 126000 | 146000 | 168000 | 99000 | 97600 | 119000 | 112000 | 96400 | 110000 | 87300 | 91900 |
| 21 | 152000 | 121000 | 144000 | 146000 | 120000 | 118000 | 118000 | 138000 | 106000 | 85800 | 65200 | 98100 |
| 22 | 160000 | 134000 | 158000 | 132000 | 117000 | 114000 | 110000 | 131000 | 108000 | 107000 | 106000 | 95500 |
| 23 | 89100 | 126000 | 160000 | 132000 | 132000 | 123000 | 94500 | 131000 | 110000 | 66700 | 111000 | 110000 |
| 24 | 89000 | 141000 | 119000 | 175000 | 121000 | 123000 | 74100 | 132000 | 124000 | 73800 | 111000 | 92100 |
| 25 | 125000 | 130000 | 117000 | 213000 | 146000 | 117000 | 117000 | 170000 | 107000 | 92200 | 89500 | 91600 |
| 26 | 136000 | 129000 | 118000 | 171000 | 121000 | 90000 | 129000 | 174000 | 75500 | 97100 | 79900 | 109000 |
| 27 | 148000 | 143000 | 122000 | 151000 | 108000 | 89000 | 125000 | 184000 | 117000 | 85600 | 75500 | 112000 |
| 28 | 156000 | 118000 | 136000 | 161000 | 134000 | 109000 | 127000 | 130000 | 96200 | 92700 | 55600 | 112000 |
| 29 | 164000 | 171000 | 139000 | 153000 | --- | 140000 | 111000 | 116000 | 113000 | 106000 | 98700 | 114000 |
| 30 | 131000 | 183000 | 147000 | 136000 | --- | 121000 | 105000 | 95900 | 113000 | 84700 | 83500 | 110000 |
| 31 | 112000 | --- | 162000 | 198000 | --- | 131000 | --- | 144000 | --- | 73500 | 88500 | --- |
| TOTAL | 4383900 | 3998000 | 4111800 | 4512200 | 3473700 | 3810600 | 3118300 | 4219900 | 3710100 | 2746700 | 2905200 | 2970300 |
| MEAN | 141400 | 133300 | 132600 | 145600 | 124100 | 122900 | 103900 | 136100 | 123700 | 88600 | 93720 | 99010 |
| MAX | 190000 | 183000 | 170000 | 213000 | 171000 | 175000 | 129000 | 184000 | 168000 | 118000 | 126000 | 124000 |
| MIN | 89000 | 111000 | 84900 | 96200 | 77500 | 89000 | 65600 | 95900 | 75500 | 53900 | 55600 | 65600 |
| AC-FT | 8695000 | 7930000 | 8156000 | 8950000 | 6890000 | 7558000 | 6185000 | 8370000 | 7359000 | 5448000 | 5762000 | 5892000 |
| CAL YR 1976 TOTAL | 78819700 | | | MEAN 215400 | MAX 418000 | MIN 84900 | AC-FT 156300000 | | | | | |
| WTR YR 1977 TOTAL | 43960700 | | | MEAN 120400 | MAX 213000 | MIN 53900 | AC-FT 87200000 | | | | | |

14105700 COLUMBIA RIVER NEAR THE DALLES, OR--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected at The Dalles Dam, 3.2 mi (5.1 km) upstream from discharge station.

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1950 to current year.

WATER TEMPERATURES: December 1950 to September 1969, October 1973 to September 1976.

REMARKS.--No appreciable inflow between sampling point and gaging station except during periods of heavy local runoff.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 324 micromhos/cm Dec. 7, 1955; minimum daily, 95 micromhos/cm June 8, 1972.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 232 micromhos May 13; minimum daily recorded, 136 micromhos July 7, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | CHLORO- PHYLL A (UG/L) | CHLORO- PHYLL B (UG/L) | CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) | CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) |
|--------------|------|-------------------------|-----------------------------|---------------|------------------------------------|--|--|--|------------------------------|------------------------------|---|---|
| OCT 18... | 1400 | 177000 | 16.0 | 8.3 | 10.0 | 170 | B4 | <1 | 6.16 | .959 | -- | -- |
| NOV 30... | 1400 | 182700 | 9.0 | 8.1 | 11.6 | 186 | B6 | <1 | 11.1 | 10.2 | -- | -- |
| DEC 28... | 1500 | 141500 | 5.8 | 8.3 | 11.5 | 191 | B1 | -- | -- | -- | -- | -- |
| JAN 25... | 1400 | 211300 | 2.0 | 8.0 | 14.0 | 196 | <1 | B7 | -- | -- | .126 | .000 |
| MAR 02... | 1300 | 129600 | 5.0 | 8.5 | 13.0 | 196 | B1 | <1 | 5.41 | .620 | -- | -- |
| 22... | 1300 | 113600 | 5.8 | 8.6 | 13.4 | 188 | <1 | <1 | -- | -- | .300 | .066 |
| APR 27... | 1200 | 122800 | 11.3 | 8.4 | 11.3 | 202 | B1 | <1 | 1.95 | .576 | -- | -- |
| MAY 23... | 1330 | 133100 | 13.3 | 8.6 | -- | 179 | B2 | <1 | -- | -- | -- | -- |
| JUN 30... | 1200 | 112900 | 19.0 | 8.2 | 8.7 | 146 | B1 | <1 | 8.10 | .486 | -- | -- |
| JUL 26... | 1300 | 97100 | 20.5 | 8.0 | 11.3 | 144 | B1 | <1 | 4.15 | .000 | -- | -- |
| AUG 31... | 0800 | 88500 | 20.7 | -- | 8.3 | 156 | B12 | B15 | -- | -- | -- | -- |

| DATE | CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) | DIS- SOLVED SILICA (SI02) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL AMMONIA NITRO- GEN (N) (MG/L) | TOTAL ORGANIC NITRO- GEN (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) |
|--------------|---|--|--|--|--|--|---|---|---|--|--|
| OCT 18... | 19 | 7.0 | .14 | .00 | .47 | .47 | .61 | .04 | 2.5 | 91 | 43500 |
| NOV 30... | 3 | 7.2 | .23 | .00 | .37 | .37 | .60 | .04 | 1.5 | 105 | 51800 |
| DEC 28... | 14 | 8.7 | .26 | .02 | .22 | .24 | .50 | .03 | 1.7 | 116 | 44300 |
| JAN 25... | 19 | 8.4 | .30 | .01 | .06 | .07 | .37 | .02 | 1.4 | 122 | 69600 |
| MAR 02... | 15 | 7.6 | .19 | .00 | .92 | .92 | 1.1 | .01 | 1.5 | 109 | 38100 |
| 22... | 7 | 7.1 | .12 | .02 | .20 | .22 | .34 | .00 | 1.5 | 122 | 37400 |
| APR 27... | 13 | 6.3 | .21 | .06 | .30 | .36 | .57 | .03 | 1.7 | 116 | 38500 |
| MAY 23... | 9 | 3.8 | .01 | .04 | .52 | .56 | .57 | .05 | 1.9 | 101 | 36300 |
| JUN 30... | 8 | 4.7 | .06 | .05 | .12 | .17 | .23 | .04 | 1.8 | 77 | 23500 |
| JUL 26... | 7 | 4.4 | .03 | .01 | .41 | .42 | .45 | .03 | 1.9 | 81 | 21200 |
| AUG 31... | 28 | 5.9 | .09 | .04 | .24 | .28 | .37 | .02 | 1.0 | 77 | 18400 |

COLUMBIA RIVER MAIN STEM

14105700 COLUMBIA RIVER NEAR THE DALLES, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | DIS- SOLVED SOLIDS (TONS PER AC-FT) | TOTAL ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | TOTAL COPPER (CU) (UG/L) | TOTAL IRON (FE) (UG/L) | TOTAL LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | TOTAL NON- FILT- RABLE RESIDUE (MG/L) |
|-----------|--|------------------------------------|---|--|-----------------------------------|---------------------------------|---------------------------------|---------------------------------|--|------------------------------------|--|
| OCT 14... | .12 | 2 | <10 | 0 | 20 | 360 | 100 | 30 | 0 | .2 | 11 |
| NOV 30... | .14 | 2 | <10 | 0 | <10 | 250 | <100 | 20 | 0 | .0 | 10 |
| DEC 24... | .16 | 1 | <10 | 0 | <10 | 150 | <100 | 40 | 0 | .0 | 5 |
| JAN 25... | .17 | 2 | <10 | 0 | <10 | 130 | <100 | 70 | 0 | .1 | 4 |
| MAR 02... | .15 | 3 | <10 | 0 | <10 | 140 | <100 | 40 | 0 | .0 | 0 |
| 22... | .17 | 1 | <10 | 0 | <10 | 160 | <100 | 30 | 0 | .0 | 0 |
| APR 27... | .16 | 2 | <10 | 0 | 10 | 200 | 100 | 20 | 0 | .0 | 12 |
| MAY 23... | .14 | -- | 10 | 320 | <10 | 1100 | <100 | 70 | 0 | .1 | 8 |
| JUN 30... | .10 | 0 | <10 | 0 | 10 | 150 | <100 | 30 | 0 | .1 | 4 |
| JUL 26... | .11 | 2 | <10 | 10 | 40 | 460 | <100 | 40 | 0 | .0 | 3 |
| AUG 31... | .10 | 1 | <10 | 10 | 30 | 180 | <100 | 30 | 0 | .0 | 5 |

| DATE | TOTAL CAL- CIUM (CA) (MG/L) | TOTAL MAG- NE- SIUM (MG) (MG/L) | TOTAL PO- TAS- SIUM (K) (MG/L) | TOTAL SODIUM (NA) (MG/L) | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | OIL AND GREASE (MG/L) |
|-----------|---|--|---|-----------------------------------|--------------------------------------|-----------------------------------|--|---|--------------------------------|
| OCT 18... | 17 | 4.5 | 1.2 | 6.4 | 69 | 0 | 13 | 2.9 | 0 |
| JAN 25... | 22 | 6.4 | 1.4 | 7.4 | -- | 0 | 20 | 4.2 | 0 |
| APR 27... | 24 | 6.8 | 1.5 | 8.5 | 96 | 0 | 16 | 5.0 | 0 |
| JUL 26... | 18 | 4.6 | 1.1 | 4.4 | 68 | 0 | 11 | 2.7 | 0 |

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | --- | 184 | 171 | 200 | --- | 185 | 216 | 165 | 140 | 149 | 153 |
| 2 | | --- | 185 | 172 | 193 | --- | 189 | 212 | 165 | 140 | 147 | 153 |
| 3 | | --- | 189 | 174 | 186 | --- | 191 | 213 | --- | 140 | 148 | 151 |
| 4 | | --- | 189 | 183 | 184 | --- | 190 | 215 | 165 | 138 | 148 | 152 |
| 5 | | 160 | 185 | 183 | 184 | --- | 189 | 211 | 160 | 139 | 149 | 156 |
| 6 | | 155 | 189 | 183 | 186 | --- | 194 | 210 | 161 | 137 | 148 | 155 |
| 7 | | 154 | 189 | 186 | 186 | --- | 194 | 210 | 161 | 136 | 148 | 154 |
| 8 | | 154 | 191 | 191 | --- | --- | 191 | 213 | 162 | 136 | 150 | 157 |
| 9 | | 161 | 196 | 192 | --- | 186 | 194 | 220 | 160 | 137 | 149 | 156 |
| 10 | | 159 | 195 | 188 | --- | 188 | 190 | 228 | 158 | 138 | 148 | 157 |
| 11 | | 160 | 193 | 190 | --- | --- | 186 | 228 | 159 | 137 | 151 | 158 |
| 12 | | 162 | 191 | 180 | --- | 188 | 186 | --- | 157 | 138 | 151 | 158 |
| 13 | | 162 | 188 | 188 | --- | 190 | 185 | 232 | 157 | 137 | 152 | 158 |
| 14 | | 162 | 186 | 177 | --- | 189 | 186 | 220 | 158 | 138 | 152 | 160 |
| 15 | | 166 | 187 | 189 | --- | 189 | 188 | 219 | 155 | 138 | 151 | 159 |
| 16 | | 170 | 188 | 180 | --- | 190 | 192 | 209 | 154 | 138 | 153 | 159 |
| 17 | | 170 | 190 | 181 | --- | 192 | 192 | 202 | 153 | 138 | 152 | 158 |
| 18 | | 170 | 192 | 186 | --- | 194 | 192 | 203 | 154 | 138 | 154 | 158 |
| 19 | | 175 | 188 | 188 | --- | 189 | 191 | 194 | 151 | 140 | 155 | 158 |
| 20 | | --- | 189 | 191 | --- | 194 | 193 | 189 | 150 | 140 | 154 | 158 |
| 21 | | --- | --- | 195 | --- | 191 | 193 | 186 | 152 | 141 | 154 | 159 |
| 22 | | 187 | 199 | 190 | --- | 192 | 195 | 183 | --- | 142 | 153 | --- |
| 23 | | 186 | 202 | 190 | --- | 189 | 200 | 180 | 150 | 144 | 153 | --- |
| 24 | | 183 | 203 | 190 | --- | 187 | 199 | 178 | 151 | 143 | 153 | --- |
| 25 | | 178 | 197 | 193 | --- | 184 | 202 | 176 | 149 | 143 | 154 | --- |
| 26 | | 176 | 196 | --- | --- | 188 | 216 | 173 | 148 | 144 | 153 | --- |
| 27 | | 176 | 193 | 198 | --- | 192 | 211 | 171 | 146 | 144 | 154 | --- |
| 28 | | 181 | 191 | 197 | --- | 190 | 213 | 170 | 145 | 145 | 156 | --- |
| 29 | | 180 | 189 | 201 | --- | 194 | 209 | 168 | 143 | 146 | 154 | --- |
| 30 | | 184 | 186 | 198 | --- | 192 | 213 | 166 | 142 | 146 | 153 | --- |
| 31 | | --- | 171 | 202 | --- | 192 | --- | 166 | --- | 147 | 152 | --- |

MOSIER CREEK BASIN

203

14113200 MOSIER CREEK NEAR MOSIER, OR

LOCATION.--Lat 45°38'55", long 121°22'35", in NW¼NW¼ sec.19, T.2 N., R.12 E., Wasco County, Hydrologic Unit 17070105, on left bank 0.1 mi (0.2 km) downstream from West Fork Mosier Creek, 2.5 mi (4.0 km) southeast of Mosier, and at mile 3.0 (4.8 km).

DRAINAGE AREA.--41.5 mi² (107.5 km²).

PERIOD OF RECORD.--April 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 425 ft (130 m), from topographic map.

REMARKS.--Records fair. No regulation. Several small pumping diversions for irrigation above station.

AVERAGE DISCHARGE.--14 years, 28.4 ft³/s (0.804 m³/s), 20,580 acre-ft/yr (25.4 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,790 ft³/s (136 m³/s) Dec. 23, 1964, gage height, 8.9 ft (2.71 m), from flood profile, from rating curve extended above 1,000 ft³/s (28.3 m³/s), on basis of slope-area measurement of peak flow; minimum, 0.60 ft³/s (0.017 m³/s) July 31, 1968, July 30, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.4 ft³/s (0.27 m³/s) Mar. 8; maximum gage height, 1.53 ft (0.466 m), backwater from ice; minimum discharge, 0.61 ft³/s (0.017 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|------|
| 1 | 2.3 | 4.5 | 4.1 | 3.3 | 3.3 | 6.4 | 5.6 | 3.2 | 2.7 | 1.1 | .89 | 1.7 |
| 2 | 2.3 | 3.6 | 4.0 | 3.3 | 3.3 | 5.4 | 5.6 | 3.2 | 2.6 | 1.2 | .85 | 1.6 |
| 3 | 2.3 | 3.4 | 4.1 | 3.5 | 3.3 | 5.1 | 5.6 | 3.7 | 2.6 | 1.1 | .81 | 1.7 |
| 4 | 2.4 | 3.2 | 3.5 | 3.5 | 3.3 | 4.9 | 5.6 | 4.9 | 2.7 | 1.2 | .81 | 1.7 |
| 5 | 2.5 | 3.2 | 3.5 | 3.3 | 3.3 | 4.4 | 5.8 | 4.1 | 2.7 | 1.3 | .81 | 1.7 |
| 6 | 2.4 | 3.3 | 3.5 | 3.0 | 3.3 | 4.4 | 5.8 | 4.3 | 2.4 | 1.3 | .85 | 1.6 |
| 7 | 2.3 | 3.3 | 3.5 | 3.0 | 3.3 | 4.9 | 5.8 | 3.6 | 2.2 | 1.2 | .93 | 1.4 |
| 8 | 2.2 | 3.2 | 3.7 | 3.0 | 3.3 | 8.6 | 5.8 | 3.7 | 2.0 | 1.1 | .85 | 1.3 |
| 9 | 2.2 | 3.2 | 4.7 | 3.0 | 3.3 | 8.3 | 5.8 | 3.6 | 1.9 | 1.1 | .77 | 1.3 |
| 10 | 2.2 | 3.3 | 4.1 | 3.0 | 3.3 | 7.6 | 5.6 | 3.6 | 2.0 | 1.2 | .77 | 1.3 |
| 11 | 2.2 | 3.5 | 3.6 | 3.0 | 4.0 | 6.4 | 5.4 | 3.7 | 1.8 | 1.1 | .77 | 1.3 |
| 12 | 2.2 | 3.6 | 3.6 | 3.0 | 4.1 | 5.8 | 5.1 | 3.5 | 1.8 | 1.1 | .77 | 1.4 |
| 13 | 2.1 | 3.7 | 3.5 | 3.1 | 4.1 | 5.4 | 4.9 | 3.5 | 1.8 | 1.1 | .77 | 1.4 |
| 14 | 2.1 | 3.6 | 3.5 | 3.2 | 4.0 | 5.1 | 4.9 | 3.2 | 1.7 | .93 | .77 | 1.4 |
| 15 | 2.1 | 4.0 | 3.3 | 3.5 | 3.7 | 4.7 | 4.7 | 3.2 | 1.7 | 1.1 | .77 | 1.4 |
| 16 | 2.1 | 4.6 | 3.5 | 4.0 | 3.6 | 4.6 | 4.6 | 3.0 | 1.6 | 1.0 | .77 | 1.5 |
| 17 | 2.1 | 4.4 | 3.5 | 4.3 | 3.6 | 4.3 | 4.6 | 2.9 | 1.5 | .98 | .72 | 1.5 |
| 18 | 2.1 | 4.4 | 3.5 | 4.9 | 3.6 | 4.3 | 4.6 | 2.9 | 1.4 | 1.2 | .72 | 1.7 |
| 19 | 2.1 | 4.1 | 3.5 | 5.8 | 3.6 | 4.3 | 4.4 | 2.7 | 1.3 | 1.1 | .77 | 1.8 |
| 20 | 2.1 | 3.8 | 3.6 | 5.1 | 3.6 | 4.3 | 4.4 | 2.6 | 1.3 | 1.1 | .85 | 1.8 |
| 21 | 2.1 | 3.8 | 3.1 | 4.4 | 3.7 | 4.4 | 4.1 | 2.6 | 1.5 | 1.0 | .89 | 1.8 |
| 22 | 2.1 | 3.8 | 3.2 | 4.1 | 4.3 | 4.4 | 4.1 | 2.6 | 1.5 | .98 | .93 | 2.0 |
| 23 | 2.1 | 3.8 | 3.2 | 4.0 | 4.3 | 4.4 | 4.1 | 2.6 | 1.3 | .93 | .98 | 2.0 |
| 24 | 2.5 | 3.8 | 3.3 | 3.8 | 4.0 | 4.4 | 4.1 | 2.7 | 1.2 | .89 | 1.2 | 2.0 |
| 25 | 3.0 | 3.6 | 3.3 | 3.6 | 4.0 | 4.4 | 3.7 | 2.5 | 1.2 | .89 | 1.8 | 2.1 |
| 26 | 4.5 | 3.6 | 4.0 | 4.1 | 4.1 | 4.4 | 3.7 | 2.6 | 1.1 | 1.0 | 2.7 | 2.1 |
| 27 | 3.8 | 3.5 | 5.1 | 3.5 | 4.3 | 6.9 | 3.6 | 3.5 | 1.1 | 1.0 | 2.0 | 2.1 |
| 28 | 3.5 | 3.5 | 4.3 | 4.1 | 7.3 | 7.1 | 3.5 | 3.1 | 1.1 | .98 | 1.9 | 2.1 |
| 29 | 3.3 | 3.6 | 3.8 | 3.5 | --- | 6.4 | 3.3 | 2.8 | 1.1 | 1.0 | 1.9 | 2.1 |
| 30 | 3.3 | 5.1 | 3.8 | 3.3 | --- | 5.6 | 3.3 | 2.7 | 1.1 | .98 | 2.0 | 2.1 |
| 31 | 3.5 | --- | 3.5 | 3.3 | --- | 5.6 | --- | 2.6 | --- | .93 | 2.0 | --- |
| TOTAL | 78.0 | 112.0 | 114.4 | 113.5 | 106.9 | 167.2 | 142.1 | 99.4 | 51.9 | 33.09 | 34.32 | 50.9 |
| MEAN | 2.52 | 3.73 | 3.69 | 3.66 | 3.82 | 5.39 | 4.74 | 3.21 | 1.73 | 1.07 | 1.11 | 1.70 |
| MAX | 4.5 | 5.1 | 5.1 | 5.8 | 7.3 | 8.6 | 5.8 | 4.9 | 2.7 | 1.3 | 2.7 | 2.1 |
| MIN | 2.1 | 3.2 | 3.1 | 3.0 | 3.3 | 4.3 | 3.3 | 2.5 | 1.1 | .89 | .72 | 1.3 |
| AC-FT | 155 | 222 | 227 | 225 | 212 | 332 | 282 | 197 | 103 | 66 | 68 | 101 |

CAL YR 1976 TOTAL 11655.00 MEAN 31.8 MAX 313 MIN 1.9 AC-FT 23120
WTR YR 1977 TOTAL 1103.71 MEAN 3.02 MAX 8.6 MIN .72 AC-FT 2190

HOOD RIVER BASIN

14118500 WEST FORK HOOD RIVER NEAR DEE, OR

LOCATION.--Lat 45°35'55", long 121°38'05", in SE¼ sec.1, T.1 N., R.9 E., Hood River County, Hydrologic Unit 17070105, on left bank 0.3 mi (0.5 km) upstream from Dead Point Creek, 0.8 mi (1.3 km) northwest of Dee, and at mile 0.4 (0.6 km).

DRAINAGE AREA.--95.6 mi² (247.6 km²).

PERIOD OF RECORD.--September 1913 to February 1916 (incomplete), June 1932 to current year.

GAGE.--Water-stage recorder. Datum of gage is 802.1 ft (244.48 m) above mean sea level. Sept. 1, 1913, to Feb. 12, 1916, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Records excellent. No regulation. Dee Irrigation District canal diverts from right bank about 6 mi (10 km) above station for irrigation above station and in Middle Fork basin. Diversions from Green Point Creek basin above station for irrigation near Oak Grove; water from two of these diversions is carried in Hood River Irrigation District canal.

AVERAGE DISCHARGE.--46 years (water years 1914, 1933-77), 561 ft³/s (15.89 m³/s), 406,400 acre-ft/yr (501 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, Dec. 22, 1964, gage height, 27.0 ft (8.23 m), from floodmarks; maximum daily, 15,000 ft³/s (425 m³/s) Dec. 23, 1964; minimum, 93 ft³/s (2.63 m³/s) Aug. 22, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,120 ft³/s (31.7 m³/s) Mar. 27, gage height, 4.96 ft (1.512 m), no peak above base of 4,100 ft³/s (116 m³/s); minimum, 112 ft³/s (3.17 m³/s) Aug. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|---------|--------------|-------|-------|-------|------|------|-------|
| 1 | 156 | 279 | 152 | 222 | 179 | 611 | 593 | 441 | 420 | 179 | 129 | 171 |
| 2 | 163 | 222 | 151 | 215 | 173 | 494 | 530 | 534 | 376 | 173 | 126 | 163 |
| 3 | 163 | 197 | 151 | 206 | 167 | 475 | 482 | 657 | 354 | 163 | 126 | 195 |
| 4 | 154 | 183 | 149 | 200 | 163 | 403 | 506 | 598 | 607 | 160 | 129 | 255 |
| 5 | 149 | 173 | 149 | 189 | 162 | 370 | 559 | 522 | 546 | 151 | 127 | 266 |
| 6 | 151 | 167 | 147 | 187 | 158 | 373 | 643 | 452 | 514 | 147 | 126 | 210 |
| 7 | 151 | 167 | 149 | 187 | 154 | 700 | 774 | 413 | 490 | 142 | 122 | 183 |
| 8 | 151 | 162 | 185 | 187 | 152 | 901 | 863 | 399 | 427 | 144 | 118 | 154 |
| 9 | 149 | 160 | 213 | 187 | 156 | 831 | 705 | 396 | 360 | 149 | 118 | 144 |
| 10 | 151 | 156 | 187 | 187 | 200 | 625 | 572 | 456 | 330 | 145 | 122 | 139 |
| 11 | 152 | 152 | 179 | 187 | 224 | 506 | 530 | 502 | 312 | 144 | 126 | 134 |
| 12 | 147 | 151 | 173 | 187 | 226 | 463 | 494 | 427 | 292 | 151 | 129 | 130 |
| 13 | 145 | 151 | 169 | 189 | 295 | 410 | 526 | 389 | 279 | 142 | 127 | 127 |
| 14 | 142 | 152 | 165 | 191 | 238 | 367 | 463 | 386 | 268 | 139 | 124 | 126 |
| 15 | 140 | 191 | 171 | 217 | 217 | 333 | 441 | 399 | 253 | 139 | 121 | 124 |
| 16 | 139 | 238 | 183 | 266 | 208 | 309 | 460 | 383 | 241 | 139 | 122 | 127 |
| 17 | 135 | 226 | 175 | 273 | 208 | 287 | 403 | 452 | 238 | 149 | 124 | 127 |
| 18 | 134 | 258 | 187 | 345 | 197 | 290 | 373 | 427 | 238 | 165 | 124 | 135 |
| 19 | 134 | 213 | 177 | 376 | 191 | 348 | 345 | 403 | 229 | 149 | 124 | 152 |
| 20 | 134 | 195 | 169 | 327 | 191 | 321 | 333 | 367 | 217 | 140 | 124 | 200 |
| 21 | 134 | 187 | 165 | 295 | 206 | 312 | 327 | 393 | 231 | 158 | 126 | 330 |
| 22 | 132 | 181 | 162 | 271 | 261 | 336 | 333 | 373 | 233 | 152 | 121 | 250 |
| 23 | 132 | 175 | 171 | 248 | 243 | 367 | 380 | 370 | 224 | 140 | 115 | 255 |
| 24 | 142 | 171 | 167 | 233 | 226 | 354 | 490 | 363 | 202 | 142 | 139 | 559 |
| 25 | 273 | 185 | 173 | 215 | 233 | 327 | 602 | 336 | 206 | 145 | 144 | 441 |
| 26 | 208 | 171 | 370 | 208 | 263 | 324 | 550 | 396 | 195 | 147 | 229 | 345 |
| 27 | 169 | 162 | 518 | 202 | 406 | 836 | 482 | 438 | 193 | 142 | 139 | 287 |
| 28 | 158 | 160 | 351 | 195 | 710 | 607 | 463 | 431 | 185 | 142 | 195 | 284 |
| 29 | 152 | 158 | 298 | 187 | --- | 502 | 475 | 389 | 193 | 130 | 255 | 318 |
| 30 | 149 | 154 | 263 | 181 | --- | 449 | 452 | 380 | 181 | 129 | 434 | 348 |
| 31 | 197 | --- | 238 | 181 | --- | 438 | --- | 380 | --- | 130 | 222 | --- |
| TOTAL | 4786 | 5497 | 6257 | 6941 | 6407 | 14269 | 15149 | 13252 | 9034 | 4567 | 4607 | 6679 |
| MEAN | 154 | 183 | 202 | 224 | 229 | 460 | 505 | 427 | 301 | 147 | 149 | 223 |
| MAX | 273 | 279 | 518 | 376 | 710 | 901 | 863 | 657 | 607 | 179 | 434 | 559 |
| MIN | 132 | 151 | 147 | 181 | 152 | 287 | 327 | 336 | 181 | 129 | 115 | 124 |
| AC-FT | 9490 | 10900 | 12410 | 13770 | 12710 | 28300 | 30050 | 26290 | 17920 | 9060 | 9140 | 13250 |
| CAL YR 1976 | TOTAL | 173157 | MEAN 473 | MAX 3480 | MIN 132 | AC-FT 343500 | | | | | | |
| WTR YR 1977 | TOTAL | 97445 | MEAN 267 | MAX 901 | MIN 115 | AC-FT 193300 | | | | | | |

14120000 HOOD RIVER AT TUCKER BRIDGE, NEAR HOOD RIVER, OR

LOCATION.--Lat 45°39'20", long 121°32'50", in SE¼ sec.15, T.2 N., R.10 E., Hood River County, Hydrologic Unit 17070105, on right bank 25 ft (8 m) downstream from Tucker Bridge, 0.5 mi (0.8 km) upstream from Odell Creek, 4.5 mi (7.2 km) southwest of Hood River, and at mile 6.1 (9.8 km).

DRAINAGE AREA.--279 mi² (723 km²).

PERIOD OF RECORD.--October 1897 to December 1899, September 1913 to September 1914, August 1915 to September 1917, January 1965 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1318: 1899. WSP 1935: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 383.2 ft (116.80 m) above mean sea level (Oregon State Highway Department bench mark). Prior to July 23, 1915, nonrecording gage at bridge at various datums. July 23 to Dec. 21, 1915, water-stage recorder at site 0.8 mi (1.3 km) upstream at different datum. January 1916 to September 1917, nonrecording gage at bridge at different datum. Jan. 16 to July 23, 1965, nonrecording gage at bridge.

REMARKS.--Records good. Some daily fluctuation caused by diversion dam above station and sawmill at Dee. Diversions above station for irrigation.

AVERAGE DISCHARGE.--17 years (water years 1898-99, 1914, 1916-17, 1966-77), 1,124 ft³/s (31.83 m³/s), 814,300 acre-ft/yr (1.00 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft³/s (558 m³/s), Jan. 15, 1974, gage height, 14.48 ft (4.414 m); minimum recorded, 136 ft³/s (3.85 m³/s) Sept. 16, 1915, caused by temporary storage behind dam at Dee.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 20.6 ft (6.28 m), present datum, discharge, 33,200 ft³/s (940 m³/s), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,500 ft³/s (42.5 m³/s) Mar. 27, gage height, 5.05 ft (1.54 m), no peak above base of 4,500 ft³/s (127 m³/s); minimum, 182 ft³/s (5.15 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|-------|-------|-------|-------|---------|--------------|-------|-------|-------|-------|
| 1 | 355 | 604 | 380 | 440 | 377 | 906 | 814 | 698 | 685 | 312 | 238 | 347 |
| 2 | 374 | 465 | 377 | 440 | 366 | 750 | 754 | 782 | 593 | 300 | 236 | 355 |
| 3 | 361 | 422 | 380 | 422 | 355 | 732 | 693 | 963 | 530 | 259 | 236 | 478 |
| 4 | 332 | 394 | 380 | 422 | 350 | 632 | 724 | 891 | 973 | 236 | 244 | 681 |
| 5 | 314 | 377 | 374 | 388 | 350 | 589 | 795 | 786 | 906 | 220 | 236 | 612 |
| 6 | 317 | 377 | 374 | 350 | 345 | 581 | 896 | 681 | 867 | 205 | 230 | 437 |
| 7 | 317 | 382 | 377 | 355 | 342 | 927 | 1050 | 620 | 867 | 203 | 215 | 396 |
| 8 | 322 | 377 | 431 | 345 | 340 | 1240 | 1180 | 597 | 786 | 209 | 205 | 355 |
| 9 | 319 | 371 | 468 | 319 | 342 | 1120 | 984 | 589 | 632 | 228 | 201 | 322 |
| 10 | 317 | 363 | 425 | 382 | 402 | 896 | 819 | 644 | 548 | 222 | 218 | 322 |
| 11 | 319 | 369 | 411 | 422 | 446 | 754 | 763 | 719 | 509 | 230 | 236 | 314 |
| 12 | 307 | 388 | 405 | 453 | 431 | 698 | 732 | 624 | 465 | 247 | 244 | 310 |
| 13 | 305 | 385 | 396 | 585 | 548 | 628 | 772 | 574 | 449 | 226 | 249 | 291 |
| 14 | 300 | 388 | 391 | 488 | 446 | 570 | 698 | 574 | 428 | 238 | 244 | 275 |
| 15 | 298 | 472 | 396 | 495 | 417 | 523 | 660 | 589 | 391 | 228 | 249 | 251 |
| 16 | 293 | 593 | 422 | 552 | 399 | 492 | 711 | 563 | 371 | 236 | 247 | 244 |
| 17 | 284 | 516 | 402 | 548 | 396 | 462 | 620 | 628 | 366 | 275 | 251 | 238 |
| 18 | 293 | 600 | 414 | 620 | 382 | 459 | 574 | 608 | 377 | 329 | 255 | 261 |
| 19 | 300 | 502 | 396 | 681 | 374 | 530 | 533 | 563 | 366 | 275 | 259 | 314 |
| 20 | 295 | 468 | 388 | 585 | 374 | 498 | 512 | 526 | 363 | 236 | 251 | 347 |
| 21 | 298 | 446 | 385 | 537 | 402 | 482 | 502 | 585 | 371 | 281 | 270 | 509 |
| 22 | 295 | 434 | 380 | 502 | 465 | 512 | 505 | 578 | 399 | 279 | 238 | 405 |
| 23 | 293 | 422 | 391 | 468 | 440 | 559 | 570 | 530 | 388 | 275 | 213 | 411 |
| 24 | 307 | 417 | 382 | 446 | 422 | 541 | 724 | 505 | 350 | 298 | 291 | 786 |
| 25 | 537 | 434 | 388 | 425 | 417 | 505 | 896 | 462 | 358 | 300 | 266 | 648 |
| 26 | 431 | 408 | 668 | 411 | 465 | 492 | 847 | 544 | 340 | 302 | 459 | 519 |
| 27 | 355 | 385 | 857 | 408 | 616 | 1130 | 746 | 600 | 353 | 286 | 251 | 440 |
| 28 | 337 | 388 | 624 | 396 | 1030 | 872 | 724 | 585 | 347 | 293 | 342 | 453 |
| 29 | 327 | 391 | 552 | 388 | --- | 737 | 759 | 523 | 391 | 232 | 566 | 485 |
| 30 | 322 | 388 | 498 | 374 | --- | 668 | 741 | 502 | 310 | 228 | 857 | 530 |
| 31 | 411 | --- | 462 | 380 | --- | 640 | --- | 566 | --- | 240 | 405 | --- |
| TOTAL | 10235 | 12926 | 13574 | 14027 | 12039 | 21125 | 22298 | 19199 | 15079 | 7928 | 8902 | 12336 |
| MEAN | 330 | 431 | 438 | 452 | 430 | 681 | 743 | 619 | 503 | 256 | 287 | 411 |
| MAX | 537 | 604 | 857 | 681 | 1030 | 1240 | 1180 | 963 | 973 | 329 | 857 | 786 |
| MIN | 284 | 363 | 374 | 319 | 340 | 459 | 502 | 462 | 310 | 203 | 201 | 238 |
| AC-FT | 20300 | 25640 | 26920 | 27820 | 23880 | 41900 | 44230 | 38080 | 29910 | 15730 | 17660 | 24470 |
| CAL YR 1976 TOTAL | 354065 | | | | | 6320 | MIN 284 | AC-FT 702300 | | | | |
| WTR YR 1977 TOTAL | 169668 | | | | | 1240 | MIN 201 | AC-FT 336500 | | | | |

COLUMBIA RIVER MAIN STEM

14128600 COLUMBIA RIVER AT STEVENSON, WA

LOCATION.--Lat 45°41'58", long 121°52'02", in NW¼SE¼ sec.36, T.3 N., R.7½ E., Skamania County, Hydrologic Unit 17070105, on right bank 0.9 mi (1.4 km) east of Stevenson, and at mile 151.3 (243.4 km).

DRAINAGE AREA.--239,800 mi² (621,100 km²), approximately.

PERIOD OF RECORD.--October 1973 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 79.79 ft (24.320 m) June 20, 1974; minimum, 70.01 ft (21.339 m) Sept. 13, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 77.53 ft (23.631 m) June 3; minimum, 71.93 ft (21.924 m) Feb. 19.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---------|-------|-------|-------|----------|-------|-------|----------|-------|-------|---------|-------|-------|
| OCTOBER | | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | 76.33 | 75.17 | 75.84 | 74.72 | 73.15 | 73.81 | 76.43 | 72.87 | 74.62 | 76.48 | 75.25 | 75.70 |
| 2 | 76.58 | 75.51 | 76.13 | 75.01 | 72.76 | 73.69 | 76.91 | 73.05 | 75.19 | 76.15 | 74.36 | 74.97 |
| 3 | 76.37 | 73.93 | 74.97 | 75.08 | 73.25 | 73.96 | 76.79 | 73.64 | 75.24 | 76.69 | 72.94 | 74.76 |
| 4 | 76.79 | 72.89 | 75.10 | 74.99 | 72.87 | 73.82 | 76.22 | 73.38 | 74.45 | 77.05 | 73.65 | 75.52 |
| 5 | 77.26 | 74.31 | 75.77 | 76.20 | 72.21 | 74.00 | 75.25 | 73.30 | 74.16 | 76.40 | 74.14 | 75.59 |
| 6 | 77.24 | 73.87 | 75.60 | 76.19 | 74.07 | 74.60 | 75.14 | 72.36 | 73.81 | 76.60 | 73.80 | 75.03 |
| 7 | 76.50 | 73.52 | 75.00 | 74.70 | 72.46 | 73.48 | 75.24 | 72.37 | 73.72 | 77.24 | 74.01 | 75.73 |
| 8 | 77.06 | 75.32 | 76.24 | 75.30 | 72.40 | 73.40 | 76.49 | 73.00 | 74.50 | 76.77 | 73.67 | 75.04 |
| 9 | 77.10 | 74.76 | 75.31 | 75.28 | 73.08 | 74.20 | 76.47 | 73.42 | 74.97 | 75.94 | 73.06 | 74.21 |
| 10 | 74.91 | 73.62 | 74.46 | 76.32 | 72.83 | 74.36 | 76.77 | 74.09 | 75.51 | 75.50 | 72.28 | 73.94 |
| 11 | 74.92 | 72.43 | 73.47 | 76.64 | 73.87 | 74.92 | 76.58 | 75.21 | 75.86 | 76.80 | 73.43 | 75.06 |
| 12 | 75.89 | 73.71 | 74.83 | 76.51 | 74.28 | 75.44 | 76.60 | 75.35 | 76.02 | 76.93 | 74.21 | 75.69 |
| 13 | 76.62 | 74.28 | 75.57 | 76.43 | 74.47 | 75.38 | 77.31 | 74.54 | 75.95 | 76.71 | 73.65 | 75.33 |
| 14 | 76.28 | 72.96 | 74.64 | 76.58 | 75.01 | 75.88 | 76.83 | 73.99 | 75.50 | 76.76 | 73.81 | 75.74 |
| 15 | 77.08 | 73.29 | 75.21 | 76.05 | 73.95 | 75.18 | 76.35 | 73.65 | 74.95 | 76.70 | 74.89 | 75.74 |
| 16 | 77.30 | 75.22 | 75.85 | 76.39 | 73.92 | 75.31 | 76.43 | 73.58 | 75.04 | 76.46 | 74.11 | 74.98 |
| 17 | 76.11 | 74.66 | 75.46 | 76.54 | 74.25 | 75.46 | 77.06 | 74.33 | 76.09 | 76.95 | 72.94 | 74.82 |
| 18 | 76.32 | 72.46 | 74.77 | 76.96 | 75.08 | 76.14 | 76.52 | 74.42 | 75.18 | 76.70 | 73.57 | 75.15 |
| 19 | 76.47 | 73.04 | 75.29 | 76.93 | 75.05 | 76.24 | 75.69 | 73.14 | 73.82 | 76.64 | 72.77 | 74.91 |
| 20 | 76.12 | 72.70 | 74.37 | 76.68 | 74.78 | 75.86 | 76.18 | 72.11 | 74.14 | 77.29 | 73.93 | 75.68 |
| 21 | 76.27 | 72.49 | 74.58 | 76.50 | 74.60 | 75.44 | 76.42 | 72.82 | 74.68 | 76.86 | 73.25 | 75.46 |
| 22 | 77.15 | 72.66 | 74.94 | 76.41 | 73.49 | 75.00 | 76.51 | 75.09 | 76.01 | 76.70 | 73.93 | 75.35 |
| 23 | 76.43 | 73.47 | 74.45 | 76.12 | 74.01 | 74.88 | 77.09 | 73.83 | 75.22 | 76.98 | 74.38 | 75.60 |
| 24 | 73.96 | 72.21 | 73.31 | 76.91 | 73.70 | 75.18 | 76.96 | 74.62 | 75.65 | 77.20 | 73.92 | 75.50 |
| 25 | 74.86 | 72.08 | 73.46 | 76.64 | 74.50 | 75.70 | 76.53 | 75.04 | 75.65 | 76.99 | 74.32 | 75.98 |
| 26 | 75.42 | 72.33 | 73.91 | 77.19 | 76.31 | 76.75 | 75.97 | 74.12 | 74.78 | 76.63 | 72.83 | 75.05 |
| 27 | 76.28 | 72.66 | 74.42 | 77.11 | 75.92 | 76.55 | 75.09 | 73.53 | 74.34 | 76.62 | 74.07 | 75.22 |
| 28 | 77.27 | 73.72 | 75.57 | 76.80 | 74.44 | 75.21 | 76.01 | 72.96 | 74.39 | 76.21 | 73.46 | 75.05 |
| 29 | 76.79 | 74.59 | 75.78 | 76.95 | 73.39 | 75.44 | 76.96 | 75.03 | 76.01 | 77.05 | 75.62 | 76.36 |
| 30 | 76.77 | 75.92 | 76.38 | 76.92 | 73.28 | 75.03 | 76.84 | 75.37 | 76.07 | 76.97 | 74.99 | 75.49 |
| 31 | 76.68 | 74.72 | 75.44 | --- | --- | --- | 76.58 | 75.35 | 75.95 | 76.44 | 74.90 | 75.65 |
| MONTH | 77.30 | 72.08 | 75.03 | 77.19 | 72.21 | 75.01 | 77.31 | 72.11 | 75.07 | 77.29 | 72.28 | 75.30 |

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | FEBRUARY | | | MARCH | | | APRIL | | | MAY | | |
| 1 | 76.48 | 74.05 | 75.38 | 76.29 | 73.26 | 74.83 | 76.77 | 73.80 | 75.45 | 75.40 | 73.01 | 74.32 |
| 2 | 76.29 | 73.92 | 75.05 | 76.75 | 73.40 | 75.27 | 76.80 | 75.31 | 75.92 | 76.51 | 72.65 | 74.77 |
| 3 | 77.03 | 74.51 | 75.79 | 77.16 | 73.96 | 75.64 | 76.48 | 73.68 | 74.51 | 76.50 | 73.14 | 75.00 |
| 4 | 76.65 | 73.70 | 75.49 | 76.94 | 74.44 | 75.74 | 74.43 | 72.47 | 73.34 | 75.95 | 73.05 | 74.49 |
| 5 | 76.60 | 74.22 | 75.39 | 76.83 | 75.02 | 75.81 | 74.32 | 72.45 | 73.54 | 75.42 | 72.61 | 74.29 |
| 6 | 76.10 | 73.25 | 74.01 | 76.39 | 73.83 | 74.94 | 74.64 | 72.82 | 74.00 | 76.67 | 74.19 | 75.36 |
| 7 | 75.69 | 72.02 | 73.95 | 76.59 | 73.04 | 75.08 | 75.00 | 73.19 | 74.20 | 76.60 | 75.58 | 76.06 |
| 8 | 75.76 | 72.87 | 74.40 | 77.12 | 73.79 | 75.56 | 75.32 | 73.86 | 74.62 | 76.16 | 73.25 | 74.29 |
| 9 | 76.12 | 73.52 | 74.76 | 77.13 | 73.94 | 75.49 | 74.93 | 74.12 | 74.54 | 75.57 | 72.40 | 73.95 |
| 10 | 75.82 | 73.12 | 74.39 | 76.83 | 74.13 | 75.13 | 74.59 | 73.02 | 73.64 | 75.84 | 72.71 | 74.30 |
| 11 | 74.77 | 72.96 | 73.78 | 76.80 | 74.67 | 75.96 | 74.73 | 72.20 | 73.45 | 77.02 | 74.62 | 75.92 |
| 12 | 75.66 | 72.54 | 74.08 | 77.02 | 76.19 | 76.50 | 75.31 | 72.65 | 73.88 | 77.17 | 74.96 | 76.32 |
| 13 | 75.17 | 73.50 | 74.06 | 77.02 | 74.19 | 75.49 | 76.20 | 72.92 | 74.51 | 77.06 | 75.80 | 76.45 |
| 14 | 74.88 | 72.25 | 73.40 | 77.25 | 73.70 | 75.62 | 76.31 | 74.12 | 75.27 | 76.88 | 75.65 | 76.26 |
| 15 | 74.91 | 71.95 | 73.20 | 77.17 | 74.07 | 75.48 | 75.97 | 73.31 | 74.71 | 75.90 | 73.69 | 74.38 |
| 16 | 75.03 | 72.30 | 73.58 | 77.47 | 73.76 | 75.72 | 75.86 | 73.81 | 74.78 | 75.28 | 72.61 | 74.06 |
| 17 | 76.18 | 72.48 | 74.18 | 77.06 | 73.67 | 75.22 | 75.78 | 73.85 | 74.46 | 75.31 | 72.65 | 73.95 |
| 18 | 75.96 | 73.92 | 75.02 | 76.76 | 73.82 | 75.20 | 75.74 | 72.40 | 74.01 | 74.79 | 72.65 | 73.70 |
| 19 | 75.24 | 71.93 | 73.27 | 77.02 | 73.82 | 75.35 | 75.92 | 73.35 | 74.58 | 75.37 | 73.03 | 74.35 |
| 20 | 75.32 | 74.01 | 74.56 | 76.66 | 74.44 | 75.18 | 76.06 | 73.62 | 74.97 | 76.12 | 72.84 | 74.83 |
| 21 | 75.70 | 73.32 | 74.51 | 75.30 | 73.04 | 74.06 | 76.39 | 73.35 | 74.98 | 77.00 | 74.53 | 75.71 |
| 22 | 76.61 | 72.53 | 74.87 | 75.30 | 72.76 | 73.78 | 76.26 | 73.48 | 74.66 | 76.61 | 74.30 | 75.48 |
| 23 | 76.17 | 72.57 | 74.66 | 75.60 | 72.18 | 73.49 | 76.30 | 73.32 | 74.73 | 76.81 | 73.22 | 75.15 |
| 24 | 75.94 | 72.97 | 74.64 | 76.21 | 72.31 | 74.01 | 76.18 | 74.47 | 74.99 | 76.56 | 73.44 | 75.24 |
| 25 | 76.66 | 72.90 | 74.90 | 76.50 | 72.60 | 74.70 | 76.14 | 73.36 | 74.54 | 76.81 | 72.88 | 75.14 |
| 26 | 76.60 | 74.83 | 75.71 | 76.15 | 73.12 | 74.76 | 76.29 | 73.23 | 74.64 | 76.67 | 73.76 | 75.46 |
| 27 | 76.40 | 73.18 | 74.36 | 75.69 | 73.79 | 74.60 | 75.28 | 72.67 | 73.99 | 77.31 | 74.28 | 75.83 |
| 28 | 76.49 | 72.68 | 74.53 | 75.53 | 72.85 | 74.39 | 75.49 | 72.09 | 73.74 | 76.72 | 75.24 | 76.15 |
| 29 | --- | --- | --- | 77.16 | 74.11 | 75.82 | 76.64 | 72.57 | 74.46 | 76.64 | 74.34 | 74.98 |
| 30 | --- | --- | --- | 76.67 | 74.72 | 75.84 | 75.86 | 73.63 | 74.84 | 75.57 | 73.66 | 74.54 |
| 31 | --- | --- | --- | 77.12 | 75.08 | 76.38 | --- | --- | --- | 76.67 | 73.22 | 74.57 |
| MONTH | 77.03 | 71.93 | 74.49 | 77.47 | 72.18 | 75.19 | 76.80 | 72.09 | 74.46 | 77.31 | 72.40 | 75.00 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|-------|-------|-------|-------|-------|--------|-------|-------|-----------|-------|-------|-------|
| JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | | |
| 1 | 77.09 | 73.17 | 75.30 | 75.80 | 73.53 | 74.49 | 75.96 | 74.61 | 75.50 | 76.56 | 73.03 | 74.87 |
| 2 | 77.47 | 74.39 | 75.91 | 75.27 | 73.14 | 74.07 | 76.08 | 73.14 | 74.79 | 76.81 | 74.32 | 75.59 |
| 3 | 77.53 | 73.73 | 75.73 | 75.32 | 73.10 | 74.13 | 76.24 | 72.67 | 74.32 | 77.03 | 75.14 | 76.23 |
| 4 | 76.75 | 75.16 | 75.90 | 74.80 | 72.57 | 73.63 | 76.57 | 72.85 | 74.76 | 76.76 | 74.66 | 75.51 |
| 5 | 75.82 | 74.00 | 74.69 | 74.86 | 72.84 | 73.69 | 76.22 | 72.89 | 74.43 | 76.06 | 74.58 | 75.29 |
| 6 | 75.37 | 72.94 | 73.92 | 76.62 | 72.89 | 74.44 | 75.99 | 72.73 | 74.15 | 76.68 | 73.30 | 75.13 |
| 7 | 76.00 | 72.68 | 74.21 | 76.84 | 74.39 | 75.73 | 75.39 | 73.07 | 74.27 | 76.69 | 73.12 | 75.06 |
| 8 | 76.72 | 72.51 | 74.46 | 76.71 | 74.98 | 76.08 | 75.38 | 72.98 | 74.14 | 76.44 | 72.95 | 74.76 |
| 9 | 77.21 | 73.40 | 75.28 | 76.87 | 75.47 | 76.19 | 75.80 | 73.20 | 74.33 | 76.87 | 73.24 | 75.01 |
| 10 | 77.29 | 74.39 | 75.74 | 76.82 | 75.05 | 75.68 | 76.59 | 73.15 | 74.80 | 76.40 | 73.69 | 75.03 |
| 11 | 77.05 | 75.69 | 76.15 | 75.72 | 73.24 | 74.43 | 76.08 | 72.70 | 74.51 | 75.76 | 73.44 | 74.40 |
| 12 | 76.32 | 74.04 | 74.84 | 76.58 | 74.61 | 75.59 | 76.58 | 73.89 | 75.20 | 76.05 | 72.68 | 74.30 |
| 13 | 75.58 | 72.83 | 74.13 | 76.49 | 73.40 | 74.53 | 76.72 | 73.92 | 75.19 | 76.10 | 72.92 | 74.68 |
| 14 | 75.66 | 72.74 | 74.08 | 75.50 | 72.82 | 74.27 | 76.27 | 74.20 | 75.07 | 76.75 | 72.80 | 74.71 |
| 15 | 77.34 | 73.70 | 75.35 | 76.62 | 73.81 | 75.28 | 76.75 | 72.90 | 74.84 | 76.35 | 73.32 | 74.83 |
| 16 | 77.34 | 74.35 | 75.97 | 76.35 | 73.89 | 74.70 | 76.83 | 73.57 | 75.27 | 76.38 | 73.24 | 75.07 |
| 17 | 76.86 | 73.09 | 75.24 | 75.40 | 72.29 | 73.83 | 76.64 | 73.91 | 75.10 | 76.32 | 74.18 | 75.24 |
| 18 | 76.62 | 74.06 | 75.40 | 76.54 | 73.44 | 75.00 | 75.42 | 72.30 | 74.00 | 76.22 | 73.94 | 75.07 |
| 19 | 76.62 | 74.59 | 75.31 | 76.47 | 73.04 | 74.75 | 76.18 | 72.94 | 74.48 | 76.50 | 72.79 | 74.74 |
| 20 | 75.92 | 74.14 | 74.98 | 76.45 | 72.94 | 74.57 | 75.29 | 73.09 | 74.04 | 75.98 | 73.32 | 74.52 |
| 21 | 76.66 | 73.85 | 75.22 | 75.91 | 73.24 | 74.31 | 75.50 | 73.19 | 74.02 | 75.32 | 73.29 | 74.25 |
| 22 | 76.54 | 74.62 | 75.61 | 76.46 | 72.75 | 74.42 | 74.91 | 72.65 | 73.83 | 75.84 | 73.35 | 74.69 |
| 23 | 76.49 | 73.54 | 75.20 | 76.40 | 74.31 | 75.10 | 75.03 | 72.80 | 73.77 | 76.34 | 73.45 | 75.15 |
| 24 | 76.97 | 73.24 | 75.35 | 75.31 | 73.48 | 74.43 | 76.72 | 72.81 | 74.36 | 75.98 | 73.40 | 74.64 |
| 25 | 76.51 | 74.61 | 75.78 | 75.56 | 72.73 | 74.15 | 76.62 | 73.65 | 75.18 | 75.72 | 74.62 | 75.19 |
| 26 | 76.07 | 74.27 | 75.06 | 76.01 | 72.62 | 74.15 | 76.81 | 73.55 | 74.94 | 76.19 | 72.97 | 74.65 |
| 27 | 76.21 | 72.58 | 74.55 | 76.14 | 73.06 | 74.81 | 76.70 | 74.48 | 75.64 | 76.39 | 73.13 | 74.87 |
| 28 | 75.89 | 72.86 | 74.62 | 77.01 | 73.56 | 75.17 | 76.70 | 74.29 | 74.99 | 76.42 | 73.09 | 74.97 |
| 29 | 76.26 | 72.61 | 74.53 | 76.68 | 73.31 | 74.97 | 76.29 | 72.49 | 73.84 | 76.71 | 73.25 | 75.24 |
| 30 | 76.12 | 72.71 | 74.85 | 76.73 | 74.96 | 75.86 | 75.65 | 72.22 | 73.88 | 76.17 | 73.25 | 74.74 |
| 31 | --- | --- | --- | 76.58 | 75.00 | 75.71 | 75.73 | 72.58 | 74.34 | --- | --- | --- |
| MONTH | 77.53 | 72.51 | 75.11 | 77.01 | 72.29 | 74.77 | 76.83 | 72.22 | 74.58 | 77.03 | 72.68 | 74.94 |

| YEAR | 77.53 | 71.93 | 74.92 |
|------|-------|-------|-------|
|------|-------|-------|-------|

COLUMBIA RIVER MAIN STEM

14128890 COLUMBIA RIVER NEAR BONNEVILLE, OR

LOCATION.--Lat 45°37'35", long 121°58'22", in sec.29, T.2 N., R.7 E., Multnomah County, Hydrologic Unit 17080001, on left bank 0.2 mi (0.3 km) upstream from Moffett Creek, 2.2 mi (3.5 km) downstream from Bonneville Dam, at mile 143.5 (230.9 km).

DRAINAGE AREA.--239,900 mi² (621,300 km²), approximately.

PERIOD OF RECORD.--October 1973 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 33.12 ft (10.095 m) June 22, 1974; minimum was less than 7.5 ft (2.29 m) Oct. 6, 8, 1973, Oct. 3, 1975, July 4-10, 17, Aug. 6, 7, 9, 14, 27, Sept. 2, 1977, when stage was known to be less than the lower recording limit.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 18.28 ft (5.572 m) Jan. 25; minimum was less than 7.5 ft (2.29 m) July 4-10, 17, Aug. 6, 7, 9, 14, 27, Sept. 2, 1977, when stage was known to be less than the lower recording limit.

REVISIONS.--The minimum gage heights for water years 1974-76 have been revised to less than or equal to 7.5 ft (2.29 m) Oct. 6, 8, 1973, Sept. 13, 1974, Oct. 3, 1975; revised daily minimum and mean gage heights are given below.

| | | Minimum | Mean |
|-------|----------|---------|------|
| Oct. | 6, 1973 | -- | -- |
| | 14 | 7.5 | |
| Sept. | 13, 1975 | 7.5 | |
| | 14 | 7.6 | |
| | 21 | 7.6 | |
| Oct. | 1 | 7.6 | |
| | 2 | 7.5 | |
| | 3 | -- | -- |
| | 11 | 7.6 | |
| | 12 | 7.6 | |

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---------|-------|-------|----------|-------|-------|----------|-------|-------|---------|-------|-------|-------|
| OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | | |
| 1 | 12.56 | 12.02 | 12.32 | 13.08 | 12.34 | 12.82 | 15.86 | 12.92 | 14.59 | 12.96 | 10.26 | 11.31 |
| 2 | 12.23 | 8.85 | 11.27 | 12.81 | 12.21 | 12.60 | 15.14 | 12.40 | 13.76 | 11.56 | 9.84 | 10.42 |
| 3 | 12.64 | 11.81 | 12.18 | 12.48 | 12.12 | 12.25 | 14.10 | 12.08 | 13.13 | 17.76 | 11.45 | 14.02 |
| 4 | 15.05 | 12.27 | 13.46 | 12.76 | 12.12 | 12.47 | 12.08 | 8.45 | 10.27 | 14.72 | 12.68 | 13.72 |
| 5 | 15.74 | 14.99 | 15.31 | 12.66 | 10.52 | 12.07 | 10.58 | 7.83 | 9.36 | 16.99 | 13.77 | 15.25 |
| 6 | 16.46 | 14.77 | 15.39 | 12.20 | 9.50 | 11.42 | 12.36 | 9.74 | 11.16 | 15.45 | 12.55 | 13.19 |
| 7 | 16.02 | 12.42 | 13.41 | 12.84 | 9.77 | 11.57 | 12.38 | 11.18 | 11.84 | 16.98 | 12.56 | 14.61 |
| 8 | 13.63 | 12.07 | 12.82 | 12.37 | 9.80 | 11.09 | 12.50 | 11.22 | 11.86 | 16.31 | 11.96 | 13.16 |
| 9 | 13.62 | 10.59 | 11.87 | 12.54 | 10.69 | 11.85 | 12.28 | 11.02 | 11.69 | 12.20 | 9.54 | 11.07 |
| 10 | 12.28 | 10.23 | 10.64 | 12.72 | 12.13 | 12.42 | 12.02 | 10.70 | 11.38 | 11.90 | 9.79 | 11.17 |
| 11 | 12.91 | 12.31 | 12.64 | 12.34 | 11.85 | 12.10 | 11.88 | 11.42 | 11.65 | 12.72 | 11.33 | 11.82 |
| 12 | 13.36 | 12.39 | 12.99 | 12.07 | 11.55 | 11.81 | 13.17 | 11.32 | 11.62 | 14.58 | 12.81 | 13.85 |
| 13 | 14.61 | 13.06 | 13.76 | 12.06 | 10.81 | 11.61 | 16.59 | 10.66 | 12.55 | 13.21 | 12.44 | 12.92 |
| 14 | 15.11 | 14.15 | 14.80 | 11.98 | 11.69 | 11.81 | 15.98 | 12.31 | 13.13 | 13.35 | 11.99 | 12.59 |
| 15 | 15.76 | 13.81 | 14.73 | 12.43 | 11.88 | 12.18 | 13.43 | 12.69 | 13.00 | 12.30 | 10.34 | 11.51 |
| 16 | 14.42 | 11.10 | 13.22 | 12.40 | 11.83 | 12.15 | 13.22 | 11.90 | 12.60 | 12.33 | 10.45 | 11.31 |
| 17 | 11.54 | 10.20 | 10.95 | 12.51 | 11.52 | 12.09 | 15.70 | 12.70 | 13.67 | 13.42 | 12.00 | 12.42 |
| 18 | 16.64 | 11.53 | 13.33 | 12.39 | 11.88 | 12.11 | 13.23 | 12.01 | 12.55 | 12.63 | 12.12 | 12.28 |
| 19 | 15.73 | 13.60 | 14.55 | 12.32 | 11.73 | 11.99 | 12.13 | 10.01 | 11.50 | 12.45 | 11.93 | 12.18 |
| 20 | 14.36 | 12.66 | 13.73 | 12.02 | 11.32 | 11.67 | 16.33 | 9.39 | 11.62 | 15.43 | 12.02 | 13.82 |
| 21 | 14.59 | 12.60 | 13.44 | 12.83 | 11.49 | 12.03 | 15.99 | 12.21 | 12.82 | --- | --- | --- |
| 22 | 16.17 | 12.66 | 13.80 | 12.74 | 12.15 | 12.48 | 15.34 | 11.75 | 13.60 | --- | --- | --- |
| 23 | 13.85 | 10.80 | 12.00 | 12.58 | 11.99 | 12.20 | 16.74 | 12.84 | 14.40 | --- | --- | --- |
| 24 | 11.07 | 9.67 | 10.23 | 12.77 | 12.11 | 12.49 | 13.15 | 11.77 | 12.18 | 16.08 | --- | --- |
| 25 | 13.21 | 8.54 | 11.17 | 12.72 | 12.13 | 12.42 | 11.94 | 11.57 | 11.77 | 18.28 | 16.02 | 17.05 |
| 26 | 13.31 | 11.48 | 12.46 | 12.49 | 11.46 | 11.83 | 12.56 | 11.55 | 12.15 | 16.37 | 13.57 | 14.82 |
| 27 | 13.13 | 12.29 | 12.74 | 14.81 | 11.23 | 12.76 | 12.62 | 11.93 | 12.36 | 14.70 | 12.98 | 14.09 |
| 28 | 16.01 | 12.30 | 13.27 | --- | 11.56 | --- | 12.14 | 11.41 | 11.78 | 14.75 | 13.01 | 14.11 |
| 29 | 15.97 | 13.74 | 14.59 | 16.40 | 11.52 | 13.58 | 12.95 | 11.27 | 11.90 | 14.54 | 12.37 | 13.00 |
| 30 | 14.53 | 11.85 | 12.60 | 16.67 | 13.75 | 15.33 | 13.52 | 12.76 | 13.13 | 13.74 | 12.43 | 12.80 |
| 31 | 12.63 | 11.86 | 12.16 | --- | --- | --- | 14.51 | 12.96 | 13.94 | 16.43 | 13.78 | 15.37 |
| MONTH | 16.64 | 8.54 | 12.96 | 16.67 | 9.50 | 12.24 | 16.74 | 7.83 | 12.35 | 18.28 | 9.54 | 13.10 |

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | | | | |
|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|--|
| | | FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | | | |
| | | | | | | | | | | | | | | | | |
| 1 | 15.82 | 13.46 | 14.31 | --- | --- | --- | 13.37 | 11.62 | 12.51 | 10.89 | 10.11 | 10.41 | | | | |
| 2 | 14.91 | 14.24 | 14.54 | --- | --- | --- | 11.62 | 11.14 | 11.36 | 13.27 | 10.38 | 12.32 | | | | |
| 3 | 15.86 | 12.93 | 13.98 | 14.92 | 12.02 | 13.23 | 11.22 | 9.14 | 10.08 | 14.66 | 13.10 | 14.21 | | | | |
| 4 | 16.10 | 11.59 | 13.14 | 14.95 | 11.65 | 12.41 | 11.92 | 8.87 | 10.72 | 14.91 | 14.25 | 14.55 | | | | |
| 5 | 11.68 | 11.06 | 11.44 | 12.20 | 11.70 | 11.96 | 11.17 | 8.53 | 9.92 | 14.97 | 13.55 | 14.28 | | | | |
| 6 | 11.61 | 8.92 | 10.16 | 12.67 | 11.82 | 12.29 | 11.21 | 8.48 | 10.16 | 13.73 | 12.14 | 13.23 | | | | |
| 7 | 14.35 | 7.60 | 10.92 | 13.03 | 12.32 | 12.66 | 10.94 | 8.42 | 9.97 | 13.08 | 12.18 | 12.65 | | | | |
| 8 | 14.47 | 11.89 | 12.75 | 13.62 | 12.69 | 13.09 | 10.59 | 7.83 | 9.28 | 13.35 | 12.55 | 12.96 | | | | |
| 9 | 12.47 | 11.67 | 12.07 | 13.97 | 12.87 | 13.39 | 9.73 | 7.90 | 8.99 | 13.28 | 12.66 | 12.97 | | | | |
| 10 | 12.88 | 11.72 | 12.28 | 13.47 | 12.46 | 13.14 | 10.03 | 7.60 | 8.95 | 13.09 | 12.32 | 12.7 | | | | |
| 11 | 12.44 | 9.55 | 11.43 | 12.54 | 12.05 | 12.29 | 11.01 | 8.87 | 10.34 | 13.54 | 11.97 | 12.68 | | | | |
| 12 | 10.82 | 9.11 | 10.09 | 12.88 | 12.16 | 12.43 | 10.66 | 9.54 | 9.93 | 14.03 | 11.85 | 12.80 | | | | |
| 13 | 10.15 | 8.85 | 9.49 | 12.93 | 12.18 | 12.49 | 11.62 | 9.42 | 10.26 | 13.99 | 12.15 | 12.49 | | | | |
| 14 | 12.16 | 9.28 | 10.88 | 13.79 | 12.07 | 12.50 | 12.39 | 10.80 | 11.95 | 12.64 | 12.02 | 12.29 | | | | |
| 15 | 12.51 | 9.31 | 11.57 | 13.95 | 12.29 | 12.54 | 12.62 | 10.21 | 12.01 | 13.01 | 12.11 | 12.65 | | | | |
| 16 | 12.28 | 10.63 | 11.72 | 17.40 | 12.11 | 14.06 | 12.34 | 9.58 | 10.25 | 13.40 | 12.50 | 12.93 | | | | |
| 17 | 10.62 | 9.70 | 10.12 | 16.43 | 12.63 | 13.27 | 9.74 | 8.74 | 9.02 | 13.41 | 12.64 | 13.05 | | | | |
| 18 | 11.86 | 9.92 | 11.18 | 13.03 | 12.29 | 12.59 | 10.57 | 7.50 | 9.12 | 13.43 | 11.38 | 12.80 | | | | |
| 19 | 11.87 | 9.92 | 10.95 | 13.11 | 11.68 | 12.40 | 10.61 | 8.15 | 10.02 | 11.36 | 9.71 | 10.68 | | | | |
| 20 | 10.44 | 9.03 | 9.54 | 11.71 | 11.07 | 11.37 | 11.71 | 10.09 | 10.82 | 10.29 | 9.32 | 9.71 | | | | |
| 21 | 12.56 | 10.02 | 11.23 | 12.19 | 11.39 | 11.76 | 11.79 | 10.16 | 11.00 | 12.56 | 9.55 | 12.00 | | | | |
| 22 | 15.99 | 8.84 | 11.78 | 12.08 | 11.31 | 11.76 | 12.37 | 10.89 | 11.42 | 12.64 | 12.09 | 12.36 | | | | |
| 23 | 13.03 | 11.75 | 12.39 | 12.25 | 10.74 | 11.62 | 11.04 | 8.34 | 9.04 | 12.92 | 12.02 | 12.55 | | | | |
| 24 | 12.25 | 11.80 | 12.05 | 12.19 | 10.86 | 11.62 | 8.90 | 8.17 | 8.57 | 12.57 | 11.84 | 12.30 | | | | |
| 25 | 13.18 | 11.75 | 12.29 | 11.79 | 10.23 | 11.32 | 11.84 | 8.40 | 10.43 | 17.87 | 11.74 | 13.67 | | | | |
| 26 | 12.11 | 11.17 | 11.73 | 10.62 | 8.80 | 9.85 | 12.42 | 10.79 | 11.75 | 17.90 | 14.68 | 15.45 | | | | |
| 27 | 12.03 | 11.23 | 11.68 | 10.08 | 9.12 | 9.55 | 12.80 | 11.69 | 12.34 | 16.09 | 14.73 | 15.47 | | | | |
| 28 | 12.54 | 11.62 | 12.22 | 11.33 | 9.47 | 10.67 | 12.65 | 10.28 | 11.52 | 16.10 | 12.27 | 13.26 | | | | |
| 29 | --- | --- | --- | 14.30 | 10.27 | 11.80 | 11.85 | 9.57 | 10.48 | 12.93 | 10.69 | 12.56 | | | | |
| 30 | --- | --- | --- | 12.22 | 10.93 | 11.74 | 11.08 | 9.56 | 10.60 | 10.65 | 9.54 | 10.06 | | | | |
| 31 | --- | --- | --- | 13.67 | 10.78 | 11.89 | --- | --- | --- | 13.83 | 9.49 | 12.33 | | | | |
| MONTH | 16.10 | 7.60 | 11.71 | 17.40 | 8.80 | 12.12 | 13.37 | 7.50 | 10.42 | 17.90 | 9.32 | 12.72 | | | | |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-----------|-------|--|--|--|--|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | | | | |
| | | | | | | | | | | | | | | | | |
| 1 | 16.25 | 13.09 | 14.67 | 10.63 | 8.10 | 9.15 | 11.58 | 7.99 | 9.95 | 9.57 | 8.12 | 8.91 | | | | |
| 2 | 16.32 | 13.38 | 14.61 | 9.24 | 7.50 | 8.35 | 12.04 | 10.94 | 11.63 | 9.06 | --- | --- | | | | |
| 3 | 17.02 | 13.19 | 14.83 | 9.24 | 7.50 | 8.20 | 11.59 | 8.98 | 10.20 | 10.64 | 7.60 | 9.06 | | | | |
| 4 | 16.07 | 11.92 | 12.66 | 8.92 | --- | --- | 11.86 | 9.43 | 11.04 | 10.87 | 7.70 | 9.03 | | | | |
| 5 | 12.07 | 9.62 | 10.38 | 8.45 | --- | --- | 12.02 | 9.17 | 11.18 | 8.41 | 7.50 | 7.86 | | | | |
| 6 | 13.56 | 10.53 | 12.39 | 7.94 | --- | --- | 9.58 | --- | --- | 10.98 | 7.50 | 9.91 | | | | |
| 7 | 13.54 | 11.27 | 12.84 | 8.56 | --- | --- | 8.68 | --- | --- | 11.51 | 10.47 | 11.06 | | | | |
| 8 | 14.93 | 12.77 | 13.74 | 10.44 | --- | --- | 9.44 | 7.50 | 8.48 | 11.59 | 9.14 | 10.29 | | | | |
| 9 | 14.55 | 13.11 | 13.51 | 9.82 | --- | --- | 9.93 | --- | --- | 10.76 | 8.89 | 9.43 | | | | |
| 10 | 13.61 | 12.30 | 13.13 | 7.76 | --- | --- | 9.46 | 7.60 | 8.70 | 10.17 | 7.75 | 8.50 | | | | |
| 11 | 13.57 | 10.24 | 11.35 | 9.00 | 7.82 | 8.59 | 10.21 | 8.48 | 9.41 | 8.48 | 7.60 | 7.84 | | | | |
| 12 | 11.46 | 9.33 | 10.39 | 9.89 | 8.41 | 9.07 | 11.12 | 8.13 | 9.86 | 9.39 | 7.50 | 8.46 | | | | |
| 13 | 13.37 | 9.43 | 11.54 | 12.08 | 8.76 | 10.45 | 8.91 | 7.60 | 8.08 | 11.02 | 8.81 | 9.80 | | | | |
| 14 | 13.83 | 12.09 | 12.66 | 10.14 | 8.24 | 9.11 | 8.53 | --- | --- | 11.37 | 10.09 | 10.81 | | | | |
| 15 | 14.62 | 11.73 | 12.73 | 10.81 | 9.80 | 10.25 | 10.54 | 7.60 | 9.27 | 11.42 | 10.84 | 11.06 | | | | |
| 16 | 15.21 | 12.19 | 13.90 | 10.71 | 7.81 | 8.64 | 11.81 | 9.81 | 10.90 | 11.38 | 10.22 | 10.88 | | | | |
| 17 | 15.28 | 10.89 | 13.45 | 8.27 | --- | --- | 11.51 | 9.84 | 10.72 | 11.06 | 9.30 | 9.83 | | | | |
| 18 | 13.38 | 11.96 | 12.52 | 11.60 | 7.50 | 10.07 | 11.54 | 8.96 | 10.11 | 10.20 | 8.32 | 8.85 | | | | |
| 19 | --- | --- | --- | 11.86 | 10.28 | 11.17 | 11.81 | 8.92 | 10.43 | 10.61 | 9.68 | 10.16 | | | | |
| 20 | --- | --- | --- | 11.40 | 9.53 | 10.36 | 10.79 | 8.14 | 8.86 | 11.23 | 9.07 | 10.46 | | | | |
| 21 | --- | --- | --- | 11.02 | 9.11 | 10.05 | 9.10 | 7.60 | 7.94 | 10.13 | 8.77 | 9.61 | | | | |
| 22 | --- | --- | --- | 9.48 | 7.75 | 8.35 | 10.74 | 7.50 | 9.71 | 9.83 | 8.71 | 9.20 | | | | |
| 23 | --- | --- | --- | 8.73 | 7.60 | 7.91 | 11.85 | 9.30 | 10.57 | 11.01 | 8.62 | 10.43 | | | | |
| 24 | --- | --- | --- | 8.20 | 7.50 | 7.79 | 9.95 | 9.08 | 9.55 | 11.49 | 9.39 | 10.23 | | | | |
| 25 | --- | --- | --- | 9.29 | 7.73 | 8.82 | 10.15 | 8.57 | 9.26 | 10.42 | 8.96 | 9.80 | | | | |
| 26 | --- | --- | --- | 9.42 | 8.46 | 8.71 | 9.69 | 7.60 | 8.48 | 11.21 | 9.87 | 10.44 | | | | |
| 27 | --- | --- | --- | 9.22 | 7.90 | 8.66 | 8.68 | --- | --- | 11.44 | 10.06 | 10.89 | | | | |
| 28 | --- | --- | --- | 10.05 | 7.96 | 9.02 | 8.63 | 7.60 | 8.11 | 11.47 | 10.32 | 10.94 | | | | |
| 29 | --- | --- | --- | 10.42 | 8.69 | 9.72 | 10.03 | 8.24 | 9.09 | 11.64 | 10.21 | 11.28 | | | | |
| 30 | --- | --- | --- | 10.25 | 8.02 | 9.03 | 11.50 | 8.19 | 9.60 | 11.49 | 11.02 | 11.25 | | | | |
| 31 | --- | --- | --- | 10.14 | 8.01 | 8.40 | 9.62 | 8.03 | 8.96 | --- | --- | --- | | | | |
| MONTH | 17.02 | 9.33 | 12.85 | 12.08 | 7.50 | 9.14 | 12.04 | 7.50 | 9.61 | 11.64 | 7.50 | 9.87 | | | | |

| YEAR | 18.28 | 7.50 | 11.62 |
|------|-------|------|-------|
|------|-------|------|-------|

COLUMBIA RIVER MAIN STEM

14128910 COLUMBIA RIVER AT WARRENDALE, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°36'45", long 122°01'35", in NE¼SE¼ sec.35, T.2 N., R.6 E., Multnomah County, Hydrologic Unit 17080001, on left bank 0.1 mi (0.2 km) downstream from Tumult Creek, 1.0 mi (1.6 km) west of Warrendale, 5.1 mi (9.2 km) downstream from Bonneville Dam, and at mile 141.0 (226.9 km).

DRAINAGE AREA.--240,000 mi² (621,600 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 30.91 ft (9.421 m) June 20, 1972; minimum, 4.49 ft (1.369 m) July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.76 ft (4.194 m) Jan. 25; minimum, 4.49 ft (1.369 m) July 10.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|---------|-------|-------|----------|-------|-------|----------|-------|-------|---------|-------|-------|
| | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | 9.63 | 9.01 | 9.31 | 9.94 | 9.30 | 9.62 | 12.10 | 10.16 | 10.96 | 10.18 | 7.62 | 8.62 |
| 2 | 9.41 | 7.34 | 8.59 | 9.59 | 9.17 | 9.38 | 10.92 | 9.77 | 10.38 | 8.44 | 7.04 | 7.58 |
| 3 | 9.37 | 8.72 | 9.06 | 9.26 | 8.73 | 8.98 | 10.86 | 9.37 | 10.07 | 12.53 | 8.29 | 10.18 |
| 4 | 11.21 | 9.17 | 9.89 | 9.65 | 8.85 | 9.25 | 9.35 | 6.84 | 8.10 | 11.90 | 9.65 | 10.55 |
| 5 | 12.07 | 11.17 | 11.60 | 9.48 | 8.52 | 9.13 | 8.02 | 5.84 | 6.84 | 12.82 | 10.44 | 11.31 |
| 6 | 12.36 | 11.35 | 11.81 | 9.12 | 7.50 | 8.36 | 9.40 | 7.28 | 8.14 | 12.39 | 9.45 | 10.18 |
| 7 | 12.02 | 9.51 | 10.31 | 9.74 | 7.68 | 8.60 | 9.53 | 8.43 | 8.93 | 12.49 | 9.58 | 10.62 |
| 8 | 10.45 | 9.22 | 9.73 | 9.47 | 7.63 | 8.40 | 9.88 | 8.63 | 9.11 | 12.41 | 9.23 | 10.30 |
| 9 | 10.45 | 8.32 | 9.30 | 9.59 | 7.93 | 8.75 | 9.66 | 8.51 | 9.01 | 9.30 | 7.26 | 8.37 |
| 10 | 9.10 | 7.66 | 8.17 | 9.56 | 9.09 | 9.29 | 9.21 | 8.13 | 8.61 | 8.62 | 7.25 | 8.17 |
| 11 | 9.93 | 9.06 | 9.43 | 9.32 | 8.68 | 8.96 | 8.90 | 8.44 | 8.70 | 9.09 | 7.89 | 8.40 |
| 12 | 10.10 | 9.23 | 9.70 | 9.21 | 8.28 | 8.68 | 9.20 | 8.30 | 8.62 | 11.07 | 9.14 | 10.26 |
| 13 | 11.10 | 9.78 | 10.26 | 8.82 | 7.99 | 8.49 | 11.51 | 8.11 | 9.05 | 10.60 | 9.47 | 10.00 |
| 14 | 11.40 | 10.96 | 11.23 | 8.85 | 8.38 | 8.66 | 11.56 | 9.41 | 10.08 | 10.21 | 9.17 | 9.58 |
| 15 | 11.54 | 10.86 | 11.16 | 9.32 | 8.82 | 9.06 | 10.06 | 9.36 | 9.69 | 9.54 | 7.93 | 8.87 |
| 16 | 10.97 | 8.69 | 10.19 | 9.45 | 8.88 | 9.12 | 9.86 | 8.96 | 9.52 | 9.49 | 8.03 | 8.68 |
| 17 | 8.65 | 7.38 | 8.00 | 9.72 | 8.80 | 9.15 | 11.73 | 9.38 | 10.25 | 10.05 | 8.91 | 9.45 |
| 18 | 11.57 | 8.05 | 9.25 | 9.64 | 8.91 | 9.24 | 10.81 | 9.37 | 9.86 | 10.08 | 9.14 | 9.51 |
| 19 | 11.57 | 10.24 | 10.82 | 9.67 | 8.83 | 9.13 | 9.33 | 8.01 | 8.77 | 9.79 | 8.98 | 9.32 |
| 20 | 11.12 | 9.88 | 10.54 | 9.18 | 8.25 | 8.68 | 11.77 | 7.13 | 8.49 | 11.61 | 9.25 | 10.08 |
| 21 | 11.17 | 9.49 | 10.18 | 10.13 | 8.38 | 9.08 | 11.79 | 9.38 | 10.10 | 11.70 | 10.04 | 10.67 |
| 22 | 11.88 | 9.86 | 10.62 | 9.95 | 9.16 | 9.55 | 11.81 | 8.89 | 10.05 | 11.02 | 8.97 | 9.78 |
| 23 | 11.54 | 8.67 | 9.77 | 10.01 | 8.94 | 9.31 | 12.46 | 10.48 | 11.36 | 9.71 | 8.27 | 8.76 |
| 24 | 9.22 | 7.36 | 8.13 | 10.22 | 9.36 | 9.69 | 10.47 | 8.87 | 9.43 | 11.43 | 9.47 | 10.30 |
| 25 | 10.37 | 6.96 | 8.64 | 10.15 | 9.34 | 9.66 | 9.24 | 8.49 | 8.89 | 13.76 | 11.45 | 12.67 |
| 26 | 10.38 | 8.95 | 9.62 | 9.81 | 8.61 | 9.05 | 9.75 | 8.59 | 9.26 | 13.07 | 10.83 | 11.49 |
| 27 | 10.07 | 9.37 | 9.70 | 10.60 | 8.11 | 9.17 | 9.76 | 8.96 | 9.43 | 11.03 | 9.85 | 10.63 |
| 28 | 11.37 | 9.46 | 9.88 | 10.47 | 8.47 | 9.16 | 9.06 | 8.32 | 8.72 | 10.86 | 9.94 | 10.63 |
| 29 | 11.88 | 10.61 | 11.11 | 11.56 | 8.47 | 9.52 | 9.20 | 8.13 | 8.66 | 9.90 | 8.79 | 9.35 |
| 30 | 11.05 | 8.81 | 9.66 | 12.32 | 10.35 | 11.29 | 10.04 | 9.11 | 9.55 | 9.65 | 8.69 | 9.11 |
| 31 | 9.65 | 8.72 | 9.09 | --- | --- | --- | 10.78 | 9.71 | 10.23 | 12.29 | 9.61 | 11.14 |
| MONTH | 12.36 | 6.96 | 9.83 | 12.32 | 7.50 | 9.14 | 12.46 | 5.84 | 9.31 | 13.76 | 7.04 | 9.82 |

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|-------|-------|-------|-------|-------|--------|------|------|-----------|-------|-------|
| | FEBRUARY | | | MARCH | | | APRIL | | | MAY | | |
| 1 | 12.11 | 10.27 | 11.03 | 9.96 | 9.17 | 9.64 | 9.92 | 9.13 | 9.61 | 8.42 | 7.62 | 8.00 |
| 2 | 10.75 | 10.28 | 10.52 | 9.58 | 9.23 | 9.42 | 9.13 | 8.44 | 8.77 | 10.04 | 7.74 | 9.25 |
| 3 | 11.19 | 9.43 | 10.19 | 11.14 | 9.26 | 10.11 | 8.59 | 7.27 | 7.95 | 11.57 | 9.89 | 11.01 |
| 4 | 11.48 | 8.78 | 10.05 | 11.19 | 9.40 | 9.81 | 9.08 | 6.74 | 8.11 | 11.98 | 11.22 | 11.55 |
| 5 | 8.86 | 7.99 | 8.40 | 9.56 | 8.94 | 9.21 | 8.54 | 6.99 | 7.85 | 11.99 | 10.87 | 11.45 |
| 6 | 8.76 | 6.96 | 7.63 | 10.03 | 8.94 | 9.50 | 8.60 | 6.85 | 7.97 | 11.15 | 9.88 | 10.63 |
| 7 | 9.84 | 5.28 | 7.37 | 10.65 | 9.40 | 9.99 | 8.71 | 6.81 | 7.98 | 10.45 | 9.64 | 9.96 |
| 8 | 10.04 | 9.10 | 9.57 | 11.19 | 10.10 | 10.61 | 8.41 | 6.50 | 7.55 | 10.43 | 9.68 | 10.02 |
| 9 | 9.61 | 8.80 | 9.13 | 11.67 | 10.38 | 11.04 | 7.88 | 6.39 | 7.17 | 10.24 | 9.75 | 9.98 |
| 10 | 10.08 | 8.61 | 9.31 | 11.02 | 9.98 | 10.64 | 7.13 | 5.94 | 6.79 | 10.03 | 9.38 | 9.84 |
| 11 | 9.38 | 7.58 | 8.69 | 10.00 | 9.30 | 9.65 | 8.23 | 6.87 | 7.65 | 10.10 | 9.31 | 9.62 |
| 12 | 8.41 | 7.00 | 7.77 | 10.37 | 9.49 | 9.72 | 7.91 | 6.97 | 7.44 | 10.27 | 9.23 | 9.63 |
| 13 | 7.81 | 6.58 | 7.10 | 10.23 | 9.49 | 9.86 | 8.32 | 6.86 | 7.65 | 10.29 | 9.21 | 9.65 |
| 14 | 9.02 | 6.73 | 7.75 | 9.85 | 9.42 | 9.59 | 9.17 | 8.21 | 8.83 | 9.80 | 9.03 | 9.39 |
| 15 | 9.46 | 7.70 | 8.58 | 9.96 | 9.40 | 9.67 | 9.58 | 8.34 | 9.01 | 10.02 | 9.09 | 9.62 |
| 16 | 9.23 | 8.47 | 8.96 | 12.73 | 9.28 | 10.48 | 9.41 | 7.33 | 8.09 | 10.28 | 9.43 | 9.88 |
| 17 | 8.44 | 7.27 | 7.85 | 12.62 | 9.94 | 10.62 | 7.49 | 6.46 | 6.94 | 10.38 | 9.60 | 9.96 |
| 18 | 8.97 | 7.35 | 8.23 | 9.95 | 9.47 | 9.74 | 7.84 | 5.64 | 6.75 | 10.40 | 9.43 | 9.92 |
| 19 | 8.87 | 7.60 | 8.29 | 10.11 | 9.29 | 9.66 | 7.87 | 6.50 | 7.48 | 9.21 | 7.44 | 8.25 |
| 20 | 7.95 | 6.81 | 7.42 | 9.25 | 8.46 | 8.81 | 8.62 | 7.35 | 7.90 | 8.12 | 7.07 | 7.54 |
| 21 | 9.91 | 7.22 | 8.46 | 9.38 | 8.53 | 8.96 | 8.64 | 7.64 | 8.21 | 9.68 | 7.54 | 8.98 |
| 22 | 10.78 | 7.50 | 9.04 | 9.29 | 8.48 | 8.97 | 9.24 | 8.18 | 8.62 | 9.77 | 9.14 | 9.42 |
| 23 | 10.61 | 8.94 | 9.52 | 9.50 | 8.55 | 8.98 | 8.50 | 6.22 | 7.10 | 9.89 | 9.16 | 9.55 |
| 24 | 9.42 | 8.82 | 9.06 | 9.38 | 8.47 | 8.93 | 6.91 | 5.96 | 6.48 | 9.54 | 8.96 | 9.32 |
| 25 | 9.59 | 8.76 | 9.09 | 8.98 | 7.99 | 8.60 | 8.94 | 6.22 | 7.52 | 12.47 | 8.97 | 9.93 |
| 26 | 9.24 | 8.28 | 8.80 | 8.28 | 6.80 | 7.60 | 9.14 | 7.99 | 8.59 | 12.66 | 11.51 | 11.99 |
| 27 | 8.92 | 8.26 | 8.56 | 8.06 | 7.01 | 7.41 | 9.42 | 8.60 | 9.08 | 12.29 | 11.45 | 11.91 |
| 28 | 9.78 | 8.57 | 9.22 | 8.32 | 7.06 | 7.82 | 9.31 | 8.13 | 8.63 | 12.25 | 9.45 | 10.55 |
| 29 | --- | --- | --- | 9.62 | 7.84 | 8.55 | 8.64 | 7.23 | 8.00 | 10.04 | 8.96 | 9.69 |
| 30 | --- | --- | --- | 9.30 | 8.30 | 8.86 | 8.30 | 7.27 | 7.89 | 8.89 | 7.29 | 8.02 |
| 31 | --- | --- | --- | 9.95 | 8.04 | 8.74 | --- | --- | --- | 10.21 | 7.29 | 9.20 |
| MONTH | 12.11 | 5.28 | 8.77 | 12.73 | 6.80 | 9.39 | 9.92 | 5.64 | 7.92 | 12.66 | 7.07 | 9.79 |
| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |

COLUMBIA RIVER MAIN STEM

14128910 COLUMBIA RIVER AT WARREDALE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURES: October 1975 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 242 micromhos/cm May 15, 1977; minimum, 107 micromhos/cm June 5, 1976.

WATER TEMPERATURES: Maximum, 22.5°C Aug. 17, 18, 1977; minimum recorded, 5.0°C Feb. 24-28, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 242 micromhos/cm May 15; minimum, 137 micromhos/cm July 6.

WATER TEMPERATURES: Maximum, 22.5°C Aug. 17, 18; minimum recorded, 5.0°C Feb. 24-28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) | DIS- SOLVED SODIUM (NA) (MG/L) |
|-------|--------------------------------------|-----------------------------------|--|---|--|--|--|--|--|--|---|--|
| OCT | | | | | | | | | | | | |
| 04... | 1400 | 161500 | 16.3 | 8.0 | 9.3 | 161 | 86 | 81 | 6.2 | 18 | 4.3 | 6.1 |
| 22... | 1200 | 154900 | 15.0 | 7.9 | 9.9 | 191 | 83 | 813 | 7.1 | 19 | 5.0 | 6.7 |
| DEC | | | | | | | | | | | | |
| 03... | 1130 | 148700 | 8.0 | 7.7 | 12.1 | 186 | 84 | <1 | 8.2 | 21 | 5.9 | 8.1 |
| 27... | 1200 | 136700 | 5.9 | 8.3 | 11.9 | 195 | 83 | 57 | 9.1 | 22 | 7.7 | 9.0 |
| JAN | | | | | | | | | | | | |
| 24... | 1400 | 180300 | 2.3 | 8.1 | 13.2 | 191 | 83 | 83 | 8.8 | 22 | 7.8 | 8.0 |
| FEB | | | | | | | | | | | | |
| 28... | 1300 | 132000 | 5.0 | 8.3 | 13.0 | 190 | 82 | 21 | 8.5 | 22 | 6.2 | 7.7 |
| MAR | | | | | | | | | | | | |
| 21... | 1130 | 125600 | 5.8 | 8.2 | 12.9 | 188 | <1 | 85 | 7.5 | 22 | 5.9 | 6.6 |
| APR | | | | | | | | | | | | |
| 28... | 1200 | 126900 | 12.2 | 8.0 | 11.4 | 207 | 84 | 44 | 6.3 | 24 | 6.1 | 7.8 |
| MAY | | | | | | | | | | | | |
| 31... | 1130 | 141700 | 13.9 | 8.5 | 11.1 | 164 | <1 | <1 | 3.6 | 21 | 5.0 | 5.5 |
| JUL | | | | | | | | | | | | |
| 07... | 0930 | 85300 | 18.0 | 8.2 | 9.4 | 139 | 81 | 84 | 4.2 | 17 | 4.6 | 4.5 |
| 25... | 1400 | 96700 | 20.1 | 8.3 | 8.9 | 148 | -- | -- | 3.7 | 18 | 4.1 | 4.8 |
| SEP | | | | | | | | | | | | |
| 02... | 1100 | 83000 | 20.5 | -- | -- | 160 | 82 | 49 | 6.9 | 19 | 3.0 | 4.4 |
| | | | | | | | | | | | | |
| DATE | BICAR- BONATE (HC03) (MG/L) | CAR- BONATE (C03) (MG/L) | DIS- SOLVED SULFATE (S04) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA,MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO |
| OCT | | | | | | | | | | | | |
| 04... | 75 | 0 | 10 | 2.7 | .2 | .10 | .23 | .33 | .02 | 63 | 1 | .3 |
| 22... | 73 | 0 | 12 | 3.0 | .2 | .11 | .17 | .28 | .02 | 68 | 8 | .4 |
| DEC | | | | | | | | | | | | |
| 03... | 88 | 0 | 15 | 3.3 | .2 | .25 | .21 | .46 | .04 | 77 | 5 | .4 |
| 27... | 88 | 0 | 18 | 4.6 | .2 | .29 | .39 | .68 | .03 | 87 | 14 | .4 |
| JAN | | | | | | | | | | | | |
| 24... | 89 | 0 | 20 | 3.9 | .2 | .32 | .10 | .42 | .04 | 87 | 14 | .4 |
| FEB | | | | | | | | | | | | |
| 28... | 88 | 0 | 18 | 4.2 | .2 | .23 | .97 | 1.2 | .01 | 80 | 8 | .4 |
| MAR | | | | | | | | | | | | |
| 21... | 88 | 0 | 20 | 4.0 | .2 | .10 | .27 | .37 | .03 | 79 | 7 | .3 |
| APR | | | | | | | | | | | | |
| 28... | 91 | 0 | 16 | 4.3 | .2 | .08 | .35 | .43 | .03 | 85 | 10 | .4 |
| MAY | | | | | | | | | | | | |
| 31... | 77 | 0 | 15 | 3.1 | .3 | .02 | .17 | .19 | .01 | 73 | 10 | .3 |
| JUL | | | | | | | | | | | | |
| 07... | 63 | 0 | 12 | 2.4 | .1 | .03 | .28 | .31 | .04 | 61 | 10 | .2 |
| 25... | 65 | 0 | 11 | 2.5 | .2 | .00 | .34 | .34 | .01 | 62 | 9 | .3 |
| SEP | | | | | | | | | | | | |
| 02... | 72 | -- | 9.6 | 2.2 | .2 | .11 | .23 | .34 | .03 | 60 | 1 | .2 |

B: RESULTS BASED ON NON-IDEAL COLONY COUNT

COLUMBIA RIVER MAIN STEM

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14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS-SOLVED SOLIDS (TONS PER DAY) | DIS-SOLVED SOLIDS (TONS PER AC-FT) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SUSPENDED SEDIMENT CHARGE (T/DAY) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | TOTAL NON-FILTERABLE RESIDUE (MG/L) | ALKALINITY AS CaCO3 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|---|--|----------------------------------|------------------------------------|-----------------|---------------------------|-----------------------------------|--|-------------------------------------|----------------------------|---------------------------------|
| OCT 04... | 83 | 86 | 36200 | .11 | 3 | 6 | 2620 | 89 | 0 | 62 | 1.4 |
| 22... | 84 | 90 | 35100 | .11 | 3 | 4 | 1670 | 92 | 0 | 60 | 1.2 |
| DEC 03... | 110 | 107 | 44200 | .15 | 4 | 8 | 3210 | 78 | 18 | 72 | -- |
| 27... | 118 | 115 | 43600 | .16 | 2 | 3 | 1110 | 62 | 2 | 72 | -- |
| JAN 24... | 115 | 116 | 56000 | .16 | 2 | 9 | 4380 | -- | 7 | 73 | 1.3 |
| FEB 28... | 110 | 111 | 39200 | .15 | 2 | 9 | 3210 | 89 | 0 | 72 | -- |
| MAR 21... | 117 | 111 | 39700 | .16 | 3 | 5 | 1700 | 78 | 2 | 72 | -- |
| APR 28... | 131 | 111 | 44900 | .18 | 3 | 10 | 3430 | 71 | 15 | 75 | 2.2 |
| MAY 31... | 99 | 93 | 37900 | .13 | 4 | 10 | 3830 | 60 | 13 | 63 | -- |
| JUL 07... | 81 | 77 | 18700 | .11 | 3 | 8 | 1840 | 67 | 3 | 52 | -- |
| 25... | 81 | 77 | 21100 | .11 | 2 | 9 | 2350 | 50 | 10 | 53 | 1.8 |
| SEP 02... | 76 | 82 | 17000 | .10 | 3 | 9 | 2020 | -- | 6 | 59 | -- |

| DATE | TOTAL IRON (FE) (UG/L) | DIS-SOLVED IRON (FE) (UG/L) | TOTAL MANGANESE (MN) (UG/L) | DIS-SOLVED MANGANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS-SOLVED ARSENIC (AS) (UG/L) | TOTAL CADMIUM (CD) (UG/L) | DIS-SOLVED CADMIUM (CD) (UG/L) | TOTAL CHROMIUM (CR) (UG/L) | DIS-SOLVED CHROMIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|------------------------|-----------------------------|-----------------------------|----------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|----------------------------|---------------------------------|--------------------------|
| OCT 22... | 190 | 0 | 10 | 10 | 1 | 1 | <10 | 0 | 20 | 0 | <50 |
| JAN 24... | 370 | 20 | 10 | 0 | 1 | 1 | <10 | 1 | 0 | 0 | <50 |
| APR 28... | 200 | 10 | 20 | 0 | 2 | 1 | <10 | 1 | 0 | 0 | <50 |
| JUL 25... | 190 | 20 | 20 | 0 | 1 | 1 | <10 | 3 | 0 | 0 | <50 |

| DATE | DIS-SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS-SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) | TOTAL SELENIUM (SE) (UG/L) | DIS-SOLVED SELENIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS-SOLVED MERCURY (HG) (UG/L) |
|-----------|-------------------------------|--------------------------|-------------------------------|------------------------|-----------------------------|------------------------|-----------------------------|----------------------------|---------------------------------|---------------------------|--------------------------------|
| OCT 22... | 0 | 10 | 9 | <100 | 0 | 30 | 10 | -- | 0 | .0 | .0 |
| JAN 24... | 0 | 10 | 6 | <100 | 4 | 30 | 20 | 0 | 0 | .0 | .0 |
| APR 28... | 0 | 20 | 6 | <100 | 0 | 20 | 10 | 1 | 1 | .0 | .0 |
| JUL 25... | 0 | 20 | 4 | <100 | 24 | 10 | 0 | 0 | 0 | .1 | .1 |

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO JULY 1977

| DATE TIME | OCT 4,76 1400 | OCT 22,76 1200 | DEC 3,76 1130 | DEC 27,76 1200 | JAN 14,77 1400 | |
|-------------------------------|------------------|-------------------|------------------|-------------------|-------------------|--------------|
| TOTAL CELLS/ML | 5500 | 4200 | 790 | 1700 | 2100 | |
| DIVERSITY: DIVISION | 1.5 | 1.4 | 1.3 | 0.4 | 0.7 | |
| ..CLASS | 1.6 | 1.4 | 1.3 | 0.4 | 0.7 | |
| ...ORDER | 2.0 | 1.8 | 1.9 | 1.2 | 1.6 | |
| ...FAMILY | 2.7 | 2.0 | 2.1 | 1.4 | 2.1 | |
|GENUS | 3.2 | 2.6 | 2.9 | 2.3 | 2.6 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| ..CHLOROPHYCEAE | | | | | | |
| ...CHLOROCOCCALES | | | | | | |
| ...CHARACIACEAE | | | | | | |
| ...SCHROEDERIA | -- | -- | * 0 | -- | -- | -- |
| ...PYDRODICTYACEAE | | | | | | |
| ...PEDIASTRUM | 790 | 14 | -- | -- | -- | -- |
| ...MICRACTINIACEAE | | | | | | |
| ...GOLENKINIA | -- | -- | -- | -- | -- | * 0 |
| ...MICRACTINIUM | -- | -- | -- | -- | -- | -- |
| ...OOCYSTACEAE | | | | | | |
| ...ANKISTRODESMUS | -- | -- | 100 2 | 42 5 | 45 3 | 310 14 |
| ...CHDDATELLA | -- | -- | -- | -- | -- | 36 2 |
| ...DICTYOSPHAERIUM | -- | -- | -- | 45 6 | * 0 | -- |
| ...OOCYSTIS | 170 3 | -- | -- | 11 1 | -- | -- |
| ...TETRAEDRON | 330 6 | -- | -- | -- | -- | -- |
| ...SCENEDESMACEAE | | | | | | |
| ...ACTINASTRUM | -- | -- | 140 3 | -- | 36 2 | * 0 |
| ...CRUCIGENIA | -- | -- | -- | -- | -- | -- |
| ...SCENEDESMUS | 170 3 | 310 7 | 6 1 | -- | -- | -- |
| ...TETRASTRUM | -- | -- | -- | 11 1 | 36 2 | * 0 |
| ..TETRASPORALES | | | | | | |
| ...COCCOMYXACEAE | | | | | | |
| ...ELAKATOTHRIX | -- | -- | -- | -- | -- | 24 1 |
| ...PALMELLACEAE | | | | | | |
| ...GLOEOCYSTIS | -- | -- | -- | 22 3 | -- | -- |
| ..VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ...CHLAMYDOMONAS | -- | -- | -- | -- | -- | 12 1 |
| CHRYSOPHYTA | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | |
| ...CENTRALES | | | | | | |
| ...COSCINODISCACEAE | | | | | | |
| ...CYCLOTELLA | 460 8 | 440 10 | 160# 20 | 140 9 | 570# 27 | |
| ...MELOSIRA | 420 8 | 1100# 27 | 220# 28 | 420# 25 | 360# 17 | |
| ...STEPHANODISCUS | -- | * 0 | * 0 | -- | -- | -- |
| ..PENNALES | | | | | | |
| ...ACHNANTHACEAE | | | | | | |
| ...ACHNANTHES | -- | -- | -- | -- | -- | * 0 |
| ...COCCONEIS | -- | -- | -- | -- | -- | -- |
| ...RHOICOSPHENIA | -- | -- | -- | * 0 | -- | -- |
| ...CYMBELLACEAE | | | | | | |
| ...CYMBELLA | -- | -- | -- | -- | -- | * 0 |
| ...EPITHEMIA | -- | * 0 | * 0 | -- | -- | * 0 |
| ...DIATOMACEAE | | | | | | |
| ...DIATOMA | -- | * 0 | -- | -- | -- | 140 7 |
| ...FRAGILARIACEAE | | | | | | |
| ...ASTERIONELLA | 960# 17 | 190 4 | * 0 | 690# 41 | 570# 27 | |
| ...FRAGILARIA | 750 14 | 150 4 | 84 11 | 260# 15 | 24 1 | |
| ...SYNEDRA | -- | 51 1 | 28 4 | 31 2 | * 0 | |
| ...GOMPHONEMACEAE | | | | | | |
| ...GOMPHONEMA | -- | * 0 | * 0 | -- | -- | * 0 |
| ...NAVICULACEAE | | | | | | |
| ...DIPLONEIS | -- | -- | * 0 | -- | -- | -- |
| ...NAVICULA | -- | -- | * 0 | -- | -- | 12 1 |
| ...NITZSCHIA | 83 2 | 34 1 | 8 1 | * 0 | 72 3 | |
| ...SURIRELLACEAE | | | | | | |
| ...CYMATOPLEURA | -- | -- | * 0 | -- | -- | -- |
| ...TABELLARIACEAE | | | | | | |
| ...TABELLARIA | -- | -- | * 0 | * 0 | * 0 | |
| ..CHRYSOPHYCEAE | | | | | | |
| ...CHRYSOMONADALES | | | | | | |
| ...OCHROMONADACEAE | | | | | | |
| ...OCHROMONAS | 42 1 | -- | -- | -- | -- | -- |
| ..XANTHOPHYCEAE | | | | | | |
| ...HETEROTRICHIALES | | | | | | |
| ...TRIBONEMACEAE | | | | | | |
| ...TRIBONEMA | -- | -- | -- | -- | -- | * 0 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| ..CYANOPHYCEAE | | | | | | |
| ...HORMOGONALES | | | | | | |
| ...NOSTOCACEAE | | | | | | |
| ...ANABAENA | 500 9 | 68 2 | -- | -- | -- | -- |
| ...OSCILLATORIA | | | | | | |
| ...LYNGBYA | -- | -- | -- | -- | -- | * 0 |
| ...OSCILLATORIA | 830# 15 | 1600# 38 | -- | -- | -- | * 0 |
| ...CHROCCOCCALES | | | | | | |
| ...CHROCCOCCACEAE | | | | | | |
| ...GOMPHOSPHERIA | -- | -- | 140# 18 | -- | -- | -- |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | |
| ..DINOPHYCEAE | | | | | | |
| ...PERIDINIALES | | | | | | |
| ...GLENODINIACEAE | | | | | | |
| ...GLENODINIUM | -- | -- | -- | -- | -- | 12 1 |
| ...PERIDINIACEAE | | | | | | |
| ...PERIDINIUM | -- | * 0 | -- | -- | -- | -- |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO JULY 1977

| DATE TIME | FEB 28,77 1300 | MAY 31,77 1130 | JUL 7,77 0930 | JUL 25,77 1400 |
|---------------------|-------------------|-------------------|------------------|-------------------|
| TOTAL CELLS/ML | 5500 | 3400 | 6000 | 5200 |
| DIVERSITY: DIVISION | 0.1 | 0.0 | 0.1 | 1.1 |
| ..CLASS | 0.1 | 0.0 | 0.1 | 1.1 |
| ...ORDER | 1.0 | 0.5 | 0.9 | 1.6 |
| ...FAMILY | 1.4 | 0.5 | 1.0 | 1.7 |
|GENUS | 2.1 | 0.6 | 1.3 | 2.0 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
|SCHROEDERIA | -- | - | -- | - | -- | - | -- | - |
|HYDRODICTYACEAE | | | | | | | | |
|PEDIASTRUM | -- | - | -- | - | -- | - | 200 | 4 |
|MICRACTINIACEAE | | | | | | | | |
|GOLLENKINIA | -- | - | -- | - | -- | - | -- | - |
|MICRACTINIUM | -- | - | -- | - | * 0 | | -- | - |
|OOCYSTACEAE | | | | | | | | |
|ANKISTRODESUS | 32 | 1 | * 0 | | 94 | 2 | 50 | 1 |
|CHODATELLA | -- | - | * 0 | | -- | - | -- | - |
|DICTYOSPHAERIUM | -- | - | -- | - | -- | - | -- | - |
|OOCYSTIS | -- | - | -- | - | -- | - | -- | - |
|TETRAEDRON | -- | - | -- | - | -- | - | -- | - |
|SCENEDESMACEAE | | | | | | | | |
|ACTINASTRUM | -- | - | -- | - | -- | - | -- | - |
|CRUCIGENIA | -- | - | -- | - | -- | - | 50 | 1 |
|SCENEDESMUS | -- | - | -- | - | -- | - | 120 | 2 |
|TETRASTRUM | -- | - | -- | - | -- | - | -- | - |
| ..TETRASPORALES | | | | | | | | |
| ...COCCOMYXACEAE | | | | | | | | |
| ...ELAKATOTHRIX | -- | - | -- | - | -- | - | -- | - |
| ...PALMELLACEAE | | | | | | | | |
| ...GLOEOCYSTIS | -- | - | -- | - | -- | - | -- | - |
| ...VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ...CHLAMYDOMONAS | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | |
| ...CENTRALES | | | | | | | | |
| ...COSCINODISACEAE | | | | | | | | |
|CYCLOTELLA | 2300# | 42 | * 0 | | 150 | 2 | 110 | 2 |
|MELOSIRA | 740 | 14 | 3100# | 90 | 4200# | 70 | 3300# | 63 |
|STEPHANODISCUS | -- | - | -- | - | 80 | 1 | * | 0 |
| ...PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ...ACHNANTHES | -- | - | -- | - | -- | - | -- | - |
| ...COCCONEIS | 32 | 1 | -- | - | -- | - | 37 | 1 |
| ...RHOICOSPHEA | -- | - | -- | - | -- | - | -- | - |
| ...CYMBELLACEAE | | | | | | | | |
| ...CYMBELLA | -- | - | -- | - | -- | - | -- | - |
| ...EPITHEMIA | -- | - | -- | - | -- | - | -- | - |
| ...DIATOMACEAE | | | | | | | | |
| ...DIATOMA | 160 | 3 | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
| ...ASTERIONELLA | 1500# | 28 | 180 | 5 | 80 | 1 | -- | - |
| ...FRAGILARIA | 580 | 11 | 94 | 3 | 1300# | 22 | 87 | 2 |
| ...SYNEDRA | -- | - | 36 | 1 | -- | - | 75 | 1 |
| ...GOMPHONEMACEAE | | | | | | | | |
| ...GOMPHONEMA | 32 | 1 | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
| ...DIPLONEIS | -- | - | -- | - | -- | - | -- | - |
| ...NAVICULA | 32 | 1 | -- | - | -- | - | -- | - |
| ...NITZSCHIA | | | | | | | | |
| ...NITZSCHIA | 32 | 1 | -- | - | 54 | 1 | * | 0 |
| ...SURIRELLACEAE | | | | | | | | |
| ...CYMATOPLEURA | -- | - | -- | - | -- | - | -- | - |
| ...TABELLARIACEAE | | | | | | | | |
| ...TABELLARIA | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYCEAE | | | | | | | | |
| ..CHRYSOMONADALES | | | | | | | | |
| ...OCHROMONADACEAE | | | | | | | | |
| ...OCHROMONAS | -- | - | -- | - | -- | - | -- | - |
| ...XANTHOPHYCEAE | | | | | | | | |
| ...HETEROTRICHIALES | | | | | | | | |
| ...TRIBONEMACEAE | | | | | | | | |
| ...TRIBONEMA | -- | - | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | |
| ...HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
|ANABAENA | -- | - | -- | - | -- | - | 660 | 13 |
| ...OSCILLATORIACEAE | | | | | | | | |
|LYNGBYA | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIA | -- | - | -- | - | -- | - | -- | - |
| ...CHROCOCCOCCALES | | | | | | | | |
| ...CHROCOCCOCCAEAE | | | | | | | | |
| ...GOMPHOSPHAERIA | -- | - | -- | - | -- | - | 500 | 10 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | |
| ..DINOPHYCEAE | | | | | | | | |
| ...PERIDINIALES | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | |
| ...GLENODINIUM | -- | - | -- | - | -- | - | -- | - |
| ...PERIDINIACEAE | | | | | | | | |
| ...PERIDINIUM | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

COLUMBIA RIVER MAIN STEM

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | LENGTH OF EXPO- SURE (DAYS) | BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) | CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) |
|--------------|---|--|--|--|
| DEC 27... | 27 | 1379 | .390 | .312 |
| SEP 02... | 37 | 21450 | .011 | .002 |

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 150 | 160 | 168 | 179 | 215 | 190 | 197 | 221 | 183 | 140 | 158 | 165 |
| 2 | 151 | 159 | 171 | 180 | 214 | 189 | 195 | 219 | 183 | 142 | 159 | 165 |
| 3 | 152 | 158 | 173 | 179 | 208 | 190 | 193 | 222 | 177 | 142 | 161 | 165 |
| 4 | 154 | 157 | 173 | 178 | 202 | 192 | 192 | 225 | 173 | 143 | 162 | 165 |
| 5 | 158 | 156 | 172 | 184 | 196 | 192 | 191 | 227 | 173 | 139 | 161 | 167 |
| 6 | 158 | 154 | 174 | 187 | 188 | 192 | 190 | 228 | 171 | 137 | 161 | 170 |
| 7 | 155 | 153 | 176 | 185 | 186 | 189 | 190 | 222 | 169 | 140 | 158 | 166 |
| 8 | 155 | 153 | 176 | 183 | 184 | 187 | 191 | 218 | 168 | 145 | 158 | 168 |
| 9 | 156 | 154 | 176 | 184 | 185 | 189 | 192 | 216 | 170 | 143 | 158 | 168 |
| 10 | 157 | 155 | 178 | 184 | 186 | 190 | 191 | 220 | 172 | 141 | 158 | 167 |
| 11 | 159 | 156 | 180 | 184 | 185 | 189 | 191 | 222 | 172 | 138 | 160 | 168 |
| 12 | 161 | 157 | 182 | 185 | 183 | 191 | 191 | 232 | 167 | 138 | 158 | 168 |
| 13 | 162 | 157 | 182 | 186 | --- | 189 | 190 | 237 | 166 | 138 | 161 | 169 |
| 14 | 161 | 157 | 181 | 187 | --- | 188 | 189 | 240 | 166 | 139 | 164 | 171 |
| 15 | 160 | 158 | 179 | 188 | --- | 188 | 189 | 242 | 165 | 141 | 166 | 171 |
| 16 | 161 | 160 | 176 | 189 | --- | 191 | 190 | 240 | 166 | 143 | 164 | 171 |
| 17 | 162 | 162 | 175 | 190 | --- | 192 | 190 | 230 | 163 | 145 | 164 | 170 |
| 18 | 162 | 165 | 176 | 192 | --- | 195 | 192 | 220 | 161 | 144 | 165 | 170 |
| 19 | 164 | 168 | 179 | 194 | --- | 197 | 194 | 214 | 157 | 145 | 164 | 172 |
| 20 | 166 | 170 | 181 | 196 | --- | 198 | 196 | 211 | 157 | 148 | 166 | 171 |
| 21 | 168 | 169 | 182 | 198 | --- | 198 | 199 | 206 | 153 | 152 | 168 | 169 |
| 22 | 168 | 168 | 183 | 202 | --- | 199 | 198 | 204 | 153 | 154 | 168 | 166 |
| 23 | 166 | 171 | 184 | 203 | --- | 202 | 198 | 201 | 154 | 152 | 168 | 166 |
| 24 | 166 | 175 | 188 | 202 | 183 | 201 | 199 | 198 | 155 | 149 | 169 | 166 |
| 25 | 167 | 175 | 190 | 202 | 186 | 200 | 202 | 194 | 159 | 152 | 169 | 166 |
| 26 | 166 | 171 | 188 | 204 | 186 | 199 | 202 | 190 | 155 | 152 | 168 | 168 |
| 27 | 162 | 168 | 185 | 206 | 188 | 195 | 204 | 188 | 152 | 154 | 168 | 170 |
| 28 | 160 | 165 | 185 | 209 | 189 | 195 | 208 | 186 | 152 | 156 | 165 | 171 |
| 29 | 160 | 164 | 182 | 212 | --- | 196 | 214 | 185 | 149 | 156 | 164 | 172 |
| 30 | 160 | 166 | 180 | 213 | --- | 197 | 220 | 185 | 144 | 156 | 165 | 169 |
| 31 | 160 | --- | 179 | 214 | --- | 198 | --- | 185 | --- | 157 | 165 | --- |

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-----------|------|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 18.5 | 18.0 | 13.0 | 13.0 | 9.5 | 9.5 | 7.0 | 7.0 | 6.0 | 5.5 | 5.5 | 5.5 |
| 2 | 18.5 | 18.0 | 13.0 | 13.0 | 9.5 | 9.5 | 7.0 | 7.0 | 6.0 | 5.5 | 6.0 | 5.5 |
| 3 | 18.0 | 17.5 | 13.0 | 13.0 | 9.5 | 9.5 | 7.0 | 6.5 | 5.5 | 5.5 | 6.0 | 6.0 |
| 4 | 17.5 | 17.0 | 13.0 | 13.0 | 9.5 | 9.0 | 7.0 | 7.0 | 5.5 | 5.5 | 6.0 | 5.5 |
| 5 | 17.5 | 17.0 | 13.0 | 13.0 | 9.0 | 9.0 | 7.0 | 6.5 | 5.5 | 5.5 | 6.0 | 5.0 |
| 6 | 17.5 | 17.0 | 13.0 | 12.5 | 9.0 | 9.0 | 6.5 | 6.5 | 5.5 | 5.5 | 6.0 | 5.5 |
| 7 | 17.5 | 17.0 | 12.5 | 12.5 | 9.0 | 8.5 | 6.5 | 6.0 | 5.5 | 5.5 | 6.0 | 6.0 |
| 8 | 17.5 | 17.0 | 13.0 | 12.5 | 9.0 | 9.0 | 6.0 | 6.0 | 5.5 | 5.5 | 6.0 | 6.0 |
| 9 | 17.5 | 17.5 | 13.0 | 12.5 | 9.0 | 8.5 | 6.0 | 6.0 | 5.5 | 5.5 | 6.0 | 6.0 |
| 10 | 17.5 | 17.0 | 12.5 | 12.5 | 8.5 | 8.5 | --- | --- | 6.0 | 5.5 | 6.0 | 5.5 |
| 11 | 17.5 | 17.0 | 12.5 | 12.5 | 8.5 | 8.5 | --- | --- | 6.0 | 5.5 | 6.0 | 5.5 |
| 12 | 17.5 | 17.0 | 12.5 | 12.0 | 8.5 | 8.0 | --- | --- | 6.0 | 6.0 | 6.0 | 6.0 |
| 13 | 17.0 | 16.5 | 12.5 | 12.0 | 8.5 | 8.0 | --- | --- | --- | --- | 6.0 | 5.5 |
| 14 | 16.5 | 16.5 | 12.0 | 12.0 | 8.0 | 8.0 | --- | --- | --- | --- | 6.0 | 5.5 |
| 15 | 16.5 | 16.0 | 12.0 | 12.0 | 8.0 | 8.0 | --- | --- | --- | --- | 6.0 | 5.5 |
| 16 | 16.5 | 16.0 | 12.0 | 12.0 | 8.0 | 8.0 | --- | --- | --- | --- | 6.0 | 6.0 |
| 17 | 16.0 | 15.5 | 12.0 | 12.0 | 8.0 | 8.0 | --- | --- | --- | --- | 6.0 | 6.0 |
| 18 | 15.5 | 15.0 | 12.0 | 12.0 | 8.0 | 8.0 | --- | --- | --- | --- | 6.0 | 6.0 |
| 19 | 15.0 | 14.5 | 12.0 | 12.0 | 8.0 | 8.0 | --- | --- | --- | --- | 6.5 | 6.0 |
| 20 | 15.0 | 14.5 | 12.0 | 11.5 | 8.0 | 7.5 | --- | --- | --- | --- | 6.5 | 6.0 |
| 21 | 15.0 | 14.5 | 11.5 | 11.5 | 8.0 | 7.5 | 6.0 | 5.5 | --- | --- | 6.5 | 6.0 |
| 22 | 15.0 | 14.5 | 11.5 | 11.5 | 7.5 | 7.5 | 6.0 | 5.5 | --- | --- | 7.0 | 6.0 |
| 23 | 14.5 | 14.5 | 11.5 | 11.0 | 8.0 | 7.5 | 5.5 | 5.5 | --- | --- | 7.0 | 7.0 |
| 24 | 14.5 | 14.0 | 11.0 | 11.0 | 8.0 | 7.5 | 5.5 | 5.5 | 5.0 | 5.0 | 7.5 | 7.0 |
| 25 | 14.5 | 14.0 | 11.0 | 11.0 | 7.5 | 7.5 | 5.5 | 5.5 | 5.0 | 5.0 | 7.5 | 7.0 |
| 26 | 14.5 | 14.0 | 11.0 | 10.5 | 7.5 | 7.5 | 5.5 | 5.5 | 5.0 | 5.0 | 7.5 | 7.0 |
| 27 | 14.0 | 14.0 | 11.0 | 10.0 | 8.0 | 7.5 | 5.5 | 5.5 | 5.5 | 5.0 | 7.5 | 7.0 |
| 28 | 14.0 | 14.0 | 10.5 | 10.0 | 8.0 | 7.5 | 5.5 | 5.5 | 5.5 | 5.5 | 7.5 | 7.0 |
| 29 | 14.0 | 13.5 | 10.0 | 10.0 | 7.5 | 7.5 | 5.5 | 5.5 | --- | --- | 7.5 | 7.0 |
| 30 | 13.5 | 13.5 | 10.0 | 9.5 | 7.5 | 7.5 | 5.5 | 5.5 | --- | --- | 8.0 | 7.0 |
| 31 | 13.5 | 13.0 | --- | --- | 7.5 | 7.0 | 6.0 | 5.5 | --- | --- | 7.5 | 7.5 |
| MONTH | 18.5 | 13.0 | 13.0 | 9.5 | 9.5 | 7.0 | 7.0 | 5.5 | 6.0 | 5.0 | 8.0 | 5.0 |
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 7.5 | 7.5 | 12.0 | 11.5 | 15.0 | 14.5 | 19.5 | 19.5 | 20.5 | 20.0 | 20.5 | 19.5 |
| 2 | 8.0 | 7.5 | 12.0 | 11.5 | 15.0 | 14.5 | 19.5 | 19.0 | 20.5 | 20.0 | 20.5 | 19.5 |
| 3 | 8.0 | 7.5 | 12.0 | 11.5 | 15.0 | 15.0 | 19.5 | 19.0 | 21.0 | 20.5 | 20.5 | 19.5 |
| 4 | 8.5 | 8.0 | 12.0 | 11.0 | 15.0 | 15.0 | 19.0 | 19.0 | 21.0 | 21.0 | 20.0 | 19.5 |
| 5 | 8.5 | 8.5 | 12.0 | 11.5 | 15.5 | 15.0 | 19.0 | 18.5 | 21.5 | 21.0 | 20.0 | 19.5 |
| 6 | 9.0 | 8.0 | 12.0 | 11.5 | 16.0 | 15.5 | 19.5 | 18.5 | 21.5 | 21.0 | 19.5 | 19.5 |
| 7 | 9.0 | 8.5 | 12.0 | 11.5 | 16.5 | 16.0 | 19.5 | 19.0 | 21.5 | 21.0 | 19.5 | 19.0 |
| 8 | 9.0 | 9.0 | 12.0 | 11.5 | 16.5 | 16.0 | 19.5 | 19.0 | 21.5 | 21.0 | 19.0 | 18.5 |
| 9 | 9.0 | 9.0 | 12.5 | 11.5 | 16.5 | 16.0 | 19.0 | 18.5 | 21.5 | 21.0 | 19.0 | 18.5 |
| 10 | 9.0 | 8.5 | 12.5 | 12.0 | 16.5 | 16.0 | 19.0 | 18.5 | 21.5 | 21.5 | 19.0 | 18.5 |
| 11 | 9.5 | 8.5 | 12.5 | 12.0 | 16.5 | 16.0 | 19.0 | 19.0 | 22.0 | 21.5 | 19.0 | 18.5 |
| 12 | 9.5 | 9.0 | 12.5 | 12.0 | 16.5 | 16.0 | 19.0 | 19.0 | 22.0 | 22.0 | 19.0 | 18.5 |
| 13 | 9.5 | 9.0 | 12.5 | 12.5 | 17.0 | 16.0 | 19.5 | 19.0 | 22.0 | 21.5 | 18.5 | 18.5 |
| 14 | 9.0 | 8.5 | 12.5 | 12.0 | 17.0 | 16.5 | 19.0 | 19.0 | 22.0 | 21.5 | 18.5 | 18.5 |
| 15 | 9.0 | 8.5 | 12.5 | 12.5 | 17.5 | 17.0 | 19.5 | 19.0 | 22.0 | 21.5 | 18.5 | 18.0 |
| 16 | 9.5 | 9.0 | 12.5 | 12.5 | 17.5 | 17.0 | 19.5 | 19.5 | 22.0 | 21.5 | 18.0 | 18.0 |
| 17 | 9.5 | 9.0 | 12.5 | 12.5 | 18.0 | 17.5 | 19.5 | 19.0 | 22.5 | 22.0 | 18.0 | 17.5 |
| 18 | 9.5 | 9.0 | 13.0 | 12.5 | 18.0 | 18.0 | 19.5 | 19.0 | 22.5 | 22.0 | 18.0 | 17.5 |
| 19 | 9.5 | 9.0 | 13.0 | 12.5 | 18.0 | 18.0 | 19.5 | 19.0 | 22.0 | 21.5 | 17.5 | 17.0 |
| 20 | 9.5 | 9.0 | 13.0 | 13.0 | 18.0 | 18.0 | 19.5 | 19.5 | 21.5 | 21.5 | 17.0 | 17.0 |
| 21 | 10.0 | 9.5 | 13.5 | 13.0 | 18.5 | 18.0 | 19.5 | 19.5 | 21.5 | 21.0 | 19.0 | 17.0 |
| 22 | 10.0 | 9.5 | 13.5 | 13.5 | 19.0 | 18.5 | 20.0 | 19.5 | 21.0 | 21.0 | 19.0 | 18.5 |
| 23 | 10.5 | 10.0 | 13.5 | 13.5 | 19.0 | 18.5 | 20.0 | 19.5 | 21.0 | 21.0 | 18.5 | 18.5 |
| 24 | 10.5 | 10.0 | 13.5 | 13.5 | 19.0 | 18.5 | 20.5 | 20.0 | 21.0 | 20.5 | 18.5 | 18.0 |
| 25 | 11.0 | 10.5 | 14.0 | 13.5 | 19.5 | 19.0 | 20.5 | 20.0 | 21.0 | 20.5 | 18.0 | 18.0 |
| 26 | 11.5 | 10.5 | 14.0 | 13.5 | 19.5 | 19.0 | 20.5 | 20.0 | 21.5 | 20.0 | 18.0 | 18.0 |
| 27 | 11.5 | 11.0 | 14.5 | 14.0 | 19.5 | 19.0 | 20.0 | 20.0 | 21.0 | 20.0 | 16.5 | 16.5 |
| 28 | 12.0 | 11.0 | 14.5 | 14.0 | 19.5 | 19.0 | 20.0 | 20.0 | 21.0 | 20.0 | 16.5 | 16.5 |
| 29 | 12.0 | 11.0 | 14.5 | 14.0 | 19.5 | 19.0 | 20.0 | 19.5 | 21.0 | 19.5 | 16.5 | 16.5 |
| 30 | 12.0 | 11.0 | 14.5 | 14.5 | 19.5 | 19.0 | 20.0 | 20.0 | 20.5 | 19.5 | 16.5 | 16.0 |
| 31 | --- | --- | 14.5 | 14.5 | --- | --- | 20.5 | 20.0 | 20.5 | 19.5 | --- | --- |
| MONTH | 12.0 | 7.5 | 14.5 | 11.0 | 19.5 | 14.5 | 20.5 | 18.5 | 22.5 | 19.5 | 20.5 | 16.0 |

COLUMBIA RIVER MAIN STEM

14128950 COLUMBIA RIVER AT MULTNOMAH FALLS, OR

LOCATION.--Lat 45°34'45", long 122°06'55", in SW¼SE¼ sec.7, T.1 N., R.6 E., Multnomah County, Hydrologic Unit 17080001, on left bank at Multnomah Falls, 0.7 mi (1.1 km) upstream from mouth of Multnomah Creek, 2.1 mi (3.4 km) downstream from Oneonta Creek, and at mile 136.2 (219.1 km).

DRAINAGE AREA.--240,000 mi² (621,600 km²), approximately.

PERIOD OF RECORD.--November 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 31.11 ft (9.482 m) June 19, 20, 1972; minimum, 4.47 ft (1.362 m) July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 13.75 ft (4.191 m) Jan. 25; minimum, 4.47 ft (1.362 m) July 10.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|---------|-------|-------|----------|-------|-------|----------|-------|-------|---------|-------|-------|
| | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | 9.52 | 8.89 | 9.21 | 9.89 | 9.16 | 9.55 | 12.28 | 10.16 | 10.95 | --- | --- | --- |
| 2 | 9.22 | 7.15 | 8.47 | 9.55 | 9.12 | 9.34 | 10.85 | 9.68 | 10.30 | --- | --- | --- |
| 3 | 9.25 | 8.64 | 8.95 | 9.21 | 8.70 | 8.96 | 10.79 | 9.31 | 10.02 | --- | --- | --- |
| 4 | 11.09 | 9.09 | 9.81 | 9.58 | 8.82 | 9.21 | 9.28 | 6.83 | 8.05 | --- | --- | --- |
| 5 | 11.98 | 11.11 | 11.50 | 9.46 | 8.48 | 9.08 | --- | 5.79 | --- | --- | --- | --- |
| 6 | 12.25 | 11.31 | 11.74 | 9.01 | 7.51 | 8.35 | --- | --- | --- | --- | --- | --- |
| 7 | 12.01 | 9.50 | 10.28 | 9.68 | 7.63 | 8.56 | --- | --- | --- | --- | --- | --- |
| 8 | 10.36 | 9.16 | 9.65 | 9.40 | 7.61 | 8.36 | --- | --- | --- | --- | --- | --- |
| 9 | 10.33 | 8.25 | 9.22 | 9.55 | 7.92 | 8.72 | --- | --- | --- | --- | --- | --- |
| 10 | 9.05 | 7.62 | 8.09 | 9.47 | 9.04 | 9.25 | --- | --- | --- | --- | --- | --- |
| 11 | 9.83 | 9.00 | 9.33 | 9.29 | 8.65 | 8.94 | --- | --- | --- | --- | --- | --- |
| 12 | 10.07 | 9.21 | 9.63 | 9.17 | 8.28 | 8.65 | --- | --- | --- | --- | --- | --- |
| 13 | 10.98 | 9.74 | 10.17 | 8.79 | 7.94 | 8.46 | --- | --- | --- | --- | --- | --- |
| 14 | 11.29 | 10.90 | 11.13 | 8.79 | 8.35 | 8.61 | --- | --- | --- | --- | --- | --- |
| 15 | 11.47 | 10.77 | 11.08 | 9.24 | 8.78 | 9.00 | --- | --- | --- | --- | --- | --- |
| 16 | 10.90 | 8.58 | 10.08 | 9.39 | 8.82 | 9.05 | --- | --- | --- | --- | --- | --- |
| 17 | 8.54 | 7.35 | 7.95 | 9.63 | 8.71 | 9.06 | --- | --- | --- | --- | --- | --- |
| 18 | 11.55 | 8.08 | 9.28 | 9.57 | 8.81 | 9.15 | --- | --- | --- | --- | --- | --- |
| 19 | 11.53 | 10.19 | 10.78 | 9.58 | 8.71 | 9.06 | --- | --- | --- | --- | --- | --- |
| 20 | 11.01 | 9.77 | 10.48 | 9.12 | 8.22 | 8.67 | --- | --- | --- | --- | --- | --- |
| 21 | 11.06 | 9.44 | 10.12 | 10.03 | 8.37 | 9.04 | --- | --- | --- | --- | --- | --- |
| 22 | 11.79 | 9.77 | 10.54 | 9.93 | 9.14 | 9.51 | --- | --- | --- | 10.95 | 8.91 | 9.74 |
| 23 | 11.35 | 8.62 | 9.66 | 9.94 | 8.93 | 9.28 | --- | --- | --- | 9.66 | 8.25 | 8.72 |
| 24 | 9.08 | 7.33 | 8.09 | 10.06 | 9.25 | 9.58 | --- | --- | --- | 11.39 | 9.42 | 10.25 |
| 25 | 10.30 | 6.90 | 8.56 | 10.00 | 9.24 | 9.54 | --- | --- | --- | 13.75 | 11.45 | 12.64 |
| 26 | 10.28 | 8.88 | 9.55 | 9.72 | 8.55 | 8.98 | --- | --- | --- | 13.03 | 10.78 | 11.45 |
| 27 | 10.00 | 9.27 | 9.64 | 10.54 | 8.08 | 9.10 | --- | --- | --- | 10.96 | 9.77 | 10.54 |
| 28 | 11.35 | 9.37 | 9.79 | 10.41 | 8.45 | 9.11 | --- | --- | --- | 10.79 | 9.89 | 10.56 |
| 29 | 11.75 | 10.51 | 11.02 | 11.51 | 8.44 | 9.45 | --- | --- | --- | 9.86 | 8.78 | 9.35 |
| 30 | 10.94 | 8.74 | 9.59 | 12.29 | 10.32 | 11.23 | --- | --- | --- | 9.61 | 8.69 | 9.08 |
| 31 | 9.55 | 8.67 | 9.02 | --- | --- | --- | --- | --- | --- | 12.17 | 9.55 | 11.05 |
| MONTH | 12.25 | 6.90 | 9.75 | 12.29 | 7.51 | 9.09 | 12.28 | 5.79 | 9.83 | 13.75 | 8.25 | 10.33 |

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-------|-------|-------|-------|-------|-------|--------|------|------|-----------|-------|-------|
| FEBRUARY | | | | MARCH | | | APRIL | | | MAY | | |
| 1 | 12.04 | 10.21 | 10.98 | 9.83 | 9.11 | 9.51 | 9.76 | 9.07 | 9.51 | 8.36 | 7.56 | 7.93 |
| 2 | 10.80 | 10.26 | 10.54 | 9.50 | 9.14 | 9.33 | 9.03 | 8.36 | 8.69 | 9.94 | 7.60 | 9.15 |
| 3 | 11.13 | 9.43 | 10.17 | 11.01 | 9.12 | 9.98 | 8.52 | 7.19 | 7.88 | 11.45 | 9.83 | 10.91 |
| 4 | 11.42 | 8.84 | 10.03 | 11.09 | 9.32 | 9.73 | 9.04 | 6.69 | 8.03 | 11.87 | 11.11 | 11.46 |
| 5 | 8.81 | 7.99 | 8.38 | 9.47 | 8.86 | 9.14 | 8.47 | 6.98 | 7.79 | 11.90 | 10.90 | 11.38 |
| 6 | 8.68 | 7.01 | 7.63 | 9.88 | 8.88 | 9.40 | 8.57 | 6.83 | 7.91 | 11.06 | 9.85 | 10.57 |
| 7 | 9.88 | 5.46 | 7.38 | 10.52 | 9.32 | 9.89 | 8.63 | 6.78 | 7.92 | 10.35 | 9.59 | 9.90 |
| 8 | 10.06 | 9.03 | 9.55 | 11.02 | 9.98 | 10.50 | 8.34 | 6.44 | 7.48 | 10.32 | 9.64 | 9.95 |
| 9 | 9.49 | 8.73 | 9.06 | 11.51 | 10.26 | 10.92 | 7.80 | 6.27 | 7.11 | 10.18 | 9.63 | 9.92 |
| 10 | 9.92 | 8.55 | 9.20 | 10.90 | 9.96 | 10.56 | 7.01 | 5.87 | 6.72 | 9.89 | 9.30 | 9.73 |
| 11 | 9.25 | 7.46 | 8.61 | 9.94 | 9.30 | 9.60 | 8.08 | 6.75 | 7.56 | 9.98 | 9.27 | 9.54 |
| 12 | 8.36 | 6.88 | 7.67 | 10.17 | 9.40 | 9.71 | 7.84 | 6.87 | 7.36 | 10.13 | 9.19 | 9.55 |
| 13 | 7.71 | 6.40 | 7.01 | 10.07 | 9.40 | 9.65 | 8.16 | 6.78 | 7.55 | 10.14 | 9.17 | 9.56 |
| 14 | 8.91 | 6.67 | 7.69 | 9.74 | 9.33 | 9.51 | 9.07 | 8.14 | 8.74 | 9.64 | 8.97 | 9.30 |
| 15 | 9.34 | 7.61 | 8.50 | 9.88 | 9.35 | 9.61 | 9.46 | 8.27 | 8.93 | 9.86 | 9.01 | 9.53 |
| 16 | 9.12 | 8.42 | 8.88 | 12.65 | 9.22 | 10.36 | 9.24 | 7.28 | 8.01 | 10.14 | 9.35 | 9.78 |
| 17 | 8.37 | 7.20 | 7.76 | 12.47 | 9.87 | 10.51 | 7.42 | 6.42 | 6.87 | 10.23 | 9.50 | 9.87 |
| 18 | 8.89 | 7.26 | 8.17 | 9.83 | 9.35 | 9.62 | 7.76 | 5.60 | 6.67 | 10.29 | 9.37 | 9.84 |
| 19 | 8.83 | 7.55 | 8.27 | 9.96 | 9.20 | 9.54 | 7.77 | 6.46 | 7.40 | 9.32 | 7.41 | 8.19 |
| 20 | 7.89 | 6.83 | 7.38 | 9.17 | 8.42 | 8.73 | 8.52 | 7.32 | 7.85 | 8.03 | 7.01 | 7.47 |
| 21 | 9.72 | 7.18 | 8.36 | 9.24 | 8.41 | 8.86 | 8.57 | 7.59 | 8.15 | 9.56 | 7.39 | 8.88 |
| 22 | 10.68 | 7.38 | 8.93 | 9.20 | 8.43 | 8.88 | 9.24 | 8.13 | 8.56 | 9.66 | 9.09 | 9.33 |
| 23 | 10.56 | 8.95 | 9.48 | 9.44 | 8.48 | 8.89 | 8.41 | 6.16 | 7.05 | 9.78 | 9.13 | 9.46 |
| 24 | 9.29 | 8.74 | 8.97 | 9.29 | 8.38 | 8.84 | 6.83 | 5.90 | 6.41 | 9.45 | 8.89 | 9.23 |
| 25 | 9.34 | 8.64 | 8.96 | 8.84 | 8.08 | 8.49 | 8.54 | 6.16 | 7.42 | 12.40 | 8.92 | 9.84 |
| 26 | 9.17 | 8.20 | 8.70 | 8.18 | 6.66 | 7.47 | 9.01 | 7.90 | 8.49 | 12.61 | 11.41 | 11.89 |
| 27 | 8.82 | 8.19 | 8.47 | 7.89 | 6.75 | 7.29 | 9.29 | 8.54 | 9.01 | 12.15 | 11.35 | 11.81 |
| 28 | 9.59 | 8.49 | 9.08 | 8.18 | 6.99 | 7.71 | 9.26 | 8.08 | 8.55 | 12.13 | 9.38 | 10.47 |
| 29 | --- | --- | --- | 9.49 | 7.73 | 8.44 | 8.56 | 7.14 | 7.93 | 9.92 | 8.89 | 9.60 |
| 30 | --- | --- | --- | 9.26 | 8.16 | 8.77 | 8.24 | 7.21 | 7.83 | 8.83 | 7.25 | 7.97 |
| 31 | --- | --- | --- | 9.74 | 7.93 | 8.60 | --- | --- | --- | 10.07 | 7.19 | 9.12 |
| MONTH | 12.04 | 5.46 | 8.70 | 12.65 | 6.66 | 9.29 | 9.76 | 5.60 | 7.84 | 12.61 | 7.01 | 9.71 |
| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
| JUNE | | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 12.16 | 10.10 | 11.17 | 8.38 | 6.55 | 7.33 | 8.64 | 5.86 | 7.28 | 7.64 | 6.12 | 6.89 |
| 2 | 12.07 | 10.74 | 11.47 | 7.47 | 5.77 | 6.69 | 9.08 | 8.24 | 8.64 | 7.20 | 5.39 | 6.10 |
| 3 | 12.59 | 10.51 | 11.51 | 7.18 | 5.72 | 6.46 | 9.07 | 6.81 | 7.79 | 7.79 | 5.59 | 6.60 |
| 4 | 12.61 | 9.38 | 10.34 | 6.89 | 5.44 | 6.22 | 8.81 | 7.25 | 8.15 | 8.12 | 5.90 | 6.96 |
| 5 | 9.61 | 7.93 | 8.39 | 6.72 | 5.18 | 5.87 | 9.06 | 7.40 | 8.45 | 6.83 | 5.30 | 5.85 |
| 6 | 10.09 | 8.26 | 9.36 | 6.32 | 4.68 | 5.46 | 7.80 | 5.25 | 6.55 | 7.55 | 5.81 | 6.95 |
| 7 | 10.26 | 8.99 | 9.84 | 5.94 | 4.93 | 5.52 | 6.38 | 5.34 | 5.83 | 8.20 | 7.58 | 7.95 |
| 8 | 10.78 | 10.01 | 10.34 | 7.06 | 5.60 | 6.32 | 6.44 | 5.69 | 6.15 | 8.49 | 6.88 | 7.61 |
| 9 | 10.83 | 9.94 | 10.31 | 7.45 | 4.95 | 5.99 | 6.84 | 5.54 | 6.17 | 7.25 | 6.46 | 6.89 |
| 10 | 9.97 | 9.59 | 9.86 | 6.00 | 4.47 | 5.11 | 6.69 | 6.12 | 6.39 | 7.26 | 5.69 | 6.52 |
| 11 | 9.89 | 8.15 | 8.61 | 6.60 | 4.97 | 6.10 | 7.26 | 6.18 | 6.89 | 6.81 | 5.32 | 6.08 |
| 12 | 8.29 | 7.42 | 7.80 | 7.06 | 5.90 | 6.53 | 8.08 | 6.19 | 7.12 | 7.16 | 5.39 | 6.35 |
| 13 | 9.69 | 7.20 | 8.42 | 8.46 | 6.72 | 7.60 | 7.15 | 5.79 | 6.42 | 8.42 | 6.39 | 7.34 |
| 14 | 9.93 | 9.18 | 9.51 | 7.21 | 6.17 | 6.69 | 6.90 | 5.21 | 6.04 | 8.86 | 7.71 | 8.27 |
| 15 | 10.32 | 9.01 | 9.42 | 7.91 | 6.95 | 7.46 | 7.84 | 5.46 | 6.90 | 9.04 | 8.11 | 8.49 |
| 16 | 11.13 | 9.60 | 10.36 | 7.80 | 5.77 | 6.67 | 8.73 | 7.20 | 8.13 | 9.06 | 7.94 | 8.42 |
| 17 | 11.09 | 9.37 | 10.24 | 6.67 | 5.17 | 5.88 | 8.94 | 7.41 | 8.15 | 9.02 | 7.09 | 7.80 |
| 18 | 10.36 | 7.89 | 8.84 | 8.60 | 5.31 | 7.16 | 8.93 | 6.94 | 7.87 | 8.27 | 6.21 | 6.99 |
| 19 | 7.90 | 6.54 | 7.30 | 8.73 | 7.93 | 8.29 | 8.82 | 6.58 | 7.66 | 8.45 | 7.42 | 7.81 |
| 20 | 7.90 | 6.10 | 7.15 | 8.77 | 7.25 | 7.81 | 8.81 | 6.00 | 6.92 | 8.97 | 7.10 | 8.09 |
| 21 | 7.71 | 5.75 | 6.98 | 8.27 | 6.91 | 7.52 | 7.30 | 5.10 | 6.00 | 7.74 | 6.51 | 7.21 |
| 22 | 8.18 | 6.27 | 7.41 | 7.53 | 5.81 | 6.55 | 7.44 | 5.98 | 6.93 | 7.61 | 6.42 | 6.97 |
| 23 | 8.56 | 7.80 | 8.05 | 7.00 | 5.06 | 5.88 | 8.42 | 7.21 | 7.75 | 8.36 | 6.30 | 7.68 |
| 24 | 8.51 | 7.43 | 7.84 | 6.51 | 5.24 | 5.72 | 8.13 | 6.77 | 7.32 | 8.87 | 7.29 | 7.97 |
| 25 | 8.31 | 7.31 | 7.69 | 7.08 | 5.51 | 6.44 | 7.95 | 6.49 | 7.11 | 8.20 | 6.87 | 7.58 |
| 26 | 8.08 | 6.00 | 6.84 | 7.34 | 5.81 | 6.51 | 7.92 | 5.92 | 6.77 | 8.72 | 7.42 | 8.02 |
| 27 | 7.87 | 6.58 | 7.16 | 7.24 | 5.69 | 6.50 | 7.24 | 5.43 | 6.35 | 8.77 | 7.88 | 8.34 |
| 28 | 8.67 | 5.90 | 7.40 | 7.62 | 5.83 | 6.75 | 7.24 | 5.73 | 6.44 | 9.03 | 8.00 | 8.39 |
| 29 | 8.49 | 7.18 | 7.75 | 7.99 | 6.39 | 7.29 | 7.80 | 6.23 | 6.98 | 9.03 | 8.13 | 8.64 |
| 30 | 9.50 | 7.74 | 8.68 | 7.42 | 5.98 | 6.80 | 8.33 | 6.38 | 7.47 | 8.98 | 8.24 | 8.57 |
| 31 | --- | --- | --- | 7.40 | 5.74 | 6.62 | 7.65 | 6.10 | 6.94 | --- | --- | --- |
| MONTH | 12.61 | 5.75 | 8.86 | 8.77 | 4.47 | 6.57 | 9.08 | 5.10 | 7.08 | 9.06 | 5.30 | 7.44 |
| YEAR | 13.75 | 4.47 | 8.51 | | | | | | | | | |

COLUMBIA RIVER MAIN STEM

14129400 COLUMBIA RIVER AT WASHOUGAL, WA

LOCATION.--Lat 45°34'30", long 122°21'10", in SE¼ sec.53, T.1 N., R.4 E., Clark County, Hydrologic Unit 17080001, on right bank on rock-fill point at south end of 17th Street, in Washougal, and at river mile 122.9 (197.7 km).

DRAINAGE AREA.--240,400 mi² (622,600 km²), approximately.

PERIOD OF RECORD.--October 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 28.87 ft (8.800 m) June 19, 1972; minimum, 3.68 ft (1.122 m) July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.03 ft (3.667 m) Jan. 25; minimum, 3.68 ft (1.122 m) July 10.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---------|-------|------|----------|-------|------|----------|-------|------|---------|-------|------|-------|
| OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | | |
| 1 | 8.31 | 7.57 | 7.88 | 8.55 | 7.87 | 8.19 | 10.73 | 9.09 | 9.80 | 8.96 | 6.69 | 7.69 |
| 2 | 8.13 | 6.03 | 7.32 | 8.42 | 7.94 | 8.16 | 9.38 | 8.53 | 8.90 | 7.47 | 6.15 | 6.72 |
| 3 | 7.89 | 7.31 | 7.62 | 8.18 | 7.72 | 7.96 | 9.14 | 7.96 | 8.70 | 10.54 | 7.05 | 8.58 |
| 4 | 9.36 | 7.64 | 8.30 | 8.52 | 7.69 | 8.08 | 7.92 | 5.97 | 7.03 | 10.20 | 8.53 | 9.14 |
| 5 | 10.28 | 9.34 | 9.82 | 8.51 | 7.36 | 7.95 | 7.00 | 5.22 | 5.96 | 11.10 | 8.92 | 9.64 |
| 6 | 10.58 | 9.78 | 10.17 | 8.15 | 6.93 | 7.51 | 7.89 | 6.08 | 6.81 | 11.09 | 8.52 | 9.21 |
| 7 | 10.40 | 8.35 | 9.21 | 8.40 | 6.77 | 7.51 | 8.13 | 7.07 | 7.53 | 10.79 | 8.03 | 9.13 |
| 8 | 9.02 | 7.95 | 8.38 | 8.26 | 6.83 | 7.37 | 8.51 | 7.24 | 7.75 | 10.86 | 8.29 | 9.21 |
| 9 | 8.93 | 7.31 | 8.09 | 8.44 | 7.08 | 7.67 | 8.27 | 7.10 | 7.70 | 8.30 | 6.30 | 7.36 |
| 10 | 7.71 | 6.57 | 7.07 | 8.42 | 7.70 | 8.06 | 7.80 | 6.71 | 7.28 | 7.57 | 6.20 | 7.06 |
| 11 | 8.58 | 7.57 | 7.99 | 8.28 | 7.54 | 7.88 | 7.63 | 6.93 | 7.30 | 7.95 | 7.09 | 7.51 |
| 12 | 8.79 | 7.91 | 8.26 | 8.14 | 7.43 | 7.68 | 7.55 | 6.97 | 7.26 | 9.32 | 7.87 | 8.65 |
| 13 | 9.42 | 8.27 | 8.65 | 7.83 | 6.81 | 7.42 | 9.41 | 6.87 | 7.46 | 9.17 | 8.02 | 8.56 |
| 14 | 9.59 | 9.38 | 9.48 | 7.71 | 7.14 | 7.45 | 9.63 | 7.93 | 8.56 | 8.69 | 7.67 | 8.15 |
| 15 | 9.67 | 9.30 | 9.49 | 7.94 | 7.28 | 7.62 | 8.66 | 7.88 | 8.25 | 8.22 | 6.64 | 7.60 |
| 16 | 9.45 | 7.48 | 8.66 | 8.13 | 7.33 | 7.69 | 8.59 | 7.70 | 8.16 | 8.14 | 6.74 | 7.47 |
| 17 | 7.48 | 6.35 | 6.84 | 8.39 | 7.20 | 7.74 | 9.77 | 7.90 | 8.67 | 8.80 | 7.46 | 8.06 |
| 18 | 9.68 | 6.92 | 7.84 | 8.33 | 7.39 | 7.84 | 9.36 | 7.92 | 8.55 | 8.88 | 7.68 | 8.17 |
| 19 | 9.88 | 8.94 | 9.42 | 8.41 | 7.31 | 7.80 | 8.71 | 7.25 | 7.93 | 8.86 | 7.82 | 8.23 |
| 20 | 9.68 | 8.57 | 9.30 | 8.33 | 7.41 | 7.87 | 9.65 | 6.47 | 7.34 | 10.04 | 8.15 | 8.95 |
| 21 | 9.53 | 8.28 | 8.79 | 8.88 | 7.40 | 8.00 | 9.78 | 8.15 | 8.81 | 10.04 | 8.70 | 9.23 |
| 22 | 10.04 | 8.55 | 9.15 | 9.15 | 8.03 | 8.48 | 10.20 | 7.75 | 8.77 | 9.57 | 8.00 | 8.69 |
| 23 | 10.08 | 7.71 | 8.65 | 9.00 | 7.91 | 8.38 | 10.39 | 9.13 | 9.78 | 8.48 | 7.38 | 7.80 |
| 24 | 8.12 | 6.40 | 7.22 | 8.87 | 7.95 | 8.34 | 9.09 | 7.71 | 8.21 | 9.87 | 8.24 | 8.94 |
| 25 | 9.07 | 6.14 | 7.49 | 8.74 | 7.92 | 8.28 | 8.05 | 7.19 | 7.61 | 12.03 | 9.93 | 10.97 |
| 26 | 8.99 | 7.77 | 8.35 | 8.46 | 7.33 | 7.75 | 8.32 | 7.15 | 7.84 | 11.63 | 9.52 | 10.14 |
| 27 | 8.85 | 8.00 | 8.44 | 9.00 | 6.93 | 7.73 | 8.44 | 7.68 | 8.09 | 9.54 | 8.38 | 9.02 |
| 28 | 9.59 | 8.00 | 8.33 | 9.07 | 7.32 | 7.92 | 8.00 | 7.35 | 7.69 | 9.26 | 8.58 | 9.05 |
| 29 | 10.02 | 9.05 | 9.42 | 9.86 | 7.26 | 8.10 | 8.02 | 6.96 | 7.55 | 9.09 | 8.02 | 8.45 |
| 30 | 9.45 | 7.49 | 8.31 | 10.70 | 8.93 | 9.77 | 8.83 | 7.94 | 8.35 | 8.46 | 7.87 | 8.11 |
| 31 | 8.22 | 7.23 | 7.73 | --- | --- | --- | 9.43 | 8.39 | 8.87 | 10.49 | 7.98 | 9.38 |
| MONTH | 10.58 | 6.03 | 8.44 | 10.70 | 6.77 | 7.94 | 10.73 | 5.22 | 8.01 | 12.03 | 6.15 | 8.54 |

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|------|------|-------|------|------|-------|------|------|-------|------|-------|
| | FEBRUARY | | | MARCH | | | APRIL | | | MAY | | |
| 1 | 10.32 | 8.88 | 9.59 | 8.58 | 7.70 | 8.18 | 8.37 | 7.52 | 8.08 | 7.37 | 6.38 | 6.84 |
| 2 | 9.95 | 8.90 | 9.47 | 8.35 | 7.83 | 8.05 | 7.72 | 7.05 | 7.44 | 8.48 | 6.37 | 7.82 |
| 3 | 9.81 | 8.43 | 9.14 | 9.29 | 7.73 | 8.60 | 7.54 | 5.96 | 6.77 | 10.06 | 8.28 | 9.44 |
| 4 | 9.97 | 8.16 | 9.08 | 9.35 | 8.00 | 8.45 | 7.79 | 5.71 | 6.96 | 10.52 | 9.58 | 10.07 |
| 5 | 8.12 | 7.19 | 7.62 | 8.28 | 7.59 | 7.92 | 7.34 | 6.27 | 6.82 | 10.56 | 9.68 | 10.07 |
| 6 | 7.68 | 6.53 | 7.01 | 8.72 | 7.60 | 8.17 | 7.50 | 6.10 | 6.95 | 9.87 | 8.86 | 9.37 |
| 7 | 8.90 | 5.37 | 6.77 | 9.30 | 7.95 | 8.65 | 7.59 | 6.06 | 7.02 | 9.16 | 8.33 | 8.70 |
| 8 | 9.05 | 7.89 | 8.50 | 9.72 | 8.35 | 9.05 | 7.36 | 5.83 | 6.66 | 8.96 | 8.29 | 8.62 |
| 9 | 8.21 | 7.29 | 7.75 | 10.31 | 8.49 | 9.66 | 6.91 | 5.53 | 6.26 | 8.84 | 8.19 | 8.55 |
| 10 | 8.59 | 7.07 | 7.85 | 9.65 | 8.87 | 9.15 | 6.12 | 5.12 | 5.77 | 8.57 | 7.92 | 8.34 |
| 11 | 7.89 | 6.24 | 7.34 | 8.87 | 8.07 | 8.50 | 6.81 | 5.62 | 6.37 | 8.42 | 7.85 | 8.13 |
| 12 | 7.15 | 5.65 | 6.54 | 8.89 | 8.05 | 8.45 | 6.71 | 5.57 | 6.20 | 8.34 | 7.79 | 8.09 |
| 13 | 6.65 | 5.24 | 5.94 | 8.74 | 8.00 | 8.35 | 6.87 | 5.55 | 6.40 | 8.63 | 7.76 | 8.27 |
| 14 | 7.60 | 5.66 | 6.59 | 8.45 | 7.94 | 8.17 | 7.69 | 6.62 | 7.34 | 8.34 | 7.60 | 7.95 |
| 15 | 8.03 | 6.46 | 7.28 | 8.62 | 7.93 | 8.32 | 8.02 | 7.16 | 7.57 | 8.46 | 7.60 | 8.14 |
| 16 | 8.19 | 7.17 | 7.60 | 10.61 | 7.91 | 8.97 | 7.68 | 6.22 | 6.94 | 8.70 | 7.85 | 8.36 |
| 17 | 7.22 | 6.10 | 6.72 | 10.04 | 8.20 | 8.99 | 6.37 | 5.36 | 5.90 | 8.81 | 8.01 | 8.46 |
| 18 | 7.84 | 6.11 | 7.09 | 8.50 | 7.98 | 8.25 | 6.49 | 4.91 | 5.66 | 8.88 | 8.12 | 8.49 |
| 19 | 7.91 | 6.71 | 7.35 | 8.51 | 7.74 | 8.22 | 6.56 | 5.71 | 6.23 | 8.11 | 6.44 | 7.18 |
| 20 | 7.10 | 5.90 | 6.61 | 7.77 | 7.16 | 7.50 | 7.17 | 6.12 | 6.66 | 7.12 | 5.98 | 6.48 |
| 21 | 8.44 | 6.28 | 7.23 | 7.91 | 7.04 | 7.60 | 7.27 | 6.46 | 6.93 | 8.18 | 6.37 | 7.53 |
| 22 | 9.02 | 6.29 | 7.70 | 7.95 | 7.19 | 7.64 | 8.01 | 6.86 | 7.31 | 8.30 | 7.66 | 7.95 |
| 23 | 9.02 | 7.63 | 8.19 | 8.19 | 7.18 | 7.65 | 7.20 | 5.20 | 6.10 | 8.35 | 7.76 | 8.04 |
| 24 | 8.00 | 7.30 | 7.59 | 8.03 | 7.20 | 7.58 | 5.91 | 4.92 | 5.46 | 8.07 | 7.47 | 7.82 |
| 25 | 7.74 | 7.10 | 7.44 | 7.62 | 6.85 | 7.17 | 6.99 | 5.09 | 6.16 | 9.88 | 7.66 | 8.16 |
| 26 | 7.68 | 6.84 | 7.29 | 6.92 | 5.60 | 6.26 | 7.48 | 6.57 | 7.05 | 10.72 | 9.79 | 10.16 |
| 27 | 7.44 | 6.74 | 7.07 | 6.86 | 5.77 | 6.23 | 7.77 | 7.15 | 7.52 | 10.41 | 9.78 | 10.08 |
| 28 | 8.17 | 7.09 | 7.65 | 6.94 | 5.90 | 6.47 | 7.91 | 6.81 | 7.22 | 10.43 | 8.00 | 9.13 |
| 29 | --- | --- | --- | 7.75 | 6.42 | 7.06 | 7.47 | 5.81 | 6.76 | 8.64 | 7.90 | 8.29 |
| 30 | --- | --- | --- | 7.61 | 6.64 | 7.30 | 7.03 | 5.85 | 6.65 | 7.88 | 6.20 | 7.05 |
| 31 | --- | --- | --- | 8.01 | 6.49 | 7.24 | --- | --- | --- | 8.46 | 6.00 | 7.83 |
| MONTH | 10.32 | 5.24 | 7.57 | 10.61 | 5.60 | 7.99 | 8.37 | 4.91 | 6.70 | 10.72 | 5.98 | 8.36 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|-------|------|-------|------|------|------|--------|------|------|-----------|------|------|
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 10.40 | 8.47 | 9.62 | 7.36 | 5.62 | 6.43 | 7.39 | 4.93 | 6.20 | 6.61 | 5.20 | 5.96 |
| 2 | 10.44 | 9.58 | 10.02 | 6.72 | 5.08 | 5.89 | 7.86 | 6.81 | 7.33 | 6.26 | 4.37 | 5.26 |
| 3 | 10.81 | 9.37 | 10.04 | 6.47 | 4.98 | 5.69 | 7.84 | 5.83 | 6.72 | 6.84 | 4.64 | 5.57 |
| 4 | 10.91 | 8.23 | 9.26 | 6.09 | 4.76 | 5.46 | 7.74 | 6.18 | 6.89 | 6.90 | 4.99 | 5.93 |
| 5 | 8.58 | 6.86 | 7.59 | 5.93 | 4.44 | 5.12 | 7.80 | 6.61 | 7.17 | 6.02 | 4.29 | 4.93 |
| 6 | 8.94 | 7.25 | 8.09 | 5.70 | 3.88 | 4.71 | 7.04 | 4.57 | 5.63 | 6.26 | 5.12 | 5.66 |
| 7 | 9.00 | 7.72 | 8.49 | 5.34 | 3.85 | 4.70 | 5.71 | 4.24 | 4.89 | 6.75 | 6.10 | 6.50 |
| 8 | 9.07 | 8.51 | 8.81 | 5.99 | 4.48 | 5.24 | 5.82 | 4.65 | 5.14 | 7.04 | 5.73 | 6.26 |
| 9 | 9.41 | 8.39 | 8.82 | 6.59 | 3.95 | 5.06 | 5.68 | 4.41 | 5.18 | 6.27 | 5.20 | 5.70 |
| 10 | 8.78 | 8.10 | 8.38 | 5.39 | 3.68 | 4.30 | 5.92 | 5.04 | 5.40 | 6.21 | 4.78 | 5.48 |
| 11 | 8.43 | 6.84 | 7.34 | 5.65 | 4.01 | 5.11 | 6.27 | 5.14 | 5.84 | 5.89 | 4.51 | 5.20 |
| 12 | 7.28 | 6.23 | 6.66 | 6.12 | 4.83 | 5.51 | 6.90 | 5.33 | 6.09 | 6.15 | 4.49 | 5.45 |
| 13 | 8.09 | 6.23 | 7.10 | 6.87 | 5.43 | 6.39 | 6.47 | 4.95 | 5.67 | 7.16 | 5.30 | 6.26 |
| 14 | 8.42 | 7.74 | 8.09 | 6.25 | 5.11 | 5.70 | 6.13 | 4.55 | 5.32 | 7.62 | 6.45 | 7.05 |
| 15 | 8.48 | 7.52 | 7.97 | 6.85 | 5.72 | 6.31 | 6.98 | 4.69 | 5.96 | 7.87 | 6.77 | 7.24 |
| 16 | 9.38 | 8.25 | 8.77 | 6.47 | 4.88 | 5.76 | 7.71 | 6.09 | 6.99 | 7.91 | 6.60 | 7.22 |
| 17 | 9.42 | 8.13 | 8.77 | 6.10 | 4.33 | 5.12 | 7.78 | 6.43 | 7.08 | 7.82 | 5.95 | 6.77 |
| 18 | 8.96 | 6.81 | 7.70 | 7.32 | 4.49 | 6.07 | 7.73 | 5.90 | 6.82 | 7.25 | 5.25 | 6.13 |
| 19 | 6.89 | 5.80 | 6.32 | 7.50 | 6.62 | 7.04 | 7.83 | 5.51 | 6.48 | 7.72 | 5.96 | 6.57 |
| 20 | 6.62 | 5.35 | 6.15 | 7.49 | 6.26 | 6.68 | 7.82 | 5.01 | 5.99 | 7.76 | 6.27 | 6.91 |
| 21 | 6.73 | 5.05 | 5.93 | 7.11 | 5.92 | 6.41 | 6.42 | 4.25 | 5.14 | 6.95 | 5.51 | 6.19 |
| 22 | 7.04 | 5.35 | 6.24 | 6.72 | 4.98 | 5.58 | 6.48 | 5.18 | 5.74 | 6.80 | 5.39 | 6.04 |
| 23 | 7.26 | 6.44 | 6.72 | 6.25 | 4.12 | 5.01 | 6.88 | 5.82 | 6.48 | 7.25 | 5.41 | 6.64 |
| 24 | 7.07 | 6.17 | 6.51 | 5.71 | 4.19 | 4.83 | 7.30 | 5.54 | 6.27 | 7.74 | 6.39 | 7.00 |
| 25 | 7.29 | 6.01 | 6.40 | 6.17 | 4.89 | 5.43 | 6.97 | 5.41 | 6.15 | 7.27 | 6.05 | 6.71 |
| 26 | 7.25 | 5.07 | 5.77 | 6.40 | 4.73 | 5.54 | 7.00 | 5.18 | 5.97 | 7.70 | 6.45 | 7.10 |
| 27 | 6.61 | 5.30 | 6.00 | 6.37 | 4.74 | 5.57 | 6.44 | 4.74 | 5.59 | 7.78 | 6.83 | 7.35 |
| 28 | 7.71 | 5.18 | 6.30 | 6.60 | 4.84 | 5.81 | 6.42 | 4.86 | 5.66 | 8.02 | 6.85 | 7.37 |
| 29 | 7.39 | 6.05 | 6.60 | 6.88 | 5.38 | 6.25 | 6.77 | 5.19 | 6.05 | 8.01 | 7.08 | 7.53 |
| 30 | 8.26 | 6.61 | 7.44 | 6.72 | 4.89 | 5.92 | 7.65 | 5.58 | 6.50 | 7.91 | 7.06 | 7.44 |
| 31 | --- | --- | --- | 6.58 | 4.84 | 5.80 | 6.77 | 5.31 | 6.03 | --- | --- | --- |
| MONTH | 10.91 | 5.05 | 7.59 | 7.50 | 3.68 | 5.62 | 7.86 | 4.24 | 6.07 | 8.02 | 4.29 | 6.38 |

| YEAR | 12.03 | 3.68 | 7.44 |
|------|-------|------|------|
|------|-------|------|------|

SANDY RIVER BASIN

14134000 SALMON RIVER NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°15'55", long 121°43'00", in SE¼NW¼ sec.31, T.3 S., R.9 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank near lower end of Red Top Meadows and 3.0 mi (4.8 km) southeast of Government Camp.

DRAINAGE AREA.--8.0 mi² (20.7 km²), revised.

PERIOD OF RECORD.--May 1910 to May 1912, April 1926 to current year. Published as "near Rowe" 1910-12.

REVISED RECORDS.--WSP 769: Drainage area. WSP 1398: 1911-12, 1926-27, 1933(M), 1949.

GAGE.--Water-stage recorder. Datum of gage is 3,445.53 ft (1,050.198 m) above mean sea level. Prior to Nov. 21, 1910, nonrecording gage at site 0.2 mi (0.3 km) upstream at different datum. Nov. 21, 1910, to May 31, 1912, and Apr. 21, 1926, to Sept. 30, 1933, at site 75 ft (23 m) upstream from former site at different datums. Oct. 1, 1933, to Sept. 30, 1960, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--52 years (water years 1911, 1927-77), 44.8 ft³/s (1.269 m³/s), 69.93 in/yr (1,776 mm/yr), 32,460 acre-ft/yr (40.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s (36.8 m³/s) Dec. 23, 1964, gage height, 4.75 ft (1.448 m), from rating curve extended above 310 ft³/s (8.78 m³/s), on basis of slope-area measurement of peak flow; minimum, 10 ft³/s (0.28 m³/s) Nov. 27, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 90 ft³/s (2.55 m³/s) Aug. 30, gage height, 1.74 ft (0.530 m), no peak above base of 150 ft³/s (4.25 m³/s); minimum, 16 ft³/s (0.45 m³/s) Feb. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|---------|--------|-----------|----------|-------|-------|------|------|------|
| 1 | 24 | 31 | 19 | 18 | 18 | 22 | 28 | 58 | 53 | 30 | 23 | 24 |
| 2 | 27 | 25 | 19 | 19 | 17 | 20 | 25 | 77 | 44 | 30 | 23 | 23 |
| 3 | 24 | 23 | 19 | 19 | 17 | 20 | 26 | 75 | 47 | 29 | 24 | 28 |
| 4 | 22 | 22 | 19 | 19 | 17 | 19 | 29 | 59 | 59 | 29 | 23 | 33 |
| 5 | 22 | 21 | 19 | 18 | 17 | 20 | 33 | 53 | 53 | 28 | 23 | 27 |
| 6 | 22 | 20 | 19 | 18 | 17 | 21 | 39 | 47 | 52 | 27 | 22 | 24 |
| 7 | 23 | 20 | 19 | 19 | 17 | 22 | 50 | 45 | 51 | 26 | 21 | 23 |
| 8 | 23 | 20 | 22 | 18 | 17 | 23 | 54 | 45 | 47 | 27 | 21 | 23 |
| 9 | 22 | 20 | 20 | 20 | 17 | 22 | 42 | 47 | 44 | 28 | 22 | 22 |
| 10 | 23 | 19 | 20 | 17 | 20 | 20 | 36 | 61 | 42 | 27 | 22 | 22 |
| 11 | 23 | 19 | 19 | 17 | 20 | 20 | 39 | 52 | 40 | 29 | 22 | 22 |
| 12 | 22 | 19 | 19 | 20 | 23 | 20 | 39 | 46 | 39 | 29 | 22 | 21 |
| 13 | 21 | 19 | 19 | 21 | 24 | 20 | 40 | 46 | 38 | 26 | 22 | 21 |
| 14 | 21 | 20 | 19 | 19 | 20 | 19 | 35 | 50 | 37 | 27 | 21 | 21 |
| 15 | 20 | 28 | 20 | 24 | 19 | 19 | 36 | 47 | 35 | 27 | 21 | 20 |
| 16 | 20 | 26 | 20 | 23 | 20 | 19 | 36 | 47 | 35 | 27 | 21 | 20 |
| 17 | 20 | 29 | 20 | 21 | 21 | 19 | 32 | 57 | 35 | 29 | 20 | 20 |
| 18 | 19 | 26 | 21 | 25 | 20 | 19 | 30 | 53 | 35 | 30 | 21 | 21 |
| 19 | 19 | 22 | 19 | 24 | 19 | 19 | 30 | 50 | 34 | 26 | 21 | 23 |
| 20 | 19 | 21 | 18 | 22 | 20 | 19 | 32 | 49 | 35 | 26 | 21 | 28 |
| 21 | 20 | 20 | 18 | 21 | 20 | 20 | 32 | 58 | 37 | 27 | 22 | 36 |
| 22 | 19 | 20 | 18 | 20 | 19 | 22 | 38 | 50 | 38 | 26 | 20 | 25 |
| 23 | 19 | 19 | 19 | 19 | 18 | 23 | 47 | 53 | 34 | 26 | 20 | 29 |
| 24 | 24 | 20 | 18 | 19 | 18 | 20 | 61 | 48 | 32 | 26 | 23 | 34 |
| 25 | 46 | 21 | 21 | 18 | 18 | 20 | 67 | 45 | 34 | 27 | 26 | 30 |
| 26 | 27 | 19 | 29 | 18 | 18 | 21 | 61 | 49 | 33 | 26 | 32 | 24 |
| 27 | 22 | 18 | 29 | 18 | 23 | 31 | 57 | 49 | 34 | 26 | 20 | 23 |
| 28 | 21 | 18 | 22 | 17 | 28 | 25 | 58 | 47 | 33 | 25 | 35 | 26 |
| 29 | 21 | 19 | 21 | 17 | --- | 23 | 62 | 44 | 33 | 23 | 38 | 32 |
| 30 | 20 | 19 | 19 | 17 | --- | 22 | 64 | 43 | 30 | 24 | 50 | 37 |
| 31 | 34 | --- | 18 | 17 | --- | 24 | --- | 47 | --- | 24 | 28 | --- |
| TOTAL | 709 | 643 | 621 | 602 | 542 | 653 | 1258 | 1597 | 1193 | 837 | 750 | 762 |
| MEAN | 22.9 | 21.4 | 20.0 | 19.4 | 19.4 | 21.1 | 41.9 | 51.5 | 39.8 | 27.0 | 24.2 | 25.4 |
| MAX | 46 | 31 | 29 | 25 | 28 | 31 | 67 | 77 | 59 | 30 | 50 | 37 |
| MIN | 19 | 18 | 18 | 17 | 17 | 19 | 25 | 43 | 30 | 23 | 20 | 20 |
| CFSM | 2.86 | 2.68 | 2.50 | 2.43 | 2.43 | 2.64 | 5.24 | 6.44 | 4.98 | 3.38 | 3.03 | 3.18 |
| IN. | 3.30 | 2.99 | 2.89 | 2.80 | 2.52 | 3.04 | 5.85 | 7.43 | 5.55 | 3.89 | 3.49 | 3.54 |
| AC-FT | 1410 | 1280 | 1230 | 1190 | 1080 | 1300 | 2500 | 3170 | 2370 | 1660 | 1490 | 1510 |
| CAL YR 1976 | TOTAL | 16966 | MEAN 46.4 | MAX 134 | MIN 18 | CFSM 5.80 | IN 78.89 | AC-FT | 33650 | | | |
| WTR YR 1977 | TOTAL | 10167 | MEAN 27.9 | MAX 77 | MIN 17 | CFSM 3.49 | IN 47.27 | AC-FT | 20170 | | | |

SANDY RIVER BASIN

223

14137000 SANDY RIVER NEAR MARMOT, OR

LOCATION.--Lat 45°23'30", long 122°07'40", in SE¼ sec.13, T.2 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, on right bank 0.7 mi (1.1 km) southwest of Marmot, 0.8 mi (1.3 km) upstream from Sandy River Dam of Portland General Electric Co., 6.6 mi (10.6 km) downstream from Salmon River, and at mile 30.9 (49.7 km).

DRAINAGE AREA.--262 mi² (679 km²).

PERIOD OF RECORD.--August 1911 to current year. Published as "at Marmot" October 1912 to September 1913. Records for January 1916 to June 1919, published as "below dam, near Marmot," obtained by combining records for Sandy River below dam, near Marmot, with records for Sandy River Canal near Marmot.

REVISED RECORDS.--WSP 594: Drainage area. WSP 1288: 1912(M), 1915, 1922, 1924, 1934(M). WSP 1318: 1932(M).

GAGE.--Water-stage recorder. Altitude of gage is 730 ft (223 m), from river-profile map. Aug. 15, 1911, to Dec. 20, 1915, and July 2, 1919, to Oct. 19, 1933, nonrecording gage at site 1.0 mi (1.6 km) upstream at different datum. Oct. 20, 1933, to Sept. 30, 1958, water-stage recorder at site 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--66 years, 1,373 ft³/s (38.88 m³/s), 71.17 in/yr (1,808 mm/yr), 994,700 acre-ft/yr (1.23 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,400 ft³/s (1,740 m³/s) Dec. 22, 1964, gage height, 17.05 ft (5.197 m), from rating curve extended above 7,000 ft³/s (198 m³/s); minimum, 195 ft³/s (5.52 m³/s) Nov. 27, 28, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,280 ft³/s (92.9 m³/s) Apr. 7, gage height, 9.40 ft (2.865 m), no peak above base of 7,700 ft³/s (218 m³/s); minimum daily, 260 ft³/s (7.36 m³/s) Oct. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|
| 1 | 344 | 842 | 300 | 465 | 406 | 1570 | 2560 | 1550 | 1510 | 566 | 360 | 436 |
| 2 | 366 | 580 | 290 | 459 | 383 | 1270 | 2140 | 1870 | 1360 | 533 | 350 | 388 |
| 3 | 383 | 483 | 290 | 424 | 360 | 1350 | 1710 | 2170 | 1290 | 514 | 355 | 483 |
| 4 | 334 | 436 | 290 | 424 | 355 | 1100 | 1660 | 2010 | 1890 | 527 | 350 | 630 |
| 5 | 318 | 400 | 280 | 388 | 344 | 1020 | 1950 | 1810 | 1800 | 495 | 339 | 698 |
| 6 | 313 | 371 | 280 | 383 | 339 | 1090 | 2400 | 1630 | 1720 | 471 | 339 | 514 |
| 7 | 308 | 355 | 320 | 383 | 334 | 1570 | 2900 | 1490 | 1610 | 447 | 330 | 442 |
| 8 | 318 | 344 | 460 | 383 | 329 | 1870 | 3050 | 1410 | 1420 | 459 | 320 | 400 |
| 9 | 313 | 334 | 580 | 377 | 329 | 1780 | 2400 | 1370 | 1230 | 471 | 310 | 377 |
| 10 | 324 | 324 | 480 | 377 | 360 | 1410 | 1850 | 1650 | 1130 | 453 | 334 | 360 |
| 11 | 334 | 318 | 440 | 371 | 394 | 1180 | 1650 | 1900 | 1050 | 459 | 334 | 350 |
| 12 | 313 | 313 | 400 | 430 | 400 | 1160 | 1540 | 1610 | 988 | 471 | 339 | 339 |
| 13 | 302 | 302 | 380 | 908 | 514 | 1040 | 1710 | 1440 | 934 | 436 | 329 | 334 |
| 14 | 292 | 313 | 360 | 810 | 424 | 926 | 1610 | 1430 | 900 | 436 | 324 | 329 |
| 15 | 287 | 400 | 366 | 757 | 394 | 850 | 1500 | 1440 | 842 | 436 | 318 | 324 |
| 16 | 282 | 477 | 383 | 818 | 377 | 795 | 1590 | 1450 | 802 | 436 | 329 | 297 |
| 17 | 277 | 495 | 371 | 757 | 377 | 742 | 1420 | 2260 | 779 | 453 | 324 | 282 |
| 18 | 272 | 691 | 394 | 772 | 371 | 779 | 1300 | 2140 | 772 | 489 | 318 | 272 |
| 19 | 267 | 514 | 360 | 810 | 355 | 1040 | 1170 | 1740 | 749 | 436 | 324 | 339 |
| 20 | 267 | 453 | 339 | 727 | 355 | 1050 | 1130 | 1550 | 720 | 412 | 324 | 507 |
| 21 | 267 | 418 | 329 | 664 | 394 | 943 | 1110 | 1580 | 734 | 442 | 329 | 818 |
| 22 | 260 | 394 | 324 | 608 | 489 | 997 | 1150 | 1490 | 720 | 430 | 313 | 670 |
| 23 | 260 | 371 | 377 | 546 | 477 | 1180 | 1440 | 1540 | 677 | 418 | 292 | 630 |
| 24 | 320 | 360 | 383 | 507 | 436 | 1080 | 1820 | 1460 | 643 | 424 | 383 | 1200 |
| 25 | 750 | 380 | 406 | 483 | 447 | 979 | 2130 | 1340 | 657 | 424 | 377 | 961 |
| 26 | 500 | 365 | 934 | 459 | 527 | 908 | 1890 | 1480 | 615 | 418 | 637 | 764 |
| 27 | 420 | 350 | 1110 | 442 | 900 | 2060 | 1670 | 1640 | 608 | 412 | 360 | 643 |
| 28 | 380 | 330 | 818 | 430 | 1820 | 1670 | 1630 | 1670 | 587 | 400 | 424 | 637 |
| 29 | 350 | 320 | 670 | 406 | --- | 1360 | 1630 | 1510 | 601 | 350 | 637 | 713 |
| 30 | 329 | 310 | 580 | 388 | --- | 1210 | 1640 | 1400 | 560 | 360 | 1010 | 1340 |
| 31 | 430 | --- | 507 | 400 | --- | 1300 | --- | 1380 | --- | 366 | 580 | --- |
| TOTAL | 10480 | 12343 | 13801 | 16556 | 12990 | 37279 | 53350 | 50410 | 29898 | 13844 | 11992 | 16477 |
| MEAN | 338 | 411 | 445 | 534 | 464 | 1203 | 1778 | 1626 | 997 | 447 | 387 | 549 |
| MAX | 750 | 842 | 1110 | 908 | 1820 | 2060 | 3050 | 2260 | 1890 | 566 | 1010 | 1340 |
| MIN | 260 | 302 | 280 | 371 | 329 | 742 | 1110 | 1340 | 560 | 350 | 292 | 272 |
| CFSM | 1.29 | 1.57 | 1.70 | 2.04 | 1.77 | 4.59 | 6.79 | 6.21 | 3.81 | 1.71 | 1.48 | 2.10 |
| IN. | 1.49 | 1.75 | 1.96 | 2.35 | 1.84 | 5.29 | 7.57 | 7.16 | 4.25 | 1.97 | 1.70 | 2.34 |
| AC-FT | 20790 | 24480 | 27370 | 32840 | 25770 | 73940 | 105800 | 99990 | 59300 | 27460 | 23790 | 32680 |
| CAL YR 1976 TOTAL | 442098 | | MEAN | 1208 | MAX | 9570 | MIN | 260 | CFSM | 4.61 | IN | 62.77 |
| WTR YR 1977 TOTAL | 279420 | | MEAN | 766 | MAX | 3050 | MIN | 260 | CFSM | 2.92 | IN | 39.67 |
| | | | | | | | | | AC-FT | 876900 | | |
| | | | | | | | | | AC-FT | 554200 | | |

SANDY RIVER BASIN

14138800 BLAZED ALDER CREEK NEAR RHODODENDRON, OR

LOCATION.--Lat 45°27'10", long 121°53'25", in NW¼SE¼ sec.25, T.1 S., R.7 E., Clackamas County, Hydrologic Unit Unit 17080001, in Mount Hood National Forest; on right bank 600 ft (183 m) below the confluence of Bedrock and Hickman Creeks and 8.6 mi (13.8 km) north of Rhododendron.

DRAINAGE AREA.--8.17 mi² (21.16 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,540 ft (774 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 61.2 ft³/s (1.733 m³/s), 101.73 in/yr (2,584 mm/yr), 44,340 acre-ft/yr (54.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,610 ft³/s (73.9 m³/s) Dec. 22, 1964, gage height, 8.25 ft (2.515 m), from rating curve extended above 330 ft³/s (9.35 m³/s), on basis of slope-area measurement of peak flow; minimum, 1.5 ft³/s (0.042 m³/s) Sept. 5-10, 28, 29, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 219 ft³/s (6.20 m³/s) Mar. 27, gage height, 2.93 ft (0.893 m), no peak above base of 500 ft³/s (14.2 m³/s); minimum, 2.0 ft³/s (0.057 m³/s) Oct. 18, Aug. 14-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|-------|-------|-----------|---------|---------|-----------|----------|-------------|-------|-------|--------|
| 1 | 2.5 | 43 | 8.3 | 22 | 13 | 74 | 100 | 77 | 61 | 6.3 | 3.0 | 25 |
| 2 | 3.3 | 27 | 7.8 | 25 | 12 | 49 | 75 | 121 | 53 | 6.3 | 3.0 | 18 |
| 3 | 4.0 | 20 | 7.3 | 20 | 13 | 39 | 58 | 152 | 53 | 6.3 | 2.8 | 31 |
| 4 | 3.0 | 17 | 7.3 | 17 | 10 | 32 | 58 | 119 | 117 | 6.8 | 2.8 | 44 |
| 5 | 2.8 | 14 | 6.8 | 43 | 9.4 | 31 | 79 | 91 | 87 | 6.3 | 2.8 | 44 |
| 6 | 2.8 | 13 | 6.8 | 53 | 9.4 | 33 | 125 | 71 | 69 | 6.3 | 2.8 | 30 |
| 7 | 2.5 | 11 | 7.3 | 53 | 8.8 | 94 | 181 | 58 | 56 | 5.9 | 2.5 | 22 |
| 8 | 2.5 | 10 | 20 | 53 | 8.3 | 109 | 199 | 55 | 49 | 5.5 | 2.5 | 18 |
| 9 | 2.5 | 8.3 | 22 | 53 | 8.3 | 86 | 126 | 56 | 39 | 5.1 | 2.5 | 15 |
| 10 | 2.8 | 7.8 | 17 | 55 | 14 | 51 | 84 | 96 | 31 | 5.1 | 2.5 | 13 |
| 11 | 3.0 | 7.3 | 13 | 47 | 16 | 42 | 77 | 100 | 26 | 5.1 | 2.2 | 11 |
| 12 | 2.8 | 6.8 | 13 | 40 | 23 | 39 | 71 | 71 | 22 | 5.1 | 2.2 | 10 |
| 13 | 2.5 | 6.3 | 13 | 63 | 32 | 32 | 94 | 58 | 21 | 5.1 | 2.2 | 8.8 |
| 14 | 2.5 | 6.8 | 13 | 46 | 21 | 28 | 79 | 58 | 18 | 4.7 | 2.2 | 8.3 |
| 15 | 2.5 | 17 | 14 | 46 | 17 | 25 | 71 | 63 | 17 | 4.7 | 2.2 | 8.3 |
| 16 | 2.2 | 17 | 15 | 49 | 16 | 23 | 75 | 61 | 15 | 4.3 | 2.2 | 7.8 |
| 17 | 2.2 | 28 | 15 | 44 | 16 | 21 | 59 | 119 | 13 | 4.7 | 2.0 | 7.3 |
| 18 | 2.2 | 35 | 17 | 59 | 14 | 24 | 51 | 96 | 13 | 5.9 | 2.0 | 8.3 |
| 19 | 2.2 | 22 | 14 | 58 | 13 | 46 | 47 | 69 | 11 | 4.7 | 2.0 | 15 |
| 20 | 2.2 | 17 | 13 | 46 | 13 | 35 | 44 | 56 | 11 | 4.3 | 2.0 | 39 |
| 21 | 2.2 | 15 | 11 | 36 | 16 | 33 | 44 | 71 | 12 | 4.0 | 2.0 | 44 |
| 22 | 2.2 | 13 | 11 | 30 | 22 | 37 | 53 | 58 | 11 | 4.0 | 2.5 | 51 |
| 23 | 2.2 | 11 | 13 | 25 | 17 | 42 | 86 | 58 | 9.4 | 3.7 | 2.0 | 61 |
| 24 | 6.8 | 11 | 12 | 21 | 15 | 39 | 132 | 59 | 8.8 | 3.7 | 4.7 | 140 |
| 25 | 64 | 17 | 23 | 19 | 15 | 35 | 144 | 53 | 8.3 | 3.7 | 13 | 96 |
| 26 | 32 | 13 | 93 | 17 | 17 | 47 | 117 | 72 | 7.8 | 3.7 | 27 | 59 |
| 27 | 17 | 11 | 121 | 16 | 80 | 218 | 93 | 91 | 7.8 | 3.3 | 8.3 | 43 |
| 28 | 12 | 10 | 63 | 14 | 154 | 96 | 91 | 89 | 7.3 | 3.7 | 24 | 36 |
| 29 | 10 | 9.4 | 44 | 13 | --- | 59 | 91 | 74 | 6.8 | 3.3 | 33 | 51 |
| 30 | 8.8 | 8.8 | 33 | 13 | --- | 47 | 82 | 61 | 6.8 | 3.3 | 119 | 59 |
| 31 | 27 | --- | 26 | 13 | --- | 51 | --- | 58 | --- | 3.0 | 42 | --- |
| TOTAL | 237.2 | 453.5 | 700.6 | 1109 | 623.2 | 1617 | 2686 | 2391 | 868.0 | 147.9 | 325.9 | 1063.8 |
| MEAN | 7.65 | 15.1 | 22.6 | 35.8 | 22.3 | 52.2 | 89.5 | 77.1 | 28.9 | 4.77 | 10.5 | 35.5 |
| MAX | 64 | 43 | 121 | 63 | 154 | 218 | 199 | 152 | 117 | 6.8 | 119 | 140 |
| MIN | 2.2 | 6.3 | 6.8 | 13 | 8.3 | 21 | 44 | 53 | 6.8 | 3.0 | 2.0 | 7.3 |
| CFSM | .94 | 1.85 | 2.77 | 4.38 | 2.73 | 6.39 | 11.0 | 9.44 | 3.54 | .58 | 1.29 | 4.35 |
| IN. | 1.08 | 2.06 | 3.19 | 5.05 | 2.84 | 7.36 | 12.23 | 10.89 | 3.95 | .67 | 1.48 | 4.84 |
| AC-FT | 470 | 900 | 1390 | 2200 | 1240 | 3210 | 5330 | 4740 | 1720 | 293 | 646 | 2110 |
| CAL YR 1976 TOTAL | 18816.7 | | | MEAN 51.4 | MAX 522 | MIN 2.2 | CFSM 6.29 | IN 85.68 | AC-FT 37320 | | | |
| WTR YR 1977 TOTAL | 12223.1 | | | MEAN 33.5 | MAX 218 | MIN 2.0 | CFSM 4.10 | IN 55.65 | AC-FT 24240 | | | |

SANDY RIVER BASIN

225

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR

LOCATION.--Lat 45°29'50", long 122°00'50", near center of sec.12, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 1.2 mi (1.9 km) above North Fork, 7.0 mi (11.3 km) southeast of Multnomah Falls, and at mile 14.8 (23.8 km).

DRAINAGE AREA.--47.9 mi² (124.1 km²).

PERIOD OF RECORD.--August 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,080 ft (329 m), from topographic map.

REMARKS.--Records good. Water stored since 1915 in Bull Run Lake, usable capacity, 12,270 acre-ft (15.1 hm³). No diversion above station.

AVERAGE DISCHARGE.--11 years, 440 ft³/s (12.46 m³/s), 124.74 in/yr (3,168 mm/yr), 318,800 acre-ft/yr (393 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,610 ft³/s (244 m³/s) Jan. 20, 1972, gage height, 13.22 ft (4.029 m); minimum, 33 ft³/s (0.93 m³/s) Sept. 27, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,200 ft³/s (62.3 m³/s) Mar. 27, gage height, 7.44 ft (2.268 m), no peak above base of 3,800 ft³/s (108 m³/s); minimum, 34 ft³/s (0.96 m³/s) Aug. 16-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 71 | 420 | 81 | 179 | 129 | 666 | 875 | 386 | 373 | 70 | 43 | 232 |
| 2 | 82 | 260 | 78 | 165 | 108 | 442 | 634 | 661 | 326 | 68 | 43 | 177 |
| 3 | 82 | 197 | 76 | 146 | 97 | 380 | 486 | 892 | 323 | 66 | 42 | 323 |
| 4 | 70 | 161 | 72 | 138 | 92 | 320 | 482 | 752 | 771 | 64 | 41 | 490 |
| 5 | 66 | 137 | 70 | 113 | 89 | 303 | 599 | 626 | 574 | 62 | 41 | 463 |
| 6 | 61 | 116 | 69 | 111 | 86 | 335 | 817 | 494 | 460 | 58 | 41 | 300 |
| 7 | 58 | 103 | 78 | 103 | 82 | 865 | 1060 | 407 | 383 | 56 | 41 | 225 |
| 8 | 55 | 94 | 199 | 97 | 80 | 953 | 1120 | 370 | 317 | 54 | 41 | 180 |
| 9 | 52 | 87 | 268 | 90 | 78 | 757 | 787 | 354 | 270 | 54 | 40 | 149 |
| 10 | 57 | 81 | 218 | 94 | 110 | 467 | 545 | 545 | 236 | 52 | 40 | 128 |
| 11 | 59 | 76 | 180 | 119 | 123 | 364 | 494 | 630 | 214 | 52 | 37 | 111 |
| 12 | 52 | 72 | 161 | 312 | 165 | 370 | 449 | 463 | 195 | 52 | 36 | 99 |
| 13 | 49 | 69 | 146 | 570 | 243 | 303 | 561 | 386 | 179 | 50 | 35 | 90 |
| 14 | 47 | 69 | 135 | 393 | 177 | 255 | 482 | 383 | 163 | 50 | 35 | 83 |
| 15 | 46 | 131 | 133 | 386 | 151 | 229 | 431 | 442 | 151 | 50 | 35 | 81 |
| 16 | 44 | 189 | 133 | 400 | 138 | 216 | 449 | 452 | 138 | 50 | 35 | 76 |
| 17 | 43 | 270 | 129 | 345 | 137 | 199 | 373 | 838 | 128 | 55 | 34 | 73 |
| 18 | 42 | 326 | 146 | 367 | 124 | 255 | 326 | 648 | 121 | 70 | 34 | 80 |
| 19 | 41 | 223 | 124 | 364 | 114 | 463 | 283 | 475 | 114 | 60 | 34 | 114 |
| 20 | 40 | 182 | 111 | 300 | 114 | 354 | 270 | 393 | 110 | 55 | 34 | 300 |
| 21 | 40 | 155 | 103 | 250 | 135 | 320 | 272 | 449 | 114 | 52 | 34 | 671 |
| 22 | 40 | 135 | 97 | 218 | 216 | 354 | 312 | 383 | 103 | 50 | 34 | 403 |
| 23 | 40 | 119 | 118 | 191 | 193 | 410 | 434 | 386 | 96 | 50 | 34 | 525 |
| 24 | 48 | 111 | 114 | 167 | 173 | 383 | 595 | 417 | 92 | 48 | 54 | 1030 |
| 25 | 400 | 146 | 187 | 151 | 193 | 332 | 652 | 354 | 86 | 48 | 129 | 634 |
| 26 | 236 | 116 | 699 | 138 | 239 | 373 | 557 | 460 | 82 | 48 | 386 | 413 |
| 27 | 140 | 102 | 822 | 129 | 843 | 1470 | 467 | 529 | 80 | 47 | 124 | 303 |
| 28 | 110 | 96 | 445 | 119 | 1270 | 675 | 445 | 521 | 76 | 47 | 227 | 265 |
| 29 | 96 | 90 | 317 | 110 | --- | 456 | 442 | 434 | 75 | 47 | 335 | 370 |
| 30 | 85 | 86 | 250 | 103 | --- | 380 | 403 | 376 | 72 | 45 | 953 | 438 |
| 31 | 236 | --- | 210 | 111 | --- | 434 | --- | 360 | --- | 44 | 367 | --- |
| TOTAL | 2588 | 4419 | 5969 | 6479 | 5699 | 14083 | 16102 | 15266 | 6422 | 1674 | 3439 | 8826 |
| MEAN | 83.5 | 147 | 193 | 209 | 204 | 454 | 537 | 492 | 214 | 54.0 | 111 | 294 |
| MAX | 400 | 420 | 822 | 570 | 1270 | 1470 | 1120 | 892 | 771 | 70 | 953 | 1030 |
| MIN | 40 | 69 | 69 | 90 | 78 | 199 | 270 | 354 | 72 | 44 | 34 | 73 |
| CFSM | 1.74 | 3.07 | 4.03 | 4.36 | 4.26 | 9.48 | 11.2 | 10.3 | 4.47 | 1.13 | 2.32 | 6.14 |
| IN. | 2.01 | 3.43 | 4.64 | 5.03 | 4.43 | 10.94 | 12.50 | 11.86 | 4.99 | 1.30 | 2.67 | 6.85 |
| AC-FT | 5130 | 8770 | 11840 | 12850 | 11300 | 27930 | 31940 | 30280 | 12740 | 3320 | 6820 | 17510 |

| | | | | | | | | |
|-------------|-------|--------|----------|----------|--------|-----------|----------|--------------|
| CAL YR 1976 | TOTAL | 127468 | MEAN 348 | MAX 3260 | MIN 40 | CFSM 7.27 | IN 98.99 | AC-FT 252800 |
| WTR YR 1977 | TOTAL | 90966 | MEAN 249 | MAX 1470 | MIN 34 | CFSM 5.20 | IN 70.64 | AC-FT 180400 |

SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°28'56", long 122°01'36", in NE 1/4 sec. 14, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, on right bank, 6.4 mi (10.3 km) north of Brightwood and 0.6 mi (1.0 km) above Bull Run Reservoir Number One.

DRAINAGE AREA.--5.46 mi² (14.1 km²).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,440 ft (439 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 659 ft³/s (18.7 m³/s) Dec. 1, 1975, gage height 4.81 ft (1.466 m); minimum, 1.9 ft³/s (0.054 m³/s) Aug. 17-23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 161 ft³/s (4.56 m³/s) Mar. 27, gage height, 3.55 ft (1.082 m), no peak above base of 400 ft³/s (11.3 m³/s); minimum, 1.9 ft³/s (0.054 m³/s) Aug. 17-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 3.5 | 35 | 6.0 | 14 | 12 | 74 | 97 | 34 | 32 | 6.0 | 3.4 | 16 | | |
| 2 | 4.6 | 21 | 5.8 | 13 | 9.9 | 51 | 79 | 67 | 28 | 5.8 | 3.2 | 12 | | |
| 3 | 4.8 | 15 | 5.6 | 12 | 9.1 | 45 | 59 | 80 | 28 | 5.8 | 3.2 | 24 | | |
| 4 | 3.8 | 13 | 5.4 | 11 | 8.5 | 36 | 56 | 67 | 72 | 5.6 | 3.1 | 42 | | |
| 5 | 3.6 | 11 | 5.2 | 10 | 8.0 | 33 | 66 | 60 | 56 | 5.6 | 2.9 | 43 | | |
| 6 | 3.5 | 9.3 | 5.0 | 9.2 | 8.0 | 40 | 81 | 53 | 45 | 5.4 | 2.9 | 25 | | |
| 7 | 3.2 | 8.3 | 5.2 | 9.0 | 7.5 | 93 | 97 | 44 | 35 | 5.2 | 2.8 | 18 | | |
| 8 | 3.2 | 7.3 | 11 | 8.4 | 7.3 | 101 | 103 | 40 | 28 | 5.0 | 2.7 | 15 | | |
| 9 | 3.1 | 6.8 | 21 | 8.0 | 7.1 | 84 | 76 | 35 | 24 | 4.7 | 2.7 | 13 | | |
| 10 | 4.1 | 6.4 | 17 | 7.8 | 8.8 | 56 | 58 | 66 | 21 | 4.6 | 2.5 | 11 | | |
| 11 | 4.1 | 6.0 | 14 | 9.0 | 9.1 | 40 | 53 | 78 | 19 | 4.6 | 2.4 | 9.9 | | |
| 12 | 3.5 | 5.6 | 13 | 25 | 12 | 42 | 47 | 45 | 17 | 4.6 | 2.3 | 9.1 | | |
| 13 | 3.2 | 5.2 | 12 | 64 | 18 | 34 | 58 | 41 | 16 | 4.5 | 2.3 | 8.3 | | |
| 14 | 3.1 | 5.6 | 11 | 45 | 12 | 27 | 48 | 45 | 14 | 4.5 | 2.2 | 7.8 | | |
| 15 | 2.9 | 10 | 11 | 38 | 11 | 24 | 43 | 52 | 13 | 4.3 | 2.2 | 7.3 | | |
| 16 | 2.8 | 11 | 10 | 35 | 11 | 23 | 46 | 110 | 12 | 4.5 | 2.1 | 7.1 | | |
| 17 | 2.8 | 21 | 10 | 31 | 10 | 21 | 36 | 80 | 11 | 5.0 | 2.0 | 6.6 | | |
| 18 | 2.7 | 22 | 12 | 30 | 9.6 | 24 | 31 | 69 | 11 | 7.3 | 1.9 | 7.8 | | |
| 19 | 2.7 | 16 | 10 | 28 | 8.8 | 45 | 27 | 57 | 10 | 5.0 | 1.9 | 12 | | |
| 20 | 2.5 | 13 | 9.4 | 24 | 8.8 | 39 | 26 | 44 | 9.9 | 4.6 | 1.9 | 31 | | |
| 21 | 2.5 | 12 | 8.4 | 21 | 9.9 | 33 | 26 | 46 | 10 | 4.3 | 1.9 | 63 | | |
| 22 | 2.5 | 11 | 8.4 | 18 | 14 | 37 | 29 | 37 | 9.6 | 4.1 | 2.0 | 37 | | |
| 23 | 2.5 | 9.6 | 12 | 16 | 13 | 45 | 39 | 42 | 8.8 | 4.0 | 2.0 | 50 | | |
| 24 | 3.5 | 8.8 | 12 | 14 | 13 | 42 | 51 | 49 | 8.3 | 4.0 | 5.0 | 104 | | |
| 25 | 2.9 | 9.9 | 25 | 13 | 15 | 35 | 56 | 39 | 7.8 | 3.8 | 12 | 66 | | |
| 26 | 17 | 8.3 | 56 | 12 | 20 | 35 | 46 | 53 | 7.3 | 3.8 | 27 | 40 | | |
| 27 | 11 | 7.5 | 56 | 11 | 75 | 118 | 38 | 54 | 7.1 | 3.6 | 8.8 | 29 | | |
| 28 | 8.8 | 7.1 | 37 | 11 | 118 | 70 | 36 | 51 | 6.8 | 3.8 | 13 | 26 | | |
| 29 | 8.0 | 6.6 | 25 | 10 | --- | 49 | 36 | 40 | 6.6 | 3.8 | 24 | 41 | | |
| 30 | 7.1 | 6.4 | 20 | 9.6 | --- | 40 | 33 | 33 | 6.0 | 3.6 | 66 | 49 | | |
| 31 | 21 | --- | 16 | 10 | --- | 44 | --- | 31 | --- | 3.5 | 25 | --- | | |
| TOTAL | 180.6 | 335.7 | 475.4 | 577.0 | 474.4 | 1480 | 1577 | 1642 | 580.2 | 144.9 | 237.3 | 830.9 | | |
| MEAN | 5.83 | 11.2 | 15.3 | 18.6 | 16.9 | 47.7 | 52.6 | 53.0 | 19.3 | 4.67 | 7.65 | 27.7 | | |
| MAX | 29 | 35 | 56 | 64 | 118 | 118 | 103 | 110 | 72 | 7.3 | 66 | 104 | | |
| MIN | 2.5 | 5.2 | 5.0 | 7.8 | 7.1 | 21 | 26 | 31 | 6.0 | 3.5 | 1.9 | 6.6 | | |
| CFSM | 1.07 | 2.05 | 2.80 | 3.41 | 3.10 | 8.74 | 9.63 | 9.71 | 3.54 | .86 | 1.40 | 5.07 | | |
| IN. | 1.23 | 2.29 | 3.24 | 3.93 | 3.23 | 10.08 | 10.74 | 11.19 | 3.95 | .99 | 1.62 | 5.66 | | |
| AC-FT | 358 | 666 | 943 | 1140 | 941 | 2940 | 3130 | 3260 | 1150 | 287 | 471 | 1650 | | |
| CAL YR 1976 | TOTAL | 11311.2 | MEAN | 30.9 | MAX | 368 | MIN | 2.5 | CFSM | 5.66 | IN | 77.07 | AC-FT | 22440 |
| WTR YR 1977 | TOTAL | 8535.4 | MEAN | 23.4 | MAX | 118 | MIN | 1.9 | CFSM | 4.29 | IN | 58.14 | AC-FT | 16930 |

SANDY RIVER BASIN

227

14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR

LOCATION.--Lat 45°29'40", long 122°02'05", in NE¼SW¼ sec.11, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, on right bank 6.9 mi (11.1 km) southeast of Multnomah Falls and at mile 0.1 (0.2 km).

DRAINAGE AREA.--8.32 mi² (21.55 km²).

PERIOD OF RECORD.--August 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,080 ft (329 m), from topographic map.

REMARKS.--Records excellent. Regulation at times since 1958 by North Fork dam, capacity, about 1,030 acre-ft (1.27 hm³). No diversion above station.

AVERAGE DISCHARGE.--12 years, 80.9 ft³/s (2.291 m³/s), 132.05 in/yr (3,354 mm/yr), 58,610 acre-ft/yr (72.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft³/s (275 m³/s), probably affected by surge from release of water temporarily impounded by landslide upstream from station, Jan. 20, 1972, gage height, 9.89 ft (3.014 m), from floodmark, from rating curve extended above 850 ft³/s (24.1 m³/s) on basis of estimate of peak flow from slope-area survey; minimum, 9.4 ft³/s (0.27 m³/s) Aug. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 340 ft³/s (9.63 m³/s) Feb. 28, gage height, 5.10 ft (1.554 m), no peak above base of 700 ft³/s (19.8 m³/s); minimum, 9.4 ft³/s (0.27 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|-------|-------|-------|------|-------|-------|--------|
| 1 | 13 | 66 | 17 | 31 | 31 | 125 | 177 | 64 | 63 | 16 | 11 | 33 |
| 2 | 14 | 43 | 17 | 31 | 23 | 93 | 117 | 189 | 53 | 16 | 11 | 27 |
| 3 | 14 | 32 | 17 | 28 | 21 | 87 | 89 | 243 | 74 | 16 | 11 | 64 |
| 4 | 13 | 27 | 16 | 26 | 21 | 70 | 87 | 210 | 134 | 16 | 11 | 100 |
| 5 | 13 | 24 | 16 | 23 | 20 | 64 | 102 | 156 | 84 | 16 | 10 | 75 |
| 6 | 12 | 22 | 16 | 23 | 20 | 67 | 123 | 112 | 67 | 16 | 10 | 50 |
| 7 | 12 | 21 | 21 | 22 | 19 | 153 | 143 | 87 | 57 | 14 | 10 | 37 |
| 8 | 12 | 20 | 45 | 21 | 18 | 153 | 174 | 79 | 51 | 14 | 10 | 31 |
| 9 | 12 | 19 | 45 | 20 | 18 | 117 | 123 | 69 | 45 | 14 | 10 | 27 |
| 10 | 14 | 18 | 37 | 20 | 30 | 84 | 93 | 104 | 40 | 14 | 10 | 24 |
| 11 | 14 | 17 | 31 | 28 | 25 | 70 | 91 | 107 | 36 | 14 | 9.9 | 22 |
| 12 | 13 | 17 | 27 | 74 | 35 | 74 | 80 | 80 | 33 | 14 | 9.9 | 20 |
| 13 | 13 | 16 | 25 | 97 | 37 | 61 | 97 | 69 | 31 | 14 | 9.9 | 19 |
| 14 | 13 | 18 | 23 | 66 | 28 | 53 | 79 | 70 | 28 | 14 | 9.9 | 19 |
| 15 | 13 | 34 | 24 | 72 | 25 | 49 | 77 | 89 | 26 | 13 | 9.9 | 18 |
| 16 | 12 | 36 | 23 | 64 | 24 | 45 | 79 | 86 | 25 | 13 | 9.7 | 18 |
| 17 | 12 | 63 | 23 | 53 | 24 | 42 | 63 | 146 | 23 | 15 | 9.7 | 18 |
| 18 | 12 | 53 | 25 | 56 | 22 | 53 | 56 | 102 | 22 | 18 | 9.7 | 20 |
| 19 | 12 | 37 | 21 | 47 | 21 | 87 | 53 | 77 | 22 | 14 | 9.7 | 31 |
| 20 | 12 | 31 | 20 | 41 | 23 | 69 | 53 | 67 | 22 | 13 | 9.7 | 60 |
| 21 | 12 | 27 | 19 | 35 | 27 | 61 | 55 | 77 | 23 | 13 | 9.7 | 97 |
| 22 | 12 | 25 | 19 | 32 | 38 | 64 | 61 | 60 | 21 | 12 | 9.7 | 55 |
| 23 | 12 | 23 | 22 | 29 | 34 | 72 | 70 | 69 | 20 | 12 | 9.9 | 137 |
| 24 | 17 | 22 | 21 | 27 | 31 | 69 | 80 | 67 | 18 | 12 | 14 | 149 |
| 25 | 87 | 29 | 47 | 25 | 34 | 59 | 89 | 60 | 18 | 12 | 42 | 107 |
| 26 | 38 | 22 | 120 | 24 | 43 | 72 | 87 | 80 | 18 | 12 | 100 | 69 |
| 27 | 25 | 20 | 104 | 23 | 174 | 233 | 79 | 86 | 18 | 12 | 25 | 55 |
| 28 | 22 | 19 | 64 | 22 | 264 | 115 | 75 | 79 | 17 | 12 | 38 | 52 |
| 29 | 20 | 18 | 53 | 21 | --- | 82 | 70 | 66 | 17 | 12 | 52 | 82 |
| 30 | 18 | 18 | 42 | 20 | --- | 70 | 66 | 63 | 16 | 12 | 117 | 75 |
| 31 | 57 | --- | 34 | 27 | --- | 89 | --- | 63 | --- | 11 | 49 | --- |
| TOTAL | 575 | 837 | 1034 | 1128 | 1130 | 2602 | 2688 | 2976 | 1122 | 426 | 668.3 | 1631 |
| MEAN | 18.5 | 27.9 | 33.4 | 36.4 | 40.4 | 83.9 | 89.6 | 96.0 | 37.4 | 13.7 | 21.6 | 54.4 |
| MAX | 87 | 66 | 120 | 97 | 264 | 233 | 177 | 243 | 134 | 18 | 117 | 189 |
| MIN | 12 | 16 | 16 | 20 | 18 | 42 | 53 | 60 | 16 | 11 | 9.7 | 18 |
| CFSM | 2.22 | 3.35 | 4.01 | 4.38 | 4.86 | 10.1 | 10.8 | 11.5 | 4.50 | 1.65 | 2.60 | 6.54 |
| IN. | 2.57 | 3.74 | 4.62 | 5.04 | 5.05 | 11.63 | 12.02 | 13.30 | 5.02 | 1.90 | 2.99 | 7.29 |
| AC-FT | 1140 | 1660 | 2050 | 2240 | 2240 | 5160 | 5330 | 5900 | 2230 | 845 | 1330 | 3240 |
| CAL YR 1976 | TOTAL | 23542.0 | MEAN | 64.3 | MAX | 785 | MIN | 12 | CFSM | 7.73 | IN | 105.26 |
| WTR YR 1977 | TOTAL | 16817.3 | MEAN | 46.1 | MAX | 264 | MIN | 9.7 | CFSM | 5.54 | IN | 75.18 |
| | | | | | | | | | | AC-FT | 46700 | |
| | | | | | | | | | | AC-FT | 33360 | |

SANDY RIVER BASIN

14139000 BULL RUN RESERVOIR NUMBER ONE NEAR BULL RUN, OR

LOCATION.--Lat 45°28'50", long 122°04'50", in NW¼SW¼ sec.16, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, in control house of Bear Creek Dam on Bull Run River, 8.2 mi (13.2 km) northeast of Bull Run, and at mile 11.2 (18.0 km).

DRAINAGE AREA.--74.6 mi² (193.0 km²).

PERIOD OF RECORD.--October 1928 to current year. Prior to October 1937, published as Bull Run Reservoir. October 1937 to September 1967, published as Lake Ben Morrow. Prior to October 1975, monthend contents only.

REVISED RECORDS.--WSP 814: 1935(M). WSP 1935: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Portland Water Bureau). Prior to Oct. 9, 1930, nonrecording gage, Oct. 9, 1930, to Sept. 30, 1962, water-stage recorder at present site and datum, and Oct. 1, 1962, to Dec. 31, 1975, nonrecording gage at present site and datum.

REMARKS.--Lake is formed by concrete dam completed in March 1929 for water supply of city of Portland. Storage began about Apr. 29, 1929; first filling occurred May 15, 1929. Capacity, 26,930 acre-ft (33.2 hm³) at crest of spillway, elevation, 1,036.0 ft (315.77 m); capacity increased in October 1954 to 30,140 acre-ft (37.2 hm³) at elevation 1,044.0 ft (318.21 m) by installation of three gates 40 ft (12 m) wide and 8 ft (2.4 m) high. No dead storage. Water is used for power generation by Portland General Electric Co. and municipal supply for city of Portland.

COOPERATION.--Capacity table furnished by Portland Water Bureau.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,600 acre-ft (39.0 hm³) Mar. 31, 1931, elevation, 1,047.40 ft (319.248 m); minimum observed, 169 acre-ft (208,000 m³) Jan. 10, 1960, elevation, 887.5 ft (270.51 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 31,100 acre-ft (38.3 hm³) Feb. 27, elevation, 1,046.27 ft (318.903 m); minimum, 11,900 acre-ft (14.7 hm³) Oct. 25, elevation, 988.24 ft (301.216 m).

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 1018.81 | 997.02 | 1017.89 | 1036.83 | 1040.93 | 1043.96 | 1045.23 | 1045.24 | 1045.38 | 1042.82 | 1026.54 | 1021.82 |
| 2 | 1017.83 | 998.66 | 1017.77 | 1036.81 | 1040.07 | 1044.19 | 1044.25 | 1045.66 | 1045.20 | 1042.32 | 1025.50 | 1023.20 |
| 3 | 1016.81 | 999.02 | 1017.39 | 1036.79 | 1040.02 | 1045.21 | 1044.25 | 1044.54 | 1045.80 | 1042.13 | 1024.34 | 1025.84 |
| 4 | 1015.63 | 1000.21 | 1016.94 | 1036.73 | 1040.46 | 1044.90 | 1044.47 | 1044.20 | 1045.60 | 1042.14 | 1023.20 | 1029.67 |
| 5 | 1014.45 | 1000.61 | 1016.48 | 1036.68 | 1040.84 | 1044.26 | 1045.45 | 1044.43 | 1045.70 | 1042.14 | 1022.11 | 1033.11 |
| 6 | 1013.20 | 1000.87 | 1016.04 | 1036.67 | 1041.24 | 1043.93 | 1045.57 | 1044.79 | 1045.50 | 1042.14 | 1021.13 | 1035.26 |
| 7 | 1011.92 | 1001.00 | 1015.89 | 1036.67 | 1041.57 | 1046.00 | 1045.67 | 1045.28 | 1045.50 | 1041.79 | 1020.14 | 1036.88 |
| 8 | 1010.63 | 1001.11 | 1016.62 | 1036.66 | 1041.80 | 1044.77 | 1044.91 | 1045.45 | 1045.40 | 1041.33 | 1019.15 | 1038.08 |
| 9 | 1009.28 | 1001.21 | 1017.82 | 1036.65 | 1041.90 | 1044.30 | 1043.21 | 1045.20 | 1045.20 | 1040.83 | 1018.14 | 1038.12 |
| 10 | 1008.11 | 1001.39 | 1018.56 | 1036.65 | 1042.29 | 1043.97 | 1043.13 | 1045.49 | 1045.20 | 1040.33 | 1016.90 | 1038.37 |
| 11 | 1006.88 | 1001.58 | 1018.97 | 1036.72 | 1042.59 | 1043.51 | 1044.31 | 1045.24 | 1045.40 | 1039.76 | 1015.44 | 1038.43 |
| 12 | 1005.55 | 1001.70 | 1019.30 | 1037.52 | 1043.22 | 1043.24 | 1044.95 | 1044.90 | 1045.50 | 1039.25 | 1013.93 | 1039.17 |
| 13 | 1004.22 | 1001.83 | 1019.44 | 1037.78 | 1044.23 | 1042.45 | 1045.24 | 1044.76 | 1045.40 | 1038.73 | 1012.43 | 1039.03 |
| 14 | 1002.89 | 1002.08 | 1019.55 | 1037.44 | 1044.77 | 1042.20 | 1044.74 | 1044.74 | 1045.30 | 1038.20 | 1010.93 | 1038.83 |
| 15 | 1001.46 | 1002.94 | 1019.63 | 1037.52 | 1045.04 | 1043.10 | 1044.24 | 1045.21 | 1045.40 | 1037.46 | 1009.48 | 1038.82 |
| 16 | 1000.06 | 1004.14 | 1019.70 | 1037.44 | 1045.09 | 1044.36 | 1044.25 | 1045.43 | 1045.47 | 1036.62 | 1008.23 | 1038.92 |
| 17 | 998.87 | 1006.29 | 1019.81 | 1037.29 | 1045.09 | 1044.90 | 1043.75 | 1045.42 | 1045.46 | 1035.84 | 1006.96 | 1039.03 |
| 18 | 997.40 | 1008.90 | 1020.00 | 1037.41 | 1045.15 | 1045.00 | 1043.65 | 1045.47 | 1045.45 | 1035.71 | 1005.63 | 1039.19 |
| 19 | 995.67 | 1010.40 | 1020.07 | 1037.28 | 1045.26 | 1045.04 | 1044.19 | 1045.30 | 1045.41 | 1035.97 | 1004.32 | 1039.60 |
| 20 | 994.16 | 1011.40 | 1020.04 | 1037.17 | 1045.42 | 1043.49 | 1044.93 | 1045.15 | 1045.40 | 1035.80 | 1003.03 | 1041.13 |
| 21 | 992.66 | 1012.50 | 1019.90 | 1037.04 | 1045.43 | 1043.68 | 1045.28 | 1045.44 | 1045.38 | 1035.02 | 1001.69 | 1044.53 |
| 22 | 991.10 | 1013.30 | 1019.81 | 1036.96 | 1045.42 | 1044.89 | 1045.47 | 1045.29 | 1045.30 | 1034.08 | 1000.84 | 1042.67 |
| 23 | 989.60 | 1013.90 | 1019.89 | 1036.90 | 1045.08 | 1044.81 | 1045.80 | 1045.24 | 1045.22 | 1033.11 | 1000.38 | 1042.43 |
| 24 | 988.26 | 1014.51 | 1019.93 | 1036.80 | 1045.00 | 1044.47 | 1045.90 | 1045.38 | 1045.07 | 1032.16 | 1000.15 | 1042.92 |
| 25 | 990.95 | 1015.31 | 1020.68 | 1037.26 | 1045.30 | 1044.59 | 1045.57 | 1045.04 | 1044.92 | 1031.37 | 1000.83 | 1040.70 |
| 26 | 991.98 | 1015.92 | 1025.20 | 1037.57 | 1045.67 | 1045.42 | 1045.44 | 1045.46 | 1044.72 | 1030.88 | 1004.33 | 1040.34 |
| 27 | 992.33 | 1016.40 | 1030.17 | 1037.84 | 1045.79 | 1043.45 | 1045.45 | 1045.67 | 1044.51 | 1030.37 | 1005.37 | 1040.44 |
| 28 | 992.43 | 1016.78 | 1032.62 | 1038.48 | 1045.02 | 1042.94 | 1045.58 | 1045.54 | 1044.27 | 1029.88 | 1007.19 | 1040.31 |
| 29 | 992.42 | 1017.19 | 1034.22 | 1039.13 | --- | 1043.50 | 1045.54 | 1045.20 | 1043.73 | 1029.12 | 1010.01 | 1040.98 |
| 30 | 992.23 | 1017.54 | 1035.67 | 1039.57 | --- | 1044.46 | 1045.40 | 1045.25 | 1043.26 | 1028.28 | 1017.20 | 1041.81 |
| 31 | 993.75 | --- | 1036.77 | 1040.20 | --- | 1045.07 | --- | 1045.39 | --- | 1027.40 | 1020.03 | --- |
| MEAN | 1001.66 | 1006.88 | 1021.38 | 1037.37 | 1043.56 | 1044.20 | 1044.86 | 1045.19 | 1045.17 | 1036.55 | 1012.11 | 1037.65 |
| MAX | 1018.81 | 1017.54 | 1036.77 | 1040.20 | 1045.79 | 1046.00 | 1045.90 | 1045.67 | 1045.80 | 1042.82 | 1026.54 | 1044.53 |
| MIN | 988.26 | 997.02 | 1015.88 | 1036.65 | 1040.02 | 1042.20 | 1043.13 | 1044.20 | 1043.26 | 1027.40 | 1000.15 | 1021.82 |
| (+) | 13,320 | 20,360 | 27,230 | 28,580 | 30,580 | 30,600 | 30,740 | 30,730 | 29,830 | 23,740 | 21,190 | 29,230 |
| (-) | -7,880 | +7,040 | +6,870 | +1,350 | +2,000 | +20 | -140 | -10 | -900 | -6,090 | -2,550 | +8,040 |
| CAL YR 1976 | MEAN | 970.13 | MAX | 1045.53 | MIN | 19.93 | AC-FT± | -570 | | | | |
| WTR YR 1977 | MEAN | 1031.26 | MAX | 1046.00 | MIN | 988.26 | AC-FT± | +8,030 | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

SANDY RIVER BASIN

229

14139700 CEDAR CREEK NEAR BRIGHTWOOD, OR

LOCATION: Lat 45°27'30", long 122°01'50", in NE¼ sec.26, T.1 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 5.8 mi (9.3 km) north of Brightwood and at mile 2.5 (4.0 km).

DRAINAGE AREA.--7.93 mi² (20.54 km²).

PERIOD OF RECORD.--July to November 1964, June 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,960 ft (597 m), from topographic map.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--12 years, 69.4 ft³/s (1.965 m³/s), 118.85 in/yr (3,019 mm/yr), 50,280 acre-ft/yr (62.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,990 ft³/s (56.4 m³/s) Dec. 22, 1964, gage height, 7.20 ft (2.195 m), from rating curve extended above 320 ft³/s (9.06 m³/s) on basis of slope-area measurement of peak flow; minimum, 7.1 ft³/s (0.20 m³/s) Aug. 29 to Sept. 3, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 402 ft³/s (11.4 m³/s) Mar. 27, gage height, 3.30 ft (1.006 m), no peak above base of 500 ft³/s (14.2 m³/s); minimum, 7.8 ft³/s (0.22 m³/s) Oct. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-----------|---------|---------|-----------|----------|-------------|------|------|-------|------|
| 1 | 10 | 62 | 14 | 28 | 21 | 119 | 167 | 49 | 56 | 16 | 12 | 39 |
| 2 | 12 | 38 | 13 | 27 | 17 | 81 | 119 | 103 | 48 | 16 | 12 | 30 |
| 3 | 13 | 30 | 13 | 24 | 16 | 79 | 90 | 135 | 48 | 16 | 12 | 62 |
| 4 | 11 | 26 | 12 | 22 | 15 | 60 | 84 | 121 | 111 | 16 | 12 | 84 |
| 5 | 10 | 23 | 12 | 20 | 14 | 58 | 99 | 109 | 74 | 16 | 12 | 74 |
| 6 | 9.9 | 20 | 12 | 18 | 14 | 65 | 126 | 86 | 61 | 16 | 12 | 50 |
| 7 | 9.5 | 19 | 13 | 17 | 13 | 167 | 157 | 70 | 52 | 15 | 12 | 39 |
| 8 | 9.5 | 17 | 39 | 17 | 13 | 159 | 175 | 62 | 44 | 15 | 11 | 32 |
| 9 | 9.1 | 16 | 44 | 15 | 12 | 130 | 130 | 56 | 40 | 15 | 11 | 28 |
| 10 | 10 | 15 | 34 | 16 | 15 | 79 | 92 | 93 | 36 | 15 | 11 | 24 |
| 11 | 10 | 15 | 28 | 18 | 16 | 62 | 84 | 103 | 32 | 15 | 11 | 22 |
| 12 | 9.5 | 14 | 25 | 54 | 22 | 64 | 71 | 73 | 30 | 15 | 11 | 20 |
| 13 | 9.1 | 13 | 23 | 117 | 31 | 49 | 95 | 61 | 28 | 15 | 10 | 18 |
| 14 | 8.8 | 14 | 21 | 73 | 20 | 41 | 74 | 62 | 26 | 15 | 10 | 17 |
| 15 | 8.8 | 28 | 20 | 68 | 18 | 37 | 70 | 74 | 24 | 14 | 9.9 | 16 |
| 16 | 8.4 | 28 | 19 | 62 | 17 | 35 | 79 | 79 | 24 | 14 | 9.9 | 16 |
| 17 | 8.4 | 49 | 19 | 53 | 17 | 32 | 61 | 164 | 22 | 15 | 9.9 | 15 |
| 18 | 8.1 | 48 | 23 | 53 | 16 | 49 | 52 | 117 | 22 | 19 | 9.5 | 18 |
| 19 | 8.1 | 33 | 19 | 49 | 15 | 92 | 46 | 83 | 20 | 16 | 9.5 | 30 |
| 20 | 8.1 | 27 | 17 | 41 | 15 | 67 | 42 | 67 | 20 | 15 | 9.5 | 78 |
| 21 | 8.1 | 24 | 16 | 35 | 19 | 61 | 43 | 71 | 22 | 14 | 9.5 | 113 |
| 22 | 8.1 | 22 | 15 | 30 | 36 | 61 | 48 | 57 | 20 | 14 | 9.5 | 62 |
| 23 | 8.1 | 20 | 22 | 27 | 28 | 73 | 60 | 65 | 19 | 14 | 9.5 | 90 |
| 24 | 12 | 19 | 22 | 24 | 26 | 71 | 74 | 74 | 19 | 14 | 15 | 162 |
| 25 | 88 | 24 | 35 | 22 | 31 | 61 | 78 | 58 | 18 | 14 | 30 | 101 |
| 26 | 38 | 20 | 101 | 20 | 39 | 68 | 68 | 84 | 17 | 14 | 70 | 67 |
| 27 | 24 | 17 | 101 | 19 | 137 | 259 | 58 | 97 | 17 | 13 | 23 | 50 |
| 28 | 20 | 16 | 62 | 18 | 233 | 115 | 57 | 86 | 17 | 13 | 31 | 46 |
| 29 | 19 | 15 | 48 | 17 | --- | 79 | 54 | 70 | 16 | 13 | 40 | 67 |
| 30 | 17 | 15 | 38 | 16 | --- | 67 | 50 | 60 | 16 | 13 | 152 | 71 |
| 31 | 41 | --- | 32 | 18 | --- | 81 | --- | 56 | --- | 12 | 58 | --- |
| TOTAL | 474.6 | 727 | 912 | 1038 | 886 | 2521 | 2503 | 2545 | 999 | 457 | 664.7 | 1541 |
| MEAN | 15.3 | 24.2 | 29.4 | 33.5 | 31.6 | 81.3 | 83.4 | 82.1 | 33.3 | 14.7 | 21.4 | 51.4 |
| MAX | 88 | 62 | 101 | 117 | 233 | 259 | 175 | 164 | 111 | 19 | 152 | 162 |
| MIN | 8.1 | 13 | 12 | 15 | 12 | 32 | 42 | 49 | 16 | 12 | 9.5 | 15 |
| CFSM | 1.93 | 3.05 | 3.71 | 4.22 | 3.99 | 10.3 | 10.5 | 10.4 | 4.20 | 1.85 | 2.70 | 6.48 |
| IN. | 2.23 | 3.41 | 4.28 | 4.87 | 4.16 | 11.82 | 11.74 | 11.94 | 4.69 | 2.14 | 3.12 | 7.23 |
| AC-FT | 941 | 1440 | 1810 | 2060 | 1760 | 5000 | 4960 | 5050 | 1980 | 906 | 1320 | 3060 |
| CAL YR 1976 | TOTAL | 19896.6 | MEAN 54.4 | MAX 490 | MIN 8.1 | CFSM 6.86 | IN 93.34 | AC-FT 39460 | | | | |
| WTR YR 1977 | TOTAL | 15268.3 | MEAN 41.8 | MAX 259 | MIN 8.1 | CFSM 5.27 | IN 71.62 | AC-FT 30280 | | | | |

SANDY RIVER BASIN

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'38", long 122°06'20", in NE¼ sec.31, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 6.2 mi (10.0 km) northeast of Bull Run, and at mile 0.6 (1.0 km).

DRAINAGE AREA.--15.4 mi² (39.9 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 990 ft (302 m) from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,350 ft³/s (66.6 m³/s) Jan. 25, 1975, gage height, 8.28 ft (2.524 m); minimum, 10 ft³/s (0.28 m³/s) Aug. 18, 19, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 449 ft³/s (12.7 m³/s) Mar. 27, gage height, 4.81 ft (1.466 m), no peak above base of 1,600 ft³/s (45.3 m³/s); minimum, 10 ft³/s (0.28 m³/s) Aug. 18, 19, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|---------|--------|-----------|----------|-------|-------|------|------|------|
| 1 | 17 | 84 | 25 | 59 | 33 | 251 | 296 | 130 | 105 | 22 | 14 | 75 |
| 2 | 16 | 63 | 25 | 56 | 29 | 185 | 242 | 194 | 105 | 22 | 14 | 55 |
| 3 | 16 | 52 | 24 | 51 | 27 | 186 | 186 | 226 | 130 | 22 | 14 | 100 |
| 4 | 15 | 47 | 23 | 48 | 25 | 145 | 168 | 222 | 200 | 22 | 13 | 135 |
| 5 | 15 | 42 | 23 | 42 | 25 | 132 | 174 | 208 | 150 | 22 | 13 | 141 |
| 6 | 14 | 38 | 22 | 38 | 25 | 138 | 206 | 176 | 110 | 21 | 14 | 105 |
| 7 | 15 | 35 | 22 | 37 | 24 | 268 | 246 | 145 | 90 | 21 | 13 | 80 |
| 8 | 15 | 32 | 50 | 34 | 22 | 287 | 287 | 130 | 70 | 20 | 13 | 64 |
| 9 | 15 | 30 | 65 | 30 | 25 | 253 | 242 | 116 | 60 | 19 | 12 | 53 |
| 10 | 16 | 27 | 56 | 30 | 28 | 174 | 179 | 163 | 55 | 19 | 12 | 45 |
| 11 | 18 | 24 | 50 | 32 | 30 | 140 | 155 | 212 | 50 | 19 | 12 | 40 |
| 12 | 15 | 23 | 45 | 70 | 45 | 138 | 140 | 164 | 47 | 19 | 12 | 37 |
| 13 | 13 | 21 | 42 | 201 | 55 | 117 | 164 | 134 | 45 | 20 | 12 | 34 |
| 14 | 12 | 21 | 38 | 158 | 40 | 99 | 150 | 125 | 42 | 19 | 11 | 32 |
| 15 | 12 | 35 | 36 | 138 | 35 | 87 | 137 | 135 | 40 | 18 | 11 | 30 |
| 16 | 12 | 40 | 34 | 128 | 32 | 82 | 147 | 147 | 38 | 18 | 11 | 28 |
| 17 | 12 | 55 | 34 | 111 | 31 | 72 | 127 | 291 | 36 | 19 | 11 | 26 |
| 18 | 12 | 75 | 38 | 106 | 29 | 94 | 113 | 255 | 34 | 25 | 10 | 29 |
| 19 | 12 | 60 | 34 | 100 | 28 | 168 | 100 | 181 | 32 | 20 | 11 | 41 |
| 20 | 12 | 50 | 31 | 85 | 29 | 144 | 93 | 145 | 31 | 18 | 11 | 111 |
| 21 | 12 | 45 | 28 | 73 | 34 | 127 | 88 | 140 | 33 | 17 | 11 | 178 |
| 22 | 12 | 40 | 27 | 61 | 60 | 124 | 89 | 130 | 30 | 17 | 11 | 131 |
| 23 | 12 | 38 | 36 | 51 | 53 | 140 | 106 | 124 | 29 | 17 | 11 | 150 |
| 24 | 14 | 36 | 37 | 42 | 51 | 141 | 124 | 147 | 27 | 16 | 21 | 280 |
| 25 | 105 | 40 | 47 | 38 | 60 | 128 | 140 | 130 | 26 | 16 | 31 | 206 |
| 26 | 53 | 35 | 141 | 36 | 77 | 123 | 120 | 150 | 25 | 16 | 108 | 141 |
| 27 | 36 | 31 | 168 | 34 | 201 | 351 | 100 | 180 | 24 | 16 | 39 | 108 |
| 28 | 33 | 30 | 121 | 31 | 379 | 222 | 95 | 150 | 24 | 16 | 42 | 97 |
| 29 | 31 | 28 | 96 | 29 | --- | 163 | 90 | 130 | 23 | 16 | 53 | 115 |
| 30 | 26 | 27 | 78 | 27 | --- | 138 | 90 | 120 | 23 | 15 | 208 | 135 |
| 31 | 39 | --- | 66 | 27 | --- | 148 | --- | 110 | --- | 14 | 110 | --- |
| TOTAL | 657 | 1204 | 1562 | 2003 | 1532 | 4965 | 4594 | 5010 | 1734 | 581 | 889 | 2802 |
| MEAN | 21.2 | 40.1 | 50.4 | 64.6 | 54.7 | 160 | 153 | 162 | 57.8 | 18.7 | 28.7 | 93.4 |
| MAX | 105 | 84 | 168 | 201 | 379 | 351 | 296 | 291 | 200 | 25 | 208 | 280 |
| MIN | 12 | 21 | 22 | 27 | 22 | 72 | 88 | 110 | 23 | 14 | 10 | 26 |
| CFSM | 1.38 | 2.60 | 3.27 | 4.20 | 3.55 | 10.4 | 9.94 | 10.5 | 3.75 | 1.21 | 1.86 | 6.07 |
| IN. | 1.59 | 2.91 | 3.77 | 4.84 | 3.70 | 11.99 | 11.10 | 12.10 | 4.19 | 1.40 | 2.15 | 6.77 |
| AC-FT | 1300 | 2390 | 3100 | 3970 | 3040 | 9850 | 9110 | 9940 | 3440 | 1150 | 1760 | 5560 |
| CAL YR 1976 | TOTAL | 37679 | MEAN 103 | MAX 798 | MIN 12 | CFSM 6.69 | IN 91.02 | AC-FT | 74740 | | | |
| WTR YR 1977 | TOTAL | 27533 | MEAN 75.4 | MAX 379 | MIN 10 | CFSM 4.90 | IN 66.50 | AC-FT | 54610 | | | |

14139900 BULL RUN RESERVOIR NUMBER TWO NEAR BULL RUN, OR

LOCATION.--Lat 45°26'55", long 122°08'45", on line between secs.25 and 26, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on south tower 0.3 mi (0.5 km) above headworks dam on Bull Run River, 4.4 mi (7.1 km) northeast of Bull Run, and at mile 6.5 (10.5 km).

DRAINAGE AREA.--102 mi² (264 km²).

PERIOD OF RECORD.--December 1961 to current year. Prior to October 1975, monthend contents only.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Portland Water Bureau). Prior to Dec. 31, 1975, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth and rockfill dam with concrete spillway built by Portland Water Bureau. Storage began about Dec. 20, 1961; first filling occurred Dec. 24, 1961. Capacity, 20,990 acre-ft (25.8 hm³) at crest of spillway, elevation, 860.0 ft (262.13 m). Dead storage negligible. Water is used for power generation by Portland General Electric Co. and municipal supply for city of Portland.

COOPERATION.--Capacity table furnished by Portland Water Bureau.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 23,660 acre-ft (29.2 hm³) Dec. 22, 1964, elevation, 866.00 ft (263.957 m); no contents at times during low-flow periods.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 21,870 acre-ft (27.0 hm³) Mar. 27, elevation, 861.97 ft (262.728 m); minimum, 15,490 acre-ft (19.1 hm³) Oct. 25, elevation, 846.36 ft (257.971 m).

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 848.88 | 849.77 | 847.71 | 860.17 | 859.01 | 860.93 | 861.15 | 860.52 | 860.30 | 859.37 | 859.15 | 859.04 |
| 2 | 848.95 | 850.26 | 847.75 | 860.17 | 859.95 | 860.53 | 860.78 | 860.84 | 860.35 | 859.58 | 859.00 | 858.66 |
| 3 | 849.09 | 850.53 | 848.03 | 860.13 | 859.97 | 860.64 | 860.76 | 861.22 | 860.27 | 859.59 | 859.10 | 858.69 |
| 4 | 849.11 | 850.77 | 848.37 | 860.09 | 859.71 | 860.60 | 860.61 | 860.81 | 860.71 | 859.54 | 859.27 | 858.85 |
| 5 | 849.08 | 850.96 | 848.77 | 860.02 | 859.51 | 860.59 | 860.72 | 860.82 | 860.60 | 859.39 | 859.25 | 858.96 |
| 6 | 849.02 | 851.09 | 849.13 | 859.99 | 859.35 | 860.60 | 860.93 | 860.60 | 860.53 | 859.15 | 859.27 | 858.84 |
| 7 | 848.86 | 851.24 | 849.43 | 860.00 | 859.10 | 861.12 | 861.13 | 860.55 | 860.32 | 858.97 | 859.33 | 858.58 |
| 8 | 848.65 | 851.23 | 849.95 | 860.01 | 858.89 | 861.05 | 861.23 | 860.54 | 860.25 | 858.82 | 859.24 | 858.32 |
| 9 | 848.40 | 851.10 | 850.57 | 860.00 | 858.00 | 860.87 | 860.87 | 860.33 | 860.28 | 858.91 | 859.07 | 858.88 |
| 10 | 848.45 | 850.83 | 851.06 | 859.97 | 858.83 | 860.65 | 860.47 | 860.67 | 860.17 | 859.06 | 858.98 | 859.08 |
| 11 | 848.40 | 850.66 | 851.56 | 860.03 | 858.83 | 860.63 | 860.44 | 860.68 | 860.12 | 859.01 | 858.98 | 859.40 |
| 12 | 848.36 | 850.47 | 852.03 | 860.43 | 858.83 | 860.61 | 860.52 | 860.52 | 860.16 | 859.02 | 859.00 | 858.87 |
| 13 | 848.27 | 850.19 | 852.46 | 860.67 | 858.83 | 860.57 | 860.68 | 860.40 | 860.12 | 859.11 | 859.09 | 858.98 |
| 14 | 848.19 | 850.05 | 852.87 | 860.50 | 858.83 | 860.35 | 860.63 | 860.40 | 860.08 | 859.10 | 859.37 | 859.21 |
| 15 | 848.09 | 849.92 | 853.23 | 860.53 | 858.83 | 860.10 | 860.56 | 860.45 | 859.98 | 859.18 | 859.51 | 859.19 |
| 16 | 847.98 | 849.72 | 853.58 | 860.47 | 858.83 | 860.07 | 860.56 | 860.57 | 860.01 | 859.34 | 859.40 | 859.09 |
| 17 | 847.97 | 849.81 | 853.92 | 860.41 | 858.83 | 860.33 | 860.55 | 860.99 | 859.97 | 859.84 | 859.14 | 859.09 |
| 18 | 847.81 | 849.89 | 854.35 | 860.44 | 860.02 | 860.39 | 860.34 | 860.67 | 859.99 | 859.80 | 859.02 | 859.17 |
| 19 | 847.59 | 849.93 | 854.67 | 860.41 | 859.99 | 860.75 | 860.32 | 860.56 | 860.01 | 859.26 | 859.14 | 859.28 |
| 20 | 847.31 | 849.87 | 854.97 | 860.31 | 860.03 | 860.69 | 860.29 | 860.44 | 859.98 | 858.91 | 859.36 | 859.77 |
| 21 | 847.02 | 849.77 | 855.27 | 860.26 | 860.16 | 860.30 | 860.33 | 860.41 | 860.01 | 858.99 | 859.66 | 860.20 |
| 22 | 846.76 | 849.66 | 855.53 | 860.20 | 860.31 | 860.39 | 860.36 | 860.36 | 859.90 | 859.14 | 859.60 | 860.87 |
| 23 | 846.62 | 849.47 | 855.91 | 860.18 | 860.21 | 860.63 | 860.48 | 860.37 | 859.89 | 859.33 | 859.41 | 860.60 |
| 24 | 846.53 | 849.27 | 856.27 | 860.11 | 860.14 | 860.53 | 860.60 | 860.41 | 859.76 | 859.56 | 859.43 | 861.07 |
| 25 | 847.39 | 849.03 | 856.83 | 859.85 | 860.20 | 860.42 | 860.64 | 860.40 | 859.71 | 859.60 | 859.55 | 860.90 |
| 26 | 847.92 | 848.92 | 857.88 | 859.97 | 860.34 | 860.48 | 860.66 | 860.36 | 859.71 | 859.62 | 859.78 | 860.38 |
| 27 | 848.15 | 848.79 | 859.01 | 859.94 | 861.14 | 861.11 | 860.51 | 860.50 | 859.57 | 859.43 | 859.49 | 860.35 |
| 28 | 848.34 | 848.59 | 859.79 | 859.71 | 861.14 | 860.81 | 860.51 | 860.47 | 859.41 | 859.33 | 859.27 | 860.33 |
| 29 | 848.50 | 848.30 | 860.16 | 859.47 | --- | 860.48 | 860.54 | 860.46 | 859.46 | 859.34 | 859.01 | 860.42 |
| 30 | 848.65 | 848.00 | 859.91 | 859.26 | --- | 860.47 | 860.50 | 860.28 | 859.52 | 859.28 | 859.44 | 860.35 |
| 31 | 849.11 | --- | 860.01 | 859.15 | --- | 860.85 | --- | 860.33 | --- | 859.23 | 859.34 | --- |
| MEAN | 848.18 | 849.94 | 853.58 | 860.09 | 859.56 | 860.60 | 860.62 | 860.55 | 860.04 | 859.28 | 859.28 | 859.51 |
| MAX | 849.11 | 851.24 | 860.16 | 860.67 | 861.14 | 861.12 | 861.23 | 861.22 | 860.71 | 859.84 | 859.78 | 861.07 |
| MIN | 846.53 | 848.00 | 847.71 | 859.15 | 858.00 | 860.07 | 860.29 | 860.28 | 859.41 | 858.82 | 858.98 | 858.32 |
| (†) | 16,480 | 16,080 | 21,000 | 20,630 | 21,500 | 21,370 | 21,220 | 21,150 | 20,790 | 20,660 | 20,710 | 21,150 |
| (‡) | +70 | -400 | +4,920 | -370 | +870 | -130 | -150 | -70 | -360 | -130 | +50 | +440 |

CAL YP 1976 MEAN 856.64 MAX 862.62 MIN 846.53 AC-FT‡ -400
WTR YR 1977 MEAN 857.59 MAX 861.23 MIN 846.53 AC-FT‡ +4,740

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

SANDY RIVER BASIN

14140001 BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'15", long 122°10'40", in NE¼ sec.34, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on left bank 1.8 mi (2.9 km) downstream from Bull Run Reservoir Number Two, 2.7 mi (4.3 km) northeast of Bull Run, and at mile 4.7 (7.6 km).

DRAINAGE AREA.--107 mi² (277 km²).

PERIOD OF RECORD.--September 1907 to current year. Records for January 1895 to August 1907, published in WSP 370, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1288: 1910-11, 1913, 1920-23, 1926, 1929. WSP 1318: 1919(M). WSP 1568: 1952. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 567.90 ft (173.096 m) above mean sea level (levels by Portland Water Bureau). Prior to July 27, 1909, nonrecording gage at site 1.5 mi (2.4 km) upstream at different datum. July 27, 1909, to Sept. 30, 1959, water-stage recorder at site 2.5 mi (4.0 km) upstream at different datums.

REMARKS.--Records excellent. Water stored since 1915 in Bull Run Lake, capacity, 12,270 acre-ft (15.1 hm³), and since 1958 in North Fork Reservoir, capacity, 1,030 acre-ft (1.27 hm³). Flow regulated since 1929 by Bull Run Reservoir Number One (see station 14139000), and since 1961 by Bull Run Reservoir Number Two (see station 14139900). All records given herein include flow diverted from Bull Run Reservoir Number Two for city of Portland, and that used by Portland General Electric Co. for power generation, which returns to Bull Run River below station. Total diversion, 75,350 acre-ft (92.9 hm³) of which 23,600 acre-ft (29.1 hm³) was used for power generation and returned to Bull Run River.

COOPERATION.--Records of daily diversion furnished by Portland Water Bureau.

AVERAGE DISCHARGE.--70 years, 777 ft³/s (22.00 m³/s), 98.61 in/yr (2,505 mm/yr), 562,900 acre-ft/yr (694 hm³/yr), adjusted for storage in Bull Run Reservoir Number One since 1929 and Bull Run Reservoir Number Two since 1961.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 24,800 ft³/s (702 m³/s) Dec. 22, 1964, gage height, 17.21 ft (5.246 m), from rating curve extended above 8,800 ft³/s (249 m³/s) on basis of computation of peak flow over dam; minimum, 1.1 ft³/s (0.03 m³/s) Oct. 4, 1974.

Combined flow, maximum discharge, 25,100 ft³/s (711 m³/s) Dec. 22, 1964; minimum daily, 63 ft³/s (1.78 m³/s) Aug. 13-16, 1926.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 4,470 ft³/s (127 m³/s) Mar. 27, gage height, 9.41 ft (2.868 m); minimum recorded, 2.0 ft³/s (0.057 m³/s) Oct. 17-21, 23, 24.

Combined flow, maximum discharge, 4,610 ft³/s (131 m³/s) Mar. 27; minimum daily, 129 ft³/s (4.02 m³/s) Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| 1 | 328 | 152 | 185 | 303 | 163 | 1980 | 1810 | 736 | 726 | 269 | 277 | 167 |
| 2 | 324 | 147 | 153 | 371 | 178 | 1340 | 1780 | 1090 | 694 | 226 | 288 | 170 |
| 3 | 297 | 142 | 184 | 334 | 220 | 1010 | 1180 | 1690 | 624 | 202 | 286 | 160 |
| 4 | 253 | 172 | 172 | 325 | 180 | 1080 | 1070 | 1640 | 1190 | 168 | 276 | 149 |
| 5 | 324 | 171 | 155 | 276 | 159 | 996 | 968 | 1130 | 1040 | 184 | 236 | 150 |
| 6 | 328 | 165 | 150 | 246 | 155 | 978 | 1350 | 1050 | 970 | 161 | 257 | 154 |
| 7 | 330 | 148 | 168 | 227 | 155 | 1230 | 1630 | 748 | 779 | 222 | 246 | 171 |
| 8 | 354 | 165 | 171 | 215 | 156 | 2160 | 2000 | 772 | 699 | 236 | 253 | 165 |
| 9 | 354 | 187 | 157 | 212 | 172 | 1790 | 1890 | 778 | 646 | 228 | 284 | 164 |
| 10 | 339 | 185 | 168 | 197 | 161 | 1290 | 1180 | 975 | 522 | 193 | 296 | 167 |
| 11 | 303 | 178 | 160 | 231 | 161 | 1040 | 723 | 1340 | 400 | 226 | 325 | 157 |
| 12 | 322 | 164 | 157 | 339 | 156 | 1060 | 722 | 1050 | 406 | 235 | 342 | 166 |
| 13 | 320 | 170 | 155 | 1100 | 174 | 998 | 947 | 853 | 382 | 208 | 326 | 189 |
| 14 | 321 | 156 | 170 | 971 | 152 | 806 | 1050 | 794 | 361 | 226 | 291 | 182 |
| 15 | 319 | 156 | 170 | 809 | 188 | 498 | 969 | 786 | 317 | 243 | 250 | 164 |
| 16 | 321 | 179 | 171 | 840 | 201 | 309 | 901 | 858 | 266 | 239 | 281 | 166 |
| 17 | 298 | 166 | 170 | 747 | 257 | 344 | 812 | 1540 | 265 | 219 | 293 | 158 |
| 18 | 307 | 165 | 165 | 676 | 214 | 626 | 731 | 1470 | 260 | 177 | 304 | 129 |
| 19 | 324 | 164 | 181 | 716 | 200 | 973 | 496 | 1040 | 240 | 185 | 268 | 144 |
| 20 | 330 | 164 | 146 | 622 | 187 | 1190 | 371 | 954 | 242 | 221 | 237 | 166 |
| 21 | 324 | 161 | 162 | 528 | 231 | 843 | 364 | 856 | 246 | 235 | 213 | 268 |
| 22 | 342 | 160 | 168 | 469 | 401 | 531 | 562 | 832 | 239 | 253 | 180 | 922 |
| 23 | 317 | 167 | 170 | 413 | 475 | 861 | 633 | 823 | 230 | 253 | 221 | 1110 |
| 24 | 233 | 161 | 155 | 374 | 420 | 946 | 896 | 833 | 244 | 233 | 180 | 1590 |
| 25 | 310 | 175 | 151 | 283 | 342 | 758 | 1080 | 809 | 241 | 250 | 189 | 1690 |
| 26 | 180 | 155 | 159 | 187 | 409 | 647 | 973 | 838 | 221 | 183 | 174 | 1040 |
| 27 | 161 | 142 | 155 | 220 | 1280 | 2740 | 818 | 920 | 232 | 223 | 169 | 647 |
| 28 | 174 | 147 | 173 | 167 | 2560 | 1580 | 740 | 1030 | 238 | 239 | 158 | 622 |
| 29 | 156 | 161 | 233 | 173 | --- | 1000 | 771 | 926 | 262 | 210 | 154 | 642 |
| 30 | 165 | 165 | 268 | 167 | --- | 714 | 754 | 785 | 232 | 227 | 169 | 719 |
| 31 | 162 | --- | 172 | 163 | --- | 854 | --- | 685 | --- | 240 | 158 | --- |
| TOTAL | 8920 | 4890 | 5274 | 12901 | 9707 | 33172 | 30171 | 30631 | 13414 | 6814 | 7581 | 12488 |
| MEAN | 288 | 163 | 170 | 416 | 347 | 1070 | 1006 | 988 | 447 | 220 | 245 | 416 |
| MAX | 354 | 187 | 268 | 1100 | 2560 | 2740 | 2000 | 1690 | 1190 | 269 | 342 | 1690 |
| MIN | 156 | 142 | 146 | 163 | 152 | 309 | 364 | 685 | 221 | 161 | 154 | 129 |
| AC-FT | 17690 | 9700 | 10460 | 25590 | 19250 | 65800 | 59840 | 60760 | 26610 | 13520 | 15040 | 24770 |
| MEAN† | 161 | 274 | 361 | 433 | 399 | 1,068 | 1,001 | 987 | 426 | 119 | 204 | 559 |
| CFSM† | 1.50 | 2.56 | 3.37 | 4.05 | 3.73 | 9.98 | 9.36 | 9.22 | 3.98 | 1.11 | 1.91 | 5.22 |
| IN.† | 1.75 | 2.88 | 3.92 | 4.70 | 3.91 | 11.60 | 10.51 | 10.71 | 4.47 | 1.29 | 2.21 | 5.87 |
| AC-FT† | 9,900 | 16,310 | 22,210 | 26,610 | 22,130 | 65,690 | 59,550 | 60,680 | 25,350 | 7,300 | 12,540 | 33,250 |

CAL YR 1976 TOTAL 243,889 MEAN 666 MAX 6,300 MIN 139 AC-FT 483,800 MEAN† 613 CFSM† 5.73 IN.† 78.49 AC-FT† 444,800
WTR YR 1977 TOTAL 175,963 MEAN 482 MAX 2,740 MIN 129 AC-FT 349,000 MEAN† 500 CFSM† 4.67 IN.† 63.88 AC-FT† 362,000

† Adjusted for change in contents in Bull Run Reservoir Number One and Bull Run Reservoir Number Two.

14141500 LITTLE SANDY RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°24'55", long 122°10'20", in NW¼NW¼ sec.10, T.2 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on left bank 0.25 mi (0.40 km) upstream from Portland General Electric Co. dam and tunnel from Sandy River, 3.0 mi (4.8 km) east of Bull Run, and at mile 1.95 (3.14 km).

DRAINAGE AREA.--22.3 mi² (57.8 km²).

PERIOD OF RECORD.--May to July 1911, October 1911 to March 1912, June 1912 to April 1913, July 1919 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1154: 1949. WSP 1248: Drainage area. WSP 1288: 1912, 1920-21(M), 1922-23, 1931, 1945. WSP 1318: 1920.

GAGE.--Water-stage recorder. Altitude of gage is 720 ft (220 m), from topographic map. May 23, 1911, to Apr. 29, 1913, nonrecording gage at site 0.85 mi (1.37 km) downstream at different datum, 0.5 mi (0.8 km) downstream from Sandy River diversion tunnel. July 1, 1919, to Sept. 30, 1931, water-stage recorder at site 0.1 mi (0.2 km) downstream at different datum. Oct. 1, 1931, to Nov. 3, 1967, at site 0.1 mi (0.2 km) downstream at datum 712 ft (217 m) above mean sea level. Nov. 4, 1967, to Aug. 8, 1971, water-stage recorder at site 0.1 mi (0.2 km) downstream at datum 697.44 ft (212.580 m) above mean sea level (Portland General Electric Co. bench mark).

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--58 years (water years 1920-77), 147 ft³/s (4.163 m³/s), 89.52 in/yr (2,274 mm/yr), 106,500 acre-ft/yr (131 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,320 ft³/s (151 m³/s) Nov. 20, 1921, gage height, 9.18 ft (2.798 m), site and datum then in use, from rating curve extended above 2,200 ft³/s (62.3 m³/s); minimum, 8 ft³/s (0.23 m³/s) Aug. 20, Sept. 16, 17, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 703 ft³/s (19.9 m³/s) May 17, gage height, 3.87 ft (1.180 m), no peak above base of 1,400 ft³/s (39.6 m³/s); minimum, 11 ft³/s Aug. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 23 | 126 | 30 | 54 | 50 | 251 | 440 | 139 | 157 | 32 | 16 | 40 |
| 2 | 26 | 77 | 28 | 53 | 42 | 193 | 323 | 303 | 130 | 28 | 16 | 32 |
| 3 | 35 | 59 | 27 | 48 | 38 | 208 | 241 | 323 | 126 | 27 | 16 | 67 |
| 4 | 21 | 50 | 26 | 47 | 35 | 168 | 221 | 248 | 259 | 28 | 15 | 105 |
| 5 | 20 | 44 | 26 | 39 | 33 | 147 | 238 | 205 | 196 | 28 | 15 | 113 |
| 6 | 19 | 39 | 26 | 54 | 33 | 144 | 284 | 184 | 162 | 26 | 15 | 70 |
| 7 | 18 | 36 | 27 | 60 | 32 | 231 | 331 | 162 | 135 | 25 | 14 | 53 |
| 8 | 18 | 33 | 55 | 38 | 31 | 299 | 392 | 154 | 111 | 24 | 14 | 42 |
| 9 | 17 | 31 | 83 | 47 | 30 | 269 | 284 | 142 | 98 | 24 | 14 | 37 |
| 10 | 20 | 29 | 63 | 45 | 33 | 193 | 193 | 280 | 85 | 24 | 14 | 32 |
| 11 | 21 | 28 | 54 | 41 | 39 | 154 | 196 | 291 | 77 | 23 | 13 | 29 |
| 12 | 19 | 27 | 50 | 69 | 42 | 157 | 184 | 202 | 70 | 23 | 12 | 26 |
| 13 | 18 | 26 | 47 | 215 | 70 | 139 | 238 | 162 | 64 | 24 | 12 | 24 |
| 14 | 18 | 27 | 44 | 152 | 45 | 122 | 190 | 162 | 59 | 22 | 12 | 22 |
| 15 | 17 | 50 | 44 | 142 | 39 | 109 | 173 | 181 | 55 | 22 | 12 | 22 |
| 16 | 17 | 58 | 47 | 142 | 37 | 102 | 199 | 202 | 51 | 21 | 12 | 22 |
| 17 | 17 | 96 | 44 | 117 | 37 | 90 | 152 | 600 | 49 | 22 | 12 | 21 |
| 18 | 16 | 117 | 55 | 120 | 35 | 103 | 135 | 401 | 47 | 30 | 12 | 22 |
| 19 | 16 | 75 | 44 | 120 | 33 | 205 | 120 | 251 | 43 | 23 | 12 | 33 |
| 20 | 16 | 60 | 39 | 96 | 32 | 170 | 120 | 193 | 43 | 21 | 12 | 83 |
| 21 | 16 | 53 | 37 | 82 | 36 | 147 | 122 | 199 | 47 | 20 | 12 | 205 |
| 22 | 16 | 47 | 35 | 67 | 49 | 154 | 132 | 165 | 43 | 19 | 13 | 113 |
| 23 | 16 | 42 | 44 | 59 | 47 | 173 | 173 | 181 | 39 | 18 | 13 | 130 |
| 24 | 19 | 39 | 43 | 53 | 47 | 157 | 211 | 196 | 37 | 18 | 23 | 284 |
| 25 | 144 | 53 | 58 | 49 | 48 | 137 | 224 | 154 | 35 | 18 | 36 | 179 |
| 26 | 89 | 43 | 173 | 45 | 53 | 124 | 190 | 196 | 34 | 19 | 96 | 120 |
| 27 | 49 | 38 | 187 | 42 | 196 | 365 | 160 | 211 | 32 | 18 | 33 | 89 |
| 28 | 39 | 35 | 117 | 40 | 415 | 234 | 157 | 211 | 31 | 18 | 30 | 82 |
| 29 | 36 | 33 | 92 | 38 | --- | 179 | 160 | 170 | 30 | 21 | 43 | 113 |
| 30 | 31 | 32 | 74 | 37 | --- | 152 | 144 | 147 | 29 | 18 | 137 | 168 |
| 31 | 54 | --- | 62 | 39 | --- | 184 | --- | 142 | --- | 16 | 59 | --- |
| TOTAL | 901 | 1503 | 1781 | 2250 | 1657 | 5460 | 6327 | 6757 | 2374 | 700 | 765 | 2378 |
| MEAN | 29.1 | 50.1 | 57.5 | 72.6 | 59.2 | 176 | 211 | 218 | 79.1 | 22.6 | 24.7 | 79.3 |
| MAX | 144 | 126 | 187 | 215 | 415 | 365 | 440 | 600 | 259 | 32 | 137 | 284 |
| MIN | 16 | 26 | 26 | 37 | 30 | 90 | 120 | 139 | 29 | 16 | 12 | 21 |
| CFSM | 1.31 | 2.25 | 2.58 | 3.26 | 2.66 | 7.89 | 9.46 | 9.78 | 3.55 | 1.01 | 1.11 | 3.56 |
| IN. | 1.50 | 2.51 | 2.97 | 3.75 | 2.76 | 9.11 | 10.55 | 11.27 | 3.96 | 1.17 | 1.28 | 3.97 |
| AC-FT | 1790 | 2980 | 3530 | 4460 | 3290 | 10830 | 12550 | 13400 | 4710 | 1390 | 1520 | 4720 |
| CAL YR 1976 | TOTAL | 45887 | MEAN | 125 | MAX | 1390 | MIN | 16 | CFSM | 5.61 | IN | 76.55 |
| WTR YR 1977 | TOTAL | 32853 | MEAN | 90.0 | MAX | 600 | MIN | 12 | CFSM | 4.04 | IN | 54.80 |
| | | | | | | | | | AC-FT | 91020 | AC-FT | 65160 |

14144700 COLUMBIA RIVER AT VANCOUVER, WA

LOCATION.--Lat 45°37'15", long 122°40'20", in NE¼ sec. 34, T.2 N., R.1 E., Clark County, Hydrologic Unit 17080001, temperature recorder near right bank, in control house of Interstate Highway 5 bridge, at south edge of Vancouver, 5.0 mi (8.0 km) upstream from Willamette River, and at mile 106.5 (171.4 km).

DRAINAGE AREA.--241,000 mi² (624,200 km²).

PERIOD OF RECORD.--Water years 1964-70, 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1967 to September 1970, October 1972 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1963 to September 1967.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 12-15, 17, 18, 1977; minimum, 0.5°C Jan. 28, 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 12-15, 17, 18; minimum, 2.0°C Jan. 10-12, 30, 31.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|------|----------|------|----------|------|---------|------|----------|------|-----------|------|
| OCTOBER | | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 18.5 | 18.0 | 13.5 | 13.0 | 8.0 | 7.0 | 4.5 | 4.5 | 3.0 | 2.5 | 5.5 | 5.0 |
| 2 | 18.5 | 18.0 | 13.5 | 13.0 | 7.5 | 7.0 | 4.5 | 4.0 | 3.0 | 3.0 | 5.0 | 5.0 |
| 3 | 18.0 | 17.5 | 13.5 | 13.0 | 7.5 | 7.0 | 4.0 | 3.5 | 3.0 | 2.5 | 5.5 | 5.0 |
| 4 | 18.0 | 16.5 | 13.0 | 12.5 | 7.5 | 7.0 | 4.0 | 4.0 | 3.0 | 2.5 | 5.5 | 5.0 |
| 5 | 17.5 | 16.0 | 12.5 | 12.5 | 7.5 | 6.5 | 4.5 | 4.0 | 2.5 | 2.5 | 5.5 | 5.0 |
| 6 | 18.0 | 16.0 | 12.5 | 11.5 | 7.5 | 6.5 | 3.5 | 3.5 | 3.0 | 2.5 | 5.5 | 5.5 |
| 7 | 17.5 | 16.5 | 12.5 | 11.5 | 7.0 | 6.5 | 3.5 | 3.0 | 3.0 | 2.5 | 5.5 | 5.5 |
| 8 | 18.0 | 16.5 | 12.5 | 12.0 | 7.5 | 6.5 | 3.0 | 2.5 | 2.5 | 2.5 | 5.5 | 5.5 |
| 9 | 17.5 | 16.5 | 12.5 | 12.0 | 7.5 | 7.0 | 3.0 | 2.5 | 3.0 | 2.5 | 5.5 | 5.5 |
| 10 | 18.0 | 17.0 | 12.5 | 11.5 | 7.5 | 6.5 | 2.5 | 2.0 | 3.5 | 3.0 | 5.5 | 5.0 |
| 11 | 18.0 | 17.0 | 12.0 | 11.5 | 7.0 | 7.0 | 2.5 | 2.0 | 3.5 | 3.0 | 5.5 | 5.5 |
| 12 | 17.5 | 16.0 | 12.0 | 11.5 | 7.0 | 6.5 | 2.5 | 2.0 | 4.0 | 3.5 | 5.5 | 5.5 |
| 13 | 17.5 | 16.0 | 11.5 | 11.5 | 7.0 | 6.5 | 3.0 | 2.5 | 4.0 | 3.5 | 6.0 | 5.5 |
| 14 | 17.5 | 16.5 | 11.5 | 11.0 | 6.5 | 6.0 | 3.5 | 3.0 | 4.5 | 4.0 | 5.5 | 5.5 |
| 15 | 17.0 | 15.5 | 11.5 | 10.5 | 6.5 | 5.5 | 3.5 | 3.5 | 4.5 | 4.0 | 5.5 | 5.0 |
| 16 | 16.5 | 15.0 | 11.5 | 11.5 | 6.5 | 5.5 | 4.0 | 3.5 | 4.5 | 4.0 | 6.0 | 5.5 |
| 17 | 16.0 | 15.5 | 12.0 | 11.5 | 6.5 | 6.0 | 3.5 | 3.5 | 4.5 | 4.0 | 6.0 | 5.5 |
| 18 | 16.0 | 14.5 | 11.5 | 11.5 | 6.5 | 5.5 | 3.5 | 3.5 | 4.5 | 4.0 | 6.0 | 5.5 |
| 19 | 14.5 | 14.0 | 11.5 | 11.0 | 6.5 | 6.0 | 3.5 | 3.5 | 5.0 | 4.5 | 6.0 | 5.5 |
| 20 | 14.0 | 13.5 | 11.0 | 10.5 | 6.5 | 5.5 | 3.5 | 3.5 | 5.0 | 4.5 | 6.0 | 5.5 |
| 21 | 14.0 | 13.0 | 10.5 | 10.0 | 6.0 | 5.0 | 3.5 | 3.5 | 5.0 | 4.5 | 6.0 | 5.5 |
| 22 | 14.5 | 13.5 | 11.0 | 10.0 | 6.0 | 5.0 | 3.5 | 3.0 | 5.0 | 4.5 | 6.5 | 6.0 |
| 23 | 14.5 | 13.5 | 10.5 | 9.5 | 5.5 | 5.0 | 3.0 | 3.0 | 4.5 | 4.5 | 7.0 | 6.5 |
| 24 | 14.5 | 14.0 | 10.0 | 9.5 | 6.0 | 5.5 | 3.0 | 2.5 | 4.5 | 4.5 | 7.0 | 6.5 |
| 25 | 14.5 | 14.0 | 10.0 | 9.5 | 5.5 | 5.5 | 2.5 | 2.5 | 4.5 | 4.5 | 7.0 | 6.5 |
| 26 | 14.0 | 13.5 | 10.0 | 9.5 | 6.0 | 5.5 | 2.5 | 2.5 | 5.0 | 4.5 | 7.0 | 6.5 |
| 27 | 14.0 | 13.5 | 9.5 | 8.5 | 6.0 | 5.0 | 2.5 | 2.5 | 5.0 | 5.0 | 7.0 | 6.5 |
| 28 | 13.5 | 12.5 | 8.5 | 8.0 | 6.0 | 5.5 | 2.5 | 2.5 | 5.5 | 5.0 | 6.5 | 6.0 |
| 29 | 13.5 | 13.5 | 9.0 | 7.5 | 6.0 | 5.5 | 2.5 | 2.5 | --- | --- | 6.5 | 6.0 |
| 30 | 13.5 | 13.0 | 8.0 | 7.5 | 5.5 | 5.0 | 2.5 | 2.0 | --- | --- | 7.0 | 6.5 |
| 31 | 13.0 | 12.5 | --- | --- | 5.0 | 4.5 | 2.5 | 2.0 | --- | --- | 7.0 | 6.5 |
| MONTH | 18.5 | 12.5 | 13.5 | 7.5 | 8.0 | 4.5 | 4.5 | 2.0 | 5.5 | 2.5 | 7.0 | 5.0 |
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| APRIL | | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 7.0 | 6.5 | 13.0 | 12.5 | 14.5 | 13.5 | 20.0 | 19.5 | 22.0 | 21.0 | 20.5 | 20.0 |
| 2 | 7.0 | 7.0 | 13.0 | 12.0 | 14.5 | 14.0 | 19.5 | 19.0 | 22.0 | 21.0 | 20.5 | 20.0 |
| 3 | 7.5 | 7.0 | 13.0 | 12.5 | 14.5 | 14.5 | 19.5 | 18.5 | 22.0 | 21.5 | 20.0 | 20.0 |
| 4 | 8.0 | 7.0 | 12.5 | 12.0 | 14.5 | 14.0 | 19.0 | 18.0 | 22.0 | 21.5 | 20.5 | 20.0 |
| 5 | 8.5 | 7.5 | 12.5 | 12.0 | 15.5 | 14.0 | 19.0 | 18.5 | 22.0 | 21.5 | 20.5 | 20.0 |
| 6 | 9.0 | 8.0 | 13.0 | 12.0 | 15.5 | 15.0 | 19.5 | 18.0 | 22.5 | 22.0 | 20.5 | 20.0 |
| 7 | 9.5 | 8.5 | 13.0 | 12.5 | 16.5 | 15.5 | 20.0 | 18.5 | 22.5 | 22.0 | 20.5 | 20.0 |
| 8 | 9.5 | 9.0 | 13.5 | 12.5 | 16.5 | 15.5 | 20.0 | 19.0 | 23.0 | 22.0 | 20.0 | 19.5 |
| 9 | 9.5 | 9.0 | 13.5 | 13.0 | 16.5 | 16.0 | 19.5 | 19.0 | 23.0 | 22.0 | 20.0 | 19.5 |
| 10 | 9.0 | 8.0 | 13.5 | 13.0 | 17.0 | 16.0 | 19.5 | 18.5 | 22.5 | 22.0 | 20.0 | 19.5 |
| 11 | 10.0 | 8.0 | 13.5 | 12.5 | 16.5 | 16.0 | 19.5 | 18.5 | 23.0 | 22.0 | 20.0 | 19.5 |
| 12 | 10.0 | 9.0 | 13.5 | 12.5 | 16.5 | 15.5 | 19.5 | 18.5 | 23.5 | 22.5 | 20.5 | 19.5 |
| 13 | 10.0 | 9.5 | 13.5 | 13.0 | 16.5 | 16.0 | 19.0 | 18.0 | 23.5 | 22.5 | 20.5 | 20.0 |
| 14 | 10.0 | 9.0 | 13.5 | 13.0 | 17.0 | 16.0 | 19.5 | 18.0 | 23.5 | 22.5 | 20.0 | 19.5 |
| 15 | 10.0 | 9.5 | 13.0 | 13.0 | 17.0 | 16.0 | 19.5 | 18.5 | 23.5 | 22.5 | 19.5 | 19.0 |
| 16 | 9.5 | 9.5 | 13.0 | 12.5 | 17.5 | 16.5 | 19.5 | 18.5 | 23.0 | 22.5 | 19.0 | 19.0 |
| 17 | 10.0 | 9.0 | 12.5 | 12.5 | 18.5 | 17.0 | 19.5 | 19.0 | 23.5 | 22.5 | 19.0 | 18.5 |
| 18 | 10.5 | 9.5 | 13.0 | 12.0 | 18.0 | 18.0 | 19.5 | 19.0 | 23.5 | 23.0 | 19.0 | 18.5 |
| 19 | 10.5 | 9.5 | 13.5 | 12.5 | 18.5 | 17.5 | 19.5 | 19.0 | 23.0 | 22.5 | 19.0 | 18.5 |
| 20 | 10.5 | 10.0 | 13.5 | 13.0 | 18.0 | 17.5 | 20.0 | 19.5 | 22.5 | 22.5 | 18.5 | 18.0 |
| 21 | 10.5 | 10.0 | 14.0 | 13.0 | 18.5 | 17.5 | 20.0 | 19.5 | 22.5 | 21.5 | 18.5 | 17.5 |
| 22 | 11.0 | 10.0 | 14.0 | 13.5 | 19.0 | 18.0 | 20.5 | 19.5 | 22.0 | 21.0 | 18.0 | 17.5 |
| 23 | 11.5 | 11.0 | 14.0 | 13.5 | 19.5 | 18.0 | 21.0 | 19.5 | 22.0 | 21.5 | 18.0 | 17.5 |
| 24 | 12.0 | 11.0 | 14.0 | 13.0 | 19.5 | 18.5 | 21.0 | 19.5 | 21.5 | 21.0 | 17.5 | 17.5 |
| 25 | 12.5 | 11.5 | 14.0 | 13.5 | 19.5 | 19.0 | 21.0 | 20.0 | 21.0 | 20.5 | 17.5 | 17.0 |
| 26 | 12.0 | 11.5 | 14.0 | 13.5 | 19.5 | 18.5 | 21.0 | 20.0 | 21.0 | 20.0 | 17.5 | 17.0 |
| 27 | 12.5 | 11.5 | 13.5 | 13.5 | 20.0 | 19.0 | 21.5 | 20.0 | 20.5 | 20.0 | 17.0 | 17.0 |
| 28 | 13.0 | 12.5 | 14.0 | 13.5 | 19.5 | 19.0 | 21.0 | 20.5 | 21.0 | 20.0 | 17.5 | 17.0 |
| 29 | 13.5 | 12.5 | 14.5 | 13.5 | 19.5 | 18.5 | 21.0 | 20.0 | 21.0 | 20.5 | 17.5 | 16.5 |
| 30 | 13.5 | 12.5 | 14.0 | 14.0 | 20.0 | 18.5 | 21.0 | 20.0 | 20.5 | 20.0 | 17.0 | 16.5 |
| 31 | --- | --- | 14.0 | 14.0 | --- | --- | 21.5 | 20.5 | 20.5 | 19.5 | --- | --- |
| MONTH | 13.5 | 6.5 | 14.5 | 12.0 | 20.0 | 13.5 | 21.5 | 18.0 | 23.5 | 19.5 | 20.5 | 16.5 |

WILLAMETTE RIVER BASIN

235

14144800 MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR

LOCATION.--Lat 43°35'50", long 122°27'20", in NW¼NE¼ sec.9, T.23 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 0.2 mi (0.3 km) upstream from Windfall Creek, 8.3 mi (13.4 km) upstream from Hills Creek Dam, 10.2 mi (16.4 km) south of Oakridge, and at mile 240.8 (387.4 km).

DRAINAGE AREA.--258 mi² (668 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,556.83 ft (474.522 m) above mean sea level (levels by Corps of Engineers). Prior to June 21, 1967, at site 0.5 mi (0.8 km) upstream at different datums. June 22, 1967, to June 23, 1971, water-stage recorder at same site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--19 years, 809 ft³/s (22.91 m³/s), 42.58 in/yr (1,082 mm/yr), 586,100 acre-ft/yr (723 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,800 ft³/s (1,130 m³/s) Dec. 22, 1964, gage height, 16.96 ft (5.169 m), from floodmark, site and datum then in use, from rating curve extended above 5,100 ft³/s (144 m³/s) on basis of slope-area measurement of peak flow; minimum, 187 ft³/s (5.30 m³/s) Sept. 15, 16, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 984 ft³/s (27.9 m³/s) May 26, gage height, 6.09 ft (1.856 m), no peak above base of 3,500 ft³/s (99.1 m³/s); minimum, 187 ft³/s (5.30 m³/s) Sept. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 295 | 339 | 276 | 262 | 252 | 470 | 450 | 657 | 705 | 292 | 220 | 212 |
| 2 | 297 | 325 | 276 | 295 | 252 | 400 | 466 | 830 | 681 | 290 | 217 | 207 |
| 3 | 305 | 312 | 272 | 295 | 252 | 410 | 450 | 885 | 634 | 286 | 217 | 202 |
| 4 | 302 | 305 | 272 | 283 | 250 | 390 | 474 | 861 | 634 | 286 | 215 | 202 |
| 5 | 297 | 302 | 272 | 276 | 250 | 374 | 570 | 796 | 646 | 286 | 212 | 200 |
| 6 | 297 | 297 | 272 | 255 | 250 | 387 | 640 | 724 | 669 | 283 | 212 | 200 |
| 7 | 300 | 295 | 269 | 258 | 250 | 427 | 711 | 669 | 663 | 276 | 217 | 197 |
| 8 | 292 | 295 | 276 | 252 | 247 | 687 | 838 | 628 | 622 | 269 | 222 | 195 |
| 9 | 292 | 292 | 286 | 252 | 247 | 730 | 743 | 622 | 561 | 262 | 212 | 192 |
| 10 | 292 | 290 | 279 | 258 | 247 | 561 | 634 | 823 | 514 | 262 | 210 | 192 |
| 11 | 292 | 290 | 279 | 265 | 247 | 490 | 561 | 823 | 494 | 258 | 205 | 190 |
| 12 | 292 | 290 | 276 | 297 | 247 | 478 | 547 | 762 | 470 | 258 | 205 | 190 |
| 13 | 290 | 283 | 272 | 307 | 250 | 458 | 599 | 711 | 450 | 258 | 202 | 190 |
| 14 | 286 | 295 | 272 | 310 | 250 | 420 | 581 | 693 | 427 | 250 | 202 | 190 |
| 15 | 286 | 336 | 269 | 295 | 250 | 396 | 551 | 675 | 410 | 250 | 205 | 187 |
| 16 | 286 | 329 | 269 | 286 | 250 | 353 | 581 | 681 | 393 | 247 | 197 | 192 |
| 17 | 286 | 307 | 269 | 279 | 250 | 359 | 570 | 699 | 380 | 245 | 195 | 195 |
| 18 | 286 | 305 | 265 | 283 | 250 | 353 | 528 | 699 | 374 | 245 | 192 | 205 |
| 19 | 279 | 300 | 262 | 283 | 247 | 356 | 498 | 675 | 362 | 247 | 192 | 222 |
| 20 | 279 | 297 | 262 | 283 | 250 | 362 | 486 | 663 | 359 | 245 | 192 | 242 |
| 21 | 279 | 295 | 265 | 279 | 272 | 362 | 470 | 675 | 356 | 240 | 195 | 227 |
| 22 | 279 | 292 | 258 | 276 | 297 | 387 | 486 | 699 | 346 | 237 | 195 | 212 |
| 23 | 279 | 290 | 258 | 269 | 297 | 450 | 498 | 782 | 336 | 235 | 192 | 215 |
| 24 | 295 | 286 | 258 | 269 | 295 | 427 | 533 | 762 | 322 | 235 | 292 | 362 |
| 25 | 416 | 286 | 258 | 262 | 292 | 396 | 628 | 724 | 315 | 245 | 258 | 290 |
| 26 | 356 | 283 | 276 | 258 | 295 | 383 | 622 | 909 | 310 | 237 | 252 | 272 |
| 27 | 315 | 279 | 300 | 255 | 310 | 396 | 593 | 893 | 305 | 232 | 237 | 262 |
| 28 | 305 | 276 | 283 | 255 | 551 | 458 | 581 | 809 | 300 | 230 | 225 | 486 |
| 29 | 300 | 276 | 276 | 252 | --- | 438 | 593 | 730 | 295 | 225 | 222 | 478 |
| 30 | 300 | 276 | 272 | 252 | --- | 420 | 610 | 681 | 292 | 225 | 225 | 362 |
| 31 | 302 | --- | 265 | 252 | --- | 413 | --- | 663 | --- | 222 | 220 | --- |
| TOTAL | 9257 | 8923 | 8414 | 8453 | 7597 | 13391 | 17092 | 22903 | 13625 | 7858 | 6654 | 7168 |
| MEAN | 299 | 297 | 271 | 273 | 271 | 432 | 570 | 739 | 454 | 253 | 215 | 239 |
| MAX | 416 | 339 | 300 | 310 | 551 | 730 | 838 | 909 | 705 | 292 | 292 | 486 |
| MIN | 279 | 276 | 258 | 252 | 247 | 353 | 450 | 622 | 292 | 222 | 192 | 187 |
| CFSM | 1.16 | 1.15 | 1.05 | 1.06 | 1.05 | 1.67 | 2.21 | 2.86 | 1.76 | .98 | .83 | .93 |
| IN. | 1.33 | 1.29 | 1.21 | 1.22 | 1.10 | 1.93 | 2.46 | 3.30 | 1.96 | 1.13 | .96 | 1.03 |
| AC-FT | 18360 | 17700 | 16690 | 16770 | 15070 | 26560 | 33900 | 45430 | 27030 | 15590 | 13200 | 14220 |

| | | | | | | | | |
|-------------|-------|--------|----------|----------|---------|-----------|----------|--------------|
| CAL YR 1976 | TOTAL | 258152 | MEAN 705 | MAX 6940 | MIN 258 | CFSM 2.73 | IN 37.22 | AC-FT 512000 |
| WTR YR 1977 | TOTAL | 131335 | MEAN 360 | MAX 909 | MIN 187 | CFSM 1.40 | IN 18.94 | AC-FT 260500 |

WILLAMETTE RIVER BASIN

14144800 MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1958 to January 1959, September 1959 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.0°C July 15, 1970; minimum, 0.0°C on several days during winter period most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.0°C July 24, 31; minimum, 1.5°C Jan. 6, 8, 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|------|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 14.5 | 10.5 | 10.5 | 9.0 | 6.0 | 4.0 | 5.5 | 3.5 | 7.5 | 4.5 | 6.5 | 5.0 |
| 2 | 13.0 | 11.0 | 12.0 | 9.5 | 6.0 | 4.0 | 6.0 | 5.0 | 6.5 | 3.0 | 6.0 | 5.0 |
| 3 | 13.0 | 9.5 | 11.0 | 8.5 | 6.0 | 4.0 | 5.5 | 4.0 | 6.5 | 3.0 | 7.5 | 5.0 |
| 4 | 12.0 | 7.5 | 10.5 | 7.5 | 6.5 | 4.5 | 5.5 | 4.5 | 6.5 | 3.5 | 9.0 | 5.0 |
| 5 | 12.5 | 7.5 | 9.0 | 7.0 | 6.0 | 4.0 | 5.0 | 2.0 | 5.5 | 4.0 | 9.0 | 4.5 |
| 6 | 13.0 | 8.0 | 10.5 | 8.0 | 6.0 | 3.5 | 4.0 | 1.5 | 7.5 | 4.5 | 7.0 | 4.5 |
| 7 | 14.0 | 8.5 | 10.0 | 7.5 | 6.0 | 4.0 | 4.0 | 2.0 | 7.5 | 4.0 | 7.5 | 6.0 |
| 8 | 13.5 | 9.0 | 10.5 | 8.0 | 6.5 | 5.0 | 4.0 | 1.5 | 7.0 | 5.0 | 7.5 | 6.0 |
| 9 | 13.0 | 8.5 | 9.0 | 7.0 | 6.5 | 5.0 | 3.5 | 1.5 | 8.5 | 5.0 | 6.5 | 4.5 |
| 10 | 12.0 | 8.5 | 9.5 | 7.0 | 5.5 | 4.0 | 5.5 | 3.0 | 9.5 | 6.0 | 8.5 | 4.5 |
| 11 | 13.5 | 9.5 | 9.0 | 7.0 | 6.0 | 4.0 | 4.5 | 3.5 | 7.5 | 4.5 | 8.5 | 4.5 |
| 12 | 12.0 | 7.5 | 10.0 | 7.5 | 5.5 | 3.5 | 6.0 | 4.5 | 9.5 | 5.0 | 7.5 | 5.0 |
| 13 | 12.5 | 7.5 | 8.5 | 6.0 | 5.5 | 4.0 | 6.0 | 5.0 | 10.5 | 7.0 | 7.0 | 4.5 |
| 14 | 12.0 | 7.5 | 9.5 | 8.0 | 6.0 | 3.5 | 5.5 | 4.0 | 9.0 | 5.0 | 7.5 | 4.0 |
| 15 | 11.5 | 7.0 | 10.0 | 8.5 | 6.0 | 4.5 | 5.5 | 3.5 | 9.0 | 5.0 | 8.0 | 4.5 |
| 16 | 11.0 | 7.0 | 11.0 | 9.0 | 6.5 | 4.5 | 5.5 | 3.5 | 9.0 | 5.5 | --- | 4.0 |
| 17 | 11.0 | 6.5 | 10.5 | 8.5 | 6.0 | 4.0 | 6.5 | 4.0 | 10.0 | 6.5 | --- | --- |
| 18 | 10.5 | 6.0 | 11.0 | 9.0 | 5.0 | 3.5 | 6.0 | 4.0 | 9.0 | 4.5 | --- | --- |
| 19 | 10.5 | 6.0 | 9.0 | 7.0 | 4.5 | 2.5 | 6.5 | 4.0 | 9.5 | 4.5 | --- | --- |
| 20 | 10.5 | 6.0 | 8.5 | 5.5 | 4.5 | 2.5 | 6.0 | 3.5 | 8.0 | 5.5 | --- | --- |
| 21 | 10.5 | 6.5 | 10.0 | 7.0 | 4.5 | 2.5 | 6.5 | 5.0 | 7.5 | 5.5 | --- | --- |
| 22 | 10.0 | 6.5 | 8.5 | 6.0 | 5.0 | 3.5 | 6.5 | 4.5 | 8.0 | 5.5 | --- | --- |
| 23 | 10.0 | 7.5 | 8.0 | 5.5 | 6.5 | 5.0 | 5.5 | 3.5 | 6.0 | 4.5 | --- | --- |
| 24 | 8.0 | 7.0 | 8.0 | 5.5 | 5.0 | 3.5 | 5.5 | 3.0 | 7.0 | 4.5 | --- | --- |
| 25 | 9.5 | 8.0 | 8.5 | 6.5 | 6.0 | 4.0 | 5.5 | 2.5 | 6.5 | 5.0 | --- | --- |
| 26 | 10.0 | 7.5 | 7.0 | 4.5 | 5.5 | 4.5 | 5.5 | 2.5 | 7.5 | 5.0 | --- | --- |
| 27 | 9.5 | 6.0 | 5.5 | 3.0 | 6.5 | 4.5 | 5.5 | 2.5 | 8.5 | 6.0 | --- | --- |
| 28 | 9.0 | 6.0 | 5.5 | 3.0 | 5.0 | 3.0 | 5.5 | 2.5 | 7.0 | 5.5 | --- | --- |
| 29 | 9.0 | 7.5 | 6.0 | 3.5 | 6.0 | 5.0 | 5.5 | 2.0 | --- | --- | --- | --- |
| 30 | 10.0 | 7.5 | 6.5 | 4.0 | 5.5 | 4.0 | 5.5 | 2.5 | --- | --- | --- | --- |
| 31 | 9.0 | 7.5 | --- | --- | 5.0 | 3.0 | 6.5 | 4.5 | --- | --- | --- | --- |
| MONTH | 14.5 | 6.0 | 12.0 | 3.0 | 6.5 | 2.5 | 6.5 | 1.5 | 10.5 | 3.0 | 9.0 | 4.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-----|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | --- | --- | --- | --- | 13.5 | 10.5 | 19.0 | 13.5 | 20.5 | 13.5 | 17.5 | 10.5 |
| 2 | --- | --- | --- | --- | 14.0 | 8.0 | 18.5 | 12.5 | 19.5 | 14.5 | 18.0 | 11.5 |
| 3 | --- | --- | --- | --- | 12.5 | 9.0 | 15.0 | 11.5 | 20.5 | 13.0 | 18.0 | 13.0 |
| 4 | --- | --- | --- | --- | 17.0 | 10.0 | 15.5 | 11.5 | 20.5 | 13.5 | 19.0 | 13.0 |
| 5 | --- | --- | --- | --- | 18.0 | 10.5 | 14.5 | 9.5 | 20.5 | 13.0 | 19.0 | 14.0 |
| 6 | --- | --- | --- | --- | 18.0 | 11.5 | 18.5 | 11.0 | 20.0 | 13.0 | 19.0 | 13.5 |
| 7 | --- | --- | --- | --- | 15.0 | 12.0 | 19.5 | 11.5 | 17.0 | 13.5 | 18.0 | 12.0 |
| 8 | --- | --- | --- | --- | 17.0 | 11.5 | 19.5 | 12.0 | 19.5 | 12.5 | 17.0 | 11.5 |
| 9 | --- | --- | --- | --- | 16.5 | 10.0 | 18.5 | 13.0 | 19.5 | 12.5 | 16.5 | 10.5 |
| 10 | --- | --- | --- | --- | 15.5 | 11.0 | 19.5 | 12.0 | 20.5 | 13.0 | 17.0 | 10.5 |
| 11 | --- | --- | --- | --- | 16.5 | 11.0 | 20.5 | 12.0 | 20.5 | 13.0 | 17.0 | 11.0 |
| 12 | --- | --- | --- | --- | 17.5 | 10.5 | 20.0 | 13.5 | 20.5 | 13.5 | 17.5 | 10.5 |
| 13 | --- | --- | --- | --- | 17.5 | 10.5 | 19.5 | 11.5 | 19.5 | 13.5 | 17.5 | 11.0 |
| 14 | --- | --- | --- | --- | 18.0 | 10.5 | 20.0 | 12.0 | 20.0 | 13.5 | 17.0 | 12.0 |
| 15 | --- | --- | --- | --- | 17.5 | 10.0 | 20.5 | 12.5 | 20.5 | 13.5 | 14.0 | 11.5 |
| 16 | --- | --- | 10.5 | --- | 18.0 | 10.5 | 20.0 | 13.0 | 20.5 | 13.5 | 13.5 | 10.0 |
| 17 | --- | --- | 10.0 | 7.0 | 16.5 | 11.5 | 20.5 | 13.0 | 20.5 | 13.5 | 12.5 | 10.5 |
| 18 | --- | --- | 11.0 | 7.0 | 18.0 | 12.0 | 17.5 | 14.5 | 20.0 | 14.5 | 14.0 | 11.0 |
| 19 | --- | --- | 14.5 | 7.0 | 18.0 | 12.5 | 20.5 | 13.0 | 20.0 | 14.0 | 14.5 | 11.5 |
| 20 | --- | --- | 15.0 | 8.0 | 15.5 | 11.5 | 21.0 | 13.0 | 18.0 | 13.5 | 13.5 | 10.5 |
| 21 | --- | --- | 14.5 | 9.5 | 19.5 | 11.5 | 20.5 | 13.5 | 19.5 | 14.0 | 14.0 | 10.5 |
| 22 | --- | --- | 10.5 | 8.0 | 20.0 | 13.0 | 20.5 | 13.0 | 19.5 | 13.5 | 14.0 | 9.5 |
| 23 | --- | --- | 10.5 | 8.0 | 20.0 | 13.0 | 18.5 | 13.5 | 18.5 | 12.5 | 11.5 | 10.0 |
| 24 | --- | --- | 12.5 | 8.0 | 20.0 | 12.0 | 21.0 | 12.5 | 16.5 | 13.5 | 13.5 | 9.5 |
| 25 | --- | --- | 11.5 | 7.5 | 20.5 | 12.5 | 19.5 | 13.5 | 14.0 | 12.0 | 12.5 | 10.0 |
| 26 | --- | --- | 11.5 | 8.5 | 20.0 | 12.5 | 20.5 | 13.0 | 14.0 | 12.0 | 14.5 | 10.0 |
| 27 | --- | --- | 10.5 | 7.0 | 20.0 | 12.5 | 20.5 | 13.0 | 15.5 | 11.5 | 11.5 | 10.0 |
| 28 | --- | --- | 13.0 | 7.0 | 20.5 | 12.0 | 19.5 | 13.0 | 16.0 | 12.5 | 11.0 | 10.5 |
| 29 | --- | --- | 14.0 | 7.0 | 20.0 | 12.5 | 19.0 | 12.0 | 18.5 | 12.5 | 11.5 | 9.5 |
| 30 | --- | --- | 14.0 | 8.0 | 19.0 | 12.5 | 20.0 | 12.0 | 18.0 | 13.0 | 12.0 | 9.5 |
| 31 | --- | --- | 15.5 | 9.5 | --- | --- | 21.0 | 13.0 | 17.0 | 11.0 | --- | --- |
| MONTH | --- | --- | 15.5 | 7.0 | 20.5 | 8.0 | 21.0 | 9.5 | 20.5 | 11.0 | 19.0 | 9.5 |

WILLAMETTE RIVER BASIN

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14144900 HILLS CREEK ABOVE HILLS CREEK LAKE, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°40'50", long 122°22'10", in NW¼NW¼ sec.8, T.22 S., R.4 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 0.2 mi (0.3 km) downstream from Tufti Creek, 0.7 mi (1.1 km) upstream from Hills Creek Lake, 6.5 mi (10.5 km) southeast of Oakridge, and at mile 4.1 (6.6 km).

DRAINAGE AREA.--52.7 mi² (136.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to current year. Prior to October 1971, published as Hills Creek above Hills Creek Reservoir.

GAGE.--Water-stage recorder. Datum of gage is 1,630.80 ft (497.068 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--19 years, 154 ft³/s (4.361 m³/s), 39.68 in/yr (1,008 mm/yr), 111,600 acre-ft/yr (138 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s (303 m³/s) Dec. 22, 1964, gage height, 12.23 ft (3.728 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s) on basis of slope-area measurement of peak flow; minimum, 14 ft³/s (0.40 m³/s) Nov. 1, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 335 ft³/s (9.49 m³/s) May 26, gage height, 4.37 ft (1.332 m), no peak above base of 700 ft³/s (19.8 m³/s); minimum, 16 ft³/s (0.45 m³/s) Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1 | 29 | 43 | 23 | 21 | 22 | 56 | 125 | 153 | 196 | 35 | 21 | 25 |
| 2 | 32 | 38 | 23 | 25 | 20 | 47 | 114 | 220 | 170 | 34 | 21 | 25 |
| 3 | 36 | 34 | 22 | 24 | 20 | 52 | 104 | 235 | 151 | 33 | 20 | 24 |
| 4 | 31 | 32 | 22 | 23 | 19 | 51 | 118 | 220 | 170 | 33 | 20 | 23 |
| 5 | 30 | 30 | 22 | 22 | 19 | 51 | 135 | 172 | 172 | 33 | 20 | 23 |
| 6 | 29 | 29 | 22 | 23 | 20 | 56 | 156 | 183 | 179 | 32 | 20 | 23 |
| 7 | 29 | 28 | 22 | 23 | 19 | 70 | 185 | 160 | 163 | 31 | 20 | 22 |
| 8 | 29 | 27 | 25 | 27 | 19 | 118 | 220 | 146 | 135 | 30 | 20 | 21 |
| 9 | 29 | 27 | 26 | 63 | 20 | 127 | 185 | 146 | 116 | 29 | 19 | 21 |
| 10 | 29 | 26 | 25 | 56 | 19 | 96 | 144 | 310 | 102 | 29 | 19 | 20 |
| 11 | 29 | 25 | 26 | 22 | 20 | 86 | 127 | 304 | 94 | 28 | 19 | 20 |
| 12 | 28 | 25 | 25 | 28 | 21 | 91 | 125 | 250 | 86 | 28 | 18 | 19 |
| 13 | 27 | 25 | 24 | 32 | 22 | 81 | 142 | 210 | 78 | 27 | 18 | 19 |
| 14 | 26 | 28 | 23 | 33 | 23 | 69 | 127 | 206 | 72 | 27 | 18 | 19 |
| 15 | 26 | 35 | 23 | 29 | 22 | 60 | 122 | 206 | 65 | 27 | 20 | 20 |
| 16 | 26 | 33 | 23 | 26 | 22 | 55 | 135 | 213 | 59 | 26 | 19 | 20 |
| 17 | 26 | 30 | 23 | 26 | 21 | 51 | 120 | 253 | 55 | 25 | 18 | 20 |
| 18 | 25 | 32 | 22 | 28 | 21 | 49 | 107 | 245 | 52 | 27 | 17 | 21 |
| 19 | 25 | 29 | 21 | 27 | 20 | 52 | 101 | 220 | 52 | 28 | 17 | 26 |
| 20 | 25 | 28 | 21 | 26 | 21 | 58 | 97 | 215 | 52 | 26 | 17 | 28 |
| 21 | 25 | 27 | 21 | 25 | 26 | 56 | 97 | 218 | 52 | 25 | 18 | 26 |
| 22 | 25 | 26 | 21 | 25 | 27 | 63 | 102 | 215 | 47 | 25 | 18 | 24 |
| 23 | 25 | 25 | 22 | 24 | 25 | 75 | 109 | 245 | 44 | 25 | 17 | 25 |
| 24 | 29 | 25 | 21 | 23 | 25 | 69 | 133 | 263 | 42 | 26 | 55 | 62 |
| 25 | 70 | 25 | 21 | 22 | 24 | 63 | 163 | 235 | 41 | 26 | 41 | 42 |
| 26 | 51 | 25 | 25 | 21 | 25 | 58 | 144 | 302 | 39 | 25 | 42 | 39 |
| 27 | 39 | 24 | 27 | 21 | 27 | 73 | 131 | 271 | 38 | 24 | 34 | 37 |
| 28 | 34 | 24 | 25 | 20 | 70 | 76 | 127 | 225 | 38 | 23 | 29 | 107 |
| 29 | 32 | 24 | 24 | 20 | --- | 73 | 127 | 190 | 36 | 23 | 32 | 97 |
| 30 | 31 | 24 | 23 | 20 | --- | 75 | 131 | 172 | 36 | 22 | 30 | 72 |
| 31 | 31 | --- | 22 | 21 | --- | 81 | --- | 176 | --- | 22 | 27 | --- |
| TOTAL | 958 | 853 | 715 | 826 | 659 | 2138 | 3953 | 6779 | 2632 | 854 | 724 | 970 |
| MEAN | 30.9 | 28.4 | 23.1 | 26.6 | 23.5 | 69.0 | 132 | 219 | 87.7 | 27.5 | 23.4 | 32.3 |
| MAX | 70 | 43 | 27 | 63 | 70 | 127 | 220 | 310 | 196 | 35 | 55 | 107 |
| MIN | 25 | 24 | 21 | 20 | 19 | 47 | 97 | 146 | 36 | 22 | 17 | 19 |
| CFSM | .59 | .54 | .44 | .51 | .45 | 1.31 | 2.51 | 4.16 | 1.66 | .52 | .44 | .61 |
| IN. | .68 | .60 | .50 | .58 | .47 | 1.51 | 2.79 | 4.79 | 1.86 | .60 | .51 | .68 |
| AC-FT | 1900 | 1690 | 1420 | 1640 | 1310 | 4240 | 7840 | 13450 | 5220 | 1690 | 1440 | 1920 |
| CAL YR 1976 | TOTAL | 45251 | MEAN | 124 | MAX | 1570 | MIN | 21 | CFSM | 2.35 | IN | 31.94 |
| WTR YR 1977 | TOTAL | 22061 | MEAN | 60.4 | MAX | 310 | MIN | 17 | CFSM | 1.15 | IN | 15.57 |
| | | | | | | | | | AC-FT | 89760 | AC-FT | 43760 |

14144900 HILLS CREEK ABOVE HILLS CREEK LAKE, NEAR OAKRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1958 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 22.5°C Aug. 7, 1972; minimum, 0.0°C Jan. 19-25, 1962, Jan. 5-11, 1974, Feb. 4-7, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.0°C Aug. 12, 16, 17; minimum recorded, 0.5°C Jan. 26-30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 15.5 | 12.0 | 11.0 | 10.0 | --- | --- | --- | --- | 4.0 | 3.5 | 5.0 | 4.0 |
| 2 | 14.5 | 11.5 | 11.5 | 10.0 | --- | --- | --- | --- | 3.5 | 1.5 | 5.5 | 4.0 |
| 3 | 12.5 | 10.0 | 10.5 | 8.5 | --- | --- | --- | --- | 3.0 | 1.5 | 5.5 | 3.5 |
| 4 | 11.5 | 8.0 | 9.5 | 7.5 | --- | --- | --- | --- | 3.5 | 1.5 | 6.5 | 4.0 |
| 5 | 12.5 | 7.5 | --- | --- | --- | --- | --- | --- | 4.0 | 2.0 | 7.0 | 3.5 |
| 6 | 13.0 | 9.0 | --- | --- | --- | --- | --- | --- | 4.5 | 3.0 | 6.5 | 3.5 |
| 7 | 14.0 | 10.0 | --- | --- | --- | --- | --- | --- | 5.5 | 3.0 | 6.5 | 5.0 |
| 8 | 13.5 | 10.5 | --- | --- | --- | --- | --- | --- | 5.0 | 4.5 | 6.5 | 5.0 |
| 9 | 13.0 | 9.5 | --- | --- | --- | --- | --- | --- | 6.0 | 4.0 | 5.5 | 3.5 |
| 10 | 13.5 | 9.5 | --- | --- | --- | --- | --- | --- | 6.5 | 5.0 | 6.0 | 3.5 |
| 11 | 13.0 | 11.0 | --- | --- | --- | --- | --- | --- | 6.5 | 4.5 | 7.0 | 3.5 |
| 12 | 12.0 | 9.0 | --- | --- | --- | --- | 4.0 | --- | 7.5 | 4.5 | 5.5 | 4.0 |
| 13 | 12.0 | 8.5 | --- | --- | --- | --- | 4.0 | 3.0 | 8.0 | 6.5 | 5.5 | 3.5 |
| 14 | 11.5 | 7.5 | --- | --- | --- | --- | 3.5 | 2.5 | 7.0 | 4.5 | 5.5 | 3.0 |
| 15 | 10.5 | 7.5 | --- | --- | --- | --- | 3.5 | 2.0 | 7.5 | 4.5 | 6.5 | 3.0 |
| 16 | 10.0 | 7.5 | --- | --- | --- | --- | 4.0 | 2.0 | 7.5 | 5.0 | 6.0 | 3.0 |
| 17 | 9.5 | 7.0 | --- | --- | --- | --- | 4.5 | 2.5 | 7.5 | 6.0 | 6.0 | 3.5 |
| 18 | 9.0 | 6.0 | --- | --- | --- | --- | 4.5 | 3.0 | 7.0 | 4.5 | 6.0 | 4.0 |
| 19 | 9.5 | 6.0 | --- | --- | --- | --- | 4.0 | 3.0 | 7.0 | 4.0 | 7.0 | 4.5 |
| 20 | 9.5 | 6.5 | --- | --- | --- | --- | 4.5 | 2.5 | 7.0 | 5.0 | 7.5 | 4.5 |
| 21 | 9.0 | 6.5 | --- | --- | --- | --- | 5.0 | 3.5 | 6.5 | 5.0 | 8.0 | 3.5 |
| 22 | 9.5 | 6.5 | --- | --- | --- | --- | 4.0 | 3.0 | 6.5 | 5.0 | 9.0 | 4.0 |
| 23 | 9.0 | 7.5 | --- | --- | --- | --- | 3.5 | 2.0 | 5.5 | 4.0 | 6.5 | 5.0 |
| 24 | 8.5 | 6.5 | --- | --- | --- | --- | 3.0 | 1.5 | 5.5 | 4.0 | 6.5 | 4.0 |
| 25 | 8.5 | 7.5 | --- | --- | --- | --- | 2.5 | 1.0 | 5.0 | 4.5 | 7.5 | 4.5 |
| 26 | 9.0 | 6.5 | --- | --- | 3.0 | 2.0 | 2.0 | 0.5 | 6.5 | 4.5 | 7.5 | 4.5 |
| 27 | 8.5 | 5.5 | --- | --- | 2.5 | 2.0 | 2.5 | 0.5 | 7.5 | 5.5 | 6.5 | 3.5 |
| 28 | 8.5 | 5.5 | --- | --- | 1.5 | 1.0 | 2.0 | 0.5 | 6.5 | 4.5 | 5.5 | 3.0 |
| 29 | 9.0 | 7.5 | --- | --- | 1.0 | 1.0 | 2.0 | 0.5 | --- | --- | 6.5 | 3.5 |
| 30 | 9.5 | 7.5 | --- | --- | --- | --- | 3.0 | 0.5 | --- | --- | 7.0 | 4.0 |
| 31 | 11.0 | 7.5 | --- | --- | --- | --- | 4.5 | 2.5 | --- | --- | 5.5 | 3.5 |
| MONTH | 15.5 | 5.5 | 11.5 | 7.5 | 3.0 | 1.0 | 5.0 | 0.5 | 8.0 | 1.5 | 9.0 | 3.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|-----|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 6.0 | 4.5 | --- | --- | --- | --- | 18.5 | 14.0 | 20.0 | 14.5 | 16.5 | 11.5 |
| 2 | 8.0 | 4.5 | --- | --- | --- | --- | 18.0 | 12.5 | 20.0 | 16.0 | 17.0 | 12.0 |
| 3 | 9.5 | 4.5 | --- | --- | --- | --- | 15.0 | 12.0 | 20.0 | 15.0 | 17.0 | 14.0 |
| 4 | 10.0 | 4.5 | --- | --- | --- | --- | 16.0 | 11.5 | 19.5 | 15.0 | 18.0 | 14.0 |
| 5 | 9.5 | 4.5 | --- | --- | --- | --- | 14.5 | 10.5 | 20.0 | 14.5 | 17.0 | 15.0 |
| 6 | 10.0 | 5.0 | --- | --- | --- | --- | 17.5 | 11.0 | 19.5 | 14.5 | 17.5 | 14.5 |
| 7 | 10.0 | 5.0 | --- | --- | --- | --- | 18.5 | 11.5 | 19.0 | 15.5 | 16.5 | 13.0 |
| 8 | 7.0 | 5.5 | --- | --- | --- | --- | 18.5 | 12.5 | 20.0 | 14.5 | 15.5 | 12.0 |
| 9 | 6.5 | 5.0 | --- | --- | --- | --- | 17.0 | 13.0 | 19.5 | 14.5 | 15.0 | 11.5 |
| 10 | 8.5 | 4.5 | --- | --- | --- | --- | 18.5 | 12.5 | 20.0 | 15.5 | 15.5 | 11.5 |
| 11 | 9.5 | 5.5 | --- | --- | --- | --- | 19.5 | 12.5 | 20.5 | 15.5 | 15.5 | 12.0 |
| 12 | 10.0 | 5.0 | --- | --- | --- | --- | 18.0 | 14.5 | 21.0 | 16.0 | 16.0 | 11.5 |
| 13 | 7.5 | 5.5 | --- | --- | --- | --- | 18.5 | 11.5 | 20.5 | 16.5 | 16.5 | 12.5 |
| 14 | 9.0 | 4.0 | --- | --- | --- | --- | 19.0 | 12.5 | 20.5 | 16.0 | 16.0 | 13.5 |
| 15 | 9.5 | 5.5 | --- | --- | 16.5 | --- | 19.5 | 13.0 | 20.5 | 16.5 | 14.5 | 12.0 |
| 16 | 8.0 | 5.5 | --- | --- | 17.5 | 10.0 | 19.5 | 13.5 | 21.0 | 16.5 | 13.5 | 11.0 |
| 17 | 8.5 | 3.5 | --- | --- | 17.5 | 11.0 | 19.5 | 14.0 | 21.0 | 16.0 | 13.0 | 11.0 |
| 18 | 8.0 | 3.0 | --- | --- | 17.5 | 12.0 | 18.0 | 15.0 | 20.5 | 17.0 | 14.0 | 11.5 |
| 19 | 9.0 | 3.5 | --- | --- | 18.0 | 12.5 | 19.0 | 12.5 | 19.5 | 16.5 | 13.5 | 12.5 |
| 20 | 9.5 | 4.0 | --- | --- | 14.5 | 11.5 | 20.0 | 14.0 | 19.5 | 16.0 | 13.0 | 11.0 |
| 21 | 9.5 | 5.5 | --- | --- | 18.5 | 11.5 | 18.0 | 14.0 | 18.5 | 16.5 | 13.0 | 11.0 |
| 22 | 9.5 | 5.5 | --- | --- | 19.5 | 13.5 | --- | --- | 18.5 | 15.5 | 12.5 | 10.0 |
| 23 | 10.0 | 5.5 | --- | --- | 19.5 | 13.5 | --- | --- | 18.5 | 14.5 | 12.0 | 10.0 |
| 24 | 10.5 | 6.5 | --- | --- | 19.5 | 12.0 | --- | --- | 18.5 | 14.5 | 12.0 | 9.5 |
| 25 | 9.0 | 6.0 | --- | --- | 20.0 | 13.0 | --- | --- | 14.5 | 12.5 | 12.5 | 10.0 |
| 26 | 10.5 | 5.0 | --- | --- | 19.5 | 12.5 | --- | --- | 15.0 | 12.0 | 13.5 | 9.0 |
| 27 | 11.5 | 5.0 | --- | --- | 19.5 | 12.5 | --- | --- | 15.5 | 12.5 | 11.5 | 10.0 |
| 28 | 7.5 | 6.0 | --- | --- | 20.0 | 12.5 | --- | --- | 16.5 | 13.5 | 10.5 | 10.0 |
| 29 | --- | --- | --- | --- | 19.5 | 13.5 | 18.5 | 15.5 | 17.5 | 13.5 | 11.0 | 9.5 |
| 30 | --- | --- | --- | --- | 18.5 | 12.5 | 19.5 | 13.5 | 17.5 | 14.0 | 10.5 | 9.0 |
| 31 | --- | --- | --- | --- | --- | --- | 20.0 | 14.0 | 15.5 | 11.5 | --- | --- |
| MONTH | 11.5 | 3.0 | --- | --- | 20.0 | 10.0 | 20.0 | 10.5 | 21.0 | 11.5 | 18.0 | 9.0 |

14145100 HILLS CREEK LAKE NEAR OAKRIDGE, OR

LOCATION.--Lat 43°42'30", long 122°25'25", in NW¼ sec.35, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, near right end of Hills Creek Dam on Middle Fork Willamette River, 600 ft (183 m) downstream from Hills Creek, 3.5 mi (5.6 km) southeast of Oakridge, and at mile 232.5 (374.1 km).

DRAINAGE AREA.--389 mi² (1,008 km²).

PERIOD OF RECORD.--August 1961 to current year. Prior to October 1971, published as Hills Creek Reservoir near Oakridge.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1961 by the Corps of Engineers; storage began August 1961. Total capacity is 355,600 acre-ft (438 hm³) at elevation 1,543.0 ft (470.31 m), top of spillway gates, and usable capacity is 248,900 acre-ft (307 hm³) between elevations 1,414.0 ft (430.98 m), minimum power pool, and 1,543.0 ft (470.31 m). Reservoir used for flood control and power generation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 354,200 acre-ft (437 hm³) June 25, 1971, elevation, 1,542.52 ft (470.160 m); minimum, 104,800 acre-ft (129 hm³) Jan. 2, 1969, elevation, 1,412.52 ft (430.536 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 315,700 acre-ft (389 hm³) July 16, elevation, 1,527.62 ft (465.619 m); minimum, 135,400 acre-ft (167 hm³) Jan. 14, elevation, 1,434.86 ft (437.345 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

| | | | | | |
|-------|---------|-------|---------|-------|---------|
| 1,410 | 101,500 | 1,460 | 174,900 | 1,520 | 297,200 |
| 1,420 | 114,600 | 1,480 | 211,000 | 1,540 | 347,300 |
| 1,440 | 143,000 | 1,500 | 251,900 | 1,544 | 358,500 |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 1506.49 | 1471.00 | 1449.50 | 1437.13 | 1435.27 | 1438.69 | 1458.69 | 1483.74 | 1514.58 | 1525.67 | 1521.30 | 1492.51 |
| 2 | 1505.34 | 1469.98 | 1449.24 | 1436.63 | 1435.27 | 1439.14 | 1459.55 | 1484.90 | 1515.30 | 1525.81 | 1520.80 | 1491.14 |
| 3 | 1504.22 | 1468.90 | 1448.99 | 1436.38 | 1435.26 | 1439.69 | 1460.41 | 1486.18 | 1515.98 | 1525.95 | 1520.32 | 1489.70 |
| 4 | 1503.13 | 1468.23 | 1448.75 | 1436.24 | 1435.25 | 1440.27 | 1461.36 | 1487.43 | 1516.65 | 1526.10 | 1519.84 | 1488.25 |
| 5 | 1501.87 | 1467.52 | 1448.49 | 1436.12 | 1435.23 | 1440.66 | 1462.25 | 1488.58 | 1517.32 | 1526.23 | 1519.32 | 1486.73 |
| 6 | 1500.67 | 1466.78 | 1448.22 | 1435.92 | 1435.23 | 1441.11 | 1463.33 | 1489.60 | 1518.00 | 1526.40 | 1518.82 | 1485.25 |
| 7 | 1499.40 | 1465.98 | 1447.95 | 1435.75 | 1435.22 | 1441.83 | 1464.53 | 1490.66 | 1518.67 | 1526.56 | 1518.34 | 1483.73 |
| 8 | 1498.20 | 1465.18 | 1447.70 | 1435.58 | 1435.20 | 1443.11 | 1466.02 | 1491.52 | 1519.26 | 1526.69 | 1517.85 | 1482.00 |
| 9 | 1496.93 | 1464.38 | 1447.43 | 1435.37 | 1435.20 | 1444.54 | 1467.20 | 1492.36 | 1519.78 | 1526.81 | 1517.35 | 1480.63 |
| 10 | 1495.67 | 1463.53 | 1447.16 | 1435.22 | 1435.19 | 1445.47 | 1468.12 | 1493.63 | 1520.43 | 1526.95 | 1516.81 | 1479.00 |
| 11 | 1494.38 | 1462.70 | 1446.85 | 1435.09 | 1435.18 | 1446.20 | 1468.93 | 1494.86 | 1520.85 | 1527.10 | 1516.25 | 1477.36 |
| 12 | 1493.08 | 1461.85 | 1446.58 | 1434.90 | 1435.18 | 1446.95 | 1469.73 | 1495.95 | 1521.26 | 1527.21 | 1515.73 | 1475.71 |
| 13 | 1491.69 | 1461.00 | 1446.27 | 1434.89 | 1435.18 | 1447.60 | 1470.67 | 1496.89 | 1521.64 | 1527.34 | 1515.22 | 1474.02 |
| 14 | 1490.34 | 1460.19 | 1445.97 | 1434.89 | 1435.20 | 1448.14 | 1471.49 | 1497.79 | 1521.98 | 1527.46 | 1514.70 | 1472.26 |
| 15 | 1488.90 | 1459.32 | 1445.67 | 1434.93 | 1435.23 | 1448.71 | 1472.25 | 1498.68 | 1522.26 | 1527.57 | 1513.73 | 1470.93 |
| 16 | 1487.55 | 1457.87 | 1445.37 | 1434.99 | 1435.31 | 1449.13 | 1473.06 | 1499.59 | 1522.58 | 1527.60 | 1512.56 | 1470.08 |
| 17 | 1486.14 | 1457.00 | 1445.12 | 1435.01 | 1435.42 | 1449.60 | 1473.81 | 1500.67 | 1522.85 | 1527.59 | 1511.38 | 1469.50 |
| 18 | 1484.73 | 1456.32 | 1444.80 | 1435.06 | 1435.58 | 1450.03 | 1474.48 | 1501.71 | 1523.14 | 1527.45 | 1510.20 | 1468.80 |
| 19 | 1483.27 | 1455.61 | 1444.48 | 1435.08 | 1435.68 | 1450.50 | 1475.11 | 1502.56 | 1523.40 | 1527.20 | 1508.97 | 1468.51 |
| 20 | 1481.72 | 1454.68 | 1444.04 | 1435.10 | 1435.78 | 1451.00 | 1475.70 | 1503.42 | 1523.67 | 1526.90 | 1507.76 | 1468.26 |
| 21 | 1480.40 | 1453.74 | 1443.41 | 1435.13 | 1435.96 | 1451.47 | 1476.28 | 1504.30 | 1523.93 | 1526.51 | 1506.60 | 1468.05 |
| 22 | 1479.47 | 1452.82 | 1442.84 | 1435.15 | 1436.20 | 1452.00 | 1476.90 | 1505.21 | 1524.17 | 1526.03 | 1505.38 | 1467.73 |
| 23 | 1478.67 | 1452.11 | 1442.29 | 1435.19 | 1436.41 | 1452.73 | 1477.53 | 1506.20 | 1524.33 | 1525.59 | 1504.08 | 1467.46 |
| 24 | 1477.94 | 1451.50 | 1441.71 | 1435.23 | 1436.60 | 1453.33 | 1478.06 | 1507.20 | 1524.43 | 1525.11 | 1503.02 | 1467.37 |
| 25 | 1477.46 | 1451.21 | 1441.13 | 1435.24 | 1436.79 | 1453.87 | 1479.08 | 1508.13 | 1524.67 | 1524.68 | 1501.80 | 1467.30 |
| 26 | 1476.80 | 1450.94 | 1440.62 | 1435.23 | 1436.98 | 1454.36 | 1479.88 | 1509.29 | 1524.84 | 1524.22 | 1500.59 | 1467.21 |
| 27 | 1476.09 | 1450.65 | 1440.11 | 1435.24 | 1437.22 | 1455.10 | 1480.69 | 1510.50 | 1525.03 | 1523.73 | 1499.25 | 1467.09 |
| 28 | 1475.11 | 1450.56 | 1439.41 | 1435.24 | 1438.11 | 1455.83 | 1481.36 | 1511.46 | 1525.20 | 1523.24 | 1497.93 | 1467.42 |
| 29 | 1474.04 | 1450.10 | 1438.85 | 1435.23 | --- | 1456.51 | 1482.10 | 1512.30 | 1525.35 | 1522.76 | 1496.64 | 1467.71 |
| 30 | 1473.00 | 1449.78 | 1438.28 | 1435.23 | --- | 1457.14 | 1482.87 | 1513.04 | 1525.52 | 1522.27 | 1495.29 | 1467.76 |
| 31 | 1471.93 | --- | 1437.69 | 1435.24 | --- | 1457.78 | --- | 1513.77 | --- | 1521.77 | 1493.90 | --- |
| MEAN | 1488.21 | 1459.05 | 1444.67 | 1435.41 | 1435.73 | 1448.47 | 1471.71 | 1499.42 | 1521.57 | 1525.89 | 1510.38 | 1474.98 |
| MAX | 1506.49 | 1471.00 | 1449.50 | 1437.13 | 1438.11 | 1457.78 | 1482.87 | 1513.77 | 1525.52 | 1527.60 | 1521.30 | 1492.51 |
| MIN | 1471.93 | 1449.78 | 1437.69 | 1434.89 | 1435.18 | 1438.69 | 1458.69 | 1483.74 | 1514.58 | 1521.77 | 1493.90 | 1467.09 |
| (†) | 195,800 | 158,200 | 139,600 | 136,000 | 140,200 | 171,200 | 216,500 | 282,700 | 310,500 | 301,400 | 238,900 | 188,300 |
| (‡) | -72,900 | -37,600 | -18,600 | -3,600 | 4,200 | 31,000 | 45,300 | 66,200 | +27,800 | -9,100 | -62,500 | -50,600 |
| CAL YR 1976 | MEAN | 1502.79 | MAX | 1541.22 | MIN | 1437.69 | AC-FT‡ | -24,200 | | | | |
| WTR YR 1977 | MEAN | 1476.56 | MAX | 1527.60 | MIN | 1434.89 | AC-FT‡ | -80,400 | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

14145500 MIDDLE FORK WILLAMETTE RIVER ABOVE SALT CREEK, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'20", long 122°26'15", in NW¼NE¼ sec.27, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 90 ft (27 m) upstream from highway bridge, 0.4 mi (0.6 km) upstream from Salt Creek, 1.1 mi (1.8 km) downstream from Hills Creek Dam, 2.3 mi (3.7 km) southeast of Oakridge, and at mile 231.4 (372.3 km).

DRAINAGE AREA.--392 mi² (1,015 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1913 to September 1914, September 1935 to current year. Monthly discharge only September 1935, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1914.

GAGE.--Water-stage recorder. Datum of gage is 1,208.01 ft (368.201 m) above mean sea level (levels by Corps of Engineers). Oct. 3, 1913, to Sept. 30, 1914, nonrecording gage and Sept. 1, 1935, to Aug. 18, 1960, water-stage recorder at sites 400 ft (122 m) and 1,000 ft (305 m) downstream, respectively, at different datum.

REMARKS.--Water-discharge records good. Flow regulated since 1961 by Hills Creek Lake (see station 14145100). No diversions above station.

AVERAGE DISCHARGE.--43 years, 1,149 ft³/s (32.54 m³/s), 39.80 in/yr (1,011 mm/yr), 832,500 acre-ft/yr (1.03 km³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft³/s (963 m³/s) Dec. 28, 1945, gage height, 12.06 ft (3.676 m), site and datum then in use, from rating curve extended above 13,000 ft³/s (368 m³/s); minimum observed, 0.70 ft³/s (0.020 m³/s) Sept. 8-11, 13, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,910 ft³/s (54.1 m³/s) Oct. 21; maximum gage height, 4.55 ft (1.387 m) Sept. 14, 15; minimum discharge, 32 ft³/s (0.91 m³/s) June 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 1660 | 1370 | 504 | 699 | 294 | 206 | 84 | 106 | 96 | 122 | 807 | 1620 |
| 2 | 1660 | 1360 | 500 | 699 | 291 | 203 | 84 | 108 | 96 | 122 | 807 | 1610 |
| 3 | 1670 | 1360 | 492 | 536 | 297 | 201 | 84 | 110 | 97 | 122 | 807 | 1610 |
| 4 | 1670 | 996 | 475 | 408 | 297 | 199 | 84 | 101 | 97 | 122 | 812 | 1670 |
| 5 | 1690 | 1010 | 483 | 405 | 300 | 201 | 84 | 81 | 97 | 122 | 812 | 1700 |
| 6 | 1680 | 1020 | 487 | 408 | 297 | 192 | 87 | 83 | 99 | 119 | 801 | 1690 |
| 7 | 1700 | 1040 | 487 | 405 | 297 | 199 | 86 | 81 | 96 | 115 | 812 | 1670 |
| 8 | 1650 | 1050 | 509 | 412 | 300 | 201 | 89 | 81 | 96 | 115 | 807 | 1680 |
| 9 | 1740 | 1040 | 514 | 412 | 297 | 197 | 91 | 83 | 97 | 115 | 807 | 1690 |
| 10 | 1750 | 1040 | 518 | 408 | 297 | 206 | 91 | 83 | 99 | 117 | 818 | 1700 |
| 11 | 1760 | 1020 | 509 | 405 | 291 | 197 | 91 | 83 | 97 | 117 | 818 | 1740 |
| 12 | 1760 | 1050 | 514 | 405 | 291 | 197 | 91 | 83 | 97 | 117 | 818 | 1760 |
| 13 | 1760 | 1040 | 518 | 405 | 291 | 194 | 91 | 84 | 97 | 117 | 812 | 1760 |
| 14 | 1790 | 1040 | 509 | 358 | 291 | 165 | 92 | 86 | 97 | 117 | 807 | 1790 |
| 15 | 1790 | 1040 | 504 | 309 | 253 | 78 | 94 | 87 | 92 | 157 | 1280 | 1410 |
| 16 | 1790 | 1550 | 504 | 309 | 220 | 78 | 96 | 89 | 97 | 253 | 1540 | 996 |
| 17 | 1820 | 1110 | 509 | 309 | 220 | 77 | 96 | 92 | 97 | 291 | 1530 | 753 |
| 18 | 1830 | 907 | 518 | 309 | 199 | 81 | 92 | 94 | 99 | 447 | 1520 | 753 |
| 19 | 1830 | 925 | 514 | 309 | 215 | 96 | 89 | 96 | 99 | 594 | 1470 | 570 |
| 20 | 1860 | 1040 | 584 | 312 | 213 | 97 | 92 | 96 | 99 | 599 | 1500 | 496 |
| 21 | 1680 | 1040 | 699 | 306 | 213 | 97 | 97 | 96 | 99 | 716 | 1500 | 492 |
| 22 | 1200 | 1040 | 699 | 294 | 210 | 97 | 97 | 96 | 99 | 835 | 1480 | 518 |
| 23 | 1120 | 882 | 693 | 288 | 203 | 101 | 97 | 92 | 182 | 807 | 1560 | 527 |
| 24 | 1110 | 796 | 693 | 297 | 206 | 101 | 97 | 94 | 250 | 801 | 1610 | 527 |
| 25 | 1140 | 518 | 699 | 300 | 210 | 101 | 101 | 92 | 80 | 796 | 1610 | 451 |
| 26 | 1130 | 514 | 705 | 297 | 215 | 101 | 101 | 97 | 119 | 796 | 1610 | 408 |
| 27 | 1110 | 514 | 699 | 297 | 218 | 104 | 101 | 91 | 121 | 807 | 1610 | 451 |
| 28 | 1260 | 523 | 699 | 294 | 213 | 94 | 101 | 92 | 121 | 807 | 1590 | 483 |
| 29 | 1390 | 518 | 693 | 294 | --- | 81 | 104 | 92 | 121 | 807 | 1630 | 487 |
| 30 | 1360 | 509 | 699 | 297 | --- | 80 | 104 | 92 | 121 | 812 | 1630 | 459 |
| 31 | 1360 | --- | 699 | 297 | --- | 80 | --- | 94 | --- | 812 | 1620 | --- |
| TOTAL | 48720 | 28862 | 17829 | 11483 | 7139 | 4302 | 2788 | 2835 | 3254 | 12796 | 37635 | 33471 |
| MEAN | 1572 | 962 | 575 | 370 | 255 | 139 | 92.9 | 91.5 | 108 | 413 | 1214 | 1116 |
| MAX | 1860 | 1550 | 705 | 699 | 300 | 206 | 104 | 110 | 250 | 835 | 1630 | 1790 |
| MIN | 1110 | 509 | 475 | 288 | 199 | 77 | 84 | 81 | 80 | 115 | 801 | 408 |
| AC-FT | 96640 | 57250 | 35360 | 22780 | 14160 | 8530 | 5530 | 5620 | 6450 | 25380 | 74650 | 66390 |
| MEAN† | 386 | 330 | 273 | 312 | 331 | 643 | 854 | 1,168 | 576 | 265 | 198 | 265 |
| CFSM† | .98 | .84 | .70 | .80 | .84 | 1.64 | 2.18 | 2.98 | 1.47 | .68 | .51 | .68 |
| IN.† | 1.14 | .94 | .80 | .92 | .88 | 1.89 | 2.43 | 3.44 | 1.64 | .78 | .58 | .76 |
| AC-FT† | 23,740 | 19,650 | 16,760 | 19,180 | 18,360 | 39,530 | 50,830 | 71,820 | 34,250 | 16,280 | 12,150 | 15,790 |

CAL YR 1976 TOTAL 368,485 MEAN 1,007 MAX 5,930 MIN 225 AC-FT 730,900 MEAN† 973 CFSM† 2.48 IN.† 33.81 AC-FT† 706,720
WTR YR 1977 TOTAL 211,114 MEAN 578 MAX 1,860 MIN 77 AC-FT 418,700 MEAN† 467 CFSM† 1.19 IN.† 16.19 AC-FT† 338,340

† Adjusted for change in contents in Hills Creek Lake.

14145500 MIDDLE FORK WILLAMETTE RIVER ABOVE SALT CREEK, NEAR OAKRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1960 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.0°C Sept. 4, 1960; minimum, 1.5°C Jan. 4, 1961.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.0°C Sept. 11-14; minimum, 4.5°C Jan. 24 to Feb. 8.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 15.0 | 14.5 | 13.5 | 13.0 | 9.5 | 9.0 | 6.0 | 6.0 | 5.5 | 4.5 | 6.5 | 6.0 |
| 2 | 15.0 | 14.5 | 13.5 | 13.5 | 9.5 | 9.0 | 6.0 | 6.0 | 5.5 | 4.5 | 6.0 | 6.0 |
| 3 | 15.0 | 14.5 | 13.5 | 13.5 | 9.0 | 8.5 | 6.0 | 6.0 | 5.0 | 4.5 | 6.5 | 5.5 |
| 4 | 15.5 | 14.5 | 13.5 | 13.0 | 9.0 | 8.5 | 6.0 | 6.0 | 5.5 | 4.5 | 7.0 | 5.5 |
| 5 | 15.5 | 15.0 | 13.5 | 13.0 | 8.5 | 8.5 | 5.5 | 5.5 | 5.0 | 4.5 | 7.5 | 5.5 |
| 6 | 15.5 | 15.0 | 13.5 | 13.0 | 8.5 | 8.0 | 5.5 | 5.5 | 5.0 | 4.5 | 7.0 | 6.0 |
| 7 | 15.5 | 15.0 | 13.0 | 13.0 | 8.5 | 8.0 | 5.5 | 5.5 | 5.5 | 4.5 | 6.5 | 6.0 |
| 8 | 15.5 | 15.0 | 13.0 | 12.5 | 8.5 | 8.0 | 5.5 | 5.0 | 5.0 | 4.5 | 7.0 | 6.0 |
| 9 | 16.0 | 15.0 | 13.0 | 12.5 | 8.0 | 8.0 | 5.5 | 5.0 | 5.5 | 5.0 | 6.5 | 5.5 |
| 10 | 15.5 | 15.0 | 13.0 | 12.5 | 8.5 | 8.0 | 5.5 | 5.0 | 6.0 | 5.0 | 7.5 | 5.5 |
| 11 | 16.0 | 15.0 | 13.0 | 12.0 | 8.0 | 8.0 | 5.5 | 5.0 | 5.5 | 5.0 | 7.5 | 6.0 |
| 12 | 16.0 | 15.5 | 12.5 | 12.0 | 8.0 | 7.5 | 5.5 | 5.0 | 5.5 | 5.0 | 7.0 | 6.0 |
| 13 | 16.0 | 15.5 | 12.5 | 12.0 | 8.0 | 7.5 | 5.5 | 5.0 | 6.0 | 5.0 | 7.0 | 6.0 |
| 14 | 16.0 | 15.5 | 12.0 | 12.0 | 8.0 | 7.5 | 5.5 | 5.0 | 6.5 | 5.0 | 7.5 | 5.5 |
| 15 | 16.0 | 15.5 | 12.0 | 12.0 | 8.0 | 7.5 | 5.5 | 5.0 | 6.5 | 5.5 | 8.0 | 5.5 |
| 16 | 15.5 | 15.0 | 12.0 | 12.0 | 7.5 | 7.5 | 5.5 | 5.0 | 7.0 | 5.5 | 9.0 | 5.5 |
| 17 | 15.5 | 15.0 | 12.5 | 11.5 | 7.5 | 7.0 | 5.5 | 5.0 | 7.0 | 5.5 | 7.5 | 5.0 |
| 18 | 15.5 | 15.0 | 12.0 | 11.5 | 7.5 | 7.0 | 5.5 | 5.0 | 7.5 | 5.5 | 7.5 | 6.0 |
| 19 | 15.5 | 15.0 | 12.0 | 11.5 | 7.5 | 7.0 | 5.5 | 5.0 | 7.0 | 5.5 | 8.5 | 6.0 |
| 20 | 15.5 | 15.0 | 12.0 | 11.5 | 7.0 | 7.0 | 5.5 | 5.0 | 6.5 | 5.5 | 8.5 | 6.0 |
| 21 | 15.0 | 14.0 | 11.5 | 11.0 | 7.0 | 7.0 | 5.5 | 5.0 | 6.5 | 5.5 | 9.0 | 5.5 |
| 22 | 14.5 | 13.5 | 11.5 | 11.0 | 7.0 | 6.5 | 5.5 | 5.0 | 6.5 | 6.0 | 9.5 | 6.0 |
| 23 | 14.5 | 14.0 | 11.5 | 11.0 | 7.0 | 6.5 | 5.5 | 5.0 | 6.0 | 5.5 | 7.5 | 6.0 |
| 24 | 14.0 | 14.0 | 11.0 | 10.5 | 6.5 | 6.5 | 5.5 | 4.5 | 6.5 | 5.5 | 8.5 | 6.0 |
| 25 | 14.0 | 13.5 | 11.0 | 10.5 | 6.5 | 6.5 | 5.5 | 4.5 | 6.0 | 5.5 | 9.0 | 6.0 |
| 26 | 14.0 | 13.5 | 10.5 | 10.0 | 6.5 | 6.5 | 5.5 | 4.5 | 6.5 | 5.5 | 8.0 | 6.0 |
| 27 | 14.0 | 13.5 | 10.5 | 9.5 | 6.5 | 6.5 | 5.5 | 4.5 | 6.5 | 6.0 | 7.5 | 6.0 |
| 28 | 14.0 | 13.5 | 10.0 | 9.5 | 6.5 | 6.0 | 5.0 | 4.5 | 6.5 | 6.0 | 9.5 | 6.0 |
| 29 | 13.5 | 13.5 | 10.0 | 9.5 | 6.5 | 6.0 | 5.5 | 4.5 | --- | --- | 8.5 | 6.5 |
| 30 | 13.5 | 13.0 | 10.0 | 9.0 | 6.5 | 6.0 | 5.0 | 4.5 | --- | --- | 9.0 | 6.0 |
| 31 | 13.5 | 13.0 | --- | --- | 6.0 | 6.0 | 5.0 | 4.5 | --- | --- | 7.5 | 6.0 |
| MONTH | 16.0 | 13.0 | 13.5 | 9.0 | 9.5 | 6.0 | 6.0 | 4.5 | 7.5 | 4.5 | 9.5 | 5.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 8.5 | 6.5 | 9.0 | 7.0 | 10.5 | 7.5 | 11.5 | 8.5 | 9.5 | 9.0 | 16.0 | 15.0 |
| 2 | 10.0 | 6.5 | 10.0 | 7.0 | 11.0 | 6.5 | 13.0 | 7.0 | 11.0 | 9.0 | 16.5 | 15.0 |
| 3 | 10.0 | 6.5 | 9.0 | 7.0 | 9.5 | 7.5 | 10.5 | 7.0 | 11.5 | 9.0 | 16.5 | 16.0 |
| 4 | 10.5 | 6.0 | 9.5 | 6.5 | 12.5 | 8.0 | 12.0 | 8.0 | 11.0 | 9.0 | 16.5 | 15.5 |
| 5 | 10.5 | 6.0 | 8.5 | 6.5 | 13.0 | 8.0 | 9.5 | 8.0 | 12.5 | 9.0 | 17.0 | 16.0 |
| 6 | 10.5 | 6.5 | 10.5 | 7.0 | 13.0 | 7.5 | 12.0 | 7.5 | 11.0 | 9.0 | 17.5 | 16.0 |
| 7 | 10.5 | 6.5 | 10.5 | 7.0 | 10.5 | 8.5 | 12.5 | 7.5 | 12.0 | 9.0 | 17.5 | 16.5 |
| 8 | 8.5 | 6.5 | 11.5 | 6.5 | 12.0 | 7.5 | 12.0 | 8.0 | 13.0 | 9.5 | 17.5 | 16.5 |
| 9 | 9.0 | 6.5 | 9.5 | 7.0 | 12.0 | 7.0 | 11.5 | 8.5 | 12.5 | 9.0 | 17.5 | 16.5 |
| 10 | 10.0 | 6.5 | 8.0 | 7.0 | 11.0 | 8.0 | 12.5 | 8.0 | 12.5 | 9.5 | 17.5 | 16.5 |
| 11 | 10.0 | 7.0 | 10.0 | 7.0 | 11.5 | 7.5 | 13.0 | 8.0 | 12.5 | 9.5 | 18.0 | 17.0 |
| 12 | 10.5 | 6.5 | 10.5 | 6.5 | 11.5 | 7.5 | 11.5 | 8.5 | 11.5 | 9.5 | 18.0 | 17.0 |
| 13 | 8.5 | 6.5 | 10.5 | 7.0 | 12.0 | 7.5 | 12.0 | 8.5 | 12.5 | 8.5 | 18.0 | 17.0 |
| 14 | 10.0 | 6.5 | 9.5 | 7.0 | 12.0 | 7.5 | 12.5 | 8.0 | 12.5 | 10.0 | 18.0 | 16.5 |
| 15 | 9.5 | 6.5 | 9.0 | 6.5 | 12.0 | 7.5 | 12.0 | 8.0 | 14.0 | 11.0 | 17.5 | 16.0 |
| 16 | 9.5 | 6.5 | 9.5 | 7.0 | 12.5 | 7.5 | 9.5 | 7.5 | 14.5 | 9.0 | 16.5 | 15.0 |
| 17 | 10.0 | 6.5 | 9.5 | 7.0 | 12.0 | 7.5 | 10.0 | 8.0 | 14.5 | 9.0 | 15.5 | 15.0 |
| 18 | 10.0 | 6.0 | 9.5 | 7.0 | 12.0 | 8.0 | 11.0 | 8.0 | 14.0 | 12.0 | 15.5 | 15.0 |
| 19 | 10.0 | 6.0 | 11.5 | 7.0 | 11.5 | 8.0 | 9.5 | 8.5 | 12.0 | 11.5 | 15.0 | 13.0 |
| 20 | 10.0 | 6.0 | 11.5 | 6.5 | 10.0 | 8.0 | 11.5 | 7.5 | 15.0 | 12.0 | 13.5 | 13.0 |
| 21 | 9.5 | 6.5 | 11.5 | 7.0 | 12.5 | 8.0 | 11.0 | 8.0 | 15.5 | 12.0 | 14.0 | 13.0 |
| 22 | 9.5 | 6.5 | 9.0 | 6.5 | 12.5 | 8.5 | 9.0 | 8.5 | 15.0 | 12.0 | 15.0 | 13.5 |
| 23 | 9.5 | 6.5 | 9.5 | 7.0 | 10.0 | 7.5 | 9.0 | 8.5 | 16.0 | 12.5 | 14.5 | 13.5 |
| 24 | 10.0 | 6.5 | 10.5 | 7.0 | 10.0 | 7.5 | 10.5 | 8.5 | 16.0 | 13.0 | 14.5 | 13.5 |
| 25 | 9.5 | 7.0 | 10.0 | 7.5 | 12.5 | 8.0 | 11.5 | 9.0 | 15.5 | 11.5 | 14.5 | 12.0 |
| 26 | 10.5 | 6.5 | 10.0 | 7.0 | 12.0 | 8.0 | 11.5 | 8.5 | 16.0 | 13.5 | 15.0 | 11.0 |
| 27 | 11.0 | 6.5 | 9.5 | 7.0 | 12.0 | 8.0 | 10.0 | 8.5 | 14.0 | 13.5 | 14.5 | 11.5 |
| 28 | 9.5 | 6.5 | 11.5 | 7.0 | 12.0 | 8.5 | 11.5 | 8.5 | 15.5 | 14.0 | 15.0 | 11.5 |
| 29 | 10.0 | 7.0 | 12.0 | 7.0 | 12.0 | 8.5 | 11.0 | 8.5 | 15.5 | 14.0 | 14.5 | 12.5 |
| 30 | 10.0 | 7.0 | 11.0 | 7.0 | 11.5 | 8.0 | 9.5 | 9.0 | 15.5 | 15.0 | 14.5 | 11.5 |
| 31 | --- | --- | 12.0 | 7.5 | --- | --- | 10.0 | 8.5 | 15.5 | 15.0 | --- | --- |
| MONTH | 11.0 | 6.0 | 12.0 | 6.5 | 13.0 | 6.5 | 13.0 | 7.0 | 16.0 | 8.5 | 18.0 | 11.0 |

WILLAMETTE RIVER BASIN

14146500 SALMON CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°45'45", long 122°22'18", in NE¼ sec.7, T.21 S., R.4 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 190 ft (58 m) upstream from Salmon Creek Falls, 0.1 mi (0.2 km) upstream from Needle Creek, 4.6 mi (7.4 km) east of Oakridge, and at mile 5.84 (9.40 km).

DRAINAGE AREA.--117 mi² (303 km²), at measuring cable 0.6 mi (1.0 km) downstream from gage.

PERIOD OF RECORD.--October to November 1909 (gage heights and one discharge measurement only), February 1913 to October 1919, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as Kelsey River near Hazeldell and Salmon Creek near Hazeldell, 1909.

REVISED RECORDS.--WSP 794: 1934(M). WSP 814: Drainage area. WSP 1124: 1935, 1942(M), 1943, 1946(M). WSP 1248: 1915, 1918. WRD 1971 Oreg.: 1968, 1969(M,P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,462.36 ft (445.727 m) above mean sea level. Prior to Oct. 1, 1914, nonrecording gage at several sites within 4 mi (6 km) of present site at various datums. Oct. 1, 1914, to Oct. 14, 1919, water-stage recorder at site 1.8 mi (2.9 km) downstream at different datum. Nov. 5, 1933, to Oct. 27, 1964, water-stage recorder at site 0.8 mi (1.3 km) downstream at datum 40.53 ft (12.354 m) lower. Oct. 28, 1964, to Aug. 27, 1965, nonrecording gage at site 0.6 mi (1.0 km) downstream at different datum.

REMARKS.--Records good. No regulation or diversion above station. All records given herein are for measuring cable site.

AVERAGE DISCHARGE.--50 years (water years 1914-19, 1934-77), 427 ft³/s (12.09 m³/s), 49.56 in/yr (1,259 mm/yr), 309,400 acre-ft/yr (381 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Dec. 22, 1964, gage height, 9.15 ft (2.789 m), from floodmark, site and datum then in use, from rating curve extended above 2,100 ft³/s (59.5 m³/s) on basis of slope-area measurement of peak flow; minimum, 63 ft³/s (1.78 m³/s) Jan. 8, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 773 ft³/s (21.9 m³/s) May 10, 11, gage height, 2.93 ft (0.893 m), no peak above base of 1,700 ft³/s (48.1 m³/s); minimum, 122 ft³/s (3.46 m³/s) Aug. 16-19; 23, 24, Sept. 11-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|---------|-----------|----------|--------------|-------|------|------|------|
| 1 | 141 | 182 | 141 | 138 | 133 | 244 | 387 | 448 | 482 | 167 | 133 | 138 |
| 2 | 143 | 170 | 141 | 152 | 133 | 215 | 358 | 617 | 468 | 167 | 133 | 135 |
| 3 | 149 | 165 | 138 | 149 | 131 | 244 | 307 | 632 | 429 | 165 | 133 | 133 |
| 4 | 143 | 159 | 138 | 146 | 128 | 229 | 312 | 589 | 448 | 165 | 131 | 131 |
| 5 | 143 | 154 | 138 | 141 | 128 | 220 | 366 | 555 | 455 | 162 | 131 | 128 |
| 6 | 141 | 154 | 138 | 138 | 128 | 229 | 448 | 489 | 496 | 154 | 131 | 128 |
| 7 | 138 | 154 | 138 | 138 | 128 | 249 | 537 | 435 | 489 | 154 | 138 | 128 |
| 8 | 154 | 152 | 143 | 135 | 128 | 345 | 654 | 395 | 435 | 154 | 133 | 124 |
| 9 | 152 | 152 | 149 | 133 | 128 | 416 | 568 | 395 | 380 | 154 | 131 | 124 |
| 10 | 152 | 146 | 141 | 131 | 128 | 345 | 455 | 716 | 345 | 154 | 128 | 124 |
| 11 | 152 | 143 | 141 | 133 | 128 | 307 | 395 | 716 | 322 | 154 | 126 | 124 |
| 12 | 152 | 143 | 141 | 143 | 128 | 322 | 366 | 639 | 302 | 149 | 126 | 122 |
| 13 | 149 | 143 | 138 | 159 | 131 | 302 | 422 | 568 | 293 | 149 | 126 | 122 |
| 14 | 149 | 143 | 135 | 165 | 131 | 269 | 395 | 528 | 274 | 149 | 126 | 122 |
| 15 | 149 | 193 | 135 | 157 | 131 | 244 | 366 | 519 | 265 | 149 | 126 | 122 |
| 16 | 149 | 182 | 135 | 152 | 131 | 229 | 373 | 528 | 249 | 146 | 124 | 122 |
| 17 | 146 | 165 | 135 | 146 | 131 | 165 | 338 | 647 | 249 | 146 | 124 | 122 |
| 18 | 146 | 167 | 133 | 146 | 128 | 165 | 312 | 647 | 239 | 149 | 122 | 124 |
| 19 | 146 | 159 | 133 | 146 | 128 | 182 | 293 | 589 | 229 | 149 | 124 | 133 |
| 20 | 143 | 157 | 133 | 146 | 128 | 206 | 274 | 568 | 225 | 146 | 124 | 138 |
| 21 | 143 | 154 | 133 | 146 | 138 | 193 | 269 | 575 | 225 | 141 | 124 | 135 |
| 22 | 143 | 152 | 133 | 143 | 143 | 206 | 274 | 582 | 211 | 143 | 124 | 133 |
| 23 | 143 | 149 | 133 | 143 | 143 | 244 | 298 | 632 | 202 | 146 | 124 | 143 |
| 24 | 152 | 146 | 133 | 141 | 141 | 229 | 352 | 617 | 193 | 146 | 172 | 229 |
| 25 | 288 | 146 | 138 | 138 | 141 | 206 | 448 | 568 | 189 | 143 | 159 | 197 |
| 26 | 211 | 146 | 152 | 135 | 146 | 189 | 442 | 603 | 186 | 141 | 170 | 186 |
| 27 | 172 | 143 | 157 | 135 | 162 | 249 | 402 | 568 | 178 | 138 | 149 | 170 |
| 28 | 165 | 143 | 149 | 133 | 274 | 244 | 387 | 528 | 172 | 138 | 143 | 298 |
| 29 | 159 | 143 | 143 | 133 | --- | 229 | 387 | 475 | 170 | 135 | 154 | 298 |
| 30 | 159 | 141 | 141 | 133 | --- | 225 | 387 | 442 | 167 | 135 | 162 | 249 |
| 31 | 159 | --- | 138 | 133 | --- | 229 | --- | 435 | --- | 135 | 149 | --- |
| TOTAL | 4831 | 4646 | 4314 | 4407 | 3876 | 7570 | 11572 | 17245 | 8967 | 4623 | 4200 | 4582 |
| MEAN | 156 | 155 | 139 | 142 | 138 | 244 | 386 | 556 | 299 | 149 | 135 | 153 |
| MAX | 288 | 193 | 157 | 165 | 274 | 416 | 654 | 716 | 496 | 167 | 172 | 298 |
| MIN | 138 | 141 | 133 | 131 | 128 | 165 | 269 | 395 | 167 | 135 | 122 | 122 |
| CFSM | 1.33 | 1.33 | 1.19 | 1.21 | 1.18 | 2.09 | 3.30 | 4.75 | 2.56 | 1.27 | 1.15 | 1.31 |
| IN. | 1.54 | 1.48 | 1.37 | 1.40 | 1.23 | 2.41 | 3.68 | 5.48 | 2.85 | 1.47 | 1.34 | 1.46 |
| AC-FT | 9580 | 9220 | 8560 | 8740 | 7690 | 15020 | 22950 | 34210 | 17790 | 9170 | 8330 | 9090 |
| CAL YR 1976 | TOTAL | 158941 | MEAN 434 | MAX 3410 | MIN 133 | CFSM 3.71 | IN 50.54 | AC-FT 315300 | | | | |
| WTR YR 1977 | TOTAL | 80833 | MEAN 221 | MAX 716 | MIN 122 | CFSM 1.89 | IN 25.70 | AC-FT 160300 | | | | |

WILLAMETTE RIVER BASIN

243

14146950 WALDO LAKE NEAR OAKRIDGE, OR

LOCATION.--Lat 43°46'05", long 122°03'10", in SE¼NW¼ sec.7, T.21 S., R.6 E., Lane County, Hydrologic Unit 17090001, Willamette National Forest, on left bank at head of artificial outlet channel for Waldo Lake, at headwaters of the North Fork of the Middle Fork Willamette River, 20 mi (32 km) east of Oakridge, and at mile 43.51 (70.0 km).

DRAINAGE AREA.--30.5 mi² (79.0 km²).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Nonrecording gage. Altitude of gage is 5,410 ft (1,649.0 m), from topographic map; gage readings have been reduced to elevations above mean sea level. Present gage is at same site and datum as former gage for Waldo Lake outlet near Oakridge (see sta 14147000) for period 1936-53.

REMARKS.--Lake not regulated. Lake level was lowered approximately 0.5 ft (0.2 m) when low rock dam in artificial outlet channel was removed Sept. 23, 1971. Lake outlet is an old artificial outlet channel 30 ft (9 m) below the gage. Diversion tunnel into head of Black Creek, near south end of lake, built about 1914, is not used; but leakage past old control gates was measured at 1.32 ft³/s (0.037 m³/s) Aug. 23, 1977. The maximum stage of the lake during period 1936-53 was 5,412.98 ft (1,649.876 m), which occurred Jan. 2, 1943. At times during this period the lake elevation could have been as much as 2 ft (0.6 m) below elevation 5,410 ft (1,649.0 m). A high-water mark noted Sept. 3, 1936, indicated that an elevation of 5,413.2 ft (1,649.94 m) had occurred sometime previous to that date. See station 14147000 for lake elevations for period 1936-53.

COOPERATION.--Waldo Lake bathymetric chart, used to compute capacity table, furnished by Environmental Protection Agency.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 778,900 acre-ft Mar. 18, 1971, elevation, 5,413.25 ft (1,649.969 m); minimum observed, 759,900 acre-ft (937 hm³) Oct. 1, 1973, elevation, 5,410.22 ft (1,649.035 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 767,100 acre-ft (946 hm³) June 14, elevation, 5,411.38 ft (1,649.389 m); minimum observed, 760,700 acre-ft (938 hm³) Aug. 23, elevation, 5,410.36 ft (1,649.078 m).

ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) |
|--------------|---------------------|-------------------------|
| Oct. 1..... | 5,410.87 | 763,900 |
| Nov. 3..... | 5,410.70 | 762,800 |
| Dec. 3..... | 5,410.50 | 761,600 |
| June 14..... | 5,411.38 | 767,100 |
| July 19..... | 5,410.85 | 763,800 |
| Aug. 23..... | 5,410.36 | 760,700 |

WILLAMETTE RIVER BASIN

14147000 WALDO LAKE OUTLET NEAR OAKRIDGE, OR

LOCATION.--Lat 43°46'05", long 122°03'10", in SE¼NW¼ sec.7, T.21 S., R.6 E., Lane County, Hydrologic Unit 17090001, in Willametta National Forest, on right bank of artificial outlet channel of Waldo Lake forming the headwaters of the North Fork of the Middle Fork of Willamette River, 20 mi (32 km) east of Oakridge, and at mile 43.5 (70.0 km).

DRAINAGE AREA.--30.5 mi² (79.0 km²), of which about 10.5 mi² (27.2 km²) is Waldo Lake.

PERIOD OF RECORD.--October 1936 to September 1953, October 1969 to current year.

REVISED RECORDS.--WSP 2135: Drainage area.

GAGE.--Water-stage recorder and modified v-notch weir. Altitude of gage is 5,410 ft (1,649 m), from topographic map. October 1936 to September 1953, at site 120 ft (37 m) upstream on left bank at same datum.

REMARKS.--Records good. At times seiches from Waldo Lake cause rapid changes in stage at gage many times each hour. No regulation. Diversion tunnel into head of Black Creek, near south end of lake, built about 1914, is sealed off, but there is leakage of about 0.58 ft³/s (0.016 m³/s) past control gates, measured Aug. 23, 1977.

AVERAGE DISCHARGE.--25 years, 34.9 ft³/s (0.988 m³/s), 25,290 acre-ft/yr (31.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150 ft³/s (4.25 m³/s) Jan. 20, 1971, from rating curve extended above 77 ft³/s (2.18 m³/s) and adjusted for overbank flow; maximum gage height, 2.98 ft (0.908 m) Jan. 2, 1943; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A high-water mark in the channel of a previous high stage in the lake was noted on Sept. 3, 1936, as 3.2 ft (0.98 m) gage height, affected by seiche.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30 ft³/s (0.85 m³/s) June 6, gage height, 1.23 ft (0.375 m); minimum, 0.19 ft³/s (0.005 m³/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|----------|-------|------|-----------|---------|---------|-------------|------|------|-------|-------|-------|
| 1 | 9.6 | 7.0 | 3.0 | 1.4 | .66 | 2.2 | 12 | 11 | 25 | 18 | 7.0 | 3.0 |
| 2 | 10 | 7.0 | 2.8 | 1.8 | .62 | 2.5 | 12 | 12 | 25 | 17 | 6.7 | 2.7 |
| 3 | 10 | 7.0 | 2.8 | 1.6 | .58 | 3.7 | 12 | 14 | 25 | 16 | 6.5 | 2.4 |
| 4 | 10 | 6.7 | 2.5 | 1.8 | .54 | 3.7 | 12 | 15 | 26 | 16 | 5.9 | 1.9 |
| 5 | 9.9 | 6.5 | 2.5 | 1.9 | .50 | 3.7 | 11 | 17 | 26 | 15 | 5.7 | 1.3 |
| 6 | 9.9 | 6.2 | 2.4 | 1.5 | .50 | 3.3 | 11 | 17 | 27 | 15 | 5.2 | 1.2 |
| 7 | 9.3 | 5.9 | 2.4 | 1.5 | .50 | 3.7 | 11 | 17 | 27 | 14 | 4.9 | 1.1 |
| 8 | 8.7 | 5.7 | 2.4 | 1.5 | .47 | 4.3 | 11 | 17 | 27 | 14 | 4.7 | .89 |
| 9 | 8.7 | 5.4 | 2.8 | 1.4 | .44 | 5.7 | 11 | 17 | 27 | 13 | 4.5 | .71 |
| 10 | 8.4 | 5.4 | 2.8 | 1.4 | .41 | 6.5 | 11 | 19 | 27 | 13 | 4.1 | .71 |
| 11 | 8.1 | 5.2 | 2.7 | 1.5 | .41 | 6.5 | 11 | 20 | 27 | 13 | 3.7 | .71 |
| 12 | 7.8 | 4.9 | 2.5 | 1.5 | .38 | 7.0 | 11 | 20 | 27 | 12 | 3.5 | .66 |
| 13 | 7.3 | 4.5 | 2.4 | 1.5 | .41 | 7.5 | 11 | 19 | 27 | 12 | 3.3 | .54 |
| 14 | 7.3 | 4.5 | 2.2 | 1.6 | .41 | 7.5 | 11 | 20 | 26 | 11 | 3.0 | .47 |
| 15 | 6.7 | 5.4 | 2.2 | 1.6 | .38 | 7.3 | 11 | 21 | 26 | 11 | 3.2 | .35 |
| 16 | 6.7 | 5.7 | 2.1 | 1.6 | .35 | 7.0 | 11 | 22 | 25 | 11 | 2.8 | .27 |
| 17 | 6.5 | 5.4 | 2.0 | 1.5 | .35 | 7.0 | 11 | 24 | 25 | 10 | 2.5 | .24 |
| 18 | 6.2 | 5.7 | 2.0 | 1.2 | .35 | 7.5 | 11 | 24 | 24 | 10 | 2.4 | .35 |
| 19 | 5.4 | 5.4 | 1.9 | 1.2 | .32 | 7.8 | 11 | 23 | 24 | 10 | 2.2 | .32 |
| 20 | 4.9 | 5.4 | 1.8 | 1.1 | .29 | 8.1 | 11 | 23 | 23 | 9.9 | 2.1 | .47 |
| 21 | 4.7 | 5.2 | 1.6 | 1.1 | .38 | 7.8 | 10 | 23 | 23 | 9.6 | 2.1 | .50 |
| 22 | 4.5 | 4.9 | 1.5 | 1.1 | .50 | 7.5 | 10 | 23 | 22 | 9.3 | 1.9 | .47 |
| 23 | 4.3 | 4.7 | 1.6 | .97 | .58 | 7.8 | 9.9 | 24 | 22 | 9.3 | 1.8 | .58 |
| 24 | 4.5 | 4.5 | 1.6 | .89 | .58 | 8.1 | 9.9 | 24 | 21 | 9.3 | 2.5 | 1.1 |
| 25 | 6.7 | 4.3 | 1.5 | .89 | .62 | 8.4 | 9.6 | 24 | 21 | 9.3 | 3.0 | 1.5 |
| 26 | 7.3 | 4.5 | 1.8 | .76 | .76 | 8.1 | 9.9 | 25 | 20 | 9.0 | 3.3 | 1.6 |
| 27 | 7.0 | 4.1 | 2.0 | .71 | .89 | 9.9 | 9.9 | 25 | 20 | 8.7 | 3.0 | 1.6 |
| 28 | 6.7 | 3.5 | 1.8 | .66 | 1.5 | 11 | 9.9 | 26 | 19 | 8.1 | 3.0 | 2.4 |
| 29 | 6.5 | 3.3 | 1.6 | .66 | --- | 11 | 9.9 | 25 | 18 | 7.8 | 3.3 | 2.5 |
| 30 | 6.2 | 3.2 | 1.5 | .62 | --- | 11 | 9.9 | 25 | 18 | 7.5 | 3.3 | 2.5 |
| 31 | 6.5 | --- | 1.4 | .62 | --- | 11 | --- | 25 | --- | 7.3 | 3.2 | --- |
| TOTAL | 226.3 | 157.1 | 66.1 | 39.08 | 14.68 | 214.1 | 322.9 | 641 | 720 | 356.1 | 114.3 | 35.04 |
| MEAN | 7.30 | 5.24 | 2.13 | 1.26 | .52 | 6.91 | 10.8 | 20.7 | 24.0 | 11.5 | 3.69 | 1.17 |
| MAX | 10 | 7.0 | 3.0 | 1.9 | 1.5 | 11 | 12 | 26 | 27 | 18 | 7.0 | 3.0 |
| MIN | 4.3 | 3.2 | 1.4 | .62 | .29 | 2.2 | 9.6 | 11 | 18 | 7.3 | 1.8 | .24 |
| AC-FT | 449 | 312 | 131 | 78 | 29 | 425 | 640 | 1270 | 1430 | 706 | 227 | 70 |
| CAL YR 1976 TOTAL | 15206.50 | | | MEAN 41.5 | MAX 111 | MIN 1.4 | AC-FT 30160 | | | | | |
| WTR YR 1977 TOTAL | 2906.70 | | | MEAN 7.96 | MAX 27 | MIN .24 | AC-FT 5770 | | | | | |

14147500 NORTH FORK OF MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR

LOCATION.--Lat 43°45'25", long 122°30'15", in SW¼ sec.7, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, on left bank 2.5 mi (4.0 km) northwest of Oakridge and at mile 1.0 (1.6 km).

DRAINAGE AREA.--246 mi² (637 km²), at measuring section 0.5 mi (0.8 km) downstream.

PERIOD OF RECORD.--October 1909 to March 1916, September 1935 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1912, published as "near Hazeldell."

REVISED RECORDS.--WSP 1248: 1914-16.

GAGE.--Water-stage recorder. Datum of gage is 1,029.6 ft (313.82 m) above mean sea level (river profile survey). Oct. 1, 1909, to Mar. 31, 1916, water-stage recorder or nonrecording gage at several sites within 0.8 mi (1.3 km) of present site at various datums. Sept. 10, 1935, to Oct. 3, 1938, nonrecording gage at present site and datum.

REMARKS.--Records good. Slight regulation by Waldo Lake; occasional fluctuations during low-water periods caused by log-ponds above station. No diversions above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--48 years (water years 1910-15, 1936-77), 793 ft³/s (22.46 m³/s), 43.78 in/yr (1,112 mm/yr), 574,500 acre-ft/yr (708 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft³/s (691 m³/s) Dec. 22, 1964, gage height, 19.14 ft (5.834 m), from floodmark, from rating curve extended above 7,100 ft³/s (201 m³/s) on basis of slope-area measurement of peak flow; minimum, 22 ft³/s (0.62 m³/s) Aug. 20, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,490 ft³/s (42.2 m³/s) Apr. 8, gage height, 3.92 ft (1.195 m), no peak above base of 3,500 ft³/s (99.1 m³/s); minimum, 85 ft³/s (2.41 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|---------|-----------|----------|--------------|-------|-------|------|-------|
| 1 | 157 | 290 | 160 | 168 | 157 | 443 | 841 | 814 | 836 | 266 | 136 | 157 |
| 2 | 160 | 256 | 157 | 227 | 146 | 381 | 803 | 1060 | 786 | 221 | 136 | 146 |
| 3 | 175 | 218 | 154 | 221 | 141 | 457 | 715 | 1100 | 731 | 215 | 133 | 141 |
| 4 | 168 | 200 | 154 | 200 | 138 | 401 | 748 | 1120 | 758 | 215 | 131 | 136 |
| 5 | 162 | 186 | 152 | 189 | 136 | 377 | 873 | 1090 | 737 | 212 | 128 | 133 |
| 6 | 160 | 181 | 149 | 170 | 136 | 389 | 997 | 976 | 737 | 206 | 128 | 131 |
| 7 | 157 | 173 | 149 | 170 | 136 | 443 | 1160 | 884 | 705 | 200 | 128 | 126 |
| 8 | 154 | 170 | 160 | 165 | 136 | 737 | 1380 | 820 | 649 | 194 | 133 | 121 |
| 9 | 152 | 168 | 189 | 157 | 136 | 857 | 1210 | 797 | 594 | 192 | 128 | 121 |
| 10 | 152 | 165 | 170 | 168 | 136 | 705 | 1000 | 1140 | 546 | 189 | 126 | 119 |
| 11 | 152 | 162 | 168 | 168 | 138 | 612 | 884 | 1230 | 510 | 183 | 124 | 119 |
| 12 | 152 | 160 | 165 | 178 | 138 | 635 | 846 | 1110 | 471 | 181 | 110 | 119 |
| 13 | 146 | 157 | 162 | 221 | 144 | 576 | 906 | 997 | 434 | 160 | 119 | 117 |
| 14 | 144 | 168 | 157 | 243 | 146 | 505 | 868 | 934 | 409 | 154 | 119 | 117 |
| 15 | 144 | 259 | 154 | 215 | 141 | 457 | 809 | 939 | 385 | 170 | 117 | 114 |
| 16 | 144 | 280 | 154 | 200 | 138 | 422 | 814 | 1000 | 361 | 170 | 117 | 117 |
| 17 | 141 | 224 | 154 | 194 | 138 | 401 | 764 | 1280 | 346 | 168 | 114 | 124 |
| 18 | 141 | 224 | 152 | 197 | 136 | 397 | 700 | 1270 | 332 | 173 | 114 | 124 |
| 19 | 138 | 209 | 146 | 194 | 133 | 466 | 645 | 1120 | 317 | 175 | 105 | 141 |
| 20 | 146 | 197 | 144 | 194 | 133 | 533 | 612 | 1070 | 310 | 168 | 110 | 162 |
| 21 | 136 | 192 | 144 | 192 | 149 | 485 | 599 | 1050 | 310 | 160 | 112 | 165 |
| 22 | 136 | 183 | 144 | 183 | 173 | 515 | 608 | 1030 | 293 | 154 | 112 | 154 |
| 23 | 141 | 181 | 149 | 178 | 170 | 594 | 640 | 1100 | 283 | 154 | 110 | 146 |
| 24 | 149 | 175 | 149 | 173 | 160 | 559 | 715 | 1070 | 269 | 162 | 181 | 280 |
| 25 | 354 | 175 | 149 | 168 | 160 | 515 | 857 | 983 | 263 | 160 | 183 | 283 |
| 26 | 300 | 175 | 194 | 162 | 183 | 476 | 846 | 1070 | 256 | 154 | 197 | 287 |
| 27 | 212 | 168 | 240 | 157 | 233 | 645 | 769 | 1050 | 249 | 152 | 173 | 227 |
| 28 | 183 | 165 | 206 | 154 | 550 | 664 | 737 | 990 | 240 | 141 | 152 | 373 |
| 29 | 178 | 160 | 189 | 152 | --- | 617 | 737 | 900 | 233 | 146 | 209 | 397 |
| 30 | 173 | 160 | 178 | 146 | --- | 581 | 737 | 836 | 227 | 141 | 215 | 346 |
| 31 | 175 | --- | 173 | 149 | --- | 563 | --- | 803 | --- | 141 | 189 | --- |
| TOTAL | 5182 | 5781 | 5065 | 5653 | 4561 | 16408 | 24820 | 31633 | 13577 | 5477 | 4289 | 5243 |
| MEAN | 167 | 193 | 163 | 182 | 163 | 529 | 827 | 1020 | 453 | 177 | 138 | 175 |
| MAX | 354 | 290 | 240 | 243 | 550 | 857 | 1380 | 1280 | 836 | 266 | 215 | 397 |
| MIN | 136 | 157 | 144 | 146 | 133 | 377 | 599 | 797 | 227 | 141 | 105 | 114 |
| CFSM | .68 | .79 | .66 | .74 | .66 | 2.15 | 3.36 | 4.15 | 1.84 | .72 | .56 | .71 |
| IN. | .78 | .87 | .77 | .85 | .69 | 2.48 | 3.75 | 4.78 | 2.05 | .83 | .65 | .79 |
| AC-FT | 10280 | 11470 | 10050 | 11210 | 9050 | 32550 | 49230 | 62740 | 26930 | 10860 | 8510 | 10400 |
| CAL YR 1976 | TOTAL | 262511 | MEAN 717 | MAX 7520 | MIN 136 | CFSM 2.92 | IN 39.70 | AC-FT 520700 | | | | |
| WTR YR 1977 | TOTAL | 127689 | MEAN 350 | MAX 1380 | MIN 105 | CFSM 1.42 | IN 19.31 | AC-FT 253300 | | | | |

WILLAMETTE RIVER BASIN

14148000 MIDDLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°48'05", long 122°33'35", in SW¼ sec.27, T.20 S., R.2 E., Lane County, Hydrologic Unit 17090001, on left bank 0.5 mi (0.8 km) downstream from Whitehead Creek, 4.2 mi (6.8 km) downstream from North Fork of Middle Fork Willamette River, 7.0 mi (11.3 km) northwest of Oakridge, and at mile 220.2 (354.3 km).

DRAINAGE AREA.--924 mi² (2,393 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1911 to September 1912, July 1923 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "near Hazeldell" 1911-12 and as "at Eula" 1923-50.

REVISED RECORDS.--WSP 694: 1925-28. WSP 814: Drainage area at Eula. WSP 1248: 1924, 1925(M), 1926-28, 1929(M), 1930, 1933, 1946(M). WSP 1398: 1927(M). WSP 1638: 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 934.76 ft (284.915 m) above mean sea level. Mar. 22, 1911, to Sept. 30, 1912, non-recording gage at site 4.0 mi (6.4 km) upstream, just below North Fork at different datum. July 1, 1923, to Aug. 11, 1935, nonrecording gage and Aug. 12, 1935, to Sept. 30, 1950, water-stage recorder at site 4.0 mi (6.4 km) downstream at different datum.

REMARKS.--Water-discharge records excellent. Flow regulated since 1961 by Hills Creek Lake (see station 14145100); slight regulation at times by logponds above station. No diversion above station.

AVERAGE DISCHARGE.--55 years, 2,769 ft³/s (78.42 m³/s), 2,006,000 acre-ft/yr (2.47 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,800 ft³/s (2,320 m³/s) Dec. 28, 1945, gage height, 18.8 ft (5.73 m), from floodmark, site and datum then in use, from rating curve extended above 39,000 ft³/s (1,100 m³/s); minimum, 322 ft³/s (9.12 m³/s) Aug. 30, 1961, caused by closing outlet gates at Hills Creek Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1861 and prior to beginning of record, 17.0 ft (5.18 m) in February 1890 at site used 1923-50, from information by local resident, discharge, about 55,000 ft³/s (1,560 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,050 ft³/s (86.4 m³/s) May 18, gage height, 3.07 ft (0.936 m); minimum, 440 ft³/s (12.5 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|-------|-----------|-------|-------|---------|--------|---------|-------|--------|--------|
| 1 | 2150 | 2080 | 990 | 1220 | 734 | 1210 | 1800 | 1770 | 1940 | 638 | 1260 | 2180 |
| 2 | 2160 | 2010 | 978 | 1310 | 714 | 1080 | 1790 | 2280 | 1870 | 638 | 1260 | 2150 |
| 3 | 2200 | 1940 | 966 | 1180 | 714 | 1270 | 1590 | 2450 | 1750 | 601 | 1250 | 2130 |
| 4 | 2180 | 1580 | 942 | 966 | 704 | 1170 | 1610 | 2470 | 1790 | 601 | 1250 | 2180 |
| 5 | 2160 | 1550 | 942 | 918 | 704 | 1100 | 1790 | 2410 | 1790 | 601 | 1250 | 2200 |
| 6 | 2160 | 1550 | 954 | 894 | 704 | 1100 | 1950 | 2200 | 1840 | 582 | 1230 | 2200 |
| 7 | 2160 | 1560 | 942 | 883 | 704 | 1190 | 2200 | 2010 | 1800 | 564 | 1250 | 2160 |
| 8 | 2160 | 1560 | 1000 | 883 | 704 | 1690 | 2670 | 1840 | 1660 | 546 | 1250 | 2160 |
| 9 | 2180 | 1550 | 1090 | 860 | 704 | 1990 | 2390 | 1790 | 1500 | 546 | 1230 | 2180 |
| 10 | 2180 | 1550 | 1040 | 871 | 704 | 1750 | 2010 | 2560 | 1360 | 537 | 1250 | 2180 |
| 11 | 2180 | 1520 | 1030 | 883 | 704 | 1550 | 1800 | 2840 | 1250 | 529 | 1230 | 2220 |
| 12 | 2180 | 1550 | 1010 | 918 | 704 | 1590 | 1720 | 2540 | 1150 | 520 | 1220 | 2240 |
| 13 | 2180 | 1550 | 1000 | 1010 | 714 | 1490 | 1840 | 2240 | 1090 | 503 | 1230 | 2240 |
| 14 | 2180 | 1560 | 990 | 1030 | 714 | 1330 | 1770 | 2130 | 1030 | 487 | 1230 | 2280 |
| 15 | 2180 | 1720 | 978 | 883 | 675 | 1110 | 1670 | 2130 | 966 | 537 | 1630 | 1940 |
| 16 | 2180 | 2240 | 978 | 849 | 628 | 1050 | 1700 | 2220 | 906 | 638 | 2010 | 1520 |
| 17 | 2200 | 1800 | 978 | 827 | 619 | 990 | 1630 | 2820 | 871 | 704 | 1990 | 1190 |
| 18 | 2220 | 1550 | 990 | 827 | 601 | 978 | 1500 | 2890 | 838 | 849 | 1990 | 1190 |
| 19 | 2220 | 1530 | 978 | 827 | 610 | 1090 | 1400 | 2540 | 817 | 1090 | 1970 | 1060 |
| 20 | 2240 | 1640 | 1010 | 817 | 610 | 1250 | 1340 | 2370 | 785 | 1090 | 1970 | 978 |
| 21 | 2130 | 1630 | 1170 | 806 | 656 | 1150 | 1330 | 2300 | 796 | 1170 | 1990 | 978 |
| 22 | 1590 | 1610 | 1170 | 785 | 704 | 1190 | 1340 | 2260 | 754 | 1330 | 1970 | 978 |
| 23 | 1580 | 1460 | 1180 | 765 | 695 | 1340 | 1400 | 2450 | 785 | 1300 | 2020 | 990 |
| 24 | 1560 | 1340 | 1180 | 754 | 675 | 1270 | 1530 | 2410 | 849 | 1310 | 2300 | 1300 |
| 25 | 2060 | 1080 | 1180 | 754 | 675 | 1180 | 1770 | 2220 | 685 | 1300 | 2300 | 1180 |
| 26 | 1920 | 1040 | 1270 | 744 | 724 | 1100 | 1800 | 2410 | 685 | 1290 | 2320 | 1140 |
| 27 | 1700 | 1010 | 1340 | 734 | 785 | 1400 | 1670 | 2340 | 666 | 1290 | 2220 | 1060 |
| 28 | 1770 | 1010 | 1290 | 724 | 1310 | 1470 | 1630 | 2180 | 647 | 1270 | 2180 | 1460 |
| 29 | 1900 | 1010 | 1250 | 724 | --- | 1380 | 1630 | 2020 | 628 | 1270 | 2260 | 1550 |
| 30 | 1870 | 1000 | 1230 | 724 | --- | 1310 | 1630 | 1890 | 619 | 1270 | 2280 | 1370 |
| 31 | 1870 | --- | 1220 | 724 | --- | 1290 | --- | 1840 | --- | 1270 | 2240 | --- |
| TOTAL | 63600 | 45780 | 33266 | 27094 | 19893 | 40058 | 51900 | 70820 | 34117 | 26871 | 53030 | 50584 |
| MEAN | 2052 | 1526 | 1073 | 874 | 710 | 1292 | 1730 | 2285 | 1137 | 867 | 1711 | 1686 |
| MAX | 2240 | 2240 | 1340 | 1310 | 1310 | 1990 | 2670 | 2890 | 1940 | 1330 | 2320 | 2280 |
| MIN | 1560 | 1000 | 942 | 724 | 601 | 978 | 1330 | 1770 | 619 | 487 | 1220 | 978 |
| AC-FT | 126200 | 90800 | 65980 | 53740 | 39460 | 79460 | 102900 | 140500 | 67670 | 53300 | 105200 | 100300 |
| CAL YR 1976 TOTAL | 914787 | | | 2499 | MAX | 20300 | MIN 933 | AC-FT | 1814000 | | | |
| WTR YR 1977 TOTAL | 517013 | | | MEAN 1416 | MAX | 2890 | MIN 487 | AC-FT | 1025000 | | | |

14148000 MIDDLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: September 1950 to October 1960, June 1961 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 3, 1961; minimum, 0.0°C Jan. 20-22, 1962.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.0°C July 15; minimum, 2.5°C Jan. 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 16.0 | 14.0 | 13.0 | 11.0 | 7.5 | 6.5 | 5.5 | 5.0 | 7.0 | 5.5 | 6.0 | 5.0 |
| 2 | 15.0 | 13.5 | 13.5 | 12.0 | 7.5 | 6.5 | 6.0 | 5.5 | 6.5 | 5.0 | 5.5 | 5.0 |
| 3 | 15.0 | 13.5 | 13.5 | 11.5 | 7.5 | 6.0 | 5.5 | 5.0 | 6.5 | 4.0 | 6.0 | 5.0 |
| 4 | 15.0 | 13.0 | 13.0 | 11.0 | 7.0 | 6.0 | 6.0 | 5.0 | 7.0 | 4.5 | 7.5 | 5.5 |
| 5 | 15.5 | 13.0 | 12.5 | 10.0 | 7.0 | 5.5 | 5.0 | 3.5 | 6.0 | 5.0 | 7.5 | 5.5 |
| 6 | 16.0 | 13.5 | 13.0 | 10.5 | 6.5 | 5.5 | 4.5 | 3.0 | 7.0 | 5.5 | 6.5 | 6.0 |
| 7 | 16.0 | 13.5 | 12.5 | 11.0 | 6.5 | 5.5 | 4.0 | 3.0 | 7.0 | 5.0 | 7.0 | 6.5 |
| 8 | 15.5 | 14.0 | 12.5 | 10.5 | 6.5 | 6.0 | 4.0 | 3.0 | 7.0 | 5.5 | 7.0 | 6.0 |
| 9 | 16.0 | 13.5 | 12.0 | 11.0 | 6.5 | 5.5 | 4.0 | 2.5 | 8.0 | 6.0 | 6.5 | 5.0 |
| 10 | 15.5 | 13.5 | 12.0 | 10.5 | 6.0 | 4.5 | 5.0 | 3.0 | 9.0 | 6.5 | 7.0 | 4.5 |
| 11 | 15.5 | 14.0 | 11.5 | 10.5 | 5.5 | 5.0 | 5.0 | 4.0 | 8.5 | 6.5 | 7.5 | 5.0 |
| 12 | 15.5 | 13.5 | 12.0 | 10.5 | 5.5 | 4.5 | 6.0 | 4.5 | 9.0 | 6.5 | 7.0 | 5.5 |
| 13 | 15.5 | 13.0 | 11.0 | 10.0 | 6.0 | 4.5 | 5.5 | 5.0 | 9.5 | 8.0 | 6.5 | 4.5 |
| 14 | 15.0 | 13.0 | 11.0 | 10.5 | 6.0 | 4.5 | 5.5 | 5.0 | 9.0 | 6.5 | 7.0 | 4.5 |
| 15 | 15.0 | 13.0 | 11.0 | 10.5 | 6.0 | 5.0 | 5.5 | 4.5 | 9.0 | 6.0 | 7.5 | 5.0 |
| 16 | 15.0 | 13.0 | 11.5 | 10.5 | 6.0 | 5.5 | 5.5 | 4.5 | 9.0 | 6.5 | 7.5 | 5.0 |
| 17 | 14.5 | 12.5 | 11.5 | 11.0 | 6.5 | 5.5 | 6.0 | 4.5 | 9.5 | 7.0 | 7.0 | 5.5 |
| 18 | 14.5 | 12.5 | 11.5 | 10.5 | 6.0 | 5.5 | 6.5 | 5.0 | 9.0 | 6.0 | 7.0 | 6.0 |
| 19 | 14.5 | 12.0 | 11.0 | 9.5 | 5.5 | 4.5 | 6.5 | 5.0 | 8.5 | 5.5 | 7.5 | 6.0 |
| 20 | 14.0 | 12.0 | 10.5 | 9.0 | 6.0 | 4.0 | 6.5 | 5.0 | 8.0 | 6.0 | 8.0 | 6.0 |
| 21 | 14.0 | 12.0 | 10.5 | 9.5 | 6.5 | 5.0 | 6.5 | 5.5 | 8.0 | 6.0 | 8.5 | 5.5 |
| 22 | 12.5 | 10.5 | 10.5 | 10.0 | 6.5 | 5.0 | 7.0 | 5.5 | 7.5 | 6.5 | 9.5 | 6.0 |
| 23 | 13.0 | 11.5 | 10.5 | 9.5 | 7.0 | 6.0 | 6.0 | 4.5 | 6.5 | 5.5 | 8.0 | 6.5 |
| 24 | 11.5 | 11.0 | 10.0 | 9.0 | 6.5 | 6.0 | 6.0 | 4.0 | 6.5 | 5.0 | 7.0 | 6.0 |
| 25 | 11.5 | 10.5 | 10.0 | 9.0 | 7.0 | 6.0 | 5.5 | 3.5 | 6.0 | 5.5 | 8.5 | 6.0 |
| 26 | 12.0 | 10.5 | 9.0 | 7.5 | 7.0 | 6.5 | 5.5 | 3.5 | 7.0 | 5.5 | 8.5 | 6.0 |
| 27 | 12.5 | 10.5 | 7.5 | 6.5 | 7.0 | 6.0 | 5.5 | 3.5 | 7.5 | 6.0 | 7.5 | 5.5 |
| 28 | 12.5 | 10.5 | 7.5 | 6.0 | 6.5 | 6.0 | 5.5 | 3.5 | 7.0 | 6.0 | 6.5 | 4.5 |
| 29 | 12.5 | 12.0 | 8.0 | 6.0 | 6.5 | 5.5 | 5.5 | 3.0 | --- | --- | 7.5 | 5.0 |
| 30 | 13.0 | 12.0 | 8.0 | 6.5 | 6.5 | 5.5 | 5.5 | 3.0 | --- | --- | 8.0 | 5.5 |
| 31 | 13.0 | 12.0 | --- | --- | 6.0 | 5.0 | 6.5 | 5.0 | --- | --- | 6.5 | 5.5 |
| MONTH | 16.0 | 10.5 | 13.5 | 6.0 | 7.5 | 4.0 | 7.0 | 2.5 | 9.5 | 4.0 | 9.5 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.0 | 5.5 | 10.0 | 8.5 | 12.5 | 10.5 | 18.5 | 15.0 | 17.0 | 12.0 | 18.0 | 14.5 |
| 2 | 8.5 | 5.5 | 10.5 | 8.0 | 12.0 | 8.0 | 18.5 | 13.0 | 15.5 | 12.5 | 18.0 | 15.0 |
| 3 | 9.0 | 5.5 | 9.5 | 7.5 | 12.0 | 9.5 | 15.5 | 12.5 | 16.5 | 12.0 | 18.0 | 15.5 |
| 4 | 10.0 | 6.5 | 8.0 | 6.5 | 15.0 | 10.5 | 16.0 | 11.5 | 16.5 | 12.0 | 18.5 | 16.0 |
| 5 | 10.0 | 6.0 | 7.5 | 6.0 | 17.0 | 11.5 | 14.5 | 10.5 | 16.5 | 12.0 | 17.5 | 16.0 |
| 6 | 9.5 | 6.0 | 9.5 | 6.0 | 17.0 | 13.0 | 17.5 | 11.0 | 16.5 | 12.0 | 19.0 | 16.0 |
| 7 | 9.5 | 6.0 | 9.0 | 6.5 | 15.0 | 13.0 | 19.0 | 12.5 | 15.5 | 12.0 | 18.5 | 16.0 |
| 8 | 8.5 | 6.5 | 12.0 | 7.0 | 15.5 | 11.5 | 18.5 | 13.5 | 17.0 | 12.0 | 18.5 | 16.0 |
| 9 | 8.0 | 5.5 | 10.0 | 8.0 | 15.0 | 11.0 | 17.0 | 13.5 | 16.5 | 12.0 | 18.5 | 15.5 |
| 10 | 8.5 | 5.5 | 8.5 | 7.5 | 15.0 | 11.5 | 18.5 | 13.0 | 16.5 | 12.0 | 18.5 | 16.0 |
| 11 | 10.5 | 7.0 | 9.5 | 7.0 | 15.0 | 11.5 | 19.5 | 13.5 | 17.0 | 12.0 | 18.5 | 16.0 |
| 12 | 10.5 | 6.5 | 10.5 | 6.5 | 16.0 | 12.0 | 17.5 | 14.5 | 17.0 | 12.0 | 19.0 | 16.0 |
| 13 | 9.0 | 7.0 | 10.5 | 7.5 | 16.0 | 12.0 | 18.5 | 12.5 | 16.5 | 12.5 | 19.0 | 16.0 |
| 14 | 9.0 | 5.0 | 10.0 | 8.0 | 16.5 | 12.5 | 19.0 | 13.5 | 17.0 | 12.5 | 17.5 | 16.0 |
| 15 | 9.0 | 6.5 | 9.0 | 7.5 | 16.0 | 12.0 | 20.0 | 14.5 | 15.5 | 12.5 | 17.0 | 15.5 |
| 16 | 9.0 | 7.0 | 9.0 | 6.5 | 17.0 | 12.0 | 18.5 | 14.0 | 16.0 | 12.5 | 17.0 | 14.5 |
| 17 | 8.5 | 5.0 | 8.5 | 7.0 | 16.5 | 12.5 | 18.5 | 13.0 | 16.0 | 12.5 | 17.0 | 14.0 |
| 18 | 8.0 | 4.5 | 9.5 | 7.5 | 16.5 | 13.0 | 15.5 | 12.0 | 15.5 | 13.0 | 17.0 | 14.5 |
| 19 | 8.5 | 4.5 | 11.5 | 7.5 | 17.0 | 13.5 | 15.5 | 11.0 | 15.5 | 13.0 | 16.0 | 14.5 |
| 20 | 9.0 | 5.5 | 12.0 | 8.0 | 15.0 | 13.0 | 16.5 | 11.0 | 15.0 | 13.0 | 15.5 | 13.5 |
| 21 | 9.0 | 7.0 | 12.0 | 9.5 | 18.0 | 12.5 | 16.5 | 11.5 | 15.0 | 13.0 | 16.0 | 13.5 |
| 22 | 9.0 | 6.5 | 10.5 | 8.0 | 19.5 | 14.5 | 16.5 | 11.0 | 15.5 | 13.0 | 15.5 | 12.5 |
| 23 | 9.5 | 7.0 | 9.5 | 8.0 | 19.0 | 15.0 | 15.0 | 11.5 | 15.5 | 13.0 | 14.0 | 13.0 |
| 24 | 11.0 | 7.5 | 11.5 | 8.0 | 18.0 | 13.0 | 16.5 | 11.5 | 15.5 | 14.0 | 14.5 | 13.0 |
| 25 | 9.5 | 7.5 | 10.5 | 8.0 | 19.5 | 13.5 | 15.5 | 12.0 | 15.0 | 13.0 | 14.5 | 13.0 |
| 26 | 10.5 | 6.5 | 10.5 | 8.5 | 19.0 | 14.5 | 16.0 | 11.5 | 16.5 | 14.0 | 15.5 | 12.5 |
| 27 | 10.5 | 6.5 | 10.0 | 7.0 | 19.0 | 14.5 | 16.5 | 11.5 | 16.5 | 15.0 | 14.0 | 13.0 |
| 28 | 9.5 | 7.5 | 11.5 | 7.5 | 19.5 | 14.0 | 15.5 | 11.5 | 17.5 | 15.5 | 14.0 | 12.5 |
| 29 | 10.5 | 8.0 | 12.0 | 8.0 | 19.0 | 14.5 | 15.5 | 11.0 | 17.5 | 15.0 | 14.0 | 12.0 |
| 30 | 11.5 | 8.5 | 12.5 | 8.5 | 18.5 | 14.0 | 16.5 | 11.0 | 17.5 | 15.0 | 14.0 | 12.0 |
| 31 | --- | --- | 13.5 | 10.0 | --- | --- | 17.0 | 11.5 | 17.0 | 15.0 | --- | --- |
| MONTH | 11.5 | 4.5 | 13.5 | 6.0 | 19.5 | 8.0 | 20.0 | 10.5 | 17.5 | 12.0 | 19.0 | 12.0 |

WILLAMETTE RIVER BASIN

14149000 LOOKOUT POINT LAKE NEAR LOWELL, OR

LOCATION.--Lat 43°54'50", long 122°45'00", SE¼ sec.13, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, in elevator house at right end of spillway section of dam on Middle Fork Willamette River, 1.5 mi (2.4 km) east of Lowell, and at mile 206.9 (332.9 km).

DRAINAGE AREA.--991 mi² (2,567 km²).

PERIOD OF RECORD.--November 1953 to current year. Prior to October 1971, published as Lookout Point Reservoir near Lowell.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Nov. 7, 1953, to Dec. 4, 1954, approximate elevations obtained from reference marks and Dec. 5, 1954, to Feb. 4, 1955, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1954 by Corps of Engineers. Planned storage began in November 1953. Total capacity is 455,800 acre-ft (562 hm³) at elevation 929 ft (283.2 m), and usable capacity is 349,200 acre-ft (431 hm³) between elevations 819 ft (249.6 m), and 929 ft (283.2 m), top of spillway gates. Reservoir used for flood control, improvement of navigation, power generation, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 464,900 acre-ft (573 hm³) Dec. 26, 1964, elevation, 931.09 ft (283.796 m); minimum observed since first filling, 91,450 acre-ft (113 hm³) Dec. 1, 1954, elevation, 811.00 ft (247.193 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 392,800 acre-ft (484 hm³) June 25, elevation, 913.85 ft (278.541 m); minimum, 109,300 acre-ft (135 hm³) Feb. 8, elevation, 820.35 ft (250.043 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

| | | | | | |
|-----|---------|-----|---------|-----|---------|
| 820 | 108,600 | 860 | 205,500 | 900 | 338,900 |
| 830 | 129,500 | 870 | 235,500 | 910 | 377,400 |
| 840 | 152,500 | 880 | 267,800 | 920 | 417,800 |
| 850 | 117,700 | 890 | 302,300 | 930 | 460,200 |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|---------|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| 1 | 888.93 | 861.78 | 828.32 | 825.23 | 821.20 | 824.21 | 848.29 | 875.51 | 907.63 | 911.90 | 902.70 | 901.15 |
| 2 | 888.15 | 860.60 | 827.99 | 825.51 | 820.95 | 824.80 | 849.41 | 876.70 | 908.18 | 911.60 | 902.46 | 901.35 |
| 3 | 887.53 | 859.28 | 827.50 | 825.62 | 820.70 | 825.60 | 850.29 | 878.14 | 908.74 | 911.38 | 902.17 | 901.56 |
| 4 | 886.91 | 858.10 | 827.19 | 825.49 | 820.68 | 826.24 | 851.21 | 879.72 | 909.25 | 911.06 | 901.90 | 901.78 |
| 5 | 886.33 | 856.98 | 826.87 | 825.35 | 820.66 | 826.73 | 852.16 | 881.03 | 909.79 | 910.83 | 901.62 | 902.12 |
| 6 | 885.75 | 855.75 | 826.61 | 825.18 | 820.62 | 827.30 | 853.35 | 882.22 | 910.38 | 910.51 | 901.36 | 902.35 |
| 7 | 885.13 | 854.63 | 826.33 | 824.94 | 820.60 | 828.02 | 854.65 | 883.22 | 910.89 | 910.17 | 901.09 | 902.52 |
| 8 | 884.57 | 853.50 | 826.15 | 824.74 | 820.55 | 829.30 | 856.34 | 884.12 | 911.33 | 909.88 | 900.81 | 902.62 |
| 9 | 883.95 | 852.32 | 826.02 | 824.51 | 820.61 | 831.07 | 859.75 | 884.96 | 911.81 | 909.51 | 900.53 | 902.64 |
| 10 | 883.37 | 851.21 | 825.84 | 824.29 | 820.65 | 832.30 | 858.84 | 886.32 | 912.10 | 909.23 | 900.24 | 902.68 |
| 11 | 882.79 | 849.80 | 825.64 | 824.09 | 820.71 | 833.20 | 859.82 | 887.85 | 912.38 | 908.91 | 900.05 | 902.75 |
| 12 | 882.20 | 848.50 | 825.45 | 823.87 | 820.78 | 834.07 | 860.68 | 889.11 | 912.60 | 908.62 | 899.62 | 902.80 |
| 13 | 881.80 | 847.36 | 825.25 | 823.82 | 820.82 | 835.02 | 861.65 | 890.27 | 912.78 | 908.28 | 899.31 | 902.88 |
| 14 | 881.38 | 846.22 | 825.09 | 823.80 | 820.93 | 835.70 | 862.56 | 891.28 | 912.95 | 907.95 | 899.02 | 902.98 |
| 15 | 880.76 | 845.30 | 824.89 | 823.71 | 820.98 | 836.23 | 863.32 | 892.35 | 913.08 | 907.53 | 898.80 | 902.96 |
| 16 | 880.03 | 844.70 | 824.63 | 823.55 | 821.18 | 836.60 | 864.18 | 893.50 | 913.17 | 907.08 | 898.81 | 902.72 |
| 17 | 879.51 | 843.42 | 824.41 | 823.36 | 821.17 | 837.05 | 864.96 | 894.87 | 913.27 | 906.63 | 898.78 | 902.30 |
| 18 | 878.86 | 841.70 | 824.21 | 822.80 | 821.23 | 837.58 | 865.67 | 896.15 | 913.41 | 906.28 | 898.70 | 901.88 |
| 19 | 878.24 | 840.00 | 823.95 | 822.44 | 821.22 | 838.19 | 866.28 | 897.13 | 913.46 | 906.01 | 898.63 | 901.42 |
| 20 | 877.58 | 838.60 | 823.72 | 822.25 | 821.35 | 838.94 | 866.84 | 898.05 | 913.51 | 905.73 | 898.61 | 900.90 |
| 21 | 876.56 | 837.15 | 823.75 | 822.09 | 821.40 | 839.61 | 867.47 | 898.98 | 913.56 | 905.47 | 898.60 | 900.50 |
| 22 | 875.18 | 835.75 | 823.79 | 821.88 | 821.62 | 840.31 | 868.08 | 899.80 | 913.59 | 905.24 | 898.57 | 900.00 |
| 23 | 873.81 | 834.25 | 823.89 | 821.65 | 821.87 | 841.13 | 868.71 | 900.79 | 913.62 | 905.03 | 898.56 | 899.35 |
| 24 | 872.38 | 832.97 | 824.01 | 821.40 | 822.00 | 841.85 | 869.51 | 901.84 | 913.72 | 904.80 | 898.92 | 898.86 |
| 25 | 871.34 | 832.28 | 824.08 | 821.30 | 822.12 | 842.49 | 870.53 | 902.68 | 913.53 | 904.58 | 899.23 | 899.32 |
| 26 | 870.13 | 831.50 | 824.22 | 821.34 | 822.30 | 843.28 | 871.43 | 903.65 | 913.25 | 904.32 | 899.66 | 897.72 |
| 27 | 868.72 | 830.73 | 824.46 | 821.29 | 822.58 | 843.94 | 872.24 | 904.48 | 912.97 | 904.09 | 899.91 | 896.80 |
| 28 | 867.27 | 829.82 | 824.61 | 821.26 | 823.49 | 844.86 | 873.02 | 905.24 | 912.67 | 903.83 | 900.17 | 896.10 |
| 29 | 865.88 | 829.15 | 824.79 | 821.21 | --- | 845.71 | 873.80 | 905.89 | 912.40 | 903.60 | 900.44 | 895.42 |
| 30 | 864.42 | 828.69 | 824.92 | 821.19 | --- | 846.46 | 874.60 | 906.46 | 912.14 | 903.35 | 900.76 | 895.12 |
| 31 | 862.97 | --- | 825.07 | 821.15 | --- | 847.18 | --- | 907.00 | --- | 902.98 | 901.08 | --- |
| MEAN | 878.47 | 844.40 | 825.28 | 823.24 | 821.25 | 835.97 | 862.65 | 892.88 | 912.07 | 907.30 | 900.04 | 900.75 |
| MAX | 888.93 | 861.78 | 828.32 | 825.62 | 823.49 | 847.18 | 874.60 | 907.00 | 913.72 | 911.90 | 902.70 | 902.98 |
| MIN | 862.97 | 828.69 | 823.72 | 821.15 | 820.55 | 824.21 | 848.29 | 875.51 | 907.63 | 902.98 | 898.56 | 895.12 |
| (+) | 214,200 | 126,600 | 118,900 | 110,900 | 115,600 | 157,800 | 250,100 | 365,700 | 385,900 | 350,200 | 343,000 | 320,800 |
| (-) | -87,200 | -87,600 | -7,700 | -8,000 | +4,700 | +42,200 | +92,300 | +115,600 | +20,200 | -35,700 | -7,200 | -22,200 |

CAL YR 1976 MEAN 883.09 MAX 927.09 MIN 823.72 AC-FT† -12,500
WTR YR 1977 MEAN 867.26 MAX 913.72 MIN 820.55 AC-FT† +19,400

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR

LOCATION.--Lat 43°56'45", long 122°50'10", in SE¼NW¼ sec.5, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, on right bank 0.6 mi (1.0 km) upstream from Lost Creek, 2.0 mi (3.2 km) northwest of Dexter, 2.6 mi (4.2 km) downstream from Dexter Dam, and at mile 201.2 (323.7 km).

DRAINAGE AREA.--1,001 mi² (2,593 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to September 1954 (published as "at Lowell"), June 1955 to current year. Monthly discharge only for October 1954 to June 1955, published in WSP 1738.

REVISED RECORDS.--WSP 1638: 1948(P).

GAGE.--Water-stage recorder. Datum of gage is 592.30 ft (180.533 m) above mean sea level (levels by Corps of Engineers). Prior to Aug. 23, 1950, nonrecording gage and Aug. 23, 1950, to Sept. 30, 1954, at site 4.0 mi (6.4 km) upstream at different datum, and June 9, 1955, to Feb. 18, 1977, at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1953 by Lookout Point Lake (see station 14149000), since 1955 by Dexter Lake (re-regulating), and since 1961 by Hills Creek Lake (see station 14145100).

AVERAGE DISCHARGE.--31 years, 3,202 ft³/s (90.68 m³/s), 2,320,000 acre-ft/yr (2.86 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,600 ft³/s (1,770 m³/s) Jan. 18, 1953, gage height, 12.46 ft (3.798 m), site and datum then in use, from rating curve extended above 33,000 ft³/s (935 m³/s); minimum daily, 100 ft³/s (2.83 m³/s) Nov. 25, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 13.9 ft (4.24 m) Dec. 28, 1945, former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,460 ft³/s (126 m³/s) Oct. 29; maximum gage height, 4.79 ft (1.460 m) Aug. 17; minimum discharge, 323 ft³/s (9.15 m³/s) May 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|---------|--------|--------|
| 1 | 3630 | 4040 | 1360 | 1110 | 803 | 596 | 424 | 369 | 727 | 1140 | 1620 | 1730 |
| 2 | 3400 | 3980 | 1340 | 1110 | 796 | 602 | 424 | 369 | 714 | 1150 | 1620 | 1600 |
| 3 | 3200 | 3630 | 1410 | 1130 | 754 | 614 | 418 | 374 | 701 | 1140 | 1660 | 1560 |
| 4 | 3260 | 3070 | 1540 | 1140 | 789 | 614 | 424 | 348 | 701 | 1150 | 1690 | 1610 |
| 5 | 3020 | 3120 | 1370 | 1140 | 866 | 608 | 465 | 358 | 695 | 1160 | 1690 | 1660 |
| 6 | 3040 | 3070 | 1220 | 1150 | 850 | 602 | 465 | 348 | 695 | 1180 | 1690 | 1670 |
| 7 | 3040 | 3050 | 1310 | 1150 | 776 | 602 | 465 | 343 | 720 | 1180 | 1680 | 1720 |
| 8 | 3050 | 3070 | 1340 | 1150 | 750 | 571 | 478 | 338 | 733 | 1180 | 1690 | 1940 |
| 9 | 3020 | 2970 | 1310 | 1150 | 700 | 564 | 472 | 338 | 733 | 1180 | 1680 | 1990 |
| 10 | 3130 | 3290 | 1250 | 1150 | 650 | 626 | 465 | 338 | 740 | 1180 | 1680 | 1990 |
| 11 | 3100 | 3080 | 1230 | 1150 | 650 | 620 | 465 | 348 | 740 | 1180 | 1680 | 1990 |
| 12 | 3100 | 3040 | 1230 | 1150 | 650 | 701 | 465 | 396 | 727 | 1170 | 1680 | 1990 |
| 13 | 2840 | 2890 | 1230 | 1150 | 650 | 620 | 472 | 401 | 740 | 1200 | 1680 | 2090 |
| 14 | 2670 | 2840 | 1230 | 1150 | 650 | 614 | 472 | 407 | 747 | 1200 | 1690 | 2050 |
| 15 | 3240 | 2840 | 1230 | 1150 | 600 | 614 | 465 | 418 | 714 | 1340 | 1940 | 1840 |
| 16 | 3100 | 2810 | 1230 | 1150 | 572 | 583 | 465 | 430 | 720 | 1430 | 1950 | 1840 |
| 17 | 3120 | 3600 | 1190 | 1150 | 600 | 490 | 465 | 539 | 720 | 1440 | 1950 | 1880 |
| 18 | 3260 | 3480 | 1190 | 1130 | 602 | 447 | 465 | 644 | 714 | 1440 | 1950 | 2000 |
| 19 | 3240 | 3320 | 1200 | 1110 | 596 | 436 | 472 | 688 | 714 | 1470 | 1950 | 1930 |
| 20 | 3160 | 3360 | 1230 | 1110 | 590 | 430 | 465 | 669 | 714 | 1550 | 1960 | 1940 |
| 21 | 3640 | 3320 | 1240 | 1080 | 596 | 418 | 465 | 657 | 727 | 1610 | 1960 | 1880 |
| 22 | 3690 | 3440 | 1250 | 994 | 596 | 418 | 459 | 657 | 762 | 1610 | 1960 | 1770 |
| 23 | 3740 | 3050 | 1160 | 1000 | 596 | 430 | 424 | 657 | 740 | 1620 | 1970 | 2150 |
| 24 | 3630 | 2670 | 1100 | 1000 | 602 | 430 | 385 | 651 | 874 | 1620 | 1850 | 2270 |
| 25 | 3840 | 1920 | 1100 | 890 | 608 | 430 | 374 | 638 | 1230 | 1620 | 1570 | 2170 |
| 26 | 3880 | 1720 | 1100 | 810 | 608 | 430 | 369 | 657 | 1150 | 1620 | 1370 | 2130 |
| 27 | 3820 | 1730 | 1140 | 810 | 602 | 436 | 363 | 762 | 1140 | 1620 | 1610 | 2410 |
| 28 | 3850 | 1830 | 1120 | 803 | 596 | 436 | 369 | 851 | 1150 | 1620 | 1620 | 2910 |
| 29 | 4010 | 1880 | 1110 | 796 | --- | 436 | 369 | 791 | 1150 | 1620 | 1680 | 2790 |
| 30 | 3950 | 1430 | 1090 | 796 | --- | 430 | 369 | 769 | 1140 | 1620 | 1710 | 2250 |
| 31 | 3680 | --- | 1100 | 796 | --- | 424 | --- | 747 | --- | 1620 | 1730 | --- |
| TOTAL | 104350 | 87540 | 38150 | 32555 | 18698 | 16272 | 13117 | 16300 | 24472 | 42860 | 54160 | 59750 |
| MEAN | 3366 | 2918 | 1231 | 1050 | 668 | 525 | 437 | 526 | 816 | 1383 | 1747 | 1992 |
| MAX | 4010 | 4040 | 1540 | 1150 | 866 | 701 | 478 | 851 | 1230 | 1620 | 1970 | 2910 |
| MIN | 2670 | 1430 | 1090 | 796 | 572 | 418 | 363 | 338 | 695 | 1140 | 1370 | 1560 |
| AC-FT | 207000 | 173600 | 75670 | 64570 | 37090 | 32280 | 26020 | 32330 | 48540 | 85010 | 107400 | 118500 |
| CAL YR 1976 | TOTAL | 986810 | MEAN | 2696 | MAX | 11900 | MIN | 1090 | AC-FT | 1957000 | | |
| WTR YR 1977 | TOTAL | 508224 | MEAN | 1392 | MAX | 4040 | MIN | 338 | AC-FT | 1008000 | | |

14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1955 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.5°C Sept. 17, 21, 22, '24, 25, 1961; minimum, 3.5°C on several days in 1957, 1969, and Jan. 9-11, 1973.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.5°C Oct. 11-14, Sept. 6, 7, 11-13, 16; minimum recorded, 4.5°C Jan. 27-30, Mar. 17.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|------|---------|-----|----------|------|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 16.0 | 15.5 | 14.5 | 13.5 | 10.5 | 9.5 | 6.5 | 6.5 | 6.0 | 5.0 | 7.5 | 6.0 |
| 2 | 15.5 | 15.0 | 14.5 | 14.5 | 10.5 | 9.5 | 6.5 | 6.0 | 5.0 | 5.0 | 6.5 | 6.0 |
| 3 | 16.0 | 15.0 | 14.5 | 14.5 | 10.0 | 9.5 | 6.5 | 6.0 | 6.0 | 5.0 | 8.0 | 6.0 |
| 4 | 16.0 | 15.0 | 15.0 | 13.0 | 9.5 | 9.5 | 6.5 | 6.0 | 6.5 | 5.0 | 9.0 | 5.5 |
| 5 | 16.0 | 15.0 | 14.0 | 13.0 | 9.5 | 9.0 | 6.5 | 5.5 | 6.0 | 5.0 | 10.0 | 5.5 |
| 6 | 16.0 | 15.0 | 14.0 | 13.5 | 9.5 | 8.5 | 6.5 | 5.5 | 6.5 | 5.0 | 7.5 | 5.5 |
| 7 | 16.0 | 15.0 | 14.0 | 13.5 | 10.0 | 8.5 | 6.0 | 5.0 | 6.0 | 5.0 | 8.0 | 6.0 |
| 8 | 16.0 | 15.5 | 14.0 | 13.0 | 9.5 | 8.5 | 6.0 | 5.0 | 6.5 | 5.0 | 7.5 | 6.0 |
| 9 | 16.0 | 15.5 | 13.5 | 13.0 | 9.5 | 8.5 | 6.0 | 5.0 | 7.0 | 5.0 | 7.0 | 5.0 |
| 10 | 16.0 | 15.5 | 13.5 | 13.0 | 9.0 | 8.0 | 5.5 | 5.0 | 7.0 | 5.0 | 8.0 | 6.0 |
| 11 | 16.5 | 15.5 | 13.5 | 13.0 | 8.5 | 8.0 | 5.0 | 5.0 | 6.5 | 5.5 | 9.0 | 6.0 |
| 12 | 16.5 | 15.5 | 13.5 | 13.0 | 9.0 | 7.5 | 5.5 | 5.0 | 7.0 | 5.5 | 8.0 | 6.0 |
| 13 | 16.5 | 15.5 | 13.5 | 13.0 | 8.5 | 7.5 | 5.5 | 5.0 | 7.5 | 6.0 | 9.5 | 6.0 |
| 14 | 16.5 | 15.0 | 13.5 | 13.0 | 8.0 | 7.5 | 6.0 | 5.0 | 7.5 | 5.5 | 8.5 | 5.5 |
| 15 | 16.0 | 15.5 | 13.0 | 13.0 | 8.5 | 7.5 | 6.0 | 5.0 | 9.5 | 5.5 | 9.5 | 5.5 |
| 16 | 16.0 | 15.0 | 13.5 | 13.0 | 8.0 | 7.0 | 6.0 | 5.0 | 10.0 | 5.0 | 10.0 | 5.0 |
| 17 | 16.0 | 15.0 | 13.5 | 12.5 | 8.0 | 7.0 | 6.0 | 5.0 | 8.5 | 5.5 | 10.5 | 4.5 |
| 18 | 16.0 | 15.0 | 13.0 | 12.5 | 8.0 | 7.0 | 6.0 | 5.0 | 9.5 | 5.0 | --- | --- |
| 19 | 15.5 | 15.0 | 13.0 | 13.0 | 7.5 | 7.0 | 6.5 | 5.0 | 9.0 | 5.0 | --- | --- |
| 20 | 15.5 | 15.0 | 13.0 | 12.5 | 8.0 | 7.0 | 6.0 | 5.0 | 8.0 | 5.5 | --- | --- |
| 21 | 15.5 | 15.0 | 12.5 | 12.5 | 7.5 | 6.5 | 6.0 | 5.5 | 9.0 | 6.0 | --- | --- |
| 22 | 15.5 | 15.0 | 12.5 | 12.5 | 7.0 | 6.5 | 6.5 | 5.0 | 7.5 | 5.5 | --- | --- |
| 23 | 15.0 | 14.5 | 12.5 | 12.0 | 7.5 | 6.5 | 6.0 | 5.0 | 7.0 | 5.5 | --- | --- |
| 24 | 15.0 | 14.5 | 12.0 | 12.0 | 7.0 | 6.5 | 6.0 | 5.0 | 6.5 | 6.0 | --- | --- |
| 25 | 15.0 | 14.5 | 12.0 | 11.5 | 7.0 | 6.5 | 6.5 | 5.0 | 6.5 | 5.5 | --- | --- |
| 26 | 15.0 | 14.0 | 12.0 | 11.0 | 7.0 | 6.5 | 6.5 | 5.0 | 7.5 | 6.0 | --- | --- |
| 27 | 15.0 | 14.0 | 12.0 | 10.5 | 7.0 | 6.5 | 6.0 | 4.5 | 8.5 | 6.0 | --- | --- |
| 28 | 14.5 | 14.0 | 11.5 | 10.5 | 7.0 | 6.5 | 6.0 | 4.5 | 8.0 | 6.0 | --- | --- |
| 29 | 14.5 | 14.5 | 11.0 | 10.0 | 7.0 | 6.5 | 5.5 | 4.5 | --- | --- | --- | --- |
| 30 | 14.5 | 14.0 | 11.0 | 10.0 | 6.5 | 6.5 | 5.5 | 4.5 | --- | --- | --- | --- |
| 31 | 15.0 | 13.5 | --- | --- | 6.5 | 6.5 | 5.5 | 5.0 | --- | --- | --- | --- |
| MONTH | 16.5 | 13.5 | 15.0 | 10.0 | 10.5 | 6.5 | 6.5 | 4.5 | 10.0 | 5.0 | 10.5 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | --- | --- | 10.5 | 10.0 | 12.5 | 10.5 | 14.0 | 11.5 | 15.0 | 12.0 | 16.0 | 13.5 |
| 2 | --- | --- | 13.5 | 10.0 | 13.0 | 10.0 | 14.0 | 11.5 | 14.5 | 12.0 | 15.5 | 14.0 |
| 3 | --- | --- | 12.0 | 10.0 | 11.5 | 10.5 | 13.0 | 11.5 | 15.0 | 12.0 | 16.0 | 14.5 |
| 4 | --- | --- | 11.5 | 9.5 | 13.5 | 10.5 | 13.0 | 11.5 | 15.0 | 12.0 | 16.0 | 14.5 |
| 5 | --- | --- | 12.0 | 9.5 | 14.0 | 10.5 | 13.5 | 11.5 | 15.0 | 12.0 | 15.5 | 14.5 |
| 6 | 13.5 | 9.0 | 13.5 | 10.0 | 14.5 | 11.0 | 14.5 | 11.5 | 15.0 | 12.5 | 16.5 | 14.0 |
| 7 | 13.5 | 9.5 | 12.5 | 9.5 | 13.5 | 11.0 | 14.5 | 11.5 | 15.0 | 12.0 | 16.5 | 14.0 |
| 8 | 11.5 | 10.0 | 15.0 | 9.5 | 14.0 | 11.0 | 14.0 | 11.5 | 15.0 | 12.5 | 16.0 | 14.5 |
| 9 | 12.0 | 9.5 | 13.5 | 10.5 | 14.0 | 11.0 | 12.5 | 11.5 | 15.5 | 12.5 | 16.0 | 14.5 |
| 10 | 12.5 | 9.5 | 11.5 | 10.5 | 14.0 | 11.0 | 14.0 | 11.5 | 15.5 | 12.0 | 16.0 | 14.5 |
| 11 | 12.5 | 10.0 | 13.5 | 10.0 | 12.5 | 11.5 | 14.5 | 11.5 | 15.5 | 13.0 | 16.5 | 14.5 |
| 12 | 13.0 | 9.5 | 14.0 | 10.0 | 14.0 | 11.0 | 12.5 | 11.5 | 15.5 | 13.0 | 16.5 | 14.5 |
| 13 | 11.5 | 10.0 | 13.0 | 10.5 | 14.5 | 11.0 | 14.0 | 11.0 | 15.5 | 13.0 | 16.5 | 15.0 |
| 14 | 13.5 | 9.5 | 13.0 | 10.5 | 14.5 | 11.0 | 14.5 | 11.5 | 15.5 | 13.0 | 15.5 | 15.0 |
| 15 | 12.0 | 10.0 | 11.5 | 10.0 | 14.5 | 11.0 | 14.5 | 11.5 | 15.5 | 13.5 | 15.5 | 15.0 |
| 16 | 13.5 | 10.5 | 13.0 | 10.0 | 15.0 | 11.0 | 14.5 | 11.5 | 16.0 | 13.5 | 16.5 | 15.0 |
| 17 | 13.5 | 9.5 | 12.0 | 10.0 | 14.5 | 11.0 | 14.5 | 12.0 | 16.0 | 13.5 | 16.0 | 15.0 |
| 18 | 13.0 | 10.0 | 12.5 | 10.0 | 14.0 | 11.5 | 13.0 | 12.0 | 16.0 | 14.0 | 15.5 | 15.0 |
| 19 | 13.5 | 10.0 | 13.0 | 10.0 | 14.0 | 11.5 | 14.0 | 11.5 | 15.5 | 14.0 | 15.5 | 15.0 |
| 20 | 13.0 | 10.0 | 12.5 | 10.0 | 12.5 | 11.5 | 14.5 | 11.5 | 14.5 | 13.5 | 15.5 | 15.0 |
| 21 | 12.5 | 10.5 | 12.5 | 10.5 | 15.0 | 11.5 | 14.5 | 11.5 | 14.5 | 13.5 | 16.0 | 14.5 |
| 22 | 13.0 | 10.0 | 11.0 | 10.0 | 14.5 | 11.5 | 14.5 | 11.5 | 15.5 | 13.5 | 16.0 | 14.5 |
| 23 | 14.0 | 10.5 | 11.5 | 10.0 | 15.0 | 11.5 | 14.0 | 11.5 | 15.5 | 13.5 | 15.0 | 15.0 |
| 24 | 13.5 | 10.5 | 12.5 | 10.0 | 15.0 | 11.5 | 14.5 | 12.0 | 15.0 | 14.0 | 15.5 | 15.0 |
| 25 | 12.0 | 10.5 | 12.0 | 10.0 | 14.5 | 12.0 | 14.0 | 12.0 | 14.5 | 14.0 | 15.5 | 15.0 |
| 26 | 15.5 | 10.0 | 12.5 | 10.0 | 15.0 | 11.5 | 14.5 | 12.0 | 15.0 | 14.0 | 16.0 | 15.0 |
| 27 | 13.5 | 9.5 | 11.5 | 10.0 | 15.0 | 11.5 | 14.5 | 12.0 | 15.5 | 14.0 | 15.0 | 14.5 |
| 28 | 12.0 | 9.5 | 13.0 | 10.5 | 15.0 | 11.5 | 14.0 | 12.0 | 15.5 | 14.0 | 15.0 | 15.0 |
| 29 | 12.5 | 10.0 | 13.0 | 10.0 | 14.5 | 11.5 | 14.5 | 12.0 | 15.5 | 14.0 | 15.0 | 15.0 |
| 30 | 12.5 | 10.0 | 12.0 | 10.5 | 14.5 | 11.5 | 14.5 | 12.0 | 16.0 | 14.0 | 15.5 | 14.5 |
| 31 | --- | --- | 13.0 | 10.5 | --- | --- | 15.0 | 12.0 | 16.0 | 14.0 | --- | --- |
| MONTH | 15.5 | 9.0 | 15.0 | 9.5 | 15.0 | 10.0 | 15.0 | 11.0 | 16.0 | 12.0 | 16.5 | 13.5 |

WILLAMETTE RIVER BASIN

251

14150300 FALL CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°58'15", long 122°38'15", in SW¼ sec.25, T.18 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.1 mi (0.2 km) downstream from North Fork, 8.0 mi (12.9 km) northeast of Lowell, and at mile 14.4 (23.2 km).

DRAINAGE AREA.--118 mi² (306 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 844.42 ft (257.379 m) above mean sea level.

REMARKS.--Water discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 420 ft³/s (11.89 m³/s), 48.34 in/yr (1,228 mm/yr), 304,300 acre-ft/yr (375 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft³/s (343 m³/s) Jan. 21, 1972, which may have been caused by release from breakup of temporary logjam 12 mi (19 km) upstream, gage height, 11.84 ft (3.609 m); minimum, 16 ft³/s (0.45 m³/s) Oct. 3, 4, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,860 ft³/s (52.7 m³/s) May 17, gage height, 4.88 ft (1.487 m), no peak above base of 3,500 ft³/s (99.1 m³/s); minimum, 22 ft³/s (0.62 m³/s) Aug. 17-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|-----------|----------|--------------|------|------|------|------|
| 1 | 34 | 242 | 46 | 58 | 65 | 547 | 891 | 215 | 316 | 70 | 32 | 60 |
| 2 | 36 | 143 | 44 | 159 | 55 | 455 | 771 | 359 | 271 | 69 | 31 | 47 |
| 3 | 47 | 94 | 44 | 159 | 52 | 673 | 577 | 513 | 248 | 67 | 31 | 43 |
| 4 | 39 | 77 | 43 | 120 | 49 | 481 | 537 | 814 | 261 | 69 | 30 | 40 |
| 5 | 35 | 69 | 43 | 106 | 47 | 401 | 542 | 858 | 236 | 67 | 29 | 39 |
| 6 | 34 | 60 | 42 | 89 | 47 | 417 | 513 | 695 | 218 | 63 | 29 | 37 |
| 7 | 34 | 55 | 42 | 80 | 46 | 582 | 499 | 542 | 201 | 65 | 29 | 35 |
| 8 | 32 | 52 | 63 | 110 | 46 | 1120 | 547 | 442 | 184 | 60 | 29 | 32 |
| 9 | 32 | 49 | 134 | 190 | 44 | 1170 | 486 | 386 | 171 | 58 | 27 | 31 |
| 10 | 31 | 46 | 90 | 125 | 43 | 802 | 397 | 802 | 161 | 60 | 25 | 30 |
| 11 | 32 | 44 | 76 | 67 | 43 | 629 | 348 | 1020 | 151 | 56 | 24 | 29 |
| 12 | 31 | 43 | 70 | 80 | 43 | 789 | 316 | 701 | 143 | 55 | 24 | 28 |
| 13 | 31 | 43 | 61 | 209 | 46 | 624 | 344 | 509 | 136 | 56 | 23 | 28 |
| 14 | 30 | 53 | 56 | 239 | 46 | 468 | 316 | 430 | 127 | 52 | 24 | 27 |
| 15 | 29 | 198 | 53 | 161 | 43 | 382 | 285 | 477 | 120 | 49 | 24 | 28 |
| 16 | 29 | 187 | 52 | 127 | 42 | 337 | 288 | 765 | 116 | 47 | 23 | 29 |
| 17 | 28 | 116 | 50 | 110 | 42 | 302 | 261 | 1560 | 110 | 46 | 22 | 31 |
| 18 | 28 | 122 | 49 | 98 | 40 | 323 | 233 | 1270 | 106 | 47 | 22 | 35 |
| 19 | 27 | 102 | 46 | 90 | 39 | 490 | 215 | 808 | 102 | 52 | 22 | 53 |
| 20 | 27 | 89 | 44 | 84 | 40 | 562 | 203 | 603 | 102 | 46 | 22 | 73 |
| 21 | 27 | 79 | 43 | 79 | 52 | 451 | 195 | 486 | 104 | 44 | 24 | 73 |
| 22 | 27 | 73 | 42 | 74 | 98 | 464 | 190 | 413 | 96 | 42 | 25 | 58 |
| 23 | 28 | 67 | 47 | 70 | 112 | 504 | 187 | 446 | 90 | 42 | 24 | 73 |
| 24 | 39 | 61 | 46 | 67 | 92 | 442 | 190 | 401 | 87 | 42 | 116 | 248 |
| 25 | 230 | 61 | 46 | 63 | 90 | 390 | 198 | 352 | 84 | 40 | 71 | 224 |
| 26 | 139 | 58 | 84 | 60 | 159 | 334 | 192 | 434 | 82 | 40 | 87 | 164 |
| 27 | 76 | 53 | 122 | 58 | 261 | 618 | 169 | 430 | 79 | 39 | 58 | 108 |
| 28 | 58 | 50 | 90 | 56 | 789 | 613 | 161 | 472 | 76 | 36 | 56 | 268 |
| 29 | 52 | 49 | 77 | 55 | --- | 552 | 156 | 409 | 74 | 36 | 129 | 224 |
| 30 | 47 | 49 | 70 | 52 | --- | 509 | 174 | 352 | 71 | 35 | 161 | 201 |
| 31 | 58 | --- | 63 | 56 | --- | 486 | --- | 305 | --- | 34 | 87 | --- |
| TOTAL | 1427 | 2484 | 1878 | 3151 | 2571 | 16917 | 10381 | 18269 | 4323 | 1584 | 1360 | 2396 |
| MEAN | 46.0 | 82.8 | 60.6 | 102 | 91.8 | 546 | 346 | 589 | 144 | 51.1 | 43.9 | 79.9 |
| MAX | 230 | 242 | 134 | 239 | 789 | 1170 | 891 | 1560 | 316 | 70 | 161 | 268 |
| MIN | 27 | 43 | 42 | 52 | 39 | 302 | 156 | 215 | 71 | 34 | 22 | 27 |
| CFSM | .39 | .70 | .51 | .86 | .78 | 4.63 | 2.93 | 4.99 | 1.22 | .43 | .37 | .68 |
| IN. | .45 | .78 | .59 | .99 | .81 | 5.33 | 3.27 | 5.76 | 1.36 | .50 | .43 | .76 |
| AC-FT | 2830 | 4930 | 3730 | 6250 | 5100 | 33550 | 20590 | 36240 | 8570 | 3140 | 2700 | 4750 |
| CAL YR 1976 | TOTAL | 125475 | MEAN 343 | MAX 8490 | MIN 27 | CFSM 2.91 | IN 39.56 | AC-FT 248900 | | | | |
| WTR YR 1977 | TOTAL | 66741 | MEAN 183 | MAX 1560 | MIN 22 | CFSM 1.55 | IN 21.04 | AC-FT 132400 | | | | |

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.5°C Aug. 11, 1971; minimum, 0.0°C Dec. 7, 8, 1972, Jan. 8, 1973, Feb. 6, 1976, Jan. 6-10, 27-30, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 13; minimum, 0.0°C Jan. 6-10, 27-30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 15.0 | 13.0 | 10.0 | 9.0 | 2.5 | 1.5 | 3.0 | 2.0 | 3.5 | 3.0 | 6.5 | 5.5 |
| 2 | 14.0 | 13.0 | 10.5 | 10.0 | 2.0 | 1.5 | 4.5 | 3.0 | 3.0 | 2.0 | 6.0 | 5.5 |
| 3 | 12.5 | 11.0 | 10.0 | 9.5 | 2.5 | 1.5 | 4.0 | 3.5 | 2.5 | 1.5 | 6.5 | 5.5 |
| 4 | 11.0 | 9.5 | 9.5 | 8.5 | 3.0 | 2.5 | 4.5 | 4.0 | 3.0 | 1.5 | 7.0 | 5.5 |
| 5 | 11.0 | 9.0 | 8.5 | 7.5 | 3.5 | 3.0 | 4.0 | 1.5 | 3.5 | 2.0 | 7.0 | 5.0 |
| 6 | 11.5 | 9.5 | 8.5 | 7.5 | 3.0 | 2.5 | 1.5 | 0.0 | 4.0 | 3.0 | 7.0 | 5.5 |
| 7 | 12.5 | 10.0 | 9.0 | 7.5 | 2.5 | 2.0 | 0.5 | 0.0 | 4.0 | 2.5 | 7.0 | 6.5 |
| 8 | 12.5 | 11.0 | 9.5 | 8.5 | 4.0 | 2.5 | 0.0 | 0.0 | 4.0 | 3.0 | 7.0 | 6.5 |
| 9 | 12.0 | 10.5 | 8.5 | 7.5 | 5.0 | 4.0 | 0.0 | 0.0 | 5.0 | 3.5 | 7.5 | 6.0 |
| 10 | 11.5 | 10.5 | 8.5 | 7.0 | 4.5 | 3.5 | 1.0 | 0.0 | 6.5 | 4.5 | 6.5 | 5.5 |
| 11 | 12.5 | 11.0 | 8.0 | 7.5 | 3.5 | 3.0 | 2.5 | 1.0 | 7.0 | 5.5 | 7.0 | 5.5 |
| 12 | 11.5 | 10.0 | 7.5 | 6.5 | 3.0 | 2.5 | 3.5 | 2.5 | 7.5 | 6.0 | 7.5 | 6.0 |
| 13 | 11.0 | 9.5 | 6.5 | 5.5 | 3.0 | 2.5 | 4.5 | 3.5 | 8.5 | 7.5 | 6.5 | 5.5 |
| 14 | 10.5 | 9.0 | 7.5 | 6.5 | 3.5 | 2.5 | 4.5 | 3.5 | 8.0 | 6.5 | 6.5 | 5.0 |
| 15 | 10.0 | 8.5 | 9.5 | 7.5 | 4.0 | 3.5 | 4.0 | 3.5 | 7.0 | 5.5 | 6.5 | 5.0 |
| 16 | 9.5 | 8.0 | 9.5 | 9.5 | 4.5 | 3.5 | 4.5 | 3.5 | 7.0 | 5.5 | 7.0 | 4.5 |
| 17 | 8.5 | 7.5 | 10.0 | 9.5 | 4.0 | 3.5 | 5.0 | 4.0 | 7.0 | 6.0 | 6.5 | 5.0 |
| 18 | 8.0 | 6.5 | 10.0 | 10.0 | 4.5 | 4.0 | 5.0 | 4.5 | 6.5 | 5.0 | 7.5 | 6.0 |
| 19 | 8.0 | 6.5 | 10.0 | 8.0 | 4.0 | 2.0 | 4.5 | 4.0 | 6.0 | 4.5 | 8.5 | 7.5 |
| 20 | 7.5 | 6.0 | 8.0 | 6.5 | 2.0 | 1.5 | 4.0 | 3.5 | 6.5 | 5.5 | 8.5 | 7.0 |
| 21 | 7.5 | 6.0 | 7.5 | 6.5 | 2.0 | 1.0 | 4.5 | 4.0 | 6.5 | 5.5 | 9.0 | 6.5 |
| 22 | 7.5 | 6.5 | 8.0 | 7.5 | 2.5 | 1.5 | 5.0 | 4.0 | 6.5 | 6.0 | 9.5 | 6.5 |
| 23 | 8.0 | 6.5 | 8.0 | 6.5 | 3.5 | 2.5 | 3.5 | 3.0 | 6.0 | 4.5 | 9.0 | 7.5 |
| 24 | 7.5 | 7.0 | 6.5 | 5.5 | 3.5 | 2.5 | 2.5 | 2.0 | 5.5 | 5.0 | 8.0 | 6.5 |
| 25 | 8.5 | 7.5 | 7.0 | 6.5 | 4.0 | 3.0 | 1.5 | 1.0 | 5.5 | 5.0 | 8.5 | 7.0 |
| 26 | 8.5 | 7.5 | 6.5 | 4.5 | 5.0 | 4.0 | 1.5 | 0.5 | 6.0 | 5.0 | 9.0 | 7.0 |
| 27 | 7.5 | 6.5 | 4.0 | 2.0 | 5.5 | 5.0 | 1.5 | 0.0 | 7.0 | 6.0 | 8.5 | 6.5 |
| 28 | 7.5 | 6.0 | 2.0 | 1.5 | 5.0 | 4.0 | 1.5 | 0.0 | 7.0 | 6.5 | 7.0 | 5.5 |
| 29 | 7.5 | 7.0 | 2.0 | 1.5 | 4.5 | 4.0 | 1.5 | 0.0 | --- | --- | 7.5 | 6.0 |
| 30 | 8.5 | 7.5 | 2.5 | 1.5 | 4.5 | 3.5 | 1.5 | 0.0 | --- | --- | 8.5 | 6.0 |
| 31 | 9.0 | 8.0 | --- | --- | 3.5 | 2.5 | 3.0 | 1.5 | --- | --- | 7.0 | 6.0 |
| MONTH | 15.0 | 6.0 | 10.5 | 1.5 | 5.5 | 1.0 | 5.0 | 0.0 | 8.5 | 1.5 | 9.5 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 8.0 | 7.0 | 11.5 | 10.5 | 12.5 | 11.0 | 19.0 | 16.0 | 21.0 | 16.5 | 16.0 | 13.0 |
| 2 | 9.0 | 7.0 | 11.5 | 9.5 | 12.5 | 9.5 | 18.5 | 15.0 | 21.0 | 18.0 | 16.0 | 13.5 |
| 3 | 9.5 | 6.5 | 10.5 | 8.5 | 12.0 | 11.0 | 16.0 | 14.5 | 21.0 | 17.5 | 17.5 | 16.0 |
| 4 | 10.5 | 7.0 | 8.5 | 7.0 | 14.0 | 11.0 | 15.0 | 13.5 | 21.5 | 17.5 | 19.0 | 14.5 |
| 5 | 10.5 | 7.0 | 8.5 | 7.0 | 16.0 | 11.5 | 15.0 | 12.5 | 22.0 | 17.5 | 18.0 | 14.0 |
| 6 | 11.0 | 8.0 | 9.5 | 7.0 | 17.0 | 14.0 | --- | 12.5 | 21.5 | 17.5 | 17.0 | 15.0 |
| 7 | 11.5 | 8.0 | 9.0 | 6.5 | 16.0 | 14.5 | --- | --- | 21.0 | 17.5 | --- | --- |
| 8 | 10.5 | 8.5 | 11.0 | 7.0 | 16.0 | 13.0 | 18.5 | --- | 21.0 | 17.5 | --- | --- |
| 9 | 8.5 | 7.5 | 10.0 | 8.0 | 15.5 | 12.5 | 16.0 | 14.0 | 21.0 | 17.0 | --- | --- |
| 10 | 9.0 | 6.5 | 9.5 | 8.0 | 15.0 | 12.5 | 17.5 | 12.5 | 21.0 | 17.5 | --- | --- |
| 11 | 10.5 | 8.0 | 9.5 | 7.5 | 14.5 | 12.5 | 19.0 | 14.0 | 22.0 | 18.0 | --- | --- |
| 12 | 10.5 | 7.0 | 10.5 | 7.0 | 14.5 | 11.5 | 16.5 | 15.0 | 22.0 | 18.5 | --- | --- |
| 13 | 10.5 | 8.5 | 10.5 | 8.5 | 16.5 | 12.5 | 17.5 | 13.0 | 23.5 | 19.0 | 17.0 | 15.0 |
| 14 | 9.0 | 7.0 | 10.0 | 9.0 | 16.5 | 13.0 | 18.5 | 14.0 | 22.0 | 18.5 | 15.5 | 14.5 |
| 15 | 10.0 | 8.0 | 9.5 | 8.0 | 16.0 | 12.5 | 19.5 | 14.5 | 21.5 | 18.5 | 14.5 | 14.0 |
| 16 | 10.0 | 8.5 | 8.5 | 7.0 | 17.0 | 12.5 | 19.5 | 15.5 | 22.0 | 18.5 | 14.5 | 13.0 |
| 17 | 9.0 | 6.0 | 8.5 | 7.5 | 16.5 | 13.5 | 20.0 | 16.0 | 22.0 | 19.0 | 14.0 | 13.0 |
| 18 | 8.0 | 6.0 | 9.5 | 8.0 | 16.5 | 14.0 | 17.5 | 16.5 | 22.0 | 19.0 | 14.0 | 13.0 |
| 19 | 9.0 | 6.0 | 11.5 | 8.0 | 17.0 | 14.5 | 19.0 | 14.5 | 21.5 | 18.0 | 14.0 | 13.5 |
| 20 | 9.5 | 7.0 | 11.5 | 8.5 | 15.5 | 14.0 | 19.5 | 15.5 | 19.5 | 17.5 | 14.0 | 13.0 |
| 21 | 10.0 | 8.5 | 12.5 | 10.0 | 18.0 | 13.5 | 19.5 | 15.0 | 18.5 | 17.5 | 13.5 | 12.5 |
| 22 | 10.0 | 8.5 | 11.0 | 9.0 | 19.5 | 15.5 | 20.5 | 15.5 | 20.5 | 16.5 | 13.0 | 11.5 |
| 23 | 12.0 | 9.5 | 10.0 | 8.5 | 19.5 | 15.5 | 19.5 | 16.0 | 19.0 | 16.0 | 12.0 | 11.5 |
| 24 | 12.5 | 10.0 | 11.0 | 8.5 | 19.0 | 14.5 | 20.5 | 16.0 | 17.5 | 16.0 | 12.5 | 11.5 |
| 25 | 12.0 | 10.0 | 10.5 | 8.5 | 19.5 | 16.0 | 19.0 | 16.5 | 16.0 | 15.0 | 12.5 | 11.5 |
| 26 | 12.0 | 9.0 | 10.5 | 9.0 | 19.5 | 15.0 | 20.0 | 16.5 | 16.0 | 14.5 | 12.0 | 11.0 |
| 27 | 12.0 | 9.0 | 9.5 | 8.0 | 19.5 | 15.5 | 20.5 | 16.0 | 16.5 | 15.0 | 12.0 | 11.5 |
| 28 | 11.0 | 9.5 | 11.0 | 8.0 | 20.0 | 15.0 | 19.5 | 16.0 | 16.5 | 15.5 | 12.0 | 12.0 |
| 29 | 12.5 | 10.0 | 11.5 | 8.0 | 19.0 | 15.5 | 19.5 | 15.0 | 16.5 | 15.5 | 12.0 | 11.5 |
| 30 | 13.0 | 11.0 | 12.0 | 9.0 | 19.0 | 15.0 | 19.5 | 15.0 | 16.5 | 15.5 | 12.0 | 11.0 |
| 31 | --- | --- | 13.0 | 10.5 | --- | --- | 21.0 | 16.0 | 16.5 | 14.0 | --- | --- |
| MONTH | 13.0 | 6.0 | 13.0 | 6.5 | 20.0 | 9.5 | 21.0 | 12.5 | 23.5 | 14.0 | 19.0 | 11.0 |

WILLAMETTE RIVER BASIN

253

14150800 WINBERRY CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°54'50", long 122°41'15", in NE¼SE¼ sec.16, T.19 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.9 mi (1.4 km) upstream from Nelson Creek, 4.6 mi (7.4 km) east of Lowell, and at mile 4.4 (7.1 km).

DRAINAGE AREA.--43.9 mi² (113.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 863.70 ft (263.256 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 121 ft³/s (3.427 m³/s), 37.43 in/yr (951 mm/yr), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s (127 m³/s) Dec. 22, 1964, gage height, 8.07 ft (2.460 m); minimum, 1.5 ft³/s (0.042 m³/s) Sept. 4, 5, 8-10, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 846 ft³/s (24.0 m³/s) May 17, gage height, 3.67 ft (1.119 m), no peak above base of 1,000 ft³/s (28.3 m³/s); minimum, 4.5 ft³/s (0.13 m³/s) Aug. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-----------|----------|---------|-----------|----------|-------------|------|-------|-------|-------|
| 1 | 7.6 | 65 | 12 | 15 | 17 | 118 | 340 | 90 | 126 | 16 | 6.7 | 14 |
| 2 | 8.3 | 43 | 11 | 41 | 15 | 110 | 288 | 164 | 110 | 15 | 6.7 | 11 |
| 3 | 13 | 29 | 11 | 45 | 14 | 208 | 209 | 245 | 99 | 15 | 6.4 | 9.5 |
| 4 | 9.6 | 23 | 11 | 36 | 13 | 159 | 193 | 366 | 97 | 15 | 6.2 | 9.1 |
| 5 | 8.3 | 18 | 10 | 31 | 13 | 131 | 195 | 370 | 87 | 15 | 6.2 | 9.1 |
| 6 | 7.9 | 17 | 9.6 | 26 | 13 | 126 | 190 | 322 | 82 | 14 | 6.2 | 8.7 |
| 7 | 7.6 | 15 | 9.6 | 29 | 12 | 151 | 190 | 252 | 76 | 13 | 5.9 | 8.0 |
| 8 | 7.3 | 14 | 18 | 38 | 12 | 251 | 227 | 198 | 68 | 13 | 5.9 | 7.3 |
| 9 | 7.3 | 13 | 45 | 34 | 12 | 333 | 198 | 177 | 61 | 12 | 5.7 | 7.0 |
| 10 | 7.3 | 12 | 30 | 25 | 11 | 248 | 157 | 351 | 55 | 13 | 5.7 | 6.7 |
| 11 | 7.3 | 12 | 25 | 18 | 11 | 198 | 137 | 429 | 49 | 12 | 5.2 | 6.4 |
| 12 | 7.3 | 11 | 23 | 24 | 11 | 209 | 122 | 305 | 46 | 12 | 5.2 | 6.4 |
| 13 | 7.0 | 11 | 19 | 73 | 12 | 172 | 137 | 218 | 42 | 12 | 4.9 | 6.2 |
| 14 | 6.7 | 14 | 17 | 90 | 12 | 139 | 124 | 182 | 38 | 11 | 4.9 | 5.9 |
| 15 | 6.4 | 37 | 15 | 63 | 11 | 112 | 114 | 212 | 35 | 11 | 4.9 | 6.2 |
| 16 | 6.4 | 35 | 15 | 49 | 11 | 97 | 116 | 326 | 32 | 9.9 | 4.9 | 6.4 |
| 17 | 6.4 | 27 | 15 | 41 | 11 | 85 | 101 | 673 | 31 | 9.5 | 4.7 | 6.7 |
| 18 | 6.1 | 38 | 14 | 36 | 10 | 84 | 90 | 537 | 29 | 9.9 | 4.7 | 7.0 |
| 19 | 6.1 | 31 | 13 | 32 | 9.6 | 118 | 82 | 333 | 27 | 11 | 4.5 | 10 |
| 20 | 6.1 | 27 | 12 | 29 | 9.6 | 155 | 77 | 258 | 27 | 9.9 | 4.7 | 12 |
| 21 | 6.1 | 23 | 13 | 27 | 12 | 128 | 74 | 212 | 28 | 9.1 | 4.9 | 12 |
| 22 | 6.1 | 20 | 11 | 24 | 17 | 130 | 74 | 179 | 24 | 8.7 | 5.4 | 12 |
| 23 | 6.1 | 18 | 12 | 22 | 20 | 148 | 74 | 204 | 23 | 8.3 | 5.2 | 12 |
| 24 | 7.9 | 17 | 11 | 20 | 22 | 132 | 79 | 207 | 21 | 8.0 | 31 | 43 |
| 25 | 66 | 17 | 11 | 18 | 21 | 116 | 85 | 177 | 20 | 8.0 | 17 | 36 |
| 26 | 43 | 15 | 17 | 18 | 27 | 99 | 82 | 212 | 19 | 8.0 | 23 | 34 |
| 27 | 22 | 14 | 23 | 19 | 47 | 122 | 76 | 204 | 18 | 7.7 | 15 | 25 |
| 28 | 16 | 13 | 21 | 18 | 146 | 132 | 73 | 185 | 17 | 7.3 | 11 | 73 |
| 29 | 14 | 13 | 19 | 18 | --- | 150 | 70 | 155 | 16 | 7.3 | 32 | 66 |
| 30 | 13 | 12 | 17 | 21 | --- | 152 | 76 | 132 | 16 | 7.0 | 27 | 64 |
| 31 | 12 | --- | 16 | 15 | --- | 152 | --- | 116 | --- | 7.0 | 20 | --- |
| TOTAL | 362.2 | 654 | 506.2 | 995 | 552.2 | 4665 | 4050 | 7991 | 1419 | 335.6 | 301.7 | 540.6 |
| MEAN | 11.7 | 21.8 | 16.3 | 32.1 | 19.7 | 150 | 135 | 258 | 47.3 | 10.8 | 9.73 | 18.0 |
| MAX | 66 | 65 | 45 | 90 | 146 | 333 | 340 | 673 | 126 | 16 | 32 | 73 |
| MIN | 6.1 | 11 | 9.6 | 15 | 9.6 | 84 | 70 | 90 | 16 | 7.0 | 4.5 | 5.9 |
| CFSM | .27 | .50 | .37 | .73 | .45 | 3.42 | 3.08 | 5.88 | 1.08 | .25 | .22 | .41 |
| IN. | .31 | .55 | .43 | .84 | .47 | 3.95 | 3.43 | 6.77 | 1.20 | .28 | .26 | .46 |
| AC-FT | 718 | 1300 | 1000 | 1970 | 1100 | 9250 | 8030 | 15850 | 2810 | 666 | 598 | 1070 |
| CAL YR 1976 | TOTAL | 35396.6 | MEAN 96.7 | MAX 2090 | MIN 6.1 | CFSM 2.20 | IN 29.99 | AC-FT 70210 | | | | |
| WTR YR 1977 | TOTAL | 22372.5 | MEAN 61.3 | MAX 673 | MIN 4.5 | CFSM 1.40 | IN 18.96 | AC-FT 44380 | | | | |

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.5°C July 3, 1967; minimum, 0.0°C on several days in 1965, Jan. 4, 30, Feb. 2, 3, Dec. 6-17, 1972, and Jan. 5-12, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 24.0°C Aug. 2, 3, 11-13, 15, 16; minimum, 0.5°C Dec. 20, 21, Jan. 6-9, 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|------|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 16.0 | 13.5 | 10.5 | 9.5 | --- | --- | 3.5 | 2.0 | 4.5 | 3.5 | 6.0 | 5.5 |
| 2 | 15.0 | 13.5 | 11.5 | 10.0 | --- | --- | 4.5 | 3.5 | 3.5 | 2.0 | 6.0 | 5.5 |
| 3 | 13.5 | 12.0 | 11.0 | 10.0 | --- | --- | 4.0 | 3.5 | 3.0 | 1.0 | 6.5 | 5.5 |
| 4 | 12.0 | 9.5 | 10.0 | 9.0 | --- | --- | 5.0 | 4.0 | 4.0 | 1.5 | 7.5 | 5.5 |
| 5 | 12.0 | 8.5 | 9.0 | 7.5 | --- | --- | 4.5 | 1.5 | 4.0 | 2.0 | 7.5 | 5.0 |
| 6 | 12.5 | 9.5 | 9.5 | 7.5 | --- | --- | 1.0 | 0.5 | 5.0 | 3.0 | 7.0 | 5.5 |
| 7 | 13.5 | 10.0 | 10.0 | 7.5 | --- | --- | 1.0 | 0.5 | 4.5 | 2.0 | 7.0 | 6.5 |
| 8 | 12.5 | 11.0 | 10.0 | 8.5 | --- | --- | 1.0 | 0.5 | 5.0 | 3.0 | 7.0 | 6.5 |
| 9 | 12.5 | 10.0 | 8.5 | 7.0 | --- | --- | 1.0 | 0.5 | 6.0 | 3.0 | 6.5 | 5.0 |
| 10 | 12.5 | 11.0 | 8.5 | 6.5 | --- | --- | 1.0 | 1.0 | 8.0 | 4.5 | 7.0 | 5.0 |
| 11 | 13.5 | 12.0 | 9.0 | 7.5 | --- | --- | 2.0 | 1.0 | 8.0 | 5.5 | 7.5 | 5.0 |
| 12 | 12.0 | 10.0 | 7.5 | 6.0 | --- | --- | 3.5 | 2.0 | 8.5 | 6.0 | 6.5 | 5.0 |
| 13 | 11.5 | 9.0 | 7.0 | 5.0 | --- | --- | 5.0 | 3.5 | 10.0 | 8.0 | 6.5 | 5.0 |
| 14 | 11.0 | 8.5 | 8.5 | 7.0 | --- | --- | 4.5 | 4.0 | 8.5 | 6.0 | 6.5 | 4.5 |
| 15 | 10.5 | 7.5 | 10.0 | 8.0 | --- | --- | 5.0 | 4.0 | 7.5 | 5.0 | 7.0 | 4.5 |
| 16 | 10.0 | 7.5 | 11.0 | 9.5 | 4.5 | 3.5 | 5.0 | 3.5 | 8.0 | 5.0 | 7.0 | 4.0 |
| 17 | 9.0 | 6.5 | 11.0 | 10.0 | 4.0 | 3.0 | 5.5 | 4.0 | 8.5 | 6.0 | 6.5 | 4.5 |
| 18 | 8.5 | 6.0 | 10.5 | 10.0 | 5.0 | 4.0 | 6.0 | 4.5 | 7.5 | 4.5 | 6.5 | 5.5 |
| 19 | 8.0 | 5.5 | 10.0 | 7.5 | 4.0 | 1.5 | 5.5 | 4.0 | 7.0 | 4.0 | 7.5 | 6.0 |
| 20 | 7.5 | 5.5 | 8.0 | 7.0 | 1.5 | 0.5 | 5.0 | 3.5 | 7.5 | 5.0 | 7.0 | 5.5 |
| 21 | 7.5 | 5.5 | 8.5 | 6.5 | 1.5 | 0.5 | 6.0 | 4.5 | 7.5 | 5.5 | 8.0 | 5.0 |
| 22 | 7.5 | 6.0 | 9.0 | 7.5 | 2.0 | 1.0 | 6.0 | 4.0 | 6.5 | 5.5 | 9.0 | 5.5 |
| 23 | 8.5 | 6.5 | 8.5 | 6.0 | 4.0 | 2.0 | 4.0 | 3.0 | 5.5 | 4.5 | 7.5 | 6.0 |
| 24 | 8.0 | 6.5 | 6.5 | 5.0 | 3.0 | 2.0 | 3.0 | 2.0 | 6.0 | 4.5 | 7.0 | 5.5 |
| 25 | 9.0 | 7.0 | 8.0 | 6.5 | 4.0 | 2.0 | 2.5 | 1.0 | 5.5 | 5.0 | 7.5 | 5.5 |
| 26 | 8.5 | 7.0 | 6.5 | 3.5 | 5.0 | 4.0 | 2.0 | 1.0 | 7.0 | 5.5 | 8.0 | 5.5 |
| 27 | 8.0 | 6.0 | 3.5 | 2.0 | 5.5 | 4.5 | 1.5 | 1.0 | 8.0 | 6.0 | 7.0 | 5.0 |
| 28 | 8.5 | 6.0 | 2.5 | 1.5 | 4.5 | 3.0 | 2.0 | 1.0 | 7.0 | 6.0 | 5.5 | 4.0 |
| 29 | 9.0 | 7.5 | 3.0 | 1.5 | 5.0 | 3.5 | 1.5 | 1.0 | --- | --- | 6.5 | 4.0 |
| 30 | 10.0 | 7.5 | 3.0 | 2.0 | 5.0 | 3.5 | 1.5 | 0.5 | --- | --- | 7.5 | 4.5 |
| 31 | 10.0 | 7.5 | --- | --- | 3.5 | 2.0 | 4.5 | 2.0 | --- | --- | 6.0 | 4.5 |
| MONTH | 16.0 | 5.5 | 11.5 | 1.5 | 5.5 | 0.5 | 6.0 | 0.5 | 10.0 | 1.0 | 9.0 | 4.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 6.5 | 5.5 | 9.5 | 8.0 | 11.5 | 10.0 | --- | --- | 23.0 | 17.5 | 17.5 | 12.0 |
| 2 | 8.0 | 5.5 | 10.0 | 7.0 | 12.0 | 7.5 | --- | --- | 24.0 | 19.0 | 16.5 | 13.0 |
| 3 | 8.5 | 5.0 | 9.0 | 6.5 | 11.0 | 9.5 | --- | --- | 24.0 | 18.0 | 19.0 | 15.0 |
| 4 | 9.5 | 5.5 | 7.5 | 6.0 | 13.5 | 10.0 | --- | --- | 23.0 | --- | 19.5 | 16.5 |
| 5 | 9.5 | 5.5 | 7.5 | 6.0 | 16.5 | 10.5 | --- | --- | 23.0 | 18.0 | 18.0 | 16.5 |
| 6 | 10.0 | 6.0 | 8.5 | 5.5 | 17.0 | 12.5 | --- | --- | 23.0 | 18.0 | 19.0 | 16.0 |
| 7 | 10.5 | 6.5 | 8.5 | 5.5 | 16.0 | 14.0 | --- | --- | 22.5 | 18.0 | 18.0 | 14.0 |
| 8 | 8.5 | 6.5 | 10.5 | 6.0 | 16.0 | 12.5 | --- | --- | 23.5 | 18.5 | 17.0 | 13.5 |
| 9 | 7.5 | 5.5 | 9.5 | 6.5 | --- | --- | --- | --- | 23.0 | 17.5 | 16.0 | 13.0 |
| 10 | 8.0 | 4.5 | 8.0 | 6.5 | --- | --- | --- | --- | 23.5 | 18.0 | 16.0 | 12.5 |
| 11 | 9.0 | 6.5 | 8.0 | 6.0 | --- | --- | --- | --- | 24.0 | 18.5 | 16.5 | 12.5 |
| 12 | 10.0 | 5.5 | 9.5 | 6.0 | --- | --- | --- | --- | 24.0 | 19.0 | 16.5 | 12.5 |
| 13 | 8.5 | 6.5 | 10.0 | 7.0 | --- | --- | --- | --- | 24.0 | 18.5 | 17.5 | 13.5 |
| 14 | 8.5 | 4.5 | 9.0 | 7.0 | --- | --- | --- | --- | 23.5 | 18.5 | 16.5 | 14.5 |
| 15 | 9.0 | 6.0 | 7.5 | 6.5 | --- | --- | --- | --- | 24.0 | 19.5 | 15.0 | 13.5 |
| 16 | 8.5 | 6.0 | 8.0 | 6.0 | --- | --- | --- | --- | 24.0 | 19.5 | 14.5 | 12.5 |
| 17 | 8.5 | 4.5 | 7.5 | 6.5 | --- | --- | --- | --- | 22.0 | 19.0 | 14.5 | 12.5 |
| 18 | 8.0 | 4.0 | 8.5 | 6.5 | --- | --- | --- | --- | 22.0 | 18.0 | 15.0 | 11.5 |
| 19 | 9.0 | 3.5 | 10.5 | 7.0 | --- | --- | 21.0 | 15.5 | 20.0 | 18.0 | 12.0 | 11.0 |
| 20 | 9.0 | 4.5 | 11.0 | 7.0 | --- | --- | 21.5 | 15.5 | --- | 18.0 | 12.5 | 11.0 |
| 21 | 9.5 | 6.5 | 11.5 | 8.5 | --- | --- | 21.5 | 15.0 | 21.0 | 17.0 | 13.0 | 11.0 |
| 22 | 9.5 | 6.0 | 9.0 | 7.0 | --- | --- | 22.5 | 15.5 | 20.0 | 16.0 | 11.5 | 10.0 |
| 23 | 11.5 | 7.0 | 8.5 | 6.5 | --- | --- | 22.0 | 16.5 | 19.0 | 15.0 | 11.0 | 9.0 |
| 24 | 11.5 | 7.5 | 10.0 | 6.5 | --- | --- | 22.5 | 17.0 | 15.0 | 14.5 | 11.5 | --- |
| 25 | 10.5 | 8.0 | 9.5 | 7.0 | --- | --- | 20.0 | 17.5 | 17.0 | 14.5 | 11.5 | 9.0 |
| 26 | 11.0 | 6.5 | 9.0 | 7.0 | --- | --- | 22.0 | 17.0 | 17.5 | 14.5 | 12.0 | 9.5 |
| 27 | 11.5 | 6.0 | 8.0 | 6.5 | --- | --- | 22.0 | 17.0 | 17.0 | 15.5 | 10.5 | 9.5 |
| 28 | 10.0 | 7.0 | 10.5 | 7.0 | --- | --- | 21.0 | 16.0 | 18.0 | 15.0 | --- | --- |
| 29 | 12.0 | 8.0 | 11.5 | 6.5 | --- | --- | 21.0 | 15.0 | 16.0 | 15.0 | --- | --- |
| 30 | 12.0 | 9.0 | 11.5 | 7.0 | --- | --- | 22.0 | 15.5 | 18.0 | 15.5 | --- | --- |
| 31 | --- | --- | 12.0 | 9.5 | --- | --- | 23.0 | 16.5 | 17.0 | 13.0 | --- | --- |
| MONTH | 12.0 | 3.5 | 12.0 | 5.5 | 17.0 | 7.5 | 23.0 | 15.0 | 24.0 | 13.0 | 19.5 | 9.0 |

14150900 FALL CREEK LAKE NEAR LOWELL, OR

LOCATION.--Lat 43°56'40", long 122°45'20", in SW¼ sec.1, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, in regulating tower near the center of Fall Creek Dam on Fall Creek, 2.2 mi (3.5 km) northeast of Lowell, and at mile 7.2 (11.6 km).

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--January 1966 to current year. Prior to October 1971, published as Fall Creek Reservoir near Lowell.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1965 by Corps of Engineers; storage began January 1966. Total capacity is 125,100 acre-ft (154 hm³) at elevation 834 ft (254.2 m) and usable capacity is 115,500 acre-ft (142 hm³) between elevation 728 ft (221.9 m) and 834 ft (254.2 m). Reservoir used for flood control, conservation, and recreation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 123,200 acre-ft (152 hm³) May 30, 31, 1972; maximum elevation, 832.98 ft (253.892 m) May 31, 1972; minimum, no contents Nov. 7 to Dec. 6, 1969, Nov. 14-16, 1970, Nov. 18-25, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 121,500 acre-ft (150 hm³) June 16, elevation, 832.06 ft (253.612 m); minimum, 55 acre-ft (67,800 m³) Jan. 16, elevation, 678.84 ft (206.910 m).

CORRECTIONS.--Change in contents, in acre-feet, published in WRD Oreg. 1972, are in error and should not be used.

Capacity table (elevation, in feet, and total contents, in acre-feet)

| | | | | | |
|-------|-------|-----|--------|-----|---------|
| 670.4 | 0 | 725 | 8,340 | 785 | 53,120 |
| 679 | 59 | 735 | 13,270 | 795 | 64,590 |
| 685 | 366 | 745 | 19,480 | 805 | 77,880 |
| 695 | 1,400 | 755 | 26,130 | 815 | 97,750 |
| 705 | 2,850 | 765 | 33,770 | 825 | 109,200 |
| 715 | 5,200 | 775 | 42,580 | 833 | 123,200 |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------------|------------|------------|----------------|--------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 789.33 | 753.71 | 727.14 | 708.92 | 702.56 | 724.71 | 789.72 | 809.71 | 830.68 | 831.19 | 830.83 | 826.86 |
| 2 | 788.10 | 752.11 | 725.23 | 710.08 | 702.96 | 727.54 | 791.72 | 810.41 | 830.83 | 831.08 | 830.83 | 826.30 |
| 3 | 786.81 | 750.28 | 723.30 | 711.32 | 703.30 | 731.79 | 793.12 | 811.34 | 831.00 | 831.00 | 830.72 | 825.75 |
| 4 | 785.50 | 748.26 | 721.31 | 712.13 | 703.67 | 734.73 | 794.37 | 812.79 | 831.17 | 830.90 | 830.60 | 825.39 |
| 5 | 784.18 | 746.55 | 719.25 | 712.73 | 703.94 | 736.85 | 795.53 | 814.41 | 831.34 | 830.88 | 830.44 | 825.04 |
| 6 | 782.98 | 745.05 | 716.90 | 713.19 | 704.22 | 738.95 | 796.78 | 815.74 | 831.50 | 830.91 | 830.32 | 824.43 |
| 7 | 782.04 | 743.49 | 714.30 | 713.18 | 704.51 | 741.80 | 797.73 | 816.72 | 831.74 | 830.97 | 830.14 | 823.70 |
| 8 | 781.08 | 741.77 | 711.83 | 712.82 | 704.74 | 746.53 | 799.03 | 817.49 | 831.74 | 831.00 | 830.03 | 822.87 |
| 9 | 780.00 | 740.12 | 710.88 | 712.39 | 704.97 | 751.75 | 800.15 | 818.10 | 831.83 | 831.01 | 829.83 | 822.03 |
| 10 | 779.97 | 738.48 | 710.05 | 712.14 | 705.24 | 755.26 | 800.96 | 819.45 | 831.90 | 831.07 | 829.69 | 821.17 |
| 11 | 778.03 | 736.73 | 709.03 | 711.80 | 705.51 | 757.81 | 801.70 | 821.20 | 831.94 | 831.10 | 829.54 | 820.31 |
| 12 | 777.04 | 735.18 | 707.90 | 711.58 | 705.78 | 760.75 | 802.36 | 822.43 | 831.98 | 831.11 | 829.38 | 819.47 |
| 13 | 776.49 | 733.90 | 706.68 | 710.55 | 706.07 | 762.99 | 803.06 | 823.29 | 832.00 | 831.13 | 829.23 | 818.58 |
| 14 | 775.97 | 732.70 | 705.62 | 705.88 | 706.36 | 764.73 | 803.68 | 824.05 | 832.00 | 831.12 | 829.04 | 817.70 |
| 15 | 774.92 | 731.90 | 705.42 | 698.05 | 706.69 | 766.10 | 804.21 | 824.89 | 832.00 | 831.11 | 828.92 | 816.70 |
| 16 | 773.83 | 731.10 | 705.50 | 678.84 | 707.04 | 767.25 | 804.79 | 826.13 | 832.02 | 831.11 | 828.74 | 815.82 |
| 17 | 772.76 | 729.68 | 705.57 | 687.28 | 707.36 | 768.24 | 805.28 | 828.33 | 832.00 | 831.10 | 828.59 | 814.95 |
| 18 | 771.65 | 728.45 | 705.58 | 690.36 | 707.71 | 769.30 | 805.72 | 829.58 | 831.97 | 831.10 | 828.46 | 814.09 |
| 19 | 770.52 | 727.90 | 705.58 | 692.45 | 707.97 | 770.83 | 806.07 | 829.91 | 831.94 | 831.08 | 828.32 | 813.26 |
| 20 | 769.28 | 727.90 | 705.54 | 694.07 | 708.31 | 772.57 | 806.40 | 829.87 | 831.92 | 831.06 | 828.18 | 812.46 |
| 21 | 767.93 | 727.97 | 705.47 | 695.41 | 708.73 | 773.90 | 806.71 | 829.92 | 831.90 | 831.04 | 828.04 | 811.63 |
| 22 | 766.68 | 727.96 | 705.49 | 696.50 | 709.53 | 775.24 | 807.03 | 830.01 | 831.86 | 831.02 | 827.90 | 810.57 |
| 23 | 765.38 | 727.90 | 705.62 | 697.40 | 710.63 | 776.77 | 807.34 | 829.96 | 831.81 | 830.99 | 827.77 | 809.41 |
| 24 | 764.15 | 727.90 | 705.73 | 698.19 | 711.43 | 778.09 | 807.66 | 829.89 | 831.75 | 830.94 | 827.86 | 808.51 |
| 25 | 763.54 | 727.90 | 705.84 | 698.88 | 712.24 | 779.20 | 808.02 | 829.90 | 831.69 | 830.92 | 827.84 | 807.53 |
| 26 | 762.60 | 727.89 | 706.32 | 699.52 | 713.54 | 780.21 | 808.32 | 829.97 | 831.62 | 830.92 | 827.78 | 806.41 |
| 27 | 761.45 | 727.89 | 707.20 | 700.11 | 715.44 | 781.80 | 808.57 | 830.02 | 831.55 | 830.90 | 827.73 | 805.13 |
| 28 | 760.21 | 727.83 | 707.75 | 700.62 | 721.16 | 783.37 | 808.78 | 830.34 | 831.45 | 830.88 | 827.62 | 803.91 |
| 29 | 758.57 | 727.80 | 708.27 | 701.09 | --- | 784.85 | 809.03 | 830.56 | 831.37 | 830.83 | 827.52 | 802.47 |
| 30 | 756.70 | 727.73 | 708.50 | 701.50 | --- | 786.20 | 809.31 | 830.55 | 831.29 | 830.83 | 827.41 | 800.81 |
| 31 | 754.83 | --- | 708.72 | 702.00 | --- | 786.46 | --- | 830.56 | --- | 830.83 | 827.30 | --- |
| MEAN | 772.98 | 735.13 | 710.24 | 702.93 | 707.56 | 762.47 | 802.77 | 823.79 | 831.66 | 831.00 | 828.92 | 815.78 |
| MAX | 789.33 | 753.71 | 727.14 | 713.19 | 721.16 | 786.46 | 809.31 | 830.56 | 832.02 | 831.19 | 830.83 | 826.86 |
| MIN | 754.83 | 727.73 | 705.42 | 678.84 | 702.56 | 724.71 | 789.72 | 809.71 | 830.68 | 830.83 | 827.30 | 800.81 |
| (†) | 26,100 | 9,500 | 3,620 | 2,340 | 6,980 | 54,700 | 84,100 | 118,800 | 120,100 | 119,300 | 113,100 | 72,100 |
| (‡) | -33,300 | -16,600 | -5,880 | -1,280 | +4,640 | +47,720 | +29,400 | +34,700 | +1,300 | -800 | -6,200 | -41,000 |
| CAL YR 1976 | MEAN 787.18 | MAX 831.26 | MIN 705.42 | AC-FT† -5,890 | | | | | | | | |
| WTR YR 1977 | MEAN 777.46 | MAX 832.02 | MIN 678.84 | AC-FT† +12,700 | | | | | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14151000 FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK, OR

LOCATION.--Lat 43°56'40", long 122°46'25", in NW¼SE¼ sec.2, T.19 S., R.1 W., Lake County, Hydrologic Unit 17090001, on left bank 10 ft (3 m) upstream from highway bridge, 1.1 mi (1.8 km) downstream from Fall Creek Dam, 2.3 mi (3.7 km) southeast of town of Fall Creek, and at mile 6.1 (9.8 km).

DRAINAGE AREA.--186 mi² (482 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October to December 1911 (published as Big Fall Creek near Fall Creek; gage heights and discharge measurements only), September 1935 to current year.

REVISED RECORDS.--WSP 1094: 1946(M). WSP 1248: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 637.81 ft (194.404 m) above mean sea level (Corps of Engineers bench mark). Oct. 1 to Dec. 31, 1911, nonrecording gage at site 0.25 mi (0.40 km) downstream at different datum. Sept. 9, 1935, to Aug. 3, 1950, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. Flow regulated since 1966 by Fall Creek Lake (see station 14150900). No diversion above station.

AVERAGE DISCHARGE.--42 years, 586 ft³/s (16.60 m³/s), 42.78 in/yr (1,087 mm/yr), 424,600 acre-ft/yr (524 hm³/yr), adjusted for storage since January 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s (700 m³/s) Dec. 11, 1956, gage height, 18.80 ft (5.370 m), from rating curve extended above 9,700 ft³/s (275 m³/s); minimum, 1.5 ft³/s (0.042 m³/s) Oct. 7, 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,400 ft³/s (39.6 m³/s) Sept. 29, gage height, 4.68 ft (1.426 m); minimum, 6.6 ft³/s (0.19 m³/s) Mar. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|-------|
| 1 | 756 | 720 | 192 | 53 | 34 | 15 | 10 | 46 | 411 | 148 | 33 | 351 |
| 2 | 751 | 731 | 450 | 53 | 34 | 16 | 9.4 | 99 | 255 | 148 | 33 | 351 |
| 3 | 746 | 725 | 442 | 55 | 34 | 16 | 9.4 | 143 | 221 | 148 | 101 | 351 |
| 4 | 741 | 736 | 434 | 55 | 34 | 9.1 | 28 | 143 | 224 | 148 | 141 | 351 |
| 5 | 736 | 604 | 426 | 56 | 34 | 10 | 48 | 103 | 186 | 90 | 141 | 351 |
| 6 | 658 | 526 | 442 | 56 | 36 | 11 | 48 | 77 | 155 | 27 | 141 | 475 |
| 7 | 509 | 522 | 442 | 105 | 36 | 12 | 48 | 77 | 155 | 27 | 141 | 643 |
| 8 | 504 | 513 | 430 | 139 | 36 | 12 | 51 | 77 | 155 | 27 | 141 | 746 |
| 9 | 504 | 509 | 320 | 139 | 36 | 20 | 51 | 111 | 155 | 27 | 139 | 746 |
| 10 | 500 | 504 | 230 | 139 | 30 | 13 | 49 | 158 | 155 | 27 | 139 | 741 |
| 11 | 500 | 517 | 227 | 139 | 29 | 11 | 49 | 155 | 155 | 27 | 139 | 736 |
| 12 | 496 | 458 | 224 | 136 | 29 | 12 | 49 | 107 | 155 | 27 | 139 | 736 |
| 13 | 290 | 366 | 221 | 414 | 29 | 11 | 51 | 78 | 153 | 44 | 139 | 736 |
| 14 | 252 | 366 | 192 | 916 | 29 | 9.7 | 61 | 78 | 153 | 56 | 139 | 731 |
| 15 | 509 | 414 | 93 | 911 | 21 | 9.1 | 58 | 80 | 139 | 58 | 125 | 731 |
| 16 | 504 | 407 | 64 | 861 | 12 | 8.8 | 46 | 125 | 134 | 58 | 129 | 725 |
| 17 | 504 | 450 | 64 | 61 | 13 | 8.8 | 46 | 334 | 153 | 58 | 129 | 725 |
| 18 | 500 | 446 | 64 | 32 | 13 | 8.8 | 46 | 766 | 153 | 58 | 129 | 725 |
| 19 | 500 | 261 | 64 | 33 | 14 | 8.8 | 63 | 979 | 153 | 58 | 129 | 720 |
| 20 | 526 | 113 | 64 | 34 | 14 | 8.8 | 58 | 950 | 153 | 58 | 129 | 720 |
| 21 | 548 | 95 | 64 | 33 | 16 | 8.4 | 61 | 699 | 153 | 58 | 129 | 720 |
| 22 | 548 | 97 | 55 | 33 | 16 | 8.4 | 58 | 590 | 150 | 58 | 129 | 867 |
| 23 | 544 | 97 | 52 | 33 | 16 | 9.4 | 46 | 746 | 150 | 58 | 129 | 990 |
| 24 | 539 | 86 | 52 | 33 | 16 | 10 | 46 | 679 | 150 | 58 | 129 | 979 |
| 25 | 539 | 77 | 52 | 32 | 15 | 9.4 | 63 | 509 | 150 | 53 | 129 | 973 |
| 26 | 535 | 77 | 52 | 33 | 12 | 9.4 | 58 | 658 | 150 | 51 | 129 | 973 |
| 27 | 531 | 77 | 52 | 32 | 13 | 10 | 46 | 585 | 150 | 51 | 129 | 1080 |
| 28 | 526 | 77 | 52 | 33 | 16 | 10 | 63 | 434 | 150 | 52 | 129 | 1190 |
| 29 | 633 | 77 | 53 | 33 | --- | 10 | 56 | 392 | 148 | 52 | 216 | 1310 |
| 30 | 736 | 77 | 53 | 33 | --- | 9.4 | 46 | 531 | 148 | 49 | 320 | 1370 |
| 31 | 725 | --- | 53 | 33 | --- | 9.4 | --- | 377 | --- | 32 | 351 | --- |
| TOTAL | 17390 | 10725 | 5675 | 4748 | 667 | 334.7 | 1421.8 | 10886 | 5072 | 1891 | 4395 | 22843 |
| MEAN | 561 | 358 | 183 | 153 | 23.8 | 10.8 | 47.4 | 351 | 169 | 61.0 | 142 | 761 |
| MAX | 756 | 736 | 450 | 916 | 36 | 20 | 63 | 979 | 411 | 148 | 351 | 1370 |
| MIN | 252 | 77 | 52 | 32 | 12 | 8.4 | 9.4 | 46 | 134 | 27 | 33 | 351 |
| AC-FT | 34490 | 21270 | 11260 | 9420 | 1320 | 664 | 2820 | 21590 | 10060 | 3750 | 8720 | 45310 |
| MEAN† | 19.4 | 78.5 | 87.5 | 132 | 107 | 787 | 541 | 915 | 191 | 48.0 | 41.0 | 72.4 |
| CFSM† | .10 | .42 | .47 | .71 | .58 | 4.23 | 2.91 | 4.92 | 1.03 | .26 | .22 | .39 |
| IN.† | .12 | .47 | .54 | .82 | .60 | 4.88 | 3.25 | 5.68 | 1.15 | .30 | .25 | .43 |
| AC-FT† | 1,190 | 4,670 | 5,380 | 8,140 | 5,960 | 48,384 | 32,220 | 56,290 | 11,360 | 2,950 | 2,520 | 4,310 |

CAL YR 1976 TOTAL 177,849.0 MEAN 486 MAX 3,920 MIN 27 AC-FT 352,800 MEAN† 478 CFSM† 2.57 IN.† 34.98 AC-FT† 346,910
WTR YR 1977 TOTAL 86,048.5 MEAN 236 MAX 1,370 MIN 8.4 AC-FT 170,700 MEAN† 253 CFSM† 1.36 IN.† 18.49 AC-FT† 183,400

† Adjusted for change in contents in Fall Creek Lake.

14151000 FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1950 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C July 28, 1958; minimum, 0.5°C on several days in 1962 and 1965.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.0°C Aug. 15; minimum recorded, 3.0°C Jan. 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 9.0 | 9.0 | 14.5 | 14.5 | --- | --- | 5.5 | 5.0 | 4.5 | 3.5 | 8.5 | 7.0 |
| 2 | 9.5 | 9.0 | 14.5 | 14.0 | --- | --- | 5.5 | 5.0 | 4.5 | 3.5 | 9.5 | 7.0 |
| 3 | 9.5 | 9.5 | 14.0 | 14.0 | --- | --- | 5.0 | 5.0 | 5.0 | 4.0 | 9.5 | 6.5 |
| 4 | 10.0 | 9.5 | 14.0 | 14.0 | --- | --- | 5.5 | 5.0 | 5.0 | 4.0 | 8.5 | 7.0 |
| 5 | 10.0 | 10.0 | 14.0 | 14.0 | --- | --- | 5.0 | 4.0 | 5.5 | 4.0 | 9.0 | 7.5 |
| 6 | 10.5 | 10.0 | 14.0 | 14.0 | --- | --- | 5.0 | 4.0 | 5.0 | 4.5 | 8.5 | 7.5 |
| 7 | 11.0 | 10.5 | 14.0 | 14.0 | --- | --- | 5.0 | 3.5 | 5.5 | 4.5 | 10.0 | 7.0 |
| 8 | 11.5 | 11.0 | 14.0 | 13.5 | --- | --- | 4.5 | 3.5 | 6.0 | 4.5 | 10.0 | 7.0 |
| 9 | 12.0 | 11.5 | 13.5 | 13.5 | --- | --- | 4.5 | 3.0 | 6.5 | 5.0 | 9.0 | 7.0 |
| 10 | 12.0 | 12.0 | 13.5 | 13.5 | --- | --- | 5.0 | 4.0 | 6.5 | 5.5 | 9.5 | 7.0 |
| 11 | 13.5 | 13.0 | 13.5 | 13.5 | --- | --- | --- | --- | 7.5 | 5.5 | --- | 7.0 |
| 12 | 14.0 | 13.5 | 13.5 | 13.5 | --- | --- | --- | --- | 7.5 | 6.0 | --- | --- |
| 13 | 14.5 | 13.0 | 13.5 | 13.0 | --- | --- | --- | --- | 7.5 | 6.0 | --- | --- |
| 14 | 14.5 | 12.0 | 13.0 | 13.0 | --- | --- | --- | --- | 9.0 | 6.0 | 9.5 | --- |
| 15 | 15.0 | 14.5 | 13.0 | 12.0 | --- | --- | --- | --- | 8.0 | 6.0 | 10.0 | 7.0 |
| 16 | 15.5 | 15.0 | 12.0 | 11.5 | --- | --- | --- | --- | 9.0 | 6.5 | 10.0 | 7.0 |
| 17 | 15.5 | 15.5 | 11.5 | 11.5 | --- | --- | --- | --- | 9.0 | 6.0 | 9.5 | 7.5 |
| 18 | 16.0 | 15.5 | 11.5 | 11.5 | --- | --- | --- | --- | 9.0 | 6.0 | 9.0 | 8.0 |
| 19 | 16.0 | 15.5 | 11.5 | 11.5 | 6.0 | 5.5 | --- | --- | 8.5 | 6.5 | 10.5 | 8.0 |
| 20 | 16.0 | 15.5 | 11.5 | 11.0 | 6.0 | 5.5 | --- | --- | 9.0 | 6.5 | 10.5 | 8.0 |
| 21 | 16.0 | 15.5 | 11.0 | 10.5 | 6.0 | 5.5 | --- | --- | 8.5 | 7.5 | 11.0 | 7.5 |
| 22 | 16.0 | 15.5 | 11.0 | --- | 5.5 | 5.0 | --- | --- | 8.0 | 7.0 | 11.5 | 7.5 |
| 23 | 16.0 | 15.5 | --- | --- | 5.5 | 5.0 | --- | --- | 7.5 | 6.5 | 10.0 | 8.5 |
| 24 | 15.5 | 15.5 | --- | --- | 5.5 | 4.5 | --- | --- | 7.0 | 6.5 | 10.0 | 8.0 |
| 25 | 15.5 | 15.0 | --- | --- | 5.0 | 4.5 | --- | --- | 8.0 | 6.5 | 10.5 | 8.0 |
| 26 | 15.0 | 14.5 | --- | --- | 5.5 | 5.0 | --- | --- | 8.0 | 7.0 | 10.5 | 8.0 |
| 27 | 14.5 | 14.5 | --- | --- | 5.5 | 5.0 | --- | --- | 8.0 | 7.0 | 10.0 | 8.5 |
| 28 | 14.5 | 14.5 | --- | --- | 5.5 | 5.0 | --- | --- | 7.5 | 6.5 | 9.5 | 7.5 |
| 29 | 14.5 | 14.5 | --- | --- | 5.5 | 5.0 | --- | --- | --- | --- | 10.5 | 8.0 |
| 30 | 14.5 | 14.5 | --- | --- | 5.5 | 5.0 | --- | --- | --- | --- | 11.5 | 7.5 |
| 31 | 14.5 | 14.5 | --- | --- | 5.5 | 5.0 | 4.5 | --- | --- | --- | 9.0 | 8.0 |
| MONTH | 16.0 | 9.0 | 14.5 | 10.5 | 6.0 | 4.5 | 5.5 | 3.0 | 9.0 | 3.5 | 11.5 | 6.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 10.0 | 8.0 | 9.5 | 9.0 | 10.0 | 9.5 | 13.5 | 12.5 | 13.5 | 9.0 | 9.5 | 9.0 |
| 2 | 11.0 | 8.0 | 9.5 | 9.0 | 12.0 | 10.0 | 14.0 | 12.5 | 13.5 | 9.0 | 9.5 | 9.0 |
| 3 | 12.0 | 7.5 | 9.5 | 8.5 | 12.0 | 11.0 | 13.5 | 12.5 | 15.5 | 9.0 | 9.5 | 9.0 |
| 4 | 10.5 | 7.5 | 9.5 | 9.0 | 12.0 | 11.5 | 13.5 | 13.0 | 16.0 | 15.0 | 9.5 | 9.0 |
| 5 | 10.0 | 7.5 | 10.5 | 8.5 | 12.5 | 11.5 | 14.0 | 9.0 | 15.5 | 15.0 | 9.5 | 9.0 |
| 6 | 10.0 | 7.5 | 11.0 | 8.5 | 12.5 | 11.5 | 13.5 | 8.5 | 16.0 | 15.0 | 9.5 | 9.0 |
| 7 | 10.0 | 7.5 | 10.0 | 8.5 | 13.0 | 11.5 | 13.5 | 8.5 | 16.0 | 15.0 | 9.5 | 9.0 |
| 8 | 9.0 | 7.5 | 11.0 | 9.0 | 12.5 | 11.5 | 13.0 | 8.5 | 16.0 | 15.0 | 9.5 | 9.0 |
| 9 | 9.5 | 7.5 | 14.0 | 8.5 | 12.5 | 11.0 | 11.0 | 8.5 | 16.0 | 15.5 | 9.5 | 9.0 |
| 10 | 9.5 | 7.0 | 12.5 | 10.5 | 12.5 | 11.5 | 13.5 | 8.5 | 16.0 | 16.0 | 9.5 | 9.0 |
| 11 | 9.5 | 7.5 | 13.0 | 12.0 | 12.0 | 11.5 | 13.5 | 8.5 | 16.5 | 15.5 | 10.5 | 9.5 |
| 12 | 10.0 | 7.5 | 13.5 | 11.0 | 12.5 | 11.5 | 10.5 | 8.5 | 16.5 | 15.5 | 10.0 | 9.5 |
| 13 | 9.5 | 7.5 | 13.0 | 10.5 | 12.5 | 11.5 | 11.5 | 8.0 | 17.0 | 16.0 | 10.0 | 9.0 |
| 14 | 10.5 | 7.0 | 13.0 | 10.5 | 12.5 | 11.5 | 11.5 | 8.5 | 17.0 | 16.0 | 10.0 | 9.5 |
| 15 | 10.0 | 8.0 | 12.5 | 11.5 | 12.5 | 11.5 | 11.5 | 8.5 | 18.0 | 9.0 | 10.0 | 9.5 |
| 16 | 10.5 | 8.5 | 12.5 | 10.5 | 13.5 | 11.5 | 11.5 | 8.5 | 10.5 | 9.0 | 10.0 | 9.5 |
| 17 | 11.0 | 8.0 | 11.0 | 9.0 | 13.0 | 11.5 | 11.5 | 8.5 | 10.0 | 9.0 | 10.0 | 9.5 |
| 18 | 10.5 | 8.0 | 9.5 | 8.5 | 12.5 | 12.0 | 10.0 | 8.5 | 10.0 | 9.0 | 10.0 | 10.0 |
| 19 | 10.5 | 8.0 | 9.0 | 8.5 | 13.0 | 12.0 | 11.5 | 8.5 | 10.0 | 9.0 | 10.0 | 10.0 |
| 20 | 10.5 | 8.5 | 9.0 | 8.5 | 12.5 | 12.0 | 11.5 | 8.5 | 10.0 | 9.0 | 10.0 | 10.0 |
| 21 | 9.5 | 8.5 | 9.5 | 8.5 | 13.5 | 12.0 | 11.5 | 8.5 | 9.5 | 9.0 | 10.0 | 10.0 |
| 22 | 11.0 | 8.5 | 9.5 | 8.5 | 13.5 | 12.0 | 11.5 | 8.5 | 10.0 | 9.0 | 10.0 | 10.0 |
| 23 | 11.0 | 9.0 | 9.0 | 9.0 | 13.5 | 12.0 | 11.5 | 8.5 | 10.0 | 9.0 | 10.5 | 10.0 |
| 24 | 11.0 | 9.0 | 9.5 | 8.5 | 13.5 | 12.0 | 11.5 | 9.0 | 10.0 | 9.0 | 10.5 | 10.0 |
| 25 | 10.0 | 8.5 | 10.0 | 9.0 | 13.5 | 12.0 | 11.5 | 9.0 | 9.5 | 9.0 | 10.5 | 10.0 |
| 26 | 11.5 | 8.5 | 9.5 | 8.5 | 13.5 | 12.0 | 12.0 | 9.0 | 10.0 | 9.0 | 10.5 | 10.0 |
| 27 | 11.5 | 8.5 | 10.0 | 9.0 | 13.5 | 12.5 | 12.0 | 8.5 | 10.0 | 9.0 | 10.5 | 10.5 |
| 28 | 10.0 | 9.0 | 10.5 | 9.5 | 14.0 | 12.5 | 11.5 | 8.5 | 10.0 | 9.0 | 10.5 | 10.5 |
| 29 | 11.0 | 9.0 | 10.5 | 9.5 | 13.5 | 12.0 | 11.5 | 8.5 | 9.5 | 9.0 | 11.0 | 10.5 |
| 30 | 11.5 | 9.0 | 10.0 | 9.0 | 14.0 | 12.5 | 12.0 | 8.5 | 9.5 | 9.0 | 11.0 | 11.0 |
| 31 | --- | --- | 11.0 | 9.5 | --- | --- | 13.5 | 8.5 | 9.5 | 9.0 | --- | --- |
| MONTH | 12.0 | 7.0 | 14.0 | 8.5 | 14.0 | 9.5 | 14.0 | 8.0 | 18.0 | 9.0 | 11.0 | 9.0 |

WILLAMETTE RIVER BASIN

14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR

LOCATION.--Lat 43°59'55", long 122°54'20", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090001, on right bank 25 ft (8 m) downstream from highway bridge at Jasper, 0.1 mi (0.2 km) downstream from Hills Creek, and at mile 195.0 (313.8 km).

DRAINAGE AREA.--1,340 mi² (3,471 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1905 to February 1912, July 1913 to March 1917, October 1952 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1907-8, 1910-12, 1914-16, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 513.45 ft (156.500 m) above mean sea level. September 1905 to February 1912 and July 1913 to March 1917, nonrecording gage at approximately same site at datum about 1.5 ft (0.46 m) higher. Oct. 22, 1952, to Sept. 30, 1953, nonrecording gage at site 25 ft (8 m) upstream at same datum.

REMARKS.--Water-discharge records excellent. Flow regulated since 1953 by Lookout Point Lake (see station 14149000), since 1961 by Hills Creek Lake (see station 14145100), and since 1966 by Fall Creek Lake (see station 14150900).

AVERAGE DISCHARGE.--34 years (water years 1906-11, 1914-16, 1953-77), 4,116 ft³/s (116.6 m³/s), 2,982,000 acre-ft/yr (3.68 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,000 ft³/s (2,660 m³/s) Nov. 23, 1909, gage height, 17.4 ft (5.20 m), datum then in use, from graph based on gage readings, from rating curve extended above 42,000 ft³/s (1,190 m³/s); minimum, 366 ft³/s (10.4 m³/s) Dec. 5, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,420 ft³/s (154 m³/s) Nov. 1, gage height, 4.92 ft (1.500 m); minimum, 524 ft³/s (14.8 m³/s) Apr. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|--------|-------|-------|-------|-------|-------|-------|-------|---------|--------|--------|
| 1 | 4610 | 5230 | 1580 | 1250 | 879 | 1370 | 893 | 565 | 1490 | 1450 | 1860 | 2340 |
| 2 | 4420 | 5090 | 1900 | 1300 | 851 | 1230 | 879 | 652 | 1320 | 1460 | 1840 | 2180 |
| 3 | 4220 | 4700 | 1940 | 1360 | 837 | 1490 | 823 | 988 | 1230 | 1470 | 1880 | 2100 |
| 4 | 4260 | 4120 | 2100 | 1340 | 837 | 1270 | 788 | 1200 | 1240 | 1470 | 1960 | 2120 |
| 5 | 4020 | 4040 | 1930 | 1330 | 924 | 1110 | 851 | 1220 | 1170 | 1430 | 1960 | 2190 |
| 6 | 3980 | 3880 | 1760 | 1330 | 916 | 1040 | 830 | 1120 | 1100 | 1360 | 1960 | 2300 |
| 7 | 3820 | 3860 | 1840 | 1360 | 851 | 1190 | 809 | 972 | 1120 | 1340 | 1960 | 2490 |
| 8 | 3820 | 3860 | 1890 | 1410 | 830 | 1420 | 932 | 872 | 1120 | 1340 | 1960 | 2840 |
| 9 | 3780 | 3760 | 1840 | 1400 | 767 | 1920 | 924 | 823 | 1110 | 1340 | 1950 | 2940 |
| 10 | 3880 | 4040 | 1620 | 1410 | 748 | 1710 | 858 | 1000 | 1100 | 1350 | 1950 | 2940 |
| 11 | 3860 | 3900 | 1580 | 1400 | 742 | 1430 | 816 | 1230 | 1100 | 1340 | 1940 | 2940 |
| 12 | 3840 | 3800 | 1570 | 1400 | 736 | 1530 | 781 | 1120 | 1080 | 1340 | 1940 | 2940 |
| 13 | 3480 | 3540 | 1560 | 1670 | 736 | 1380 | 795 | 948 | 1070 | 1370 | 1940 | 3020 |
| 14 | 3060 | 3520 | 1530 | 2340 | 736 | 1240 | 788 | 879 | 1080 | 1390 | 1950 | 3020 |
| 15 | 3980 | 3610 | 1430 | 2280 | 688 | 1140 | 767 | 916 | 1030 | 1540 | 2220 | 2760 |
| 16 | 3860 | 3570 | 1380 | 2230 | 620 | 1040 | 736 | 1200 | 1000 | 1670 | 2240 | 2710 |
| 17 | 3860 | 4320 | 1360 | 1470 | 664 | 865 | 718 | 1730 | 1020 | 1700 | 2240 | 2740 |
| 18 | 4000 | 4300 | 1340 | 1310 | 635 | 802 | 688 | 2240 | 1020 | 1710 | 2250 | 2900 |
| 19 | 3980 | 3940 | 1350 | 1270 | 630 | 837 | 682 | 2380 | 1020 | 1730 | 2250 | 2840 |
| 20 | 3920 | 3780 | 1370 | 1270 | 625 | 879 | 682 | 2200 | 1020 | 1800 | 2270 | 2840 |
| 21 | 4420 | 3680 | 1390 | 1240 | 646 | 816 | 664 | 1900 | 1030 | 1870 | 2270 | 2600 |
| 22 | 4500 | 3780 | 1380 | 1140 | 706 | 788 | 664 | 1650 | 1070 | 1860 | 2280 | 2970 |
| 23 | 4520 | 3470 | 1320 | 1130 | 754 | 830 | 610 | 1860 | 1040 | 1860 | 2270 | 3470 |
| 24 | 4440 | 3060 | 1240 | 1130 | 774 | 879 | 560 | 1770 | 1160 | 1860 | 2310 | 3540 |
| 25 | 4760 | 2230 | 1240 | 1020 | 760 | 844 | 570 | 1570 | 1530 | 1870 | 1990 | 3410 |
| 26 | 4760 | 1960 | 1250 | 900 | 809 | 788 | 580 | 1700 | 1480 | 1890 | 1730 | 3390 |
| 27 | 4650 | 1950 | 1310 | 900 | 858 | 872 | 545 | 1830 | 1470 | 1880 | 1950 | 3960 |
| 28 | 4680 | 2070 | 1280 | 893 | 1470 | 964 | 545 | 1750 | 1470 | 1890 | 1950 | 4440 |
| 29 | 4900 | 2120 | 1260 | 886 | --- | 980 | 550 | 1610 | 1460 | 1890 | 2140 | 4280 |
| 30 | 4960 | 1660 | 1240 | 886 | --- | 924 | 536 | 1700 | 1460 | 1880 | 2300 | 3740 |
| 31 | 4680 | --- | 1240 | 879 | --- | 865 | --- | 1520 | --- | 1860 | 2350 | --- |
| TOTAL | 129920 | 106840 | 47020 | 41134 | 22029 | 34443 | 21864 | 43115 | 35610 | 50210 | 64060 | 88950 |
| MEAN | 4191 | 3561 | 1517 | 1327 | 787 | 1111 | 729 | 1391 | 1187 | 1620 | 2066 | 2965 |
| MAX | 4960 | 5230 | 2100 | 2340 | 1470 | 1920 | 932 | 2380 | 1530 | 1890 | 2350 | 4440 |
| MIN | 3060 | 1660 | 1240 | 879 | 620 | 788 | 536 | 565 | 1000 | 1340 | 1730 | 2100 |
| AC-FT | 257700 | 211900 | 93260 | 81590 | 43690 | 68320 | 43370 | 85520 | 70630 | 99590 | 127100 | 176400 |
| CAL YR 1976 TOTAL | 1357760 | | | 3710 | | 16400 | | 1240 | | 2693000 | | |
| WTR YR 1977 TOTAL | | 685195 | | 1877 | | 5230 | | 536 | | 1359000 | | |

14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1953 to December 1962, October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.5°C July 27, 28, 1958; minimum, 1.5°C Jan. 25-27, 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.5°C June 16, 21, 23, 24; minimum, 3.5°C Jan. 8, 9, 14, 26-28, 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 15.0 | 13.5 | 13.5 | 13.0 | 9.0 | 7.5 | 6.5 | 5.5 | 6.5 | 4.5 | 6.5 | 5.5 |
| 2 | 14.0 | 13.5 | 13.5 | 13.0 | 9.0 | 7.5 | 6.5 | 5.5 | 5.0 | 4.5 | 6.5 | 6.0 |
| 3 | 14.5 | 13.5 | 13.5 | 13.0 | 8.5 | 7.5 | 6.5 | 5.0 | 6.0 | 4.5 | 7.5 | 6.0 |
| 4 | 15.0 | 13.0 | 13.5 | 13.0 | 8.5 | 7.5 | 6.5 | 5.5 | 6.5 | 4.0 | 8.5 | 5.5 |
| 5 | 15.0 | 13.0 | 13.0 | 12.5 | 8.0 | 7.5 | 6.0 | 4.5 | 5.5 | 4.0 | 9.0 | 5.5 |
| 6 | 15.0 | 13.0 | 13.0 | 12.5 | 8.5 | 7.5 | 5.5 | 4.0 | 7.0 | 4.5 | 8.0 | 6.0 |
| 7 | 16.0 | 14.0 | 13.0 | 12.5 | 8.5 | 7.5 | 5.5 | 4.0 | 6.0 | 5.0 | 8.0 | 7.0 |
| 8 | 15.5 | 14.0 | 13.5 | 12.5 | 8.5 | 7.0 | 5.0 | 3.5 | 6.5 | 4.5 | 7.5 | 7.0 |
| 9 | 16.0 | 14.0 | 13.0 | 12.0 | 8.5 | 7.0 | 5.0 | 3.5 | 7.5 | 4.5 | 7.0 | 6.0 |
| 10 | 15.5 | 14.5 | 13.0 | 12.0 | 7.5 | 6.5 | 5.5 | 4.0 | 8.5 | 5.0 | 8.0 | 5.5 |
| 11 | 16.5 | 14.5 | 13.0 | 12.0 | 7.5 | 7.0 | 5.0 | 4.5 | 7.5 | 5.5 | 9.0 | 5.5 |
| 12 | 16.0 | 14.5 | 12.5 | 11.5 | 7.5 | 7.0 | 5.5 | 4.5 | 8.0 | 5.5 | 8.0 | 6.5 |
| 13 | 16.5 | 14.5 | 12.5 | 11.5 | 8.0 | 6.5 | 5.5 | 4.0 | 8.0 | 6.0 | 8.5 | 5.5 |
| 14 | 16.5 | 14.5 | 12.5 | 11.5 | 7.5 | 6.5 | 5.0 | 3.5 | 8.0 | 6.0 | 8.0 | 5.5 |
| 15 | 16.0 | 14.5 | 12.5 | 12.0 | 8.0 | 7.0 | 5.5 | 4.0 | 8.5 | 5.0 | 9.5 | 6.0 |
| 16 | 16.0 | 14.5 | 13.0 | 12.0 | 8.0 | 7.0 | 5.5 | 4.5 | 9.0 | 5.5 | 9.5 | 6.0 |
| 17 | 16.0 | 14.5 | 12.5 | 12.0 | 8.0 | 6.5 | 6.5 | 4.5 | 9.0 | 6.0 | 8.5 | 6.5 |
| 18 | 16.0 | 14.0 | 12.5 | 12.0 | 8.0 | 7.0 | 6.5 | 5.0 | 9.5 | 5.5 | 8.0 | 7.0 |
| 19 | 15.5 | 14.0 | 12.0 | 11.5 | 7.5 | 7.0 | 6.5 | 5.0 | 9.0 | 5.0 | 9.5 | 7.0 |
| 20 | 16.0 | 14.0 | 11.5 | 11.5 | 7.5 | 6.5 | 6.5 | 5.0 | 8.0 | 6.0 | 10.5 | 7.0 |
| 21 | 15.5 | 14.0 | 12.0 | 11.0 | 7.0 | 6.0 | 6.5 | 5.0 | 8.5 | 6.0 | 11.5 | 6.5 |
| 22 | 15.0 | 14.5 | 11.5 | 11.5 | 6.5 | 6.0 | 6.5 | 5.0 | 8.0 | 6.0 | 12.0 | 7.0 |
| 23 | 15.0 | 14.0 | 11.5 | 11.0 | 7.5 | 6.0 | 6.0 | 4.5 | 6.5 | 5.5 | 10.0 | 8.0 |
| 24 | 14.5 | 14.0 | 11.0 | 11.0 | 6.5 | 5.5 | 6.0 | 4.5 | 6.5 | 5.5 | 10.0 | 7.0 |
| 25 | 14.0 | 13.5 | 11.5 | 10.5 | 7.0 | 6.0 | 6.5 | 4.0 | 6.5 | 5.5 | 11.0 | 7.0 |
| 26 | 14.5 | 13.0 | 10.5 | 9.5 | 7.0 | 6.5 | 6.0 | 3.5 | 7.5 | 6.0 | 10.0 | 7.5 |
| 27 | 14.5 | 13.0 | 10.5 | 9.0 | 7.5 | 6.5 | 6.0 | 3.5 | 8.0 | 6.5 | 9.5 | 7.0 |
| 28 | 14.0 | 13.0 | 10.0 | 9.0 | 6.5 | 6.0 | 6.5 | 3.5 | 7.5 | 6.0 | 9.0 | 6.5 |
| 29 | 13.5 | 13.5 | 9.5 | 8.5 | 6.5 | 6.0 | 5.0 | 4.0 | --- | --- | 9.5 | 6.0 |
| 30 | 14.0 | 13.5 | 9.5 | 8.5 | 6.5 | 6.0 | 5.5 | 3.5 | --- | --- | 11.0 | 6.0 |
| 31 | 14.0 | 13.0 | --- | --- | 6.5 | 6.0 | 6.0 | 4.5 | --- | --- | 7.5 | 6.5 |
| MONTH | 16.5 | 13.0 | 13.5 | 8.0 | 9.0 | 5.5 | 6.5 | 3.5 | 9.5 | 4.0 | 12.0 | 5.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 9.5 | 7.0 | 12.5 | 11.0 | 14.0 | 11.0 | 17.0 | 12.5 | 17.0 | 13.0 | 16.0 | 12.5 |
| 2 | 11.5 | 6.5 | 15.5 | 10.5 | 15.0 | 9.5 | 16.5 | 12.0 | 17.5 | 13.0 | 15.0 | 12.5 |
| 3 | 12.5 | 6.5 | 12.5 | 9.5 | 13.0 | 11.0 | 15.0 | 12.5 | 18.0 | 13.0 | 15.5 | 13.0 |
| 4 | 13.5 | 7.5 | 10.5 | 8.5 | 15.5 | 11.0 | 15.0 | 12.0 | 17.5 | 13.0 | 16.0 | 13.5 |
| 5 | 14.0 | 8.0 | 11.0 | 8.0 | 18.0 | 11.5 | 15.5 | 12.0 | 17.5 | 13.5 | 14.5 | 13.5 |
| 6 | 14.5 | 8.5 | 12.0 | 7.5 | 18.0 | 12.5 | 17.5 | 12.0 | 17.5 | 13.5 | 15.5 | 12.5 |
| 7 | 14.5 | 9.0 | 11.0 | 7.5 | 17.5 | 13.0 | 17.5 | 12.0 | 17.5 | 13.5 | 15.0 | 12.0 |
| 8 | 12.0 | 9.5 | 14.5 | 8.0 | 17.5 | 12.0 | 17.5 | 12.0 | 17.5 | 13.5 | 15.0 | 11.5 |
| 9 | 11.0 | 8.0 | 14.0 | 9.5 | 17.0 | 11.0 | 14.0 | 12.5 | 18.0 | 13.0 | 15.0 | 12.0 |
| 10 | 11.5 | 7.5 | 11.5 | 9.5 | 16.5 | 11.5 | 17.0 | 11.5 | 18.0 | 13.5 | 15.0 | 12.0 |
| 11 | 13.0 | 9.5 | 12.5 | 8.5 | 14.5 | 12.0 | 17.5 | 12.0 | 18.0 | 13.5 | 15.0 | 12.0 |
| 12 | 13.5 | 8.0 | 13.5 | 8.0 | 16.0 | 11.0 | 14.5 | 12.5 | 18.0 | 14.0 | 15.5 | 12.0 |
| 13 | 12.5 | 9.5 | 14.0 | 10.0 | 17.5 | 11.0 | 17.0 | 11.5 | 18.0 | 14.0 | 15.5 | 12.5 |
| 14 | 13.5 | 7.5 | 13.5 | 10.0 | 17.0 | 11.5 | 17.5 | 12.0 | 18.0 | 14.0 | 13.5 | 13.0 |
| 15 | 11.5 | 9.0 | 11.5 | 9.5 | 17.0 | 11.5 | 17.5 | 12.5 | 18.0 | 14.0 | 13.5 | 12.5 |
| 16 | 13.5 | 9.5 | 11.0 | 8.5 | 18.5 | 11.5 | 17.0 | 12.5 | 18.0 | 14.0 | 14.5 | 12.5 |
| 17 | 13.5 | 7.5 | 10.5 | 8.5 | 17.5 | 12.0 | 17.0 | 12.5 | 17.0 | 14.0 | 14.0 | 12.5 |
| 18 | 12.5 | 7.5 | 11.5 | 8.0 | 16.5 | 12.5 | 14.5 | 13.0 | 17.0 | 14.0 | 13.5 | 12.5 |
| 19 | 14.0 | 7.0 | 12.5 | 8.0 | 16.5 | 12.5 | 16.5 | 12.0 | 16.0 | 13.5 | 13.5 | 12.5 |
| 20 | 13.0 | 8.0 | 11.5 | 8.5 | 14.5 | 12.0 | 16.5 | 12.5 | 15.0 | 14.0 | 13.5 | 12.5 |
| 21 | 13.0 | 10.0 | 13.0 | 9.5 | 18.5 | 12.0 | 16.5 | 12.0 | 17.0 | 14.0 | 14.0 | 12.5 |
| 22 | 13.5 | 9.0 | 10.0 | 9.0 | 18.0 | 13.0 | 17.0 | 12.5 | 16.5 | 13.5 | 14.0 | 12.0 |
| 23 | 15.5 | 10.0 | 10.5 | 8.5 | 18.5 | 12.0 | 16.5 | 13.0 | 15.5 | 14.0 | 13.0 | 12.0 |
| 24 | 14.5 | 10.5 | 13.5 | 8.5 | 18.5 | 12.0 | 17.0 | 13.0 | 14.5 | 14.0 | 13.5 | 12.0 |
| 25 | 12.0 | 10.5 | 12.0 | 8.5 | 17.0 | 13.0 | 15.5 | 13.0 | --- | 14.0 | 13.5 | 12.0 |
| 26 | 16.5 | 10.0 | 11.5 | 9.5 | 18.0 | 12.0 | 16.5 | 13.0 | 15.5 | 14.0 | 14.0 | 12.0 |
| 27 | 16.5 | 9.5 | 11.5 | 9.0 | 18.0 | 12.5 | 17.0 | 12.5 | 16.0 | 14.0 | 13.0 | 12.0 |
| 28 | 14.5 | 10.0 | 14.0 | 9.0 | 18.0 | 12.0 | 16.0 | 13.0 | 16.0 | 14.0 | 12.5 | 12.0 |
| 29 | 15.0 | 10.5 | 14.5 | 9.0 | 17.0 | 12.0 | 16.5 | 12.5 | 15.5 | 13.5 | 12.5 | 11.5 |
| 30 | 16.0 | 11.5 | 12.5 | 10.0 | 17.5 | 12.0 | 17.0 | 12.5 | 16.0 | 13.0 | 12.5 | 11.5 |
| 31 | --- | --- | 14.5 | 10.0 | --- | --- | 17.5 | 13.0 | 16.0 | 12.5 | --- | --- |
| MONTH | 16.5 | 6.5 | 15.5 | 7.5 | 18.5 | 9.5 | 17.5 | 11.5 | 18.0 | 12.5 | 16.0 | 11.5 |

WILLAMETTE RIVER BASIN

14152500 COAST FORK WILLAMETTE RIVER AT LONDON, OR

LOCATION.--Lat 43°38'30", long 123°05'05", in SW¼ sec.20, T.22 S., R.3 W., Lane County, Hydrologic Unit 17090002, on left bank 0.6 mi (1.0 km) north of London, 11.0 mi (17.7 km) south of Cottage Grove, and at mile 35.9 (57.8 km).

DRAINAGE AREA.--72.1 mi² (186.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1935 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 852.58 ft (259.866 m) above mean sea level (levels by Corps of Engineers). Sept. 18 to Oct. 17, 1935, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records excellent. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years, 203 ft³/s (5.749 m³/s), 38.23 in/yr (971 mm/yr), 147,100 acre-ft/yr (181 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s (354 m³/s) Dec. 22, 1964, gage height, 13.37 ft (4.075 m), from rating curve extended above 3,200 ft³/s (90.6 m³/s), on basis of slope-area measurement of peak flow; minimum, 6.8 ft³/s (0.19 m³/s) Aug. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 634 ft³/s (18.0 m³/s) Mar. 9, gage height, 3.40 ft (1.036 m), no peak above base of 2,100 ft³/s (59.5 m³/s); minimum, 6.8 ft³/s (0.19 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|---------|------|------|------|-------|------|-------|------|------|-------|-------|-------|--------|
| 1 | 18 | 109 | 23 | 24 | 25 | 274 | 199 | 57 | 99 | 24 | 11 | 19 | | |
| 2 | 18 | 75 | 22 | 35 | 23 | 214 | 191 | 103 | 86 | 23 | 11 | 16 | | |
| 3 | 21 | 52 | 21 | 49 | 23 | 303 | 163 | 217 | 81 | 23 | 11 | 15 | | |
| 4 | 19 | 42 | 21 | 46 | 22 | 240 | 145 | 246 | 83 | 24 | 10 | 15 | | |
| 5 | 18 | 36 | 21 | 48 | 21 | 179 | 148 | 292 | 75 | 23 | 10 | 15 | | |
| 6 | 17 | 33 | 21 | 40 | 22 | 153 | 145 | 277 | 65 | 23 | 10 | 15 | | |
| 7 | 17 | 30 | 20 | 40 | 21 | 194 | 143 | 208 | 61 | 22 | 10 | 14 | | |
| 8 | 16 | 28 | 29 | 38 | 21 | 288 | 185 | 197 | 57 | 21 | 9.6 | 13 | | |
| 9 | 16 | 27 | 70 | 36 | 20 | 532 | 163 | 153 | 54 | 20 | 9.6 | 13 | | |
| 10 | 17 | 26 | 40 | 32 | 20 | 364 | 131 | 140 | 52 | 21 | 8.8 | 13 | | |
| 11 | 18 | 25 | 33 | 31 | 20 | 267 | 113 | 163 | 50 | 20 | 8.0 | 13 | | |
| 12 | 18 | 24 | 29 | 54 | 20 | 343 | 103 | 143 | 49 | 20 | 7.8 | 13 | | |
| 13 | 17 | 24 | 27 | 47 | 20 | 300 | 115 | 122 | 46 | 21 | 8.0 | 12 | | |
| 14 | 16 | 32 | 25 | 43 | 20 | 233 | 113 | 109 | 42 | 19 | 8.3 | 12 | | |
| 15 | 15 | 43 | 24 | 40 | 20 | 185 | 99 | 126 | 41 | 18 | 8.3 | 13 | | |
| 16 | 15 | 43 | 24 | 37 | 20 | 153 | 97 | 250 | 39 | 17 | 8.3 | 14 | | |
| 17 | 15 | 35 | 23 | 34 | 19 | 133 | 88 | 390 | 37 | 16 | 7.8 | 16 | | |
| 18 | 15 | 38 | 23 | 33 | 19 | 126 | 81 | 315 | 37 | 16 | 7.6 | 18 | | |
| 19 | 15 | 34 | 22 | 32 | 19 | 138 | 75 | 227 | 37 | 18 | 8.0 | 34 | | |
| 20 | 15 | 32 | 21 | 30 | 20 | 148 | 70 | 177 | 37 | 16 | 8.0 | 33 | | |
| 21 | 15 | 30 | 21 | 29 | 35 | 133 | 67 | 143 | 37 | 15 | 9.6 | 27 | | |
| 22 | 15 | 28 | 21 | 28 | 75 | 124 | 64 | 128 | 34 | 14 | 10 | 23 | | |
| 23 | 16 | 27 | 23 | 27 | 71 | 143 | 63 | 145 | 33 | 14 | 9.6 | 24 | | |
| 24 | 23 | 26 | 23 | 26 | 95 | 153 | 61 | 140 | 30 | 13 | 63 | 71 | | |
| 25 | 100 | 26 | 22 | 25 | 73 | 153 | 63 | 124 | 29 | 13 | 33 | 50 | | |
| 26 | 60 | 24 | 27 | 25 | 90 | 135 | 61 | 179 | 29 | 14 | 48 | 53 | | |
| 27 | 39 | 24 | 33 | 27 | 109 | 182 | 56 | 182 | 27 | 13 | 30 | 43 | | |
| 28 | 31 | 23 | 29 | 24 | 323 | 230 | 53 | 163 | 26 | 13 | 23 | 143 | | |
| 29 | 28 | 23 | 28 | 24 | --- | 253 | 53 | 135 | 24 | 13 | 27 | 124 | | |
| 30 | 27 | 23 | 26 | 27 | --- | 236 | 54 | 117 | 24 | 12 | 26 | 73 | | |
| 31 | 26 | --- | 24 | 24 | --- | 199 | --- | 101 | --- | 12 | 24 | --- | | |
| TOTAL | 716 | 1042 | 816 | 1055 | 1286 | 6708 | 3162 | 5469 | 1421 | 551 | 484.3 | 957 | | |
| MEAN | 23.1 | 34.7 | 26.3 | 34.0 | 45.9 | 216 | 105 | 176 | 47.4 | 17.8 | 15.6 | 31.9 | | |
| MAX | 100 | 109 | 70 | 54 | 323 | 532 | 199 | 390 | 99 | 24 | 63 | 143 | | |
| MIN | 15 | 23 | 20 | 24 | 19 | 124 | 53 | 57 | 24 | 12 | 7.6 | 12 | | |
| CFSM | .32 | .48 | .37 | .47 | .64 | 3.00 | 1.46 | 2.44 | .66 | .25 | .22 | .44 | | |
| IN. | .37 | .54 | .42 | .54 | .66 | 3.46 | 1.63 | 2.82 | .73 | .28 | .25 | .49 | | |
| AC-FT | 1420 | 2070 | 1620 | 2090 | 2550 | 13310 | 6270 | 10850 | 2820 | 1090 | 961 | 1900 | | |
| CAL YR 1976 | TOTAL | 55045.0 | MEAN | 150 | MAX | 4360 | MIN | 15 | CFSM | 2.08 | IN | 28.40 | AC-FT | 109200 |
| WTR YR 1977 | TOTAL | 23667.3 | MEAN | 64.8 | MAX | 532 | MIN | 7.6 | CFSM | .90 | IN | 12.21 | AC-FT | 46940 |

14152500 COAST FORK WILLAMETTE RIVER AT LONDON, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1960 to September 1965, June 1967 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C July 7, 1968, Aug. 11, 1971; minimum, 0.0°C Jan. 9, 1974, Feb. 5, 6, 1976, Nov. 28, 29, 1976, Jan. 6-10, 26-30, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.0°C Aug. 12, 16, 17; minimum, 0.0°C Nov. 28, 29, Jan. 6-10, 26-30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|------|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 17.0 | 13.5 | 11.5 | 10.5 | 3.5 | 2.0 | 3.5 | 2.5 | 5.5 | 3.5 | 6.0 | 5.0 |
| 2 | 15.5 | 13.5 | 12.0 | 10.5 | 3.5 | 1.5 | 4.5 | 3.5 | 5.0 | 3.5 | 6.0 | 5.0 |
| 3 | 14.5 | 12.5 | 12.0 | 10.5 | 3.5 | 2.0 | 4.0 | 3.0 | 5.0 | 2.5 | 6.5 | 5.5 |
| 4 | 12.5 | 9.5 | 11.0 | 10.0 | 4.0 | 2.5 | 4.5 | 3.0 | 5.0 | 1.5 | 7.0 | 5.5 |
| 5 | 13.0 | 8.5 | 10.0 | 8.5 | 4.0 | 2.5 | 4.0 | 1.5 | 4.5 | 2.0 | 7.0 | 4.5 |
| 6 | 13.5 | 9.0 | 10.5 | 8.5 | 4.0 | 2.5 | 1.0 | 0.0 | 6.0 | 3.0 | 7.0 | 5.0 |
| 7 | 15.0 | 10.0 | 11.0 | 8.5 | 3.5 | 1.5 | 0.5 | 0.0 | 5.5 | 3.5 | 7.5 | 6.0 |
| 8 | 13.5 | 11.5 | 11.5 | 9.0 | 4.5 | 2.0 | 0.5 | 0.0 | 6.5 | 4.0 | 7.5 | 6.5 |
| 9 | 14.0 | 10.5 | 9.5 | 8.0 | 5.0 | 4.0 | 0.5 | 0.0 | 6.5 | 3.5 | 7.0 | 5.5 |
| 10 | 13.0 | 11.5 | 9.5 | 7.5 | 4.0 | 3.0 | 1.0 | 0.0 | 8.5 | 5.0 | 6.5 | 5.0 |
| 11 | 15.5 | 12.0 | 10.5 | 9.0 | 4.5 | 3.0 | 2.5 | 1.0 | 8.5 | 5.5 | 7.5 | 4.5 |
| 12 | 13.5 | 11.5 | 9.5 | 7.5 | 3.5 | 2.0 | 4.5 | 2.5 | 9.5 | 6.0 | 7.0 | 5.0 |
| 13 | 13.0 | 9.5 | 9.5 | 7.0 | 3.5 | 1.5 | 5.0 | 4.0 | 9.5 | 8.0 | 6.5 | 4.5 |
| 14 | 12.5 | 9.0 | 9.5 | 7.5 | 4.0 | 1.5 | 4.5 | 3.0 | 10.0 | 7.5 | 6.0 | 4.5 |
| 15 | 12.0 | 8.5 | 11.5 | 9.0 | 5.0 | 3.0 | 4.0 | 2.0 | 9.5 | 5.5 | 7.5 | 5.0 |
| 16 | 12.0 | 8.0 | 12.0 | 10.5 | 4.5 | 3.0 | 4.0 | 2.0 | 9.0 | 5.5 | 7.0 | 4.5 |
| 17 | 11.0 | 7.5 | 11.5 | 10.0 | 5.0 | 2.5 | 5.0 | 2.5 | 10.5 | 7.0 | 6.5 | 4.5 |
| 18 | 10.0 | 6.5 | 12.0 | 10.5 | 5.5 | 4.0 | 5.0 | 3.0 | 9.0 | 5.5 | 7.0 | 5.5 |
| 19 | 10.0 | 6.0 | 10.5 | 9.0 | 5.0 | 3.0 | 5.5 | 3.5 | 8.5 | 4.5 | 8.5 | 6.0 |
| 20 | 10.0 | 6.0 | 8.5 | 7.5 | 3.0 | 1.0 | 5.0 | 3.0 | 7.0 | 5.5 | 8.5 | 6.0 |
| 21 | 9.5 | 6.0 | 9.5 | 7.5 | 2.0 | 0.5 | 5.5 | 3.5 | 6.5 | 5.0 | 9.0 | 5.0 |
| 22 | 8.5 | 6.5 | 9.0 | 8.5 | 2.0 | 0.5 | 6.0 | 4.0 | 6.5 | 5.5 | 9.5 | 5.5 |
| 23 | 9.0 | 5.5 | 9.0 | 7.5 | 4.0 | 2.0 | 4.5 | 3.0 | 5.5 | 4.5 | 8.5 | 7.0 |
| 24 | 8.5 | 6.5 | 8.0 | 6.0 | 3.0 | 2.0 | 4.0 | 2.5 | 5.5 | 4.0 | 7.5 | 5.5 |
| 25 | 10.0 | 8.0 | 8.5 | 6.5 | 4.0 | 1.5 | 3.5 | 1.5 | 6.0 | 5.0 | 8.0 | 5.5 |
| 26 | 10.0 | 7.5 | 7.0 | 3.5 | 5.5 | 3.5 | 2.5 | 0.0 | 7.0 | 5.0 | 8.5 | 5.5 |
| 27 | 9.0 | 6.5 | 3.5 | 1.5 | 6.0 | 4.5 | 2.5 | 0.0 | 8.0 | 6.0 | 8.0 | 5.5 |
| 28 | 8.5 | 6.0 | 2.5 | 0.0 | 5.5 | 4.0 | 3.0 | 0.0 | 7.5 | 5.5 | 6.0 | 4.5 |
| 29 | 9.0 | 8.0 | 2.5 | 0.0 | 4.5 | 3.5 | 2.5 | 0.0 | --- | --- | 7.0 | 4.5 |
| 30 | 11.0 | 8.5 | 3.0 | 0.5 | 5.0 | 4.0 | 2.0 | 0.0 | --- | --- | 8.0 | 4.5 |
| 31 | 11.5 | 8.5 | --- | --- | 4.0 | 3.5 | 5.0 | 2.0 | --- | --- | 6.5 | 5.0 |
| MONTH | 17.0 | 5.5 | 12.0 | 0.0 | 6.0 | 0.5 | 6.0 | 0.0 | 10.5 | 1.5 | 9.5 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 8.5 | 6.5 | 13.0 | 10.5 | 14.5 | 12.0 | 20.5 | 15.5 | 23.0 | 16.5 | 18.0 | 12.5 |
| 2 | 9.0 | 5.5 | 13.5 | 9.5 | 13.5 | 9.0 | 20.0 | 14.5 | 24.0 | 19.5 | 17.5 | 13.5 |
| 3 | 9.5 | 5.5 | 12.0 | 9.0 | 12.5 | 10.5 | 16.5 | 14.0 | 24.5 | 18.0 | 20.0 | 15.5 |
| 4 | 11.0 | 6.0 | 9.5 | 7.0 | 14.0 | 11.0 | 16.5 | 13.0 | 23.5 | 17.5 | 21.0 | 17.0 |
| 5 | 11.5 | 7.0 | 9.0 | 7.0 | 18.0 | 12.0 | 16.0 | 12.5 | 23.5 | 17.5 | 19.0 | 16.5 |
| 6 | 11.5 | 7.0 | 10.5 | 6.5 | 19.0 | 14.0 | 18.5 | 12.5 | 24.0 | 18.0 | 19.0 | 14.5 |
| 7 | 12.0 | 7.0 | 9.5 | 7.0 | 17.5 | 15.0 | 20.0 | 13.0 | 24.0 | 18.5 | 18.5 | 13.5 |
| 8 | 10.5 | 8.0 | 12.0 | 7.0 | 17.5 | 13.5 | 20.5 | 14.0 | 24.0 | 18.5 | 18.0 | 13.5 |
| 9 | 9.0 | 6.5 | 12.0 | 7.5 | 17.0 | 12.5 | 17.5 | 15.0 | 24.0 | 17.0 | 17.0 | 12.5 |
| 10 | 9.0 | 5.5 | 11.0 | 9.0 | 15.5 | 12.5 | 19.5 | 13.0 | 24.0 | 18.0 | 17.0 | 12.0 |
| 11 | 11.0 | 8.0 | 10.5 | 7.5 | 14.0 | 12.5 | 21.0 | 14.0 | 24.5 | 18.0 | 17.5 | 12.5 |
| 12 | 11.0 | 6.0 | 11.5 | 7.0 | 16.5 | 10.5 | 19.0 | 15.0 | 25.0 | 19.5 | 18.0 | 12.5 |
| 13 | 10.5 | 8.0 | 12.5 | 9.0 | 17.5 | 12.0 | 19.5 | 12.5 | 24.5 | 19.5 | 18.5 | 14.0 |
| 14 | 10.5 | 6.5 | 11.5 | 9.5 | 18.0 | 13.0 | 20.5 | 14.0 | 23.5 | 18.0 | 17.0 | 14.5 |
| 15 | 10.5 | 7.0 | 10.0 | 8.5 | 17.5 | 13.0 | 21.5 | 14.5 | 24.0 | 18.0 | 15.0 | 13.5 |
| 16 | 11.0 | 8.0 | 9.5 | 7.5 | 19.0 | 12.5 | 22.0 | 15.0 | 25.0 | 19.0 | 15.0 | 12.0 |
| 17 | 10.5 | 5.5 | 10.0 | 8.0 | 17.0 | 14.0 | 22.0 | 15.5 | 25.0 | 20.5 | 15.0 | 13.0 |
| 18 | 10.0 | 5.5 | 10.5 | 7.5 | 16.0 | 14.0 | 20.0 | 17.0 | 23.0 | 19.5 | 15.5 | 13.0 |
| 19 | 11.0 | 5.5 | 12.5 | 7.0 | 16.5 | 13.0 | 20.5 | 14.5 | 23.0 | 17.5 | 15.5 | 13.5 |
| 20 | 10.5 | 6.5 | 13.5 | 9.0 | 15.5 | 13.5 | 21.5 | 14.5 | 21.0 | 17.5 | 14.5 | 12.5 |
| 21 | 11.0 | 8.5 | 14.0 | 10.5 | 20.0 | 13.5 | 21.5 | 15.0 | 18.5 | 17.0 | 15.0 | 12.5 |
| 22 | 11.5 | 7.5 | 12.5 | 9.5 | 20.0 | 16.0 | 22.0 | 15.5 | 21.0 | 15.5 | 14.5 | 11.5 |
| 23 | 13.0 | 9.5 | 11.0 | 9.0 | 20.0 | 14.0 | 22.5 | 16.0 | 21.0 | 15.5 | 12.5 | 11.0 |
| 24 | 13.0 | 9.5 | 12.5 | 9.5 | 21.0 | 14.0 | 23.0 | 16.5 | 19.5 | 15.0 | 13.0 | 11.0 |
| 25 | 12.0 | 10.0 | 12.0 | 9.0 | 19.5 | 16.0 | 20.5 | 17.0 | 16.0 | 14.0 | 13.5 | 12.0 |
| 26 | 14.5 | 8.5 | 11.5 | 10.0 | 21.0 | 14.0 | 21.5 | 16.0 | 17.0 | 14.0 | 13.0 | 11.5 |
| 27 | 14.5 | 8.5 | 11.0 | 8.5 | 21.0 | 14.5 | 22.0 | 15.5 | 17.5 | 14.0 | 12.5 | 11.5 |
| 28 | 13.0 | 10.0 | 12.5 | 8.5 | 21.5 | 14.5 | 22.0 | 16.0 | 18.5 | 15.0 | 12.0 | 11.5 |
| 29 | 14.0 | 10.5 | 13.0 | 8.5 | 20.5 | 15.0 | 21.0 | 15.0 | 19.5 | 16.0 | 11.5 | 11.0 |
| 30 | 14.5 | 11.5 | 14.0 | 10.0 | 20.0 | 14.5 | 22.0 | 15.0 | 19.5 | 16.0 | 12.0 | 10.5 |
| 31 | --- | --- | 15.0 | 11.5 | --- | --- | 23.0 | 16.0 | 18.0 | 13.5 | --- | --- |
| MONTH | 14.5 | 5.5 | 15.0 | 6.5 | 21.5 | 9.0 | 23.0 | 12.5 | 25.0 | 13.5 | 21.0 | 10.5 |

WILLAMETTE RIVER BASIN

14153000 COTTAGE GROVE LAKE NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°43'00", long 123°02'55", in NE¼ sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, in east abutment of dam on Coast Fork Willamette River 5.8 mi (9.3 km) south of Cottage Grove, and at mile 29.7 (47.8 km).

DRAINAGE AREA.--104 mi² (269 km²).

PERIOD OF RECORD.--October 1942 to current year. Prior to October 1971, published as Cottage Grove Reservoir near Cottage Grove.

REVISED RECORDS.--WSP 1218: 1950.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed by Corps of Engineers in 1942; storage began Oct. 31, 1942. Capacity, 32,930 acre-ft (40.6 hm³) between elevation 719.0 ft (219.15 m), outlet conduit, and 791.0 ft (241.10 m), crest of spillway. Dead storage negligible. Reservoir used for flood control and improvement of navigation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 36,750 acre-ft (45.3 hm³) Dec. 24, 1964, elevation, 794.23 ft (242.081 m); minimum since first filling, no contents Sept. 26 to Oct. 19, 1966, and Nov. 14, 15, Nov. 20 to Dec. 8, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 32,930 acre-ft (40.6 hm³) June 8-12, elevation, 791.00 ft (241.097 m); minimum, 1,910 acre-ft (235,500 m³) Feb. 20, elevation, 745.29 ft (227.164 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

| | | | | | |
|-------|-------|-----|--------|-----|--------|
| 710.9 | 0 | 755 | 4,860 | 780 | 21,460 |
| 730 | 151 | 760 | 7,150 | 785 | 26,370 |
| 740 | 926 | 765 | 9,970 | 790 | 31,780 |
| 745 | 1,840 | 770 | 13,260 | 793 | 35,270 |
| 750 | 3,140 | 775 | 17,070 | | |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------------|------------|------------|---------------|--------|---------|--------|--------|--------|--------|--------|---------|
| 1 | 772.10 | 755.83 | 747.17 | 747.29 | 745.94 | 753.90 | 778.25 | 784.23 | 790.58 | 790.57 | 788.85 | 787.21 |
| 2 | 771.46 | 755.50 | 747.11 | 747.39 | 745.94 | 755.18 | 778.66 | 784.40 | 790.63 | 790.52 | 788.80 | 787.16 |
| 3 | 770.77 | 755.25 | 747.06 | 747.64 | 745.93 | 756.79 | 779.18 | 784.82 | 790.73 | 790.48 | 788.73 | 787.11 |
| 4 | 770.05 | 755.04 | 747.00 | 747.84 | 745.90 | 758.01 | 779.50 | 785.30 | 790.83 | 790.44 | 788.66 | 787.03 |
| 5 | 769.37 | 754.77 | 746.95 | 748.02 | 745.88 | 758.86 | 779.82 | 785.84 | 790.90 | 790.40 | 788.58 | 787.00 |
| 6 | 768.68 | 754.59 | 746.88 | 748.14 | 745.82 | 759.55 | 780.10 | 786.37 | 790.95 | 790.37 | 788.50 | 786.67 |
| 7 | 767.96 | 754.36 | 746.80 | 748.10 | 745.79 | 760.48 | 780.37 | 786.75 | 790.98 | 790.32 | 788.43 | 786.13 |
| 8 | 767.26 | 754.15 | 746.84 | 747.92 | 745.77 | 761.86 | 780.82 | 787.09 | 791.00 | 790.28 | 788.35 | 785.57 |
| 9 | 766.53 | 753.90 | 747.25 | 747.70 | 745.72 | 764.24 | 781.16 | 787.36 | 791.00 | 790.24 | 788.29 | 785.02 |
| 10 | 765.80 | 753.35 | 747.40 | 747.54 | 745.70 | 765.74 | 781.41 | 787.62 | 791.00 | 790.19 | 788.21 | 784.46 |
| 11 | 765.06 | 752.60 | 747.49 | 747.41 | 745.66 | 766.80 | 781.66 | 787.90 | 791.00 | 790.14 | 788.13 | 783.91 |
| 12 | 764.32 | 751.93 | 747.53 | 747.41 | 745.62 | 768.18 | 781.86 | 788.14 | 791.00 | 790.10 | 788.04 | 783.36 |
| 13 | 763.82 | 751.42 | 747.57 | 747.41 | 745.59 | 769.30 | 782.09 | 788.34 | 790.97 | 790.04 | 787.96 | 782.80 |
| 14 | 763.30 | 750.87 | 747.57 | 747.40 | 745.56 | 770.11 | 782.31 | 788.52 | 790.95 | 789.99 | 787.90 | 782.25 |
| 15 | 762.53 | 750.58 | 747.55 | 747.35 | 745.50 | 770.69 | 782.52 | 788.77 | 790.95 | 789.93 | 787.82 | 781.65 |
| 16 | 761.72 | 750.33 | 747.54 | 747.30 | 745.45 | 771.18 | 782.71 | 789.19 | 790.92 | 789.84 | 787.75 | 781.06 |
| 17 | 760.85 | 749.90 | 747.51 | 747.18 | 745.43 | 771.60 | 782.86 | 789.73 | 790.90 | 789.82 | 787.66 | 780.45 |
| 18 | 760.00 | 749.65 | 747.47 | 747.06 | 745.38 | 771.98 | 783.00 | 790.10 | 790.88 | 789.78 | 787.58 | 779.87 |
| 19 | 759.17 | 749.39 | 747.43 | 746.92 | 745.33 | 772.38 | 783.13 | 790.16 | 790.89 | 789.72 | 787.50 | 779.33 |
| 20 | 758.28 | 749.07 | 747.39 | 746.79 | 745.31 | 772.80 | 783.23 | 790.06 | 790.89 | 789.67 | 787.41 | 778.78 |
| 21 | 757.38 | 748.76 | 747.33 | 746.64 | 745.50 | 773.17 | 783.33 | 790.04 | 790.89 | 789.61 | 787.36 | 778.24 |
| 22 | 756.47 | 748.56 | 747.26 | 746.47 | 746.07 | 773.50 | 783.43 | 790.03 | 790.88 | 789.53 | 787.29 | 777.65 |
| 23 | 756.10 | 748.37 | 747.24 | 746.31 | 746.72 | 773.91 | 783.52 | 790.10 | 790.86 | 789.47 | 787.22 | 777.12 |
| 24 | 756.04 | 748.19 | 747.19 | 746.12 | 747.50 | 774.31 | 783.63 | 790.13 | 790.83 | 789.40 | 787.37 | 776.65 |
| 25 | 756.30 | 748.00 | 747.15 | 746.05 | 748.09 | 774.70 | 783.73 | 790.14 | 790.80 | 789.33 | 787.40 | 776.14 |
| 26 | 756.40 | 747.80 | 747.16 | 746.05 | 748.76 | 775.06 | 783.81 | 790.24 | 790.77 | 789.28 | 787.40 | 775.64 |
| 27 | 756.40 | 747.59 | 747.23 | 746.04 | 749.57 | 775.53 | 783.88 | 790.35 | 790.73 | 789.21 | 787.38 | 775.15 |
| 28 | 756.34 | 747.37 | 747.27 | 746.02 | 752.06 | 776.12 | 783.96 | 790.42 | 790.70 | 789.15 | 787.35 | 774.87 |
| 29 | 756.20 | 747.25 | 747.29 | 745.99 | --- | 776.73 | 784.03 | 790.45 | 790.65 | 789.07 | 787.31 | 774.31 |
| 30 | 755.97 | 747.22 | 747.29 | 745.96 | --- | 777.31 | 784.13 | 790.50 | 790.60 | 789.00 | 787.30 | 773.50 |
| 31 | 755.76 | --- | 747.30 | 745.95 | --- | 777.78 | --- | 790.55 | --- | 788.93 | 787.26 | --- |
| MEAN | 762.21 | 751.05 | 747.27 | 747.01 | 746.34 | 768.64 | 782.07 | 788.50 | 790.86 | 789.83 | 787.86 | 781.20 |
| MAX | 772.10 | 755.83 | 747.57 | 748.14 | 752.06 | 777.78 | 784.13 | 790.55 | 791.00 | 790.57 | 788.85 | 787.21 |
| MIN | 755.76 | 747.22 | 746.80 | 745.95 | 745.31 | 753.90 | 778.25 | 784.23 | 790.58 | 788.93 | 787.22 | 773.50 |
| (†) | 5,170 | 2,380 | 2,400 | 2,060 | 3,790 | 19,450 | 25,480 | 32,410 | 32,470 | 30,580 | 28,750 | 15,860 |
| (‡) | -10,100 | -2,790 | +20 | -340 | +1,730 | +15,660 | +6,030 | +6,930 | +60 | -1,890 | -1,830 | -12,890 |
| CAL YR 1976 | MEAN 771.67 | MAX 788.91 | MIN 746.80 | AC-FT‡ -1,010 | | | | | | | | |
| WTR YR 1977 | MEAN 770.37 | MAX 791.00 | MIN 745.31 | AC-FT‡ +590 | | | | | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

14153500 COAST FORK WILLAMETTE RIVER BELOW COTTAGE GROVE DAM, OR

LOCATION.--Lat 43°43'15", long 123°02'55", in NE¼ sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank at bridge 0.3 mi (0.5 km) downstream from Cottage Grove Dam, 5.5 mi (8.8 km) south of Cottage Grove, and at mile 29.4 (47.3 km).

DRAINAGE AREA.--104 mi² (269 km²).

PERIOD OF RECORD.--January 1939 to current year. Prior to October 1944, published as "near Cottage Grove."

REVISED RECORDS.--WSP 1448: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 711.00 ft (216.713 m) above mean sea level (Corps of Engineers bench mark). Jan. 1 to Oct. 12, 1939, nonrecording gage and Oct. 13, 1939, to Sept. 30, 1944, water-stage recorder at several sites and datums 0.8 mi (1.3 km) downstream.

REMARKS.--Records good. Flow regulated since 1942 by Cottage Grove Lake (see station 14153000). Small diversions for irrigation above station.

AVERAGE DISCHARGE.--38 years, 278 ft³/s (7.873 m³/s), 36.30 in/yr (922 mm/yr), 201,400 acre-ft/yr (248 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,910 ft³/s (167 m³/s) Dec. 24, 1964, gage height, 11.83 ft (3.606 m); no flow July 5-7, 1945, and for part of Aug. 24, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 432 ft³/s (12.2 m³/s) Sept. 29, 30, gage height, 4.35 ft (1.326 m); minimum, 22 ft³/s (0.62 m³/s) Feb. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|------|------|-------|
| 1 | 271 | 123 | 32 | 37 | 30 | 34 | 28 | 30 | 97 | 44 | 41 | 41 |
| 2 | 268 | 164 | 32 | 36 | 30 | 33 | 28 | 30 | 67 | 44 | 41 | 41 |
| 3 | 268 | 116 | 32 | 34 | 30 | 34 | 28 | 30 | 52 | 44 | 41 | 41 |
| 4 | 268 | 91 | 32 | 33 | 30 | 34 | 28 | 30 | 49 | 44 | 41 | 41 |
| 5 | 268 | 80 | 32 | 34 | 30 | 34 | 29 | 30 | 49 | 44 | 41 | 41 |
| 6 | 265 | 75 | 32 | 34 | 30 | 34 | 29 | 31 | 49 | 44 | 41 | 143 |
| 7 | 262 | 75 | 32 | 50 | 31 | 35 | 29 | 31 | 49 | 44 | 41 | 302 |
| 8 | 262 | 75 | 33 | 62 | 29 | 36 | 30 | 31 | 49 | 44 | 41 | 302 |
| 9 | 258 | 75 | 33 | 62 | 29 | 38 | 30 | 31 | 58 | 44 | 41 | 302 |
| 10 | 258 | 130 | 33 | 62 | 29 | 30 | 30 | 31 | 64 | 44 | 41 | 302 |
| 11 | 255 | 171 | 33 | 64 | 29 | 26 | 30 | 31 | 62 | 43 | 40 | 299 |
| 12 | 252 | 145 | 33 | 65 | 29 | 27 | 30 | 32 | 64 | 43 | 39 | 299 |
| 13 | 168 | 116 | 34 | 67 | 29 | 27 | 30 | 32 | 60 | 43 | 39 | 296 |
| 14 | 166 | 120 | 33 | 61 | 29 | 27 | 30 | 33 | 54 | 42 | 39 | 296 |
| 15 | 243 | 99 | 34 | 57 | 29 | 27 | 30 | 33 | 50 | 42 | 39 | 293 |
| 16 | 240 | 91 | 34 | 58 | 29 | 27 | 30 | 32 | 50 | 42 | 39 | 293 |
| 17 | 237 | 89 | 34 | 58 | 29 | 27 | 30 | 75 | 52 | 42 | 39 | 293 |
| 18 | 234 | 79 | 34 | 58 | 29 | 27 | 30 | 103 | 47 | 42 | 39 | 289 |
| 19 | 234 | 77 | 35 | 58 | 29 | 27 | 30 | 219 | 43 | 42 | 39 | 289 |
| 20 | 231 | 77 | 35 | 58 | 29 | 27 | 30 | 255 | 43 | 42 | 39 | 286 |
| 21 | 228 | 77 | 35 | 58 | 30 | 27 | 30 | 173 | 43 | 42 | 39 | 283 |
| 22 | 225 | 62 | 35 | 58 | 29 | 27 | 30 | 147 | 43 | 42 | 39 | 283 |
| 23 | 99 | 53 | 36 | 58 | 29 | 27 | 30 | 140 | 43 | 42 | 40 | 283 |
| 24 | 48 | 53 | 36 | 58 | 30 | 27 | 30 | 140 | 43 | 42 | 41 | 280 |
| 25 | 48 | 53 | 36 | 40 | 29 | 27 | 30 | 140 | 44 | 42 | 41 | 280 |
| 26 | 48 | 53 | 36 | 30 | 32 | 27 | 30 | 140 | 44 | 42 | 41 | 277 |
| 27 | 48 | 53 | 37 | 30 | 32 | 27 | 30 | 140 | 43 | 42 | 40 | 277 |
| 28 | 48 | 53 | 37 | 30 | 34 | 27 | 30 | 140 | 43 | 42 | 40 | 277 |
| 29 | 62 | 43 | 37 | 30 | --- | 28 | 30 | 125 | 43 | 42 | 40 | 370 |
| 30 | 77 | 32 | 37 | 30 | --- | 28 | 30 | 109 | 43 | 42 | 41 | 428 |
| 31 | 77 | --- | 37 | 30 | --- | 28 | --- | 109 | --- | 41 | 41 | --- |
| TOTAL | 5916 | 2600 | 1061 | 1500 | 833 | 911 | 889 | 2653 | 1540 | 1324 | 1244 | 7567 |
| MEAN | 191 | 86.7 | 34.2 | 48.4 | 29.8 | 29.4 | 29.6 | 85.6 | 51.3 | 42.7 | 40.1 | 252 |
| MAX | 271 | 171 | 37 | 67 | 34 | 38 | 30 | 255 | 97 | 44 | 41 | 428 |
| MIN | 48 | 32 | 32 | 30 | 29 | 26 | 28 | 30 | 43 | 41 | 39 | 41 |
| AC-FT | 11730 | 5160 | 2100 | 2980 | 1650 | 1810 | 1760 | 5260 | 3050 | 2630 | 2470 | 15010 |
| MEAN† | 26.5 | 39.8 | 34.5 | 42.9 | 60.9 | 284 | 131 | 198 | 52.3 | 12.0 | 10.4 | 35.6 |
| CFSM† | .25 | .38 | .33 | .41 | .59 | 2.73 | 1.26 | 1.90 | .50 | .12 | .10 | .34 |
| IN.† | .29 | .43 | .38 | .48 | .61 | 3.15 | 1.40 | 2.20 | .56 | .13 | .12 | .38 |
| AC-FT† | 1,630 | 2,370 | 2,120 | 2,640 | 3,380 | 17,470 | 7,790 | 12,190 | 3,110 | 740 | 640 | 2,120 |

CAL YR 1976 TOTAL 74,921 MEAN 205 MAX 3,030 MIN 32 AC-FT 148,600 MEAN† 203 CFSM† 1.95 IN.† 26.6 AC-FT† 147,590
WTR YR 1977 TOTAL 28,038 MEAN 76.8 MAX 428 MIN 26 AC-FT 55,610 MEAN† 77.6 CFSM† .75 IN.† 10.1 AC-FT† 56,200

† Adjusted for change in contents in Cottage Grove Lake.

WILLAMETTE RIVER BASIN

14154500 ROW RIVER ABOVE PITCHER CREEK, NEAR DORENA, OR

LOCATION.--Lat 43°44'10", long 122°52'20", in NE¼ sec.24, T.21 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank 0.5 mi (0.8 km) upstream from Pitcher Creek, 1.2 mi (1.9 km) northwest of Dorena, and at mile 13.2 (21.2 km).

DRAINAGE AREA.--211 mi² (546 km²).

PERIOD OF RECORD.--September 1935 to current year. Prior to October 1949, published as "at Star."

GAGE.--Water-stage recorder. Datum of gage is 856.16 ft (260.958 m) above mean sea level. Sept. 16, 1935, to Oct. 17, 1938, non-recording gage at site 450 ft (137 m) upstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Slight regulation caused by upstream logponds. No diversion above station.

AVERAGE DISCHARGE.--42 years, 602 ft³/s (17.05 m³/s), 38.74 in/yr (984 mm/yr), 436,100 acre-ft/yr (538 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft³/s (937 m³/s) Dec. 22, 1964, gage height, 18.19 ft (5.544 m), from rating curve extended above 12,000 ft³/s (340 m³/s), on basis of slope-area measurement of peak flow; minimum, 10 ft³/s (0.28 m³/s) Sept. 24, 25, 1951, Oct. 7, 8, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,410 ft³/s (68.3 m³/s) May 17, gage height, 6.38 ft (1.945 m), no peak above base of 7,000 ft³/s (198 m³/s); minimum daily, 20 ft³/s (0.57 m³/s) Aug. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FFH | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|-------|------|------|------|------|
| 1 | 37 | 221 | 45 | 54 | 52 | 515 | 1020 | 399 | 439 | 60 | 28 | 60 |
| 2 | 35 | 209 | 43 | 90 | 48 | 399 | 990 | 793 | 378 | 58 | 28 | 48 |
| 3 | 44 | 137 | 42 | 135 | 45 | 474 | 753 | 1080 | 322 | 58 | 28 | 42 |
| 4 | 42 | 104 | 41 | 105 | 44 | 458 | 827 | 1260 | 306 | 59 | 28 | 40 |
| 5 | 38 | 86 | 41 | 97 | 43 | 435 | 940 | 1280 | 291 | 56 | 26 | 38 |
| 6 | 36 | 73 | 41 | 82 | 43 | 503 | 903 | 1230 | 277 | 56 | 26 | 38 |
| 7 | 34 | 66 | 40 | 77 | 42 | 700 | 915 | 1040 | 253 | 54 | 26 | 35 |
| 8 | 33 | 60 | 52 | 76 | 41 | 1500 | 996 | 897 | 223 | 58 | 26 | 31 |
| 9 | 33 | 55 | 128 | 70 | 41 | 1500 | 793 | 793 | 198 | 54 | 26 | 29 |
| 10 | 32 | 52 | 92 | 66 | 40 | 850 | 592 | 903 | 181 | 54 | 24 | 28 |
| 11 | 32 | 50 | 75 | 62 | 40 | 671 | 498 | 1100 | 165 | 51 | 22 | 27 |
| 12 | 31 | 48 | 75 | 111 | 40 | 810 | 458 | 897 | 155 | 50 | 22 | 26 |
| 13 | 31 | 47 | 68 | 150 | 41 | 671 | 540 | 698 | 144 | 52 | 22 | 25 |
| 14 | 30 | 55 | 61 | 200 | 43 | 507 | 519 | 606 | 133 | 50 | 22 | 24 |
| 15 | 28 | 110 | 56 | 152 | 41 | 406 | 458 | 657 | 127 | 48 | 22 | 25 |
| 16 | 28 | 137 | 55 | 123 | 41 | 351 | 478 | 1140 | 118 | 48 | 22 | 25 |
| 17 | 28 | 99 | 54 | 105 | 40 | 316 | 417 | 2210 | 110 | 46 | 20 | 29 |
| 18 | 28 | 100 | 52 | 96 | 40 | 306 | 358 | 1720 | 104 | 44 | 20 | 33 |
| 19 | 28 | 93 | 48 | 90 | 39 | 382 | 316 | 1160 | 102 | 42 | 22 | 47 |
| 20 | 27 | 82 | 46 | 84 | 39 | 566 | 294 | 965 | 97 | 42 | 22 | 62 |
| 21 | 26 | 73 | 44 | 79 | 52 | 486 | 289 | 821 | 100 | 40 | 26 | 59 |
| 22 | 27 | 67 | 43 | 72 | 89 | 544 | 294 | 692 | 93 | 38 | 28 | 53 |
| 23 | 28 | 63 | 44 | 67 | 102 | 671 | 316 | 770 | 87 | 38 | 26 | 51 |
| 24 | 34 | 59 | 46 | 62 | 100 | 549 | 355 | 934 | 80 | 36 | 65 | 187 |
| 25 | 286 | 58 | 44 | 59 | 96 | 511 | 389 | 758 | 75 | 36 | 120 | 173 |
| 26 | 248 | 55 | 60 | 56 | 113 | 435 | 328 | 879 | 73 | 34 | 135 | 183 |
| 27 | 120 | 51 | 86 | 53 | 173 | 708 | 277 | 874 | 68 | 34 | 100 | 121 |
| 28 | 84 | 47 | 83 | 51 | 703 | 816 | 266 | 708 | 65 | 32 | 67 | 428 |
| 29 | 68 | 46 | 71 | 48 | --- | 698 | 264 | 579 | 63 | 32 | 84 | 450 |
| 30 | 61 | 46 | 63 | 47 | --- | 610 | 309 | 486 | 61 | 30 | 89 | 272 |
| 31 | 58 | --- | 58 | 48 | --- | 592 | --- | 424 | --- | 30 | 79 | --- |
| TOTAL | 1695 | 2449 | 1797 | 2667 | 2271 | 18940 | 16152 | 28753 | 4888 | 1420 | 1301 | 2689 |
| MEAN | 54.7 | 81.6 | 58.0 | 86.0 | 81.1 | 611 | 538 | 928 | 163 | 45.8 | 42.0 | 89.6 |
| MAX | 286 | 221 | 128 | 200 | 703 | 1500 | 1020 | 2210 | 439 | 60 | 135 | 450 |
| MIN | 26 | 46 | 40 | 47 | 39 | 306 | 264 | 399 | 61 | 30 | 20 | 24 |
| CFSM | .26 | .39 | .28 | .41 | .38 | 2.90 | 2.55 | 4.40 | .77 | .22 | .20 | .43 |
| IN. | .30 | .43 | .32 | .47 | .40 | 3.34 | 2.85 | 5.07 | .86 | .25 | .23 | .47 |
| AC-FT | 3360 | 4860 | 3560 | 5290 | 4500 | 37570 | 32040 | 57030 | 9700 | 2820 | 2580 | 5330 |

CAL YR 1976 TOTAL 169996 MEAN 464 MAX 14700 MIN 26 CFSM 2.20 IN 29.97 AC-FT 337200
WTR YR 1977 TOTAL 85022 MEAN 233 MAX 2210 MIN 20 CFSM 1.10 IN 14.99 AC-FT 168600

NOTE.--No gage-height record July 15 to Aug. 25.

14155000 DORENA LAKE NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'10", long 122°57'15", in SE¼ sec.32, T.20 S., R.2 W., Lane County, Hydrologic Unit 17090002, on left end of Dorena Dam on Row River, 5.0 mi (8.0 km) east of Cottage Grove, and at mile 7.61 (12.24 km).

DRAINAGE AREA.--265 mi² (686 km²).

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1971, published as Dorena Reservoir near Cottage Grove.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete outlet and spillway, completed in 1949 by Corps of Engineers; controlled storage began Oct. 11, 1949. Capacity, 77,580 acre-ft (95.7 hm³) between elevations 739.0 ft (225.25 m), sill of outlet gates, and 835.0 ft (254.51 m), crest of spillway. Dead storage, 18 acre-ft (22,200 m³) below elevation 739.0 ft (225.25 m). Reservoir used for flood control and improvement of navigation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 95,550 acre-ft (118 hm³) Dec. 23, 1964, elevation, 844.03 ft (257.260 m); minimum observed since first filling, 159 acre-ft (196,000 m³) Dec. 14, 1970, elevation, 743.60 ft (226.649 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 75,840 acre-ft (93.5 hm³) June 11, elevation, 834.06 ft (254.221 m); minimum, 4,420 acre-ft (5.45 hm³) Jan. 1, elevation, 764.65 ft (233.065 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

| | | | | | | | |
|-----|-------|-----|--------|-----|--------|-----|--------|
| 760 | 2,810 | 780 | 12,530 | 800 | 28,490 | 820 | 52,480 |
| 765 | 4,560 | 785 | 15,850 | 805 | 33,700 | 825 | 60,060 |
| 770 | 6,840 | 790 | 19,580 | 810 | 39,380 | 830 | 68,470 |
| 775 | 9,540 | 795 | 23,780 | 815 | 45,620 | 835 | 77,600 |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|---------|--------|--------|--------|--------|---------|---------|--------|--------|--------|---------|---------|
| 1 | 806.12 | 773.23 | 769.98 | 764.65 | 767.24 | 775.40 | 823.07 | 831.55 | 833.05 | 832.66 | 827.70 | 820.72 |
| 2 | 805.00 | 773.13 | 769.71 | 765.00 | 767.06 | 777.18 | 824.58 | 831.92 | 833.09 | 832.53 | 827.51 | 820.45 |
| 3 | 803.87 | 772.65 | 769.25 | 765.55 | 766.86 | 780.11 | 825.67 | 832.18 | 833.21 | 832.39 | 827.32 | 820.18 |
| 4 | 802.73 | 771.96 | 768.72 | 765.86 | 766.65 | 782.12 | 826.61 | 832.30 | 833.42 | 832.26 | 827.14 | 819.91 |
| 5 | 801.54 | 771.42 | 768.23 | 766.08 | 766.42 | 783.62 | 827.21 | 832.37 | 833.60 | 832.13 | 826.93 | 819.63 |
| 6 | 800.36 | 771.00 | 767.71 | 766.11 | 766.20 | 785.18 | 827.33 | 832.36 | 833.74 | 831.98 | 826.74 | 819.36 |
| 7 | 799.14 | 770.54 | 767.18 | 766.16 | 765.96 | 787.28 | 827.30 | 832.25 | 833.88 | 831.83 | 826.55 | 819.04 |
| 8 | 797.86 | 770.23 | 766.85 | 766.08 | 765.72 | 791.04 | 827.48 | 832.17 | 833.97 | 831.70 | 826.35 | 818.77 |
| 9 | 796.62 | 770.13 | 767.19 | 765.98 | 765.58 | 795.27 | 827.49 | 832.14 | 834.02 | 831.55 | 826.16 | 818.47 |
| 10 | 795.33 | 769.97 | 767.32 | 765.93 | 765.53 | 797.72 | 827.53 | 832.29 | 834.05 | 831.40 | 825.95 | 818.17 |
| 11 | 794.03 | 769.82 | 767.34 | 765.91 | 765.52 | 799.60 | 827.67 | 832.57 | 834.06 | 831.25 | 825.74 | 817.86 |
| 12 | 792.70 | 769.68 | 767.32 | 766.12 | 765.50 | 801.76 | 827.84 | 832.59 | 834.04 | 831.10 | 825.53 | 817.57 |
| 13 | 791.88 | 769.52 | 767.27 | 766.72 | 765.50 | 803.39 | 828.07 | 832.52 | 834.01 | 830.93 | 825.31 | 817.26 |
| 14 | 791.23 | 769.41 | 767.15 | 767.44 | 765.52 | 804.59 | 828.28 | 832.47 | 833.97 | 830.80 | 825.11 | 816.91 |
| 15 | 790.03 | 769.64 | 767.00 | 767.95 | 765.51 | 805.48 | 828.43 | 832.61 | 833.94 | 830.66 | 824.82 | 816.62 |
| 16 | 788.78 | 770.02 | 766.84 | 768.25 | 765.49 | 806.22 | 828.62 | 832.99 | 833.93 | 830.52 | 824.50 | 816.31 |
| 17 | 787.58 | 770.20 | 766.68 | 768.42 | 765.50 | 806.88 | 828.77 | 833.70 | 833.92 | 830.36 | 824.19 | 816.02 |
| 18 | 786.36 | 770.39 | 766.50 | 768.52 | 765.49 | 807.53 | 828.89 | 833.42 | 833.90 | 830.20 | 823.88 | 815.70 |
| 19 | 785.13 | 770.52 | 766.29 | 768.61 | 765.46 | 808.31 | 828.98 | 833.03 | 833.86 | 830.02 | 823.57 | 815.37 |
| 20 | 783.98 | 770.59 | 766.07 | 768.65 | 765.45 | 809.42 | 829.13 | 832.94 | 833.83 | 829.85 | 823.36 | 814.85 |
| 21 | 782.92 | 770.60 | 765.81 | 768.65 | 765.59 | 810.35 | 829.29 | 832.80 | 833.76 | 829.70 | 822.94 | 814.20 |
| 22 | 781.83 | 770.56 | 765.57 | 768.62 | 765.96 | 811.34 | 829.45 | 832.76 | 833.69 | 829.52 | 822.63 | 813.42 |
| 23 | 780.74 | 770.49 | 765.36 | 768.55 | 766.49 | 812.61 | 829.65 | 832.87 | 833.60 | 829.35 | 822.32 | 812.63 |
| 24 | 779.71 | 770.43 | 765.14 | 768.45 | 766.98 | 813.62 | 829.86 | 832.89 | 833.49 | 829.16 | 822.32 | 812.03 |
| 25 | 779.47 | 770.42 | 764.83 | 768.34 | 767.46 | 814.56 | 830.17 | 832.84 | 833.39 | 828.99 | 822.21 | 811.43 |
| 26 | 779.17 | 770.40 | 764.73 | 768.20 | 768.02 | 815.32 | 830.42 | 833.00 | 833.28 | 828.80 | 822.20 | 810.82 |
| 27 | 778.33 | 770.33 | 764.90 | 768.06 | 769.00 | 816.57 | 830.62 | 832.95 | 833.16 | 828.63 | 821.89 | 810.15 |
| 28 | 777.38 | 770.26 | 765.07 | 767.90 | 772.93 | 817.99 | 830.78 | 832.86 | 833.04 | 828.45 | 821.67 | 809.99 |
| 29 | 776.27 | 770.17 | 765.08 | 767.73 | --- | 819.41 | 830.96 | 832.89 | 833.91 | 828.26 | 821.45 | 809.40 |
| 30 | 774.96 | 770.07 | 765.00 | 767.54 | --- | 820.44 | 831.20 | 832.94 | 832.80 | 828.08 | 821.24 | 807.90 |
| 31 | 773.61 | --- | 764.80 | 767.38 | --- | 821.42 | --- | 832.97 | --- | 827.90 | 820.98 | --- |
| MEAN | 789.18 | 770.59 | 766.67 | 767.21 | 766.45 | 802.64 | 828.38 | 832.65 | 833.65 | 830.42 | 824.39 | 815.70 |
| MAX | 806.12 | 773.23 | 769.98 | 768.65 | 772.93 | 821.42 | 831.20 | 833.70 | 834.06 | 832.66 | 827.70 | 820.72 |
| MIN | 773.61 | 769.41 | 764.73 | 764.65 | 765.45 | 775.40 | 823.07 | 831.55 | 832.80 | 827.90 | 820.98 | 807.90 |
| (†) | 8,760 | 6,870 | 4,480 | 5,580 | 8,390 | 54,550 | 70,610 | 73,820 | 73,510 | 64,840 | 53,930 | 36,930 |
| (‡) | -27,460 | -1,890 | -2,390 | +1,100 | +2,810 | +46,160 | +16,060 | +3,210 | -310 | -8,670 | -10,910 | -17,000 |

CAL YR 1976 MEAN 806.08 MAX 833.22 MIN 764.73 AF-FT† -2,830

WTR YR 1977 MEAN 802.52 MAX 834.06 MIN 764.65 AF-FT‡ +710

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14155500 ROW RIVER NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'35", long 122°59'25", in NE¼ sec.36, T.20 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank 1.7 mi (2.7 km) upstream from Mosby Creek, 2.1 mi (3.4 km) downstream from Dorena Dam, 3.5 mi (5.6 km) east of Cottage Grove, and at mile 5.5 (8.8 km).

DRAINAGE AREA.--270 mi² (699 km²).

PERIOD OF RECORD.--January 1939 to current year. Prior to October 1947, published as "near Dorena."

GAGE.--Water-stage recorder. Datum of gage is 685.24 ft (208.861 m) above mean sea level (levels by Corps of Engineers). Jan. 5 to Oct. 12, 1939, nonrecording gage at site 180 ft (55 m) upstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records excellent. Flow regulated since October 1949 by Dorena Lake (see station 14155000). No diversion above station.

AVERAGE DISCHARGE.--38 years, 758 ft³/s (21.47 m³/s), 38.12 in/yr (968 mm/yr), 549,200 acre-ft/yr (677 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s (606 m³/s) Dec. 28, 1945, gage height, 18.20 ft (5.547 m); minimum, 0.20 ft³/s (0.006 m³/s) Sept. 25 to Oct. 7, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,660 ft³/s (75.3 m³/s) May 17, gage height, 5.89 ft (1.795 m); minimum, 41 ft³/s (1.16 m³/s) Mar. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FFB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|-------|
| 1 | 676 | 369 | 75 | 95 | 100 | 66 | 53 | 145 | 475 | 187 | 179 | 247 |
| 2 | 670 | 297 | 105 | 97 | 100 | 66 | 53 | 527 | 440 | 187 | 179 | 247 |
| 3 | 664 | 293 | 151 | 97 | 97 | 62 | 53 | 1070 | 306 | 187 | 179 | 247 |
| 4 | 659 | 293 | 148 | 97 | 97 | 55 | 187 | 1440 | 207 | 187 | 179 | 247 |
| 5 | 653 | 231 | 148 | 97 | 97 | 55 | 571 | 1600 | 207 | 183 | 179 | 247 |
| 6 | 648 | 191 | 148 | 100 | 97 | 55 | 934 | 1580 | 199 | 183 | 179 | 247 |
| 7 | 643 | 187 | 148 | 100 | 97 | 58 | 1050 | 1360 | 183 | 183 | 179 | 247 |
| 8 | 637 | 138 | 145 | 97 | 97 | 62 | 1100 | 1140 | 183 | 183 | 175 | 243 |
| 9 | 631 | 92 | 122 | 97 | 78 | 78 | 970 | 958 | 195 | 183 | 175 | 243 |
| 10 | 626 | 92 | 100 | 97 | 60 | 60 | 682 | 970 | 203 | 183 | 175 | 243 |
| 11 | 615 | 92 | 100 | 97 | 55 | 55 | 495 | 1130 | 203 | 183 | 175 | 243 |
| 12 | 609 | 92 | 100 | 97 | 55 | 57 | 400 | 1100 | 203 | 183 | 175 | 239 |
| 13 | 391 | 92 | 97 | 100 | 55 | 53 | 475 | 910 | 203 | 183 | 175 | 239 |
| 14 | 311 | 90 | 97 | 100 | 55 | 51 | 440 | 784 | 195 | 183 | 175 | 239 |
| 15 | 521 | 92 | 97 | 103 | 55 | 51 | 400 | 718 | 167 | 183 | 223 | 239 |
| 16 | 516 | 92 | 97 | 103 | 53 | 49 | 400 | 1110 | 145 | 183 | 263 | 239 |
| 17 | 510 | 92 | 100 | 103 | 53 | 49 | 369 | 2130 | 145 | 183 | 255 | 239 |
| 18 | 500 | 92 | 100 | 103 | 53 | 49 | 328 | 2480 | 145 | 183 | 255 | 239 |
| 19 | 495 | 92 | 100 | 103 | 53 | 49 | 297 | 1800 | 145 | 183 | 255 | 289 |
| 20 | 450 | 92 | 100 | 103 | 53 | 49 | 231 | 1250 | 167 | 183 | 255 | 425 |
| 21 | 410 | 92 | 97 | 103 | 55 | 49 | 203 | 1100 | 187 | 183 | 255 | 485 |
| 22 | 405 | 92 | 97 | 103 | 55 | 49 | 203 | 856 | 187 | 183 | 255 | 543 |
| 23 | 400 | 92 | 97 | 103 | 57 | 51 | 203 | 826 | 187 | 179 | 251 | 604 |
| 24 | 396 | 82 | 97 | 103 | 57 | 51 | 203 | 1070 | 187 | 179 | 255 | 598 |
| 25 | 391 | 75 | 97 | 103 | 57 | 49 | 183 | 910 | 187 | 179 | 251 | 598 |
| 26 | 391 | 75 | 95 | 103 | 57 | 49 | 145 | 886 | 187 | 179 | 251 | 593 |
| 27 | 387 | 75 | 95 | 100 | 58 | 51 | 145 | 1070 | 187 | 179 | 251 | 593 |
| 28 | 387 | 75 | 97 | 100 | 64 | 53 | 145 | 910 | 183 | 179 | 251 | 587 |
| 29 | 415 | 75 | 97 | 100 | --- | 53 | 145 | 653 | 183 | 179 | 251 | 922 |
| 30 | 445 | 75 | 97 | 100 | --- | 53 | 145 | 532 | 187 | 179 | 251 | 1190 |
| 31 | 435 | --- | 95 | 100 | --- | 53 | --- | 495 | --- | 179 | 247 | --- |
| TOTAL | 15887 | 3909 | 3339 | 3104 | 1920 | 1690 | 11208 | 33510 | 6178 | 5653 | 6753 | 11801 |
| MEAN | 512 | 130 | 108 | 100 | 68.6 | 54.5 | 374 | 1081 | 206 | 182 | 218 | 393 |
| MAX | 676 | 369 | 151 | 103 | 100 | 78 | 1100 | 2480 | 475 | 187 | 263 | 1190 |
| MIN | 311 | 75 | 75 | 95 | 53 | 49 | 53 | 145 | 145 | 179 | 175 | 239 |
| AC-FT | 31510 | 7750 | 6620 | 6160 | 3810 | 3350 | 22230 | 66470 | 12250 | 11210 | 13390 | 23410 |
| MEAN† | 65.9 | 98.5 | 68.8 | 118 | 119 | 805 | 643 | 1,133 | 201 | 41.3 | 40.3 | 108 |
| CFSM† | .24 | .36 | .25 | .44 | .44 | 2.98 | 2.38 | 4.20 | .74 | .15 | .15 | .40 |
| IN.† | .28 | .41 | .29 | .50 | .46 | 3.44 | 2.66 | 4.84 | .83 | .18 | .17 | .45 |
| AC-FT† | 4,050 | 5,860 | 4,230 | 7,260 | 6,620 | 49,510 | 38,290 | 69,680 | 11,940 | 2,540 | 2,480 | 6,410 |

CAL YR 1976 TOTAL 214,937 MEAN 587 MAX 5,050 MIN 75 AC-FT 426,300 MEAN† 583 CFSM† 2.16 IN.† 29.41 AC-FT† 423,470
WTR YR 1977 TOTAL 104,952 MEAN 288 MAX 2,480 MIN 49 AC-FT 208,200 MEAN† 289 CFSM† 1.07 IN.† 14.51 AC-FT† 208,910

† Adjusted for change in contents in Dorena Lake.

WILLAMETTE RIVER BASIN

267

14156500 MOSBY CREEK AT MOUTH, NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°46'35", long 122°59'55", in SE¼NW¼ sec.1, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on left bank 3.5 mi (5.6 km) southeast of Cottage Grove and at mile 1.0 (1.6 km).

DRAINAGE AREA.--95.3 mi² (246.8 km²).

PERIOD OF RECORD.--September 1946 to current year. Monthly discharge only September 1946, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 676.62 ft (206.234 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--31 years, 245 ft³/s (6.938 m³/s), 34.91 in/yr (887 mm/yr), 177,500 acre-ft/yr (219 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s (399 m³/s) Dec. 22, 1964, gage height, 13.37 ft (4.075 m), from rating curve extended above 4,600 ft³/s (130 m³/s) on basis of slope-area measurement of peak flow; minimum, 2.8 ft³/s (0.079 m³/s) Aug. 15, 1973, Sept. 24, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,010 ft³/s (28.6 m³/s) Mar. 9, gage height, 3.43 ft (1.045 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum daily, 6.0 ft³/s (0.17 m³/s) Aug. 12-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|-------|------|-------|-------|--------|-------|--------|
| 1 | 17 | 137 | 21 | 26 | 23 | 415 | 242 | 73 | 113 | 20 | 8.0 | 18 |
| 2 | 17 | 131 | 20 | 36 | 22 | 315 | 242 | 143 | 95 | 20 | 8.0 | 16 |
| 3 | 20 | 82 | 20 | 62 | 21 | 415 | 193 | 355 | 93 | 19 | 8.0 | 15 |
| 4 | 19 | 61 | 20 | 56 | 20 | 349 | 174 | 447 | 90 | 18 | 7.5 | 14 |
| 5 | 17 | 47 | 19 | 54 | 20 | 266 | 186 | 487 | 80 | 19 | 7.5 | 13 |
| 6 | 16 | 40 | 19 | 47 | 20 | 230 | 174 | 542 | 71 | 19 | 7.5 | 13 |
| 7 | 16 | 35 | 18 | 43 | 20 | 292 | 171 | 387 | 64 | 18 | 7.5 | 12 |
| 8 | 15 | 31 | 22 | 53 | 19 | 567 | 227 | 296 | 57 | 17 | 7.0 | 12 |
| 9 | 15 | 29 | 69 | 64 | 19 | 894 | 227 | 227 | 54 | 16 | 7.0 | 10 |
| 10 | 15 | 27 | 56 | 34 | 18 | 642 | 182 | 197 | 51 | 17 | 7.0 | 10 |
| 11 | 15 | 26 | 43 | 31 | 18 | 426 | 153 | 238 | 51 | 15 | 6.5 | 10 |
| 12 | 15 | 24 | 38 | 53 | 18 | 470 | 131 | 214 | 50 | 15 | 6.0 | 9.4 |
| 13 | 15 | 23 | 34 | 54 | 18 | 442 | 134 | 171 | 46 | 16 | 6.0 | 9.0 |
| 14 | 14 | 28 | 30 | 51 | 18 | 329 | 143 | 146 | 42 | 15 | 6.0 | 9.0 |
| 15 | 14 | 37 | 29 | 47 | 18 | 254 | 131 | 153 | 39 | 14 | 6.0 | 9.4 |
| 16 | 13 | 54 | 27 | 42 | 18 | 202 | 125 | 339 | 34 | 13 | 6.0 | 10 |
| 17 | 13 | 43 | 26 | 38 | 18 | 163 | 111 | 715 | 34 | 12 | 6.0 | 11 |
| 18 | 13 | 43 | 25 | 36 | 17 | 143 | 97 | 487 | 35 | 12 | 6.0 | 12 |
| 19 | 13 | 39 | 23 | 34 | 17 | 146 | 88 | 315 | 34 | 13 | 6.0 | 18 |
| 20 | 13 | 36 | 22 | 33 | 17 | 163 | 84 | 227 | 34 | 12 | 6.0 | 24 |
| 21 | 13 | 33 | 21 | 30 | 28 | 146 | 80 | 178 | 34 | 11 | 6.0 | 26 |
| 22 | 13 | 30 | 20 | 30 | 62 | 143 | 75 | 150 | 30 | 9.8 | 6.1 | 20 |
| 23 | 13 | 29 | 21 | 28 | 78 | 167 | 73 | 178 | 30 | 9.4 | 6.4 | 19 |
| 24 | 16 | 27 | 22 | 27 | 93 | 167 | 71 | 197 | 27 | 9.0 | 36 | 62 |
| 25 | 102 | 26 | 21 | 25 | 84 | 186 | 73 | 171 | 24 | 9.0 | 47 | 62 |
| 26 | 100 | 25 | 25 | 24 | 88 | 171 | 73 | 219 | 25 | 10 | 39 | 76 |
| 27 | 56 | 23 | 36 | 23 | 116 | 223 | 62 | 246 | 23 | 9.4 | 35 | 54 |
| 28 | 40 | 22 | 35 | 23 | 476 | 305 | 59 | 210 | 22 | 8.6 | 24 | 167 |
| 29 | 34 | 22 | 31 | 22 | --- | 334 | 59 | 167 | 20 | 7.8 | 23 | 219 |
| 30 | 30 | 21 | 30 | 21 | --- | 292 | 57 | 140 | 19 | 7.8 | 25 | 102 |
| 31 | 28 | --- | 27 | 23 | --- | 250 | --- | 116 | --- | 7.4 | 23 | --- |
| TOTAL | 750 | 1231 | 870 | 1170 | 1404 | 9507 | 3897 | 8131 | 1421 | 419.2 | 406.0 | 1061.8 |
| MEAN | 24.2 | 41.0 | 28.1 | 37.7 | 50.1 | 307 | 130 | 262 | 47.4 | 13.5 | 13.1 | 35.4 |
| MAX | 102 | 137 | 69 | 64 | 476 | 894 | 242 | 715 | 113 | 20 | 47 | 219 |
| MIN | 13 | 21 | 18 | 21 | 17 | 143 | 57 | 73 | 19 | 7.4 | 6.0 | 9.0 |
| CFSM | .25 | .43 | .30 | .40 | .53 | 3.22 | 1.36 | 2.75 | .50 | .14 | .14 | .37 |
| IN. | .29 | .48 | .34 | .46 | .55 | 3.71 | 1.52 | 3.17 | .55 | .16 | .16 | .41 |
| AC-FT | 1490 | 2440 | 1730 | 2320 | 2780 | 18860 | 7730 | 16130 | 2820 | 831 | 805 | 2110 |
| CAL YR 1976 | TOTAL | 67572.0 | MEAN | 185 | MAX | 6020 | MIN | 11 | CFSM | 1.94 | IN | 26.38 |
| WTR YR 1977 | TOTAL | 30268.0 | MEAN | 82.9 | MAX | 894 | MIN | 6.0 | CFSM | .87 | IN | 11.81 |
| | | | | | | | | | AC-FT | 134000 | AC-FT | 60040 |

WILLAMETTE RIVER BASIN

14157500 COAST FORK WILLAMETTE RIVER NEAR GOSHEN, OR

LOCATION.--Lat 43°58'50", long 122°57'55", in NW¼ sec.29, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank at downstream side of bridge on State Highway 58, 2.5 mi (4.0 km) southeast of Goshen, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--642 mi² (1,663 km²).

PERIOD OF RECORD.--August 1905 to February 1912, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1248: 1905-12: WSP 1935: 1956.

GAGE.--Water-stage recorder. Datum of gage is 473.80 ft (144.414 m) above mean sea level. Aug. 23, 1905, to Feb. 7, 1912, non-recording gage at site 600 ft (183 m) upstream at different datum.

REMARKS.--Records good. Flow regulated since 1942 by Cottage Grove Lake (see station 14153000) and since 1949 by Dorena Lake (see station 14155000). Several small diversions for logponds and irrigation above station.

AVERAGE DISCHARGE.--33 years (water years 1906-11, 1951-77), 1,675 ft³/s (47.44 m³/s), 1,214,000 acre-ft/yr (1.50 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,500 ft³/s (1,660 m³/s) Nov. 22, 1909, gage height, 19.5 ft (5.94 m), site and datum then in use, from rating curve extended above 15,000 ft³/s (425 m³/s); minimum, 36 ft³/s (1.02 m³/s) Sept. 29, 30, Oct. 11, 12, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,630 ft³/s (103 m³/s) May 17, gage height, 6.33 ft (1.929 m); minimum, 122 ft³/s (3.46 m³/s) Feb. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|-------|----------|-------|----------|-------|---------|--------------|-------|-------|-------|
| 1 | 995 | 640 | 175 | 175 | 175 | 977 | 496 | 326 | 817 | 242 | 203 | 307 |
| 2 | 986 | 640 | 172 | 187 | 175 | 724 | 490 | 478 | 748 | 239 | 198 | 297 |
| 3 | 986 | 552 | 222 | 215 | 172 | 765 | 434 | 1440 | 619 | 235 | 200 | 297 |
| 4 | 977 | 467 | 232 | 212 | 170 | 724 | 413 | 2050 | 456 | 239 | 198 | 297 |
| 5 | 959 | 429 | 232 | 209 | 170 | 558 | 724 | 2220 | 429 | 242 | 200 | 293 |
| 6 | 950 | 342 | 232 | 203 | 170 | 478 | 1170 | 2350 | 398 | 239 | 198 | 304 |
| 7 | 940 | 330 | 228 | 192 | 168 | 685 | 1360 | 2070 | 362 | 235 | 198 | 508 |
| 8 | 930 | 322 | 235 | 206 | 168 | 1040 | 1520 | 1750 | 338 | 232 | 198 | 514 |
| 9 | 920 | 249 | 274 | 206 | 165 | 1980 | 1530 | 1480 | 334 | 228 | 195 | 508 |
| 10 | 910 | 245 | 242 | 206 | 147 | 1690 | 1210 | 1330 | 350 | 235 | 190 | 502 |
| 11 | 901 | 315 | 219 | 206 | 137 | 1050 | 920 | 1630 | 346 | 232 | 192 | 502 |
| 12 | 891 | 315 | 206 | 219 | 133 | 1350 | 708 | 1580 | 342 | 228 | 192 | 496 |
| 13 | 817 | 274 | 198 | 235 | 133 | 1230 | 732 | 1370 | 330 | 228 | 195 | 490 |
| 14 | 330 | 278 | 190 | 232 | 133 | 891 | 782 | 1180 | 322 | 228 | 195 | 484 |
| 15 | 748 | 281 | 185 | 222 | 131 | 685 | 670 | 1090 | 300 | 222 | 200 | 490 |
| 16 | 748 | 278 | 180 | 219 | 131 | 565 | 655 | 1440 | 270 | 222 | 267 | 484 |
| 17 | 748 | 274 | 177 | 212 | 129 | 484 | 626 | 2710 | 267 | 222 | 267 | 484 |
| 18 | 740 | 281 | 175 | 209 | 129 | 445 | 552 | 3360 | 263 | 219 | 270 | 490 |
| 19 | 732 | 263 | 175 | 209 | 129 | 423 | 508 | 2750 | 256 | 219 | 274 | 520 |
| 20 | 700 | 259 | 172 | 203 | 129 | 423 | 456 | 1990 | 256 | 215 | 285 | 662 |
| 21 | 633 | 252 | 170 | 203 | 145 | 398 | 393 | 1720 | 278 | 212 | 300 | 791 |
| 22 | 626 | 245 | 168 | 203 | 212 | 374 | 379 | 1440 | 274 | 209 | 297 | 817 |
| 23 | 578 | 225 | 172 | 198 | 274 | 403 | 374 | 1280 | 274 | 212 | 289 | 959 |
| 24 | 473 | 219 | 170 | 195 | 362 | 478 | 366 | 1550 | 270 | 212 | 350 | 1000 |
| 25 | 532 | 206 | 170 | 192 | 322 | 450 | 370 | 1530 | 267 | 209 | 358 | 1050 |
| 26 | 578 | 200 | 177 | 177 | 304 | 429 | 334 | 1300 | 267 | 206 | 342 | 1060 |
| 27 | 508 | 198 | 185 | 175 | 318 | 423 | 318 | 1650 | 263 | 206 | 338 | 1030 |
| 28 | 478 | 195 | 187 | 172 | 748 | 571 | 311 | 1520 | 259 | 206 | 326 | 1090 |
| 29 | 484 | 195 | 185 | 172 | --- | 648 | 307 | 1230 | 252 | 203 | 322 | 1410 |
| 30 | 558 | 180 | 182 | 170 | --- | 598 | 315 | 950 | 249 | 203 | 318 | 1830 |
| 31 | 552 | --- | 177 | 175 | --- | 520 | --- | 872 | --- | 206 | 311 | --- |
| TOTAL | 22908 | 9149 | 6064 | 6209 | 5679 | 22459 | 19423 | 49636 | 10456 | 6885 | 7866 | 19966 |
| MEAN | 739 | 305 | 196 | 200 | 203 | 724 | 647 | 1601 | 349 | 222 | 254 | 666 |
| MAX | 995 | 640 | 274 | 235 | 748 | 1980 | 1530 | 3360 | 817 | 242 | 358 | 1830 |
| MIN | 330 | 180 | 168 | 170 | 129 | 374 | 307 | 326 | 249 | 203 | 190 | 293 |
| AC-FT | 45440 | 18150 | 12030 | 12320 | 11260 | 44550 | 38530 | 98450 | 20740 | 13660 | 15600 | 39600 |
| CAL YR 1976 TOTAL | 440198 | | | 1203 | | 15500 | | MIN 168 | AC-FT 873100 | | | |
| WTR YR 1977 TOTAL | 186700 | | | MEAN 512 | | MAX 3360 | | MIN 129 | AC-FT 370300 | | | |

WILLAMETTE RIVER BASIN

269

14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR

LOCATION.--Lat 44°21'40", long 121°59'40", in SE¼ sec.8, T.14 S., R.7 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, on west bank of Clear Lake in narrow channel, 150 ft (46 m) upstream from outlet and at mile 89.6 (144.2 km).

DRAINAGE AREA.--92.4 mi² (239.3 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--June 1912 to September 1915, October 1947 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1949. WSP 1318: 1915(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,015.32 ft (919.070 m) above mean sea level (levels by Eugene Water and Electric Board). June 20, 1912, to July 31, 1915, nonrecording gage at site 1.0 mi (1.6 km) north at different datum.

REMARKS.--Records excellent. Flow regulated by natural storage in lake. At high stages an undetermined flow enters numerous sinkholes in lava rock along south edge of lake above station.

AVERAGE DISCHARGE.--33 years, 479 ft³/s (13.57 m³/s), 70.40 in/yr (1,788 mm/yr), 347,000 acre-ft/yr (428 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft³/s (93.5 m³/s) Dec. 23, 1964, gage height, 8.15 ft (2.484 m); minimum, 137 ft³/s (3.88 m³/s) Sept. 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 576 ft³/s (16.3 m³/s) May 3, 4, gage height, 2.90 ft (0.884 m); minimum, 137 ft³/s (3.88 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|-------|------|---------|-----------|----------|-------|--------|------|------|
| 1 | 277 | 250 | 227 | 202 | 181 | 193 | 247 | 514 | 366 | 196 | 158 | 145 |
| 2 | 275 | 249 | 225 | 204 | 180 | 192 | 247 | 533 | 360 | 193 | 157 | 145 |
| 3 | 272 | 249 | 224 | 201 | 180 | 193 | 249 | 566 | 360 | 190 | 157 | 146 |
| 4 | 270 | 250 | 222 | 199 | 180 | 192 | 252 | 559 | 363 | 189 | 156 | 146 |
| 5 | 268 | 250 | 220 | 198 | 179 | 192 | 258 | 530 | 360 | 186 | 156 | 145 |
| 6 | 268 | 250 | 218 | 196 | 177 | 192 | 268 | 501 | 358 | 184 | 156 | 145 |
| 7 | 265 | 250 | 213 | 195 | 177 | 202 | 282 | 482 | 358 | 181 | 156 | 143 |
| 8 | 263 | 249 | 217 | 195 | 176 | 212 | 306 | 470 | 358 | 180 | 154 | 142 |
| 9 | 263 | 247 | 215 | 193 | 176 | 225 | 326 | 461 | 355 | 179 | 152 | 142 |
| 10 | 261 | 245 | 213 | 193 | 176 | 229 | 347 | 467 | 352 | 177 | 151 | 142 |
| 11 | 259 | 243 | 212 | 192 | 176 | 238 | 366 | 464 | 350 | 176 | 151 | 142 |
| 12 | 258 | 241 | 210 | 192 | 174 | 247 | 379 | 458 | 344 | 174 | 151 | 140 |
| 13 | 258 | 240 | 208 | 195 | 176 | 245 | 396 | 449 | 339 | 173 | 149 | 140 |
| 14 | 256 | 240 | 208 | 192 | 176 | 241 | 402 | 434 | 334 | 173 | 148 | 140 |
| 15 | 254 | 243 | 207 | 190 | 177 | 240 | 410 | 425 | 326 | 172 | 148 | 140 |
| 16 | 252 | 240 | 207 | 190 | 177 | 236 | 419 | 416 | 319 | 170 | 148 | 139 |
| 17 | 250 | 240 | 205 | 189 | 179 | 232 | 425 | 410 | 311 | 170 | 146 | 139 |
| 18 | 250 | 243 | 205 | 189 | 179 | 231 | 440 | 399 | 304 | 169 | 146 | 139 |
| 19 | 249 | 243 | 204 | 189 | 179 | 229 | 446 | 393 | 294 | 169 | 146 | 138 |
| 20 | 249 | 245 | 202 | 189 | 180 | 225 | 452 | 385 | 284 | 167 | 146 | 138 |
| 21 | 247 | 245 | 201 | 189 | 183 | 224 | 449 | 382 | 272 | 167 | 146 | 138 |
| 22 | 247 | 245 | 201 | 189 | 186 | 222 | 443 | 379 | 259 | 166 | 145 | 138 |
| 23 | 245 | 243 | 201 | 189 | 184 | 224 | 440 | 385 | 247 | 166 | 143 | 139 |
| 24 | 247 | 241 | 199 | 189 | 184 | 225 | 443 | 379 | 238 | 165 | 147 | 143 |
| 25 | 252 | 240 | 199 | 187 | 183 | 225 | 467 | 374 | 227 | 163 | 146 | 142 |
| 26 | 245 | 238 | 201 | 186 | 184 | 225 | 511 | 379 | 220 | 163 | 146 | 143 |
| 27 | 245 | 234 | 201 | 184 | 184 | 238 | 504 | 379 | 215 | 162 | 145 | 147 |
| 28 | 245 | 232 | 199 | 184 | 192 | 238 | 488 | 377 | 210 | 161 | 145 | 151 |
| 29 | 247 | 231 | 201 | 183 | --- | 238 | 488 | 371 | 204 | 161 | 145 | 153 |
| 30 | 245 | 229 | 202 | 181 | --- | 241 | 495 | 368 | 201 | 159 | 147 | 156 |
| 31 | 249 | --- | 202 | 183 | --- | 245 | --- | 366 | --- | 158 | 145 | --- |
| TOTAL | 7931 | 7285 | 6469 | 5927 | 5035 | 6931 | 11645 | 13455 | 9088 | 5359 | 4632 | 4286 |
| MEAN | 256 | 243 | 209 | 191 | 180 | 224 | 388 | 434 | 303 | 173 | 149 | 143 |
| MAX | 277 | 250 | 227 | 204 | 192 | 247 | 511 | 566 | 366 | 196 | 158 | 156 |
| MIN | 245 | 229 | 199 | 181 | 174 | 192 | 247 | 366 | 201 | 158 | 143 | 138 |
| CFSM | 2.77 | 2.63 | 2.26 | 2.07 | 1.95 | 2.42 | 4.20 | 4.70 | 3.28 | 1.87 | 1.61 | 1.55 |
| IN. | 3.19 | 2.93 | 2.60 | 2.39 | 2.03 | 2.79 | 4.69 | 5.42 | 3.66 | 2.16 | 1.86 | 1.73 |
| AC-FT | 15730 | 14450 | 12830 | 11760 | 9990 | 13750 | 23100 | 26690 | 18030 | 10630 | 9190 | 8500 |
| CAL YR 1976 | TOTAL | 171877 | MEAN 470 | MAX | 1210 | MIN 199 | CFSM 5.09 | IN 69.20 | AC-FT | 340900 | | |
| WTR YR 1977 | TOTAL | 88043 | MEAN 241 | MAX | 566 | MIN 138 | CFSM 2.61 | IN 35.45 | AC-FT | 174600 | | |

WILLAMETTE RIVER BASIN

14158790 SMITH RIVER ABOVE SMITH RIVER RESERVOIR, NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°20'05", long 122°02'45", in SW¹/₄SW¹/₄ sec. 24, T.14 S., R. 6 E., Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 200 ft (61 m) upstream from Smith River Reservoir, 0.7 mi (1.1 km) downstream from Browder Creek, 10 mi (16 km) north of town of Belnap Springs, and at mile 4.4 (7.1 km).

DRAINAGE AREA.--16.2 mi² (42.0 km²).

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,610.00 ft (795.528 m) above mean sea level (levels by Eugene Water and Electric Board). Prior to Sept. 10, 1964, at datum 1.56 ft (0.475 m) higher.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--17 years, 93.1 ft³/s (2.637 m³/s), 78.04 in/yr (1,982 mm/yr), 67,450 acre-ft/yr (83.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,160 ft³/s (146 m³/s) Dec. 22, 1964, gage height, 11.9 ft (3.63 m), from floodmark, from rating curve extended above 560 ft³/s (15.9 m³/s), on basis of slope-area measurement of peak flow; minimum, 3.2 ft³/s (0.091 m³/s) Sept. 24-29, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 289 ft³/s (8.18 m³/s) Apr. 7, gage height, 6.77 ft (2.063 m), no peak above base of 800 ft³/s (22.7 m³/s); minimum, 3.4 ft³/s (0.10 m³/s) Oct. 18-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-------|-------|-------|------|-------|------|------|-------|-------|-------|
| 1 | 4.1 | 30 | 8.4 | 13 | 11 | 36 | 61 | 184 | 116 | 11 | 4.8 | 7.7 |
| 2 | 4.8 | 22 | 8.1 | 13 | 11 | 30 | 60 | 211 | 100 | 10 | 4.8 | 7.0 |
| 3 | 5.4 | 16 | 7.7 | 11 | 10 | 26 | 62 | 214 | 96 | 10 | 4.8 | 7.0 |
| 4 | 4.3 | 13 | 7.7 | 11 | 10 | 24 | 82 | 180 | 126 | 10 | 4.6 | 7.0 |
| 5 | 4.3 | 11 | 7.4 | 13 | 10 | 25 | 126 | 156 | 118 | 9.8 | 4.6 | 6.7 |
| 6 | 4.1 | 10 | 7.4 | 25 | 10 | 29 | 180 | 136 | 112 | 9.3 | 4.3 | 6.3 |
| 7 | 4.1 | 9.3 | 7.0 | 13 | 8.8 | 65 | 238 | 120 | 101 | 8.8 | 4.3 | 5.7 |
| 8 | 4.1 | 8.8 | 9.8 | 9.3 | 8.8 | 156 | 264 | 112 | 85 | 8.4 | 4.6 | 5.7 |
| 9 | 3.8 | 8.1 | 8.8 | 11 | 9.3 | 130 | 204 | 114 | 71 | 8.1 | 4.1 | 5.4 |
| 10 | 3.8 | 7.7 | 8.1 | 12 | 10 | 87 | 160 | 151 | 61 | 8.1 | 4.1 | 5.4 |
| 11 | 4.1 | 7.4 | 8.4 | 9.8 | 11 | 68 | 147 | 136 | 53 | 7.7 | 3.8 | 5.1 |
| 12 | 3.8 | 7.4 | 8.4 | 12 | 11 | 65 | 149 | 122 | 48 | 7.4 | 3.8 | 5.1 |
| 13 | 3.8 | 7.0 | 8.1 | 13 | 14 | 55 | 160 | 112 | 42 | 7.4 | 3.8 | 4.8 |
| 14 | 3.6 | 8.8 | 8.1 | 12 | 12 | 47 | 143 | 112 | 38 | 7.0 | 4.1 | 4.8 |
| 15 | 3.6 | 24 | 8.1 | 12 | 11 | 43 | 141 | 107 | 35 | 7.0 | 3.8 | 4.8 |
| 16 | 3.6 | 25 | 8.1 | 13 | 11 | 40 | 147 | 101 | 32 | 6.7 | 3.6 | 5.4 |
| 17 | 3.6 | 19 | 8.1 | 15 | 10 | 37 | 132 | 109 | 29 | 6.7 | 4.1 | 5.7 |
| 18 | 3.4 | 21 | 8.1 | 17 | 10 | 36 | 120 | 105 | 26 | 7.7 | 4.8 | 6.7 |
| 19 | 3.4 | 17 | 7.7 | 18 | 10 | 37 | 107 | 101 | 25 | 7.4 | 5.1 | 9.3 |
| 20 | 3.4 | 16 | 7.4 | 17 | 11 | 36 | 105 | 101 | 23 | 7.0 | 5.1 | 11 |
| 21 | 3.4 | 15 | 7.4 | 17 | 13 | 37 | 109 | 107 | 22 | 6.7 | 4.8 | 11 |
| 22 | 3.4 | 13 | 7.0 | 16 | 13 | 47 | 122 | 107 | 20 | 6.3 | 4.8 | 10 |
| 23 | 3.4 | 13 | 7.7 | 16 | 12 | 56 | 147 | 122 | 19 | 6.3 | 4.8 | 15 |
| 24 | 6.3 | 11 | 7.0 | 14 | 11 | 51 | 189 | 109 | 17 | 6.3 | 11 | 30 |
| 25 | 26 | 11 | 9.3 | 14 | 11 | 48 | 233 | 101 | 16 | 6.0 | 9.8 | 25 |
| 26 | 13 | 10 | 21 | 13 | 11 | 47 | 211 | 141 | 15 | 6.0 | 9.8 | 18 |
| 27 | 6.7 | 9.3 | 24 | 12 | 25 | 84 | 184 | 128 | 15 | 5.7 | 7.4 | 15 |
| 28 | 6.7 | 9.3 | 18 | 12 | 53 | 69 | 180 | 126 | 13 | 5.4 | 9.3 | 19 |
| 29 | 6.3 | 8.8 | 16 | 11 | --- | 60 | 175 | 116 | 13 | 5.4 | 13 | 21 |
| 30 | 6.0 | 8.8 | 15 | 11 | --- | 55 | 177 | 105 | 12 | 5.1 | 16 | 39 |
| 31 | 13 | --- | 13 | 12 | --- | 53 | --- | 103 | --- | 5.1 | 8.8 | --- |
| TOTAL | 173.3 | 397.7 | 306.3 | 418.1 | 358.9 | 1679 | 4515 | 3949 | 1499 | 229.8 | 186.5 | 329.6 |
| MEAN | 5.59 | 13.3 | 9.88 | 13.5 | 12.8 | 54.2 | 151 | 127 | 50.0 | 7.41 | 6.02 | 11.0 |
| MAX | 26 | 30 | 24 | 25 | 53 | 156 | 264 | 214 | 126 | 11 | 16 | 39 |
| MIN | 3.4 | 7.0 | 7.0 | 9.3 | 8.8 | 24 | 60 | 101 | 12 | 5.1 | 3.6 | 4.8 |
| CFSM | .35 | .82 | .61 | .83 | .79 | 3.35 | 9.32 | 7.84 | 3.09 | .46 | .37 | .68 |
| IN. | .40 | .91 | .70 | .96 | .82 | 3.86 | 10.37 | 9.07 | 3.44 | .53 | .43 | .76 |
| AC-FT | 344 | 789 | 608 | 829 | 712 | 3330 | 8960 | 7830 | 2970 | 456 | 370 | 654 |
| CAL YR 1976 | TOTAL | 26218.0 | MEAN | 71.6 | MAX | 402 | CFSM | 4.42 | IN | 60.20 | AC-FT | 52000 |
| WTR YR 1977 | TOTAL | 14042.2 | MEAN | 38.5 | MAX | 264 | CFSM | 2.38 | IN | 32.24 | AC-FT | 27850 |

WILLAMETTE RIVER BASIN

271

14158795 SMITH RIVER RESERVOIR NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°18'20", long 122°02'40", in SW¼SW¼ sec.36, T.14 S., R.6 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, in intake tower near left end of Smith River Dam on Smith River, 800 ft (244 m) upstream from Bunchgrass Creek, 8 mi (13 km) north of town of Belknap Springs, and at mile 2.1 (3.4 km).

DRAINAGE AREA.--18.2 mi² (47.1 km²).

PERIOD OF RECORD.--March 1963 to current year.

GAGE.--Telemark with equipment to transmit elevations at 15-minute intervals. Datum of gage is at mean sea level (levels by Eugene Water and Electric Board).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1963 by Eugene Water and Electric Board; storage began Mar. 18, 1963. Total capacity is 15,000 acre-ft (18.5 hm³) at elevation 2,605.0 ft (794.00 m), top of spillway gates, and usable capacity is 9,900 acre-ft (12.2 hm³) between elevations 2,525.0 ft (769.62 m), minimum power pool, and 2,605.0 ft (794.00 m). Storage of 5,100 acre-ft (6.29 hm³), below elevation 2,525.0 ft (769.62 m), not normally available for release. Water used for power generation. Figures herein represent total contents.

COOPERATION.--Elevations and area-volume curves furnished by Eugene Water and Electric Board.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 15,200 acre-ft (18.7 hm³) Dec. 22, 1964, elevation, 2,606.5 ft (794.46 m); minimum, 5,700 acre-ft (7.03 hm³) Apr. 11, 14, 1964, elevation, 2,532.90 ft (772.028 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,800 acre-ft (18.2 hm³) June 19, elevation, 2,603.93 ft (793.678 m); minimum, 13,200 acre-ft (16.3 hm³) Apr. 6, elevation, 2,594.58 ft (790.828 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 2,601.76 | 14,400 | - |
| Oct. 31..... | 2,600.89 | 14,250 | -150 |
| Nov. 30..... | 2,600.89 | 14,250 | 0 |
| Dec. 31..... | 2,600.74 | 14,230 | -20 |
| CAL YR 1976..... | - | - | +2,110 |
| Jan. 31..... | 2,600.82 | 14,240 | +10 |
| Feb. 28..... | 2,600.90 | 14,250 | +10 |
| Mar. 31..... | 2,594.87 | 13,280 | -970 |
| Apr. 30..... | 2,598.93 | 13,930 | +650 |
| May 31..... | 2,598.50 | 13,860 | -70 |
| June 30..... | 2,601.64 | 14,380 | +520 |
| July 31..... | 2,602.02 | 14,440 | +60 |
| Aug. 31..... | 2,601.76 | 14,400 | -40 |
| Sept. 30..... | 2,601.60 | 14,370 | -30 |
| WTR YR 1977..... | - | - | -30 |

WILLAMETTE RIVER BASIN

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°16'05", long 122°02'55", in T.15 S., R.6 E. (unsurveyed), Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.4 mi (0.6 km) downstream from Trail Bridge Dam, 0.5 mi (0.8 km) upstream from Anderson Creek, 5 mi (8 km) north of town of Belknap Springs, and at mile 81.5 (131.1 km).

DRAINAGE AREA.--184 mi² (477 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,980.00 ft (603.504 m) above mean sea level (levels by Eugene Water and Electric Board). Prior to Oct. 11, 1963, at datum 5.60 ft (1.707 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1963 by Smith River Reservoir (see station 14158795). Diurnal fluctuations by powerplants and by Trail Bridge reregulating reservoir upstream. Water is diverted from McKenzie River in SW $\frac{1}{4}$ sec.20, T.14 S., R.7 E., to Smith River Reservoir and returned to river above station.

AVERAGE DISCHARGE.--18 years, 1,056 ft³/s (29.91 m³/s), 77.94 in/yr (1,980 mm/yr), 765,100 acre-ft/yr (943 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s (317 m³/s) Dec. 22, 1964, gage height, 12.45 ft (3.795 m), from rating curve extended above 3,700 ft³/s (105 m³/s) on basis of slope-area measurement of peak flow; minimum, 185 ft³/s (5.24 m³/s) Feb. 3, 1963; minimum daily, 425 ft³/s (12.0 m³/s) Nov. 23, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,240 ft³/s (35.1 m³/s) May 3, gage height, 7.19 ft (2.192 m); minimum, 456 ft³/s (12.9 m³/s) Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 746 | 767 | 654 | 617 | 587 | 677 | 719 | 1160 | 887 | 580 | 558 | 558 |
| 2 | 726 | 719 | 654 | 625 | 580 | 640 | 719 | 1150 | 902 | 602 | 573 | 558 |
| 3 | 790 | 740 | 669 | 647 | 580 | 617 | 746 | 1190 | 910 | 632 | 565 | 551 |
| 4 | 797 | 733 | 654 | 632 | 573 | 654 | 790 | 1190 | 932 | 617 | 565 | 529 |
| 5 | 760 | 699 | 610 | 595 | 558 | 654 | 902 | 1120 | 910 | 617 | 551 | 529 |
| 6 | 733 | 684 | 632 | 580 | 558 | 684 | 925 | 1080 | 910 | 602 | 551 | 536 |
| 7 | 733 | 684 | 677 | 587 | 573 | 782 | 880 | 1040 | 902 | 595 | 558 | 536 |
| 8 | 733 | 712 | 662 | 602 | 573 | 947 | 932 | 993 | 880 | 587 | 558 | 536 |
| 9 | 726 | 726 | 684 | 602 | 573 | 962 | 1030 | 985 | 895 | 580 | 551 | 529 |
| 10 | 706 | 726 | 647 | 610 | 573 | 865 | 970 | 1060 | 842 | 617 | 543 | 536 |
| 11 | 719 | 712 | 640 | 610 | 565 | 740 | 917 | 1050 | 740 | 617 | 551 | 536 |
| 12 | 726 | 677 | 617 | 602 | 565 | 740 | 925 | 1010 | 706 | 580 | 551 | 536 |
| 13 | 733 | 669 | 617 | 610 | 565 | 740 | 985 | 985 | 733 | 573 | 551 | 536 |
| 14 | 726 | 692 | 617 | 632 | 573 | 746 | 977 | 985 | 797 | 580 | 551 | 536 |
| 15 | 712 | 753 | 617 | 610 | 580 | 692 | 1020 | 962 | 797 | 595 | 551 | 529 |
| 16 | 706 | 712 | 617 | 587 | 587 | 692 | 1000 | 955 | 797 | 595 | 543 | 522 |
| 17 | 699 | 706 | 625 | 580 | 565 | 699 | 977 | 970 | 746 | 580 | 543 | 522 |
| 18 | 699 | 706 | 640 | 587 | 558 | 699 | 955 | 947 | 712 | 580 | 551 | 522 |
| 19 | 699 | 706 | 625 | 602 | 558 | 699 | 977 | 887 | 790 | 580 | 543 | 536 |
| 20 | 692 | 699 | 617 | 602 | 573 | 699 | 1010 | 872 | 775 | 580 | 551 | 543 |
| 21 | 712 | 706 | 625 | 610 | 587 | 677 | 962 | 902 | 726 | 580 | 543 | 551 |
| 22 | 719 | 699 | 625 | 610 | 610 | 677 | 962 | 947 | 706 | 565 | 536 | 551 |
| 23 | 719 | 699 | 617 | 602 | 610 | 692 | 1040 | 955 | 699 | 565 | 543 | 558 |
| 24 | 712 | 699 | 625 | 602 | 587 | 712 | 1040 | 940 | 662 | 565 | 543 | 587 |
| 25 | 760 | 692 | 625 | 587 | 573 | 726 | 1130 | 925 | 654 | 565 | 551 | 558 |
| 26 | 719 | 662 | 647 | 587 | 565 | 726 | 1170 | 977 | 654 | 573 | 558 | 558 |
| 27 | 706 | 669 | 662 | 587 | 595 | 753 | 1110 | 970 | 654 | 573 | 558 | 558 |
| 28 | 706 | 669 | 632 | 580 | 706 | 775 | 1100 | 902 | 654 | 580 | 558 | 565 |
| 29 | 706 | 684 | 625 | 587 | --- | 797 | 1090 | 932 | 640 | 565 | 558 | 580 |
| 30 | 706 | 684 | 587 | 587 | --- | 753 | 1080 | 932 | 617 | 558 | 558 | 632 |
| 31 | 719 | --- | 595 | 580 | --- | 733 | --- | 910 | --- | 551 | 558 | --- |
| TOTAL | 22445 | 21085 | 19640 | 18638 | 16250 | 22649 | 29040 | 30883 | 23229 | 18129 | 17123 | 16414 |
| MEAN | 724 | 703 | 634 | 601 | 580 | 731 | 968 | 996 | 774 | 585 | 552 | 547 |
| MAX | 797 | 767 | 684 | 647 | 706 | 962 | 1170 | 1190 | 932 | 632 | 573 | 632 |
| MIN | 692 | 662 | 587 | 580 | 558 | 617 | 719 | 872 | 617 | 551 | 536 | 522 |
| AC-FT | 44520 | 41820 | 38960 | 36970 | 32230 | 44920 | 57600 | 61260 | 46070 | 35960 | 33960 | 32560 |
| MEAN† | 722 | 703 | 633 | 601 | 580 | 715 | 979 | 995 | 783 | 586 | 552 | 547 |
| CFSM† | 3.92 | 3.82 | 3.44 | 3.27 | 3.15 | 3.89 | 5.32 | 5.41 | 4.26 | 3.18 | 3.00 | 2.97 |
| IN.† | 4.52 | 4.26 | 3.97 | 3.77 | 3.29 | 4.48 | 5.94 | 6.24 | 4.75 | 3.67 | 3.46 | 3.32 |
| AC-FT† | 44,370 | 41,820 | 38,940 | 36,980 | 32,240 | 43,950 | 58,250 | 61,190 | 46,590 | 36,020 | 33,920 | 32,530 |

CAL YR 1976 TOTAL 372,161 MEAN 1,017 MAX 2,040 MIN 587 AC-FT 738,200 MEAN† 1,020 CFSM† 5.54 IN.† 75.45 AC-FT† 740,260
WTR YR 1977 TOTAL 255,525 MEAN 700 MAX 1,190 MIN 522 AC-FT 506,800 MEAN† 700 CFSM† 3.80 IN.† 51.66 AC-FT† 506,800

† Adjusted for change in contents in Smith River Reservoir.

WILLAMETTE RIVER BASIN

273

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to current year.

WATER TEMPERATURES: November 1976 to current year.

INSTRUMENTATION.--Dual conductivity-temperature recorder since November 1976.

REMARKS.--Interruptions in the record after Nov. 3, were due to malfunctions of the instrument.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 59 micromhos Feb. 4; minimum recorded, 45 micromhos May 30, June 1, 6-9.

WATER TEMPERATURES: Maximum recorded, 12.0°C Aug. 1; minimum recorded, 4.0°C many days January to March.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS- CHARGE (CFS) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) | DIS- SOLVED SODIUM (NA) (MG/L) | BICAR- BONATE (HCO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) |
|--------------|------|--|--|--|---|--|--------------------------------------|--|---|
| AUG 10... | 1215 | 543 | 23 | 6.9 | 2.0 | 4.4 | 32 | 1.6 | .9 |

| DATE | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA,MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) |
|--------------|--|--|--|---|---|------------------------------------|---|---|--|
| AUG 10... | .1 | .00 | .54 | .54 | .05 | 25 | 0 | .4 | 46 |

| DATE | DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) | TUR- BID- ITY (JTU) | SUS- PENDE SEDI- MENT (MG/L) | SUS- PENDE SEDI- MENT CHARGE (T/DAY) | ALKA- LITY AS CAC03 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|--------------|--|--|--|------------------------------|--|---|--|---|
| AUG 10... | 56 | 67.4 | .06 | 1 | 1 | 1.5 | 26 | .0 |

| DATE | TOTAL IRON (FE) (UG/L) | DIS- SOLVED IRON (FE) (UG/L) | TOTAL MAN- GANESE (MN) (UG/L) | DIS- SOLVED MAN- GANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS- SOLVED ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | DIS- SOLVED CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | DIS- SOLVED CHRO- MIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|--------------|---------------------------------|--|---|--|------------------------------------|---|---|--|--|---|-----------------------------------|
| AUG 10... | 30 | 20 | 0 | 0 | 0 | 1 | <10 | 0 | 0 | 0 | <50 |

| DATE | DIS- SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS- SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS- SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS- SOLVED ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | DIS- SOLVED SELE- NIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS- SOLVED MERCURY (HG) (UG/L) |
|--------------|--|-----------------------------------|--|---------------------------------|--|---------------------------------|--|--|---|------------------------------------|---|
| AUG 10... | 0 | <10 | 2 | <100 | 2 | 20 | 6 | 0 | 0 | .0 | .0 |

WILLAMETTE RIVER BASIN

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | --- | 56 | 56 | 53 | 56 | | --- | 47 | 50 | 54 | 54 |
| 2 | | --- | 57 | 56 | 53 | --- | | --- | 47 | 51 | 54 | 54 |
| 3 | | --- | 56 | 55 | 53 | 57 | | --- | 47 | 52 | 54 | 54 |
| 4 | | 53 | 57 | 55 | 54 | 56 | | --- | 47 | 52 | 54 | 53 |
| 5 | | 54 | 57 | 55 | 55 | 56 | | --- | 47 | 52 | 54 | 53 |
| 6 | | 54 | 57 | 56 | 55 | 56 | | --- | 46 | 52 | 54 | 53 |
| 7 | | 54 | 57 | 56 | 55 | 56 | | --- | 46 | 52 | 54 | 53 |
| 8 | | 54 | 57 | 56 | 55 | 55 | | --- | 47 | 52 | 54 | 53 |
| 9 | | 54 | 57 | 56 | 54 | 55 | | --- | 47 | 52 | 54 | 53 |
| 10 | | 54 | 57 | 55 | 54 | 54 | | --- | 47 | 52 | 54 | 52 |
| 11 | | 54 | 57 | 55 | 54 | 54 | | --- | 48 | 52 | 54 | 52 |
| 12 | | 54 | 57 | 55 | 54 | 54 | | --- | 48 | 52 | 54 | 52 |
| 13 | | 54 | 57 | 55 | 54 | 54 | | --- | 48 | 53 | 54 | 52 |
| 14 | | 54 | 57 | 55 | 54 | 54 | | --- | 48 | 53 | 54 | 51 |
| 15 | | 54 | 57 | 55 | 54 | 54 | | --- | 48 | 52 | 54 | 52 |
| 16 | | 55 | 57 | 55 | 55 | 54 | | --- | 48 | 53 | 54 | 51 |
| 17 | | 55 | 57 | 55 | 55 | 54 | | --- | 48 | 53 | 55 | 52 |
| 18 | | 55 | 57 | 55 | 55 | 53 | | --- | 48 | 53 | 55 | 52 |
| 19 | | 54 | 57 | 55 | 56 | 53 | | --- | 48 | 53 | 54 | 51 |
| 20 | | 55 | 56 | 55 | 56 | 53 | | --- | 49 | 53 | 54 | 51 |
| 21 | | 55 | 56 | 54 | 56 | 53 | | --- | 49 | 53 | 55 | 51 |
| 22 | | 56 | 57 | 55 | 56 | 53 | | --- | 49 | 53 | 55 | 51 |
| 23 | | 56 | 57 | 55 | 56 | 54 | | --- | 49 | 53 | 54 | 51 |
| 24 | | 56 | 57 | 55 | 56 | 53 | | --- | 49 | 53 | 55 | 51 |
| 25 | | 56 | 56 | 55 | 57 | 53 | | --- | 49 | 53 | 55 | 51 |
| 26 | | 56 | 56 | 54 | 56 | 53 | | 47 | 50 | 53 | 55 | 51 |
| 27 | | 56 | 56 | 54 | 56 | 53 | | 47 | 50 | 53 | 55 | 51 |
| 28 | | 56 | 56 | 54 | 56 | 53 | | 47 | 50 | 53 | 54 | 50 |
| 29 | | 56 | 56 | 54 | --- | 52 | | 47 | 50 | 53 | 54 | 51 |
| 30 | | 56 | 56 | 53 | --- | 52 | | 47 | 50 | 54 | 54 | 51 |
| 31 | | --- | 56 | 53 | --- | 53 | | 47 | --- | 53 | 54 | --- |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | | | --- | --- | 5.5 | 5.5 | 5.5 | 5.0 | 4.5 | 4.0 | 4.5 | 4.0 |
| 2 | | | --- | --- | 5.5 | 5.5 | 5.0 | 5.0 | 4.5 | 4.0 | --- | --- |
| 3 | | | --- | --- | 5.5 | 5.5 | 5.0 | 5.0 | 4.5 | 4.0 | 4.5 | 4.5 |
| 4 | | | 6.5 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 4.5 | 4.0 | 5.0 | 4.0 |
| 5 | | | 6.5 | 6.0 | 5.5 | 5.5 | 5.5 | 5.0 | 4.5 | 4.0 | 5.0 | 4.5 |
| 6 | | | 6.5 | 6.5 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.0 | 5.0 | 4.5 |
| 7 | | | 6.5 | 6.0 | 5.5 | 5.5 | 5.0 | 4.5 | 4.5 | 4.0 | 5.0 | 4.5 |
| 8 | | | 6.5 | 6.0 | 6.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.5 | 5.0 | 4.5 |
| 9 | | | 6.5 | 6.0 | 6.0 | 6.0 | 5.0 | 4.5 | 5.0 | 4.5 | 4.5 | 4.0 |
| 10 | | | 6.5 | 6.0 | 6.0 | 5.5 | 5.0 | 4.5 | 5.0 | 4.5 | 4.5 | 4.0 |
| 11 | | | 6.5 | 6.0 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 |
| 12 | | | 6.5 | 6.0 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.5 |
| 13 | | | 6.5 | 6.0 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | 4.5 | 4.5 | 4.0 |
| 14 | | | 6.0 | 6.0 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 4.5 | 4.5 |
| 15 | | | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.5 |
| 16 | | | 6.0 | 6.0 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.5 |
| 17 | | | 6.5 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 4.5 |
| 18 | | | 6.5 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 4.5 |
| 19 | | | 6.5 | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 4.5 |
| 20 | | | 6.5 | 6.0 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.5 |
| 21 | | | 6.5 | 6.0 | 5.5 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 5.0 | 4.5 |
| 22 | | | 6.0 | 6.0 | 5.5 | 5.5 | 5.5 | 5.0 | 5.0 | 4.5 | 5.0 | 4.5 |
| 23 | | | 6.5 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 4.5 | 5.5 | 5.0 |
| 24 | | | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.0 | 4.5 | 5.0 | 5.0 |
| 25 | | | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.5 | 5.0 |
| 26 | | | 6.0 | 6.0 | 5.5 | 5.5 | 5.0 | 4.0 | 5.0 | 4.5 | 5.5 | 5.0 |
| 27 | | | 6.0 | 5.5 | 5.5 | 5.5 | 4.5 | 4.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 28 | | | 6.0 | 5.5 | 5.5 | 5.5 | 4.5 | 4.0 | 4.5 | 4.0 | 5.0 | 4.5 |
| 29 | | | 5.5 | 5.5 | 5.5 | 5.5 | 4.5 | 4.0 | --- | --- | 5.0 | 4.5 |
| 30 | | | 5.5 | 5.5 | 5.5 | 5.0 | 4.5 | 4.0 | --- | --- | 5.0 | 5.0 |
| 31 | | | --- | --- | 5.5 | 5.0 | 4.5 | 4.0 | --- | --- | 5.5 | 5.0 |
| MONTH | | | 6.5 | 5.5 | 6.0 | 5.0 | 5.5 | 4.0 | 5.0 | 4.0 | 5.5 | 4.0 |

WILLAMETTE RIVER BASIN

275

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|-----|-----|------|-----|------|------|--------|------|-----------|-----|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | | | --- | --- | 8.0 | 7.0 | 10.0 | 9.0 | 12.0 | 10.0 | 9.5 | 8.5 |
| 2 | | | --- | --- | 7.5 | 7.5 | 10.0 | 9.0 | 11.5 | 10.5 | 10.0 | 9.0 |
| 3 | | | --- | --- | 8.0 | 7.0 | 10.0 | 9.0 | 11.5 | 10.5 | 9.5 | 9.0 |
| 4 | | | --- | --- | 8.0 | 7.0 | 10.0 | 9.0 | 11.0 | 9.0 | 10.0 | 9.0 |
| 5 | | | --- | --- | 8.0 | 7.5 | 10.0 | 9.0 | 10.5 | 9.5 | 10.0 | 9.0 |
| 6 | | | --- | --- | 8.0 | 7.5 | 10.0 | 9.0 | 10.5 | 9.5 | 10.0 | 9.0 |
| 7 | | | --- | --- | 9.0 | 8.0 | 10.0 | 9.0 | 10.5 | 9.5 | 10.0 | 9.0 |
| 8 | | | --- | --- | 8.5 | 8.0 | 10.5 | 9.5 | 10.5 | 9.5 | 10.0 | 9.0 |
| 9 | | | --- | --- | 8.5 | 8.0 | 10.5 | 9.5 | 10.5 | 9.5 | 10.0 | 9.0 |
| 10 | | | --- | --- | 8.5 | 8.0 | 10.5 | 9.5 | 10.5 | 9.5 | 10.0 | 9.0 |
| 11 | | | --- | --- | 8.5 | 8.0 | 10.5 | 9.5 | 10.5 | 9.5 | 10.0 | 9.0 |
| 12 | | | --- | --- | 8.5 | 8.0 | 10.5 | 9.5 | 10.5 | 9.5 | 10.0 | 9.0 |
| 13 | | | --- | --- | 9.0 | 8.0 | 10.5 | 9.5 | 10.5 | 9.5 | 9.5 | 9.0 |
| 14 | | | --- | --- | 9.0 | 8.5 | 10.5 | 9.5 | 10.5 | 9.5 | 10.0 | 9.0 |
| 15 | | | --- | --- | 9.0 | 8.5 | 10.5 | 9.5 | 10.5 | 9.5 | 10.0 | 9.0 |
| 16 | | | --- | --- | 9.0 | 8.5 | 10.5 | 9.5 | 10.0 | 9.0 | 9.5 | 9.0 |
| 17 | | | --- | --- | 9.0 | 8.5 | 10.5 | 9.5 | 10.0 | 9.0 | 9.5 | 9.0 |
| 18 | | | --- | --- | 9.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.5 | 9.5 | 9.0 |
| 19 | | | --- | --- | 9.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.0 | 9.5 | 8.5 |
| 20 | | | --- | --- | 9.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.0 | 9.5 | 8.5 |
| 21 | | | --- | --- | 9.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.5 | 9.5 | 8.5 |
| 22 | | | --- | --- | 9.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.0 | 9.5 | 9.0 |
| 23 | | | --- | --- | 9.5 | 8.5 | 10.5 | 9.5 | 10.0 | 9.0 | 9.0 | 8.5 |
| 24 | | | --- | --- | 9.5 | 9.0 | 10.5 | 9.5 | 10.0 | 9.5 | 9.0 | 8.5 |
| 25 | | | --- | --- | 9.5 | 9.0 | 10.5 | 9.5 | 10.0 | 9.0 | 9.0 | 8.5 |
| 26 | | | 7.5 | 7.5 | 9.5 | 9.0 | 10.5 | 9.5 | 10.0 | 8.5 | 9.0 | 8.5 |
| 27 | | | 7.5 | 7.0 | 9.5 | 9.0 | 10.5 | 9.5 | 9.5 | 8.5 | 9.0 | 8.5 |
| 28 | | | 7.5 | 7.0 | 10.0 | 9.0 | 11.5 | 10.0 | 9.5 | 8.5 | 9.0 | 8.5 |
| 29 | | | 7.5 | 7.0 | 10.0 | 9.0 | 11.5 | 10.0 | 9.5 | 8.5 | 9.0 | 8.0 |
| 30 | | | 7.5 | 7.0 | 10.0 | 9.0 | 10.5 | 9.5 | 9.5 | 8.5 | 8.5 | 8.5 |
| 31 | | | 7.5 | 7.0 | --- | --- | 11.0 | 9.5 | 9.5 | 8.5 | --- | --- |
| MONTH | | | 7.5 | 7.0 | 10.0 | 7.0 | 11.5 | 9.0 | 12.0 | 8.5 | 10.0 | 8.0 |

WILLAMETTE RIVER BASIN

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR

LOCATION.--Lat 44°10'45", long 122°07'45", on line between NE¼ and NW¼ sec.18, T.16 S., R.6 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, on left bank 1.0 mi (1.6 km) upstream from Glen Creek, 1.7 mi (2.7 km) east of town of McKenzie Bridge, and at mile 69.9 (112.5 km).

DRAINAGE AREA.--348 mi² (901 km²) at cableway 1.2 mi (1.9 km) upstream, where all discharge measurements are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1910 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "near McKenzie Bridge" August 1910 to September 1911 and October 1914 to September 1916.

REVISED RECORDS.--WSP 1248: 1911-16, 1920-25. WSP 1448: 1919. WSP 1638: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,419.04 ft (432.523 m) above mean sea level. Prior to June 2, 1932, nonrecording gage at several sites within 2 mi (3 km) of present site at various datums.

REMARKS.--Water-discharge records good. Flow regulated since March 1963 by Smith River Reservoir (see station 14158795). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--67 years, 1,686 ft³/s (47.75 m³/s), 1,222,000 acre-ft/yr (1.51 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,100 ft³/s (541 m³/s) Dec. 22, 1964, gage height, 10.36 ft (3.158 m), from rating curve extended above 7,100 ft³/s (201 m³/s) on basis of slope-area measurement of peak flow; minimum, 805 ft³/s (22.8 m³/s) Oct. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,930 ft³/s (54.7 m³/s) May 3, gage height, 1.82 ft (0.555 m); minimum, 924 ft³/s (26.2 m³/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| 1 | 1220 | 1290 | 1110 | 1070 | 1030 | 1230 | 1350 | 1780 | 1520 | 1100 | 1000 | 980 |
| 2 | 1190 | 1220 | 1100 | 1090 | 1030 | 1180 | 1350 | 1830 | 1500 | 1120 | 1000 | 972 |
| 3 | 1250 | 1220 | 1110 | 1100 | 1030 | 1170 | 1390 | 1890 | 1490 | 1150 | 1000 | 972 |
| 4 | 1260 | 1200 | 1110 | 1090 | 1010 | 1180 | 1600 | 1860 | 1550 | 1140 | 1000 | 956 |
| 5 | 1220 | 1160 | 1060 | 1060 | 998 | 1180 | 1700 | 1770 | 1500 | 1130 | 1000 | 956 |
| 6 | 1200 | 1140 | 1070 | 1050 | 998 | 1210 | 1700 | 1690 | 1490 | 1120 | 1000 | 956 |
| 7 | 1190 | 1140 | 1110 | 1040 | 1010 | 1370 | 1700 | 1640 | 1470 | 1120 | 1000 | 956 |
| 8 | 1190 | 1160 | 1120 | 1040 | 1010 | 1750 | 1790 | 1580 | 1440 | 1110 | 1000 | 948 |
| 9 | 1190 | 1170 | 1130 | 1040 | 1010 | 1770 | 1800 | 1580 | 1430 | 1110 | 1000 | 948 |
| 10 | 1160 | 1170 | 1100 | 1040 | 1010 | 1590 | 1680 | 1760 | 1400 | 1120 | 980 | 948 |
| 11 | 1170 | 1160 | 1090 | 1050 | 1010 | 1410 | 1590 | 1760 | 1290 | 1090 | 980 | 948 |
| 12 | 1180 | 1120 | 1070 | 1040 | 998 | 1400 | 1580 | 1670 | 1250 | 1100 | 980 | 940 |
| 13 | 1180 | 1120 | 1060 | 1080 | 1010 | 1370 | 1660 | 1630 | 1260 | 1100 | 980 | 940 |
| 14 | 1180 | 1130 | 1060 | 1090 | 1010 | 1350 | 1630 | 1600 | 1310 | 1100 | 980 | 940 |
| 15 | 1170 | 1240 | 1060 | 1070 | 1010 | 1280 | 1650 | 1590 | 1310 | 1100 | 980 | 940 |
| 16 | 1160 | 1220 | 1060 | 1040 | 1020 | 1250 | 1650 | 1570 | 1310 | 1100 | 980 | 932 |
| 17 | 1150 | 1180 | 1060 | 1040 | 998 | 1240 | 1600 | 1600 | 1270 | 1000 | 980 | 932 |
| 18 | 1150 | 1180 | 1070 | 1050 | 989 | 1250 | 1550 | 1580 | 1210 | 1000 | 980 | 932 |
| 19 | 1150 | 1170 | 1070 | 1050 | 980 | 1270 | 1550 | 1520 | 1280 | 1000 | 972 | 956 |
| 20 | 1140 | 1160 | 1060 | 1060 | 998 | 1250 | 1580 | 1480 | 1280 | 1000 | 972 | 964 |
| 21 | 1160 | 1160 | 1060 | 1060 | 1030 | 1230 | 1530 | 1520 | 1220 | 1000 | 972 | 972 |
| 22 | 1170 | 1150 | 1060 | 1060 | 1060 | 1260 | 1530 | 1570 | 1200 | 1000 | 972 | 964 |
| 23 | 1170 | 1150 | 1060 | 1060 | 1050 | 1290 | 1630 | 1600 | 1200 | 1000 | 964 | 949 |
| 24 | 1180 | 1150 | 1060 | 1040 | 1030 | 1290 | 1660 | 1570 | 1170 | 1000 | 998 | 1080 |
| 25 | 1300 | 1150 | 1070 | 1030 | 1030 | 1290 | 1790 | 1540 | 1160 | 1000 | 989 | 1030 |
| 26 | 1210 | 1120 | 1120 | 1030 | 1030 | 1320 | 1830 | 1630 | 1160 | 1000 | 998 | 998 |
| 27 | 1170 | 1120 | 1140 | 1030 | 1080 | 1420 | 1740 | 1610 | 1160 | 1000 | 980 | 989 |
| 28 | 1170 | 1120 | 1100 | 1030 | 1290 | 1410 | 1700 | 1560 | 1160 | 1000 | 989 | 1030 |
| 29 | 1160 | 1120 | 1080 | 1030 | --- | 1370 | 1690 | 1570 | 1150 | 1000 | 998 | 1030 |
| 30 | 1160 | 1120 | 1050 | 1030 | --- | 1330 | 1670 | 1560 | 1130 | 1000 | 1020 | 1090 |
| 31 | 1180 | --- | 1050 | 1030 | --- | 1340 | --- | 1530 | --- | 1000 | 989 | --- |
| TOTAL | 36730 | 34910 | 33530 | 32620 | 28759 | 41250 | 48870 | 50640 | 39270 | 32810 | 30633 | 29188 |
| MEAN | 1185 | 1164 | 1082 | 1052 | 1027 | 1331 | 1629 | 1634 | 1309 | 1058 | 988 | 973 |
| MAX | 1300 | 1290 | 1140 | 1100 | 1290 | 1770 | 1830 | 1890 | 1550 | 1150 | 1020 | 1090 |
| MIN | 1140 | 1120 | 1050 | 1030 | 980 | 1170 | 1350 | 1480 | 1130 | 1000 | 964 | 932 |
| AC-FT | 72850 | 69240 | 66510 | 64700 | 57040 | 81820 | 96930 | 100400 | 77890 | 65080 | 60760 | 57890 |

CAL YR 1976 TOTAL 622540 MEAN 1701 MAX 3840 MIN 1050 AC-FT 1235000
WTR YR 1977 TOTAL 439210 MEAN 1203 MAX 1890 MIN 932 AC-FT 871200

NOTE.--No gage-height record July 12 to Aug. 10.

WILLAMETTE RIVER BASIN

277

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to current year.

WATER TEMPERATURES: November 1976 to current year.

INSTRUMENTATION.--Conductivity and temperature recorder since November 1976.

REMARKS.--Interruptions in the record after Nov. 4 were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 78 micromhos Jan. 2, 1977; minimum recorded, 43 micromhos Aug. 5, 6, 1977.

WATER TEMPERATURES: Maximum recorded, 13.5°C Aug. 1, 3, 1977; minimum recorded, 3.5°C Jan. 5, 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 78 micromhos Jan. 2; minimum recorded, 43 micromhos Aug. 5, 6.

WATER TEMPERATURES: Maximum recorded, 13.5°C Aug. 1, 3; minimum recorded, 3.5°C Jan. 5, 8, 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SiO ₂) (MG/L) | DIS-SOLVED CALCIUM (CA) (MG/L) | DIS-SOLVED MAGNE-SIUM (MG) | DIS-SOLVED SODIUM (NA) (MG/L) | BICARBONATE (HCO ₃) (MG/L) | DIS-SOLVED SULFATE (SO ₄) (MG/L) | DIS-SOLVED CHLORIDE (CL) (MG/L) |
|-----------|------|--------------------------------|--|--------------------------------|----------------------------|-------------------------------|--|--|---------------------------------|
| AUG 10... | 1500 | 981 | 24 | 5.3 | 2.0 | 5.0 | 31 | 1.5 | 2.3 |

| DATE | DIS-SOLVED FLUORIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL-DAHL NITROGEN (N) (MG/L) | TOTAL NITROGEN (N) (MG/L) | TOTAL PHOSPHORUS (P) (MG/L) | HARDNESS (CA,MG) (MG/L) | NON-CARBONATE HARDNESS (MG/L) | SODIUM ADSORPTION RATIO | DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) |
|-----------|--------------------------------|---------------------------------------|-------------------------------------|---------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|---|
| AUG 10... | .1 | .00 | .37 | .37 | .05 | 21 | 0 | .5 | 47 |

| DATE | DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS-SOLVED SOLIDS (TONS PER DAY) | DIS-SOLVED SOLIDS (TONS PER AC-FT) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SUSPENDED SEDIMENT CHARGE (T/DAY) | ALKALINITY AS CaCO ₃ (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|--|----------------------------------|------------------------------------|-----------------|---------------------------|-----------------------------------|--|---------------------------------|
| AUG 10... | 57 | 124 | .06 | 1 | 1 | 2.6 | 25 | .4 |

| DATE | TOTAL IRON (FE) (UG/L) | DIS-SOLVED IRON (FE) (UG/L) | TOTAL MANGANESE (MN) (UG/L) | DIS-SOLVED MANGANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS-SOLVED ARSENIC (AS) (UG/L) | TOTAL CADMIUM (CD) (UG/L) | DIS-SOLVED CADMIUM (CD) (UG/L) | TOTAL CHROMIUM (CR) (UG/L) | DIS-SOLVED CHROMIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|------------------------|-----------------------------|-----------------------------|----------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|----------------------------|---------------------------------|--------------------------|
| AUG 10... | 40 | 20 | 0 | 0 | 0 | 0 | <10 | 4 | 0 | 0 | <50 |

| DATE | DIS-SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS-SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) | TOTAL SELENIUM (SE) (UG/L) | DIS-SOLVED SELENIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS-SOLVED MERCURY (HG) (UG/L) |
|-----------|-------------------------------|--------------------------|-------------------------------|------------------------|-----------------------------|------------------------|-----------------------------|----------------------------|---------------------------------|---------------------------|--------------------------------|
| AUG 10... | 1 | 10 | 5 | <100 | 54 | 40 | 20 | 0 | 0 | .1 | .0 |

WILLAMETTE RIVER BASIN

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | --- | --- | 67 | | | | | --- | 51 | 54 | 56 |
| 2 | | --- | --- | 67 | | | | | --- | 52 | 54 | 56 |
| 3 | | --- | --- | 67 | | | | | --- | 51 | 54 | 56 |
| 4 | | --- | --- | 66 | | | | | --- | 51 | 55 | 56 |
| 5 | | 60 | --- | 65 | | | | | --- | 51 | 50 | 56 |
| 6 | | 60 | --- | 65 | | | | | --- | 50 | 50 | 55 |
| 7 | | 59 | --- | 65 | | | | | --- | 51 | 56 | 56 |
| 8 | | --- | --- | 65 | | | | | 54 | 53 | 55 | 56 |
| 9 | | --- | --- | 64 | | | | | 55 | 52 | 56 | 56 |
| 10 | | --- | --- | 66 | | | | | 55 | 52 | 56 | 55 |
| 11 | | --- | --- | 65 | | | | | 55 | 52 | 56 | 55 |
| 12 | | --- | --- | 66 | | | | | 56 | 52 | 56 | 55 |
| 13 | | --- | --- | 66 | | | | | 56 | 53 | 56 | 55 |
| 14 | | --- | --- | 66 | | | | | 54 | 53 | 56 | 55 |
| 15 | | --- | --- | 65 | | | | | 55 | 53 | 56 | 55 |
| 16 | | --- | --- | 64 | | | | | 54 | 52 | 56 | 55 |
| 17 | | --- | --- | 64 | | | | | 53 | 53 | 57 | 55 |
| 18 | | --- | --- | 64 | | | | | 54 | 53 | 57 | 55 |
| 19 | | --- | --- | 65 | | | | | 54 | 53 | 57 | 54 |
| 20 | | --- | --- | 66 | | | | | 54 | 53 | 57 | 54 |
| 21 | | --- | --- | 66 | | | | | 53 | 54 | 57 | 55 |
| 22 | | --- | --- | 65 | | | | | 53 | 54 | 57 | 54 |
| 23 | | --- | --- | 66 | | | | | 53 | 54 | 57 | 54 |
| 24 | | --- | --- | 65 | | | | | 52 | 54 | 56 | 53 |
| 25 | | --- | --- | 63 | | | | | 53 | 54 | 57 | 53 |
| 26 | | --- | --- | 65 | | | | | 52 | 54 | 57 | 53 |
| 27 | | --- | 66 | 62 | | | | | 52 | 54 | 57 | 54 |
| 28 | | --- | 67 | 65 | | | | | 52 | 54 | 56 | 54 |
| 29 | | --- | 65 | 62 | | | | | 52 | 55 | 57 | 54 |
| 30 | | --- | 68 | 65 | | | | | 51 | 55 | 56 | 53 |
| 31 | | --- | 68 | --- | | | | | --- | 54 | 57 | --- |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | | | --- | --- | --- | --- | 5.0 | 4.0 | | | | |
| 2 | | | --- | --- | --- | --- | 5.0 | 4.0 | | | | |
| 3 | | | --- | --- | --- | --- | 5.0 | 4.5 | | | | |
| 4 | | | 8.0 | 7.0 | --- | --- | 5.0 | 4.0 | | | | |
| 5 | | | 8.0 | 7.0 | --- | --- | 4.0 | 3.5 | | | | |
| 6 | | | 8.0 | 7.0 | --- | --- | 4.0 | 4.0 | | | | |
| 7 | | | 8.0 | 7.0 | --- | --- | 4.5 | 4.0 | | | | |
| 8 | | | --- | --- | --- | --- | 4.0 | 3.5 | | | | |
| 9 | | | --- | --- | --- | --- | 4.5 | 3.5 | | | | |
| 10 | | | --- | --- | --- | --- | 5.5 | 4.5 | | | | |
| 11 | | | --- | --- | --- | --- | 5.0 | 4.5 | | | | |
| 12 | | | --- | --- | --- | --- | 5.0 | 5.0 | | | | |
| 13 | | | --- | --- | --- | --- | 5.0 | 5.0 | | | | |
| 14 | | | --- | --- | --- | --- | 6.0 | 4.5 | | | | |
| 15 | | | --- | --- | --- | --- | 6.0 | 5.0 | | | | |
| 16 | | | --- | --- | --- | --- | 5.0 | 5.0 | | | | |
| 17 | | | --- | --- | --- | --- | 5.5 | 4.5 | | | | |
| 18 | | | --- | --- | --- | --- | 5.0 | 4.5 | | | | |
| 19 | | | --- | --- | --- | --- | 5.0 | 4.5 | | | | |
| 20 | | | --- | --- | --- | --- | 5.0 | 4.5 | | | | |
| 21 | | | --- | --- | --- | --- | 5.0 | 4.5 | | | | |
| 22 | | | --- | --- | --- | --- | 6.0 | 4.5 | | | | |
| 23 | | | --- | --- | --- | --- | 5.5 | 4.5 | | | | |
| 24 | | | --- | --- | --- | --- | 6.0 | 4.5 | | | | |
| 25 | | | --- | --- | --- | --- | 6.0 | 5.0 | | | | |
| 26 | | | --- | --- | --- | --- | 5.5 | 4.5 | | | | |
| 27 | | | --- | --- | 6.0 | 5.0 | 6.0 | 5.0 | | | | |
| 28 | | | --- | --- | 5.0 | 4.5 | 5.0 | 4.5 | | | | |
| 29 | | | --- | --- | 5.5 | 4.5 | 6.5 | 5.0 | | | | |
| 30 | | | --- | --- | 5.0 | 4.0 | 5.0 | 5.0 | | | | |
| 31 | | | --- | --- | 4.5 | 4.0 | --- | --- | | | | |
| MONTH | | | 8.0 | 7.0 | 6.0 | 4.0 | 6.5 | 3.5 | | | | |

WILLAMETTE RIVER BASIN

279

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|------|-----------|-----|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | --- | --- | 7.5 | 6.5 | 9.0 | 7.0 | 12.0 | 9.0 | 13.5 | 9.5 | 11.5 | 8.5 |
| 2 | --- | --- | 8.5 | 6.5 | 9.5 | 7.0 | 12.0 | 9.0 | 13.0 | 10.0 | 10.5 | 8.5 |
| 3 | --- | --- | 7.0 | 6.0 | 8.5 | 7.5 | 10.5 | 9.0 | 13.5 | 9.5 | 11.0 | 9.0 |
| 4 | --- | --- | 7.0 | 6.0 | 9.5 | 7.5 | 11.0 | 9.0 | 13.0 | 9.0 | 11.5 | 9.0 |
| 5 | --- | --- | 7.0 | 6.0 | 11.0 | 7.5 | 10.5 | 8.5 | 12.5 | 9.0 | 11.5 | 9.0 |
| 6 | --- | --- | 8.0 | 6.0 | 11.0 | 8.0 | 12.0 | 8.5 | 12.5 | 9.5 | 11.5 | 9.0 |
| 7 | --- | --- | 7.0 | 5.5 | 9.5 | 8.0 | 12.5 | 8.5 | 11.5 | 9.5 | 11.5 | 8.5 |
| 8 | --- | --- | 9.0 | 6.0 | 11.5 | 8.0 | 12.5 | 9.0 | 12.5 | 9.5 | 11.0 | 8.5 |
| 9 | --- | --- | 7.0 | 6.0 | 11.5 | 8.0 | 12.0 | 9.0 | 12.5 | 9.0 | 11.0 | 8.0 |
| 10 | --- | --- | 7.0 | 6.0 | 11.0 | 8.5 | 12.5 | 8.5 | 12.5 | 9.0 | 11.0 | 8.5 |
| 11 | --- | --- | 7.5 | 6.0 | 11.5 | 8.5 | 12.5 | 9.0 | 12.5 | 9.5 | 11.0 | 8.5 |
| 12 | --- | --- | 8.0 | 6.0 | 11.5 | 8.5 | 11.5 | 9.5 | 12.0 | 9.0 | 11.0 | 8.5 |
| 13 | --- | --- | 8.0 | 6.5 | 12.0 | 8.0 | 12.5 | 8.5 | 12.0 | 9.5 | 11.0 | 8.5 |
| 14 | 8.0 | 6.0 | 8.0 | 6.5 | 11.5 | 8.5 | 12.5 | 9.0 | 12.5 | 9.5 | 11.0 | 8.5 |
| 15 | 7.0 | 6.0 | 7.5 | 6.0 | 11.5 | 8.5 | 12.5 | 9.0 | 12.5 | 9.5 | 10.0 | 8.5 |
| 16 | 7.0 | 5.5 | 7.5 | 6.0 | 12.0 | 8.5 | 12.5 | 9.5 | 12.5 | 9.5 | 10.0 | 8.5 |
| 17 | 8.0 | 5.5 | 7.5 | 6.0 | 11.5 | 8.5 | 12.5 | 9.5 | 12.0 | 9.5 | 9.5 | 8.5 |
| 18 | 7.5 | 5.5 | 8.0 | 6.5 | 12.0 | 8.5 | 10.5 | 9.5 | 12.5 | 9.5 | 9.5 | 8.5 |
| 19 | 8.0 | 5.0 | 9.5 | 6.5 | 12.0 | 9.0 | 12.0 | 9.0 | 11.5 | 9.5 | 10.0 | 8.5 |
| 20 | 8.0 | 5.5 | 9.5 | 6.5 | 10.0 | 9.0 | 12.5 | 9.0 | 11.5 | 9.5 | 9.5 | 8.5 |
| 21 | 7.5 | 6.0 | 9.5 | 7.0 | 12.0 | 9.0 | 12.5 | 9.5 | 12.0 | 9.5 | 9.5 | 8.5 |
| 22 | 8.0 | 6.0 | 8.0 | 6.5 | 12.5 | 9.0 | 13.0 | 9.5 | 12.0 | 9.5 | 10.0 | 8.5 |
| 23 | 7.5 | 6.0 | 8.5 | 7.0 | 12.5 | 9.0 | 11.5 | 9.5 | 11.0 | 9.0 | 8.5 | 8.5 |
| 24 | 8.5 | 6.0 | 9.0 | 6.5 | 12.5 | 9.0 | 12.0 | 9.5 | 10.5 | 9.5 | 9.5 | 8.5 |
| 25 | 8.0 | 6.5 | 9.0 | 6.5 | 13.0 | 9.0 | 12.0 | 9.5 | 9.5 | 9.0 | 9.5 | 8.0 |
| 26 | 8.5 | 6.0 | 8.0 | 7.0 | 12.5 | 9.0 | 13.0 | 9.5 | 10.0 | 9.0 | 10.0 | 8.0 |
| 27 | 9.0 | 6.0 | 7.5 | 6.5 | 12.5 | 9.0 | 12.5 | 9.5 | 9.5 | 9.0 | 8.5 | 8.0 |
| 28 | 8.0 | 6.5 | 9.5 | 6.5 | 13.0 | 9.0 | 12.5 | 9.5 | 10.0 | 9.0 | 8.5 | 8.5 |
| 29 | 8.5 | 6.5 | 9.5 | 6.5 | 12.5 | 9.0 | 13.0 | 9.0 | 10.5 | 9.0 | 8.5 | 8.0 |
| 30 | 8.5 | 6.5 | 8.5 | 7.0 | 12.5 | 9.0 | 12.5 | 9.0 | 11.5 | 9.0 | 8.5 | 8.0 |
| 31 | --- | --- | 9.5 | 7.5 | --- | --- | 13.0 | 9.5 | 11.0 | 8.5 | --- | --- |
| MONTH | 9.0 | 5.0 | 9.5 | 5.5 | 13.0 | 7.0 | 13.0 | 8.5 | 13.5 | 8.5 | 11.5 | 8.0 |

WILLAMETTE RIVER BASIN

14159200 SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR

LOCATION.--Lat 44°02'50", long 122°13'00", in T.17 S., R.5 E. (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 100 ft (30 m) upstream from Tipsoo Creek, 8.0 mi (12.9 km) south of Rainbow, 9.0 mi (14.5 km) southeast of town of Blue River, and at mile 10.4 (16.7 km). Records include flow of Tipsoo Creek.

DRAINAGE AREA.--160 mi² (414 km²) at cableway 0.2 mi (0.3 km) downstream, where all discharge measurements are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1971, published as South Fork McKenzie River above Cougar Reservoir.

REVISED RECORDS.--WSP 1638: Drainage area. WSP 1935: 1958(M).

GAGE.--Water-stage recorder. Datum of gage is 1,709.51 ft (521.059 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good. No regulation or diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--20 years, 645 ft³/s (18.27 m³/s), 54.74 in/yr (1,390 mm/yr), 467,300 acre-ft/yr (576 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s (521 m³/s) Dec. 22, 1964, gage height, 20.06 ft (6.114 m), from floodmark, from rating curve extended above 7,600 ft³/s (215 m³/s), on basis of slope-area measurement of peak flow; minimum, 182 ft³/s (5.15 m³/s) Aug. 17-20, 22, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft³/s (30.3 m³/s) May 3, gage height, 5.73 ft (1.747 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum, 182 ft³/s (5.15 m³/s) Aug. 17-20, 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 243 | 339 | 232 | 229 | 225 | 365 | 490 | 850 | 756 | 250 | 198 | 217 |
| 2 | 246 | 301 | 232 | 255 | 220 | 325 | 479 | 992 | 701 | 246 | 198 | 207 |
| 3 | 253 | 278 | 229 | 246 | 217 | 333 | 455 | 1030 | 660 | 246 | 196 | 205 |
| 4 | 246 | 265 | 229 | 239 | 217 | 314 | 511 | 945 | 693 | 243 | 196 | 203 |
| 5 | 243 | 258 | 227 | 232 | 215 | 314 | 636 | 869 | 672 | 243 | 193 | 198 |
| 6 | 241 | 253 | 227 | 227 | 215 | 336 | 752 | 787 | 668 | 239 | 193 | 198 |
| 7 | 239 | 248 | 227 | 227 | 215 | 438 | 897 | 718 | 624 | 236 | 196 | 196 |
| 8 | 239 | 246 | 239 | 222 | 215 | 731 | 992 | 668 | 570 | 234 | 198 | 193 |
| 9 | 236 | 243 | 239 | 220 | 215 | 739 | 823 | 672 | 518 | 232 | 193 | 191 |
| 10 | 236 | 241 | 232 | 225 | 215 | 544 | 684 | 930 | 476 | 229 | 191 | 191 |
| 11 | 236 | 239 | 234 | 225 | 217 | 455 | 612 | 940 | 445 | 227 | 189 | 191 |
| 12 | 234 | 236 | 232 | 229 | 217 | 462 | 589 | 874 | 425 | 227 | 189 | 189 |
| 13 | 234 | 236 | 229 | 248 | 222 | 422 | 656 | 805 | 399 | 225 | 189 | 189 |
| 14 | 232 | 241 | 227 | 248 | 222 | 387 | 612 | 796 | 377 | 222 | 191 | 191 |
| 15 | 232 | 325 | 225 | 241 | 220 | 362 | 589 | 792 | 359 | 220 | 189 | 191 |
| 16 | 232 | 312 | 225 | 241 | 217 | 345 | 616 | 778 | 345 | 217 | 187 | 196 |
| 17 | 229 | 285 | 225 | 241 | 217 | 331 | 577 | 841 | 333 | 217 | 187 | 196 |
| 18 | 229 | 285 | 222 | 246 | 217 | 328 | 536 | 841 | 322 | 222 | 184 | 200 |
| 19 | 229 | 273 | 220 | 246 | 215 | 342 | 504 | 800 | 314 | 222 | 184 | 215 |
| 20 | 227 | 265 | 220 | 243 | 217 | 347 | 490 | 796 | 309 | 217 | 187 | 234 |
| 21 | 227 | 260 | 217 | 241 | 234 | 339 | 493 | 800 | 306 | 215 | 187 | 232 |
| 22 | 227 | 255 | 217 | 239 | 248 | 371 | 515 | 814 | 296 | 212 | 184 | 220 |
| 23 | 227 | 250 | 225 | 234 | 239 | 438 | 570 | 916 | 288 | 210 | 184 | 222 |
| 24 | 243 | 248 | 220 | 232 | 232 | 409 | 660 | 883 | 280 | 212 | 241 | 232 |
| 25 | 368 | 248 | 225 | 229 | 232 | 380 | 774 | 828 | 275 | 215 | 229 | 232 |
| 26 | 309 | 243 | 255 | 227 | 241 | 359 | 752 | 960 | 270 | 207 | 248 | 232 |
| 27 | 265 | 239 | 273 | 225 | 280 | 493 | 710 | 900 | 265 | 205 | 217 | 232 |
| 28 | 253 | 239 | 248 | 222 | 452 | 472 | 697 | 841 | 260 | 205 | 220 | 232 |
| 29 | 248 | 236 | 241 | 222 | --- | 432 | 701 | 778 | 255 | 203 | 258 | 232 |
| 30 | 243 | 234 | 234 | 220 | --- | 406 | 714 | 731 | 253 | 200 | 275 | 232 |
| 31 | 260 | --- | 229 | 225 | --- | 402 | --- | 722 | --- | 200 | 232 | --- |
| TOTAL | 7606 | 7821 | 7156 | 7246 | 6508 | 12721 | 19086 | 25897 | 12714 | 6898 | 6303 | 6289 |
| MEAN | 245 | 261 | 231 | 234 | 232 | 410 | 636 | 835 | 424 | 223 | 203 | 210 |
| MAX | 368 | 339 | 273 | 255 | 452 | 739 | 992 | 1030 | 756 | 250 | 275 | 234 |
| MIN | 227 | 234 | 217 | 220 | 215 | 314 | 455 | 668 | 253 | 200 | 184 | 189 |
| CFSM | 1.53 | 1.63 | 1.44 | 1.46 | 1.45 | 2.56 | 3.98 | 5.22 | 2.65 | 1.39 | 1.27 | 1.31 |
| IN. | 1.77 | 1.82 | 1.66 | 1.68 | 1.51 | 2.96 | 4.44 | 6.02 | 2.96 | 1.60 | 1.47 | 1.46 |
| AC-FT | 15090 | 15510 | 14190 | 14370 | 12910 | 25230 | 37860 | 51370 | 25220 | 13680 | 12500 | 12470 |

CAL YR 1976 TOTAL 224194 MEAN 613 MAX 3810 MIN 217 CFSM 3.83 IN 52.13 AC-FT 444700
WTR YR 1977 TOTAL 126245 MEAN 346 MAX 1030 MIN 184 CFSM 2.16 IN 29.35 AC-FT 250400

14159200 SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1957 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 17.0°C July 8, 1968; minimum, 0.0°C Dec. 7-11, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.5°C July 31, Aug. 14, 17; minimum, 1.5°C Jan. 8, 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 10.5 | 7.5 | 8.0 | 7.0 | 5.0 | 4.0 | 4.0 | 3.5 | 4.5 | 3.5 | 4.5 | 3.5 |
| 2 | 9.0 | 8.0 | 8.0 | 7.0 | 4.5 | 4.0 | 4.5 | 4.0 | 4.0 | 3.0 | 4.5 | 4.0 |
| 3 | 8.5 | 7.5 | 7.5 | 6.5 | 5.0 | 4.0 | 4.5 | 4.0 | 4.5 | 3.0 | 5.0 | 3.5 |
| 4 | 8.0 | 5.5 | 7.5 | 6.0 | 5.0 | 4.5 | 4.5 | 4.0 | 4.5 | 3.0 | 6.0 | 4.0 |
| 5 | 8.5 | 6.0 | 7.0 | 6.0 | 5.0 | 4.5 | 4.0 | 2.0 | 4.5 | 3.0 | 6.0 | 3.5 |
| 6 | 9.0 | 6.5 | 7.5 | 6.5 | 5.0 | 4.5 | 2.5 | 2.0 | 5.0 | 3.5 | 5.5 | 3.5 |
| 7 | 9.5 | 7.0 | 7.5 | 6.0 | 5.0 | 4.5 | 2.5 | 2.0 | 5.5 | 3.5 | 5.5 | 4.5 |
| 8 | 9.5 | 7.0 | 7.5 | 7.0 | 5.5 | 4.5 | 2.5 | 1.5 | 6.0 | 4.5 | 5.5 | 4.5 |
| 9 | 9.0 | 6.5 | 7.0 | 6.0 | 5.5 | 4.5 | 2.0 | 1.5 | 6.0 | 4.5 | 5.0 | 3.5 |
| 10 | 9.0 | 6.5 | 7.0 | 6.0 | 5.0 | 4.0 | 3.5 | 2.0 | 6.0 | 5.0 | 5.5 | 3.5 |
| 11 | 9.0 | 7.0 | 7.5 | 6.5 | 4.5 | 4.0 | 4.0 | 3.5 | 6.0 | 4.0 | 6.0 | 3.5 |
| 12 | 8.0 | 6.0 | 6.5 | 5.5 | 5.0 | 4.0 | 4.5 | 4.0 | 6.5 | 4.5 | 4.5 | 3.5 |
| 13 | 8.5 | 6.0 | 6.5 | 5.0 | 4.5 | 4.0 | 4.5 | 4.0 | 6.5 | 5.5 | 5.0 | 3.5 |
| 14 | 8.0 | 6.0 | 7.5 | 6.5 | 5.0 | 4.0 | 4.0 | 3.5 | 6.0 | 4.0 | 5.0 | 3.5 |
| 15 | 7.5 | 5.5 | 8.0 | 7.0 | 5.0 | 4.5 | 4.0 | 3.5 | 6.0 | 4.0 | 6.0 | 3.5 |
| 16 | 7.5 | 5.5 | 8.0 | 7.5 | 5.5 | 4.5 | 4.5 | 3.5 | 6.0 | 4.5 | 5.5 | 3.5 |
| 17 | 7.0 | 5.0 | 8.0 | 7.0 | 5.0 | 4.5 | 4.5 | 4.0 | 6.5 | 5.0 | 5.0 | 4.0 |
| 18 | 7.0 | 4.5 | 8.0 | 7.0 | 5.0 | 4.0 | 4.5 | 4.0 | 6.0 | 4.0 | 5.5 | 4.0 |
| 19 | 7.0 | 4.5 | 7.0 | 6.0 | 4.0 | 3.0 | 4.5 | 4.0 | 6.0 | 4.0 | 6.0 | 4.5 |
| 20 | 7.0 | 4.5 | 6.5 | 5.0 | 3.5 | 3.0 | 4.5 | 3.5 | 6.5 | 5.0 | 6.0 | 4.5 |
| 21 | 7.0 | 5.0 | 7.0 | 6.5 | 4.5 | 3.0 | 4.5 | 4.5 | 6.0 | 4.5 | 7.0 | 4.0 |
| 22 | 6.5 | 5.0 | 7.0 | 6.0 | 4.5 | 3.5 | 4.5 | 3.5 | 5.0 | 4.5 | 7.5 | 4.0 |
| 23 | 7.0 | 6.0 | 6.5 | 5.5 | 5.0 | 4.5 | 3.5 | 3.0 | 4.5 | 4.0 | 6.0 | 4.5 |
| 24 | 6.5 | 5.5 | 6.5 | 5.5 | 4.5 | 4.0 | 3.5 | 3.0 | 5.0 | 4.0 | 6.0 | 4.5 |
| 25 | 7.0 | 6.0 | 7.0 | 6.0 | 5.5 | 4.0 | 3.5 | 2.5 | 5.0 | 4.0 | 6.5 | 4.5 |
| 26 | 6.5 | 5.5 | 5.5 | 4.0 | 5.0 | 4.5 | 3.5 | 2.5 | 5.5 | 4.0 | 6.5 | 4.5 |
| 27 | 6.5 | 5.0 | 4.0 | 3.5 | 5.0 | 4.5 | 3.5 | 2.0 | 6.0 | 4.5 | 5.5 | 3.5 |
| 28 | 6.5 | 5.0 | 4.0 | 3.5 | 4.5 | 4.0 | 3.5 | 2.0 | 5.0 | 3.5 | 5.0 | 3.5 |
| 29 | 7.0 | 6.0 | 4.5 | 4.0 | 5.0 | 4.5 | 3.5 | 2.0 | --- | --- | 6.0 | 4.0 |
| 30 | 7.0 | 6.0 | 4.5 | 4.0 | 4.5 | 3.5 | 4.0 | 2.5 | --- | --- | 6.5 | 4.5 |
| 31 | 7.5 | 6.0 | --- | --- | 3.5 | 3.0 | 5.0 | 3.5 | --- | --- | 5.0 | 4.0 |
| MONTH | 10.5 | 4.5 | 8.0 | 3.5 | 5.5 | 3.0 | 5.0 | 1.5 | 6.5 | 3.0 | 7.5 | 3.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 6.0 | 4.5 | 7.0 | 6.0 | 9.0 | 7.5 | 14.5 | 10.5 | 16.0 | 10.5 | 13.0 | 8.5 |
| 2 | 7.0 | 4.5 | 8.0 | 6.0 | 10.0 | 6.0 | 14.5 | 10.0 | 15.5 | 11.0 | 13.0 | 9.5 |
| 3 | 8.0 | 4.5 | 6.5 | 5.0 | 9.5 | 7.5 | 12.0 | 9.0 | 16.0 | 10.5 | 13.0 | 10.0 |
| 4 | 8.5 | 4.5 | 6.0 | 4.0 | 11.5 | 8.0 | 11.5 | 9.0 | 16.0 | 10.5 | 14.0 | 10.5 |
| 5 | 8.0 | 4.5 | 6.0 | 4.5 | 13.5 | 8.0 | 11.5 | 8.0 | 16.0 | 10.0 | 14.0 | 11.0 |
| 6 | 8.0 | 4.5 | 7.5 | 4.5 | 13.0 | 9.5 | 14.5 | 8.5 | 16.0 | 10.5 | 13.5 | 10.5 |
| 7 | 8.0 | 5.0 | 6.5 | 4.5 | 11.0 | 10.0 | 15.0 | 8.5 | 14.5 | 10.5 | 13.0 | 9.5 |
| 8 | 6.5 | 5.5 | 9.0 | 5.0 | 13.0 | 9.5 | 15.0 | 9.5 | 16.0 | 10.5 | 12.5 | 9.0 |
| 9 | 6.0 | 4.5 | 7.0 | 5.0 | 13.0 | 8.5 | 14.0 | 10.0 | 15.5 | 10.0 | 12.5 | 8.0 |
| 10 | 7.0 | 4.5 | 6.0 | 5.5 | 13.0 | 8.5 | 15.0 | 9.0 | 15.5 | 10.0 | 12.5 | 8.5 |
| 11 | 8.0 | 5.5 | 6.5 | 5.0 | 13.0 | 9.5 | 15.5 | 9.0 | 16.0 | 10.5 | 12.5 | 9.0 |
| 12 | 8.5 | 4.5 | 7.5 | 5.0 | 13.5 | 9.0 | 15.0 | 10.5 | 16.0 | 10.5 | 12.5 | 9.0 |
| 13 | 7.0 | 5.0 | 8.5 | 5.5 | 14.0 | 8.5 | 15.0 | 8.5 | 15.0 | 11.0 | 12.5 | 8.5 |
| 14 | 7.5 | 4.5 | 8.5 | 6.0 | 14.0 | 8.5 | 15.5 | 9.0 | 16.5 | 10.5 | 12.5 | 9.5 |
| 15 | 7.5 | 5.5 | 7.0 | 5.0 | 13.0 | 8.0 | 16.0 | 9.5 | 16.0 | 11.0 | 10.5 | 9.5 |
| 16 | 7.0 | 5.0 | 7.0 | 4.5 | 14.0 | 8.0 | 15.5 | 9.5 | 16.0 | 11.0 | 11.0 | 8.5 |
| 17 | 7.0 | 4.0 | 6.5 | 5.0 | 13.5 | 9.0 | 15.0 | 10.0 | 16.5 | 11.0 | 10.5 | 8.5 |
| 18 | 7.0 | 3.5 | 7.5 | 5.0 | 14.0 | 9.5 | 12.5 | 10.5 | 15.5 | 11.0 | 10.5 | 9.0 |
| 19 | 7.5 | 3.5 | 9.5 | 5.5 | 14.5 | 10.0 | 15.0 | 9.5 | 15.0 | 11.0 | 11.0 | 9.0 |
| 20 | 8.0 | 4.5 | 9.0 | 6.0 | 11.5 | 9.5 | 15.5 | 10.0 | 15.5 | 11.0 | 10.5 | 9.0 |
| 21 | 8.0 | 5.5 | 9.5 | 6.5 | 15.0 | 9.0 | 16.0 | 10.0 | 15.0 | 11.5 | 10.0 | 8.5 |
| 22 | 8.0 | 5.5 | 7.5 | 6.0 | 15.5 | 10.0 | 16.0 | 10.0 | 14.5 | 10.5 | 10.0 | 7.5 |
| 23 | 8.0 | 6.0 | 7.0 | 6.0 | 15.0 | 10.0 | 14.0 | 10.5 | 14.0 | 10.0 | 9.0 | 8.0 |
| 24 | 8.5 | 5.5 | 8.5 | 6.0 | 15.5 | 9.0 | 14.0 | 10.0 | 12.5 | 11.0 | 10.0 | 9.0 |
| 25 | 7.5 | 6.0 | 8.0 | 5.5 | 16.0 | 10.0 | 15.5 | 10.5 | 11.0 | 10.0 | 10.0 | 8.5 |
| 26 | 8.5 | 5.5 | 7.5 | 6.0 | 15.5 | 9.5 | 16.0 | 10.5 | 11.5 | 10.0 | 10.0 | 7.5 |
| 27 | 9.0 | 5.0 | 7.0 | 5.5 | 15.5 | 10.0 | 16.0 | 10.5 | 11.0 | 10.0 | 9.5 | 8.5 |
| 28 | 8.0 | 6.0 | 8.5 | 5.5 | 16.0 | 9.5 | 14.0 | 10.5 | 12.0 | 10.0 | 9.5 | 9.0 |
| 29 | 8.5 | 6.0 | 9.5 | 5.0 | 15.5 | 10.0 | 15.0 | 9.5 | 12.5 | 10.5 | 9.0 | 8.5 |
| 30 | 8.5 | 6.0 | 9.5 | 6.0 | 15.0 | 9.5 | 15.5 | 9.5 | 13.5 | 11.0 | 9.5 | 8.0 |
| 31 | --- | --- | 10.5 | 7.0 | --- | --- | 16.5 | 10.0 | 12.0 | 9.0 | --- | --- |
| MONTH | 9.0 | 3.5 | 10.5 | 4.0 | 16.0 | 6.0 | 16.5 | 8.0 | 16.5 | 9.0 | 14.0 | 7.5 |

WILLAMETTE RIVER BASIN

14159400 COUGAR LAKE NEAR RAINBOW, OR

LOCATION.--Lat 44°07'40", long 122°14'25", in SE¼SE¼ sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, in intake tower near left end of Cougar Dam on South Fork McKenzie River, 2.7 mi (4.3 km) south of Rainbow, and at mile 4.5 (7.2 km).

DRAINAGE AREA.--207 mi² (536 km²).

PERIOD OF RECORD.--October 1963 to current year. Prior to October 1971, published as Cougar Reservoir near Rainbow.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1963 by the Corps of Engineers; storage began September 1963. Total capacity is 219,100 acre-ft (270 hm³) at elevation 1,699 ft (517.9 m), maximum pool, and usable capacity is 164,800 acre-ft (203 hm³) between elevations 1,516 ft (462.1 m), minimum power pool, and 1,699 ft (517.9 m). Reservoir used for flood control and power generation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 214,100 acre-ft (264 hm³) June 29, 1977, elevation, 1,695.06 ft (516.654 m); minimum, 33,690 acre-ft (41.5 hm³) Oct. 31 to Nov. 2, 1965, elevation, 1,475.40 ft (449.702 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 214,100 acre-ft (264 hm³) June 29, elevation, 1,695.06 ft (516.654 m); minimum, 60,100 acre-ft (74.1 hm³) Jan. 12, 13, elevation, 1,525.88 ft (465.088 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

| | | | |
|-------|---------|-------|---------|
| 1,510 | 50,920 | 1,650 | 162,300 |
| 1,550 | 75,940 | 1,696 | 215,300 |
| 1,600 | 114,800 | | |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 1643.76 | 1598.92 | 1535.14 | 1526.18 | 1528.38 | 1541.61 | 1585.00 | 1640.48 | 1692.72 | 1694.92 | 1684.88 | 1658.55 |
| 2 | 1642.41 | 1597.40 | 1534.38 | 1526.34 | 1528.59 | 1542.75 | 1586.58 | 1642.87 | 1693.46 | 1694.68 | 1684.51 | 1657.36 |
| 3 | 1641.02 | 1595.77 | 1534.00 | 1526.40 | 1528.76 | 1543.92 | 1588.00 | 1645.46 | 1694.16 | 1694.45 | 1684.12 | 1656.12 |
| 4 | 1639.51 | 1594.07 | 1533.54 | 1526.41 | 1528.96 | 1544.93 | 1589.57 | 1647.78 | 1694.47 | 1694.18 | 1683.72 | 1654.85 |
| 5 | 1638.10 | 1592.28 | 1533.06 | 1526.37 | 1529.14 | 1545.93 | 1591.65 | 1649.82 | 1694.48 | 1693.92 | 1683.28 | 1653.56 |
| 6 | 1636.67 | 1590.48 | 1532.52 | 1526.31 | 1529.30 | 1547.08 | 1594.12 | 1651.63 | 1694.52 | 1693.66 | 1682.85 | 1652.24 |
| 7 | 1635.24 | 1588.70 | 1532.02 | 1526.26 | 1529.50 | 1548.77 | 1597.20 | 1653.22 | 1694.53 | 1693.38 | 1682.48 | 1650.90 |
| 8 | 1633.77 | 1587.70 | 1531.66 | 1526.16 | 1529.64 | 1551.76 | 1600.67 | 1654.69 | 1694.58 | 1693.10 | 1682.08 | 1649.50 |
| 9 | 1632.30 | 1584.82 | 1531.22 | 1526.08 | 1529.80 | 1554.79 | 1603.37 | 1656.16 | 1694.80 | 1692.83 | 1681.72 | 1648.15 |
| 10 | 1630.88 | 1582.74 | 1530.74 | 1525.98 | 1530.00 | 1556.80 | 1605.45 | 1658.49 | 1694.90 | 1692.56 | 1681.30 | 1646.74 |
| 11 | 1629.28 | 1580.67 | 1530.28 | 1525.91 | 1530.20 | 1558.45 | 1607.30 | 1660.88 | 1694.96 | 1692.26 | 1680.87 | 1645.42 |
| 12 | 1628.47 | 1578.28 | 1529.68 | 1525.88 | 1530.36 | 1560.29 | 1609.01 | 1662.89 | 1695.03 | 1691.98 | 1680.29 | 1644.00 |
| 13 | 1628.33 | 1576.20 | 1528.16 | 1526.07 | 1530.61 | 1561.71 | 1610.98 | 1664.65 | 1695.03 | 1691.68 | 1679.48 | 1642.57 |
| 14 | 1626.80 | 1574.20 | 1528.64 | 1526.17 | 1530.81 | 1562.95 | 1612.71 | 1666.43 | 1695.02 | 1691.36 | 1678.70 | 1641.12 |
| 15 | 1625.27 | 1572.42 | 1528.09 | 1526.22 | 1531.18 | 1564.06 | 1614.36 | 1668.24 | 1695.01 | 1690.93 | 1677.70 | 1639.64 |
| 16 | 1623.70 | 1570.60 | 1527.54 | 1526.24 | 1531.62 | 1565.01 | 1616.07 | 1670.00 | 1695.01 | 1690.40 | 1676.61 | 1638.21 |
| 17 | 1622.13 | 1568.60 | 1527.29 | 1526.28 | 1532.08 | 1565.95 | 1617.66 | 1672.04 | 1694.99 | 1689.80 | 1675.47 | 1636.75 |
| 18 | 1620.58 | 1566.50 | 1527.18 | 1526.32 | 1532.54 | 1566.92 | 1619.04 | 1673.95 | 1695.00 | 1689.40 | 1674.33 | 1635.31 |
| 19 | 1618.89 | 1564.36 | 1527.06 | 1526.38 | 1533.00 | 1568.02 | 1620.38 | 1675.68 | 1694.96 | 1688.96 | 1673.23 | 1633.91 |
| 20 | 1617.30 | 1562.20 | 1526.94 | 1526.42 | 1533.52 | 1569.09 | 1621.61 | 1677.34 | 1694.93 | 1688.61 | 1672.07 | 1632.60 |
| 21 | 1615.66 | 1559.82 | 1526.77 | 1526.46 | 1534.12 | 1570.09 | 1622.84 | 1679.03 | 1694.96 | 1688.14 | 1670.87 | 1631.22 |
| 22 | 1614.04 | 1557.30 | 1526.66 | 1526.47 | 1534.78 | 1571.21 | 1624.13 | 1680.82 | 1694.99 | 1687.52 | 1669.62 | 1629.72 |
| 23 | 1612.39 | 1554.68 | 1526.58 | 1526.48 | 1535.48 | 1572.67 | 1625.59 | 1682.58 | 1694.99 | 1686.90 | 1668.42 | 1628.46 |
| 24 | 1610.86 | 1552.00 | 1526.46 | 1526.60 | 1535.94 | 1573.76 | 1627.26 | 1683.97 | 1695.00 | 1686.30 | 1667.44 | 1627.48 |
| 25 | 1609.90 | 1549.30 | 1526.42 | 1526.82 | 1536.54 | 1574.92 | 1629.40 | 1685.04 | 1695.02 | 1685.90 | 1666.37 | 1626.47 |
| 26 | 1608.56 | 1546.50 | 1526.54 | 1527.07 | 1537.30 | 1575.98 | 1631.38 | 1686.47 | 1695.02 | 1685.76 | 1665.29 | 1625.28 |
| 27 | 1607.00 | 1543.50 | 1526.72 | 1527.29 | 1538.24 | 1577.80 | 1633.14 | 1687.80 | 1695.03 | 1685.64 | 1664.11 | 1624.00 |
| 28 | 1605.36 | 1540.55 | 1526.77 | 1527.50 | 1540.28 | 1579.32 | 1634.80 | 1688.98 | 1695.04 | 1685.56 | 1663.00 | 1623.08 |
| 29 | 1603.70 | 1538.90 | 1526.32 | 1527.73 | --- | 1580.73 | 1636.53 | 1690.00 | 1695.06 | 1685.46 | 1661.92 | 1622.03 |
| 30 | 1602.00 | 1536.06 | 1526.30 | 1527.92 | --- | 1581.00 | 1638.24 | 1690.88 | 1695.05 | 1685.31 | 1660.96 | 1621.01 |
| 31 | 1600.38 | --- | 1526.24 | 1528.18 | --- | 1583.30 | --- | 1691.72 | --- | 1685.18 | 1659.75 | --- |
| MEAN | 1622.72 | 1570.18 | 1529.06 | 1526.55 | 1532.17 | 1563.28 | 1613.13 | 1669.03 | 1694.76 | 1690.02 | 1674.76 | 1639.21 |
| MAX | 1643.76 | 1598.92 | 1535.14 | 1528.18 | 1540.28 | 1583.30 | 1638.24 | 1691.72 | 1695.06 | 1694.92 | 1684.88 | 1658.55 |
| MIN | 1600.38 | 1536.06 | 1526.24 | 1525.88 | 1528.38 | 1541.61 | 1585.00 | 1640.48 | 1692.72 | 1685.18 | 1659.75 | 1621.01 |
| (†) | 115,100 | 66,520 | 60,320 | 61,510 | 69,300 | 100,900 | 150,300 | 209,900 | 214,100 | 201,900 | 172,700 | 133,600 |
| (‡) | -42,100 | -48,580 | -6,200 | +1,190 | +7,790 | +31,600 | +49,400 | +59,600 | +4,200 | -12,200 | -29,200 | -39,100 |
| CAL YR 1976 | MEAN | 1628.63 | MAX | 1690.23 | MIN | 1526.24 | AC-FT† | -9,300 | | | | |
| WTR YR 1977 | MEAN | 1610.84 | MAX | 1695.06 | MIN | 1525.88 | AC-FT‡ | -23,600 | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR

LOCATION.--Lat 44°08'10", long 122°14'50", in NE¼ sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 0.2 mi (0.3 km) upstream from Cougar Creek, 0.6 mi (1.0 km) downstream from Cougar Dam, 2.1 mi (3.4 km) south of Rainbow, and at mile 3.9 (6.3 km).

DRAINAGE AREA.--208 mi² (539 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1638: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,236.42 ft (376.861 m) above mean sea level (Bureau of Public Roads bench mark). Oct. 1 to Nov. 4, 1947, nonrecording gage at site 40 ft (12 m) upstream at datum 0.80 ft (0.244 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1963 by Cougar Lake (see station 14159400), usable capacity, 165,000 acre-ft (203 hm³). No diversion above station.

AVERAGE DISCHARGE.--30 years, 884 ft³/s (25.03 m³/s), 57.71 in/yr (1,466 mm/yr), 640,500 acre-ft/yr (790 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s (498 m³/s) Dec. 11, 1956, gage height, 8.66 ft (2.640 m), from rating curve extended above 8,100 ft³/s (229 m³/s); maximum gage height, 8.90 ft (2.713 m) Dec. 22, 1955 (backwater from debris); minimum discharge, 17 ft³/s (0.48 m³/s) Nov. 18, 1965; minimum daily, 85 ft³/s (2.41 m³/s) Apr. 26-28, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s (694 m³/s) Dec. 28, 1945, gage height, 8.8 ft (2.68 m), from floodmarks, at Corps of Engineers gage at site 40 ft (12 m) upstream at datum 0.80 ft (0.244 m) higher; gage height at present site and datum, about 9.3 ft (2.83 m), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft³/s (34.3 m³/s) Nov. 28, gage height, 2.48 ft (0.756 m); minimum, 43 ft³/s (1.22 m³/s) Mar. 9; minimum daily, 85 ft³/s (2.41 m³/s) Apr. 26-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------------|----------|-----------|---------|---------------|-----------|------------|------------|----------------|--------|--------|--------|
| 1 | 883 | 940 | 518 | 285 | 201 | 108 | 97 | 87 | 375 | 366 | 380 | 820 |
| 2 | 883 | 940 | 468 | 281 | 201 | 108 | 97 | 87 | 409 | 419 | 434 | 820 |
| 3 | 883 | 950 | 340 | 285 | 201 | 108 | 100 | 92 | 409 | 419 | 434 | 829 |
| 4 | 892 | 950 | 389 | 292 | 201 | 105 | 102 | 92 | 639 | 419 | 440 | 829 |
| 5 | 892 | 960 | 389 | 285 | 201 | 92 | 90 | 97 | 788 | 419 | 434 | 829 |
| 6 | 892 | 960 | 394 | 285 | 201 | 105 | 90 | 100 | 764 | 419 | 440 | 838 |
| 7 | 901 | 970 | 389 | 288 | 201 | 105 | 90 | 100 | 740 | 419 | 440 | 829 |
| 8 | 901 | 980 | 394 | 288 | 205 | 92 | 92 | 102 | 620 | 419 | 434 | 838 |
| 9 | 901 | 1000 | 394 | 292 | 205 | 87 | 92 | 105 | 462 | 419 | 440 | 847 |
| 10 | 910 | 1020 | 389 | 288 | 201 | 105 | 90 | 105 | 512 | 419 | 440 | 847 |
| 11 | 910 | 1010 | 394 | 288 | 201 | 102 | 90 | 102 | 473 | 419 | 440 | 847 |
| 12 | 596 | 990 | 394 | 288 | 205 | 105 | 90 | 90 | 451 | 419 | 529 | 847 |
| 13 | 327 | 1000 | 399 | 292 | 205 | 97 | 90 | 95 | 468 | 419 | 627 | 856 |
| 14 | 910 | 1010 | 399 | 292 | 201 | 100 | 90 | 95 | 440 | 424 | 627 | 856 |
| 15 | 910 | 1020 | 404 | 292 | 145 | 92 | 87 | 92 | 424 | 484 | 740 | 856 |
| 16 | 910 | 1020 | 399 | 292 | 105 | 90 | 90 | 95 | 424 | 552 | 788 | 865 |
| 17 | 910 | 1020 | 327 | 292 | 105 | 100 | 87 | 95 | 389 | 558 | 780 | 865 |
| 18 | 892 | 1030 | 285 | 292 | 108 | 97 | 87 | 92 | 380 | 468 | 804 | 865 |
| 19 | 901 | 1040 | 285 | 288 | 105 | 100 | 90 | 92 | 394 | 456 | 772 | 874 |
| 20 | 901 | 1040 | 285 | 288 | 105 | 97 | 92 | 92 | 366 | 484 | 804 | 874 |
| 21 | 901 | 1090 | 288 | 288 | 105 | 97 | 90 | 87 | 349 | 529 | 804 | 874 |
| 22 | 910 | 1110 | 285 | 288 | 108 | 92 | 90 | 87 | 340 | 577 | 804 | 874 |
| 23 | 910 | 1120 | 288 | 288 | 110 | 100 | 90 | 209 | 344 | 577 | 804 | 883 |
| 24 | 910 | 1130 | 285 | 235 | 110 | 162 | 87 | 314 | 318 | 577 | 804 | 883 |
| 25 | 920 | 1140 | 285 | 201 | 113 | 92 | 87 | 414 | 318 | 456 | 804 | 883 |
| 26 | 910 | 1160 | 288 | 201 | 110 | 95 | 85 | 419 | 314 | 318 | 804 | 883 |
| 27 | 920 | 1160 | 288 | 201 | 113 | 100 | 85 | 419 | 309 | 318 | 812 | 883 |
| 28 | 930 | 1180 | 288 | 201 | 115 | 97 | 85 | 419 | 296 | 285 | 812 | 883 |
| 29 | 930 | 1090 | 404 | 201 | --- | 97 | 87 | 419 | 300 | 285 | 812 | 892 |
| 30 | 930 | 712 | 281 | 201 | --- | 100 | 87 | 414 | 309 | 318 | 820 | 892 |
| 31 | 940 | --- | 281 | 201 | --- | 97 | --- | 414 | --- | 318 | 820 | --- |
| TOTAL | 27216 | 30762 | 10896 | 8279 | 4387 | 3124 | 2706 | 5522 | 13124 | 13378 | 20127 | 25761 |
| MEAN | 878 | 1025 | 351 | 267 | 157 | 101 | 90.2 | 178 | 437 | 432 | 649 | 859 |
| MAX | 940 | 1180 | 518 | 292 | 205 | 162 | 102 | 419 | 788 | 577 | 820 | 892 |
| MIN | 327 | 712 | 281 | 201 | 105 | 87 | 85 | 87 | 296 | 285 | 380 | 820 |
| AC-FT | 53980 | 61020 | 21610 | 16420 | 8700 | 6200 | 5370 | 10950 | 26030 | 26540 | 39920 | 51100 |
| MEAN† | 193 | 209 | 251 | 286 | 297 | 615 | 920 | 1,147 | 508 | 233 | 174 | 202 |
| CFSM† | .93 | 1.00 | 1.21 | 1.38 | 1.43 | 2.96 | 4.42 | 5.51 | 2.44 | 1.12 | .84 | .97 |
| IN.† | 1.07 | 1.12 | 1.39 | 1.59 | 1.49 | 3.41 | 4.94 | 6.36 | 2.73 | 1.29 | .97 | 1.08 |
| AC-FT† | 11,880 | 12,440 | 15,410 | 17,610 | 16,490 | 37,800 | 54,770 | 70,550 | 30,230 | 14,340 | 10,720 | 12,000 |
| CAL YR 1976 | TOTAL 277,969 | MEAN 759 | MAX 3,550 | MIN 281 | AC-FT 551,400 | MEAN† 747 | CFSM† 3.59 | IN.† 48.88 | AC-FT† 542,100 | | | |
| WTR YR 1977 | TOTAL 165,282 | MEAN 453 | MAX 1,180 | MIN 85 | AC-FT 327,800 | MEAN† 420 | CFSM† 2.02 | IN.† 27.43 | AC-FT† 304,240 | | | |

† Adjusted for change in contents in Cougar Lake.

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1955 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.0°C July 28, 1958; minimum, 0.5°C Jan. 20-23, 1962.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 12.5°C Oct. 6-27, Sept. 26-30; minimum, 3.5°C Jan. 27 to Feb. 6.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 12.0 | 11.5 | 12.0 | 12.0 | 9.5 | 9.0 | 5.5 | 5.0 | 4.0 | 3.5 | 6.0 | 5.0 |
| 2 | 12.0 | 11.5 | 12.0 | 12.0 | 9.0 | 9.0 | 5.5 | 5.5 | 4.0 | 3.5 | 5.5 | 4.5 |
| 3 | 12.0 | 11.5 | 12.0 | 12.0 | 9.0 | 8.5 | 5.5 | 5.0 | 4.5 | 3.5 | 6.0 | 5.0 |
| 4 | 12.0 | 11.5 | 12.0 | 11.5 | 8.5 | 7.5 | 5.5 | 5.0 | 4.5 | 3.5 | 7.0 | 5.0 |
| 5 | 12.0 | 11.5 | 12.0 | 11.5 | 8.0 | 8.0 | 5.0 | 5.0 | 4.0 | 3.5 | 7.5 | 4.5 |
| 6 | 12.5 | 12.0 | 12.0 | 11.5 | 8.0 | 8.0 | 5.0 | 5.0 | 4.5 | 3.5 | 6.0 | 4.5 |
| 7 | 12.5 | 12.0 | 12.0 | 12.0 | 8.0 | 8.0 | 5.0 | 4.5 | 4.5 | 4.0 | 5.5 | 5.0 |
| 8 | 12.5 | 12.0 | 12.0 | 12.0 | 8.0 | 7.0 | 5.0 | 4.5 | 4.5 | 4.0 | 6.0 | 5.5 |
| 9 | 12.5 | 11.5 | 12.0 | 11.5 | 7.5 | 7.0 | 4.5 | 4.5 | 4.5 | 4.0 | 6.5 | 4.5 |
| 10 | 12.5 | 12.0 | 12.0 | 11.5 | 7.5 | 7.0 | 5.0 | 4.5 | 4.5 | 4.0 | 6.5 | 5.0 |
| 11 | 12.5 | 12.0 | 12.0 | 11.5 | 7.0 | 7.0 | 5.0 | 4.5 | 4.5 | 4.0 | 7.5 | 5.0 |
| 12 | 12.5 | 11.5 | 12.0 | 12.0 | 7.0 | 7.0 | 5.0 | 4.5 | 4.5 | 4.0 | 6.0 | 4.5 |
| 13 | 12.5 | 11.0 | 12.0 | 12.0 | 7.0 | 6.5 | 5.0 | 4.5 | 5.0 | 4.0 | 7.0 | 4.5 |
| 14 | 12.5 | 12.0 | 12.0 | 11.5 | 6.5 | 6.5 | 4.5 | 4.5 | 5.0 | 4.0 | 6.5 | 4.5 |
| 15 | 12.5 | 12.0 | 12.0 | 11.5 | 6.5 | 6.5 | 5.0 | 5.0 | 5.5 | 4.0 | 8.0 | 4.5 |
| 16 | 12.5 | 12.0 | 12.0 | 11.5 | 6.5 | 6.0 | 5.0 | 5.0 | 6.5 | 4.5 | 8.0 | 4.5 |
| 17 | 12.5 | 12.0 | 12.0 | 11.5 | 6.0 | 6.0 | 5.0 | 5.0 | 7.0 | 4.5 | 6.5 | 5.0 |
| 18 | 12.5 | 12.0 | 12.0 | 11.5 | 6.0 | 6.0 | 5.0 | 5.0 | 7.0 | 4.5 | 6.0 | 5.0 |
| 19 | 12.5 | 12.0 | 12.0 | 11.5 | 6.0 | 5.5 | 5.0 | 5.0 | 7.0 | 4.5 | 7.0 | 5.0 |
| 20 | 12.5 | 12.0 | 12.0 | 11.5 | 6.0 | 5.5 | 5.0 | 5.0 | 5.5 | 5.0 | 6.5 | 5.0 |
| 21 | 12.5 | 12.0 | 11.5 | 11.5 | 6.0 | 5.5 | 5.0 | 5.0 | 5.5 | 5.0 | 7.5 | 5.0 |
| 22 | 12.5 | 12.0 | 11.5 | 11.5 | 6.0 | 5.5 | 5.0 | 5.0 | 6.0 | 5.0 | 9.0 | 5.0 |
| 23 | 12.5 | 12.0 | 11.5 | 11.0 | 6.0 | 5.5 | 5.0 | 5.0 | 5.0 | 4.5 | 7.0 | 5.0 |
| 24 | 12.5 | 12.0 | 11.5 | 11.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.0 | 6.0 | 5.0 |
| 25 | 12.5 | 12.0 | 11.0 | 10.5 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 4.5 | 8.5 | 5.0 |
| 26 | 12.5 | 12.0 | 11.0 | 10.0 | 5.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.0 | 6.5 | 5.0 |
| 27 | 12.5 | 12.0 | 10.0 | 10.0 | 5.5 | 5.5 | 5.0 | 3.5 | 6.0 | 5.0 | 7.0 | 5.0 |
| 28 | 12.0 | 12.0 | 10.0 | 10.0 | 5.5 | 5.5 | 4.0 | 3.5 | 6.0 | 5.0 | 7.0 | 4.5 |
| 29 | 12.0 | 12.0 | 10.0 | 9.5 | 5.5 | 5.5 | 4.0 | 3.5 | --- | --- | 8.5 | 5.0 |
| 30 | 12.0 | 12.0 | 9.5 | 9.5 | 5.5 | 5.0 | 4.0 | 3.5 | --- | --- | 9.0 | 5.0 |
| 31 | 12.0 | 12.0 | --- | --- | 5.5 | 5.0 | 4.0 | 3.5 | --- | --- | 6.0 | 5.0 |
| MONTH | 12.5 | 11.0 | 12.0 | 9.5 | 9.5 | 5.0 | 5.5 | 3.5 | 7.0 | 3.5 | 9.0 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|-----|------|-----|--------|-----|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 6.5 | 5.0 | 6.5 | 5.5 | 7.5 | 5.5 | 7.0 | 6.0 | 8.5 | 6.5 | 9.0 | 7.5 |
| 2 | 9.0 | 5.0 | 9.0 | 5.5 | 7.0 | 5.5 | 7.5 | 6.0 | 8.0 | 6.5 | 9.0 | 7.5 |
| 3 | 10.0 | 5.0 | 8.0 | 5.5 | 6.5 | 5.5 | 7.0 | 6.0 | 8.0 | 6.5 | 9.0 | 7.5 |
| 4 | 9.5 | 5.0 | 7.0 | 5.5 | 6.5 | 5.5 | 7.0 | 6.0 | 8.5 | 6.5 | 9.0 | 8.0 |
| 5 | 11.0 | 5.0 | 7.0 | 5.5 | 6.5 | 5.5 | 7.0 | 6.5 | 8.5 | 6.5 | 9.0 | 8.0 |
| 6 | 10.0 | 5.0 | 10.0 | 5.5 | 6.5 | 5.5 | 7.5 | 6.5 | 8.5 | 6.5 | 9.0 | 8.5 |
| 7 | 9.5 | 5.0 | 7.5 | 5.0 | 6.5 | 6.0 | 7.5 | 6.0 | 8.5 | 6.5 | 9.0 | 8.5 |
| 8 | 7.0 | 5.5 | 10.0 | 5.5 | 6.5 | 6.0 | 7.5 | 6.0 | 8.5 | 6.5 | 9.5 | 8.0 |
| 9 | 8.5 | 5.5 | 7.5 | 5.0 | 6.5 | 5.5 | 7.5 | 6.5 | 8.5 | 6.5 | 9.5 | 8.0 |
| 10 | 9.5 | 5.0 | 7.0 | 5.5 | 6.5 | 6.0 | 7.5 | 6.5 | 8.5 | 6.5 | 10.0 | 8.0 |
| 11 | 9.0 | 5.0 | 8.5 | 5.5 | 7.0 | 6.0 | 7.5 | 6.5 | 8.5 | 6.0 | 9.5 | 8.5 |
| 12 | 9.5 | 5.0 | 8.5 | 5.5 | 7.0 | 6.0 | 7.0 | 6.0 | 8.0 | 6.0 | 10.0 | 8.5 |
| 13 | 8.0 | 5.0 | 9.5 | 5.5 | 7.0 | 5.5 | 7.5 | 6.0 | 8.0 | 7.0 | 10.5 | 8.5 |
| 14 | 9.5 | 5.0 | 8.5 | 5.5 | 7.0 | 6.0 | 7.5 | 6.5 | 8.0 | 7.0 | 10.0 | 8.5 |
| 15 | 8.5 | 5.5 | 7.5 | 5.5 | 7.0 | 6.0 | 7.5 | 6.5 | 8.0 | 7.0 | 10.0 | 9.0 |
| 16 | 7.5 | 5.0 | 8.5 | 5.5 | 7.0 | 6.0 | 7.5 | 6.5 | 8.0 | 7.0 | 10.5 | 9.5 |
| 17 | 10.0 | 5.0 | 7.5 | 5.5 | 7.0 | 6.0 | 7.5 | 6.5 | 8.0 | 7.0 | 10.5 | 9.5 |
| 18 | 8.5 | 5.0 | 8.0 | 6.0 | 7.0 | 6.5 | 7.0 | 6.5 | 8.0 | 7.0 | 10.5 | 9.0 |
| 19 | 10.0 | 5.0 | 10.5 | 6.0 | 7.5 | 6.0 | 8.0 | 6.0 | 8.0 | 7.5 | 11.0 | 10.0 |
| 20 | 9.5 | 5.0 | 9.5 | 5.5 | 6.5 | 5.5 | 8.0 | 6.0 | 8.0 | 7.5 | 11.0 | 10.5 |
| 21 | 7.5 | 5.5 | 10.0 | 6.0 | 7.5 | 6.0 | 7.5 | 6.5 | 8.0 | 7.5 | 11.0 | 10.0 |
| 22 | 8.5 | 5.5 | 7.5 | 5.5 | 7.5 | 6.5 | 7.5 | 6.5 | 8.0 | 7.5 | 11.5 | 10.5 |
| 23 | 7.5 | 5.5 | 8.0 | 5.5 | 7.5 | 6.0 | 7.5 | 6.5 | 8.0 | 7.0 | 11.5 | 10.5 |
| 24 | 9.0 | 5.5 | 10.0 | 5.5 | 7.5 | 6.0 | 7.5 | 6.5 | 8.0 | 6.5 | 12.0 | 11.0 |
| 25 | 9.5 | 5.5 | 6.5 | 5.5 | 7.5 | 6.0 | 8.5 | 6.5 | 8.0 | 7.5 | 12.0 | 11.5 |
| 26 | 10.5 | 5.5 | 6.5 | 5.5 | 8.0 | 6.0 | 8.5 | 6.5 | 8.0 | 7.5 | 12.5 | 11.5 |
| 27 | 10.5 | 5.0 | 6.0 | 5.0 | 7.5 | 6.5 | 8.5 | 6.0 | 8.0 | 7.5 | 12.5 | 12.0 |
| 28 | 9.0 | 5.5 | 6.5 | 5.5 | 7.5 | 6.0 | 9.0 | 6.5 | 8.0 | 7.5 | 12.5 | 12.0 |
| 29 | 9.5 | 5.5 | 7.0 | 5.5 | 7.5 | 6.0 | 9.5 | 6.5 | 8.0 | 8.0 | 12.5 | 12.0 |
| 30 | 10.5 | 5.5 | 7.0 | 5.5 | 8.0 | 6.0 | 8.5 | 6.0 | 8.5 | 7.5 | 12.5 | 12.5 |
| 31 | --- | --- | 6.5 | 5.5 | --- | --- | 8.5 | 6.5 | 8.5 | 7.5 | --- | --- |
| MONTH | 11.0 | 5.0 | 10.5 | 5.0 | 8.0 | 5.5 | 9.5 | 6.0 | 8.5 | 6.0 | 12.5 | 7.5 |

WILLAMETTE RIVER BASIN

285

14161100 BLUE RIVER BELOW TIDBITS CREEK, NEAR BLUE RIVER, OR

LOCATION.--Lat 44°13'05", long 122°15'50", in SE¼NE¼ sec.36, T.15 S., R.4 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.2 mi (0.3 km) downstream from Tidbits Creek, 5.5 mi (8.8 km) northeast of town of Blue River, and at mile 8.5 (13.7 km).

DRAINAGE AREA.--45.8 mi² (118.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,386.90 ft (422.727 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 264 ft³/s (7.476 m³/s), 78.28 in/yr (1,988 mm/yr), 191,300 acre-ft/yr (236 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft³/s (351 m³/s) Dec. 22, 1964, gage height, 15.32 ft (4.670 m), from floodmarks, from rating curve extended above 2,800 ft³/s (79.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 8.2 ft³/s (0.23 m³/s) Sept. 28, 29, Oct. 2-4, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) Mar. 8, gage height, 5.60 ft (1.707 m), no peak above base of 2,000 ft³/s (56.6 m³/s); minimum, 11 ft³/s (0.31 m³/s) Oct. 14-24, Aug. 18-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|----------|----------|--------|-----------|----------|--------------|------|------|------|------|
| 1 | 12 | 147 | 25 | 38 | 34 | 254 | 321 | 254 | 216 | 41 | 17 | 24 |
| 2 | 12 | 98 | 24 | 48 | 31 | 181 | 300 | 330 | 190 | 38 | 17 | 20 |
| 3 | 15 | 63 | 22 | 48 | 30 | 171 | 257 | 445 | 177 | 37 | 16 | 21 |
| 4 | 14 | 47 | 21 | 43 | 29 | 154 | 342 | 453 | 211 | 37 | 16 | 21 |
| 5 | 13 | 37 | 21 | 37 | 29 | 149 | 516 | 395 | 204 | 37 | 16 | 18 |
| 6 | 13 | 32 | 21 | 33 | 29 | 179 | 620 | 324 | 188 | 36 | 16 | 17 |
| 7 | 12 | 29 | 20 | 33 | 27 | 468 | 697 | 285 | 168 | 34 | 15 | 16 |
| 8 | 12 | 26 | 26 | 30 | 26 | 829 | 687 | 252 | 149 | 33 | 16 | 16 |
| 9 | 12 | 25 | 35 | 28 | 26 | 697 | 496 | 254 | 134 | 32 | 15 | 14 |
| 10 | 12 | 23 | 30 | 30 | 26 | 382 | 355 | 362 | 122 | 31 | 14 | 14 |
| 11 | 12 | 21 | 27 | 30 | 26 | 274 | 306 | 358 | 114 | 31 | 14 | 13 |
| 12 | 12 | 21 | 29 | 36 | 26 | 291 | 300 | 291 | 105 | 30 | 13 | 13 |
| 13 | 12 | 19 | 28 | 73 | 29 | 244 | 333 | 246 | 96 | 30 | 12 | 13 |
| 14 | 11 | 24 | 26 | 81 | 29 | 199 | 291 | 223 | 90 | 28 | 12 | 12 |
| 15 | 11 | 90 | 25 | 75 | 28 | 171 | 265 | 223 | 84 | 27 | 12 | 12 |
| 16 | 11 | 112 | 25 | 73 | 26 | 154 | 274 | 233 | 79 | 25 | 12 | 12 |
| 17 | 11 | 73 | 24 | 75 | 25 | 143 | 241 | 339 | 75 | 25 | 12 | 14 |
| 18 | 11 | 72 | 23 | 78 | 25 | 141 | 211 | 342 | 71 | 25 | 11 | 17 |
| 19 | 11 | 60 | 22 | 73 | 24 | 181 | 188 | 285 | 67 | 25 | 11 | 25 |
| 20 | 11 | 50 | 21 | 67 | 29 | 208 | 181 | 254 | 64 | 25 | 11 | 36 |
| 21 | 11 | 44 | 20 | 61 | 47 | 183 | 183 | 241 | 64 | 23 | 11 | 36 |
| 22 | 11 | 39 | 20 | 55 | 55 | 228 | 199 | 226 | 60 | 23 | 11 | 32 |
| 23 | 11 | 35 | 22 | 50 | 47 | 309 | 236 | 238 | 58 | 22 | 11 | 68 |
| 24 | 20 | 32 | 21 | 47 | 46 | 260 | 279 | 221 | 54 | 22 | 28 | 168 |
| 25 | 127 | 31 | 26 | 43 | 56 | 223 | 312 | 194 | 53 | 22 | 23 | 129 |
| 26 | 68 | 30 | 84 | 41 | 100 | 194 | 276 | 271 | 49 | 21 | 33 | 89 |
| 27 | 35 | 27 | 114 | 37 | 442 | 413 | 233 | 279 | 48 | 21 | 22 | 63 |
| 28 | 26 | 26 | 73 | 35 | 472 | 330 | 223 | 312 | 46 | 20 | 24 | 85 |
| 29 | 25 | 25 | 58 | 34 | --- | 254 | 223 | 276 | 44 | 19 | 34 | 84 |
| 30 | 22 | 24 | 49 | 33 | --- | 213 | 236 | 236 | 42 | 18 | 60 | 98 |
| 31 | 42 | --- | 42 | 33 | --- | 204 | --- | 211 | --- | 17 | 31 | --- |
| TOTAL | 638 | 1382 | 1024 | 1498 | 1819 | 8281 | 9581 | 8853 | 3122 | 855 | 566 | 1200 |
| MEAN | 20.6 | 46.1 | 33.0 | 48.3 | 65.0 | 267 | 319 | 286 | 104 | 27.6 | 18.3 | 40.0 |
| MAX | 127 | 147 | 114 | 81 | 472 | 829 | 697 | 453 | 216 | 41 | 60 | 168 |
| MIN | 11 | 19 | 20 | 28 | 24 | 141 | 181 | 194 | 42 | 17 | 11 | 12 |
| CFSM | .45 | 1.01 | .72 | 1.06 | 1.42 | 5.83 | 6.97 | 6.25 | 2.27 | .60 | .40 | .87 |
| IN. | .52 | 1.12 | .83 | 1.22 | 1.48 | 6.73 | 7.78 | 7.19 | 2.54 | .69 | .46 | .97 |
| AC-FT | 1270 | 2740 | 2030 | 2970 | 3610 | 16430 | 19000 | 17560 | 6190 | 1700 | 1120 | 2380 |
| CAL YR 1976 | TOTAL | 68810 | MEAN 188 | MAX 2710 | MIN 11 | CFSM 4.11 | IN 55.89 | AC-FT 136500 | | | | |
| WTR YR 1977 | TOTAL | 38819 | MEAN 106 | MAX 829 | MIN 11 | CFSM 2.31 | IN 31.53 | AC-FT 77000 | | | | |

14161100 BLUE RIVER BELOW TIDBITS CREEK, NEAR BLUE RIVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: September 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.0°C Aug. 3, 4, 1974; minimum, 0.0°C on several days in 1969, 1971, 1972, Jan. 8, 9, 1973, Jan. 1-13, 1974, Feb. 4-7, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C Aug. 15-17; minimum, 0.5°C Jan. 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 17.0 | 13.5 | 10.5 | 9.5 | 3.5 | 2.0 | 3.5 | 2.5 | 4.5 | 3.0 | 4.5 | 3.0 |
| 2 | 15.0 | 13.0 | 11.5 | 10.0 | 3.5 | 2.5 | 4.0 | 3.0 | 3.5 | 2.0 | 4.5 | 3.0 |
| 3 | 13.5 | 11.5 | 10.5 | 9.0 | 4.0 | 2.5 | 4.5 | 3.5 | 3.5 | 2.0 | 5.0 | 2.5 |
| 4 | 13.0 | 9.5 | 10.0 | 8.0 | 5.5 | 3.5 | 4.5 | 3.5 | 4.0 | 2.0 | 6.5 | 4.0 |
| 5 | 14.0 | 9.5 | 10.0 | 7.5 | 5.5 | 3.5 | 3.5 | 1.0 | 4.0 | 2.5 | 6.0 | 3.5 |
| 6 | 14.5 | 10.5 | 11.0 | 8.0 | 4.5 | 2.5 | 1.5 | 1.0 | 5.5 | 3.5 | 5.5 | 3.5 |
| 7 | 14.5 | 10.5 | 10.0 | 7.5 | 6.0 | 4.0 | 1.5 | 1.0 | 4.5 | 3.0 | 5.5 | 4.5 |
| 8 | 14.0 | 11.0 | 11.0 | 8.5 | 5.5 | 4.0 | 1.0 | 1.0 | 5.0 | 4.0 | 6.0 | 5.0 |
| 9 | 14.0 | 10.0 | 10.0 | 7.5 | 5.0 | 3.5 | 1.0 | 0.5 | 6.0 | 4.0 | 5.5 | 4.0 |
| 10 | 13.0 | 10.0 | 9.5 | 7.5 | 4.0 | 3.0 | 2.0 | 1.0 | 7.0 | 4.5 | 6.0 | 4.0 |
| 11 | 13.5 | 11.0 | 10.0 | 7.0 | 3.5 | 2.5 | 3.0 | 2.0 | 7.0 | 5.0 | 7.0 | 4.0 |
| 12 | 13.0 | 9.5 | 8.0 | 5.5 | 3.0 | 2.5 | 4.0 | 3.0 | 8.5 | 5.5 | 5.0 | 4.0 |
| 13 | 12.5 | 9.0 | 7.5 | 5.5 | 3.5 | 2.5 | 4.0 | 2.5 | 8.5 | 6.0 | 6.0 | 4.0 |
| 14 | 12.0 | 8.5 | 9.0 | 6.5 | 4.0 | 2.5 | 4.0 | 3.0 | 6.5 | 4.5 | 6.0 | 4.0 |
| 15 | 11.5 | 8.0 | 10.5 | 8.0 | 4.0 | 3.0 | 4.5 | 3.5 | 6.5 | 4.5 | 6.5 | 3.5 |
| 16 | 10.5 | 7.5 | 11.5 | 9.5 | 4.5 | 3.5 | 5.0 | 3.5 | 6.5 | 4.5 | 6.0 | 3.0 |
| 17 | 9.0 | 6.5 | 11.0 | 9.0 | 4.0 | 3.5 | 5.5 | 3.5 | 7.5 | 5.0 | 5.0 | 3.5 |
| 18 | 8.0 | 5.5 | 11.5 | 9.0 | 4.5 | 3.5 | 5.5 | 4.0 | 6.5 | 4.0 | 5.0 | 3.5 |
| 19 | 8.0 | 5.0 | 9.5 | 8.0 | 3.5 | 2.5 | 5.0 | 4.0 | 6.5 | 3.5 | 6.0 | 4.5 |
| 20 | 8.0 | 5.0 | 8.5 | 5.5 | 2.5 | 1.5 | 5.0 | 3.5 | 5.5 | 4.0 | 6.0 | 4.5 |
| 21 | 8.5 | 5.0 | 9.0 | 6.5 | 3.0 | 1.5 | 5.5 | 4.5 | 5.5 | 4.5 | 7.5 | 4.0 |
| 22 | 8.0 | 5.5 | 9.0 | 6.5 | 3.0 | 2.0 | 4.5 | 3.5 | 4.5 | 3.5 | 8.5 | 4.0 |
| 23 | 8.5 | 6.5 | 8.0 | 5.5 | 4.5 | 3.0 | 3.5 | 2.5 | 4.0 | 3.5 | 6.0 | 4.0 |
| 24 | 8.0 | 5.5 | 7.5 | 5.0 | 4.0 | 3.0 | 3.5 | 2.0 | 4.5 | 3.0 | 6.5 | 4.0 |
| 25 | 8.5 | 7.0 | 8.0 | 6.5 | 4.5 | 3.0 | 3.0 | 2.0 | 4.0 | 3.0 | 6.0 | 4.0 |
| 26 | 9.0 | 7.0 | 7.0 | 4.0 | 5.5 | 4.5 | 2.5 | 1.5 | 4.5 | 3.0 | 5.5 | 4.5 |
| 27 | 8.5 | 5.5 | 3.5 | 2.0 | 6.0 | 5.0 | 2.5 | 1.0 | 5.5 | 4.5 | 5.0 | 3.5 |
| 28 | 8.5 | 5.5 | 3.0 | 1.5 | 4.5 | 4.0 | 2.5 | 1.0 | 5.0 | 4.0 | 5.0 | 3.5 |
| 29 | 9.0 | 7.5 | 3.5 | 2.0 | 5.5 | 4.5 | 2.5 | 1.0 | --- | --- | 6.0 | 4.0 |
| 30 | 10.5 | 8.5 | 3.5 | 2.0 | 4.5 | 3.5 | 3.0 | 1.0 | --- | --- | 6.5 | 4.0 |
| 31 | 10.0 | 9.0 | --- | --- | 3.0 | 2.5 | 4.0 | 2.5 | --- | --- | 5.0 | 4.0 |
| MONTH | 17.0 | 5.0 | 11.5 | 1.5 | 6.0 | 1.5 | 5.5 | 0.5 | 8.5 | 2.0 | 8.5 | 2.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-----|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 5.5 | 4.5 | 7.5 | 7.0 | 10.0 | 8.5 | 18.0 | 15.0 | 20.0 | 16.0 | 16.5 | 12.5 |
| 2 | 6.5 | 4.5 | 8.5 | 6.5 | 11.0 | 7.5 | 17.5 | 14.0 | 21.0 | 17.0 | 16.0 | 13.5 |
| 3 | 7.5 | 4.0 | 7.0 | 5.5 | 9.5 | 8.5 | 15.0 | 13.5 | 21.0 | 16.5 | 16.5 | 14.5 |
| 4 | 8.0 | 4.5 | 6.0 | 5.0 | 11.0 | 9.0 | 14.5 | 12.5 | 20.5 | 16.5 | 17.0 | 15.0 |
| 5 | 7.5 | 4.5 | 6.5 | 5.0 | 14.0 | 9.0 | 14.0 | 11.5 | 20.5 | 16.5 | 18.0 | 16.0 |
| 6 | 7.5 | 4.5 | 7.5 | 5.0 | 14.5 | 10.5 | 16.0 | 11.5 | 21.0 | 16.5 | 18.0 | 15.0 |
| 7 | 7.5 | 4.5 | 7.0 | 5.0 | 13.0 | 11.5 | 17.0 | 12.5 | 20.0 | 17.0 | 17.0 | 14.5 |
| 8 | 6.0 | 5.0 | 9.0 | 5.5 | 14.5 | 11.0 | 17.5 | 13.5 | 21.0 | 17.0 | 16.0 | 13.5 |
| 9 | 6.0 | 4.5 | 8.0 | 6.0 | 14.0 | 10.0 | 17.0 | 14.5 | 20.0 | 16.0 | 16.0 | 12.5 |
| 10 | 7.0 | 4.5 | 7.5 | 6.0 | 14.0 | 10.5 | 17.5 | 13.0 | 20.5 | 16.5 | 16.0 | 13.0 |
| 11 | 7.5 | 5.0 | 7.5 | 6.0 | 14.0 | 11.0 | 18.5 | 14.0 | 21.0 | 17.0 | 16.0 | 13.0 |
| 12 | 8.0 | 4.5 | 8.0 | 5.0 | 15.0 | 10.5 | 16.5 | 15.0 | 21.0 | 17.0 | 16.0 | 13.0 |
| 13 | 6.5 | 4.5 | 9.0 | 6.5 | 15.0 | 10.5 | 17.5 | 13.0 | 21.0 | 17.5 | 16.0 | 13.0 |
| 14 | 7.0 | 4.0 | 8.5 | 7.0 | 15.0 | 11.0 | 18.0 | 13.5 | 21.0 | 17.5 | 16.0 | 14.0 |
| 15 | 7.5 | 5.0 | 7.5 | 6.0 | 15.0 | 10.5 | 19.0 | 14.5 | 21.5 | 17.5 | 15.0 | 13.0 |
| 16 | 6.5 | 5.0 | 7.5 | 5.5 | 15.5 | 11.0 | 18.5 | 15.0 | 21.5 | 18.0 | 14.5 | 13.0 |
| 17 | 7.0 | 4.0 | 7.0 | 5.5 | 15.5 | 11.5 | 19.0 | 15.0 | 21.5 | 18.0 | 14.0 | 12.5 |
| 18 | 6.5 | 3.5 | 8.0 | 6.0 | 15.5 | 12.5 | 17.0 | 15.5 | 21.0 | 18.0 | 14.0 | 12.5 |
| 19 | 7.5 | 3.5 | 9.5 | 6.0 | 16.5 | 13.0 | 18.5 | 14.5 | 20.5 | 18.0 | 14.0 | 13.0 |
| 20 | 7.5 | 4.0 | 9.5 | 6.5 | 14.0 | 12.5 | 19.5 | 15.0 | 20.5 | 17.5 | 14.0 | 12.5 |
| 21 | 7.5 | 5.5 | 10.5 | 7.5 | 16.5 | 12.5 | 19.5 | 15.0 | 19.5 | 18.0 | 13.5 | 11.5 |
| 22 | 8.0 | 5.5 | 8.5 | 7.0 | 17.0 | 13.0 | 19.5 | 15.0 | 20.0 | 17.5 | 13.5 | 11.0 |
| 23 | 8.0 | 6.0 | 8.0 | 7.0 | 17.0 | 13.0 | 19.0 | 15.5 | 19.0 | 16.5 | 12.0 | 11.0 |
| 24 | 9.0 | 6.0 | 9.0 | 6.5 | 17.0 | 13.0 | 19.5 | 15.5 | 17.5 | 16.0 | 11.5 | 10.5 |
| 25 | 8.0 | 6.0 | 9.5 | 6.5 | 18.0 | 13.5 | 19.0 | 16.0 | 16.0 | 15.0 | 12.0 | 10.0 |
| 26 | 9.0 | 5.5 | 9.0 | 7.0 | 17.5 | 13.5 | 20.0 | 16.0 | 15.0 | 14.5 | 12.5 | 9.5 |
| 27 | 9.5 | 5.5 | 8.0 | 6.0 | 17.5 | 13.5 | 20.0 | 16.0 | 15.5 | 14.0 | 11.5 | 10.5 |
| 28 | 8.5 | 6.5 | 9.0 | 6.5 | 18.0 | 13.5 | 19.0 | 16.0 | 16.0 | 14.5 | 11.5 | 10.5 |
| 29 | 9.5 | 7.0 | 10.5 | 6.0 | 18.0 | 14.0 | 19.0 | 15.0 | 16.0 | 14.5 | 10.5 | 10.0 |
| 30 | 9.0 | 6.5 | 10.0 | 7.5 | 18.0 | 14.0 | 19.5 | 15.0 | 16.0 | 14.0 | 11.0 | 10.0 |
| 31 | --- | --- | 11.0 | 8.0 | --- | --- | 20.5 | 15.5 | 16.0 | 13.0 | --- | --- |
| MONTH | 9.5 | 3.5 | 11.0 | 5.0 | 18.0 | 7.5 | 20.5 | 11.5 | 21.5 | 13.0 | 18.0 | 9.5 |

WILLAMETTE RIVER BASIN

287

14161500 LOOKOUT CREEK NEAR BLUE RIVER, OR

LOCATION.--Lat 44°12'35", long 122°15'20", in T.15 or 16 S., R.5 E. (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 6.0 mi (9.7 km) northeast of town of Blue River, and at mile 0.5 (0.8 km).

DRAINAGE AREA.--24.1 mi² (62.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1949 to September 1955, September 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,377.76 ft (419.941 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good except those for periods of no gage-height record, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--20 years, 130 ft³/s (3.682 m³/s), 73.25 in/yr (1,861 mm/yr), 94,180 acre-ft/yr (116 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft³/s (189 m³/s) Dec. 22, 1964, gage height, 8.88 ft (2.707 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s), on basis of slope-area measurement of peak flow; minimum, 6.4 ft³/s (0.18 m³/s) Nov. 25-30, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 293 ft³/s (8.298 m³/s) Mar. 9, gage height, 3.68 ft (1.122 m), no peak above base of 1,000 ft³/s (28.3 m³/s); minimum, 8.6 ft³/s (0.24 m³/s) Oct. 18-22, 24, Aug. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|------|------|------|------|------|------|------|------|------|-------|-------|
| 1 | 10 | 52 | 18 | 20 | 20 | 121 | 130 | 120 | 120 | 25 | 13 | 14 |
| 2 | 11 | 43 | 18 | 28 | 18 | 98 | 120 | 160 | 101 | 24 | 12 | 12 |
| 3 | 12 | 31 | 17 | 26 | 18 | 95 | 110 | 190 | 95 | 24 | 12 | 13 |
| 4 | 10 | 25 | 17 | 24 | 17 | 87 | 110 | 140 | 101 | 24 | 12 | 13 |
| 5 | 10 | 21 | 16 | 22 | 16 | 80 | 140 | 130 | 97 | 24 | 12 | 12 |
| 6 | 10 | 20 | 17 | 22 | 16 | 81 | 176 | 120 | 92 | 22 | 12 | 11 |
| 7 | 9.9 | 18 | 16 | 20 | 16 | 137 | 224 | 110 | 86 | 21 | 12 | 11 |
| 8 | 9.9 | 16 | 20 | 18 | 16 | 234 | 256 | 100 | 78 | 21 | 12 | 10 |
| 9 | 9.9 | 16 | 22 | 18 | 16 | 250 | 209 | 110 | 73 | 20 | 11 | 9.9 |
| 10 | 9.4 | 15 | 20 | 18 | 16 | 169 | 164 | 170 | 67 | 20 | 10 | 9.9 |
| 11 | 9.9 | 14 | 19 | 18 | 16 | 133 | 141 | 160 | 62 | 19 | 10 | 9.4 |
| 12 | 9.4 | 14 | 18 | 20 | 16 | 131 | 133 | 140 | 60 | 19 | 9.9 | 9.4 |
| 13 | 9.4 | 14 | 18 | 28 | 18 | 115 | 139 | 130 | 56 | 18 | 9.9 | 9.0 |
| 14 | 9.0 | 17 | 17 | 38 | 17 | 101 | 127 | 120 | 53 | 18 | 9.9 | 9.0 |
| 15 | 9.0 | 48 | 16 | 34 | 16 | 90 | 121 | 110 | 49 | 18 | 9.9 | 9.0 |
| 16 | 9.0 | 59 | 16 | 34 | 16 | 81 | 123 | 120 | 46 | 18 | 9.4 | 9.4 |
| 17 | 9.0 | 41 | 16 | 32 | 16 | 75 | 113 | 150 | 44 | 17 | 9.0 | 10 |
| 18 | 9.0 | 40 | 16 | 36 | 15 | 74 | 103 | 130 | 42 | 18 | 9.0 | 12 |
| 19 | 8.6 | 33 | 16 | 34 | 15 | 84 | 95 | 120 | 40 | 18 | 9.4 | 15 |
| 20 | 8.6 | 31 | 15 | 32 | 15 | 89 | 92 | 120 | 39 | 16 | 9.4 | 18 |
| 21 | 8.6 | 27 | 15 | 30 | 20 | 84 | 92 | 120 | 38 | 16 | 9.4 | 21 |
| 22 | 8.6 | 25 | 15 | 28 | 32 | 87 | 97 | 110 | 36 | 15 | 9.4 | 16 |
| 23 | 9.0 | 24 | 17 | 26 | 31 | 98 | 108 | 130 | 34 | 15 | 9.0 | 26 |
| 24 | 15 | 22 | 16 | 26 | 27 | 97 | 125 | 120 | 32 | 16 | 21 | 57 |
| 25 | 57 | 22 | 20 | 24 | 29 | 92 | 141 | 110 | 31 | 15 | 16 | 48 |
| 26 | 32 | 21 | 40 | 22 | 40 | 86 | 127 | 130 | 30 | 15 | 18 | 36 |
| 27 | 17 | 20 | 44 | 22 | 80 | 121 | 115 | 130 | 29 | 14 | 14 | 28 |
| 28 | 14 | 20 | 31 | 19 | 169 | 117 | 120 | 140 | 27 | 14 | 18 | 40 |
| 29 | 13 | 19 | 26 | 20 | --- | 110 | 110 | 120 | 26 | 14 | 18 | 37 |
| 30 | 12 | 18 | 23 | 19 | --- | 100 | 110 | 110 | 26 | 13 | 29 | 38 |
| 31 | 25 | --- | 21 | 20 | --- | 96 | --- | 110 | --- | 13 | 17 | --- |
| TOTAL | 404.2 | 796 | 616 | 778 | 757 | 3413 | 3971 | 3980 | 1710 | 564 | 392.6 | 573.0 |
| MEAN | 13.0 | 26.5 | 19.9 | 25.1 | 27.0 | 110 | 132 | 128 | 57.0 | 18.2 | 12.7 | 19.1 |
| MAX | 57 | 62 | 44 | 38 | 169 | 250 | 256 | 190 | 120 | 25 | 29 | 57 |
| MIN | 8.6 | 14 | 15 | 18 | 15 | 74 | 92 | 100 | 26 | 13 | 9.0 | 9.0 |
| CFSM | 5.4 | 1.10 | .83 | 1.04 | 1.12 | 4.56 | 5.48 | 5.31 | 2.37 | .76 | .53 | .79 |
| IN. | .62 | 1.23 | .95 | 1.20 | 1.17 | 5.27 | 6.13 | 6.14 | 2.64 | .87 | .61 | .88 |
| AC-FT | 802 | 1580 | 1220 | 1540 | 1500 | 6770 | 7880 | 7890 | 3390 | 1120 | 779 | 1140 |

CAL YR 1976 TOTAL 35825.2 MEAN 97.9 MAX 1230 MIN 8.6 CFMS 4.06 IN 55.30 AC-FT 71060
WTR YR 1977 TOTAL 17954.8 MEAN 49.2 MAX 256 MIN 8.6 CFMS 2.04 IN 27.71 AC-FT 35610

NOTE.--No gage-height record Jan. 6 to Feb. 28, Apr. 28 to June 1.

WILLAMETTE RIVER BASIN

14161500 LOOKOUT CREEK NEAR BLUE RIVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1950 to September 1955, September 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 21.5°C July 28, 1968; minimum, 0.0°C Jan. 31, Feb. 1, 1969, Jan. 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.0°C Aug. 15-18; minimum, 0.0°C Jan. 8, 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 14.5 | 10.5 | 9.5 | 8.5 | 3.5 | 3.0 | 3.5 | 2.0 | 3.5 | 2.5 | --- | --- |
| 2 | 14.0 | 12.5 | 10.0 | 9.0 | 3.5 | 3.0 | 3.5 | 2.5 | 2.5 | 1.5 | 5.0 | 3.5 |
| 3 | 12.5 | 11.5 | 9.5 | 8.5 | 4.0 | 3.0 | 3.5 | 3.0 | 2.5 | 1.5 | 5.0 | 3.5 |
| 4 | 11.5 | 9.0 | 9.0 | 8.0 | 4.5 | 4.0 | 3.5 | 3.0 | 3.0 | 1.5 | 6.0 | 4.5 |
| 5 | 11.5 | 9.5 | 9.0 | 7.5 | 4.5 | 3.5 | 3.0 | 1.0 | 3.0 | 2.0 | 6.0 | 4.0 |
| 6 | 12.0 | 10.0 | 9.0 | 8.0 | 4.5 | 3.0 | 1.0 | 0.5 | 4.0 | 3.0 | 5.5 | 4.0 |
| 7 | 12.5 | 10.5 | 9.0 | 7.5 | 4.5 | 4.0 | 1.0 | 0.5 | 3.5 | 2.0 | 5.0 | 4.5 |
| 8 | 12.5 | 11.0 | 9.0 | 8.5 | 5.0 | 4.5 | 1.0 | 0.0 | 4.0 | 3.0 | 5.5 | 5.0 |
| 9 | 12.0 | 10.0 | 8.5 | 7.0 | 5.0 | 4.0 | 0.5 | 0.0 | 4.5 | 3.5 | 5.0 | 4.5 |
| 10 | 11.5 | 10.0 | 8.0 | 7.0 | 4.0 | 3.0 | 2.0 | 0.5 | 5.5 | 4.0 | 5.5 | 4.5 |
| 11 | 12.5 | 10.5 | 8.0 | 7.5 | 3.5 | 3.0 | 3.0 | 2.0 | 5.5 | 4.0 | 6.0 | 4.0 |
| 12 | 11.5 | 9.5 | 7.5 | 6.0 | 3.0 | 2.5 | 3.5 | 2.5 | 6.0 | 4.5 | 5.0 | 4.0 |
| 13 | 11.0 | 9.5 | 7.0 | 5.5 | 3.0 | 3.0 | 3.0 | 1.5 | 6.5 | 4.5 | 5.5 | 4.0 |
| 14 | 10.5 | 9.0 | 8.0 | 7.0 | 3.5 | 2.5 | 3.0 | 2.5 | 5.0 | 4.0 | 5.5 | 4.0 |
| 15 | 10.5 | 8.5 | 9.0 | 8.0 | 3.5 | 3.0 | 3.5 | 2.5 | 5.5 | 4.0 | 5.5 | 4.0 |
| 16 | 10.0 | 8.0 | 9.5 | 8.5 | 4.0 | 2.5 | 4.0 | 2.5 | 5.5 | 4.0 | 5.5 | 3.5 |
| 17 | 9.0 | 7.5 | 9.5 | 8.5 | 4.0 | 3.0 | 4.0 | 3.0 | 6.0 | 4.5 | 5.0 | 4.0 |
| 18 | 8.5 | 6.5 | 9.5 | 8.0 | 4.5 | 3.5 | 4.0 | 3.0 | 5.0 | 3.5 | 5.0 | 4.0 |
| 19 | 8.5 | 6.5 | 8.5 | 7.5 | 3.5 | 2.5 | 4.0 | 2.5 | 5.0 | 3.5 | 5.5 | 4.5 |
| 20 | 8.5 | 6.5 | 8.0 | 6.5 | 2.5 | 2.0 | 4.0 | 2.5 | 5.0 | 4.0 | 6.0 | 4.5 |
| 21 | 8.5 | 6.5 | 8.0 | 6.5 | 2.5 | 1.5 | 4.5 | 3.0 | 5.0 | 4.0 | 7.0 | 4.0 |
| 22 | 8.0 | 7.0 | 7.5 | 6.5 | 3.0 | 2.0 | 3.5 | 3.0 | 4.5 | 3.5 | 7.0 | 4.5 |
| 23 | 9.0 | 7.5 | 7.0 | 6.0 | 4.0 | 3.0 | 3.0 | 2.0 | 4.0 | 3.0 | 6.0 | 5.0 |
| 24 | 8.0 | 7.5 | 6.5 | 5.5 | 3.5 | 3.0 | 2.5 | 1.5 | 4.5 | 3.0 | 6.0 | 4.5 |
| 25 | 8.5 | 8.0 | 7.5 | 6.5 | 4.0 | 3.0 | 2.0 | 1.5 | --- | --- | 6.5 | 4.5 |
| 26 | 8.5 | 7.5 | 6.0 | 4.0 | 4.5 | 4.0 | 1.5 | 1.0 | --- | --- | 6.0 | 5.0 |
| 27 | 8.0 | 6.5 | 4.0 | 3.5 | 4.5 | 4.0 | 1.5 | 1.0 | --- | --- | 5.5 | 4.5 |
| 28 | 8.0 | 6.0 | 3.5 | 3.0 | 4.0 | 3.0 | 1.5 | 1.0 | --- | --- | 5.0 | 4.0 |
| 29 | 8.5 | 8.0 | 4.0 | 2.5 | 4.5 | 3.5 | 1.5 | 0.5 | --- | --- | 6.0 | 4.0 |
| 30 | 9.0 | 8.0 | 3.5 | 3.0 | 4.0 | 3.0 | 2.0 | 0.5 | --- | --- | 6.5 | 4.0 |
| 31 | 9.5 | 8.5 | --- | --- | 3.0 | 2.0 | 3.5 | 2.0 | --- | --- | 5.0 | 4.5 |
| MONTH | 14.5 | 6.0 | 10.0 | 2.5 | 5.0 | 1.5 | 4.5 | 0.0 | 6.5 | 1.5 | 7.0 | 3.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 5.5 | 5.0 | 7.5 | 7.0 | 10.0 | 8.5 | 18.0 | 14.0 | 20.0 | 15.5 | 16.0 | 12.0 |
| 2 | 7.0 | 4.5 | 7.5 | 6.5 | 11.5 | 7.5 | 17.5 | 13.5 | 20.0 | 16.0 | 16.0 | 13.0 |
| 3 | 8.0 | 4.5 | 7.0 | 5.5 | 9.5 | 8.5 | 14.5 | 12.5 | 20.5 | 15.5 | 16.0 | 14.5 |
| 4 | 8.0 | 5.0 | --- | 5.5 | 11.5 | 8.5 | 14.5 | 12.0 | 20.0 | 15.5 | 17.0 | 15.0 |
| 5 | 8.5 | 5.0 | 6.5 | 5.5 | 14.5 | 8.5 | 14.5 | 11.0 | 20.0 | 15.5 | 18.0 | 15.5 |
| 6 | 8.0 | 5.0 | 7.5 | 5.5 | 15.0 | 10.5 | 16.5 | 11.0 | 20.5 | 15.5 | 17.5 | 15.0 |
| 7 | 8.0 | 5.0 | 7.0 | 5.0 | 13.0 | 11.5 | 18.0 | 11.5 | 19.5 | 16.0 | 17.0 | 13.5 |
| 8 | 6.5 | 5.5 | 9.5 | --- | 15.0 | 10.5 | 18.0 | 12.5 | 20.0 | 16.0 | 16.0 | 13.0 |
| 9 | 6.0 | 5.0 | 7.5 | 6.0 | 15.0 | 9.5 | 17.0 | 13.5 | 20.0 | 15.0 | 15.5 | 12.0 |
| 10 | 7.0 | 5.0 | 6.5 | 5.5 | 14.5 | 10.0 | 17.5 | 12.5 | 20.0 | 15.5 | 16.0 | 12.5 |
| 11 | 7.5 | 5.5 | 8.0 | 5.0 | 14.5 | 10.5 | 18.5 | 12.5 | 20.5 | 16.0 | 16.0 | 13.0 |
| 12 | 8.5 | 5.0 | 8.5 | 6.5 | 15.5 | 10.0 | 16.0 | 14.0 | 20.5 | 16.0 | 16.0 | 12.5 |
| 13 | 7.0 | 5.0 | 9.0 | 7.0 | 16.0 | 10.0 | 17.5 | 11.5 | 20.0 | 16.5 | 16.0 | 12.5 |
| 14 | 7.5 | 4.5 | 8.0 | 6.5 | 16.5 | 10.5 | 18.5 | 12.5 | 20.5 | 16.5 | 16.0 | 14.0 |
| 15 | 7.5 | 5.5 | 7.5 | 5.5 | 16.0 | 10.0 | 19.0 | 13.5 | 21.0 | 17.0 | 14.5 | 13.5 |
| 16 | 7.0 | 5.0 | 7.0 | 6.0 | 16.5 | 10.0 | 18.5 | 13.5 | 21.0 | 17.0 | 14.0 | 12.5 |
| 17 | 7.5 | 4.5 | 7.0 | 6.0 | 16.0 | 11.0 | 18.5 | 14.0 | 21.0 | 17.0 | 13.5 | 12.5 |
| 18 | 7.0 | 4.5 | 9.5 | 6.0 | 16.5 | 12.0 | 17.0 | 14.5 | 21.0 | 17.5 | 13.5 | 12.5 |
| 19 | 8.0 | 4.0 | 10.0 | 7.0 | 17.0 | 12.5 | 18.5 | 13.5 | 20.0 | 17.0 | 13.5 | 12.5 |
| 20 | 8.0 | 4.5 | 10.5 | 8.0 | 13.5 | 11.5 | 19.0 | 14.0 | 19.5 | 16.5 | 13.0 | 12.0 |
| 21 | 7.5 | 5.5 | 8.5 | 7.0 | 17.0 | 11.5 | 19.0 | 14.0 | 19.5 | 17.5 | 13.0 | 11.5 |
| 22 | 8.5 | 6.0 | 8.0 | 7.0 | 18.0 | 12.5 | 19.5 | 14.0 | 20.0 | 17.0 | 12.5 | 11.0 |
| 23 | 8.0 | 6.0 | 9.0 | 6.5 | 18.5 | 12.5 | 18.0 | 14.5 | 18.5 | 15.5 | 12.0 | 11.5 |
| 24 | 9.0 | 6.0 | 9.5 | 6.5 | 18.5 | 12.0 | 19.0 | 14.5 | 17.5 | 15.5 | 12.0 | 10.5 |
| 25 | 8.0 | 6.0 | 9.0 | 6.5 | 19.0 | 12.5 | 18.5 | 15.0 | 15.0 | 14.5 | 12.5 | 11.0 |
| 26 | 9.0 | 6.0 | 8.5 | 6.5 | 18.5 | 12.5 | 19.5 | 15.0 | 14.5 | 14.0 | 12.5 | 10.0 |
| 27 | 9.5 | 5.5 | 9.5 | 6.5 | 18.5 | 13.0 | 19.5 | 15.0 | 15.0 | 14.0 | 11.5 | 10.5 |
| 28 | 8.5 | 6.5 | 10.5 | 6.0 | 19.0 | 12.5 | 18.5 | 15.0 | 15.0 | 14.0 | 11.5 | 11.0 |
| 29 | 9.5 | 7.0 | 10.0 | 7.0 | 18.5 | 13.0 | 18.5 | 13.5 | 15.5 | 14.0 | 11.0 | 10.5 |
| 30 | 10.0 | 7.0 | 11.0 | 8.0 | 19.0 | 13.0 | 19.5 | 14.0 | 16.0 | 14.0 | 11.0 | 10.0 |
| 31 | --- | --- | --- | 8.5 | --- | --- | 20.0 | 15.0 | 16.0 | 12.5 | --- | --- |
| MONTH | 10.0 | 4.0 | 11.0 | 5.0 | 19.0 | 7.5 | 20.0 | 11.0 | 21.0 | 12.5 | 18.0 | 10.0 |

WILLAMETTE RIVER BASIN

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14162100 BLUE RIVER LAKE NEAR BLUE RIVER, OR

LOCATION.--Lat 44°10'20", long 122°19'40", in SE¼SE¼ sec.16, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, in intake tower near left end of Blue River Dam on Blue River, 1.4 mi (2.3 km) north of town of Blue River, and at mile 1.7 (2.7 km).

DRAINAGE AREA.--87.3 mi² (226.1 km²).

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1971, published as Blue River Reservoir near Blue River.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1968 by Corps of Engineers; storage began October 1968. Total capacity is 89,520 acre-ft (110 hm³) at elevation 1,357 ft (413.6 m), maximum pool, and usable capacity is 85,550 acre-ft (105 hm³) between elevations 1,180 ft (359.7 m), minimum flood control pool, and 1,357 ft (413.6 m), maximum pool. Reservoir used for flood control. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 85,680 acre-ft (106 hm³) June 12, 13, 1977, elevation, 1,353.02 ft (412.400 m); minimum observed since first filling in 1968, 305 acre-ft (376,000 m³) Dec. 7, 1973, elevation, 1,125.47 ft (343.043 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 85,680 acre-ft (106 hm³) June 12, 13, elevation, 1,353.02 ft (412.400 m); minimum observed, 2,550 acre-ft (3.14 hm³) Dec. 23, elevation, 1,167.60 ft (355.884 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

| | | | | | |
|-------|-------|-------|--------|-------|--------|
| 1,120 | 136 | 1,160 | 1,870 | 1,250 | 19,260 |
| 1,130 | 437 | 1,180 | 3,970 | 1,290 | 36,960 |
| 1,140 | 764 | 1,200 | 7,030 | 1,340 | 73,710 |
| 1,150 | 1,210 | 1,220 | 11,040 | 1,354 | 86,620 |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 1242.09 | 1202.84 | 1179.76 | 1179.95 | 1198.72 | 1229.18 | 1302.68 | 1345.01 | 1350.98 | 1350.31 | 1305.40 | 1243.19 |
| 2 | 1241.25 | 1201.62 | 1179.70 | 1179.10 | 1198.88 | 1232.74 | 1304.38 | 1346.16 | 1350.98 | 1349.04 | 1303.64 | 1242.24 |
| 3 | 1240.11 | 1199.46 | 1179.58 | 1179.22 | 1198.96 | 1236.22 | 1305.78 | 1347.20 | 1351.22 | 1347.74 | 1301.78 | 1241.36 |
| 4 | 1238.66 | 1196.83 | 1179.42 | 1179.94 | 1199.02 | 1238.58 | 1307.52 | 1347.84 | 1351.55 | 1346.48 | 1299.95 | 1240.41 |
| 5 | 1237.43 | 1194.38 | 1179.26 | 1180.28 | 1199.06 | 1240.58 | 1309.86 | 1348.10 | 1351.64 | 1345.19 | 1298.11 | 1239.42 |
| 6 | 1236.17 | 1192.60 | 1179.14 | 1180.12 | 1199.10 | 1242.75 | 1312.74 | 1348.22 | 1351.79 | 1343.83 | 1296.23 | 1238.35 |
| 7 | 1234.83 | 1190.64 | 1178.88 | 1179.78 | 1199.10 | 1247.25 | 1315.95 | 1348.46 | 1352.03 | 1342.49 | 1294.38 | 1237.36 |
| 8 | 1233.34 | 1288.49 | 1179.04 | 1179.31 | 1199.10 | 1255.00 | 1319.05 | 1348.80 | 1352.25 | 1341.17 | 1292.42 | 1236.53 |
| 9 | 1231.78 | 1186.56 | 1179.74 | 1178.66 | 1199.10 | 1261.60 | 1321.25 | 1349.21 | 1352.46 | 1339.82 | 1290.40 | 1235.65 |
| 10 | 1230.18 | 1184.92 | 1180.01 | 1178.12 | 1199.10 | 1265.28 | 1322.85 | 1349.70 | 1352.70 | 1338.88 | 1288.35 | 1234.72 |
| 11 | 1228.50 | 1183.42 | 1180.16 | 1177.55 | 1199.09 | 1267.80 | 1324.25 | 1349.85 | 1352.94 | 1337.15 | 1286.17 | 1233.74 |
| 12 | 1227.52 | 1182.22 | 1180.31 | 1177.90 | 1199.10 | 1270.70 | 1325.60 | 1349.92 | 1353.02 | 1335.77 | 1283.88 | 1232.74 |
| 13 | 1227.01 | 1181.50 | 1180.40 | 1181.15 | 1199.16 | 1272.89 | 1327.08 | 1349.92 | 1353.02 | 1334.41 | 1281.58 | 1231.70 |
| 14 | 1225.40 | 1180.92 | 1177.80 | 1184.02 | 1199.20 | 1274.58 | 1328.32 | 1319.92 | 1353.00 | 1332.98 | 1279.23 | 1230.64 |
| 15 | 1223.68 | 1182.96 | 1175.10 | 1186.02 | 1199.55 | 1275.96 | 1329.48 | 1349.88 | 1353.00 | 1331.61 | 1276.83 | 1229.60 |
| 16 | 1221.98 | 1282.86 | 1173.70 | 1187.85 | 1200.12 | 1277.22 | 1330.72 | 1349.85 | 1353.00 | 1330.21 | 1274.25 | 1228.59 |
| 17 | 1220.28 | 1180.24 | 1172.30 | 1189.45 | 1200.62 | 1278.34 | 1331.74 | 1350.45 | 1352.98 | 1328.76 | 1273.66 | 1227.59 |
| 18 | 1218.50 | 1179.64 | 1170.80 | 1191.04 | 1201.10 | 1279.52 | 1332.64 | 1350.54 | 1352.95 | 1327.35 | 1269.05 | 1226.64 |
| 19 | 1216.70 | 1179.82 | 1169.40 | 1192.38 | 1201.54 | 1281.12 | 1333.40 | 1350.56 | 1352.98 | 1325.94 | 1266.34 | 1225.79 |
| 20 | 1214.98 | 1180.11 | 1168.70 | 1193.48 | 1202.02 | 1282.74 | 1334.18 | 1350.72 | 1352.99 | 1324.44 | 1263.52 | 1225.17 |
| 21 | 1213.30 | 1180.10 | 1168.20 | 1194.42 | 1202.76 | 1284.08 | 1334.92 | 1350.80 | 1352.99 | 1322.99 | 1260.69 | 1224.57 |
| 22 | 1211.60 | 1180.05 | 1167.70 | 1195.20 | 1204.35 | 1285.62 | 1335.75 | 1350.80 | 1352.98 | 1321.53 | 1257.65 | 1223.84 |
| 23 | 1209.78 | 1180.15 | 1168.80 | 1195.82 | 1205.72 | 1287.67 | 1336.78 | 1350.78 | 1352.98 | 1320.05 | 1254.56 | 1223.49 |
| 24 | 1208.26 | 1280.00 | 1170.40 | 1196.33 | 1206.82 | 1289.30 | 1337.85 | 1350.68 | 1353.00 | 1318.60 | 1251.66 | 1225.18 |
| 25 | 1209.44 | 1179.84 | 1172.00 | 1176.80 | 1208.10 | 1290.77 | 1339.18 | 1350.48 | 1353.00 | 1317.11 | 1248.97 | 1236.16 |
| 26 | 1208.95 | 1179.74 | 1173.60 | 1197.24 | 1209.86 | 1291.96 | 1340.26 | 1350.56 | 1353.00 | 1315.50 | 1247.71 | 1236.39 |
| 27 | 1207.66 | 1179.78 | 1177.52 | 1197.64 | 1214.20 | 1294.54 | 1341.18 | 1350.90 | 1353.00 | 1313.79 | 1246.83 | 1226.11 |
| 28 | 1206.24 | 1179.80 | 1180.06 | 1197.90 | 1224.00 | 1296.58 | 1342.06 | 1351.07 | 1352.84 | 1312.21 | 1246.06 | 1226.15 |
| 29 | 1204.66 | 1179.84 | 1180.88 | 1198.10 | --- | 1298.16 | 1342.96 | 1351.10 | 1352.35 | 1310.55 | 1245.34 | 1226.15 |
| 30 | 1203.12 | 1179.80 | 1180.56 | 1198.26 | --- | 1299.48 | 1343.95 | 1351.00 | 1351.47 | 1308.89 | 1244.98 | 1226.21 |
| 31 | 1202.10 | --- | 1180.16 | 1198.50 | --- | 1300.76 | --- | 1350.91 | --- | 1307.17 | 1244.08 | --- |
| MEAN | 1221.79 | 1195.04 | 1176.23 | 1187.15 | 1202.41 | 1271.90 | 1327.15 | 1348.69 | 1352.50 | 1329.73 | 1273.35 | 1231.86 |
| MAX | 1242.09 | 1288.49 | 1180.88 | 1198.50 | 1224.00 | 1300.76 | 1343.95 | 1351.10 | 1353.02 | 1350.31 | 1305.40 | 1243.19 |
| MIN | 1202.10 | 1179.64 | 1167.70 | 1176.80 | 1198.72 | 1229.18 | 1302.68 | 1319.92 | 1350.98 | 1307.17 | 1244.08 | 1223.49 |
| (†) | 7,400 | 3,940 | 3,990 | 6,770 | 11,970 | 43,600 | 77,240 | 83,680 | 84,210 | 47,900 | 17,380 | 12,510 |
| (‡) | -9,720 | -3,460 | +50 | +2,780 | +5,200 | +31,630 | +33,640 | +6,440 | +530 | -36,310 | -30,520 | -4,870 |
| CAL YR 1976 | MEAN | 1275.42 | MAX | 1352.04 | MIN | 1167.70 | AC-FT† | -10 | | | | |
| WTR YR 1977 | MEAN | 1260.10 | MAX | 1353.02 | MIN | 1167.70 | AC-FT‡ | -4,610 | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14162200 BLUE RIVER AT BLUE RIVER, OR

LOCATION.--Lat 44°09'45", long 122°19'55", in NW¼SE¼ sec.21, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, on right bank 0.3 mi (0.5 km) upstream from Simmonds Creek, 0.7 mi (1.1 km) north of town of Blue River, 0.8 mi (1.3 km) downstream from Blue River Dam, and at mile 0.9 (1.4 km).

DRAINAGE AREA.--87.7 mi² (227.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,056.53 ft (322.030 m) above mean sea level (Corps of Engineers bench mark). Prior to Aug. 25, 1966, nonrecording gage at datum 0.80 ft (0.244 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since October 1968 by Blue River Lake (see station 14162100). No diversion above station. Discharge not adjusted for storage or release from Blue River Lake as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--11 years, 479 ft³/s (13.57 m³/s), 347,000 acre-ft/yr (428 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,270 ft³/s (206 m³/s) Feb. 23, 1968, gage height, 8.93 ft (2.722 m); minimum, 0.80 ft³/s (0.023 m³/s) Oct. 8, 10, 11, 1968; minimum daily, 3.7 ft³/s (0.10 m³/s) Oct. 8, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 590 ft³/s (16.7 m³/s) May 10, 11, gage height, 4.49 ft (1.369 m); minimum, 8.5 ft³/s (0.24 m³/s) Feb. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|--------------|------|-------|------|-------|-------|------|
| 1 | 207 | 210 | 52 | 78 | 52 | 15 | 14 | 14 | 360 | 533 | 570 | 200 |
| 2 | 205 | 259 | 50 | 86 | 50 | 13 | 13 | 106 | 328 | 570 | 567 | 200 |
| 3 | 205 | 256 | 49 | 114 | 50 | 16 | 12 | 307 | 220 | 570 | 567 | 197 |
| 4 | 205 | 256 | 49 | 119 | 50 | 13 | 12 | 474 | 215 | 567 | 563 | 197 |
| 5 | 207 | 230 | 49 | 91 | 50 | 11 | 12 | 525 | 307 | 567 | 563 | 202 |
| 6 | 205 | 168 | 49 | 71 | 49 | 13 | 11 | 451 | 248 | 567 | 563 | 205 |
| 7 | 205 | 166 | 48 | 85 | 49 | 15 | 11 | 350 | 180 | 567 | 559 | 180 |
| 8 | 213 | 164 | 49 | 85 | 48 | 16 | 11 | 264 | 149 | 563 | 555 | 157 |
| 9 | 218 | 149 | 50 | 85 | 48 | 17 | 11 | 238 | 130 | 563 | 555 | 157 |
| 10 | 215 | 126 | 50 | 85 | 47 | 12 | 11 | 422 | 91 | 563 | 563 | 155 |
| 11 | 215 | 111 | 50 | 85 | 46 | 11 | 12 | 536 | 78 | 559 | 578 | 155 |
| 12 | 130 | 94 | 50 | 85 | 46 | 13 | 12 | 470 | 137 | 559 | 586 | 153 |
| 13 | 81 | 69 | 49 | 60 | 46 | 12 | 12 | 422 | 166 | 559 | 582 | 153 |
| 14 | 195 | 68 | 139 | 55 | 46 | 11 | 12 | 390 | 155 | 559 | 578 | 153 |
| 15 | 192 | 98 | 187 | 55 | 27 | 10 | 12 | 418 | 132 | 555 | 578 | 151 |
| 16 | 192 | 213 | 106 | 55 | 12 | 10 | 12 | 433 | 132 | 555 | 578 | 151 |
| 17 | 190 | 251 | 65 | 55 | 13 | 10 | 12 | 451 | 130 | 555 | 578 | 149 |
| 18 | 185 | 155 | 63 | 55 | 15 | 10 | 12 | 536 | 116 | 551 | 574 | 149 |
| 19 | 185 | 106 | 63 | 55 | 15 | 11 | 12 | 463 | 91 | 551 | 578 | 149 |
| 20 | 173 | 95 | 61 | 55 | 15 | 11 | 12 | 357 | 100 | 551 | 578 | 147 |
| 21 | 161 | 84 | 55 | 55 | 16 | 11 | 12 | 376 | 112 | 548 | 574 | 147 |
| 22 | 161 | 78 | 53 | 55 | 17 | 10 | 12 | 404 | 98 | 548 | 582 | 147 |
| 23 | 157 | 76 | 44 | 55 | 17 | 10 | 12 | 459 | 78 | 544 | 582 | 147 |
| 24 | 157 | 63 | 38 | 55 | 17 | 10 | 12 | 459 | 78 | 544 | 578 | 149 |
| 25 | 159 | 72 | 38 | 55 | 17 | 10 | 12 | 415 | 78 | 555 | 511 | 151 |
| 26 | 157 | 67 | 40 | 55 | 18 | 10 | 12 | 387 | 78 | 567 | 295 | 153 |
| 27 | 155 | 54 | 43 | 55 | 19 | 12 | 12 | 394 | 78 | 567 | 205 | 157 |
| 28 | 151 | 53 | 46 | 53 | 18 | 13 | 12 | 448 | 170 | 563 | 205 | 159 |
| 29 | 153 | 53 | 78 | 53 | --- | 13 | 12 | 448 | 286 | 559 | 205 | 157 |
| 30 | 153 | 53 | 100 | 53 | --- | 12 | 14 | 451 | 411 | 555 | 205 | 157 |
| 31 | 151 | --- | 94 | 52 | --- | 12 | --- | 400 | --- | 559 | 202 | --- |
| TOTAL | 5538 | 3897 | 1957 | 2110 | 913 | 373 | 360 | 12268 | 4932 | 17293 | 15557 | 4884 |
| MEAN | 179 | 130 | 63.1 | 68.1 | 32.6 | 12.0 | 12.0 | 396 | 164 | 558 | 502 | 163 |
| MAX | 218 | 259 | 187 | 119 | 52 | 17 | 14 | 536 | 411 | 570 | 586 | 205 |
| MIN | 81 | 53 | 38 | 52 | 12 | 10 | 11 | 14 | 78 | 533 | 202 | 147 |
| AC-FT | 10980 | 7730 | 3880 | 4190 | 1810 | 740 | 714 | 24330 | 9780 | 34300 | 30860 | 9690 |
| CAL YR 1976 | TOTAL | 127129 | MEAN 347 | MAX 2920 | MIN 38 | AC-FT 252200 | | | | | | |
| WTR YR 1977 | TOTAL | 70082 | MEAN 192 | MAX 586 | MIN 10 | AC-FT 139000 | | | | | | |

14162200 BLUE RIVER AT BLUE RIVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1966 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C July 6, 1968; minimum, 0.0°C Jan. 5-9, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C Aug. 25, 26; minimum, 2.5°C Dec. 24, Jan. 6-14, 26-28.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 19.0 | 19.0 | 13.0 | 12.0 | 7.0 | 6.0 | 4.0 | 3.5 | 4.5 | 3.0 | --- | --- |
| 2 | 19.0 | 18.5 | 12.0 | 12.0 | 6.5 | 5.5 | 4.0 | 3.5 | 4.5 | 3.0 | --- | --- |
| 3 | 19.0 | 18.5 | 12.0 | 12.0 | 6.0 | 5.5 | 4.0 | 3.5 | 4.0 | 3.0 | 7.0 | --- |
| 4 | 19.0 | 18.5 | 12.5 | 12.0 | 6.0 | 5.5 | 4.0 | 3.5 | 4.0 | 3.0 | 7.5 | 5.0 |
| 5 | 18.5 | 18.0 | 12.5 | 12.0 | 6.0 | 5.0 | 4.0 | 3.0 | 3.5 | 3.0 | 8.0 | 4.5 |
| 6 | 18.0 | 18.0 | 12.5 | 12.0 | 6.0 | 5.0 | 3.0 | 2.5 | --- | --- | 6.5 | 5.0 |
| 7 | 18.0 | 17.5 | 12.5 | 12.0 | 6.0 | 5.0 | 3.5 | 2.5 | --- | --- | 6.5 | 5.5 |
| 8 | 18.0 | 17.5 | 12.0 | 12.0 | 5.5 | 5.0 | 3.0 | 2.5 | --- | --- | 6.5 | 5.0 |
| 9 | 18.0 | 17.5 | 12.0 | 12.0 | 6.0 | 4.5 | 3.0 | 2.5 | --- | --- | 6.5 | 5.5 |
| 10 | 18.0 | 17.5 | 12.0 | 11.5 | 5.5 | 5.0 | 3.0 | 2.5 | --- | --- | 8.0 | 5.5 |
| 11 | 18.0 | 17.5 | 12.0 | 11.5 | 5.5 | 5.0 | 3.0 | 2.5 | --- | --- | 8.0 | 5.5 |
| 12 | 18.5 | 17.0 | 12.0 | 11.0 | 5.5 | 4.5 | 3.5 | 2.5 | --- | --- | 7.0 | 5.0 |
| 13 | 18.0 | 17.0 | 11.5 | 10.5 | 5.0 | 4.5 | 3.5 | 2.5 | --- | --- | 7.5 | 5.0 |
| 14 | 17.5 | 17.5 | 11.0 | 10.5 | 4.5 | 4.0 | 4.0 | 2.5 | --- | --- | 7.0 | 5.5 |
| 15 | 17.5 | 17.0 | 10.5 | 10.5 | 4.5 | 4.0 | 4.0 | 3.0 | --- | --- | 8.0 | 5.0 |
| 16 | 17.5 | 17.0 | 10.5 | 10.0 | 4.5 | 4.5 | 3.5 | 3.0 | --- | --- | 8.0 | 4.5 |
| 17 | 17.0 | 17.0 | 10.5 | 10.5 | 5.0 | 4.5 | 4.0 | 3.0 | --- | --- | 6.5 | 4.5 |
| 18 | 17.0 | 16.5 | 10.5 | 10.5 | 5.0 | 4.0 | 4.0 | 3.0 | --- | --- | 6.5 | 5.0 |
| 19 | 16.5 | 16.0 | 10.5 | 10.0 | 4.5 | 4.0 | 4.5 | 3.0 | --- | --- | 6.5 | 5.0 |
| 20 | 16.0 | 15.5 | 10.5 | 10.0 | 4.5 | 3.5 | 4.5 | 3.0 | --- | --- | 7.5 | 5.0 |
| 21 | 16.0 | 15.5 | 10.0 | 9.5 | 4.5 | 4.0 | 4.5 | 3.5 | --- | --- | 8.5 | 5.0 |
| 22 | 16.0 | 15.5 | 9.5 | 9.0 | 4.0 | 3.5 | 4.5 | 3.5 | --- | --- | 8.5 | 5.0 |
| 23 | 15.5 | 15.0 | 9.5 | 9.0 | 6.5 | 3.5 | 4.5 | 3.0 | --- | --- | 7.0 | 5.0 |
| 24 | 15.5 | 15.0 | 9.5 | 8.5 | 5.0 | 2.5 | 4.5 | 3.0 | --- | --- | 9.0 | 5.0 |
| 25 | 15.0 | 13.0 | 8.5 | 8.5 | 4.0 | 3.0 | 5.5 | 3.0 | --- | --- | 7.0 | 5.5 |
| 26 | 13.0 | 12.0 | 9.0 | 8.0 | 4.0 | 3.5 | 5.0 | 2.5 | --- | --- | 6.5 | 5.0 |
| 27 | 12.5 | 12.0 | 8.5 | 7.0 | 5.5 | 3.5 | 5.0 | 2.5 | --- | --- | 7.0 | 5.0 |
| 28 | 12.5 | 12.5 | 8.0 | 7.0 | 4.5 | 3.0 | 4.0 | 2.5 | --- | --- | 7.0 | 4.5 |
| 29 | 12.5 | 12.5 | 7.5 | 6.5 | 4.0 | 3.5 | 4.5 | 3.0 | --- | --- | 8.0 | 5.0 |
| 30 | 13.0 | 12.5 | 7.0 | 6.0 | 4.5 | 3.5 | 4.0 | 3.0 | --- | --- | 9.0 | 5.0 |
| 31 | 13.0 | 13.0 | --- | --- | 4.0 | 3.5 | 4.0 | 3.0 | --- | --- | 6.5 | 5.0 |
| MONTH | 19.0 | 12.0 | 13.0 | 6.0 | 7.0 | 2.5 | 5.5 | 2.5 | 4.5 | 3.0 | 9.0 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 7.0 | 5.5 | 7.5 | 5.5 | 7.0 | 5.5 | 8.0 | 6.5 | 10.0 | 9.0 | 20.0 | 19.0 |
| 2 | 8.0 | 5.0 | 8.0 | 5.5 | 7.5 | 5.5 | 7.5 | 6.5 | 10.5 | 9.5 | 20.0 | 19.0 |
| 3 | 9.0 | 5.5 | 6.5 | 5.0 | 7.0 | 6.0 | 8.0 | 6.5 | 10.5 | 9.5 | 20.0 | 19.0 |
| 4 | 9.5 | 5.5 | 6.5 | 5.0 | 7.5 | 6.0 | 8.0 | 6.5 | 10.5 | 9.5 | 20.5 | 19.5 |
| 5 | 9.0 | 5.5 | 6.5 | 5.0 | 7.5 | 6.5 | 8.0 | 6.5 | 11.0 | 10.0 | 20.0 | 19.0 |
| 6 | 9.5 | 5.0 | 6.5 | 5.0 | 7.5 | 6.0 | 8.0 | 6.5 | 11.0 | 10.0 | 20.5 | 19.0 |
| 7 | 9.5 | 5.0 | 7.0 | 5.0 | 7.5 | 6.5 | 8.0 | 7.0 | 11.5 | 10.5 | 20.5 | 19.0 |
| 8 | 7.5 | 5.5 | 6.5 | 5.5 | 7.5 | 6.5 | 8.0 | 7.5 | 11.5 | 11.0 | 20.5 | 19.0 |
| 9 | 7.5 | 5.5 | 6.5 | 5.0 | 7.5 | 6.0 | 8.0 | 7.5 | 12.0 | 11.5 | 20.5 | 19.0 |
| 10 | 8.5 | 5.5 | 6.5 | 5.0 | 8.5 | 6.5 | 8.0 | 7.5 | 12.5 | 11.5 | 20.5 | 18.5 |
| 11 | 9.5 | 5.5 | 6.5 | 5.0 | 8.5 | 6.0 | 8.0 | 7.5 | 12.5 | 12.0 | 20.5 | 19.0 |
| 12 | 9.0 | 5.0 | 7.0 | 5.0 | 8.0 | 6.5 | 8.5 | 7.5 | 13.5 | 12.5 | 20.5 | 19.5 |
| 13 | 8.0 | 5.0 | 7.5 | 5.0 | 8.0 | 6.0 | 8.0 | 7.5 | 14.0 | 13.0 | 20.5 | 19.0 |
| 14 | 9.0 | 5.0 | 7.0 | 4.5 | 7.5 | 6.5 | 8.0 | 7.5 | 15.0 | 14.0 | 20.5 | 19.5 |
| 15 | 8.0 | 5.5 | 6.5 | 5.5 | 8.0 | 6.0 | 8.0 | 8.0 | 15.5 | 14.5 | 20.5 | 19.0 |
| 16 | 8.0 | 5.0 | 7.0 | 5.0 | 8.0 | 6.0 | 8.5 | 8.0 | 16.0 | 15.0 | 20.5 | 19.0 |
| 17 | 8.5 | 5.0 | 6.5 | 5.5 | 8.0 | 6.5 | 8.5 | 7.5 | 17.0 | 16.0 | 20.0 | 18.0 |
| 18 | 8.5 | 5.0 | 6.5 | 5.5 | 8.5 | 6.0 | 8.5 | 8.0 | 18.0 | 17.0 | 19.5 | 18.5 |
| 19 | 9.5 | 5.0 | 7.0 | 5.0 | 8.0 | 6.0 | 9.0 | 8.0 | 18.5 | 17.5 | 19.5 | 18.0 |
| 20 | 9.0 | 5.5 | 7.5 | 5.5 | 8.5 | 6.5 | 8.5 | 8.0 | 19.0 | 18.0 | 19.0 | 18.0 |
| 21 | 7.5 | 5.0 | 7.0 | 5.0 | 8.0 | 6.5 | 8.5 | 8.0 | 19.5 | 18.5 | 18.5 | 17.5 |
| 22 | 8.5 | 5.5 | 7.0 | 5.5 | 8.0 | 6.0 | 9.0 | 8.0 | 20.5 | 19.0 | 18.0 | 17.0 |
| 23 | 8.0 | 5.5 | 7.5 | 5.5 | 8.5 | 6.0 | 9.0 | 7.5 | 20.5 | 19.5 | 17.5 | 16.5 |
| 24 | 9.0 | 5.0 | 7.0 | 5.5 | 8.5 | 6.5 | 9.0 | 8.0 | 21.0 | 20.5 | 17.5 | 15.0 |
| 25 | 9.0 | 5.5 | 7.0 | 5.5 | 8.5 | 7.0 | 9.0 | 8.0 | 21.5 | 21.0 | 15.5 | 14.5 |
| 26 | 9.5 | 5.5 | 7.5 | 6.0 | 8.5 | 6.5 | 9.5 | 8.5 | 21.5 | 20.5 | 15.0 | 14.5 |
| 27 | 9.5 | 5.0 | 7.0 | 5.5 | 8.5 | 6.0 | 9.5 | 8.0 | 21.0 | 20.5 | 15.0 | 14.0 |
| 28 | 8.5 | 5.0 | 7.0 | 5.5 | 8.0 | 6.5 | 10.0 | 8.5 | 21.0 | 20.0 | 15.0 | 14.5 |
| 29 | 9.0 | 5.5 | 7.0 | 6.0 | 8.0 | 6.5 | 9.5 | 8.5 | 20.5 | 20.0 | 15.0 | 14.0 |
| 30 | 9.5 | 5.5 | 7.0 | 6.0 | 8.0 | 6.0 | 10.0 | 9.0 | 21.0 | 19.5 | 14.5 | 14.0 |
| 31 | --- | --- | 7.0 | 5.5 | --- | --- | 10.0 | 9.0 | 20.0 | 19.5 | --- | --- |
| MONTH | 9.5 | 5.0 | 8.0 | 4.5 | 8.5 | 5.5 | 10.0 | 6.5 | 21.5 | 9.0 | 20.5 | 14.0 |

WILLAMETTE RIVER BASIN

14162500 MCKENZIE RIVER NEAR VIDA, OR

LOCATION.--Lat 44°07'30", long 122°28'10", in NE¼NE¼ sec.5, T.17 S., R.3 E., Lane County, Hydrologic Unit 17090004, on right bank 0.4 mi (0.6 km) downstream from Mason Creek, 5.4 mi (8.7 km) east of Vida, and at mile 47.7 (76.6 km).

DRAINAGE AREA.--930 mi² (2,409 km²) at cableway 0.4 mi (0.6 km) downstream, where all discharge measurements are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1910 to March 1911 (published as "at Martins Rapids, near Vida"), September 1924 to current year. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 855.71 ft (260.820 m) above mean sea level (levels by Eugene Water and Electric Board). July 1, 1910, to Mar. 31, 1911, nonrecording gage at site 3 mi (5 km) downstream at different datum. Sept. 1, 1924, to Nov. 16, 1928, nonrecording gage at site 20 ft (6 m) upstream at datum 0.15 ft (0.046 m) lower. Nov. 17, 1928, to Sept. 23, 1968, water-stage recorder at present site on left bank at datum 0.15 ft (0.046 m) lower.

REMARKS.--Water-discharge records good. Flow regulated since 1963 by Smith River Reservoir (see station 14158795) and Cougar Lake (see station 14159400), and since 1968 by Blue River Lake (see station 14162100). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--53 years (water years 1925-77), 4,051 ft³/s (114.7 m³/s), 2,935,000 acre-ft/yr (3.62 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,400 ft³/s (1,820 m³/s) Dec. 28, 1945, gage height, 17.70 ft (5.395 m), site and datum then in use, from rating curve extended above 32,000 ft³/s (906 m³/s); minimum, 1,260 ft³/s (35.7 m³/s) Nov. 7, 1930, Sept. 17, Oct. 4, 8, 9, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1923 reached a stage of 17.2 ft (5.24 m), from floodmarks, discharge, 62,000 ft³/s (1,760 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,440 ft³/s (126 m³/s) May 10, 11, gage height, 2.44 ft (0.744 m); minimum, 1,320 ft³/s (37.4 m³/s) Feb. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|--------|--------|--------|-------|--------|--------|--------|--------|---------|--------|--------|
| 1 | 2790 | 3190 | 2100 | 1770 | 1580 | 2420 | 2620 | 2920 | 3390 | 2420 | 2260 | 2350 |
| 2 | 2790 | 3080 | 2010 | 1910 | 1570 | 2170 | 2540 | 3330 | 3310 | 2550 | 2350 | 2330 |
| 3 | 2830 | 2970 | 1880 | 1960 | 1550 | 2280 | 2380 | 3750 | 3130 | 2590 | 2350 | 2310 |
| 4 | 2830 | 2950 | 1900 | 1940 | 1540 | 2140 | 2450 | 4090 | 3410 | 2590 | 2330 | 2300 |
| 5 | 2810 | 2880 | 1860 | 1850 | 1520 | 2020 | 2720 | 3990 | 3690 | 2590 | 2310 | 2300 |
| 6 | 2770 | 2770 | 1850 | 1760 | 1520 | 2060 | 2950 | 3610 | 3630 | 2550 | 2300 | 2310 |
| 7 | 2760 | 2760 | 1900 | 1740 | 1510 | 2450 | 3080 | 3280 | 3510 | 2540 | 2310 | 2280 |
| 8 | 2740 | 2760 | 1960 | 1740 | 1510 | 3550 | 3330 | 2990 | 3260 | 2520 | 2310 | 2250 |
| 9 | 2760 | 2790 | 2040 | 1740 | 1520 | 3830 | 3190 | 2900 | 2950 | 2500 | 2300 | 2230 |
| 10 | 2760 | 2790 | 1960 | 1740 | 1520 | 3130 | 2880 | 3890 | 2840 | 2500 | 2300 | 2250 |
| 11 | 2740 | 2760 | 1910 | 1740 | 1520 | 2670 | 2670 | 4200 | 2690 | 2520 | 2300 | 2230 |
| 12 | 2450 | 2710 | 1900 | 1760 | 1510 | 2810 | 2590 | 3670 | 2540 | 2480 | 2380 | 2230 |
| 13 | 1820 | 2650 | 1900 | 1900 | 1520 | 2600 | 2740 | 3350 | 2590 | 2470 | 2520 | 2250 |
| 14 | 2690 | 2690 | 1940 | 1960 | 1520 | 2420 | 2650 | 3200 | 2590 | 2450 | 2520 | 2250 |
| 15 | 2720 | 3020 | 2020 | 1880 | 1450 | 2230 | 2620 | 3280 | 2520 | 2500 | 2620 | 2230 |
| 16 | 2710 | 3150 | 1960 | 1800 | 1380 | 2120 | 2670 | 3330 | 2480 | 2600 | 2710 | 2250 |
| 17 | 2720 | 3080 | 1830 | 1790 | 1360 | 2060 | 2570 | 3910 | 2400 | 2570 | 2710 | 2250 |
| 18 | 2670 | 2990 | 1760 | 1770 | 1340 | 2070 | 2450 | 3950 | 2280 | 2520 | 2720 | 2260 |
| 19 | 2670 | 2880 | 1740 | 1770 | 1330 | 2180 | 2380 | 3470 | 2300 | 2470 | 2670 | 2310 |
| 20 | 2650 | 2840 | 1710 | 1770 | 1340 | 2230 | 2400 | 3150 | 2330 | 2480 | 2710 | 2380 |
| 21 | 2670 | 2830 | 1700 | 1770 | 1410 | 2100 | 2370 | 3130 | 2260 | 2480 | 2710 | 2380 |
| 22 | 2670 | 2840 | 1700 | 1760 | 1580 | 2140 | 2330 | 3190 | 2170 | 2550 | 2710 | 2350 |
| 23 | 2670 | 2840 | 1730 | 1740 | 1570 | 2300 | 2480 | 3590 | 2120 | 2550 | 2720 | 2420 |
| 24 | 2740 | 2830 | 1710 | 1700 | 1510 | 2310 | 2600 | 3690 | 2020 | 2550 | 2880 | 2810 |
| 25 | 3130 | 2840 | 1710 | 1610 | 1480 | 2170 | 2830 | 3570 | 1990 | 2470 | 2760 | 2690 |
| 26 | 2930 | 2830 | 1830 | 1590 | 1570 | 2090 | 2920 | 3790 | 1980 | 2280 | 2550 | 2590 |
| 27 | 2760 | 2810 | 1930 | 1580 | 1710 | 2540 | 2720 | 3770 | 1940 | 2250 | 2370 | 2480 |
| 28 | 2740 | 2810 | 1830 | 1570 | 2740 | 2590 | 2670 | 3790 | 1990 | 2200 | 2370 | 2670 |
| 29 | 2720 | 2740 | 1960 | 1570 | --- | 2500 | 2670 | 3670 | 2100 | 2200 | 2450 | 2670 |
| 30 | 2710 | 2430 | 1820 | 1570 | --- | 2330 | 2670 | 3570 | 2230 | 2220 | 2520 | 2760 |
| 31 | 2770 | --- | 1760 | 1570 | --- | 2310 | --- | 3410 | --- | 2200 | 2400 | --- |
| TOTAL | 84190 | 85510 | 57810 | 54320 | 43180 | 74820 | 80140 | 109430 | 78640 | 76360 | 77420 | 71370 |
| MEAN | 2716 | 2850 | 1865 | 1752 | 1542 | 2414 | 2671 | 3530 | 2621 | 2463 | 2497 | 2379 |
| MAX | 3130 | 3190 | 2100 | 1960 | 2740 | 3830 | 3330 | 4200 | 3690 | 2600 | 2880 | 2810 |
| MIN | 1820 | 2430 | 1700 | 1570 | 1330 | 2020 | 2330 | 2900 | 1940 | 2200 | 2260 | 2230 |
| AC-FT | 167000 | 169600 | 114700 | 107700 | 85650 | 148400 | 159000 | 217100 | 156000 | 151500 | 153600 | 141600 |
| CAL YR 1976 TOTAL | 1420120 | | | 3880 | | 15700 | | 1700 | | 2817000 | | |
| WTR YR 1977 TOTAL | | 893190 | | 2447 | | 4200 | | 1330 | | 1772000 | | |

WILLAMETTE RIVER BASIN,

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14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to current year.

WATER TEMPERATURES: June 1961 to current year.

INSTRUMENTATION.--Graphic temperature recorder since June 1961. Dual conductivity-temperature recorder since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 67 micromhos Jan. 9, 1977; minimum recorded, 39 micromhos May 26-28, June 5-7, 1977.

WATER TEMPERATURES: Maximum, 16.0°C July 6, 7, 28, 1968; minimum, 1.0°C Feb. 5, 6, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 67 micromhos Jan. 9; minimum recorded, 39 micromhos May 26-28, June 5-7.

WATER TEMPERATURES: Maximum, 15.5°C June 24-27, Aug. 17, 22; minimum, 2.5°C Jan. 3, 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS-CHARGE (CFS) | DIS-SOLVED SILICA (SI02) (MG/L) | DIS-SOLVED CALCIUM (CA) (MG/L) | DIS-SOLVED MAGNE-SIUM (MG) (MG/L) | DIS-SOLVED SODIUM (NA) (MG/L) | BICARBONATE (HC03) (MG/L) | DIS-SOLVED SULFATE (SO4) (MG/L) | DIS-SOLVED CHLORIDE (CL) (MG/L) |
|-----------|------|--------------------------------|---------------------------------|--------------------------------|-----------------------------------|-------------------------------|---------------------------|---------------------------------|---------------------------------|
| AUG 11... | 1415 | 2300 | 20 | 4.3 | 1.6 | 3.7 | 27 | 1.3 | 1.5 |

| DATE | DIS-SOLVED FLUORIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJELDAHL NITROGEN (N) (MG/L) | TOTAL NITROGEN (N) (MG/L) | TOTAL PHOSPHORUS (P) (MG/L) | HARDNESS (CA,MG) (MG/L) | NON-CARBONATE HARDNESS (MG/L) | SODIUM ADSORPTION RATIO | DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) |
|-----------|--------------------------------|---------------------------------------|------------------------------------|---------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|---|
| AUG 11... | .0 | .00 | .65 | .65 | .03 | 17 | 0 | .4 | 45 |

| DATE | DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS-SOLVED SOLIDS (TONS PER DAY) | DIS-SOLVED SOLIDS (TONS PER AC-FT) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SUSPENDED SEDIMENT DIS-CHARGE (T/DAY) | ALKALINITY AS CAC03 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|--|----------------------------------|------------------------------------|-----------------|---------------------------|---------------------------------------|----------------------------|---------------------------------|
| AUG 11... | 47 | 279 | .06 | 2 | 3 | 19 | 22 | .6 |

| DATE | TOTAL IRON (FE) (UG/L) | DIS-SOLVED IRON (FE) (UG/L) | TOTAL MANGANESE (MN) (UG/L) | DIS-SOLVED MANGANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS-SOLVED ARSENIC (AS) (UG/L) | TOTAL CADMIUM (CD) (UG/L) | DIS-SOLVED CADMIUM (CD) (UG/L) | TOTAL CHROMIUM (CR) (UG/L) | DIS-SOLVED CHROMIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|------------------------|-----------------------------|-----------------------------|----------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|----------------------------|---------------------------------|--------------------------|
| AUG 11... | 130 | 20 | 8 | 0 | 0 | 0 | <10 | 1 | 0 | 0 | <50 |

| DATE | DIS-SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS-SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) | TOTAL SELENIUM (SE) (UG/L) | DIS-SOLVED SELENIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS-SOLVED MERCURY (HG) (UG/L) |
|-----------|-------------------------------|--------------------------|-------------------------------|------------------------|-----------------------------|------------------------|-----------------------------|----------------------------|---------------------------------|---------------------------|--------------------------------|
| AUG 11... | 0 | 10 | 4 | <100 | 1 | 40 | 20 | 0 | 0 | .1 | .0 |

14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | --- | 57 | 64 | 58 | 54 | 52 | 47 | 41 | 51 | 52 | 49 |
| 2 | | --- | 58 | 63 | 58 | 56 | 53 | 45 | 42 | 50 | 51 | 49 |
| 3 | | --- | 58 | 64 | 58 | 54 | 54 | 44 | 42 | 50 | 51 | 49 |
| 4 | | --- | 58 | 65 | 58 | 56 | 54 | 43 | 42 | 50 | 51 | 49 |
| 5 | | 54 | 58 | 64 | 58 | 56 | 52 | 44 | 41 | 51 | 52 | 48 |
| 6 | | 55 | 58 | 65 | 58 | 56 | 52 | 45 | 40 | 51 | 51 | 49 |
| 7 | | 55 | 58 | 65 | 58 | 53 | 49 | 46 | 40 | 51 | 51 | 49 |
| 8 | | 55 | 57 | 64 | 58 | 49 | 47 | 46 | 42 | 52 | 51 | 49 |
| 9 | | 55 | 59 | 64 | 59 | 48 | 48 | 47 | 43 | 51 | 51 | 49 |
| 10 | | 56 | 63 | 63 | 58 | 51 | 50 | 43 | 45 | 52 | 51 | 49 |
| 11 | | 55 | 63 | 63 | 59 | 53 | 51 | 42 | 45 | 52 | 51 | 49 |
| 12 | | 55 | 63 | 63 | 58 | 52 | 51 | 44 | 46 | 52 | 50 | 49 |
| 13 | | 55 | 63 | 64 | 58 | 53 | 51 | 44 | 46 | 52 | 50 | 49 |
| 14 | | 55 | 63 | 64 | 58 | 54 | 51 | 45 | 47 | 51 | 50 | 50 |
| 15 | | 54 | 63 | 64 | 59 | 55 | 51 | 44 | 47 | 51 | 49 | 50 |
| 16 | | 54 | 63 | 64 | 59 | 56 | 51 | 44 | 48 | 51 | 50 | 50 |
| 17 | | 54 | 63 | 64 | 59 | 56 | 51 | 42 | 48 | 51 | 49 | 49 |
| 18 | | 54 | 64 | 64 | 60 | 56 | 51 | 42 | 48 | 51 | 49 | 50 |
| 19 | | 54 | 64 | 64 | 60 | 55 | 52 | 44 | 49 | 51 | 49 | 50 |
| 20 | | 54 | 65 | 65 | 60 | 56 | 52 | 44 | 50 | 51 | 49 | 50 |
| 21 | | 54 | 64 | 65 | 59 | 56 | 52 | 44 | 50 | 51 | 49 | 50 |
| 22 | | 55 | 64 | --- | 58 | 55 | 51 | --- | 51 | 50 | 49 | 51 |
| 23 | | 53 | 64 | --- | 59 | 54 | 51 | --- | 51 | 50 | 49 | 50 |
| 24 | | 54 | 65 | 58 | 59 | 54 | 50 | --- | 52 | 50 | 47 | 50 |
| 25 | | 54 | 64 | 58 | 59 | 55 | 48 | --- | 53 | 51 | 48 | 49 |
| 26 | | 54 | 63 | 58 | 58 | 56 | 47 | 40 | 53 | 52 | 49 | 50 |
| 27 | | 55 | 63 | 58 | 58 | 53 | 48 | 40 | 54 | 52 | 50 | 51 |
| 28 | | 54 | 64 | 58 | 52 | 52 | 48 | 40 | 53 | 52 | 49 | 51 |
| 29 | | 55 | 63 | 58 | --- | 54 | 48 | 41 | 53 | 52 | 48 | 51 |
| 30 | | 56 | 63 | 58 | --- | 54 | 48 | 41 | 52 | 52 | 48 | 51 |
| 31 | | --- | 64 | 58 | --- | 54 | --- | 42 | --- | 52 | 49 | --- |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 12.0 | 11.0 | 10.0 | 10.0 | 6.5 | 5.5 | 5.5 | 4.0 | 6.0 | 5.0 | 5.5 | 4.5 |
| 2 | 12.0 | 11.0 | 10.0 | 10.0 | 6.5 | 5.5 | 5.5 | 3.5 | 5.5 | 3.5 | 5.5 | 4.5 |
| 3 | 11.5 | 11.0 | 10.0 | 10.0 | 6.5 | 5.5 | 3.5 | 2.5 | 5.0 | 3.5 | 6.0 | 4.5 |
| 4 | 11.5 | 11.0 | 10.0 | 9.5 | 7.0 | 6.0 | 4.0 | 3.0 | 5.5 | 4.0 | 7.0 | 5.0 |
| 5 | 12.0 | 10.5 | 9.5 | 9.5 | 6.5 | 6.0 | 3.5 | 3.0 | 5.5 | 4.0 | 7.0 | 4.0 |
| 6 | 12.0 | 11.0 | 10.0 | 9.0 | 6.5 | 5.5 | 3.5 | 2.5 | 6.0 | 4.5 | 6.5 | 5.0 |
| 7 | 13.0 | 11.5 | 10.0 | 8.5 | 6.5 | 6.0 | 5.0 | 3.0 | 6.0 | 4.0 | 6.5 | 5.5 |
| 8 | 13.0 | 11.5 | 10.0 | 9.0 | 7.0 | 6.0 | 5.5 | 4.5 | 6.0 | 5.0 | 6.0 | 5.5 |
| 9 | 13.0 | 11.0 | 9.5 | 8.5 | 6.5 | 6.0 | 5.5 | 5.0 | 6.5 | 5.0 | 6.0 | 4.5 |
| 10 | 12.0 | 11.0 | 9.5 | 8.5 | 6.0 | 5.0 | 5.5 | 5.0 | 7.0 | 5.5 | 6.5 | 4.5 |
| 11 | 13.0 | 11.5 | 10.0 | 9.0 | 5.5 | 5.0 | 5.0 | 4.5 | 6.5 | 5.5 | 7.0 | 4.5 |
| 12 | 12.0 | 11.0 | 9.5 | 8.0 | 5.5 | 5.0 | 5.5 | 4.5 | 7.0 | 5.5 | 6.5 | 5.0 |
| 13 | 11.0 | 9.5 | 9.0 | 8.0 | 5.5 | 5.0 | 5.5 | 4.5 | 7.5 | 5.5 | 6.5 | 4.5 |
| 14 | 11.5 | 10.5 | 9.5 | 8.5 | 5.5 | 4.5 | 5.5 | 4.5 | 6.5 | 5.0 | 6.5 | 4.5 |
| 15 | 11.5 | 10.5 | 9.5 | 9.0 | 6.0 | 5.0 | 5.5 | 4.5 | 6.5 | 5.0 | 7.0 | 4.5 |
| 16 | 11.5 | 10.5 | 10.5 | 9.5 | 6.0 | 5.0 | 5.5 | 4.5 | 6.5 | 5.0 | 7.0 | 4.5 |
| 17 | 11.5 | 10.5 | 10.0 | 9.0 | 6.0 | 5.0 | 5.5 | 4.5 | 7.0 | 5.5 | 6.5 | 5.0 |
| 18 | 11.0 | 10.0 | 10.0 | 9.5 | 6.0 | 5.0 | 6.0 | 5.0 | 6.5 | 5.0 | 6.5 | 5.5 |
| 19 | 11.0 | 10.0 | 9.5 | 8.5 | 5.0 | 4.0 | 6.0 | 4.5 | 7.0 | 4.5 | 7.0 | 6.0 |
| 20 | 11.0 | 10.0 | 9.0 | 8.0 | 4.5 | 4.0 | 5.0 | 3.5 | 6.5 | 5.5 | 7.5 | 5.5 |
| 21 | 11.0 | 10.0 | 9.0 | 8.5 | 5.0 | 4.0 | 4.5 | 4.0 | 6.5 | 5.5 | 8.0 | 5.0 |
| 22 | 11.0 | 10.5 | 9.0 | 8.5 | 5.0 | 4.0 | 4.5 | 4.0 | 6.0 | 4.5 | 8.5 | 5.0 |
| 23 | 11.0 | 10.5 | 9.0 | 8.0 | 6.0 | 5.0 | --- | --- | 5.5 | 5.0 | 7.5 | 6.0 |
| 24 | 11.0 | 10.5 | 8.5 | 8.0 | 5.5 | 5.0 | 5.0 | 4.5 | 5.0 | 5.0 | 8.0 | 6.0 |
| 25 | 10.0 | 10.0 | 9.0 | 8.5 | 6.0 | 5.0 | 5.0 | 3.5 | 5.0 | 5.0 | 8.0 | 6.0 |
| 26 | 10.0 | 10.0 | 8.0 | 6.5 | 6.0 | 5.5 | 4.5 | 3.5 | 6.0 | 4.5 | 7.5 | 6.0 |
| 27 | 10.0 | 10.0 | 7.0 | 6.0 | 6.0 | 5.5 | 4.0 | 3.0 | 6.5 | 5.5 | 7.0 | 5.5 |
| 28 | 10.0 | 9.5 | 7.5 | 6.0 | 5.5 | 4.5 | 4.5 | 3.0 | 6.5 | 5.0 | 6.5 | 4.5 |
| 29 | 10.0 | 10.0 | 7.5 | 6.5 | 6.0 | 5.0 | 4.5 | 3.0 | --- | --- | 7.5 | 5.0 |
| 30 | 10.5 | 10.0 | 7.0 | 6.5 | 5.0 | 3.0 | 4.5 | 3.5 | --- | --- | 8.5 | 5.5 |
| 31 | 10.5 | 10.0 | --- | --- | 4.5 | 4.0 | 5.5 | 4.5 | --- | --- | 7.0 | 5.5 |
| MONTH | 13.0 | 9.5 | 10.5 | 6.0 | 7.0 | 3.0 | 6.0 | 2.5 | 7.5 | 3.5 | 8.5 | 4.0 |

WILLAMETTE RIVER BASIN

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14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 7.5 | 6.0 | 9.0 | 8.0 | 10.5 | 8.5 | 13.0 | 10.0 | 14.5 | 10.5 | 13.5 | 9.5 |
| 2 | 8.5 | 6.0 | 10.0 | 8.0 | 11.5 | 7.5 | 13.5 | 9.5 | 14.5 | 10.5 | 12.5 | 10.0 |
| 3 | 9.5 | 6.0 | 8.5 | 7.5 | 10.0 | 8.5 | 11.0 | 9.0 | 14.5 | 10.5 | 13.0 | 10.5 |
| 4 | 10.0 | 6.0 | 8.0 | 6.5 | 11.0 | 8.5 | 11.5 | 9.0 | 14.5 | 10.5 | 13.5 | 11.0 |
| 5 | 10.0 | 6.0 | 8.5 | 6.5 | 13.5 | 8.5 | 11.5 | 8.5 | 14.5 | 10.0 | 13.0 | 11.0 |
| 6 | 10.0 | 6.5 | 9.5 | 6.5 | 13.5 | 9.0 | 13.5 | 8.5 | 15.0 | 10.5 | 14.0 | 11.0 |
| 7 | 10.0 | 6.5 | 8.5 | 6.5 | 11.5 | 9.5 | 13.5 | 9.0 | 14.0 | 10.5 | 13.5 | 10.5 |
| 8 | 8.5 | 7.0 | 11.0 | 6.5 | 13.0 | 9.0 | 13.5 | 9.5 | 15.0 | 10.5 | 13.5 | 10.0 |
| 9 | 8.0 | 6.5 | 9.0 | 7.0 | 13.0 | 8.5 | 12.0 | 9.5 | 14.5 | 10.5 | 13.0 | 9.5 |
| 10 | 9.0 | 6.0 | 8.0 | 7.5 | 13.0 | 9.0 | 13.5 | 9.0 | 14.5 | 10.5 | 13.5 | 10.0 |
| 11 | 10.0 | 7.0 | 9.0 | 7.0 | 12.5 | 9.0 | 14.0 | 9.5 | 14.5 | 11.0 | 13.5 | 10.0 |
| 12 | 10.0 | 6.5 | 10.5 | 6.5 | 13.5 | 9.0 | 12.0 | 10.0 | 15.0 | 11.0 | 13.5 | 10.0 |
| 13 | 9.0 | 7.0 | 10.0 | 7.5 | 13.5 | 9.0 | 13.5 | 9.0 | 14.5 | 11.0 | 13.5 | 10.0 |
| 14 | 9.5 | 6.0 | 9.5 | 8.0 | 14.0 | 9.0 | 14.0 | 9.5 | 14.5 | 11.0 | 12.5 | 10.5 |
| 15 | 9.0 | 7.0 | 8.5 | 7.0 | 13.5 | 9.0 | 14.5 | 9.5 | 15.0 | 11.5 | 12.0 | 10.5 |
| 16 | 8.5 | 7.0 | 9.0 | 6.5 | 14.0 | 9.0 | 14.0 | 9.5 | 15.0 | 11.0 | 12.0 | 10.5 |
| 17 | 9.5 | 6.0 | 8.5 | 7.0 | 13.5 | 9.5 | 13.5 | 9.5 | 15.5 | 11.5 | 12.0 | 10.5 |
| 18 | 9.0 | 5.5 | 9.5 | 7.5 | 14.0 | 10.0 | 12.0 | 10.0 | 15.0 | 11.5 | 11.5 | 10.5 |
| 19 | 9.5 | 5.5 | 11.5 | 7.0 | 14.0 | 10.5 | 13.5 | 9.5 | 14.5 | 11.5 | 12.0 | 10.5 |
| 20 | 9.5 | 6.0 | 11.0 | 7.5 | 12.0 | 9.5 | 14.0 | 9.5 | 15.0 | 11.5 | 12.0 | 10.5 |
| 21 | 9.5 | 7.0 | 11.5 | 8.5 | 14.5 | 9.5 | 14.0 | 9.5 | 14.0 | 12.5 | 12.0 | 10.5 |
| 22 | 9.5 | 7.0 | 10.5 | 8.5 | 15.0 | 10.5 | 14.0 | 9.5 | 15.5 | 12.0 | 12.5 | 10.0 |
| 23 | 9.5 | 7.5 | 9.0 | 8.5 | 15.0 | 10.0 | 13.0 | 10.0 | 14.5 | 11.5 | 11.0 | 10.5 |
| 24 | 10.5 | 7.5 | 10.0 | 8.5 | 15.5 | 10.0 | 13.0 | 9.5 | 13.5 | 12.5 | 12.0 | 10.5 |
| 25 | 9.5 | 8.0 | 9.5 | 8.5 | 15.5 | 10.5 | 13.5 | 10.0 | 12.5 | 11.5 | 12.0 | 10.5 |
| 26 | 11.0 | 7.0 | 10.0 | 8.0 | 15.5 | 10.0 | 14.5 | 10.5 | 12.0 | 11.0 | 12.5 | 10.0 |
| 27 | 11.0 | 7.0 | 9.0 | 7.5 | 15.5 | 10.0 | 14.5 | 10.0 | 12.0 | 10.5 | 11.5 | 10.5 |
| 28 | 10.0 | 7.5 | 11.0 | 7.0 | 15.0 | 10.0 | 14.0 | 10.5 | 12.0 | 10.5 | 11.5 | 11.0 |
| 29 | 11.0 | 8.0 | 11.0 | 7.0 | 15.0 | 10.0 | 14.0 | 10.0 | 12.5 | 10.5 | 11.0 | 10.5 |
| 30 | 10.5 | 8.0 | 10.0 | 7.5 | 14.5 | 10.0 | 14.5 | 10.0 | 14.0 | 11.0 | 12.0 | 10.5 |
| 31 | --- | --- | 11.0 | 8.0 | --- | --- | 15.0 | 10.5 | 13.0 | 10.0 | --- | --- |
| MONTH | 11.0 | 5.5 | 11.5 | 6.5 | 15.5 | 7.5 | 15.0 | 8.5 | 15.5 | 10.0 | 14.0 | 9.5 |

WILLAMETTE RIVER BASIN

14163000 GATE CREEK AT VIDA, OR

LOCATION.--Lat 44°08'45", long 122°34'15", in SW¼ sec.28, T.16 S., R.2 E., Lane County, Hydrologic Unit 17090004, on right bank 300 ft (91 m) downstream from bridge on State Highway 126, at Vida, and at mile 0.2 (0.3 km).

DRAINAGE AREA.--47.6 mi² (123.3 km²).

PERIOD OF RECORD.--June 1951 to September 1957; annual maximums, water years 1958-65; August 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 764.56 ft (233.038 m) above mean sea level. June 11, 1951, to Sept. 30, 1957, water-stage recorder, and Oct. 1, 1957, to Aug. 1, 1966, crest-stage gage at same site and datum.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--17 years (water years 1952-57, 1967-77), 221 ft³/s (6.259 m³/s), 63.05 in/yr (1,601 mm/yr), 160,100 acre-ft/yr (197 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,140 ft³/s (202 m³/s) Dec. 22, 1964, gage height, 12.18 ft (3.712 m), from slope-area measurement of peak flow; minimum, 12 ft³/s (0.34 m³/s) Nov. 26, 27, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 722 ft³/s (20.4 m³/s) May 17, gage height, 4.34 ft (1.323 m), no peak above base of 1,800 ft³/s (51.0 m³/s); minimum, 15 ft³/s (0.42 m³/s) Oct. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|-------|------|-------|-------|--------|-------|-------|
| 1 | 18 | 114 | 27 | 35 | 38 | 324 | 312 | 104 | 176 | 55 | 26 | 30 |
| 2 | 21 | 72 | 26 | 67 | 34 | 243 | 300 | 152 | 156 | 53 | 25 | 26 |
| 3 | 25 | 50 | 25 | 66 | 34 | 312 | 248 | 324 | 150 | 52 | 24 | 28 |
| 4 | 20 | 42 | 25 | 58 | 32 | 245 | 199 | 410 | 159 | 52 | 23 | 28 |
| 5 | 20 | 37 | 23 | 55 | 32 | 208 | 250 | 365 | 146 | 51 | 22 | 25 |
| 6 | 19 | 34 | 23 | 48 | 31 | 218 | 240 | 272 | 135 | 49 | 22 | 23 |
| 7 | 18 | 31 | 23 | 44 | 31 | 365 | 237 | 218 | 127 | 47 | 23 | 21 |
| 8 | 18 | 30 | 35 | 43 | 30 | 492 | 261 | 186 | 118 | 46 | 23 | 20 |
| 9 | 18 | 29 | 49 | 55 | 30 | 526 | 225 | 171 | 114 | 45 | 22 | 20 |
| 10 | 18 | 28 | 34 | 41 | 30 | 365 | 197 | 312 | 109 | 45 | 21 | 19 |
| 11 | 18 | 27 | 35 | 38 | 30 | 294 | 178 | 324 | 102 | 43 | 20 | 19 |
| 12 | 18 | 26 | 33 | 42 | 29 | 336 | 165 | 240 | 99 | 43 | 20 | 18 |
| 13 | 18 | 25 | 31 | 130 | 30 | 280 | 167 | 197 | 95 | 43 | 19 | 18 |
| 14 | 17 | 32 | 30 | 122 | 29 | 223 | 154 | 178 | 92 | 41 | 20 | 18 |
| 15 | 16 | 86 | 29 | 85 | 28 | 190 | 144 | 213 | 86 | 39 | 20 | 18 |
| 16 | 16 | 95 | 28 | 71 | 27 | 169 | 139 | 294 | 84 | 38 | 18 | 18 |
| 17 | 16 | 66 | 28 | 63 | 27 | 157 | 127 | 611 | 81 | 37 | 18 | 19 |
| 18 | 16 | 68 | 29 | 57 | 26 | 178 | 118 | 492 | 78 | 38 | 17 | 23 |
| 19 | 15 | 56 | 26 | 53 | 25 | 272 | 114 | 339 | 77 | 38 | 18 | 32 |
| 20 | 16 | 49 | 25 | 50 | 28 | 266 | 109 | 269 | 76 | 36 | 18 | 44 |
| 21 | 16 | 43 | 24 | 47 | 34 | 211 | 104 | 232 | 76 | 34 | 19 | 43 |
| 22 | 16 | 40 | 24 | 44 | 71 | 213 | 99 | 206 | 71 | 34 | 20 | 34 |
| 23 | 16 | 37 | 30 | 43 | 71 | 232 | 96 | 228 | 68 | 33 | 18 | 52 |
| 24 | 31 | 35 | 28 | 41 | 64 | 220 | 93 | 218 | 66 | 34 | 48 | 112 |
| 25 | 114 | 35 | 31 | 39 | 65 | 202 | 95 | 190 | 64 | 34 | 34 | 80 |
| 26 | 63 | 33 | 57 | 38 | 102 | 180 | 92 | 206 | 62 | 33 | 41 | 60 |
| 27 | 38 | 30 | 68 | 36 | 169 | 286 | 85 | 223 | 59 | 31 | 31 | 46 |
| 28 | 30 | 30 | 53 | 35 | 496 | 274 | 82 | 245 | 58 | 30 | 36 | 70 |
| 29 | 30 | 29 | 45 | 34 | --- | 255 | 80 | 215 | 56 | 30 | 45 | 63 |
| 30 | 28 | 28 | 41 | 34 | --- | 237 | 85 | 188 | 56 | 29 | 56 | 66 |
| 31 | 45 | --- | 36 | 37 | --- | 223 | --- | 169 | --- | 28 | 38 | --- |
| TOTAL | 788 | 1337 | 1021 | 1651 | 1673 | 8196 | 4795 | 7991 | 2896 | 1241 | 805 | 1093 |
| MEAN | 25.4 | 44.6 | 32.9 | 53.3 | 59.8 | 264 | 160 | 258 | 96.5 | 40.0 | 26.0 | 36.4 |
| MAX | 114 | 114 | 68 | 130 | 496 | 526 | 312 | 611 | 176 | 55 | 56 | 112 |
| MIN | 15 | 25 | 23 | 34 | 25 | 157 | 80 | 104 | 56 | 28 | 17 | 18 |
| CFSM | .53 | .94 | .69 | 1.12 | 1.26 | 5.55 | 3.36 | 5.42 | 2.03 | .84 | .55 | .77 |
| IN. | .62 | 1.04 | .80 | 1.29 | 1.31 | 6.41 | 3.75 | 6.24 | 2.26 | .97 | .63 | .85 |
| AC-FT | 1560 | 2650 | 2030 | 3270 | 3320 | 16260 | 9510 | 15850 | 5740 | 2460 | 1600 | 2170 |
| CAL YR 1976 | TOTAL | 60306 | MEAN | 165 | MAX | 2850 | MIN | 15 | CFSM | 3.47 | IN | 47.13 |
| WTR YR 1977 | TOTAL | 33487 | MEAN | 91.7 | MAX | 611 | MIN | 15 | CFSM | 1.93 | IN | 26.17 |
| | | | | | | | | | AC-FT | 119600 | AC-FT | 66420 |

WILLAMETTE RIVER BASIN

297

14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR

LOCATION.--Lat 44°05'34", long 122°57'20", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.17 S., R.2 W., Lane County, Hydrologic Unit 17090004, on left bank 50 ft (15 m) downstream from bridge, 1.3 mi (2.1 km) northeast of Springfield, and at mile 1.59 (2.56 km).

DRAINAGE AREA.--177 mi² (458 km²).

PERIOD OF RECORD.--September 1935 to September 1952, October 1963 to current year. Prior to October 1935 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1939. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 442.47 ft (134.865 m) above mean sea level. Oct. 1, 1935, to Sept. 30, 1952, non-recording gage at same site and datum.

REMARKS.--Records good. Slight regulation at low flows by log ponds upstream. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--31 years, 538 ft³/s (15.24 m³/s), 41.28 in/yr (1,049 mm/yr), 389,800 acre-ft/yr (481 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Dec. 22, 1964, gage height, 22.60 ft (6.888 m); minimum, 8.2 ft³/s (0.23 m³/s) Sept. 9, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 22.9 ft (6.98 m), from floodmark, probably affected by backwater from McKenzie River, discharge, 9,200 ft³/s (261 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft³/s (36.8 m³/s) Mar. 9, gage height, 5.67 ft (1.728 m), no peak above base of 3,500 ft³/s (99.1 m³/s); minimum, 15 ft³/s (0.42 m³/s) Aug. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|------|------|----------|----------|--------|-----------|----------|--------------|------|------|------|
| 1 | 28 | 96 | 40 | 59 | 75 | 894 | 422 | 161 | 356 | 92 | 31 | 35 |
| 2 | 28 | 92 | 39 | 80 | 66 | 666 | 390 | 211 | 314 | 90 | 28 | 31 |
| 3 | 35 | 62 | 39 | 115 | 62 | 822 | 356 | 337 | 299 | 86 | 27 | 34 |
| 4 | 39 | 50 | 39 | 90 | 59 | 631 | 332 | 397 | 377 | 90 | 27 | 40 |
| 5 | 33 | 45 | 38 | 84 | 57 | 484 | 314 | 451 | 353 | 88 | 27 | 35 |
| 6 | 31 | 42 | 38 | 77 | 57 | 405 | 297 | 474 | 309 | 84 | 27 | 34 |
| 7 | 28 | 40 | 38 | 68 | 56 | 658 | 282 | 407 | 282 | 77 | 26 | 31 |
| 8 | 27 | 38 | 41 | 63 | 54 | 878 | 380 | 358 | 262 | 71 | 26 | 29 |
| 9 | 25 | 36 | 105 | 78 | 54 | 1200 | 380 | 309 | 248 | 70 | 25 | 27 |
| 10 | 27 | 36 | 80 | 68 | 53 | 1110 | 332 | 370 | 236 | 75 | 24 | 27 |
| 11 | 29 | 35 | 57 | 63 | 52 | 849 | 306 | 407 | 223 | 70 | 21 | 27 |
| 12 | 29 | 35 | 52 | 63 | 52 | 1030 | 284 | 360 | 218 | 63 | 20 | 26 |
| 13 | 27 | 34 | 48 | 121 | 52 | 926 | 292 | 319 | 208 | 66 | 18 | 24 |
| 14 | 27 | 45 | 45 | 218 | 54 | 746 | 273 | 292 | 197 | 62 | 17 | 23 |
| 15 | 24 | 84 | 43 | 152 | 53 | 618 | 260 | 319 | 186 | 57 | 20 | 24 |
| 16 | 24 | 128 | 42 | 124 | 52 | 519 | 253 | 474 | 177 | 54 | 20 | 26 |
| 17 | 23 | 88 | 42 | 107 | 49 | 454 | 236 | 647 | 168 | 53 | 18 | 27 |
| 18 | 23 | 98 | 41 | 96 | 48 | 446 | 223 | 713 | 161 | 52 | 16 | 28 |
| 19 | 23 | 86 | 41 | 90 | 48 | 459 | 214 | 592 | 157 | 54 | 16 | 39 |
| 20 | 21 | 68 | 39 | 84 | 47 | 434 | 208 | 497 | 157 | 50 | 16 | 62 |
| 21 | 24 | 60 | 38 | 78 | 66 | 392 | 202 | 436 | 161 | 47 | 19 | 60 |
| 22 | 23 | 54 | 36 | 73 | 216 | 363 | 194 | 392 | 147 | 45 | 23 | 43 |
| 23 | 24 | 50 | 40 | 68 | 227 | 385 | 189 | 392 | 138 | 42 | 24 | 42 |
| 24 | 28 | 48 | 44 | 66 | 232 | 454 | 179 | 382 | 128 | 41 | 86 | 128 |
| 25 | 112 | 48 | 43 | 63 | 241 | 417 | 179 | 329 | 119 | 41 | 63 | 80 |
| 26 | 96 | 47 | 82 | 62 | 282 | 377 | 194 | 405 | 117 | 42 | 52 | 66 |
| 27 | 52 | 43 | 105 | 59 | 314 | 419 | 173 | 429 | 110 | 42 | 48 | 50 |
| 28 | 41 | 41 | 86 | 59 | 853 | 454 | 164 | 490 | 103 | 40 | 40 | 70 |
| 29 | 38 | 41 | 75 | 57 | --- | 490 | 159 | 436 | 96 | 39 | 43 | 73 |
| 30 | 41 | 41 | 71 | 56 | --- | 469 | 157 | 390 | 96 | 36 | 44 | 60 |
| 31 | 44 | --- | 63 | 62 | --- | 434 | --- | 353 | --- | 32 | 41 | --- |
| TOTAL | 1074 | 1711 | 1630 | 2603 | 3531 | 18883 | 7824 | 12529 | 6103 | 1851 | 933 | 1301 |
| MEAN | 34.6 | 57.0 | 52.6 | 84.0 | 126 | 609 | 261 | 404 | 203 | 59.7 | 30.1 | 43.4 |
| MAX | 112 | 128 | 105 | 218 | 853 | 1200 | 422 | 713 | 377 | 92 | 86 | 128 |
| MIN | 21 | 34 | 36 | 56 | 47 | 363 | 157 | 161 | 96 | 32 | 16 | 23 |
| CFSM | .20 | .32 | .30 | .48 | .71 | 3.44 | 1.48 | 2.28 | 1.15 | .34 | .17 | .25 |
| IN. | .23 | .36 | .34 | .55 | .74 | 3.97 | 1.64 | 2.63 | 1.28 | .39 | .20 | .27 |
| AC-FT | 2130 | 3390 | 3230 | 5160 | 7000 | 37450 | 15520 | 24850 | 12110 | 3670 | 1850 | 2580 |
| CAL YR 1976 TOTAL | 142796 | | | MEAN 390 | MAX 7500 | MIN 21 | CFSM 2.20 | IN 30.01 | AC-FT 283200 | | | |
| WTR YR 1977 TOTAL | 59973 | | | MEAN 164 | MAX 1200 | MIN 16 | CFSM .93 | IN 12.60 | AC-FT 119000 | | | |

WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR

LOCATION.--Lat 44°16'14", long 123°10'21", in NW¼NE¼ sec.16, T.15 S., R.4 W., Linn County, Hydrologic Unit 17090003, on right bank 75 ft (23 m) north of intersection of First Street and Kesling Street in Harrisburg and at mile 161.0 (259.0 km).

DRAINAGE AREA.--3,420 mi² (8,860 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to current year. Gage-height records collected at same site in 1927-28, 1931, 1934, are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 288.39 ft (87.901 m) above mean sea level. Oct. 1 to Nov. 14, 1944, nonrecording gage at bridge 1,110 ft (338 m) upstream at different datum. Nov. 15, 1944, to Aug. 15, 1973, at site 1,100 ft (335 m) upstream at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good. Flow regulated by 8 reservoirs above station (see elsewhere in this report). Many small diversions above station for irrigation.

AVERAGE DISCHARGE.--33 years, 12,420 ft³/s (351.7 m³/s), 8,998,000 acre-ft/yr (11.1 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft³/s (5,950 m³/s) Dec. 29, 1945, gage height, 19.69 ft (6.002 m), from rating curve extended above 115,000 ft³/s (3,260 m³/s); minimum, 1,990 ft³/s (56.4 m³/s) Oct. 30, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 20.5 ft (6.25 m) was reached in December 1861, and 20.1 ft (6.13 m) in February 1890 (information from Corps of Engineers). Flood of Jan. 1, 1943, reached a stage of 19.1 ft (5.82 m) from National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,700 ft³/s (331 m³/s) May 18, gage height, 4.03 ft (1.228 m); minimum, 2,260 ft³/s (64.0 m³/s) Feb. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|--------|--------|------------|--------|-----------|----------|---------------|--------|--------|--------|--------|
| 1 | 7960 | 8470 | 4340 | 3500 | 3050 | 7280 | 5110 | 4040 | 6600 | 4120 | 4250 | 5000 |
| 2 | 7950 | 9050 | 4330 | 3630 | 2930 | 6110 | 5310 | 4570 | 6420 | 4270 | 4260 | 4900 |
| 3 | 7880 | 8510 | 4390 | 3960 | 2880 | 6240 | 5020 | 5880 | 6020 | 4410 | 4280 | 4710 |
| 4 | 7820 | 7770 | 4450 | 3910 | 2810 | 6220 | 4730 | 8120 | 5880 | 4470 | 4370 | 4740 |
| 5 | 7670 | 7460 | 4480 | 3870 | 2790 | 5350 | 4930 | 8720 | 6140 | 4450 | 4400 | 4730 |
| 6 | 7530 | 7080 | 4250 | 3710 | 2790 | 4930 | 5530 | 8580 | 5970 | 4340 | 4390 | 4720 |
| 7 | 7330 | 6920 | 4240 | 3630 | 2710 | 5400 | 5950 | 7760 | 5710 | 4240 | 4410 | 5040 |
| 8 | 7240 | 6880 | 4360 | 3680 | 2680 | 7190 | 6400 | 6880 | 5480 | 4170 | 4430 | 5290 |
| 9 | 7250 | 6790 | 4630 | 3680 | 2680 | 9590 | 6930 | 6210 | 5150 | 4140 | 4410 | 5490 |
| 10 | 7250 | 6820 | 4390 | 3700 | 2660 | 10500 | 6240 | 6330 | 4930 | 4180 | 4320 | 5550 |
| 11 | 7360 | 6910 | 4160 | 3690 | 2660 | 8010 | 5520 | 7980 | 4810 | 4160 | 4320 | 5550 |
| 12 | 7240 | 6850 | 4130 | 3730 | 2610 | 7730 | 5120 | 7710 | 4550 | 4120 | 4320 | 5520 |
| 13 | 6790 | 6550 | 3910 | 3850 | 2600 | 8020 | 5030 | 6910 | 4470 | 4130 | 4450 | 5580 |
| 14 | 5530 | 6510 | 3770 | 5060 | 2610 | 6880 | 5170 | 6280 | 4430 | 4110 | 4540 | 5620 |
| 15 | 6800 | 6690 | 3780 | 5020 | 2580 | 5990 | 4920 | 6160 | 4300 | 4130 | 4650 | 5540 |
| 16 | 7060 | 7260 | 3720 | 4840 | 2420 | 5430 | 4880 | 6740 | 4180 | 4350 | 5000 | 5380 |
| 17 | 7110 | 7280 | 3590 | 4380 | 2370 | 5030 | 4740 | 8500 | 4070 | 4520 | 5070 | 5390 |
| 18 | 7120 | 7750 | 3440 | 3800 | 2360 | 4720 | 4430 | 11400 | 3970 | 4520 | 5070 | 5560 |
| 19 | 7140 | 7380 | 3390 | 3700 | 2340 | 4780 | 4310 | 10800 | 3900 | 4440 | 5100 | 5790 |
| 20 | 7040 | 6910 | 3380 | 3650 | 2340 | 5060 | 4150 | 9020 | 3940 | 4430 | 5100 | 5870 |
| 21 | 7200 | 6770 | 3370 | 3610 | 2450 | 4800 | 4080 | 8200 | 3940 | 4520 | 5120 | 6000 |
| 22 | 7540 | 6850 | 3390 | 3530 | 2870 | 4550 | 3970 | 7420 | 3870 | 4590 | 5180 | 5780 |
| 23 | 7500 | 6690 | 3390 | 3450 | 3260 | 4680 | 3890 | 7390 | 3760 | 4600 | 5090 | 6440 |
| 24 | 7500 | 6380 | 3280 | 3420 | 3260 | 5000 | 3990 | 7900 | 3640 | 4610 | 5570 | 7160 |
| 25 | 8050 | 5720 | 3240 | 3340 | 3270 | 4970 | 4060 | 7670 | 3840 | 4590 | 5430 | 7150 |
| 26 | 8470 | 5280 | 3410 | 3100 | 3310 | 4680 | 4340 | 7310 | 4010 | 4460 | 5030 | 7040 |
| 27 | 7960 | 5100 | 3570 | 3050 | 3510 | 4680 | 4140 | 8210 | 3930 | 4330 | 4690 | 7050 |
| 28 | 7770 | 5140 | 3680 | 3020 | 5250 | 5530 | 4020 | 8250 | 3880 | 4310 | 4590 | 7940 |
| 29 | 7960 | 5170 | 3610 | 3010 | --- | 5510 | 3930 | 7790 | 3920 | 4270 | 4720 | 8290 |
| 30 | 8000 | 5020 | 3700 | 3000 | --- | 5370 | 3860 | 7240 | 4030 | 4250 | 5070 | 8450 |
| 31 | 8030 | --- | 3530 | 3010 | --- | 5100 | --- | 6930 | --- | 4270 | 5130 | --- |
| TOTAL | 231050 | 203960 | 119300 | 114530 | 80050 | 185330 | 144700 | 232900 | 139740 | 134500 | 146760 | 177270 |
| MEAN | 7453 | 6799 | 3848 | 3695 | 2859 | 5978 | 4823 | 7513 | 4658 | 4339 | 4734 | 5909 |
| MAX | 8470 | 9050 | 4630 | 5060 | 5250 | 10500 | 6930 | 11400 | 6600 | 4610 | 5570 | 8450 |
| MIN | 5530 | 5020 | 3240 | 3000 | 2340 | 4550 | 3860 | 4040 | 3640 | 4110 | 4250 | 4710 |
| AC-FT | 458300 | 404600 | 236600 | 227200 | 158800 | 367600 | 287000 | 462000 | 277200 | 266800 | 291100 | 351600 |
| CAL YR 1976 TOTAL | 3788050 | | | MEAN 10350 | | MAX 65700 | MIN 3240 | AC-FT 7514000 | | | | |
| WTR YR 1977 TOTAL | 1910090 | | | MEAN 5233 | | MAX 11400 | MIN 2340 | AC-FT 3789000 | | | | |

WILLAMETTE RIVER BASIN

299

14166000 WILLAMETTE RIVER AT HARRISBURG, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.0°C Aug. 12, 1973; minimum, 0.0°C Jan. 8, 9, 1973.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.0°C Aug. 3, 12; minimum recorded, 2.5°C Jan. 27.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-----------|------|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 16.5 | 15.0 | 14.5 | 14.0 | 8.0 | 6.5 | --- | --- | 6.5 | 6.0 | 8.0 | 7.0 |
| 2 | 16.0 | 14.5 | 14.0 | 14.0 | 7.5 | 6.5 | --- | --- | 7.0 | 6.0 | --- | 7.0 |
| 3 | 15.0 | 14.5 | 14.0 | 14.0 | 7.0 | 7.0 | --- | --- | 6.5 | 6.0 | --- | --- |
| 4 | 14.5 | 11.5 | 14.0 | 13.5 | 7.5 | 7.0 | --- | --- | 6.5 | 5.5 | --- | --- |
| 5 | 14.5 | 11.5 | 13.5 | 13.0 | 7.5 | 7.0 | --- | --- | 6.0 | 5.5 | --- | --- |
| 6 | 15.5 | 11.5 | 13.5 | 13.0 | 8.5 | 7.0 | --- | --- | 6.5 | 6.0 | --- | --- |
| 7 | 16.0 | 15.0 | 13.0 | 12.5 | 8.0 | 7.0 | --- | --- | 7.0 | 6.0 | 7.5 | --- |
| 8 | 16.0 | 15.0 | 13.5 | 13.0 | 7.0 | 6.5 | --- | --- | 7.5 | 6.5 | 8.0 | 6.5 |
| 9 | 15.5 | 15.0 | 13.5 | 13.0 | 6.5 | 6.5 | --- | --- | 8.0 | 6.5 | 8.5 | 7.0 |
| 10 | 16.0 | 15.0 | 13.0 | 12.5 | 6.5 | 6.5 | --- | --- | 8.5 | 7.5 | 8.5 | 8.0 |
| 11 | 16.5 | 15.5 | 13.0 | 12.5 | --- | --- | --- | --- | 9.0 | 8.0 | 8.5 | 7.0 |
| 12 | 16.0 | 15.0 | 12.5 | 12.0 | --- | --- | --- | --- | 9.5 | 8.5 | 8.0 | 6.5 |
| 13 | 16.0 | 15.0 | 12.0 | 11.5 | 7.0 | 6.5 | --- | --- | 9.5 | 8.5 | 8.5 | 7.0 |
| 14 | 16.0 | 14.0 | 12.5 | 12.0 | 7.0 | 6.5 | --- | --- | 9.5 | 8.5 | 9.0 | 7.5 |
| 15 | 14.5 | 13.5 | 13.0 | 12.5 | 7.5 | 6.5 | --- | --- | 9.5 | 8.0 | 9.0 | 8.0 |
| 16 | 14.5 | 13.5 | 13.5 | 13.0 | 7.0 | 6.5 | --- | --- | 10.0 | 8.5 | 8.5 | 8.0 |
| 17 | 14.0 | 13.0 | 13.5 | 13.0 | 7.0 | 6.5 | --- | --- | 10.5 | 9.0 | 9.0 | 8.0 |
| 18 | 14.0 | 13.0 | 13.0 | 12.0 | 7.5 | 7.0 | --- | --- | 10.0 | 8.5 | 9.5 | 8.0 |
| 19 | 14.0 | 13.0 | 12.0 | 11.5 | 7.0 | 6.5 | --- | --- | 9.5 | 8.0 | 9.5 | 8.5 |
| 20 | 14.0 | 13.0 | 11.5 | 11.0 | 6.5 | 6.0 | 7.0 | --- | 9.0 | 8.5 | 11.0 | 9.0 |
| 21 | 14.0 | 13.0 | 11.5 | 11.0 | 6.0 | 5.5 | 7.0 | 6.5 | 9.0 | 8.0 | 11.0 | --- |
| 22 | 14.5 | 13.5 | 11.5 | 11.0 | 5.5 | 5.5 | 7.0 | 6.0 | 8.5 | 7.5 | 10.0 | 9.5 |
| 23 | 14.0 | 13.0 | 11.5 | 10.5 | --- | 5.5 | 6.5 | 5.5 | 7.5 | 6.5 | 10.0 | 9.0 |
| 24 | 14.0 | 13.0 | 11.0 | 10.5 | --- | --- | 6.0 | 4.5 | 7.0 | 6.5 | 10.5 | 9.5 |
| 25 | 14.0 | 13.5 | 11.0 | 9.5 | --- | --- | 5.5 | 4.0 | 7.0 | 6.0 | 10.0 | 9.5 |
| 26 | 14.0 | 13.0 | 10.0 | 8.0 | --- | --- | 5.5 | 4.0 | 7.5 | 6.5 | 10.0 | 8.5 |
| 27 | 14.0 | 13.0 | 8.5 | 7.0 | --- | --- | 5.5 | 2.5 | 8.5 | 7.5 | 9.0 | 7.5 |
| 28 | 13.5 | 13.0 | 7.5 | 7.0 | --- | --- | 5.5 | 4.0 | 8.5 | 8.0 | 9.0 | 7.5 |
| 29 | 13.5 | 13.0 | 7.5 | 7.0 | --- | --- | 5.0 | 4.0 | --- | --- | 10.0 | 7.5 |
| 30 | 14.0 | 13.0 | 7.5 | 7.0 | --- | --- | 5.0 | 3.5 | --- | --- | 9.5 | 8.5 |
| 31 | 14.5 | 13.5 | --- | --- | --- | --- | 6.0 | 5.0 | --- | --- | --- | 8.0 |
| MONTH | 16.5 | 11.5 | 14.5 | 7.0 | 8.5 | 5.5 | 7.0 | 2.5 | 10.5 | 5.5 | 11.0 | 6.5 |
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 9.5 | 8.0 | 13.5 | 12.5 | 15.5 | 13.5 | 20.0 | 18.0 | 20.5 | 18.5 | 17.0 | 15.5 |
| 2 | 10.0 | --- | 13.0 | 11.5 | 14.5 | 13.0 | 18.5 | 17.0 | 20.5 | 18.5 | 16.5 | 16.0 |
| 3 | 11.0 | 8.5 | 13.0 | 12.0 | 14.0 | 13.0 | 17.0 | 16.0 | 21.0 | 18.5 | 17.0 | 16.0 |
| 4 | 12.5 | 10.0 | 11.5 | 10.0 | 14.5 | 12.5 | 16.0 | 14.5 | 20.0 | 18.5 | 17.5 | 16.5 |
| 5 | 13.5 | 11.0 | 10.5 | 9.5 | 17.0 | 13.5 | 16.0 | 14.5 | 20.0 | 18.0 | 17.5 | 16.5 |
| 6 | 13.5 | 11.5 | 11.5 | 9.0 | 18.5 | 15.5 | 17.0 | 14.0 | 20.0 | 18.0 | 17.5 | 15.5 |
| 7 | 13.5 | 11.5 | 12.0 | 10.0 | 19.0 | 16.0 | 18.5 | 15.5 | 20.0 | 18.0 | 17.5 | 16.0 |
| 8 | 12.5 | 11.0 | 13.0 | 10.0 | 17.5 | 15.0 | 19.0 | 16.5 | 20.0 | 18.0 | 16.5 | 15.5 |
| 9 | 11.0 | 10.0 | 14.5 | 11.5 | 17.5 | 14.5 | 18.0 | 16.0 | 20.0 | 18.0 | 16.5 | 15.0 |
| 10 | 11.0 | 9.0 | 13.5 | 11.0 | 17.5 | 15.0 | 17.5 | 14.5 | 20.5 | 18.0 | 16.5 | 15.0 |
| 11 | 12.0 | 10.0 | 12.0 | 10.0 | 16.5 | 15.0 | 19.0 | 16.0 | 20.5 | 18.5 | 16.5 | 15.5 |
| 12 | 12.5 | 10.5 | 12.5 | 10.0 | 16.5 | 14.0 | 18.5 | 16.5 | 21.0 | 19.0 | 17.0 | 15.5 |
| 13 | 12.0 | 11.0 | 13.5 | 11.0 | 17.5 | 14.5 | 17.5 | 15.0 | 20.5 | 18.5 | 17.5 | --- |
| 14 | 11.5 | 9.5 | 13.5 | 11.5 | 17.0 | 15.5 | 19.0 | 16.0 | 19.5 | 18.0 | 16.5 | 15.0 |
| 15 | 11.5 | 10.5 | 12.5 | 11.0 | 17.0 | 15.0 | 19.5 | 17.0 | 19.5 | 17.5 | 15.5 | 14.5 |
| 16 | 11.5 | 10.5 | 11.5 | 10.5 | 18.5 | 15.5 | 19.5 | 17.5 | 20.5 | 18.5 | 15.0 | 14.0 |
| 17 | 12.0 | 10.0 | 12.0 | 10.0 | 18.5 | 16.5 | 18.5 | 17.0 | 20.0 | 19.0 | 15.0 | 14.5 |
| 18 | 11.5 | 10.0 | 12.0 | 10.0 | 17.5 | 16.0 | 18.0 | 17.0 | 19.5 | 18.5 | 15.0 | 14.5 |
| 19 | 11.5 | 9.5 | 13.0 | 10.5 | 18.0 | 16.0 | 18.0 | 15.5 | 19.0 | 17.5 | 15.0 | 14.5 |
| 20 | 12.0 | 10.5 | 13.5 | 12.0 | 17.0 | 16.0 | 19.0 | 16.5 | 18.5 | 16.5 | 15.0 | 14.0 |
| 21 | 12.0 | 11.5 | 14.0 | 12.5 | 18.0 | 15.0 | 19.0 | 16.5 | 16.5 | 16.0 | 15.5 | 14.5 |
| 22 | 12.5 | 11.0 | 13.5 | 12.0 | 19.0 | 17.0 | 19.5 | 17.0 | 18.5 | 16.0 | 15.5 | 14.0 |
| 23 | 13.5 | 11.5 | 12.0 | 11.0 | 20.0 | 17.5 | 19.0 | 17.5 | 18.0 | 17.0 | 15.0 | 14.0 |
| 24 | 14.0 | 12.5 | 13.5 | 10.5 | 20.5 | 17.5 | 20.0 | 17.5 | 17.5 | 17.0 | 14.5 | 13.5 |
| 25 | 13.0 | 12.0 | 13.0 | 12.0 | 20.0 | 18.0 | 18.5 | 16.5 | 17.0 | 15.5 | 15.5 | 14.0 |
| 26 | 14.0 | 11.5 | 13.5 | 11.5 | 20.5 | 17.5 | 18.5 | 16.0 | 16.5 | 15.0 | 15.0 | 14.0 |
| 27 | 14.0 | 12.0 | 12.5 | 11.5 | 20.0 | 17.5 | 18.5 | 17.0 | 16.5 | 15.5 | 15.0 | 14.0 |
| 28 | 14.0 | 13.0 | 13.0 | 10.5 | 20.5 | 17.5 | 19.0 | 17.0 | 17.5 | 16.0 | 14.5 | 14.0 |
| 29 | 14.0 | 12.5 | 14.5 | 11.5 | 19.5 | 17.5 | 19.0 | 16.5 | 17.0 | 16.0 | 14.0 | 13.5 |
| 30 | 14.0 | 13.0 | 13.5 | 12.5 | 20.0 | 17.0 | 19.5 | 17.0 | 17.5 | 16.0 | 14.5 | 13.5 |
| 31 | --- | --- | 14.5 | 12.5 | --- | --- | 20.0 | 18.0 | 17.0 | 15.5 | --- | --- |
| MONTH | 14.0 | 8.0 | 14.5 | 9.0 | 20.5 | 12.5 | 20.0 | 14.0 | 21.0 | 15.0 | 17.5 | 13.5 |

WILLAMETTE RIVER BASIN

14166500 LONG TOM RIVER NEAR NOTI, OR

LOCATION.--Lat 44°03'00", long 123°25'30", in sec.33, T.17 S., R.6 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi (0.3 km) upstream from Southern Pacific Railroad bridge, 0.8 mi (1.3 km) downstream from Noti Creek, 1.3 mi (2.1 km) southeast of Noti, and at mile 37.4 (60.2 km).

DRAINAGE AREA.--89.3 mi² (231.3 km²).

PERIOD OF RECORD.--October 1935 to current year.

REVISED RECORDS.--WSP 1318: 1936(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 389.05 ft (118.582 m) above mean sea level (levels by U.S. Weather Bureau). Prior to Nov. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Records fair. Slight regulation caused by logpond above Noti. No diversion above station.

AVERAGE DISCHARGE.--42 years, 237 ft³/s (6.712 m³/s), 36.04 in/yr (915 mm/yr), 171,700 acre-ft/yr (212 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,990 ft³/s (198 m³/s) Dec. 22, 1955, gage height, 20.17 ft (6.148 m); minimum, 0.04 ft³/s (0.001 m³/s) Aug. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 862 ft³/s (24.4 m³/s) Mar. 8, gage height, 7.38 ft (2.249 m), no peak above base of 1,600 ft³/s (45.3 m³/s); minimum, 0.04 ft³/s (0.001 m³/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|------|------|------|-------|------|------|-------|--------|--------|-------|
| 1 | 10 | 52 | 18 | 24 | 20 | 470 | 98 | 53 | 45 | 9.1 | .60 | 9.1 |
| 2 | 11 | 48 | 18 | 28 | 20 | 272 | 92 | 60 | 51 | 9.4 | .48 | 8.2 |
| 3 | 13 | 31 | 18 | 36 | 18 | 208 | 83 | 70 | 34 | 8.9 | .36 | 8.2 |
| 4 | 14 | 25 | 18 | 34 | 17 | 172 | 80 | 86 | 44 | 9.1 | .28 | 8.6 |
| 5 | 14 | 20 | 18 | 32 | 17 | 142 | 77 | 94 | 51 | 9.4 | .22 | 8.6 |
| 6 | 13 | 18 | 18 | 26 | 16 | 119 | 72 | 86 | 40 | 9.7 | .16 | 8.6 |
| 7 | 13 | 18 | 19 | 25 | 17 | 362 | 65 | 77 | 35 | 9.1 | .12 | 7.8 |
| 8 | 12 | 18 | 21 | 22 | 17 | 753 | 69 | 92 | 30 | 8.0 | .09 | 6.8 |
| 9 | 12 | 17 | 49 | 20 | 16 | 749 | 69 | 83 | 28 | 7.7 | .07 | 6.5 |
| 10 | 12 | 18 | 36 | 22 | 17 | 553 | 63 | 79 | 26 | 7.7 | .05 | 5.3 |
| 11 | 14 | 19 | 27 | 23 | 18 | 350 | 60 | 71 | 28 | 8.0 | .05 | 4.8 |
| 12 | 14 | 18 | 28 | 25 | 20 | 327 | 58 | 59 | 25 | 7.7 | .05 | 4.6 |
| 13 | 14 | 18 | 23 | 36 | 20 | 337 | 57 | 54 | 24 | 7.5 | .04 | 4.4 |
| 14 | 13 | 21 | 21 | 45 | 18 | 278 | 54 | 50 | 21 | 6.9 | .05 | 3.7 |
| 15 | 13 | 35 | 20 | 35 | 18 | 224 | 51 | 49 | 21 | 6.7 | .25 | 4.1 |
| 16 | 13 | 53 | 20 | 30 | 18 | 183 | 51 | 49 | 20 | 6.5 | .51 | 5.6 |
| 17 | 13 | 48 | 20 | 28 | 18 | 155 | 49 | 49 | 18 | 6.5 | .77 | 6.5 |
| 18 | 13 | 49 | 20 | 27 | 20 | 137 | 45 | 44 | 17 | 6.0 | 1.5 | 8.6 |
| 19 | 13 | 46 | 19 | 25 | 17 | 127 | 46 | 42 | 18 | 6.2 | 1.7 | 20 |
| 20 | 12 | 40 | 19 | 24 | 17 | 115 | 46 | 40 | 18 | 6.5 | 1.9 | 29 |
| 21 | 12 | 34 | 19 | 23 | 27 | 104 | 46 | 36 | 18 | 5.4 | 1.7 | 31 |
| 22 | 13 | 28 | 18 | 22 | 95 | 92 | 45 | 35 | 19 | 5.1 | 2.2 | 16 |
| 23 | 13 | 25 | 19 | 21 | 115 | 87 | 43 | 35 | 17 | 4.9 | 2.7 | 13 |
| 24 | 16 | 23 | 20 | 20 | 256 | 111 | 42 | 35 | 20 | 4.7 | 7.1 | 19 |
| 25 | 43 | 21 | 20 | 19 | 215 | 112 | 41 | 33 | 15 | 4.4 | 14 | 20 |
| 26 | 41 | 21 | 27 | 18 | 172 | 100 | 45 | 35 | 14 | 3.4 | 15 | 16 |
| 27 | 24 | 20 | 44 | 18 | 147 | 105 | 44 | 40 | 12 | 2.4 | 14 | 13 |
| 28 | 19 | 19 | 39 | 17 | 363 | 128 | 41 | 53 | 11 | 2.0 | 11 | 13 |
| 29 | 18 | 19 | 30 | 18 | --- | 126 | 39 | 38 | 11 | 1.4 | 11 | 13 |
| 30 | 20 | 18 | 28 | 17 | --- | 115 | 44 | 34 | 10 | 1.1 | 13 | 12 |
| 31 | 20 | --- | 25 | 20 | --- | 104 | --- | 33 | --- | .95 | 11 | --- |
| TOTAL | 495 | 840 | 739 | 780 | 1749 | 7217 | 1715 | 1694 | 741 | 192.35 | 111.95 | 335.0 |
| MEAN | 16.0 | 28.0 | 23.8 | 25.2 | 62.5 | 233 | 57.2 | 54.6 | 24.7 | 6.20 | 3.61 | 11.2 |
| MAX | 43 | 53 | 49 | 45 | 363 | 753 | 98 | 94 | 51 | 9.7 | 15 | 31 |
| MIN | 10 | 17 | 18 | 17 | 16 | 87 | 39 | 33 | 10 | .95 | .04 | 3.7 |
| CFSM | .18 | .31 | .27 | .28 | .70 | 2.61 | .64 | .61 | .28 | .07 | .04 | .13 |
| IN. | .21 | .35 | .31 | .32 | .73 | 3.01 | .71 | .71 | .31 | .08 | .05 | .14 |
| AC-FT | 982 | 1670 | 1470 | 1550 | 3470 | 14310 | 3400 | 3360 | 1470 | 382 | 222 | 664 |
| CAL YR 1976 | TOTAL | 59630.70 | MEAN | 163 | MAX | 3600 | MIN | 8.3 | CFSM | 1.83 | IN | 24.84 |
| WTR YR 1977 | TOTAL | 16609.30 | MEAN | 45.5 | MAX | 753 | MIN | .04 | CFSM | .51 | IN | 6.92 |
| | | | | | | | | | AC-FT | 118300 | AC-FT | 32940 |

WILLAMETTE RIVER BASIN

301

14167000 COYOTE CREEK NEAR CROW, OR

LOCATION.--Lat 44°01'19", long 123°15'17", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.18 S., R.5 W., Lane County, Hydrologic Unit 17090003, on right bank 1.0 mi (1.6 km) downstream from Spencer Creek, 4.3 mi (6.9 km) northeast of Crow, and at mile 3.8 (6.1 km).

DRAINAGE AREA.--95.1 mi² (246.3 km²).

PERIOD OF RECORD.--July 1940 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 374.0 ft (114.00 m) above mean sea level (Corps of Engineers bench mark). Prior to Aug. 31, 1940, nonrecording gage near same site at different datums.

REMARKS.--Records fair. No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--37 years, 180 ft³/s (5.098 m³/s), 25.70 in/yr (653 mm/yr), 130,400 acre-ft/yr (161 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) Feb. 10, 1961, gage height, 14.43 ft (4.398 m), from rating curve extended above 4,700 ft³/s (133 m³/s); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 474 ft³/s (13.4 m³/s) Mar. 10, gage height, 5.37 ft (1.637 m), no peak above base of 1,600 ft³/s (45.3 m³/s); no flow Aug. 6 to Sept. 26, Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|----------|------|-------|-------|------|-------|------|--------|-------|------|-------|-------|-------|
| 1 | .07 | 1.9 | 1.9 | 5.0 | 2.5 | 160 | 35 | 19 | 15 | 2.1 | .02 | .00 | | |
| 2 | .05 | 2.5 | 1.9 | 4.7 | 3.1 | 107 | 33 | 23 | 15 | 3.1 | .02 | .00 | | |
| 3 | .07 | 4.7 | 1.9 | 5.7 | 3.1 | 72 | 30 | 28 | 13 | 1.2 | .01 | .00 | | |
| 4 | .07 | 4.7 | 1.9 | 7.2 | 3.4 | 56 | 27 | 54 | 17 | .32 | .01 | .00 | | |
| 5 | .06 | 3.4 | 1.9 | 6.4 | 3.4 | 44 | 25 | 55 | 20 | .20 | .01 | .00 | | |
| 6 | .10 | 2.5 | 1.9 | 5.3 | 3.1 | 38 | 24 | 62 | 17 | .09 | .00 | .00 | | |
| 7 | .10 | 3.7 | 1.9 | 4.7 | 3.1 | 67 | 23 | 52 | 13 | .63 | .00 | .00 | | |
| 8 | .10 | 2.5 | 2.3 | 4.0 | 2.8 | 184 | 27 | 84 | 10 | .78 | .00 | .00 | | |
| 9 | .10 | .63 | 3.4 | 3.4 | 2.8 | 354 | 32 | 62 | 8.1 | .78 | .00 | .00 | | |
| 10 | .10 | .95 | 4.0 | 2.8 | 2.8 | 388 | 27 | 60 | 7.2 | 1.4 | .00 | .00 | | |
| 11 | .10 | 2.8 | 4.7 | 3.1 | 2.8 | 216 | 23 | 48 | 12 | .63 | .00 | .00 | | |
| 12 | .10 | 8.5 | 4.4 | 3.7 | 3.1 | 237 | 22 | 40 | 12 | .26 | .00 | .00 | | |
| 13 | .10 | 8.1 | 4.0 | 4.4 | 2.8 | 225 | 20 | 34 | 11 | .20 | .00 | .00 | | |
| 14 | .10 | 7.2 | 3.4 | 5.3 | 2.8 | 154 | 19 | 30 | 11 | .18 | .00 | .00 | | |
| 15 | .10 | 6.4 | 3.1 | 5.3 | 2.8 | 108 | 17 | 29 | 10 | .09 | .00 | .00 | | |
| 16 | .10 | 5.7 | 2.8 | 5.0 | 2.8 | 80 | 17 | 30 | 10 | .08 | .00 | .00 | | |
| 17 | .10 | 5.7 | 2.8 | 4.7 | 2.8 | 61 | 16 | 35 | 10 | .06 | .00 | .00 | | |
| 18 | .10 | 5.3 | 2.8 | 4.0 | 2.5 | 53 | 15 | 31 | 8.1 | .04 | .00 | .00 | | |
| 19 | .10 | 5.0 | 2.8 | 4.0 | 2.3 | 48 | 13 | 27 | 3.1 | .03 | .00 | .00 | | |
| 20 | .10 | 4.7 | 2.8 | 3.7 | 2.3 | 43 | 13 | 23 | 2.3 | .04 | .00 | .00 | | |
| 21 | .10 | 4.7 | 2.5 | 3.7 | 4.4 | 39 | 13 | 22 | .63 | .06 | .00 | .00 | | |
| 22 | .10 | 3.7 | 2.5 | 3.4 | 2.3 | 35 | 13 | 20 | 14 | .63 | .00 | .00 | | |
| 23 | .10 | 3.7 | 2.5 | 3.1 | 3.6 | 36 | 12 | 19 | 6.4 | .16 | .00 | .00 | | |
| 24 | .10 | 3.1 | 2.5 | 3.1 | 4.3 | 48 | 11 | 20 | 6.4 | .08 | .00 | .00 | | |
| 25 | 1.9 | 2.8 | 2.8 | 2.8 | 4.3 | 39 | 9.0 | 19 | 6.4 | .26 | .00 | .00 | | |
| 26 | 10 | 2.8 | 2.8 | 2.8 | 3.3 | 33 | 6.8 | 20 | 6.0 | 2.5 | .00 | .00 | | |
| 27 | 9.0 | 3.7 | 3.4 | 2.5 | 2.9 | 33 | 10 | 20 | 5.0 | 4.7 | .00 | .02 | | |
| 28 | 5.7 | 2.5 | 4.7 | 2.3 | 5.6 | 45 | 10 | 20 | 5.0 | .63 | .00 | .00 | | |
| 29 | 3.4 | 2.1 | 5.0 | 2.3 | --- | 48 | 9.0 | 19 | 2.5 | .07 | .00 | .01 | | |
| 30 | 2.3 | 2.1 | 5.0 | 2.3 | --- | 42 | 10 | 16 | 1.4 | .04 | .00 | .01 | | |
| 31 | 2.5 | --- | 5.0 | 2.3 | --- | 38 | --- | 15 | --- | .03 | .00 | --- | | |
| TOTAL | 37.02 | 118.08 | 95.3 | 123.0 | 324.5 | 3131 | 561.8 | 1036 | 278.53 | 21.37 | .07 | .04 | | |
| MEAN | 1.19 | 3.94 | 3.07 | 3.97 | 11.6 | 101 | 18.7 | 33.4 | 9.28 | .69 | .002 | .001 | | |
| MAX | 10 | 8.5 | 5.0 | 7.2 | 5.6 | 388 | 35 | 84 | 20 | 4.7 | .02 | .02 | | |
| MIN | .05 | .63 | 1.9 | 2.3 | 2.3 | 33 | 6.8 | 15 | .63 | .03 | .00 | .00 | | |
| CFSM | .01 | .04 | .03 | .04 | .12 | 1.06 | .20 | .35 | .10 | .007 | .000 | .000 | | |
| IN. | .01 | .05 | .04 | .05 | .13 | 1.22 | .22 | .41 | .11 | .01 | .00 | .00 | | |
| AC-FT | 73 | 234 | 189 | 244 | 644 | 6210 | 1110 | 2050 | 552 | 42 | .1 | .08 | | |
| CAL YR 1976 | TOTAL | 42978.40 | MEAN | 117 | MAX | 3670 | MIN | .00 | CFSM | 1.23 | IN | 16.81 | AC-FT | 85250 |
| WTR YR 1977 | TOTAL | 5726.71 | MEAN | 15.7 | MAX | 388 | MIN | .00 | CFSM | .17 | IN | 2.24 | AC-FT | 11360 |

14168000 FERN RIDGE LAKE NEAR ELMIRA, OR

LOCATION.--Lat 44°07'15", long 123°18'00", near center of sec.4, T.17 S., R.5 W., Lane County, Hydrologic Unit 17090003, in control house at spillway section of dam across Long Tom River and Coyote Creek, 4.5 mi (7.2 km) northeast of Elmira, and at mile 25.7 (41.4 km).

DRAINAGE AREA.--252 mi² (653 km²), not including Amazon Creek basin (see REMARKS).

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1971, published as Fern Ridge Reservoir near Elmira.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earth-fill dam with concrete outlet and spillway, completed in 1941 by Corps of Engineers; storage began Nov. 13, 1941. Total capacity, 116,800 acre-ft (144 hm³) at elevation 375.1 ft (114.33 m), maximum pool elevation. Usable capacity, 101,100 acre-ft (125 hm³) between elevations 340.0 ft (103.63 m), sill of outlet gate, and 373.5 ft (113.84 m), normal maximum operating pool level. Reservoir used for flood control and improvement of navigation. Since November 1951, most of flow of Amazon Creek has been diverted in SE¼ sec.29, T.17 S., R.4 W., and discharged into Fern Ridge Reservoir; drainage area at point of diversion, 21.3 mi² (55.2 km²).

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 124,500 acre-ft (154 hm³) Dec. 27, 1955, elevation, 375.83 ft (114.553 m); minimum since first filling in 1942, 163 acre-ft (201,000 m³) Nov. 11, 1950, elevation, 344.00 ft (104.851 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 86,120 acre-ft (106 hm³) Oct. 1, elevation, 371.81 ft (113.328 m); minimum, 5,190 acre-ft (6.40 hm³) Dec. 25, elevation, 351.59 ft (107.165 m).

Capacity table (elevation, in feet, and usable contents, in acre-feet)

| | | | | | | | |
|-----|-------|-----|--------|-----|--------|-----|---------|
| 349 | 2,270 | 356 | 12,440 | 364 | 37,490 | 372 | 87,720 |
| 350 | 3,250 | 358 | 17,020 | 366 | 46,940 | 374 | 105,800 |
| 352 | 5,730 | 360 | 22,670 | 368 | 58,320 | 376 | 126,300 |
| 354 | 8,760 | 362 | 29,460 | 370 | 71,900 | | |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|---------|---------|--------|--------|--------|---------|--------|--------|--------|--------|---------|--------|
| 1 | 371.80 | 361.16 | 352.38 | 351.76 | 352.39 | 357.22 | 365.42 | 366.32 | 367.36 | 367.03 | 365.89 | 363.25 |
| 2 | 371.78 | 360.62 | 352.33 | 351.82 | 352.41 | 357.73 | 365.48 | 366.37 | 367.37 | 367.00 | 365.84 | 363.21 |
| 3 | 371.76 | 360.03 | 352.27 | 351.82 | 352.43 | 358.06 | 365.53 | 366.43 | 367.41 | 366.97 | 365.80 | 363.19 |
| 4 | 371.61 | 359.41 | 352.21 | 351.82 | 352.45 | 358.30 | 365.58 | 366.51 | 367.44 | 366.94 | 365.70 | 363.14 |
| 5 | 371.36 | 358.76 | 352.16 | 351.81 | 352.47 | 358.49 | 365.63 | 366.60 | 367.47 | 366.90 | 365.59 | 363.10 |
| 6 | 371.09 | 358.09 | 352.12 | 351.82 | 352.48 | 358.74 | 365.67 | 366.66 | 367.48 | 366.86 | 365.44 | 363.06 |
| 7 | 370.78 | 357.37 | 352.06 | 351.82 | 352.50 | 359.22 | 365.70 | 366.72 | 367.48 | 366.84 | 365.32 | 363.01 |
| 8 | 370.41 | 356.58 | 352.09 | 351.77 | 352.51 | 360.14 | 365.77 | 366.80 | 367.46 | 366.81 | 365.19 | 362.95 |
| 9 | 370.05 | 355.85 | 352.08 | 351.75 | 352.53 | 361.19 | 365.81 | 366.86 | 367.46 | 366.80 | 365.00 | 362.92 |
| 10 | 369.70 | 355.31 | 352.09 | 351.75 | 352.54 | 361.98 | 365.84 | 366.90 | 367.46 | 366.75 | 364.90 | 362.89 |
| 11 | 369.32 | 354.84 | 352.08 | 351.79 | 352.56 | 362.43 | 365.88 | 366.94 | 367.44 | 366.72 | 364.81 | 362.84 |
| 12 | 368.92 | 354.41 | 352.06 | 351.80 | 352.58 | 362.95 | 365.91 | 366.98 | 367.44 | 366.70 | 364.69 | 362.80 |
| 13 | 368.51 | 354.12 | 352.04 | 351.91 | 352.59 | 363.35 | 365.92 | 367.00 | 367.42 | 366.65 | 364.57 | 362.76 |
| 14 | 368.14 | 353.80 | 352.01 | 351.98 | 352.60 | 363.63 | 365.95 | 367.03 | 367.41 | 366.62 | 364.44 | 362.71 |
| 15 | 367.82 | 353.65 | 351.90 | 352.04 | 352.63 | 363.85 | 365.98 | 367.05 | 367.40 | 366.59 | 364.32 | 362.67 |
| 16 | 367.51 | 353.40 | 351.87 | 352.08 | 352.67 | 364.01 | 365.99 | 367.09 | 367.38 | 366.55 | 364.20 | 362.63 |
| 17 | 367.16 | 353.17 | 351.82 | 352.12 | 352.70 | 364.14 | 366.01 | 367.11 | 367.37 | 366.51 | 364.07 | 362.59 |
| 18 | 366.85 | 352.93 | 351.79 | 352.15 | 352.73 | 364.26 | 366.03 | 367.13 | 367.35 | 366.50 | 363.94 | 362.59 |
| 19 | 366.50 | 352.82 | 351.75 | 352.17 | 352.77 | 364.36 | 366.04 | 367.15 | 367.34 | 366.45 | 363.82 | 362.60 |
| 20 | 366.18 | 352.83 | 351.71 | 352.19 | 352.82 | 364.45 | 366.06 | 367.17 | 367.34 | 366.42 | 363.70 | 362.58 |
| 21 | 365.81 | 352.81 | 351.67 | 352.21 | 353.04 | 364.52 | 366.09 | 367.17 | 367.32 | 366.36 | 363.58 | 362.56 |
| 22 | 365.44 | 352.80 | 351.67 | 352.22 | 353.45 | 364.59 | 366.11 | 367.19 | 367.30 | 366.32 | 363.50 | 362.54 |
| 23 | 365.05 | 352.77 | 351.65 | 352.23 | 354.00 | 364.71 | 366.12 | 367.20 | 367.28 | 366.28 | 363.47 | 362.56 |
| 24 | 364.74 | 352.74 | 351.61 | 352.24 | 354.49 | 364.77 | 366.15 | 367.21 | 367.26 | 366.24 | 363.51 | 362.54 |
| 25 | 364.35 | 352.69 | 351.63 | 352.24 | 355.06 | 364.88 | 366.18 | 367.24 | 367.23 | 366.20 | 363.50 | 362.52 |
| 26 | 363.95 | 352.61 | 351.66 | 352.25 | 355.37 | 364.96 | 366.19 | 367.25 | 367.20 | 366.17 | 363.47 | 362.49 |
| 27 | 363.52 | 352.58 | 351.67 | 352.27 | 355.75 | 365.04 | 366.20 | 367.28 | 367.17 | 366.12 | 363.44 | 362.49 |
| 28 | 363.06 | 352.53 | 351.70 | 352.29 | 356.43 | 365.13 | 366.21 | 367.28 | 367.13 | 366.07 | 363.40 | 362.48 |
| 29 | 362.63 | 352.48 | 351.73 | 352.30 | --- | 365.21 | 366.22 | 367.30 | 367.08 | 366.01 | 363.38 | 362.45 |
| 30 | 362.13 | 352.43 | 351.73 | 352.33 | --- | 365.29 | 366.28 | 367.31 | 367.06 | 365.98 | 363.32 | 362.42 |
| 31 | 361.65 | --- | 351.72 | 352.36 | --- | 365.37 | --- | 367.36 | --- | 365.93 | 363.29 | --- |
| MEAN | 367.41 | 354.85 | 351.91 | 352.04 | 353.18 | 362.68 | 365.93 | 366.99 | 367.34 | 366.53 | 364.36 | 362.75 |
| MAX | 371.80 | 361.16 | 352.38 | 352.36 | 356.43 | 365.37 | 366.28 | 367.36 | 367.48 | 367.03 | 365.89 | 363.25 |
| MIN | 361.65 | 352.43 | 351.61 | 351.75 | 352.39 | 357.22 | 365.42 | 366.32 | 367.06 | 365.93 | 363.29 | 362.42 |
| (†) | 28,180 | 6,350 | 5,360 | 6,250 | 13,340 | 43,780 | 48,410 | 54,450 | 52,710 | 46,580 | 34,490 | 31,040 |
| (‡) | -57,940 | -21,830 | -990 | +890 | +7,090 | +30,440 | +4,630 | +6,040 | -1,740 | -6,130 | -12,090 | -3,450 |

CAL YR 1976 MEAN 366.75 MAX 373.71 MIN 351.61 AC-FT‡ -1,890
WTR YR 1977 MEAN 361.38 MAX 371.80 MIN 351.61 AC-FT‡ -55,080

† Contents in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

14169001 LONG TOM RIVER NEAR ALVADORE, OR

LOCATION.--Lat 44°07'25", long 123°17'55", in SW¼NE¼ sec.4, T.17 S., R.5 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi (0.3 km) downstream from Fern Ridge Dam, 1.7 mi (2.7 km) west of Alvadore, and at mile 25.5 (41.0 km).

DRAINAGE AREA.--252 mi² (653 km²), not including Amazon Creek basin.

PERIOD OF RECORD.--August 1939 to current year. Prior to October 1943, published as "at Smithfield," and October 1943 to September 1959, as "below Fern Ridge Dam, near Smithfield."

REVISED RECORDS.--WSP 1248: 1940-41, 1948.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 332.00 ft (101.194 m) above mean sea level (levels by Corps of Engineers). Prior to Sept. 21, 1939, nonrecording gage and Sept. 21, 1939, to Sept. 30, 1943, water-stage recorder at site 2.5 mi (4.0 km) downstream at datum 11.09 ft (3.380 m) lower.

REMARKS.--Records fair. Flow regulated since 1941 by Fern Ridge Lake (see station 14168000). Several small diversions for irrigation above station. Records include diversion to Coyote Creek Channel. Point of diversion is 500 ft (152 m) upstream and point of return, 2.3 mi (3.7 km) downstream. Discharge not adjusted for storage or release from Fern Ridge Lake as evaporation from reservoir at times exceeds natural flow and diversions, and beginning in November 1951, most of flow of Amazon Creek has been diverted into Fern Ridge Lake.

AVERAGE DISCHARGE.--38 years, 541 ft³/s (15.32 m³/s), 392,000 acre-ft/yr (483 hm³/yr), adjusted for diversion to Coyote Creek since 1943.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s (326 m³/s) Jan. 1, 1943 gage height, 15.12 ft (4.609 m), site and datum then in use; minimum daily, 2 ft³/s (0.057 m³/s) Aug. 7, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,360 ft³/s (38.5 m³/s) Oct. 12; minimum daily, 3.4 ft³/s (0.096 m³/s) Apr. 22, 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|------|------|-------|-------|-------|-------|------|------|-------|------|
| 1 | 40 | 917 | 50 | 44 | 18 | 5.3 | 3.5 | 7.2 | 11 | 54 | 75 | 65 |
| 2 | 39 | 923 | 50 | 44 | 19 | 4.2 | 3.5 | 8.2 | 11 | 54 | 77 | 65 |
| 3 | 39 | 931 | 50 | 44 | 20 | 4.8 | 3.5 | 8.8 | 11 | 54 | 75 | 65 |
| 4 | 571 | 917 | 50 | 44 | 20 | 4.5 | 3.8 | 9.7 | 12 | 53 | 185 | 65 |
| 5 | 989 | 888 | 49 | 44 | 20 | 4.0 | 4.2 | 10 | 11 | 53 | 292 | 66 |
| 6 | 1040 | 874 | 48 | 44 | 19 | 4.1 | 4.2 | 10 | 12 | 51 | 292 | 66 |
| 7 | 1220 | 874 | 47 | 44 | 19 | 4.6 | 4.2 | 10 | 12 | 51 | 292 | 66 |
| 8 | 1310 | 874 | 45 | 44 | 18 | 5.4 | 3.5 | 10 | 11 | 51 | 266 | 66 |
| 9 | 1310 | 756 | 45 | 44 | 19 | 6.3 | 3.8 | 9.8 | 11 | 51 | 249 | 65 |
| 10 | 1320 | 511 | 45 | 44 | 19 | 5.8 | 3.8 | 9.5 | 14 | 51 | 249 | 65 |
| 11 | 1320 | 407 | 45 | 44 | 19 | 5.7 | 3.7 | 10 | 25 | 51 | 245 | 65 |
| 12 | 1330 | 333 | 45 | 34 | 19 | 6.2 | 3.7 | 10 | 32 | 50 | 245 | 64 |
| 13 | 1340 | 257 | 45 | 25 | 19 | 5.0 | 3.7 | 10 | 33 | 51 | 245 | 64 |
| 14 | 1190 | 253 | 45 | 24 | 19 | 4.2 | 3.7 | 10 | 33 | 51 | 245 | 64 |
| 15 | 965 | 226 | 45 | 24 | 11 | 4.0 | 3.7 | 9.7 | 36 | 51 | 245 | 64 |
| 16 | 923 | 206 | 44 | 24 | 5.6 | 4.1 | 3.7 | 9.7 | 38 | 51 | 245 | 64 |
| 17 | 930 | 203 | 44 | 25 | 5.4 | 3.7 | 4.1 | 10 | 38 | 51 | 241 | 64 |
| 18 | 916 | 199 | 44 | 28 | 5.4 | 3.7 | 4.1 | 11 | 38 | 51 | 241 | 62 |
| 19 | 930 | 90 | 44 | 28 | 5.7 | 3.6 | 4.1 | 11 | 38 | 58 | 241 | 63 |
| 20 | 930 | 55 | 44 | 28 | 6.9 | 3.6 | 4.1 | 11 | 38 | 65 | 241 | 63 |
| 21 | 930 | 54 | 44 | 26 | 6.8 | 3.9 | 4.1 | 11 | 38 | 73 | 241 | 65 |
| 22 | 923 | 52 | 44 | 25 | 7.9 | 4.3 | 3.4 | 11 | 38 | 77 | 143 | 64 |
| 23 | 923 | 52 | 44 | 25 | 6.6 | 3.9 | 3.7 | 11 | 39 | 77 | 71 | 65 |
| 24 | 930 | 50 | 44 | 25 | 6.5 | 3.7 | 3.4 | 11 | 48 | 77 | 67 | 65 |
| 25 | 924 | 49 | 44 | 26 | 6.3 | 3.7 | 3.4 | 11 | 52 | 69 | 66 | 63 |
| 26 | 916 | 49 | 44 | 23 | 6.3 | 3.7 | 4.0 | 11 | 51 | 75 | 66 | 65 |
| 27 | 923 | 49 | 44 | 18 | 5.4 | 3.7 | 5.2 | 11 | 51 | 79 | 63 | 65 |
| 28 | 923 | 49 | 44 | 17 | 5.5 | 3.6 | 5.8 | 11 | 51 | 75 | 63 | 63 |
| 29 | 916 | 49 | 44 | 17 | --- | 3.6 | 5.8 | 11 | 52 | 73 | 65 | 65 |
| 30 | 923 | 49 | 44 | 17 | --- | 3.6 | 5.8 | 11 | 52 | 75 | 65 | 65 |
| 31 | 923 | --- | 44 | 18 | --- | 3.6 | --- | 10 | --- | 75 | 65 | --- |
| TOTAL | 28806 | 11196 | 1408 | 961 | 358.3 | 134.1 | 121.2 | 315.6 | 937 | 1878 | 5461 | 1936 |
| MEAN | 929 | 373 | 45.4 | 31.0 | 12.8 | 4.33 | 4.04 | 10.2 | 31.2 | 60.6 | 176 | 64.5 |
| MAX | 1340 | 931 | 50 | 44 | 20 | 6.3 | 5.8 | 11 | 52 | 79 | 292 | 66 |
| MIN | 39 | 49 | 44 | 17 | 5.4 | 3.6 | 3.4 | 7.2 | 11 | 50 | 63 | 62 |
| AC-FT | 57140 | 22210 | 2790 | 1910 | 711 | 266 | 240 | 626 | 1860 | 3730 | 10830 | 3840 |

CAL YR 1976 TOTAL 136441.0 MEAN 373 MAX 4040 MIN 25 AC-FT 270600
WTR YR 1977 TOTAL 53512.2 MEAN 147 MAX 1340 MIN 3.4 AC-FT 106100

WILLAMETTE RIVER BASIN

14170000 LONG TOM RIVER AT MONROE, OR

LOCATION.--Lat 44°18'50", long 123°17'45", in NE¼ sec.33, T.14 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank in canalized river channel at Monroe, 110 ft (34 m) upstream from bridge on State Highway 99W, 0.1 mi (0.2 km) downstream from Shafer Creek, and at mile 6.8 (10.9 km).

DRAINAGE AREA.--391 mi² (1,013 km²).

PERIOD OF RECORD.--November 1920 to July 1921, October 1921 to April 1926, November 1926 to May 1927, October 1927 to current year. Prior to October 1930, published as "near Monroe."

REVISED RECORDS.--WSP 654: Drainage area. WSP 1248: 1923, 1927, 1928(M). WSP 1288: 1952.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 270.57 ft (82.470 m) above mean sea level. Prior to Nov. 24, 1944, nonrecording gage at various sites ranging from present site to 1.5 mi (2.4 km) downstream at different datums.

REMARKS.--Records fair. Flow regulated since 1941 by Fern Ridge Lake (see station 14168000). Several small diversions above station.

AVERAGE DISCHARGE.--54 years (water years 1922-25, 1928-77), 777 ft³/s (22.00 m³/s), 562,900 acre-ft/yr (694 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/s (547 m³/s) Jan. 2, 1943, gage height, 17.14 ft (5.224 m), site and datum then in use, from graph based on gage readings, includes some overflow from Willamette River near Junction City; no flow Oct. 20-22, 1944 (water filling pool at gage); minimum observed prior to regulation, 7 ft³/s (0.20 m³/s) Sept. 29, Oct. 1, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,380 ft³/s (39.1 m³/s) Oct. 12, 13, gage height, 5.94 ft (1.811 m); minimum, 13 ft³/s (0.37 m³/s) Feb. 17-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|--------------|------|------|------|------|------|------|
| 1 | 42 | 980 | 53 | 56 | 26 | 397 | 78 | 68 | 42 | 30 | 47 | 50 |
| 2 | 45 | 980 | 53 | 59 | 26 | 244 | 75 | 65 | 39 | 30 | 39 | 50 |
| 3 | 45 | 991 | 53 | 59 | 26 | 156 | 71 | 71 | 39 | 32 | 39 | 59 |
| 4 | 267 | 970 | 53 | 62 | 26 | 138 | 68 | 78 | 45 | 37 | 53 | 59 |
| 5 | 970 | 950 | 53 | 56 | 26 | 108 | 68 | 78 | 42 | 37 | 233 | 62 |
| 6 | 1030 | 929 | 53 | 56 | 26 | 96 | 65 | 75 | 37 | 30 | 244 | 62 |
| 7 | 1150 | 929 | 53 | 56 | 26 | 112 | 62 | 65 | 32 | 30 | 256 | 62 |
| 8 | 1310 | 919 | 56 | 53 | 28 | 703 | 65 | 59 | 32 | 30 | 244 | 59 |
| 9 | 1330 | 868 | 62 | 53 | 28 | 858 | 68 | 56 | 28 | 30 | 206 | 59 |
| 10 | 1330 | 595 | 65 | 56 | 28 | 657 | 65 | 53 | 24 | 35 | 196 | 53 |
| 11 | 1360 | 411 | 62 | 56 | 30 | 362 | 62 | 50 | 20 | 35 | 196 | 47 |
| 12 | 1340 | 390 | 53 | 59 | 30 | 291 | 59 | 47 | 30 | 32 | 196 | 50 |
| 13 | 1380 | 273 | 53 | 45 | 28 | 426 | 56 | 45 | 35 | 30 | 196 | 53 |
| 14 | 1310 | 267 | 53 | 45 | 30 | 273 | 56 | 47 | 32 | 28 | 196 | 53 |
| 15 | 1040 | 262 | 53 | 42 | 26 | 212 | 59 | 50 | 30 | 28 | 196 | 56 |
| 16 | 960 | 233 | 50 | 42 | 20 | 166 | 56 | 47 | 37 | 28 | 191 | 56 |
| 17 | 970 | 222 | 53 | 37 | 16 | 147 | 53 | 50 | 37 | 30 | 191 | 56 |
| 18 | 960 | 222 | 53 | 37 | 14 | 133 | 50 | 47 | 37 | 30 | 196 | 62 |
| 19 | 970 | 191 | 53 | 39 | 14 | 120 | 47 | 45 | 39 | 24 | 191 | 71 |
| 20 | 970 | 68 | 53 | 37 | 19 | 112 | 45 | 42 | 42 | 32 | 201 | 82 |
| 21 | 970 | 62 | 50 | 39 | 26 | 100 | 45 | 39 | 37 | 35 | 196 | 82 |
| 22 | 960 | 59 | 50 | 37 | 32 | 92 | 42 | 37 | 32 | 39 | 176 | 82 |
| 23 | 960 | 59 | 53 | 35 | 75 | 100 | 39 | 37 | 32 | 42 | 59 | 78 |
| 24 | 980 | 56 | 53 | 35 | 96 | 120 | 39 | 42 | 26 | 47 | 62 | 78 |
| 25 | 991 | 56 | 53 | 32 | 152 | 116 | 39 | 37 | 37 | 47 | 65 | 75 |
| 26 | 970 | 56 | 59 | 32 | 108 | 96 | 45 | 35 | 45 | 37 | 78 | 78 |
| 27 | 980 | 56 | 65 | 30 | 92 | 92 | 42 | 39 | 45 | 47 | 71 | 78 |
| 28 | 980 | 56 | 65 | 26 | 161 | 100 | 39 | 42 | 37 | 45 | 68 | 78 |
| 29 | 970 | 53 | 62 | 26 | --- | 96 | 35 | 39 | 30 | 39 | 65 | 75 |
| 30 | 970 | 53 | 62 | 26 | --- | 89 | 42 | 39 | 35 | 45 | 65 | 78 |
| 31 | 980 | --- | 59 | 26 | --- | 82 | --- | 39 | --- | 47 | 65 | --- |
| TOTAL | 29490 | 12216 | 1721 | 1349 | 1235 | 6794 | 1635 | 1563 | 1055 | 1088 | 4477 | 1943 |
| MEAN | 951 | 407 | 55.5 | 43.5 | 44.1 | 219 | 54.5 | 50.4 | 35.2 | 35.1 | 144 | 64.8 |
| MAX | 1380 | 991 | 65 | 62 | 161 | 858 | 78 | 78 | 45 | 47 | 256 | 82 |
| MIN | 42 | 53 | 50 | 26 | 14 | 82 | 35 | 35 | 20 | 24 | 39 | 47 |
| AC-FT | 58490 | 24230 | 3410 | 2680 | 2450 | 13480 | 3240 | 3100 | 2090 | 2160 | 8880 | 3850 |
| CAL YR 1976 | TOTAL | 199480 | MEAN 545 | MAX 5340 | MIN 22 | AC-FT 395700 | | | | | | |
| WTR YR 1977 | TOTAL | 64566 | MEAN 177 | MAX 1380 | MIN 14 | AC-FT 128100 | | | | | | |

WILLAMETTE RIVER BASIN

305

14170500 ROCK CREEK NEAR PHILOMATH, OR

LOCATION.--Lat 44°30'05", long 123°26'20", in SW¼NE¼ sec.29, T.12 S., R.6 W., Benton County, Hydrologic Unit 17090003, on left bank 600 ft (183 m) upstream from bridge on State Highway 34, 4.5 mi (7.2 km) southwest of Philomath, and at mile 0.4 (0.6 km).

DRAINAGE AREA.--14.6 mi² (37.8 km²).

PERIOD OF RECORD.--October 1945 to September 1952, water years 1953-60 (annual maximum), October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 349.08 ft (106.400 m) above mean sea level. Prior to October 1974, at site 0.2 mi (0.3 km) downstream at datum 5.08 ft (1.548 m) higher.

REMARKS.--Records excellent. Flow regulated by small storage reservoir operated by city of Corvallis, most low-water flow diverted to city of Corvallis water supply system.

AVERAGE DISCHARGE.--10 years, 53.2 ft³/s (1.507 m³/s), 49.48 in/yr (1,257 mm/yr), 38,540 acre-ft/yr (47.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,190 ft³/s (62.0 m³/s) Dec. 21, 1955, gage height, 6.82 ft (2.079 m), at site and datum then in use, from rating curve extended above 810 ft³/s (22.9 m³/s), on basis of slope-area measurement of peak flow; maximum gage height, 12.14 ft (3.700 m) Dec. 27, 1974; minimum discharge, 0.2 ft³/s (0.006 m³/s) Aug. 24, 1946, for several days in summers of 1949 and 1950, Sept. 1-3, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 24, 1964, reached a stage of 7.30 ft (2.225 m), discharge, 2,500 ft³/s (708 m³/s), at site 0.2 mi (0.3 km) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 500 ft³/s (14.2 m³/s) and maximum discharge, 528 ft³/s (15.0 m³/s) Mar. 7, gage height, 12.06 ft (3.676 m); minimum, 1.3 ft³/s (0.037 m³/s) Jan. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|-------|-------|------|-------|------|-----------|----------|-------------|-------|------|-------|
| 1 | 1.9 | 6.4 | 3.1 | 2.6 | 1.6 | 154 | 34 | 11 | 19 | 4.5 | 2.6 | 2.3 |
| 2 | 2.0 | 3.7 | 2.9 | 6.2 | 1.6 | 89 | 31 | 15 | 17 | 4.5 | 2.5 | 2.3 |
| 3 | 2.3 | 2.8 | 2.9 | 4.5 | 1.6 | 84 | 28 | 38 | 17 | 4.7 | 2.5 | 2.4 |
| 4 | 2.0 | 2.5 | 2.9 | 3.7 | 1.5 | 62 | 27 | 39 | 20 | 4.9 | 2.6 | 2.5 |
| 5 | 2.0 | 2.5 | 2.9 | 3.1 | 1.5 | 46 | 26 | 32 | 18 | 4.5 | 2.4 | 2.5 |
| 6 | 1.9 | 2.5 | 2.9 | 2.6 | 1.5 | 52 | 26 | 25 | 16 | 4.3 | 2.3 | 2.1 |
| 7 | 1.9 | 2.5 | 2.9 | 2.6 | 1.5 | 322 | 25 | 26 | 14 | 4.0 | 2.2 | 2.3 |
| 8 | 1.9 | 2.6 | 13 | 2.5 | 1.5 | 263 | 25 | 25 | 13 | 3.8 | 2.1 | 2.3 |
| 9 | 2.0 | 2.6 | 13 | 2.4 | 1.5 | 246 | 22 | 20 | 12 | 3.8 | 2.1 | 2.3 |
| 10 | 2.3 | 4.1 | 5.1 | 2.3 | 1.6 | 162 | 20 | 19 | 11 | 3.8 | 2.0 | 2.2 |
| 11 | 2.3 | 4.1 | 4.1 | 2.5 | 1.6 | 109 | 19 | 17 | 11 | 3.7 | 2.0 | 2.1 |
| 12 | 2.1 | 4.0 | 3.8 | 3.1 | 1.5 | 103 | 18 | 15 | 9.9 | 3.5 | 2.0 | 2.0 |
| 13 | 2.1 | 4.1 | 3.7 | 12 | 1.5 | 87 | 19 | 13 | 9.6 | 3.5 | 2.0 | 2.0 |
| 14 | 2.0 | 5.1 | 3.7 | 7.5 | 1.5 | 68 | 17 | 13 | 9.6 | 3.4 | 2.0 | 2.2 |
| 15 | 2.1 | 4.7 | 3.4 | 4.5 | 1.5 | 56 | 17 | 15 | 8.7 | 3.2 | 2.0 | 2.3 |
| 16 | 2.1 | 4.7 | 2.9 | 3.7 | 1.4 | 47 | 16 | 17 | 7.8 | 3.1 | 1.9 | 2.1 |
| 17 | 2.1 | 4.7 | 2.6 | 3.0 | 1.4 | 40 | 15 | 17 | 7.8 | 3.1 | 1.8 | 2.4 |
| 18 | 2.0 | 5.3 | 2.2 | 2.6 | 1.4 | 37 | 14 | 17 | 7.5 | 3.1 | 1.8 | 5.1 |
| 19 | 2.0 | 4.0 | 2.1 | 2.3 | 1.4 | 36 | 13 | 15 | 7.2 | 3.0 | 1.9 | 17 |
| 20 | 2.0 | 3.8 | 2.0 | 2.2 | 2.8 | 33 | 13 | 14 | 7.2 | 2.9 | 1.9 | 22 |
| 21 | 2.1 | 3.7 | 2.0 | 2.1 | 9.6 | 30 | 13 | 13 | 7.2 | 2.9 | 2.0 | 8.1 |
| 22 | 2.0 | 3.7 | 2.0 | 2.0 | 31 | 27 | 13 | 13 | 6.9 | 3.4 | 2.0 | 5.7 |
| 23 | 2.1 | 3.7 | 2.4 | 1.8 | 19 | 34 | 12 | 13 | 6.4 | 3.1 | 2.0 | 5.5 |
| 24 | 4.3 | 3.7 | 2.3 | 1.8 | 47 | 35 | 11 | 11 | 6.0 | 3.1 | 4.1 | 7.2 |
| 25 | 11 | 3.7 | 2.8 | 1.8 | 34 | 31 | 12 | 11 | 6.0 | 3.1 | 5.3 | 6.2 |
| 26 | 3.2 | 3.5 | 9.0 | 1.7 | 45 | 27 | 11 | 14 | 5.7 | 3.1 | 5.3 | 5.3 |
| 27 | 2.3 | 3.2 | 9.3 | 1.6 | 59 | 71 | 11 | 27 | 5.3 | 3.0 | 3.0 | 4.9 |
| 28 | 2.4 | 2.9 | 4.9 | 1.6 | 140 | 59 | 10 | 24 | 5.1 | 2.9 | 2.8 | 6.2 |
| 29 | 3.2 | 2.9 | 4.0 | 1.6 | --- | 49 | 9.9 | 19 | 4.7 | 2.8 | 3.4 | 4.9 |
| 30 | 3.0 | 2.9 | 3.4 | 1.6 | --- | 41 | 9.6 | 17 | 4.3 | 2.8 | 2.9 | 4.5 |
| 31 | 4.9 | --- | 2.6 | 1.6 | --- | 36 | --- | 19 | --- | 2.6 | 2.6 | --- |
| TOTAL | 81.5 | 110.6 | 126.8 | 95.1 | 416.0 | 2536 | 537.5 | 584 | 300.9 | 108.1 | 78.0 | 140.9 |
| MEAN | 2.63 | 3.69 | 4.09 | 3.07 | 14.9 | 81.8 | 17.9 | 18.8 | 10.0 | 3.49 | 2.52 | 4.70 |
| MAX | 11 | 6.4 | 13 | 12 | 140 | 322 | 34 | 39 | 20 | 4.9 | 5.3 | 22 |
| MIN | 1.9 | 2.5 | 2.0 | 1.6 | 1.4 | 27 | 9.6 | 11 | 4.3 | 2.6 | 1.8 | 2.0 |
| CFSM | .18 | .25 | .28 | .21 | 1.02 | 5.60 | 1.23 | 1.29 | .69 | .24 | .17 | .32 |
| IN. | .21 | .28 | .32 | .24 | 1.06 | 6.46 | 1.37 | 1.49 | .77 | .28 | .20 | .36 |
| AC-FT | 162 | 219 | 252 | 189 | 825 | 5030 | 1070 | 1160 | 597 | 214 | 155 | 279 |
| CAL YR 1976 TOTAL | 13243.4 | | | 36.2 | 533 | 1.9 | CFSM 2.48 | IN 33.74 | AC-FT 26270 | | | |
| WTR YR 1977 TOTAL | 5115.4 | | | 14.0 | 322 | 1.4 | CFSM .96 | IN 13.03 | AC-FT 10150 | | | |

WILLAMETTE RIVER BASIN

14171000 MARYS RIVER NEAR PHILOMATH, OR

LOCATION.--Lat 44°31'35", long 123°20'00", in NE¼SE¼ sec.18, T.12 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank 50 ft (15 m) downstream from bridge on Bellfountain Road, 0.6 mi (1.0 km) downstream from Newton Creek, 2.0 mi (3.2 km) southeast of Philomath, and at mile 9.4 (15.1 km).

DRAINAGE AREA.--159 mi² (412 km²), including drainage area of Evergreen Creek above Bellfountain Road, 1.4 mi (2.3 km) south of station.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1935: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 224.01 ft (68.278 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1961, nonrecording gage at bridge 50 ft (15 m) upstream at same datum.

REMARKS.--Records good. Records include flow of Evergreen Creek at Bellfountain Road crossing 1.4 mi (2.3 km) south of station, with which overflow from Marys River may at times be mingled. Slight regulation by small storage reservoir on Rock Creek from which municipal supply is diverted for city of Corvallis. Other small diversions above station for irrigation.

AVERAGE DISCHARGE.--37 years, 465 ft³/s (13.17 m³/s), 39.72 in/yr (1,009 mm/yr), 336,900 acre-ft/yr (415 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) Dec. 22, 1964; gage height, 20.72 ft (6.315 m); maximum gage height, 20.91 ft (6.373 m) Jan. 15, 1974; minimum discharge, 0.60 ft³/s (0.017 m³/s) Aug. 23, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,960 ft³/s (55.5 m³/s) Mar. 9, gage height, 12.96 ft (3.950 m), no peak above base of 3,200 ft³/s (90.6 m³/s); minimum, 3.1 ft³/s (0.088 m³/s) Aug. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|----------|------|------|----------|----------|---------|-----------|----------|--------------|------|-------|-------|
| 1 | 13 | 39 | 25 | 32 | 27 | 1250 | 354 | 93 | 149 | 35 | 9.9 | 18 |
| 2 | 13 | 34 | 24 | 37 | 28 | 841 | 336 | 123 | 143 | 35 | 7.4 | 14 |
| 3 | 14 | 37 | 25 | 37 | 28 | 629 | 301 | 155 | 125 | 34 | 7.0 | 12 |
| 4 | 14 | 32 | 25 | 38 | 27 | 494 | 283 | 220 | 150 | 33 | 7.0 | 13 |
| 5 | 15 | 30 | 25 | 35 | 26 | 383 | 267 | 283 | 159 | 32 | 7.0 | 13 |
| 6 | 15 | 28 | 25 | 29 | 25 | 323 | 254 | 262 | 134 | 31 | 7.2 | 11 |
| 7 | 15 | 27 | 25 | 29 | 24 | 961 | 236 | 209 | 121 | 30 | 8.8 | 11 |
| 8 | 14 | 27 | 28 | 29 | 24 | 1360 | 222 | 211 | 115 | 29 | 6.8 | 10 |
| 9 | 14 | 27 | 49 | 29 | 23 | 1760 | 214 | 175 | 106 | 28 | 4.7 | 9.0 |
| 10 | 15 | 27 | 44 | 32 | 23 | 1590 | 195 | 158 | 99 | 27 | 4.7 | 8.5 |
| 11 | 16 | 27 | 39 | 31 | 23 | 1060 | 176 | 151 | 91 | 26 | 5.0 | 8.1 |
| 12 | 16 | 27 | 34 | 34 | 23 | 892 | 161 | 142 | 84 | 25 | 4.2 | 8.5 |
| 13 | 15 | 27 | 31 | 49 | 24 | 832 | 149 | 125 | 78 | 24 | 4.3 | 6.7 |
| 14 | 16 | 31 | 29 | 82 | 23 | 662 | 143 | 120 | 76 | 22 | 4.8 | 6.1 |
| 15 | 15 | 32 | 25 | 73 | 24 | 536 | 129 | 121 | 75 | 22 | 3.9 | 6.5 |
| 16 | 15 | 35 | 22 | 59 | 23 | 441 | 119 | 143 | 69 | 20 | 3.8 | 7.0 |
| 17 | 16 | 36 | 20 | 51 | 22 | 375 | 110 | 132 | 66 | 23 | 4.0 | 9.0 |
| 18 | 16 | 41 | 19 | 45 | 20 | 329 | 101 | 131 | 67 | 23 | 4.0 | 14 |
| 19 | 16 | 37 | 18 | 41 | 21 | 299 | 102 | 123 | 71 | 18 | 4.0 | 30 |
| 20 | 17 | 36 | 18 | 39 | 22 | 267 | 97 | 112 | 67 | 18 | 4.3 | 83 |
| 21 | 16 | 33 | 18 | 37 | 33 | 231 | 91 | 106 | 61 | 17 | 5.0 | 58 |
| 22 | 16 | 31 | 18 | 35 | 94 | 211 | 89 | 103 | 60 | 15 | 5.9 | 41 |
| 23 | 16 | 29 | 18 | 34 | 159 | 216 | 85 | 99 | 54 | 15 | 6.5 | 34 |
| 24 | 18 | 29 | 18 | 32 | 233 | 243 | 83 | 96 | 51 | 17 | 11 | 36 |
| 25 | 35 | 29 | 19 | 31 | 246 | 222 | 83 | 93 | 46 | 14 | 17 | 45 |
| 26 | 38 | 29 | 32 | 29 | 251 | 197 | 86 | 97 | 46 | 14 | 28 | 38 |
| 27 | 30 | 28 | 65 | 28 | 243 | 265 | 88 | 121 | 41 | 14 | 25 | 33 |
| 28 | 27 | 29 | 66 | 28 | 590 | 421 | 88 | 140 | 38 | 12 | 21 | 33 |
| 29 | 25 | 28 | 48 | 27 | --- | 436 | 86 | 120 | 37 | 12 | 18 | 29 |
| 30 | 22 | 26 | 40 | 25 | --- | 405 | 86 | 119 | 37 | 12 | 18 | 29 |
| 31 | 29 | --- | 35 | 30 | --- | 369 | --- | 123 | --- | 13 | 18 | --- |
| TOTAL | 572 | 928 | 927 | 1167 | 2329 | 18500 | 4814 | 4406 | 2516 | 690 | 286.2 | 674.4 |
| MEAN | 18.5 | 30.9 | 29.9 | 37.6 | 83.2 | 597 | 160 | 142 | 83.9 | 22.3 | 9.23 | 22.5 |
| MAX | 38 | 41 | 66 | 82 | 590 | 1760 | 354 | 283 | 159 | 35 | 28 | 83 |
| MIN | 13 | 26 | 18 | 25 | 20 | 197 | 83 | 93 | 37 | 12 | 3.8 | 6.1 |
| CFSM | .12 | .19 | .19 | .24 | .52 | 3.76 | 1.01 | .89 | .53 | .14 | .06 | .14 |
| IN. | .13 | .22 | .22 | .27 | .54 | 4.33 | 1.13 | 1.03 | .59 | .16 | .07 | .16 |
| AC-FT | 1130 | 1840 | 1840 | 2310 | 4620 | 36690 | 9550 | 8740 | 4990 | 1370 | 568 | 1340 |
| CAL YR 1976 TOTAL | 121641.0 | | | MEAN 332 | MAX 4280 | MIN 13 | CFSM 2.09 | IN 28.46 | AC-FT 241300 | | | |
| WTR YR 1977 TOTAL | 37809.6 | | | MEAN 104 | MAX 1760 | MIN 3.8 | CFSM .65 | IN 8.85 | AC-FT 75000 | | | |

14171750 WILLAMETTE RIVER ABOVE CALAPOOIA RIVER, AT ALBANY, OR

LOCATION.--Lat 44°38'30", long 123°07'00", in NW¼ sec.1, T.11 S., R.4 W., Benton County, Hydrologic Unit 17090003, temperature recorder on left bank, 0.6 mi (1.0 km) upstream from gaging station at Albany, 0.4 mi (0.6 km) upstream from Calapooia River, and at mile 119.9 (192.9 km).

DRAINAGE AREA.--4,460 mi² (11,600 km²), approximately.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 3, 1977; minimum, 0.5°C Jan. 26, 1969, Dec. 11, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 3; minimum, 3.0°C Jan. 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|------|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 17.5 | 15.5 | 13.5 | 13.0 | 6.5 | 6.0 | 5.5 | 5.0 | 7.5 | 6.5 | 8.5 | 7.5 |
| 2 | 16.5 | 15.0 | 13.5 | 13.0 | 6.0 | 5.5 | 5.5 | 5.0 | 8.0 | 6.5 | 8.0 | 7.5 |
| 3 | 16.0 | 14.5 | 13.5 | 12.5 | 6.0 | 5.5 | 5.5 | 5.0 | 7.5 | 6.0 | 8.0 | 7.0 |
| 4 | 15.5 | 14.0 | 13.5 | 13.0 | 6.0 | 5.5 | 6.5 | 5.5 | 7.5 | 6.5 | 7.5 | 7.0 |
| 5 | 15.5 | 13.5 | 13.0 | 12.5 | 6.0 | 5.5 | 6.0 | 4.5 | 7.0 | 6.0 | 8.0 | 7.0 |
| 6 | 15.5 | 14.5 | 12.5 | 12.0 | 6.5 | 6.0 | 4.5 | 4.0 | 8.0 | 6.5 | 8.5 | 8.0 |
| 7 | 16.5 | 15.0 | 13.0 | 11.5 | 7.0 | 6.0 | 4.5 | 3.5 | 7.5 | 6.5 | 9.0 | 7.5 |
| 8 | 16.5 | 15.5 | 12.5 | 11.5 | 7.5 | 6.5 | 4.0 | 3.5 | 7.5 | 6.5 | 8.5 | 8.0 |
| 9 | 16.5 | 14.5 | 12.5 | 11.5 | 7.5 | 7.0 | 4.0 | 3.0 | 8.5 | 7.0 | 8.0 | 7.5 |
| 10 | 16.0 | 14.0 | 12.5 | 11.0 | 7.0 | 6.5 | 4.5 | 3.5 | 9.0 | 8.0 | 7.5 | 7.0 |
| 11 | 16.5 | 14.0 | 12.5 | 11.5 | 6.5 | 5.5 | 5.5 | 4.5 | 9.5 | 8.5 | 7.5 | 7.0 |
| 12 | 16.0 | 14.0 | 12.0 | 11.5 | 5.5 | 5.5 | 6.5 | 5.5 | 10.5 | 9.0 | 8.5 | 7.5 |
| 13 | 15.5 | 13.5 | 11.5 | 11.0 | 6.0 | 5.5 | 7.5 | 6.5 | 11.0 | 9.5 | 8.5 | 7.0 |
| 14 | 16.0 | 14.5 | 11.5 | 11.0 | 6.0 | 5.5 | 7.5 | 7.0 | 10.5 | 8.5 | 7.5 | 7.0 |
| 15 | 15.5 | 14.5 | 12.5 | 11.5 | 7.0 | 6.0 | 7.5 | 6.5 | 10.5 | 8.5 | 8.0 | 6.5 |
| 16 | 15.0 | 14.0 | 13.0 | 11.5 | 6.5 | 6.5 | 7.0 | 6.5 | 10.5 | 9.0 | 8.5 | 7.5 |
| 17 | 15.0 | 13.5 | 13.0 | 12.5 | 6.5 | 6.0 | 7.0 | 6.5 | 11.5 | 9.5 | 8.5 | 7.5 |
| 18 | 13.5 | 13.0 | 13.0 | 12.0 | 6.5 | 6.0 | 8.0 | 6.5 | 11.5 | 9.5 | 8.5 | 7.5 |
| 19 | 13.5 | 12.5 | 12.5 | 11.0 | 6.5 | 6.0 | 8.5 | 7.5 | 11.5 | 9.5 | 9.0 | 7.5 |
| 20 | 13.5 | 12.5 | 11.0 | 10.5 | 6.5 | 6.0 | 7.5 | 7.0 | 10.0 | 9.0 | 9.0 | 8.0 |
| 21 | 13.5 | 12.5 | 11.0 | 10.0 | 6.0 | 5.5 | 8.0 | 7.0 | 9.5 | 8.5 | 10.0 | 8.0 |
| 22 | 13.0 | 12.5 | 11.0 | 10.0 | 5.5 | 5.5 | 8.0 | 7.0 | 9.0 | 8.0 | 10.5 | 9.0 |
| 23 | 13.0 | 12.5 | 11.0 | 9.5 | 5.5 | 5.0 | 7.0 | 6.5 | 8.0 | 7.5 | 10.0 | 9.5 |
| 24 | 13.0 | 12.0 | 11.0 | 9.5 | 5.5 | 5.0 | 7.0 | 6.0 | 7.5 | 7.0 | 10.5 | 9.5 |
| 25 | 13.0 | 12.0 | 11.0 | 9.5 | 6.0 | 5.5 | 6.5 | 5.5 | 7.0 | 6.5 | 10.5 | 9.5 |
| 26 | 13.0 | 12.5 | 9.5 | 8.0 | 6.5 | 6.0 | 6.0 | 5.0 | 7.5 | 6.5 | 10.0 | 9.5 |
| 27 | 13.0 | 11.5 | 8.0 | 7.0 | 7.0 | 6.5 | 6.0 | 5.0 | 9.0 | 7.5 | 10.0 | 9.0 |
| 28 | 12.5 | 12.0 | 7.0 | 6.5 | 7.0 | 6.5 | 6.0 | 5.0 | 9.0 | 8.0 | 9.5 | 9.0 |
| 29 | 12.5 | 12.0 | 6.5 | 6.0 | 6.5 | 6.0 | 6.5 | 5.0 | --- | --- | 9.5 | 8.5 |
| 30 | 12.5 | 11.5 | 6.5 | 6.0 | 6.0 | 5.0 | 5.5 | 4.5 | --- | --- | 9.5 | 8.0 |
| 31 | 13.5 | 12.5 | --- | --- | 5.5 | 5.0 | 6.5 | 5.0 | --- | --- | 9.0 | 8.0 |
| MONTH | 17.5 | 11.5 | 13.5 | 6.0 | 7.5 | 5.0 | 8.5 | 3.0 | 11.5 | 6.0 | 10.5 | 6.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 9.5 | 8.0 | 15.0 | 13.0 | 16.0 | 14.0 | 21.5 | 18.0 | 22.5 | 19.5 | 18.0 | 16.5 |
| 2 | 9.0 | 8.0 | 14.5 | 13.0 | 16.0 | 14.5 | 20.5 | 18.5 | 23.0 | 21.0 | 17.5 | 16.5 |
| 3 | 10.5 | 7.5 | 14.5 | 13.0 | 15.5 | 14.5 | 18.5 | 17.5 | 23.5 | 20.5 | 17.0 | 16.5 |
| 4 | 12.0 | 9.5 | 14.0 | 12.0 | 15.5 | 13.5 | 17.5 | 16.0 | 23.0 | 20.0 | 18.5 | 17.0 |
| 5 | 13.0 | 11.0 | 12.0 | 11.5 | 17.5 | 14.5 | 17.5 | 15.5 | 22.0 | 19.5 | 19.0 | 17.5 |
| 6 | 13.5 | 12.0 | 12.0 | 10.0 | 19.0 | 16.5 | 18.0 | 15.0 | 22.0 | 20.0 | 18.5 | 17.0 |
| 7 | 14.0 | 12.5 | 12.5 | 11.0 | 20.0 | 17.5 | 19.5 | 16.0 | 22.5 | 20.0 | 18.5 | 16.5 |
| 8 | 13.5 | 12.5 | 13.5 | 12.0 | 19.5 | 18.0 | 20.5 | 17.5 | 22.5 | 19.5 | 18.0 | 16.5 |
| 9 | 12.0 | 11.0 | 14.5 | 12.0 | 19.0 | 16.5 | 19.0 | 18.0 | 22.5 | 19.5 | 17.5 | 15.5 |
| 10 | 11.0 | 9.5 | 14.5 | 13.5 | 19.0 | 16.5 | 20.0 | 17.0 | 22.5 | 19.0 | 17.5 | 16.0 |
| 11 | 12.0 | 9.5 | 13.5 | 12.0 | 18.0 | 17.0 | 20.0 | 17.5 | 23.0 | 19.5 | 18.0 | 16.0 |
| 12 | 13.0 | 10.5 | 13.0 | 11.5 | 18.0 | 15.5 | 19.0 | 18.0 | 23.0 | 21.0 | 18.0 | 16.5 |
| 13 | 13.0 | 11.5 | 13.5 | 12.0 | 18.5 | 16.5 | 19.5 | 17.0 | 23.0 | 20.0 | 18.0 | 16.5 |
| 14 | 13.0 | 11.0 | 14.0 | 12.0 | 18.5 | 17.0 | 20.5 | 17.5 | 22.0 | 20.0 | 17.5 | 16.5 |
| 15 | 12.5 | 11.5 | 14.0 | 12.5 | 17.5 | 15.5 | 21.0 | 18.5 | 21.5 | 19.0 | 16.5 | 14.0 |
| 16 | 13.0 | 11.5 | 13.5 | 12.0 | 18.0 | 15.5 | 21.5 | 19.0 | 22.0 | 19.0 | 16.0 | 14.0 |
| 17 | 12.5 | 10.5 | 13.0 | 12.0 | 19.0 | 17.0 | 21.0 | 19.0 | 22.5 | 20.5 | 16.0 | 14.5 |
| 18 | 12.5 | 11.0 | 12.5 | 12.0 | 18.5 | 17.0 | 20.0 | 18.5 | 21.5 | 20.0 | 16.0 | 14.5 |
| 19 | 12.5 | 10.5 | 13.5 | 11.5 | 18.0 | 16.5 | 20.5 | 18.0 | 21.0 | 19.0 | 15.5 | 14.5 |
| 20 | 12.5 | 11.0 | 14.5 | 13.0 | 17.5 | 16.5 | 21.0 | 18.0 | 20.0 | 18.5 | 15.5 | 14.0 |
| 21 | 12.5 | 11.5 | 15.0 | 13.5 | 18.0 | 16.0 | 21.0 | 18.5 | 19.0 | 17.5 | 16.0 | 14.5 |
| 22 | 13.5 | 11.5 | 14.5 | 13.0 | 19.5 | 17.0 | 21.5 | 19.0 | 19.0 | 17.0 | 15.5 | 13.5 |
| 23 | 14.5 | 12.5 | 14.0 | 12.0 | 20.0 | 17.5 | 21.5 | 19.5 | 18.5 | 17.5 | 15.5 | 14.5 |
| 24 | 15.0 | 13.0 | 14.0 | 12.0 | 21.0 | 18.0 | 22.0 | 19.5 | 18.5 | 17.5 | 15.0 | 14.0 |
| 25 | 14.5 | 13.0 | 14.5 | 13.0 | 21.5 | 19.0 | 20.5 | 19.0 | 18.0 | 16.5 | 15.5 | 13.5 |
| 26 | 15.0 | 13.0 | 14.5 | 13.0 | 21.5 | 18.5 | 20.0 | 18.0 | 17.5 | 16.0 | 15.5 | 14.5 |
| 27 | 15.0 | 13.0 | 14.0 | 13.0 | 20.5 | 18.5 | 20.5 | 18.0 | 17.5 | 16.0 | 15.0 | 14.5 |
| 28 | 14.5 | 13.5 | 13.5 | 12.0 | 21.5 | 18.5 | 20.5 | 18.5 | 18.0 | 16.5 | 15.5 | 14.5 |
| 29 | 15.5 | 13.0 | 14.5 | 12.0 | 21.0 | 19.0 | 21.0 | 18.5 | 18.0 | 17.0 | 15.0 | 13.5 |
| 30 | 16.0 | 14.0 | 14.5 | 14.0 | 21.0 | 18.5 | 21.5 | 19.0 | 18.5 | 16.5 | 15.5 | 14.0 |
| 31 | --- | --- | 14.5 | 13.5 | --- | --- | 22.0 | 19.5 | 18.5 | 16.5 | --- | --- |
| MONTH | 16.0 | 7.5 | 15.0 | 10.0 | 21.5 | 13.5 | 22.0 | 15.0 | 23.5 | 16.0 | 19.0 | 13.5 |

WILLAMETTE RIVER BASIN

14172000 CALAPOOIA RIVER AT HOLLEY, OR

LOCATION.--Lat 44°21'05", long 122°47'10", in SE¼ sec.15, T.14 S., R.1 W., Linn County, Hydrologic Unit 17090003, on right bank 200 ft (61 m) downstream from bridge on State Highway 228, 0.3 mi (0.5 km) southwest of Holley, 5.0 mi (8.0 km) upstream from Brush Creek, and at mile 45.4 (73.0 km).

DRAINAGE AREA.--105 mi² (272 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1935 to current year. Prior to October 1963, published as Calapooya River at Holley.

REVISED RECORDS.--WSP 1044: 1943. WSP 1218: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 527.58 ft (160.806 m) above mean sea level. Prior to Oct. 7, 1963, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good except those for periods of no gage-height record, which are fair. Slight regulation at times during low-water periods by small dam upstream. Diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years, 444 ft³/s (12.57 m³/s), 57.42 in/yr (1,458 mm/yr), 321,700 acre-ft/yr (397 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s (357 m³/s) Dec. 22, 1964, gage height, 14.60 ft (4.450 m); maximum gage height, 15.30 ft (4.663 m) Dec. 22, 1964 (backwater from debris); minimum discharge observed, 13 ft³/s (0.37 m³/s) Sept. 8, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,660 ft³/s (47.0 m³/s) Mar. 9, gage height, 4.16 ft (1.270 m), no peak above base of 3,400 ft³/s (96.3 m³/s); minimum, 24 ft³/s (0.68 m³/s) Oct. 18-22, Aug. 19, but may have been less during period of no gage-height record Aug. 18-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|-----------|----------|-------|--------|------|------|------|
| 1 | 29 | 189 | 50 | 64 | 56 | 686 | 531 | 280 | 410 | 81 | 41 | 48 |
| 2 | 30 | 147 | 49 | 84 | 52 | 499 | 509 | 360 | 354 | 78 | 40 | 41 |
| 3 | 36 | 96 | 48 | 88 | 50 | 594 | 448 | 700 | 330 | 78 | 39 | 40 |
| 4 | 33 | 76 | 47 | 80 | 48 | 473 | 468 | 660 | 375 | 81 | 38 | 44 |
| 5 | 31 | 66 | 46 | 72 | 47 | 405 | 559 | 600 | 346 | 78 | 37 | 40 |
| 6 | 29 | 59 | 45 | 62 | 45 | 443 | 600 | 560 | 314 | 78 | 37 | 38 |
| 7 | 28 | 54 | 45 | 65 | 43 | 914 | 642 | 500 | 281 | 73 | 36 | 35 |
| 8 | 27 | 52 | 58 | 56 | 42 | 1340 | 751 | 450 | 257 | 69 | 35 | 33 |
| 9 | 27 | 48 | 102 | 56 | 41 | 1430 | 660 | 420 | 234 | 67 | 34 | 32 |
| 10 | 28 | 46 | 73 | 70 | 43 | 959 | 580 | 699 | 219 | 67 | 33 | 32 |
| 11 | 28 | 45 | 63 | 65 | 50 | 731 | 500 | 718 | 204 | 64 | 32 | 32 |
| 12 | 27 | 43 | 60 | 70 | 48 | 847 | 430 | 570 | 192 | 62 | 31 | 31 |
| 13 | 27 | 43 | 58 | 150 | 52 | 699 | 480 | 468 | 178 | 63 | 30 | 30 |
| 14 | 26 | 54 | 54 | 160 | 53 | 570 | 430 | 414 | 170 | 60 | 28 | 29 |
| 15 | 26 | 107 | 52 | 130 | 49 | 478 | 390 | 463 | 159 | 59 | 29 | 30 |
| 16 | 26 | 172 | 50 | 110 | 44 | 419 | 420 | 576 | 149 | 57 | 33 | 30 |
| 17 | 25 | 128 | 49 | 100 | 45 | 375 | 380 | 999 | 142 | 54 | 29 | 30 |
| 18 | 25 | 147 | 49 | 90 | 44 | 383 | 350 | 952 | 135 | 57 | 25 | 33 |
| 19 | 24 | 116 | 47 | 85 | 44 | 433 | 325 | 712 | 131 | 58 | 24 | 44 |
| 20 | 24 | 98 | 46 | 80 | 45 | 468 | 300 | 594 | 126 | 53 | 25 | 60 |
| 21 | 24 | 86 | 44 | 76 | 67 | 405 | 275 | 531 | 126 | 50 | 27 | 50 |
| 22 | 25 | 78 | 44 | 72 | 142 | 424 | 250 | 468 | 118 | 49 | 29 | 43 |
| 23 | 25 | 72 | 48 | 70 | 135 | 526 | 250 | 478 | 109 | 48 | 32 | 78 |
| 24 | 31 | 67 | 49 | 66 | 140 | 499 | 260 | 468 | 104 | 49 | 84 | 200 |
| 25 | 167 | 67 | 48 | 64 | 126 | 433 | 280 | 405 | 100 | 53 | 57 | 100 |
| 26 | 120 | 63 | 81 | 60 | 164 | 383 | 260 | 499 | 96 | 50 | 55 | 90 |
| 27 | 66 | 58 | 126 | 58 | 225 | 606 | 250 | 531 | 92 | 48 | 53 | 76 |
| 28 | 52 | 57 | 96 | 54 | 914 | 606 | 240 | 594 | 89 | 46 | 42 | 105 |
| 29 | 48 | 54 | 85 | 52 | --- | 542 | 230 | 515 | 86 | 45 | 67 | 98 |
| 30 | 46 | 53 | 80 | 52 | --- | 488 | 220 | 443 | 84 | 44 | 78 | 88 |
| 31 | 47 | --- | 70 | 54 | --- | 463 | --- | 387 | --- | 43 | 69 | --- |
| TOTAL | 1207 | 2441 | 1862 | 2415 | 2854 | 18521 | 12268 | 17014 | 5710 | 1862 | 1249 | 1660 |
| MEAN | 38.9 | 81.4 | 60.1 | 77.9 | 102 | 597 | 409 | 549 | 190 | 60.1 | 40.3 | 55.3 |
| MAX | 167 | 189 | 126 | 160 | 914 | 1430 | 751 | 999 | 410 | 81 | 84 | 200 |
| MIN | 24 | 43 | 44 | 52 | 41 | 375 | 220 | 280 | 84 | 43 | 24 | 29 |
| CFSM | .37 | .78 | .57 | .74 | .97 | 5.69 | 3.90 | 5.23 | 1.81 | .57 | .38 | .53 |
| IN. | .43 | .86 | .66 | .86 | 1.01 | 6.56 | 4.35 | 6.03 | 2.02 | .66 | .44 | .59 |
| AC-FT | 2390 | 4840 | 3690 | 4790 | 5660 | 36740 | 24330 | 33750 | 11330 | 3690 | 2480 | 3290 |
| CAL YR 1976 | TOTAL | 122086 | MEAN 334 | MAX 5610 | MIN 24 | CFSM 3.18 | IN 43.25 | AC-FT | 242200 | | | |
| WTR YR 1977 | TOTAL | 69063 | MEAN 189 | MAX 1430 | MIN 24 | CFSM 1.80 | IN 24.47 | AC-FT | 137000 | | | |

NOTE.--No gage-height record Dec. 29 to Feb. 11, Apr. 9 to May 9.

14172000 CALAPOOIA RIVER AT HOLLEY, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.5°C July 17, Aug. 7, 1972, Aug. 12, 16, 1977; minimum, 0.0°C Dec. 19, 20, 1965, Dec. 7, 12-16, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.5°C Aug. 12, 16; minimum, 1.0°C Jan. 25.30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|------|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 19.5 | 14.5 | 11.5 | 11.0 | 4.0 | 2.5 | 4.0 | 3.0 | 6.0 | 3.5 | 7.0 | 6.0 |
| 2 | 18.0 | 15.5 | 12.0 | 11.0 | 4.0 | 2.5 | 5.5 | 4.0 | 4.5 | 3.0 | 6.5 | 6.0 |
| 3 | 17.0 | 14.0 | 12.5 | 11.0 | 4.5 | 2.5 | 5.5 | 4.5 | 4.5 | 2.0 | 7.5 | 6.0 |
| 4 | 16.0 | 11.5 | 11.0 | 10.0 | 4.5 | 3.5 | 5.5 | 4.5 | 5.0 | 2.0 | 8.5 | 6.0 |
| 5 | 16.5 | 11.0 | 10.5 | 9.5 | 5.0 | 4.5 | 5.0 | 2.0 | 5.0 | 2.5 | 8.5 | 5.5 |
| 6 | 16.5 | 11.5 | 11.5 | 9.5 | 6.0 | 4.5 | 2.0 | 1.5 | 6.5 | 4.0 | 8.0 | 6.0 |
| 7 | 18.0 | 12.0 | 11.0 | 8.5 | 5.5 | 4.0 | 2.0 | 1.5 | 6.5 | 3.5 | 8.0 | 7.0 |
| 8 | 16.0 | 13.0 | 12.0 | 9.5 | 6.5 | 5.0 | 2.0 | 1.5 | 6.0 | 3.5 | 8.0 | 7.0 |
| 9 | 15.5 | 12.0 | 10.5 | 8.5 | 7.0 | 5.0 | 2.0 | 1.5 | 7.0 | 3.5 | 7.5 | 6.5 |
| 10 | 15.0 | 12.5 | 10.5 | 8.0 | 5.5 | 4.0 | 2.0 | 1.5 | 8.0 | 5.0 | 8.5 | 6.0 |
| 11 | 17.5 | 13.5 | 10.5 | 8.0 | 4.5 | 3.5 | 2.5 | 1.5 | 8.0 | 5.5 | 9.0 | 6.0 |
| 12 | 16.5 | 12.0 | 9.5 | 6.5 | 4.5 | 3.5 | 5.5 | 2.0 | 10.5 | 6.5 | 8.0 | 6.0 |
| 13 | 16.0 | 11.0 | 8.0 | 5.5 | 4.5 | 3.0 | 6.5 | 5.5 | 11.0 | 8.5 | 9.0 | 5.5 |
| 14 | 15.5 | 10.5 | 9.5 | 7.0 | 5.0 | 3.5 | 5.5 | 4.5 | 10.5 | 7.0 | 8.0 | 6.0 |
| 15 | 15.0 | 10.0 | 11.0 | 9.5 | 6.5 | 4.5 | 6.5 | 4.5 | 9.5 | 5.5 | 9.0 | 6.0 |
| 16 | 14.5 | 9.0 | 11.5 | 10.5 | 6.5 | 5.0 | 6.0 | 4.5 | 9.5 | 5.5 | 8.5 | 5.5 |
| 17 | 13.0 | 8.0 | 11.5 | 10.5 | 6.0 | 4.5 | 6.5 | 5.0 | 11.0 | 7.0 | 8.5 | 6.5 |
| 18 | 12.5 | 7.5 | 11.0 | 10.5 | 6.5 | 5.0 | 6.5 | 5.0 | 10.0 | 5.5 | 8.5 | 7.0 |
| 19 | 12.0 | 7.0 | 10.5 | 9.0 | 5.0 | 4.5 | 7.0 | 5.0 | 9.0 | 4.5 | 9.0 | 7.5 |
| 20 | 11.5 | 6.5 | 9.0 | 8.0 | 4.5 | 3.5 | 5.5 | 4.0 | 8.0 | 6.0 | 9.0 | 6.5 |
| 21 | 11.5 | 6.5 | 9.5 | 7.5 | 3.5 | 2.5 | 6.5 | 4.5 | 8.0 | 5.5 | 10.5 | 6.5 |
| 22 | 10.5 | 8.0 | 9.5 | 9.0 | 3.5 | 3.0 | 7.0 | 4.5 | 7.5 | 6.0 | 10.5 | 7.0 |
| 23 | 10.5 | 7.0 | 9.0 | 8.5 | 5.5 | 3.5 | 4.5 | 3.0 | 6.0 | 4.5 | 9.5 | 8.0 |
| 24 | 9.5 | 7.5 | 8.5 | 7.5 | 4.5 | 4.0 | 4.0 | 2.0 | 7.0 | 5.5 | 9.0 | 7.0 |
| 25 | 11.0 | 9.0 | 9.5 | 7.5 | 6.0 | 4.0 | 3.5 | 1.0 | 6.5 | 5.5 | 10.0 | 7.5 |
| 26 | 10.5 | 8.5 | 7.5 | 4.5 | 7.5 | 6.0 | 2.5 | 1.0 | 7.5 | 6.0 | 10.0 | 8.0 |
| 27 | 10.5 | 7.5 | 4.5 | 2.5 | 7.5 | 7.0 | 3.0 | 1.0 | 9.5 | 7.0 | 9.5 | 7.0 |
| 28 | 10.0 | 6.5 | 4.0 | 2.0 | 7.0 | 5.5 | 3.5 | 1.0 | 8.5 | 6.0 | 8.0 | 6.5 |
| 29 | 10.0 | 9.0 | 4.0 | 2.0 | 6.0 | 5.0 | 3.5 | 1.0 | --- | --- | 9.5 | 6.5 |
| 30 | 12.0 | 9.5 | 4.0 | 2.0 | 6.5 | 5.5 | 3.0 | 1.0 | --- | --- | 10.5 | 6.5 |
| 31 | 13.5 | 10.0 | --- | --- | 5.5 | 3.5 | 5.0 | 2.5 | --- | --- | 8.0 | 7.5 |
| MONTH | 19.5 | 6.5 | 12.5 | 2.0 | 7.5 | 2.5 | 7.0 | 1.0 | 11.0 | 2.0 | 10.5 | 5.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 10.0 | 8.0 | 13.0 | 11.0 | 15.0 | 13.0 | 22.5 | 18.0 | 27.5 | 19.0 | 22.5 | 14.5 |
| 2 | 11.0 | 7.5 | 14.0 | 11.0 | 15.5 | 11.0 | 22.5 | 16.5 | 28.0 | 20.5 | 20.5 | 16.0 |
| 3 | 12.0 | 7.5 | 12.0 | 9.5 | 13.5 | 12.5 | 18.5 | 16.5 | 28.5 | 20.0 | 21.0 | 18.0 |
| 4 | 13.0 | 8.5 | 11.0 | 9.0 | 15.0 | 12.5 | 19.0 | 15.0 | 27.5 | 19.5 | 22.5 | 20.0 |
| 5 | 13.0 | 8.5 | 10.5 | 8.5 | 19.5 | 12.5 | 18.5 | 14.0 | 27.5 | 19.5 | 21.5 | 18.5 |
| 6 | 13.0 | 8.5 | 13.0 | 8.5 | 20.0 | 15.5 | 22.0 | 15.0 | 28.0 | 20.0 | 23.0 | 16.5 |
| 7 | 13.0 | 9.0 | 12.0 | 8.5 | 20.5 | 16.0 | 23.5 | 15.5 | 28.0 | 20.0 | 23.0 | 16.0 |
| 8 | 11.5 | 9.0 | 14.5 | 9.5 | 18.5 | 15.0 | 23.5 | 16.5 | 28.0 | 20.5 | 22.5 | 15.5 |
| 9 | 10.0 | 8.0 | 14.0 | 13.0 | 18.5 | 13.5 | 19.0 | 16.5 | 28.0 | 19.0 | 22.0 | 15.5 |
| 10 | 11.0 | 7.5 | 12.5 | 10.0 | 18.5 | 14.0 | 22.5 | 14.5 | 28.0 | 20.0 | 22.0 | 15.0 |
| 11 | 12.5 | 9.5 | 12.0 | 9.0 | 16.5 | 14.0 | 24.0 | 16.5 | 29.0 | 20.5 | 22.5 | 15.5 |
| 12 | 12.5 | 8.5 | 13.5 | 8.5 | 19.0 | 13.5 | 20.5 | 17.5 | 29.5 | 20.5 | 23.0 | 15.5 |
| 13 | 12.0 | 9.5 | 14.0 | 10.5 | 20.0 | 14.0 | 23.0 | 15.0 | 28.5 | 21.0 | 23.0 | 16.5 |
| 14 | 12.0 | 8.0 | 12.5 | 11.0 | 18.0 | 15.0 | 24.0 | 16.0 | 25.5 | 20.5 | 19.0 | 17.0 |
| 15 | 11.5 | 9.5 | 11.5 | 10.0 | 19.0 | 14.5 | 25.0 | 17.0 | 27.5 | 18.5 | 18.5 | 16.0 |
| 16 | 12.5 | 9.5 | 11.5 | 8.5 | 20.5 | 14.5 | 25.0 | 18.0 | 29.5 | 20.0 | 19.0 | 14.5 |
| 17 | 12.0 | 7.5 | 11.0 | 9.5 | 20.5 | 15.5 | 24.5 | 18.5 | 28.5 | 21.0 | 19.0 | 15.0 |
| 18 | 11.5 | 7.5 | 11.5 | 9.5 | 20.0 | 16.5 | 20.5 | 18.5 | 27.5 | 21.0 | 18.0 | 15.5 |
| 19 | 12.5 | 7.0 | 14.5 | 9.5 | 20.5 | 16.5 | 24.0 | 16.5 | 27.0 | 20.0 | 18.5 | 16.0 |
| 20 | 12.5 | 8.5 | 13.5 | 10.5 | 17.0 | 15.5 | 25.0 | 17.5 | 23.0 | 20.0 | 18.0 | 15.0 |
| 21 | 12.5 | 10.5 | 14.5 | 11.5 | 21.5 | 14.5 | 25.5 | 18.0 | 21.0 | 19.5 | 17.5 | 14.5 |
| 22 | 14.0 | 9.5 | 12.5 | 10.5 | 19.0 | 18.0 | 26.0 | 18.0 | 26.0 | 19.5 | 18.0 | 13.0 |
| 23 | 15.5 | 11.5 | 12.0 | 10.5 | 22.5 | 16.0 | 25.0 | 18.5 | 24.5 | 18.5 | 14.5 | 14.0 |
| 24 | 15.5 | 11.5 | 14.0 | 10.0 | 23.0 | 16.5 | 26.0 | 18.5 | 20.0 | 18.5 | 14.0 | 12.5 |
| 25 | 13.5 | 11.0 | 13.5 | 10.0 | 21.5 | 18.0 | 21.0 | 19.0 | 18.0 | 17.0 | 15.5 | 12.5 |
| 26 | 14.5 | 10.5 | 13.5 | 11.0 | 23.0 | 16.0 | 24.0 | 18.0 | 20.0 | 16.5 | 15.0 | 11.0 |
| 27 | 15.5 | 10.0 | 12.0 | 10.0 | 23.5 | 17.0 | 25.5 | 18.5 | 19.5 | 16.5 | 13.5 | 12.5 |
| 28 | 14.5 | 12.0 | 13.5 | 9.5 | 24.0 | 16.5 | 23.0 | 19.0 | 21.0 | 17.5 | 14.0 | 12.5 |
| 29 | 16.0 | 12.0 | 15.0 | 9.5 | 22.5 | 17.0 | 25.0 | 17.0 | 20.0 | 18.0 | 12.5 | 11.5 |
| 30 | 16.5 | 12.5 | 13.5 | 11.5 | 23.0 | 16.5 | 26.5 | 17.5 | 22.0 | 17.0 | 14.5 | 11.5 |
| 31 | --- | --- | 15.5 | 12.0 | --- | --- | 27.5 | 18.5 | 21.0 | 16.0 | --- | --- |
| MONTH | 16.5 | 7.0 | 15.5 | 8.5 | 24.0 | 11.0 | 27.5 | 14.0 | 29.5 | 16.0 | 23.0 | 11.0 |

WILLAMETTE RIVER BASIN

14173500 CALAPOOIA RIVER AT ALBANY, OR

LOCATION.--Lat 44°37'15", long 123°07'40", in NW¼ sec.13, T.11 S., R.4 W., Linn County, Hydrologic Unit 17090003, near right bank on downstream side of bridge on Riverside Drive at Albany, 0.6 mi (1.0 km) downstream from Oak Creek, and at mile 3.0 (4.8 km).

DRAINAGE AREA.--372 mi² (963 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1963, published as Calapooya River at Albany.

REVISED RECORDS.--WSP 1218: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 180.85 ft (55.123 m) above mean sea level. Prior to May 11, 1962, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records excellent. Higher flows are affected by backwater from Willamette River at times. Diurnal fluctuation caused by ponds at flour mills near Shedd. Diversions for irrigation above station.

AVERAGE DISCHARGE.--37 years, 912 ft³/s (25.83 m³/s), 33.29 in/yr (846 mm/yr), 660,700 acre-ft/yr (815 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 32,700 ft³/s (926 m³/s) Dec. 22, 1955, gage height, 22.12 ft (6.742 m); maximum gage height, 25.5 ft (7.77 m) Jan. 2, 1943, from graph based on gage readings (backwater from Willamette River); minimum discharge, 3.5 ft³/s (0.099 m³/s) Sept. 7, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,710 ft³/s (76.7 m³/s) Mar. 10, gage height, 9.84 ft (2.999 m); minimum, 8.8 ft³/s (0.25 m³/s) Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|-----------|--------|-----------|----------|--------------|-------|------|------|------|
| 1 | 35 | 54 | 72 | 85 | 80 | 1280 | 644 | 223 | 454 | 87 | 33 | 69 |
| 2 | 35 | 100 | 63 | 83 | 75 | 1100 | 687 | 338 | 462 | 106 | 51 | 68 |
| 3 | 24 | 174 | 55 | 85 | 79 | 856 | 634 | 488 | 401 | 68 | 28 | 53 |
| 4 | 17 | 114 | 51 | 117 | 70 | 870 | 558 | 791 | 422 | 81 | 28 | 38 |
| 5 | 33 | 100 | 52 | 108 | 69 | 683 | 573 | 835 | 562 | 88 | 29 | 36 |
| 6 | 32 | 87 | 48 | 106 | 54 | 577 | 637 | 859 | 484 | 82 | 29 | 40 |
| 7 | 43 | 71 | 69 | 95 | 62 | 788 | 672 | 761 | 408 | 84 | 16 | 52 |
| 8 | 33 | 61 | 58 | 82 | 72 | 1610 | 716 | 654 | 350 | 72 | 11 | 36 |
| 9 | 36 | 76 | 55 | 69 | 63 | 2130 | 835 | 562 | 309 | 68 | 34 | 38 |
| 10 | 27 | 60 | 75 | 75 | 59 | 2610 | 701 | 529 | 279 | 76 | 31 | 40 |
| 11 | 16 | 54 | 98 | 87 | 66 | 1860 | 573 | 791 | 266 | 58 | 25 | 20 |
| 12 | 33 | 56 | 79 | 96 | 55 | 1560 | 504 | 772 | 276 | 62 | 21 | 15 |
| 13 | 38 | 53 | 74 | 89 | 52 | 2080 | 469 | 634 | 242 | 63 | 25 | 47 |
| 14 | 36 | 43 | 82 | 108 | 53 | 1330 | 488 | 526 | 223 | 59 | 18 | 24 |
| 15 | 25 | 41 | 71 | 202 | 74 | 970 | 436 | 484 | 200 | 58 | 13 | 20 |
| 16 | 27 | 76 | 67 | 165 | 62 | 791 | 405 | 585 | 192 | 51 | 12 | 26 |
| 17 | 23 | 154 | 54 | 149 | 54 | 669 | 412 | 734 | 180 | 46 | 17 | 35 |
| 18 | 15 | 151 | 65 | 136 | 60 | 608 | 369 | 1140 | 169 | 47 | 16 | 19 |
| 19 | 34 | 151 | 43 | 124 | 59 | 612 | 335 | 1030 | 158 | 56 | 19 | 19 |
| 20 | 34 | 140 | 52 | 120 | 44 | 641 | 315 | 811 | 160 | 62 | 19 | 58 |
| 21 | 29 | 119 | 70 | 114 | 56 | 623 | 295 | 694 | 153 | 39 | 15 | 46 |
| 22 | 30 | 106 | 53 | 106 | 84 | 589 | 287 | 608 | 151 | 43 | 11 | 55 |
| 23 | 24 | 102 | 53 | 99 | 206 | 604 | 279 | 540 | 141 | 45 | 23 | 62 |
| 24 | 28 | 95 | 52 | 94 | 237 | 781 | 269 | 551 | 133 | 30 | 30 | 68 |
| 25 | 20 | 74 | 43 | 94 | 259 | 775 | 292 | 519 | 121 | 37 | 30 | 176 |
| 26 | 38 | 75 | 61 | 88 | 228 | 647 | 306 | 469 | 121 | 50 | 83 | 153 |
| 27 | 148 | 88 | 70 | 87 | 251 | 573 | 287 | 566 | 113 | 45 | 59 | 154 |
| 28 | 106 | 65 | 129 | 83 | 443 | 821 | 264 | 608 | 110 | 44 | 59 | 104 |
| 29 | 79 | 62 | 126 | 73 | --- | 866 | 244 | 637 | 107 | 36 | 54 | 111 |
| 30 | 61 | 72 | 111 | 66 | --- | 788 | 235 | 566 | 98 | 45 | 52 | 133 |
| 31 | 55 | --- | 96 | 70 | --- | 690 | --- | 492 | --- | 23 | 59 | --- |
| TOTAL | 1214 | 2674 | 2147 | 3155 | 3026 | 31382 | 13721 | 19797 | 7445 | 1811 | 950 | 1815 |
| MEAN | 39.2 | 89.1 | 69.3 | 102 | 108 | 1012 | 457 | 639 | 248 | 58.4 | 30.6 | 60.5 |
| MAX | 148 | 174 | 129 | 202 | 443 | 2610 | 835 | 1140 | 562 | 106 | 83 | 176 |
| MIN | 15 | 41 | 43 | 66 | 44 | 573 | 235 | 223 | 98 | 23 | 11 | 15 |
| CFSM | .11 | .24 | .19 | .27 | .29 | 2.72 | 1.23 | 1.72 | .67 | .16 | .08 | .16 |
| IN. | .12 | .27 | .21 | .32 | .30 | 3.14 | 1.37 | 1.98 | .74 | .18 | .09 | .18 |
| AC-FT | 2410 | 5300 | 4260 | 6260 | 6000 | 62250 | 27220 | 39270 | 14770 | 3590 | 1880 | 3600 |
| CAL YR 1976 | TOTAL | 225071 | MEAN 615 | MAX 11100 | MIN 14 | CFSM 1.65 | IN 22.51 | AC-FT 446400 | | | | |
| WTR YR 1977 | TOTAL | 89137 | MEAN 244 | MAX 2610 | MIN 11 | CFSM .66 | IN 8.91 | AC-FT 176800 | | | | |

14173500 CALAPOOIA RIVER AT ALBANY, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1964 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.5°C Aug. 16, 17, 19-21, 1967; minimum, 0.0°C sometime during period Jan. 7 to Feb. 18, 1969, Dec. 16-18, 1972, Jan. 6-12, 1974, Jan. 8-10, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 27.0°C Aug. 1; minimum, 0.0°C Jan. 8-10.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|------|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 20.5 | 18.5 | 12.0 | 11.5 | 3.0 | 2.5 | 4.0 | 3.5 | 4.0 | 3.0 | 7.5 | 6.5 |
| 2 | 19.5 | 18.0 | 12.5 | 12.0 | 2.5 | 2.0 | 4.0 | 3.5 | 4.0 | 3.0 | 6.5 | 6.5 |
| 3 | 18.0 | 16.5 | 13.0 | 12.0 | 2.5 | 2.0 | 4.0 | 3.5 | 4.0 | 2.5 | 7.0 | 6.0 |
| 4 | 17.5 | 15.5 | 12.5 | 12.0 | 2.0 | 2.0 | 4.0 | 3.5 | 4.0 | 3.0 | 7.0 | 6.0 |
| 5 | 17.0 | 15.0 | 12.0 | 11.5 | 3.0 | 2.0 | 4.0 | 2.5 | 4.0 | 3.5 | 7.5 | 6.0 |
| 6 | 17.5 | 15.0 | 12.0 | 11.0 | 3.5 | 2.5 | 2.5 | 1.5 | 5.0 | 4.0 | 7.0 | 6.5 |
| 7 | 17.5 | 15.5 | 12.0 | 11.0 | 4.0 | 3.0 | 1.5 | 1.0 | 5.0 | 4.0 | 7.5 | 7.0 |
| 8 | 18.0 | 16.0 | 12.0 | 11.5 | 4.5 | 4.0 | 1.0 | 0.0 | 5.5 | 4.0 | 7.5 | 7.0 |
| 9 | 17.0 | 16.0 | 11.5 | 11.0 | 5.0 | 4.0 | 0.5 | 0.0 | 6.0 | 4.5 | 7.0 | 6.5 |
| 10 | 17.0 | 16.0 | 11.0 | 11.0 | 4.5 | 4.0 | 0.5 | 0.0 | 7.0 | 5.5 | 6.5 | 6.0 |
| 11 | 18.0 | 15.5 | 11.0 | 10.5 | 4.5 | 4.0 | 1.5 | 0.5 | 7.5 | 6.5 | 7.5 | 6.0 |
| 12 | 17.0 | 15.0 | 10.5 | 9.5 | 4.5 | 4.0 | 3.0 | 1.5 | 9.0 | 7.5 | 8.0 | 7.0 |
| 13 | 16.0 | 14.5 | 9.5 | 9.0 | 4.5 | 4.0 | 4.5 | 3.0 | 9.0 | 8.0 | 7.0 | 6.0 |
| 14 | 15.5 | 14.0 | 10.0 | 9.5 | 4.5 | 4.0 | 4.5 | 3.5 | 8.5 | 7.5 | 6.5 | 6.0 |
| 15 | 14.5 | 13.5 | 11.0 | 10.0 | 5.0 | 4.5 | 5.5 | 4.5 | 8.5 | 7.0 | 7.5 | 6.0 |
| 16 | 15.0 | 13.0 | 12.5 | 11.0 | 5.0 | 4.5 | 5.0 | 5.0 | 9.0 | 7.5 | 8.0 | 6.5 |
| 17 | 14.0 | 12.5 | 12.0 | 11.5 | 5.0 | 5.0 | 5.5 | 4.5 | 10.0 | 8.5 | 8.0 | 7.0 |
| 18 | 14.0 | 11.5 | 12.5 | 11.5 | 5.0 | 4.5 | 6.0 | 5.0 | 9.5 | 8.0 | 8.0 | 7.5 |
| 19 | 13.0 | 11.0 | 11.5 | 10.5 | 5.0 | 5.0 | 6.5 | 5.5 | 9.5 | 8.0 | 9.0 | 7.5 |
| 20 | 12.5 | 10.5 | 10.5 | 10.0 | 5.0 | 5.0 | 5.5 | 5.0 | 9.0 | 8.0 | 8.5 | 7.5 |
| 21 | 12.0 | 10.0 | 10.0 | 9.5 | 5.0 | 4.5 | 6.0 | 5.0 | 8.5 | 7.5 | 9.5 | 7.5 |
| 22 | 11.0 | 10.0 | 9.5 | 8.5 | 4.5 | 4.5 | 5.5 | 4.5 | 8.0 | 7.0 | 10.0 | 8.0 |
| 23 | 10.5 | 9.5 | 8.5 | 8.0 | 5.0 | 4.0 | 5.0 | 4.0 | 7.5 | 6.5 | 10.0 | 9.5 |
| 24 | 10.5 | 10.0 | 8.5 | 8.0 | 4.5 | 4.0 | 4.0 | 3.0 | 6.5 | 6.0 | 10.0 | 8.5 |
| 25 | 11.5 | 10.0 | 9.0 | 8.0 | 4.5 | 4.0 | 3.5 | 2.5 | 6.0 | 5.5 | 9.5 | 8.5 |
| 26 | 12.0 | 10.5 | 8.0 | 6.5 | 5.5 | 4.5 | 3.0 | 2.0 | 6.5 | 5.5 | 10.0 | 9.0 |
| 27 | 11.0 | 10.5 | 6.5 | 5.5 | 5.5 | 5.5 | 2.5 | 1.5 | 7.5 | 6.5 | 10.0 | 9.0 |
| 28 | 11.0 | 10.5 | 5.5 | 4.5 | 5.5 | 5.5 | 2.5 | 1.5 | 7.5 | 7.5 | 9.0 | 8.0 |
| 29 | 11.0 | 10.5 | 4.5 | 3.5 | 5.5 | 5.5 | 2.0 | 1.0 | --- | --- | 8.5 | 7.5 |
| 30 | 11.0 | 10.5 | 4.0 | 3.0 | 5.5 | 5.0 | 1.5 | 1.0 | --- | --- | 9.0 | 7.5 |
| 31 | 12.0 | 10.5 | --- | --- | 4.5 | 4.0 | 3.0 | 1.5 | --- | --- | 9.0 | 8.0 |
| MONTH | 20.5 | 9.5 | 13.0 | 3.0 | 6.0 | 2.0 | 6.5 | 0.0 | 10.0 | 2.5 | 10.0 | 6.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 8.5 | 8.0 | 16.0 | 15.0 | 16.5 | 13.5 | 24.5 | 21.0 | 27.0 | 23.0 | 21.0 | 18.0 |
| 2 | 9.5 | 7.5 | 15.5 | 14.5 | 17.0 | 14.5 | 23.5 | 21.0 | --- | --- | 20.0 | 18.0 |
| 3 | 10.5 | 8.0 | 14.5 | 13.0 | 15.5 | 14.5 | 22.0 | 20.0 | --- | --- | 19.0 | 18.5 |
| 4 | 11.5 | 9.0 | 13.5 | 11.5 | 16.0 | 14.5 | 20.5 | 19.0 | --- | --- | 20.5 | 19.0 |
| 5 | 13.0 | 10.5 | 11.5 | 11.0 | 18.0 | 14.5 | 20.0 | 17.5 | --- | --- | 21.5 | 19.0 |
| 6 | 13.5 | 11.5 | 12.0 | 10.5 | 19.5 | 16.5 | --- | --- | --- | --- | 21.0 | 18.5 |
| 7 | 14.0 | 11.5 | 12.5 | 10.5 | 21.5 | 18.5 | --- | --- | --- | --- | 20.5 | 18.5 |
| 8 | 13.0 | 12.0 | 13.5 | 11.5 | 21.5 | 19.0 | --- | --- | --- | --- | 20.0 | 17.5 |
| 9 | 12.0 | 10.5 | 14.5 | 12.0 | 21.5 | 18.0 | --- | --- | --- | --- | 20.0 | 17.5 |
| 10 | 10.5 | 10.0 | 14.5 | 13.5 | 20.5 | 17.5 | --- | --- | --- | --- | 20.0 | 17.5 |
| 11 | 11.5 | 9.5 | 13.5 | 11.5 | 19.5 | 17.5 | --- | --- | --- | --- | 21.0 | 17.5 |
| 12 | 13.0 | 10.5 | 13.0 | 11.0 | 19.5 | 16.5 | --- | --- | --- | --- | 21.5 | 18.0 |
| 13 | 13.5 | 11.5 | 13.0 | 11.5 | 20.0 | 16.5 | --- | --- | --- | --- | 21.0 | 18.5 |
| 14 | 13.0 | 11.0 | 14.0 | 12.0 | 19.5 | 17.0 | --- | --- | --- | --- | 19.5 | 18.0 |
| 15 | 12.5 | 11.0 | 13.5 | 12.5 | 20.5 | 17.5 | --- | --- | --- | --- | 18.0 | 16.5 |
| 16 | 13.0 | 11.5 | 12.5 | 11.0 | 21.0 | 18.0 | --- | --- | --- | --- | 17.5 | 16.0 |
| 17 | 13.0 | 10.5 | 12.5 | 11.0 | 21.5 | 19.0 | --- | --- | --- | --- | 17.5 | 16.5 |
| 18 | 13.0 | 10.5 | 11.5 | 10.5 | 20.5 | 19.5 | --- | --- | --- | --- | 17.0 | 16.5 |
| 19 | 13.0 | 10.0 | 13.0 | 10.5 | 21.0 | 19.0 | --- | --- | 25.0 | 21.5 | 16.5 | 16.0 |
| 20 | 12.5 | 10.0 | 14.0 | 12.0 | 20.0 | 18.5 | 24.0 | --- | 24.0 | 21.5 | 16.5 | 15.5 |
| 21 | 12.5 | 11.0 | 15.0 | 13.5 | 20.5 | 18.0 | 24.5 | 20.5 | 22.0 | 20.5 | 17.5 | 15.5 |
| 22 | 13.5 | 11.0 | 14.5 | 13.0 | 21.5 | 19.5 | 25.0 | 21.5 | 23.0 | 20.0 | 16.5 | 15.5 |
| 23 | 15.0 | 12.0 | 13.5 | 12.5 | 23.0 | 19.0 | 25.0 | 22.0 | 22.0 | 20.0 | 16.0 | 15.0 |
| 24 | 15.5 | 13.0 | 14.5 | 11.5 | 23.5 | 20.0 | 26.0 | 22.0 | 21.0 | 18.5 | 15.5 | 14.5 |
| 25 | 15.0 | 14.0 | 14.5 | 12.0 | 24.5 | 21.0 | 24.0 | 22.0 | 20.0 | 18.0 | 16.0 | 14.5 |
| 26 | 16.0 | 13.5 | 15.5 | 13.0 | 24.5 | 20.5 | 24.5 | 21.0 | 20.0 | 17.5 | 15.5 | 14.5 |
| 27 | 16.0 | 13.0 | 14.5 | 13.0 | 24.0 | 20.5 | 24.0 | 21.0 | 19.5 | 18.0 | 15.0 | 14.5 |
| 28 | 15.5 | 14.0 | 14.0 | 12.5 | 25.0 | 20.5 | 23.5 | 21.0 | 20.0 | 18.5 | 15.5 | 14.5 |
| 29 | 16.5 | 14.0 | 14.5 | 12.0 | 24.0 | 20.5 | 24.0 | 20.0 | 19.5 | 18.5 | 15.0 | 13.5 |
| 30 | 17.0 | 15.0 | 14.0 | 13.0 | 24.5 | 20.0 | 25.0 | 21.0 | 20.5 | 18.0 | 15.0 | 13.5 |
| 31 | --- | --- | 14.5 | 13.5 | --- | --- | 26.5 | 22.0 | 21.0 | 18.0 | --- | --- |
| MONTH | 17.0 | 7.5 | 16.0 | 10.5 | 25.0 | 13.5 | 26.5 | 17.5 | 27.0 | 17.5 | 21.5 | 13.5 |

14174000 WILLAMETTE RIVER AT ALBANY, OR

LOCATION.--Lat 44°38'20", long 123°06'20", in SW¼ sec.6, T.11 S., R.3 W., Linn County, Hydrologic Unit 17090003, on right bank 5 ft (1.5 m) upstream from bridge on U.S. Highway 20 (Ellsworth Street) in Albany, 0.2 mi (0.3 km) downstream from Calapooia River, and at mile 119.31 (191.97 km).

DRAINAGE AREA.--4,840 mi² (12,500 km²), approximately.

PERIOD OF RECORD.--November 1878 to April 1888 (fragmentary), January to June 1892, November 1892 to September 1894, December 1894 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 694: Drainage area. WSP 904: 1939. WSP 964: 1881, 1890, 1894, 1897, 1901, 1903, 1908, 1910, 1916, 1923, 1927, 1932(M). WSP 984: 1916. WSP 1248: 1895, 1902, 1907, 1915(M), 1917(M), 1918-19, 1934(M). WSP 1318 (monthly and annual figures only): 1894, 1897, 1901-3, 1907-8, 1910, 1916, 1918-19, 1923, 1927.

GAGE.--Water-stage recorder. Datum of gage is 167.18 ft (50.956 m) above mean sea level. Prior to Sept. 27, 1906, nonrecording gage at site 0.2 mi (0.3 km) upstream at datum 5.00 ft (1.524 m) higher. Sept. 27, 1906, to Nov. 12, 1934, nonrecording gage at site 300 ft (91 m) upstream at datum 5.00 ft (1.524 m) higher. Nov. 14, 1934, to Sept. 30, 1962, at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records excellent. Flow regulated by nine reservoirs above station (see elsewhere in this report). Albany power canal diverts water from South Santiam River at Lebanon and discharges into Calapooia River near mouth; small diversions for irrigation and municipal water supply.

AVERAGE DISCHARGE.--83 years (water years 1894, 1896-77), 14,510 ft³/s (410.9 m³/s), 40.71 in/yr (1,034 mm/yr), 10,510,000 acre-ft/yr (13.0 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266,000 ft³/s (7,530 m³/s) Jan. 14, 1881, gage height, 37.8 ft (11.52 m), present datum; minimum, 1,840 ft³/s (52.1 m³/s) Sept. 1, 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached a stage of 41.0 ft (12.50 m), discharge, 340,000 ft³/s (9,630 m³/s), from rating curve extended above 220,000 ft³/s (6,230 m³/s). Flood of Feb. 4, 1890, reached a stage of 38.9 ft (11.86 m), discharge, 291,000 ft³/s (8,240 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,000 ft³/s (510 m³/s) Mar. 10, gage height, 8.64 ft (2.633 m); minimum, 2,570 ft³/s (72.8 m³/s) Feb. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|--------|--------|--------|--------|-----------|----------|-----------|----------|---------------|--------|--------|
| 1 | 7840 | 9190 | 4960 | 3730 | 3200 | 9370 | 6220 | 4470 | 7460 | 4080 | 4220 | 5270 |
| 2 | 8200 | 10200 | 4480 | 3760 | 3200 | 9320 | 6430 | 4860 | 7280 | 4170 | 4220 | 5150 |
| 3 | 8080 | 10100 | 4540 | 3980 | 3110 | 8080 | 6290 | 5710 | 6900 | 4330 | 4230 | 5020 |
| 4 | 7980 | 9390 | 4560 | 4170 | 3130 | 8340 | 5870 | 7710 | 6660 | 4450 | 4230 | 4960 |
| 5 | 8460 | 8720 | 4620 | 4110 | 3110 | 7280 | 5730 | 9370 | 6810 | 4500 | 4390 | 4960 |
| 6 | 8600 | 8440 | 4500 | 4010 | 3110 | 6480 | 6130 | 9730 | 6810 | 4400 | 4540 | 4970 |
| 7 | 8540 | 8080 | 4340 | 3840 | 3090 | 6750 | 6620 | 9250 | 6460 | 4300 | 4540 | 5040 |
| 8 | 8560 | 7960 | 4420 | 3800 | 3020 | 10000 | 6960 | 8360 | 6180 | 4170 | 4560 | 5320 |
| 9 | 8620 | 7920 | 4620 | 3810 | 3000 | 13600 | 7730 | 7470 | 5870 | 4140 | 4530 | 5560 |
| 10 | 8620 | 7650 | 4770 | 3830 | 2940 | 17400 | 7490 | 6900 | 5510 | 4170 | 4440 | 5700 |
| 11 | 8700 | 7610 | 4450 | 3870 | 2950 | 14500 | 6770 | 8000 | 5360 | 4190 | 4400 | 5680 |
| 12 | 8660 | 7440 | 4280 | 3900 | 2910 | 11900 | 6200 | 8880 | 5220 | 4130 | 4400 | 5660 |
| 13 | 8560 | 7210 | 4170 | 3960 | 2870 | 13000 | 5830 | 8140 | 4970 | 4100 | 4420 | 5700 |
| 14 | 7610 | 6960 | 4140 | 4470 | 2860 | 11200 | 5920 | 7320 | 4890 | 4070 | 4590 | 5730 |
| 15 | 7170 | 6980 | 4100 | 5320 | 2870 | 9210 | 5820 | 6900 | 4830 | 4010 | 4650 | 5750 |
| 16 | 8160 | 7460 | 4110 | 5140 | 2800 | 7790 | 5610 | 7050 | 4650 | 4140 | 4840 | 5590 |
| 17 | 8120 | 7570 | 4010 | 4960 | 2640 | 6960 | 5590 | 8060 | 4500 | 4390 | 5070 | 5560 |
| 18 | 8120 | 8180 | 3930 | 4310 | 2600 | 6360 | 5310 | 11100 | 4400 | 4480 | 5100 | 5650 |
| 19 | 8180 | 8060 | 3800 | 4010 | 2570 | 6130 | 5090 | 12200 | 4250 | 4450 | 5140 | 5970 |
| 20 | 8200 | 7530 | 3760 | 3890 | 2630 | 6150 | 4910 | 11000 | 4260 | 4360 | 5170 | 6170 |
| 21 | 8100 | 7210 | 3770 | 3830 | 2670 | 6170 | 4800 | 9480 | 4300 | 4390 | 5250 | 6200 |
| 22 | 8480 | 7090 | 3740 | 3760 | 3050 | 5800 | 4650 | 8620 | 4200 | 4440 | 5310 | 6100 |
| 23 | 8520 | 7150 | 3760 | 3680 | 3780 | 5730 | 4540 | 8020 | 4080 | 4510 | 5250 | 6310 |
| 24 | 8640 | 6830 | 3740 | 3650 | 3980 | 6100 | 4530 | 8300 | 3950 | 4510 | 5460 | 6940 |
| 25 | 8790 | 6460 | 3710 | 3640 | 4220 | 6310 | 4610 | 8460 | 3840 | 4580 | 5780 | 7550 |
| 26 | 9500 | 5850 | 3710 | 3600 | 4110 | 5990 | 4810 | 8020 | 4130 | 4540 | 5490 | 7380 |
| 27 | 9480 | 5560 | 3840 | 3400 | 4330 | 5710 | 4880 | 8400 | 4130 | 4360 | 5090 | 7280 |
| 28 | 9050 | 5420 | 4070 | 3200 | 5070 | 6460 | 4640 | 8900 | 4010 | 4310 | 4970 | 7650 |
| 29 | 8990 | 5460 | 3990 | 3100 | --- | 6940 | 4510 | 8850 | 3920 | 4280 | 4910 | 8140 |
| 30 | 9100 | 5440 | 3890 | 3100 | --- | 6840 | 4420 | 8240 | 3980 | 4220 | 5090 | 8400 |
| 31 | 9190 | --- | 3870 | 3100 | --- | 6520 | --- | 7860 | --- | 4230 | 5320 | --- |
| TOTAL | 262820 | 225120 | 128650 | 120930 | 89820 | 258390 | 168910 | 255630 | 153810 | 133400 | 149600 | 181380 |
| MEAN | 8478 | 7504 | 4150 | 3901 | 3208 | 8335 | 5630 | 8246 | 5127 | 4303 | 4826 | 6046 |
| MAX | 9500 | 10200 | 4960 | 5320 | 5070 | 17400 | 7730 | 12200 | 7460 | 4580 | 5780 | 8400 |
| MIN | 7170 | 5420 | 3710 | 3100 | 2570 | 5710 | 4420 | 4470 | 3840 | 4010 | 4220 | 4960 |
| CFSM | 1.75 | 1.55 | .86 | .81 | .66 | 1.72 | 1.16 | 1.70 | 1.06 | .89 | 1.00 | 1.25 |
| IN. | 2.02 | 1.73 | .99 | .93 | .69 | 1.99 | 1.30 | 1.96 | 1.18 | 1.03 | 1.15 | 1.39 |
| AC-FT | 521300 | 446500 | 255200 | 239900 | 178200 | 512500 | 335000 | 507000 | 305100 | 264600 | 296700 | 359800 |
| CAL YR 1976 TOTAL | 4522100 | | | 12360 | | MAX 80200 | MIN 3710 | CFSM 2.55 | IN 34.76 | AC-FT 8970000 | | |
| WTR YR 1977 TOTAL | 2128460 | | | 5831 | | MAX 17400 | MIN 2570 | CFSM 1.21 | IN 16.36 | AC-FT 4222000 | | |

WILLAMETTE RIVER BASIN

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14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°42'25", long 122°06'00", in SE¼NW¼ sec.17, T.10 S., R.6 E., Marion County, Hydrologic Unit 17090005, on right bank 0.5 mi (0.8 km) downstream from Boulder Creek, 3.0 mi (4.8 km) southeast of Detroit, and at mile 70.7 (113.8 km).

DRAINAGE AREA.--216 mi² (559 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1907 to October 1909, October 1928 to current year. Monthly discharge only January 1907, published in WSP 1318. Prior to October 1952, published as "at Detroit."

REVISED RECORDS.--WSP 814: Drainage area at former site. WSP 1248: 1931.

GAGE.--Water-stage recorder. Datum of gage is 1,590.07 ft (484.653 m) above mean sea level. See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--Water-discharge records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--51 years, 1,011 ft³/s (28.63 m³/s), 63.56 in/yr (1,614 mm/yr), 732,500 acre-ft/yr (903 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft³/s (756 m³/s) Dec. 22, 1964, gage height, 13.76 ft (4.194 m), temporary backwater from debris, from rating curve extended above 6,600 ft³/s (187 m³/s) on basis of slope-area measurement of peak flow; minimum, 250 ft³/s (7.08 m³/s) Sept. 13, 1909.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft³/s (45.0 m³/s) May 3, gage height, 5.41 ft (1.649 m), no peak above base of 3,700 ft³/s (105 m³/s); minimum, 321 ft³/s (9.09 m³/s) Sept. 12, 13, 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| 1 | 464 | 661 | 420 | 434 | 388 | 616 | 796 | 1130 | 990 | 469 | 366 | 370 |
| 2 | 474 | 581 | 420 | 444 | 383 | 547 | 768 | 1320 | 938 | 459 | 366 | 357 |
| 3 | 474 | 521 | 420 | 429 | 379 | 547 | 747 | 1500 | 896 | 454 | 362 | 366 |
| 4 | 464 | 490 | 415 | 424 | 370 | 502 | 782 | 1420 | 1120 | 454 | 362 | 343 |
| 5 | 459 | 474 | 415 | 410 | 370 | 496 | 896 | 1300 | 1110 | 444 | 362 | 374 |
| 6 | 454 | 464 | 415 | 406 | 370 | 508 | 1090 | 1160 | 1130 | 434 | 357 | 349 |
| 7 | 454 | 454 | 415 | 406 | 370 | 661 | 1310 | 1080 | 1110 | 429 | 353 | 341 |
| 8 | 449 | 449 | 444 | 401 | 370 | 964 | 1570 | 1010 | 1010 | 424 | 349 | 337 |
| 9 | 449 | 449 | 459 | 397 | 370 | 964 | 1420 | 999 | 913 | 424 | 349 | 333 |
| 10 | 449 | 439 | 434 | 406 | 374 | 803 | 1210 | 1270 | 848 | 420 | 349 | 329 |
| 11 | 449 | 439 | 429 | 410 | 388 | 720 | 1110 | 1230 | 803 | 420 | 353 | 329 |
| 12 | 444 | 434 | 424 | 415 | 388 | 733 | 1090 | 1130 | 768 | 420 | 353 | 325 |
| 13 | 444 | 434 | 420 | 444 | 415 | 676 | 1130 | 1050 | 740 | 415 | 349 | 325 |
| 14 | 439 | 454 | 415 | 429 | 406 | 623 | 1060 | 1030 | 720 | 410 | 349 | 325 |
| 15 | 439 | 540 | 415 | 429 | 392 | 588 | 1020 | 1020 | 692 | 406 | 349 | 325 |
| 16 | 434 | 553 | 420 | 429 | 388 | 567 | 1030 | 955 | 668 | 406 | 349 | 325 |
| 17 | 434 | 515 | 415 | 420 | 383 | 540 | 955 | 955 | 653 | 406 | 349 | 325 |
| 18 | 429 | 534 | 415 | 424 | 383 | 540 | 904 | 929 | 638 | 420 | 349 | 333 |
| 19 | 429 | 496 | 410 | 434 | 379 | 547 | 848 | 888 | 616 | 410 | 349 | 357 |
| 20 | 429 | 479 | 406 | 429 | 383 | 547 | 833 | 880 | 602 | 397 | 349 | 392 |
| 21 | 429 | 464 | 401 | 424 | 415 | 527 | 833 | 896 | 595 | 401 | 349 | 424 |
| 22 | 429 | 459 | 401 | 424 | 439 | 553 | 864 | 896 | 588 | 397 | 345 | 388 |
| 23 | 429 | 449 | 410 | 410 | 424 | 616 | 955 | 1010 | 567 | 392 | 341 | 401 |
| 24 | 464 | 444 | 406 | 406 | 415 | 616 | 1080 | 938 | 540 | 392 | 424 | 527 |
| 25 | 676 | 449 | 420 | 401 | 406 | 595 | 1280 | 872 | 540 | 388 | 415 | 479 |
| 26 | 553 | 439 | 508 | 401 | 415 | 581 | 1280 | 981 | 521 | 383 | 444 | 439 |
| 27 | 485 | 429 | 560 | 397 | 459 | 782 | 1170 | 981 | 508 | 383 | 383 | 410 |
| 28 | 464 | 429 | 496 | 392 | 700 | 761 | 1130 | 990 | 496 | 379 | 392 | 464 |
| 29 | 459 | 424 | 469 | 383 | --- | 720 | 1120 | 938 | 496 | 370 | 434 | 474 |
| 30 | 454 | 424 | 454 | 383 | --- | 684 | 1150 | 896 | 479 | 370 | 496 | 515 |
| 31 | 502 | --- | 439 | 388 | --- | 692 | --- | 888 | --- | 366 | 401 | --- |
| TOTAL | 14304 | 14270 | 13390 | 12829 | 11322 | 19816 | 31431 | 32542 | 22295 | 12742 | 11497 | 11421 |
| MEAN | 461 | 476 | 432 | 414 | 404 | 639 | 1048 | 1050 | 743 | 411 | 371 | 361 |
| MAX | 676 | 661 | 560 | 444 | 700 | 964 | 1570 | 1500 | 1130 | 469 | 496 | 527 |
| MIN | 429 | 424 | 401 | 383 | 370 | 496 | 747 | 872 | 479 | 366 | 341 | 325 |
| CFSM | 2.13 | 2.20 | 2.00 | 1.92 | 1.87 | 2.96 | 4.85 | 4.86 | 3.44 | 1.90 | 1.72 | 1.76 |
| IN. | 2.46 | 2.46 | 2.31 | 2.21 | 1.95 | 3.41 | 5.41 | 5.60 | 3.84 | 2.19 | 1.98 | 1.97 |
| AC-FT | 28370 | 28300 | 26560 | 25450 | 22460 | 39310 | 62340 | 64550 | 44220 | 25270 | 22800 | 22650 |
| CAL YR 1976 | TOTAL | 352978 | MEAN | 964 | MAX | 3950 | MIN | 401 | CFSM | 4.46 | IN | 60.79 |
| WTR YR 1977 | TOTAL | 207859 | MEAN | 569 | MAX | 1570 | MIN | 325 | CFSM | 2.63 | IN | 35.80 |
| | | | | | | | | | AC-FT | 700100 | | |
| | | | | | | | | | AC-FT | 412300 | | |

14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: April 1951 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 19.0°C July 8, 18, 19, 1970; minimum, 0.0°C Dec. 1, 1954, Mar. 5, Feb. 16, 17, 1956, Jan. 4-11, 1974, Jan. 5, 6, 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 17.0°C July 26, 31, Aug. 1-6, 12, 15-17; minimum, 0.0°C Jan. 5, 6, 8, 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDIM- ENT CHARGE (MG/L) | SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) |
|-----------|------|---|--|---|
| OCT 06... | 1400 | 454 | 1 | 1.2 |
| NOV 15... | 1515 | 574 | 4 | 6.2 |
| DEC 22... | 1300 | 401 | 2 | 2.2 |
| FEB 07... | 1445 | 388 | 3 | 3.1 |
| MAR 30... | 1400 | 700 | 6 | 11 |
| MAY 03... | 1110 | 1620 | 4 | 17 |
| 09... | 1200 | 1030 | 41 | 114 |
| JUN 20... | 1330 | 623 | 2 | 3.4 |
| AUG 01... | 1500 | 374 | 2 | 2.0 |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 11.5 | 9.0 | 8.0 | 7.5 | 3.5 | 2.5 | 3.0 | 1.5 | 4.0 | 3.0 | 3.0 | 2.0 |
| 2 | 10.5 | 9.0 | 9.0 | 7.5 | 3.5 | 2.5 | 3.5 | 2.5 | 3.0 | 2.0 | 4.0 | 2.5 |
| 3 | 9.0 | 7.5 | 8.5 | 6.5 | 4.0 | 2.5 | 3.5 | 2.5 | 3.0 | 2.0 | 4.5 | 2.5 |
| 4 | 8.5 | 6.5 | 7.5 | 6.5 | 4.0 | 3.0 | 3.5 | 2.5 | 3.5 | 2.0 | 5.5 | 3.5 |
| 5 | 9.0 | 6.5 | 7.0 | 6.0 | 4.5 | 3.5 | 2.5 | 0.0 | 4.0 | 2.5 | 5.5 | 3.5 |
| 6 | 9.5 | 7.0 | 7.5 | 6.0 | 4.5 | 3.5 | 1.0 | 0.0 | 4.5 | 3.5 | 5.0 | 3.0 |
| 7 | 10.0 | 7.5 | 7.5 | 5.5 | 4.5 | 4.0 | 1.0 | 0.5 | 4.0 | 2.5 | 4.5 | 3.5 |
| 8 | 10.0 | 8.0 | 7.5 | 6.5 | 4.5 | 3.5 | 1.0 | 0.0 | 5.0 | 3.5 | 4.5 | 3.5 |
| 9 | 9.5 | 7.0 | 7.0 | 6.0 | 4.5 | 3.0 | 1.0 | 0.0 | 5.0 | 3.5 | 3.5 | 2.5 |
| 10 | 9.0 | 7.5 | 6.5 | 5.0 | 4.0 | 3.0 | 3.0 | 1.0 | 5.5 | 4.0 | 5.0 | 2.5 |
| 11 | 10.0 | 8.0 | 6.5 | 5.5 | 4.0 | 3.0 | 3.5 | 3.0 | 5.5 | 4.0 | 5.0 | 2.5 |
| 12 | 8.5 | 7.0 | 6.0 | 4.5 | 3.5 | 2.5 | 4.0 | 3.0 | 6.0 | 4.5 | 4.0 | 3.0 |
| 13 | 9.0 | 6.5 | 5.5 | 4.0 | 3.5 | 2.5 | 3.5 | 3.0 | 6.5 | 5.0 | 4.5 | 2.5 |
| 14 | 8.5 | 6.5 | 7.0 | 5.0 | 4.0 | 2.5 | 3.5 | 3.0 | 5.0 | 3.5 | 4.5 | 2.5 |
| 15 | 8.0 | 6.5 | --- | --- | 4.5 | 3.5 | 4.5 | 3.0 | 5.0 | 3.5 | 5.0 | 2.5 |
| 16 | 7.5 | 6.0 | --- | --- | 4.5 | 3.5 | 4.0 | 3.0 | 5.5 | 3.5 | 5.0 | 2.5 |
| 17 | 7.0 | 5.0 | --- | --- | 4.0 | 3.0 | 4.0 | 3.0 | 6.0 | 4.5 | 4.5 | 3.0 |
| 18 | 6.5 | 4.5 | --- | --- | 5.0 | 3.5 | 4.5 | 3.0 | 5.0 | 3.5 | 4.5 | 3.0 |
| 19 | 6.5 | 4.0 | 6.5 | 5.0 | 3.0 | 2.0 | 4.0 | 3.0 | 5.0 | 3.0 | 5.5 | 4.0 |
| 20 | 6.5 | 4.5 | 5.5 | 3.5 | 2.5 | 2.0 | 4.0 | 2.5 | 5.5 | 3.5 | 5.0 | 3.5 |
| 21 | 7.0 | 4.5 | 6.5 | 4.5 | 3.0 | 2.0 | 4.5 | 3.0 | 5.0 | 3.5 | 6.5 | 3.0 |
| 22 | 6.5 | 5.0 | 6.5 | 5.5 | 3.5 | 2.0 | 3.5 | 2.5 | 4.0 | 2.5 | 6.5 | 3.0 |
| 23 | 7.0 | 6.0 | 5.5 | 4.0 | 4.0 | 3.5 | 2.5 | 1.0 | 3.5 | 2.5 | 5.5 | 4.0 |
| 24 | 6.5 | 5.5 | 6.0 | 3.5 | 4.0 | 3.0 | 2.0 | 0.5 | 4.0 | 2.5 | 5.5 | 3.5 |
| 25 | 7.0 | 6.0 | 6.0 | 5.0 | 4.0 | 3.5 | 2.0 | 1.0 | 4.0 | 3.0 | 6.0 | 3.5 |
| 26 | 7.0 | 6.0 | 4.5 | 2.5 | 4.5 | 3.5 | 2.0 | 1.0 | 4.5 | 2.5 | 5.0 | 4.0 |
| 27 | 6.5 | 5.0 | 2.5 | 1.5 | 4.5 | 3.5 | 2.0 | 1.0 | 5.5 | 3.5 | 5.0 | 3.0 |
| 28 | 7.0 | 4.5 | 3.0 | 1.5 | 3.5 | 2.5 | 2.0 | 1.0 | 5.0 | 2.5 | 4.5 | 2.5 |
| 29 | 7.5 | 6.5 | 3.5 | 2.0 | 4.5 | 3.0 | 2.0 | 1.0 | --- | --- | 5.5 | 3.0 |
| 30 | 7.5 | 6.0 | 3.5 | 2.5 | 3.5 | 2.5 | 3.0 | 1.0 | --- | --- | 6.5 | 3.5 |
| 31 | 8.0 | 6.5 | --- | --- | 2.5 | 1.5 | 4.0 | 3.0 | --- | --- | 4.5 | 3.0 |
| MONTH | 11.5 | 4.0 | 9.0 | 1.5 | 5.0 | 1.5 | 4.5 | 0.0 | 6.5 | 2.0 | 6.5 | 2.0 |

WILLAMETTE RIVER BASIN

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14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 5.0 | 3.5 | 7.5 | 6.5 | 10.0 | 8.0 | 15.5 | 11.5 | 17.0 | 12.0 | 13.5 | 8.5 |
| 2 | 7.0 | 4.0 | 8.0 | 6.5 | 11.0 | 6.0 | 15.5 | 9.5 | 17.0 | 12.0 | 13.0 | 10.0 |
| 3 | 7.5 | 3.5 | 7.0 | 5.0 | 9.5 | 7.5 | 12.5 | 9.5 | 17.0 | 12.0 | 12.5 | 10.5 |
| 4 | 8.5 | 3.5 | 6.0 | 3.5 | 10.0 | 8.0 | 12.5 | 9.5 | 17.0 | 11.5 | 13.5 | 11.0 |
| 5 | 8.5 | 4.0 | 7.5 | 3.5 | 14.0 | 8.0 | 11.0 | 8.5 | 17.0 | 12.0 | 14.5 | 11.5 |
| 6 | 8.0 | 4.0 | 7.5 | 4.5 | 14.0 | 9.0 | 14.5 | 8.5 | 17.0 | 12.0 | 14.5 | 11.5 |
| 7 | 8.5 | 4.0 | 7.5 | 4.5 | 14.0 | 9.5 | 15.5 | 9.5 | 16.5 | 12.0 | 13.5 | 10.0 |
| 8 | 6.0 | 4.5 | 9.5 | 5.5 | 13.5 | 9.5 | 15.5 | 10.5 | 16.5 | 12.0 | 13.0 | 9.5 |
| 9 | 6.0 | 4.0 | 8.5 | 5.5 | 13.0 | 7.5 | 13.5 | 11.0 | 16.0 | 11.0 | 12.5 | 8.0 |
| 10 | 7.0 | 3.5 | 7.5 | 6.0 | 13.0 | 8.0 | 15.0 | 10.0 | 16.5 | 11.5 | 13.0 | 9.0 |
| 11 | 8.5 | 5.0 | 8.0 | 5.0 | 13.0 | 8.5 | 16.5 | 9.5 | 16.5 | 11.0 | 13.0 | 9.5 |
| 12 | 8.0 | 4.0 | 8.0 | 5.0 | 14.0 | 8.5 | 13.5 | 11.5 | 17.0 | 12.0 | 13.0 | 8.5 |
| 13 | 6.5 | 4.5 | 9.0 | 6.0 | 14.5 | 9.0 | 15.5 | 9.0 | 16.5 | 11.5 | 13.0 | 9.0 |
| 14 | 7.0 | 3.5 | 8.5 | 6.5 | 14.5 | 8.0 | 16.0 | 9.0 | 16.0 | 12.0 | 13.0 | 10.5 |
| 15 | 6.5 | 5.0 | 7.5 | 5.5 | 14.5 | 8.5 | 16.0 | 10.5 | 17.0 | 12.5 | 12.0 | 9.5 |
| 16 | 6.5 | 4.5 | 8.0 | 5.5 | 14.5 | 7.5 | 16.0 | 10.0 | 17.0 | 12.5 | 11.0 | 9.5 |
| 17 | 7.5 | 3.5 | 7.0 | 5.5 | 14.5 | 8.5 | 14.0 | 10.5 | 17.0 | 11.5 | 11.0 | 8.5 |
| 18 | 7.0 | 3.5 | 9.0 | 5.5 | 15.0 | 9.5 | 12.5 | 11.0 | 16.5 | 12.0 | 10.5 | 9.0 |
| 19 | 8.0 | 3.0 | 11.5 | 6.5 | 15.0 | 10.0 | 14.5 | 9.5 | 15.5 | 12.5 | 10.5 | 9.5 |
| 20 | 8.0 | 3.5 | 9.5 | 6.5 | 12.5 | 9.5 | 16.5 | 10.5 | 16.5 | 12.0 | 10.5 | 9.0 |
| 21 | 8.0 | 5.0 | 10.5 | 7.0 | 14.5 | 9.0 | 16.5 | 10.5 | 16.5 | 13.0 | 11.0 | 8.5 |
| 22 | 9.0 | 5.0 | 9.0 | 6.5 | 16.0 | 10.0 | 16.5 | 11.0 | 16.0 | 12.0 | 11.0 | 8.0 |
| 23 | 8.5 | 5.5 | 8.0 | 6.5 | 15.5 | 9.5 | 15.5 | 11.0 | 14.0 | 10.5 | 9.5 | 8.0 |
| 24 | 9.5 | 5.0 | 10.0 | 6.5 | 16.0 | 9.0 | 15.5 | 11.0 | 13.0 | 11.5 | 10.5 | 8.0 |
| 25 | 8.0 | 6.0 | 9.0 | 6.0 | 16.5 | 10.0 | 15.0 | 12.0 | 11.5 | 9.5 | 10.5 | 8.0 |
| 26 | 9.0 | 5.5 | 8.5 | 6.5 | 16.0 | 10.0 | 17.0 | 11.5 | 12.0 | 10.0 | 10.0 | 6.5 |
| 27 | 9.5 | 4.5 | 7.5 | 5.0 | 15.5 | 10.0 | 16.5 | 11.5 | 11.5 | 10.0 | 9.0 | 8.0 |
| 28 | 8.5 | 6.0 | 9.0 | 5.5 | 16.5 | 9.5 | 14.5 | 11.5 | 12.0 | 10.0 | 9.5 | 8.5 |
| 29 | 9.5 | 6.5 | 11.0 | 6.0 | 16.0 | 10.5 | 15.5 | 10.5 | 12.0 | 11.0 | 8.5 | 7.5 |
| 30 | 9.0 | 6.5 | 9.5 | 6.5 | 16.5 | 10.0 | 16.5 | 10.5 | 13.5 | 10.5 | 9.0 | 7.0 |
| 31 | --- | --- | 11.0 | 7.5 | --- | --- | 17.0 | 11.5 | 12.5 | 9.0 | --- | --- |
| MONTH | 9.5 | 3.0 | 11.5 | 3.5 | 16.5 | 6.0 | 17.0 | 8.5 | 17.0 | 9.0 | 14.5 | 6.5 |

WILLAMETTE RIVER BASIN

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°45'10", long 122°07'40", in SE_{1/4}NE_{1/4} sec.36, T.9 S., R.5 E., Marion County, Hydrologic Unit 17090005, in Willamette National Forest, on left bank 600 ft (183 m) upstream from Canyon Creek, 1.5 mi (2.4 km) northeast of Detroit, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--106 mi² (275 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1932 to current year. Monthly discharge only June 1932, published in WSP 1318. Prior to October 1952, published as "above French Creek, near Detroit."

REVISED RECORDS.--WSP 1044: 1943(M). WSP 1248: 1947.

GAGE.--Water-stage recorder. Datum of gage is 1,573.95 ft (479.740 m) above mean sea level. Prior to Oct. 1, 1952, at site 0.2 mi (0.3 km) downstream at datum 13.46 ft (4.103 m) lower.

REMARKS.--Water-discharge records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--45 years, 578 ft³/s (16.37 m³/s), 74.05 in/yr (1,881 mm/yr), 418,800 acre-ft/yr (516 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s (479 m³/s) Dec. 22, 1964, gage height, 14.55 ft (4.435 m); minimum, 87 ft³/s (2.46 m³/s) Sept. 2, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,230 ft³/s (34.8 m³/s) Apr. 8, gage height, 5.01 ft (1.524 m), no peak above base of 4,000 ft³/s (113 m³/s); minimum, 98 ft³/s (2.78 m³/s) Aug. 17-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|------|----------|----------|---------|-----------|----------|--------------|-------|-------|------|-------|
| 1 | 121 | 381 | 126 | 169 | 144 | 509 | 504 | 566 | 539 | 206 | 139 | 181 |
| 2 | 126 | 273 | 126 | 169 | 139 | 404 | 489 | 723 | 489 | 199 | 137 | 161 |
| 3 | 129 | 215 | 126 | 158 | 137 | 386 | 464 | 979 | 450 | 193 | 137 | 161 |
| 4 | 124 | 178 | 126 | 155 | 134 | 343 | 519 | 916 | 815 | 196 | 134 | 158 |
| 5 | 117 | 158 | 126 | 144 | 134 | 318 | 672 | 775 | 808 | 190 | 134 | 155 |
| 6 | 112 | 144 | 124 | 144 | 134 | 364 | 878 | 660 | 815 | 181 | 134 | 144 |
| 7 | 109 | 137 | 126 | 150 | 131 | 642 | 1060 | 583 | 761 | 178 | 134 | 134 |
| 8 | 109 | 131 | 144 | 137 | 129 | 979 | 1160 | 529 | 648 | 175 | 131 | 126 |
| 9 | 109 | 126 | 155 | 139 | 129 | 849 | 916 | 514 | 534 | 175 | 129 | 124 |
| 10 | 107 | 124 | 147 | 139 | 134 | 606 | 723 | 679 | 469 | 172 | 126 | 117 |
| 11 | 109 | 124 | 139 | 137 | 137 | 499 | 624 | 648 | 436 | 169 | 126 | 114 |
| 12 | 107 | 120 | 142 | 155 | 139 | 499 | 595 | 572 | 408 | 166 | 124 | 109 |
| 13 | 105 | 120 | 139 | 212 | 166 | 445 | 624 | 524 | 390 | 163 | 124 | 109 |
| 14 | 105 | 140 | 139 | 212 | 163 | 399 | 572 | 509 | 377 | 163 | 124 | 107 |
| 15 | 105 | 212 | 142 | 209 | 152 | 351 | 529 | 494 | 364 | 158 | 124 | 107 |
| 16 | 103 | 256 | 142 | 222 | 147 | 322 | 529 | 469 | 347 | 155 | 121 | 107 |
| 17 | 103 | 199 | 140 | 212 | 144 | 299 | 484 | 464 | 334 | 155 | 119 | 109 |
| 18 | 100 | 235 | 142 | 212 | 142 | 292 | 440 | 455 | 334 | 161 | 119 | 114 |
| 19 | 100 | 196 | 140 | 215 | 137 | 334 | 404 | 426 | 318 | 161 | 121 | 126 |
| 20 | 100 | 172 | 140 | 206 | 139 | 351 | 386 | 426 | 310 | 155 | 121 | 178 |
| 21 | 100 | 158 | 140 | 196 | 155 | 322 | 381 | 455 | 310 | 152 | 121 | 222 |
| 22 | 100 | 152 | 140 | 187 | 184 | 351 | 404 | 469 | 318 | 150 | 119 | 190 |
| 23 | 100 | 144 | 142 | 175 | 175 | 436 | 479 | 469 | 295 | 150 | 119 | 219 |
| 24 | 112 | 142 | 144 | 169 | 166 | 399 | 601 | 417 | 273 | 150 | 172 | 422 |
| 25 | 249 | 142 | 142 | 163 | 166 | 368 | 742 | 390 | 277 | 150 | 184 | 390 |
| 26 | 178 | 134 | 266 | 158 | 190 | 347 | 679 | 464 | 259 | 147 | 206 | 307 |
| 27 | 139 | 131 | 445 | 152 | 326 | 630 | 578 | 450 | 245 | 144 | 161 | 245 |
| 28 | 126 | 129 | 284 | 150 | 742 | 539 | 561 | 455 | 235 | 144 | 184 | 263 |
| 29 | 121 | 129 | 232 | 144 | --- | 464 | 572 | 431 | 232 | 142 | 228 | 266 |
| 30 | 121 | 129 | 203 | 142 | --- | 431 | 595 | 408 | 215 | 142 | 347 | 338 |
| 31 | 181 | --- | 184 | 147 | --- | 431 | --- | 422 | --- | 139 | 222 | --- |
| TOTAL | 3727 | 5031 | 5053 | 5279 | 4915 | 13909 | 18164 | 16741 | 12605 | 5081 | 4621 | 5503 |
| MEAN | 120 | 168 | 163 | 170 | 176 | 449 | 605 | 540 | 420 | 164 | 149 | 183 |
| MAX | 249 | 381 | 445 | 222 | 742 | 979 | 1160 | 979 | 815 | 206 | 347 | 422 |
| MIN | 100 | 120 | 124 | 137 | 129 | 292 | 381 | 390 | 215 | 139 | 119 | 107 |
| CFSM | 1.13 | 1.59 | 1.54 | 1.60 | 1.66 | 4.24 | 5.71 | 5.09 | 3.96 | 1.55 | 1.41 | 1.73 |
| IN. | 1.31 | 1.77 | 1.77 | 1.85 | 1.72 | 4.88 | 6.37 | 5.88 | 4.42 | 1.78 | 1.62 | 1.93 |
| AC-FT | 7390 | 9980 | 10020 | 10470 | 9750 | 27590 | 36030 | 33210 | 25000 | 10080 | 9170 | 10920 |
| CAL YR 1976 TOTAL | 181892 | | MEAN 497 | MAX 3230 | MIN 100 | CFSM 4.69 | IN 63.83 | AC-FT 360800 | | | | |
| WTR YR 1977 TOTAL | 100629 | | MEAN 276 | MAX 1160 | MIN 100 | CFSM 2.60 | IN 35.31 | AC-FT 199600 | | | | |

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1950 to July 1961, January 1962 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.0°C July 27, 1973; minimum, 0.0°C on several days in December 1972 and January 1973, Jan. 5-10, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 17.5°C Aug. 6; minimum, 0.0°C Jan. 5-10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDIM- ENT (MG/L) | SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) |
|--------------|------|---|--|---|
| OCT 06... | 1640 | 137 | 1 | .37 |
| NOV 15... | 1120 | 219 | 1 | .59 |
| DEC 22... | 1415 | 140 | 1 | .38 |
| FEB 07... | 1130 | 131 | 8 | 2.8 |
| MAR 30... | 1530 | 431 | 6 | 7.0 |
| MAY 03... | 1010 | 1040 | 4 | 11 |
| 09... | 1130 | 474 | 8 | 10 |
| JUN 20... | 1140 | 307 | 6 | 5.0 |
| AUG 01... | 1240 | 121 | 2 | .65 |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | --- | --- | 8.0 | 7.5 | 3.0 | 2.5 | 3.0 | 2.0 | 4.0 | 3.0 | 3.5 | 2.0 |
| 2 | --- | --- | 8.5 | 8.0 | 3.0 | 2.5 | 3.5 | 1.5 | 3.0 | 2.0 | 4.0 | 3.5 |
| 3 | --- | --- | 8.0 | 7.0 | 3.5 | 2.5 | 3.5 | 2.0 | 2.5 | 1.5 | 4.5 | 3.0 |
| 4 | --- | --- | 7.5 | 6.5 | 4.0 | 3.5 | 3.5 | 2.5 | 3.0 | 2.0 | 5.0 | 4.0 |
| 5 | --- | --- | 7.5 | 6.5 | 4.5 | 4.0 | 3.0 | 0.0 | 3.5 | 2.0 | 5.5 | 4.0 |
| 6 | --- | --- | 7.5 | 7.0 | 4.5 | 3.5 | 0.0 | 0.0 | 4.0 | 3.5 | 5.5 | 4.5 |
| 7 | 10.0 | 8.0 | 7.5 | 6.0 | 5.0 | 4.0 | 0.5 | 0.0 | 3.5 | 2.5 | 5.0 | 4.0 |
| 8 | 10.0 | 8.5 | 7.5 | 7.0 | 5.0 | 4.5 | 0.5 | 0.0 | 3.5 | 3.0 | 5.0 | 4.5 |
| 9 | 9.5 | 7.5 | 7.5 | 6.5 | 4.5 | 3.5 | 0.0 | 0.0 | 4.5 | 3.5 | 4.5 | 3.5 |
| 10 | 9.0 | 8.5 | 7.0 | 5.5 | 4.5 | 4.0 | 2.5 | 0.0 | 5.5 | 4.0 | 5.0 | 3.5 |
| 11 | 10.0 | 8.5 | 6.5 | 6.0 | 4.0 | 3.5 | 3.0 | 2.5 | 5.5 | 4.5 | 5.5 | 3.5 |
| 12 | 9.0 | 7.0 | 6.0 | 5.0 | 3.5 | 2.5 | 3.5 | 3.0 | 6.5 | 5.5 | 4.5 | 4.0 |
| 13 | 8.5 | 7.0 | 5.5 | 4.5 | 3.5 | 3.0 | 3.5 | 3.0 | 6.5 | 5.5 | 5.0 | 3.5 |
| 14 | 8.5 | 7.0 | 7.0 | 5.5 | 3.5 | 2.5 | 3.5 | 3.5 | 5.0 | 3.5 | 5.0 | 3.5 |
| 15 | 8.0 | 6.5 | 7.5 | 6.5 | 4.0 | 3.5 | 4.0 | 3.5 | 5.0 | 3.5 | 5.0 | 3.0 |
| 16 | 7.5 | 6.0 | 8.0 | 7.0 | 4.0 | 3.5 | 4.5 | 3.5 | 5.5 | 4.0 | 5.0 | 3.5 |
| 17 | 7.0 | 5.5 | 8.0 | 7.0 | 4.0 | 3.0 | 4.0 | 3.5 | 6.0 | 5.0 | 5.0 | 3.5 |
| 18 | 7.0 | 5.5 | 7.5 | 7.0 | 4.5 | 3.5 | 4.5 | 3.5 | 5.0 | 3.5 | 5.0 | 3.5 |
| 19 | 6.5 | 5.0 | 7.0 | 6.0 | 3.5 | 2.5 | 4.5 | 3.5 | 5.0 | 3.5 | 5.5 | 4.5 |
| 20 | 6.0 | 5.0 | 6.0 | 5.0 | 2.5 | 2.0 | 4.0 | 3.0 | 5.0 | 4.5 | 5.5 | 4.5 |
| 21 | 6.5 | 5.0 | 6.5 | 5.5 | 2.5 | 1.5 | 4.0 | 3.5 | 5.0 | 4.5 | 6.5 | 4.5 |
| 22 | 6.5 | 5.5 | 6.5 | 5.5 | 3.0 | 2.5 | 3.5 | 3.0 | 4.5 | 4.0 | 6.5 | 4.5 |
| 23 | 7.5 | 6.5 | 5.5 | 4.5 | 4.0 | 3.0 | 3.0 | 1.5 | 4.0 | 3.5 | 6.0 | 5.0 |
| 24 | 7.0 | 6.0 | 5.5 | 4.5 | 4.0 | 3.5 | 2.0 | 1.5 | 4.0 | 3.0 | 6.5 | 4.5 |
| 25 | 7.5 | 6.5 | 6.0 | 5.5 | 4.5 | 3.5 | 2.0 | 1.5 | 4.0 | 3.0 | 6.5 | 4.5 |
| 26 | 7.5 | 6.5 | 5.5 | 3.0 | 5.0 | 4.0 | 2.0 | 1.0 | 4.5 | 3.0 | 5.5 | 5.0 |
| 27 | 6.5 | 5.5 | 3.0 | 2.0 | 5.0 | 4.0 | 1.5 | 0.5 | 5.0 | 4.0 | 5.5 | 4.0 |
| 28 | 7.0 | 5.5 | 2.5 | 1.5 | 4.0 | 3.5 | 1.5 | 1.0 | 4.5 | 2.5 | 5.0 | 3.0 |
| 29 | 7.5 | 7.0 | 3.0 | 2.0 | 5.0 | 3.5 | 1.5 | 0.5 | --- | --- | 6.0 | 4.0 |
| 30 | 8.0 | 7.0 | 3.0 | 2.5 | 4.0 | 3.0 | 2.5 | 1.0 | --- | --- | 6.5 | 4.0 |
| 31 | 8.5 | 7.5 | --- | --- | 3.0 | 2.0 | 3.5 | 2.5 | --- | --- | 5.0 | 4.0 |
| MONTH | 10.0 | 5.0 | 8.5 | 1.5 | 5.0 | 1.5 | 4.5 | 0.0 | 6.5 | 1.5 | 6.5 | 2.0 |

WILLAMETTE RIVER BASIN

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 6.0 | 4.5 | 7.5 | 7.0 | 9.5 | 8.0 | 14.5 | 11.5 | 16.5 | 13.0 | 12.0 | 9.0 |
| 2 | 7.0 | 5.0 | 8.0 | 6.5 | 10.5 | 6.5 | 14.5 | 10.5 | 17.0 | 13.5 | 12.0 | 10.5 |
| 3 | 7.5 | 4.5 | 7.0 | 5.0 | 8.5 | 7.5 | 13.0 | 10.0 | 17.0 | 13.0 | 12.0 | 11.5 |
| 4 | 8.0 | 4.5 | 6.5 | 5.0 | 9.0 | 7.5 | 12.0 | 9.5 | 16.5 | 13.0 | 13.0 | 11.5 |
| 5 | 8.0 | 4.5 | 7.0 | 5.0 | 12.5 | 7.0 | 11.0 | 9.0 | 17.0 | 13.0 | 14.0 | 11.5 |
| 6 | 8.0 | 5.0 | 7.5 | 5.5 | 12.5 | 8.0 | 14.0 | 9.0 | 17.5 | 13.5 | 14.0 | 11.5 |
| 7 | 8.0 | 5.0 | 7.5 | 5.0 | 13.5 | 9.0 | 14.5 | 9.5 | 15.5 | 12.5 | 13.0 | 10.5 |
| 8 | 6.5 | 5.5 | 10.0 | 6.5 | 12.5 | 8.5 | 15.0 | 11.0 | 16.5 | 13.0 | 12.5 | 9.5 |
| 9 | 6.5 | 4.5 | 9.0 | 6.0 | 12.5 | 7.5 | 14.0 | 11.0 | 16.0 | 12.0 | 12.0 | 9.0 |
| 10 | 7.0 | 5.0 | 7.5 | 6.5 | 12.5 | 8.0 | 14.5 | 10.5 | 16.5 | 13.0 | 12.5 | 9.5 |
| 11 | 8.0 | 5.5 | 8.0 | 6.0 | 12.5 | 8.5 | 15.5 | 11.0 | 17.0 | 13.5 | 12.5 | 10.0 |
| 12 | 8.0 | 4.5 | 9.0 | 5.5 | 13.0 | 8.5 | 14.5 | 11.5 | 17.0 | 13.5 | 12.5 | 10.0 |
| 13 | 7.0 | 6.0 | 9.5 | 6.5 | 13.5 | 8.5 | 14.5 | 10.0 | 17.0 | 13.5 | 12.5 | 10.0 |
| 14 | 7.0 | 4.5 | 8.0 | 6.5 | 13.5 | 8.5 | 15.0 | 11.0 | 16.5 | 14.0 | 13.0 | 11.0 |
| 15 | 7.0 | 5.5 | 7.5 | 6.0 | 13.5 | 8.5 | 15.5 | 11.0 | 17.0 | 13.5 | 12.0 | 10.5 |
| 16 | 7.0 | 5.5 | 8.0 | 6.0 | 13.5 | 8.0 | 15.0 | 11.5 | 17.0 | 14.0 | 11.0 | 10.0 |
| 17 | 7.5 | 4.0 | 7.5 | 6.0 | 13.5 | 9.0 | 14.0 | 12.0 | 17.5 | 14.0 | 10.5 | 9.5 |
| 18 | 7.0 | 4.0 | 9.5 | 6.5 | 14.0 | 10.0 | 13.0 | 11.5 | 17.0 | 14.5 | 10.5 | 10.0 |
| 19 | 7.5 | 4.0 | 10.5 | 6.5 | 14.0 | 9.5 | 14.5 | 10.5 | 15.5 | 14.0 | 10.5 | 10.0 |
| 20 | 8.0 | 4.5 | 9.5 | 6.5 | 12.0 | 9.0 | 16.0 | 11.5 | 16.5 | 13.5 | 10.5 | 9.5 |
| 21 | 8.0 | 5.5 | 10.5 | 7.5 | 12.5 | 9.0 | 16.0 | 12.0 | 17.0 | 14.5 | 10.0 | 9.0 |
| 22 | 9.0 | 5.5 | 9.0 | 6.5 | 14.5 | 9.5 | 16.0 | 12.0 | 16.5 | 13.5 | 10.5 | 8.5 |
| 23 | 8.5 | 6.0 | 8.0 | 6.5 | 14.5 | 9.0 | 15.0 | 12.5 | 14.5 | 12.5 | 9.5 | 8.5 |
| 24 | 9.5 | 6.0 | 10.0 | 6.5 | 15.0 | 9.5 | 15.5 | 12.5 | 14.0 | 12.5 | 9.5 | 8.5 |
| 25 | 8.5 | 6.5 | 9.0 | 6.0 | 15.5 | 10.5 | 15.5 | 12.5 | 12.5 | 11.5 | 10.0 | 8.5 |
| 26 | 9.0 | 6.0 | 8.5 | 7.0 | 15.0 | 10.0 | 16.5 | 12.5 | 11.5 | 11.0 | 9.0 | 7.0 |
| 27 | 9.5 | 5.5 | 7.5 | 6.0 | 14.5 | 10.0 | 16.5 | 13.0 | 11.5 | 10.5 | 9.0 | 8.0 |
| 28 | 9.0 | 6.5 | 9.0 | 6.0 | 15.0 | 10.0 | 15.0 | 13.0 | 12.0 | 11.0 | 9.5 | 8.5 |
| 29 | 9.5 | 7.0 | 10.5 | 6.0 | 15.0 | 10.5 | 15.5 | 11.5 | 12.0 | 11.0 | 8.5 | 8.0 |
| 30 | 9.0 | 7.0 | 9.0 | 7.0 | 15.0 | 10.0 | 16.0 | 11.5 | 12.5 | 10.5 | 9.0 | 7.5 |
| 31 | --- | --- | 11.0 | 7.5 | --- | --- | 16.5 | 12.5 | 12.0 | 9.5 | --- | --- |
| MONTH | 9.5 | 4.0 | 11.0 | 5.0 | 15.5 | 6.5 | 16.5 | 9.0 | 17.5 | 9.5 | 14.0 | 7.0 |

14180500 DETROIT LAKE NEAR DETROIT, OR

LOCATION.--Lat 44°43'20", long 122°14'55", in SW¼NW¼ sec.7, T.10 S., R.5 E., Marion County, Hydrologic Unit 17090005, in control house near right abutment of Detroit Dam on North Santiam River, 4.9 mi (7.9 km) west of Detroit, and at mile 60.9 (98.0 km).

DRAINAGE AREA.--437 mi² (1,132 km²)

PERIOD OF RECORD.--January 1953 to current year. Prior to October 1971, published as Detroit Reservoir near Detroit.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by concrete, gravity-type dam with six 42-ft (12.8 m) by 28-ft ((8.5 m) control gates. Length of dam is 1,580 ft (481.6 m), built by Corps of Engineers. Storage began in January 1953. Total capacity is 455,100 acre-ft (561 hm³) and usable capacity is 340,100 acre-ft (419 hm³) between elevations 1,425.0 ft (434.34 m), proposed lower limit of operation, and 1,569.0 ft (478.23 m), top of spillway gates. Reservoir used for flood control, power development, irrigation, improvement of navigation, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 457,900 acre-ft (565 hm³) July 13, 1972, elevation, 1,569.79 ft (478.472 m); minimum, 115,500 acre-ft (142 hm³) Jan. 30, 1969, elevation, 1,425.37 ft (434.453 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 451,800 acre-ft (557 hm³) June 22, elevation, 1,568.05 ft (477.942 m); minimum, 133,500 acre-ft (165 hm³) Feb. 20, elevation, 1,437.38 ft (438.113 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

| | | | | | |
|-------|---------|-------|---------|-------|---------|
| 1,425 | 115,000 | 1,480 | 210,900 | 1,530 | 331,500 |
| 1,430 | 122,200 | 1,490 | 232,000 | 1,540 | 360,200 |
| 1,440 | 137,700 | 1,500 | 254,600 | 1,550 | 390,900 |
| 1,450 | 154,400 | 1,510 | 278,700 | 1,560 | 424,000 |
| 1,460 | 172,200 | 1,520 | 304,400 | 1,570 | 458,600 |
| 1,470 | 191,100 | | | | |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| 1 | 1526.41 | 1492.80 | 1451.37 | 1443.65 | 1438.71 | 1444.11 | 1487.60 | 1537.27 | 1565.63 | 1566.51 | 1559.20 | 1544.48 |
| 2 | 1525.49 | 1491.22 | 1450.99 | 1443.43 | 1438.22 | 1445.48 | 1489.10 | 1539.10 | 1565.79 | 1566.25 | 1558.93 | 1543.87 |
| 3 | 1524.55 | 1490.25 | 1450.58 | 1443.15 | 1438.29 | 1446.80 | 1490.43 | 1541.56 | 1565.94 | 1566.11 | 1558.65 | 1543.63 |
| 4 | 1523.56 | 1489.58 | 1450.32 | 1443.03 | 1438.20 | 1447.62 | 1491.94 | 1543.91 | 1566.63 | 1565.99 | 1558.37 | 1543.38 |
| 5 | 1522.54 | 1488.35 | 1449.93 | 1442.63 | 1438.09 | 1448.52 | 1493.94 | 1545.74 | 1566.81 | 1565.84 | 1558.08 | 1542.74 |
| 6 | 1521.54 | 1487.08 | 1449.51 | 1442.21 | 1438.03 | 1449.57 | 1496.63 | 1547.25 | 1567.02 | 1565.69 | 1557.80 | 1542.07 |
| 7 | 1520.46 | 1485.74 | 1449.09 | 1441.84 | 1437.93 | 1451.91 | 1499.78 | 1548.61 | 1566.98 | 1565.50 | 1557.51 | 1541.74 |
| 8 | 1519.41 | 1484.50 | 1448.84 | 1441.41 | 1437.83 | 1455.76 | 1503.31 | 1549.75 | 1567.14 | 1565.32 | 1557.23 | 1541.03 |
| 9 | 1518.32 | 1483.10 | 1448.89 | 1441.10 | 1437.77 | 1459.10 | 1505.99 | 1550.79 | 1567.32 | 1565.15 | 1556.93 | 1540.29 |
| 10 | 1517.28 | 1481.68 | 1448.54 | 1440.66 | 1437.68 | 1461.24 | 1508.03 | 1552.32 | 1567.32 | 1564.98 | 1556.63 | 1539.85 |
| 11 | 1516.20 | 1480.24 | 1448.17 | 1440.44 | 1437.68 | 1462.77 | 1509.70 | 1553.71 | 1567.35 | 1564.78 | 1556.33 | 1539.25 |
| 12 | 1515.09 | 1478.75 | 1447.76 | 1440.18 | 1437.68 | 1464.46 | 1511.27 | 1554.86 | 1567.33 | 1564.59 | 1556.02 | 1538.23 |
| 13 | 1513.98 | 1476.74 | 1447.38 | 1440.20 | 1437.78 | 1465.66 | 1513.00 | 1555.86 | 1567.45 | 1564.39 | 1555.70 | 1537.16 |
| 14 | 1512.86 | 1474.76 | 1447.16 | 1440.17 | 1437.84 | 1466.88 | 1514.59 | 1556.86 | 1567.54 | 1564.19 | 1555.16 | 1536.49 |
| 15 | 1511.70 | 1473.03 | 1446.75 | 1440.08 | 1437.85 | 1467.84 | 1516.02 | 1557.83 | 1567.55 | 1563.98 | 1554.26 | 1535.44 |
| 16 | 1510.51 | 1471.37 | 1446.36 | 1439.99 | 1437.76 | 1468.59 | 1517.48 | 1558.73 | 1567.69 | 1563.77 | 1553.35 | 1534.36 |
| 17 | 1509.38 | 1469.53 | 1445.94 | 1439.86 | 1437.77 | 1469.41 | 1518.70 | 1559.57 | 1567.74 | 1563.56 | 1552.72 | 1533.70 |
| 18 | 1508.17 | 1467.74 | 1445.51 | 1439.80 | 1437.69 | 1470.07 | 1519.90 | 1560.46 | 1567.79 | 1563.38 | 1551.79 | 1533.04 |
| 19 | 1506.93 | 1465.79 | 1445.41 | 1439.74 | 1437.60 | 1470.88 | 1520.89 | 1561.22 | 1567.79 | 1563.17 | 1550.88 | 1532.04 |
| 20 | 1505.69 | 1463.70 | 1444.95 | 1439.60 | 1437.57 | 1471.70 | 1521.82 | 1561.72 | 1567.85 | 1562.94 | 1550.43 | 1531.16 |
| 21 | 1504.43 | 1461.47 | 1444.59 | 1439.46 | 1437.65 | 1472.54 | 1522.75 | 1562.27 | 1567.87 | 1562.73 | 1549.90 | 1530.79 |
| 22 | 1503.17 | 1459.17 | 1444.19 | 1439.33 | 1437.95 | 1473.42 | 1523.73 | 1562.93 | 1567.88 | 1562.23 | 1548.92 | 1529.92 |
| 23 | 1501.89 | 1456.77 | 1443.84 | 1439.12 | 1438.08 | 1474.72 | 1524.97 | 1563.57 | 1567.84 | 1561.57 | 1547.96 | 1529.11 |
| 24 | 1500.77 | 1455.23 | 1443.44 | 1438.90 | 1438.24 | 1475.97 | 1526.49 | 1564.07 | 1567.76 | 1561.23 | 1547.52 | 1528.65 |
| 25 | 1500.10 | 1454.66 | 1443.18 | 1438.76 | 1438.37 | 1477.08 | 1528.38 | 1564.48 | 1567.68 | 1560.99 | 1546.95 | 1528.05 |
| 26 | 1499.12 | 1454.07 | 1443.38 | 1438.76 | 1438.53 | 1478.07 | 1530.12 | 1565.08 | 1567.56 | 1560.75 | 1546.40 | 1527.29 |
| 27 | 1497.97 | 1453.42 | 1443.85 | 1438.77 | 1439.31 | 1480.07 | 1531.53 | 1565.37 | 1567.45 | 1560.50 | 1546.20 | 1526.06 |
| 28 | 1496.78 | 1452.80 | 1443.95 | 1438.78 | 1442.23 | 1481.86 | 1532.89 | 1565.46 | 1567.44 | 1560.25 | 1546.05 | 1524.68 |
| 29 | 1495.51 | 1452.07 | 1444.20 | 1438.76 | --- | 1483.50 | 1534.28 | 1565.47 | 1567.36 | 1560.00 | 1545.56 | 1523.37 |
| 30 | 1494.27 | 1451.76 | 1444.06 | 1438.73 | --- | 1484.70 | 1535.78 | 1565.41 | 1567.04 | 1559.73 | 1545.25 | 1522.14 |
| 31 | 1493.37 | --- | 1443.88 | 1438.71 | --- | 1485.96 | --- | 1565.32 | --- | 1559.47 | 1545.09 | --- |
| MEAN | 1510.24 | 1471.58 | 1446.65 | 1440.36 | 1438.15 | 1466.33 | 1514.03 | 1556.34 | 1567.28 | 1563.40 | 1552.64 | 1534.80 |
| MAX | 1526.41 | 1492.80 | 1451.37 | 1443.65 | 1442.23 | 1485.96 | 1535.78 | 1565.47 | 1567.88 | 1566.51 | 1559.20 | 1544.48 |
| MIN | 1493.37 | 1451.76 | 1443.18 | 1438.71 | 1437.57 | 1444.11 | 1487.60 | 1537.27 | 1565.63 | 1559.47 | 1545.09 | 1522.14 |
| (†) | 239,400 | 157,400 | 144,000 | 135,600 | 141,300 | 223,300 | 347,900 | 442,300 | 448,300 | 422,200 | 375,600 | 310,000 |
| (‡) | -85,700 | -82,000 | -13,400 | -8,400 | +5,700 | +82,000 | +124,600 | +94,400 | +6,000 | -26,100 | -46,600 | -65,600 |
| CAL YR 1976 | MEAN | 1515.86 | MAX | 1567.58 | MIN | 1443.18 | AC-FT† | -26,600 | | | | |
| WTR YR 1977 | MEAN | 1505.52 | MAX | 1567.88 | MIN | 1437.57 | AC-FT‡ | -15,100 | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR

LOCATION.--Lat 44°45'10", long 122°17'50", in NE¼NE¼ sec.34, T.9 S., R.4 E., Marion County, Hydrologic Unit 17090005, on left bank 0.1 mi (0.2 km) downstream from Little Sardine Creek, 0.8 mi (1.3 km) downstream from Big Cliff Dam, 2.1 mi (3.4 km) east of Niagara, and at mile 57.3 (92.2 km).

DRAINAGE AREA.--453 mi² (1,173 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1908 to January 1920, October 1921 to March 1922, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as North Fork of Santiam River near Niagara prior to October 1913, and as "above Mayflower Creek, near Detroit" October 1938 to September 1952.

REVISED RECORDS.--WSP 1288: 1914-18, 1920. WSP 1718: 1953-54.

GAGE.--Water-stage recorder. Datum of gage is 1,093.78 ft (333.384 m) above mean sea level (Bureau of Public Roads bench mark). See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--Water-discharge records excellent. Flow regulated since 1953 by Detroit Lake (see station 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft (3.61 hm³). No diversion above station.

AVERAGE DISCHARGE.--49 years (water years 1910-19, 1939-77), 2,350 ft³/s (66.55 m³/s), 70.45 in/yr (1,789 mm/yr), 1,703,000 acre-ft/yr (2.10 km³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,200 ft³/s (1,790 m³/s) Nov. 22, 1909, gage height, 16.4 ft (5.00 m), from flood-mark, site and datum then in use, from rating curve extended above 35,000 ft³/s (991 m³/s); minimum, 19 ft³/s (0.54 m³/s) Aug. 21, 1963; minimum daily, 395 ft³/s (11.2 m³/s) Mar. 25, 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,560 ft³/s (101 m³/s) Nov. 17, gage height, 4.88 ft (1.487 m); minimum, 331 ft³/s (9.37 m³/s) Mar. 23; minimum daily, 395 ft³/s (11.2 m³/s) Mar. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|------------|-----------|---------|-----------------|-------------|------------|------------|------------------|--------|--------|--------|
| 1 | 2490 | 2220 | 990 | 938 | 678 | 541 | 456 | 491 | 1760 | 1740 | 999 | 1740 |
| 2 | 2020 | 2970 | 878 | 946 | 678 | 547 | 467 | 485 | 1740 | 1240 | 999 | 1600 |
| 3 | 2000 | 2090 | 895 | 946 | 656 | 541 | 444 | 491 | 1720 | 946 | 990 | 999 |
| 4 | 2040 | 1650 | 878 | 946 | 656 | 534 | 417 | 485 | 1760 | 999 | 999 | 955 |
| 5 | 1970 | 2060 | 929 | 946 | 663 | 534 | 428 | 473 | 2020 | 1040 | 1030 | 1710 |
| 6 | 2060 | 2150 | 887 | 938 | 656 | 534 | 462 | 456 | 2460 | 999 | 1020 | 1640 |
| 7 | 2100 | 2090 | 938 | 929 | 663 | 547 | 479 | 439 | 2540 | 972 | 1020 | 1050 |
| 8 | 2060 | 2240 | 938 | 929 | 685 | 515 | 439 | 473 | 1970 | 972 | 1020 | 1700 |
| 9 | 2070 | 2240 | 946 | 929 | 678 | 503 | 503 | 491 | 1560 | 972 | 1020 | 1620 |
| 10 | 2020 | 2180 | 929 | 929 | 678 | 528 | 485 | 497 | 1700 | 981 | 1020 | 1210 |
| 11 | 2040 | 2340 | 929 | 929 | 670 | 522 | 473 | 573 | 1530 | 981 | 1020 | 1440 |
| 12 | 2100 | 2110 | 929 | 955 | 670 | 522 | 456 | 614 | 1560 | 1030 | 1020 | 2110 |
| 13 | 2100 | 2760 | 946 | 946 | 670 | 522 | 467 | 635 | 1230 | 990 | 1010 | 2130 |
| 14 | 2010 | 2760 | 938 | 938 | 670 | 522 | 462 | 614 | 1040 | 981 | 1440 | 1500 |
| 15 | 2100 | 2750 | 938 | 938 | 663 | 515 | 467 | 627 | 1200 | 972 | 2100 | 2050 |
| 16 | 2110 | 2990 | 938 | 938 | 670 | 515 | 473 | 649 | 1030 | 990 | 2070 | 2240 |
| 17 | 2070 | 2850 | 929 | 938 | 670 | 515 | 473 | 790 | 1040 | 999 | 1510 | 1450 |
| 18 | 2110 | 2750 | 938 | 938 | 663 | 663 | 467 | 790 | 1020 | 999 | 2090 | 1440 |
| 19 | 2160 | 2930 | 920 | 955 | 663 | 509 | 450 | 790 | 1040 | 999 | 2060 | 2100 |
| 20 | 2010 | 2870 | 920 | 929 | 663 | 509 | 456 | 1080 | 1030 | 990 | 1190 | 2130 |
| 21 | 2190 | 2900 | 929 | 929 | 670 | 509 | 462 | 1060 | 1030 | 999 | 1460 | 1570 |
| 22 | 2180 | 2940 | 920 | 929 | 670 | 491 | 462 | 1070 | 1070 | 1510 | 2040 | 2090 |
| 23 | 2150 | 2960 | 946 | 929 | 670 | 444 | 473 | 1060 | 1070 | 1780 | 2100 | 2230 |
| 24 | 2110 | 2090 | 946 | 929 | 663 | 411 | 473 | 1050 | 1040 | 1200 | 1510 | 2260 |
| 25 | 2150 | 1280 | 929 | 790 | 663 | 395 | 479 | 1050 | 1040 | 1010 | 1770 | 2280 |
| 26 | 2160 | 1220 | 938 | 685 | 663 | 395 | 473 | 1270 | 1060 | 981 | 1630 | 2230 |
| 27 | 2160 | 1180 | 955 | 685 | 678 | 456 | 473 | 1710 | 1040 | 1020 | 1010 | 2690 |
| 28 | 2130 | 1220 | 999 | 670 | 593 | 566 | 473 | 2010 | 1010 | 1010 | 1050 | 3030 |
| 29 | 2160 | 1300 | 946 | 642 | --- | 515 | 473 | 2100 | 972 | 972 | 1560 | 3000 |
| 30 | 2140 | 1040 | 929 | 649 | --- | 503 | 473 | 2040 | 1460 | 1010 | 1660 | 3110 |
| 31 | 2070 | --- | 929 | 649 | --- | 433 | --- | 2100 | --- | 999 | 1040 | --- |
| TOTAL | 65240 | 67130 | 28899 | 27266 | 18633 | 15756 | 13938 | 28463 | 41742 | 33283 | 42457 | 57304 |
| MEAN | 2105 | 2238 | 932 | 880 | 665 | 508 | 465 | 918 | 1391 | 1074 | 1370 | 1910 |
| MAX | 2490 | 2990 | 999 | 955 | 685 | 663 | 503 | 2100 | 2540 | 1780 | 2100 | 3110 |
| MIN | 1970 | 1040 | 878 | 642 | 593 | 395 | 417 | 439 | 972 | 946 | 990 | 955 |
| AC-FT | 129400 | 133200 | 57320 | 54080 | 36960 | 31250 | 27650 | 56460 | 82800 | 66020 | 84210 | 113700 |
| MEAN† | 711 | 860 | 714 | 743 | 769 | 1,841 | 2,558 | 2,454 | 1,492 | 649 | 611 | 808 |
| CFSM† | 1.57 | 1.90 | 1.58 | 1.64 | 1.70 | 4.06 | 5.65 | 5.42 | 3.29 | 1.43 | 1.35 | 1.78 |
| IN.† | 1.81 | 2.12 | 1.82 | 1.89 | 1.77 | 4.69 | 6.30 | 6.25 | 3.68 | 1.65 | 1.56 | 1.99 |
| AC-FT† | 43,700 | 51,200 | 43,900 | 45,700 | 42,700 | 113,200 | 152,200 | 150,900 | 88,800 | 39,900 | 37,600 | 48,100 |
| CAL YR 1976 TOTAL | 739,299 | MEAN 2,202 | MAX 8,370 | MIN 878 | AC-FT 1,466,000 | MEAN† 2,700 | CFSM† 5.96 | IN.† 80.97 | AC-FT† 1,955,700 | | | |
| WTR YR 1977 TOTAL | 440,111 | MEAN 1,206 | MAX 3,110 | MIN 395 | AC-FT 873,000 | MEAN† 1,185 | CFSM† 2.62 | IN.† 35.52 | AC-FT† 857,900 | | | |

† Adjusted for change in contents of Detroit Lake.

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1953 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 16.5°C July 28, 29, 1958; minimum, 1.5°C on several days in 1957, 1971, and Jan. 10-13, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 14.0°C Oct. 18; minimum, 4.0°C many days in January and February.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 13.0 | 12.5 | 12.5 | 12.5 | 8.5 | 8.5 | 6.0 | 5.5 | 4.5 | 4.0 | 4.5 | 4.5 |
| 2 | 13.0 | 12.5 | 13.0 | 12.5 | 8.5 | 8.5 | 6.0 | 5.5 | 4.5 | 4.0 | 4.5 | 4.5 |
| 3 | 13.0 | 13.0 | 13.0 | 12.5 | 8.5 | 8.0 | 6.0 | 5.5 | 4.0 | 4.0 | 4.5 | 4.5 |
| 4 | 13.0 | 12.5 | 13.0 | 12.5 | 8.5 | 8.5 | 6.0 | 6.0 | 4.5 | 4.0 | 5.0 | 4.5 |
| 5 | 13.0 | 13.0 | 12.5 | 12.5 | 8.5 | 8.0 | 5.5 | 5.5 | 4.0 | 4.0 | 5.0 | 4.5 |
| 6 | 13.0 | 13.0 | 12.5 | 12.0 | 8.0 | 8.0 | 5.5 | 5.0 | 4.5 | 4.0 | 5.0 | 4.5 |
| 7 | 13.0 | 13.0 | 12.5 | 12.5 | 8.0 | 8.0 | 5.0 | 5.0 | 4.5 | 4.0 | 5.0 | 5.0 |
| 8 | 13.5 | 13.0 | 12.5 | 12.0 | 8.0 | 8.0 | 5.0 | 5.0 | 4.5 | 4.0 | 5.0 | 5.0 |
| 9 | 13.5 | 13.0 | 12.0 | 12.0 | 8.0 | 8.0 | 5.0 | 4.5 | 4.5 | 4.5 | 5.0 | 5.0 |
| 10 | 13.5 | 13.0 | 12.0 | 12.0 | 8.0 | 7.0 | 5.0 | 4.5 | 4.5 | 4.5 | 5.0 | 4.5 |
| 11 | 13.5 | 13.5 | 12.0 | 12.0 | 7.5 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 12 | 13.5 | 13.0 | 12.0 | 12.0 | 7.5 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 13 | 13.5 | 13.0 | 12.0 | 11.5 | 7.5 | 7.0 | 5.0 | 5.0 | 4.5 | 4.0 | 5.0 | 5.0 |
| 14 | 13.5 | 13.0 | 11.5 | 11.5 | 7.5 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 15 | 13.5 | 13.0 | 11.5 | 11.0 | 7.5 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 16 | 13.5 | 13.0 | 11.5 | 11.0 | 7.5 | 7.0 | 5.0 | 5.0 | 4.5 | 4.0 | 5.0 | 5.0 |
| 17 | 13.5 | 13.0 | 11.5 | 11.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 18 | 14.0 | 13.5 | 11.0 | 11.0 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 19 | 13.5 | 13.0 | 11.0 | 10.5 | 7.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 20 | 13.5 | 13.0 | 11.0 | 11.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 21 | 13.5 | 13.0 | 11.0 | 11.0 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.5 | 5.0 |
| 22 | 13.5 | 13.0 | 11.0 | 10.5 | 6.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.5 | 5.0 | 5.0 |
| 23 | 13.0 | 13.0 | 10.5 | 10.5 | 6.5 | 6.5 | 5.0 | 4.5 | 4.5 | 4.0 | 5.0 | 5.0 |
| 24 | 13.5 | 13.0 | 10.5 | 10.5 | 6.5 | 6.5 | 4.5 | 4.0 | 4.5 | 4.0 | 5.0 | 5.0 |
| 25 | 13.5 | 13.0 | 10.5 | 10.0 | 6.5 | 6.5 | 4.5 | 4.0 | 4.5 | 4.0 | 5.5 | 5.0 |
| 26 | 13.0 | 12.5 | 10.0 | 9.0 | 6.5 | 6.5 | 4.5 | 4.0 | 4.5 | 4.0 | 5.5 | 5.0 |
| 27 | 13.0 | 13.0 | 9.5 | 9.0 | 6.5 | 6.5 | 4.0 | 4.0 | 4.5 | 4.5 | 5.5 | 5.0 |
| 28 | 13.0 | 13.0 | 9.0 | 9.0 | 6.5 | 6.0 | 4.0 | 4.0 | 4.5 | 4.5 | 5.0 | 4.5 |
| 29 | 13.0 | 13.0 | 9.0 | 9.0 | 6.5 | 6.0 | 4.0 | 4.0 | --- | --- | 5.5 | 5.0 |
| 30 | 13.0 | 12.5 | 9.0 | 8.5 | 6.0 | 6.0 | 4.0 | 4.0 | --- | --- | 5.5 | 5.0 |
| 31 | 13.0 | 12.5 | --- | --- | 6.0 | 6.0 | 4.0 | 4.0 | --- | --- | 5.5 | 5.0 |
| MONTH | 14.0 | 12.5 | 13.0 | 8.5 | 8.5 | 6.0 | 6.0 | 4.0 | 4.5 | 4.0 | 5.5 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 5.5 | 5.0 | 8.0 | 7.0 | 6.5 | 6.0 | 8.0 | 7.5 | 9.0 | 8.5 | 10.5 | 10.0 |
| 2 | 6.0 | 5.5 | 7.5 | 7.0 | 6.5 | 6.0 | 8.0 | 7.5 | 9.0 | 8.5 | 10.0 | 9.5 |
| 3 | 6.0 | 5.5 | 7.0 | 6.5 | 6.5 | 6.5 | 7.5 | 7.5 | 9.0 | 8.5 | 10.0 | 9.5 |
| 4 | 6.5 | 5.5 | 6.5 | 6.5 | 6.5 | 6.0 | 7.5 | 7.5 | 8.5 | 8.5 | 10.0 | 9.5 |
| 5 | 6.5 | 6.0 | 6.5 | 6.5 | 7.0 | 6.5 | 7.5 | 7.5 | 9.0 | 8.5 | 10.5 | 10.0 |
| 6 | 7.0 | 6.0 | 7.0 | 6.5 | 7.5 | 7.0 | 8.0 | 7.5 | 9.0 | 8.5 | 10.5 | 10.0 |
| 7 | 7.0 | 6.5 | 7.0 | 6.5 | 7.0 | 7.0 | 8.5 | 7.5 | 9.0 | 8.5 | 10.5 | 10.0 |
| 8 | 6.5 | 6.5 | 7.5 | 6.5 | 7.0 | 7.0 | 8.0 | 8.0 | 9.0 | 8.5 | 10.5 | 10.0 |
| 9 | 6.5 | 6.5 | 8.0 | 7.0 | 7.5 | 7.0 | 8.5 | 8.0 | 9.5 | 8.5 | 10.5 | 10.0 |
| 10 | 7.0 | 6.5 | 7.0 | 6.5 | 7.0 | 7.0 | 8.0 | 7.5 | 9.5 | 9.0 | 10.0 | 10.0 |
| 11 | 7.0 | 6.5 | 7.0 | 6.5 | 7.5 | 7.0 | 8.5 | 7.5 | 9.5 | 9.0 | 10.5 | 10.0 |
| 12 | 7.5 | 6.5 | 7.0 | 6.5 | 7.5 | 7.0 | 8.5 | 8.0 | 10.0 | 9.0 | 10.5 | 10.5 |
| 13 | 6.5 | 6.5 | 7.0 | 6.5 | 7.5 | 7.0 | 8.5 | 7.5 | 9.5 | 8.5 | 11.0 | 10.0 |
| 14 | 7.0 | 6.0 | 7.0 | 6.5 | 8.0 | 7.0 | 8.5 | 7.5 | 9.0 | 8.5 | 11.0 | 10.5 |
| 15 | 7.0 | 6.5 | 7.0 | 6.5 | 8.0 | 7.5 | 9.0 | 8.0 | 9.0 | 8.5 | 11.0 | 10.5 |
| 16 | 6.5 | 6.0 | 6.5 | 6.5 | 8.5 | 7.5 | 8.5 | 8.0 | 8.5 | 8.5 | 11.0 | 10.5 |
| 17 | 7.0 | 6.0 | 6.5 | 6.5 | 8.5 | 7.5 | 8.0 | 8.0 | 8.5 | 8.5 | 11.0 | 11.0 |
| 18 | 6.5 | 6.0 | 6.5 | 6.0 | 8.5 | 7.5 | 8.0 | 8.0 | 9.0 | 8.5 | 11.5 | 11.0 |
| 19 | 7.0 | 6.0 | 7.0 | 6.0 | 8.5 | 8.0 | 8.5 | 8.0 | 9.0 | 8.5 | 12.0 | 11.5 |
| 20 | 7.0 | 6.0 | 7.0 | 6.5 | 8.0 | 7.5 | 8.5 | 8.0 | 9.0 | 8.5 | 12.0 | 11.5 |
| 21 | 7.0 | 6.5 | 6.5 | 6.5 | 8.0 | 7.5 | 8.5 | 8.0 | 9.0 | 8.5 | 11.5 | 11.5 |
| 22 | 7.5 | 6.5 | 7.0 | 6.5 | 8.0 | 7.5 | 9.0 | 8.0 | 9.0 | 8.5 | 12.0 | 11.5 |
| 23 | 7.5 | 7.0 | 6.5 | 6.0 | 8.0 | 7.5 | 8.5 | 8.0 | 9.0 | 8.5 | 11.5 | 11.5 |
| 24 | 7.5 | 7.0 | 6.5 | 6.0 | 8.5 | 7.5 | 8.0 | 7.5 | 9.0 | 8.5 | 12.0 | 11.5 |
| 25 | 7.5 | 6.5 | 6.5 | 6.0 | 8.0 | 7.5 | 8.0 | 8.0 | 9.0 | 8.5 | 12.0 | 11.5 |
| 26 | 7.5 | 7.0 | 6.5 | 6.0 | 8.5 | 8.0 | 8.5 | 8.0 | 9.5 | 9.0 | 12.0 | 11.5 |
| 27 | 8.0 | 7.0 | 6.5 | 6.0 | 8.0 | 8.0 | 8.5 | 8.0 | 9.5 | 9.0 | 12.0 | 11.5 |
| 28 | 8.0 | 7.0 | 6.5 | 6.0 | 8.5 | 8.0 | 9.0 | 8.5 | 9.5 | 9.5 | 12.5 | 12.0 |
| 29 | 8.0 | 7.0 | 6.5 | 6.0 | 8.5 | 8.0 | 8.5 | 8.0 | 10.0 | 9.5 | 12.5 | 12.0 |
| 30 | 8.5 | 7.5 | 6.5 | 6.0 | 9.0 | 8.0 | 8.5 | 8.5 | 10.5 | 9.0 | 12.5 | 12.0 |
| 31 | --- | --- | 6.5 | 6.5 | --- | --- | 9.0 | 8.5 | 10.5 | 10.0 | --- | --- |
| MONTH | 8.5 | 5.0 | 8.0 | 6.0 | 9.0 | 6.0 | 9.5 | 7.5 | 10.5 | 8.5 | 12.5 | 9.5 |

WILLAMETTE RIVER BASIN

14181900 LITTLE NORTH SANTIAM RIVER ABOVE EVANS CREEK, NEAR GATES, OR

LOCATION.--Lat 44°45'06", long 122°21'23", in SW 1/4 sec.22, T.8 S., R.4 E., Marion County, Hydrologic Unit 17090005, and at mile 16.1 (25.9 km).

DRAINAGE AREA.--53.1 mi² (137.5 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDIMENT DIS- CHARGE (MG/L) | SUS- PENDE SEDIMENT DIS- CHARGE (T/DAY) |
|--------------|------|---|---|--|
| JAN 05... | 1400 | 119 | 1 | .32 |
| FEB 16... | 1400 | 76 | 4 | .82 |
| MAR 29... | 1500 | 442 | 4 | 4.8 |
| MAY 12... | 1530 | 531 | 4 | 5.7 |
| JUL 12... | 1500 | 36 | 3 | .29 |

14182500 LITTLE NORTH SANTIAM RIVER NEAR MEHAMA, OR

LOCATION.--Lat 44°47'30", long 122°34'40", in NW¼ sec.16, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on left bank 2.0 mi (3.2 km) east of Mehama and at mile 2.0 (3.2 km).

DRAINAGE AREA.--112 mi² (290 km²) at cableway 1.2 mi (1.9 km) downstream where all discharge measurements are made.

PERIOD OF RECORD.--October 1931 to current year. Records for July to September 1924 and July to September 1931 at site 4 mi (6.4 km) upstream not equivalent owing to difference in drainage areas.

REVISED RECORDS.--WSP 754: 1932. WSP 1218: 1934, 1936, 1949-50. WSP 1935: Maximum only, 1932-34, 1936, 1938, 1943, 1945-49, 1950(M,P), 1951-53(M), 1954(M,P), 1955(M), 1956(M,P), 1957(M), 1958-59(M,P). WSP 2135: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 655.41 ft (199.769 m) above mean sea level. Prior to June 12, 1948, nonrecording gage at about same site and datum.

REMARKS.--Records good. No regulation or diversion above station. Records herein are for measuring site.

AVERAGE DISCHARGE.--46 years, 776 ft³/s (21.98 m³/s), 94.09 in/yr (2,390 mm/yr), 562,200 acre-ft/yr (693 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft³/s (1,020 m³/s) Dec. 22, 1964, gage height, 16.73 ft (5.099 m), from rating curve extended above 17,000 ft³/s (481 m³/s); minimum, 13 ft³/s (0.37 m³/s) Aug. 30, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,180 ft³/s (90.1 m³/s) Feb. 28, no peak above base of 8,200 ft³/s (232 m³/s); minimum, 32 ft³/s (0.91 m³/s) Aug. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|-------|----------|----------|--------|-----------|----------|--------------|------|------|-------|
| 1 | 40 | 1100 | 99 | 239 | 139 | 1580 | 882 | 773 | 630 | 97 | 41 | 243 |
| 2 | 44 | 485 | 94 | 260 | 126 | 1120 | 898 | 1510 | 563 | 94 | 40 | 170 |
| 3 | 57 | 327 | 90 | 249 | 119 | 1080 | 760 | 2290 | 525 | 94 | 39 | 175 |
| 4 | 49 | 243 | 85 | 236 | 113 | 828 | 866 | 1860 | 1340 | 103 | 39 | 270 |
| 5 | 44 | 192 | 83 | 204 | 109 | 715 | 1290 | 1490 | 1200 | 95 | 39 | 410 |
| 6 | 42 | 162 | 76 | 186 | 107 | 786 | 1770 | 1150 | 914 | 94 | 39 | 289 |
| 7 | 40 | 139 | 76 | 178 | 103 | 1520 | 2000 | 964 | 740 | 85 | 39 | 210 |
| 8 | 39 | 124 | 92 | 167 | 99 | 2140 | 1980 | 843 | 607 | 80 | 39 | 167 |
| 9 | 39 | 111 | 157 | 154 | 95 | 1820 | 1410 | 843 | 500 | 78 | 38 | 139 |
| 10 | 40 | 101 | 124 | 149 | 103 | 1280 | 981 | 1200 | 433 | 76 | 37 | 121 |
| 11 | 42 | 94 | 111 | 149 | 121 | 981 | 800 | 1300 | 384 | 73 | 36 | 107 |
| 12 | 41 | 88 | 109 | 195 | 119 | 1110 | 766 | 930 | 346 | 70 | 35 | 95 |
| 13 | 39 | 83 | 107 | 753 | 162 | 930 | 914 | 747 | 311 | 70 | 34 | 88 |
| 14 | 38 | 85 | 101 | 672 | 170 | 760 | 851 | 678 | 285 | 67 | 34 | 81 |
| 15 | 38 | 233 | 95 | 500 | 149 | 642 | 721 | 747 | 260 | 64 | 34 | 78 |
| 16 | 37 | 740 | 95 | 456 | 137 | 568 | 760 | 773 | 239 | 61 | 34 | 75 |
| 17 | 37 | 451 | 94 | 405 | 128 | 510 | 678 | 1560 | 220 | 60 | 34 | 71 |
| 18 | 36 | 624 | 97 | 371 | 119 | 552 | 585 | 1420 | 207 | 67 | 32 | 73 |
| 19 | 36 | 433 | 92 | 354 | 113 | 728 | 510 | 1020 | 192 | 67 | 32 | 90 |
| 20 | 36 | 327 | 86 | 319 | 111 | 760 | 470 | 858 | 184 | 60 | 33 | 281 |
| 21 | 36 | 260 | 83 | 285 | 132 | 648 | 475 | 813 | 181 | 57 | 34 | 563 |
| 22 | 36 | 217 | 81 | 253 | 246 | 684 | 510 | 760 | 167 | 54 | 34 | 490 |
| 23 | 36 | 186 | 92 | 226 | 256 | 922 | 678 | 672 | 154 | 52 | 34 | 475 |
| 24 | 41 | 164 | 99 | 204 | 246 | 806 | 874 | 636 | 142 | 50 | 57 | 1420 |
| 25 | 359 | 154 | 105 | 189 | 267 | 678 | 1030 | 563 | 135 | 49 | 73 | 981 |
| 26 | 397 | 139 | 568 | 175 | 359 | 596 | 914 | 709 | 128 | 49 | 132 | 684 |
| 27 | 195 | 126 | 1270 | 162 | 760 | 1680 | 703 | 740 | 119 | 47 | 99 | 480 |
| 28 | 135 | 117 | 648 | 151 | 2570 | 1260 | 672 | 786 | 113 | 46 | 117 | 446 |
| 29 | 113 | 111 | 442 | 142 | --- | 939 | 678 | 703 | 107 | 46 | 423 | 495 |
| 30 | 97 | 105 | 342 | 135 | --- | 793 | 696 | 613 | 103 | 44 | 858 | 728 |
| 31 | 189 | --- | 281 | 139 | --- | 721 | --- | 568 | --- | 43 | 428 | --- |
| TOTAL | 2448 | 7721 | 5974 | 8257 | 7278 | 30137 | 27122 | 30519 | 11429 | 2092 | 3017 | 9995 |
| MEAN | 79.0 | 257 | 193 | 266 | 260 | 972 | 904 | 984 | 381 | 67.5 | 97.3 | 333 |
| MAX | 397 | 1100 | 1270 | 753 | 2570 | 2140 | 2000 | 2290 | 1340 | 103 | 858 | 1420 |
| MIN | 36 | 83 | 76 | 135 | 95 | 510 | 470 | 563 | 103 | 43 | 32 | 71 |
| CFSM | .71 | 2.30 | 1.72 | 2.38 | 2.32 | 8.68 | 8.07 | 8.79 | 3.40 | .60 | .87 | 2.97 |
| IN. | .81 | 2.56 | 1.98 | 2.74 | 2.42 | 10.01 | 9.01 | 10.14 | 3.80 | .69 | 1.00 | 3.32 |
| AC-FT | 4860 | 15310 | 11850 | 16380 | 14440 | 59780 | 53800 | 60530 | 22670 | 4150 | 5980 | 19830 |
| CAL YR 1976 TOTAL | 212548 | | | MEAN 581 | MAX 8660 | MIN 36 | CFSM 5.19 | IN 70.60 | AC-FT 421600 | | | |
| WTR YR 1977 TOTAL | 145989 | | | MEAN 400 | MAX 2570 | MIN 32 | CFSM 3.57 | IN 48.49 | AC-FT 289600 | | | |

WILLAMETTE RIVER BASIN

14183000 NORTH SANTIAM RIVER AT MEHAMA, OR

LOCATION.--Lat 44°47'20", long 122°37'00", in NW¼ sec.18, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on right bank 300 ft (91 m) downstream from highway bridge at Mehama, 0.5 mi (0.8 km) downstream from Little North Santiam River, and at mile 38.71 (62.28 km).

DRAINAGE AREA.--655 mi² (1,696 km²), at cableway 0.8 mi (1.3 km) downstream, where all discharge measurements are made.

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to September 1914, September 1921 to current year. Monthly discharge only September 1921, published in WSP 1318. Prior to October 1913, published as North Fork of Santiam River at Mehama.

REVISED RECORDS.--WSP 739: 1922-23(M). WSP 1044: 1943. WSP 1248: 1906, 1911-14, 1924(M), 1926, 1934-36(M), 1937, 1938(M), 1942(M). WSP 2135: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 602.49 ft (183.639 m) above mean sea level. Prior to June 15, 1933, nonrecording gage at site 100 ft (30 m) upstream at same datum.

REMARKS.--Records excellent. Flow regulated since 1953 by Detroit Lake (see station 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft (3.61 km³). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--61 years (water years 1906, 1911-14, 1922-77), 3,372 ft³/s (95.50 m³/s), 2,443,000 acre-ft/yr (3.01 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,600 ft³/s (2,170 m³/s) Dec. 28, 1945, gage height, 15.37 ft (4.685 m), from rating curve extended above 36,000 ft³/s (1,020 m³/s), on basis of slope-area measurement of peak flow; maximum gage height, 17.5 ft (5.33 m) Nov. 20, 1921, from graph based on gage readings, and Jan. 6, 1923, from floodmark, at site then in use; minimum discharge, 254 ft³/s (7.19 m³/s) Aug. 3, 1970; minimum daily, 420 ft³/s (11.9 m³/s) Sept. 18, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,730 ft³/s (134 m³/s) Feb. 28, gage height, 4.83 ft (1.472 m); minimum, 808 ft³/s (22.9 m³/s) Feb. 15; minimum daily, 851 ft³/s (24.1 m³/s) Feb. 4, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|---------|-------|-------|-------|--------|-------|--------|--------|---------|-------|--------|
| 1 | 2440 | 3420 | 1130 | 1250 | 894 | 2740 | 1730 | 1500 | 2740 | 1850 | 1060 | 1820 |
| 2 | 2080 | 3420 | 1040 | 1280 | 885 | 2140 | 1760 | 2330 | 2540 | 1470 | 1060 | 1910 |
| 3 | 2050 | 2620 | 1040 | 1270 | 868 | 2140 | 1570 | 3500 | 2470 | 1110 | 1050 | 1240 |
| 4 | 2020 | 1890 | 1010 | 1250 | 851 | 1780 | 1610 | 3070 | 3500 | 1170 | 1040 | 1270 |
| 5 | 1980 | 2170 | 1060 | 1200 | 859 | 1590 | 2020 | 2640 | 3710 | 1190 | 1080 | 1920 |
| 6 | 1980 | 2280 | 1010 | 1180 | 859 | 1660 | 2560 | 2220 | 3670 | 1150 | 1060 | 2070 |
| 7 | 2070 | 2200 | 1040 | 1160 | 851 | 2710 | 2890 | 1940 | 3620 | 1130 | 1060 | 1320 |
| 8 | 2050 | 2310 | 1100 | 1140 | 868 | 3620 | 2920 | 1760 | 2980 | 1110 | 1070 | 1700 |
| 9 | 2070 | 2300 | 1180 | 1140 | 859 | 3380 | 2310 | 1760 | 2330 | 1110 | 1050 | 1860 |
| 10 | 2020 | 2220 | 1110 | 1120 | 868 | 2570 | 1820 | 2220 | 2330 | 1110 | 1070 | 1320 |
| 11 | 2050 | 2420 | 1090 | 1130 | 877 | 2110 | 1600 | 2410 | 2080 | 1110 | 1060 | 1500 |
| 12 | 2070 | 2100 | 1090 | 1190 | 877 | 2370 | 1520 | 2050 | 2070 | 1140 | 1060 | 2010 |
| 13 | 2110 | 2740 | 1090 | 1770 | 912 | 2080 | 1690 | 1800 | 1770 | 1110 | 1050 | 2280 |
| 14 | 2020 | 2800 | 1090 | 1700 | 921 | 1800 | 1610 | 1660 | 1450 | 1090 | 1340 | 1590 |
| 15 | 2070 | 2940 | 1080 | 1520 | 894 | 1590 | 1460 | 1810 | 1560 | 1080 | 1940 | 1980 |
| 16 | 2100 | 3770 | 1070 | 1460 | 885 | 1450 | 1540 | 1840 | 1410 | 1090 | 2130 | 2370 |
| 17 | 2070 | 3340 | 1070 | 1390 | 877 | 1350 | 1410 | 3190 | 1380 | 1100 | 1560 | 1520 |
| 18 | 2070 | 3420 | 1070 | 1360 | 868 | 1520 | 1310 | 3030 | 1320 | 1110 | 1920 | 1550 |
| 19 | 2140 | 3380 | 1060 | 1370 | 859 | 1590 | 1190 | 2460 | 1340 | 1110 | 2190 | 2070 |
| 20 | 1990 | 3220 | 1050 | 1310 | 859 | 1620 | 1140 | 2410 | 1310 | 1090 | 1290 | 2490 |
| 21 | 2140 | 3130 | 1050 | 1260 | 912 | 1470 | 1140 | 2330 | 1300 | 1080 | 1400 | 2200 |
| 22 | 2160 | 3150 | 1040 | 1240 | 1040 | 1470 | 1180 | 2220 | 1310 | 1450 | 1890 | 2490 |
| 23 | 2110 | 3130 | 1080 | 1220 | 1060 | 1740 | 1360 | 2100 | 1320 | 1780 | 2190 | 2760 |
| 24 | 2130 | 2340 | 1100 | 1200 | 1070 | 1570 | 1570 | 2020 | 1270 | 1360 | 1650 | 3770 |
| 25 | 2490 | 1620 | 1100 | 1110 | 1070 | 1390 | 1760 | 1890 | 1250 | 1100 | 1780 | 3360 |
| 26 | 2570 | 1380 | 1590 | 921 | 1170 | 1290 | 1650 | 2230 | 1260 | 1070 | 1920 | 2980 |
| 27 | 2360 | 1340 | 2330 | 921 | 1600 | 2470 | 1410 | 2690 | 1230 | 1100 | 1160 | 3110 |
| 28 | 2250 | 1350 | 1770 | 903 | 3920 | 2190 | 1360 | 3170 | 1200 | 1070 | 1230 | 3520 |
| 29 | 2230 | 1400 | 1500 | 877 | --- | 1860 | 1360 | 3070 | 1150 | 1060 | 1820 | 3650 |
| 30 | 2220 | 1250 | 1350 | 868 | --- | 1650 | 1370 | 2920 | 1490 | 1070 | 2620 | 3990 |
| 31 | 2200 | --- | 1280 | 877 | --- | 1550 | --- | 2890 | --- | 1060 | 1520 | --- |
| TOTAL | 66310 | 75050 | 36670 | 37587 | 29333 | 60460 | 49820 | 73130 | 58360 | 36630 | 45320 | 67620 |
| MEAN | 2139 | 2502 | 1183 | 1212 | 1048 | 1950 | 1661 | 2359 | 1945 | 1182 | 1462 | 2254 |
| MAX | 2570 | 3770 | 2330 | 1770 | 3920 | 3620 | 2920 | 3500 | 3710 | 1850 | 2620 | 3990 |
| MIN | 1980 | 1250 | 1010 | 868 | 851 | 1290 | 1140 | 1500 | 1150 | 1060 | 1040 | 1240 |
| AC-FT | 131500 | 148900 | 72730 | 74550 | 58180 | 119900 | 98820 | 145100 | 115800 | 72660 | 89890 | 134100 |
| CAL YR 1976 | TOTAL | 1066540 | MEAN | 2914 | MAX | 13400 | MIN | 1010 | AC-FT | 2115000 | | |
| WTR YR 1977 | TOTAL | 636290 | MEAN | 1743 | MAX | 3990 | MIN | 851 | AC-FT | 1262000 | | |

WILLAMETTE RIVER BASIN

325

14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR

LOCATION.--Lat 44°23'35", long 122°30'35", in SE¼ sec.36, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, on right bank 100 ft (30 m) downstream from bridge at Cascadia ranger station, 0.5 mi (0.8 km) downstream from Mouse Creek, 0.5 mi (0.8 km) upstream from Deer Creek, 1.5 mi (2.4 km) southwest of Cascadia, and at mile 48.5 (78.0 km).

DRAINAGE AREA.--174 mi² (451 km²), at gaging cable 0.7 mi (1.1 km) upstream.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1935 to current year. Monthly discharge only September 1935, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 759.88 ft (231.611 m) above mean sea level. Prior to Nov. 1, 1935, nonrecording gage.

REMARKS.--Water-discharge records good. No regulation or diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--42 years, 826 ft³/s (23.39 m³/s), 64.47 in/yr (1,638 mm/yr), 598,400 acre-ft/yr (738 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft³/s (782 m³/s) Dec. 22, 1964, gage height, 19.68 ft (5.998 m), from rating curve extended above 14,000 ft³/s (396 m³/s); minimum, 23 ft³/s (0.65 m³/s) Dec. 1, 2, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,690 ft³/s (76.18 m³/s) Mar. 8, gage height, 6.16 ft (1.878 m), no peak above base of 5,700 ft³/s (161 m³/s); minimum, 46 ft³/s (1.30 m³/s) Aug. 18-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|------|-------|--------|-----------|----------|-------|--------|------|------|
| 1 | 69 | 274 | 69 | 95 | 84 | 956 | 1350 | 1070 | 867 | 150 | 64 | 101 |
| 2 | 72 | 240 | 66 | 123 | 77 | 723 | 1160 | 1550 | 729 | 143 | 63 | 86 |
| 3 | 81 | 171 | 64 | 124 | 73 | 914 | 928 | 2160 | 664 | 140 | 61 | 79 |
| 4 | 75 | 140 | 62 | 112 | 70 | 681 | 978 | 1930 | 813 | 145 | 59 | 80 |
| 5 | 71 | 119 | 60 | 102 | 68 | 549 | 1240 | 1640 | 773 | 138 | 58 | 80 |
| 6 | 68 | 102 | 59 | 92 | 68 | 602 | 1490 | 1380 | 705 | 136 | 57 | 76 |
| 7 | 67 | 92 | 58 | 90 | 66 | 1240 | 1680 | 1140 | 635 | 126 | 56 | 71 |
| 8 | 64 | 84 | 81 | 85 | 65 | 2150 | 1880 | 942 | 549 | 119 | 55 | 67 |
| 9 | 64 | 78 | 121 | 83 | 65 | 1950 | 1520 | 873 | 482 | 114 | 53 | 63 |
| 10 | 64 | 74 | 89 | 80 | 64 | 1300 | 1140 | 1410 | 430 | 112 | 52 | 60 |
| 11 | 66 | 69 | 78 | 80 | 68 | 971 | 956 | 1500 | 390 | 105 | 50 | 58 |
| 12 | 66 | 65 | 76 | 86 | 69 | 1060 | 907 | 1190 | 365 | 102 | 48 | 58 |
| 13 | 64 | 61 | 72 | 171 | 80 | 860 | 1010 | 971 | 338 | 101 | 47 | 56 |
| 14 | 62 | 67 | 68 | 185 | 79 | 681 | 914 | 887 | 314 | 98 | 48 | 54 |
| 15 | 61 | 207 | 66 | 152 | 74 | 565 | 819 | 935 | 295 | 95 | 50 | 54 |
| 16 | 61 | 232 | 66 | 140 | 70 | 492 | 853 | 1060 | 280 | 90 | 49 | 54 |
| 17 | 60 | 173 | 65 | 132 | 67 | 444 | 748 | 2070 | 265 | 86 | 47 | 54 |
| 18 | 59 | 199 | 64 | 130 | 65 | 467 | 664 | 1800 | 251 | 89 | 46 | 57 |
| 19 | 58 | 160 | 61 | 128 | 63 | 619 | 591 | 1340 | 243 | 90 | 46 | 71 |
| 20 | 58 | 138 | 58 | 123 | 63 | 681 | 565 | 1120 | 235 | 85 | 46 | 99 |
| 21 | 59 | 121 | 57 | 117 | 86 | 581 | 565 | 1030 | 237 | 83 | 46 | 114 |
| 22 | 59 | 109 | 55 | 110 | 143 | 624 | 591 | 935 | 222 | 81 | 48 | 115 |
| 23 | 59 | 101 | 64 | 104 | 140 | 813 | 681 | 1030 | 211 | 80 | 49 | 152 |
| 24 | 68 | 93 | 63 | 98 | 123 | 767 | 833 | 985 | 197 | 81 | 107 | 528 |
| 25 | 289 | 92 | 70 | 93 | 117 | 681 | 1010 | 839 | 192 | 80 | 90 | 361 |
| 26 | 227 | 85 | 150 | 89 | 183 | 591 | 978 | 1080 | 183 | 80 | 99 | 295 |
| 27 | 140 | 79 | 192 | 85 | 292 | 1280 | 839 | 1130 | 173 | 76 | 85 | 232 |
| 28 | 109 | 75 | 152 | 81 | 1170 | 1200 | 793 | 1230 | 169 | 75 | 73 | 271 |
| 29 | 96 | 74 | 130 | 78 | --- | 985 | 767 | 1060 | 160 | 73 | 132 | 283 |
| 30 | 88 | 71 | 114 | 76 | --- | 833 | 914 | 887 | 156 | 70 | 209 | 472 |
| 31 | 89 | --- | 102 | 80 | --- | 793 | --- | 780 | --- | 68 | 138 | --- |
| TOTAL | 2593 | 3645 | 2552 | 3324 | 3652 | 27053 | 29364 | 37954 | 11523 | 3111 | 2131 | 4201 |
| MEAN | 83.6 | 122 | 82.3 | 107 | 130 | 873 | 979 | 1224 | 384 | 100 | 68.7 | 140 |
| MAX | 289 | 274 | 192 | 185 | 1170 | 2150 | 1880 | 2160 | 867 | 150 | 209 | 528 |
| MIN | 58 | 61 | 55 | 76 | 63 | 444 | 565 | 780 | 156 | 68 | 46 | 54 |
| CFSM | .48 | .70 | .47 | .62 | .75 | 5.02 | 5.63 | 7.03 | 2.21 | .58 | .40 | .81 |
| IN. | .55 | .78 | .55 | .71 | .78 | 5.78 | 6.28 | 8.11 | 2.46 | .67 | .46 | .90 |
| AC-FT | 5140 | 7230 | 5060 | 6590 | 7240 | 53660 | 58240 | 75280 | 22860 | 6170 | 4230 | 8330 |
| CAL YR 1976 | TOTAL | 225050 | MEAN 615 | MAX | 11100 | MIN 55 | CFSM 3.53 | IN 48.11 | AC-FT | 446400 | | |
| WTR YR 1977 | TOTAL | 131103 | MEAN 359 | MAX | 2160 | MIN 46 | CFSM 2.06 | IN 28.03 | AC-FT | 260000 | | |

WILLAMETTE RIVER BASIN

14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1962 to July 1967, February 1969 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.0°C July 30, Aug. 7, 1965; minimum, 0.0°C Dec. 7-16, 1972, Jan. 8, 9, 1973, Jan. 6, 7, 1974, Feb. 6, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 24.5°C Aug. 11, 12, 16; minimum, 0.5°C Jan. 6-10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDIM- ENT DIS- CHARGE (MG/L) | SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) |
|--------------|------|---|--|---|
| OCT 05... | 1330 | 70 | 5 | .94 |
| NOV 17... | 1200 | 243 | 23 | 15 |
| DEC 22... | 1010 | 58 | 1 | .16 |
| FEB 09... | 1000 | 105 | 4 | 1.1 |
| MAR 30... | 0930 | 839 | 8 | 18 |
| MAY 02... | 1445 | 1570 | 4 | 17 |
| 11... | 1400 | 1540 | 10 | 42 |
| JUN 22... | 1015 | 224 | 4 | 2.4 |
| AUG 02... | 1030 | 77 | 6 | 1.2 |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 15.5 | 14.5 | 10.5 | 10.0 | 3.5 | 3.0 | 3.5 | 2.5 | 4.5 | 3.5 | 5.5 | 4.0 |
| 2 | 15.0 | 14.0 | 11.0 | 10.0 | 3.5 | 3.0 | 4.5 | 3.5 | 3.5 | 3.0 | 5.5 | 5.0 |
| 3 | 14.0 | 12.5 | 11.0 | 9.5 | 3.5 | 3.0 | 4.5 | 4.0 | 3.0 | 2.5 | 6.0 | 5.0 |
| 4 | 12.0 | 10.5 | 10.0 | 9.0 | 4.5 | 3.5 | 4.0 | 4.0 | 3.5 | 2.5 | 6.5 | 5.0 |
| 5 | 11.5 | 10.0 | 9.0 | 9.0 | 5.0 | 4.0 | 4.0 | 1.5 | 4.0 | 3.0 | 6.5 | 4.5 |
| 6 | 12.5 | 10.5 | 9.5 | 8.5 | 4.5 | 4.0 | 1.5 | 0.5 | 4.5 | 4.0 | 6.5 | 5.0 |
| 7 | 13.5 | 11.5 | 9.5 | 9.0 | 4.5 | 4.0 | 1.0 | 0.5 | 4.5 | 4.0 | 6.5 | 5.5 |
| 8 | 14.0 | 12.0 | 10.5 | 9.0 | 5.5 | 4.5 | 0.5 | 0.5 | 5.0 | 4.0 | 6.5 | 5.5 |
| 9 | 13.0 | 11.5 | 10.0 | 9.0 | 5.5 | 5.0 | 0.5 | 0.5 | 5.0 | 4.5 | 6.0 | 4.5 |
| 10 | 13.0 | 11.5 | 9.0 | 8.0 | 5.0 | 3.5 | 2.0 | 0.5 | 6.5 | 5.0 | 6.0 | 4.5 |
| 11 | 13.5 | 12.0 | 9.0 | 8.5 | 3.5 | 3.5 | 3.5 | 2.0 | 6.5 | 6.0 | 7.0 | 4.5 |
| 12 | 13.0 | 11.0 | 8.5 | 7.0 | 3.5 | 3.0 | 4.0 | 3.5 | 7.5 | 6.5 | 6.0 | 4.5 |
| 13 | 12.0 | 10.5 | 7.0 | 6.5 | 3.5 | 3.0 | 4.5 | 4.0 | 8.0 | 7.0 | 5.5 | 4.5 |
| 14 | 11.5 | 10.0 | 8.5 | 7.0 | 4.0 | 3.0 | 4.5 | 3.5 | 7.5 | 5.5 | 5.5 | 4.0 |
| 15 | 11.5 | 9.5 | 10.0 | 8.5 | 5.0 | 4.5 | 5.0 | 4.0 | 6.0 | 5.5 | 6.0 | 4.0 |
| 16 | 10.5 | 9.0 | 10.5 | 10.0 | 5.0 | 4.5 | 5.0 | 4.5 | 6.5 | 5.5 | 5.5 | 4.0 |
| 17 | 9.5 | 8.0 | --- | --- | 5.0 | 4.5 | 5.0 | 4.5 | 7.0 | 6.5 | 5.5 | 4.5 |
| 18 | 9.0 | 7.5 | --- | --- | 4.5 | 4.0 | 5.5 | 5.0 | 6.5 | 5.5 | 5.5 | 5.0 |
| 19 | 9.0 | 7.0 | 10.0 | 8.0 | 4.0 | 2.5 | 5.5 | 4.5 | 6.0 | 5.0 | 6.5 | 5.5 |
| 20 | 8.5 | 7.0 | 7.5 | 6.5 | 2.5 | 2.0 | 4.5 | 4.0 | 6.5 | 5.5 | 6.5 | 5.0 |
| 21 | 8.5 | 7.0 | 8.5 | 7.5 | 2.0 | 1.5 | 5.5 | 4.5 | 6.5 | 6.0 | 7.5 | 4.5 |
| 22 | 8.5 | 7.0 | 9.0 | 8.5 | 2.5 | 2.0 | 5.0 | 4.0 | 6.0 | 5.5 | 8.0 | 5.0 |
| 23 | 8.5 | 7.0 | 8.5 | 6.5 | 4.0 | 2.5 | 4.0 | 3.0 | 5.5 | 4.5 | 7.5 | 5.5 |
| 24 | 8.0 | 7.0 | 7.0 | 6.5 | 4.0 | 3.5 | 3.0 | 2.0 | 5.0 | 4.0 | 6.5 | 5.0 |
| 25 | 9.5 | 8.0 | 8.0 | 7.0 | 4.5 | 4.0 | 2.5 | 2.0 | 5.5 | 4.0 | 7.0 | 5.5 |
| 26 | 9.5 | 8.5 | 7.0 | 4.5 | 6.0 | 4.5 | 2.0 | 1.5 | 6.0 | 4.0 | 6.5 | 5.5 |
| 27 | 8.5 | 7.0 | 4.5 | 3.0 | 6.0 | 5.0 | 2.0 | 1.5 | 7.0 | 6.0 | 6.5 | 4.5 |
| 28 | 8.0 | 7.0 | 3.0 | 2.5 | 5.0 | 4.0 | 2.0 | 1.5 | 6.5 | 5.0 | 5.5 | 4.0 |
| 29 | 9.0 | 8.0 | 3.5 | 2.5 | 5.0 | 4.0 | 2.0 | 1.5 | --- | --- | 6.5 | 4.5 |
| 30 | 9.5 | 9.0 | 3.5 | 3.0 | 5.0 | 3.5 | 2.0 | 1.5 | --- | --- | 7.0 | 5.0 |
| 31 | 10.0 | 9.0 | --- | --- | 3.5 | 2.5 | 4.0 | 2.5 | --- | --- | 5.5 | 5.0 |
| MONTH | 15.5 | 7.0 | 11.0 | 2.5 | 6.0 | 1.5 | 5.5 | 0.5 | 8.0 | 2.5 | 8.0 | 4.0 |

WILLAMETTE RIVER BASIN

327

14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 6.5 | 5.5 | --- | --- | 11.5 | 10.0 | 19.0 | 16.5 | --- | --- | 15.5 | 13.0 |
| 2 | 7.5 | 5.5 | --- | --- | 11.5 | 8.0 | 18.0 | 15.5 | 23.5 | 20.0 | 15.5 | 14.0 |
| 3 | 8.5 | 5.0 | --- | --- | 11.0 | 9.5 | 16.5 | 14.5 | 24.0 | 20.0 | 16.0 | 15.0 |
| 4 | 9.0 | 5.5 | --- | --- | 12.0 | 9.5 | 14.5 | 13.5 | 23.5 | 19.5 | 17.0 | 16.0 |
| 5 | 9.0 | 6.0 | --- | --- | 15.0 | 10.0 | 14.5 | 13.0 | 23.0 | 19.0 | 17.5 | 16.0 |
| 6 | 9.5 | 6.0 | --- | --- | 15.5 | 12.0 | 17.0 | 13.0 | 23.5 | 19.5 | 17.5 | 15.5 |
| 7 | --- | --- | --- | --- | 15.5 | 13.0 | 18.0 | 14.5 | 23.5 | 19.5 | 17.0 | 15.5 |
| 8 | --- | --- | --- | --- | 15.0 | 11.5 | 18.5 | 15.5 | 23.5 | 19.5 | 16.5 | 14.5 |
| 9 | --- | --- | --- | --- | 14.5 | 10.5 | 17.0 | 15.0 | 23.5 | 19.0 | 16.0 | 13.5 |
| 10 | --- | --- | --- | --- | 14.5 | 11.0 | 18.0 | 14.0 | 24.0 | 19.0 | 16.0 | 13.5 |
| 11 | --- | --- | 9.0 | 7.0 | 13.5 | 11.5 | 19.0 | 15.5 | 24.5 | 19.5 | 16.5 | 13.5 |
| 12 | --- | --- | 10.0 | 6.5 | 15.0 | 11.5 | 18.0 | 15.5 | 24.5 | 20.0 | 17.0 | 13.5 |
| 13 | --- | --- | 10.5 | 8.0 | 15.5 | 11.5 | 17.5 | 14.0 | 24.0 | 20.0 | 17.0 | 14.0 |
| 14 | --- | --- | 9.5 | 8.0 | 15.5 | 12.0 | 18.5 | 15.0 | 23.0 | 19.5 | 15.5 | 14.5 |
| 15 | --- | --- | 8.5 | 7.0 | 15.5 | 12.0 | 19.5 | 16.5 | 23.0 | 18.5 | 15.0 | 13.5 |
| 16 | --- | --- | 8.5 | 6.5 | 16.0 | 12.5 | 20.0 | 17.0 | 24.5 | 19.5 | 14.5 | 13.0 |
| 17 | --- | --- | 8.0 | 7.0 | 16.0 | 13.5 | 19.5 | 17.5 | 24.0 | 20.0 | 14.0 | 13.0 |
| 18 | --- | --- | 8.5 | 7.0 | 16.5 | 14.0 | 18.0 | 16.0 | 23.5 | 20.0 | 14.0 | 13.5 |
| 19 | --- | --- | 11.0 | 7.0 | 16.0 | 14.5 | 18.0 | 15.0 | 22.5 | 19.5 | 14.0 | 13.5 |
| 20 | --- | --- | 10.5 | 8.0 | 16.0 | 13.5 | 20.0 | 16.5 | 20.0 | 18.5 | 13.0 | 13.0 |
| 21 | --- | --- | 11.5 | 9.0 | 16.0 | 13.0 | 20.5 | 17.0 | 19.0 | 18.0 | 13.0 | 12.5 |
| 22 | --- | --- | 10.0 | 8.0 | 16.0 | 15.0 | 21.0 | 17.5 | 21.0 | 17.5 | 12.0 | 11.0 |
| 23 | --- | --- | 9.0 | 8.0 | 18.0 | 15.0 | --- | --- | 20.0 | 17.0 | 11.5 | 11.0 |
| 24 | --- | --- | 10.5 | 7.5 | 18.0 | 15.0 | --- | --- | 17.5 | 16.5 | 11.0 | 10.5 |
| 25 | --- | --- | 10.0 | 7.5 | 18.5 | 16.0 | --- | --- | 16.0 | 14.5 | 11.5 | 10.5 |
| 26 | --- | --- | 9.5 | 8.5 | 18.5 | 15.5 | --- | --- | 15.5 | 14.5 | 11.0 | 9.5 |
| 27 | --- | --- | 8.5 | 7.0 | 18.5 | 15.5 | --- | --- | 16.0 | 15.0 | 11.0 | 10.5 |
| 28 | --- | --- | 10.0 | 7.0 | 18.5 | 15.0 | --- | --- | 16.0 | 15.0 | 11.5 | 11.0 |
| 29 | --- | --- | 11.5 | 7.0 | 18.5 | 15.5 | --- | --- | 15.5 | 15.0 | 10.5 | 9.5 |
| 30 | --- | --- | 10.5 | 8.5 | 18.5 | 15.0 | --- | --- | 16.0 | 14.0 | 10.5 | 9.0 |
| 31 | --- | --- | 12.0 | 9.0 | --- | --- | --- | --- | 15.0 | 13.5 | --- | --- |
| MONTH | 9.5 | 5.0 | 12.0 | 6.5 | 18.5 | 8.0 | 21.0 | 13.0 | 24.5 | 13.5 | 17.5 | 9.0 |

WILLAMETTE RIVER BASIN

14185800 MIDDLE SANTIAM RIVER NEAR CASCADIA, OR

LOCATION.--Lat 44°30'55", long 122°22'15", in NE¼ sec.19, T.12 S., R.4 E., Linn County, Hydrologic Unit 17090006, on right bank 5.6 mi (9.0 km) downstream from Bear Creek, 10 mi (16 km) northeast of Cascadia, and at mile 17.5 (28.2 km).

DRAINAGE AREA.--104 mi² (269 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,040 ft (320 m), from topographic map.

REMARKS.--Water-discharge records good except those for period of no gage-height record, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 650 ft³/s (18.41 m³/s), 84.87 in/yr (2,156 mm/yr), 470,900 acre-ft/yr (581 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s (649 m³/s) Dec. 22, 1964, gage height, 15.75 ft (4.801 m), from floodmark, from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of slope-area measurement of peak flow; minimum, 28 ft³/s (0.79 m³/s) Oct. 17, 26, 27, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,480 ft³/s (41.9 m³/s) Mar. 8, gage height, 4.63 ft (1.411 m), no peak above base of 4,500 ft³/s (127 m³/s); minimum, 48 ft³/s (1.36 m³/s) Oct. 19-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|-------|------|-------|-------|-------|-------|------|------|-------|
| 1 | 60 | 356 | 93 | 154 | 136 | 720 | 750 | 700 | 634 | 142 | 78 | 162 |
| 2 | 63 | 256 | 88 | 196 | 126 | 545 | 650 | 950 | 562 | 138 | 74 | 130 |
| 3 | 73 | 185 | 87 | 185 | 120 | 495 | 550 | 1200 | 532 | 136 | 73 | 126 |
| 4 | 66 | 148 | 84 | 169 | 116 | 433 | 700 | 1000 | 750 | 142 | 88 | 126 |
| 5 | 62 | 126 | 82 | 152 | 118 | 419 | 900 | 800 | 676 | 134 | 88 | 122 |
| 6 | 60 | 112 | 79 | 136 | 118 | 472 | 1100 | 700 | 606 | 130 | 84 | 109 |
| 7 | 59 | 102 | 78 | 140 | 114 | 745 | 1300 | 600 | 545 | 126 | 79 | 98 |
| 8 | 58 | 95 | 100 | 128 | 105 | 1280 | 1100 | 550 | 479 | 122 | 79 | 90 |
| 9 | 56 | 88 | 140 | 120 | 105 | 1150 | 800 | 700 | 430 | 118 | 78 | 88 |
| 10 | 56 | 84 | 109 | 124 | 109 | 823 | 700 | 1000 | 390 | 114 | 76 | 76 |
| 11 | 58 | 79 | 102 | 122 | 116 | 666 | 500 | 850 | 359 | 112 | 74 | 69 |
| 12 | 58 | 76 | 100 | 144 | 118 | 700 | 480 | 750 | 333 | 111 | 73 | 69 |
| 13 | 55 | 73 | 96 | 256 | 152 | 593 | 600 | 700 | 310 | 111 | 71 | 66 |
| 14 | 54 | 84 | 91 | 259 | 142 | 512 | 500 | 685 | 289 | 103 | 71 | 60 |
| 15 | 52 | 320 | 90 | 224 | 130 | 452 | 480 | 681 | 271 | 102 | 69 | 59 |
| 16 | 52 | 472 | 90 | 216 | 122 | 419 | 440 | 643 | 254 | 98 | 69 | 58 |
| 17 | 51 | 304 | 90 | 211 | 116 | 390 | 400 | 823 | 240 | 96 | 66 | 59 |
| 18 | 50 | 313 | 90 | 214 | 112 | 390 | 380 | 765 | 229 | 100 | 65 | 65 |
| 19 | 50 | 248 | 84 | 214 | 109 | 487 | 360 | 676 | 216 | 100 | 62 | 80 |
| 20 | 49 | 209 | 79 | 204 | 109 | 504 | 350 | 634 | 211 | 95 | 63 | 128 |
| 21 | 49 | 180 | 78 | 194 | 138 | 460 | 400 | 643 | 209 | 93 | 63 | 209 |
| 22 | 49 | 160 | 74 | 185 | 209 | 524 | 500 | 615 | 196 | 90 | 63 | 185 |
| 23 | 49 | 146 | 82 | 173 | 189 | 643 | 600 | 666 | 187 | 88 | 62 | 289 |
| 24 | 60 | 134 | 80 | 164 | 171 | 597 | 750 | 615 | 180 | 90 | 116 | 685 |
| 25 | 268 | 132 | 91 | 156 | 178 | 541 | 900 | 554 | 173 | 87 | 109 | 487 |
| 26 | 178 | 120 | 265 | 144 | 224 | 495 | 700 | 685 | 167 | 84 | 194 | 383 |
| 27 | 107 | 111 | 390 | 138 | 426 | 1010 | 550 | 720 | 160 | 82 | 130 | 292 |
| 28 | 85 | 105 | 274 | 132 | 1060 | 856 | 500 | 781 | 156 | 82 | 148 | 310 |
| 29 | 78 | 102 | 221 | 130 | --- | 750 | 500 | 705 | 150 | 80 | 243 | 333 |
| 30 | 71 | 96 | 189 | 126 | --- | 650 | 600 | 629 | 146 | 78 | 422 | 520 |
| 31 | 138 | --- | 169 | 132 | --- | 550 | --- | 593 | --- | 76 | 232 | --- |
| TOTAL | 2274 | 5016 | 3765 | 5242 | 4988 | 19271 | 19040 | 22613 | 10040 | 3260 | 3262 | 5533 |
| MEAN | 73.4 | 167 | 121 | 169 | 178 | 622 | 635 | 729 | 335 | 105 | 105 | 184 |
| MAX | 268 | 472 | 390 | 259 | 1060 | 1280 | 1300 | 1200 | 750 | 142 | 422 | 685 |
| MIN | 49 | 73 | 74 | 120 | 105 | 390 | 350 | 550 | 146 | 76 | 62 | 58 |
| CFSM | .71 | 1.61 | 1.16 | 1.63 | 1.71 | 5.98 | 6.11 | 7.01 | 3.22 | 1.01 | 1.01 | 1.77 |
| IN. | .81 | 1.79 | 1.35 | 1.88 | 1.78 | 6.89 | 6.81 | 8.09 | 3.59 | 1.17 | 1.17 | 1.98 |
| AC-FT | 4510 | 9950 | 7470 | 10400 | 9890 | 38220 | 37770 | 44850 | 19910 | 6470 | 6470 | 10970 |

CAL YR 1976 TOTAL 187339 MEAN 512 MAX 5890 MIN 49 CFSM 4.92 IN 67.01 AC-FT 371600
WTR YR 1977 TOTAL 104304 MEAN 286 MAX 1300 MIN 49 CFSM 2.75 IN 37.31 AC-FT 206900

NOTE.--No gage-height record Mar. 29 to May 13.

14185800 MIDDLE SANTIAM RIVER NEAR CASCADIA, OR

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 22.5°C Aug. 2, 3, 6, 11-13, 16, 17, 1977; minimum, 0.5°C Dec. 23, 24, 1965, Feb. 5, 1976, Jan. 9, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.5°C Aug. 2, 3, 6, 11-13, 16, 17; minimum, 0.5°C Jan. 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDEO SEDI- MENT (MG/L) | SUS- PENDEO SEDI- MENT DIS- CHARGE (T/DAY) |
|--------------|------|---|---|--|
| OCT 05... | 1100 | 45 | 1 | .12 |
| NOV 16... | 1145 | 964 | 1 | 2.6 |
| DEC 21... | 1010 | 78 | 2 | .42 |
| FEB 08... | 1100 | 95 | 5 | 1.3 |
| MAR 29... | 1015 | 705 | 5 | 9.5 |
| MAY 02... | 1615 | 370 | 4 | 4.0 |
| 12... | 1100 | 1070 | 9 | 26 |
| JUN 21... | 1045 | 211 | 6 | 3.4 |
| AUG 03... | 1115 | 58 | 3 | .47 |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 14.5 | 13.0 | 9.5 | 9.5 | 3.5 | 3.5 | 4.0 | 2.5 | 4.0 | 3.5 | 4.5 | 3.5 |
| 2 | 14.0 | 12.5 | 10.0 | 9.5 | 3.5 | 3.0 | 4.5 | 4.0 | 3.5 | 3.0 | 5.0 | 4.0 |
| 3 | 12.5 | 11.0 | 9.5 | 9.0 | 4.0 | 3.0 | 4.0 | 3.5 | 3.0 | 2.5 | 5.0 | 4.0 |
| 4 | 11.0 | 9.5 | 9.0 | 8.5 | 4.5 | 4.0 | 4.0 | 3.5 | 3.5 | 2.5 | 6.0 | 4.5 |
| 5 | 11.5 | 9.0 | 8.5 | 8.0 | 5.0 | 4.5 | 3.5 | 1.0 | 4.5 | 3.0 | 5.5 | 4.5 |
| 6 | 12.0 | 10.0 | 9.5 | 8.5 | 5.0 | 4.0 | 1.5 | 1.0 | 5.0 | 4.0 | 6.0 | 4.5 |
| 7 | 12.5 | 10.5 | 9.0 | 8.5 | 5.0 | 4.5 | 1.5 | 1.0 | 4.0 | 3.5 | 5.5 | 5.0 |
| 8 | 12.5 | 11.0 | 10.0 | 9.0 | 5.5 | 5.0 | 1.0 | 1.0 | 5.0 | 4.0 | 5.5 | 5.0 |
| 9 | 12.0 | 10.0 | 9.0 | 8.5 | 5.5 | 5.0 | 1.0 | 0.5 | 5.5 | 4.5 | 5.0 | 4.5 |
| 10 | 11.5 | 10.5 | 8.5 | 7.5 | 5.0 | 4.0 | 3.0 | 1.0 | 6.0 | 5.0 | 5.5 | 4.5 |
| 11 | 12.5 | 11.0 | 8.5 | 7.5 | 4.0 | 3.5 | 3.5 | 3.0 | 6.5 | 6.0 | 6.0 | 4.5 |
| 12 | 11.5 | 10.0 | 7.5 | 6.5 | 3.5 | 3.5 | 4.0 | 3.5 | 7.0 | 6.5 | 5.5 | 4.5 |
| 13 | 11.0 | 9.0 | 6.5 | 5.5 | 3.5 | 3.5 | 4.0 | 4.0 | 7.5 | 6.5 | 5.5 | 4.0 |
| 14 | 10.5 | 9.0 | 8.0 | 6.5 | 4.5 | 3.0 | 4.0 | 3.5 | 6.5 | 5.5 | 5.5 | 4.0 |
| 15 | 10.0 | 8.5 | 9.5 | 8.0 | 4.5 | 4.5 | 4.5 | 4.0 | 5.5 | 5.0 | 5.5 | 4.0 |
| 16 | 9.0 | 8.0 | --- | --- | 5.0 | 4.5 | 5.0 | 4.0 | 6.5 | 5.5 | 5.5 | 4.0 |
| 17 | 8.5 | 7.0 | --- | --- | 5.0 | 4.0 | 5.0 | 4.0 | 7.0 | 6.5 | 5.5 | 4.5 |
| 18 | 8.0 | 6.5 | --- | --- | 5.0 | 4.5 | 5.0 | 4.5 | 6.0 | 5.0 | 5.5 | 4.5 |
| 19 | 7.5 | 6.0 | 8.5 | 7.0 | 4.0 | 3.0 | 5.0 | 4.5 | 5.5 | 5.0 | 6.0 | 5.0 |
| 20 | 7.0 | 6.0 | 7.5 | 6.5 | 3.0 | 2.5 | 4.5 | 3.5 | 6.0 | 5.5 | 6.0 | 5.0 |
| 21 | 7.5 | 6.0 | 8.0 | 7.0 | 3.0 | 2.0 | 5.0 | 4.5 | 5.5 | 5.5 | 6.5 | 4.5 |
| 22 | 7.5 | 6.5 | 8.0 | 7.5 | 3.0 | 2.5 | 5.0 | 3.5 | 5.0 | 4.0 | 7.0 | 4.5 |
| 23 | 8.0 | 7.0 | 7.5 | 6.5 | 4.5 | 3.0 | 3.5 | 2.5 | 4.5 | 4.0 | 6.0 | 5.0 |
| 24 | 8.0 | 7.5 | 6.5 | 6.0 | 4.0 | 3.5 | 2.5 | 2.0 | 4.5 | 4.0 | 6.0 | 4.5 |
| 25 | 9.0 | 8.0 | 7.5 | 7.0 | 5.0 | 4.0 | 2.5 | 2.0 | 4.5 | 4.0 | 6.5 | 5.0 |
| 26 | 8.5 | 8.0 | 7.0 | 4.0 | 5.5 | 4.5 | 2.0 | 1.5 | 5.0 | 4.0 | 6.0 | 5.5 |
| 27 | 8.0 | 7.0 | 4.0 | 3.0 | 5.5 | 5.0 | 2.0 | 1.5 | 5.5 | 5.0 | 6.0 | 4.0 |
| 28 | 8.0 | 6.5 | 3.0 | 2.5 | 5.0 | 4.0 | 2.0 | 1.5 | 5.5 | 3.5 | 5.5 | 3.5 |
| 29 | 9.0 | 8.0 | 3.5 | 3.0 | 5.0 | 4.5 | 2.0 | 1.5 | --- | --- | 6.0 | 4.5 |
| 30 | 9.5 | 8.5 | 3.5 | 3.5 | 5.0 | 3.5 | 2.5 | 1.5 | --- | --- | 6.5 | 4.5 |
| 31 | 9.5 | 9.0 | --- | --- | 3.5 | 3.0 | 4.0 | 2.5 | --- | --- | 5.5 | 4.5 |
| MONTH | 14.5 | 6.0 | 10.0 | 2.5 | 5.5 | 2.0 | 5.0 | 0.5 | 7.5 | 2.5 | 7.0 | 3.5 |

WILLAMETTE RIVER BASIN

14185800 MIDDLE SANTIAM RIVER NEAR CASCADIA, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 6.5 | 5.0 | 8.5 | 7.0 | 10.5 | 9.0 | 18.0 | 15.5 | 22.0 | 17.0 | 14.0 | 12.5 |
| 2 | 7.0 | 5.5 | 7.5 | 7.0 | 10.5 | 7.5 | 17.5 | 14.0 | 22.5 | 18.0 | 15.0 | 13.0 |
| 3 | 7.5 | 5.0 | 7.5 | 6.0 | 10.5 | 9.0 | 15.5 | 13.0 | 22.5 | 18.0 | 14.5 | 14.0 |
| 4 | 8.0 | 5.0 | 6.0 | 5.5 | 10.5 | 9.0 | 13.0 | 12.0 | 22.0 | 17.5 | 15.0 | 14.5 |
| 5 | 8.0 | 5.5 | 7.0 | 5.5 | 13.5 | 9.0 | 13.5 | 11.5 | 22.0 | 17.5 | 16.5 | 14.5 |
| 6 | 8.0 | 5.5 | 8.0 | 5.5 | 14.5 | 11.0 | 15.0 | 12.5 | 22.5 | 18.0 | 16.5 | 14.0 |
| 7 | 8.0 | 5.5 | 8.0 | 5.5 | 14.5 | 12.0 | 18.0 | 14.0 | 22.0 | 17.5 | 16.5 | 14.0 |
| 8 | 6.5 | 6.0 | 10.0 | 6.5 | 14.0 | 11.0 | 18.0 | 14.5 | 22.5 | 18.0 | 15.5 | 13.0 |
| 9 | 6.5 | 6.5 | 9.0 | 7.0 | 13.5 | 10.0 | 16.0 | 13.5 | 21.5 | 17.0 | 15.0 | 12.0 |
| 10 | 7.0 | 5.5 | 7.0 | 6.5 | 13.5 | 10.5 | 18.0 | 13.5 | 22.0 | 17.5 | 15.5 | 12.5 |
| 11 | 7.5 | 7.0 | 8.0 | 6.0 | 13.0 | 10.5 | 19.0 | 14.5 | 22.5 | 18.0 | 16.0 | 13.0 |
| 12 | 8.5 | 5.0 | 8.5 | 5.5 | 14.0 | 11.0 | 17.5 | 14.0 | 22.5 | 18.0 | 16.0 | 13.0 |
| 13 | 7.0 | 6.0 | 9.5 | 7.0 | 15.0 | 11.0 | 17.5 | 12.5 | 22.5 | 18.0 | 15.5 | 12.5 |
| 14 | 7.5 | 5.0 | 8.5 | 7.5 | 15.0 | 11.0 | 19.0 | 14.5 | 21.0 | 18.5 | 14.0 | 13.5 |
| 15 | 7.5 | 6.0 | 7.5 | 6.5 | 15.0 | 11.0 | 19.5 | 15.0 | 22.0 | 17.5 | 14.0 | 13.0 |
| 16 | 7.0 | 6.0 | 8.0 | 6.0 | 14.0 | 11.0 | 19.5 | 15.5 | 22.5 | 18.5 | 13.5 | 12.0 |
| 17 | 7.5 | 4.5 | 7.0 | 6.0 | 15.0 | 11.5 | 18.0 | 16.0 | 22.5 | 18.5 | 13.0 | 11.5 |
| 18 | 7.0 | 4.5 | 8.0 | 6.5 | 15.5 | 12.5 | 16.5 | 15.0 | 21.5 | 18.5 | 13.0 | 12.0 |
| 19 | 7.5 | 4.0 | 10.5 | 7.0 | 16.0 | 13.0 | 18.5 | 13.5 | 21.0 | 18.0 | 12.5 | 12.0 |
| 20 | 8.0 | 5.0 | 9.5 | 7.5 | 15.0 | 12.5 | 20.0 | 15.5 | 20.5 | 18.0 | 12.0 | 11.5 |
| 21 | 8.5 | 6.5 | 10.5 | 8.5 | 15.0 | 11.5 | 20.5 | 16.0 | 19.0 | 18.0 | 11.5 | 11.0 |
| 22 | 8.5 | 6.0 | 9.0 | 7.5 | 17.0 | 13.0 | 21.0 | 16.0 | 18.0 | 17.5 | 11.5 | 10.0 |
| 23 | 9.0 | 6.5 | 8.5 | 7.5 | 17.0 | 13.5 | 19.5 | 16.5 | 18.5 | 17.5 | 10.5 | 10.0 |
| 24 | 9.5 | 6.5 | 9.5 | 7.0 | 17.0 | 13.0 | 20.0 | 16.5 | 18.5 | 16.0 | 10.5 | 9.5 |
| 25 | 8.5 | 7.0 | 9.5 | 7.0 | 18.0 | 14.5 | 19.0 | 16.5 | 16.0 | 14.5 | 11.0 | 10.0 |
| 26 | 9.0 | 6.0 | 9.0 | 7.5 | 17.5 | 14.0 | 21.0 | 17.0 | 14.5 | 14.5 | 10.5 | 8.5 |
| 27 | 9.5 | 6.0 | 7.5 | 6.0 | 17.5 | 14.0 | 21.0 | 17.0 | 14.5 | 14.5 | 10.5 | 10.0 |
| 28 | 9.0 | 7.0 | 8.5 | 6.5 | 17.5 | 14.0 | 19.0 | 17.0 | 14.5 | 14.0 | 11.0 | 10.0 |
| 29 | 9.5 | 7.5 | 10.0 | 6.5 | 17.5 | 14.5 | 19.0 | 15.0 | 14.0 | 14.0 | 10.0 | 9.0 |
| 30 | 9.5 | 7.0 | 9.5 | 7.5 | 18.0 | 15.0 | 20.5 | 15.5 | 14.5 | 13.0 | 9.5 | 9.0 |
| 31 | --- | --- | 11.0 | 8.5 | --- | --- | 21.5 | 16.5 | 14.0 | 12.0 | --- | --- |
| MONTH | 9.5 | 4.0 | 11.0 | 5.5 | 18.0 | 7.5 | 21.5 | 11.5 | 22.5 | 12.0 | 16.5 | 8.5 |

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR

LOCATION.--Lat 44°32'25", long 122°26'05", in NW¼ sec.10, T.12 S., R.3 E., Linn County, Hydrologic Unit 17090006, on Bureau of Land Management land, on right bank 80 ft (24 m) downstream from Panther Creek, 10 mi (16 km) north of Cascadia, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--99.2 mi² (256.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1963 to November 1964 (destroyed by flood of December 1964); October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,050 ft (320 m), from topographic map. Aug. 13, 1963, to Dec. 22, 1964, water-stage recorder on left bank at present datum.

REMARKS.--Water-discharge records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--13 years (water years 1964, 1966-77), 690 ft³/s (19.54 m³/s), 94.46 in/yr (2,399 mm/yr), 499,900 acre-ft/yr (616 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s (6.34 m³/s) Jan. 20, 1972, gage height, 16.38 ft (4.993 m); minimum, 14 ft³/s (0.40 m³/s) Aug. 19-23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 36,500 ft³/s (1,030 m³/s) Dec. 22, 1964, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,000 ft³/s (85.0 m³/s) Mar. 8, no peak above base of 4,500 ft³/s (127 m³/s); minimum, 22 ft³/s (0.62 m³/s) Oct. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|----------|-----------|--------|-----------|----------|--------------|-------|-------|------|------|-------|
| 1 | 30 | 578 | 54 | 133 | 96 | 1170 | 887 | 664 | 541 | 82 | 44 | 124 |
| 2 | 34 | 265 | 51 | 175 | 82 | 723 | 826 | 1040 | 448 | 76 | 42 | 90 |
| 3 | 42 | 162 | 49 | 167 | 76 | 550 | 718 | 1870 | 428 | 76 | 41 | 96 |
| 4 | 35 | 120 | 47 | 147 | 71 | 450 | 957 | 1620 | 989 | 82 | 41 | 102 |
| 5 | 33 | 96 | 44 | 129 | 67 | 400 | 1420 | 1240 | 838 | 76 | 39 | 104 |
| 6 | 30 | 78 | 41 | 114 | 67 | 700 | 1850 | 900 | 628 | 74 | 39 | 88 |
| 7 | 30 | 67 | 39 | 108 | 64 | 1500 | 1990 | 650 | 504 | 69 | 41 | 71 |
| 8 | 29 | 59 | 69 | 96 | 62 | 3000 | 1890 | 550 | 416 | 65 | 39 | 60 |
| 9 | 27 | 53 | 124 | 88 | 60 | 2000 | 1320 | 550 | 349 | 65 | 38 | 53 |
| 10 | 27 | 49 | 90 | 96 | 62 | 1300 | 925 | 1070 | 305 | 64 | 37 | 49 |
| 11 | 29 | 44 | 74 | 94 | 71 | 950 | 774 | 1060 | 271 | 62 | 34 | 44 |
| 12 | 29 | 39 | 72 | 126 | 71 | 1000 | 751 | 774 | 243 | 60 | 33 | 39 |
| 13 | 27 | 38 | 69 | 412 | 100 | 800 | 900 | 628 | 219 | 60 | 33 | 35 |
| 14 | 26 | 49 | 62 | 408 | 94 | 600 | 779 | 559 | 202 | 59 | 33 | 34 |
| 15 | 25 | 404 | 59 | 294 | 82 | 500 | 669 | 541 | 186 | 57 | 33 | 33 |
| 16 | 25 | 569 | 57 | 255 | 72 | 400 | 685 | 513 | 169 | 56 | 33 | 31 |
| 17 | 24 | 305 | 56 | 228 | 67 | 350 | 578 | 900 | 159 | 54 | 30 | 31 |
| 18 | 23 | 337 | 56 | 213 | 62 | 370 | 504 | 838 | 149 | 56 | 29 | 35 |
| 19 | 23 | 240 | 50 | 200 | 59 | 550 | 440 | 664 | 140 | 57 | 29 | 62 |
| 20 | 23 | 183 | 47 | 177 | 59 | 600 | 412 | 578 | 133 | 54 | 29 | 228 |
| 21 | 23 | 147 | 45 | 162 | 71 | 550 | 428 | 559 | 131 | 53 | 29 | 356 |
| 22 | 23 | 124 | 42 | 145 | 234 | 600 | 487 | 509 | 122 | 51 | 30 | 237 |
| 23 | 23 | 110 | 51 | 131 | 205 | 750 | 623 | 491 | 118 | 50 | 31 | 436 |
| 24 | 39 | 96 | 50 | 120 | 186 | 650 | 774 | 465 | 110 | 51 | 100 | 906 |
| 25 | 249 | 94 | 74 | 112 | 188 | 550 | 875 | 420 | 104 | 50 | 78 | 588 |
| 26 | 149 | 80 | 384 | 104 | 228 | 500 | 740 | 757 | 100 | 49 | 202 | 408 |
| 27 | 69 | 71 | 648 | 98 | 768 | 1300 | 598 | 729 | 94 | 49 | 100 | 281 |
| 28 | 47 | 65 | 345 | 90 | 2510 | 1000 | 578 | 850 | 92 | 45 | 145 | 284 |
| 29 | 39 | 62 | 240 | 84 | --- | 800 | 555 | 696 | 86 | 45 | 225 | 305 |
| 30 | 34 | 57 | 186 | 80 | --- | 650 | 623 | 569 | 82 | 45 | 541 | 424 |
| 31 | 208 | --- | 149 | 88 | --- | 620 | --- | 504 | --- | 42 | 211 | --- |
| TOTAL | 1474 | 4641 | 3424 | 4874 | 5834 | 25883 | 25556 | 23758 | 8356 | 1834 | 2409 | 5634 |
| MEAN | 47.5 | 155 | 110 | 157 | 208 | 835 | 852 | 766 | 279 | 59.2 | 77.7 | 188 |
| MAX | 249 | 578 | 648 | 412 | 2510 | 3000 | 1990 | 1870 | 989 | 82 | 541 | 906 |
| MIN | 23 | 38 | 39 | 80 | 59 | 350 | 412 | 420 | 82 | 42 | 29 | 31 |
| CFSM | .48 | 1.56 | 1.11 | 1.58 | 2.10 | 8.42 | 8.59 | 7.72 | 2.81 | .60 | .78 | 1.90 |
| IN. | .55 | 1.74 | 1.28 | 1.63 | 2.19 | 9.71 | 9.58 | 8.91 | 3.13 | .69 | .90 | 2.11 |
| AC-FT | 2920 | 9210 | 6790 | 9670 | 11570 | 51340 | 50690 | 47120 | 16570 | 3640 | 4780 | 11180 |
| CAL YR 1976 TOTAL | 182075 | MEAN 497 | MAX 10000 | MIN 23 | CFSM 5.01 | IN 68.28 | AC-FT 361100 | | | | | |
| WTR YR 1977 TOTAL | 113677 | MEAN 311 | MAX 3000 | MIN 23 | CFSM 3.14 | IN 42.63 | AC-FT 225500 | | | | | |

NOTE.--No gage-height record Mar. 3-31.

WILLAMETTE RIVER BASIN

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1963 to November 1964, October 1965 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 10, 11, 1971; minimum, 0.0°C on several days in 1969, 1972, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.0°C Aug. 17; minimum, 0.0°C Jan. 6, 8, 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 14.5 | 13.0 | 9.5 | 9.0 | 3.0 | 2.5 | 3.5 | 2.0 | 4.0 | 3.5 | 4.0 | 3.0 |
| 2 | 14.5 | 12.0 | 10.0 | 9.0 | 3.0 | 2.5 | 4.0 | 3.5 | 3.5 | 2.5 | 4.5 | 3.5 |
| 3 | 12.0 | 11.0 | 9.5 | 8.5 | 3.5 | 2.5 | 4.0 | 3.5 | 3.0 | 2.0 | 5.0 | 3.5 |
| 4 | 11.0 | 9.5 | 9.0 | 8.5 | 4.5 | 3.5 | 3.5 | 3.5 | 3.0 | 2.0 | 6.0 | 4.0 |
| 5 | 12.0 | 9.5 | 8.5 | 8.0 | 4.5 | 4.0 | 3.5 | 0.5 | 4.0 | 2.5 | 6.0 | 4.0 |
| 6 | 12.5 | 10.5 | 9.0 | 8.5 | 4.5 | 3.5 | 1.0 | 0.0 | 5.0 | 4.0 | 5.5 | 4.0 |
| 7 | 12.5 | 11.0 | 9.0 | 8.5 | 4.5 | 4.0 | 1.0 | 0.5 | 4.5 | 4.0 | 5.5 | 4.5 |
| 8 | 13.0 | 11.5 | 10.0 | 9.0 | 5.0 | 4.5 | 0.5 | 0.0 | 4.5 | 4.0 | 5.5 | 5.0 |
| 9 | 12.5 | 11.0 | 9.0 | 8.5 | 5.0 | 4.5 | 0.5 | 0.0 | 5.0 | 4.0 | 5.0 | 4.0 |
| 10 | 12.5 | 11.5 | 8.0 | 7.5 | 4.5 | 4.0 | 1.5 | 0.5 | 6.0 | 5.0 | 5.5 | 4.0 |
| 11 | 13.0 | 11.5 | 8.0 | 7.5 | 4.0 | 3.5 | 3.0 | 1.5 | 6.5 | 5.5 | 6.0 | 4.0 |
| 12 | 12.0 | 10.5 | 7.5 | 7.0 | 3.5 | 3.0 | 3.5 | 3.0 | 7.5 | 6.5 | 5.0 | 4.0 |
| 13 | 11.5 | 10.5 | 6.5 | 6.0 | 3.0 | 3.0 | 4.5 | 3.5 | 7.5 | 7.0 | 5.5 | 3.5 |
| 14 | 11.0 | 10.0 | 8.0 | 6.5 | 4.0 | 2.5 | 4.0 | 3.5 | 6.5 | 5.5 | 5.0 | 3.5 |
| 15 | 10.5 | 9.5 | 9.0 | 8.0 | 4.5 | 4.0 | 5.0 | 4.0 | 6.0 | 5.0 | 6.0 | 3.5 |
| 16 | 10.0 | 9.0 | --- | --- | 4.5 | 4.0 | 5.0 | 4.0 | 6.5 | 5.0 | 5.5 | 3.0 |
| 17 | 9.0 | 7.5 | --- | --- | 4.5 | 4.0 | 5.0 | 4.0 | 7.5 | 6.0 | 5.0 | 3.5 |
| 18 | 8.5 | 7.5 | --- | --- | 4.5 | 4.0 | 5.5 | 4.5 | 6.5 | 5.0 | 5.0 | 4.0 |
| 19 | 8.0 | 7.0 | 9.0 | 7.0 | 3.5 | 2.5 | 5.5 | 4.5 | 6.0 | 5.0 | 5.0 | 4.5 |
| 20 | 8.0 | 7.0 | 7.5 | 6.5 | 2.5 | 2.0 | 4.5 | 3.5 | 6.0 | 5.5 | 5.5 | 4.0 |
| 21 | 8.0 | 7.0 | 8.0 | 7.0 | 2.0 | 1.5 | 5.0 | 4.0 | 5.0 | 4.5 | 7.0 | 4.0 |
| 22 | 8.0 | 7.0 | 8.0 | 7.5 | 2.5 | 1.5 | 4.5 | 3.5 | 4.5 | 4.0 | 7.0 | 4.0 |
| 23 | 8.0 | 6.5 | 7.5 | 6.5 | 3.5 | 2.5 | 3.0 | 2.5 | 4.0 | 3.5 | 5.5 | 4.5 |
| 24 | 7.5 | 7.0 | 7.0 | 6.0 | 3.5 | 3.0 | 2.5 | 1.5 | 4.0 | 3.5 | 6.0 | 4.0 |
| 25 | 8.5 | 7.5 | 7.5 | 6.5 | 4.5 | 3.5 | 2.5 | 1.5 | 4.0 | 3.5 | 6.0 | 4.5 |
| 26 | 8.5 | 7.5 | 6.5 | 4.0 | 5.5 | 4.5 | 2.0 | 1.0 | 5.0 | 3.5 | 5.5 | 4.5 |
| 27 | 8.0 | 7.0 | 4.0 | 3.0 | 5.5 | 5.0 | 2.0 | 1.0 | 5.5 | 4.5 | 5.5 | 3.5 |
| 28 | 7.5 | 6.5 | 3.0 | 2.0 | 5.0 | 4.0 | 2.0 | 1.0 | 5.0 | 3.5 | 4.5 | 3.5 |
| 29 | 8.5 | 7.5 | 3.0 | 2.5 | 5.5 | 4.5 | 1.5 | 1.0 | --- | --- | 6.0 | 3.5 |
| 30 | 9.0 | 8.0 | 3.0 | 2.5 | 4.5 | 3.5 | 2.0 | 1.0 | --- | --- | 6.5 | 4.0 |
| 31 | 9.5 | 9.0 | --- | --- | 3.0 | 2.5 | 3.5 | 2.0 | --- | --- | 4.5 | 4.0 |
| MONTH | 14.5 | 6.5 | 10.0 | 2.0 | 5.5 | 1.5 | 5.5 | 0.0 | 7.5 | 2.0 | 7.0 | 3.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 6.0 | 4.5 | 8.0 | 7.5 | 11.0 | 9.5 | 19.5 | 17.0 | 22.0 | 18.0 | 15.0 | 11.5 |
| 2 | 6.5 | 4.5 | 9.0 | 7.0 | 12.0 | 8.0 | 18.5 | 15.5 | 22.5 | 19.0 | 15.0 | 13.5 |
| 3 | 8.0 | 4.5 | 7.5 | 6.0 | 10.5 | 9.5 | 16.0 | 14.0 | 22.5 | 18.5 | 15.0 | 14.5 |
| 4 | 8.5 | 4.5 | 6.5 | 5.5 | 11.0 | 9.0 | 15.5 | 13.5 | 22.0 | 18.5 | 15.5 | 14.5 |
| 5 | 8.5 | 4.5 | 7.0 | 5.5 | 14.5 | 9.0 | 14.5 | 12.5 | 22.0 | 18.0 | 16.5 | 15.0 |
| 6 | 8.0 | 5.0 | 8.5 | 5.5 | 15.5 | 11.0 | 17.5 | 12.5 | 22.5 | 18.5 | 17.0 | 14.0 |
| 7 | 8.0 | 5.0 | 8.0 | 5.5 | 15.5 | 12.0 | 19.0 | 14.0 | 22.5 | 18.5 | 16.5 | 14.5 |
| 8 | 6.0 | 5.0 | 10.5 | 6.5 | 15.0 | 11.5 | 19.5 | 15.0 | 22.5 | 19.0 | 15.5 | 13.5 |
| 9 | 6.0 | 4.5 | 10.0 | 6.5 | 15.0 | 10.0 | 17.0 | 15.0 | 22.0 | 18.0 | 15.5 | 13.0 |
| 10 | 7.0 | 4.5 | 7.0 | 6.5 | 15.0 | 11.0 | 18.5 | 13.5 | 22.0 | 18.5 | 16.0 | 13.5 |
| 11 | 8.5 | 5.5 | 7.5 | 6.0 | 14.0 | 11.5 | 20.0 | 15.0 | 22.5 | 19.0 | 16.5 | 14.0 |
| 12 | 8.5 | 5.0 | 9.5 | 5.5 | 16.0 | 11.5 | 18.0 | 15.0 | 22.5 | 19.0 | 16.5 | 14.0 |
| 13 | 6.5 | 5.0 | 10.0 | 7.0 | 16.5 | 11.5 | 18.5 | 13.5 | 22.5 | 19.5 | 16.5 | 14.0 |
| 14 | 7.5 | 4.5 | 9.0 | 7.5 | 16.5 | 12.0 | 19.5 | 14.5 | 21.5 | 19.5 | 15.5 | 14.5 |
| 15 | 7.0 | 5.5 | 7.5 | 6.5 | 16.5 | 12.0 | 20.5 | 15.5 | 22.0 | 18.5 | 14.5 | 13.5 |
| 16 | 7.0 | 5.5 | 8.0 | 6.0 | 17.0 | 12.0 | 20.5 | 16.5 | 22.5 | 19.5 | 14.5 | 13.0 |
| 17 | 7.5 | 4.0 | 7.5 | 6.5 | 17.0 | 13.0 | 19.0 | 16.5 | 23.0 | 19.5 | 14.0 | 12.5 |
| 18 | 7.0 | 4.0 | 8.0 | 6.5 | 17.5 | 14.0 | 17.0 | 16.0 | 22.0 | 19.5 | 14.0 | 13.0 |
| 19 | 8.0 | 3.5 | 10.5 | 6.5 | 17.5 | 14.5 | 19.0 | 14.5 | 21.5 | 19.0 | 13.5 | 12.5 |
| 20 | 8.5 | 4.5 | 10.0 | 7.5 | 16.0 | 14.0 | 20.5 | 16.0 | 21.0 | 19.0 | 12.5 | 11.5 |
| 21 | 8.0 | 6.0 | 11.0 | 8.5 | 16.5 | 13.0 | 21.0 | 16.5 | 19.5 | 18.5 | 12.0 | 11.0 |
| 22 | 9.0 | 6.0 | 10.0 | 7.5 | 18.5 | 14.5 | 21.5 | 17.0 | 20.5 | 18.0 | 12.0 | 10.0 |
| 23 | 9.0 | 6.5 | 8.5 | 7.5 | 18.5 | 14.5 | 20.5 | 17.5 | 19.5 | 17.0 | 11.5 | 10.0 |
| 24 | 10.0 | 6.0 | 11.0 | 7.0 | 18.5 | 14.5 | 21.0 | 17.5 | 18.0 | 16.5 | 10.5 | 9.5 |
| 25 | 8.5 | 7.0 | 10.0 | 7.0 | 19.5 | 16.0 | 19.5 | 17.5 | 16.5 | 14.5 | 11.0 | 9.5 |
| 26 | 9.5 | 6.0 | 9.0 | 7.5 | 19.0 | 15.0 | 22.0 | 18.0 | 15.0 | 14.0 | 11.0 | 8.0 |
| 27 | 10.5 | 5.5 | 7.5 | 6.5 | 18.5 | 15.5 | 22.0 | 18.0 | 15.0 | 13.5 | 10.0 | 9.5 |
| 28 | 9.5 | 7.0 | 9.5 | 6.5 | 19.0 | 15.0 | 20.0 | 17.5 | 15.0 | 14.0 | 11.0 | 10.0 |
| 29 | 10.0 | 7.5 | 11.5 | 6.5 | 19.0 | 15.5 | 20.0 | 16.0 | 14.5 | 13.5 | 10.0 | 9.5 |
| 30 | 9.5 | 7.0 | 10.0 | 7.5 | 19.5 | 15.5 | 21.0 | 16.0 | 14.5 | 12.0 | 10.0 | 9.0 |
| 31 | --- | --- | 12.5 | 8.5 | --- | --- | 22.0 | 17.5 | 14.5 | 11.5 | --- | --- |
| MONTH | 10.5 | 3.5 | 12.5 | 5.5 | 19.5 | 8.0 | 22.0 | 12.5 | 23.0 | 11.5 | 17.0 | 8.0 |

14186100 GREEN PETER LAKE NEAR FOSTER, OR

LOCATION.--Lat 44°27'10", long 122°32'40", in NE¼SE¼ sec.10, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, in Green Peter Dam on Middle Santiam River 7.0 mi (11.3 km) northeast of Foster and at mile 5.7 (9.2 km).

DRAINAGE AREA.--273 mi² (707 km²).

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1971, published as Green Peter Reservoir near Foster.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by concrete, gravity-type dam with ogee spillway completed in 1966 by Corps of Engineers; controlled storage began Oct. 6, 1966. Total capacity, 428,100 acre-ft (528 hm³) and usable capacity 330,800 acre-ft (408 hm³) between elevations 887.0 ft (270.36 m), proposed lower limit of operation, and 1,015.0 ft (309.37 m), top of spillway gates. Reservoir used for flood control, power development, improvement of navigation, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 417,700 acre-ft (515 hm³) June 18, 1977, elevation, 1,012.17 ft (308.509 m); minimum, 116,900 acre-ft (144 hm³) Dec. 15, 1972, elevation, 899.20 ft (274.076 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 417,700 acre-ft (515 hm³) June 18, elevation, 1,012.17 ft (308.509 m); minimum, 139,400 acre-ft (172 hm³) Feb. 21, elevation, 911.68 ft (277.880 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)

| | | | |
|-----|---------|-------|---------|
| 899 | 116,600 | 960 | 251,100 |
| 900 | 118,300 | 980 | 309,700 |
| 920 | 115,700 | 1,000 | 374,800 |
| 940 | 199,900 | 1,013 | 420,700 |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------------|-------------|------------|---------|---------|----------|----------|---------|---------|---------|---------|---------|
| 1 | 979.60 | 955.70 | 932.25 | 915.70 | 914.99 | 922.17 | 967.96 | 1002.06 | 1011.16 | 1010.17 | 1000.43 | 990.21 |
| 2 | 978.85 | 954.63 | 931.54 | 915.54 | 914.85 | 923.92 | 969.21 | 1003.40 | 1011.23 | 1009.89 | 1000.21 | 990.01 |
| 3 | 978.09 | 953.41 | 931.02 | 915.34 | 914.69 | 925.57 | 970.32 | 1005.41 | 1011.50 | 1009.67 | 999.89 | 989.79 |
| 4 | 977.31 | 952.74 | 930.30 | 915.24 | 914.54 | 926.85 | 971.62 | 1006.57 | 1011.59 | 1009.46 | 999.49 | 989.49 |
| 5 | 976.51 | 952.00 | 929.58 | 915.13 | 914.38 | 927.99 | 973.37 | 1006.91 | 1011.59 | 1009.25 | 999.08 | 989.20 |
| 6 | 975.73 | 951.38 | 928.84 | 914.97 | 914.23 | 929.32 | 975.56 | 1006.87 | 1011.87 | 1008.99 | 998.67 | 988.83 |
| 7 | 974.92 | 950.71 | 928.10 | 914.82 | 914.04 | 932.15 | 977.93 | 1006.65 | 1011.98 | 1008.73 | 998.27 | 988.45 |
| 8 | 974.11 | 950.04 | 927.47 | 914.63 | 913.88 | 936.12 | 980.39 | 1006.33 | 1011.98 | 1008.45 | 997.93 | 988.04 |
| 9 | 973.29 | 949.42 | 926.90 | 914.43 | 913.69 | 939.41 | 982.19 | 1006.42 | 1011.98 | 1008.18 | 997.60 | 987.65 |
| 10 | 972.48 | 948.79 | 926.26 | 914.24 | 913.44 | 941.48 | 983.52 | 1006.94 | 1011.93 | 1007.91 | 997.18 | 987.23 |
| 11 | 971.66 | 947.56 | 925.56 | 914.05 | 913.28 | 943.04 | 984.65 | 1007.43 | 1011.85 | 1007.62 | 996.75 | 986.82 |
| 12 | 970.83 | 946.84 | 924.86 | 913.93 | 913.15 | 944.80 | 985.75 | 1007.86 | 1011.89 | 1007.34 | 996.33 | 986.39 |
| 13 | 969.99 | 946.16 | 924.14 | 914.57 | 913.08 | 946.19 | 986.98 | 1008.37 | 1011.98 | 1007.02 | 995.91 | 985.93 |
| 14 | 969.14 | 945.53 | 923.41 | 915.17 | 912.96 | 947.32 | 988.04 | 1009.18 | 1011.96 | 1006.70 | 995.46 | 985.55 |
| 15 | 968.29 | 945.48 | 922.70 | 915.43 | 912.85 | 948.25 | 989.01 | 1010.01 | 1012.00 | 1006.36 | 995.03 | 985.16 |
| 16 | 967.42 | 945.48 | 921.96 | 915.62 | 912.68 | 949.09 | 989.96 | 1010.04 | 1012.03 | 1006.02 | 994.60 | 984.39 |
| 17 | 966.57 | 944.65 | 921.21 | 915.76 | 912.53 | 949.88 | 990.80 | 1010.23 | 1012.04 | 1005.67 | 994.17 | 984.25 |
| 18 | 965.68 | 943.83 | 920.48 | 915.88 | 912.29 | 950.72 | 991.52 | 1010.19 | 1012.03 | 1005.34 | 993.71 | 984.03 |
| 19 | 964.79 | 942.86 | 919.70 | 915.89 | 912.12 | 951.79 | 992.18 | 1009.94 | 1012.01 | 1005.03 | 993.26 | 983.67 |
| 20 | 963.89 | 941.91 | 918.92 | 915.92 | 911.95 | 952.87 | 992.79 | 1009.56 | 1012.00 | 1004.69 | 992.82 | 983.41 |
| 21 | 962.99 | 940.75 | 918.22 | 915.95 | 911.95 | 953.78 | 993.42 | 1009.49 | 1011.93 | 1004.34 | 992.40 | 983.41 |
| 22 | 962.09 | 939.55 | 917.51 | 915.97 | 912.23 | 954.81 | 994.07 | 1009.39 | 1011.86 | 1003.97 | 991.95 | 983.29 |
| 23 | 961.41 | 938.29 | 916.96 | 915.86 | 912.41 | 956.24 | 994.88 | 1009.30 | 1011.77 | 1003.61 | 991.54 | 983.41 |
| 24 | 960.84 | 937.00 | 916.40 | 915.81 | 912.60 | 957.40 | 995.82 | 1009.18 | 1011.61 | 1003.25 | 991.70 | 983.99 |
| 25 | 960.57 | 936.37 | 915.91 | 915.82 | 912.99 | 958.41 | 996.93 | 1009.50 | 1011.31 | 1002.88 | 991.36 | 984.23 |
| 26 | 960.12 | 935.72 | 915.91 | 915.73 | 913.50 | 959.35 | 997.91 | 1010.11 | 1011.13 | 1002.55 | 991.06 | 984.07 |
| 27 | 959.33 | 935.06 | 916.53 | 915.62 | 915.18 | 961.48 | 998.77 | 1010.44 | 1010.96 | 1002.26 | 990.72 | 983.61 |
| 28 | 958.53 | 934.36 | 916.69 | 915.42 | 919.62 | 963.11 | 999.53 | 1010.80 | 1010.78 | 1001.89 | 990.43 | 982.90 |
| 29 | 957.28 | 933.67 | 916.47 | 915.38 | --- | 964.41 | 1000.30 | 1010.88 | 1010.58 | 1001.51 | 990.37 | 982.22 |
| 30 | 956.45 | 932.98 | 916.23 | 915.25 | --- | 965.49 | 1001.14 | 1010.99 | 1010.39 | 1001.12 | 990.62 | 981.75 |
| 31 | 955.86 | --- | 915.98 | 915.07 | --- | 966.54 | --- | 1011.05 | --- | 1000.74 | 990.43 | --- |
| MEAN | 967.57 | 944.43 | 922.52 | 915.29 | 913.58 | 946.77 | 987.22 | 1008.44 | 1011.63 | 1005.83 | 994.82 | 985.71 |
| MAX | 979.60 | 955.70 | 932.25 | 915.97 | 919.62 | 966.54 | 1001.14 | 1011.05 | 1012.04 | 1010.17 | 1000.43 | 990.21 |
| MIN | 955.86 | 932.98 | 915.91 | 913.93 | 911.95 | 922.17 | 967.96 | 1002.06 | 1010.39 | 1000.74 | 990.37 | 981.75 |
| (†) | 239,900 | 183,600 | 147,700 | 145,900 | 155,000 | 269,500 | 378,700 | 413,600 | 411,200 | 377,300 | 342,900 | 315,200 |
| (‡) | -71,000 | -56,300 | -35,900 | -1,800 | +9,100 | +114,500 | +109,200 | +34,900 | -2,400 | -33,900 | -34,400 | -27,700 |
| CAL YR 1976 | MEAN 975.34 | MAX 1011.62 | MIN 915.91 | AC-FT† | -39,100 | | | | | | | |
| WTR YR 1977 | MEAN 967.25 | MAX 1012.04 | MIN 911.95 | AC-FT‡ | +4,300 | | | | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14186600 FOSTER LAKE AT FOSTER, OR

LOCATION.--Lat 44°25'00", long 122°40'25", in NW¼NE¼ sec.27, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, in Foster Dam on South Santiam River, 0.3 mi (0.5 km) above Wiley Creek, 0.5 mi (0.8 km) north of Foster, and at mile 37.7 (60.7 km).

DRAINAGE AREA.--492 mi² (1,274 km²).

PERIOD OF RECORD.--December 1966 to current year. Prior to October 1971, published as Foster Reservoir at Foster.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by rockfill embankment with an impervious core and ogee spillway completed in 1966 by Corps of Engineers; controlled storage began in November 1966. Total capacity, 60,780 acre-ft (74.9 hm³) and usable capacity 33,210 acre-ft (40.9 hm³) between elevations 609.0 ft (185.52 m), proposed lower limit of operation, and 641.0 ft (195.38 m), top of spillway gates. Reservoir used for reregulation of water released from Green Peter Reservoir, flood control, power development, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 60,090 acre-ft (74.1 hm³) Sept. 17, 1968, elevation, 640.45 ft (195.209 m); minimum, 26,590 acre-ft (32.8 hm³) Nov. 15, 16, 1971, elevation, 607.85 ft (185.273 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 57,540 acre-ft (70.9 hm³) Sept. 16, elevation, 638.38 ft (194.578 m); minimum, 29,890 acre-ft (36.9 hm³) Nov. 21, elevation, 611.68 ft (186.440 m).

Capacity table (elevation, in feet, and total contents, in acre-ft)

| | | | |
|-----|--------|-----|--------|
| 607 | 25,880 | 630 | 47,860 |
| 610 | 28,430 | 635 | 53,510 |
| 615 | 32,870 | 640 | 59,530 |
| 620 | 37,570 | 641 | 60,780 |
| 625 | 42,550 | | |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------------|------------|------------|-------------|--------|---------|--------|--------|--------|--------|--------|--------|
| 1 | 637.14 | 621.34 | 613.09 | 612.98 | 612.98 | 619.23 | 635.20 | 636.60 | 637.27 | 637.07 | 637.30 | 637.23 |
| 2 | 637.18 | 620.82 | 613.29 | 613.02 | 612.96 | 620.49 | 635.23 | 636.69 | 637.21 | 637.23 | 637.08 | 636.97 |
| 3 | 637.21 | 620.13 | 612.95 | 613.03 | 612.96 | 622.23 | 635.19 | 636.69 | 637.26 | 637.15 | 637.14 | 636.83 |
| 4 | 637.21 | 619.33 | 612.93 | 613.04 | 612.97 | 623.33 | 635.24 | 637.14 | 637.08 | 637.07 | 637.16 | 636.83 |
| 5 | 637.23 | 618.90 | 613.01 | 613.11 | 612.95 | 624.01 | 635.29 | 636.88 | 637.08 | 636.97 | 637.19 | 636.82 |
| 6 | 637.25 | 618.12 | 613.05 | 613.13 | 612.93 | 624.76 | 635.34 | 637.09 | 636.81 | 636.95 | 637.22 | 636.92 |
| 7 | 637.21 | 617.63 | 613.04 | 613.11 | 612.91 | 626.64 | 635.27 | 637.03 | 637.19 | 636.91 | 637.22 | 636.99 |
| 8 | 637.21 | 617.09 | 613.08 | 613.08 | 612.89 | 629.81 | 635.02 | 636.97 | 637.27 | 636.87 | 637.19 | 637.05 |
| 9 | 637.20 | 616.46 | 613.00 | 613.02 | 612.87 | 630.95 | 635.11 | 636.70 | 637.21 | 636.84 | 637.04 | 637.10 |
| 10 | 637.19 | 615.59 | 612.97 | 613.02 | 613.02 | 631.31 | 635.06 | 636.63 | 637.13 | 636.81 | 637.11 | 637.13 |
| 11 | 637.18 | 616.23 | 613.05 | 613.00 | 612.97 | 631.67 | 635.08 | 637.23 | 637.21 | 636.75 | 637.14 | 637.19 |
| 12 | 637.16 | 615.60 | 613.05 | 612.96 | 612.94 | 631.95 | 635.12 | 636.96 | 637.02 | 636.70 | 637.14 | 637.25 |
| 13 | 637.17 | 614.80 | 613.01 | 613.05 | 612.92 | 632.24 | 635.16 | 637.36 | 637.01 | 636.76 | 637.12 | 637.36 |
| 14 | 637.19 | 613.82 | 612.98 | 612.93 | 612.93 | 632.51 | 635.29 | 637.26 | 637.33 | 636.81 | 637.12 | 637.28 |
| 15 | 637.21 | 613.51 | 612.92 | 612.98 | 612.90 | 632.87 | 635.41 | 637.00 | 637.34 | 636.89 | 637.12 | 637.22 |
| 16 | 637.23 | 613.45 | 612.96 | 612.96 | 612.84 | 633.18 | 635.49 | 637.68 | 637.32 | 636.93 | 637.12 | 638.20 |
| 17 | 637.23 | 613.54 | 613.12 | 612.94 | 612.78 | 633.38 | 635.60 | 637.28 | 637.27 | 637.00 | 637.12 | 637.47 |
| 18 | 636.48 | 613.49 | 613.13 | 612.87 | 612.94 | 633.49 | 635.67 | 637.31 | 637.18 | 637.07 | 637.12 | 637.01 |
| 19 | 634.76 | 613.30 | 613.07 | 613.05 | 612.89 | 633.72 | 635.68 | 637.16 | 637.08 | 637.00 | 637.15 | 637.19 |
| 20 | 633.03 | 613.03 | 613.10 | 613.05 | 612.88 | 633.81 | 635.79 | 636.90 | 636.95 | 637.03 | 637.13 | 637.39 |
| 21 | 631.21 | 613.39 | 613.03 | 612.99 | 613.00 | 633.89 | 635.90 | 636.76 | 636.95 | 637.06 | 637.14 | 637.35 |
| 22 | 629.27 | 613.48 | 612.98 | 612.89 | 613.60 | 634.06 | 636.00 | 636.80 | 636.93 | 637.13 | 637.18 | 637.13 |
| 23 | 628.06 | 613.30 | 612.99 | 612.96 | 614.14 | 634.18 | 636.04 | 636.89 | 636.85 | 637.18 | 637.28 | 637.14 |
| 24 | 626.87 | 613.12 | 612.99 | 612.82 | 614.36 | 634.20 | 636.03 | 637.11 | 636.86 | 637.24 | 636.24 | 637.24 |
| 25 | 625.96 | 613.07 | 613.05 | 612.59 | 614.38 | 634.30 | 636.03 | 637.27 | 637.35 | 637.31 | 636.53 | 636.95 |
| 26 | 624.72 | 613.01 | 613.18 | 612.69 | 614.72 | 634.41 | 636.08 | 637.14 | 637.34 | 637.24 | 636.96 | 637.13 |
| 27 | 623.98 | 613.04 | 613.01 | 612.72 | 615.02 | 634.49 | 636.21 | 637.30 | 637.32 | 637.04 | 637.06 | 636.92 |
| 28 | 623.32 | 613.08 | 612.88 | 612.92 | 617.47 | 634.57 | 636.30 | 637.30 | 637.26 | 637.09 | 637.14 | 637.13 |
| 29 | 623.67 | 613.06 | 613.16 | 612.73 | --- | 634.69 | 636.40 | 637.48 | 637.23 | 637.14 | 637.22 | 637.36 |
| 30 | 622.35 | 613.07 | 613.18 | 612.74 | --- | 634.82 | 636.50 | 637.42 | 637.16 | 637.18 | 637.08 | 637.37 |
| 31 | 621.71 | --- | 613.09 | 612.96 | --- | 635.08 | --- | 637.18 | --- | 637.26 | 637.33 | --- |
| MEAN | 632.83 | 615.26 | 613.04 | 612.95 | 613.40 | 630.98 | 635.59 | 637.07 | 637.15 | 637.02 | 637.10 | 637.17 |
| MAX | 637.25 | 621.34 | 613.29 | 613.13 | 617.47 | 635.08 | 636.50 | 637.68 | 637.35 | 637.31 | 637.33 | 638.20 |
| MIN | 621.71 | 613.01 | 612.88 | 612.59 | 612.78 | 619.23 | 635.02 | 636.60 | 636.81 | 636.70 | 636.24 | 636.82 |
| (†) | 39,240 | 31,130 | 31,150 | 31,030 | 35,160 | 53,600 | 55,280 | 56,090 | 56,060 | 56,180 | 56,270 | 56,320 |
| (‡) | -16,840 | -8,110 | +20 | -120 | +4,130 | +18,440 | +1,680 | +810 | -30 | +120 | +90 | +50 |
| CAL YR 1976 | MEAN 626.21 | MAX 637.92 | MIN 612.48 | AC-FT‡ -320 | | | | | | | | |
| WTR YR 1977 | MEAN 628.39 | MAX 638.20 | MIN 612.59 | AC-FT‡ -240 | | | | | | | | |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

335

14187100 WILEY CREEK AT FOSTER, OR

LOCATION.--Lat 44°23'55", long 122°39'35", in SW¼NW¼ sec.35, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, on right bank 1.5 mi (2.4 km) downstream from Jackson Creek, 1.0 mi (1.6 km) southeast of Foster, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--62.3 mi² (161.4 km²).

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 590 ft (179.8 m), from topographic map. Prior to May 2, 1974, at present site at datum 5.00 ft (1.524 m) lower.

REMARKS.--Records fair. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,320 ft³/s (179 m³/s) Jan. 15, 1974, gage height, 9.28 ft (2.829 m); minimum, 3.1 ft³/s (0.088 m³/s) Oct. 19, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 916 ft³/s (25.9 m³/s) Mar. 8, 9, gage height, 6.22 ft (1.896 m), no peak above base of 2,300 ft³/s (65.1 m³/s); minimum, 6.8 ft³/s (0.19 m³/s) Aug. 17-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|----------|----------|---------|-----------|----------|--------------|------|------|-------|------|
| 1 | 16 | 81 | 33 | 40 | 41 | 406 | 283 | 114 | 257 | 39 | 16 | 24 |
| 2 | 18 | 68 | 32 | 55 | 39 | 325 | 267 | 218 | 212 | 38 | 15 | 21 |
| 3 | 21 | 50 | 31 | 56 | 37 | 411 | 239 | 449 | 196 | 37 | 14 | 20 |
| 4 | 20 | 43 | 31 | 51 | 37 | 343 | 239 | 438 | 245 | 40 | 13 | 21 |
| 5 | 19 | 39 | 31 | 47 | 37 | 264 | 260 | 411 | 227 | 37 | 13 | 21 |
| 6 | 18 | 37 | 31 | 41 | 37 | 254 | 286 | 358 | 198 | 37 | 12 | 20 |
| 7 | 18 | 34 | 30 | 40 | 36 | 537 | 307 | 314 | 172 | 36 | 12 | 18 |
| 8 | 16 | 32 | 47 | 36 | 35 | 725 | 366 | 273 | 151 | 33 | 11 | 16 |
| 9 | 16 | 31 | 70 | 37 | 34 | 680 | 321 | 242 | 133 | 32 | 11 | 15 |
| 10 | 16 | 30 | 50 | 43 | 34 | 525 | 267 | 406 | 131 | 33 | 9.3 | 15 |
| 11 | 17 | 28 | 42 | 41 | 33 | 427 | 239 | 449 | 114 | 32 | 8.9 | 14 |
| 12 | 17 | 28 | 40 | 42 | 33 | 411 | 215 | 358 | 106 | 31 | 8.4 | 14 |
| 13 | 17 | 27 | 37 | 97 | 37 | 386 | 239 | 300 | 97 | 31 | 7.6 | 13 |
| 14 | 16 | 33 | 36 | 103 | 37 | 328 | 221 | 257 | 89 | 30 | 7.6 | 13 |
| 15 | 15 | 81 | 36 | 81 | 34 | 270 | 204 | 277 | 85 | 28 | 8.0 | 13 |
| 16 | 15 | 82 | 34 | 71 | 33 | 227 | 215 | 343 | 81 | 27 | 8.0 | 14 |
| 17 | 15 | 70 | 34 | 64 | 32 | 193 | 190 | 595 | 74 | 26 | 7.6 | 14 |
| 18 | 14 | 99 | 33 | 59 | 31 | 182 | 169 | 569 | 71 | 28 | 6.8 | 15 |
| 19 | 14 | 75 | 32 | 56 | 31 | 182 | 153 | 432 | 68 | 29 | 6.8 | 24 |
| 20 | 14 | 62 | 31 | 52 | 31 | 180 | 142 | 343 | 65 | 26 | 6.8 | 36 |
| 21 | 14 | 55 | 30 | 50 | 46 | 174 | 136 | 304 | 66 | 24 | 8.0 | 33 |
| 22 | 14 | 49 | 30 | 47 | 100 | 172 | 130 | 257 | 61 | 24 | 9.3 | 28 |
| 23 | 14 | 45 | 33 | 46 | 89 | 160 | 128 | 260 | 56 | 21 | 9.8 | 41 |
| 24 | 18 | 41 | 33 | 43 | 88 | 224 | 130 | 257 | 52 | 21 | 59 | 112 |
| 25 | 87 | 41 | 33 | 41 | 81 | 245 | 140 | 218 | 50 | 21 | 33 | 66 |
| 26 | 54 | 39 | 56 | 41 | 103 | 218 | 138 | 304 | 48 | 22 | 33 | 55 |
| 27 | 37 | 37 | 73 | 40 | 154 | 336 | 118 | 332 | 43 | 21 | 27 | 47 |
| 28 | 31 | 36 | 56 | 39 | 489 | 336 | 111 | 358 | 42 | 19 | 24 | 63 |
| 29 | 31 | 34 | 51 | 38 | --- | 325 | 103 | 314 | 41 | 19 | 36 | 56 |
| 30 | 31 | 34 | 46 | 38 | --- | 297 | 99 | 267 | 41 | 19 | 39 | 49 |
| 31 | 31 | --- | 42 | 39 | --- | 267 | --- | 227 | --- | 18 | 31 | --- |
| TOTAL | 694 | 1441 | 1224 | 1574 | 1849 | 10010 | 6055 | 10244 | 3272 | 879 | 511.9 | 911 |
| MEAN | 22.4 | 48.0 | 39.5 | 50.8 | 66.0 | 323 | 202 | 330 | 109 | 28.4 | 16.5 | 30.4 |
| MAX | 87 | 99 | 73 | 103 | 489 | 725 | 366 | 595 | 257 | 40 | 59 | 112 |
| MIN | 14 | 27 | 30 | 36 | 31 | 160 | 99 | 114 | 41 | 18 | 6.8 | 13 |
| CFSM | .36 | .77 | .63 | .82 | 1.06 | 5.19 | 3.24 | 5.30 | 1.75 | .46 | .27 | .49 |
| IN. | .41 | .86 | .73 | .94 | 1.10 | 5.98 | 3.62 | 6.12 | 1.95 | .52 | .31 | .54 |
| AC-FT | 1380 | 2860 | 2430 | 3120 | 3670 | 19850 | 12010 | 20320 | 6490 | 1740 | 1020 | 1810 |
| CAL YR 1976 | TOTAL | 64448.0 | MEAN 176 | MAX 2420 | MIN 13 | CFSM 2.83 | IN 38.48 | AC-FT 127800 | | | | |
| WTR YR 1977 | TOTAL | 38664.9 | MEAN 106 | MAX 725 | MIN 6.8 | CFSM 1.70 | IN 23.09 | AC-FT 76690 | | | | |

WILLAMETTE RIVER BASIN

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR

LOCATION.--Lat 44°24'45", long 122°41'15", in SE 1/4 sec. 28, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, on left bank 0.6 mi (1.0 km) downstream from Wiley Creek and at mile 37.0 (59.5 km).

DRAINAGE AREA.--557 mi² (1,443 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year. Records for October 1966 to July 1973 (published as South Santiam River at Foster, station 14186700) at site 0.5 mi (0.8 km) upstream not equivalent owing to inflow between sites.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft (171 m), from topographic map.

REMARKS.--Water-discharge records excellent. Flow regulated since October 1966 by Green Peter Lake (see station 14186100) and since December 1966 by Foster Lake (see station 14186600). No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s (479 m³/s) Jan. 15, 1974, gage height, 16.07 ft (4.898 m); minimum, 425 ft³/s (12.0 m³/s) July 26, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,050 ft³/s (200 m³/s) May 17, gage height, 13.26 ft (4.042 m); minimum, 485 ft³/s (13.7 m³/s) Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|--------|-------|-------|-------|-------|-------|--------|-------|---------|-------|-------|
| 1 | 1400 | 1960 | 1200 | 980 | 595 | 856 | 1840 | 1370 | 2620 | 931 | 750 | 922 |
| 2 | 1400 | 2770 | 1110 | 980 | 595 | 758 | 1700 | 1970 | 2370 | 922 | 750 | 912 |
| 3 | 1400 | 2770 | 1090 | 990 | 587 | 884 | 1460 | 2980 | 1920 | 922 | 732 | 912 |
| 4 | 1400 | 1920 | 1200 | 847 | 580 | 793 | 1420 | 3900 | 3420 | 922 | 912 | 912 |
| 5 | 1400 | 1690 | 1130 | 724 | 572 | 724 | 1690 | 4900 | 3170 | 922 | 912 | 903 |
| 6 | 1390 | 1650 | 1160 | 724 | 565 | 716 | 1960 | 4230 | 2340 | 941 | 912 | 912 |
| 7 | 1420 | 1520 | 1170 | 716 | 572 | 1060 | 2250 | 4060 | 1920 | 941 | 912 | 912 |
| 8 | 1420 | 1520 | 1240 | 716 | 565 | 1700 | 2760 | 3780 | 2020 | 941 | 793 | 922 |
| 9 | 1430 | 1450 | 1390 | 707 | 572 | 2740 | 2070 | 3080 | 1820 | 931 | 856 | 912 |
| 10 | 1430 | 1550 | 1300 | 716 | 572 | 2130 | 1690 | 3800 | 1760 | 931 | 875 | 912 |
| 11 | 1430 | 1650 | 1200 | 724 | 580 | 1550 | 1420 | 3570 | 1600 | 931 | 912 | 912 |
| 12 | 1430 | 1540 | 1230 | 724 | 580 | 1730 | 1320 | 3130 | 1440 | 931 | 912 | 912 |
| 13 | 1420 | 1570 | 1240 | 793 | 595 | 1430 | 1460 | 1950 | 1130 | 922 | 912 | 912 |
| 14 | 1400 | 1640 | 1240 | 802 | 587 | 1160 | 1290 | 1510 | 1030 | 922 | 912 | 903 |
| 15 | 1400 | 1610 | 1220 | 776 | 580 | 893 | 1200 | 1740 | 1020 | 922 | 922 | 893 |
| 16 | 1420 | 1740 | 1180 | 750 | 580 | 793 | 1250 | 2920 | 1010 | 922 | 912 | 893 |
| 17 | 1420 | 2180 | 1110 | 741 | 572 | 784 | 1110 | 6020 | 1000 | 922 | 912 | 893 |
| 18 | 1860 | 2330 | 1210 | 732 | 557 | 884 | 1020 | 5360 | 990 | 922 | 912 | 903 |
| 19 | 2400 | 2310 | 1230 | 724 | 557 | 980 | 960 | 4660 | 990 | 931 | 903 | 903 |
| 20 | 2430 | 2100 | 1180 | 716 | 557 | 1170 | 866 | 4350 | 980 | 931 | 903 | 922 |
| 21 | 2480 | 1970 | 1130 | 716 | 572 | 1010 | 838 | 3420 | 980 | 922 | 903 | 922 |
| 22 | 2510 | 2070 | 1130 | 707 | 565 | 990 | 866 | 3130 | 970 | 912 | 903 | 1020 |
| 23 | 1800 | 2190 | 990 | 707 | 543 | 1320 | 990 | 3220 | 960 | 912 | 903 | 1180 |
| 24 | 1800 | 2190 | 990 | 707 | 550 | 1330 | 1170 | 2980 | 970 | 903 | 951 | 1610 |
| 25 | 1970 | 1310 | 980 | 650 | 550 | 1170 | 1350 | 1930 | 960 | 903 | 931 | 1560 |
| 26 | 2060 | 1250 | 1120 | 587 | 572 | 1030 | 1290 | 2450 | 951 | 912 | 931 | 1490 |
| 27 | 1960 | 1210 | 1120 | 587 | 587 | 1820 | 1090 | 2920 | 951 | 903 | 931 | 1920 |
| 28 | 1840 | 1220 | 1010 | 587 | 960 | 1850 | 1050 | 3190 | 941 | 903 | 922 | 2160 |
| 29 | 1930 | 1220 | 1000 | 587 | --- | 1590 | 1010 | 3100 | 941 | 912 | 941 | 2140 |
| 30 | 2150 | 1210 | 990 | 595 | --- | 1370 | 1130 | 2740 | 931 | 903 | 941 | 2500 |
| 31 | 1740 | --- | 980 | 595 | --- | 1200 | --- | 2690 | --- | 893 | 931 | --- |
| TOTAL | 52940 | 53310 | 35470 | 22607 | 16419 | 38415 | 41520 | 101050 | 44105 | 28538 | 27704 | 34719 |
| MEAN | 1708 | 1777 | 1144 | 729 | 586 | 1239 | 1384 | 3260 | 1470 | 921 | 894 | 1157 |
| MAX | 2510 | 2770 | 1390 | 990 | 960 | 2740 | 2760 | 6020 | 3420 | 941 | 951 | 2500 |
| MIN | 1390 | 1210 | 980 | 587 | 543 | 716 | 838 | 1370 | 931 | 893 | 732 | 893 |
| AC-FT | 105000 | 105700 | 70350 | 44840 | 32570 | 76200 | 82350 | 200400 | 87480 | 56610 | 54950 | 68870 |
| CAL YR 1976 | TOTAL | 856345 | MEAN | 2340 | MAX | 15000 | MIN | 471 | AC-FT | 1699000 | | |
| WTR YR 1977 | TOTAL | 496797 | MEAN | 1361 | MAX | 6020 | MIN | 543 | AC-FT | 985400 | | |

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 15.5°C July 23-25, 1975; minimum, 3.0°C Jan. 7, 12, 13, 1974, Feb. 6, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 14.0°C June 24, 26; minimum, 4.0°C Jan. 26-28, 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 11.5 | 10.5 | 10.5 | 10.0 | 9.0 | 8.5 | 7.0 | 6.0 | 6.5 | 5.0 | 7.0 | 5.5 |
| 2 | 11.5 | 10.5 | 10.5 | 10.0 | 9.0 | 8.0 | 7.0 | 6.5 | 6.0 | 5.0 | 7.0 | 5.5 |
| 3 | 11.0 | 10.5 | 10.0 | 9.5 | 9.0 | 8.0 | 7.0 | 6.0 | 6.0 | 4.5 | 7.0 | 5.5 |
| 4 | 11.5 | 10.5 | 10.0 | 10.0 | 8.5 | 8.0 | 7.0 | 6.0 | 6.0 | 4.5 | 8.0 | 5.5 |
| 5 | 11.5 | 10.5 | 10.0 | 9.5 | 8.5 | 8.0 | 6.5 | 5.0 | 6.0 | 5.0 | 8.0 | 5.0 |
| 6 | 12.0 | 10.5 | 10.0 | 9.5 | 8.5 | 8.0 | 5.5 | 5.0 | 6.5 | 5.0 | 8.0 | 5.5 |
| 7 | 12.0 | 10.5 | 10.0 | 9.5 | 9.0 | 8.0 | 5.5 | 4.5 | 6.0 | 5.0 | 8.0 | 6.5 |
| 8 | 11.0 | 10.5 | 10.0 | 10.0 | 9.0 | 8.0 | 5.5 | 5.0 | 6.0 | 5.0 | 8.0 | 6.5 |
| 9 | 11.0 | 10.5 | 10.0 | 9.5 | 8.5 | 8.0 | 5.5 | 4.5 | 7.0 | 5.5 | 7.5 | 5.5 |
| 10 | 11.0 | 10.5 | 10.0 | 9.5 | 8.5 | 7.5 | 5.5 | 4.5 | 7.0 | 6.0 | 6.5 | 5.5 |
| 11 | 11.5 | 10.5 | 10.0 | 9.5 | 8.0 | 7.5 | 5.5 | 5.0 | 7.5 | 6.0 | 7.5 | 5.0 |
| 12 | 11.0 | 10.0 | 10.0 | 9.5 | 8.0 | 7.5 | 6.5 | 5.0 | 7.5 | 6.5 | 8.0 | 6.0 |
| 13 | 11.0 | 10.0 | 10.0 | 9.0 | 8.5 | 7.5 | 6.0 | 5.5 | 8.0 | 7.0 | 7.0 | 5.0 |
| 14 | 11.0 | 10.0 | 10.0 | 9.5 | 8.5 | 7.5 | 6.0 | 4.5 | 7.5 | 6.5 | 7.0 | 5.0 |
| 15 | 11.0 | 10.0 | 10.5 | 10.0 | 8.5 | 8.0 | 6.5 | 5.0 | 8.0 | 6.5 | 8.0 | 5.0 |
| 16 | 11.0 | 10.0 | 10.5 | 10.0 | 8.5 | 8.0 | 6.5 | 5.0 | 8.5 | 7.0 | 7.5 | 5.0 |
| 17 | 12.0 | 10.0 | 11.0 | 10.5 | 8.5 | 7.5 | 6.5 | 5.5 | 8.5 | 7.0 | 7.0 | 5.5 |
| 18 | 12.5 | 11.0 | 10.5 | 10.0 | 8.5 | 8.0 | 7.0 | 6.0 | 8.0 | 7.0 | 7.0 | 6.0 |
| 19 | 11.0 | 10.5 | 10.5 | 10.0 | 8.0 | 7.5 | 7.0 | 6.0 | 8.0 | 6.5 | 7.0 | 6.5 |
| 20 | 11.0 | 10.5 | 10.0 | 9.5 | 8.0 | 7.5 | 6.5 | 5.5 | 8.0 | 7.0 | 8.0 | 5.5 |
| 21 | 11.0 | 10.0 | 10.5 | 9.5 | 7.5 | 7.0 | 7.0 | 5.5 | 8.0 | 7.0 | 8.0 | 5.5 |
| 22 | 11.0 | 10.5 | 10.0 | 10.0 | 7.5 | 7.0 | 6.5 | 5.5 | 8.0 | 6.5 | 8.5 | 6.0 |
| 23 | 10.5 | 10.0 | 10.0 | 9.5 | 8.0 | 7.0 | 6.0 | 4.5 | 7.0 | 5.5 | 7.5 | 6.5 |
| 24 | 11.0 | 10.0 | 10.5 | 9.5 | 7.5 | 6.5 | 6.0 | 4.5 | 7.0 | 6.0 | 8.0 | 6.0 |
| 25 | 10.5 | 9.5 | 10.5 | 10.0 | 8.0 | 7.0 | 5.5 | 4.5 | 7.0 | 6.0 | 8.0 | 6.0 |
| 26 | 10.5 | 9.5 | 9.5 | 9.0 | 8.0 | 7.0 | 5.5 | 4.0 | 7.5 | 6.0 | 9.0 | 6.5 |
| 27 | 10.0 | 9.5 | 9.5 | 8.5 | 8.0 | 7.0 | 5.5 | 4.0 | 8.5 | 7.0 | 7.5 | 6.0 |
| 28 | 10.0 | 9.5 | 9.0 | 8.5 | 8.0 | 7.5 | 6.5 | 5.5 | 8.5 | 6.5 | 7.0 | 6.0 |
| 29 | 10.0 | 9.5 | 9.0 | 8.0 | 7.5 | 7.0 | 5.5 | 4.5 | --- | --- | 7.5 | 6.0 |
| 30 | 10.0 | 9.5 | 9.0 | 8.0 | 7.5 | 6.5 | 5.5 | 4.0 | --- | --- | 8.5 | 5.5 |
| 31 | 10.5 | 10.0 | --- | --- | 7.0 | 6.0 | 6.0 | 5.0 | --- | --- | 7.0 | 6.0 |
| MONTH | 12.5 | 9.5 | 11.0 | 8.0 | 9.0 | 6.0 | 7.0 | 4.0 | 8.5 | 4.5 | 8.5 | 5.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 7.5 | 6.5 | 10.0 | 9.5 | 12.0 | 10.5 | 13.5 | 11.0 | 10.5 | 9.0 | 13.0 | 11.0 |
| 2 | 8.5 | 6.0 | 11.0 | 10.0 | 11.5 | 10.0 | 12.5 | 11.0 | 10.5 | 8.5 | 12.5 | 11.5 |
| 3 | 9.0 | 6.0 | 10.5 | 9.5 | 11.5 | 10.0 | 12.0 | 11.0 | 11.0 | 9.0 | 12.5 | 12.0 |
| 4 | 10.0 | 6.5 | 10.0 | 9.0 | 11.5 | 10.0 | 12.0 | 10.5 | 11.0 | 9.0 | 12.5 | 12.5 |
| 5 | 10.0 | 7.5 | 9.5 | 8.5 | 12.5 | 10.5 | 12.0 | 10.5 | 11.0 | 9.0 | 12.5 | 12.0 |
| 6 | 10.5 | 7.5 | 10.0 | 8.5 | 13.5 | 11.5 | 12.5 | 10.5 | 11.0 | 9.0 | 13.0 | 12.0 |
| 7 | 10.0 | 8.0 | 10.0 | 8.5 | 13.0 | 11.5 | 12.5 | 10.5 | 11.5 | 9.5 | 12.5 | 11.5 |
| 8 | 9.0 | 7.5 | 10.5 | 9.0 | 12.5 | 11.0 | 12.5 | 10.5 | 11.5 | 9.5 | 13.0 | 11.5 |
| 9 | 9.0 | 7.5 | 10.5 | 9.5 | 12.5 | 10.5 | 12.0 | 11.0 | 11.5 | 9.5 | 13.0 | 12.0 |
| 10 | 9.0 | 7.0 | 10.0 | 9.0 | 12.5 | 10.5 | 12.5 | 11.0 | 12.0 | 10.0 | 12.5 | 12.0 |
| 11 | 9.5 | 7.5 | 9.5 | 8.5 | 12.0 | 11.0 | 12.5 | 10.5 | 11.5 | 10.0 | 13.0 | 12.0 |
| 12 | 10.0 | 7.5 | 9.5 | 8.0 | 13.0 | 10.5 | 11.5 | 10.5 | 11.5 | 9.5 | 13.0 | 12.0 |
| 13 | 9.0 | 7.5 | 10.5 | 8.5 | 13.0 | 10.5 | 12.0 | 10.0 | 11.5 | 10.0 | 13.0 | 12.5 |
| 14 | 9.5 | 7.0 | 10.5 | 9.0 | 12.5 | 11.0 | 12.0 | 10.0 | 11.0 | 10.0 | 13.0 | 12.0 |
| 15 | 9.5 | 8.0 | 9.5 | 8.5 | 13.0 | 10.5 | 12.0 | 10.0 | 11.5 | 10.0 | 12.5 | 12.0 |
| 16 | 10.0 | 7.5 | 9.5 | 8.5 | 13.5 | 10.5 | 12.0 | 10.0 | 12.0 | 10.0 | 12.5 | 11.5 |
| 17 | 9.5 | 7.0 | 9.5 | 8.5 | 13.0 | 11.0 | 11.5 | 10.5 | 12.0 | 10.0 | 12.5 | 12.0 |
| 18 | 9.0 | 7.0 | 9.5 | 8.5 | 13.0 | 11.5 | 11.0 | 10.0 | 12.0 | 10.5 | 12.5 | 12.0 |
| 19 | 9.5 | 7.0 | 11.0 | 9.0 | 13.0 | 11.5 | 11.5 | 9.5 | 12.0 | 10.5 | 13.0 | 12.0 |
| 20 | 9.5 | 7.5 | 10.0 | 9.5 | 12.5 | 11.5 | 11.5 | 9.5 | 11.5 | 10.5 | 13.0 | 12.0 |
| 21 | 10.0 | 8.5 | 10.5 | 9.5 | 13.5 | 11.5 | 11.0 | 9.5 | 11.5 | 11.0 | 13.0 | 11.5 |
| 22 | 10.5 | 8.5 | 10.0 | 9.0 | 13.5 | 12.0 | 12.0 | 9.5 | 12.0 | 11.0 | 12.5 | 10.5 |
| 23 | 11.0 | 9.0 | 9.5 | 9.5 | 13.5 | 11.5 | 11.5 | 9.5 | 12.0 | 11.0 | 12.5 | 11.5 |
| 24 | 10.5 | 9.5 | 11.0 | 9.0 | 14.0 | 11.0 | 11.0 | 9.5 | 12.5 | 12.0 | 12.5 | 11.5 |
| 25 | 10.5 | 9.5 | 10.5 | 9.0 | 13.0 | 11.5 | 10.5 | 9.5 | 12.5 | 11.0 | 12.5 | 11.5 |
| 26 | 10.5 | 9.0 | 10.5 | 9.5 | 14.0 | 11.0 | 11.0 | 9.5 | 12.0 | 11.0 | 12.5 | 10.5 |
| 27 | 10.5 | 8.5 | 10.0 | 9.5 | 13.5 | 11.0 | 11.0 | 9.5 | 12.0 | 11.5 | 12.5 | 11.0 |
| 28 | 10.0 | 9.0 | 10.5 | 9.0 | 13.5 | 11.0 | 10.5 | 9.5 | 12.0 | 11.5 | 12.5 | 11.5 |
| 29 | 10.5 | 9.5 | 11.5 | 9.0 | 13.0 | 11.0 | 10.5 | 9.0 | 12.5 | 11.5 | 12.0 | 11.0 |
| 30 | 11.0 | 9.5 | 10.5 | 10.0 | 13.5 | 11.0 | 11.0 | 9.0 | 13.0 | 12.0 | 12.0 | 11.0 |
| 31 | --- | --- | 11.5 | 10.0 | --- | --- | 11.0 | 9.0 | 12.5 | 11.0 | --- | --- |
| MONTH | 11.0 | 6.0 | 11.5 | 8.0 | 14.0 | 10.0 | 13.5 | 9.0 | 13.0 | 8.5 | 13.0 | 10.5 |

WILLAMETTE RIVER BASIN

14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR

LOCATION.--Lat 44°29'55", long 122°49'20", in SW¼NW¼ sec.28, T.12 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.1 mi (0.2 km) downstream from highway bridge at Waterloo, 2.1 mi (3.4 km) upstream from Hamilton Creek, and at mile 23.3 (37.5 km).

DRAINAGE AREA.--640 mi² (1,658 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to December 1911 (gage heights only January to December 1911), July 1923 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as South Fork of Santiam River at Waterloo 1905-7, 1910-11.

REVISED RECORDS.--WSP 1248: 1907, 1924-30, 1932.

GAGE.--Water-stage recorder. Datum of gage is 370.39 ft (112.895 m) above mean sea level. Prior to Dec. 31, 1911, nonrecording gage at site 0.5 mi (0.8 km) downstream at datum about 5.0 ft (1.52 m) lower. July 1, 1923, to Nov. 12, 1934, nonrecording gage, at present site and datum.

REMARKS.--Water-discharge records excellent except those for period Nov. 17 to Dec. 2, which are good. Flow regulated since October 1966 by Green Peter Lake (see station 14186100) and since December 1966 by Foster Lake (see station 14186600). No diversion above station.

AVERAGE DISCHARGE.--55 years (water years 1906, 1924-77), 2,937 ft³/s (83.18 m³/s), 2,128,000 acre-ft/yr (2.62 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,200 ft³/s (2,696 m³/s) Dec. 22, 1964, gage height, 24.50 ft (7.468 m); minimum, 61 ft³/s (1.73 m³/s) Oct. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,230 ft³/s (205 m³/s) May 17, gage height, 6.42 ft (1.957 m); minimum, 523 ft³/s (14.8 m³/s) Feb. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|--------|-------|-------|-------|-------|-------|--------|-------|---------|-------|-------|
| 1 | 1440 | 1970 | 1200 | 951 | 573 | 1270 | 1910 | 1440 | 2740 | 910 | 702 | 900 |
| 2 | 1450 | 2770 | 1000 | 962 | 573 | 1040 | 1960 | 2080 | 2460 | 910 | 702 | 880 |
| 3 | 1450 | 2860 | 1080 | 973 | 564 | 1220 | 1620 | 3200 | 2030 | 910 | 673 | 890 |
| 4 | 1440 | 2090 | 1170 | 880 | 547 | 1050 | 1520 | 4120 | 3270 | 920 | 870 | 890 |
| 5 | 1440 | 1750 | 1160 | 711 | 539 | 910 | 1810 | 5150 | 3410 | 910 | 870 | 880 |
| 6 | 1440 | 1710 | 1150 | 692 | 547 | 880 | 2050 | 4500 | 2560 | 930 | 880 | 880 |
| 7 | 1450 | 1560 | 1160 | 692 | 547 | 1350 | 2370 | 4320 | 1970 | 930 | 880 | 880 |
| 8 | 1450 | 1550 | 1220 | 683 | 539 | 2110 | 2920 | 3980 | 2080 | 920 | 750 | 890 |
| 9 | 1460 | 1480 | 1400 | 673 | 547 | 3390 | 2350 | 3280 | 1880 | 910 | 800 | 880 |
| 10 | 1470 | 1530 | 1330 | 692 | 547 | 2750 | 1900 | 4140 | 1780 | 910 | 820 | 890 |
| 11 | 1460 | 1660 | 1210 | 692 | 555 | 1990 | 1570 | 3900 | 1640 | 900 | 860 | 890 |
| 12 | 1460 | 1570 | 1220 | 692 | 555 | 2290 | 1450 | 3520 | 1500 | 900 | 870 | 880 |
| 13 | 1460 | 1590 | 1220 | 790 | 564 | 1930 | 1560 | 2270 | 1170 | 890 | 870 | 880 |
| 14 | 1440 | 1650 | 1220 | 850 | 564 | 1510 | 1450 | 1680 | 1020 | 890 | 880 | 880 |
| 15 | 1440 | 1680 | 1210 | 780 | 555 | 1200 | 1300 | 1840 | 1010 | 890 | 880 | 870 |
| 16 | 1450 | 1790 | 1160 | 750 | 555 | 962 | 1380 | 2940 | 995 | 890 | 870 | 870 |
| 17 | 1460 | 2300 | 1110 | 740 | 555 | 951 | 1230 | 5870 | 962 | 880 | 870 | 870 |
| 18 | 1760 | 2400 | 1150 | 721 | 531 | 1050 | 1120 | 5750 | 962 | 890 | 870 | 880 |
| 19 | 2500 | 2300 | 1200 | 711 | 531 | 1080 | 1040 | 4890 | 962 | 890 | 850 | 890 |
| 20 | 2530 | 2100 | 1150 | 692 | 539 | 1350 | 951 | 4440 | 951 | 890 | 860 | 910 |
| 21 | 2580 | 2000 | 1090 | 692 | 564 | 1200 | 890 | 3650 | 951 | 890 | 860 | 910 |
| 22 | 2610 | 2100 | 1090 | 692 | 627 | 1080 | 910 | 3230 | 940 | 870 | 860 | 962 |
| 23 | 1960 | 2200 | 984 | 683 | 600 | 1460 | 1010 | 3300 | 930 | 870 | 860 | 1160 |
| 24 | 1870 | 2200 | 940 | 683 | 627 | 1600 | 1200 | 3110 | 930 | 870 | 962 | 1590 |
| 25 | 2030 | 1300 | 951 | 645 | 600 | 1380 | 1380 | 2200 | 940 | 870 | 920 | 1600 |
| 26 | 2140 | 1300 | 1080 | 555 | 636 | 1200 | 1400 | 2400 | 930 | 870 | 930 | 1500 |
| 27 | 2050 | 1200 | 1150 | 555 | 711 | 1870 | 1160 | 2940 | 920 | 870 | 910 | 1900 |
| 28 | 1910 | 1200 | 995 | 564 | 1320 | 2120 | 1110 | 3250 | 920 | 860 | 910 | 2170 |
| 29 | 1910 | 1200 | 984 | 564 | --- | 1850 | 1060 | 3160 | 910 | 870 | 920 | 2210 |
| 30 | 2230 | 1200 | 962 | 564 | --- | 1610 | 1120 | 2870 | 920 | 860 | 930 | 2510 |
| 31 | 1850 | --- | 951 | 573 | --- | 1350 | --- | 2700 | --- | 850 | 910 | --- |
| TOTAL | 54590 | 54210 | 34897 | 22097 | 16712 | 47003 | 44701 | 106120 | 44643 | 27620 | 26599 | 34192 |
| MEAN | 1761 | 1807 | 1126 | 713 | 597 | 1516 | 1490 | 3423 | 1488 | 891 | 858 | 1140 |
| MAX | 2610 | 2860 | 1400 | 973 | 1320 | 3390 | 2920 | 5870 | 3410 | 930 | 962 | 2510 |
| MIN | 1440 | 1200 | 940 | 555 | 531 | 880 | 890 | 1440 | 910 | 850 | 673 | 870 |
| AC-FT | 108300 | 107500 | 69220 | 43830 | 33150 | 93230 | 88660 | 210500 | 88550 | 54780 | 52760 | 67820 |
| CAL YR 1976 | TOTAL | 889599 | MEAN | 2431 | MAX | 17000 | MIN | 437 | AC-FT | 1765000 | | |
| WTR YR 1977 | TOTAL | 513384 | MEAN | 1407 | MAX | 5870 | MIN | 531 | AC-FT | 1018000 | | |

14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C Aug. 4, 1966; minimum, 1.5°C Dec. 18-20, 1965.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.5°C Aug. 1, 2; minimum, 3.0°C Jan. 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 13.0 | 10.5 | 10.5 | 10.0 | 8.5 | 7.5 | 6.5 | 6.0 | 6.5 | 5.5 | 7.5 | 6.0 |
| 2 | 12.0 | 10.5 | 10.5 | 10.0 | 8.5 | 7.5 | 7.0 | 6.5 | 6.0 | 5.0 | 7.0 | 6.5 |
| 3 | 12.0 | 10.0 | 10.5 | 9.5 | 8.5 | 7.5 | 6.5 | 5.5 | 6.0 | 4.5 | 7.5 | 6.0 |
| 4 | 12.5 | 9.5 | 10.5 | 9.5 | 8.0 | 7.5 | 6.5 | 6.0 | 6.0 | 5.0 | 8.0 | 6.5 |
| 5 | 12.5 | 9.5 | 10.0 | 9.5 | 8.0 | 8.0 | 6.5 | 4.0 | 5.5 | 5.0 | 8.5 | 6.5 |
| 6 | 13.0 | 10.0 | 10.5 | 9.5 | 8.0 | 7.5 | 4.5 | 3.5 | 6.5 | 5.5 | 8.0 | 7.0 |
| 7 | 13.5 | 10.0 | 10.5 | 9.0 | 9.0 | 7.5 | 4.5 | 3.5 | 6.0 | 5.5 | 8.0 | 7.0 |
| 8 | 12.0 | 10.0 | 11.0 | 9.5 | 9.0 | 8.5 | 4.0 | 3.5 | 6.0 | 5.5 | 7.5 | 7.0 |
| 9 | 12.0 | 10.0 | 10.5 | 9.0 | 8.5 | 8.0 | 4.5 | 3.0 | 7.0 | 5.5 | 7.0 | 6.5 |
| 10 | 11.5 | 10.0 | 10.5 | 9.0 | 8.0 | 7.5 | 6.0 | 4.5 | 8.0 | 6.5 | 8.0 | 6.0 |
| 11 | 12.5 | 10.5 | 10.5 | 9.5 | 8.0 | 7.5 | 6.0 | 5.5 | 7.5 | 6.5 | 8.5 | 6.0 |
| 12 | 12.0 | 10.0 | 10.5 | 9.0 | 7.5 | 7.0 | 6.5 | 5.5 | 8.0 | 7.0 | 8.0 | 6.5 |
| 13 | 12.0 | 9.5 | 10.0 | 8.5 | 7.5 | 7.0 | 6.5 | 6.0 | 8.0 | 7.5 | 7.5 | 5.5 |
| 14 | 12.0 | 9.5 | 10.5 | 9.5 | 8.0 | 7.0 | 6.0 | 5.0 | 8.0 | 7.0 | 7.0 | 5.5 |
| 15 | 12.0 | 9.5 | 10.5 | 10.0 | 8.5 | 7.5 | 7.0 | 5.5 | 8.0 | 6.5 | 8.5 | 6.0 |
| 16 | 12.0 | 9.5 | 11.0 | 10.5 | 8.5 | 7.5 | 6.5 | 5.5 | 8.5 | 7.0 | 8.5 | 6.0 |
| 17 | 12.0 | 9.0 | 11.0 | 10.5 | 8.5 | 7.0 | 6.5 | 5.5 | 9.5 | 8.0 | 8.0 | 6.5 |
| 18 | 13.0 | 8.5 | 10.5 | 10.0 | 8.5 | 8.0 | 6.5 | 6.0 | 8.5 | 7.5 | 7.5 | 7.0 |
| 19 | 11.5 | 9.5 | 10.0 | 9.5 | 8.0 | 7.5 | 7.0 | 6.0 | 8.5 | 7.0 | 8.5 | 7.0 |
| 20 | 12.0 | 9.5 | 10.0 | 9.5 | 7.5 | 7.0 | 6.5 | 5.5 | 8.0 | 7.5 | 8.0 | 6.0 |
| 21 | 11.5 | 9.5 | 10.5 | 9.5 | 7.0 | 6.5 | 6.5 | 5.5 | 7.5 | 7.0 | 9.5 | 6.5 |
| 22 | 11.5 | 9.5 | 10.0 | 10.0 | 7.0 | 7.0 | 6.5 | 6.0 | 7.5 | 7.0 | 10.0 | 7.0 |
| 23 | 11.0 | 9.0 | 10.0 | 9.5 | 8.0 | 7.0 | 5.5 | 4.5 | 7.0 | 6.0 | 9.5 | 7.0 |
| 24 | 10.5 | 9.5 | 10.5 | 9.5 | 7.5 | 7.5 | 5.5 | 4.5 | 6.5 | 6.0 | 9.5 | 7.0 |
| 25 | 10.5 | 9.5 | 10.5 | 9.5 | 8.0 | 7.0 | 5.0 | 4.0 | 6.5 | 6.0 | 10.0 | 7.0 |
| 26 | 11.0 | 9.5 | 9.5 | 8.5 | 8.0 | 7.5 | 4.5 | 3.5 | 7.5 | 6.5 | 8.5 | 7.0 |
| 27 | 11.0 | 9.0 | 8.5 | 7.5 | 8.0 | 7.5 | 5.0 | 4.0 | 8.5 | 7.0 | 8.5 | 6.5 |
| 28 | 10.5 | 9.0 | 8.5 | 7.5 | 8.0 | 7.0 | 5.0 | 4.0 | 8.0 | 7.0 | 7.5 | 6.5 |
| 29 | 10.0 | 9.5 | 8.5 | 7.5 | 7.5 | 7.0 | 4.5 | 4.0 | --- | --- | 8.5 | 6.5 |
| 30 | 10.5 | 9.5 | 8.5 | 7.5 | 7.5 | 6.5 | 5.0 | 4.0 | --- | --- | 9.5 | 6.5 |
| 31 | 11.0 | 9.5 | --- | --- | 6.5 | 6.0 | 6.5 | 5.0 | --- | --- | 8.5 | 6.5 |
| MONTH | 13.5 | 8.5 | 11.0 | 7.5 | 9.0 | 6.0 | 7.0 | 3.0 | 9.5 | 4.5 | 10.0 | 5.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 8.5 | 7.0 | 12.0 | 9.5 | 12.5 | 10.0 | 16.0 | 13.5 | 18.5 | 14.5 | 15.5 | 12.0 |
| 2 | 9.5 | 6.5 | 12.5 | 9.5 | 13.0 | 9.0 | 16.0 | 13.0 | 18.5 | 14.5 | 14.5 | 12.5 |
| 3 | 10.5 | 6.5 | 11.0 | 9.5 | 11.0 | 9.5 | 15.0 | 12.5 | 18.0 | 14.5 | 14.5 | 13.0 |
| 4 | 11.0 | 7.0 | 11.0 | 9.5 | 11.5 | 10.5 | 14.5 | 12.5 | 17.0 | 13.5 | 14.5 | 13.0 |
| 5 | 12.0 | 7.5 | 10.5 | 9.0 | 14.5 | 10.5 | 14.5 | 12.0 | 17.5 | 13.5 | 15.0 | 13.0 |
| 6 | 12.0 | 7.5 | 11.5 | 8.5 | 14.5 | 10.5 | 16.5 | 12.5 | 17.5 | 14.0 | 16.0 | 12.0 |
| 7 | 12.0 | 8.0 | 11.0 | 8.0 | 15.0 | 11.0 | 17.0 | 13.0 | 17.5 | 14.0 | 15.5 | 12.5 |
| 8 | 10.0 | 8.0 | 12.0 | 8.5 | 14.5 | 10.5 | 17.0 | 13.0 | 18.0 | 14.0 | 15.0 | 12.0 |
| 9 | 10.0 | 8.0 | 12.0 | 8.0 | 14.0 | 10.0 | 16.0 | 13.5 | 18.0 | 14.0 | 15.5 | 12.0 |
| 10 | 10.5 | 7.5 | 9.5 | 9.0 | 14.5 | 10.5 | 17.0 | 12.5 | 18.0 | 14.5 | 15.5 | 12.0 |
| 11 | 11.0 | 8.0 | 10.5 | 8.5 | 12.0 | 11.0 | 17.5 | 13.5 | 18.0 | 14.5 | 15.5 | 12.0 |
| 12 | 11.5 | 7.5 | 12.0 | 8.0 | 15.0 | 10.5 | 16.5 | 13.5 | 17.5 | 14.0 | 15.5 | 12.0 |
| 13 | 11.0 | 8.5 | 12.0 | 8.5 | 15.5 | 11.0 | 16.5 | 12.0 | 17.5 | 14.0 | 15.5 | 12.5 |
| 14 | 11.0 | 7.0 | 11.5 | 9.0 | 14.0 | 11.5 | 17.0 | 13.0 | 16.5 | 13.5 | 14.5 | 12.5 |
| 15 | 10.5 | 8.5 | 10.0 | 8.5 | 14.5 | 11.0 | 17.5 | 13.5 | 17.0 | 13.0 | 13.5 | 12.0 |
| 16 | 10.5 | 8.5 | 10.0 | 8.5 | 16.0 | 11.5 | 17.0 | 13.5 | 17.5 | 14.0 | 14.0 | 11.5 |
| 17 | 11.0 | 7.5 | 9.5 | 8.5 | 16.0 | 12.5 | 16.0 | 13.0 | 17.5 | 14.0 | 13.5 | 12.0 |
| 18 | 10.5 | 7.5 | 10.5 | 8.5 | 15.0 | 12.5 | 15.5 | 13.5 | 16.5 | 14.0 | 13.0 | 12.0 |
| 19 | 11.5 | 7.5 | 12.0 | 8.5 | 15.5 | 12.5 | 17.0 | 12.5 | 16.5 | 13.5 | 13.0 | 12.0 |
| 20 | 11.0 | 8.0 | 11.0 | 8.5 | 14.5 | 12.0 | 17.0 | 13.0 | 15.5 | 13.5 | 13.0 | 11.5 |
| 21 | 11.0 | 9.5 | 11.5 | 9.0 | 16.5 | 11.5 | 17.0 | 13.5 | 14.0 | 13.5 | 14.0 | 11.5 |
| 22 | 12.0 | 9.0 | 11.0 | 8.5 | 16.0 | 13.5 | 17.5 | 13.5 | 16.5 | 13.0 | 13.5 | 11.0 |
| 23 | 13.0 | 10.0 | 10.5 | 8.5 | 17.0 | 12.5 | 16.5 | 14.0 | 15.5 | 13.0 | 13.0 | 11.5 |
| 24 | 13.0 | 9.5 | 12.5 | 8.5 | 17.0 | 13.0 | 17.0 | 13.5 | 15.0 | 13.5 | 13.0 | 11.0 |
| 25 | 12.0 | 9.5 | 12.0 | 8.5 | 16.5 | 13.5 | 15.5 | 13.0 | 14.0 | 12.5 | 13.5 | 11.5 |
| 26 | 13.0 | 9.0 | 11.5 | 9.0 | 17.0 | 13.0 | 16.5 | 13.0 | 15.0 | 12.5 | 13.5 | 10.5 |
| 27 | 13.0 | 8.5 | 11.0 | 8.5 | 17.0 | 13.0 | 17.0 | 13.0 | 14.5 | 12.5 | 12.0 | 11.0 |
| 28 | 12.5 | 9.5 | 12.0 | 9.0 | 17.5 | 13.0 | 15.5 | 13.5 | 14.5 | 13.0 | 12.5 | 11.0 |
| 29 | 13.0 | 9.5 | 13.0 | 8.5 | 16.5 | 13.5 | 16.5 | 12.5 | 14.0 | 13.0 | 12.0 | 11.0 |
| 30 | 13.0 | 10.0 | 11.5 | 9.0 | 17.0 | 13.0 | 17.5 | 13.5 | 16.0 | 12.5 | 12.5 | 11.0 |
| 31 | --- | --- | 12.5 | 9.5 | --- | --- | 17.5 | 13.5 | 15.0 | 12.0 | --- | --- |
| MONTH | 13.0 | 6.5 | 13.0 | 8.0 | 17.5 | 9.0 | 17.5 | 12.0 | 18.5 | 12.0 | 16.0 | 10.5 |

WILLAMETTE RIVER BASIN

14188800 THOMAS CREEK NEAR SCIO, OR

LOCATION.--Lat 44°42'42", long 122°45'55", in SE¼SE¼ sec.11, T.10 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.3 mi (0.5 km) upstream from bridge on State Highway 226, 1.6 mi (2.6 km) upstream from Mill Creek, 4.2 mi (6.8 km) east of Scio, and at mile 14.6 (23.5 km).

DRAINAGE AREA.--109 mi² (282 km²).

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WRD Oreg. 1971: 1965(P), 1966(P), 1969(P).

GAGE.--Water-stage recorder. Datum of gage is 380.84 ft (116.080 m) above mean sea level.

REMARKS.--Records good. No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 503 ft³/s (14.24 m³/s), 62.67 in/yr (1,592 mm/yr), 364,400 acre-ft/yr (449 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s (776 m³/s) Dec. 22, 1964, gage height, 18.44 ft (5.621 m), from rating curve extended above 7,200 ft³/s (204 m³/s), on basis of slope-area measurement of peak flow; maximum gage height, 19.58 ft (5.968 m) Jan. 21, 1972, backwater from debris; minimum discharge, 7.8 ft³/s (0.22 m³/s) Aug. 20, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,160 ft³/s (61.2 m³/s) Mar. 8, gage height, 6.37 ft (1.942 m), no peak above base of 3,500 ft³/s (99.1 m³/s); minimum, 10 ft³/s (0.28 m³/s) Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|
| 1 | 37 | 412 | 66 | 150 | 78 | 1230 | 437 | 294 | 403 | 73 | 27 | 69 |
| 2 | 39 | 222 | 63 | 200 | 72 | 867 | 413 | 505 | 345 | 70 | 23 | 55 |
| 3 | 50 | 152 | 60 | 180 | 70 | 806 | 443 | 848 | 347 | 70 | 22 | 73 |
| 4 | 39 | 120 | 59 | 150 | 67 | 622 | 518 | 910 | 754 | 88 | 22 | 92 |
| 5 | 34 | 101 | 57 | 130 | 65 | 519 | 591 | 834 | 670 | 80 | 22 | 94 |
| 6 | 31 | 86 | 56 | 120 | 66 | 540 | 657 | 766 | 530 | 73 | 22 | 74 |
| 7 | 28 | 76 | 56 | 110 | 63 | 1320 | 610 | 653 | 440 | 65 | 23 | 60 |
| 8 | 25 | 69 | 76 | 105 | 61 | 1630 | 464 | 561 | 375 | 59 | 23 | 50 |
| 9 | 24 | 65 | 155 | 105 | 59 | 1700 | 397 | 564 | 335 | 56 | 20 | 45 |
| 10 | 25 | 61 | 106 | 110 | 62 | 1100 | 380 | 1080 | 305 | 60 | 18 | 41 |
| 11 | 25 | 57 | 90 | 130 | 84 | 835 | 400 | 861 | 277 | 56 | 17 | 39 |
| 12 | 25 | 54 | 82 | 220 | 73 | 1170 | 420 | 667 | 255 | 51 | 15 | 37 |
| 13 | 25 | 52 | 77 | 350 | 93 | 900 | 431 | 543 | 229 | 51 | 16 | 34 |
| 14 | 25 | 59 | 74 | 280 | 83 | 706 | 380 | 476 | 210 | 48 | 19 | 32 |
| 15 | 25 | 161 | 72 | 250 | 75 | 577 | 347 | 501 | 192 | 47 | 19 | 33 |
| 16 | 24 | 303 | 70 | 220 | 70 | 494 | 379 | 481 | 179 | 45 | 17 | 33 |
| 17 | 24 | 213 | 68 | 200 | 66 | 435 | 329 | 1080 | 165 | 44 | 15 | 32 |
| 18 | 24 | 278 | 70 | 180 | 63 | 418 | 299 | 924 | 155 | 53 | 15 | 34 |
| 19 | 24 | 198 | 66 | 160 | 61 | 474 | 273 | 696 | 145 | 50 | 17 | 57 |
| 20 | 23 | 162 | 62 | 150 | 62 | 427 | 259 | 574 | 138 | 42 | 21 | 181 |
| 21 | 24 | 138 | 59 | 130 | 101 | 399 | 259 | 518 | 137 | 39 | 25 | 221 |
| 22 | 24 | 122 | 58 | 120 | 230 | 454 | 259 | 449 | 126 | 36 | 19 | 170 |
| 23 | 24 | 110 | 67 | 110 | 218 | 485 | 274 | 415 | 118 | 36 | 62 | 223 |
| 24 | 33 | 100 | 70 | 100 | 239 | 425 | 294 | 382 | 107 | 39 | 55 | 432 |
| 25 | 161 | 96 | 77 | 95 | 245 | 480 | 318 | 342 | 104 | 35 | 96 | 309 |
| 26 | 111 | 86 | 299 | 90 | 312 | 775 | 329 | 481 | 100 | 37 | 67 | 231 |
| 27 | 68 | 79 | 392 | 75 | 504 | 629 | 276 | 486 | 91 | 34 | 35 | 177 |
| 28 | 54 | 75 | 250 | 65 | 1680 | 551 | 258 | 511 | 86 | 31 | 110 | 229 |
| 29 | 49 | 71 | 200 | 60 | --- | 486 | 244 | 445 | 80 | 32 | 101 | 203 |
| 30 | 45 | 69 | 150 | 63 | --- | 468 | 236 | 396 | 78 | 30 | 134 | 246 |
| 31 | 100 | --- | 120 | 68 | --- | 486 | --- | 361 | --- | 30 | 100 | --- |
| TOTAL | 1269 | 3847 | 3227 | 4476 | 4922 | 22408 | 11174 | 18604 | 7476 | 1560 | 1197 | 3606 |
| MEAN | 40.9 | 128 | 104 | 144 | 176 | 723 | 372 | 600 | 249 | 50.3 | 38.6 | 120 |
| MAX | 161 | 412 | 392 | 350 | 1680 | 1700 | 657 | 1080 | 754 | 88 | 134 | 432 |
| MIN | 23 | 52 | 56 | 60 | 59 | 399 | 236 | 294 | 78 | 30 | 15 | 32 |
| CFSM | .38 | 1.17 | .95 | 1.32 | 1.62 | 6.63 | 3.41 | 5.51 | 2.28 | .46 | .35 | 1.10 |
| IN. | .43 | 1.31 | 1.10 | 1.53 | 1.68 | 7.65 | 3.81 | 6.35 | 2.55 | .53 | .41 | 1.23 |
| AC-FT | 2520 | 7630 | 6400 | 8880 | 9760 | 44450 | 22160 | 36900 | 14830 | 3090 | 2370 | 7150 |

CAL YR 1976 TOTAL 133763 MEAN 365 MAX 4650 MIN 23 CFSM 3.35 IN 45.65 AC-FT 265300
WTR YR 1977 TOTAL 83766 MEAN 229 MAX 1700 MIN 15 CFSM 2.10 IN 28.59 AC-FT 166100

NOTE.--No gage-height record Dec. 28 to Feb. 1.

14189000 SANTIAM RIVER AT JEFFERSON, OR

LOCATION.--Lat 44°42'55", long 123°00'40", in SE¼ sec.11, T.10 S., R.3 W., Marion County, Hydrologic Unit 17090005, on right bank 350 ft (107 m) upstream from Southern Pacific railroad bridge at Jefferson, 2.1 mi (3.4 km) downstream from confluence of North and South Santiam Rivers, and at mile 9.62 (15.5 km).

DRAINAGE AREA.--1,790 mi² (4,640 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1905 to June 1906 (gage heights and discharge measurements only), October 1907 to September 1916, October 1939 to current year. Gage-height records collected at same site since 1907 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 904: Drainage area. WSP 1094: 1908, 1910, 1912, 1943. WSP 1248: 1911, 1915-16(M). WSP 1935: 1909.

GAGE.--Water-stage recorder. Datum of gage is 199.63 ft (60.847 m) above mean sea level. Prior to Sept. 22, 1940, nonrecording gages at sites within 350 ft (107 m) downstream at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records excellent. Flow regulated since 1953 by Detroit Lake (see station 14180500), since 1966 by Green Peter Lake (see station 14186100) and by Foster Lake (see station 14186600). Salem Canal diverts from North Santiam River at Stayton for irrigation and power; most of this water reaches Willamette River by way of Mill Creek at Salem. Stayton Canal diverts from North Santiam River at Stayton for irrigation of lands near West Stayton; some return flow reaches North Santiam River above station. Albany power canal diverts from South Santiam River at Lebanon; return flow reaches Willamette River at Albany.

AVERAGE DISCHARGE.--47 years (water years 1908-16, 1940-77), 7,839 ft³/s (222.0 m³/s), 5,679,000 acre-ft/yr (7.00 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft³/s (5,580 m³/s) Dec. 22, 1964, gage height, 24.22 ft (7.382 m); minimum observed, 260 ft³/s (7.36 m³/s) Aug. 15-22, Aug. 24 to Sept. 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 25.0 ft (7.62 m) was reached in December 1861, and 23.4 ft (7.13 m) in February 1890 (information from Corps of Engineers). On Nov. 21, 1921, the stage reached 19.5 ft (5.94 m) at gage on railroad bridge 350 ft (107 m) downstream, corresponding gage height at present site and datum, 24.4 ft (7.44 m), from curve of relation, discharge, 202,000 ft³/s (5,720 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft³/s (368 m³/s) May 17, gage height, 7.74 ft (2.359 m); minimum, 1,180 ft³/s (33.4 m³/s) Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| 1 | 3710 | 5420 | 2400 | 2440 | 1570 | 7640 | 4620 | 3280 | 6230 | 2470 | 1460 | 2430 |
| 2 | 3600 | 5810 | 2320 | 2470 | 1550 | 5740 | 5070 | 4840 | 5760 | 2300 | 1400 | 2770 |
| 3 | 3360 | 5740 | 2130 | 2570 | 1530 | 5770 | 4490 | 7110 | 5240 | 1900 | 1360 | 2310 |
| 4 | 3360 | 4440 | 2150 | 2460 | 1480 | 5000 | 4240 | 8650 | 6830 | 1880 | 1440 | 2100 |
| 5 | 3380 | 3960 | 2210 | 2200 | 1460 | 4230 | 4670 | 9130 | 8760 | 1880 | 1520 | 2420 |
| 6 | 3310 | 3980 | 2150 | 2080 | 1460 | 3960 | 5440 | 8760 | 7380 | 1880 | 1530 | 2980 |
| 7 | 3350 | 3930 | 2160 | 2020 | 1450 | 6320 | 6170 | 7520 | 6520 | 1810 | 1540 | 2420 |
| 8 | 3390 | 3840 | 2240 | 1980 | 1440 | 9130 | 7040 | 6830 | 6040 | 1750 | 1520 | 2210 |
| 9 | 3330 | 3800 | 2700 | 1940 | 1430 | 10500 | 6290 | 6210 | 5100 | 1750 | 1400 | 2640 |
| 10 | 3400 | 3720 | 2650 | 1960 | 1430 | 9080 | 5120 | 7640 | 4760 | 1770 | 1430 | 2280 |
| 11 | 3420 | 4050 | 2430 | 1960 | 1490 | 6790 | 4400 | 8340 | 4340 | 1750 | 1440 | 2120 |
| 12 | 3390 | 3750 | 2360 | 1980 | 1510 | 7890 | 4050 | 7230 | 4110 | 1710 | 1460 | 2410 |
| 13 | 3470 | 4110 | 2360 | 2630 | 1550 | 7230 | 4110 | 5740 | 3680 | 1710 | 1460 | 2940 |
| 14 | 3360 | 4400 | 2350 | 3470 | 1610 | 5760 | 4260 | 4640 | 2950 | 1680 | 1540 | 2490 |
| 15 | 3350 | 4640 | 2320 | 2950 | 1570 | 4880 | 3780 | 4670 | 2850 | 1690 | 2010 | 2380 |
| 16 | 3390 | 5720 | 2250 | 2730 | 1530 | 4180 | 3840 | 5480 | 2760 | 1640 | 2520 | 2900 |
| 17 | 3400 | 5630 | 2210 | 2570 | 1490 | 3810 | 3680 | 9540 | 2550 | 1660 | 2170 | 2550 |
| 18 | 3360 | 6060 | 2200 | 2460 | 1460 | 3740 | 3320 | 11300 | 2440 | 1710 | 2050 | 2250 |
| 19 | 4260 | 5920 | 2250 | 2370 | 1430 | 4130 | 3060 | 9130 | 2410 | 1700 | 2580 | 2570 |
| 20 | 4310 | 5610 | 2210 | 2300 | 1420 | 4440 | 2830 | 7990 | 2350 | 1650 | 2130 | 3470 |
| 21 | 4370 | 5320 | 2150 | 2200 | 1500 | 4100 | 2680 | 7210 | 2350 | 1620 | 1780 | 3430 |
| 22 | 4470 | 5210 | 2120 | 2130 | 1930 | 3800 | 2680 | 6450 | 2270 | 1730 | 2140 | 3580 |
| 23 | 4110 | 5330 | 2100 | 2080 | 2230 | 4420 | 2820 | 6110 | 2250 | 2160 | 2600 | 3870 |
| 24 | 3900 | 4930 | 2080 | 2030 | 2280 | 4760 | 3260 | 5940 | 2150 | 2090 | 2690 | 5510 |
| 25 | 4240 | 3840 | 2080 | 1990 | 2290 | 4180 | 3630 | 5260 | 2100 | 1710 | 2460 | 5370 |
| 26 | 4820 | 2950 | 2680 | 1700 | 2550 | 3890 | 3900 | 5100 | 2080 | 1610 | 2850 | 4860 |
| 27 | 4440 | 2760 | 3990 | 1630 | 2910 | 6320 | 3320 | 6150 | 2040 | 1590 | 2420 | 4890 |
| 28 | 4130 | 2690 | 3460 | 1590 | 7570 | 5830 | 3020 | 7040 | 1960 | 1580 | 2070 | 5480 |
| 29 | 3980 | 2680 | 3040 | 1560 | --- | 5120 | 2930 | 6810 | 1900 | 1570 | 2370 | 5680 |
| 30 | 4290 | 2680 | 2730 | 1520 | --- | 4800 | 2870 | 6490 | 1960 | 1550 | 3330 | 6290 |
| 31 | 4050 | --- | 2540 | 1540 | --- | 4420 | --- | 6060 | --- | 1560 | 2940 | --- |
| TOTAL | 116700 | 132920 | 75020 | 67510 | 53120 | 171860 | 121590 | 212650 | 114120 | 55060 | 61610 | 99600 |
| MEAN | 3765 | 4431 | 2420 | 2178 | 1897 | 5544 | 4053 | 6860 | 3804 | 1776 | 1987 | 3320 |
| MAX | 4820 | 6060 | 3990 | 3470 | 7570 | 10500 | 7040 | 11300 | 8760 | 2470 | 3330 | 6290 |
| MIN | 3310 | 2680 | 2080 | 1520 | 1420 | 3740 | 2680 | 3280 | 1900 | 1550 | 1360 | 2100 |
| AC-FT | 231500 | 263600 | 148800 | 133900 | 105400 | 340900 | 241200 | 421800 | 226400 | 109200 | 122200 | 197600 |
| CAL YR 1976 | TOTAL | 2279000 | MEAN | 6227 | MAX | 48200 | MIN | 1380 | AC-FT | 4520000 | | |
| WTR YR 1977 | TOTAL | 1281760 | MEAN | 3512 | MAX | 11300 | MIN | 1360 | AC-FT | 2542000 | | |

14189000 SANTIAM RIVER AT JEFFERSON, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 8, 1971, Aug. 1, 1973; minimum, 1.0°C Jan. 26, 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 18.0°C Aug. 22; minimum, 1.5°C Jan. 8, 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 15.5 | 14.5 | 13.0 | 12.5 | 6.5 | 5.5 | 4.0 | 3.5 | 6.0 | 4.5 | 5.5 | 5.0 |
| 2 | 15.5 | 14.5 | 13.0 | 12.5 | 6.0 | 5.5 | 4.5 | 4.0 | 6.0 | 4.5 | 5.5 | 5.0 |
| 3 | 14.5 | 13.5 | 13.0 | 12.5 | 6.0 | 5.5 | 4.5 | 3.5 | 5.0 | 4.0 | 6.0 | 5.0 |
| 4 | 14.5 | 13.0 | 13.0 | 11.5 | 6.0 | 5.5 | 4.5 | 4.0 | 5.0 | 4.0 | 6.5 | 5.5 |
| 5 | 14.5 | 13.0 | 12.0 | 11.5 | 6.5 | 6.0 | 4.0 | 3.0 | 5.0 | 4.5 | 6.5 | 5.5 |
| 6 | 15.0 | 13.5 | 12.0 | 11.5 | 7.0 | 6.5 | 3.0 | 2.0 | 6.0 | 4.5 | 6.5 | 6.0 |
| 7 | 15.5 | 14.0 | 12.0 | 11.5 | 7.5 | 6.0 | 2.5 | 2.0 | 6.0 | 5.0 | 6.5 | 6.0 |
| 8 | 15.5 | 14.5 | 12.5 | 12.0 | 8.0 | 7.0 | 2.5 | 1.5 | 5.5 | 5.0 | 6.0 | 6.0 |
| 9 | 14.5 | 13.5 | 12.5 | 11.5 | 7.5 | 7.0 | 2.5 | 1.5 | 6.0 | 5.0 | 6.0 | 5.0 |
| 10 | 14.5 | 14.0 | 11.5 | 11.5 | 7.0 | 6.0 | 3.0 | 2.0 | 7.5 | 6.0 | 6.0 | 4.5 |
| 11 | 15.5 | 14.0 | 12.0 | 11.0 | 6.0 | 5.5 | 4.0 | 3.0 | 7.5 | 7.5 | 6.5 | 5.5 |
| 12 | 15.0 | 13.5 | 11.5 | 10.5 | 5.5 | 5.5 | 5.0 | 4.0 | 8.5 | 7.5 | 6.5 | 6.0 |
| 13 | 14.5 | 13.5 | 11.0 | 10.5 | 6.0 | 5.5 | 5.5 | 5.0 | 9.5 | 8.0 | 6.0 | 5.0 |
| 14 | 14.0 | 13.0 | 11.5 | 11.0 | 6.0 | 5.5 | 5.0 | 4.5 | 8.0 | 6.5 | 6.0 | 5.5 |
| 15 | 14.0 | 13.0 | 12.0 | 11.5 | 7.5 | 6.0 | 5.5 | 4.5 | 7.5 | 6.0 | 7.0 | 5.5 |
| 16 | 14.0 | 12.5 | 12.0 | 12.0 | 7.0 | 6.5 | 5.5 | 5.0 | 8.0 | 6.5 | 7.0 | 6.0 |
| 17 | 13.5 | 12.0 | 12.0 | 12.0 | 6.5 | 6.0 | 5.0 | 4.5 | 9.0 | 7.5 | 7.0 | 6.0 |
| 18 | 13.0 | 11.5 | 12.0 | 11.0 | 6.5 | 6.0 | 6.0 | 5.0 | 9.0 | 7.5 | 7.0 | 6.5 |
| 19 | 13.0 | 12.0 | 11.0 | 10.0 | 6.5 | 6.0 | 6.5 | 5.5 | 8.5 | 7.5 | 7.5 | 6.5 |
| 20 | 13.0 | 11.5 | 10.0 | 10.0 | 6.0 | 5.5 | 5.5 | 5.0 | 8.0 | 7.5 | 7.0 | 6.5 |
| 21 | 12.5 | 11.5 | 10.5 | 10.0 | 5.0 | 5.0 | 5.5 | 4.5 | 7.5 | 6.5 | 8.0 | 6.0 |
| 22 | 12.5 | 12.0 | 10.5 | 10.5 | 5.5 | 5.0 | 5.0 | 4.5 | 7.0 | 6.5 | 9.0 | 7.5 |
| 23 | 12.5 | 12.0 | 10.5 | 10.0 | 6.0 | 5.0 | 4.5 | 3.5 | 6.0 | 5.0 | 8.5 | 7.5 |
| 24 | 12.0 | 12.0 | 10.0 | 9.5 | 5.5 | 5.5 | 3.5 | 3.0 | 5.5 | 5.0 | 8.0 | 6.5 |
| 25 | 13.0 | 12.0 | 10.0 | 9.5 | 6.0 | 5.0 | 3.5 | 2.5 | 5.5 | 5.0 | 8.5 | 7.0 |
| 26 | 12.5 | 12.0 | 9.5 | 7.5 | 6.5 | 5.5 | 4.0 | 3.0 | 6.0 | 5.0 | 8.0 | 7.5 |
| 27 | 12.5 | 11.5 | 7.5 | 6.5 | 6.5 | 6.0 | 4.0 | 3.0 | 7.0 | 6.0 | 7.5 | 6.5 |
| 28 | 12.0 | 11.5 | 6.5 | 5.5 | 6.5 | 5.5 | 4.0 | 3.0 | 7.0 | 5.5 | 6.5 | 5.5 |
| 29 | 12.5 | 12.0 | 6.5 | 5.5 | 5.5 | 5.5 | 4.0 | 3.0 | --- | --- | 7.0 | 6.0 |
| 30 | 12.0 | 11.5 | 6.5 | 6.0 | 5.5 | 4.5 | 4.0 | 3.0 | --- | --- | 8.5 | 6.0 |
| 31 | 13.0 | 12.0 | --- | --- | 5.0 | 4.0 | 4.5 | 3.5 | --- | --- | 8.0 | 7.0 |
| MONTH | 15.5 | 11.5 | 13.0 | 5.5 | 8.0 | 4.0 | 6.5 | 1.5 | 9.5 | 4.0 | 9.0 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|-----|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 8.0 | 6.5 | 13.0 | 11.0 | 12.5 | 11.5 | --- | --- | --- | --- | 18.0 | 14.0 |
| 2 | 8.0 | 6.5 | 11.5 | 10.5 | 12.5 | 11.0 | --- | --- | --- | --- | 16.0 | 14.5 |
| 3 | 9.5 | 7.0 | 11.0 | 9.5 | 12.5 | 11.5 | --- | --- | --- | --- | 15.0 | 14.5 |
| 4 | 10.5 | 8.5 | 9.5 | 8.0 | 12.5 | 11.0 | --- | --- | --- | --- | 16.5 | 15.0 |
| 5 | 11.0 | 9.0 | 9.0 | 8.0 | 14.0 | 11.0 | --- | --- | --- | --- | 17.5 | 15.0 |
| 6 | 10.5 | 9.0 | 10.0 | 8.0 | 14.5 | 13.5 | --- | --- | --- | --- | 16.5 | 13.5 |
| 7 | 10.5 | 9.0 | 10.5 | 9.0 | 15.5 | 13.0 | --- | --- | --- | --- | 17.5 | 14.0 |
| 8 | 10.0 | 9.0 | 12.0 | 9.5 | 15.5 | 13.5 | --- | --- | --- | --- | 17.5 | 14.0 |
| 9 | 8.5 | 7.5 | 12.5 | 11.0 | 15.5 | 13.5 | --- | --- | --- | --- | 16.0 | 13.5 |
| 10 | 8.5 | 7.5 | 12.0 | 10.0 | 15.5 | 14.0 | --- | --- | --- | --- | 17.0 | 13.5 |
| 11 | 10.5 | 8.5 | 10.5 | 9.0 | --- | --- | --- | --- | --- | --- | 18.0 | 14.0 |
| 12 | 11.0 | 9.0 | 11.5 | 9.0 | --- | --- | --- | --- | --- | --- | 17.5 | 14.0 |
| 13 | 11.0 | 10.0 | 11.5 | 10.5 | --- | --- | --- | --- | --- | --- | 16.0 | 13.5 |
| 14 | 10.0 | 8.0 | 12.0 | 11.0 | --- | --- | --- | --- | --- | --- | 15.0 | 14.0 |
| 15 | 10.5 | 9.0 | 11.5 | 10.0 | --- | --- | --- | --- | --- | --- | 14.5 | 13.0 |
| 16 | 10.5 | 9.5 | 10.5 | 9.5 | --- | --- | --- | --- | --- | --- | 14.0 | 13.0 |
| 17 | 10.5 | 8.5 | 10.0 | 9.5 | --- | --- | --- | --- | --- | --- | 14.5 | 13.0 |
| 18 | 10.0 | 8.5 | 10.5 | 9.0 | --- | --- | --- | --- | --- | --- | 14.0 | 13.5 |
| 19 | 10.5 | 8.0 | 12.0 | 9.5 | --- | --- | --- | 17.5 | 15.5 | 14.0 | 13.5 | |
| 20 | 10.5 | 9.0 | 12.0 | 11.5 | --- | --- | --- | 16.5 | 15.5 | 14.5 | 13.0 | |
| 21 | 10.5 | 10.0 | 12.0 | 11.0 | --- | --- | --- | 16.5 | 15.5 | 14.5 | 13.5 | |
| 22 | 12.0 | 9.5 | 12.0 | 10.5 | --- | --- | --- | 18.0 | 14.5 | 14.0 | 13.0 | |
| 23 | 13.5 | 11.0 | 11.0 | 10.5 | --- | --- | --- | 16.0 | 14.0 | 14.0 | 13.0 | |
| 24 | 13.0 | 11.5 | 12.5 | 10.0 | --- | --- | --- | 16.5 | 14.0 | 13.0 | 12.0 | |
| 25 | 12.5 | 11.0 | 12.5 | 11.5 | --- | --- | --- | 15.5 | 14.0 | 14.0 | 12.0 | |
| 26 | 12.5 | 10.0 | 12.5 | 11.0 | --- | --- | --- | 15.5 | 13.0 | 13.5 | 12.0 | |
| 27 | 13.0 | 10.5 | 12.0 | 10.5 | --- | --- | --- | 15.5 | 14.0 | 13.5 | 12.5 | |
| 28 | 13.0 | 11.5 | 11.0 | 10.0 | --- | --- | --- | 16.5 | 15.0 | 14.0 | 12.5 | |
| 29 | 13.5 | 11.5 | 12.0 | 10.0 | --- | --- | --- | 16.0 | 15.0 | 13.5 | 12.5 | |
| 30 | 14.0 | 12.0 | 12.0 | 10.5 | --- | --- | --- | 16.0 | 13.5 | 13.5 | 12.5 | |
| 31 | --- | --- | 11.5 | 10.5 | --- | --- | --- | 16.5 | 13.5 | --- | --- | |
| MONTH | 14.0 | 6.5 | 13.0 | 8.0 | 15.5 | 11.0 | --- | 18.0 | 13.0 | 18.0 | 12.0 | |

WILLAMETTE RIVER BASIN

343

14189500 LUCKIAMUTE RIVER NEAR HOSKINS, OR

LOCATION.--Lat 44°43'10", long 123°30'10", in NE¼ sec.11, T.10 S., R.7 W., Benton County, Hydrologic Unit 17090003, on right bank 0.2 mi (0.3 km) downstream from Benton County line, 3.5 mi (5.6 km) northwest of Hoskins, and at mile 43.2 (69.5 km).

DRAINAGE AREA.--34.3 mi² (88.8 km²).

PERIOD OF RECORD.--May 1934 to current year.

REVISED RECORDS.--WSP 834: 1936(M). WSP 1638: 1943(P), 1946(P). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 378.7 ft (115.43 m) above mean sea level (river-profile survey).

REMARKS.--Records good. Logponds upstream cause diurnal fluctuation at times. Minor diversion above station by pumping for irrigation.

AVERAGE DISCHARGE.--43 years, 209 ft³/s (5.919 m³/s), 82.75 in/yr (2,102 mm/yr), 151,400 acre-ft/yr (187 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft³/s (157 m³/s) Dec. 14, 1946, Feb. 17, 1949; maximum gage height, 13.22 ft (4.029 m) Dec. 14, 1946; minimum discharge, 4.0 ft³/s (0.11 m³/s) Sept. 5-8, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 6, 1933, reached a stage of about 13.8 ft (4.21 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft³/s (37.9 m³/s) Feb. 28, gage height, 5.53 ft (1.686 m), no peak above base of 2,000 ft³/s (56.6 m³/s); minimum, 9.0 ft³/s (0.25 m³/s) Aug. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|---------|------|------|------|-------|------|------|------|------|-------|-------|-------|--------|
| 1 | 12 | 85 | 26 | 61 | 48 | 1040 | 187 | 47 | 113 | 28 | 14 | 22 | | |
| 2 | 14 | 44 | 25 | 82 | 40 | 651 | 167 | 62 | 102 | 28 | 13 | 18 | | |
| 3 | 17 | 36 | 24 | 71 | 37 | 540 | 152 | 115 | 106 | 28 | 13 | 25 | | |
| 4 | 14 | 29 | 23 | 66 | 36 | 418 | 141 | 139 | 121 | 29 | 13 | 39 | | |
| 5 | 13 | 25 | 22 | 62 | 36 | 332 | 131 | 148 | 108 | 28 | 13 | 36 | | |
| 6 | 13 | 23 | 22 | 58 | 35 | 305 | 121 | 127 | 99 | 27 | 13 | 26 | | |
| 7 | 12 | 22 | 22 | 68 | 34 | 586 | 113 | 111 | 90 | 25 | 13 | 22 | | |
| 8 | 11 | 20 | 52 | 64 | 32 | 818 | 113 | 100 | 85 | 24 | 13 | 19 | | |
| 9 | 12 | 19 | 68 | 59 | 31 | 848 | 108 | 90 | 78 | 24 | 12 | 18 | | |
| 10 | 14 | 19 | 50 | 59 | 44 | 651 | 99 | 85 | 72 | 23 | 11 | 17 | | |
| 11 | 15 | 19 | 42 | 48 | 42 | 485 | 92 | 80 | 68 | 22 | 11 | 16 | | |
| 12 | 13 | 18 | 39 | 69 | 48 | 442 | 88 | 74 | 65 | 22 | 11 | 15 | | |
| 13 | 13 | 18 | 37 | 133 | 64 | 376 | 90 | 69 | 61 | 22 | 10 | 15 | | |
| 14 | 13 | 27 | 34 | 123 | 55 | 335 | 83 | 68 | 58 | 22 | 11 | 15 | | |
| 15 | 13 | 51 | 34 | 106 | 50 | 294 | 80 | 82 | 55 | 21 | 11 | 15 | | |
| 16 | 13 | 58 | 31 | 93 | 47 | 257 | 78 | 77 | 51 | 20 | 10 | 15 | | |
| 17 | 13 | 51 | 30 | 83 | 45 | 227 | 74 | 74 | 48 | 20 | 9.6 | 16 | | |
| 18 | 13 | 56 | 35 | 75 | 41 | 221 | 71 | 69 | 47 | 22 | 9.6 | 27 | | |
| 19 | 12 | 46 | 32 | 69 | 39 | 208 | 68 | 66 | 45 | 20 | 11 | 77 | | |
| 20 | 13 | 40 | 30 | 65 | 48 | 190 | 65 | 64 | 46 | 18 | 10 | 65 | | |
| 21 | 13 | 37 | 29 | 61 | 80 | 174 | 65 | 64 | 45 | 18 | 11 | 75 | | |
| 22 | 13 | 34 | 29 | 56 | 177 | 159 | 62 | 59 | 41 | 18 | 11 | 54 | | |
| 23 | 13 | 30 | 31 | 52 | 164 | 164 | 59 | 56 | 39 | 17 | 11 | 54 | | |
| 24 | 24 | 31 | 29 | 50 | 179 | 162 | 56 | 55 | 37 | 16 | 18 | 71 | | |
| 25 | 62 | 42 | 42 | 47 | 232 | 144 | 56 | 52 | 36 | 16 | 31 | 71 | | |
| 26 | 36 | 32 | 121 | 44 | 341 | 144 | 55 | 77 | 35 | 18 | 40 | 59 | | |
| 27 | 22 | 30 | 148 | 41 | 453 | 285 | 52 | 97 | 32 | 17 | 21 | 51 | | |
| 28 | 18 | 29 | 106 | 40 | 1030 | 268 | 50 | 95 | 31 | 16 | 55 | 47 | | |
| 29 | 17 | 28 | 87 | 38 | --- | 246 | 50 | 85 | 30 | 16 | 42 | 40 | | |
| 30 | 15 | 27 | 74 | 38 | --- | 221 | 47 | 82 | 29 | 15 | 47 | 39 | | |
| 31 | 65 | --- | 64 | 45 | --- | 203 | --- | 100 | --- | 15 | 28 | --- | | |
| TOTAL | 561 | 1026 | 1438 | 2026 | 3508 | 11394 | 2673 | 2569 | 1873 | 655 | 547.2 | 1079 | | |
| MEAN | 18.1 | 34.2 | 46.4 | 65.4 | 125 | 368 | 89.1 | 82.9 | 62.4 | 21.1 | 17.7 | 36.0 | | |
| MAX | 65 | 85 | 148 | 133 | 1030 | 1040 | 187 | 148 | 121 | 29 | 55 | 77 | | |
| MIN | 11 | 18 | 22 | 38 | 31 | 144 | 47 | 47 | 29 | 15 | 9.6 | 15 | | |
| CFSM | .53 | 1.00 | 1.35 | 1.91 | 3.64 | 10.7 | 2.60 | 2.42 | 1.82 | .62 | .52 | 1.05 | | |
| IN. | .61 | 1.11 | 1.56 | 2.20 | 3.80 | 12.36 | 2.90 | 2.79 | 2.03 | .71 | .59 | 1.17 | | |
| AC-FT | 1110 | 2040 | 2850 | 4020 | 6960 | 22600 | 5300 | 5100 | 3720 | 1300 | 1090 | 2140 | | |
| CAL YR 1976 | TOTAL | 57107.0 | MEAN | 156 | MAX | 1710 | MIN | 10 | CFSM | 4.55 | IN | 61.94 | AC-FT | 113300 |
| WTR YR 1977 | TOTAL | 29349.2 | MEAN | 80.4 | MAX | 1040 | MIN | 9.6 | CFSM | 2.34 | IN | 31.83 | AC-FT | 58210 |

WILLAMETTE RIVER BASIN

14190500 LUCKIAMUTE RIVER NEAR SUVER, OR

LOCATION.--Lat 44°47'00", long 123°14'00", in SW¼SW¼ sec.18, T.9 S., R.4 W., Polk County, Hydrologic Unit 17090003, on right bank 10 ft (3 m) upstream from highway bridge at Helmick State Park, 3.0 mi (4.8 km) northwest of Suver, 4.7 mi (7.6 km) downstream from Little Luckiamute River, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--240 mi² (622 km²).

PERIOD OF RECORD.--August 1905 to October 1911, July 1940 to current year.

REVISED RECORDS.--WSP 1044: Drainage area. WSP 1094: 1945-46. WSP 1248: 1905-11.

GAGE.--Water-stage recorder. Datum of gage is 171.92 ft (52.401 m) above mean sea level. Aug. 18, 1905, to Oct. 31, 1911, nonrecording gage at present site at different datum, Aug. 20 to Oct. 15, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good. Some diurnal fluctuation during periods of low flow caused by millpond above station. A few small diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years, 924 ft³/s (26.17 m³/s), 52.28 in/yr (1,328 mm/yr), 669,400 acre-ft/yr (825 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s (932 m³/s) Dec. 22, 1964, gage height, 34.52 ft (10.522 m); minimum, 0.65 ft³/s (0.018 m³/s) Aug. 13, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,410 ft³/s (96.6 m³/s) Mar. 9, gage height, 20.67 ft (6.300 m), no peak above base of 6,600 ft³/s (187 m³/s); minimum, 6.9 ft³/s (0.20 m³/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|----------|----------|---------|-----------|----------|--------------|------|------|-------|------|
| 1 | 31 | 180 | 65 | 136 | 117 | 2830 | 578 | 164 | 308 | 59 | 24 | 61 |
| 2 | 30 | 197 | 63 | 143 | 118 | 2320 | 537 | 184 | 297 | 55 | 19 | 49 |
| 3 | 32 | 132 | 63 | 187 | 105 | 1690 | 496 | 245 | 266 | 57 | 16 | 43 |
| 4 | 37 | 101 | 63 | 164 | 99 | 1330 | 463 | 373 | 318 | 62 | 16 | 50 |
| 5 | 37 | 84 | 60 | 149 | 96 | 1070 | 440 | 442 | 336 | 62 | 16 | 81 |
| 6 | 34 | 75 | 59 | 136 | 94 | 888 | 420 | 414 | 291 | 53 | 18 | 75 |
| 7 | 31 | 68 | 59 | 110 | 92 | 1260 | 406 | 354 | 258 | 51 | 18 | 57 |
| 8 | 31 | 65 | 59 | 134 | 90 | 2660 | 397 | 321 | 231 | 48 | 22 | 49 |
| 9 | 29 | 62 | 135 | 131 | 87 | 3120 | 398 | 292 | 211 | 44 | 17 | 45 |
| 10 | 30 | 59 | 154 | 134 | 86 | 3120 | 375 | 270 | 195 | 45 | 16 | 41 |
| 11 | 33 | 57 | 120 | 120 | 110 | 2120 | 345 | 249 | 180 | 49 | 13 | 39 |
| 12 | 34 | 56 | 105 | 139 | 111 | 1670 | 324 | 232 | 174 | 42 | 12 | 37 |
| 13 | 33 | 55 | 95 | 181 | 122 | 1530 | 313 | 216 | 162 | 41 | 9.2 | 33 |
| 14 | 33 | 55 | 88 | 312 | 139 | 1270 | 310 | 205 | 149 | 38 | 9.2 | 32 |
| 15 | 32 | 71 | 84 | 269 | 127 | 1120 | 292 | 206 | 142 | 37 | 15 | 31 |
| 16 | 32 | 124 | 82 | 235 | 118 | 960 | 285 | 237 | 132 | 35 | 13 | 34 |
| 17 | 31 | 137 | 79 | 207 | 112 | 839 | 269 | 221 | 121 | 33 | 12 | 34 |
| 18 | 31 | 124 | 76 | 186 | 108 | 768 | 256 | 214 | 112 | 39 | 11 | 39 |
| 19 | 30 | 131 | 76 | 172 | 103 | 738 | 244 | 203 | 111 | 38 | 10 | 82 |
| 20 | 28 | 111 | 72 | 159 | 102 | 682 | 234 | 190 | 108 | 36 | 14 | 164 |
| 21 | 28 | 99 | 70 | 149 | 133 | 623 | 226 | 180 | 106 | 32 | 17 | 161 |
| 22 | 27 | 90 | 68 | 139 | 272 | 580 | 225 | 176 | 100 | 26 | 21 | 158 |
| 23 | 29 | 84 | 68 | 130 | 430 | 567 | 214 | 166 | 91 | 23 | 18 | 117 |
| 24 | 31 | 78 | 72 | 124 | 401 | 603 | 204 | 162 | 87 | 22 | 20 | 130 |
| 25 | 57 | 77 | 71 | 118 | 438 | 561 | 198 | 156 | 77 | 28 | 39 | 152 |
| 26 | 125 | 93 | 118 | 114 | 699 | 513 | 202 | 174 | 75 | 23 | 89 | 152 |
| 27 | 84 | 81 | 325 | 109 | 838 | 658 | 191 | 219 | 75 | 26 | 86 | 124 |
| 28 | 59 | 74 | 287 | 105 | 1750 | 797 | 181 | 267 | 67 | 25 | 56 | 111 |
| 29 | 51 | 70 | 217 | 102 | --- | 739 | 174 | 245 | 65 | 24 | 84 | 102 |
| 30 | 48 | 68 | 179 | 98 | --- | 668 | 171 | 217 | 60 | 22 | 83 | 90 |
| 31 | 48 | --- | 153 | 100 | --- | 610 | --- | 230 | --- | 22 | 84 | --- |
| TOTAL | 1226 | 2758 | 3285 | 4692 | 7097 | 38904 | 9368 | 7424 | 4905 | 1197 | 897.4 | 2373 |
| MEAN | 39.5 | 91.9 | 106 | 151 | 253 | 1255 | 312 | 239 | 164 | 38.6 | 28.9 | 79.1 |
| MAX | 125 | 197 | 325 | 312 | 1750 | 3120 | 578 | 442 | 336 | 62 | 89 | 164 |
| MIN | 27 | 55 | 59 | 98 | 86 | 513 | 171 | 156 | 60 | 22 | 9.2 | 31 |
| CFSM | .17 | .38 | .44 | .63 | 1.05 | 5.23 | 1.30 | 1.00 | .68 | .16 | .12 | .33 |
| IN. | .19 | .43 | .51 | .73 | 1.10 | 6.03 | 1.45 | 1.15 | .76 | .19 | .14 | .37 |
| AC-FT | 2430 | 5470 | 6520 | 9310 | 14080 | 77170 | 18580 | 14730 | 9730 | 2370 | 1780 | 4710 |
| CAL YR 1976 | TOTAL | 244510.0 | MEAN 668 | MAX 7450 | MIN 23 | CFSM 2.78 | IN 37.90 | AC-FT 485000 | | | | |
| WTR YR 1977 | TOTAL | 84126.4 | MEAN 230 | MAX 3120 | MIN 9.2 | CFSM .96 | IN 13.04 | AC-FT 166900 | | | | |

14190700 RICKREAL CREEK NEAR DALLAS, OR

LOCATION.--Lat 44°54'55", long 123°23'02", in SW¼SE¼ sec.35, T.7 S., R.6 W., Polk County, Hydrologic Unit 17090007, on left bank 1.8 mi (2.9 km) downstream from Canyon Creek, 3.5 mi (5.6 km) west of Dallas, 5.1 mi (8.2 km) downstream from Aaron Mercer Reservoir, and at mile 19.1 (30.7 km).

DRAINAGE AREA.--27.4 mi² (71.0 km²).

PERIOD OF RECORD.--August 1957 to current year.

REVISED RECORDS.--WSP 1718: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 460 ft (140 m), from topographic map.

REMARKS.--Records good. Low flow regulated since June 1960 by Aaron Mercer Reservoir, usable capacity, 2,010 acre-ft (2.48 hm³). Diversion for city of Dallas municipal supply from four tributaries and Rickreall Creek above station.

COOPERATION.--Records of diversion, monthend elevations of reservoir, and reservoir capacity curve furnished by city of Dallas.

AVERAGE DISCHARGE.--20 years (water years 1958-77), 147 ft³/s (4.163 m³/s), 72.86 in/yr (1,851 mm/yr), 106,500 acre-ft/yr (131 hm³/yr), adjusted for diversion and storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,160 ft³/s (203 m³/s) Dec. 22, 1964, gage height, 8.78 ft (2.676 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,130 ft³/s (32.0 m³/s) Mar. 7, gage height, 4.38 ft (1.335 m), no peak above base of 1,300 ft³/s (36.8 m³/s); minimum, 1.3 ft³/s (0.037 m³/s) July 31 to Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1 | 7.4 | 15 | 7.9 | 7.2 | 14 | 559 | 95 | 26 | 58 | 6.1 | 3.2 | 6.4 |
| 2 | 9.0 | 29 | 7.6 | 8.0 | 13 | 343 | 85 | 31 | 52 | 6.7 | 2.6 | 6.4 |
| 3 | 7.9 | 27 | 7.9 | 7.9 | 12 | 274 | 80 | 52 | 51 | 8.2 | 2.4 | 6.7 |
| 4 | 7.0 | 27 | 7.7 | 7.4 | 12 | 215 | 75 | 61 | 71 | 8.9 | 4.1 | 7.4 |
| 5 | 6.4 | 26 | 8.1 | 7.0 | 12 | 165 | 73 | 67 | 67 | 8.2 | 3.2 | 6.7 |
| 6 | 6.6 | 26 | 7.2 | 6.3 | 12 | 149 | 73 | 59 | 58 | 7.8 | 4.1 | 6.7 |
| 7 | 6.9 | 25 | 7.2 | 6.5 | 11 | 515 | 74 | 55 | 48 | 5.4 | 4.3 | 6.4 |
| 8 | 7.4 | 24 | 9.8 | 5.3 | 10 | 762 | 77 | 48 | 42 | 5.2 | 3.6 | 6.1 |
| 9 | 8.1 | 24 | 11 | 5.7 | 9.9 | 665 | 73 | 45 | 35 | 6.1 | 3.2 | 6.4 |
| 10 | 10 | 23 | 11 | 7.0 | 14 | 452 | 65 | 42 | 31 | 6.1 | 3.0 | 6.1 |
| 11 | 9.5 | 22 | 11 | 8.0 | 16 | 325 | 58 | 38 | 28 | 4.9 | 2.6 | 5.7 |
| 12 | 9.4 | 21 | 9.9 | 10 | 16 | 276 | 54 | 35 | 28 | 5.7 | 3.0 | 6.4 |
| 13 | 9.5 | 21 | 9.5 | 13 | 18 | 227 | 55 | 32 | 25 | 5.4 | 3.0 | 6.1 |
| 14 | 9.6 | 19 | 9.7 | 20 | 17 | 195 | 51 | 31 | 22 | 4.6 | 4.1 | 6.4 |
| 15 | 8.7 | 19 | 9.7 | 30 | 16 | 169 | 49 | 33 | 21 | 4.1 | 3.4 | 5.7 |
| 16 | 8.0 | 21 | 9.7 | 27 | 15 | 147 | 47 | 35 | 20 | 4.3 | 3.0 | 6.1 |
| 17 | 7.9 | 22 | 9.6 | 25 | 14 | 129 | 43 | 32 | 16 | 6.1 | 2.4 | 7.1 |
| 18 | 7.2 | 22 | 10 | 23 | 13 | 118 | 40 | 31 | 16 | 6.4 | 3.4 | 8.9 |
| 19 | 6.5 | 22 | 10 | 21 | 12 | 111 | 38 | 29 | 16 | 5.7 | 3.2 | 11 |
| 20 | 7.1 | 21 | 9.3 | 19 | 19 | 101 | 36 | 28 | 16 | 4.3 | 4.3 | 11 |
| 21 | 5.3 | 21 | 9.4 | 18 | 37 | 92 | 37 | 27 | 16 | 3.8 | 4.9 | 7.8 |
| 22 | 5.2 | 20 | 9.4 | 16 | 87 | 86 | 34 | 25 | 15 | 3.8 | 3.4 | 10 |
| 23 | 5.4 | 18 | 10 | 15 | 85 | 91 | 32 | 24 | 11 | 3.0 | 5.4 | 12 |
| 24 | 7.2 | 17 | 10 | 14 | 80 | 89 | 30 | 23 | 9.3 | 4.3 | 7.1 | 11 |
| 25 | 7.6 | 19 | 11 | 13 | 94 | 81 | 31 | 23 | 9.8 | 4.9 | 8.9 | 14 |
| 26 | 7.6 | 17 | 15 | 12 | 143 | 78 | 32 | 36 | 9.8 | 4.3 | 7.8 | 12 |
| 27 | 7.6 | 12 | 15 | 11 | 249 | 143 | 29 | 39 | 7.4 | 4.6 | 7.4 | 11 |
| 28 | 7.4 | 11 | 10 | 11 | 631 | 138 | 27 | 40 | 7.4 | 3.6 | 7.4 | 13 |
| 29 | 7.0 | 10 | 8.7 | 11 | --- | 126 | 26 | 37 | 6.4 | 4.3 | 7.1 | 12 |
| 30 | 6.3 | 8.0 | 7.4 | 12 | --- | 109 | 25 | 36 | 5.7 | 4.3 | 7.1 | 16 |
| 31 | 14 | --- | 7.0 | 15 | --- | 99 | --- | 45 | --- | 3.8 | 6.4 | --- |
| TOTAL | 240.7 | 609.0 | 296.7 | 412.3 | 1681.9 | 7029 | 1544 | 1165 | 818.8 | 164.9 | 139.0 | 258.5 |
| MEAN | 7.76 | 20.3 | 9.57 | 13.3 | 60.1 | 227 | 51.5 | 37.6 | 27.3 | 5.32 | 4.48 | 8.62 |
| MAX | 14 | 29 | 15 | 30 | 631 | 762 | 95 | 67 | 71 | 8.9 | 8.9 | 16 |
| MIN | 5.2 | 8.0 | 7.0 | 5.3 | 9.9 | 78 | 25 | 23 | 5.7 | 3.0 | 2.4 | 5.7 |
| AC-FT | 477 | 1210 | 589 | 818 | 3340 | 13940 | 3060 | 2310 | 1620 | 327 | 276 | 513 |
| MEAN† | 6.97 | 16.6 | 24.1 | 25.7 | 62.5 | 229 | 53.8 | 39.8 | 30.9 | 8.32 | 4.13 | 17.1 |
| CFSM† | .25 | .61 | .88 | .94 | 2.28 | 8.36 | 1.96 | 1.45 | 1.13 | .30 | .15 | .62 |
| IN.† | .29 | .67 | 1.01 | 1.08 | 2.37 | 9.63 | 2.19 | 1.68 | 1.26 | .35 | .17 | .70 |
| AC-FT† | 429 | 986 | 1,480 | 1,580 | 3,470 | 14,080 | 3,200 | 2,450 | 1,840 | 512 | 254 | 1,020 |

CAL YR 1976 TOTAL 36,418.9 MEAN 99.5 MAX 1,240 MIN 4.3 AC-FT 72,240 MEAN† 102 CFSM† 3.72 IN.† 50.44 AC-FT† 73,720
WTR YR 1977 TOTAL 14,359.8 MEAN 39.3 MAX 762 MIN 2.4 AC-FT 28,480 MEAN† 43.2 CFSM† 1.58 IN.† 21.41 AC-FT† 31,290

† Adjusted for diversion and change in contents of Aaron Mercer Reservoir.

14191000 WILLAMETTE RIVER AT SALEM, OR

LOCATION.--Lat 44°56'40", long 123°02'30", in SE¼SW¼ sec.22, T.7 S., R.3 W., Marion County, Hydrologic Unit 17090007, on right bank 300 ft (91 m) upstream from Center Street Bridge in Salem and at mile 84.16 (135.41 km).

DRAINAGE AREA.--7,280 mi² (18,900 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1909 to December 1916, January 1923 to current year. Monthly discharge only January 1923 to September 1927, published in WSP 1318. Gage-height records collected at about the same site since 1892 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1318: 1915(M).

GAGE.--Water-stage recorder. Datum of gage is 106.14 ft (32.351 m) above mean sea level. Oct. 1, 1909, to Dec. 31, 1916, non-recording gage at site 0.5 mi (0.8 km) upstream at datum 8.00 ft (2.438 m) higher. Jan. 1, 1923, to Nov. 26, 1934, nonrecording gage at Center Street Bridge at datum 8.00 ft (2.438 m) higher. Nov. 27, 1934, to Sept. 30, 1962, water-stage recorder at present site at datum 8.00 ft (2.438 m) higher.

REMARKS.--Water-discharge records excellent. Flow regulated by 12 reservoirs above station (see elsewhere in this report). Many small diversions for irrigation above station; part of flow of Salem Canal, which diverts water from North Santiam River, returns to Willamette River below station, through Mill Creek at Salem (see station 14192000).

AVERAGE DISCHARGE.--61 years, 23,630 ft³/s (669.2 m³/s), 44.08 in/yr (1,120 mm/yr), 17,120,000 acre-ft/yr (21.1 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348,000 ft³/s (9,860 m³/s) Jan. 8, 1923, gage height, 38.3 ft (11.67 m), present datum; minimum, 2,470 ft³/s (70.0 m³/s) Aug. 27, 1940, gage height, 3.55 ft (1.082 m), present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 500,000 ft³/s (14,200 m³/s) Dec. 4, 1861, gage height, about 47 ft (14.3 m) present datum, from rating curve extended above 250,000 ft³/s (7,080 m³/s) in 1916. Floods of Jan. 16, 1881, and Feb. 5, 1890, reached stages of 44.3 ft (13.50 m), discharge, 428,000 ft³/s (12,100 m³/s), and 45.1 ft (13.75 m), discharge, 448,000 ft³/s (12,700 m³/s), respectively, from floodmarks and information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,100 ft³/s (937 m³/s) Mar. 10, gage height, 12.01 ft (3.661 m); minimum, 4,100 ft³/s (116 m³/s) Feb. 20, gage height, 3.85 ft (1.173 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|--------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|-------|----------|
| 1 | 11600 | 14100 | 7950 | 6470 | 5000 | 19700 | 11600 | 7710 | 14700 | 6290 | 5820 | 7790 | | |
| 2 | 11800 | 15700 | 7180 | 6430 | 5020 | 20200 | 12300 | 8930 | 14100 | 6600 | 5630 | 7920 | | |
| 3 | 11600 | 16600 | 6900 | 6600 | 4950 | 17300 | 12000 | 11800 | 13300 | 6290 | 5570 | 7710 | | |
| 4 | 11500 | 15000 | 6850 | 6880 | 4890 | 16300 | 11100 | 16000 | 13300 | 6220 | 5530 | 7130 | | |
| 5 | 11600 | 13200 | 6930 | 6700 | 4830 | 14300 | 10900 | 18900 | 16600 | 6370 | 5720 | 7160 | | |
| 6 | 12100 | 12800 | 6930 | 6430 | 4790 | 12400 | 11700 | 19800 | 15700 | 6310 | 5940 | 7850 | | |
| 7 | 12000 | 12400 | 6670 | 6200 | 4810 | 13500 | 13100 | 18300 | 14300 | 6200 | 6000 | 7690 | | |
| 8 | 12000 | 12000 | 6720 | 6020 | 4680 | 21300 | 14300 | 16700 | 13300 | 6040 | 6060 | 7320 | | |
| 9 | 12100 | 12000 | 7110 | 6020 | 4580 | 27800 | 15300 | 15200 | 12100 | 5920 | 5920 | 7980 | | |
| 10 | 12200 | 11700 | 7690 | 6060 | 4500 | 32400 | 14100 | 14500 | 11000 | 5960 | 5840 | 8140 | | |
| 11 | 12200 | 11600 | 7320 | 6080 | 4520 | 28000 | 12400 | 16800 | 10400 | 6040 | 5780 | 7820 | | |
| 12 | 12200 | 11600 | 6880 | 6120 | 4560 | 23500 | 11200 | 17200 | 9900 | 5920 | 5780 | 7920 | | |
| 13 | 12200 | 11300 | 6770 | 6370 | 4540 | 24300 | 10500 | 15500 | 9350 | 5880 | 5760 | 8410 | | |
| 14 | 11800 | 11500 | 6670 | 7690 | 4620 | 21200 | 10700 | 13200 | 8520 | 5840 | 5880 | 8490 | | |
| 15 | 10600 | 11600 | 6600 | 8540 | 4620 | 17600 | 10300 | 12200 | 8060 | 5760 | 6290 | 8060 | | |
| 16 | 11500 | 12700 | 6570 | 8330 | 4540 | 14900 | 9870 | 12600 | 7850 | 5760 | 6930 | 8460 | | |
| 17 | 11600 | 13600 | 6470 | 7980 | 4420 | 13100 | 9840 | 15400 | 7420 | 5960 | 7260 | 8380 | | |
| 18 | 11600 | 14100 | 6330 | 7470 | 4260 | 11900 | 9270 | 22600 | 7180 | 6160 | 6930 | 7950 | | |
| 19 | 12100 | 14600 | 6240 | 6800 | 4160 | 11600 | 8680 | 22800 | 6950 | 6200 | 7420 | 8220 | | |
| 20 | 12600 | 13900 | 6160 | 6570 | 4140 | 11800 | 8240 | 20500 | 6850 | 6080 | 7500 | 9610 | | |
| 21 | 12500 | 13000 | 6100 | 6410 | 4260 | 11700 | 7900 | 18300 | 6900 | 6000 | 6930 | 9900 | | |
| 22 | 12800 | 12600 | 6040 | 6270 | 4910 | 10900 | 7710 | 16400 | 6750 | 6020 | 7210 | 9780 | | |
| 23 | 13000 | 12700 | 6040 | 6120 | 5940 | 10700 | 7610 | 15200 | 6600 | 6350 | 7660 | 10000 | | |
| 24 | 12600 | 12400 | 6000 | 5980 | 6750 | 11800 | 7820 | 14900 | 6390 | 6670 | 8160 | 14100 | | |
| 25 | 12900 | 11300 | 5960 | 5920 | 7130 | 11700 | 8270 | 14700 | 6160 | 6390 | 8240 | 13300 | | |
| 26 | 14100 | 9410 | 6180 | 5700 | 7390 | 10900 | 8820 | 13600 | 6240 | 6180 | 8460 | 12800 | | |
| 27 | 14400 | 8760 | 7470 | 5340 | 7950 | 10700 | 8740 | 14700 | 6370 | 6000 | 8080 | 12300 | | |
| 28 | 13600 | 8350 | 8110 | 5170 | 12000 | 13700 | 8080 | 16400 | 6180 | 5880 | 7110 | 13000 | | |
| 29 | 13200 | 8300 | 7550 | 5060 | --- | 14100 | 7790 | 16700 | 6040 | 5840 | 7030 | 14000 | | |
| 30 | 13400 | 8330 | 7030 | 5000 | --- | 13300 | 7580 | 16000 | 5940 | 5780 | 7870 | 14600 | | |
| 31 | 13600 | --- | 6750 | 4950 | --- | 12400 | --- | 15000 | --- | 5780 | 8650 | --- | | |
| TOTAL | 383000 | 367150 | 210170 | 197680 | 148760 | 505000 | 307720 | 488540 | 284450 | 188690 | 208960 | 283790 | | |
| MEAN | 12350 | 12240 | 6780 | 6377 | 5313 | 16290 | 10260 | 15760 | 9482 | 6087 | 6741 | 9460 | | |
| MAX | 14400 | 16600 | 8110 | 8540 | 12000 | 32400 | 15300 | 22800 | 16600 | 6670 | 8650 | 14600 | | |
| MIN | 10600 | 8300 | 5960 | 4950 | 4140 | 10700 | 7580 | 7710 | 5940 | 5760 | 5530 | 7130 | | |
| CFSM | 1.70 | 1.68 | .93 | .88 | .73 | 2.24 | 1.41 | 2.17 | 1.30 | .84 | .93 | 1.30 | | |
| IN. | 1.96 | 1.88 | 1.07 | 1.01 | .76 | 2.58 | 1.57 | 2.50 | 1.45 | .96 | 1.07 | 1.45 | | |
| AC-FT | 759700 | 728200 | 416900 | 392100 | 295100 | 1002000 | 610400 | 969000 | 564200 | 374300 | 414500 | 562900 | | |
| CAL YR 1976 | TOTAL | 7412040 | MEAN | 20250 | MAX | 120000 | MIN | 5960 | CFSM | 2.78 | IN | 37.87 | AC-FT | 14700000 |
| WTR YR 1977 | TOTAL | 3573910 | MEAN | 7972 | MAX | 32400 | MIN | 4140 | CFSM | 1.35 | IN | 18.26 | AC-FT | 7089000 |

14191000 WILLAMETTE RIVER AT SALEM, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1910-12, 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1951 to September 1972, October 1976 to current year.

WATER TEMPERATURES: February 1951 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 141 micromhos/cm Sept. 17, 1966; minimum daily, 30 micromhos/cm Jan. 29, 1965.

WATER TEMPERATURES: Maximum, 25.5°C July 23, 1959; minimum, 0.0°C on several days in 1956.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 123 micromhos/cm Feb. 2, 3; minimum daily, 47 micromhos/cm May 6.

WATER TEMPERATURES: Maximum, 24.0°C Aug. 3, 12; minimum, 2.0°C Jan. 8-10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED IRON (FE) (UG/L) |
|-----------|------|--|-----------------------------|---------------|------------------------------------|--|--|--|
| NOV 15... | 1100 | 11700 | 11.4 | 7.2 | -- | 66 | 15 | 60 |
| DEC 28... | 1130 | 8080 | 7.3 | 6.8 | -- | 113 | 16 | 70 |
| FEB 07... | 1200 | 4810 | 4.5 | 7.2 | 11.5 | 112 | 16 | 90 |
| APR 26... | 1000 | 7710 | 13.7 | 7.1 | -- | 103 | 13 | 80 |
| JUN 14... | 1030 | 8490 | 16.2 | 6.7 | -- | 85 | 14 | 80 |
| JUL 21... | 0800 | 6080 | 19.4 | 6.6 | -- | 70 | 15 | 250 |

| DATE | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) | DIS- SOLVED SODIUM (NA) (MG/L) | DIS- SOLVED PO- TAS- SIUM (K) (MG/L) | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) |
|-----------|--|---|--|--|--------------------------------------|-----------------------------------|--|---|--|
| NOV 15... | 7.6 | 2.4 | 4.5 | .8 | 27 | 0 | 5.2 | 4.6 | .1 |
| DEC 28... | 6.9 | 1.9 | 4.5 | .6 | 27 | 0 | 6.0 | 5.9 | .1 |
| FEB 07... | 9.7 | 2.3 | 7.9 | .9 | 26 | 0 | 12 | 14 | .1 |
| APR 26... | 9.2 | 1.8 | 5.1 | .7 | 25 | 0 | 4.8 | 5.5 | .1 |
| JUN 14... | 8.5 | 1.3 | 5.6 | .7 | 26 | 0 | 4.9 | 6.8 | .1 |
| JUL 21... | 9.2 | 1.8 | 6.2 | .8 | 26 | 0 | 4.4 | 6.7 | .1 |

| DATE | DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA, MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) |
|-----------|---|---|-------------------------------------|---|---|--|--|--|
| NOV 15... | .69 | .08 | 29 | 7 | .4 | 57 | 1800 | .08 |
| DEC 28... | .84 | .06 | 25 | 3 | .4 | 59 | 1290 | .08 |
| FEB 07... | .45 | .08 | 34 | 12 | .6 | 78 | 1010 | .11 |
| APR 26... | .32 | .04 | 30 | 10 | .4 | 54 | 1120 | .07 |
| JUN 14... | .54 | .07 | 27 | 5 | .5 | 57 | 1310 | .08 |
| JUL 21... | -- | .07 | 30 | 9 | .5 | 57 | 936 | .08 |

14191000 WILLAMETTE RIVER AT SALEM, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 61 | 65 | 77 | 90 | 122 | 69 | 61 | 72 | 58 | 76 | 70 | 68 |
| 2 | 60 | 65 | 79 | 89 | 123 | 67 | 58 | 65 | 58 | 72 | 72 | 68 |
| 3 | 58 | 62 | 81 | 88 | 123 | 66 | 56 | 56 | 60 | 67 | 75 | 69 |
| 4 | 60 | 64 | 85 | 90 | 122 | 66 | 55 | 50 | 60 | 66 | 72 | 73 |
| 5 | 62 | 69 | 88 | 96 | 119 | 67 | 55 | 48 | 56 | 61 | 74 | 74 |
| 6 | 63 | 69 | 85 | 100 | 116 | 70 | 55 | 47 | 56 | 58 | 74 | 70 |
| 7 | 63 | 67 | 84 | 101 | 117 | 71 | 51 | 48 | 60 | 57 | 75 | 69 |
| 8 | 64 | 67 | 87 | 104 | 119 | 65 | 49 | 49 | 63 | 58 | 74 | 73 |
| 9 | 65 | 69 | 86 | 105 | 121 | 61 | 48 | 50 | 62 | 61 | 71 | 69 |
| 10 | 66 | 71 | 83 | 106 | 121 | 58 | 51 | 54 | 67 | 62 | 71 | 67 |
| 11 | 66 | 70 | 83 | 105 | 120 | 59 | 55 | 52 | 69 | 61 | 69 | 69 |
| 12 | 63 | 68 | 81 | 102 | 118 | 60 | 59 | 52 | 70 | 61 | 69 | 70 |
| 13 | 63 | 68 | 82 | 100 | 118 | 61 | 64 | 53 | 70 | 63 | 68 | 68 |
| 14 | 65 | 67 | 84 | 92 | 115 | 63 | 63 | 57 | 73 | 63 | 66 | 69 |
| 15 | 69 | 67 | 86 | 90 | 110 | 65 | 62 | 61 | 76 | 63 | 66 | 70 |
| 16 | 69 | 67 | 87 | 90 | 114 | 66 | 61 | 62 | 74 | 65 | 63 | 70 |
| 17 | 66 | 65 | 88 | 92 | 113 | 67 | 61 | 63 | 73 | 65 | 60 | 70 |
| 18 | 67 | 65 | 91 | 95 | 115 | 68 | 65 | 49 | 75 | 62 | 63 | 72 |
| 19 | 67 | 64 | 89 | 101 | 117 | 69 | 69 | 48 | 74 | 62 | 63 | 74 |
| 20 | 65 | 65 | 87 | 103 | 116 | 65 | 72 | 49 | 74 | 61 | 61 | 74 |
| 21 | 64 | 67 | 86 | 102 | 117 | 63 | 75 | 51 | 76 | 62 | 63 | 73 |
| 22 | 63 | 67 | 89 | 102 | 114 | 63 | 76 | 54 | 76 | 62 | 64 | 70 |
| 23 | 61 | 66 | 92 | 106 | 110 | 62 | 77 | 56 | 75 | 62 | 63 | 68 |
| 24 | 63 | 66 | 92 | 105 | 103 | 60 | 71 | 58 | 74 | 60 | 60 | 66 |
| 25 | 65 | 67 | 93 | 102 | 96 | 60 | 68 | 57 | 74 | 61 | 62 | 61 |
| 26 | 65 | 70 | 90 | 103 | 93 | 59 | 66 | 59 | 77 | 64 | 64 | 63 |
| 27 | 65 | 74 | 84 | 109 | 94 | 63 | 66 | 58 | 77 | 64 | 64 | 65 |
| 28 | 67 | 77 | 76 | 117 | 86 | 54 | 67 | 56 | 77 | 64 | 66 | 65 |
| 29 | 68 | 79 | 83 | 119 | --- | 56 | 68 | 55 | 78 | 67 | 68 | 65 |
| 30 | 66 | 79 | 87 | 121 | --- | 57 | 71 | 55 | 77 | 71 | 65 | 64 |
| 31 | 65 | --- | 89 | 122 | --- | 59 | --- | 58 | --- | 67 | 62 | --- |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|------|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 18.0 | 17.5 | 14.0 | 13.5 | --- | --- | 5.0 | 5.0 | 5.0 | 4.0 | 7.5 | 7.0 |
| 2 | 17.5 | 17.0 | 14.5 | 14.0 | --- | --- | 5.0 | 5.0 | 5.5 | 5.0 | 7.0 | 7.0 |
| 3 | 16.5 | 16.0 | 14.5 | 14.5 | --- | --- | 5.0 | 5.0 | 5.5 | 5.0 | 7.0 | 6.5 |
| 4 | 16.0 | 15.5 | 14.5 | 14.0 | --- | --- | 5.0 | 5.0 | 5.0 | 5.0 | 7.0 | 7.0 |
| 5 | 15.0 | 14.5 | 14.0 | 14.0 | --- | --- | 5.0 | 4.0 | 5.0 | 5.0 | 7.5 | 7.0 |
| 6 | 16.0 | 15.0 | 14.0 | 13.5 | --- | --- | 4.0 | 3.5 | 5.5 | 5.0 | 7.5 | 7.5 |
| 7 | 16.5 | 15.5 | 14.0 | 13.5 | --- | --- | 3.0 | 2.5 | 5.5 | 5.5 | 7.5 | 7.5 |
| 8 | 17.0 | 16.5 | 13.5 | 13.5 | --- | --- | 2.5 | 2.0 | 5.5 | 5.5 | 7.5 | 7.5 |
| 9 | 17.0 | 16.5 | 13.5 | 13.5 | --- | --- | 2.5 | 2.0 | 6.0 | 5.5 | 7.5 | 7.0 |
| 10 | 16.5 | 16.0 | 13.5 | 13.5 | --- | --- | 2.5 | 2.0 | 7.0 | 6.0 | 7.0 | 6.5 |
| 11 | 16.5 | 16.0 | 13.5 | 13.5 | --- | --- | 3.5 | 2.5 | 8.0 | 7.0 | 7.0 | 6.5 |
| 12 | 16.5 | 16.0 | 13.5 | 13.0 | --- | --- | 5.0 | 3.5 | 8.5 | 8.0 | 7.5 | 7.0 |
| 13 | 16.0 | 15.5 | 13.0 | 13.0 | --- | --- | 6.0 | 5.0 | 9.0 | 8.5 | 7.5 | 7.0 |
| 14 | 15.5 | 15.0 | 13.0 | 13.0 | --- | --- | 6.0 | 6.0 | 9.0 | 8.5 | 7.5 | 7.0 |
| 15 | 15.5 | 15.0 | 13.0 | 13.0 | --- | --- | 6.5 | 6.0 | 8.5 | 8.5 | 7.5 | 6.5 |
| 16 | 15.5 | 14.5 | 14.0 | 13.0 | --- | --- | 6.5 | 6.0 | 8.5 | 8.5 | 8.0 | 7.5 |
| 17 | 15.0 | 14.5 | 14.0 | 14.0 | --- | --- | 6.0 | 6.0 | 9.0 | 8.5 | 8.5 | 8.0 |
| 18 | 14.5 | 14.0 | 14.0 | 14.0 | --- | --- | 6.0 | 6.0 | 9.5 | 9.0 | 8.5 | 8.5 |
| 19 | 14.0 | 13.5 | 14.0 | 12.5 | --- | --- | 7.0 | 6.0 | 9.5 | 9.0 | 8.5 | 8.5 |
| 20 | 14.0 | 13.5 | 12.5 | 12.0 | --- | --- | 7.0 | 6.5 | 9.5 | 8.5 | 8.5 | 8.5 |
| 21 | 14.0 | 13.5 | 12.0 | 12.0 | --- | --- | 6.5 | 6.0 | 8.5 | 8.5 | 9.5 | 8.5 |
| 22 | 13.5 | 13.5 | 12.0 | 12.0 | --- | --- | 6.0 | 5.5 | 8.0 | 8.0 | 10.0 | 9.0 |
| 23 | 13.5 | 13.0 | 12.0 | 12.0 | --- | --- | 6.0 | 5.0 | 8.0 | 7.0 | 10.5 | 10.0 |
| 24 | 13.5 | 13.5 | 12.0 | 11.5 | --- | --- | 5.0 | 4.5 | 7.0 | 6.5 | 10.5 | 10.0 |
| 25 | 13.5 | 13.5 | 11.5 | 11.5 | --- | --- | 4.5 | 4.0 | 6.5 | 6.0 | 10.5 | 9.5 |
| 26 | 13.5 | 13.5 | 11.5 | 10.5 | --- | --- | 4.0 | 3.5 | 6.5 | 6.0 | 10.5 | 10.0 |
| 27 | 13.5 | 13.5 | --- | --- | --- | --- | 4.0 | 3.5 | 7.5 | 6.5 | 10.0 | 10.0 |
| 28 | 13.5 | 13.0 | --- | --- | --- | --- | 3.5 | 3.5 | 7.5 | 7.5 | 9.5 | 9.0 |
| 29 | 13.0 | 13.0 | --- | --- | 7.0 | 6.5 | 4.0 | 3.5 | --- | --- | 9.0 | 8.5 |
| 30 | 13.0 | 13.0 | --- | --- | 6.5 | 6.0 | 3.5 | 3.5 | --- | --- | 9.5 | 8.5 |
| 31 | 13.5 | 13.0 | --- | --- | 6.0 | 5.0 | 4.0 | 3.5 | --- | --- | 9.5 | 9.5 |
| MONTH | 18.0 | 13.0 | 14.5 | 10.5 | --- | --- | 7.0 | 2.0 | 9.5 | 4.0 | 10.5 | 6.5 |

WILLAMETTE RIVER BASIN

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14191000 WILLAMETTE RIVER AT SALEM, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 9.5 | 9.0 | 16.0 | 14.5 | 14.5 | 13.0 | 21.5 | 20.5 | 23.0 | 21.5 | 18.5 | 17.0 |
| 2 | 9.5 | 9.0 | 14.5 | 14.0 | 15.0 | 14.0 | 20.5 | 20.0 | 23.5 | 22.0 | 18.0 | 17.5 |
| 3 | 10.0 | 9.0 | 14.0 | 13.5 | 14.5 | 14.0 | 20.0 | 18.5 | 24.0 | 22.5 | 17.5 | 17.0 |
| 4 | 11.5 | 10.0 | 13.5 | 12.0 | 14.0 | 13.5 | 18.5 | 18.0 | 23.5 | 22.5 | 17.0 | 17.0 |
| 5 | 13.0 | 11.5 | 12.0 | 11.5 | 15.0 | 14.0 | 18.0 | 17.5 | 23.0 | 22.0 | 18.5 | 17.0 |
| 6 | 13.5 | 12.5 | 11.5 | 11.0 | 17.5 | 15.0 | 18.0 | 17.0 | 22.5 | 21.5 | 18.5 | 17.5 |
| 7 | 13.5 | 12.5 | 12.0 | 11.5 | 18.0 | 16.5 | 19.0 | 17.5 | 22.5 | 21.5 | 18.5 | 17.5 |
| 8 | 13.5 | 13.0 | 13.0 | 11.5 | 18.0 | 17.5 | 20.0 | 18.5 | 23.0 | 21.5 | 18.0 | 17.0 |
| 9 | 12.5 | 11.5 | 14.0 | 13.0 | 18.0 | 17.0 | 19.5 | 19.0 | 23.0 | 21.5 | 17.5 | 17.0 |
| 10 | 11.5 | 11.0 | 13.5 | 13.0 | 18.0 | 16.5 | 19.0 | 18.5 | 23.0 | 22.0 | 17.5 | 16.5 |
| 11 | 11.5 | 10.5 | 13.0 | 12.0 | 17.5 | 16.5 | 20.5 | 18.5 | 23.5 | 22.0 | 17.5 | 16.5 |
| 12 | 12.5 | 11.5 | 12.5 | 12.0 | 16.5 | 15.5 | 19.5 | 19.0 | 24.0 | 22.5 | 18.0 | 17.0 |
| 13 | 13.0 | 12.5 | 13.0 | 12.5 | 17.5 | 16.0 | 19.0 | 18.5 | 23.5 | 22.5 | 18.0 | 17.0 |
| 14 | 12.5 | 12.0 | 13.5 | 12.5 | 18.0 | 17.0 | 20.0 | 18.5 | 23.0 | 22.0 | 18.0 | 17.0 |
| 15 | 12.5 | 12.0 | 13.5 | 13.0 | 18.0 | 17.0 | 21.0 | 19.5 | 22.0 | 21.0 | 16.5 | 16.0 |
| 16 | 12.5 | 12.5 | 12.5 | 12.5 | 19.0 | 17.5 | 21.5 | 20.0 | 22.0 | 21.0 | 16.0 | 15.5 |
| 17 | 12.5 | 12.0 | 12.5 | 11.5 | 19.5 | 18.0 | 21.0 | 20.0 | 22.0 | 21.0 | 15.5 | 15.0 |
| 18 | 12.5 | 11.5 | 11.5 | 11.0 | 19.5 | 19.0 | 20.0 | 19.0 | 22.0 | 21.0 | 15.0 | 15.0 |
| 19 | 12.5 | 11.5 | 12.5 | 11.5 | 19.5 | 18.5 | 19.5 | 18.5 | 21.5 | 20.5 | 15.0 | 15.0 |
| 20 | 12.5 | 12.0 | 13.5 | 12.5 | 19.0 | 18.0 | 20.5 | 19.0 | 20.5 | 19.5 | 15.0 | 14.5 |
| 21 | 12.5 | 12.5 | 14.0 | 13.0 | 18.0 | 17.5 | 20.5 | 19.5 | 19.5 | 18.5 | 15.0 | 14.5 |
| 22 | 13.5 | 12.0 | 14.0 | 13.5 | 19.0 | 18.0 | 21.5 | 20.0 | 18.5 | 18.0 | 15.0 | 14.5 |
| 23 | 14.5 | 13.0 | 13.5 | 13.0 | 20.0 | 18.5 | 21.5 | 20.5 | 18.5 | 18.0 | 14.5 | 14.5 |
| 24 | 15.0 | 14.5 | 13.0 | 12.0 | 21.0 | 19.5 | 21.5 | 20.5 | 18.0 | 17.0 | 14.5 | 14.0 |
| 25 | 15.0 | 14.5 | 13.5 | 13.0 | 21.5 | 20.5 | 21.0 | 20.0 | 17.5 | 17.0 | 14.0 | 13.5 |
| 26 | 14.5 | 13.5 | 14.0 | 13.0 | 21.5 | 20.5 | 20.5 | 19.5 | 17.0 | 16.5 | 14.0 | 13.5 |
| 27 | 15.0 | 14.0 | 14.0 | 13.0 | 21.0 | 20.5 | 20.5 | 19.5 | 16.5 | 16.5 | 14.0 | 14.0 |
| 28 | 15.0 | 14.5 | 13.0 | 12.5 | 21.5 | 20.0 | 20.5 | 19.5 | 17.5 | 16.5 | 14.0 | 13.5 |
| 29 | 15.5 | 14.5 | 13.5 | 12.5 | 21.0 | 20.0 | 20.5 | 19.5 | 17.5 | 17.0 | 13.5 | 13.0 |
| 30 | 16.5 | 15.5 | 13.5 | 13.5 | 21.5 | 20.0 | 21.5 | 20.0 | 18.0 | 17.0 | 13.0 | 13.0 |
| 31 | --- | --- | 13.0 | 13.0 | --- | --- | 22.0 | 20.5 | 18.0 | 17.0 | --- | --- |
| MONTH | 16.5 | 9.0 | 16.0 | 11.0 | 21.5 | 13.0 | 22.0 | 17.0 | 24.0 | 16.5 | 18.5 | 13.0 |

WILLAMETTE RIVER BASIN

14192000 MILL CREEK AT SALEM, OR

LOCATION.--Lat 44°56'05", long 123°01'00", in SW¼NE¼ sec.26, T.7 S., R.3 W., Marion County, Hydrologic Unit 17090007, on left bank at State Street Bridge in Salem, 220 ft (67 m) downstream from 19th Street power diversion and at mile 2.11 (3.39 km).

DRAINAGE AREA.--110 mi² (285 km²).

PERIOD OF RECORD.--November, December 1934, August to October 1938, May 1939 to current year. Prior to October 1940 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1718: 1954(M), 1956(M), 1958(M).

GAGE.--Water-stage recorder. Datum of gage is 166.12 ft (50.633 m) above mean sea level. See WSP 1738 for history of changes prior to Oct. 10, 1940.

REMARKS.--Records good. Diurnal fluctuation caused by powerplant above station. Salem power canal diverts water into Mill Creek near Stayton. Several diversions from Mill Creek, including Shelton flood bypass 1.2 mi (1.9 km) upstream and 19th Street power diversion 220 ft (67 m) upstream.

AVERAGE DISCHARGE.--38 years (water years 1940-77), 138 ft³/s (3.908 m³/s), 99,980 acre-ft/yr (123 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,230 ft³/s (63.2 m³/s) Jan. 16, 1974, gage height, 9.85 ft (3.002 m), from floodmark; no flow Oct. 2, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 379 ft³/s (10.7 m³/s) Mar. 9, gage height, 3.14 ft (0.957 m); minimum, 9.4 ft³/s (0.27 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|-------|------|------|-------|-------|------|------|
| 1 | 67 | 74 | 49 | 66 | 59 | 264 | 116 | 82 | 110 | 58 | 25 | 39 |
| 2 | 69 | 69 | 49 | 70 | 57 | 231 | 111 | 111 | 99 | 58 | 24 | 46 |
| 3 | 68 | 67 | 45 | 69 | 56 | 255 | 107 | 126 | 103 | 64 | 23 | 61 |
| 4 | 67 | 65 | 46 | 67 | 55 | 212 | 102 | 122 | 156 | 80 | 21 | 60 |
| 5 | 69 | 62 | 44 | 66 | 55 | 183 | 99 | 121 | 154 | 65 | 21 | 44 |
| 6 | 70 | 61 | 44 | 64 | 56 | 172 | 96 | 119 | 132 | 56 | 23 | 46 |
| 7 | 71 | 60 | 44 | 63 | 54 | 226 | 101 | 109 | 124 | 47 | 28 | 35 |
| 8 | 72 | 58 | 50 | 61 | 51 | 241 | 111 | 103 | 116 | 41 | 29 | 28 |
| 9 | 71 | 61 | 57 | 65 | 50 | 325 | 110 | 98 | 107 | 38 | 19 | 42 |
| 10 | 74 | 62 | 53 | 61 | 47 | 288 | 104 | 111 | 106 | 48 | 17 | 39 |
| 11 | 74 | 62 | 50 | 62 | 47 | 239 | 98 | 114 | 107 | 43 | 16 | 44 |
| 12 | 73 | 61 | 50 | 65 | 47 | 331 | 93 | 105 | 108 | 36 | 12 | 46 |
| 13 | 74 | 59 | 49 | 81 | 50 | 302 | 99 | 99 | 103 | 38 | 17 | 42 |
| 14 | 88 | 63 | 44 | 89 | 51 | 253 | 99 | 96 | 94 | 38 | 28 | 47 |
| 15 | 94 | 65 | 44 | 81 | 47 | 227 | 95 | 103 | 91 | 35 | 37 | 53 |
| 16 | 88 | 67 | 43 | 77 | 39 | 210 | 98 | 106 | 85 | 34 | 27 | 58 |
| 17 | 78 | 66 | 43 | 72 | 52 | 193 | 93 | 123 | 75 | 45 | 33 | 59 |
| 18 | 78 | 69 | 43 | 64 | 53 | 185 | 89 | 132 | 84 | 50 | 50 | 68 |
| 19 | 76 | 66 | 42 | 70 | 60 | 178 | 88 | 119 | 83 | 40 | 53 | 80 |
| 20 | 72 | 64 | 42 | 71 | 63 | 170 | 79 | 108 | 91 | 35 | 50 | 88 |
| 21 | 74 | 63 | 43 | 68 | 70 | 161 | 73 | 104 | 89 | 28 | 61 | 75 |
| 22 | 66 | 63 | 46 | 67 | 121 | 147 | 76 | 100 | 78 | 29 | 68 | 68 |
| 23 | 62 | 61 | 52 | 65 | 118 | 118 | 77 | 100 | 73 | 31 | 56 | 66 |
| 24 | 65 | 60 | 52 | 65 | 142 | 134 | 76 | 100 | 64 | 33 | 94 | 90 |
| 25 | 69 | 60 | 58 | 64 | 147 | 139 | 79 | 94 | 64 | 35 | 98 | 73 |
| 26 | 66 | 56 | 85 | 61 | 144 | 128 | 96 | 104 | 66 | 27 | 81 | 68 |
| 27 | 64 | 54 | 88 | 60 | 140 | 132 | 88 | 101 | 68 | 20 | 54 | 60 |
| 28 | 65 | 53 | 78 | 59 | 242 | 135 | 83 | 109 | 60 | 21 | 36 | 62 |
| 29 | 63 | 53 | 71 | 58 | --- | 130 | 84 | 105 | 60 | 21 | 35 | 64 |
| 30 | 62 | 54 | 69 | 56 | --- | 121 | 78 | 102 | 60 | 22 | 40 | 72 |
| 31 | 68 | --- | 69 | 59 | --- | 118 | --- | 105 | --- | 24 | 40 | --- |
| TOTAL | 2217 | 1858 | 1642 | 2066 | 2173 | 6148 | 2798 | 3331 | 2810 | 1240 | 1216 | 1723 |
| MEAN | 71.5 | 61.9 | 53.0 | 66.6 | 77.6 | 198 | 93.3 | 107 | 93.7 | 40.0 | 39.2 | 57.4 |
| MAX | 94 | 74 | 88 | 89 | 242 | 331 | 116 | 132 | 156 | 80 | 98 | 90 |
| MIN | 62 | 53 | 42 | 56 | 39 | 118 | 73 | 82 | 60 | 20 | 12 | 28 |
| AC-FT | 4400 | 3690 | 3260 | 4100 | 4310 | 12190 | 5550 | 6610 | 5570 | 2460 | 2410 | 3420 |
| CAL YR 1976 | TOTAL | 43186 | MEAN | 118 | MAX | 717 | MIN | 36 | AC-FT | 85660 | | |
| WTR YR 1977 | TOTAL | 29222 | MEAN | 80.1 | MAX | 331 | MIN | 12 | AC-FT | 57960 | | |

WILLAMETTE RIVER BASIN

351

14192500 SOUTH YAMHILL RIVER NEAR WILLAMINA, OR

LOCATION.--Lat 45°02'50", long 123°30'10", in NE¼SE¼ sec.14, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008, on left bank 2.3 mi (3.7 km) southwest of Willamina, 2.8 mi (4.5 km) upstream from Willamina Creek, and at mile 45.5 (73.2 km).

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--May 1934 to current year.

REVISED RECORDS.--WSP 814: Drainage area. WSP 1318: 1934.

GAGE.--Water-stage recorder. Datum of gage is 235.55 ft (71.796 m) above mean sea level.

REMARKS.--Records good. Slight regulation occasionally at low flows by millpond upstream. No diversion above station.

AVERAGE DISCHARGE.--43 years, 628 ft³/s (17.78 m³/s), 64.12 in/yr (1,629 mm/yr), 455,000 acre-ft/yr (561 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,600 ft³/s (555 m³/s) Dec. 22, 1964, gage height, 17.07 ft (5.203 m); minimum, 2.6 ft³/s (0.074 m³/s) Oct. 11, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,180 ft³/s (118 m³/s) Mar. 7, gage height, 6.98 ft (2.128 m), no peak above base of 5,700 ft³/s (161 m³/s); minimum, 6.3 ft³/s (0.18 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|----------|------|------|----------|----------|---------|-----------|----------|--------------|------|-------|------|
| 1 | 19 | 202 | 44 | 125 | 101 | 2530 | 734 | 116 | 441 | 55 | 19 | 48 |
| 2 | 21 | 115 | 43 | 182 | 86 | 1630 | 608 | 145 | 344 | 52 | 17 | 39 |
| 3 | 29 | 82 | 41 | 185 | 79 | 1540 | 530 | 296 | 314 | 52 | 16 | 52 |
| 4 | 34 | 67 | 40 | 161 | 77 | 1140 | 470 | 397 | 445 | 55 | 16 | 150 |
| 5 | 27 | 57 | 40 | 144 | 75 | 875 | 421 | 405 | 360 | 52 | 15 | 132 |
| 6 | 24 | 51 | 39 | 128 | 73 | 798 | 382 | 329 | 310 | 54 | 15 | 87 |
| 7 | 22 | 45 | 39 | 214 | 71 | 2120 | 348 | 274 | 274 | 49 | 13 | 67 |
| 8 | 20 | 43 | 91 | 164 | 69 | 2620 | 336 | 241 | 244 | 45 | 13 | 57 |
| 9 | 20 | 39 | 199 | 125 | 67 | 2800 | 321 | 216 | 219 | 44 | 12 | 49 |
| 10 | 22 | 37 | 128 | 118 | 84 | 2020 | 288 | 204 | 201 | 44 | 10 | 45 |
| 11 | 26 | 35 | 101 | 115 | 106 | 1510 | 261 | 196 | 184 | 41 | 9.4 | 40 |
| 12 | 26 | 34 | 89 | 149 | 101 | 1540 | 238 | 178 | 172 | 40 | 9.4 | 36 |
| 13 | 24 | 32 | 80 | 196 | 123 | 1290 | 254 | 161 | 158 | 40 | 8.6 | 34 |
| 14 | 23 | 43 | 73 | 202 | 108 | 1100 | 232 | 158 | 145 | 39 | 8.3 | 33 |
| 15 | 23 | 99 | 71 | 179 | 101 | 967 | 219 | 193 | 135 | 36 | 8.6 | 32 |
| 16 | 23 | 152 | 69 | 164 | 97 | 814 | 210 | 204 | 125 | 33 | 8.6 | 33 |
| 17 | 24 | 113 | 64 | 146 | 95 | 703 | 196 | 201 | 116 | 32 | 7.3 | 36 |
| 18 | 21 | 161 | 69 | 138 | 89 | 682 | 184 | 187 | 111 | 42 | 7.3 | 58 |
| 19 | 21 | 108 | 64 | 133 | 84 | 662 | 172 | 169 | 105 | 36 | 8.3 | 274 |
| 20 | 20 | 89 | 59 | 123 | 115 | 599 | 167 | 156 | 103 | 32 | 9.4 | 196 |
| 21 | 21 | 77 | 57 | 115 | 233 | 535 | 161 | 153 | 103 | 28 | 11 | 196 |
| 22 | 23 | 69 | 56 | 108 | 597 | 491 | 161 | 142 | 94 | 27 | 12 | 153 |
| 23 | 25 | 62 | 62 | 101 | 509 | 487 | 148 | 137 | 87 | 25 | 12 | 140 |
| 24 | 29 | 57 | 67 | 97 | 382 | 508 | 137 | 132 | 81 | 22 | 29 | 264 |
| 25 | 118 | 67 | 66 | 93 | 378 | 437 | 135 | 128 | 77 | 22 | 41 | 204 |
| 26 | 86 | 64 | 301 | 89 | 636 | 397 | 132 | 178 | 72 | 25 | 103 | 167 |
| 27 | 54 | 56 | 416 | 86 | 918 | 1060 | 125 | 204 | 68 | 25 | 51 | 140 |
| 28 | 44 | 51 | 252 | 82 | 2340 | 1090 | 120 | 229 | 65 | 24 | 39 | 125 |
| 29 | 41 | 48 | 199 | 80 | --- | 967 | 118 | 204 | 62 | 23 | 90 | 109 |
| 30 | 39 | 47 | 164 | 77 | --- | 836 | 118 | 187 | 60 | 21 | 99 | 103 |
| 31 | 77 | --- | 141 | 82 | --- | 734 | --- | 271 | --- | 19 | 68 | --- |
| TOTAL | 1026 | 2202 | 3224 | 4101 | 7794 | 35482 | 7926 | 6391 | 5275 | 1134 | 786.2 | 3099 |
| MEAN | 33.1 | 73.4 | 104 | 132 | 278 | 1145 | 264 | 206 | 176 | 36.6 | 25.4 | 103 |
| MAX | 118 | 202 | 416 | 214 | 2340 | 2800 | 734 | 405 | 445 | 55 | 103 | 274 |
| MIN | 19 | 32 | 39 | 77 | 67 | 397 | 118 | 116 | 60 | 19 | 7.3 | 32 |
| CFSM | .25 | .55 | .78 | .99 | 2.09 | 8.61 | 1.99 | 1.55 | 1.32 | .28 | .19 | .77 |
| IN. | .29 | .62 | .90 | 1.15 | 2.18 | 9.92 | 2.22 | 1.79 | 1.48 | .32 | .22 | .87 |
| AC-FT | 2040 | 4370 | 6390 | 8130 | 15460 | 70380 | 15720 | 12680 | 10460 | 2250 | 1560 | 6150 |
| CAL YR 1976 TOTAL | 156071.0 | | | MEAN 426 | MAX 4670 | MIN 17 | CFSM 3.20 | IN 43.65 | AC-FT 309600 | | | |
| WTR YR 1977 TOTAL | 78440.2 | | | MEAN 215 | MAX 2800 | MIN 7.3 | CFSM 1.62 | IN 21.94 | AC-FT 155600 | | | |

WILLAMETTE RIVER BASIN

14193000 WILLAMINA CREEK NEAR WILLAMINA, OR

LOCATION.--Lat 45°08'35", long 123°29'35", in NE¼NW¼ sec.13, T.5 S., R.7 W., Yamhill County, Hydrologic Unit 17090008, on right bank 4.5 mi (7.2 km) north of Willamina and at mile 6.2 (10.0 km).

DRAINAGE AREA.--64.7 mi² (167.6 km²).

PERIOD OF RECORD.--June 1934 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 315 ft (96.0 m) above mean sea level (plane-table survey). Prior to Oct. 1, 1939, water-stage recorder at site on left bank at datum 1.00 ft (0.305 m) higher. Oct. 1, 1939, to Aug. 5, 1968, water-stage recorder at site on left bank at present datum.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--43 years, 263 ft³/s (7.448 m³/s), 55.20 in/yr (1,402 mm/yr), 190,500 acre-ft/yr (235 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s (306 m³/s) Dec. 22, 1964, gage height, 13.54 ft (4.126 m), from rating curve extended above 3,400 ft³/s (96.3 m³/s) on basis of slope-area measurement at gage height 11.65 ft (3.551 m); minimum, 5.4 ft³/s (0.15 m³/s) July 15, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1931, reached a stage of about 12 ft (3.6 m) from information by local resident, discharge, 8,200 ft³/s (232 m³/s) from rating curve extended above 3,400 ft³/s (96.3 m³/s) on basis of slope-area measurement at gage height 11.65 ft (3.551 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,280 ft³/s (36.2 m³/s) Mar. 8, gage height, 5.42 ft (1.652 m), no peak above base of 2,300 ft³/s (65.1 m³/s); minimum, 7.0 ft³/s (0.20 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|------|------|--------|------|-------|------|------|------|------|-------|------|
| 1 | 12 | 64 | 21 | 38 | 35 | 893 | 264 | 66 | 164 | 33 | 14 | 23 |
| 2 | 13 | 38 | 21 | 46 | 32 | 572 | 233 | 83 | 131 | 33 | 13 | 20 |
| 3 | 17 | 29 | 20 | 48 | 30 | 548 | 211 | 127 | 125 | 33 | 12 | 27 |
| 4 | 14 | 24 | 20 | 43 | 29 | 404 | 193 | 170 | 134 | 34 | 12 | 40 |
| 5 | 14 | 22 | 19 | 40 | 29 | 310 | 179 | 156 | 118 | 33 | 12 | 35 |
| 6 | 13 | 20 | 19 | 40 | 29 | 283 | 168 | 129 | 106 | 33 | 12 | 27 |
| 7 | 12 | 19 | 20 | 44 | 28 | 651 | 158 | 114 | 97 | 30 | 12 | 23 |
| 8 | 11 | 18 | 45 | 36 | 27 | 936 | 150 | 106 | 90 | 28 | 12 | 20 |
| 9 | 11 | 18 | 73 | 32 | 27 | 1070 | 142 | 96 | 85 | 28 | 11 | 19 |
| 10 | 13 | 18 | 49 | 41 | 29 | 805 | 131 | 94 | 81 | 28 | 9.5 | 17 |
| 11 | 14 | 17 | 39 | 40 | 31 | 592 | 121 | 89 | 76 | 27 | 9.5 | 16 |
| 12 | 13 | 16 | 34 | 47 | 31 | 540 | 116 | 85 | 75 | 26 | 9.2 | 16 |
| 13 | 12 | 16 | 31 | 72 | 32 | 462 | 118 | 81 | 70 | 26 | 8.9 | 15 |
| 14 | 12 | 23 | 29 | 78 | 31 | 400 | 109 | 80 | 67 | 25 | 8.9 | 15 |
| 15 | 12 | 39 | 29 | 63 | 29 | 356 | 108 | 88 | 63 | 23 | 9.5 | 16 |
| 16 | 12 | 44 | 27 | 56 | 29 | 318 | 102 | 86 | 60 | 22 | 9.2 | 16 |
| 17 | 12 | 39 | 27 | 51 | 29 | 283 | 96 | 85 | 56 | 23 | 8.3 | 18 |
| 18 | 11 | 45 | 26 | 48 | 27 | 288 | 91 | 81 | 54 | 29 | 8.3 | 28 |
| 19 | 10 | 35 | 25 | 46 | 27 | 285 | 89 | 76 | 53 | 25 | 10 | 78 |
| 20 | 11 | 30 | 23 | 43 | 35 | 264 | 88 | 72 | 51 | 22 | 10 | 76 |
| 21 | 11 | 27 | 23 | 41 | 60 | 242 | 88 | 70 | 51 | 21 | 11 | 73 |
| 22 | 11 | 25 | 23 | 38 | 154 | 226 | 85 | 67 | 49 | 20 | 11 | 53 |
| 23 | 12 | 24 | 25 | 36 | 134 | 218 | 80 | 64 | 46 | 18 | 13 | 56 |
| 24 | 20 | 23 | 25 | 35 | 109 | 216 | 78 | 64 | 43 | 18 | 30 | 89 |
| 25 | 54 | 29 | 28 | 34 | 120 | 193 | 76 | 63 | 41 | 18 | 45 | 76 |
| 26 | 33 | 26 | 76 | 33 | 184 | 184 | 75 | 81 | 40 | 19 | 59 | 63 |
| 27 | 22 | 23 | 94 | 33 | 258 | 335 | 72 | 85 | 38 | 18 | 28 | 53 |
| 28 | 19 | 22 | 66 | 32 | 790 | 363 | 67 | 94 | 37 | 17 | 35 | 48 |
| 29 | 18 | 22 | 53 | 31 | --- | 344 | 67 | 88 | 35 | 17 | 39 | 50 |
| 30 | 17 | 21 | 46 | 30 | --- | 304 | 64 | 85 | 35 | 16 | 43 | 51 |
| 31 | 46 | --- | 41 | 32 | --- | 280 | --- | 118 | --- | 14 | 30 | --- |
| TOTAL | 512 | 816 | 1097 | 1327 | 2405 | 13165 | 3619 | 2843 | 2171 | 757 | 555.3 | 1157 |
| MEAN | 16.5 | 27.2 | 35.4 | 42.8 | 85.9 | 425 | 121 | 91.7 | 72.4 | 24.4 | 17.9 | 38.6 |
| MAX | 54 | 64 | 94 | 78 | 790 | 1070 | 264 | 170 | 164 | 34 | 59 | 89 |
| MIN | 10 | 16 | 19 | 30 | 27 | 184 | 64 | 63 | 35 | 14 | 8.3 | 15 |
| CFSM | .26 | .42 | .55 | .66 | 1.33 | 6.57 | 1.87 | 1.42 | 1.12 | .38 | .28 | .60 |
| IN. | .29 | .47 | .63 | .76 | 1.38 | 7.57 | 2.08 | 1.63 | 1.25 | .44 | .32 | .67 |
| AC-FT | 1020 | 1620 | 2180 | 2630 | 4770 | 26110 | 7180 | 5640 | 4310 | 1500 | 1100 | 2290 |
| CAL YR 1976 TOTAL | 70407.0 | | | | | | | | | | | |
| WTR YR 1977 TOTAL | 30424.3 | | | | | | | | | | | |
| MEAN | | | | 192 | | | | | | | | |
| MAX | | | | 83.4 | | | | | | | | |
| MIN | | | | 10 | | | | | | | | |
| CFSM | | | | 2.97 | | | | | | | | |
| IN | | | | 40.48 | | | | | | | | |
| AC-FT | | | | 139700 | | | | | | | | |
| AC-FT | | | | 60350 | | | | | | | | |

WILLAMETTE RIVER BASIN

353

14194000 SOUTH YAMHILL RIVER NEAR WHITESON, OR

LOCATION.--Lat 45°10'08", long 123°12'25", in NE¼NW¼ sec.5, T.5 S., R.4 W., Yamhill County, Hydrologic Unit 17090008, near left bank on downstream side of Whiteson Bridge on State Highway 99W, 1.3 mi (2.1 km) northwest of Whiteson, 1.4 mi (2.3 km) downstream from Salt Creek, and at mile 16.71 (26.89 km).

DRAINAGE AREA.--502 mi² (1,300 km²).

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 82.30 ft (25.085 m) above mean sea level. Prior to Sept. 20, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good. Slight regulation during low-water periods by logpond upstream. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--37 years, 1,784 ft³/s (50.52 m³/s), 48.26 in/yr (1,226 mm/yr), 1,293,000 acre-ft/yr (1.59 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft³/s (1,340 m³/s) Dec. 23, 1964, gage height, 47.20 ft (14.387 m); minimum, 3.2 ft³/s (0.091 m³/s) Aug. 24, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 46.9 ft (14.30 m), from Oregon State Highway Department bridge plans.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,050 ft³/s (200 m³/s) Mar. 10, gage height, 28.29 ft (8.623 m), no peak above base of 13,000 ft³/s (368 m³/s); minimum, 6.9 ft³/s (0.20 m³/s) Aug. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|----------|-------|-------|-------|--------|-------|-------|-------|------|--------|-------|-------|--------|
| 1 | 21 | 185 | 85 | 251 | 162 | 4970 | 1610 | 273 | 798 | 95 | 36 | 108 | | |
| 2 | 20 | 288 | 83 | 243 | 184 | 4570 | 1460 | 312 | 786 | 84 | 34 | 87 | | |
| 3 | 20 | 187 | 79 | 333 | 163 | 3490 | 1280 | 412 | 662 | 86 | 32 | 79 | | |
| 4 | 24 | 142 | 79 | 311 | 151 | 2860 | 1150 | 762 | 741 | 88 | 31 | 86 | | |
| 5 | 35 | 119 | 77 | 281 | 147 | 2140 | 1040 | 927 | 788 | 89 | 30 | 220 | | |
| 6 | 32 | 104 | 76 | 249 | 144 | 1680 | 959 | 813 | 664 | 85 | 30 | 177 | | |
| 7 | 28 | 94 | 74 | 211 | 142 | 2320 | 896 | 681 | 578 | 86 | 29 | 132 | | |
| 8 | 24 | 87 | 76 | 237 | 137 | 5500 | 842 | 596 | 506 | 77 | 31 | 106 | | |
| 9 | 22 | 81 | 222 | 229 | 134 | 6570 | 806 | 530 | 452 | 69 | 28 | 89 | | |
| 10 | 22 | 79 | 319 | 225 | 132 | 6770 | 760 | 480 | 405 | 67 | 26 | 78 | | |
| 11 | 22 | 76 | 234 | 217 | 157 | 5220 | 689 | 457 | 365 | 69 | 24 | 68 | | |
| 12 | 24 | 73 | 196 | 219 | 175 | 3990 | 631 | 421 | 339 | 60 | 20 | 61 | | |
| 13 | 27 | 73 | 177 | 277 | 179 | 3800 | 594 | 384 | 317 | 59 | 17 | 55 | | |
| 14 | 28 | 68 | 161 | 417 | 200 | 3040 | 605 | 362 | 292 | 60 | 16 | 50 | | |
| 15 | 26 | 79 | 150 | 392 | 185 | 2650 | 549 | 362 | 271 | 60 | 16 | 46 | | |
| 16 | 24 | 203 | 144 | 340 | 174 | 2210 | 532 | 444 | 253 | 55 | 13 | 47 | | |
| 17 | 24 | 252 | 139 | 307 | 164 | 1880 | 493 | 415 | 232 | 53 | 11 | 50 | | |
| 18 | 25 | 248 | 135 | 278 | 158 | 1680 | 461 | 412 | 214 | 58 | 13 | 57 | | |
| 19 | 23 | 272 | 134 | 261 | 150 | 1640 | 437 | 374 | 204 | 69 | 10 | 145 | | |
| 20 | 20 | 205 | 124 | 245 | 146 | 1530 | 415 | 344 | 194 | 61 | 9.7 | 450 | | |
| 21 | 20 | 173 | 118 | 229 | 233 | 1380 | 399 | 320 | 192 | 52 | 9.7 | 350 | | |
| 22 | 21 | 145 | 109 | 215 | 627 | 1260 | 399 | 315 | 186 | 49 | 14 | 342 | | |
| 23 | 21 | 128 | 112 | 202 | 1150 | 1200 | 375 | 297 | 168 | 44 | 19 | 258 | | |
| 24 | 24 | 116 | 119 | 191 | 828 | 1260 | 347 | 285 | 152 | 45 | 27 | 332 | | |
| 25 | 31 | 110 | 133 | 183 | 674 | 1210 | 334 | 279 | 139 | 40 | 49 | 408 | | |
| 26 | 178 | 126 | 159 | 175 | 1010 | 1070 | 332 | 295 | 131 | 38 | 112 | 349 | | |
| 27 | 125 | 117 | 654 | 169 | 1260 | 1470 | 317 | 386 | 123 | 39 | 172 | 282 | | |
| 28 | 79 | 103 | 598 | 163 | 2870 | 2330 | 298 | 446 | 113 | 40 | 95 | 245 | | |
| 29 | 63 | 94 | 433 | 157 | --- | 2290 | 283 | 473 | 107 | 39 | 85 | 214 | | |
| 30 | 55 | 89 | 346 | 150 | --- | 1990 | 280 | 414 | 99 | 38 | 132 | 204 | | |
| 31 | 55 | --- | 287 | 152 | --- | 1730 | --- | 432 | --- | 36 | 148 | --- | | |
| TOTAL | 1163 | 4116 | 5832 | 7509 | 11836 | 85700 | 19573 | 13703 | 10471 | 1890 | 1319.4 | 5175 | | |
| MEAN | 37.5 | 137 | 188 | 242 | 423 | 2765 | 652 | 442 | 349 | 61.0 | 42.6 | 173 | | |
| MAX | 178 | 288 | 654 | 417 | 2870 | 6770 | 1610 | 927 | 798 | 95 | 172 | 450 | | |
| MIN | 20 | 68 | 74 | 150 | 132 | 1070 | 280 | 273 | 99 | 36 | 9.7 | 46 | | |
| CFSM | .08 | .27 | .38 | .48 | .84 | 5.51 | 1.30 | .88 | .70 | .12 | .09 | .35 | | |
| IN. | .09 | .31 | .43 | .56 | .88 | 6.35 | 1.45 | 1.02 | .78 | .14 | .10 | .38 | | |
| AC-FT | 2310 | 8160 | 11570 | 14890 | 23480 | 170000 | 38820 | 27180 | 20770 | 3750 | 2620 | 10260 | | |
| CAL YR 1976 | TOTAL | 452528.0 | MEAN | 1236 | MAX | 15200 | MIN | 20 | CFSM | 2.46 | IN | 33.53 | AC-FT | 897600 |
| WTR YR 1977 | TOTAL | 168287.4 | MEAN | 461 | MAX | 6770 | MIN | 9.7 | CFSM | .92 | IN | 12.47 | AC-FT | 333800 |

LOCATION.--Lat 45°21'55", long 123°22'40", in SW¼ sec.25, T.2 S., R.6 W., Yamhill County, Hydrologic Unit 17090008, on right bank 0.4 mi (0.6 km) downstream from small tributary, 1.3 mi (2.1 km) upstream from Kutch Creek, 2.1 mi (3.4 km) west of Fairdale, 9.5 mi (15.3 km) west of Yamhill and at mile 28.4 (45.7 km).

PERIOD OF RECORD.--October 1958 to March 1966, October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft (171 m), from topographic map.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--17 years (water years 1959-65, 1968-77), 49.8 ft³/s (1.410 m³/s), 74.89 in/yr (1,902 mm/yr), 36,080 acre-ft/yr (44.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft³/s (66.0 m³/s) Dec. 22, 1964, gage height, 6.88 ft (2.097 m), from rating curve extended above 1,000 ft³/s (28.3 m³/s); maximum gage height, 9.7 ft (2.96 m) Dec. 23, 1964 (backwater from debris); minimum discharge, 2.3 ft³/s (0.065 m³/s) Sept. 23-26, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 237 ft³/s (6.71 m³/s) Mar. 8, gage height, 3.72 ft (1.134 m), no peak above base of 350 ft³/s (9.91 m³/s); minimum, 2.4 ft³/s (0.068 m³/s) Aug. 16.

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|------|------|------|-------|-------|-------|-------|
| 1 | 3.8 | 10 | 4.6 | 10 | 8.5 | 147 | 49 | 14 | 38 | 7.4 | 3.9 | 5.2 |
| 2 | 4.4 | 6.6 | 4.6 | 10 | 7.7 | 98 | 45 | 17 | 34 | 7.7 | 3.7 | 4.9 |
| 3 | 4.6 | 5.5 | 4.6 | 9.3 | 7.4 | 84 | 42 | 32 | 33 | 7.7 | 3.7 | 6.3 |
| 4 | 4.2 | 5.1 | 4.4 | 8.5 | 7.0 | 68 | 40 | 39 | 33 | 7.7 | 3.5 | 9.7 |
| 5 | 4.0 | 4.9 | 4.4 | 7.7 | 7.4 | 58 | 39 | 36 | 28 | 8.1 | 3.5 | 7.4 |
| 6 | 4.0 | 4.6 | 4.4 | 7.4 | 7.0 | 54 | 40 | 30 | 26 | 7.7 | 3.5 | 6.0 |
| 7 | 3.8 | 4.4 | 4.6 | 7.0 | 7.0 | 104 | 40 | 30 | 23 | 7.0 | 3.3 | 5.2 |
| 8 | 3.6 | 4.4 | 11 | 6.7 | 6.7 | 157 | 39 | 31 | 21 | 6.7 | 3.3 | 4.9 |
| 9 | 3.8 | 4.2 | 11 | 6.3 | 6.7 | 166 | 37 | 28 | 20 | 7.0 | 3.1 | 4.4 |
| 10 | 4.2 | 4.2 | 8.2 | 6.7 | 9.3 | 118 | 32 | 26 | 19 | 7.0 | 3.0 | 4.2 |
| 11 | 4.2 | 4.0 | 7.2 | 7.4 | 8.9 | 90 | 29 | 25 | 18 | 6.7 | 2.8 | 3.9 |
| 12 | 4.0 | 4.0 | 6.6 | 10 | 10 | 78 | 27 | 22 | 17 | 6.7 | 2.6 | 3.9 |
| 13 | 3.8 | 4.2 | 6.0 | 23 | 11 | 65 | 27 | 21 | 15 | 6.7 | 2.6 | 3.7 |
| 14 | 3.8 | 6.0 | 5.8 | 20 | 9.3 | 59 | 25 | 20 | 15 | 6.3 | 2.6 | 3.7 |
| 15 | 3.8 | 8.5 | 5.5 | 18 | 8.9 | 53 | 25 | 24 | 14 | 6.0 | 2.8 | 3.9 |
| 16 | 3.8 | 8.2 | 5.1 | 16 | 8.9 | 48 | 23 | 23 | 14 | 5.7 | 2.6 | 3.9 |
| 17 | 3.8 | 8.2 | 5.1 | 14 | 8.5 | 43 | 21 | 23 | 13 | 6.3 | 2.6 | 4.2 |
| 18 | 3.6 | 7.8 | 5.1 | 14 | 8.1 | 47 | 21 | 21 | 12 | 6.7 | 2.8 | 6.7 |
| 19 | 3.6 | 6.6 | 4.9 | 13 | 7.7 | 48 | 19 | 21 | 12 | 6.0 | 3.0 | 14 |
| 20 | 3.6 | 6.0 | 4.6 | 12 | 12 | 46 | 19 | 20 | 12 | 5.4 | 3.3 | 16 |
| 21 | 3.6 | 5.8 | 4.6 | 11 | 19 | 44 | 19 | 19 | 12 | 5.4 | 3.5 | 16 |
| 22 | 3.8 | 5.5 | 4.4 | 10 | 45 | 43 | 18 | 18 | 11 | 5.2 | 3.5 | 12 |
| 23 | 4.0 | 5.3 | 5.1 | 9.7 | 38 | 44 | 17 | 18 | 10 | 4.9 | 4.6 | 13 |
| 24 | 6.6 | 5.3 | 5.1 | 9.3 | 30 | 45 | 16 | 17 | 9.7 | 4.6 | 7.4 | 15 |
| 25 | 14 | 5.8 | 5.8 | 8.9 | 38 | 42 | 16 | 17 | 9.3 | 4.9 | 18 | 15 |
| 26 | 6.3 | 5.3 | 18 | 8.5 | 45 | 42 | 15 | 19 | 8.9 | 4.9 | 11 | 13 |
| 27 | 4.9 | 5.1 | 25 | 8.1 | 54 | 68 | 15 | 19 | 8.9 | 4.6 | 5.7 | 12 |
| 28 | 4.6 | 4.9 | 18 | 7.7 | 125 | 65 | 14 | 22 | 8.5 | 4.4 | 7.7 | 11 |
| 29 | 4.2 | 4.9 | 14 | 7.7 | --- | 59 | 15 | 20 | 8.1 | 4.4 | 7.7 | 13 |
| 30 | 4.0 | 4.9 | 12 | 7.4 | --- | 53 | 14 | 21 | 7.7 | 4.2 | 9.3 | 12 |
| 31 | 14 | --- | 11 | 8.5 | --- | 49 | --- | 31 | --- | 3.9 | 6.3 | --- |
| TOTAL | 148.4 | 170.2 | 240.7 | 323.8 | 562.0 | 2185 | 798 | 724 | 511.1 | 187.9 | 146.9 | 254.1 |
| MEAN | 4.79 | 5.67 | 7.76 | 10.4 | 20.1 | 70.5 | 26.6 | 23.4 | 17.0 | 6.06 | 4.74 | 8.47 |
| MAX | 14 | 10 | 25 | 23 | 125 | 166 | 49 | 39 | 38 | 8.1 | 18 | 16 |
| MIN | 3.6 | 4.0 | 4.4 | 6.3 | 6.7 | 42 | 14 | 14 | 7.7 | 3.9 | 2.6 | 3.7 |
| CFSM | .53 | .63 | .86 | 1.15 | 2.23 | 7.81 | 2.95 | 2.59 | 1.88 | .67 | .53 | .94 |
| IN. | .61 | .70 | .99 | 1.33 | 2.31 | 9.00 | 3.29 | 2.98 | 2.11 | .77 | .61 | 1.05 |
| AC-FT | 294 | 338 | 477 | 642 | 1110 | 4330 | 1580 | 1440 | 1010 | 373 | 291 | 504 |

| | | | | | | | | | |
|-------------|-------|---------|-----------|---------|---------|-----------|----------|-------|-------|
| CAL YR 1976 | TOTAL | 12668.4 | MEAN 34.6 | MAX 309 | MIN 3.0 | CFSM 3.83 | IN 52.19 | AC-FT | 25130 |
| WTR YR 1977 | TOTAL | 6252.1 | MEAN 17.1 | MAX 166 | MIN 2.6 | CFSM 1.89 | IN 25.75 | AC-FT | 12400 |

WILLAMETTE RIVER BASIN

355

14195500 HASKINS CREEK RESERVOIR NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'40", long 123°21'15", in NW¼ sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on control tower 250 ft (76 m) upstream from dam on Haskins Creek, 11 mi (18 km) northwest of McMinnville, and at mile 5.1 (8.2 km).

DRAINAGE AREA.--6.88 mi² (17.82 km²).

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by city of McMinnville).

REMARKS.--Reservoir is formed by earthfill dam equipped with five siphon spillways which act as overflow weirs until priming occurs, approximately 835.5 ft (254.66 m) elevation. Capacity of reservoir is 733 acre-ft (904,000 m³) between elevations 761.5 ft (232.11 m), invert of outlet tunnel, and 835.0 ft (254.51 m), crest of siphon spillways. Dead storage negligible. Rated capacity of three siphons is 700 ft³/s (19.8 m³/s) each and remaining two siphons 350 ft³/s (9.91 m³/s) each. Under normal operation, reservoir is filled in the spring (April or May) and drained when fall rains start. There is no planned storage during winter months; however, during periods of heavy runoff, inflow may be greater than capacity of outlet tunnel and there may be some temporary storage. Water is used for municipal supply of city of McMinnville.

COOPERATION.--Elevation and capacity table furnished by city of McMinnville, Water and Light Department.

EXTREMES FOR PERIOD RECORD.--Maximum contents observed, 748 acre-ft (922,000 m³) Nov. 17, 1954, elevation, 835.65 ft (254.706 m); no contents most of time during winter months.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 744 acre-ft (917,000 m³) many days during the year, elevation, 835.5 ft (254.66 m); minimum, 349 acre-ft (430,000 m³) Sept. 17-19, elevation, 814.0 ft (248.11 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 828.5 | 593 | - |
| Oct. 31..... | 834.5 | 722 | -129 |
| Nov. 30..... | 832.0 | 666 | -56 |
| Dec. 31..... | 831.0 | 645 | -21 |
| CAL YR 1976..... | - | - | +645 |
| Jan. 31..... | 833.9 | 708 | +63 |
| Feb. 28..... | 835.5 | 744 | +36 |
| Mar. 31..... | 835.5 | 744 | 0 |
| Apr. 30..... | 835.5 | 744 | 0 |
| May 31..... | 835.5 | 744 | 0 |
| June 30..... | 835.5 | 744 | 0 |
| July 31..... | 821.0 | 455 | -289 |
| Aug. 31..... | 818.0 | 408 | -47 |
| Sept. 30..... | 817.0 | 393 | -15 |
| WTR YR 1977..... | - | - | -200 |

14196001 HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'40", long 123°20'55", in NW¼ sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on right bank 800 ft (244 m) downstream from Haskins Creek Reservoir, 11 mi (18 km) northwest of McMinnville, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--6.90 mi² (17.87 km²).

PERIOD OF RECORD.--October 1951 to current year. Maximum discharge for water year 1957, published in WSP 1518, has been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1738: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 707 ft (215 m) above mean sea level (topographic survey of 1955). Prior to Aug. 5, 1952, water-stage recorder at site 600 ft (183 m) upstream at different datum.

REMARKS.--Records good except those below 2 ft³/s (0.06 m³/s), which are fair. All records given herein include flow in pipeline which diverts 600 ft (183 m) above station for municipal supply of McMinnville. Flow regulated by Haskin Creek Reservoir (see station 14195500); during winter months reservoir is empty except when inflow exceeds capacity of outlet tunnel. Monthly figures except for water year 1977 adjusted for diversion from McGuire Lake in the Nestucca River basin and for storage in Haskins Creek Reservoir.

COOPERATION.--Meter readings for diversion and elevations of Haskins Creek Reservoir furnished by city of McMinnville.

AVERAGE DISCHARGE.--25 years (water years 1952-76), 33.7 ft³/s (0.954 m³/s), 66.33 in/yr (1,685 mm/yr), 24,420 acre-ft/yr (30.1 hm³/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,030 ft³/s (29.2 m³/s) Dec. 23, 1964, gage height, 5.98 ft (1.823 m), from floodmark, from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of slope-area measurement of peak flow; maximum daily, 515 ft³/s (14.6 m³/s) Jan. 21, 1972; minimum daily, 0.10 ft³/s (0.003 m³/s) Oct. 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 319 ft³/s (9.03 m³/s) Mar. 8; minimum daily, 1.5 ft³/s (0.042 m³/s) Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 1 | 5.8 | 8.5 | 4.4 | 5.3 | 4.8 | 77 | 29 | 9.4 | 23 | 8.8 | 10 | 8.4 |
| 2 | 5.7 | 9.8 | 4.5 | 5.0 | 4.5 | 51 | 26 | 12 | 18 | 8.6 | 12 | 6.4 |
| 3 | 5.1 | 7.9 | 4.4 | 5.0 | 4.7 | 48 | 24 | 19 | 18 | 6.3 | 12 | 5.4 |
| 4 | 4.8 | 6.5 | 4.7 | 4.8 | 4.7 | 39 | 24 | 22 | 19 | 5.5 | 10 | 5.4 |
| 5 | 4.8 | 5.5 | 4.4 | 5.2 | 4.6 | 33 | 23 | 18 | 16 | 9.0 | 9.5 | 5.4 |
| 6 | 4.8 | 4.8 | 5.3 | 5.9 | 4.8 | 31 | 21 | 16 | 14 | 9.0 | 9.9 | 6.4 |
| 7 | 5.6 | 4.8 | 5.2 | 5.2 | 5.1 | 76 | 20 | 13 | 14 | 8.9 | 11 | 7.0 |
| 8 | 5.7 | 5.5 | 5.5 | 5.3 | 5.2 | 94 | 20 | 16 | 12 | 11 | 11 | 6.3 |
| 9 | 5.8 | 5.4 | 4.5 | 4.1 | 5.1 | 100 | 18 | 14 | 9.2 | 10 | 11 | 6.4 |
| 10 | 5.8 | 5.3 | 4.6 | 4.0 | 4.7 | 72 | 17 | 13 | 12 | 8.6 | 14 | 6.4 |
| 11 | 5.9 | 5.1 | 4.4 | 4.4 | 4.3 | 54 | 16 | 12 | 12 | 10 | 14 | 6.7 |
| 12 | 5.0 | 5.1 | 4.6 | 4.6 | 4.2 | 49 | 15 | 12 | 10 | 11 | 12 | 7.5 |
| 13 | 5.1 | 5.2 | 5.2 | 5.6 | 4.4 | 44 | 15 | 11 | 9.8 | 9.1 | 9.7 | 7.1 |
| 14 | 4.9 | 5.8 | 5.3 | 5.4 | 4.9 | 40 | 15 | 11 | 9.6 | 8.6 | 9.0 | 5.6 |
| 15 | 5.0 | 4.8 | 5.4 | 5.5 | 5.7 | 38 | 15 | 12 | 9.0 | 10 | 12 | 4.9 |
| 16 | 4.9 | 4.7 | 4.6 | 5.4 | 5.4 | 34 | 14 | 12 | 8.8 | 7.9 | 12 | 4.0 |
| 17 | 5.4 | 4.8 | 4.6 | 5.5 | 5.4 | 31 | 13 | 12 | 8.6 | 7.5 | 15 | 4.0 |
| 18 | 4.9 | 4.8 | 4.7 | 4.7 | 4.3 | 34 | 13 | 12 | 8.3 | 6.6 | 11 | 6.9 |
| 19 | 5.7 | 5.3 | 4.3 | 4.5 | 3.1 | 33 | 12 | 11 | 8.6 | 7.7 | 9.5 | 3.8 |
| 20 | 5.9 | 5.5 | 4.6 | 4.4 | 3.4 | 33 | 12 | 11 | 7.8 | 8.0 | 9.8 | 5.5 |
| 21 | 5.8 | 5.5 | 4.1 | 4.4 | 3.9 | 31 | 12 | 11 | 5.6 | 7.7 | 6.4 | 1.5 |
| 22 | 5.3 | 5.4 | 4.5 | 4.4 | 9.0 | 30 | 11 | 9.9 | 7.7 | 12 | 10 | 4.1 |
| 23 | 5.2 | 4.6 | 4.6 | 5.4 | 16 | 30 | 11 | 9.3 | 8.9 | 13 | 6.4 | 5.2 |
| 24 | 5.1 | 4.6 | 4.4 | 5.5 | 14 | 29 | 10 | 9.9 | 8.4 | 11 | 5.6 | 4.5 |
| 25 | 2.8 | 4.6 | 4.8 | 5.2 | 14 | 26 | 11 | 10 | 8.3 | 7.3 | 5.8 | 5.6 |
| 26 | 2.0 | 4.6 | 5.2 | 5.3 | 22 | 25 | 9.7 | 12 | 9.1 | 10 | 5.3 | 4.8 |
| 27 | 4.6 | 5.2 | 5.2 | 5.2 | 24 | 37 | 9.6 | 13 | 12 | 11 | 5.0 | 4.9 |
| 28 | 5.7 | 6.0 | 5.2 | 4.6 | 65 | 35 | 9.6 | 12 | 14 | 9.1 | 5.4 | 7.2 |
| 29 | 3.0 | 6.0 | 5.7 | 4.6 | --- | 33 | 9.6 | 11 | 9.9 | 9.4 | 5.1 | 5.5 |
| 30 | 2.3 | 4.9 | 5.4 | 4.8 | --- | 32 | 11 | 12 | 8.8 | 10 | 6.6 | 5.7 |
| 31 | 5.4 | --- | 5.3 | 4.7 | --- | 28 | --- | 18 | --- | 15 | 10 | --- |
| TOTAL | 153.8 | 166.5 | 149.6 | 153.9 | 261.2 | 1347 | 466.5 | 396.5 | 340.4 | 287.6 | 296.0 | 168.5 |
| MEAN | 4.96 | 5.55 | 4.83 | 4.96 | 9.33 | 43.5 | 15.6 | 12.8 | 11.3 | 9.28 | 9.55 | 5.62 |
| MAX | 5.9 | 9.8 | 5.7 | 5.9 | 65 | 100 | 29 | 22 | 23 | 15 | 15 | 8.4 |
| MIN | 2.0 | 4.6 | 4.1 | 4.0 | 3.1 | 25 | 9.6 | 9.3 | 5.6 | 5.5 | 5.0 | 1.5 |
| AC-FT | 305 | 330 | 297 | 305 | 518 | 2670 | 925 | 786 | 675 | 570 | 587 | 334 |
| CAL YR 1976 | TOTAL | 8840.3 | MEAN | 24.2 | MAX | 209 | MIN | 2.0 | AC-FT | 17530 | | |
| WTR YR 1977 | TOTAL | 4187.5 | MEAN | 11.5 | MAX | 100 | MIN | 1.5 | AC-FT | 8310 | | |

14198500 MOLALLA RIVER ABOVE PINE CREEK, NEAR WILHOIT, OR

LOCATION.--Lat 45°00'35", long 122°28'45", in NE 1/4 sec. 31, T.6 S., R.3 E., Clackamas County, Hydrologic Unit 17090009, on right bank 0.5 mi (0.8 km) upstream from Pine Creek, 5 mi (8 km) southeast of Wilhoit, and at mile 32.5 (52.3 km).

DRAINAGE AREA.--97.0 mi² (251.2 km²), at gaging cable 0.2 mi (0.3 km) downstream.

PERIOD OF RECORD.--October 1935 to current year.

REVISED RECORDS.--WSP 1738: Drainage area. WDR OR-75-1: 1967(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 791.35 ft (241.203 m) above mean sea level (Bureau of Public Roads bench mark). Oct. 1, 1935, to Sept. 30, 1945, and Oct. 1, 1945, to Feb. 9, 1961, water-stage recorder at site 0.3 mi (0.5 km) downstream at datums 8.42 ft (2.566 m) and 10.44 ft (3.182 m) lower, respectively. Feb. 10, 1961, to July 21, 1966, water-stage recorder at site 0.2 mi (0.3 km) downstream at datum 5.99 ft (1.826 m) lower.

REMARKS.--Records fair. No regulation or diversion above station. Records given herein are for measuring site.

AVERAGE DISCHARGE.--42 years, 548 ft³/s (15.52 m³/s), 76.72 in/yr (1,949 mm/yr), 397,000 acre-ft/yr (490 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft³/s (688 m³/s) Dec. 22, 1964, gage height, 16.3 ft (4.97 m), from flood-mark, site and datum then in use, from rating curve extended above 5,200 ft³/s (147 m³/s); minimum, 18 ft³/s (0.51 m³/s) Oct. 3, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,430 ft³/s (40.5 m³/s) Apr. 7, gage height, 5.58 ft (1.701 m), no peak above base of 3,600 ft³/s (102 m³/s); minimum, 50 ft³/s (1.42 m³/s) Aug. 16-18, 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|-------|
| 1 | 70 | 200 | 71 | 130 | 84 | 750 | 556 | 516 | 395 | 86 | 60 | 120 |
| 2 | 80 | 160 | 70 | 120 | 80 | 500 | 567 | 772 | 340 | 85 | 60 | 108 |
| 3 | 85 | 130 | 69 | 110 | 77 | 450 | 499 | 1200 | 313 | 84 | 59 | 114 |
| 4 | 90 | 110 | 68 | 105 | 75 | 324 | 556 | 1050 | 661 | 90 | 57 | 237 |
| 5 | 85 | 100 | 67 | 100 | 72 | 282 | 778 | 915 | 644 | 90 | 57 | 250 |
| 6 | 80 | 95 | 66 | 95 | 74 | 346 | 1060 | 791 | 532 | 89 | 57 | 168 |
| 7 | 80 | 95 | 65 | 91 | 71 | 850 | 1270 | 709 | 442 | 83 | 59 | 137 |
| 8 | 75 | 90 | 76 | 89 | 71 | 1200 | 1280 | 616 | 346 | 79 | 57 | 122 |
| 9 | 70 | 85 | 95 | 83 | 69 | 1050 | 957 | 591 | 282 | 78 | 57 | 112 |
| 10 | 75 | 80 | 90 | 84 | 70 | 800 | 715 | 752 | 250 | 78 | 56 | 105 |
| 11 | 80 | 80 | 80 | 84 | 74 | 620 | 610 | 811 | 219 | 75 | 55 | 100 |
| 12 | 85 | 75 | 70 | 90 | 76 | 720 | 585 | 667 | 195 | 75 | 53 | 97 |
| 13 | 75 | 75 | 80 | 244 | 79 | 560 | 649 | 556 | 177 | 76 | 53 | 92 |
| 14 | 65 | 80 | 80 | 222 | 79 | 478 | 604 | 494 | 162 | 79 | 53 | 90 |
| 15 | 60 | 90 | 80 | 180 | 78 | 395 | 544 | 467 | 151 | 86 | 52 | 89 |
| 16 | 60 | 110 | 70 | 186 | 77 | 335 | 591 | 462 | 140 | 85 | 52 | 89 |
| 17 | 60 | 130 | 70 | 166 | 75 | 275 | 521 | 838 | 133 | 83 | 52 | 88 |
| 18 | 60 | 150 | 75 | 154 | 72 | 262 | 457 | 866 | 125 | 94 | 51 | 89 |
| 19 | 62 | 130 | 70 | 149 | 70 | 279 | 382 | 673 | 118 | 85 | 51 | 108 |
| 20 | 60 | 120 | 70 | 137 | 71 | 289 | 346 | 579 | 115 | 80 | 52 | 282 |
| 21 | 60 | 110 | 65 | 125 | 84 | 272 | 346 | 538 | 115 | 69 | 52 | 358 |
| 22 | 65 | 95 | 65 | 117 | 126 | 313 | 382 | 494 | 109 | 66 | 53 | 269 |
| 23 | 65 | 85 | 70 | 108 | 120 | 494 | 505 | 452 | 103 | 65 | 53 | 289 |
| 24 | 70 | 84 | 70 | 102 | 125 | 435 | 632 | 408 | 98 | 65 | 100 | 638 |
| 25 | 100 | 83 | 75 | 96 | 118 | 382 | 727 | 352 | 95 | 65 | 96 | 527 |
| 26 | 150 | 79 | 190 | 95 | 135 | 324 | 667 | 538 | 96 | 65 | 133 | 382 |
| 27 | 130 | 76 | 530 | 90 | 253 | 521 | 550 | 538 | 94 | 65 | 102 | 275 |
| 28 | 100 | 74 | 250 | 88 | 1200 | 616 | 516 | 550 | 94 | 62 | 96 | 324 |
| 29 | 95 | 73 | 190 | 85 | --- | 538 | 499 | 494 | 92 | 63 | 146 | 382 |
| 30 | 95 | 72 | 160 | 82 | --- | 467 | 488 | 435 | 88 | 62 | 199 | 544 |
| 31 | 95 | --- | 140 | 83 | --- | 428 | --- | 382 | --- | 60 | 156 | --- |
| TOTAL | 2482 | 3016 | 3287 | 3690 | 3655 | 15555 | 18839 | 19506 | 6724 | 2367 | 2289 | 6585 |
| MEAN | 80.1 | 101 | 106 | 119 | 131 | 502 | 628 | 629 | 224 | 76.4 | 73.8 | 220 |
| MAX | 150 | 200 | 530 | 244 | 1200 | 1200 | 1280 | 1200 | 661 | 94 | 199 | 638 |
| MIN | 60 | 72 | 65 | 82 | 69 | 262 | 346 | 352 | 88 | 60 | 51 | 88 |
| CFSM | .83 | 1.04 | 1.09 | 1.23 | 1.35 | 5.18 | 6.47 | 6.49 | 2.31 | .79 | .76 | 2.27 |
| IN. | .95 | 1.16 | 1.26 | 1.42 | 1.40 | 5.97 | 7.22 | 7.48 | 2.58 | .91 | .88 | 2.53 |
| AC-FT | 4920 | 5980 | 6520 | 7320 | 7250 | 30850 | 37370 | 38690 | 13340 | 4690 | 4540 | 13060 |

CAL YR 1976 TOTAL 137288 MEAN 375 MAX 4400 MIN 45 CFSM 3.87 IN 52.65 AC-FT 272300
WTR YR 1977 TOTAL 87995 MEAN 241 MAX 1280 MIN 51 CFSM 2.49 IN 33.75 AC-FT 174500

NOTE.--No gage-height record Oct. 19 to Nov. 23.

WILLAMETTE RIVER BASIN

14200000 MOLALLA RIVER NEAR CANBY, OR

LOCATION.--Lat 45°14'40", long 122°41'10", in NW¼NE¼ sec.9, T.4 S., R.1 E., Clackamas County, Hydrologic Unit 17090009, on left bank at upstream side of Goods bridge, 1.5 mi (2.4 km) south of Canby, and at mile 6.01 (9.67 km).

DRAINAGE AREA.--323 mi² (837 km²).

PERIOD OF RECORD.--August 1928 to September 1959, October 1963 to current year.

REVISED RECORDS.--WSP 1248: 1929-30, 1932.

GAGE.--Water-stage recorder. Datum of gage is 104.00 ft (31.699 m) above mean sea level. Prior to Oct. 24, 1933, nonrecording gage and Oct. 24, 1933, to Sept. 26, 1955, water-stage recorder at present site and at datum 1.00 ft (0.305 m) higher. Sept. 27, 1955, to June 3, 1956, water-stage recorder at site 145 ft (44 m) downstream at present datum. June 4, 1956, to Sept. 30, 1959, water-stage recorder at site 0.3 mi (0.5 km) downstream at datum 1.98 ft (0.604 m) lower. Oct. 1, 1963, to May 4, 1964, nonrecording gage at present site and datum.

REMARKS.--Records fair. No regulation. Numerous small diversions for irrigation above station.

AVERAGE DISCHARGE.--45 years, 1,160 ft³/s (32.85 m³/s), 48.77 in/yr (1,239 mm/yr), 840,400 acre-ft/yr (1.04 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,600 ft³/s (1,230 m³/s) Dec. 22, 1964, gage height, 16.76 ft (5.108 m); minimum, 20 ft³/s (0.57 m³/s) Aug. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,300 ft³/s (122 m³/s) Mar. 8, gage height, 5.73 ft (1.747 m), no peak above base of 7,200 ft³/s (204 m³/s); minimum, 60 ft³/s (1.70 m³/s) Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 160 | 498 | 150 | 300 | 202 | 1930 | 1260 | 911 | 850 | 186 | 97 | 150 |
| 2 | 160 | 440 | 150 | 300 | 194 | 1530 | 1380 | 1210 | 800 | 182 | 92 | 132 |
| 3 | 178 | 292 | 150 | 290 | 182 | 1370 | 1190 | 1770 | 750 | 178 | 92 | 126 |
| 4 | 190 | 246 | 150 | 271 | 175 | 1140 | 1170 | 1860 | 1520 | 202 | 85 | 147 |
| 5 | 178 | 227 | 150 | 256 | 171 | 987 | 1380 | 1760 | 1500 | 190 | 90 | 292 |
| 6 | 178 | 223 | 150 | 218 | 167 | 940 | 1810 | 1640 | 1200 | 182 | 88 | 214 |
| 7 | 175 | 214 | 160 | 223 | 160 | 2090 | 2110 | 1490 | 1000 | 171 | 88 | 182 |
| 8 | 164 | 194 | 170 | 218 | 157 | 3500 | 2320 | 1340 | 900 | 160 | 83 | 171 |
| 9 | 164 | 182 | 200 | 232 | 154 | 2990 | 1860 | 1230 | 800 | 150 | 79 | 150 |
| 10 | 167 | 182 | 170 | 218 | 154 | 2190 | 1410 | 1510 | 700 | 150 | 75 | 141 |
| 11 | 186 | 178 | 160 | 232 | 157 | 1600 | 1190 | 1840 | 650 | 144 | 71 | 138 |
| 12 | 194 | 171 | 150 | 232 | 164 | 1870 | 1110 | 1600 | 600 | 135 | 69 | 129 |
| 13 | 175 | 164 | 150 | 420 | 171 | 1720 | 1190 | 1350 | 550 | 132 | 67 | 121 |
| 14 | 150 | 167 | 140 | 638 | 175 | 1380 | 1230 | 1180 | 500 | 118 | 69 | 118 |
| 15 | 138 | 178 | 140 | 490 | 164 | 1140 | 1070 | 1130 | 470 | 115 | 71 | 115 |
| 16 | 138 | 251 | 140 | 476 | 154 | 987 | 1280 | 1180 | 430 | 107 | 71 | 115 |
| 17 | 138 | 256 | 140 | 447 | 150 | 854 | 1230 | 1500 | 410 | 115 | 67 | 107 |
| 18 | 138 | 351 | 130 | 407 | 147 | 800 | 1100 | 2230 | 380 | 160 | 65 | 105 |
| 19 | 135 | 314 | 130 | 388 | 147 | 809 | 968 | 1760 | 360 | 160 | 65 | 121 |
| 20 | 135 | 266 | 130 | 370 | 157 | 854 | 891 | 1400 | 350 | 138 | 71 | 266 |
| 21 | 147 | 246 | 130 | 332 | 206 | 756 | 873 | 1260 | 338 | 132 | 75 | 414 |
| 22 | 144 | 218 | 130 | 309 | 292 | 774 | 854 | 1170 | 303 | 123 | 83 | 401 |
| 23 | 147 | 210 | 150 | 286 | 388 | 997 | 987 | 1070 | 271 | 110 | 81 | 344 |
| 24 | 157 | 190 | 170 | 276 | 370 | 1010 | 1120 | 1010 | 266 | 107 | 129 | 891 |
| 25 | 241 | 180 | 210 | 260 | 357 | 901 | 1240 | 920 | 266 | 102 | 167 | 774 |
| 26 | 376 | 170 | 350 | 250 | 344 | 809 | 1240 | 1070 | 251 | 102 | 198 | 569 |
| 27 | 276 | 170 | 700 | 230 | 407 | 1320 | 1040 | 1300 | 271 | 100 | 171 | 476 |
| 28 | 232 | 160 | 550 | 220 | 1910 | 1410 | 949 | 1300 | 218 | 95 | 135 | 544 |
| 29 | 214 | 160 | 440 | 210 | --- | 1210 | 920 | 1300 | 206 | 92 | 144 | 552 |
| 30 | 218 | 160 | 370 | 200 | --- | 1100 | 863 | 1000 | 194 | 92 | 178 | 1100 |
| 31 | 218 | --- | 320 | 200 | --- | 1030 | --- | 900 | --- | 97 | 206 | --- |
| TOTAL | 5611 | 6858 | 6530 | 9399 | 7576 | 41998 | 37235 | 42191 | 17304 | 4227 | 3122 | 9105 |
| MEAN | 181 | 229 | 211 | 303 | 271 | 1355 | 1241 | 1361 | 577 | 136 | 101 | 304 |
| MAX | 376 | 498 | 700 | 638 | 1910 | 3500 | 2320 | 2230 | 1520 | 202 | 206 | 1100 |
| MIN | 135 | 160 | 130 | 200 | 147 | 756 | 854 | 900 | 194 | 92 | 65 | 105 |
| CFSM | .56 | .71 | .65 | .94 | .84 | 4.20 | 3.84 | 4.21 | 1.79 | .42 | .31 | .94 |
| IN. | .65 | .79 | .75 | 1.08 | .87 | 4.84 | 4.29 | 4.86 | 1.99 | .49 | .36 | 1.05 |
| AC-FT | 11130 | 13600 | 12950 | 18640 | 15030 | 83300 | 73860 | 83690 | 34320 | 8380 | 6190 | 18060 |

CAL YR 1976 TOTAL 312494 MEAN 854 MAX 10500 MIN 130 CFSM 2.64 IN 35.99 AC-FT 619800
WTR YR 1977 TOTAL 191156 MEAN 524 MAX 3500 MIN 65 CFSM 1.62 IN 22.02 AC-FT 379200

NOTE.--No gage-height record Nov. 23 to Jan. 4.

WILLAMETTE RIVER BASIN

359

14200300 SILVER CREEK AT SILVERTON, OR

LOCATION.--Lat 45°00'34", long 122°47'15", in NE¼ sec.34, T.6 S., R.1 W., Marion County, Hydrologic Unit 17090009, on right bank 300 ft (91 m) downstream from railroad bridge in Silverton, 2.5 mi (4.0 km) upstream from Brush Creek, and at mile 3.4 (5.5 km).

DRAINAGE AREA.--47.9 mi² (124.1 km²).

PERIOD OF RECORD.--October 1963 to September 1968, October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 218.5 ft (66.60 m) above mean sea level.

REMARKS.--Records excellent. No regulation. Several small diversions for irrigation and municipal use above station.

AVERAGE DISCHARGE.--12 years, 211 ft³/s (5.976 m³/s), 59.82 in/yr (1,519 mm/yr), 152,900 acre-ft/yr (189 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft³/s (167 m³/s) Dec. 22, 1964, gage height, 11.15 ft (3.399 m); minimum, 2.0 ft³/s (0.057 m³/s) Aug. 20, 21, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 775 ft³/s (21.9 m³/s) Feb. 28, gage height, 4.11 ft (1.253 m), no peak above base of 1,200 ft³/s (34.0 m³/s); minimum, 4.8 ft³/s (0.14 m³/s) Aug. 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|-------|------|-------|-------|--------|-------|-------|
| 1 | 13 | 90 | 24 | 51 | 44 | 634 | 229 | 97 | 150 | 30 | 11 | 17 |
| 2 | 14 | 70 | 22 | 58 | 37 | 493 | 210 | 196 | 127 | 29 | 9.8 | 15 |
| 3 | 24 | 60 | 22 | 55 | 34 | 477 | 188 | 226 | 125 | 30 | 9.4 | 22 |
| 4 | 19 | 50 | 22 | 50 | 32 | 365 | 181 | 252 | 263 | 34 | 9.0 | 37 |
| 5 | 16 | 45 | 22 | 47 | 31 | 299 | 178 | 287 | 238 | 31 | 8.3 | 56 |
| 6 | 15 | 40 | 22 | 35 | 31 | 278 | 186 | 263 | 199 | 35 | 9.0 | 33 |
| 7 | 14 | 36 | 21 | 36 | 30 | 606 | 205 | 226 | 173 | 30 | 7.9 | 24 |
| 8 | 13 | 33 | 25 | 31 | 29 | 643 | 263 | 194 | 150 | 26 | 9.4 | 20 |
| 9 | 13 | 31 | 62 | 29 | 28 | 670 | 255 | 176 | 135 | 23 | 7.9 | 19 |
| 10 | 13 | 29 | 36 | 45 | 29 | 527 | 216 | 311 | 123 | 24 | 6.9 | 16 |
| 11 | 15 | 28 | 30 | 47 | 34 | 439 | 191 | 308 | 112 | 22 | 6.9 | 15 |
| 12 | 16 | 27 | 28 | 51 | 32 | 597 | 171 | 258 | 107 | 21 | 6.9 | 15 |
| 13 | 14 | 26 | 26 | 143 | 45 | 489 | 191 | 218 | 99 | 21 | 6.0 | 13 |
| 14 | 14 | 27 | 25 | 131 | 39 | 401 | 176 | 194 | 91 | 19 | 5.2 | 13 |
| 15 | 13 | 36 | 24 | 105 | 34 | 331 | 164 | 210 | 85 | 19 | 5.5 | 13 |
| 16 | 13 | 50 | 23 | 92 | 32 | 290 | 168 | 207 | 79 | 17 | 5.7 | 14 |
| 17 | 13 | 45 | 23 | 82 | 30 | 255 | 146 | 361 | 72 | 17 | 5.7 | 15 |
| 18 | 12 | 65 | 23 | 74 | 29 | 252 | 133 | 347 | 68 | 23 | 5.2 | 16 |
| 19 | 12 | 55 | 22 | 68 | 28 | 284 | 123 | 281 | 66 | 22 | 6.0 | 30 |
| 20 | 12 | 45 | 22 | 63 | 29 | 261 | 115 | 238 | 62 | 19 | 6.0 | 102 |
| 21 | 12 | 40 | 21 | 58 | 41 | 235 | 112 | 221 | 68 | 18 | 6.9 | 86 |
| 22 | 12 | 36 | 21 | 54 | 127 | 221 | 107 | 188 | 59 | 16 | 8.3 | 69 |
| 23 | 12 | 34 | 26 | 50 | 125 | 243 | 107 | 173 | 54 | 14 | 11 | 86 |
| 24 | 14 | 33 | 30 | 47 | 173 | 252 | 108 | 171 | 48 | 13 | 28 | 181 |
| 25 | 76 | 33 | 30 | 44 | 183 | 226 | 112 | 139 | 45 | 15 | 27 | 123 |
| 26 | 62 | 30 | 80 | 41 | 202 | 205 | 125 | 173 | 43 | 16 | 30 | 92 |
| 27 | 46 | 28 | 115 | 40 | 235 | 318 | 108 | 176 | 40 | 15 | 24 | 77 |
| 28 | 36 | 27 | 88 | 37 | 648 | 299 | 100 | 171 | 36 | 13 | 16 | 92 |
| 29 | 30 | 26 | 77 | 35 | --- | 281 | 94 | 150 | 32 | 13 | 30 | 92 |
| 30 | 28 | 25 | 66 | 34 | --- | 252 | 89 | 137 | 32 | 11 | 37 | 112 |
| 31 | 30 | --- | 56 | 41 | --- | 232 | --- | 131 | --- | 11 | 29 | --- |
| TOTAL | 646 | 1200 | 1135 | 1774 | 2391 | 11355 | 4751 | 6680 | 2981 | 647 | 394.9 | 1515 |
| MEAN | 20.8 | 40.0 | 36.6 | 57.2 | 85.4 | 366 | 158 | 215 | 99.4 | 20.9 | 12.7 | 50.5 |
| MAX | 76 | 90 | 115 | 143 | 648 | 670 | 263 | 361 | 263 | 35 | 37 | 181 |
| MIN | 12 | 25 | 21 | 29 | 28 | 205 | 89 | 97 | 32 | 11 | 5.2 | 13 |
| CFSM | .43 | .84 | .76 | 1.19 | 1.78 | 7.64 | 3.30 | 4.49 | 2.08 | .44 | .27 | 1.05 |
| IN. | .50 | .93 | .88 | 1.38 | 1.86 | 8.82 | 3.69 | 5.19 | 2.32 | .50 | .31 | 1.18 |
| AC-FT | 1280 | 2380 | 2250 | 3520 | 4740 | 22520 | 9420 | 13250 | 5910 | 1280 | 783 | 3010 |
| CAL YR 1976 | TOTAL | 55812.0 | MEAN | 152 | MAX | 1970 | MIN | 11 | CFSM | 3.17 | IN | 43.34 |
| WTR YR 1977 | TOTAL | 35469.9 | MEAN | 97.2 | MAX | 670 | MIN | 5.2 | CFSM | 2.03 | IN | 27.55 |
| | | | | | | | | | AC-FT | 110700 | AC-FT | 70350 |

WILLAMETTE RIVER BASIN

14201500 BUTTE CREEK AT MONITOR, OR

LOCATION.—Lat 45°06'06", long 122°44'42", in SE¼SE¼ sec.25, T.5 S., R.1 W., Marion County, Hydrologic Unit 17090009, on left bank at downstream side of highway bridge at Monitor and at mile 7.7 (12.4 km).

DRAINAGE AREA.—58.7 mi² (152.0 km²).

PERIOD OF RECORD.—January to December 1936, October 1940 to September 1952, October 1966 to current year. Monthly discharge only for January to December 1936, published in WSP 1318.

REVISED RECORDS.—WSP 2135: Drainage area.

GAGE.—Water-stage recorder. Altitude of gage is 155 ft (47.2 m) from topographic map. Jan. 20 to Oct. 22, 1936, nonrecording gage at present site at different datum. Oct. 23 to Dec. 19, 1936, nonrecording gage at site 70 ft (21 m) downstream at different datum. Oct. 1, 1940, to Sept. 30, 1952, nonrecording gage at present site at datum 151.35 ft (46.131 m) above mean sea level.

REMARKS.—Records good. No regulation. Diversions for irrigation by pumping above station.

AVERAGE DISCHARGE.—23 years (water years 1941-52, 1967-77), 224 ft³/s (6.344 m³/s), 51.82 in/yr (1,316 mm/yr), 162,300 acre-ft/yr (200 km³/yr).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,310 ft³/s (207 m³/s) Jan. 21, 1972, gage height, 15.26 ft (4.651 m), from flood-mark; minimum, 0.15 ft³/s (0.004 m³/s) Aug. 25, 1967.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 959 ft³/s (27.2 m³/s) Mar. 8, gage height, 6.53 ft (1.990 m), no peak above base of 1,500 ft³/s (42.5 m³/s); minimum, 0.40 ft³/s (0.011 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|---------|------|------|------|-------|------|-------|------|-------|-------|--------|-------|--------|
| 1 | 14 | 64 | 17 | 43 | 29 | 445 | 203 | 124 | 136 | 25 | 46 | 20 | | |
| 2 | 14 | 49 | 16 | 45 | 26 | 282 | 187 | 180 | 117 | 23 | 38 | 15 | | |
| 3 | 15 | 36 | 15 | 46 | 24 | 232 | 174 | 237 | 113 | 23 | 42 | 17 | | |
| 4 | 18 | 30 | 15 | 41 | 23 | 180 | 172 | 237 | 229 | 35 | 25 | 23 | | |
| 5 | 16 | 26 | 14 | 37 | 23 | 147 | 185 | 244 | 217 | 30 | 22 | 53 | | |
| 6 | 16 | 23 | 14 | 36 | 22 | 143 | 217 | 232 | 178 | 30 | 16 | 32 | | |
| 7 | 16 | 21 | 14 | 35 | 22 | 524 | 259 | 207 | 147 | 24 | 24 | 23 | | |
| 8 | 16 | 20 | 17 | 34 | 21 | 790 | 324 | 180 | 122 | 20 | 48 | 20 | | |
| 9 | 16 | 19 | 48 | 36 | 20 | 753 | 277 | 168 | 109 | 19 | 33 | 16 | | |
| 10 | 16 | 18 | 33 | 33 | 21 | 555 | 217 | 259 | 100 | 20 | 14 | 14 | | |
| 11 | 19 | 17 | 27 | 34 | 27 | 403 | 189 | 294 | 92 | 18 | 1.2 | 13 | | |
| 12 | 20 | 16 | 24 | 61 | 25 | 559 | 174 | 246 | 85 | 16 | 2.0 | 8.2 | | |
| 13 | 18 | 16 | 23 | 77 | 29 | 452 | 187 | 205 | 77 | 15 | 54 | 8.2 | | |
| 14 | 20 | 17 | 22 | 63 | 28 | 346 | 170 | 178 | 72 | 14 | 71 | 7.4 | | |
| 15 | 20 | 24 | 21 | 63 | 25 | 277 | 154 | 176 | 66 | 11 | 51 | 8.2 | | |
| 16 | 20 | 42 | 22 | 56 | 24 | 232 | 168 | 178 | 62 | 11 | 5.5 | 7.8 | | |
| 17 | 20 | 38 | 22 | 52 | 23 | 198 | 141 | 279 | 56 | 14 | 5.2 | 9.5 | | |
| 18 | 20 | 50 | 22 | 50 | 22 | 183 | 126 | 299 | 52 | 22 | 4.3 | 8.2 | | |
| 19 | 18 | 41 | 22 | 49 | 21 | 176 | 112 | 251 | 51 | 20 | 5.2 | 17 | | |
| 20 | 17 | 34 | 20 | 44 | 22 | 166 | 107 | 212 | 49 | 16 | 5.5 | 63 | | |
| 21 | 18 | 30 | 19 | 42 | 32 | 152 | 106 | 194 | 48 | 14 | 6.9 | 70 | | |
| 22 | 18 | 28 | 18 | 38 | 64 | 147 | 106 | 170 | 44 | 10 | 9.1 | 54 | | |
| 23 | 20 | 25 | 21 | 35 | 69 | 178 | 109 | 150 | 41 | 9.1 | 9.1 | 50 | | |
| 24 | 17 | 23 | 25 | 32 | 85 | 189 | 116 | 145 | 36 | 9.1 | 23 | 101 | | |
| 25 | 41 | 23 | 24 | 31 | 84 | 174 | 128 | 120 | 34 | 9.5 | 26 | 84 | | |
| 26 | 41 | 22 | 50 | 32 | 85 | 159 | 136 | 164 | 33 | 10 | 30 | 37 | | |
| 27 | 25 | 20 | 105 | 31 | 89 | 254 | 117 | 176 | 31 | 10 | 24 | 44 | | |
| 28 | 20 | 19 | 76 | 29 | 379 | 261 | 109 | 178 | 29 | 9.5 | 16 | 53 | | |
| 29 | 17 | 18 | 63 | 30 | --- | 251 | 106 | 154 | 26 | 9.1 | 21 | 72 | | |
| 30 | 16 | 17 | 54 | 28 | --- | 227 | 102 | 136 | 26 | 10 | 29 | 85 | | |
| 31 | 19 | --- | 49 | 28 | --- | 205 | --- | 126 | --- | 37 | 30 | --- | | |
| TOTAL | 601 | 826 | 932 | 1291 | 1364 | 9240 | 4878 | 6099 | 2478 | 543.3 | 737.0 | 1033.5 | | |
| MEAN | 19.4 | 27.5 | 30.1 | 41.6 | 48.7 | 298 | 163 | 197 | 82.6 | 17.5 | 23.8 | 34.5 | | |
| MAX | 41 | 64 | 105 | 77 | 379 | 790 | 324 | 299 | 229 | 37 | 71 | 101 | | |
| MIN | 14 | 16 | 14 | 28 | 20 | 143 | 102 | 120 | 26 | 9.1 | 1.2 | 7.4 | | |
| CFSM | .33 | .47 | .51 | .71 | .83 | 5.08 | 2.78 | 3.36 | 1.41 | .30 | .41 | .59 | | |
| IN. | .38 | .52 | .59 | .82 | .86 | 5.86 | 3.09 | 3.87 | 1.57 | .34 | .47 | .65 | | |
| AC-FT | 1190 | 1640 | 1850 | 2560 | 2710 | 18330 | 9680 | 12100 | 4920 | 1080 | 1460 | 2050 | | |
| CAL YR 1976 | TOTAL | 54849.4 | MEAN | 150 | MAX | 1790 | MIN | 7.4 | CFSM | 2.56 | IN | 34.76 | AC-FT | 108800 |
| WTR YR 1977 | TOTAL | 30022.8 | MEAN | 82.3 | MAX | 790 | MIN | 1.2 | CFSM | 1.40 | IN | 19.03 | AC-FT | 59550 |

WILLAMETTE RIVER BASIN

361

14202965 HENRY HAGG LAKE NEAR GASTON, OR

LOCATION.--Lat 45°28'25", long 123°11'51", in SE¼NE¼ sec.20, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, at left end of Scoggins Dam on Scoggins Creek, 3.8 mi (6.1 km) northwest of Gaston, and at mile 4.9 (7.9 km).

DRAINAGE AREA.--38.7 mi² (100.2 km²).

PERIOD OF RECORD.--January 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by earthfill dam with gated concrete spillway and a gated outlet tunnel. Storage began in January 1975. Total capacity at elevation 305.7 ft (93.18 m), maximum water-surface elevation, is 63,360 acre-ft (78.1 hm³), of which 56,160 acre-ft (69.2 hm³) is active storage above elevation 239.3 ft (72.94 m), proposed minimum pool. Reservoir is used for irrigation, flood control, and recreation. Figures given herein represent active storage.

COOPERATION.--Capacity table and monthend elevations furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 53,660 acre-ft (66.2 hm³) Apr. 30, 1975, elevation, 303.52 ft (92.513 m); minimum observed since first filling, 808 acre-ft (1.00 hm³) Oct. 31, 1975, elevation, 237.21 ft (72.302 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 34,990 acre-ft (43.1 hm³) June 30, elevation, 285.56 ft (87.039 m); minimum, 21,110 acre-ft (26.0 hm³) Sept. 30, elevation, 269.84 ft (82.247 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept.30..... | 282.39 | 32,000 | - |
| Oct. 31..... | 272.83 | 23,560 | -8,440 |
| Nov. 30..... | 271.71 | 22,630 | -930 |
| Dec. 31..... | 271.71 | 22,630 | 0 |
| CAL YR 1976..... | - | - | -4,210 |
| Jan. 31..... | 271.96 | 22,840 | +210 |
| Feb. 28..... | 273.38 | 24,030 | +1,190 |
| Mar. 31..... | 283.10 | 32,660 | +8,630 |
| Apr. 30..... | 284.74 | 34,210 | +1,550 |
| May 31..... | 285.22 | 34,660 | +450 |
| June 30..... | 285.56 | 34,990 | +330 |
| July 31..... | 280.05 | 29,860 | -5,130 |
| Aug. 31..... | 274.41 | 24,900 | -4,960 |
| Sept.30..... | 269.84 | 21,110 | -3,790 |
| WTR YR 1977..... | - | - | -10,890 |

WILLAMETTE RIVER BASIN

14202980 SCOGGINS CREEK BELOW HENRY HAGG LAKE, NEAR GASTON, OR

LOCATION.--Lat 45°28'10", long 123°11'56", in SE 1/4 sec. 20, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 600 ft (183 m) downstream from Scoggins Dam, 800 ft (244 m) upstream from small left bank tributary, 3.7 mi (6.0 km) north-west of Gaston, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--38.8 mi² (100.5 km²).

PERIOD OF RECORD.--January 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 187.48 ft (57.144 m) above mean sea level.

REMARKS.--Records excellent. Flow completely regulated by Henry Hagg Lake since January 1975. Discharge not adjusted for storage or release from Henry Hagg Lake as evaporation from reservoir at times exceeds natural flow.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s (32.9 m³/s) Jan. 22, 1976, gage height, 13.12 ft (3.999 m); minimum, 1.5 ft³/s (0.042 m³/s) Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 244 ft³/s (6.91 m³/s) Oct. 1, gage height, 6.55 ft (1.996 m); minimum, 1.5 ft³/s (0.042 m³/s) Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT. | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|-------|-------|-------|------|-------|-------|-------|------|------|
| 1 | 242 | 66 | 19 | 14 | 7.4 | 11 | 10 | 12 | 5.8 | 73 | 82 | 85 |
| 2 | 242 | 23 | 16 | 14 | 7.4 | 11 | 10 | 27 | 5.8 | 81 | 79 | 84 |
| 3 | 192 | 23 | 14 | 14 | 7.4 | 11 | 10 | 34 | 5.8 | 80 | 79 | 84 |
| 4 | 92 | 23 | 14 | 14 | 7.4 | 11 | 11 | 36 | 5.8 | 80 | 80 | 84 |
| 5 | 92 | 23 | 14 | 14 | 7.4 | 11 | 11 | 37 | 5.8 | 81 | 80 | 83 |
| 6 | 82 | 23 | 14 | 13 | 7.4 | 11 | 10 | 30 | 8.3 | 82 | 81 | 83 |
| 7 | 75 | 23 | 14 | 13 | 8.6 | 12 | 10 | 24 | 10 | 42 | 81 | 83 |
| 8 | 78 | 23 | 14 | 13 | 10 | 12 | 10 | 24 | 10 | 47 | 81 | 82 |
| 9 | 78 | 23 | 14 | 13 | 10 | 12 | 10 | 24 | 10 | 82 | 79 | 81 |
| 10 | 78 | 23 | 14 | 13 | 10 | 12 | 10 | 24 | 10 | 82 | 79 | 81 |
| 11 | 78 | 23 | 14 | 13 | 10 | 11 | 13 | 24 | 10 | 82 | 81 | 81 |
| 12 | 78 | 23 | 14 | 13 | 10 | 12 | 17 | 24 | 10 | 82 | 81 | 81 |
| 13 | 77 | 23 | 14 | 13 | 10 | 12 | 17 | 22 | 10 | 82 | 81 | 79 |
| 14 | 77 | 23 | 14 | 13 | 10 | 12 | 13 | 21 | 10 | 82 | 81 | 77 |
| 15 | 108 | 23 | 14 | 13 | 10 | 12 | 10 | 21 | 10 | 82 | 82 | 77 |
| 16 | 140 | 23 | 14 | 13 | 10 | 12 | 10 | 23 | 10 | 82 | 82 | 77 |
| 17 | 140 | 23 | 14 | 13 | 10 | 11 | 10 | 24 | 10 | 82 | 84 | 77 |
| 18 | 141 | 23 | 14 | 13 | 10 | 9.9 | 11 | 24 | 10 | 82 | 84 | 77 |
| 19 | 141 | 23 | 14 | 13 | 10 | 9.9 | 16 | 21 | 10 | 84 | 84 | 87 |
| 20 | 141 | 23 | 14 | 13 | 10 | 9.9 | 20 | 18 | 13 | 84 | 84 | 91 |
| 21 | 141 | 23 | 14 | 13 | 10 | 9.9 | 20 | 18 | 22 | 82 | 84 | 90 |
| 22 | 141 | 23 | 14 | 13 | 10 | 10 | 20 | 18 | 25 | 81 | 84 | 87 |
| 23 | 140 | 23 | 14 | 13 | 10 | 10 | 20 | 18 | 21 | 81 | 84 | 84 |
| 24 | 141 | 23 | 14 | 13 | 10 | 10 | 20 | 18 | 16 | 82 | 88 | 84 |
| 25 | 140 | 23 | 14 | 11 | 10 | 10 | 16 | 16 | 15 | 82 | 92 | 83 |
| 26 | 140 | 23 | 14 | 7.4 | 11 | 10 | 11 | 6.1 | 15 | 82 | 91 | 23 |
| 27 | 140 | 23 | 14 | 7.4 | 11 | 10 | 10 | 5.3 | 14 | 82 | 90 | 13 |
| 28 | 140 | 23 | 14 | 7.4 | 11 | 10 | 10 | 5.8 | 19 | 81 | 90 | 13 |
| 29 | 139 | 23 | 14 | 7.4 | --- | 10 | 10 | 5.8 | 43 | 85 | 87 | 13 |
| 30 | 139 | 23 | 14 | 7.4 | --- | 10 | 10 | 5.8 | 60 | 85 | 84 | 64 |
| 31 | 139 | --- | 14 | 7.4 | --- | 10 | --- | 6.0 | --- | 85 | 87 | --- |
| TOTAL | 3912 | 733 | 441 | 372.4 | 266.0 | 335.6 | 386 | 616.8 | 430.3 | 2462 | 2586 | 2188 |
| MEAN | 126 | 24.4 | 14.2 | 12.0 | 9.50 | 10.8 | 12.9 | 19.9 | 14.3 | 79.4 | 83.4 | 72.9 |
| MAX | 242 | 66 | 19 | 14 | 11 | 12 | 20 | 37 | 60 | 85 | 92 | 91 |
| MIN | 75 | 23 | 14 | 7.4 | 7.4 | 9.9 | 10 | 5.3 | 5.8 | 42 | 79 | 13 |
| AC-FT | 7760 | 1450 | 875 | 739 | 528 | 666 | 766 | 1220 | 853 | 4880 | 5130 | 4340 |
| CAL YR 1976 | TOTAL | 35973.0 | MEAN | 98.3 | MAX | 956 | MIN | 14 | AC-FT | 71350 | | |
| WTR YR 1977 | TOTAL | 14729.1 | MEAN | 40.4 | MAX | 242 | MIN | 5.3 | AC-FT | 29220 | | |

WILLAMETTE RIVER BASIN

363

14203500 TUALATIN RIVER NEAR DILLEY, OR

LOCATION.--Lat 45°28'30", long 123°07'23", in NE¼NW¼ sec.24, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 5 ft (2 m) upstream from highway bridge, 1.0 mi (1.6 km) south of Dilley, 1.2 mi (1.9 km) downstream from Scoggins Creek, and at mile 58.81 (94.63 km).

DRAINAGE AREA.--125 mi² (324 km²).

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1940 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1935: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 147.57 ft (44.979 m) above mean sea level. Prior to June 16, 1950, nonrecording gage at several sites within 200 ft (61 m) of present site at datum 4.00 ft (1.219 m) higher. June 16, 1950, to Aug. 10, 1966, water-stage recorder at present site at datum 4.00 ft (1.219 m) higher.

REMARKS.--Records good. Diurnal fluctuation caused by operation of millpond on Scoggins Creek above station and regulation by Henry Hagg Lake since January 1975. Diversions above station of approximately 3,000 acre-ft (3.70 hm³) from J.W. Barney Reservoir on the Middle Fork of North Fork Trask River for municipal water supply and irrigation in Wapato Lake area.

AVERAGE DISCHARGE.--38 years, 104 ft³/s (2.94 m³/s), 44.11 in/yr (1,120 mm/yr), 294,100 acre-ft/yr (363 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 ft³/s (484 m³/s) Dec. 22, 1964, gage height, 19.34 ft (5.895 m), from rating curve extended above 6,000 ft³/s (170 m³/s); minimum, 0.08 ft³/s (0.002 m³/s) Sept. 3, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 823 ft³/s (23.3 m³/s) Mar. 9, gage height, 14.49 ft (4.417 m); minimum, 14 ft³/s (0.40 m³/s) Jan. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|------|------|----------|----------|--------|--------------|------|------|------|------|------|
| 1 | 272 | 132 | 38 | 38 | 25 | 527 | 179 | 56 | 192 | 85 | 87 | 108 |
| 2 | 271 | 53 | 35 | 38 | 24 | 392 | 169 | 74 | 140 | 90 | 80 | 102 |
| 3 | 247 | 48 | 33 | 37 | 23 | 314 | 157 | 106 | 110 | 90 | 78 | 105 |
| 4 | 240 | 44 | 33 | 34 | 23 | 248 | 147 | 142 | 120 | 100 | 78 | 113 |
| 5 | 225 | 42 | 33 | 32 | 23 | 197 | 140 | 143 | 104 | 105 | 78 | 121 |
| 6 | 211 | 41 | 34 | 28 | 24 | 174 | 135 | 127 | 91 | 105 | 78 | 111 |
| 7 | 191 | 41 | 34 | 29 | 24 | 310 | 132 | 97 | 86 | 69 | 82 | 105 |
| 8 | 194 | 39 | 36 | 28 | 25 | 638 | 127 | 99 | 81 | 63 | 83 | 101 |
| 9 | 193 | 38 | 54 | 27 | 25 | 794 | 117 | 91 | 77 | 90 | 79 | 98 |
| 10 | 193 | 38 | 50 | 27 | 25 | 694 | 110 | 85 | 65 | 90 | 78 | 97 |
| 11 | 195 | 39 | 46 | 31 | 30 | 524 | 102 | 83 | 59 | 90 | 75 | 96 |
| 12 | 192 | 38 | 44 | 30 | 31 | 432 | 100 | 78 | 64 | 93 | 76 | 93 |
| 13 | 192 | 37 | 43 | 39 | 37 | 373 | 98 | 75 | 60 | 96 | 77 | 90 |
| 14 | 192 | 40 | 41 | 51 | 37 | 325 | 93 | 72 | 56 | 97 | 78 | 87 |
| 15 | 216 | 47 | 38 | 47 | 36 | 299 | 85 | 73 | 53 | 95 | 81 | 88 |
| 16 | 283 | 62 | 35 | 46 | 34 | 263 | 85 | 84 | 52 | 91 | 82 | 90 |
| 17 | 282 | 54 | 33 | 42 | 34 | 233 | 80 | 79 | 52 | 94 | 84 | 93 |
| 18 | 283 | 61 | 32 | 38 | 33 | 220 | 78 | 77 | 49 | 104 | 84 | 96 |
| 19 | 282 | 52 | 33 | 36 | 32 | 218 | 77 | 73 | 47 | 100 | 83 | 128 |
| 20 | 282 | 48 | 32 | 33 | 34 | 207 | 82 | 67 | 46 | 95 | 80 | 145 |
| 21 | 281 | 47 | 31 | 31 | 49 | 191 | 79 | 65 | 57 | 93 | 84 | 150 |
| 22 | 280 | 45 | 30 | 29 | 106 | 181 | 83 | 63 | 60 | 91 | 91 | 135 |
| 23 | 195 | 43 | 31 | 28 | 117 | 186 | 78 | 63 | 57 | 90 | 93 | 120 |
| 24 | 138 | 41 | 30 | 28 | 94 | 190 | 75 | 62 | 50 | 90 | 116 | 127 |
| 25 | 154 | 42 | 30 | 26 | 83 | 173 | 77 | 61 | 45 | 90 | 132 | 131 |
| 26 | 148 | 43 | 44 | 22 | 133 | 160 | 66 | 64 | 43 | 88 | 166 | 112 |
| 27 | 138 | 41 | 105 | 22 | 153 | 247 | 65 | 63 | 40 | 87 | 124 | 61 |
| 28 | 135 | 41 | 72 | 22 | 422 | 277 | 62 | 66 | 38 | 84 | 116 | 55 |
| 29 | 133 | 41 | 55 | 22 | --- | 247 | 59 | 67 | 49 | 89 | 119 | 51 |
| 30 | 132 | 41 | 46 | 22 | --- | 213 | 56 | 66 | 77 | 89 | 124 | 74 |
| 31 | 141 | --- | 42 | 23 | --- | 190 | --- | 85 | --- | 89 | 118 | --- |
| TOTAL | 6511 | 1419 | 1273 | 986 | 1736 | 9637 | 2993 | 2506 | 2120 | 2822 | 2884 | 3083 |
| MEAN | 210 | 47.3 | 41.1 | 31.8 | 62.0 | 311 | 99.8 | 80.8 | 70.7 | 91.0 | 93.0 | 103 |
| MAX | 283 | 132 | 105 | 51 | 422 | 794 | 179 | 143 | 192 | 105 | 166 | 150 |
| MIN | 132 | 37 | 30 | 22 | 23 | 160 | 56 | 56 | 38 | 63 | 75 | 51 |
| AC-FT | 12910 | 2810 | 2520 | 1960 | 3440 | 19110 | 5940 | 4970 | 4210 | 5600 | 5720 | 6120 |
| CAL YR 1976 TOTAL | 118538 | | | MEAN 324 | MAX 4420 | MIN 30 | AC-FT 235100 | | | | | |
| WTR YR 1977 TOTAL | 37970 | | | MEAN 104 | MAX 794 | MIN 22 | AC-FT 75310 | | | | | |

WILLAMETTE RIVER BASIN

14204500 GALES CREEK NEAR FOREST GROVE, OR

LOCATION.--Lat 45°33'20", long 123°11'10", in SE¼ sec.21, T.1 N., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 50 ft (15 m) downstream from Roderick road bridge, 0.1 mi (0.2 km) below Kelly Creek, 2.5 mi (4.0 km) southeast of town of Gales Creek, 4.5 mi (7.2 km) northwest of Forest Grove, and at mile 8.7 (14.0 km).

DRAINAGE AREA.--66.1 mi² (171.2 km²).

PERIOD OF RECORD.--October 1940 to September 1956, October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 201.81 ft (61.512 m) above mean sea level. Prior to Sept. 13, 1941, at site 1.4 mi (2.3 km) downstream at datum 14.33 ft (4.368 m) lower. Sept. 13, 1941, to June 19, 1952, at downstream side of bridge at datum 1.44 ft (0.439 m) higher. June 20, 1952, to Jan. 3, 1956, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records excellent. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--23 years, 231 ft³/s (6.542 m³/s), 47.46 in/yr (1,205 mm/yr), 167,400 acre-ft/yr (206 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,410 ft³/s (182 m³/s) Feb. 17, 1949, gage height, 10.90 ft (3.322 m), from floodmark, site and datum then in use; maximum gage height, 12.95 ft (3.947 m), from floodmark, Jan. 21, 1972; minimum discharge, 1 ft³/s (0.028 m³/s) Aug. 19, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft³/s (36.0 m³/s) Mar. 8, gage height, 5.54 ft (1.689 m), no peak above base of 2,000 ft³/s (56.6 m³/s); minimum, 3.0 ft³/s (0.085 m³/s) Aug. 13, 14, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|-------|------|------|-------|--------|-------|-------|
| 1 | 8.0 | 47 | 16 | 29 | 29 | 499 | 131 | 42 | 112 | 11 | 6.4 | 9.7 |
| 2 | 8.3 | 27 | 16 | 30 | 27 | 348 | 122 | 50 | 77 | 11 | 6.0 | 8.3 |
| 3 | 9.7 | 21 | 16 | 26 | 25 | 287 | 115 | 62 | 65 | 14 | 5.7 | 9.3 |
| 4 | 9.7 | 18 | 16 | 24 | 23 | 229 | 109 | 69 | 78 | 16 | 5.5 | 21 |
| 5 | 9.3 | 16 | 16 | 23 | 23 | 191 | 103 | 63 | 69 | 17 | 6.0 | 22 |
| 6 | 9.3 | 16 | 16 | 23 | 23 | 171 | 100 | 57 | 58 | 19 | 5.5 | 13 |
| 7 | 9.0 | 15 | 16 | 20 | 23 | 423 | 96 | 51 | 51 | 15 | 5.5 | 10 |
| 8 | 8.7 | 15 | 26 | 19 | 22 | 816 | 92 | 62 | 46 | 13 | 5.5 | 8.3 |
| 9 | 8.7 | 14 | 42 | 18 | 22 | 953 | 88 | 54 | 43 | 12 | 4.8 | 7.8 |
| 10 | 9.3 | 14 | 33 | 22 | 25 | 586 | 84 | 51 | 39 | 13 | 4.7 | 7.2 |
| 11 | 10 | 14 | 28 | 23 | 30 | 423 | 79 | 47 | 37 | 12 | 4.0 | 6.7 |
| 12 | 9.7 | 14 | 25 | 24 | 31 | 355 | 76 | 44 | 35 | 12 | 3.7 | 6.4 |
| 13 | 9.3 | 14 | 22 | 30 | 31 | 298 | 72 | 42 | 33 | 12 | 3.5 | 6.4 |
| 14 | 9.0 | 17 | 22 | 36 | 31 | 269 | 69 | 41 | 31 | 12 | 3.5 | 6.4 |
| 15 | 9.3 | 26 | 20 | 37 | 29 | 254 | 67 | 42 | 29 | 11 | 5.1 | 6.9 |
| 16 | 9.3 | 44 | 19 | 41 | 28 | 229 | 65 | 42 | 26 | 9.3 | 4.8 | 7.5 |
| 17 | 9.3 | 33 | 19 | 38 | 27 | 205 | 62 | 40 | 25 | 9.7 | 4.0 | 7.8 |
| 18 | 9.0 | 37 | 19 | 36 | 26 | 189 | 59 | 38 | 24 | 12 | 3.8 | 11 |
| 19 | 9.0 | 29 | 18 | 35 | 25 | 176 | 57 | 36 | 22 | 11 | 4.7 | 34 |
| 20 | 9.0 | 24 | 18 | 32 | 30 | 162 | 56 | 35 | 22 | 9.3 | 5.5 | 28 |
| 21 | 9.3 | 21 | 17 | 31 | 46 | 150 | 56 | 34 | 25 | 9.0 | 6.4 | 22 |
| 22 | 9.7 | 19 | 16 | 28 | 134 | 139 | 55 | 32 | 22 | 8.3 | 6.7 | 18 |
| 23 | 11 | 18 | 19 | 26 | 114 | 141 | 51 | 32 | 19 | 7.8 | 7.8 | 22 |
| 24 | 18 | 17 | 19 | 25 | 95 | 141 | 49 | 32 | 16 | 7.2 | 23 | 27 |
| 25 | 34 | 19 | 20 | 24 | 102 | 128 | 48 | 32 | 15 | 6.9 | 23 | 43 |
| 26 | 22 | 18 | 59 | 21 | 148 | 118 | 48 | 37 | 15 | 8.0 | 30 | 38 |
| 27 | 16 | 17 | 90 | 23 | 160 | 150 | 47 | 38 | 14 | 7.5 | 14 | 27 |
| 28 | 14 | 16 | 55 | 25 | 395 | 162 | 45 | 41 | 14 | 6.9 | 12 | 26 |
| 29 | 14 | 16 | 43 | 22 | --- | 160 | 43 | 38 | 12 | 6.9 | 12 | 26 |
| 30 | 13 | 16 | 36 | 24 | --- | 148 | 42 | 37 | 12 | 6.7 | 16 | 26 |
| 31 | 58 | --- | 31 | 24 | --- | 139 | --- | 70 | --- | 6.7 | 12 | --- |
| TOTAL | 401.9 | 632 | 828 | 839 | 1724 | 8639 | 2186 | 1391 | 1086 | 333.2 | 261.1 | 512.7 |
| MEAN | 13.0 | 21.1 | 26.7 | 27.1 | 61.6 | 279 | 72.9 | 44.9 | 36.2 | 10.7 | 8.42 | 17.1 |
| MAX | 58 | 47 | 90 | 41 | 395 | 953 | 131 | 70 | 112 | 19 | 30 | 43 |
| MIN | 8.0 | 14 | 16 | 18 | 22 | 118 | 42 | 32 | 12 | 6.7 | 3.5 | 6.4 |
| CFSM | .20 | .32 | .40 | .41 | .93 | 4.22 | 1.10 | .68 | .55 | .16 | .13 | .26 |
| IN. | .23 | .36 | .47 | .47 | .97 | 4.86 | 1.23 | .78 | .61 | .19 | .15 | .29 |
| AC-FT | 797 | 1250 | 1640 | 1660 | 3420 | 17140 | 4340 | 2760 | 2150 | 661 | 518 | 1020 |
| CAL YR 1976 | TOTAL | 59646.5 | MEAN | 163 | MAX | 2000 | MIN | 7.2 | CFSM | 2.47 | IN | 33.57 |
| WTR YR 1977 | TOTAL | 18833.9 | MEAN | 51.6 | MAX | 953 | MIN | 3.5 | CFSM | .78 | IN | 10.60 |
| | | | | | | | | | AC-FT | 118300 | AC-FT | 37360 |

WILLAMETTE RIVER BASIN

365

14207000 OSWEGO CANAL NEAR LAKE OSWEGO, OR

LOCATION.--Lat 45°23'20", long 122°43'10", in NW¼ sec.20, T.2 S., R. 1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 0.4 mi (0.6 km) downstream from point of diversion on Tualatin River, 1.0 mi (1.6 km) upstream from Lake Oswego, and 3.5 mi (5.6 km) southwest of Oswego.

PERIOD OF RECORD.--October 1928 to current year. October 1951 to September 1970, Oswego Canal records were not published separately, but were combined with records for Tualatin River at West Linn.

GAGE.--Water-stage recorder. Datum of gage is 96.50 ft (29.413 m) above mean sea level. Prior to Nov. 15, 1928, nonrecording gage 800 ft (244 m) upstream at different datum. Nov. 15, 1928, to June 29, 1939, nonrecording gage 900 ft (274 m) downstream at datum about 1.0 ft (0.3 m) higher.

REMARKS.--Records good. Oswego Canal diverts water from Tualatin River in NW¼ sec.20, but diversion dam is in NE¼ sec.33, about 3 mi (5 km) downstream. Water used for recreational facilities and development of power below Lake Oswego and returned to Willamette River at that point.

AVERAGE DISCHARGE.--49 years, 70.4 ft³/s (1.994 m³/s), 51,000 acre-ft/yr (62.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6,000 ft³/s (170 m³/s) Dec. 23, 1933; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-----------|---------|------|------|-------------|------|------|------|------|------|
| 1 | 51 | 61 | 43 | 39 | 48 | 103 | 50 | 54 | 53 | 46 | 52 | 57 |
| 2 | 52 | 66 | 42 | 36 | 49 | 107 | 44 | 55 | 55 | 52 | 56 | 57 |
| 3 | 52 | 65 | 41 | 36 | 50 | 98 | 46 | 57 | 51 | 60 | 57 | 56 |
| 4 | 54 | 50 | 41 | 37 | 50 | 84 | 45 | 62 | 46 | 67 | 55 | 57 |
| 5 | 53 | 41 | 41 | 37 | 49 | 74 | 46 | 64 | 46 | 72 | 55 | 57 |
| 6 | 54 | 38 | 40 | 35 | 49 | 65 | 46 | 66 | 52 | 70 | 55 | 57 |
| 7 | 45 | 37 | 39 | 36 | 47 | 61 | 45 | 64 | 53 | 59 | 55 | 57 |
| 8 | 26 | 36 | 40 | 43 | 46 | 68 | 43 | 62 | 53 | 54 | 56 | 55 |
| 9 | 25 | 35 | 41 | 44 | 46 | 98 | 42 | 59 | 53 | 53 | 55 | 53 |
| 10 | 25 | 36 | 42 | 45 | 46 | 115 | 39 | 59 | 52 | 52 | 55 | 53 |
| 11 | 24 | 36 | 46 | 46 | 46 | 116 | 56 | 58 | 50 | 58 | 53 | 52 |
| 12 | 23 | 36 | 49 | 48 | 47 | 94 | 77 | 54 | 48 | 61 | 44 | 52 |
| 13 | 22 | 36 | 49 | 58 | 48 | 71 | 74 | 52 | 43 | 59 | 28 | 56 |
| 14 | 29 | 37 | 48 | 70 | 48 | 66 | 69 | 49 | 40 | 57 | 38 | 59 |
| 15 | 53 | 39 | 47 | 74 | 50 | 59 | 65 | 48 | 37 | 56 | 41 | 58 |
| 16 | 59 | 46 | 46 | 75 | 51 | 56 | 64 | 49 | 37 | 56 | 44 | 56 |
| 17 | 66 | 52 | 45 | 75 | 51 | 53 | 58 | 53 | 33 | 54 | 46 | 54 |
| 18 | 74 | 57 | 45 | 72 | 51 | 50 | 53 | 54 | 28 | 57 | 47 | 55 |
| 19 | 69 | 58 | 44 | 69 | 50 | 47 | 51 | 53 | 22 | 58 | 48 | 53 |
| 20 | 53 | 56 | 44 | 67 | 50 | 46 | 56 | 51 | 15 | 57 | 49 | 54 |
| 21 | 49 | 53 | 43 | 63 | 53 | 50 | 59 | 50 | 14 | 54 | 53 | 58 |
| 22 | 48 | 50 | 43 | 61 | 62 | 52 | 58 | 48 | 12 | 54 | 58 | 59 |
| 23 | 47 | 48 | 44 | 60 | 77 | 51 | 59 | 49 | 30 | 53 | 60 | 58 |
| 24 | 48 | 46 | 49 | 58 | 95 | 50 | 59 | 51 | 46 | 52 | 70 | 52 |
| 25 | 51 | 46 | 51 | 55 | 89 | 50 | 58 | 51 | 44 | 50 | 62 | 50 |
| 26 | 53 | 45 | 57 | 53 | 85 | 47 | 56 | 53 | 41 | 49 | 60 | 54 |
| 27 | 60 | 45 | 61 | 52 | 85 | 45 | 56 | 53 | 39 | 47 | 60 | 58 |
| 28 | 63 | 44 | 64 | 49 | 97 | 47 | 56 | 54 | 39 | 51 | 59 | 56 |
| 29 | 61 | 44 | 64 | 48 | --- | 51 | 54 | 54 | 45 | 54 | 58 | 53 |
| 30 | 59 | 43 | 49 | 47 | --- | 53 | 53 | 53 | 45 | 53 | 57 | 52 |
| 31 | 58 | --- | 43 | 47 | --- | 51 | --- | 54 | --- | 51 | 57 | --- |
| TOTAL | 1506 | 1382 | 1441 | 1635 | 1615 | 2078 | 1637 | 1693 | 1222 | 1726 | 1643 | 1658 |
| MEAN | 48.6 | 46.1 | 46.5 | 52.7 | 57.7 | 67.0 | 54.6 | 54.6 | 40.7 | 55.7 | 53.0 | 55.3 |
| MAX | 74 | 66 | 64 | 75 | 97 | 116 | 77 | 66 | 55 | 72 | 70 | 59 |
| MIN | 22 | 35 | 39 | 35 | 46 | 45 | 39 | 48 | 12 | 46 | 28 | 50 |
| AC-FT | 2990 | 2740 | 2860 | 3240 | 3200 | 4120 | 3250 | 3360 | 2420 | 3420 | 3260 | 3290 |
| CAL YR 1976 | TOTAL | 20101.8 | MEAN 54.9 | MAX 177 | MIN | 3.4 | AC-FT 39870 | | | | | |
| WTR YR 1977 | TOTAL | 19236.0 | MEAN 52.7 | MAX 116 | MIN | 12 | AC-FT 38150 | | | | | |

WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR
(National stream-quality accounting network station)

LOCATION.—Lat 45°21'03", long 122°40'30", in SW¼ sec.34, T.2 S., R.1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 300 ft (90 m) upstream from bridge on State Highway 212, 0.4 mi (0.6 km) west of West Linn city limits, and at mile 1.8 (2.9 km).

DRAINAGE AREA.—706 mi² (1,829 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—July 1928 to current year. Prior to October 1960, published as "near Willamette."

REVISED RECORDS.—WSP 1014: 1943. WSP 1184: 1947. WSP 1248: 1941. WSP 1935: Drainage area. WDR OR-75-1: 1974(M).

GAGE.—Water-stage recorder. Datum of gage is 85.61 ft (26.094 m) above mean sea level (levels by Corps of Engineers). Prior to June 12, 1941, nonrecording gage at datum 1.02 ft (0.311 m) higher.

REMARKS.—Water-discharge records good. October 1951 to September 1970, all records published for this station included the daily flow of Oswego Canal. October 1971 to current year, maximum discharge only includes flow in Oswego Canal. Oswego Canal diverts at point 5.0 mi (8.0 km) above station for development of power between outlet of Lake Oswego and Willamette River. Some regulation in low-water season by flashboards on crest of diversion dam for Oswego Canal and regulation by Henry Hagg Lake since January 1975. Several diversions above station for irrigation.

AVERAGE DISCHARGE.—49 years, 1,529 ft³/s (43.30 m³/s), 29.41 in/yr (747 mm/yr), 1,108,000 acre-ft/yr (1.37 km³/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 23,300 ft³/s (660 m³/s) Dec. 23, 1933, gage height, 17.72 ft (5.401 m); minimum daily, 0.20 ft³/s (0.006 m³/s) July 30 to Aug. 2, 1966.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 2,870 ft³/s (81.3 m³/s) Mar. 12, gage height, 6.79 ft (2.070 m); minimum, 18 ft³/s (0.51 m³/s) June 30, July 1.

REVISIONS.—The maximum discharges for some water years have been revised, as shown in the following table. They supersede figures published in annual reports for 1971-76.

| Water year | Date | Discharge (ft ³ /s) (m ³ /s) | Gage height (ft) (m) | Water year | Date | Discharge (ft ³ /s) (m ³ /s) | Gage height (ft) (m) |
|------------|---------------|--|----------------------|------------|---------------|--|----------------------|
| 1971 | Jan. 20, 1971 | 11,700 331 | 12.72 3.877 | 1974 | Jan. 18, 1974 | 22,300 632 | 16.31 4.971 |
| 1972 | Jan. 24, 1972 | 14,900 422 | 14.18 4.322 | 1975 | Jan. 18, 1975 | 8,750 248 | 10.65 3.246 |
| 1973 | Dec. 27, 1972 | 7,840 222 | 10.50 3.200 | 1976 | Jan. 18, 1976 | 7,160 203 | 9.78 2.981 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------------|------------|-----------|--------|---------------|-------------|------------|------------|----------------|-------|-------|--------|
| 1 | 308 | 273 | 130 | 221 | 113 | 953 | 685 | 188 | 308 | 18 | 58 | 176 |
| 2 | 311 | 298 | 128 | 203 | 118 | 1480 | 643 | 185 | 441 | 20 | 55 | 158 |
| 3 | 308 | 321 | 124 | 188 | 118 | 1680 | 601 | 219 | 531 | 26 | 53 | 144 |
| 4 | 301 | 253 | 120 | 185 | 117 | 1470 | 555 | 264 | 555 | 30 | 44 | 155 |
| 5 | 273 | 192 | 117 | 182 | 117 | 1230 | 517 | 288 | 555 | 39 | 31 | 176 |
| 6 | 213 | 158 | 113 | 170 | 115 | 991 | 485 | 304 | 512 | 47 | 31 | 176 |
| 7 | 241 | 144 | 113 | 134 | 117 | 867 | 458 | 304 | 413 | 52 | 31 | 170 |
| 8 | 182 | 134 | 117 | 108 | 111 | 1000 | 441 | 288 | 341 | 62 | 31 | 146 |
| 9 | 158 | 122 | 120 | 111 | 108 | 1800 | 437 | 267 | 288 | 61 | 31 | 132 |
| 10 | 155 | 122 | 124 | 115 | 109 | 2420 | 417 | 270 | 256 | 57 | 37 | 118 |
| 11 | 167 | 124 | 144 | 118 | 111 | 2660 | 317 | 276 | 232 | 57 | 44 | 115 |
| 12 | 167 | 122 | 158 | 126 | 113 | 2800 | 304 | 270 | 210 | 58 | 111 | 109 |
| 13 | 170 | 118 | 155 | 170 | 117 | 2670 | 314 | 241 | 185 | 59 | 73 | 104 |
| 14 | 124 | 118 | 148 | 219 | 118 | 2270 | 314 | 213 | 167 | 59 | 32 | 95 |
| 15 | 103 | 126 | 142 | 238 | 118 | 1840 | 311 | 208 | 167 | 53 | 31 | 115 |
| 16 | 106 | 140 | 138 | 238 | 120 | 1570 | 308 | 213 | 155 | 57 | 28 | 120 |
| 17 | 108 | 170 | 132 | 224 | 118 | 1370 | 298 | 235 | 142 | 69 | 26 | 113 |
| 18 | 148 | 216 | 132 | 210 | 117 | 1200 | 292 | 250 | 136 | 68 | 25 | 115 |
| 19 | 208 | 221 | 130 | 200 | 115 | 1060 | 279 | 238 | 130 | 80 | 26 | 173 |
| 20 | 227 | 210 | 126 | 192 | 115 | 965 | 270 | 221 | 128 | 89 | 27 | 221 |
| 21 | 208 | 195 | 122 | 179 | 122 | 879 | 259 | 205 | 124 | 81 | 28 | 232 |
| 22 | 203 | 176 | 120 | 164 | 161 | 797 | 253 | 192 | 122 | 71 | 30 | 253 |
| 23 | 205 | 158 | 128 | 155 | 238 | 743 | 253 | 179 | 117 | 65 | 35 | 304 |
| 24 | 213 | 148 | 134 | 146 | 389 | 732 | 250 | 176 | 96 | 68 | 61 | 308 |
| 25 | 232 | 144 | 140 | 138 | 441 | 727 | 247 | 182 | 86 | 90 | 192 | 282 |
| 26 | 247 | 136 | 176 | 134 | 409 | 685 | 238 | 192 | 71 | 81 | 366 | 273 |
| 27 | 261 | 134 | 250 | 128 | 401 | 638 | 232 | 198 | 61 | 77 | 378 | 279 |
| 28 | 270 | 132 | 288 | 120 | 570 | 638 | 221 | 205 | 44 | 73 | 301 | 267 |
| 29 | 259 | 130 | 363 | 115 | --- | 721 | 210 | 203 | 19 | 68 | 219 | 235 |
| 30 | 247 | 128 | 311 | 113 | --- | 753 | 200 | 198 | 19 | 62 | 192 | 227 |
| 31 | 250 | --- | 259 | 109 | --- | 727 | --- | 221 | --- | 60 | 188 | --- |
| TOTAL | 6573 | 5063 | 4902 | 5053 | 5036 | 40336 | 10609 | 7093 | 6611 | 1857 | 2815 | 5491 |
| MEAN | 212 | 169 | 158 | 163 | 180 | 1301 | 354 | 229 | 220 | 59.9 | 90.8 | 183 |
| MAX | 311 | 321 | 363 | 238 | 570 | 2800 | 685 | 304 | 555 | 90 | 378 | 308 |
| MIN | 103 | 118 | 113 | 108 | 108 | 638 | 200 | 176 | 19 | 18 | 25 | 95 |
| AC-FT | 13040 | 10040 | 9720 | 10020 | 9990 | 80010 | 21040 | 14070 | 13110 | 3680 | 5580 | 10890 |
| MEAN† | 261 | 215 | 205 | 216 | 238 | 1,368 | 408 | 283 | 261 | 115 | 144 | 238 |
| CFSM† | .37 | .30 | .29 | .31 | .34 | 1.94 | .58 | .40 | .37 | .16 | .20 | .34 |
| IN.† | .43 | .34 | .33 | .35 | .35 | 2.23 | .64 | .46 | .41 | .19 | .23 | .38 |
| AC-FT† | 16,030 | 12,780 | 12,580 | 13,260 | 13,190 | 84,130 | 24,290 | 17,430 | 15,530 | 7,100 | 8,840 | 14,180 |
| CAL YR 1976 | TOTAL 430,634 | MEAN 1,177 | MAX 6,930 | MIN 90 | AC-FT 854,200 | MEAN† 1,235 | CFSM† 1.75 | IN.† 23.71 | AC-FT† 894,070 | | | |
| WTR YR 1977 | TOTAL 101,439 | MEAN 278 | MAX 2,800 | MIN 18 | AC-FT 201,200 | MEAN† 331 | CFSM† .47 | IN.† 6.35 | AC-FT† 239,340 | | | |

† Adjusted for diversion of Oswego Canal.

WILLAMETTE RIVER BASIN

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14207500 TUALATIN RIVER AT WEST LINN, OR--Continued
(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURES: October 1975 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 237 micromhos/cm Feb. 15, 1977; minimum, 68 micromhos/cm Mar. 3, 4, 29, 1976.

WATER TEMPERATURES: Maximum, 27.5°C Aug. 6, 8, 9, 11, 17, 1977; minimum, 2.5°C Jan. 8-12, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 237 micromhos/cm Feb. 15; minimum recorded, 85 micromhos/cm Mar. 11.

WATER TEMPERATURES: Maximum, 27.5°C Aug. 6, 8, 9, 11, 17; minimum, 2.5°C Jan. 8-12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) | DIS- SOLVED SODIUM (NA) (MG/L) |
|-------|------|---|-----------------------------|---------------|------------------------------------|--|--|--|--|--|---|--|
| OCT | | | | | | | | | | | | |
| 29... | 1000 | 256 | 10.5 | 6.9 | -- | 130 | -- | 84 | 20 | 11 | 3.3 | 10 |
| NOV | | | | | | | | | | | | |
| 23... | 1000 | 147 | 10.5 | 7.5 | -- | 206 | <1 | 89 | 24 | 16 | 5.6 | 15 |
| DEC | | | | | | | | | | | | |
| 16... | 1100 | 130 | 4.9 | 7.2 | 10.7 | 199 | B28 | 85 | 26 | 16 | 5.7 | 15 |
| JAN | | | | | | | | | | | | |
| 17... | 1130 | 213 | 3.4 | 7.3 | 10.1 | 187 | B12 | -- | 24 | 16 | 4.7 | 12 |
| FEB | | | | | | | | | | | | |
| 16... | 1100 | 122 | 6.1 | 7.1 | 9.4 | 233 | 88 | 55 | 24 | 16 | 6.1 | 18 |
| MAR | | | | | | | | | | | | |
| 28... | 1300 | 638 | 9.1 | 7.1 | 9.8 | 123 | 81 | 39 | 19 | 10 | 3.6 | 8.1 |
| MAY | | | | | | | | | | | | |
| 02... | 1100 | 180 | 15.5 | 6.9 | 8.8 | 159 | 27 | 42 | 4.3 | 13 | 4.3 | 12 |
| JUN | | | | | | | | | | | | |
| 01... | 1130 | 292 | 15.3 | 7.0 | 8.6 | 169 | 27 | 31 | 18 | 15 | 4.3 | 12 |
| 27... | 1245 | 61 | 22.2 | 8.0 | 10.9 | 194 | 73 | 53 | 18 | 15 | 4.9 | 16 |
| JUL | | | | | | | | | | | | |
| 18... | 1200 | 65 | 20.0 | 7.9 | 11.1 | 225 | 72 | 50 | 18 | 18 | 5.0 | 18 |
| SEP | | | | | | | | | | | | |
| 06... | 1200 | 174 | 18.5 | 6.5 | 6.8 | 181 | 64 | 87 | 19 | 15 | 4.5 | 14 |

| DATE | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA,MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) |
|-------|--------------------------------------|-----------------------------------|--|---|--|--|--|---|---|------------------------------------|---|
| OCT | | | | | | | | | | | |
| 29... | 41 | 0 | 14 | 12 | .1 | 1.5 | .70 | 2.2 | .56 | 41 | 7 |
| NOV | | | | | | | | | | | |
| 23... | 68 | 0 | 14 | 15 | .2 | 1.3 | .83 | 2.1 | .56 | 63 | 7 |
| DEC | | | | | | | | | | | |
| 16... | 70 | 0 | 9.1 | 15 | .1 | 1.6 | 1.5 | 3.1 | .65 | 63 | 6 |
| JAN | | | | | | | | | | | |
| 17... | 60 | 0 | 11 | 18 | .1 | 1.6 | 1.3 | 2.9 | .58 | 59 | 10 |
| FEB | | | | | | | | | | | |
| 16... | 64 | 0 | 15 | 18 | .2 | 2.0 | .06 | 2.1 | .78 | 65 | 13 |
| MAR | | | | | | | | | | | |
| 28... | 40 | 0 | 7.8 | 8.2 | .1 | 1.2 | 7.4 | 8.6 | .29 | 40 | 7 |
| MAY | | | | | | | | | | | |
| 02... | 52 | 0 | 10 | 12 | .1 | 1.7 | .95 | 2.7 | .43 | 50 | 8 |
| JUN | | | | | | | | | | | |
| 01... | 60 | 0 | 11 | 11 | .2 | .97 | 1.2 | 2.2 | .35 | 55 | 6 |
| 27... | 63 | 0 | 16 | 15 | .1 | 1.6 | 1.3 | 2.9 | .34 | 58 | 6 |
| JUL | | | | | | | | | | | |
| 18... | 70 | 0 | 16 | 18 | .2 | 1.6 | 1.4 | 3.0 | .30 | 66 | 8 |
| SEP | | | | | | | | | | | |
| 06... | 48 | 0 | 15 | 14 | .2 | 2.0 | 1.1 | 3.1 | .49 | 56 | 17 |

B: RESULTS BASED ON NON-IDEAL COLONY COUNT

WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) | DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) | TUR- BID- ITY (JTU) | SUS- PEN- DED SEDI- MENT (MG/L) | SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) | SUS- SED. SIEVE DIAM. % FINER THAN .062 MM | ALKA- LINITY AS CaCO3 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|---|--|--|--|--|------------------------------|--|---|--|--|---|
| OCT 29... | .7 | 98 | 93 | 67.7 | .13 | 4 | 5 | 3.5 | 50 | 34 | 4.1 |
| NOV 23... | .8 | 146 | 126 | 58.0 | .20 | 5 | 7 | 2.8 | 85 | 56 | -- |
| DEC 16... | .8 | 137 | 124 | 48.1 | .19 | 4 | 6 | 2.1 | 86 | 57 | -- |
| JAN 17... | .7 | 120 | 118 | 69.0 | .16 | 10 | 16 | 9.2 | 96 | 49 | 3.8 |
| FEB 16... | 1.0 | 144 | 132 | 47.4 | .20 | 6 | 6 | 2.0 | 79 | 53 | -- |
| MAR 28... | .6 | 89 | 78 | 153 | .12 | 10 | 13 | 22 | 94 | 33 | -- |
| MAY 02... | .7 | 103 | 84 | 50.1 | .14 | 2 | 9 | 4.4 | 96 | 43 | 3.9 |
| JUN 01... | .7 | -- | 103 | 81.2 | .14 | 6 | 10 | 7.9 | 91 | 49 | -- |
| JUN 27... | .9 | 126 | 118 | 20.8 | .17 | 8 | 20 | 3.3 | 65 | 52 | -- |
| JUL 18... | 1.0 | 144 | 131 | 25.5 | .20 | 4 | 2 | .35 | 75 | 57 | 4.7 |
| SEP 06... | .8 | 116 | 109 | 54.5 | .16 | 4 | 10 | 4.7 | 72 | 39 | -- |

| DATE | TOTAL IRON (FE) (UG/L) | DIS- SOLVED IRON (FE) (UG/L) | TOTAL MAN- GANESE (MN) (UG/L) | DIS- SOLVED MAN- GANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS- SOLVED ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | DIS- SOLVED CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | DIS- SOLVED CHRO- MIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|---------------------------------|--|---|--|------------------------------------|---|---|--|--|---|-----------------------------------|
| OCT 29... | 710 | 130 | 90 | 70 | 2 | 1 | <10 | 2 | 0 | 0 | <50 |
| JAN 17... | 1500 | 90 | 110 | 90 | 1 | 1 | <10 | 1 | 0 | 0 | <50 |
| MAY 02... | 900 | 80 | 160 | 70 | 1 | 1 | <10 | 2 | 0 | 0 | <50 |
| JUL 18... | 420 | 50 | 200 | 100 | 1 | 1 | <10 | 1 | 10 | 0 | <50 |

| DATE | DIS- SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS- SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS- SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS- SOLVED ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | DIS- SOLVED SELE- NIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS- SOLVED MERCURY (HG) (UG/L) |
|-----------|--|-----------------------------------|--|---------------------------------|--|---------------------------------|--|--|---|------------------------------------|---|
| OCT 29... | 0 | 10 | 7 | 100 | 0 | 30 | 20 | 0 | 0 | .0 | .0 |
| JAN 17... | 0 | 20 | 13 | <100 | 1 | 40 | 20 | 0 | 0 | 1.2 | .0 |
| MAY 02... | 0 | 20 | 15 | 100 | 3 | 50 | 50 | 0 | 0 | .0 | .0 |
| JUL 18... | 0 | 10 | 6 | <100 | 5 | 30 | 10 | 0 | 0 | .2 | .0 |

WILLAMETTE RIVER BASIN

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14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

PESTICIDE ANALYSES

| DATE | TOTAL ALDRIN (UG/L) | TOTAL LINDANE (UG/L) | TOTAL CHLOR-DANE (UG/L) | TOTAL DDD (UG/L) | TOTAL DDE (UG/L) | TOTAL DDT (UG/L) | TOTAL DI-ELDRIN (UG/L) | TOTAL ENDRIN (UG/L) | TOTAL ETHION (UG/L) | TOTAL TOX-APHENE (UG/L) | TOTAL HEPTA-CHLOR (UG/L) | TOTAL HEPTA-CHLOR EPOXIDE (UG/L) |
|------------|------------------------|-------------------------|----------------------------|---------------------|---------------------|---------------------|---------------------------|------------------------|------------------------|----------------------------|-----------------------------|-------------------------------------|
| NOV , 1976 | | | | | | | | | | | | |
| 23... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FEB , 1977 | | | | | | | | | | | | |
| 16... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| JUN | | | | | | | | | | | | |
| 01... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SEP | | | | | | | | | | | | |
| 06... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

| DATE | TOTAL METH-OXY-CHLOR (UG/L) | TOTAL MALA-THION (UG/L) | TOTAL PARA-THION (UG/L) | TOTAL DI-AZINON (UG/L) | TOTAL METHYL PARA-THION (UG/L) | TOTAL ATRA-ZINE (UG/L) | SIMA-ZINE TOTAL COUL-SON COND. (UG/L) | TOTAL 2,4-D (UG/L) | TOTAL 2,4,5-T (UG/L) | TOTAL SILVEX (UG/L) | TOTAL TRI-THION (UG/L) | TOTAL METHYL TRI-THION (UG/L) |
|------------|--------------------------------|----------------------------|----------------------------|---------------------------|-----------------------------------|---------------------------|--|-----------------------|-------------------------|------------------------|---------------------------|----------------------------------|
| NOV , 1976 | | | | | | | | | | | | |
| 23... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FEB , 1977 | | | | | | | | | | | | |
| 16... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| JUN | | | | | | | | | | | | |
| 01... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SEP | | | | | | | | | | | | |
| 06... | ND | ND | ND | ND | ND | ND | .66 | ND | ND | ND | ND | ND |

| DATE | ALDRIN IN BOTTOM MA-TERIAL (UG/KG) | LINDANE IN BOTTOM MA-TERIAL (UG/KG) | CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG) | DDT IN BOTTOM MA-TERIAL (UG/KG) | DI-ELDRIN IN BOTTOM MA-TERIAL (UG/KG) | ENDRIN IN BOTTOM MA-TERIAL (UG/KG) | ETHION IN BOTTOM MA-TERIAL (UG/KG) | TOX-APHENE IN BOTTOM MA-TERIAL (UG/KG) | HEPTA-CHLOR IN BOTTOM MA-TERIAL (UG/KG) | HEPTA-CHLOR EPOXIDE IN BOT-TOM MA-TERIAL (UG/KG) | METHOX-YCHLOR IN BOT-TOM MA-TERIAL (UG/KG) | MALA-THION IN BOTTOM MA-TERIAL (UG/KG) |
|------------|---------------------------------------|--|---|------------------------------------|--|---------------------------------------|---------------------------------------|---|--|---|---|---|
| NOV , 1976 | | | | | | | | | | | | |
| 23... | ND | ND | 6 | ND | .9 | ND | ND | ND | ND | ND | ND | ND |

| DATE | PARA-THION IN BOTTOM MA-TERIAL (UG/KG) | DI-AZINON IN BOTTOM MA-TERIAL (UG/KG) | METHYL PARA-THION IN BOT-TOM MA-TERIAL (UG/KG) | ATRA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS) | SIMA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS) | P,P' DDD IN BOTTOM MA-TERIAL (UG/KG) | 2,4-D IN BOTTOM MA-TERIAL (UG/KG) | 2,4,5-T IN BOTTOM MA-TERIAL (UG/KG) | SILVEX IN BOTTOM MA-TERIAL (UG/KG) | TRI-THION IN BOTTOM MA-TERIAL (UG/KG) | METHYL TRI-THION IN BOT-TOM MA-TERIAL (UG/KG) |
|------------|---|--|---|--|--|---|--------------------------------------|--|---------------------------------------|--|--|
| NOV , 1976 | | | | | | | | | | | |
| 23... | ND | ND | ND | ND | ND | 22 | ND | ND | ND | ND | ND |

ND: SPECIFICALLY LOOKED FOR BUT NOT DETECTED

WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO JULY 1977

| DATE TIME | OCT 29,76 1000 | NOV 23,76 1000 | DEC 16,76 1100 | JAN 17,77 1130 | FEB 16,77 1100 |
|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| TOTAL CELLS/ML | 3500 | 400 | 310 | 160 | 2400 |
| DIVERSITY: DIVISION | 1.0 | 1.0 | 1.9 | 1.7 | 1.5 |
| ..CLASS | 1.0 | 1.0 | 1.9 | 1.7 | 1.6 |
| ...ORDER | 1.4 | 1.5 | 2.4 | 2.4 | 2.3 |
| ...FAMILY | 1.5 | 2.2 | 2.6 | 2.9 | 2.8 |
|GENUS | 1.6 | 2.6 | 2.8 | 3.0 | 2.9 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | |
| ...SCHROEDERIA | -- | -- | -- | -- | | | 6 | 4 | -- | -- |
| ...COELASTRACEAE | | | | | | | | | | |
| ...COELASTRUM | -- | -- | -- | -- | | | | | -- | -- |
| ...HYDRODICTYACEAE | | | | | | | | | | |
| ...PEDIASTRUM | -- | -- | -- | -- | | | | | -- | -- |
| ...MICRACTINIACEAE | | | | | | | | | | |
| ...MICRACTINIUM | -- | -- | -- | -- | | | | | -- | -- |
| ...OOCYSTACEAE | | | | | | | | | | |
| ...ANKISTRODESMUS | -- | -- | 22 | 5 | | | 3 | 2 | -- | -- |
| ...CHODATELLA | -- | -- | 3 | 1 | | | | | -- | -- |
| ...DIGTYOSPHAERIUM | -- | -- | | | | | | | | |
| ...DIMORPHOCOCCUS | -- | -- | | | | | | | 530# | 23 |
| ...FRANCEIA | -- | -- | 3 | 1 | | | | | | |
| ...KIRCHNERIELLA | -- | -- | | | 22 | 7 | | | -- | -- |
| ...NEPHROCYTIUM | -- | -- | | | | | | | -- | -- |
| ...OOCYSTIS | -- | -- | | | | | | | -- | -- |
| ...SELENASTRUM | -- | -- | | | | | | | -- | -- |
| ...TETRAEDRON | -- | -- | | | | | | | -- | -- |
| ...SCENEDESMACEAE | | | | | | | | | | |
| ...ACTINASTRUM | -- | -- | | | | | | | -- | -- |
| ...CRUCIGENIA | -- | -- | | | | | | | -- | -- |
| ...SCENEDESMUS | 85 | 2 | 86# | 22 | 22 | 7 | 18 | 11 | 100 | 4 |
| ...TETRASTRUM | -- | -- | 12 | 3 | | | | | -- | -- |
| ...VOLVOCALES | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ...CHLAMYDOMONAS | -- | -- | | | 25 | 8 | 12 | 8 | 30 | 1 |
| ...ZYGNEATALES | | | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | | | |
| ...STAUSTRUM | -- | -- | | | | | | | -- | -- |
| CHRYSTOPHYTA | | | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | | | |
| ...CENTRALES | | | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | | | |
| ...CYCLOTELLA | 53 | 2 | 15 | 4 | 14 | 4 | 6 | 4 | -- | -- |
| ...MELOSIRA | 750# | 21 | 190# | 47 | 36 | 12 | 25# | 15 | 370# | 16 |
| ...PENNALES | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | -- | -- |
| ...ACHNANTHES | -- | -- | -- | -- | | | | | -- | -- |
| ...COCCONEIS | -- | -- | | | | | | | * | 0 |
| ...RHODICOSPHEA | -- | -- | 12 | 3 | | | | | -- | -- |
| ...CYMBELLACEAE | | | | | | | | | | |
| ...EPITHEMIA | 37 | 1 | -- | -- | | | | | -- | -- |
| ...DIATOMACEAE | | | | | | | | | | |
| ...DIATOMA | -- | -- | -- | -- | 3 | 1 | | | -- | -- |
| ...EUNOTIACEAE | | | | | | | | | | |
| ...EUNOTIA | -- | -- | -- | -- | | | | | -- | -- |
| ...FRAGILARIACEAE | | | | | | | | | | |
| ...ASTERIONELLA | -- | -- | 3 | 1 | | | 6 | 4 | -- | -- |
| ...FRAGILARIA | -- | -- | 3 | 1 | | | | | * | 0 |
| ...SYNEDRA | 27 | 1 | -- | -- | 3 | 1 | | | -- | -- |
| ...GOMPHONEMACEAE | | | | | | | | | | |
| ...GOMPHONEMA | -- | -- | 9 | 2 | | | 3 | 2 | 40 | 2 |
| ...NAVICULACEAE | | | | | | | | | | |
| ...FRUSTULIA | -- | -- | -- | -- | | | | | -- | -- |
| ...GYROSIGMA | 27 | 1 | | | | | | | -- | -- |
| ...NAVICULA | 53 | 2 | 6 | 2 | 14 | 4 | 34# | 21 | 110 | 5 |
| ...PINNULARIA | -- | -- | 12 | 3 | | | | | * | 0 |
| ...STAURONEIS | -- | -- | | | | | | | 30 | 1 |
| ...NITZSCHIA | -- | -- | 18 | 5 | 6 | 2 | | | 630# | 27 |
| ...NITZSCHIA | -- | -- | | | | | | | | |
| ...SURIPELLACEAE | | | | | | | | | | |
| ...SURIPELLA | 64 | 2 | 3 | 1 | | | | | -- | -- |
| ...CHRYSTOPHYCEAE | | | | | | | | | | |
| ...CHRYSONOMADALES | | | | | | | | | | |
| ...OCHROMONADACEAE | | | | | | | | | | |
| ...DINOBRYON | -- | -- | -- | -- | | | | | * | 0 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO JULY 1977

| DATE TIME | OCT 29,76 1000 | | NOV 23,76 1000 | | DEC 16,76 1100 | | JAN 17,77 1130 | | FEB 16,77 1100 | |
|-------------------------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | | | |
| ...CHROCOCCALES | | | | | | | | | | |
| ...CHROCOCCACEAE | | | | | | | | | | |
|ANACYSTIS | 91 | 3 | -- | - | -- | - | 9 | 6 | 130 | 6 |
| ...HORMOGONALES | | | | | | | | | | |
| ...OSCILLATORIACEAE | | | | | | | | | | |
|OSCILLATORIA | 2300# | 66 | -- | - | 130# | 40 | -- | - | 320 | 14 |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| ..CRYPTOPHYCEAE | | | | | | | | | | |
| ...CRYPTOMONIDALES | | | | | | | | | | |
| ...CRYPTOMONADACEAE | | | | | | | | | | |
|CRYPTOMONAS | -- | - | -- | - | 39 | 13 | -- | - | -- | - |
| ..EUGLENOPHYCEAE | | | | | | | | | | |
| ...EUGLENALES | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | |
|EUGLENA | -- | - | 3 | 1 | 3 | 1 | 40# | 25 | 20 | 1 |
|LEPOCINCLIS | -- | - | -- | - | -- | - | -- | - | -- | - |
|TRACHELOMONAS | -- | - | -- | - | -- | - | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | | | |
| ..DINOPHYCEAE | | | | | | | | | | |
| ...GYMNODINIALES | | | | | | | | | | |
| ...GYMNODINIACEAE | | | | | | | | | | |
|GYMNODINIUM | -- | - | -- | - | -- | - | -- | - | -- | - |

| DATE TIME | MAY 2,77 1100 | JUN 1,77 1130 | JUN 27,77 1245 | JUL 18,77 1200 |
|---------------------|------------------|------------------|-------------------|-------------------|
| TOTAL CELLS/ML | 6800 | 190000 | 100000 | 46000 |
| DIVERSITY: DIVISION | 1.1 | 0.5 | 1.6 | 1.0 |
| ..CLASS | 1.2 | 0.5 | 1.6 | 1.0 |
| ...ORDER | 1.8 | 0.5 | 1.8 | 1.7 |
| ...FAMILY | 2.5 | 0.5 | 2.0 | 2.0 |
|GENUS | 3.2 | 0.6 | 2.3 | 2.6 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
|SCHROEDERIA | -- | - | -- | - | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | | | |
|COELASTRUM | -- | - | * 0 | | -- | - | 2200 | 5 |
| ...HYDRODICTYACEAE | | | | | | | | |
|PEDIASTRUM | -- | - | * 0 | | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | |
|MICRACTINIUM | 150 | 2 | -- | - | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
|ANKISTRODESMUS | 1200# | 18 | * 0 | | 810 | 1 | -- | - |
|CHODATELLA | -- | - | -- | - | -- | - | -- | - |
| ...DICTYOSPHAERIUM | | | | | 1600 | 2 | -- | - |
| ...DIMORPHOCOCCUS | -- | - | -- | - | -- | - | -- | - |
| ...FRANCEIA | -- | - | -- | - | -- | - | -- | - |
| ...KIRCHNERIELLA | 110 | 2 | -- | - | 670 | 1 | 560 | 1 |
| ...NEPHROCITIUM | 310 | 5 | -- | - | -- | - | -- | - |
| ...OOCYSTIS | -- | - | -- | - | 540 | 1 | -- | - |
| ...SELENASTRUM | 340 | 5 | * 0 | | * 0 | | 560 | 1 |
| ...TETRAEDRON | -- | - | -- | - | * 0 | | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
|ACTINASTRUM | -- | - | * 0 | | 1100 | 1 | -- | - |
| ...CRUCIGENIA | -- | - | 1300 | 1 | 2100 | 2 | 2800 | 6 |
| ...SCENEDESMUS | 840 | 12 | -- | - | 4800 | 5 | 2800 | 6 |
| ...TETRASTRUM | -- | - | * 0 | | 1100 | 1 | 560 | 1 |
| ...VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
|CHLAMYDOMONAS | 110 | 2 | -- | - | 5400 | 5 | -- | - |
| ...ZYGNEMATALES | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | |
|STAUSTRUM | -- | - | -- | - | * 0 | | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO JULY 1977

| DATE TIME | MAY 2.77 1100 | | JUN 1.77 1130 | | JUN 27.77 1245 | | JUL 18.77 1200 | |
|-------------------------------|------------------|--------------|------------------|--------------|-------------------|--------------|-------------------|--------------|
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHRYSOPHYTA | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | |
| ...CENTRALES | | | | | | | | |
| ...COSCINODISCAEAE | | | | | | | | |
|CYCLOTELLA | 500 | 7 | 6100 | 3 | 940 | 1 | 8700# | 19 |
|MELOSIRA | 2000# | 29 | 3200 | 2 | 26000# | 26 | 10000# | 22 |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
|ACHNANTHES | 38 | 1 | -- | -- | -- | -- | -- | -- |
|COCconeIS | -- | -- | -- | -- | -- | -- | -- | -- |
|RHOICOSPHEIA | 76 | 1 | -- | -- | -- | -- | -- | -- |
| ...CYMBELLACEAE | | | | | | | | |
|EPITHEMIA | -- | -- | -- | -- | -- | -- | -- | -- |
| ...DIATOMACEAE | | | | | | | | |
|DIATOMA | -- | -- | * | 0 | -- | -- | -- | -- |
| ...EUNOTIACEAE | | | | | | | | |
|EUNOTIA | -- | -- | * | 0 | -- | -- | -- | -- |
| ...FRAGILARIACEAE | | | | | | | | |
|ASTERIONELLA | 150 | 2 | * | 0 | 1500 | 1 | 16000# | 35 |
|FRAGILARIA | -- | -- | -- | -- | -- | -- | -- | -- |
|SYNEDRA | 76 | 1 | -- | -- | -- | -- | -- | -- |
| ...GOMPHONEMACEAE | | | | | | | | |
|GOMPHONEMA | 38 | 1 | * | 0 | -- | -- | -- | -- |
| ...NAVICULACEAE | | | | | | | | |
|FRUSTULIA | -- | -- | * | 0 | -- | -- | -- | -- |
|GYROSIGMA | -- | -- | -- | -- | -- | -- | -- | -- |
|NAVICULA | -- | -- | -- | -- | -- | -- | -- | -- |
|PINNULARIA | -- | -- | -- | -- | -- | -- | -- | -- |
|STAURONEIS | -- | -- | -- | -- | -- | -- | -- | -- |
| ...NITZSCHIACEAE | | | | | | | | |
|NITZSCHIA | 610 | 9 | * | 0 | * | 0 | -- | -- |
| ...SURIRELLACEAE | | | | | | | | |
|SURIRELLA | -- | -- | -- | -- | -- | -- | -- | -- |
| ..CHRYSOPHYCEAE | | | | | | | | |
| ...CHRYSOMONADALES | | | | | | | | |
| ...OCHROMONADACEAE | | | | | | | | |
|DINOBRYON | 76 | 1 | -- | -- | -- | -- | -- | -- |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | |
| ...CHROCOCCOCEAE | | | | | | | | |
|CHROCOCCOCEAE | | | | | | | | |
|ANACYSTIS | -- | -- | 170000# | 92 | 51000# | 51 | 1700 | 4 |
| ...HORMOGONALES | | | | | | | | |
| ...OSCILLATORIAEAE | | | | | | | | |
|OSCILLATORIA | -- | -- | -- | -- | -- | -- | -- | -- |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| ..CRYPTOPHYCEAE | | | | | | | | |
| ...CRYPTOMONIDALES | | | | | | | | |
|CRYPTOMONODACEAE | | | | | | | | |
|CRYPTOMONAS | -- | -- | -- | -- | -- | -- | -- | -- |
| ..EUGLENOPHYCEAE | | | | | | | | |
| ...EUGLENALES | | | | | | | | |
|EUGLENACEAE | | | | | | | | |
|EUGLENA | 38 | 1 | -- | -- | -- | -- | -- | -- |
|LEPOCINCLIS | -- | -- | * | 0 | -- | -- | -- | -- |
|TRACHELOMONAS | 110 | 2 | * | 0 | -- | -- | * | 0 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | |
| ..DINOPHYCEAE | | | | | | | | |
| ...GYMNODINIALES | | | | | | | | |
|GYMNODINIACEAE | | | | | | | | |
|GYMNODINIUM | -- | -- | -- | -- | 1500 | 1 | -- | -- |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) | CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) |
|--------------|--|--|--|
| NOV 23... | 5965 | .258 | .036 |

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | | | --- | 190 | 147 | 111 | --- | 170 | 194 | 193 | |
| 2 | | | | --- | 191 | 140 | 109 | 173 | 176 | 195 | 190 | |
| 3 | | | | --- | 199 | 117 | 111 | 162 | 173 | 196 | 195 | |
| 4 | | | | --- | 202 | 96 | 113 | 161 | 169 | 197 | --- | |
| 5 | | | | --- | 204 | 106 | 115 | 163 | 156 | 196 | --- | |
| 6 | | | | --- | 207 | 112 | 119 | 157 | 160 | 197 | --- | |
| 7 | | | | --- | 206 | 109 | 119 | 160 | 148 | 196 | --- | |
| 8 | | | | --- | 207 | 114 | 120 | 162 | 140 | 203 | --- | |
| 9 | | | | --- | 209 | 114 | 122 | 164 | 137 | 211 | --- | |
| 10 | | | | --- | 210 | 104 | 132 | 165 | 138 | 218 | --- | |
| 11 | | | | --- | 215 | 85 | 131 | 175 | 148 | 218 | --- | |
| 12 | | | | --- | 215 | 86 | 131 | 165 | 152 | 218 | --- | |
| 13 | | | | --- | 221 | 91 | 134 | 154 | 151 | 217 | --- | |
| 14 | | | | --- | 232 | 98 | 137 | 152 | 151 | 216 | --- | |
| 15 | | | | --- | 237 | 102 | 138 | 154 | 155 | 216 | --- | |
| 16 | | | | --- | 235 | 103 | 140 | 159 | 160 | 219 | --- | |
| 17 | | | | --- | 230 | 105 | 138 | 157 | 160 | 219 | --- | |
| 18 | | | | --- | --- | 106 | 137 | 169 | 161 | 219 | --- | |
| 19 | | | | --- | --- | 108 | 138 | 171 | 158 | 219 | --- | |
| 20 | | | | --- | --- | 112 | 139 | 164 | 161 | 223 | --- | |
| 21 | | | | --- | --- | 113 | --- | 169 | 170 | 227 | --- | |
| 22 | | | | --- | --- | 116 | --- | 168 | 182 | 228 | --- | |
| 23 | | | | --- | --- | 116 | --- | 169 | 191 | 224 | --- | |
| 24 | | | | --- | 214 | 116 | --- | 174 | 192 | 213 | --- | |
| 25 | | | | --- | 196 | 115 | --- | 180 | 192 | 202 | --- | |
| 26 | | | | 221 | 180 | 116 | --- | 185 | 193 | 198 | --- | |
| 27 | | | | 212 | 186 | 118 | --- | 186 | 196 | 195 | --- | |
| 28 | | | | 202 | 191 | 124 | --- | 184 | 195 | 196 | --- | |
| 29 | | | | 199 | --- | 122 | --- | 180 | 197 | 198 | --- | |
| 30 | | | | 197 | --- | 119 | --- | 173 | 198 | 195 | --- | |
| 31 | | | | 192 | --- | 120 | --- | 167 | --- | 192 | --- | |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 16.0 | 15.5 | 11.0 | 10.5 | 6.0 | 5.5 | 5.0 | 4.5 | 4.0 | 4.0 | 7.5 | 7.0 |
| 2 | 16.0 | 15.5 | 11.5 | 11.0 | 5.5 | 5.0 | 4.5 | 4.0 | 4.0 | 4.0 | 7.0 | 7.0 |
| 3 | 15.5 | 15.0 | 11.5 | 11.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 7.5 | 7.0 |
| 4 | 15.0 | 14.5 | 11.5 | 11.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.5 | 4.0 | 7.0 | 7.0 |
| 5 | 14.5 | 14.0 | 11.5 | 11.0 | 5.0 | 5.0 | 4.0 | 3.5 | 4.5 | 4.5 | 7.5 | 7.0 |
| 6 | 14.5 | 14.0 | 11.0 | 11.0 | 5.5 | 5.0 | 3.5 | 3.0 | 4.5 | 4.5 | 7.0 | 7.0 |
| 7 | 14.5 | 14.0 | 11.0 | 11.0 | 5.5 | 5.0 | 3.0 | 3.0 | 4.5 | 4.5 | 7.0 | 7.0 |
| 8 | 14.5 | 14.0 | 11.0 | 11.0 | 5.5 | 5.5 | 3.0 | 2.5 | 4.5 | 4.5 | 7.5 | 7.0 |
| 9 | 14.0 | 14.0 | 11.0 | 10.5 | 5.5 | 5.5 | 2.5 | 2.5 | 4.5 | 4.5 | 7.0 | 7.0 |
| 10 | 14.0 | 14.0 | 10.5 | 10.5 | 5.5 | 5.5 | 2.5 | 2.5 | 5.0 | 4.5 | 7.0 | 6.5 |
| 11 | 14.5 | 14.0 | 11.0 | 10.5 | 5.5 | 5.5 | 2.5 | 2.5 | 5.0 | 5.0 | 6.5 | 6.5 |
| 12 | 14.5 | 14.0 | 11.0 | 10.5 | 5.5 | 5.0 | 3.0 | 2.5 | 5.5 | 5.0 | 6.5 | 6.5 |
| 13 | 14.0 | 13.5 | 10.5 | 10.0 | 5.0 | 5.0 | 3.0 | 3.0 | 5.5 | 5.5 | 7.0 | 6.5 |
| 14 | 14.0 | 13.5 | 10.5 | 10.0 | 5.0 | 5.0 | 3.0 | 3.0 | 6.0 | 5.5 | 7.0 | 6.5 |
| 15 | 13.5 | 13.5 | 10.5 | 10.5 | 5.0 | 4.5 | 3.5 | 3.0 | 6.0 | 6.0 | 7.0 | 6.5 |
| 16 | 13.5 | 13.0 | 11.0 | 10.5 | 4.5 | 4.5 | 3.5 | 3.5 | 6.5 | 6.0 | 7.0 | 6.5 |
| 17 | 13.5 | 12.5 | 11.0 | 10.5 | 5.0 | 4.5 | 3.5 | 3.5 | 7.0 | 6.5 | 7.0 | 6.5 |
| 18 | 12.5 | 12.5 | 10.5 | 10.5 | 5.0 | 5.0 | 4.0 | 3.5 | 7.0 | 6.5 | 7.0 | 6.5 |
| 19 | 12.5 | 12.0 | 10.5 | 10.0 | 5.0 | 5.0 | 4.0 | 3.5 | 7.5 | 6.5 | 7.5 | 7.0 |
| 20 | 12.5 | 11.5 | 10.0 | 10.0 | 5.0 | 5.0 | 4.0 | 3.5 | 7.0 | 7.0 | 7.5 | 7.5 |
| 21 | 12.0 | 11.5 | 10.0 | 9.5 | 5.0 | 5.0 | 4.0 | 4.0 | 7.0 | 7.0 | 8.0 | 7.5 |
| 22 | 11.5 | 11.0 | 9.5 | 9.0 | 5.0 | 5.0 | 4.0 | 3.5 | 7.0 | 7.0 | 9.0 | 8.0 |
| 23 | 11.0 | 11.0 | 9.0 | 8.5 | 5.5 | 5.0 | 4.0 | 3.5 | 7.5 | 7.0 | 9.0 | 8.5 |
| 24 | 11.0 | 11.0 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 7.5 | 7.5 | 9.0 | 8.5 |
| 25 | 11.0 | 11.0 | 8.5 | 8.5 | 5.5 | 5.5 | 4.0 | 4.0 | 7.5 | 7.0 | 9.0 | 8.5 |
| 26 | 11.0 | 10.5 | 8.5 | 7.5 | 5.5 | 5.5 | 4.5 | 4.0 | 7.5 | 7.0 | 9.0 | 8.5 |
| 27 | 10.5 | 10.5 | 7.5 | 7.0 | 6.0 | 5.5 | 4.0 | 3.5 | 7.5 | 7.0 | 9.0 | 8.5 |
| 28 | 10.5 | 10.5 | 7.0 | 6.5 | 6.0 | 6.0 | 3.5 | 3.5 | 8.0 | 7.5 | 9.0 | 8.5 |
| 29 | 10.5 | 10.0 | 6.5 | 6.5 | 6.0 | 6.0 | 3.5 | 3.5 | --- | --- | 9.0 | 8.5 |
| 30 | 10.0 | 10.0 | 6.5 | 6.0 | 6.0 | 5.5 | 3.5 | 3.5 | --- | --- | 9.5 | 8.5 |
| 31 | 10.5 | 10.0 | --- | --- | 5.5 | 5.0 | 4.0 | 3.5 | --- | --- | 9.0 | 8.5 |
| MONTH | 16.0 | 10.0 | 11.5 | 6.0 | 6.0 | 4.5 | 5.0 | 2.5 | 8.0 | 4.0 | 9.5 | 6.5 |

WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 8.5 | 8.5 | 16.0 | 15.0 | 16.0 | 15.0 | 26.0 | 22.0 | 25.5 | 23.0 | 19.0 | 18.5 |
| 2 | 8.5 | 8.0 | 15.5 | 15.0 | 16.0 | 15.0 | 23.5 | 21.5 | 26.5 | 23.5 | 19.0 | 18.0 |
| 3 | 9.5 | 8.5 | 15.5 | 15.0 | 16.0 | 15.5 | 22.0 | 21.0 | 26.5 | 23.5 | 18.5 | 18.0 |
| 4 | 10.5 | 8.5 | 15.5 | 15.0 | 15.5 | 15.0 | 21.5 | 20.5 | 26.0 | 24.0 | 18.5 | 18.0 |
| 5 | 11.0 | 9.0 | 15.0 | 14.5 | 16.5 | 15.0 | 21.5 | 20.0 | 26.0 | 23.5 | 19.0 | 18.0 |
| 6 | 12.0 | 10.0 | 15.0 | 14.0 | 17.5 | 15.5 | 23.0 | 20.0 | 27.5 | 24.5 | 18.5 | 18.0 |
| 7 | 12.5 | 10.5 | 14.5 | 14.0 | 18.0 | 16.5 | 23.0 | 20.0 | 27.0 | 24.0 | 18.5 | 17.5 |
| 8 | 12.5 | 11.5 | 15.0 | 14.5 | 17.5 | 17.0 | 23.0 | 21.0 | 27.5 | 24.0 | 18.5 | 17.5 |
| 9 | 12.0 | 11.5 | 15.0 | 14.5 | 18.0 | 16.5 | 22.0 | 20.5 | 27.5 | 23.5 | 18.5 | 17.5 |
| 10 | 12.0 | 11.5 | 15.5 | 14.5 | 18.0 | 17.0 | 22.5 | 20.5 | 27.0 | 23.5 | 18.5 | 17.5 |
| 11 | 12.5 | 11.5 | 16.0 | 15.0 | 18.0 | 17.5 | 23.0 | 20.5 | 27.5 | 24.0 | 18.5 | 17.5 |
| 12 | 13.0 | 12.0 | 15.0 | 14.5 | 18.5 | 17.5 | 22.0 | 20.5 | 26.0 | 24.5 | 18.5 | 17.5 |
| 13 | 13.0 | 12.5 | 15.5 | 14.5 | 18.5 | 18.0 | 21.0 | 20.0 | 26.0 | 23.5 | 19.0 | 18.0 |
| 14 | 13.0 | 12.5 | 15.5 | 14.5 | 19.5 | 18.0 | 22.5 | 19.5 | 26.0 | 24.0 | 19.0 | 17.5 |
| 15 | 13.0 | 12.5 | 15.0 | 14.5 | 20.0 | 18.5 | 23.5 | 20.5 | 26.5 | 24.0 | 17.5 | 17.5 |
| 16 | 13.0 | 12.5 | 15.0 | 14.5 | 20.5 | 19.5 | 23.0 | 21.0 | 26.0 | 24.0 | 17.5 | 17.5 |
| 17 | 13.0 | 12.0 | 15.0 | 14.5 | 21.5 | 20.0 | 22.0 | 20.5 | 27.5 | 24.5 | 17.5 | 17.0 |
| 18 | 13.0 | 12.0 | 14.5 | 14.5 | 21.0 | 20.0 | 21.5 | 20.0 | 25.5 | 24.5 | 17.0 | 17.0 |
| 19 | 12.0 | 11.5 | 15.0 | 14.0 | 21.5 | 20.5 | 22.5 | 20.0 | 24.5 | 23.5 | 17.0 | 17.0 |
| 20 | 12.5 | 11.0 | 15.5 | 14.5 | 21.0 | 20.0 | 22.5 | 21.0 | 23.5 | 22.5 | 17.0 | 16.5 |
| 21 | 12.5 | 11.5 | 16.0 | 15.0 | 21.0 | 20.0 | 23.0 | 21.0 | 22.5 | 22.0 | 17.0 | 16.5 |
| 22 | 12.5 | 12.0 | 15.5 | 15.0 | 21.5 | 20.5 | 24.5 | 21.5 | 23.5 | 21.5 | 17.0 | 16.0 |
| 23 | 13.0 | 12.0 | 15.5 | 15.0 | 22.0 | 20.5 | 24.5 | 21.5 | 22.0 | 21.0 | 16.5 | 16.0 |
| 24 | 13.5 | 12.5 | 16.0 | 15.0 | 23.0 | 20.5 | 24.5 | 22.0 | 21.5 | 20.5 | 16.0 | 15.5 |
| 25 | 14.0 | 12.5 | 16.0 | 15.5 | 24.0 | 21.5 | 24.0 | 21.5 | 21.0 | 20.0 | 16.0 | 15.5 |
| 26 | 14.0 | 13.5 | 15.5 | 15.0 | 24.0 | 21.5 | 23.0 | 21.5 | 19.5 | 19.0 | 15.5 | 15.0 |
| 27 | 14.5 | 13.0 | 15.5 | 15.0 | 23.5 | 21.5 | 24.0 | 22.0 | 19.0 | 18.5 | 15.5 | 15.0 |
| 28 | 15.0 | 13.5 | 15.5 | 15.0 | 25.5 | 21.5 | 23.5 | 22.0 | 19.5 | 18.5 | 15.5 | 15.0 |
| 29 | 15.0 | 14.0 | 16.0 | 15.0 | 25.0 | 21.5 | 23.5 | 21.0 | 19.5 | 19.0 | 15.5 | 14.5 |
| 30 | 15.0 | 14.0 | 16.0 | 15.0 | 26.5 | 21.0 | 24.5 | 21.5 | 19.5 | 19.0 | 15.0 | 14.5 |
| 31 | --- | --- | 17.0 | 15.0 | --- | --- | 25.0 | 22.0 | 19.5 | 18.5 | --- | --- |
| MONTH | 15.0 | 8.0 | 17.0 | 14.0 | 26.5 | 15.0 | 26.0 | 19.5 | 27.5 | 18.5 | 19.0 | 14.5 |

WILLAMETTE RIVER BASIN

375

14207740 WILLAMETTE RIVER ABOVE FALLS, AT OREGON CITY, OR

LOCATION.--Lat 45°20'55", long 122°37'08", in SW¼SW¼ sec.31, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090007, on right bank 0.2 mi (0.3 km) above Willamette Falls, 0.6 mi (1.0 km) downstream from Tualatin River, and at mile 26.8 (43.1 km).

DRAINAGE AREA.--10,000 mi² (25,900 km²), approximately.

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 58.02 ft (17.684 m) Mar. 10; minimum, 52.65 ft (16.048 m) Feb. 8.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | --- | 55.64 | 55.15 | 55.78 | 53.66 | 56.75 | 55.67 | --- | 55.80 | 54.70 | 54.24 | 54.96 |
| 2 | --- | 55.92 | 55.04 | 55.76 | 53.46 | 57.13 | 55.71 | --- | 55.60 | 54.76 | 54.60 | 54.65 |
| 3 | --- | 56.10 | 54.89 | 55.57 | 53.32 | 56.79 | 55.72 | --- | 55.53 | 54.81 | 54.49 | 54.56 |
| 4 | --- | 56.03 | 54.86 | 55.34 | 53.29 | 56.57 | 55.58 | --- | 55.52 | 54.96 | 54.43 | 54.35 |
| 5 | --- | 55.83 | 54.86 | 55.80 | 53.18 | 56.29 | 55.49 | --- | 55.81 | 54.89 | 54.15 | 54.68 |
| 6 | --- | 55.70 | 54.86 | 55.78 | 53.03 | 56.03 | 55.53 | --- | 55.94 | 54.88 | 54.14 | 55.06 |
| 7 | --- | 55.65 | 54.79 | 55.76 | 52.82 | 55.99 | 55.69 | --- | 55.75 | 54.77 | 54.29 | 54.80 |
| 8 | --- | 55.60 | 54.82 | 55.72 | 52.70 | 56.81 | 55.83 | --- | 55.53 | 54.35 | 54.79 | 54.52 |
| 9 | --- | 55.53 | 54.89 | 55.69 | 52.76 | 57.59 | 55.91 | --- | 55.37 | 54.07 | 55.15 | 54.42 |
| 10 | --- | 55.49 | 54.99 | 55.39 | 52.84 | 57.93 | 55.87 | --- | 55.17 | 54.11 | 55.20 | 54.70 |
| 11 | --- | 55.45 | 55.00 | 54.91 | 52.94 | 57.72 | 55.68 | --- | 54.99 | 54.32 | 55.17 | 54.65 |
| 12 | --- | 55.48 | 54.89 | 54.85 | 53.48 | 57.22 | 55.49 | --- | 54.88 | 54.30 | 55.08 | 54.43 |
| 13 | --- | 55.43 | 54.77 | 54.90 | 53.89 | 57.13 | 55.35 | --- | 54.78 | 54.23 | 55.05 | 54.56 |
| 14 | --- | 55.44 | 54.82 | 55.11 | 53.85 | 56.95 | --- | --- | 54.63 | 54.17 | 55.00 | 54.74 |
| 15 | --- | 55.50 | 55.05 | 55.34 | 54.00 | 56.55 | --- | --- | 54.40 | 53.78 | 55.02 | 54.72 |
| 16 | --- | 55.64 | 54.86 | 55.38 | 54.19 | 56.17 | --- | --- | 54.27 | 53.47 | 55.08 | 54.63 |
| 17 | --- | 55.82 | 54.70 | 55.31 | 54.37 | 55.83 | --- | --- | 54.20 | 53.24 | 55.13 | 54.74 |
| 18 | --- | 55.86 | 54.66 | 55.26 | 54.00 | 55.57 | --- | --- | 54.05 | 53.71 | 54.74 | 54.74 |
| 19 | --- | 55.95 | 54.57 | 55.09 | 53.90 | 55.40 | --- | 56.57 | 53.98 | 54.50 | 54.54 | 54.69 |
| 20 | --- | 55.95 | 54.47 | 55.00 | 53.77 | 55.36 | --- | 56.32 | 53.96 | 54.54 | 54.68 | 54.93 |
| 21 | --- | 55.85 | 54.35 | 54.97 | 53.73 | 55.34 | --- | 56.34 | 53.93 | 54.26 | 54.72 | 55.17 |
| 22 | --- | 55.78 | 54.23 | 54.94 | 54.00 | 55.20 | --- | 56.30 | 53.87 | 54.16 | 54.62 | 55.11 |
| 23 | --- | 55.74 | 54.35 | 54.90 | 54.75 | 55.19 | --- | 55.85 | 53.77 | 54.56 | 54.68 | 55.07 |
| 24 | --- | 55.77 | 54.73 | 54.79 | 55.19 | 55.42 | --- | 55.86 | 53.92 | 54.88 | 54.93 | 55.19 |
| 25 | --- | 55.69 | 54.88 | 54.72 | 55.22 | 55.52 | --- | 55.73 | 54.66 | 54.84 | 54.92 | 55.57 |
| 26 | --- | 55.47 | 54.96 | 54.71 | 55.25 | 55.44 | --- | 55.78 | 54.84 | 54.60 | 54.84 | 55.63 |
| 27 | --- | 55.27 | 55.23 | 54.42 | 55.39 | 55.32 | --- | 55.65 | 54.85 | 54.41 | 54.71 | 55.53 |
| 28 | --- | 55.16 | 55.61 | 53.84 | 55.79 | 55.62 | --- | 55.90 | 54.85 | 54.27 | 54.47 | 55.54 |
| 29 | 55.49 | 55.13 | 55.42 | 53.85 | --- | 55.90 | --- | 56.21 | 54.81 | 54.09 | 54.33 | 55.66 |
| 30 | 55.40 | 55.15 | 55.42 | 53.84 | --- | 55.83 | --- | 55.91 | 54.76 | 54.11 | 54.57 | 55.79 |
| 31 | 55.51 | --- | 55.80 | 53.78 | --- | 55.71 | --- | 55.95 | --- | 54.06 | 54.92 | --- |
| MEAN | --- | 55.63 | 54.90 | 55.05 | 53.88 | 56.20 | --- | --- | 54.81 | 54.35 | 54.73 | 54.93 |

WILLAMETTE RIVER BASIN

14207770 WILLAMETTE RIVER BELOW FALLS, AT OREGON CITY, OR

LOCATION.--Lat 45°21'28", long 122°36'35", in NE¼NW¼ sec.31, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090007, on right bank 0.5 mi (0.8 km) below Willamette Falls, 1.4 mi (2.2 km) upstream from Clackamas River, and at mile 26.2 (42.2 km).

DRAINAGE AREA.--10,000 mi² (25,900 km²), approximately.

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (Oregon State Highway Division bench mark).

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 12.85 ft (3.917 m) Mar. 10; minimum, 1.86 ft (0.567 m) July 10.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|---------|-----|------|----------|------|------|----------|------|------|---------|------|------|
| | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | | | | --- | --- | --- | 7.04 | 5.39 | 6.11 | 6.78 | 4.12 | 5.37 |
| 2 | | | | --- | --- | --- | 7.25 | 4.82 | 5.82 | 6.90 | 3.87 | 5.01 |
| 3 | | | | --- | --- | --- | 7.40 | 4.84 | 5.75 | 7.71 | 4.03 | 5.92 |
| 4 | | | | --- | --- | --- | 6.76 | 3.89 | 5.12 | 7.51 | 5.29 | 6.16 |
| 5 | | | | --- | --- | --- | 6.46 | 3.27 | 4.50 | 7.53 | 5.02 | 6.15 |
| 6 | | | | --- | --- | --- | 6.85 | 3.35 | 4.79 | 7.57 | 5.37 | 6.28 |
| 7 | | | | --- | --- | --- | 7.23 | 3.87 | 5.24 | 7.58 | 4.61 | 6.00 |
| 8 | | | | --- | --- | --- | 7.73 | 4.02 | 5.61 | 7.38 | 5.32 | 6.26 |
| 9 | | | | --- | --- | --- | 7.24 | 4.48 | 5.58 | 6.59 | 4.17 | 5.26 |
| 10 | | | | --- | --- | --- | 6.72 | 4.07 | 5.17 | 6.63 | 3.55 | 4.95 |
| 11 | | | | --- | --- | --- | 6.57 | 3.87 | 5.08 | 6.79 | 3.74 | 5.08 |
| 12 | | | | --- | --- | --- | 6.08 | 3.76 | 4.92 | 7.50 | 4.13 | 5.67 |
| 13 | | | | --- | --- | --- | 6.43 | 3.67 | 4.91 | 7.51 | 4.81 | 5.77 |
| 14 | | | | --- | --- | --- | 7.00 | 4.54 | 5.38 | 7.54 | 4.52 | 5.67 |
| 15 | | | | --- | --- | --- | 7.13 | 4.12 | 5.32 | 7.53 | 4.57 | 5.75 |
| 16 | | | | --- | --- | --- | 7.45 | 4.25 | 5.51 | 7.73 | 4.61 | 5.81 |
| 17 | | | | --- | --- | --- | 7.93 | 4.36 | 5.88 | 8.10 | 4.73 | 6.01 |
| 18 | | | | --- | --- | --- | 7.90 | 4.87 | 6.08 | 8.24 | 4.91 | 6.15 |
| 19 | | | | --- | --- | --- | 7.84 | 4.37 | 5.69 | 8.19 | 4.93 | 6.14 |
| 20 | | | | 8.39 | 5.82 | 6.75 | 7.51 | 3.82 | 5.42 | 8.37 | 4.91 | 6.33 |
| 21 | | | | 8.66 | 5.71 | 6.80 | 7.73 | 4.79 | 6.09 | 8.09 | 5.43 | 6.52 |
| 22 | | | | 8.92 | 5.80 | 6.98 | 7.91 | 4.62 | 6.08 | 7.48 | 5.17 | 6.18 |
| 23 | | | | 8.75 | 5.81 | 6.90 | 8.02 | 5.48 | 6.66 | 6.90 | 4.42 | 5.47 |
| 24 | | | | 8.57 | 5.75 | 6.82 | 7.20 | 4.67 | 5.79 | 6.82 | 4.42 | 5.56 |
| 25 | | | | 8.08 | 5.73 | 6.65 | 6.88 | 3.97 | 5.31 | 7.23 | 5.23 | 6.39 |
| 26 | | | | 7.10 | 5.07 | 5.93 | 7.07 | 3.96 | 5.59 | 7.27 | 5.56 | 6.41 |
| 27 | | | | 6.42 | 4.26 | 5.33 | 7.27 | 4.60 | 5.70 | 6.62 | 4.97 | 5.59 |
| 28 | | | | 6.37 | 4.48 | 5.24 | 7.06 | 4.16 | 5.51 | 6.60 | 4.67 | 5.45 |
| 29 | | | | 6.30 | 3.72 | 4.96 | 7.08 | 4.45 | 5.49 | 6.15 | 4.31 | 5.08 |
| 30 | | | | 6.89 | 4.88 | 5.85 | 7.13 | 4.71 | 5.56 | 6.41 | 4.13 | 4.97 |
| 31 | | | | --- | --- | --- | 7.18 | 4.72 | 5.66 | 7.40 | 4.07 | 5.59 |
| MONTH | | | | 8.92 | 3.72 | 6.20 | 8.02 | 3.27 | 5.52 | 8.37 | 3.55 | 5.77 |

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|------|------|------|-------|-------|-------|-------|------|------|-------|------|------|
| FEBRUARY | | | | MARCH | | | APRIL | | | MAY | | |
| 1 | 7.38 | 5.14 | 6.11 | 9.21 | 6.57 | 8.35 | 7.66 | 6.01 | 6.79 | 7.15 | 4.22 | 5.47 |
| 2 | 7.55 | 4.74 | 5.96 | 10.03 | 8.80 | 9.36 | 7.74 | 6.08 | 6.73 | 7.56 | 4.43 | 6.10 |
| 3 | 7.51 | 4.88 | 5.92 | --- | --- | --- | 7.91 | 5.85 | 6.63 | 8.86 | 5.55 | 7.53 |
| 4 | 7.57 | 5.01 | 5.98 | 9.25 | 7.90 | 8.51 | 7.77 | 5.44 | 6.43 | 9.87 | 7.34 | 8.54 |
| 5 | 7.12 | 4.11 | 5.31 | 8.80 | 7.14 | 7.85 | 7.83 | 5.36 | 6.42 | 10.34 | 8.22 | 9.06 |
| 6 | 6.78 | 3.76 | 5.04 | 8.81 | 6.67 | 7.53 | 8.01 | 5.58 | 6.59 | 10.25 | 8.38 | 9.04 |
| 7 | 6.73 | 3.20 | 4.72 | 9.70 | 6.61 | 7.91 | 8.36 | 6.03 | 7.02 | 9.78 | 7.69 | 8.54 |
| 8 | 7.57 | 4.27 | 5.65 | 11.17 | 8.42 | 9.95 | 8.54 | 6.44 | 7.22 | 9.04 | 7.23 | 8.00 |
| 9 | 7.08 | 3.92 | 5.14 | 12.55 | 10.78 | 11.85 | 8.27 | 6.36 | 7.08 | 8.36 | 6.75 | 7.55 |
| 10 | 7.31 | 3.60 | 5.28 | 12.85 | 11.91 | 12.40 | 7.54 | 5.68 | 6.52 | 8.12 | 6.45 | 7.1 |
| 11 | 6.58 | 3.63 | 4.79 | 12.43 | 11.22 | 11.91 | 7.05 | 5.30 | 6.14 | 7.87 | 6.79 | 7.25 |
| 12 | 6.31 | 3.07 | 4.37 | 11.40 | 10.21 | 10.81 | 6.62 | 4.73 | 5.67 | 8.33 | 6.88 | 7.39 |
| 13 | 5.95 | 2.72 | 4.01 | 10.95 | 10.08 | 10.44 | 6.84 | 4.92 | 5.78 | 8.54 | 6.59 | 7.49 |
| 14 | 6.32 | 2.89 | 4.31 | 10.37 | 9.11 | 9.90 | 6.85 | 4.97 | 5.88 | 8.31 | 6.13 | 6.91 |
| 15 | 6.82 | 3.32 | 4.82 | 9.69 | 8.26 | 9.13 | 7.33 | 5.18 | 6.09 | 8.06 | 5.90 | 6.69 |
| 16 | 7.31 | 3.66 | 5.20 | 9.19 | 7.90 | 8.45 | 7.57 | 5.16 | 6.03 | 8.06 | 5.92 | 6.83 |
| 17 | 6.86 | 3.56 | 4.91 | 8.97 | 7.17 | 8.07 | 6.91 | 4.48 | 5.46 | 8.17 | 6.17 | 7.00 |
| 18 | 6.97 | 3.30 | 4.93 | 8.32 | 6.59 | 7.35 | 6.56 | 4.03 | 5.16 | 8.90 | 7.03 | 8.22 |
| 19 | 7.07 | 3.66 | 5.13 | 8.27 | 6.38 | 7.20 | 6.64 | 4.14 | 5.13 | 9.27 | 7.98 | 8.45 |
| 20 | 6.76 | 3.50 | 5.04 | 8.00 | 5.94 | 6.81 | 6.72 | 4.16 | 5.19 | 8.93 | 7.21 | 7.94 |
| 21 | 7.50 | 3.52 | 5.33 | 7.89 | 5.89 | 6.70 | 6.94 | 4.25 | 5.29 | 8.70 | 7.02 | 7.63 |
| 22 | 7.78 | 4.14 | 5.65 | 7.88 | 5.79 | 6.64 | 7.01 | 4.49 | 5.47 | 8.30 | 6.66 | 7.38 |
| 23 | 7.23 | 4.53 | 5.53 | 8.01 | 5.70 | 6.59 | 6.58 | 3.79 | 5.07 | 8.05 | 6.34 | 7.08 |
| 24 | 6.77 | 4.37 | 5.27 | 7.94 | 5.85 | 6.61 | 6.02 | 3.60 | 4.64 | 7.32 | 5.95 | 6.63 |
| 25 | 6.33 | 4.22 | 4.97 | 7.43 | 5.65 | 6.32 | 5.99 | 4.12 | 4.83 | 7.38 | 6.02 | 6.64 |
| 26 | 6.12 | 4.18 | 4.93 | 6.90 | 5.04 | 5.83 | 5.84 | 4.58 | 5.13 | 7.97 | 6.77 | 7.37 |
| 27 | 6.01 | 4.24 | 4.89 | 6.98 | 5.23 | 5.89 | 6.04 | 4.71 | 5.37 | 8.17 | 7.08 | 7.55 |
| 28 | 7.02 | 4.90 | 5.99 | 6.66 | 5.53 | 6.12 | 6.42 | 4.44 | 5.33 | 8.70 | 6.75 | 7.54 |
| 29 | --- | --- | --- | 7.01 | 6.19 | 6.63 | 6.58 | 3.91 | 5.14 | 8.69 | 6.71 | 7.43 |
| 30 | --- | --- | --- | 7.18 | 6.03 | 6.69 | 6.64 | 3.97 | 5.23 | 8.72 | 6.15 | 7.16 |
| 31 | --- | --- | --- | 7.34 | 5.77 | 6.47 | --- | --- | --- | 8.48 | 6.04 | 7.10 |
| MONTH | 7.78 | 2.72 | 5.18 | 12.85 | 5.04 | 8.14 | 8.54 | 3.60 | 5.84 | 10.34 | 4.22 | 7.44 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
| JUNE | | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 9.43 | 6.56 | 8.03 | 7.12 | 3.47 | 5.04 | 6.36 | 2.89 | 4.45 | 6.46 | 3.57 | 4.88 |
| 2 | 9.40 | 7.32 | 8.20 | 6.66 | 2.97 | 4.66 | 6.96 | 3.62 | 4.99 | 5.97 | 2.98 | 4.44 |
| 3 | 9.54 | 7.24 | 8.10 | 6.49 | 2.84 | 4.54 | 6.56 | 3.13 | 4.89 | 6.20 | 3.27 | 4.42 |
| 4 | 9.46 | 6.99 | 8.02 | 6.42 | 2.76 | 4.35 | 6.75 | 3.29 | 4.69 | 5.91 | 3.58 | 4.54 |
| 5 | 8.88 | 6.99 | 7.71 | 5.87 | 2.44 | 4.04 | 6.68 | 3.48 | 4.74 | 5.42 | 2.70 | 3.79 |
| 6 | 8.81 | 7.05 | 7.77 | 5.21 | 2.26 | 3.71 | 6.29 | 2.62 | 4.05 | 5.61 | 3.14 | 3.98 |
| 7 | 8.62 | 6.79 | 7.55 | 5.20 | 2.22 | 3.53 | 5.52 | 2.41 | 3.46 | 5.72 | 3.44 | 4.31 |
| 8 | 8.24 | 6.31 | 7.06 | 5.50 | 2.49 | 3.62 | 5.51 | 2.06 | 3.43 | 5.66 | 3.35 | 4.22 |
| 9 | 8.05 | 5.91 | 6.79 | 5.74 | 2.14 | 3.54 | 5.52 | 2.26 | 3.59 | 5.68 | 2.91 | 4.09 |
| 10 | 7.72 | 5.51 | 6.29 | 5.04 | 1.86 | 3.06 | 5.71 | 2.35 | 3.78 | 5.94 | 3.11 | 4.34 |
| 11 | 7.53 | 4.75 | 5.76 | 5.16 | 2.24 | 3.52 | 5.76 | 2.68 | 4.04 | 5.92 | 3.04 | 4.36 |
| 12 | 7.12 | 4.51 | 5.45 | 5.58 | 2.64 | 3.85 | 6.08 | 2.72 | 4.35 | 5.98 | 3.08 | 4.44 |
| 13 | 7.06 | 4.41 | 5.51 | 5.89 | 2.79 | 4.13 | 6.45 | 2.75 | 4.46 | 6.74 | 3.26 | 4.89 |
| 14 | 7.45 | 4.86 | 5.82 | 5.99 | 2.52 | 4.05 | 5.98 | 2.53 | 4.22 | 7.28 | 3.99 | 5.44 |
| 15 | 7.31 | 4.62 | 5.62 | 6.21 | 3.00 | 4.34 | 6.28 | 2.88 | 4.46 | 7.43 | 4.14 | 5.54 |
| 16 | 7.47 | 4.86 | 5.86 | 6.27 | 2.63 | 4.21 | 6.82 | 3.53 | 4.98 | 7.49 | 4.19 | 5.59 |
| 17 | 7.55 | 4.63 | 5.99 | 5.85 | 2.27 | 3.92 | 7.17 | 3.97 | 5.32 | 7.17 | 4.10 | 5.47 |
| 18 | 7.34 | 4.24 | 5.64 | 6.07 | 2.55 | 4.13 | 6.75 | 3.54 | 5.19 | 6.77 | 3.72 | 5.11 |
| 19 | 6.66 | 3.44 | 4.89 | 6.72 | 3.30 | 4.79 | 6.86 | 3.38 | 4.76 | 7.27 | 3.84 | 5.21 |
| 20 | 6.27 | 3.28 | 4.62 | 6.41 | 3.32 | 4.76 | 6.23 | 3.03 | 4.63 | 7.10 | 4.24 | 5.37 |
| 21 | 6.01 | 3.07 | 4.40 | 6.28 | 3.03 | 4.51 | 5.89 | 2.62 | 4.05 | 6.96 | 4.10 | 5.13 |
| 22 | 6.02 | 3.18 | 4.44 | 5.77 | 2.43 | 4.02 | 6.30 | 2.78 | 3.98 | 6.81 | 4.06 | 5.12 |
| 23 | 6.17 | 3.21 | 4.40 | 5.74 | 2.12 | 3.64 | 6.44 | 3.27 | 4.47 | 6.86 | 4.15 | 5.51 |
| 24 | 6.12 | 2.89 | 4.11 | 5.51 | 2.37 | 3.61 | 6.90 | 3.56 | 4.81 | 7.49 | 4.92 | 6.06 |
| 25 | 6.10 | 2.94 | 4.12 | 5.96 | 2.68 | 3.88 | 6.72 | 3.66 | 4.99 | 7.75 | 5.13 | 6.32 |
| 26 | 6.29 | 2.65 | 4.04 | 6.13 | 2.82 | 4.07 | 6.89 | 3.76 | 5.19 | 7.94 | 5.46 | 6.55 |
| 27 | 6.19 | 2.97 | 4.18 | 6.15 | 2.68 | 4.19 | 6.62 | 3.40 | 4.91 | 7.88 | 5.38 | 6.47 |
| 28 | 6.64 | 3.08 | 4.57 | 6.33 | 2.82 | 4.39 | 6.54 | 3.38 | 4.90 | 8.20 | 5.35 | 6.48 |
| 29 | 6.72 | 3.06 | 4.74 | 6.49 | 2.98 | 4.57 | 6.53 | 3.39 | 4.87 | 8.23 | 5.66 | 6.63 |
| 30 | 7.20 | 3.51 | 5.24 | 6.65 | 2.84 | 4.56 | 7.02 | 3.74 | 5.25 | 8.20 | 5.93 | 6.79 |
| 31 | --- | --- | --- | 6.65 | 2.82 | 4.52 | 6.76 | 3.68 | 5.03 | --- | --- | --- |
| MONTH | 9.54 | 2.65 | 5.83 | 7.12 | 1.86 | 4.12 | 7.17 | 2.06 | 4.54 | 8.23 | 2.70 | 5.18 |

| YEAR | 12.85 | 1.86 | 5.77 |
|------|-------|------|------|
|------|-------|------|------|

WILLAMETTE RIVER BASIN

14208600 TIMOTHY LAKE NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'35", in NE¼ sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, in intake structure 350 ft (107 m) upstream from dam on Oak Grove Fork, 0.4 mi (0.6 km) upstream from Anvil Creek, 14 mi (22.5 km) south of Government Camp, and at mile 15.8 (25.4 km).

DRAINAGE AREA.--53.8 mi² (139.3 km²).

PERIOD OF RECORD.--May 1956 to current year. Prior to October 1957, published as Timothy Meadows Reservoir.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Portland General Electric Co.).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway built by Portland General Electric Co. Usable storage began May 28, 1956. Capacity, 65,710 acre-ft (81.0 hm³) at elevation 3,190 ft (972.3 m), normal maximum operating level. Usable capacity increased in 1966 water year to 64,450 acre-ft (79.5 hm³) between elevations 3,125.0 ft (952.50 m), invert of outlet pipe, and 3,192.0 ft (972.92 m), top of radial gates. Storage of 4,060 acre-ft (5.0 hm³) below elevation 3,125.0 ft (952.50 m) not normally available for release. Water is used for power generation. Figures given herein represent total contents.

COOPERATION.--Elevations and capacity table furnished by Portland General Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 68,800 acre-ft (84.8 hm³) Oct. 3, 1967, elevation, 3,192.2 ft (972.98 m); minimum observed, 16,010 acre-ft (19.7 hm³) Feb. 24, 1957, elevation, 3,144.5 ft (958.44 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 65,020 acre-ft (80.2 hm³) Oct. 1, elevation, 3,189.5 ft (972.16 m); minimum observed, 41,520 acre-ft (51.2 hm³) Dec. 7, elevation, 3,170.7 ft (966.43 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 3,189.6 | 65,160 | - |
| Oct. 31..... | 3,182.4 | 55,690 | -9,470 |
| Nov. 30..... | 3,171.6 | 42,570 | -13,120 |
| Dec. 31..... | 3,171.7 | 42,680 | +110 |
| CAL YR 1976..... | - | - | -22,340 |
| Jan. 31..... | 3,174.3 | 45,740 | +3,060 |
| Feb. 28..... | 3,176.4 | 48,250 | +2,510 |
| Mar. 31..... | 3,177.2 | 49,220 | +970 |
| Apr. 30..... | 3,180.7 | 53,540 | +4,320 |
| May 31..... | 3,183.8 | 57,470 | +3,930 |
| June 30..... | 3,184.9 | 58,900 | +1,430 |
| July 31..... | 3,185.3 | 59,420 | +520 |
| Aug. 31..... | 3,185.6 | 59,820 | +400 |
| Sept. 30..... | 3,185.4 | 56,960 | -2,860 |
| WTR YR 1977..... | - | - | -8,200 |

WILLAMETTE RIVER BASIN

379

14208700 OAK GROVE FORK NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'50", in NE¼ sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi (0.2 km) upstream from Anvil Creek, 0.3 mi (0.5 km) downstream from Timothy Lake, 14 mi (23 km) south of Government Camp, and at mile 15.5 (24.9 km).

DRAINAGE AREA.--54.4 mi² (140.9 km²).

PERIOD OF RECORD.--July 1956 to current year.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 3,041.83 ft (927.150 m) above mean sea level (Portland General Electric Co. bench mark).

REMARKS.--Records fair. Flow regulated since 1956 by Timothy Lake (see station 14208600). No diversion above station.

AVERAGE DISCHARGE.--21 years, 132 ft³/s (3.738 m³/s), 32.95 in/yr (837 mm/yr), 95,630 acre-ft/yr (118 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s (59.8 m³/s) Dec. 24, 1964, gage height, 3.93 ft (1.198 m), from rating curve extended above 290 ft³/s (8.21 m³/s) on basis of slope-area measurement of peak flow; minimum, 3.7 ft³/s (0.10 m³/s) Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 390 ft³/s (11.0 m³/s) Mar. 3, 5; maximum gage height, 2.65 ft (0.808 m) Mar. 7; minimum discharge, 23 ft³/s (0.65 m³/s) June 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 66 | 240 | 150 | 45 | 43 | 43 | 39 | 37 | 33 | 33 | 33 | 34 |
| 2 | 64 | 250 | 160 | 45 | 43 | 194 | 39 | 37 | 34 | 33 | 33 | 34 |
| 3 | 70 | 280 | 128 | 45 | 43 | 366 | 39 | 37 | 34 | 33 | 33 | 36 |
| 4 | 64 | 270 | 112 | 45 | 43 | 375 | 39 | 37 | 32 | 33 | 33 | 34 |
| 5 | 70 | 260 | 114 | 45 | 43 | 390 | 39 | 37 | 32 | 32 | 33 | 34 |
| 6 | 76 | 260 | 114 | 45 | 43 | 190 | 39 | 37 | 33 | 34 | 33 | 34 |
| 7 | 74 | 260 | 128 | 45 | 43 | 184 | 40 | 37 | 33 | 34 | 33 | 34 |
| 8 | 78 | 260 | 130 | 45 | 43 | 45 | 40 | 37 | 33 | 33 | 33 | 36 |
| 9 | 74 | 260 | 139 | 45 | 43 | 45 | 40 | 36 | 33 | 33 | 33 | 36 |
| 10 | 74 | 250 | 105 | 45 | 43 | 43 | 40 | 36 | 33 | 33 | 33 | 36 |
| 11 | 72 | 250 | 100 | 45 | 43 | 43 | 40 | 36 | 29 | 33 | 33 | 34 |
| 12 | 76 | 260 | 105 | 45 | 43 | 42 | 40 | 34 | 29 | 33 | 33 | 34 |
| 13 | 72 | 260 | 109 | 45 | 43 | 42 | 40 | 34 | 32 | 33 | 33 | 34 |
| 14 | 72 | 250 | 117 | 45 | 43 | 42 | 40 | 34 | 33 | 34 | 33 | 34 |
| 15 | 239 | 240 | 117 | 45 | 43 | 40 | 40 | 34 | 33 | 34 | 33 | 34 |
| 16 | 250 | 250 | 107 | 45 | 43 | 40 | 39 | 34 | 33 | 34 | 33 | 34 |
| 17 | 250 | 250 | 105 | 45 | 43 | 39 | 39 | 34 | 33 | 34 | 33 | 34 |
| 18 | 270 | 240 | 105 | 45 | 43 | 39 | 39 | 34 | 33 | 34 | 33 | 34 |
| 19 | 270 | 230 | 102 | 45 | 43 | 39 | 39 | 34 | 33 | 33 | 34 | 34 |
| 20 | 260 | 230 | 102 | 45 | 43 | 39 | 39 | 34 | 33 | 33 | 34 | 105 |
| 21 | 260 | 220 | 102 | 45 | 43 | 39 | 39 | 34 | 33 | 33 | 34 | 194 |
| 22 | 270 | 220 | 95 | 45 | 43 | 39 | 39 | 34 | 33 | 34 | 34 | 187 |
| 23 | 260 | 210 | 76 | 45 | 43 | 39 | 39 | 34 | 33 | 33 | 34 | 239 |
| 24 | 250 | 200 | 45 | 45 | 43 | 39 | 39 | 34 | 33 | 33 | 34 | 204 |
| 25 | 250 | 200 | 45 | 45 | 43 | 39 | 39 | 33 | 33 | 33 | 34 | 239 |
| 26 | 250 | 190 | 45 | 43 | 43 | 39 | 37 | 34 | 33 | 33 | 34 | 247 |
| 27 | 260 | 190 | 45 | 43 | 43 | 39 | 37 | 34 | 33 | 33 | 34 | 224 |
| 28 | 260 | 190 | 45 | 43 | 43 | 39 | 37 | 34 | 33 | 33 | 34 | 217 |
| 29 | 260 | 180 | 45 | 43 | --- | 39 | 37 | 34 | 33 | 33 | 34 | 207 |
| 30 | 250 | 160 | 45 | 43 | --- | 39 | 37 | 34 | 33 | 34 | 34 | 184 |
| 31 | 240 | --- | 45 | 43 | --- | 39 | --- | 33 | --- | 34 | 34 | --- |
| TOTAL | 5351 | 7010 | 2982 | 1383 | 1204 | 2709 | 1169 | 1082 | 981 | 1032 | 1036 | 2901 |
| MEAN | 173 | 234 | 96.2 | 44.6 | 43.0 | 87.4 | 39.0 | 34.9 | 32.7 | 33.3 | 33.4 | 96.7 |
| MAX | 270 | 280 | 160 | 45 | 43 | 390 | 40 | 37 | 34 | 34 | 34 | 247 |
| MIN | 64 | 160 | 45 | 43 | 43 | 39 | 37 | 33 | 29 | 32 | 33 | 34 |
| AC-FT | 10610 | 13900 | 5910 | 2740 | 2390 | 5370 | 2320 | 2150 | 1950 | 2050 | 2050 | 5750 |
| MEAN† | 18.5 | 13.1 | 97.9 | 94.3 | 88.2 | 103.1 | 111.6 | 98.9 | 56.8 | 41.8 | 39.8 | 48.6 |
| CFSM† | .34 | .24 | 1.80 | 1.73 | 1.62 | 1.90 | 2.05 | 1.82 | 1.04 | .77 | .73 | .89 |
| IN† | .39 | .27 | 2.08 | 2.00 | 1.69 | 2.19 | 2.29 | 2.10 | 1.17 | .89 | .84 | 1.00 |
| AC-FT† | 1,140 | 780 | 6,020 | 5,800 | 4,900 | 6,340 | 6,640 | 6,080 | 3,380 | 2,570 | 2,450 | 2,890 |

CAL YR 1976 TOTAL 65,305 MEAN 178 MAX 368 MIN 45 AC-FT 129,500 MEAN† 148.0 CFSM† 2.72 IN† 36.94 AC-FT† 107,160
WTR YR 1977 TOTAL 28,840 MEAN 79.0 MAX 390 MIN 29 AC-FT 57,200 MEAN† 67.7 CFSM† 1.24 IN† 16.89 AC-FT† 48,990

† Adjusted for change in contents in Timothy Lake.

WILLAMETTE RIVER BASIN

14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR

LOCATION.--Lat 45°04'20", long 121°57'00", on line between secs.3 and 4, T.6 S., R.7 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.2 mi (0.3 km) upstream from Spring Creek, 0.7 mi (1.1 km) upstream from Kink Creek, 1.0 mi (1.6 km) upstream from Portland General Electric Co. diversion dam, 24 mi (39 km) southeast of Estacada, and at mile 6.1 (9.8 km).

DRAINAGE AREA.--126 mi² (326 km²).

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as both Oak Grove Fork of Clackamas River at proposed intake, near Cazadero, and Oak Grove Fork of Clackamas River at intake, near Cazadero, May 1909 to September 1910, as Oak Grove Fork of Clackamas River at intake, near Cazadero, October 1910 to September 1921, and as Oak Grove Fork at Portland General Electric Power Co. intake, October 1921 to September 1929.

REVISED RECORDS.--WSP 1248: 1909, 1910(M), 1916, 1918, 1923, 1932. WSP 1935: 1914, 1921.

GAGE.--Water-stage recorder. Datum of gage is 2,052.31 ft (625.544 m) above mean sea level. May 21, 1909, to Nov. 17, 1911, non-recording gage and Mar. 26, 1912, to Sept. 30, 1923, water-stage recorder, at various sites 0.7 mi (1.1 km) downstream, below Kink Creek, at different datum.

REMARKS.--Records good. Flow regulated since 1956 by Timothy Lake (see station 14208600). No diversion above station.

AVERAGE DISCHARGE.--68 years, 505 ft³/s (14.30 m³/s), 365,900 acre-ft/yr (451 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s) Jan. 7, 1923, gage height, 5.45 ft (1.661 m), site and datum then in use, from rating curve extended above 2,300 ft³/s (65.1 m³/s) on basis of peak discharge for other stations in Clackamas River basin; minimum daily, 235 ft³/s (6.65 m³/s) many days July to September 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 685 ft³/s (19.4 m³/s) Mar. 7, gage height, 2.76 ft (0.841 m); minimum daily, 235 ft³/s (6.65 m³/s) many days July to September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|---------|--------------|-------|-------|-------|-------|-------|-------|
| 1 | 396 | 578 | 479 | 256 | 248 | 291 | 347 | 406 | 319 | 248 | 248 | 248 |
| 2 | 391 | 571 | 489 | 256 | 248 | 376 | 328 | 432 | 314 | 252 | 244 | 248 |
| 3 | 386 | 578 | 437 | 252 | 244 | 559 | 323 | 489 | 314 | 248 | 244 | 248 |
| 4 | 391 | 571 | 338 | 252 | 244 | 553 | 338 | 458 | 338 | 248 | 240 | 248 |
| 5 | 391 | 565 | 347 | 252 | 244 | 559 | 357 | 432 | 323 | 244 | 240 | 244 |
| 6 | 391 | 565 | 342 | 248 | 244 | 463 | 386 | 411 | 319 | 244 | 240 | 244 |
| 7 | 391 | 565 | 333 | 252 | 244 | 437 | 421 | 391 | 314 | 244 | 240 | 244 |
| 8 | 401 | 578 | 342 | 248 | 244 | 357 | 463 | 381 | 309 | 244 | 235 | 244 |
| 9 | 396 | 584 | 362 | 248 | 244 | 328 | 437 | 371 | 305 | 240 | 240 | 240 |
| 10 | 396 | 559 | 328 | 252 | 244 | 300 | 406 | 376 | 296 | 240 | 240 | 240 |
| 11 | 391 | 559 | 319 | 252 | 244 | 287 | 396 | 371 | 287 | 240 | 235 | 240 |
| 12 | 401 | 565 | 323 | 256 | 244 | 287 | 391 | 357 | 282 | 235 | 240 | 240 |
| 13 | 401 | 571 | 323 | 269 | 248 | 278 | 406 | 352 | 278 | 235 | 240 | 240 |
| 14 | 396 | 571 | 328 | 260 | 244 | 274 | 391 | 352 | 282 | 240 | 240 | 240 |
| 15 | 452 | 571 | 328 | 269 | 244 | 269 | 381 | 352 | 278 | 244 | 235 | 240 |
| 16 | 565 | 553 | 323 | 265 | 244 | 265 | 386 | 352 | 274 | 244 | 235 | 240 |
| 17 | 559 | 553 | 319 | 260 | 244 | 265 | 367 | 362 | 274 | 235 | 237 | 235 |
| 18 | 565 | 553 | 319 | 260 | 240 | 265 | 357 | 352 | 269 | 240 | 235 | 240 |
| 19 | 571 | 559 | 319 | 260 | 240 | 269 | 347 | 342 | 269 | 240 | 240 | 244 |
| 20 | 571 | 535 | 314 | 260 | 244 | 269 | 347 | 338 | 260 | 240 | 240 | 319 |
| 21 | 578 | 541 | 314 | 260 | 252 | 265 | 347 | 338 | 260 | 240 | 235 | 484 |
| 22 | 578 | 547 | 309 | 256 | 256 | 274 | 347 | 338 | 256 | 244 | 240 | 452 |
| 23 | 578 | 512 | 305 | 252 | 252 | 282 | 357 | 342 | 256 | 248 | 240 | 468 |
| 24 | 565 | 452 | 256 | 252 | 248 | 278 | 381 | 333 | 252 | 244 | 252 | 447 |
| 25 | 553 | 473 | 265 | 252 | 252 | 278 | 411 | 323 | 252 | 248 | 260 | 447 |
| 26 | 571 | 489 | 296 | 252 | 256 | 278 | 411 | 333 | 252 | 244 | 252 | 447 |
| 27 | 571 | 484 | 287 | 248 | 278 | 328 | 401 | 328 | 252 | 248 | 244 | 432 |
| 28 | 578 | 489 | 265 | 248 | 309 | 309 | 401 | 323 | 248 | 244 | 244 | 437 |
| 29 | 578 | 484 | 260 | 248 | --- | 300 | 411 | 319 | 248 | 244 | 248 | 458 |
| 30 | 578 | 473 | 256 | 248 | --- | 291 | 427 | 314 | 252 | 244 | 260 | 447 |
| 31 | 584 | --- | 256 | 248 | --- | 305 | --- | 314 | --- | 248 | 248 | --- |
| TOTAL | 15114 | 16248 | 10081 | 7891 | 6987 | 10139 | 11469 | 11282 | 8432 | 7541 | 7511 | 9445 |
| MEAN | 488 | 542 | 325 | 255 | 250 | 327 | 382 | 364 | 281 | 243 | 242 | 315 |
| MAX | 584 | 584 | 489 | 269 | 309 | 559 | 463 | 489 | 338 | 252 | 260 | 484 |
| MIN | 386 | 452 | 256 | 248 | 240 | 265 | 323 | 314 | 248 | 235 | 235 | 235 |
| AC-FT | 29980 | 32230 | 20000 | 15650 | 13860 | 20110 | 22750 | 22380 | 16720 | 14960 | 14900 | 18730 |
| CAL YR 1976 | TOTAL | 202712 | MEAN 554 | MAX 1330 | MIN 256 | AC-FT 402100 | | | | | | |
| WTR YR 1977 | TOTAL | 122140 | MEAN 335 | MAX 584 | MIN 235 | AC-FT 242300 | | | | | | |

WILLAMETTE RIVER BASIN

381

14209500 CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OR

LOCATION.--Lat 45°07'30", long 122°04'20", in NE¼ sec.21, T.5 S., R.6 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi (0.2 km) upstream from Three Lynx Creek, 0.25 mi (0.40 km) downstream from powerplant, 17 mi (27 km) southeast of Estacada, and at mile 47.8 (76.9 km).

DRAINAGE AREA.--479 mi² (1,241 km²).

PERIOD OF RECORD.--April 1909 to December 1913, October 1921 to current year. Prior to October 1911 (monthly discharge only), published in WSP 1318.

REVISED RECORDS.--WSP 1148: Drainage area. WSP 1248: 1910(M), 1912, 1948-50(M).

GAGE.--Water-stage recorder. Datum of gage is 1,091.69 ft (332.747 m) above mean sea level (levels by Portland General Electric Co.). Apr. 23, 1909, to Jan. 4, 1914, nonrecording gage at about same site and datum. Nov. 1, 1921, to Dec. 27, 1924, water-stage recorder at present site at datum 0.91 ft (0.277 m) higher.

REMARKS.--Records good. Minor regulation since May 1956 by Timothy Lake (see station 14208600). Considerable diurnal fluctuation during period of low flow.

AVERAGE DISCHARGE.--60 years, 1,993 ft³/s (56.44 m³/s), 56.50 in/yr (1,435 mm/yr), 1,444,000 acre-ft/yr (1.78 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft³/s (1,930 m³/s) Dec. 22, 1964, gage height, 21.7 ft (6.61 m), from floodmark, from rating curve extended above 34,100 ft³/s (966 m³/s) on basis of slope-area measurement at gage height 15.06 ft (4.590 m); minimum, 324 ft³/s (9.18 m³/s) Oct. 17, 1958; minimum daily, 427 ft³/s (12.1 m³/s) Oct. 5, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,570 ft³/s (101 m³/s) May 3, gage height, 4.01 ft (1.222 m), no peak above base of 8,100 ft³/s (229 m³/s); minimum daily, 573 ft³/s (16.2 m³/s) Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|--------|--------|-------|-------|---------|-------|
| 1 | 766 | 1450 | 904 | 760 | 677 | 1700 | 1590 | 2070 | 1550 | 724 | 608 | 655 |
| 2 | 772 | 1290 | 904 | 760 | 660 | 1570 | 1590 | 2300 | 1410 | 700 | 603 | 623 |
| 3 | 778 | 1190 | 797 | 724 | 655 | 1760 | 1500 | 3240 | 1350 | 718 | 603 | 629 |
| 4 | 772 | 1140 | 718 | 718 | 644 | 1570 | 1580 | 2930 | 1850 | 724 | 603 | 660 |
| 5 | 766 | 1110 | 724 | 677 | 639 | 1490 | 1880 | 2540 | 1870 | 724 | 598 | 677 |
| 6 | 766 | 1080 | 730 | 618 | 644 | 1340 | 2450 | 2230 | 1720 | 712 | 598 | 655 |
| 7 | 760 | 1070 | 724 | 655 | 634 | 2030 | 3040 | 2010 | 1630 | 712 | 598 | 629 |
| 8 | 760 | 1060 | 760 | 649 | 634 | 3160 | 3360 | 1850 | 1470 | 677 | 593 | 613 |
| 9 | 760 | 1050 | 853 | 618 | 629 | 2860 | 2830 | 1800 | 1360 | 689 | 588 | 603 |
| 10 | 766 | 878 | 766 | 677 | 639 | 2100 | 2290 | 2120 | 1280 | 649 | 588 | 598 |
| 11 | 772 | 1020 | 724 | 689 | 660 | 1700 | 2020 | 2070 | 1180 | 671 | 588 | 593 |
| 12 | 766 | 1020 | 730 | 695 | 666 | 1630 | 1940 | 1790 | 1140 | 666 | 588 | 603 |
| 13 | 760 | 1010 | 724 | 853 | 695 | 1480 | 2040 | 1730 | 1020 | 660 | 588 | 588 |
| 14 | 760 | 1020 | 724 | 853 | 695 | 1340 | 1950 | 1690 | 977 | 655 | 583 | 583 |
| 15 | 847 | 1080 | 724 | 840 | 677 | 1230 | 1830 | 1680 | 1040 | 649 | 583 | 588 |
| 16 | 977 | 1180 | 718 | 891 | 666 | 1160 | 1860 | 1610 | 904 | 649 | 593 | 588 |
| 17 | 970 | 1140 | 718 | 866 | 660 | 1090 | 1730 | 1640 | 898 | 644 | 588 | 588 |
| 18 | 970 | 1170 | 724 | 866 | 655 | 1080 | 1620 | 1610 | 898 | 655 | 588 | 598 |
| 19 | 970 | 1150 | 706 | 898 | 644 | 1080 | 1500 | 1520 | 859 | 649 | 583 | 623 |
| 20 | 970 | 1020 | 706 | 872 | 649 | 1090 | 1430 | 1490 | 847 | 644 | 588 | 944 |
| 21 | 977 | 1090 | 700 | 847 | 712 | 1030 | 1410 | 1510 | 840 | 634 | 593 | 1030 |
| 22 | 977 | 1080 | 695 | 809 | 809 | 1090 | 1480 | 1520 | 815 | 634 | 583 | 991 |
| 23 | 991 | 977 | 712 | 778 | 772 | 1240 | 1660 | 1500 | 803 | 629 | 573 | 970 |
| 24 | 904 | 931 | 644 | 754 | 754 | 1230 | 2030 | 1430 | 784 | 629 | 655 | 1300 |
| 25 | 1340 | 944 | 660 | 754 | 748 | 1180 | 2460 | 1350 | 760 | 629 | 649 | 1270 |
| 26 | 1180 | 937 | 924 | 760 | 778 | 1140 | 2440 | 1580 | 754 | 629 | 706 | 1160 |
| 27 | 1070 | 931 | 1330 | 700 | 917 | 1750 | 2160 | 1570 | 748 | 623 | 613 | 1050 |
| 28 | 1050 | 917 | 1050 | 677 | 1940 | 1730 | 2040 | 1540 | 754 | 618 | 613 | 1080 |
| 29 | 1030 | 911 | 924 | 666 | --- | 1520 | 2040 | 1460 | 724 | 613 | 677 | 1140 |
| 30 | 1020 | 911 | 847 | 671 | --- | 1400 | 2270 | 1390 | 724 | 608 | 689 | 1590 |
| 31 | 1050 | --- | 790 | 683 | --- | 1370 | --- | 1360 | --- | 608 | 677 | --- |
| TOTAL | 28017 | 31757 | 24354 | 23278 | 20552 | 47140 | 60020 | 56130 | 32959 | 20425 | 18878 | 24219 |
| MEAN | 904 | 1059 | 786 | 751 | 734 | 1521 | 2001 | 1811 | 1099 | 659 | 609 | 807 |
| MAX | 1340 | 1450 | 1330 | 898 | 1940 | 3160 | 3360 | 3240 | 1870 | 724 | 706 | 1590 |
| MIN | 760 | 878 | 644 | 618 | 629 | 1030 | 1410 | 1350 | 724 | 608 | 573 | 583 |
| CFSM | 1.89 | 2.21 | 1.64 | 1.57 | 1.53 | 3.18 | 4.18 | 3.78 | 2.29 | 1.38 | 1.27 | 1.69 |
| IN. | 2.18 | 2.47 | 1.89 | 1.81 | 1.60 | 3.66 | 4.66 | 4.36 | 2.56 | 1.59 | 1.47 | 1.88 |
| AC-FT | 55570 | 62990 | 48310 | 46170 | 40760 | 93500 | 119000 | 111300 | 65370 | 40510 | 37440 | 48040 |
| CAL YR 1976 | TOTAL | 673132 | MEAN | 1839 | MAX | 10300 | MIN | 644 | CFSM | 3.84 | IN | 52.28 |
| WTR YR 1977 | TOTAL | 387729 | MEAN | 1062 | MAX | 3360 | MIN | 573 | CFSM | 2.22 | IN | 30.11 |
| | | | | | | | | | AC-FT | | 1335000 | |
| | | | | | | | | | AC-FT | | 769100 | |

WILLAMETTE RIVER BASIN

14210000 CLACKAMAS RIVER AT ESTACADA OR

LOCATION.--Lat 45°18'00", long 122°21'10", in NE¼ sec.19, T.3 S., R.4 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.2 mi (0.3 km) downstream from River Mill Dam, 1.5 mi (2.4 km) northwest of Estacada, and at mile 23.1 (37.2 km).

DRAINAGE AREA.--671 mi² (1,738 km²).

PERIOD OF RECORD.--April 1908 to current year. Monthly discharge only April 1908, published in WSP 1318. Published as "near Cazadera" January 1909 to September 1957.

REVISED RECORDS.--WSP 1248: 1908-9, 1910(M), 1916, 1917(M), 1922(M), 1923. WSP 1288: Drainage area (former site). WSP 1638: 1919(M).

GAGE.--Water-stage recorder. Datum of gage is 296.93 ft (90.504 m) above mean sea level (levels by Portland General Electric Co.). See WSP 1738 for history of changes prior to Oct. 1, 1957. Oct. 1, 1957, to Feb. 16, 1965, water-stage recorder at same site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records excellent. Large diurnal fluctuations and some regulation caused by powerplants at River Mill Dam and, since 1958, North Fork Dam. Minor regulation since 1956 by Timothy Lake (see station 14208600). Two small diversions above station for Oregon City and Estacada municipal water supply.

AVERAGE DISCHARGE.--69 years, 2,753 ft³/s (77.96 m³/s), 55.72 in/yr (1,415 mm/yr), 1,995,000 acre-ft/yr (2.46 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,900 ft³/s (2,460 m³/s) Dec. 22, 1964, gage height, 18.36 ft (5.596 m); minimum, 50 ft³/s (1.42 m³/s) Mar. 10, 1961, from rating curve extended below 260 ft³/s (7.36 m³/s); minimum daily, 285 ft³/s (8.07 m³/s) Oct. 4, 5, 1958, caused by filling of North Fork dam forebay.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,470 ft³/s (155 m³/s) Mar. 8, gage height, 4.25 ft (1.295 m), no peak above base of 15,000 ft³/s (425 m³/s); minimum, 580 ft³/s (16.4 m³/s) May 1, July 9, 15, Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|--------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|-------|---------|
| 1 | 837 | 1740 | 1070 | 989 | 895 | 2750 | 2600 | 2850 | 2590 | 935 | 715 | 875 | | |
| 2 | 881 | 1520 | 1070 | 1000 | 888 | 2460 | 2590 | 3120 | 2070 | 808 | 715 | 746 | | |
| 3 | 928 | 1470 | 1080 | 996 | 875 | 2490 | 2490 | 4120 | 2070 | 820 | 660 | 757 | | |
| 4 | 935 | 1420 | 875 | 935 | 888 | 2300 | 2650 | 4100 | 2320 | 996 | 675 | 791 | | |
| 5 | 962 | 1310 | 832 | 948 | 881 | 2000 | 2680 | 3510 | 2850 | 962 | 690 | 1130 | | |
| 6 | 901 | 1200 | 832 | 868 | 862 | 2050 | 3250 | 3250 | 2900 | 935 | 680 | 915 | | |
| 7 | 895 | 1160 | 875 | 832 | 837 | 2710 | 4210 | 2930 | 2570 | 935 | 680 | 768 | | |
| 8 | 928 | 1250 | 962 | 826 | 763 | 4430 | 4670 | 2700 | 2200 | 948 | 685 | 746 | | |
| 9 | 948 | 1220 | 1080 | 832 | 768 | 4310 | 4020 | 2630 | 1880 | 875 | 680 | 780 | | |
| 10 | 955 | 1100 | 1110 | 791 | 797 | 2930 | 3250 | 2950 | 1860 | 780 | 670 | 751 | | |
| 11 | 969 | 1150 | 855 | 837 | 862 | 2460 | 2800 | 3130 | 1750 | 849 | 655 | 690 | | |
| 12 | 955 | 1120 | 875 | 948 | 868 | 2320 | 2680 | 2600 | 1670 | 791 | 660 | 685 | | |
| 13 | 982 | 1160 | 948 | 1360 | 862 | 2250 | 2830 | 2570 | 1550 | 791 | 660 | 685 | | |
| 14 | 921 | 1190 | 941 | 1350 | 948 | 1980 | 2830 | 2400 | 1400 | 814 | 660 | 675 | | |
| 15 | 901 | 1300 | 941 | 1200 | 921 | 1830 | 2600 | 2480 | 1340 | 797 | 650 | 650 | | |
| 16 | 875 | 1460 | 855 | 1360 | 888 | 1710 | 2800 | 2490 | 1390 | 791 | 636 | 645 | | |
| 17 | 1130 | 1440 | 862 | 1240 | 881 | 1570 | 2600 | 2960 | 1320 | 791 | 640 | 627 | | |
| 18 | 1150 | 1640 | 935 | 1230 | 868 | 1560 | 2420 | 3020 | 1300 | 832 | 640 | 631 | | |
| 19 | 1030 | 1390 | 888 | 1280 | 837 | 1600 | 2200 | 2650 | 1240 | 843 | 640 | 725 | | |
| 20 | 1120 | 1180 | 888 | 1330 | 832 | 1690 | 2030 | 2400 | 1180 | 826 | 645 | 1280 | | |
| 21 | 1140 | 1270 | 849 | 1200 | 855 | 1530 | 2030 | 2360 | 1190 | 820 | 650 | 1340 | | |
| 22 | 1120 | 1300 | 862 | 1130 | 1150 | 1620 | 2110 | 2420 | 1190 | 791 | 660 | 1400 | | |
| 23 | 1080 | 1200 | 875 | 1070 | 1080 | 1970 | 2320 | 2290 | 1120 | 774 | 660 | 1240 | | |
| 24 | 1060 | 1160 | 935 | 1060 | 1000 | 1920 | 2910 | 2260 | 1080 | 774 | 774 | 1970 | | |
| 25 | 1360 | 1140 | 895 | 1060 | 1000 | 1790 | 3350 | 2090 | 975 | 768 | 881 | 1720 | | |
| 26 | 1830 | 1140 | 1500 | 1010 | 1030 | 1710 | 3390 | 2280 | 1150 | 768 | 989 | 1710 | | |
| 27 | 1380 | 1130 | 1860 | 996 | 1390 | 2710 | 3340 | 2510 | 1040 | 763 | 881 | 1370 | | |
| 28 | 1360 | 1120 | 1820 | 915 | 2620 | 3150 | 2910 | 2330 | 928 | 740 | 751 | 1440 | | |
| 29 | 1040 | 1090 | 1330 | 875 | --- | 2360 | 2240 | 2250 | 948 | 710 | 969 | 1730 | | |
| 30 | 1220 | 1080 | 1190 | 797 | --- | 2110 | 2960 | 2160 | 962 | 700 | 921 | 2900 | | |
| 31 | 1300 | --- | 1030 | 862 | --- | 2070 | --- | 2070 | --- | 700 | 780 | --- | | |
| TOTAL | 33093 | 38050 | 31920 | 32127 | 27346 | 70340 | 85760 | 83880 | 48033 | 25427 | 22252 | 32372 | | |
| MEAN | 1068 | 1268 | 1030 | 1036 | 977 | 2269 | 2859 | 2706 | 1601 | 820 | 718 | 1079 | | |
| MAX | 1830 | 1740 | 1860 | 1360 | 2620 | 4430 | 4670 | 4120 | 2900 | 996 | 989 | 2900 | | |
| MIN | 837 | 1080 | 832 | 791 | 763 | 1530 | 2030 | 2070 | 928 | 700 | 636 | 627 | | |
| CFSM | 1.59 | 1.89 | 1.54 | 1.54 | 1.46 | 3.38 | 4.26 | 4.03 | 2.39 | 1.22 | 1.07 | 1.61 | | |
| IN. | 1.83 | 2.11 | 1.77 | 1.78 | 1.52 | 3.90 | 4.75 | 4.65 | 2.66 | 1.41 | 1.23 | 1.79 | | |
| AC-FT | 65640 | 75470 | 63310 | 63720 | 54240 | 139500 | 170100 | 166400 | 95270 | 50430 | 44140 | 64210 | | |
| CAL YR 1976 | TOTAL | 904283 | MEAN | 2471 | MAX | 17600 | MIN | 785 | CFSM | 3.68 | IN | 50.13 | AC-FT | 1794000 |
| WTR YR 1977 | TOTAL | 530600 | MEAN | 1454 | MAX | 4670 | MIN | 627 | CFSM | 2.17 | IN | 29.42 | AC-FT | 1052000 |

WILLAMETTE RIVER BASIN

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14211000 CLACKAMAS RIVER NEAR CLACKAMAS, OR

LOCATION.--Lat 45°23'36", long 122°31'54", in NE¼SW¼ sec.14, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.8 mi (1.3 km) upstream from Johnson Creek, 2.1 mi (3.4 km) southeast of Clackamas, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--930 mi² (2,409 km²) at gage, 936 mi² (2,424 km²) at Gladstone Bridge 3.6 mi (5.8 km) downstream, where high-flow discharge measurements are made.

PERIOD OF RECORD.--September 1911 to April 1912 (published as "at Park Place"), October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 50.68 ft (15.447 m) above mean sea level (levels by Corps of Engineers). Sept. 15, 1911, to Apr. 22, 1912, nonrecording gage at site 3.6 mi (5.8 km) downstream at different datum. Oct. 1, 1962, to Sept. 10, 1969, water-stage recorder at site 300 ft (91 m) downstream at present datum.

REMARKS.--Records good. Diurnal fluctuations and some regulation by powerplants and several storage dams upstream, operated by Portland General Electric Co. Small diversions above station for Estacada municipal water supply. All records given herein are for gage site.

AVERAGE DISCHARGE.--15 years, 3,718 ft³/s (105.3 m³/s), 54.29 in/yr (1,379 mm/yr), 2,694,000 acre-ft/yr (3.32 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s (3,400 m³/s) Dec. 22, 1964, gage height, 27.0 ft (8.23 m), from floodmarks; minimum, 336 ft³/s (9.52 m³/s) Sept. 1, 11, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,640 ft³/s (216 m³/s) Mar. 8, gage height, 6.08 ft (1.853 m), no peak above base of 16,000 ft³/s (453 m³/s); minimum, 519 ft³/s (14.7 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|-------|-------|-------|-------|--------|--------|---------|-----------|----------|---------------|-------|
| 1 | 856 | 1880 | 1080 | 1070 | 1010 | 4170 | 3420 | 3100 | 2880 | 1030 | 689 | 885 |
| 2 | 893 | 1800 | 1070 | 1110 | 989 | 3710 | 3760 | 3620 | 2640 | 878 | 702 | 798 |
| 3 | 972 | 1710 | 1110 | 1080 | 980 | 3820 | 3440 | 4650 | 2540 | 878 | 656 | 805 |
| 4 | 956 | 1500 | 948 | 1050 | 972 | 3440 | 3400 | 5130 | 3150 | 1040 | 630 | 878 |
| 5 | 964 | 1430 | 849 | 989 | 964 | 2880 | 3230 | 4350 | 3890 | 1050 | 662 | 1210 |
| 6 | 900 | 1290 | 849 | 924 | 948 | 2760 | 3910 | 4040 | 3650 | 1020 | 656 | 1130 |
| 7 | 885 | 1200 | 900 | 856 | 916 | 3580 | 5300 | 3580 | 3320 | 989 | 649 | 827 |
| 8 | 900 | 1250 | 924 | 841 | 863 | 6540 | 6050 | 3340 | 2740 | 1010 | 649 | 791 |
| 9 | 940 | 1290 | 1170 | 841 | 805 | 6500 | 5300 | 3200 | 2510 | 956 | 649 | 777 |
| 10 | 956 | 1190 | 1180 | 863 | 849 | 4710 | 4040 | 3560 | 2310 | 849 | 630 | 784 |
| 11 | 1010 | 1130 | 980 | 849 | 924 | 3600 | 3370 | 4250 | 2180 | 885 | 617 | 709 |
| 12 | 964 | 1160 | 932 | 956 | 980 | 3620 | 3170 | 3470 | 2020 | 834 | 617 | 682 |
| 13 | 972 | 1190 | 940 | 1630 | 964 | 3510 | 3270 | 3250 | 1870 | 827 | 611 | 675 |
| 14 | 956 | 1190 | 1010 | 1970 | 1010 | 3010 | 3420 | 2980 | 1570 | 827 | 611 | 662 |
| 15 | 900 | 1340 | 964 | 1520 | 1030 | 2710 | 3120 | 2990 | 1560 | 834 | 605 | 643 |
| 16 | 870 | 1530 | 948 | 1680 | 1010 | 2410 | 3460 | 3050 | 1620 | 777 | 586 | 623 |
| 17 | 989 | 1560 | 900 | 1590 | 948 | 2200 | 3340 | 3820 | 1480 | 813 | 586 | 617 |
| 18 | 1140 | 1830 | 980 | 1440 | 956 | 2120 | 3010 | 4290 | 1400 | 885 | 580 | 617 |
| 19 | 1100 | 1520 | 940 | 1490 | 916 | 2150 | 2740 | 3540 | 1380 | 893 | 586 | 669 |
| 20 | 1060 | 1340 | 932 | 1540 | 924 | 2270 | 2450 | 3090 | 1320 | 863 | 586 | 1180 |
| 21 | 1120 | 1320 | 885 | 1410 | 948 | 2070 | 2440 | 2960 | 1340 | 834 | 605 | 1480 |
| 22 | 1120 | 1350 | 885 | 1370 | 1190 | 2070 | 2450 | 2940 | 1310 | 813 | 611 | 1540 |
| 23 | 1080 | 1320 | 948 | 1230 | 1350 | 2410 | 2660 | 2820 | 1230 | 784 | 630 | 1410 |
| 24 | 1040 | 1220 | 980 | 1210 | 1290 | 2450 | 3150 | 2790 | 1200 | 777 | 763 | 2330 |
| 25 | 1360 | 1170 | 1020 | 1190 | 1240 | 2280 | 3950 | 2580 | 1070 | 777 | 997 | 2100 |
| 26 | 2000 | 1170 | 1630 | 1140 | 1280 | 2110 | 3980 | 2680 | 1230 | 777 | 1160 | 1940 |
| 27 | 1660 | 1170 | 2230 | 1110 | 1480 | 3100 | 3800 | 3090 | 1190 | 763 | 980 | 1630 |
| 28 | 1420 | 1150 | 2100 | 1030 | 3580 | 3800 | 3460 | 2990 | 997 | 736 | 813 | 1490 |
| 29 | 1100 | 1140 | 1680 | 964 | --- | 3320 | 2540 | 2840 | 1010 | 715 | 948 | 1820 |
| 30 | 1230 | 1120 | 1360 | 932 | --- | 2810 | 3220 | 2680 | 1020 | 689 | 1120 | 3440 |
| 31 | 1260 | --- | 1190 | 924 | --- | 2740 | --- | 2600 | --- | 682 | 849 | --- |
| TOTAL | 33573 | 40460 | 34514 | 36799 | 31316 | 98870 | 104850 | 104270 | 57627 | 26485 | 22033 | 35142 |
| MEAN | 1083 | 1349 | 1113 | 1187 | 1118 | 3189 | 3495 | 3364 | 1921 | 854 | 711 | 1171 |
| MAX | 2000 | 1880 | 2230 | 1970 | 3580 | 6540 | 6050 | 5130 | 3890 | 1050 | 1160 | 3440 |
| MIN | 856 | 1120 | 849 | 841 | 805 | 2070 | 2440 | 2580 | 997 | 682 | 580 | 617 |
| CFSM | 1.17 | 1.45 | 1.20 | 1.28 | 1.20 | 3.43 | 3.76 | 3.62 | 2.07 | .92 | .77 | 1.26 |
| IN. | 1.34 | 1.62 | 1.38 | 1.47 | 1.25 | 3.95 | 4.19 | 4.17 | 2.31 | 1.06 | .88 | 1.41 |
| AC-FT | 66590 | 80250 | 68460 | 72990 | 62120 | 196100 | 208000 | 206800 | 114300 | 52530 | 43700 | 69700 |
| CAL YR 1976 TOTAL | 1117669 | | | 3054 | | 20800 | | MIN 841 | CFSM 3.28 | IN 44.71 | AC-FT 2217000 | |
| WTR YR 1977 TOTAL | 625939 | | | 1715 | | 6540 | | MIN 580 | CFSM 1.84 | IN 25.04 | AC-FT 1242000 | |

WILLAMETTE RIVER BASIN

14211500 JOHNSON CREEK AT SYCAMORE, OR

LOCATION.--Lat 45°28'40", long 122°30'24", in lot 2, SW¼ sec.13, T.1 S., R.2 E., Multnomah County, Hydrologic Unit 17090012, on right bank 0.3 mi (0.5 km) southwest of Sycamore station, 2.5 mi (4.0 km) east of city limits of Portland, and at mile 10.2 (16.4 km).

DRAINAGE AREA.--26.5 mi² (68.6 km²), revised.

PERIOD OF RECORD.--July 1940 to current year.

REVISED RECORDS.--WSP 1318: 1941(M). WDR OR-75-1: 1974.

GAGE.--Water-stage recorder and V-notch weir. Datum of gage is 228.47 ft (69.638 m) above mean sea level.

REMARKS.--Records good except those for June to September, which are fair. Slight diurnal fluctuation at low flow caused by recreational ponds upstream. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--37 years, 54.5 ft³/s (1.543 m³/s), 26.25 in/yr (667 mm/yr), 39,490 acre-ft/yr (48.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,620 ft³/s (74.2 m³/s) Dec. 22, 1964, gage height, 14.68 ft (4.474 m); minimum, 0.08 ft³/s (0.002 m³/s) Aug. 21, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 329 ft³/s (9.32 m³/s) Mar. 9, gage height, 5.34 ft (1.628 m), no peak above base of 500 ft³/s (14.2 m³/s); minimum, 0.19 ft³/s (0.005 m³/s) Aug. 12, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|----------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | .93 | 11 | 1.6 | 4.1 | 5.5 | 195 | 36 | 3.3 | 31 | 1.7 | .49 | 2.7 | | |
| 2 | 1.1 | 5.5 | 1.5 | 5.2 | 4.1 | 157 | 30 | 7.9 | 22 | 1.5 | .45 | 2.3 | | |
| 3 | 1.1 | 3.5 | 1.5 | 6.0 | 3.5 | 154 | 25 | 16 | 28 | 1.6 | .45 | 4.7 | | |
| 4 | 1.1 | 4.1 | 1.5 | 4.7 | 3.1 | 81 | 22 | 18 | 164 | 1.8 | .42 | 10 | | |
| 5 | .87 | 3.9 | 1.6 | 6.9 | 3.0 | 53 | 20 | 19 | 98 | 2.0 | .36 | 7.6 | | |
| 6 | .87 | 2.8 | 1.6 | 4.1 | 3.0 | 50 | 18 | 21 | 55 | 2.1 | .36 | 4.5 | | |
| 7 | .93 | 3.9 | 1.4 | 4.1 | 2.8 | 148 | 16 | 17 | 35 | 2.0 | .45 | 3.0 | | |
| 8 | .66 | 3.3 | 6.6 | 3.9 | 2.8 | 156 | 17 | 24 | 25 | 1.7 | .36 | 2.4 | | |
| 9 | .71 | 2.5 | 4.1 | 3.5 | 2.7 | 228 | 17 | 18 | 20 | 1.5 | .36 | 2.2 | | |
| 10 | 1.6 | 2.5 | 2.7 | 3.9 | 2.8 | 121 | 14 | 33 | 16 | 1.4 | .36 | 2.0 | | |
| 11 | 3.1 | 3.3 | 2.3 | 4.3 | 3.0 | 76 | 12 | 46 | 13 | 1.3 | .33 | 1.8 | | |
| 12 | 1.1 | 3.9 | 2.2 | 6.3 | 3.0 | 233 | 10 | 31 | 12 | 1.2 | .26 | 1.6 | | |
| 13 | .93 | 3.9 | 1.9 | 56 | 5.2 | 179 | 13 | 25 | 10 | 1.2 | .26 | 1.4 | | |
| 14 | .76 | 6.3 | 1.7 | 28 | 3.5 | 106 | 11 | 21 | 9.4 | 1.1 | .28 | 1.4 | | |
| 15 | .87 | 8.8 | 1.6 | 20 | 3.1 | 68 | 11 | 21 | 8.3 | 1.2 | .31 | 1.4 | | |
| 16 | .81 | 7.7 | 1.6 | 16 | 3.0 | 47 | 12 | 25 | 7.4 | 1.3 | .26 | 1.3 | | |
| 17 | .87 | 7.2 | 1.5 | 13 | 2.8 | 36 | 10 | 56 | 6.9 | 1.3 | .24 | 1.4 | | |
| 18 | .61 | 8.6 | 1.9 | 11 | 2.7 | 31 | 9.0 | 53 | 5.7 | 4.5 | .26 | 3.1 | | |
| 19 | .71 | 6.3 | 1.6 | 10 | 2.7 | 39 | 8.5 | 37 | 5.2 | 1.9 | .26 | 6.3 | | |
| 20 | .66 | 4.5 | 1.6 | 9.2 | 5.5 | 31 | 7.9 | 29 | 4.7 | 1.4 | .28 | 4.7 | | |
| 21 | .76 | 3.9 | 1.5 | 8.1 | 14 | 26 | 7.7 | 24 | 4.7 | 1.1 | .39 | 10 | | |
| 22 | .76 | 4.1 | 1.5 | 7.1 | 21 | 23 | 7.4 | 20 | 4.3 | .93 | .66 | 5.0 | | |
| 23 | .93 | 3.1 | 4.7 | 6.6 | 21 | 28 | 6.8 | 21 | 3.5 | .81 | .53 | 16 | | |
| 24 | 3.5 | 2.7 | 3.1 | 5.5 | 32 | 27 | 6.3 | 23 | 3.0 | .71 | 12 | 27 | | |
| 25 | 8.3 | 2.5 | 4.5 | 5.0 | 31 | 22 | 6.8 | 17 | 2.7 | .76 | 21 | 21 | | |
| 26 | 2.7 | 2.3 | 25 | 4.5 | 32 | 19 | 6.3 | 21 | 2.5 | 1.4 | 29 | 12 | | |
| 27 | 1.4 | 2.2 | 21 | 5.5 | 38 | 43 | 5.0 | 19 | 2.3 | .76 | 6.8 | 9.2 | | |
| 28 | 1.5 | 2.2 | 10 | 5.0 | 191 | 50 | 4.3 | 18 | 2.2 | .71 | 5.0 | 11 | | |
| 29 | 3.1 | 1.9 | 9.0 | 3.7 | --- | 56 | 3.9 | 15 | 2.1 | .66 | 3.5 | 19 | | |
| 30 | 1.0 | 1.8 | 6.9 | 3.7 | --- | 41 | 3.7 | 14 | 1.9 | .61 | 9.0 | 24 | | |
| 31 | 6.0 | --- | 5.2 | 4.3 | --- | 35 | --- | 43 | --- | .57 | 4.3 | --- | | |
| TOTAL | 50.24 | 130.2 | 134.4 | 279.2 | 447.8 | 2559 | 377.6 | 756.2 | 605.8 | 42.72 | 98.98 | 220.0 | | |
| MEAN | 1.62 | 4.34 | 4.34 | 9.01 | 16.0 | 82.5 | 12.6 | 24.4 | 20.2 | 1.38 | 3.19 | 7.33 | | |
| MAX | 8.3 | 11 | 25 | 56 | 191 | 233 | 36 | 56 | 164 | 4.5 | 29 | 27 | | |
| MIN | .61 | 1.8 | 1.4 | 3.5 | 2.7 | 19 | 3.7 | 3.3 | 1.9 | .57 | .24 | 1.3 | | |
| CFSM | .06 | .16 | .16 | .34 | .60 | 3.11 | .48 | .92 | .76 | .05 | .12 | .28 | | |
| IN. | .07 | .18 | .19 | .39 | .63 | 3.59 | .53 | 1.06 | .85 | .06 | .14 | .31 | | |
| AC-FT | 100 | 258 | 267 | 554 | 888 | 5080 | 749 | 1500 | 1200 | 85 | 196 | 436 | | |
| CAL YR 1976 | TOTAL | 14067.68 | MEAN | 38.4 | MAX | 744 | MIN | .61 | CFSM | 1.45 | IN | 19.75 | AC-FT | 27900 |
| WTR YR 1977 | TOTAL | 5702.14 | MEAN | 15.6 | MAX | 233 | MIN | .24 | CFSM | .59 | IN | 8.00 | AC-FT | 11310 |

14211720 WILLAMETTE RIVER AT PORTLAND, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°31'07", long 122°40'00", in NW¼NE¼ sec.3, T.1 S., R.1 E., Multnomah County, Hydrologic Unit 17090012, in pier at east end of drawspan on upstream side of Morrison Bridge in Portland and at mile 12.8 (20.6 km).

DRAINAGE AREA.--11,100 mi² (28,700 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year. Gage-height records collected in this vicinity since 1879 are in reports of the U.S. Weather Bureau.

GAGE.--Acoustic velocity meter (AVM) with water-stage and velocity-index recorder. Datum of gage is 1.55 ft (0.472 m) above mean sea level (levels by U.S. Weather Bureau).

REMARKS.--Water-discharge records fair. Flow regulated by many reservoirs upstream (see elsewhere in this report). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--5 years, 32,620 ft³/s (924 m³/s), 23,630,000 acre-ft/yr (29.1 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 283,000 ft³/s (8,010 m³/s) Jan. 18, 1974; maximum gage height, 23.84 ft (7.266 m) Jan. 18, 1974; minimum daily discharge, 4,520 ft³/s (128 m³/s) Aug. 3, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 7, 1894, and June 1, 1948, reached stages of 33.0 ft (10.06 m) and 30.0 ft (9.14 m), respectively, from information by U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 58,100 ft³/s (1,650 m³/s) Mar. 10; maximum gage height, 8.00 ft (2.438 m) Mar. 9; minimum daily discharge, 5,850 ft³/s (166 m³/s) Feb. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|--------|--------|
| 1 | 13700 | 17700 | 9710 | 8890 | 6860 | 38200 | 21100 | 12800 | 19800 | 7840 | 6890 | 9510 |
| 2 | 14500 | 19300 | 8910 | 8830 | 6910 | 37900 | 21800 | 12600 | 20300 | 7970 | 6680 | 9460 |
| 3 | 13800 | 19800 | 8650 | 9120 | 6780 | 33300 | 20500 | 16000 | 19100 | 7710 | 6560 | 9210 |
| 4 | 12800 | 17700 | 8440 | 9310 | 6680 | 29900 | 19200 | 21800 | 20800 | 7850 | 6470 | 8780 |
| 5 | 11900 | 15500 | 8410 | 8980 | 6610 | 25100 | 18600 | 26400 | 23300 | 8010 | 6670 | 9560 |
| 6 | 12800 | 15000 | 8390 | 8510 | 6520 | 21800 | 20500 | 27600 | 23800 | 7900 | 6890 | 10000 |
| 7 | 13500 | 14300 | 8170 | 8060 | 6510 | 25900 | 23400 | 27500 | 22800 | 7750 | 6950 | 9400 |
| 8 | 13300 | 13900 | 8300 | 7880 | 6300 | 44600 | 24600 | 24400 | 20100 | 7580 | 7000 | 8890 |
| 9 | 13700 | 14000 | 9260 | 7880 | 6120 | 54500 | 25100 | 23000 | 17200 | 7380 | 6850 | 9440 |
| 10 | 13100 | 13600 | 10000 | 7930 | 6080 | 58100 | 23400 | 22800 | 15600 | 7320 | 6760 | 9550 |
| 11 | 13700 | 13400 | 9300 | 7950 | 6240 | 49300 | 21700 | 24400 | 14700 | 7430 | 6660 | 9140 |
| 12 | 13900 | 13500 | 8780 | 8130 | 6380 | 43000 | 19500 | 24400 | 13600 | 7220 | 6780 | 9170 |
| 13 | 14100 | 13200 | 8640 | 9460 | 6370 | 42900 | 17800 | 24100 | 13000 | 7180 | 6670 | 9630 |
| 14 | 13800 | 13400 | 8530 | 11700 | 6540 | 36600 | 17200 | 20400 | 11700 | 7130 | 6730 | 9680 |
| 15 | 12900 | 13600 | 8370 | 11900 | 6510 | 30500 | 16800 | 18300 | 11100 | 7030 | 7140 | 9270 |
| 16 | 12700 | 15200 | 8310 | 11800 | 6370 | 26200 | 17500 | 18600 | 10800 | 6980 | 7740 | 9660 |
| 17 | 14000 | 16700 | 8140 | 11200 | 6180 | 23100 | 17300 | 19600 | 10200 | 7230 | 8080 | 9540 |
| 18 | 12800 | 17300 | 8050 | 10400 | 6030 | 20900 | 15400 | 28400 | 9770 | 7580 | 7760 | 9160 |
| 19 | 12600 | 17600 | 7910 | 9740 | 5860 | 20100 | 14600 | 31900 | 9450 | 7650 | 8260 | 9780 |
| 20 | 14400 | 16500 | 7800 | 9500 | 5850 | 20200 | 13800 | 29600 | 9270 | 7480 | 8340 | 12700 |
| 21 | 14200 | 15500 | 7680 | 9100 | 6240 | 19500 | 12900 | 25800 | 9300 | 7300 | 7790 | 13100 |
| 22 | 14500 | 15000 | 7610 | 8820 | 8150 | 18200 | 12500 | 23300 | 9070 | 7270 | 8110 | 13100 |
| 23 | 14700 | 14900 | 7710 | 8490 | 10700 | 18100 | 13100 | 22700 | 8780 | 7540 | 8610 | 13100 |
| 24 | 14300 | 14300 | 7750 | 8280 | 11100 | 19500 | 13500 | 19200 | 8470 | 7880 | 9390 | 18700 |
| 25 | 15100 | 13200 | 7840 | 8130 | 11200 | 18900 | 14400 | 20000 | 8060 | 7620 | 10000 | 17800 |
| 26 | 17500 | 11400 | 8990 | 7820 | 12100 | 17500 | 14800 | 18300 | 8230 | 7380 | 10900 | 16700 |
| 27 | 17400 | 10700 | 12300 | 7390 | 13400 | 19400 | 16800 | 19800 | 8300 | 7170 | 10400 | 15800 |
| 28 | 16200 | 10200 | 12700 | 7090 | 24800 | 24800 | 15100 | 12100 | 7800 | 7000 | 8930 | 16200 |
| 29 | 15500 | 10100 | 11400 | 6880 | --- | 24800 | 13600 | 22800 | 7630 | 6940 | 8820 | 17400 |
| 30 | 15600 | 10100 | 10200 | 6760 | --- | 23000 | 12300 | 23200 | 7500 | 6830 | 9910 | 20100 |
| 31 | 16100 | --- | 9470 | 6700 | --- | 21100 | --- | 19700 | --- | 6830 | 10500 | --- |
| TOTAL | 439100 | 436600 | 275720 | 272630 | 225390 | 906900 | 528800 | 690600 | 399530 | 229980 | 245240 | 353530 |
| MEAN | 14160 | 14550 | 8894 | 8795 | 8050 | 29250 | 17630 | 22280 | 13320 | 7419 | 7911 | 11780 |
| MAX | 17500 | 19800 | 12700 | 11900 | 24800 | 58100 | 25100 | 31900 | 23800 | 8010 | 10900 | 20100 |
| MIN | 11900 | 10100 | 7610 | 6700 | 5850 | 17500 | 12300 | 12600 | 7500 | 6830 | 6470 | 8780 |
| AC-FT | 871000 | 866000 | 546900 | 540800 | 447100 | 1799000 | 1049000 | 1370000 | 792500 | 456200 | 486400 | 701200 |

| | | | | | | | | | | |
|-------------|-------|----------|------|-------|-----|--------|-----|------|-------|----------|
| CAL YR 1976 | TOTAL | 10387190 | MEAN | 28380 | MAX | 155000 | MIN | 7000 | AC-FT | 20600000 |
| WTR YR 1977 | TOTAL | 5004020 | MEAN | 13710 | MAX | 58100 | MIN | 5850 | AC-FT | 9925000 |

NOTE.--AVM not operational Oct. 20 to Apr. 7, June 9 to Sept. 30.

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued
(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1975 to current year.

WATER TEMPERATURES: November 1975 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 120 micromhos/cm Feb. 8, 1977; minimum, 44 micromhos/cm Dec. 3, 1975.

WATER TEMPERATURES: Maximum, 27.0°C Aug. 10-13, 1977; minimum, 2.0°C Jan. 12-14, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 120 micromhos/cm Feb. 8; minimum recorded, 56 micromhos/cm Apr. 11, May 9.

WATER TEMPERATURES: Maximum, 27.0°C Aug. 10-13; minimum, 2.0°C Jan. 12-14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) | DIS- SOLVED SODIUM (NA) (MG/L) |
|-------|------|-------------------------|-----------------------------|---------------|------------------------------------|--|--|--|--|--|---|--|
| OCT | | | | | | | | | | | | |
| 26... | 1200 | 17500 | 11.7 | 6.8 | 10.3 | 76 | 36 | B23 | 16 | 6.5 | 2.0 | 5.0 |
| DEC | | | | | | | | | | | | |
| 06... | 1200 | 8390 | 5.6 | 7.5 | 13.8 | 90 | 76 | B270 | 17 | 7.9 | 2.3 | 5.7 |
| JAN | | | | | | | | | | | | |
| 07... | 1030 | 8060 | 4.0 | 7.6 | 12.7 | 96 | 87 | 110 | 18 | 9.2 | 2.8 | 6.0 |
| 31... | 1200 | 6700 | 4.0 | 7.2 | 12.1 | 103 | 260 | 400 | 17 | 8.8 | 2.6 | 6.5 |
| MAR | | | | | | | | | | | | |
| 07... | 1030 | 25900 | 7.1 | 6.9 | 11.7 | 74 | 94 | 120 | 14 | 5.9 | 2.1 | 4.6 |
| 25... | 1300 | 18900 | 9.0 | 6.9 | 11.4 | 84 | 220 | 84 | 15 | 6.6 | 2.2 | 4.8 |
| MAY | | | | | | | | | | | | |
| 03... | 1100 | 16000 | 14.3 | 6.5 | 10.2 | 73 | B500 | 250 | 5.2 | 6.5 | 2.0 | 4.6 |
| 27... | 1030 | 19800 | 13.2 | 6.9 | 10.4 | 68 | -- | 79 | 13 | 6.0 | 1.7 | 4.0 |
| JUL | | | | | | | | | | | | |
| 07... | 1330 | 7750 | 21.0 | 6.9 | 7.8 | 105 | 28 | <1 | 13 | 9.4 | 4.1 | 6.1 |
| 29... | 1300 | 6940 | 22.1 | 7.1 | 7.6 | 92 | 120 | B19 | 11 | 6.9 | 2.4 | 6.5 |
| AUG | | | | | | | | | | | | |
| 29... | 1600 | 8820 | 18.7 | 6.2 | 8.4 | 86 | -- | -- | 15 | 7.9 | 2.1 | 6.1 |

| DATE | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA, MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO |
|-------|--------------------------------------|-----------------------------------|--|---|--|--|--|---|---|-------------------------------------|---|---|
| OCT | | | | | | | | | | | | |
| 26... | 34 | 0 | 4.1 | 4.3 | .1 | .27 | .42 | .69 | .08 | 24 | 0 | .4 |
| DEC | | | | | | | | | | | | |
| 06... | 25 | 0 | 11 | 5.9 | .1 | .43 | .65 | 1.1 | .13 | 29 | 9 | .5 |
| JAN | | | | | | | | | | | | |
| 07... | 29 | 0 | 11 | 6.9 | .1 | .64 | .67 | 1.3 | .13 | 35 | 11 | .4 |
| 31... | 36 | 0 | 7.4 | 7.7 | .1 | .50 | .53 | 1.0 | .14 | 33 | 3 | .5 |
| MAR | | | | | | | | | | | | |
| 07... | 23 | 0 | 6.0 | 5.0 | .0 | .86 | 1.1 | 2.0 | .07 | 23 | 5 | .4 |
| 25... | 27 | 0 | 6.0 | 4.8 | .1 | .54 | .39 | .93 | .10 | 26 | 3 | .4 |
| MAY | | | | | | | | | | | | |
| 03... | 25 | 0 | 5.4 | 4.9 | .3 | .37 | .36 | .73 | .06 | 24 | 4 | .4 |
| 27... | 23 | 0 | 3.5 | 4.0 | .0 | .23 | .22 | .45 | .05 | 22 | 3 | .4 |
| JUL | | | | | | | | | | | | |
| 07... | 32 | 0 | 6.5 | 7.5 | .0 | .39 | .59 | .98 | .15 | 40 | 14 | .4 |
| 29... | 30 | 0 | 5.8 | 6.1 | .1 | .43 | .70 | 1.1 | .13 | 27 | 3 | .5 |
| AUG | | | | | | | | | | | | |
| 29... | 29 | 0 | 6.2 | 6.2 | .1 | .57 | .30 | .87 | .12 | 28 | 5 | .5 |

BY RESULTS BASED ON NON-IDEAL COLONY COUNT

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS-SOLVED SOLIDS (TONS PER DAY) | DIS-SOLVED SOLIDS (TONS PER AC-FT) | TURBIDITY (JTU) | SUSPENDED SEDIMENT (MG/L) | SUSPENDED SEDIMENT CHARGE (T/DAY) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | TOTAL NON-FILTERABLE RESIDUE (MG/L) | ALKALINITY AS CaCO3 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|---|--|----------------------------------|------------------------------------|-----------------|---------------------------|-----------------------------------|--|-------------------------------------|----------------------------|---------------------------------|
| OCT 26... | 55 | 56 | 2600 | .07 | 5 | 12 | 567 | 83 | 11 | 28 | .8 |
| DEC 06... | 55 | 63 | 1250 | .07 | 6 | 9 | 204 | 65 | 14 | 21 | -- |
| JAN 07... | 74 | 69 | 1610 | .10 | 6 | 6 | 131 | 83 | 7 | 24 | -- |
| 31... | 75 | 69 | 1360 | .10 | 5 | 6 | 109 | 79 | 3 | 30 | 3.2 |
| MAR 07... | 69 | 50 | 4830 | .09 | 10 | 12 | 839 | 96 | 2 | 19 | -- |
| 25... | 69 | 54 | 3520 | .09 | 10 | 12 | 612 | 80 | 11 | 22 | -- |
| MAY 03... | 49 | 42 | 2120 | .07 | 4 | 10 | 432 | 88 | 13 | 21 | 3.0 |
| 27... | 52 | 44 | 2780 | .07 | 3 | 13 | 695 | 78 | 12 | 19 | -- |
| JUL 07... | 62 | 63 | 1300 | .08 | 9 | 27 | 565 | 73 | 24 | 26 | -- |
| 29... | 63 | 55 | 1180 | .09 | 3 | 22 | 412 | 72 | 56 | 25 | 3.2 |
| AUG 29... | 55 | 59 | 1310 | .07 | 5 | 11 | 262 | 78 | 1 | 24 | -- |

| DATE | TOTAL IRON (FE) (UG/L) | DIS-SOLVED IRON (FE) (UG/L) | TOTAL MANGANESE (MN) (UG/L) | DIS-SOLVED MANGANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS-SOLVED ARSENIC (AS) (UG/L) | TOTAL CADMIUM (CD) (UG/L) | DIS-SOLVED CADMIUM (CD) (UG/L) | TOTAL CHROMIUM (CR) (UG/L) | DIS-SOLVED CHROMIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|------------------------|-----------------------------|-----------------------------|----------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|----------------------------|---------------------------------|--------------------------|
| OCT 26... | 510 | 30 | 30 | 20 | 0 | 0 | 0 | 0 | 20 | 0 | 0 |
| JAN 31... | 440 | 60 | 20 | 20 | 6 | 0 | <10 | 1 | 0 | 0 | <50 |
| MAY 03... | 440 | 50 | 40 | 10 | 0 | 0 | <10 | 1 | 0 | 0 | <50 |
| JUL 29... | 850 | 70 | 50 | 20 | -- | 1 | <10 | 2 | 10 | 0 | <50 |

| DATE | DIS-SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS-SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) | TOTAL SELENIUM (SE) (UG/L) | DIS-SOLVED SELENIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS-SOLVED MERCURY (HG) (UG/L) |
|-----------|-------------------------------|--------------------------|-------------------------------|------------------------|-----------------------------|------------------------|-----------------------------|----------------------------|---------------------------------|---------------------------|--------------------------------|
| OCT 26... | 0 | 22 | 12 | 12 | 4 | 40 | 10 | -- | 0 | .1 | .0 |
| JAN 31... | 0 | <10 | 4 | <100 | 2 | 20 | 10 | 0 | 0 | .2 | .0 |
| MAY 03... | 0 | 10 | 5 | 100 | 15 | 60 | 10 | 0 | 0 | .0 | .0 |
| JUL 29... | 0 | 30 | 8 | <100 | 17 | 30 | 0 | 2 | 1 | .1 | .0 |

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TOTAL FILTERABLE RESIDUE (MG/L) | TOTAL NON-FILTERABLE RESIDUE (MG/L) | DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L) | SUSPENDED GROSS ALPHA AS U-NAT. (UG/L) | DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L) | SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L) | DIS-SOLVED GROSS BETA AS CS-137 (PC/L) | SUSPENDED GROSS BETA AS CS-137 (PC/L) | DIS-SOLVED RA-226 (RADON METHOD) (PC/L) | DIS-SOLVED URANIUM (U) (UG/L) |
|-----------|---------------------------------|-------------------------------------|---|--|---|--|--|---------------------------------------|---|-------------------------------|
| JAN 31... | 67 | 3 | <.7 | <.4 | 1.1 | <.4 | 1.4 | <.4 | .09 | .03 |

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO JULY 1977

| DATE TIME | OCT 26,76 1200 | DEC 6,76 1200 | JAN 7,77 1030 | JAN 31,77 1200 |
|---------------------|-------------------|------------------|------------------|-------------------|
| TOTAL CELLS/ML | 9800 | 14000 | 1600 | 2700 |
| DIVERSITY: DIVISION | 0.6 | 0.3 | 1.0 | 1.0 |
| ..CLASS | 0.6 | 0.3 | 1.0 | 1.0 |
| ...ORDER | 0.7 | 0.4 | 1.1 | 1.3 |
| ...FAMILY | 0.8 | 0.5 | 1.5 | 1.8 |
|GENUS | 0.9 | 0.6 | 1.7 | 1.9 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | |
| ...MICRACETINACEAE | | | | | | | | |
|GOLENKINIA | -- | - | -- | - | -- | - | -- | - |
|OOCYSTACEAE | | | | | | | | |
|ANKISTRODESUS | 50 | 1 | * 0 | | * 0 | | * 0 | |
|DICTYOSPHAERIUM | -- | - | 70 | 1 | -- | - | -- | - |
|KIRCHNERIELLA | -- | - | -- | - | -- | - | 24 | 1 |
|OOCYSTIS | -- | - | -- | - | -- | - | -- | - |
|SELENASTRUM | -- | - | -- | - | -- | - | -- | - |
|SCENEDESMACEAE | | | | | | | | |
|CRUCIGENIA | -- | - | -- | - | 15 | 1 | -- | - |
|SCENEDESMUS | -- | - | * 0 | | 15 | 1 | -- | - |
|TETRASTRUM | -- | - | -- | - | -- | - | -- | - |
| ..TETRASPORALES | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | |
| ...SPHAEROCYSTIS | -- | - | -- | - | -- | - | -- | - |
| ...VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ...CHLAMYDOMONAS | -- | - | -- | - | -- | - | * 0 | |
| CHRYSOPHYTA | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | |
| ...CENTRALES | | | | | | | | |
| ...COSCINODISCEAE | | | | | | | | |
| ...CYCLOTELLA | -- | - | * 0 | | 19 | 1 | 71 | 3 |
| ...MELOSIRA | 600 | 6 | * 0 | | 34 | 2 | 79 | 3 |
| ...STEPHANODISCUS | -- | - | * 0 | | 15 | 1 | 16 | 1 |
| ...PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ...ACHNANTHES | -- | - | * 0 | | 15 | 1 | 55 | 2 |
| ...COCONEIS | 100 | 1 | * 0 | | * 0 | | 24 | 1 |
| ...RHOICOSPHEA | 50 | 1 | * 0 | | 11 | 1 | 32 | 1 |
| ...CYMBELLACEAE | | | | | | | | |
| ...AMPHORA | -- | - | * 0 | | -- | - | -- | - |
| ...CYMBELLA | -- | - | 130 | 1 | 87 | 5 | 130 | 5 |
| ...EPITHEMIA | 100 | 1 | -- | - | -- | - | -- | - |
| ...DIATOMACEAE | | | | | | | | |
| ...DIATOMA | -- | - | * 0 | | * 0 | | 16 | 1 |
| ...FRAGILIACEAE | | | | | | | | |
| ...ASTERIONELLA | -- | - | * 0 | | -- | - | * 0 | |
| ...FRAGILARIA | -- | - | * 0 | | 38 | 2 | -- | - |
| ...MANNAEA | -- | - | -- | - | -- | - | -- | - |
| ...SYNEDRA | -- | - | * 0 | | * 0 | | * 0 | |
| ...GOMPHONEMACEAE | | | | | | | | |
| ...GOMPHONEMA | 300 | 3 | * 0 | | 19 | 1 | 32 | 1 |
| ...NAVICULACEAE | | | | | | | | |
| ...CALONEIS | -- | - | -- | - | -- | - | -- | - |
| ...FRUSTULIA | -- | - | -- | - | -- | - | -- | - |
| ...NAVICULA | 50 | 1 | 76 | 1 | * 0 | | 63 | 2 |
| ...STAURONEIS | 50 | 1 | -- | - | -- | - | -- | - |
| ...NITZSCHIA | | | | | | | | |
| ...NITZSCHIA | -- | - | * 0 | | 76 | 5 | 200 | 7 |
| ...SURIARELLACEAE | | | | | | | | |
| ...SURIARELLA | -- | - | -- | - | -- | - | -- | - |
| ...TABELLARIACEAE | | | | | | | | |
| ...TABELLARIA | -- | - | * 0 | | -- | - | -- | - |
| ..CHRYSOPHYCEAE | | | | | | | | |
| ...CHRYSDOMONADALES | | | | | | | | |
| ...CHROMULINACEAE | | | | | | | | |
| ...CHRYSOCCUS | -- | - | * 0 | | -- | - | -- | - |
| ...OCHROMONADACEAE | | | | | | | | |
| ...DINOBRYON | -- | - | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | |
| ...CHROCOCCALES | | | | | | | | |
| ...CHROCOCCACEAE | | | | | | | | |
| ...ANACYSTIS | -- | - | -- | - | -- | - | 32 | 1 |
| ...COCCOCHLORIS | -- | - | 180 | 1 | -- | - | -- | - |
| ...HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
| ...APHANIZOMENON | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | |
| ...OSCILLATORIA | 8500# | 87 | 13000# | 94 | 1200# | 76 | 1900# | 70 |
| ...RIVULARIACEAE | | | | | | | | |
| ...RAPIDIOPSIS | -- | - | -- | - | -- | - | 16 | 1 |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| ..CRYPTOPHYCEAE | | | | | | | | |
| ...CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | |
| ...CHROOMONAS | -- | - | -- | - | -- | - | 16 | 1 |
| ..EUGLENOPHYCEAE | | | | | | | | |
| ...EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ...EUGLENA | -- | - | -- | - | * 0 | | -- | - |
| ...TRACHELOMONAS | -- | - | -- | - | * 0 | | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO JULY 1977

| DATE TIME | MAY 3,77 1100 | MAY 27,77 1030 | JUL 29,77 1300 |
|---------------------|------------------|-------------------|-------------------|
| TOTAL CELLS/ML | 3700 | 2200 | 27000 |
| DIVERSITY: DIVISION | 0.7 | 1.1 | 1.2 |
| ..CLASS | 0.7 | 1.1 | 1.3 |
| ..ORDER | 1.5 | 1.6 | 1.8 |
| ...FAMILY | 2.4 | 3.4 | 2.0 |
|GENUS | 3.0 | 3.8 | 2.6 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| ..CHLOROPHYCEAE | | | | | | |
| ...CHLOROCOCCALES | | | | | | |
|MICRACTINACEAE | | | | | | |
|GOLENKINIA | | | 13 | 1 | -- | -- |
|OOCYSTACEAE | | | | | | |
|ANKISTRODESMUS | 100 | 3 | 40 | 2 | 420 | 2 |
|DICTYOSPHAERIUM | -- | -- | -- | -- | -- | -- |
|KIRCHNERIELLA | -- | -- | -- | -- | 630 | 2 |
|OOCYSTIS | -- | -- | -- | -- | 420 | 2 |
|SELENASTRUM | -- | -- | 26 | 1 | -- | -- |
|SCENEDESMACEAE | | | | | | |
|CRUCIGENIA | -- | -- | -- | -- | -- | -- |
|SCENEDESMUS | 100 | 3 | -- | -- | 840 | 3 |
|TETRASTRUM | -- | -- | 53 | 2 | 420 | 2 |
|TETRASPOALES | | | | | | |
|PALMELLACEAE | | | | | | |
|SPHAEROCYSTIS | -- | -- | -- | -- | 2300 | 9 |
|VOLVOCALES | | | | | | |
|CHLAMYDOMONADACEAE | | | | | | |
|CHLAMYDOMONAS | -- | -- | 13 | 1 | -- | -- |
| CHRYSTOPHYTA | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | |
| ...CENTRALES | | | | | | |
|COSCINODISCAEAE | | | | | | |
|CYCLOTELLA | 1500# | 39 | 150 | 7 | 1900 | 7 |
|MELOSIRA | 500 | 13 | 79 | 4 | 14000# | 52 |
|STEPHANODISCUS | -- | -- | 13 | 1 | 420 | 2 |
| ...PENNALES | | | | | | |
|ACHNANTHACEAE | | | | | | |
|ACHNANTHES | 210 | 6 | 150 | 7 | * | 0 |
|COCCONEIS | -- | -- | 26 | 1 | * | 0 |
|RHOICOSPHEA | 78 | 2 | 26 | 1 | -- | -- |
|CYMBELLACEAE | | | | | | |
|AMPHORA | -- | -- | * | 0 | -- | -- |
|CYMBELLA | 180 | 5 | 410# | 19 | -- | -- |
|EPITHEMIA | -- | -- | 13 | 1 | -- | -- |
|DIATOMACEAE | | | | | | |
|DIATOMA | 26 | 1 | 79 | 4 | * | 0 |
|FRAGILARIACEAE | | | | | | |
|ASTERIONELLA | 340 | 9 | 190 | 8 | 1500 | 6 |
|FRAGILARIA | -- | -- | * | 0 | -- | -- |
|HANNAEA | 26 | 1 | -- | -- | -- | -- |
|SYNEDRA | 26 | 1 | 53 | 2 | * | 0 |
|GOMPHONEMACEAE | | | | | | |
|GOMPHONEMA | 130 | 3 | 66 | 3 | -- | -- |
|NAVICULACEAE | | | | | | |
|CALONEIS | -- | -- | * | 0 | -- | -- |
|FRUSTULIA | -- | -- | * | 0 | -- | -- |
|NAVICULA | 26 | 1 | 110 | 5 | -- | -- |
|STAURONEIS | -- | -- | -- | -- | -- | -- |
|NITZSCHIAEAE | | | | | | |
|NITZSCHIA | 210 | 6 | 210 | 10 | 210 | 1 |
|SURIRELLACEAE | | | | | | |
|SURIRELLA | -- | -- | * | 0 | -- | -- |
|TABELLARIACEAE | | | | | | |
|TABELLARIA | -- | -- | -- | -- | -- | -- |
| ..CHRYSTOPHYCEAE | | | | | | |
| ...CHRYSOMONADALES | | | | | | |
|CHROMULINACEAE | | | | | | |
|CHRYSOCCOCUS | -- | -- | -- | -- | -- | -- |
|OCHROMONADACEAE | | | | | | |
|DINOBRYON | -- | -- | -- | -- | 320 | 1 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| ..CYANOPHYCEAE | | | | | | |
| ...CHROCOCCOCCALES | | | | | | |
|CHROCOCCOCCAEAE | | | | | | |
|ANACYSTIS | 310 | 8 | -- | -- | 2700 | 10 |
|COCCOCHLORIS | -- | -- | -- | -- | -- | -- |
| ...HORMOGONALES | | | | | | |
|NOSTOCACEAE | | | | | | |
|APHANIZOMENON | -- | -- | 330 | 15 | -- | -- |
|OSCILLATORIACEAE | | | | | | |
|OSCILLATORIA | -- | -- | 170 | 8 | -- | -- |
|RIVULARIACEAE | | | | | | |
|RAPHIIDIOPSIS | -- | -- | -- | -- | -- | -- |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | |
| ..CRYPTOPHYCEAE | | | | | | |
| ...CRYPTOMONIDALES | | | | | | |
|CRYPTOCHRYSIDACEAE | | | | | | |
|CHROOMONAS | -- | -- | -- | -- | -- | -- |
| ..EUGLENOPHYCEAE | | | | | | |
| ...EUGLENALES | | | | | | |
|EUGLENACEAE | | | | | | |
|EUGLENA | -- | -- | -- | -- | -- | -- |
|TRACHELOMONAS | -- | -- | -- | -- | 210 | 1 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

WILLAMETTE RIVER BASIN

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

WATER QUALITY DATA. WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | LENGTH OF EXPO- SURE (DAYS) | BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) | CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) |
|--------------|---|--|--|--|--|--|
| OCT 26... | 34 | 114 | 10.8 | 1.71 | -- | -- |
| JAN 07... | 32 | 1448 | .212 | .164 | -- | -- |
| JUL 29... | -- | 18670 | -- | -- | 2.03 | 1.15 |

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 85 | 78 | | | --- | --- | 64 | 71 | 63 | --- | 89 | 87 |
| 2 | 86 | 79 | | | 102 | --- | 64 | 71 | 66 | --- | 90 | 87 |
| 3 | 84 | 79 | | | 103 | --- | 63 | 72 | 69 | --- | 87 | 88 |
| 4 | 83 | 76 | | | 106 | --- | 64 | 72 | 73 | --- | 92 | 89 |
| 5 | 83 | 78 | | | 110 | --- | 65 | 71 | 87 | --- | 92 | 86 |
| 6 | 81 | 76 | | | 114 | --- | 62 | 64 | 87 | --- | 91 | 85 |
| 7 | 79 | 73 | | | 119 | --- | 63 | 61 | 88 | --- | 93 | 86 |
| 8 | 79 | 74 | | | 120 | --- | 63 | 57 | 74 | --- | 93 | 88 |
| 9 | 81 | 77 | | | 113 | --- | 60 | 56 | --- | --- | 87 | 88 |
| 10 | 81 | 77 | | | 115 | --- | 59 | 57 | --- | --- | 94 | 91 |
| 11 | 82 | 76 | | | --- | --- | 56 | 57 | --- | --- | 95 | 92 |
| 12 | 82 | 75 | | | --- | --- | 60 | 57 | --- | --- | 94 | 90 |
| 13 | 80 | 74 | | | --- | --- | 62 | 59 | --- | --- | 96 | 86 |
| 14 | 82 | 76 | | | --- | --- | 80 | 59 | --- | --- | 95 | 89 |
| 15 | 80 | 68 | | | --- | --- | 116 | 60 | --- | --- | 95 | 90 |
| 16 | 79 | 71 | | | --- | --- | 96 | 59 | --- | --- | 95 | 87 |
| 17 | 75 | 75 | | | --- | --- | 107 | 61 | --- | --- | 94 | 87 |
| 18 | 75 | 74 | | | --- | --- | 95 | 61 | --- | --- | 93 | 89 |
| 19 | 76 | 73 | | | --- | --- | 74 | 65 | --- | 88 | 92 | 86 |
| 20 | 78 | 72 | | | --- | --- | 86 | 63 | --- | 91 | 91 | 87 |
| 21 | 75 | 68 | | | --- | --- | 96 | 60 | --- | 92 | 91 | 88 |
| 22 | 74 | 72 | | | --- | --- | 98 | 59 | --- | 92 | 88 | 88 |
| 23 | 74 | 78 | | | --- | --- | 85 | 59 | --- | 93 | 86 | 89 |
| 24 | 74 | 79 | | | --- | --- | 79 | 59 | --- | 92 | 85 | 90 |
| 25 | 77 | 79 | | | --- | --- | 83 | 62 | --- | 93 | 85 | 89 |
| 26 | 76 | 80 | | | --- | 73 | 83 | 63 | --- | 91 | 84 | 84 |
| 27 | 75 | 80 | | | --- | 72 | 77 | 66 | --- | 91 | 85 | 81 |
| 28 | 74 | 86 | | | --- | 69 | 75 | 64 | --- | 91 | 88 | 79 |
| 29 | 77 | 82 | | | --- | 66 | 74 | 66 | --- | 91 | 88 | 77 |
| 30 | 78 | --- | | | --- | 68 | 73 | 68 | --- | 92 | 87 | 77 |
| 31 | 78 | --- | | | --- | 65 | --- | 62 | --- | 87 | 86 | --- |

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 18.0 | 17.0 | 12.0 | 11.5 | 8.0 | 7.0 | 5.0 | 5.0 | 4.5 | 4.5 | 7.5 | 7.0 |
| 2 | 18.0 | 17.0 | 12.0 | 11.5 | 7.5 | 6.5 | 5.0 | 5.0 | 4.5 | 4.0 | 7.0 | 7.0 |
| 3 | 18.0 | 17.0 | 12.5 | 12.0 | 6.5 | 6.0 | 5.0 | 4.5 | 4.5 | 4.0 | 7.0 | 6.5 |
| 4 | 17.5 | 17.0 | 13.0 | 12.5 | 6.0 | 5.5 | 5.0 | 4.5 | 4.5 | 4.0 | 7.0 | 6.5 |
| 5 | 17.5 | 16.5 | 13.0 | 12.5 | 5.5 | 5.0 | 4.5 | 4.0 | 4.5 | 4.0 | 7.0 | 6.5 |
| 6 | 17.0 | 16.0 | 13.5 | 12.5 | 5.5 | 5.0 | 4.0 | 3.5 | 4.5 | 4.0 | 7.0 | 6.5 |
| 7 | 16.5 | 15.5 | 12.5 | 12.0 | 5.5 | 5.0 | 3.5 | 3.0 | 5.0 | 4.5 | 7.0 | 7.0 |
| 8 | 16.0 | 15.5 | 12.5 | 12.0 | 5.5 | 5.5 | 3.5 | 3.0 | 4.5 | 4.0 | 7.0 | 7.0 |
| 9 | 16.0 | 15.0 | 12.5 | 12.0 | 5.5 | 5.0 | 3.0 | 2.5 | 5.0 | 4.5 | 7.0 | 6.5 |
| 10 | 16.0 | 15.0 | 12.5 | 11.5 | 5.5 | 5.5 | 3.0 | 2.5 | 5.5 | 5.0 | 7.0 | 6.5 |
| 11 | 16.0 | 15.5 | 12.0 | 11.5 | 6.0 | 5.5 | 2.5 | 2.5 | 5.5 | 5.5 | 7.0 | 6.5 |
| 12 | 16.5 | 15.5 | 12.0 | 11.5 | 6.0 | 5.5 | 2.5 | 2.0 | 6.0 | 5.5 | 7.0 | 7.0 |
| 13 | 16.5 | 15.5 | 11.5 | 11.0 | 6.0 | 5.5 | 2.5 | 2.0 | 6.0 | 6.0 | 7.5 | 7.0 |
| 14 | 16.5 | 15.5 | 11.5 | 11.0 | 6.0 | 5.5 | 2.5 | 2.0 | 6.5 | 6.0 | 7.5 | 7.0 |
| 15 | 16.0 | 15.0 | 11.5 | 11.0 | 6.5 | 6.0 | 2.5 | 2.5 | 7.0 | 6.0 | 7.5 | 7.0 |
| 16 | 15.5 | 15.0 | 11.5 | 11.0 | 6.5 | 6.0 | 3.5 | 2.5 | 7.0 | 6.5 | 7.5 | 7.0 |
| 17 | 15.5 | 14.5 | 11.5 | 11.0 | 6.0 | 6.0 | 4.5 | 3.5 | 7.0 | 6.5 | 7.5 | 7.0 |
| 18 | 15.0 | 14.0 | 11.0 | 11.0 | 6.0 | 5.5 | 5.0 | 4.0 | 7.5 | 7.0 | 7.5 | 7.0 |
| 19 | 14.5 | 13.5 | 11.5 | 11.0 | 6.0 | 5.5 | 5.5 | 5.0 | 8.0 | 7.5 | 7.5 | 7.0 |
| 20 | 14.0 | 13.0 | 11.5 | 11.0 | 5.5 | 5.5 | 6.0 | 5.5 | 8.5 | 8.0 | 8.0 | 7.5 |
| 21 | 13.5 | 13.0 | 11.5 | 11.0 | 5.5 | 5.5 | 6.0 | 5.5 | 9.0 | 8.5 | 8.5 | 8.0 |
| 22 | 13.5 | 12.5 | 11.5 | 10.5 | 6.0 | 5.5 | 6.0 | 5.5 | 9.0 | 8.5 | 9.0 | 8.0 |
| 23 | 13.0 | 12.5 | 11.0 | 10.0 | 6.0 | 5.5 | 5.5 | 5.5 | 9.0 | 8.5 | 9.0 | 8.5 |
| 24 | 13.0 | 12.0 | 10.0 | 9.5 | 6.0 | 5.5 | 5.5 | 5.0 | 8.5 | 8.0 | 9.0 | 8.5 |
| 25 | 12.5 | 12.0 | 10.0 | 9.5 | 6.0 | 5.5 | 5.5 | 5.0 | 8.5 | 8.0 | 9.5 | 8.5 |
| 26 | 12.5 | 12.0 | 9.5 | 9.0 | 6.0 | 5.5 | 6.0 | 5.0 | 8.5 | 8.0 | 9.5 | 9.0 |
| 27 | 12.5 | 12.0 | 9.5 | 8.5 | 6.0 | 5.5 | 5.5 | 5.5 | 8.0 | 7.5 | 10.0 | 9.0 |
| 28 | 12.5 | 11.5 | 9.0 | 8.0 | 5.5 | 5.0 | 5.5 | 5.0 | 8.0 | 7.5 | 9.5 | 9.0 |
| 29 | 12.0 | 11.5 | 8.5 | 8.0 | 5.5 | 5.0 | 5.0 | 5.0 | --- | --- | 9.0 | 8.5 |
| 30 | 12.5 | 12.0 | 8.0 | 7.5 | 5.5 | 5.0 | 5.0 | 4.5 | --- | --- | 9.0 | 8.5 |
| 31 | 12.5 | 11.5 | --- | --- | 5.0 | 5.0 | 5.0 | 4.5 | --- | --- | 9.0 | 8.5 |
| MONTH | 18.0 | 11.5 | 13.5 | 7.5 | 8.0 | 5.0 | 6.0 | 2.0 | 9.0 | 4.0 | 10.0 | 6.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 8.5 | 8.5 | 14.5 | 14.0 | 13.5 | 12.5 | 22.5 | 21.5 | 24.0 | 22.0 | 19.5 | 18.0 |
| 2 | 9.0 | 8.5 | --- | --- | 13.5 | 13.0 | 22.5 | 21.5 | 23.0 | 21.0 | 19.5 | 18.0 |
| 3 | 9.0 | 8.5 | --- | --- | 14.0 | 13.5 | 22.0 | 21.0 | 25.0 | 22.5 | 20.0 | 18.5 |
| 4 | 10.0 | 8.5 | 14.5 | 13.5 | 14.5 | 13.5 | 22.0 | 21.0 | 25.0 | 23.0 | 20.0 | 18.5 |
| 5 | 10.0 | 9.0 | 14.0 | 13.0 | 15.5 | 14.5 | 21.5 | 20.5 | 25.0 | 23.0 | 20.5 | 19.0 |
| 6 | 11.0 | 9.5 | 13.0 | 12.5 | 16.5 | 15.5 | 21.5 | 20.5 | 26.0 | 23.0 | 20.5 | 18.5 |
| 7 | 11.5 | 10.5 | 12.5 | 12.0 | 17.5 | 15.5 | 22.0 | 20.0 | 26.5 | 23.0 | 21.0 | 19.0 |
| 8 | 12.0 | 11.0 | 12.5 | 11.5 | 18.5 | 16.5 | 22.0 | 20.5 | 26.5 | 22.5 | 20.0 | 19.0 |
| 9 | 12.0 | 11.5 | 12.5 | 11.5 | 18.0 | 17.0 | 21.0 | 20.0 | 26.5 | 24.0 | 20.0 | 19.0 |
| 10 | 12.0 | 11.5 | 12.5 | 12.0 | 18.0 | 17.0 | 21.0 | 20.0 | 27.0 | 24.5 | 20.5 | 19.0 |
| 11 | 12.5 | 12.0 | 13.0 | 12.5 | 18.0 | 17.0 | 21.0 | 19.5 | 27.0 | 24.5 | 20.5 | 19.0 |
| 12 | 12.0 | 11.0 | 13.5 | 12.5 | 18.0 | 17.0 | 20.0 | 19.5 | 27.0 | 24.5 | 21.5 | 19.0 |
| 13 | 11.5 | 10.5 | 13.5 | 13.0 | 18.0 | 17.0 | 20.0 | 19.0 | 27.0 | 24.5 | 21.0 | 19.5 |
| 14 | 11.5 | 10.5 | 13.5 | 12.5 | 18.0 | 17.0 | 21.0 | 19.5 | 26.5 | 24.5 | 20.5 | 19.5 |
| 15 | 12.0 | 10.5 | 13.0 | 12.5 | 18.5 | 17.5 | 21.0 | 20.0 | 26.5 | 24.5 | 20.5 | 19.0 |
| 16 | 12.0 | 11.5 | 13.0 | 12.0 | 19.0 | 17.5 | 21.5 | 20.0 | 26.0 | 24.5 | 20.0 | 19.0 |
| 17 | 12.0 | 11.5 | 13.0 | 12.0 | 19.5 | 18.0 | 21.0 | 20.0 | 26.0 | 24.5 | 20.0 | 19.0 |
| 18 | 13.0 | 12.0 | 12.5 | 12.0 | 19.0 | 18.5 | 21.5 | 20.5 | 26.0 | 24.0 | 20.0 | 18.5 |
| 19 | 13.0 | 12.0 | 12.5 | 12.0 | --- | --- | 21.5 | 20.5 | 26.0 | 24.5 | 19.5 | 18.5 |
| 20 | 13.0 | 12.0 | 12.5 | 12.0 | --- | --- | 22.0 | 20.5 | 25.5 | 24.0 | 19.0 | 17.5 |
| 21 | 13.0 | 12.0 | 12.5 | 11.5 | --- | --- | 23.0 | 20.5 | 25.0 | 22.0 | 18.5 | 17.0 |
| 22 | 13.0 | 12.5 | 13.0 | 12.0 | --- | --- | 23.5 | 21.0 | 24.5 | 22.0 | 18.0 | 16.5 |
| 23 | 13.5 | 12.0 | 13.5 | 12.5 | --- | --- | 23.5 | 21.5 | 24.0 | 22.0 | 18.0 | 16.5 |
| 24 | 13.0 | 12.5 | 13.5 | 13.0 | --- | --- | 24.0 | 21.5 | 23.0 | 21.5 | 17.5 | 16.5 |
| 25 | 13.5 | 12.5 | 14.5 | 13.5 | --- | --- | 23.0 | 21.0 | 22.5 | 20.0 | 17.0 | 16.0 |
| 26 | 14.0 | 13.0 | 14.5 | 13.5 | --- | --- | 23.5 | 21.5 | 21.5 | 19.5 | 17.0 | 16.0 |
| 27 | 14.5 | 13.5 | 14.5 | 13.5 | --- | --- | 23.5 | 21.5 | 20.5 | 19.0 | 16.5 | 15.5 |
| 28 | 15.0 | 14.0 | 14.0 | 13.0 | --- | --- | 24.0 | 22.0 | 20.0 | 18.5 | 16.5 | 15.5 |
| 29 | 15.0 | 14.0 | 14.5 | 13.5 | --- | --- | 24.5 | 22.0 | 20.0 | 18.5 | 16.0 | 15.5 |
| 30 | 15.0 | 14.0 | 14.5 | 13.5 | --- | --- | 24.5 | 22.0 | 19.5 | 18.0 | 16.5 | 15.5 |
| 31 | --- | --- | 14.0 | 13.0 | --- | --- | 24.5 | 22.5 | 19.5 | 18.0 | --- | --- |
| MONTH | 15.0 | 8.5 | 14.5 | 11.5 | 19.5 | 12.5 | 24.5 | 19.0 | 27.0 | 18.0 | 21.5 | 15.5 |

COLUMBIA RIVER MAIN STEM

14222880 COLUMBIA RIVER AT COLUMBIA CITY, OR

LOCATION.--Lat 45°53'41", long 122°48'23", in NE¼NE¼ sec.28, T.5 N., R.1 W., Columbia County, Hydrologic Unit 17080003, on left bank in Columbia City, at the pumping station at the corner of "E" Street and "The Strand", and at mile 84.0 (135.2 km).

DRAINAGE AREA.--254,000 mi² (657,900 km²), approximately.

PERIOD OF RECORD.--October 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at Columbia River datum, 0.79 ft (0.241 m) above mean sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 19.68 ft (5.998 m) Jan. 19, 1974; minimum, -0.10 ft (-0.030 m) Sept. 9, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 7.97 ft (2.429 m) Mar. 9; minimum recorded, 0.00 ft (0.000 m) July 6, 7, 10.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|---------|------|------|----------|------|------|----------|------|------|---------|-----|------|
| | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | --- | --- | --- | 4.74 | 2.16 | 3.39 | 4.85 | 2.82 | 3.70 | | | |
| 2 | --- | --- | --- | 4.71 | 2.16 | 3.33 | 5.15 | 2.58 | 3.70 | | | |
| 3 | --- | --- | --- | 4.68 | 2.05 | 3.25 | 5.35 | 2.40 | 3.60 | | | |
| 4 | --- | --- | --- | 5.14 | 2.20 | 3.50 | 4.80 | 1.38 | 3.30 | | | |
| 5 | --- | --- | --- | 5.21 | 2.27 | 3.66 | 4.44 | 1.22 | 2.70 | | | |
| 6 | --- | --- | --- | 4.84 | 2.08 | 3.37 | 4.68 | 1.22 | 3.00 | | | |
| 7 | --- | --- | --- | 5.05 | 2.00 | 3.48 | 5.22 | 1.65 | 3.50 | | | |
| 8 | --- | --- | --- | 5.03 | 2.11 | 3.38 | 5.80 | 1.95 | 3.90 | | | |
| 9 | --- | --- | --- | 5.16 | 1.82 | 3.43 | 5.20 | 2.40 | 3.80 | | | |
| 10 | --- | --- | --- | 5.20 | 2.14 | 3.53 | 4.60 | 1.84 | 3.20 | | | |
| 11 | --- | --- | --- | 5.05 | 2.13 | 3.50 | --- | --- | --- | | | |
| 12 | --- | --- | --- | 4.66 | 1.98 | 3.27 | --- | --- | --- | | | |
| 13 | --- | --- | --- | 4.49 | 1.77 | 3.18 | --- | --- | --- | | | |
| 14 | --- | --- | --- | 4.40 | 1.79 | 3.25 | --- | --- | --- | | | |
| 15 | --- | --- | --- | 4.37 | 2.00 | 3.22 | --- | --- | --- | | | |
| 16 | --- | --- | --- | 4.93 | 1.72 | 3.26 | --- | --- | --- | | | |
| 17 | --- | --- | --- | 5.44 | 1.80 | 3.50 | 5.93 | 2.91 | --- | | | |
| 18 | 4.22 | 1.36 | 2.89 | 5.50 | 2.13 | 3.61 | 6.16 | 2.54 | 4.14 | | | |
| 19 | 4.69 | 2.36 | 3.50 | 5.65 | 2.03 | 3.67 | 5.81 | 2.19 | 3.81 | | | |
| 20 | 5.57 | 2.80 | 4.07 | 5.81 | 2.39 | 3.89 | 5.70 | 1.98 | 3.66 | | | |
| 21 | 5.90 | 2.69 | 4.21 | 6.29 | 2.56 | 4.17 | 6.23 | 2.30 | 4.25 | | | |
| 22 | 6.31 | 3.10 | 4.56 | 6.37 | 2.70 | 4.39 | 6.35 | 2.55 | 4.24 | | | |
| 23 | 6.28 | 2.89 | 4.55 | 6.46 | 2.86 | 4.41 | 6.39 | 3.14 | 4.74 | | | |
| 24 | 6.11 | 2.23 | 4.03 | 6.12 | 2.78 | 4.34 | 5.18 | 2.70 | 3.97 | | | |
| 25 | 6.19 | 2.43 | 4.17 | 5.69 | 2.87 | 4.20 | 4.84 | 1.89 | 3.45 | | | |
| 26 | 5.88 | 2.82 | 4.14 | 4.71 | 2.33 | 3.46 | --- | --- | --- | | | |
| 27 | 5.62 | 2.56 | 3.94 | 4.07 | 1.47 | 2.86 | --- | --- | --- | | | |
| 28 | 5.04 | 2.38 | 3.67 | 4.16 | 1.87 | 2.89 | --- | --- | --- | | | |
| 29 | 4.74 | 2.68 | 3.75 | 4.15 | 1.12 | 2.67 | --- | --- | --- | | | |
| 30 | 4.18 | 2.35 | 3.25 | 4.63 | 2.30 | 3.60 | --- | --- | --- | | | |
| 31 | 4.90 | 1.72 | 3.39 | --- | --- | --- | --- | --- | --- | | | |
| MONTH | 6.31 | 1.36 | 3.86 | 6.46 | 1.12 | 3.52 | 6.39 | 1.22 | 3.70 | | | |

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|------|------|-------|------|------|-------|------|------|------|------|------|
| | FEBRUARY | | | MARCH | | | APRIL | | | MAY | | |
| 1 | --- | --- | --- | 4.82 | 2.56 | 3.69 | 4.44 | 2.11 | 3.30 | 4.74 | 1.71 | 3.18 |
| 2 | --- | --- | --- | 5.00 | 2.56 | 3.63 | 4.64 | 1.77 | 3.18 | 5.23 | 2.18 | 3.77 |
| 3 | --- | --- | --- | 5.23 | 2.86 | 4.15 | 4.67 | 1.42 | 3.10 | 6.42 | 2.75 | 4.93 |
| 4 | --- | --- | --- | 5.27 | 2.44 | 3.94 | 4.56 | 1.39 | 3.09 | 7.13 | 3.89 | 5.45 |
| 5 | --- | --- | --- | 5.33 | 2.32 | 3.69 | 5.08 | 1.56 | 3.29 | 7.29 | 4.15 | 5.50 |
| 6 | --- | --- | --- | 5.79 | 2.42 | 4.06 | 5.21 | 1.74 | 3.38 | 6.92 | 3.66 | 5.09 |
| 7 | --- | --- | --- | 6.49 | 2.84 | 4.80 | 5.41 | 2.01 | 3.59 | 6.32 | 3.12 | 4.57 |
| 8 | --- | --- | --- | 7.11 | 3.99 | 5.56 | 5.38 | 1.93 | 3.51 | 5.70 | 2.76 | 4.16 |
| 9 | 5.16 | 2.01 | 3.35 | 7.97 | 4.51 | 6.07 | 4.84 | 1.52 | 3.06 | 5.18 | 2.53 | 3.92 |
| 10 | 5.49 | 1.76 | 3.60 | 6.71 | 4.07 | 5.17 | 4.01 | 0.78 | 2.43 | 4.75 | 2.33 | 3.63 |
| 11 | 4.78 | 1.71 | 3.05 | 5.85 | 3.23 | 4.44 | 3.72 | 0.96 | 2.36 | 4.60 | 2.10 | 3.29 |
| 12 | 4.61 | 1.09 | 2.72 | 6.06 | 3.36 | 4.45 | 3.33 | 0.84 | 2.19 | 4.75 | 2.15 | 3.33 |
| 13 | 4.12 | 0.69 | 2.27 | 5.57 | 2.85 | 4.12 | 3.85 | 1.23 | 2.56 | 5.14 | 2.30 | 3.55 |
| 14 | 4.35 | 1.14 | 2.49 | 5.21 | 2.62 | 3.83 | 3.85 | 1.56 | 2.69 | 5.15 | 2.37 | 3.59 |
| 15 | 4.81 | 1.68 | 3.06 | 5.34 | 2.70 | 3.95 | 4.49 | 1.72 | 3.04 | 5.18 | 2.31 | 3.61 |
| 16 | 5.30 | 1.84 | 3.46 | 5.38 | 2.86 | 4.04 | 4.81 | 1.46 | 3.10 | 5.25 | 2.43 | 3.72 |
| 17 | 4.89 | 1.51 | 3.21 | 5.59 | 2.73 | 4.31 | 4.15 | 0.93 | 2.41 | 5.28 | 2.49 | 3.73 |
| 18 | 4.87 | 1.40 | 3.15 | 5.28 | 2.54 | 3.91 | 3.84 | 0.53 | 2.21 | 5.46 | 2.55 | 3.78 |
| 19 | 5.14 | 1.73 | 3.41 | 5.34 | 2.54 | 3.95 | 3.97 | 0.74 | 2.31 | 5.18 | 1.94 | 3.40 |
| 20 | 4.97 | 1.80 | 3.47 | 5.02 | 2.02 | 3.50 | 4.09 | 1.03 | 2.56 | 4.69 | 1.52 | 3.03 |
| 21 | 5.53 | 1.81 | 3.85 | 4.86 | 2.03 | 3.43 | 4.60 | 1.33 | 2.83 | 4.86 | 2.03 | 3.37 |
| 22 | 5.83 | 2.64 | 4.00 | 4.97 | 2.15 | 3.52 | 4.65 | 1.74 | 3.12 | 4.87 | 2.10 | 3.46 |
| 23 | 5.11 | 2.45 | 3.57 | 5.25 | 2.38 | 3.72 | 4.27 | 1.03 | 2.70 | 4.67 | 2.09 | 3.39 |
| 24 | 4.65 | 2.08 | 3.11 | 5.11 | 2.27 | 3.52 | 3.64 | 0.67 | 2.21 | 4.36 | 1.79 | 3.15 |
| 25 | 4.14 | 1.85 | 2.77 | 4.43 | 1.71 | 2.95 | 3.58 | 1.07 | 2.28 | 4.76 | 1.64 | 3.05 |
| 26 | 4.04 | 1.55 | 2.61 | 4.01 | 1.10 | 2.62 | 3.43 | 1.19 | 2.40 | 5.42 | 3.16 | 4.15 |
| 27 | 3.79 | 1.50 | 2.50 | 4.22 | 1.59 | 2.78 | 3.89 | 1.46 | 2.55 | 5.59 | 3.31 | 4.21 |
| 28 | 4.59 | 2.33 | 3.25 | 3.23 | 1.27 | 2.26 | 4.10 | 1.33 | 2.71 | 5.78 | 2.70 | 4.13 |
| 29 | --- | --- | --- | 3.12 | 1.20 | 2.22 | 4.10 | 0.98 | 2.67 | 5.57 | 2.44 | 3.70 |
| 30 | --- | --- | --- | 3.45 | 1.35 | 2.46 | 4.15 | 1.44 | 2.78 | 5.58 | 1.80 | 3.41 |
| 31 | --- | --- | --- | 3.91 | 1.62 | 2.68 | --- | --- | --- | 5.30 | 2.30 | 3.77 |
| MONTH | 5.83 | 0.69 | 3.14 | 7.97 | 1.10 | 3.78 | 5.41 | 0.53 | 2.78 | 7.29 | 1.52 | 3.83 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 6.49 | 2.98 | 4.85 | 5.28 | 1.36 | 3.20 | 4.24 | 0.90 | 2.72 | 4.34 | 1.20 | 2.79 |
| 2 | 6.92 | 3.52 | 5.08 | 4.88 | 0.91 | 2.87 | 4.69 | 1.18 | 3.17 | 4.00 | 0.94 | 2.48 |
| 3 | 6.90 | 3.53 | 5.06 | 4.65 | 0.83 | 2.73 | 4.50 | 1.35 | 3.11 | --- | --- | --- |
| 4 | 7.06 | 3.26 | 5.01 | 4.21 | 0.66 | 2.52 | 4.58 | 1.28 | 2.91 | --- | --- | --- |
| 5 | 5.93 | 2.40 | 4.14 | 3.71 | 0.27 | 2.18 | 4.59 | 1.49 | 2.95 | --- | --- | --- |
| 6 | 5.43 | 2.56 | 3.98 | 3.20 | .00 | 1.80 | 3.89 | 0.83 | 2.34 | --- | --- | --- |
| 7 | 5.09 | 2.50 | 3.93 | 3.40 | .00 | 1.60 | 3.63 | 0.57 | 1.75 | --- | --- | --- |
| 8 | 4.89 | 2.31 | 3.62 | 3.40 | 0.20 | 1.70 | 3.63 | 0.61 | 1.76 | --- | --- | --- |
| 9 | 4.84 | 2.17 | 3.40 | 3.65 | 0.20 | 1.70 | 3.66 | 0.45 | 1.78 | --- | --- | --- |
| 10 | 4.85 | 2.13 | 3.23 | 3.20 | .00 | 1.30 | 3.76 | 0.44 | 1.95 | --- | --- | --- |
| 11 | 4.86 | 1.58 | 2.89 | 3.20 | 0.30 | 1.60 | 3.94 | 0.68 | 2.22 | --- | --- | --- |
| 12 | 4.65 | 1.45 | 2.71 | 3.70 | 0.55 | 2.00 | 4.15 | 0.79 | 2.57 | --- | --- | --- |
| 13 | 4.59 | 1.11 | 2.90 | 3.85 | 0.80 | 2.30 | 4.58 | 0.95 | 2.74 | --- | --- | --- |
| 14 | 4.98 | 1.98 | 3.33 | 3.95 | 0.55 | --- | 4.27 | 0.75 | 2.57 | --- | --- | --- |
| 15 | 4.91 | 1.84 | 3.24 | --- | --- | --- | 4.26 | 0.81 | 2.74 | --- | --- | --- |
| 16 | 5.04 | 2.05 | 3.49 | --- | --- | --- | 4.59 | 1.52 | 3.20 | --- | --- | --- |
| 17 | 5.37 | 2.11 | 3.75 | --- | --- | --- | 4.92 | 1.73 | 3.43 | --- | --- | --- |
| 18 | 5.29 | 1.90 | 3.50 | --- | --- | --- | 4.73 | 1.60 | 3.31 | --- | --- | --- |
| 19 | 4.58 | 1.03 | 2.82 | --- | --- | --- | 4.76 | 1.20 | 2.90 | --- | --- | --- |
| 20 | 4.18 | 0.68 | 2.59 | --- | --- | --- | 4.32 | 1.08 | 2.77 | --- | --- | --- |
| 21 | 3.77 | 0.30 | 2.34 | --- | --- | --- | 3.94 | 0.69 | 2.22 | --- | --- | --- |
| 22 | 3.62 | 0.65 | 2.32 | --- | --- | --- | 4.42 | 0.63 | 2.11 | --- | --- | --- |
| 23 | 3.77 | 0.77 | 2.29 | --- | --- | --- | 4.84 | 1.23 | 2.57 | 4.40 | 1.39 | 3.08 |
| 24 | 3.95 | 0.58 | 2.10 | --- | --- | --- | 4.86 | 1.46 | 2.84 | 5.04 | 2.09 | 3.55 |
| 25 | 3.99 | 0.62 | 2.13 | --- | --- | --- | 4.74 | 1.33 | 2.90 | 4.92 | 1.85 | 3.52 |
| 26 | 4.11 | 0.43 | 2.05 | 4.19 | 0.80 | 2.16 | 5.02 | 1.42 | 3.08 | 5.13 | 2.10 | 3.69 |
| 27 | 4.14 | 0.79 | 2.14 | 4.31 | 0.69 | 2.31 | 4.66 | 1.01 | 2.86 | 5.27 | 2.27 | 3.77 |
| 28 | 4.49 | 0.93 | 2.51 | 4.52 | 0.86 | 2.56 | 4.66 | 1.20 | 3.00 | 5.54 | 2.32 | 3.85 |
| 29 | 4.76 | 1.19 | 2.75 | 4.64 | 1.03 | 2.80 | 4.60 | 1.32 | 3.06 | 5.43 | 2.33 | 3.86 |
| 30 | 5.06 | 1.63 | 3.27 | 4.77 | 0.95 | 2.82 | 4.85 | 1.66 | 3.38 | 5.19 | 2.39 | 3.66 |
| 31 | --- | --- | --- | 4.72 | 0.92 | 2.79 | 4.68 | 1.35 | 3.02 | --- | --- | --- |
| MONTH | 7.06 | 0.30 | 3.24 | 5.28 | .00 | 2.26 | 5.02 | 0.44 | 2.70 | 5.54 | 0.94 | 3.42 |
| YEAR | 7.97 | .00 | 3.28 | | | | | | | | | |

14222910 COLUMBIA RIVER AT KALAMA, WA

LOCATION.--Lat 46°01'13", long 122°51'30", in NW¼ sec. 7, T.6 N., R.1 W., Cowlitz County, Hydrologic Unit 17080003, temperature recorder on right bank at dock of Dow Chemical Company, 1.0 mi (1.6 km) northwest of Kalama, and at mile 74.3 (119.5 km).

DRAINAGE AREA.--254,000 mi² (657,900 km²), approximately.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: September 1968 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 13-16, 18, 1977; minimum, 0.0°C Jan. 10-14, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 13-16, 18; minimum, 2.0°C Jan. 13, 25, 27, Feb. 1, 2, 7, 9, 10.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 18.0 | 18.0 | 13.5 | 13.5 | 8.5 | 7.5 | 5.5 | 4.0 | 3.0 | 2.0 | 5.5 | 5.0 |
| 2 | 18.5 | 18.0 | 13.5 | 13.0 | 8.0 | 7.5 | 5.0 | 4.5 | 3.5 | 2.0 | 5.5 | 5.5 |
| 3 | 18.5 | 17.5 | 13.5 | 13.0 | 8.0 | 7.5 | 4.5 | 4.0 | 3.5 | 2.5 | 6.0 | 5.0 |
| 4 | 18.0 | 17.5 | 13.5 | 13.0 | 8.0 | 7.5 | 4.5 | 4.0 | 3.0 | 2.5 | 6.0 | 5.0 |
| 5 | 17.5 | 17.0 | 13.5 | 12.5 | 8.0 | 7.5 | 4.5 | 4.0 | 3.0 | 2.5 | 6.0 | 5.5 |
| 6 | 17.5 | 17.0 | 13.0 | 12.5 | 8.0 | 7.5 | 4.5 | 4.0 | 3.0 | 2.5 | 6.0 | 5.5 |
| 7 | 17.5 | 17.0 | 13.0 | 12.0 | 7.5 | 7.0 | 5.0 | 3.5 | 3.5 | 2.0 | 6.0 | 5.5 |
| 8 | 17.5 | 17.0 | 12.5 | 12.0 | 7.5 | 6.5 | 4.0 | 3.5 | 3.5 | 2.5 | 6.0 | 5.5 |
| 9 | 17.5 | 17.0 | 13.0 | 12.0 | 7.5 | 7.0 | 4.0 | 3.5 | 3.5 | 2.0 | 6.0 | 5.5 |
| 10 | 17.5 | 17.0 | 12.5 | 12.0 | 7.5 | 7.0 | 3.5 | 3.0 | 3.0 | 2.0 | 6.0 | 5.5 |
| 11 | 17.5 | 17.0 | 12.5 | 12.0 | 7.5 | 7.0 | 3.0 | 2.5 | 4.0 | 3.0 | 6.0 | 5.5 |
| 12 | 17.5 | 17.0 | 12.5 | 11.5 | 7.5 | 6.5 | 3.0 | 2.5 | 3.5 | 2.5 | 6.5 | 5.5 |
| 13 | 17.5 | 17.0 | 12.0 | 11.5 | 7.0 | 6.5 | 3.0 | 2.0 | 4.5 | 3.0 | 6.0 | 5.5 |
| 14 | 17.0 | 16.5 | 12.0 | 11.0 | 7.0 | 6.0 | 3.5 | 2.5 | 4.5 | 3.0 | 6.0 | 5.5 |
| 15 | 17.0 | 16.5 | 11.5 | 11.0 | 6.5 | 6.0 | 3.5 | 2.5 | 4.5 | 3.5 | 6.0 | 5.0 |
| 16 | 16.5 | 16.0 | 11.5 | 10.5 | 6.5 | 6.0 | 3.5 | 3.0 | 4.5 | 3.5 | 6.0 | 5.5 |
| 17 | 16.5 | 16.0 | 11.5 | 11.0 | 6.5 | 6.0 | 3.5 | 3.0 | 4.5 | 4.0 | 6.0 | 5.5 |
| 18 | 16.5 | 15.5 | 12.0 | 11.5 | 6.5 | 5.5 | 3.0 | 3.0 | 5.0 | 3.5 | 6.5 | 5.5 |
| 19 | 16.0 | 14.5 | 12.0 | 11.0 | 6.5 | 5.5 | 3.5 | 3.0 | 5.0 | 3.5 | 6.5 | 6.0 |
| 20 | 15.0 | 14.0 | 11.5 | 10.5 | 6.5 | 6.0 | 4.0 | 3.0 | 5.0 | 4.0 | 6.5 | 6.0 |
| 21 | 14.5 | 14.0 | 11.5 | 11.0 | 6.5 | 5.5 | 4.0 | 3.0 | 5.0 | 4.5 | 6.5 | 5.5 |
| 22 | 14.5 | 14.0 | 11.0 | 10.0 | 6.0 | 5.5 | 4.5 | 3.0 | 5.5 | 4.5 | 6.5 | 6.0 |
| 23 | 15.0 | 14.5 | 10.5 | 10.0 | 5.5 | 5.0 | 4.0 | 2.5 | 5.5 | 4.5 | 7.0 | 6.5 |
| 24 | 15.0 | 14.5 | 11.0 | 10.0 | 6.0 | 5.0 | 4.0 | 2.5 | 5.5 | 4.5 | 7.5 | 6.5 |
| 25 | 14.5 | 14.0 | 10.0 | 9.5 | 5.5 | 5.0 | 3.5 | 2.0 | 5.0 | 4.5 | 7.5 | 6.5 |
| 26 | 15.0 | 14.0 | 10.0 | 9.5 | 5.5 | 5.0 | 3.5 | 2.5 | 5.5 | 4.0 | 7.5 | 6.5 |
| 27 | 15.0 | 14.0 | 10.0 | 9.0 | 5.5 | 5.0 | 3.5 | 2.0 | 4.5 | 4.5 | 7.5 | 7.0 |
| 28 | 14.5 | 14.0 | 9.5 | 9.0 | 6.0 | 5.0 | 3.0 | 2.5 | 5.0 | 4.5 | 7.0 | 7.0 |
| 29 | 14.0 | 13.5 | 9.0 | 8.0 | 6.0 | 5.0 | 3.5 | 2.5 | --- | --- | 7.0 | 6.5 |
| 30 | 14.0 | 13.5 | 9.0 | 8.0 | 6.0 | 5.0 | 3.5 | 2.5 | --- | --- | 7.5 | 6.5 |
| 31 | 14.0 | 13.5 | --- | --- | 5.5 | 4.5 | 3.0 | 2.5 | --- | --- | 7.5 | 7.0 |
| MONTH | 18.5 | 13.5 | 13.5 | 8.0 | 8.5 | 4.5 | 5.5 | 2.0 | 5.5 | 2.0 | 7.5 | 5.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.5 | 7.0 | 13.5 | 13.0 | 14.0 | 13.5 | 19.5 | 19.0 | 21.5 | 21.0 | 20.5 | 19.5 |
| 2 | 7.5 | 7.0 | 13.5 | 12.5 | 14.5 | 14.0 | 20.0 | 19.0 | 21.5 | 21.5 | 20.5 | 20.0 |
| 3 | 8.0 | 6.5 | 13.0 | 12.0 | 14.5 | 14.0 | 20.0 | 19.0 | 22.0 | 21.5 | 20.5 | 20.0 |
| 4 | 8.0 | 7.0 | 13.0 | 12.0 | 14.0 | 14.0 | 20.0 | 19.0 | 22.0 | 21.5 | 20.5 | 20.0 |
| 5 | 8.5 | 7.5 | 12.5 | 11.5 | 14.5 | 14.0 | 19.5 | 19.0 | 22.0 | 21.5 | 20.5 | 19.5 |
| 6 | 9.0 | 8.0 | 12.5 | 11.5 | 15.0 | 14.5 | 19.0 | 18.5 | 22.5 | 22.0 | 20.5 | 20.0 |
| 7 | 9.5 | 8.5 | 12.5 | 12.0 | 16.0 | 15.5 | 19.5 | 18.5 | 22.5 | 22.0 | 20.5 | 20.0 |
| 8 | 10.0 | 9.0 | 12.5 | 12.0 | 16.0 | 15.5 | 19.5 | 19.0 | 22.5 | 22.5 | 20.5 | 20.0 |
| 9 | 10.5 | 9.5 | 13.0 | 12.0 | 16.0 | 15.5 | 20.0 | 19.5 | 22.5 | 22.5 | 20.5 | 19.5 |
| 10 | 10.5 | 9.5 | 13.0 | 12.5 | 16.5 | 15.5 | 20.0 | 19.0 | 22.5 | 22.0 | 19.5 | 19.0 |
| 11 | 10.0 | 9.0 | 13.0 | 12.5 | 16.5 | 16.0 | 19.5 | 19.0 | 23.0 | 22.5 | 19.5 | 18.5 |
| 12 | 10.5 | 9.5 | 13.0 | 12.0 | 17.0 | 16.0 | 20.0 | 19.0 | 23.0 | 22.5 | 19.5 | 19.0 |
| 13 | 10.5 | 9.5 | 13.5 | 12.5 | 17.0 | 16.0 | 19.5 | 19.0 | 23.5 | 22.5 | 20.0 | 19.5 |
| 14 | 10.5 | 9.5 | 13.5 | 13.0 | 16.5 | 16.0 | 19.5 | 19.0 | 23.5 | 23.0 | 20.0 | 19.5 |
| 15 | 10.5 | 9.5 | 13.5 | 13.0 | 17.0 | 16.0 | 19.5 | 19.0 | 23.5 | 22.5 | 20.0 | 19.0 |
| 16 | 10.0 | 9.5 | 13.0 | 12.5 | 17.0 | 16.5 | 20.0 | 19.5 | 23.5 | 23.0 | 19.5 | 19.0 |
| 17 | 10.5 | 9.5 | 12.5 | 12.5 | 17.5 | 17.0 | 20.0 | 19.5 | 23.0 | 23.0 | 19.0 | 18.5 |
| 18 | 10.5 | 9.5 | 13.0 | 12.0 | 18.0 | 17.5 | 20.0 | 19.5 | 23.5 | 23.0 | 19.0 | 18.5 |
| 19 | 10.5 | 9.5 | 13.0 | 12.5 | 18.5 | 18.0 | 20.0 | 19.5 | 23.0 | 22.5 | 18.5 | 18.0 |
| 20 | 11.0 | 9.5 | 13.5 | 13.0 | 18.5 | 18.0 | 20.0 | 19.0 | 23.0 | 22.5 | 18.5 | 18.0 |
| 21 | 10.5 | 10.0 | 13.5 | 13.0 | 18.5 | 18.0 | 20.5 | 19.0 | 23.0 | 22.0 | 18.5 | 18.0 |
| 22 | 10.5 | 10.0 | 14.0 | 13.0 | 18.5 | 18.0 | 20.5 | 20.0 | 22.5 | 21.5 | 18.0 | 17.5 |
| 23 | 11.0 | 10.0 | 13.5 | 13.0 | 18.5 | 18.0 | 20.5 | 20.0 | 22.0 | 21.5 | 18.0 | 17.5 |
| 24 | 11.5 | 10.5 | 13.5 | 13.5 | 19.0 | 18.5 | 21.0 | 20.5 | 21.5 | 21.5 | 18.0 | 17.5 |
| 25 | 12.0 | 11.0 | 14.0 | 13.0 | 19.5 | 19.0 | 21.0 | 20.5 | 21.5 | 21.0 | 18.0 | 17.0 |
| 26 | 12.0 | 11.5 | 14.0 | 13.5 | 19.5 | 19.0 | 21.0 | 20.5 | 21.5 | 20.5 | 18.0 | 17.0 |
| 27 | 12.5 | 11.5 | 14.0 | 13.5 | 19.5 | 19.0 | 21.0 | 20.5 | 21.0 | 20.5 | 17.0 | 16.5 |
| 28 | 13.0 | 12.0 | 13.5 | 13.0 | 20.0 | 19.0 | 21.5 | 20.5 | 21.0 | 20.0 | 17.0 | 16.5 |
| 29 | 13.5 | 12.5 | 14.0 | 13.5 | 20.0 | 19.0 | 21.5 | 21.0 | 21.0 | 20.5 | 17.0 | 16.5 |
| 30 | 13.5 | 12.5 | 14.5 | 13.5 | 20.0 | 19.0 | 21.5 | 21.0 | 20.5 | 19.5 | 17.0 | 16.5 |
| 31 | --- | --- | 14.0 | 13.5 | --- | --- | 21.0 | 20.5 | 20.5 | 19.5 | --- | --- |
| MONTH | 13.5 | 6.5 | 14.5 | 11.5 | 20.0 | 13.5 | 21.5 | 18.5 | 23.5 | 19.5 | 20.5 | 16.5 |

14223600 KALAMA RIVER ABOVE SPENCER CREEK, NEAR KALAMA, WA

LOCATION.--Lat 46°02'51", long 122°50'11", in SE¼NW¼ sec.32, T. 7 N., R.1 W., Cowlitz County, Hydrologic Unit 17080003, on right bank at Modrow Road Bridge, 2.1 mi (3.4 km) north of Kalama city limits, 0.6 mi (1.0 km) upstream from Spencer Creek, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--202 mi² (325 km²), approximately.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May to November 1970, July 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 21.5°C Aug. 12, 1977; minimum, 0.0°C Dec. 7-13, 1972, Jan. 9, 1973, Jan. 6-10, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C Aug. 12; minimum, 0.0°C Jan. 6-10.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 13.0 | 12.0 | 9.5 | 9.0 | 2.5 | 2.0 | 3.0 | 2.0 | 4.5 | 4.0 | 5.5 | 4.5 |
| 2 | 12.5 | 11.0 | 9.5 | 8.5 | 2.5 | 2.0 | 3.5 | 3.0 | 5.5 | 4.5 | 5.0 | 5.0 |
| 3 | 11.0 | 10.5 | 9.0 | 8.5 | 3.5 | 2.5 | 3.0 | 2.5 | 4.5 | 3.0 | 5.5 | 5.0 |
| 4 | 11.0 | 9.5 | 9.0 | 7.5 | 4.0 | 3.5 | 3.0 | 2.0 | 4.0 | 3.5 | 6.0 | 5.0 |
| 5 | 11.0 | 10.0 | 8.5 | 7.5 | 4.5 | 4.0 | 2.5 | 1.0 | 4.5 | 3.5 | 6.0 | 5.0 |
| 6 | 11.5 | 10.0 | 8.5 | 8.0 | 5.0 | 4.5 | 1.0 | 0.0 | 5.5 | 4.5 | 6.5 | 5.0 |
| 7 | 11.5 | 10.5 | 9.0 | 7.5 | 6.0 | 5.5 | 0.5 | 0.0 | 5.0 | 4.0 | 5.5 | 5.0 |
| 8 | 12.0 | 10.5 | 9.5 | 8.5 | 6.5 | 6.0 | 0.0 | 0.0 | 5.0 | 4.5 | 5.5 | 5.0 |
| 9 | 11.5 | 10.0 | 9.0 | 9.0 | 6.0 | 5.5 | 0.0 | 0.0 | 5.5 | 4.5 | 5.5 | 5.0 |
| 10 | 11.5 | 11.0 | 9.0 | 7.5 | 6.5 | 5.0 | 1.0 | 0.0 | 6.5 | 5.5 | 6.0 | 5.0 |
| 11 | 12.0 | 11.0 | 8.5 | 7.5 | 5.0 | 5.0 | 2.5 | 1.5 | 6.5 | 6.0 | 6.5 | 5.0 |
| 12 | 11.5 | 11.0 | 8.0 | 7.0 | 5.0 | 4.0 | 4.0 | 3.0 | 7.5 | 6.0 | 6.5 | 5.0 |
| 13 | 10.5 | 9.5 | 7.0 | 5.5 | 5.0 | 4.0 | 4.5 | 3.5 | 7.5 | 6.0 | 5.5 | 5.0 |
| 14 | 10.5 | 9.5 | 7.5 | 5.5 | 6.0 | 4.5 | 5.0 | 4.0 | 6.5 | 5.0 | 5.5 | 4.5 |
| 15 | 10.5 | 9.0 | 8.5 | 7.5 | 7.0 | 6.0 | 5.5 | 5.0 | 6.0 | 4.5 | 6.0 | 4.5 |
| 16 | 9.5 | 8.5 | 9.5 | 8.5 | 7.0 | 6.5 | 6.0 | 5.0 | 7.0 | 5.0 | 5.5 | 5.5 |
| 17 | 9.0 | 7.5 | 9.5 | 9.0 | 6.5 | 5.0 | 6.5 | 5.5 | 7.5 | 6.0 | 6.0 | 5.0 |
| 18 | 8.0 | 7.0 | 9.0 | 7.0 | 6.0 | 5.5 | 7.0 | 6.0 | 7.0 | 6.0 | 6.5 | 5.5 |
| 19 | 7.5 | 6.0 | 7.0 | 5.5 | 5.5 | 4.5 | 7.0 | 5.5 | 7.0 | 5.0 | 7.0 | 5.5 |
| 20 | 7.5 | 6.0 | 7.0 | 5.0 | 4.5 | 3.5 | 6.0 | 5.0 | 7.0 | 6.5 | 6.0 | 5.5 |
| 21 | 7.5 | 5.5 | 7.0 | 5.5 | 4.0 | 3.5 | 6.0 | 5.0 | 7.0 | 6.0 | 7.5 | 5.5 |
| 22 | 8.0 | 7.0 | 6.5 | 5.0 | 4.5 | 3.5 | 5.0 | 4.0 | 6.5 | 5.0 | 8.0 | 7.0 |
| 23 | 8.5 | 7.5 | 6.0 | 5.0 | 5.0 | 4.5 | 4.0 | 3.0 | 5.5 | 4.5 | 8.0 | 7.0 |
| 24 | 8.5 | 7.5 | 6.0 | 4.5 | 5.0 | 4.5 | 3.0 | 2.0 | 5.5 | 4.5 | 7.5 | 5.5 |
| 25 | 9.0 | 8.0 | 6.5 | 5.5 | 5.0 | 4.5 | 2.5 | 2.0 | 5.0 | 4.5 | 6.5 | 6.0 |
| 26 | 9.5 | 8.5 | 6.0 | 4.5 | 6.5 | 5.5 | 2.5 | 1.5 | 5.0 | 4.5 | 6.5 | 6.0 |
| 27 | 9.0 | 8.5 | 4.0 | 2.5 | 6.5 | 6.0 | 2.0 | 1.0 | 6.5 | 5.0 | 6.5 | 5.0 |
| 28 | 8.5 | 7.5 | 2.5 | 1.5 | 6.0 | 5.0 | 2.0 | 1.5 | 6.5 | 5.0 | 6.5 | 5.0 |
| 29 | 9.0 | 7.5 | 2.0 | 1.5 | 5.5 | 5.0 | 2.0 | 1.5 | --- | --- | 6.5 | 5.5 |
| 30 | 7.5 | 7.0 | 2.5 | 2.0 | 5.0 | 4.0 | 2.5 | 1.5 | --- | --- | 7.5 | 5.5 |
| 31 | 9.0 | 7.5 | --- | --- | 4.0 | 3.0 | 4.0 | 2.5 | --- | --- | 8.0 | 6.0 |
| MONTH | 13.0 | 5.5 | 9.5 | 1.5 | 7.0 | 2.0 | 7.0 | 0.0 | 7.5 | 3.0 | 8.0 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 7.5 | 6.0 | 11.0 | 10.0 | 10.5 | 9.0 | 17.0 | 15.0 | 20.0 | 17.5 | 15.5 | 11.5 |
| 2 | 7.5 | 6.0 | 10.0 | 9.5 | 10.0 | 8.0 | 16.0 | 14.0 | 20.5 | 18.0 | 14.0 | 12.5 |
| 3 | 8.0 | 6.0 | 9.5 | 8.5 | 10.0 | 9.0 | 15.0 | 13.0 | 20.5 | 18.0 | 13.5 | 12.5 |
| 4 | 9.0 | 7.5 | 8.0 | 7.0 | 10.0 | 9.0 | 13.5 | 11.0 | 20.0 | 18.0 | 14.0 | 13.0 |
| 5 | 9.5 | 8.0 | 8.0 | 6.5 | 13.0 | 9.5 | 13.0 | 11.0 | 21.0 | 18.0 | 14.5 | 13.0 |
| 6 | 10.0 | 8.0 | 9.0 | 7.0 | 13.0 | 12.5 | 15.5 | 12.0 | 20.5 | 18.5 | 14.5 | 12.5 |
| 7 | 10.0 | 7.5 | 9.5 | 8.0 | 14.0 | 12.5 | 17.0 | 13.0 | 20.5 | 18.5 | 14.5 | 11.5 |
| 8 | 10.0 | 7.5 | 10.0 | 8.0 | 13.5 | 11.5 | 16.5 | 14.5 | 20.5 | 18.0 | 14.0 | 11.0 |
| 9 | 7.5 | 6.0 | 11.0 | 9.0 | 13.0 | 11.0 | 16.0 | 14.5 | 21.0 | 18.0 | 14.0 | 11.0 |
| 10 | 7.0 | 6.0 | 10.5 | 8.5 | 13.5 | 11.0 | 15.5 | 13.0 | 20.5 | 17.5 | 14.0 | 11.0 |
| 11 | 9.0 | 7.0 | 9.5 | 7.5 | 12.5 | 11.0 | 15.0 | 14.0 | 21.0 | 17.5 | 14.0 | 12.0 |
| 12 | 8.5 | 7.5 | 10.0 | 7.5 | 14.0 | 10.5 | 15.0 | 13.5 | 21.5 | 18.0 | 14.0 | 12.5 |
| 13 | 9.0 | 7.5 | 10.5 | 9.0 | 14.0 | 12.0 | 14.0 | 12.5 | 21.0 | 18.5 | 14.5 | 12.5 |
| 14 | 7.5 | 6.0 | 10.0 | 9.0 | 15.0 | 12.5 | 16.0 | 12.5 | 20.0 | 18.0 | 14.0 | 13.5 |
| 15 | 8.0 | 7.5 | 10.0 | 8.5 | 15.0 | 12.5 | 17.0 | 15.0 | 20.5 | 17.0 | 13.5 | 12.5 |
| 16 | 8.0 | 7.0 | 9.0 | 8.0 | 16.5 | 13.0 | 17.5 | 16.0 | 20.5 | 17.5 | 13.0 | 12.0 |
| 17 | 8.0 | 6.0 | 9.0 | 8.0 | 17.5 | 13.0 | 16.5 | 15.0 | 21.0 | 18.0 | 12.5 | 11.5 |
| 18 | 8.0 | 6.0 | 9.0 | 8.0 | 16.0 | 14.0 | 15.0 | 14.0 | 19.0 | 17.5 | 12.0 | 11.5 |
| 19 | 8.5 | 6.0 | 10.5 | 8.0 | 15.5 | 12.5 | 16.5 | 13.0 | 18.0 | 16.5 | 12.5 | 11.5 |
| 20 | 9.0 | 6.5 | 10.5 | 9.5 | 14.5 | 13.0 | 16.5 | 14.5 | 17.0 | 16.5 | 12.5 | 11.5 |
| 21 | 9.5 | 7.0 | 11.5 | 9.5 | 13.5 | 12.0 | 17.5 | 15.0 | 16.5 | 15.5 | 12.0 | 11.0 |
| 22 | 11.0 | 7.5 | 11.5 | 9.5 | 16.0 | 12.5 | 18.5 | 15.5 | 17.0 | 15.0 | 12.0 | 10.5 |
| 23 | 11.0 | 9.5 | 10.5 | 9.5 | 17.0 | 13.5 | 18.5 | 16.0 | 15.5 | 14.0 | 11.0 | 10.0 |
| 24 | 11.0 | 9.5 | 10.0 | 9.0 | 17.5 | 13.5 | 19.0 | 16.5 | 14.5 | 13.0 | 11.0 | 10.5 |
| 25 | 11.0 | 9.5 | 11.0 | 8.5 | 18.0 | 14.5 | 18.0 | 16.0 | 14.0 | 13.5 | 10.5 | 10.0 |
| 26 | 10.0 | 9.0 | 10.5 | 9.5 | 17.0 | 14.5 | 17.5 | 15.5 | 14.0 | 13.0 | 11.0 | 10.0 |
| 27 | 10.5 | 8.0 | 9.5 | 8.5 | 16.5 | 14.0 | 18.5 | 15.5 | 13.5 | 12.5 | 10.5 | 10.0 |
| 28 | 11.5 | 9.0 | 9.0 | 8.0 | 17.5 | 14.0 | 17.5 | 16.0 | 14.5 | 13.5 | 11.0 | 10.5 |
| 29 | 11.5 | 9.5 | 9.0 | 7.5 | 17.5 | 14.0 | 18.0 | 15.5 | 13.5 | 12.5 | 11.0 | 10.5 |
| 30 | 12.5 | 10.0 | 9.0 | 8.0 | 18.0 | 14.0 | 18.5 | 15.5 | 13.5 | 12.0 | 11.0 | 10.0 |
| 31 | --- | --- | 9.5 | 8.0 | --- | --- | 19.5 | 16.5 | 14.5 | 12.5 | --- | --- |
| MONTH | 12.5 | 6.0 | 11.5 | 6.5 | 18.0 | 8.0 | 19.5 | 11.0 | 21.5 | 12.0 | 15.5 | 10.0 |

COLUMBIA RIVER MAIN STEM

14245295 COLUMBIA RIVER AT RAINIER, OR

LOCATION.--Lat 46°06'02", long 122°57'47", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.8, T.7 N., R.2 W., Columbia County, Hydrologic Unit 17080003, on left bank at Rainier, 1.2 mi (1.9 km) downstream from Nice Creek, 500 ft (152 m) upstream from Interstate bridge, and at mile 66.1 (106.4 km).

DRAINAGE AREA.--256,700 mi² (664,900 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at Columbia River datum, 0.34 ft (0.104 m) below mean sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 16.52 ft (5.035 m) Jan. 19, 1974; minimum, 0.46 ft (0.140 m) July 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 9.26 ft (2.822 m) Mar. 9; minimum, 0.46 ft (0.140 m) July 6.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|---------|------|------|----------|------|------|----------|------|------|---------|------|------|
| | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | 6.12 | 1.99 | 3.85 | 5.88 | 2.21 | 3.82 | 5.91 | 2.46 | 3.83 | --- | --- | --- |
| 2 | 5.80 | 2.13 | 3.86 | 5.87 | 2.12 | 3.71 | 6.28 | 2.31 | 3.94 | --- | --- | --- |
| 3 | 5.61 | 1.66 | 3.50 | 5.84 | 2.02 | 3.66 | 6.43 | 2.25 | 4.00 | --- | --- | --- |
| 4 | 5.69 | 1.77 | 3.63 | 6.33 | 2.25 | 3.94 | 6.20 | 1.49 | 3.73 | --- | --- | --- |
| 5 | 6.36 | 2.44 | 4.26 | 6.45 | 2.13 | 4.11 | 5.80 | 1.28 | 3.33 | --- | --- | --- |
| 6 | 6.41 | 2.70 | 4.46 | 6.20 | 1.93 | 3.89 | 6.06 | 1.60 | 3.56 | --- | --- | --- |
| 7 | 6.50 | 2.51 | 4.34 | 6.38 | 1.92 | 4.05 | 6.56 | 1.69 | 3.99 | --- | --- | --- |
| 8 | 6.66 | 2.47 | 4.41 | 6.38 | 1.98 | 3.95 | 7.16 | 1.89 | 4.55 | --- | --- | --- |
| 9 | 6.79 | 2.55 | 4.38 | 6.47 | 1.79 | 3.98 | 6.51 | 2.30 | 4.29 | --- | --- | --- |
| 10 | 6.46 | 2.22 | 4.12 | 6.34 | 2.03 | 4.06 | 5.93 | 1.82 | 3.75 | --- | --- | --- |
| 11 | 6.30 | 1.97 | 3.99 | 6.20 | 2.02 | 4.00 | 5.74 | 1.46 | 3.62 | --- | --- | --- |
| 12 | 5.97 | 2.08 | 3.77 | 5.77 | 1.93 | 3.79 | --- | --- | --- | --- | --- | --- |
| 13 | 5.99 | 2.04 | 3.83 | 5.56 | 1.84 | 3.79 | --- | --- | --- | --- | --- | --- |
| 14 | 5.76 | 2.18 | 3.90 | 5.45 | 1.94 | 3.86 | --- | --- | --- | --- | --- | --- |
| 15 | 5.58 | 2.38 | 3.93 | 5.54 | 1.93 | 3.69 | --- | --- | --- | --- | --- | --- |
| 16 | 4.97 | 2.27 | 3.66 | 5.99 | 1.86 | 3.77 | --- | --- | --- | --- | --- | --- |
| 17 | 4.58 | 1.48 | 3.00 | 6.51 | 1.99 | 3.88 | --- | --- | --- | --- | --- | --- |
| 18 | 5.14 | 1.21 | 3.03 | 6.49 | 2.06 | 3.87 | --- | --- | --- | --- | --- | --- |
| 19 | 5.71 | 2.04 | 3.76 | 6.79 | 2.13 | 4.02 | --- | --- | --- | 7.46 | 2.39 | --- |
| 20 | 6.66 | 2.53 | 4.37 | 6.97 | 2.14 | 4.21 | --- | --- | --- | 7.54 | 2.39 | 4.78 |
| 21 | 7.07 | 2.58 | 4.59 | 7.51 | 2.42 | 4.59 | --- | --- | --- | 7.23 | 2.82 | 4.91 |
| 22 | 7.59 | 2.83 | 4.95 | 7.62 | 2.41 | 4.75 | --- | --- | --- | 6.65 | 2.71 | 4.51 |
| 23 | 7.70 | 2.80 | 4.99 | 7.63 | 2.55 | 4.76 | --- | --- | --- | 6.14 | 2.17 | 3.97 |
| 24 | 7.75 | 2.50 | 4.67 | 7.54 | 2.55 | 4.86 | --- | --- | --- | 5.90 | 1.82 | 3.88 |
| 25 | 7.48 | 2.42 | 4.76 | 6.96 | 2.71 | 4.69 | --- | --- | --- | 6.10 | 2.37 | 4.19 |
| 26 | 7.17 | 2.59 | 4.57 | 5.91 | 2.19 | 3.91 | --- | --- | --- | 6.45 | 3.09 | 4.37 |
| 27 | 6.93 | 2.35 | 4.39 | 5.20 | 1.42 | 3.34 | --- | --- | --- | 5.97 | 2.68 | 3.92 |
| 28 | 6.23 | 2.26 | 4.15 | 5.34 | 1.71 | 3.31 | --- | --- | --- | 5.71 | 2.46 | 3.76 |
| 29 | 5.72 | 2.28 | 4.04 | 5.14 | 1.28 | 3.11 | --- | --- | --- | 5.47 | 2.07 | 3.52 |
| 30 | 5.34 | 2.16 | 3.69 | 5.73 | 2.14 | 3.64 | --- | --- | --- | 5.87 | 2.07 | 3.63 |
| 31 | 6.11 | 1.86 | 3.95 | --- | --- | --- | --- | --- | --- | 6.45 | 2.76 | 4.13 |
| MONTH | 7.75 | 1.21 | 4.09 | 7.63 | 1.28 | 3.96 | 7.16 | 1.28 | 3.87 | 7.54 | 1.82 | 4.13 |

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|------|------|-------|------|------|-------|------|------|------|------|------|
| | FEBRUARY | | | MARCH | | | APRIL | | | MAY | | |
| 1 | 6.68 | 2.45 | 4.46 | 6.00 | 2.46 | 4.19 | 5.66 | 1.96 | 3.73 | 6.20 | 1.91 | 3.85 |
| 2 | 6.71 | 2.59 | 4.37 | 6.29 | 2.51 | 4.19 | 5.88 | 1.84 | 3.69 | 6.73 | 2.24 | 4.39 |
| 3 | 6.88 | 2.49 | 4.46 | 6.42 | 2.64 | 4.57 | 6.07 | 1.69 | 3.67 | 7.81 | 3.23 | 5.44 |
| 4 | 6.99 | 2.28 | 4.52 | 6.55 | 2.34 | 4.39 | 6.15 | 1.48 | 3.69 | 8.51 | 3.71 | 5.84 |
| 5 | 6.53 | 2.06 | 4.13 | 6.61 | 2.36 | 4.22 | 6.64 | 1.61 | 3.91 | 8.57 | 3.68 | 5.81 |
| 6 | 6.26 | 1.90 | 3.95 | 7.14 | 2.54 | 4.67 | 6.77 | 1.78 | 4.01 | 8.23 | 3.34 | 5.48 |
| 7 | 5.90 | 1.64 | 3.70 | 8.08 | 2.92 | 5.52 | 6.90 | 1.95 | 4.21 | 7.65 | 2.94 | 5.04 |
| 8 | 6.77 | 2.07 | 4.39 | 8.56 | 4.10 | 6.20 | 6.95 | 2.04 | 4.20 | 6.94 | 2.55 | 4.59 |
| 9 | 6.49 | 2.17 | 3.98 | 9.26 | 4.50 | 6.54 | 6.43 | 1.66 | 3.77 | 6.21 | 2.42 | 4.32 |
| 10 | 6.88 | 2.13 | 4.33 | 7.86 | 3.78 | 5.42 | 5.47 | 1.05 | 3.19 | 5.91 | 2.24 | 4.07 |
| 11 | 6.26 | 1.90 | 3.72 | 7.05 | 3.04 | 4.86 | 5.10 | 1.15 | 3.03 | 5.97 | 2.08 | 3.76 |
| 12 | 6.05 | 1.48 | 3.46 | 7.32 | 3.22 | 4.93 | 5.15 | 1.07 | 2.91 | 5.95 | 2.13 | 3.79 |
| 13 | 5.49 | 1.04 | 3.02 | 6.73 | 2.92 | 4.57 | 5.18 | 1.41 | 3.21 | 6.23 | 2.44 | 4.03 |
| 14 | 5.67 | 1.36 | 3.16 | 6.47 | 2.58 | 4.35 | 5.20 | 1.65 | 3.29 | 6.48 | 2.42 | 4.09 |
| 15 | 6.33 | 1.72 | 3.70 | 6.55 | 2.55 | 4.41 | 5.82 | 1.95 | 3.62 | 6.55 | 2.36 | 4.13 |
| 16 | 6.72 | 1.94 | 4.09 | 6.56 | 2.78 | 4.42 | 6.10 | 1.74 | 3.68 | 6.59 | 2.35 | 4.24 |
| 17 | 6.47 | 1.55 | 3.90 | 6.81 | 2.67 | 4.68 | 5.59 | 1.16 | 3.07 | 6.61 | 2.35 | 4.21 |
| 18 | 6.32 | 1.75 | 3.81 | 6.58 | 2.49 | 4.41 | 5.39 | 0.82 | 2.93 | 6.59 | 2.33 | 4.24 |
| 19 | 6.63 | 1.77 | 4.06 | 6.62 | 2.54 | 4.47 | 5.35 | 0.88 | 2.98 | 6.49 | 1.94 | 3.50 |
| 20 | 6.61 | 1.95 | 4.28 | 6.41 | 2.16 | 4.08 | 5.45 | 1.03 | 3.21 | 6.18 | 1.67 | 3.77 |
| 21 | 7.04 | 2.01 | 4.70 | 6.30 | 2.14 | 4.01 | 5.98 | 1.50 | 3.53 | 6.26 | 2.01 | 4.02 |
| 22 | 7.31 | 2.98 | 4.72 | 6.37 | 2.21 | 4.14 | 6.00 | 1.83 | 3.78 | 6.17 | 2.06 | 4.07 |
| 23 | 6.44 | 2.53 | 4.17 | 6.64 | 2.50 | 4.38 | 5.73 | 1.37 | 3.43 | 5.93 | 2.11 | 4.00 |
| 24 | 5.97 | 2.29 | 3.77 | 6.50 | 2.32 | 4.15 | 5.09 | 1.00 | 3.02 | 5.57 | 1.91 | 3.80 |
| 25 | 5.50 | 2.16 | 3.49 | 5.77 | 1.89 | 3.59 | 4.88 | 1.41 | 3.08 | 5.87 | 1.94 | 3.75 |
| 26 | 5.27 | 1.78 | 3.32 | 5.41 | 1.74 | 3.44 | 4.62 | 1.42 | 3.13 | 6.59 | 3.08 | 4.61 |
| 27 | 5.15 | 1.80 | 3.29 | 5.58 | 2.16 | 3.58 | 5.11 | 1.57 | 3.17 | 6.97 | 3.10 | 4.65 |
| 28 | 5.91 | 2.52 | 4.05 | 4.51 | 1.51 | 3.00 | 5.33 | 1.52 | 3.32 | 6.93 | 2.78 | 4.58 |
| 29 | --- | --- | --- | 4.29 | 1.25 | 2.83 | 5.39 | 1.47 | 3.32 | 6.89 | 2.58 | 4.23 |
| 30 | --- | --- | --- | 4.53 | 1.39 | 2.96 | 5.55 | 1.68 | 3.42 | 7.02 | 2.20 | 4.07 |
| 31 | --- | --- | --- | 5.21 | 1.72 | 3.27 | --- | --- | --- | 6.87 | 2.24 | 4.39 |
| MONTH | 7.31 | 1.04 | 3.96 | 9.26 | 1.25 | 4.33 | 6.95 | 0.82 | 3.44 | 8.57 | 1.67 | 4.34 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|------|------|------|------|------|--------|------|------|-----------|------|------|
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 7.80 | 3.28 | 5.28 | 6.90 | 1.47 | 3.90 | 5.93 | 1.05 | 3.48 | 5.93 | 1.60 | 3.60 |
| 2 | 8.26 | 3.17 | 5.49 | 6.67 | 1.19 | 3.71 | 6.15 | 1.65 | 3.82 | 5.65 | 1.47 | 3.42 |
| 3 | 8.30 | 3.25 | 5.51 | 6.39 | 1.14 | 3.60 | 6.00 | 1.64 | 3.81 | 5.58 | 1.68 | 3.37 |
| 4 | 8.43 | 3.27 | 5.53 | 5.99 | 1.01 | 3.42 | 5.97 | 1.59 | 3.65 | 5.43 | 1.98 | 3.55 |
| 5 | 7.39 | 2.32 | 4.73 | 5.46 | 0.71 | 3.09 | 5.92 | 1.85 | 3.65 | 4.83 | 1.57 | 2.93 |
| 6 | 6.83 | 2.41 | 4.58 | 4.71 | 0.46 | 2.69 | 5.16 | 1.51 | 3.21 | 4.79 | 1.21 | 2.73 |
| 7 | 6.28 | 2.36 | 4.39 | 4.76 | 0.60 | 2.50 | 4.92 | 1.33 | 2.69 | 4.86 | 1.39 | 2.89 |
| 8 | 6.09 | 2.24 | 4.09 | 4.90 | 0.61 | 2.53 | 4.96 | 1.24 | 2.69 | 4.73 | 1.25 | 2.74 |
| 9 | 6.04 | 2.12 | 3.77 | 4.61 | 0.78 | 2.54 | 4.93 | 1.00 | 2.64 | 4.75 | 0.83 | 2.62 |
| 10 | 6.08 | 2.30 | 3.71 | 4.48 | 0.73 | 2.21 | 5.07 | 0.92 | 2.76 | 5.09 | 1.03 | 2.92 |
| 11 | 6.10 | 1.99 | 3.52 | 4.78 | 0.76 | 2.52 | 5.30 | 1.04 | 2.97 | 5.37 | 1.05 | 3.08 |
| 12 | 5.85 | 1.72 | 3.41 | 5.14 | 0.99 | 2.80 | 5.68 | 1.08 | 3.32 | 5.53 | 0.88 | 3.18 |
| 13 | 5.97 | 1.59 | 3.54 | 5.34 | 1.08 | 3.01 | 6.18 | 1.34 | 3.53 | 6.04 | 1.52 | 3.70 |
| 14 | 6.29 | 1.97 | 3.85 | 5.55 | 0.83 | 2.97 | 5.98 | 1.14 | 3.45 | 6.66 | 2.03 | 4.22 |
| 15 | 6.26 | 1.67 | 3.81 | 5.58 | 1.05 | 3.15 | 5.96 | 1.16 | 3.57 | 6.75 | 2.22 | 4.31 |
| 16 | 6.34 | 1.93 | 4.00 | 5.77 | 0.96 | 3.16 | 6.15 | 1.64 | 3.90 | 6.95 | 2.33 | 4.40 |
| 17 | 6.56 | 2.06 | 4.26 | 5.58 | 0.85 | 3.07 | 6.34 | 1.94 | 4.13 | 6.84 | 2.36 | 4.37 |
| 18 | 6.65 | 1.95 | 4.12 | 5.55 | 0.90 | 3.28 | 6.21 | 1.92 | 4.05 | 6.44 | 2.09 | 4.04 |
| 19 | 6.10 | 1.25 | 3.58 | 5.94 | 1.49 | 3.66 | 6.08 | 1.49 | 3.69 | 6.83 | 2.14 | 4.32 |
| 20 | 5.77 | 1.15 | 3.43 | 5.79 | 1.43 | 3.61 | 5.84 | 1.55 | 3.58 | 6.34 | 2.46 | 4.23 |
| 21 | 5.43 | 0.86 | 3.18 | 5.51 | 1.19 | 3.41 | 5.47 | 1.30 | 3.13 | 5.86 | 1.84 | 3.63 |
| 22 | 5.09 | 0.89 | 3.09 | 5.20 | 0.91 | 3.04 | 5.76 | 1.16 | 3.04 | 5.94 | 1.63 | 3.48 |
| 23 | 5.13 | 1.04 | 3.01 | 5.05 | 0.55 | 2.74 | 6.25 | 1.61 | 3.43 | 5.99 | 1.75 | 3.88 |
| 24 | 5.12 | 0.90 | 2.85 | 5.39 | 1.02 | 2.73 | 6.27 | 1.83 | 3.68 | 6.60 | 2.31 | 4.25 |
| 25 | 5.39 | 1.00 | 2.88 | 4.75 | 1.22 | 2.58 | 6.35 | 1.74 | 3.73 | 6.55 | 2.19 | 4.27 |
| 26 | 5.41 | 0.98 | 2.83 | 5.62 | 1.01 | 2.96 | 6.67 | 1.75 | 3.87 | 6.69 | 2.32 | 4.41 |
| 27 | 5.47 | 1.15 | 2.90 | 5.78 | 1.00 | 3.07 | 6.44 | 1.40 | 3.70 | 6.80 | 2.44 | 4.46 |
| 28 | 5.85 | 1.39 | 3.17 | 6.11 | 1.12 | 3.32 | 6.44 | 1.59 | 3.92 | 7.09 | 2.52 | 4.59 |
| 29 | 6.12 | 1.26 | 3.37 | 6.27 | 1.22 | 3.53 | 6.35 | 1.55 | 3.95 | 6.97 | 2.56 | 4.57 |
| 30 | 6.42 | 1.56 | 3.78 | 6.37 | 1.23 | 3.60 | 6.47 | 2.11 | 4.17 | 6.67 | 2.56 | 4.34 |
| 31 | --- | --- | --- | 6.29 | 1.22 | 3.59 | 6.18 | 1.65 | 3.81 | --- | --- | --- |
| MONTH | 8.43 | 0.86 | 3.85 | 6.90 | 0.46 | 3.09 | 6.67 | 0.92 | 3.51 | 7.09 | 0.83 | 3.75 |

| YEAR | 9.26 | 0.46 | 3.84 |
|------|------|------|------|
|------|------|------|------|

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 10, 11, 1977; minimum, 0.0°C Jan. 9-13, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 10, 11; minimum recorded, 2.5°C Jan. 11, 12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 18.5 | 18.0 | 13.5 | 13.0 | 8.0 | 7.5 | 5.5 | 5.0 | | | --- | --- |
| 2 | 18.5 | 18.0 | 13.0 | 13.0 | 7.5 | 7.5 | 5.0 | 4.5 | | | --- | --- |
| 3 | 18.5 | 17.5 | 13.0 | 12.5 | 7.5 | 7.0 | 4.5 | 4.5 | | | --- | --- |
| 4 | 18.5 | 17.5 | 13.0 | 12.5 | 7.5 | 7.0 | 4.5 | 4.0 | | | --- | --- |
| 5 | 17.5 | 17.5 | 12.5 | 12.5 | 7.5 | 7.5 | 4.0 | 4.0 | | | --- | --- |
| 6 | 18.0 | 17.5 | 12.5 | 12.0 | 7.5 | 7.5 | 4.5 | 4.0 | | | --- | --- |
| 7 | 18.0 | 17.0 | 12.0 | 12.0 | 7.5 | 7.5 | 4.0 | 3.5 | | | --- | --- |
| 8 | 18.0 | 17.5 | 12.5 | 12.0 | 7.5 | 7.0 | 4.0 | 3.5 | | | --- | --- |
| 9 | 17.5 | 17.0 | 12.0 | 12.0 | 7.5 | 7.0 | 3.5 | 3.0 | | | --- | --- |
| 10 | 17.5 | 17.0 | 12.5 | 12.0 | 7.0 | 7.0 | 3.0 | 3.0 | | | --- | --- |
| 11 | 17.5 | 17.0 | 12.0 | 12.0 | 7.0 | 7.0 | 3.0 | 2.5 | | | --- | --- |
| 12 | 17.5 | 17.0 | 12.0 | 11.5 | 7.0 | 6.5 | 3.0 | 2.5 | | | --- | --- |
| 13 | 17.5 | 17.0 | 11.5 | 11.5 | 6.5 | 6.5 | 3.0 | 3.0 | | | --- | --- |
| 14 | 17.0 | 16.5 | 11.5 | 11.5 | 6.5 | 6.5 | 3.5 | 3.0 | | | --- | --- |
| 15 | 17.0 | 16.5 | 11.5 | 11.0 | 6.5 | 6.5 | 4.0 | 3.5 | | | --- | --- |
| 16 | 16.5 | 16.0 | 11.5 | 11.0 | 6.5 | 6.5 | 4.0 | 3.5 | | | --- | --- |
| 17 | 16.5 | 15.5 | 11.5 | 11.0 | 6.5 | 6.0 | 4.0 | 4.0 | | | --- | --- |
| 18 | 16.0 | 15.5 | 11.5 | 11.0 | 6.5 | 6.0 | 4.0 | 4.0 | | | 6.0 | 6.0 |
| 19 | 15.5 | 15.0 | 11.5 | 11.0 | 6.0 | 6.0 | 4.0 | 4.0 | | | 6.0 | 6.0 |
| 20 | 15.0 | 14.0 | 11.0 | 11.0 | 6.0 | 6.0 | 4.0 | 4.0 | | | 6.0 | 6.0 |
| 21 | 14.5 | 14.0 | 11.0 | 10.5 | 6.0 | 6.0 | 4.5 | 4.0 | | | 6.5 | 6.0 |
| 22 | 14.5 | 14.0 | 11.0 | 10.5 | 6.0 | 5.5 | 4.5 | 4.0 | | | 6.5 | 6.0 |
| 23 | 14.0 | 14.0 | 10.5 | 10.0 | 5.5 | 5.5 | --- | --- | | | 7.0 | 6.0 |
| 24 | 14.0 | 14.0 | 10.0 | 10.0 | 5.5 | 5.5 | --- | --- | | | 7.0 | 6.5 |
| 25 | 14.0 | 14.0 | 10.0 | 9.5 | 5.5 | 5.5 | --- | --- | | | 7.0 | 6.5 |
| 26 | 14.0 | 14.0 | 9.5 | 9.5 | 6.0 | 5.5 | --- | --- | | | 7.0 | 6.5 |
| 27 | 14.0 | 13.5 | 9.5 | 9.0 | 6.0 | 5.5 | --- | --- | | | 7.0 | 6.5 |
| 28 | 13.5 | 13.5 | 9.0 | 8.5 | 6.0 | 5.5 | --- | --- | | | 7.5 | 6.5 |
| 29 | 13.5 | 13.5 | 8.5 | 8.0 | 6.0 | 5.5 | --- | --- | | | 7.5 | 6.5 |
| 30 | 13.0 | 13.0 | 8.0 | 8.0 | 6.0 | 5.5 | --- | --- | | | 8.0 | 6.5 |
| 31 | 13.0 | 13.0 | --- | --- | 5.5 | 5.5 | --- | --- | | | 7.0 | 7.0 |
| MONTH | 18.5 | 13.0 | 13.5 | 8.0 | 8.0 | 5.5 | 5.5 | 2.5 | | | 8.0 | 6.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.5 | 7.0 | 13.0 | 12.5 | 14.0 | 13.5 | 19.0 | 18.5 | 21.0 | 20.5 | 19.5 | 19.0 |
| 2 | 7.5 | 7.0 | 13.0 | 12.5 | 14.0 | 13.5 | 19.0 | 18.5 | 21.0 | 20.5 | 19.5 | 19.0 |
| 3 | 7.5 | 7.0 | 12.5 | 12.0 | 14.0 | 13.5 | 18.5 | 18.5 | 21.5 | 21.0 | 19.5 | 19.0 |
| 4 | 8.0 | 7.0 | 12.0 | 12.0 | 14.0 | 13.5 | 19.0 | 18.0 | 21.5 | 21.0 | 19.5 | 19.0 |
| 5 | 8.5 | 7.5 | 12.0 | 12.0 | 14.5 | 13.5 | 18.5 | 18.0 | 21.5 | 21.0 | 19.5 | 19.0 |
| 6 | 8.5 | 8.0 | 12.0 | 11.5 | 15.5 | 14.0 | 19.5 | 18.0 | 22.0 | 21.0 | 19.5 | 18.5 |
| 7 | 9.5 | 8.5 | 12.5 | 11.5 | 16.0 | 15.0 | 19.0 | 18.0 | 22.0 | 21.0 | 19.5 | 19.0 |
| 8 | 9.5 | 9.0 | 13.0 | 12.0 | 16.0 | 15.0 | 19.0 | 18.0 | 22.5 | 21.0 | 20.0 | 18.5 |
| 9 | 9.5 | 9.0 | 13.0 | 12.0 | 16.5 | 15.0 | 19.0 | 18.0 | 23.0 | 21.5 | 19.5 | 18.5 |
| 10 | 9.5 | 9.0 | 12.5 | 12.5 | 16.0 | 15.0 | 20.0 | 18.5 | 23.5 | 21.5 | 19.0 | 18.0 |
| 11 | 10.0 | 9.0 | 13.0 | 12.0 | 16.0 | 15.5 | 19.0 | 18.5 | 23.5 | 21.5 | 18.5 | 18.0 |
| 12 | 10.0 | 9.0 | 13.0 | 12.0 | 16.5 | 15.5 | 19.0 | 18.5 | 23.0 | 22.0 | 19.0 | 18.0 |
| 13 | 10.0 | 9.5 | 12.5 | 12.0 | 16.5 | 16.0 | 19.0 | 18.0 | 22.5 | 22.0 | 19.0 | 18.0 |
| 14 | 10.0 | 9.0 | 13.0 | 12.0 | 16.5 | 15.5 | 19.0 | 18.0 | 23.0 | 22.0 | 19.0 | 18.5 |
| 15 | 10.0 | 9.5 | 13.0 | 12.5 | 16.5 | 15.5 | 19.0 | 18.0 | 22.5 | 22.0 | 19.0 | 18.5 |
| 16 | 9.5 | 9.0 | 12.5 | 12.0 | 17.0 | 16.0 | 19.0 | 18.5 | 23.0 | 22.0 | 18.5 | 18.0 |
| 17 | 9.5 | 9.0 | 12.5 | 12.0 | 17.0 | 16.5 | 19.0 | 18.5 | 23.0 | 22.5 | 18.0 | 18.0 |
| 18 | 10.0 | 9.0 | 12.5 | 12.0 | 17.5 | 17.0 | 19.0 | 18.5 | 22.5 | 22.0 | 18.0 | 18.0 |
| 19 | 10.0 | 9.0 | 13.0 | 12.0 | 18.0 | 17.0 | 19.5 | 18.5 | 22.5 | 22.0 | 17.5 | 17.5 |
| 20 | 10.0 | 9.5 | 13.0 | 12.0 | 17.5 | 17.5 | 19.5 | 19.0 | 22.0 | 22.0 | 17.5 | 17.0 |
| 21 | 10.0 | 9.5 | 13.0 | 12.5 | 17.5 | 17.0 | 20.0 | 19.0 | 22.0 | 21.5 | 17.5 | 17.0 |
| 22 | 11.0 | 10.0 | 13.5 | 12.5 | 18.0 | 17.5 | 20.5 | 19.0 | 21.5 | 21.0 | 17.5 | 16.5 |
| 23 | 11.0 | 10.0 | 13.5 | 13.0 | 18.0 | 17.0 | 20.5 | 19.0 | 21.5 | 21.0 | 17.0 | 16.5 |
| 24 | 11.0 | 10.5 | 13.5 | 13.0 | 18.5 | 17.5 | 20.5 | 19.5 | 21.0 | 20.5 | 17.0 | 16.5 |
| 25 | 11.5 | 11.0 | 13.5 | 12.5 | 19.0 | 18.0 | 20.0 | 19.5 | 20.5 | 20.0 | 16.5 | 16.0 |
| 26 | 12.0 | 11.0 | 13.5 | 12.5 | 19.5 | 18.5 | 21.0 | 19.5 | 20.5 | 20.0 | 16.5 | 16.0 |
| 27 | 12.0 | 11.0 | 13.5 | 13.0 | 19.5 | 18.5 | 20.5 | 19.5 | 20.0 | 19.5 | 16.0 | 16.0 |
| 28 | 12.0 | 11.5 | 13.5 | 13.0 | 19.0 | 18.5 | 20.5 | 20.0 | 20.0 | 19.5 | 16.0 | 15.5 |
| 29 | 13.0 | 12.0 | 13.5 | 13.0 | 19.5 | 18.5 | 20.5 | 20.0 | 19.5 | 19.5 | 16.0 | 15.5 |
| 30 | 13.0 | 12.0 | 13.5 | 13.0 | 19.5 | 18.5 | 21.0 | 20.0 | 19.5 | 19.0 | 16.0 | 15.5 |
| 31 | --- | --- | 13.5 | 13.5 | --- | --- | 21.0 | 20.0 | 19.5 | 19.0 | --- | --- |
| MONTH | 13.0 | 7.0 | 13.5 | 11.5 | 19.5 | 13.5 | 21.0 | 18.0 | 23.5 | 19.0 | 20.0 | 15.5 |

COLUMBIA RIVER MAIN STEM

399

14247295 COLUMBIA RIVER AT WAUNA, OR

LOCATION.--Lat 46°09'40", long 123°24'30", in SE¼ sec.22, T.8 N., R.6 W., Clatsop County, Hydrologic Unit 17080003, on left bank at northwest end of Crown-Zellerbach wood-pulp processing plant at Wauna, and at mile 41.5 (66.8 km).

DRAINAGE AREA.--257,000 mi² (665,600 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1971 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is at Columbia River datum, 1.76 ft (0.536 m) below mean sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 11.96 ft (3.645 m) Dec. 21, 1972; minimum recorded, -0.46 ft (-0.140 m) June 29, Aug. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 9.32 ft (2.841 m) Oct. 24; minimum recorded, -0.46 ft (-0.140 m) June 29, Aug. 1.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|---------|------|------|----------|------|------|----------|-------|------|---------|------|------|
| | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | 7.04 | 0.63 | 3.87 | 6.77 | 1.03 | 3.70 | 6.78 | 1.04 | 3.55 | --- | --- | --- |
| 2 | 6.74 | 0.89 | 3.91 | 6.69 | 0.93 | 3.49 | 7.16 | 0.81 | 3.72 | --- | --- | --- |
| 3 | 6.29 | 0.49 | 3.43 | 6.70 | 0.63 | 3.44 | 7.34 | 0.58 | 3.80 | --- | --- | --- |
| 4 | 6.50 | 0.39 | 3.44 | 7.24 | 0.67 | 3.72 | 7.32 | 0.12 | 3.71 | --- | --- | --- |
| 5 | 7.04 | 0.67 | 3.78 | 7.45 | 0.41 | 3.88 | 7.10 | -0.09 | 3.50 | --- | --- | --- |
| 6 | 7.08 | 0.94 | 3.82 | 7.20 | 0.36 | 3.76 | 7.36 | 0.03 | 3.69 | --- | --- | --- |
| 7 | 7.24 | 0.89 | 3.92 | 7.48 | 0.11 | 3.98 | 7.77 | 0.26 | 4.08 | --- | --- | --- |
| 8 | 7.56 | 0.81 | 4.21 | 7.44 | 0.14 | 3.94 | 8.36 | 0.80 | 4.72 | --- | --- | --- |
| 9 | 7.73 | 0.71 | 4.23 | 7.52 | 0.32 | 4.01 | 7.55 | 0.24 | 4.31 | --- | --- | --- |
| 10 | 7.55 | 0.51 | 4.16 | 7.30 | 0.43 | 4.06 | 7.02 | 0.03 | 3.83 | --- | --- | --- |
| 11 | 7.30 | 0.48 | 4.00 | 7.18 | 0.42 | 4.06 | 6.73 | 0.01 | 3.77 | --- | --- | --- |
| 12 | 6.84 | 0.44 | 3.68 | 6.73 | 0.46 | 3.94 | 6.42 | 0.17 | 3.79 | --- | --- | --- |
| 13 | 6.76 | 0.42 | 3.73 | 6.50 | 0.57 | 4.00 | 6.69 | 0.45 | 3.80 | --- | --- | --- |
| 14 | 6.50 | 0.61 | 3.75 | 6.45 | 0.88 | 4.18 | 7.00 | 0.70 | 3.78 | --- | --- | --- |
| 15 | 6.29 | 0.89 | 3.80 | 6.48 | 1.01 | 3.86 | 7.42 | 1.03 | 3.90 | --- | --- | --- |
| 16 | 5.76 | 0.87 | 3.58 | --- | --- | --- | 7.82 | 1.18 | 4.07 | --- | --- | --- |
| 17 | 5.50 | 0.50 | 3.15 | --- | --- | --- | 8.37 | 1.01 | 4.34 | --- | --- | --- |
| 18 | 5.70 | 0.18 | 2.55 | --- | --- | --- | 8.59 | 0.58 | 4.30 | --- | --- | --- |
| 19 | 6.56 | 0.47 | 3.45 | --- | --- | --- | 8.51 | 0.24 | 4.13 | --- | --- | --- |
| 20 | 7.41 | 0.88 | 3.97 | --- | --- | --- | 8.74 | 0.13 | 4.29 | --- | --- | --- |
| 21 | 8.03 | 0.91 | 4.19 | --- | --- | --- | 8.90 | 0.50 | 4.51 | --- | --- | --- |
| 22 | 8.56 | 0.79 | 4.47 | --- | --- | --- | --- | --- | --- | --- | 0.34 | --- |
| 23 | 8.77 | 0.53 | 4.58 | --- | --- | --- | --- | --- | --- | 6.95 | 0.33 | --- |
| 24 | 9.32 | 0.59 | 4.68 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 8.71 | 0.59 | 4.73 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | 8.21 | 0.46 | 4.32 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | 7.83 | 0.31 | 4.19 | --- | --- | --- | --- | --- | --- | --- | 1.51 | --- |
| 28 | 7.07 | 0.38 | 4.00 | --- | --- | --- | --- | --- | --- | --- | 1.17 | --- |
| 29 | 6.43 | 0.35 | 3.77 | --- | --- | --- | --- | --- | --- | 6.31 | 0.55 | 3.40 |
| 30 | 6.10 | 0.48 | 3.54 | 6.17 | 1.23 | --- | --- | --- | --- | 6.69 | 0.69 | 3.60 |
| 31 | 7.23 | 0.81 | 4.05 | --- | --- | --- | --- | --- | --- | 7.31 | 0.86 | 3.99 |
| MONTH | 9.32 | 0.18 | 3.90 | 7.52 | 0.11 | 3.86 | 8.90 | -0.09 | 3.98 | 7.31 | 0.33 | --- |

14247295 COLUMBIA RIVER AT WAUNA, OR--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|------|-------|------|-------|------|------|-------|-------|------|------|------|------|
| FEBRUARY | | | | MARCH | | | APRIL | | | MAY | | |
| 1 | 7.41 | 0.54 | 4.07 | --- | --- | --- | --- | 0.40 | --- | --- | --- | --- |
| 2 | 7.45 | 0.49 | 3.99 | --- | --- | --- | --- | 0.24 | --- | --- | --- | --- |
| 3 | 7.69 | 0.38 | 4.07 | --- | --- | --- | 6.88 | 0.20 | --- | --- | --- | --- |
| 4 | 7.80 | 0.45 | 4.12 | --- | --- | --- | --- | -0.06 | --- | --- | --- | --- |
| 5 | 7.51 | 0.22 | 3.97 | --- | --- | --- | --- | -0.03 | --- | --- | --- | --- |
| 6 | 7.29 | 0.18 | 3.89 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 6.98 | 0.42 | 3.76 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7.66 | 0.47 | 4.23 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 7.48 | 0.86 | 3.93 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 8.22 | 1.23 | 4.46 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | 7.35 | 0.64 | 3.75 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | --- | 0.25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | 6.60 | -0.18 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | --- | -0.12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | --- | --- | --- | 7.31 | 0.79 | --- | --- | --- | --- | --- | --- | --- |
| 19 | --- | --- | --- | 7.30 | 0.86 | 4.04 | --- | --- | --- | --- | --- | --- |
| 20 | --- | --- | --- | 7.16 | 0.62 | 3.78 | --- | --- | --- | --- | --- | --- |
| 21 | --- | --- | --- | 7.18 | 0.63 | 3.80 | --- | --- | --- | --- | --- | --- |
| 22 | --- | --- | --- | 7.22 | 0.66 | 4.01 | --- | --- | --- | --- | --- | --- |
| 23 | --- | --- | --- | 7.53 | 0.97 | 4.30 | --- | --- | --- | --- | --- | --- |
| 24 | --- | --- | --- | 7.42 | 0.94 | 4.06 | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | --- | 6.60 | 0.60 | 3.55 | --- | --- | --- | --- | --- | --- |
| 26 | --- | --- | --- | 6.32 | 0.86 | 3.64 | --- | --- | --- | --- | --- | --- |
| 27 | --- | --- | --- | 6.49 | 1.38 | 3.73 | --- | --- | --- | 7.58 | 1.73 | --- |
| 28 | --- | --- | --- | 5.36 | 0.62 | 3.13 | --- | --- | --- | 7.68 | 1.63 | 4.18 |
| 29 | --- | --- | --- | 5.10 | 0.30 | 2.91 | --- | --- | --- | 7.66 | 0.95 | 3.89 |
| 30 | --- | --- | --- | 5.38 | 0.07 | 2.86 | --- | --- | --- | 7.90 | 0.46 | 3.84 |
| 31 | --- | --- | --- | 5.77 | 1.08 | 3.15 | --- | --- | --- | 8.12 | 0.26 | 4.08 |
| MONTH | 8.22 | -0.18 | 4.02 | 7.53 | 0.07 | 3.61 | --- | -0.06 | --- | 8.12 | 0.26 | 3.99 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|-------|------|------|-------|------|--------|-------|------|-----------|-------|------|
| JUNE | | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 8.73 | 0.73 | 4.55 | 8.14 | -0.26 | 3.72 | 7.18 | -0.46 | 3.53 | 7.02 | 0.47 | 3.68 |
| 2 | 8.92 | 0.74 | 4.71 | 8.09 | -0.26 | --- | 7.02 | -0.02 | 3.70 | 7.04 | 0.49 | 3.74 |
| 3 | 9.01 | 0.80 | 4.89 | --- | --- | --- | 7.06 | 0.27 | 3.80 | 6.84 | 0.76 | 3.70 |
| 4 | 9.06 | 0.95 | 4.97 | --- | --- | --- | 6.99 | 0.50 | 3.70 | 6.54 | 1.00 | 3.84 |
| 5 | 8.24 | 0.41 | 4.44 | --- | --- | --- | 6.89 | 0.64 | 3.68 | 5.96 | 0.87 | 3.34 |
| 6 | 7.56 | 0.49 | 4.29 | --- | --- | --- | 6.38 | 1.07 | 3.44 | 5.73 | 0.55 | 3.10 |
| 7 | 6.85 | 0.51 | 3.98 | --- | --- | --- | 6.19 | 0.67 | 3.13 | 5.72 | 0.47 | 3.08 |
| 8 | 6.69 | 0.60 | 3.63 | --- | --- | --- | 6.19 | 0.58 | 3.10 | 5.69 | 0.14 | 2.88 |
| 9 | 6.69 | 0.87 | 3.40 | --- | --- | --- | 6.20 | 0.30 | 3.02 | 5.91 | -0.09 | 2.77 |
| 10 | 6.79 | 1.16 | 3.44 | --- | --- | --- | 6.40 | 0.05 | 3.01 | 6.03 | -0.05 | 3.03 |
| 11 | 6.76 | 0.85 | 3.36 | --- | --- | --- | 6.35 | -0.04 | 3.15 | 6.41 | -0.03 | 3.17 |
| 12 | 6.79 | 0.46 | 3.41 | --- | --- | --- | 6.82 | -0.04 | 3.44 | 6.73 | -0.09 | 3.25 |
| 13 | 7.00 | 0.16 | 3.46 | --- | --- | --- | 7.24 | 0.05 | 3.59 | 7.13 | 0.16 | 3.68 |
| 14 | 7.08 | 0.23 | 3.57 | --- | --- | --- | 7.25 | -0.07 | 3.57 | 7.63 | 0.70 | 4.11 |
| 15 | 7.06 | 0.08 | 3.54 | --- | --- | --- | 7.28 | -0.10 | 3.66 | 7.90 | 0.76 | 4.25 |
| 16 | 7.08 | 0.09 | 3.68 | --- | --- | --- | 7.26 | 0.16 | 3.87 | 8.14 | 0.80 | 4.40 |
| 17 | 7.22 | 0.25 | 3.91 | --- | --- | --- | 7.31 | 0.46 | 4.10 | 8.12 | 0.56 | 4.46 |
| 18 | 7.37 | 0.20 | 3.90 | --- | --- | --- | 7.29 | 0.59 | 4.03 | 7.82 | 0.61 | 4.24 |
| 19 | 6.99 | -0.11 | 3.61 | --- | --- | --- | 7.24 | 0.51 | 3.80 | 8.06 | 0.87 | 4.61 |
| 20 | 6.76 | -0.17 | 3.57 | --- | --- | --- | 7.12 | 0.72 | 3.70 | 7.40 | 1.11 | 4.32 |
| 21 | 6.43 | -0.25 | 3.36 | --- | --- | --- | 6.92 | 0.39 | 3.42 | 6.88 | 0.66 | 3.75 |
| 22 | 5.97 | -0.23 | 3.20 | --- | --- | --- | 7.07 | 0.09 | 3.37 | 7.16 | 0.41 | 3.63 |
| 23 | 6.04 | -0.04 | 3.07 | --- | --- | --- | 7.36 | 0.32 | 3.60 | 7.50 | 0.52 | 3.93 |
| 24 | 6.12 | 0.18 | 2.96 | --- | --- | --- | 7.69 | 0.46 | 3.81 | 7.57 | 0.79 | 4.09 |
| 25 | 6.49 | 0.38 | 2.96 | 7.02 | --- | --- | 7.80 | 0.37 | 3.85 | 7.61 | 0.77 | 4.11 |
| 26 | 6.83 | 0.28 | 2.96 | 7.23 | -0.13 | 3.17 | 8.03 | 0.24 | 3.88 | 7.67 | 0.82 | 4.17 |
| 27 | 7.05 | -0.11 | 2.95 | 7.30 | -0.38 | 3.19 | 7.78 | -0.01 | 3.75 | 7.72 | 0.94 | 4.23 |
| 28 | 6.95 | -0.29 | 3.08 | 7.59 | -0.40 | 3.33 | 7.90 | 0.22 | 3.99 | 8.05 | 0.97 | 4.44 |
| 29 | 7.39 | -0.46 | 3.23 | 7.69 | -0.43 | 3.43 | 7.68 | 0.17 | 4.00 | 7.83 | 0.84 | 4.39 |
| 30 | 7.68 | -0.37 | 3.51 | 7.73 | -0.39 | 3.54 | 7.57 | 0.47 | 4.10 | 7.50 | 0.78 | 4.15 |
| 31 | --- | --- | --- | 7.55 | -0.19 | 3.58 | 7.32 | 0.40 | 3.88 | --- | --- | --- |
| MONTH | 9.06 | -0.46 | 3.65 | 8.14 | -0.43 | 3.42 | 8.03 | -0.46 | 3.63 | 8.14 | -0.09 | 3.81 |

| YEAR | 9.32 | -0.46 | 3.78 |
|------|------|-------|------|
|------|------|-------|------|

14247400 COLUMBIA RIVER AT BRADWOOD, OR

LOCATION.--Lat 46°11'45", long 123°25'50", in SW 1/4 sec.9, T.8 N., R.6 W., Clatsop County, Hydrologic Unit 17080003, at Bradwood, and at mile 38.9 (62.6 km).

DRAINAGE AREA.--257,100 mi² (665,900 km²).

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1976 to current year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.5°C Aug. 12, 16, 17; minimum, 2.5°C Jan. 12-15, Jan. 26 to Feb. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM (7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOC- KI AGAR (COL. PER 100 ML) | CHLORO- PHYLL A (UG/L) | CHLORO- PHYLL B (UG/L) | CHLOR-A PHYTO- PLANK- TON CHROMO- FLUOROM (UG/L) | CHLOR-B PHYTO- PLANK- TON CHROMO- FLUOROM (UG/L) |
|-------|------|-----------------------------|---------------|------------------------------------|--|--|---|------------------------------|------------------------------|--|--|
| OCT | | | | | | | | | | | |
| 05... | 1430 | 17.5 | 7.8 | 9.1 | 148 | -- | 84 | 5.01 | .000 | -- | -- |
| 21... | 1400 | 14.4 | 7.7 | 10.0 | 153 | B32 | 39 | 10.3 | 1.01 | -- | -- |
| DEC | | | | | | | | | | | |
| 07... | 1200 | 8.0 | 7.2 | 9.9 | 164 | 190 | 110 | 2.49 | .819 | -- | -- |
| JAN | | | | | | | | | | | |
| 06... | 1200 | 3.8 | 8.2 | 12.6 | 173 | 310 | -- | -- | -- | .030 | .000 |
| 28... | 1200 | -- | -- | -- | 180 | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 01... | 1300 | 5.4 | 7.8 | 12.8 | 181 | 84 | B13 | -- | -- | -- | -- |
| 31... | 1300 | 7.5 | 7.6 | 12.6 | 156 | 180 | -- | -- | -- | 1.09 | .033 |
| APR | | | | | | | | | | | |
| 29... | 1200 | 12.6 | 8.1 | 11.0 | 168 | 87 | -- | 2.84 | .607 | -- | -- |
| MAY | | | | | | | | | | | |
| 26... | 1100 | 13.5 | 8.4 | -- | 165 | 55 | 75 | .867 | .481 | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | 1200 | 18.5 | 8.3 | 8.9 | 144 | 81 | 88 | 18.3 | 1.30 | -- | -- |
| AUG | | | | | | | | | | | |
| 01... | 1315 | 21.5 | 8.1 | 8.6 | 148 | -- | -- | 2.86 | .360 | -- | -- |
| SEP | | | | | | | | | | | |
| 08... | 1200 | 19.7 | 7.3 | 8.6 | 144 | >400 | B19 | -- | -- | -- | -- |

| DATE | CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L) | DIS- SOLVED SILICA (SI02) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL AMMONIA NITRO- GEN (N) (MG/L) | TOTAL ORGANIC NITRO- GEN (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) | DIS- SOLVED SOLIDS (TONS PER AC-FT) |
|-------|---|--|--|--|--|--|---|---|---|--|--|
| OCT | | | | | | | | | | | |
| 05... | 26 | 6.7 | .10 | .01 | .29 | .30 | .40 | .04 | 1.5 | 76 | .10 |
| 21... | 3 | 7.2 | .15 | .10 | .22 | .32 | .47 | .03 | 1.7 | 83 | .11 |
| DEC | | | | | | | | | | | |
| 07... | 7 | 9.5 | .22 | .00 | .35 | .35 | .57 | .05 | 1.8 | 92 | .13 |
| JAN | | | | | | | | | | | |
| 06... | 15 | 9.4 | .27 | .01 | .34 | .35 | .62 | .04 | 1.6 | 107 | .15 |
| 28... | 28 | 9.4 | .27 | .01 | .05 | .06 | .33 | .06 | 1.7 | 104 | .14 |
| MAR | | | | | | | | | | | |
| 01... | 18 | 8.7 | .37 | .06 | .39 | .45 | .82 | .02 | 2.0 | 105 | .14 |
| 31... | -- | 8.5 | .23 | .04 | .28 | .32 | .55 | .04 | 2.6 | 92 | .13 |
| APR | | | | | | | | | | | |
| 29... | 10 | 6.3 | .09 | .01 | .49 | .50 | .59 | .03 | 2.5 | 118 | .16 |
| MAY | | | | | | | | | | | |
| 26... | 10 | 6.0 | .01 | .03 | .59 | .62 | .63 | .07 | 2.8 | 105 | .14 |
| JUL | | | | | | | | | | | |
| 05... | 20 | 5.1 | .01 | .03 | .05 | .08 | .09 | .04 | 2.1 | 77 | .10 |
| AUG | | | | | | | | | | | |
| 01... | 8 | 3.6 | .03 | .00 | .57 | .57 | .60 | .04 | 2.6 | 80 | .11 |
| SEP | | | | | | | | | | | |
| 08... | 13 | 7.9 | .13 | .00 | .23 | .23 | .36 | .04 | -- | 79 | .11 |

| DATE | TOTAL ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | TOTAL COPPER (CU) (UG/L) | TOTAL IRON (FE) (UG/L) | TOTAL LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | TOTAL NON- FILT- RABLE RESIDUE (MG/L) |
|-------|------------------------------------|---|--|-----------------------------------|---------------------------------|---------------------------------|---------------------------------|--|------------------------------------|--|
| OCT | | | | | | | | | | |
| 05... | -- | <10 | 0 | 20 | 270 | <100 | 20 | 0 | .0 | 3 |
| 21... | 1 | <10 | 0 | 10 | 240 | <100 | 20 | 0 | 1.1 | 0 |
| DEC | | | | | | | | | | |
| 07... | 1 | <10 | 0 | <10 | 270 | <100 | 20 | 0 | .0 | 13 |
| JAN | | | | | | | | | | |
| 06... | 2 | <10 | 0 | <10 | 200 | <100 | 40 | 0 | .0 | 10 |
| 28... | 1 | <10 | 0 | 20 | 410 | <100 | 30 | 1 | .1 | 0 |
| MAR | | | | | | | | | | |
| 01... | 3 | <10 | 10 | <10 | 330 | <100 | 30 | 0 | .2 | 0 |
| 31... | 0 | <10 | 0 | 20 | 250 | <100 | 30 | 0 | .4 | 6 |
| APR | | | | | | | | | | |
| 29... | 2 | <10 | 0 | 20 | 190 | <100 | 20 | 0 | .0 | 13 |
| MAY | | | | | | | | | | |
| 26... | 1 | <10 | 0 | <10 | 300 | <100 | 30 | 0 | .0 | 10 |
| JUL | | | | | | | | | | |
| 05... | 1 | <10 | 10 | <10 | 390 | <100 | 20 | 0 | .0 | 12 |
| AUG | | | | | | | | | | |
| 01... | 2 | <10 | 5 | 30 | 420 | <100 | 30 | 1 | .0 | 33 |
| SEP | | | | | | | | | | |
| 08... | 0 | 10 | 0 | 10 | 220 | <100 | 50 | 0 | .0 | 3 |

14247400 COLUMBIA RIVER AT BRADWOOD, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TOTAL CAL- CIUM (CA) (MG/L) | TOTAL MAG- NE- SIUM (MG) (MG/L) | TOTAL PO- TAS- SIUM (K) (MG/L) | TOTAL SODIUM (NA) (MG/L) | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | OIL AND GREASE (MG/L) |
|-----------|---|--|---|-----------------------------------|--------------------------------------|-----------------------------------|--|---|--------------------------------|
| OCT 21... | -- | -- | -- | -- | 60 | 0 | 8.9 | 4.7 | 0 |
| JAN 28... | 19 | 5.7 | 1.4 | 8.4 | -- | -- | 17 | 5.6 | 0 |
| APR 29... | 19 | 5.2 | 1.2 | 6.3 | 79 | 0 | 14 | 5.0 | 0 |
| AUG 01... | 16 | 4.3 | 1.2 | 6.0 | 63 | 0 | 10 | 4.9 | 0 |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 18.0 | 18.0 | 13.0 | 13.0 | 8.5 | 8.0 | 5.5 | 5.0 | 3.0 | 2.5 | 5.5 | 5.0 |
| 2 | 18.0 | 17.5 | 13.0 | 13.0 | 8.5 | 8.0 | 5.0 | 5.0 | 3.0 | 2.5 | 5.5 | 5.0 |
| 3 | 17.5 | 17.0 | 13.0 | 12.5 | 8.0 | 8.0 | 5.0 | 4.5 | 3.0 | 3.0 | 5.5 | 5.5 |
| 4 | 17.5 | 17.0 | 12.5 | 12.5 | 8.0 | 7.5 | 4.5 | 4.0 | 3.5 | 3.0 | 5.5 | 5.5 |
| 5 | 17.5 | 17.0 | 12.5 | 12.5 | 8.0 | 7.5 | 4.0 | 4.0 | 3.0 | 3.0 | 5.5 | 5.5 |
| 6 | 17.0 | 17.0 | 12.5 | 12.5 | 8.0 | 7.5 | 4.0 | 3.5 | 3.5 | 3.0 | 5.5 | 5.5 |
| 7 | 17.0 | 16.5 | 12.5 | 12.0 | 8.0 | 8.0 | 4.0 | 3.5 | 3.0 | 3.0 | 6.0 | 5.5 |
| 8 | 17.0 | 17.0 | 12.5 | 12.0 | 8.0 | 8.0 | 3.5 | 3.5 | 3.0 | 3.0 | 5.5 | 5.5 |
| 9 | 17.0 | 17.0 | 12.0 | 12.0 | 8.0 | 7.5 | 3.5 | 3.0 | 3.0 | 3.0 | 5.5 | 5.5 |
| 10 | 17.0 | 17.0 | 12.0 | 12.0 | 7.5 | 7.5 | 3.0 | 3.0 | 3.5 | 3.0 | 6.0 | 5.5 |
| 11 | 17.0 | 16.5 | 12.0 | 12.0 | 7.5 | 7.5 | 3.0 | 3.0 | 3.5 | 3.5 | 6.0 | 5.5 |
| 12 | 17.0 | 17.0 | 12.0 | 12.0 | 7.5 | 7.0 | 3.0 | 2.5 | 3.5 | 3.5 | 6.0 | 5.5 |
| 13 | 17.0 | 16.5 | 12.0 | 11.5 | 7.0 | 7.0 | 2.5 | 2.5 | 4.0 | 3.5 | 6.0 | 5.5 |
| 14 | 17.0 | 16.5 | 11.5 | 11.5 | 7.0 | 7.0 | 3.0 | 2.5 | 4.0 | 3.5 | 6.0 | 5.5 |
| 15 | 16.5 | 16.5 | 11.5 | 11.5 | 7.0 | 7.0 | 3.0 | 2.5 | 4.0 | 3.5 | 6.0 | 5.5 |
| 16 | 16.5 | 16.0 | 11.0 | 11.0 | 7.0 | 7.0 | 3.5 | 3.0 | 4.0 | 4.0 | 6.0 | 5.5 |
| 17 | 16.0 | 15.5 | 11.0 | 11.0 | 7.0 | 6.5 | 3.5 | 3.5 | 4.5 | 4.0 | 6.0 | 5.5 |
| 18 | 15.5 | 15.0 | 11.0 | 10.5 | 6.5 | 6.5 | 4.0 | 3.5 | 5.0 | 4.0 | 6.0 | 6.0 |
| 19 | 15.5 | 15.0 | 11.0 | 10.5 | 6.5 | 6.5 | 4.0 | 4.0 | 5.0 | 4.5 | 6.0 | 6.0 |
| 20 | 15.0 | 14.5 | 11.0 | 11.0 | 6.5 | 6.5 | 4.0 | 3.5 | 5.0 | 4.5 | 6.0 | 6.0 |
| 21 | 14.5 | 14.0 | 11.0 | 11.0 | 6.5 | 6.0 | 3.5 | 3.5 | 5.0 | 4.5 | 6.0 | 6.0 |
| 22 | 14.0 | 14.0 | 11.0 | 10.5 | 6.0 | 6.0 | 3.5 | 3.5 | 5.0 | 4.5 | 6.5 | 6.0 |
| 23 | 14.0 | 13.5 | 10.5 | 10.5 | 6.0 | 6.0 | 3.5 | 3.5 | 5.0 | 5.0 | 6.5 | 6.0 |
| 24 | 14.0 | 13.5 | 10.5 | 10.0 | 6.0 | 5.5 | 3.5 | 3.0 | 5.0 | 5.0 | 6.5 | 6.5 |
| 25 | 13.5 | 13.5 | 10.0 | 10.0 | 5.5 | 5.5 | 3.0 | 3.0 | 5.0 | 4.5 | 6.5 | 6.5 |
| 26 | 14.0 | 13.5 | 10.0 | 9.5 | 5.5 | 5.5 | 3.0 | 2.5 | 4.5 | 4.5 | 6.5 | 6.5 |
| 27 | 14.0 | 13.5 | 9.5 | 9.5 | 6.0 | 5.5 | 2.5 | 2.5 | 5.0 | 4.5 | 6.5 | 6.5 |
| 28 | 13.5 | 13.5 | 9.5 | 9.0 | 6.0 | 5.5 | 2.5 | 2.5 | 5.0 | 4.5 | 7.0 | 6.5 |
| 29 | 13.5 | 13.5 | 9.0 | 8.5 | 6.0 | 5.5 | 2.5 | 2.5 | --- | --- | 7.0 | 6.5 |
| 30 | 13.5 | 13.0 | 8.5 | 8.0 | 6.0 | 5.5 | 2.5 | 2.5 | --- | --- | 7.0 | 6.5 |
| 31 | 13.0 | 13.0 | --- | --- | 6.0 | 5.5 | 3.0 | 2.5 | --- | --- | 7.5 | 7.0 |
| MONTH | 18.0 | 13.0 | 13.0 | 8.0 | 8.5 | 5.5 | 5.5 | 2.5 | 5.0 | 2.5 | 7.5 | 5.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.5 | 7.0 | 12.5 | 12.5 | 13.5 | 13.0 | 19.0 | 18.5 | 21.5 | 20.5 | 19.5 | 19.0 |
| 2 | 7.5 | 7.0 | 12.5 | 12.5 | 13.5 | 13.0 | 18.5 | 18.0 | 21.5 | 20.5 | 19.5 | 19.0 |
| 3 | 7.5 | 7.0 | 12.5 | 12.5 | 13.5 | 13.5 | 18.5 | 18.0 | 21.5 | 20.5 | 19.5 | 18.5 |
| 4 | 8.0 | 7.0 | 12.5 | 12.0 | 13.5 | 13.5 | 18.5 | 18.0 | 21.5 | 20.5 | 19.5 | 18.5 |
| 5 | 8.5 | 7.5 | 12.0 | 11.5 | 14.5 | 13.5 | 18.5 | 18.0 | 21.5 | 20.5 | 19.5 | 18.5 |
| 6 | 8.5 | 8.5 | 12.0 | 11.5 | 15.0 | 14.0 | 18.5 | 18.0 | 21.5 | 21.0 | 19.5 | 18.5 |
| 7 | 8.5 | 8.5 | 12.0 | 11.5 | 15.0 | 14.5 | 19.0 | 18.0 | 21.5 | 20.5 | 19.5 | 18.5 |
| 8 | 9.0 | 8.5 | 12.5 | 12.0 | 15.0 | 14.5 | 18.5 | 18.0 | 21.5 | 20.5 | 19.5 | 18.5 |
| 9 | 9.0 | 9.0 | 13.0 | 12.0 | 15.5 | 15.0 | 18.0 | 18.0 | 21.5 | 21.0 | 19.0 | 18.5 |
| 10 | 9.0 | 9.0 | 12.5 | 12.0 | 15.5 | 15.5 | 18.5 | 18.0 | 22.0 | 21.5 | 19.0 | 18.5 |
| 11 | 9.5 | 9.0 | 12.5 | 12.0 | 15.5 | 15.5 | 18.5 | 18.0 | 22.0 | 21.5 | 19.0 | 18.5 |
| 12 | 9.5 | 9.0 | 12.5 | 12.0 | 16.0 | 15.5 | 18.5 | 18.5 | 22.5 | 22.0 | 19.0 | 18.5 |
| 13 | 9.5 | 9.0 | 12.0 | 12.0 | 16.0 | 15.5 | 18.5 | 18.0 | 22.0 | 21.5 | 18.5 | 18.5 |
| 14 | 9.5 | 9.0 | 12.0 | 12.0 | 16.0 | 15.5 | 18.5 | 18.0 | 21.5 | 21.5 | 18.5 | 18.5 |
| 15 | 9.5 | 9.5 | 12.5 | 12.0 | 16.0 | 15.5 | 18.5 | 18.0 | 22.0 | 21.5 | 18.5 | 18.5 |
| 16 | 9.5 | 9.5 | 12.5 | 12.0 | 16.0 | 15.5 | 18.5 | 18.0 | 22.5 | 21.5 | 18.5 | 18.5 |
| 17 | 10.0 | 9.0 | 12.5 | 12.0 | 17.0 | 16.0 | 18.5 | 18.0 | 22.5 | 22.0 | 18.5 | 18.0 |
| 18 | 10.0 | 9.5 | 12.0 | 12.0 | 17.0 | 16.5 | 18.5 | 18.0 | 22.0 | 22.0 | 18.0 | 18.0 |
| 19 | 10.0 | 9.0 | 12.5 | 11.5 | 17.0 | 16.5 | 19.0 | 18.0 | 22.0 | 21.5 | 18.0 | 17.5 |
| 20 | 10.0 | 9.5 | 12.5 | 12.0 | 17.0 | 17.0 | 19.0 | 18.5 | 21.5 | 21.5 | 18.0 | 17.5 |
| 21 | 10.0 | 9.5 | 12.5 | 12.5 | 17.0 | 17.0 | 19.5 | 18.5 | 21.5 | 21.0 | 17.5 | 17.0 |
| 22 | 10.0 | 9.5 | 13.0 | 12.5 | 17.5 | 17.0 | 19.5 | 19.0 | 21.5 | 21.0 | 17.5 | 17.0 |
| 23 | 10.5 | 10.0 | 13.0 | 12.5 | 18.0 | 17.0 | 19.5 | 19.0 | 21.0 | 20.5 | 17.0 | 17.0 |
| 24 | 10.5 | 10.5 | 13.0 | 12.5 | 18.0 | 17.5 | 20.0 | 19.0 | 20.5 | 20.5 | 17.0 | 16.5 |
| 25 | 11.0 | 10.5 | 13.0 | 12.5 | 18.0 | 17.5 | 20.0 | 19.5 | 20.5 | 19.5 | 16.5 | 16.5 |
| 26 | 11.0 | 11.0 | 13.5 | 12.5 | 18.5 | 18.0 | 19.5 | 19.0 | 20.0 | 19.5 | 17.0 | 16.5 |
| 27 | 11.5 | 11.0 | 13.5 | 12.5 | 18.5 | 18.0 | 19.5 | 19.5 | 19.5 | 19.5 | 16.5 | 16.5 |
| 28 | 12.0 | 11.5 | 13.5 | 12.5 | 18.5 | 18.5 | 19.5 | 19.5 | 19.5 | 19.0 | 16.5 | 16.5 |
| 29 | 12.5 | 11.5 | 13.5 | 12.5 | 18.5 | 18.0 | 20.0 | 19.5 | 19.0 | 19.0 | 16.5 | 16.0 |
| 30 | 12.5 | 12.0 | 13.5 | 12.5 | 19.0 | 18.0 | 20.5 | 19.5 | 19.0 | 18.5 | 16.0 | 16.0 |
| 31 | --- | --- | 13.5 | 13.0 | --- | --- | 21.0 | 20.0 | 19.5 | 18.5 | --- | --- |
| MONTH | 12.5 | 7.0 | 13.5 | 11.5 | 19.0 | 13.0 | 21.0 | 18.0 | 22.5 | 18.5 | 19.5 | 16.0 |

14248600 COLUMBIA RIVER AT ALTOONA, WA

LOCATION.—Lat 46°15'55", long 123°39'13", in SW 1/4 sec.15, T.19 N., R.8 W., Wahkiakum County, Hydrologic Unit 17080006, temperature recorder on right bank, on Bumblebee Canning Company dock, at Altoona, and at mile 24.1 (38.8 km).

DRAINAGE AREA.—258,000 mi² (668,200 km²), approximately.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURES: October 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—

WATER TEMPERATURES: Maximum, 23.0°C Aug. 11-13, 16-20, 22, 1977; minimum, 0.5°C Jan. 11, 12, 1974.

EXTREMES FOR CURRENT YEAR.—

WATER TEMPERATURES: Maximum, 23.0°C Aug. 11-13, 16-20, 22; minimum, 2.5°C Jan. 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 18.5 | 18.0 | 13.5 | 13.0 | 8.5 | 8.0 | 5.5 | 5.0 | 3.5 | 3.0 | 5.5 | 5.0 |
| 2 | 18.0 | 17.5 | 13.5 | 13.0 | 8.0 | 7.5 | 5.0 | 4.5 | 3.5 | 3.0 | 5.5 | 5.5 |
| 3 | 18.0 | 17.5 | 13.0 | 13.0 | 8.0 | 7.5 | 5.0 | 4.5 | 3.0 | 3.0 | 6.0 | 5.5 |
| 4 | 17.5 | 17.0 | 13.0 | 13.0 | 7.5 | 7.5 | 4.5 | 4.0 | 3.5 | 3.0 | 6.0 | 5.5 |
| 5 | 17.5 | 17.0 | 13.0 | 13.0 | 7.5 | 7.5 | 4.0 | 3.5 | 3.5 | 3.5 | 6.0 | 5.5 |
| 6 | 17.5 | 17.5 | 12.5 | 12.5 | 7.5 | 7.5 | 3.5 | 3.5 | 4.0 | 3.5 | 6.0 | 6.0 |
| 7 | 17.5 | 17.0 | 12.5 | 12.5 | 7.5 | 7.5 | 3.5 | 3.5 | 3.5 | 3.5 | 6.0 | 6.0 |
| 8 | 17.0 | 17.0 | 12.5 | 12.5 | 8.0 | 7.5 | 3.5 | 3.5 | 3.5 | 3.5 | 6.0 | 6.0 |
| 9 | 17.5 | 17.0 | 12.5 | 12.5 | 8.0 | 7.5 | 3.5 | 3.0 | 3.5 | 3.5 | 6.5 | 6.0 |
| 10 | 17.5 | 17.0 | 12.5 | 12.0 | 7.5 | 7.5 | 3.5 | 3.0 | 4.0 | 3.5 | 6.5 | 6.0 |
| 11 | 17.5 | 17.0 | 12.5 | 12.0 | 7.5 | 7.0 | 3.0 | 3.0 | 4.0 | 3.5 | 6.5 | 6.0 |
| 12 | 17.5 | 17.0 | 12.5 | 12.0 | 7.0 | 7.0 | 3.5 | 3.0 | 4.0 | 3.5 | 6.0 | 6.0 |
| 13 | 17.0 | 16.5 | 12.0 | 12.0 | 7.5 | 7.0 | 3.0 | 3.0 | 4.0 | 3.5 | 6.5 | 6.0 |
| 14 | 17.0 | 17.0 | 12.0 | 11.5 | 7.0 | 7.0 | 3.0 | 3.0 | 4.5 | 3.5 | 6.0 | 6.0 |
| 15 | 17.0 | 16.5 | 11.5 | 11.5 | 7.0 | 7.0 | 3.0 | 3.0 | 4.5 | 4.0 | 6.5 | 6.0 |
| 16 | 16.5 | 16.0 | 11.5 | 11.5 | 7.0 | 7.0 | 3.5 | 3.0 | 4.5 | 4.0 | 6.5 | 6.0 |
| 17 | 16.0 | 15.5 | 11.5 | 11.5 | 7.0 | 6.5 | 4.0 | 3.5 | 4.5 | 4.5 | 6.5 | 6.0 |
| 18 | 16.0 | 15.5 | 11.0 | 11.0 | 6.5 | 6.5 | 4.0 | 4.0 | 5.0 | 4.5 | 6.5 | 6.0 |
| 19 | 15.5 | 15.0 | 11.0 | 11.0 | 6.5 | 6.0 | 4.5 | 4.0 | 5.5 | 5.0 | 6.5 | 6.5 |
| 20 | 15.5 | 14.5 | 11.0 | 10.5 | 6.0 | 6.0 | 4.5 | 4.0 | 5.5 | 5.0 | 6.5 | 6.0 |
| 21 | 15.0 | 14.5 | 11.0 | 11.0 | 6.0 | 6.0 | 4.0 | 4.0 | 5.5 | 5.0 | 7.0 | 6.5 |
| 22 | 14.5 | 14.0 | 11.0 | 10.5 | 6.0 | 6.0 | 4.0 | 3.5 | 5.5 | 5.0 | 7.0 | 6.5 |
| 23 | 14.0 | 14.0 | 10.5 | 10.5 | 6.0 | 6.0 | 4.0 | 3.5 | 5.5 | 5.0 | 7.0 | 6.5 |
| 24 | 14.0 | 13.5 | 10.5 | 10.5 | 6.0 | 5.5 | 3.5 | 3.5 | 5.5 | 5.0 | 7.5 | 6.5 |
| 25 | 13.5 | 13.5 | 10.5 | 10.0 | 5.5 | 5.5 | 3.5 | 3.5 | 5.5 | 5.0 | 7.5 | 7.0 |
| 26 | 14.0 | 13.5 | 10.0 | 9.5 | 6.0 | 5.5 | 3.5 | 3.0 | 5.0 | 5.0 | 7.5 | 7.0 |
| 27 | 14.0 | 13.5 | 9.5 | 9.5 | 6.0 | 5.5 | 3.0 | 3.0 | 5.5 | 5.0 | 7.5 | 7.0 |
| 28 | 14.0 | 13.5 | 9.5 | 9.0 | 5.5 | 5.0 | 3.0 | 3.0 | 5.0 | 5.0 | 7.5 | 7.0 |
| 29 | 14.0 | 13.5 | 9.0 | 8.5 | 5.5 | 5.5 | 3.0 | 3.0 | --- | --- | 7.5 | 7.0 |
| 30 | 13.5 | 13.0 | 9.0 | 8.5 | 6.0 | 5.5 | 3.0 | 2.5 | --- | --- | 8.0 | 7.0 |
| 31 | 13.5 | 13.0 | --- | --- | 5.5 | 5.0 | 3.0 | 3.0 | --- | --- | 7.5 | 7.5 |
| MONTH | 18.5 | 13.0 | 13.5 | 8.5 | 8.5 | 5.0 | 5.5 | 2.5 | 5.5 | 3.0 | 8.0 | 5.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.5 | 7.5 | --- | --- | 14.5 | 13.5 | 19.5 | 19.0 | 22.0 | 21.0 | 20.5 | 19.5 |
| 2 | 8.0 | 7.5 | --- | --- | 14.5 | 14.0 | 19.5 | 19.0 | 22.5 | 21.0 | 20.0 | 20.0 |
| 3 | 8.0 | 7.5 | 14.0 | 13.0 | 14.5 | 14.0 | 19.0 | 19.0 | 22.0 | 21.5 | 20.5 | 20.0 |
| 4 | 8.5 | 7.5 | 13.5 | 13.0 | 14.5 | 14.0 | 19.5 | 18.5 | 21.5 | 21.0 | 20.0 | 19.5 |
| 5 | 9.0 | 8.0 | 13.0 | 12.5 | 15.5 | 14.0 | 19.5 | 18.5 | 22.5 | 21.0 | 20.5 | 19.5 |
| 6 | 9.0 | 8.5 | 13.5 | 12.5 | 16.5 | 15.0 | 20.0 | 18.5 | 22.0 | 21.5 | 20.5 | 19.5 |
| 7 | 9.0 | 8.5 | 13.5 | 12.5 | 16.0 | 15.5 | 20.0 | 19.0 | 22.0 | 21.5 | 20.5 | 19.5 |
| 8 | 10.0 | 9.0 | 14.0 | 12.5 | 16.0 | 15.0 | 19.5 | 19.0 | 22.5 | 21.0 | 20.0 | 19.5 |
| 9 | 10.0 | 9.0 | 14.0 | 13.0 | 17.0 | 15.5 | 19.0 | 19.0 | 22.5 | 20.5 | 20.0 | 19.5 |
| 10 | 10.0 | 9.5 | 13.5 | 13.0 | 17.0 | 16.0 | 19.0 | 18.5 | 22.5 | 21.0 | 20.0 | 19.5 |
| 11 | 10.5 | 9.5 | 14.0 | 13.0 | 16.5 | 16.0 | 19.0 | 18.5 | 23.0 | 21.5 | 20.0 | 19.0 |
| 12 | 10.5 | 10.0 | 13.5 | 13.0 | 17.0 | 16.0 | 19.0 | 18.0 | 23.0 | 22.0 | 20.0 | 19.5 |
| 13 | 10.5 | 10.0 | 13.5 | 13.0 | 16.5 | 16.5 | 19.5 | 18.5 | 23.0 | 22.5 | 20.0 | 19.5 |
| 14 | 10.5 | 10.0 | 13.0 | 13.0 | 16.5 | 16.0 | 19.5 | 19.0 | 22.5 | 22.0 | 19.5 | 19.0 |
| 15 | 10.0 | 10.0 | 13.5 | 13.0 | 17.0 | 16.0 | 19.5 | 19.0 | 22.5 | 21.5 | 19.0 | 19.0 |
| 16 | 10.5 | 10.0 | 13.5 | 13.0 | 17.5 | 16.0 | 19.5 | 19.0 | 23.0 | 22.0 | 19.0 | 19.0 |
| 17 | 10.5 | 10.0 | 13.0 | 13.0 | 18.0 | 17.0 | 19.0 | 18.5 | 23.0 | 22.5 | 19.0 | 19.0 |
| 18 | --- | --- | 13.0 | 13.0 | 17.5 | 17.0 | 19.5 | 18.5 | 23.0 | 22.0 | 19.0 | 18.5 |
| 19 | --- | --- | 14.0 | 12.5 | 18.0 | 17.5 | 20.0 | 18.5 | 23.0 | 22.5 | 18.5 | 18.5 |
| 20 | --- | --- | 13.5 | 13.0 | 17.5 | 17.5 | 19.5 | 19.0 | 23.0 | 22.5 | 18.5 | 18.0 |
| 21 | --- | --- | 14.0 | 13.0 | 18.0 | 17.5 | 20.5 | 19.0 | 22.5 | 22.0 | 18.5 | 18.0 |
| 22 | --- | --- | 14.5 | 13.5 | 19.0 | 17.5 | 20.5 | 19.0 | 23.0 | 22.0 | 18.0 | 18.0 |
| 23 | --- | --- | 14.0 | 13.5 | 19.0 | 17.5 | 21.0 | 19.5 | 22.0 | 21.5 | 18.0 | 17.5 |
| 24 | --- | --- | 14.5 | 13.5 | 19.0 | 18.0 | 21.0 | 19.5 | 22.0 | 21.0 | 17.5 | 17.5 |
| 25 | --- | --- | 14.0 | 13.5 | 19.5 | 18.0 | 20.5 | 20.0 | 21.5 | 21.0 | 17.5 | 17.0 |
| 26 | --- | --- | 14.0 | 13.5 | 19.5 | 18.5 | 21.0 | 19.5 | 21.0 | 20.5 | 17.5 | 17.0 |
| 27 | --- | --- | 13.5 | 13.0 | 19.5 | 18.5 | 20.5 | 20.0 | 20.5 | 20.5 | 17.5 | 17.0 |
| 28 | --- | --- | 14.0 | 13.0 | 19.5 | 19.0 | 20.5 | 19.5 | 20.5 | 20.0 | 17.5 | 17.0 |
| 29 | --- | --- | 14.0 | 13.5 | 19.5 | 18.5 | 21.0 | 19.5 | 20.0 | 20.0 | 17.0 | 17.0 |
| 30 | --- | --- | 14.0 | 13.5 | 20.0 | 19.0 | 21.5 | 19.5 | 20.5 | 19.5 | 17.0 | 16.5 |
| 31 | --- | --- | 13.5 | 13.5 | --- | --- | 21.5 | 20.5 | 20.5 | 19.5 | --- | --- |
| MONTH | 10.5 | 7.5 | 14.5 | 12.5 | 20.0 | 13.5 | 21.5 | 18.0 | 23.0 | 19.5 | 20.5 | 16.5 |

PACIFIC SLOPE BASINS IN OREGON

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°42'15", long 123°45'15", in NW¼ sec.35, T.3 N., R.9 W., Tillamook County, Hydrologic Unit 17100202, on right bank 0.2 mi (0.3 km) upstream from Cook Creek, 2.2 mi (3.5 km) northeast of Foss, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--667 mi² (1,728 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 32.60 ft (9.936 m) above mean sea level (State Highway Department bench mark). Prior to Nov. 11, 1939, nonrecording gage.

REMARKS.--Water-discharge records excellent. No regulation. Several small diversions for irrigation and domestic use above station.

AVERAGE DISCHARGE.--38 years, 2,746 ft³/s (77.77 m³/s), 55.91 in/yr (1,420 mm/yr), 1,989,000 acre-ft/yr (2.45 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,900 ft³/s (1,328 m³/s) Jan. 20, 1972, gage height, 23.11 ft (7.044 m); minimum, 34 ft³/s (0.96 m³/s) Aug. 29-31, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,300 ft³/s (405 m³/s) Mar. 9, gage height, 12.04 ft (3.670 m), no peak above base of 19,000 ft³/s (538 m³/s); minimum, 59 ft³/s (1.67 m³/s) Aug. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|--------|-------|-------|-------|---------|-------|--------|
| 1 | 92 | 676 | 216 | 797 | 532 | 8170 | 3660 | 607 | 2000 | 318 | 127 | 513 |
| 2 | 98 | 519 | 207 | 769 | 493 | 8020 | 3210 | 648 | 2070 | 313 | 120 | 390 |
| 3 | 107 | 431 | 203 | 733 | 462 | 7260 | 2780 | 1080 | 1860 | 313 | 114 | 373 |
| 4 | 107 | 345 | 199 | 676 | 443 | 5860 | 2460 | 1610 | 2080 | 318 | 107 | 964 |
| 5 | 107 | 292 | 203 | 620 | 419 | 4490 | 2220 | 1880 | 1950 | 318 | 104 | 1050 |
| 6 | 101 | 253 | 199 | 566 | 402 | 3640 | 2030 | 1730 | 1720 | 323 | 101 | 747 |
| 7 | 101 | 225 | 203 | 493 | 390 | 6430 | 1870 | 1520 | 1500 | 318 | 98 | 593 |
| 8 | 98 | 212 | 292 | 468 | 378 | 10800 | 1730 | 1360 | 1350 | 292 | 95 | 462 |
| 9 | 95 | 199 | 613 | 419 | 373 | 13400 | 1640 | 1310 | 1210 | 287 | 89 | 378 |
| 10 | 95 | 187 | 573 | 468 | 419 | 11400 | 1500 | 1200 | 1090 | 272 | 86 | 329 |
| 11 | 95 | 179 | 552 | 456 | 552 | 8320 | 1360 | 1130 | 1000 | 258 | 80 | 292 |
| 12 | 98 | 175 | 468 | 481 | 566 | 7060 | 1260 | 1050 | 933 | 258 | 77 | 262 |
| 13 | 95 | 167 | 413 | 552 | 655 | 6100 | 1270 | 964 | 864 | 262 | 72 | 239 |
| 14 | 92 | 175 | 378 | 593 | 627 | 5370 | 1230 | 933 | 812 | 253 | 69 | 221 |
| 15 | 92 | 216 | 356 | 655 | 586 | 4910 | 1180 | 988 | 761 | 239 | 66 | 207 |
| 16 | 92 | 297 | 356 | 776 | 552 | 4460 | 1160 | 1110 | 704 | 230 | 64 | 207 |
| 17 | 89 | 356 | 339 | 776 | 539 | 3930 | 1110 | 1160 | 655 | 221 | 64 | 203 |
| 18 | 86 | 552 | 356 | 776 | 513 | 3650 | 1040 | 1170 | 613 | 216 | 59 | 225 |
| 19 | 80 | 500 | 345 | 783 | 487 | 3610 | 988 | 1070 | 573 | 207 | 59 | 456 |
| 20 | 77 | 431 | 323 | 747 | 552 | 3400 | 933 | 980 | 546 | 195 | 61 | 972 |
| 21 | 77 | 378 | 313 | 704 | 933 | 3090 | 894 | 941 | 546 | 195 | 66 | 1420 |
| 22 | 77 | 339 | 313 | 655 | 2150 | 2850 | 872 | 879 | 526 | 187 | 66 | 1270 |
| 23 | 77 | 307 | 390 | 613 | 2510 | 2700 | 827 | 834 | 493 | 171 | 83 | 1090 |
| 24 | 98 | 287 | 468 | 579 | 2140 | 2720 | 790 | 797 | 468 | 163 | 160 | 1160 |
| 25 | 234 | 292 | 500 | 546 | 1800 | 2530 | 769 | 761 | 431 | 156 | 248 | 1200 |
| 26 | 345 | 287 | 1620 | 513 | 2200 | 2400 | 747 | 879 | 407 | 156 | 431 | 1260 |
| 27 | 297 | 262 | 2640 | 474 | 2850 | 4070 | 718 | 972 | 384 | 156 | 362 | 1170 |
| 28 | 267 | 248 | 2010 | 450 | 5330 | 4730 | 683 | 1250 | 367 | 152 | 367 | 995 |
| 29 | 221 | 239 | 1460 | 450 | --- | 5110 | 648 | 1310 | 345 | 145 | 506 | 948 |
| 30 | 191 | 225 | 1130 | 443 | --- | 4550 | 641 | 1210 | 334 | 141 | 948 | 1000 |
| 31 | 262 | --- | 925 | 456 | --- | 3910 | --- | 1380 | --- | 134 | 747 | --- |
| TOTAL | 4043 | 9251 | 18563 | 18487 | 29853 | 168940 | 42220 | 34713 | 28592 | 7167 | 5696 | 20596 |
| MEAN | 130 | 308 | 599 | 596 | 1066 | 5450 | 1407 | 1120 | 953 | 231 | 184 | 687 |
| MAX | 345 | 676 | 2640 | 797 | 5330 | 13400 | 3660 | 1880 | 2080 | 323 | 948 | 1420 |
| MIN | 77 | 167 | 199 | 419 | 373 | 2400 | 641 | 607 | 334 | 134 | 59 | 203 |
| CFSM | .20 | .46 | .90 | .89 | 1.60 | 8.17 | 2.11 | 1.68 | 1.43 | .35 | .28 | 1.03 |
| IN. | .23 | .52 | 1.04 | 1.03 | 1.66 | 9.42 | 2.35 | 1.94 | 1.59 | .40 | .32 | 1.15 |
| AC-FT | 8020 | 18350 | 36820 | 36670 | 59210 | 335100 | 83740 | 68850 | 56710 | 14220 | 11300 | 40850 |
| CAL YR 1976 | TOTAL | 678147 | MEAN | 1853 | MAX | 17400 | MIN | 77 | CFSM | 2.78 | IN | 37.82 |
| WTR YR 1977 | TOTAL | 388121 | MEAN | 1063 | MAX | 13400 | MIN | 59 | CFSM | 1.59 | IN | 21.65 |
| | | | | | | | | | AC-FT | 1345000 | | 769800 |

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.5°C Aug. 12, 1977; minimum, 0.0°C Jan. 8-10, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 24.5°C Aug. 12; minimum, 0.0°C Jan. 8-10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| | | INSTAN- TANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | DIS- SOLVED SILICA (SIO2) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MA - NE - SIUM (MG) (MG/L) | DIS- SOLVED SODIUM (NA) (MG/L) | |
|--------------|------|---|-----------------------------------|--|---|--|--|--|--|--|--|---|---|
| DATE | TIME | | | | | | | | | | | | |
| OCT 28... | 1300 | 258 | 10.9 | 7.4 | 10.5 | 93 | 27 | 27 | 13 | 7.2 | 2.3 | 7.6 | |
| NOV 22... | 1500 | 337 | 8.0 | 7.3 | 11.6 | 85 | <1 | 81 | 14 | 6.3 | 1.6 | 6.6 | |
| DEC 17... | 1200 | 334 | 7.2 | 7.6 | 12.6 | 77 | 87 | 82 | 14 | 5.7 | 1.5 | 6.1 | |
| JAN 18... | 1200 | 783 | 6.4 | 7.6 | 12.1 | 70 | -- | 83 | 19 | 5.3 | 1.5 | 5.9 | |
| FEB 24... | 1200 | 2240 | 6.3 | 7.2 | 12.4 | 69 | H21 | 31 | 11 | 4.8 | 1.3 | 5.9 | |
| MAR 29... | 1300 | 5240 | 6.5 | 7.1 | 11.7 | 55 | H21 | 815 | 13 | 4.7 | 1.4 | 4.6 | |
| APR 21... | 1200 | 964 | 9.9 | 7.1 | 11.7 | 63 | 88 | 82 | 14 | 5.8 | 1.6 | 5.0 | |
| JUN 02... | 1200 | 2100 | 10.9 | 7.1 | 11.6 | 65 | <1 | 24 | 13 | 5.2 | 1.1 | 5.1 | |
| JUL 06... | 1130 | 318 | 15.0 | 7.1 | 9.9 | 75 | 120 | 88 | 14 | 6.3 | 1.7 | 5.8 | |
| 20... | 1500 | 195 | 17.8 | 8.2 | 10.5 | 80 | 82 | 320 | 14 | 6.7 | 1.6 | 6.3 | |
| SEP 09... | 1200 | 378 | 15.2 | 7.0 | 10.1 | 71 | >400 | 320 | 14 | 6.4 | 1.7 | 5.7 | |
| | | | | | | | | | | | | | |
| | | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA,MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO |
| OCT 28... | 34 | 0 | 5.9 | 7.6 | .1 | .00 | .62 | .62 | .05 | 27 | 0 | .6 | |
| NOV 22... | 30 | 0 | 5.2 | 5.9 | .1 | .37 | .26 | .63 | .04 | 22 | 0 | .6 | |
| DEC 17... | 29 | 0 | 4.8 | 6.1 | .0 | .41 | .14 | .55 | .02 | 20 | 0 | .6 | |
| JAN 18... | 25 | 0 | 6.3 | 5.9 | .2 | .53 | .20 | .73 | .01 | 19 | 0 | .6 | |
| FEB 24... | 21 | 0 | 5.7 | 5.5 | .0 | .87 | .02 | .89 | .01 | 17 | 0 | .6 | |
| MAR 29... | 14 | 0 | 4.8 | 5.4 | .0 | .60 | .22 | .82 | .03 | 18 | 6 | .5 | |
| APR 21... | 20 | 0 | 3.7 | 4.7 | .1 | .29 | .15 | .44 | .02 | 21 | 5 | .5 | |
| JUN 02... | 20 | 0 | 5.3 | 4.9 | .1 | .34 | .08 | .42 | .01 | 18 | 1 | .5 | |
| JUL 06... | 27 | 0 | 4.4 | 5.6 | .0 | .29 | .19 | .48 | .05 | 23 | 1 | .5 | |
| 20... | 29 | 0 | 4.3 | 5.9 | .1 | .12 | .30 | .42 | .04 | 23 | 0 | .6 | |
| SEP 09... | 25 | 0 | 2.9 | 5.8 | .1 | .49 | .15 | .64 | .03 | 23 | 2 | .5 | |

B: RESULTS BASED ON NON-IDEAL COLONY COUNT

PACIFIC SLOPE BASINS IN OREGON

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) | DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) | TUR- BID- ITY (JTU) | SUS- PEN- DED SEDI- MENT (MG/L) | SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | TOTAL NON- FILT- RABLE RESIDUE (MG/L) | ALKA- LINITY AS CACO3 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|--|---|--|--|------------------------------|--|---|--|--|--|---|
| OCT 28... | 61 | 62 | 42.5 | .08 | 3 | 2 | 1.4 | 76 | 19 | 28 | 2.9 |
| NOV 22... | 63 | 55 | 57.3 | .09 | 2 | 8 | 7.3 | 96 | -- | 25 | -- |
| DEC 17... | 54 | 53 | 48.7 | .07 | 2 | 3 | 2.7 | 50 | -- | 24 | -- |
| JAN 18... | 50 | 57 | 106 | .07 | 3 | 4 | 8.5 | 69 | -- | 21 | 1.7 |
| FEB 24... | 53 | 46 | 321 | .07 | 9 | 10 | 60 | 84 | -- | 17 | -- |
| MAR 29... | 44 | 41 | 623 | .06 | 7 | 17 | 241 | 74 | -- | 11 | -- |
| APR 21... | 42 | 45 | 109 | .06 | 2 | 3 | 7.8 | 70 | -- | 16 | 1.1 |
| JUN 02... | 49 | 45 | 278 | .07 | 4 | 7 | 40 | 72 | -- | 16 | -- |
| JUL 06... | 55 | 52 | 47.2 | .07 | 3 | 2 | 1.7 | 100 | -- | 22 | -- |
| 20... | 56 | 54 | 29.5 | .08 | 1 | -- | -- | -- | -- | 24 | 1.8 |
| SEP 09... | 49 | 50 | 50.0 | .07 | 3 | 6 | 6.1 | 87 | -- | 21 | -- |

| DATE | TOTAL IRON (FE) (UG/L) | DIS- SOLVED IRON (FE) (UG/L) | TOTAL MAN- GANESE (MN) (UG/L) | DIS- SOLVED MAN- GANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS- SOLVED ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | DIS- SOLVED CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | DIS- SOLVED CHRO- MIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|---------------------------------|--|---|--|------------------------------------|---|---|--|--|---|-----------------------------------|
| OCT 28... | 1300 | 330 | 30 | 10 | 1 | 1 | <10 | 0 | 0 | 0 | <50 |
| JAN 18... | 400 | 180 | 0 | 0 | 0 | 0 | <10 | 0 | 0 | 0 | <50 |
| APR 21... | 370 | 70 | 10 | 10 | 0 | 0 | 10 | 0 | 0 | 0 | <50 |
| JUL 20... | 410 | 300 | 8 | 4 | 0 | 0 | <10 | 0 | 10 | 0 | <50 |

| DATE | DIS- SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS- SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS- SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS- SOLVED ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | DIS- SOLVED SELE- NIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS- SOLVED MERCURY (HG) (UG/L) |
|-----------|--|-----------------------------------|--|---------------------------------|--|---------------------------------|--|--|---|------------------------------------|---|
| OCT 28... | 0 | <10 | 2 | <100 | 1 | 30 | 10 | 0 | 0 | .0 | .0 |
| JAN 18... | 0 | <10 | 6 | <100 | 0 | 10 | 10 | 0 | 0 | .0 | .0 |
| APR 21... | 0 | <10 | 8 | <100 | 2 | 40 | 20 | 0 | 0 | .1 | .0 |
| JUL 20... | 0 | <10 | 2 | <100 | 2 | 40 | 10 | 2 | 0 | .0 | .0 |

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

PESTICIDE ANALYSES

| DATE | TOTAL ALDRIN (UG/L) | TOTAL LINDANE (UG/L) | TOTAL CHLOR- DANE (UG/L) | TOTAL DDD (UG/L) | TOTAL DDE (UG/L) | TOTAL DDT (UG/L) | TOTAL DI- ELDRIN (UG/L) | TOTAL ENDRIN (UG/L) | TOTAL ETHION (UG/L) | TOTAL TOX- APHENE (UG/L) | TOTAL HEPTA- CHLOR (UG/L) | TOTAL HEPTA- CHLOR EPOXIDE (UG/L) |
|------------|---------------------------|----------------------------|-----------------------------------|------------------------|------------------------|------------------------|----------------------------------|---------------------------|---------------------------|-----------------------------------|------------------------------------|---|
| NOV , 1976 | | | | | | | | | | | | |
| 22... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FEB , 1977 | | | | | | | | | | | | |
| 24... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| JUN | | | | | | | | | | | | |
| 02... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SEP | | | | | | | | | | | | |
| 09... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

| DATE | TOTAL METH- OXY- CHLOR (UG/L) | TOTAL MALA- THION (UG/L) | TOTAL PARA- THION (UG/L) | TOTAL DI- AZINON (UG/L) | TOTAL METHYL PARA- THION (UG/L) | TOTAL ATRA- ZINE (UG/L) | SIMA- ZINE TOTAL COUL- SON (UG/L) | TOTAL 2,4-D (UG/L) | TOTAL 2,4,5-T (UG/L) | TOTAL SILVEX (UG/L) | TOTAL TRI- THION (UG/L) | TOTAL METHYL TRI- THION (UG/L) |
|------------|---|-----------------------------------|-----------------------------------|----------------------------------|---|----------------------------------|--|--------------------------|----------------------------|---------------------------|----------------------------------|--|
| NOV , 1976 | | | | | | | | | | | | |
| 22... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FEB , 1977 | | | | | | | | | | | | |
| 24... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| JUN | | | | | | | | | | | | |
| 02... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SEP | | | | | | | | | | | | |
| 09... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

| DATE | ALDRIN IN BOTTOM MA- TERIAL (UG/KG) | LINDANE IN BOTTOM MA- TERIAL (UG/KG) | CHLOR- DANE IN BOTTOM MA- TERIAL (UG/KG) | DDE IN BOTTOM MA- TERIAL (UG/KG) | DDT IN BOTTOM MA- TERIAL (UG/KG) | DI- ELDRIN IN BOTTOM MA- TERIAL (UG/KG) | ENDRIN IN BOTTOM MA- TERIAL (UG/KG) | ETHION IN BOTTOM MA- TERIAL (UG/KG) | TOX- APHENE IN BOTTOM MA- TERIAL (UG/KG) | HEPTA- CHLOR IN BOTTOM MA- TERIAL (UG/KG) | HEPTA- CHLOR EPOXIDE IN BOT- TOM MA- TERIAL (UG/KG) | METHOX- YCHLOR IN BOT- TOM MA- TERIAL (UG/KG) |
|------------|--|---|--|---|---|---|--|--|--|---|---|--|
| NOV , 1976 | | | | | | | | | | | | |
| 22... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

| DATE | MALA- THION IN BOTTOM MA- TERIAL (UG/KG) | PARA- THION IN BOTTOM MA- TERIAL (UG/KG) | DI- AZINON IN BOTTOM MA- TERIAL (UG/KG) | METHYL PARA- THION IN BOT- TOM MA- TERIAL (UG/KG) | ATRA- ZINE IN BOTTOM MATERI- AL (UG/ KG DRY SOLIDS) | SIMA- ZINE IN BOTTOM MATERI- AL (UG/ KG DRY SOLIDS) | 2,4-D IN BOTTOM MA- TERIAL (UG/KG) | 2,4,5-T IN BOTTOM MA- TERIAL (UG/KG) | SILVEX IN BOTTOM MA- TERIAL (UG/KG) | TRI- THION IN BOTTOM MA- TERIAL (UG/KG) | METHYL TRI- THION IN BOT- TOM MA- TERIAL (UG/KG) |
|------------|--|--|---|---|---|---|---|---|--|---|--|
| NOV , 1976 | | | | | | | | | | | |
| 22... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND: SPECIFICALLY LOOKED FOR BUT NOT DETECTED

PACIFIC SLOPE BASINS IN OREGON

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | OCT 28,76 1300 | NOV 22,76 1500 | DEC 27,76 1200 | JAN 18,77 1200 | FEB 24,77 1200 |
|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| TOTAL CELLS/ML | 1900 | 20 | 140 | 140 | 1100 |
| DIVERSITY: DIVISION | 0.5 | 1.4 | 0.8 | 1.2 | 0.1 |
| ..CLASS | 0.5 | 1.4 | 0.8 | 1.2 | 0.1 |
| ..ORDER | 0.9 | 1.8 | 1.3 | 1.4 | 0.3 |
| ...FAMILY | 1.1 | 2.4 | 2.8 | 3.0 | 2.8 |
| ...GENUS | 1.1 | 2.4 | 3.1 | 0.0 | 2.9 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | |
| ...CHARACIUM | -- | - | -- | - | -- | - | 14 | 10 | -- | - |
| ...OOCYSTACEAE | | | | | | | | | | |
| ...ANKISTRODESMUS | 100 | 5 | -- | - | -- | - | -- | - | -- | - |
| ...DICTYOSPHAERIUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...KIRCHNERIELLA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...OOCYSTIS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...TETRAEDRON | -- | - | -- | - | -- | - | 10 | 7 | -- | - |
| ...SCENEDESMACEAE | | | | | | | | | | |
| ...ACTINASTRUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMUS | 82 | 4 | 7# | 38 | 11 | 8 | * 0 | | 21 | 2 |
| ...TETRASPORALES | | | | | 23# | 16 | | | | |
| ...PALMELLACEAE | | | | | | | | | | |
| ...GLOEOCYSTIS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...SPHAEROCYSTIS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...VOLVOCALES | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ...CHLAMYDOMONAS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...ZYGNEATALES | | | | | | | | | | |
| ...MESOTAENTIAEAE | | | | | | | | | | |
| ...ROYA | -- | - | 2 | 13 | -- | - | -- | - | -- | - |
| CHRYSTOPHYTA | | | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | | | |
| ...CENTRALES | | | | | | | | | | |
| ...COSCINODISCAEAE | | | | | | | | | | |
| ...CYCLOTELLA | -- | - | -- | - | 20 | 14 | 3 | 2 | 21 | 2 |
| ...MELOSIRA | -- | - | -- | - | -- | - | -- | - | 10 | 1 |
| ...STEPHANODISCUS | 1600# | 83 | -- | - | -- | - | -- | - | -- | - |
| ...PENNALES | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | |
| ...ACHNANTHES | * 0 | | -- | - | -- | - | 3 | 2 | 94 | 9 |
| ...COCCONEIS | 21 | 1 | * 0 | | 8 | 6 | * 0 | | -- | - |
| ...RHOICOSPHEA | 21 | 1 | 2 | 13 | 6 | 4 | * 0 | | 21 | 2 |
| ...CYMBELLACEAE | | | | | | | | | | |
| ...AMPHORA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...CYMBELLA | 21 | 1 | * 0 | | 8 | 6 | 14 | 10 | 130 | 12 |
| ...DIATOMACEAE | | | | | | | | | | |
| ...DIATOMA | -- | - | -- | - | 6 | 4 | * 0 | | 10 | 1 |
| ...EUNOTIACEAE | | | | | | | | | | |
| ...EUNOTIA | -- | - | -- | - | -- | - | 3 | 2 | -- | - |
| ...FRAGILARIACEAE | | | | | | | | | | |
| ...ASTERIONELLA | -- | - | -- | - | -- | - | * 0 | | -- | - |
| ...FRAGILARIA | 41 | 2 | -- | - | -- | - | -- | - | -- | - |
| ...HANNAEA | -- | - | -- | - | -- | - | * 0 | | -- | - |
| ...SYNEDRA | -- | - | 2 | 13 | 3 | 2 | 44# | 31 | 120 | 11 |
| ...GOMPHONEMATACEAE | | | | | | | | | | |
| ...GOMPHONEIS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...GOMPHONEMA | 21 | 1 | * 0 | | 11 | 8 | 7 | 5 | 100 | 10 |
| ...NAVICULACEAE | | | | | | | | | | |
| ...NAVICULA | -- | - | * 0 | | 34# | 24 | 3 | 2 | 220# | 20 |
| ...PINNULARIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...NITZSCHIAEAE | | | | | | | | | | |
| ...NITZSCHIA | -- | - | 2 | 13 | 8 | 6 | 20 | 14 | 320# | 30 |
| ...SURIRELLACEAE | | | | | | | | | | |
| ...SURIRELLA | -- | - | -- | - | -- | - | -- | - | 10 | 1 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | | | |
| ...CHROCOCCOCCALES | | | | | | | | | | |
| ...CHROCOCCOCCAEAE | | | | | | | | | | |
| ...ANACYSTIS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...HORMOGONALES | | | | | | | | | | |
| ...OSCILLATORIACEAE | -- | - | -- | - | -- | - | 20 | 14 | -- | - |
| ...RIVULARIACEAE | | | | | | | | | | |
| ...CALOTHRIX | -- | - | -- | - | -- | - | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | | | |
| ..DINOPHYCEAE | | | | | | | | | | |
| ...PERIDINIALES | | | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | | | |
| ...GLENODINIUM | 21 | 1 | 2 | 13 | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | JUN 2,77 1200 | JUL 6,77 1130 | JUL 20,77 1500 | SEP 9,77 1200 |
|---------------------|------------------|------------------|-------------------|------------------|
| TOTAL CELLS/ML | 190 | 770 | 9900 | 18000 |
| DIVERSITY: DIVISION | 0.0 | 1.4 | 1.3 | 0.2 |
| ..CLASS | 0.0 | 1.4 | 1.3 | 0.2 |
| ...ORDER | 0.4 | 2.1 | 1.7 | 0.4 |
| ...FAMILY | 2.6 | 2.4 | 1.9 | 0.4 |
| ...GENUS | 3.1 | 2.6 | 2.2 | 1.2 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
|CHARACIUM | -- | - | -- | - | -- | - | -- | - |
|OOCYSTACEAE | | | | | | | | |
|ANKISTRODESMUS | -- | - | -- | - | 290 | 3 | -- | - |
|DICTYOSPHAERIUM | -- | - | 38 | 5 | -- | - | -- | - |
|KIRCHNERIELLA | -- | - | -- | - | -- | - | 380 | 2 |
|OOCYSTIS | -- | - | -- | - | -- | - | 250 | 1 |
|TETRAEDRON | -- | - | -- | - | -- | - | -- | - |
|SCENEDESMACEAE | | | | | | | | |
|ACTINASTRIUM | -- | - | -- | - | -- | - | -- | - |
|SCENEDESMUS | -- | - | 48 | 6 | -- | - | -- | - |
|TETRASPORALES | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | |
|GLOEOCYSTIS | -- | - | 38 | 5 | -- | - | -- | - |
|SPHAEROCYSTIS | -- | - | 160# | 21 | -- | - | -- | - |
| ...VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
|CHLAMYDOMONAS | -- | - | -- | - | 370 | 4 | -- | - |
| ...ZYGNEMALES | | | | | | | | |
| ...MESOTAENIACEAE | | | | | | | | |
|ROYA | -- | - | -- | - | -- | - | -- | - |
| CHRYCOPHYTA | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | |
| ...CENTRALES | | | | | | | | |
| ...COSCINODISCAEAE | | | | | | | | |
|CYCLOTELLA | -- | - | 43 | 6 | 3700# | 38 | 12000# | 68 |
|MELOSIRA | 14 | 7 | -- | - | 290 | 3 | 4800# | 27 |
|STEPHANODISCUS | -- | - | -- | - | -- | - | -- | - |
| ...PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
|ACHNANTHES | -- | - | 29 | 4 | 290 | 3 | -- | - |
|COCCONEIS | -- | - | 5 | 1 | 150 | 1 | -- | - |
|RHODOSPHENIA | 11 | 5 | -- | - | -- | - | -- | - |
| ...CYMBELLACEAE | | | | | | | | |
|AMPHORA | 21 | 11 | -- | - | 73 | 1 | -- | - |
|CYMBELLA | 42# | 22 | 10 | 1 | 73 | 1 | -- | - |
| ...DIATOMACEAE | | | | | | | | |
|DIATOMA | 11 | 5 | -- | - | -- | - | -- | - |
| ...EUNOTIACEAE | | | | | | | | |
|EUNOTIA | -- | - | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
|ASTERIONELLA | -- | - | -- | - | 220 | 2 | -- | - |
|FRAGILARIA | -- | - | -- | - | -- | - | -- | - |
|HANNAEA | -- | - | -- | - | -- | - | -- | - |
|SYNEDRA | 21 | 11 | -- | - | 150 | 1 | -- | - |
| ...GOMPHONEMATAEAE | | | | | | | | |
|GOMPHONEIS | 32# | 16 | -- | - | -- | - | -- | - |
|GOMPHONEMA | -- | - | -- | - | 150 | 1 | -- | - |
| ...NAVICULACEAE | | | | | | | | |
|NAVICULA | 28 | 15 | 14 | 2 | -- | - | 250 | 1 |
|PINNULARIA | 11 | 5 | -- | - | -- | - | -- | - |
| ...NITZSCHACEAE | | | | | | | | |
|NITZSCHIA | -- | - | 5 | 1 | -- | - | 130 | 1 |
| ...SURIPELLACEAE | | | | | | | | |
|SURIPELLA | 4 | 2 | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | |
| ...CHROCOCCOCCALES | | | | | | | | |
| ...CHROCOCCOCCAEAE | | | | | | | | |
|ANACYSTIS | -- | - | 38 | 5 | 4100# | 41 | -- | - |
| ...HORMOGONALES | | | | | | | | |
| ...OSCILLATORIACEAE | -- | - | -- | - | -- | - | -- | - |
| ...RIVULARIACEAE | | | | | | | | |
|CALOTHRIX | -- | - | 340# | 44 | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | |
| ..DINOPHYCEAE | | | | | | | | |
| ...PERIDINIALES | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | |
|GLENODINIUM | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PACIFIC SLOPE BASINS IN OREGON

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | LENGTH OF EXPO- SURE (DAYS) | BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) | CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- FLUOROM (MG/M2) |
|--------------|---|--|---|---|
| JUL 06... | 34 | 801 | .196 | .034 |
| 20... | 15 | 640 | 1.24 | .175 |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 17.5 | 15.5 | 10.5 | 9.5 | 2.0 | 1.5 | 3.5 | 3.5 | 4.0 | 3.5 | 6.5 | 5.5 |
| 2 | 16.5 | 15.5 | 11.0 | 10.0 | 2.0 | 1.0 | 4.0 | 3.5 | 3.5 | 3.0 | 6.5 | 5.5 |
| 3 | 15.5 | 14.5 | 10.5 | 10.0 | 2.5 | 1.5 | 3.5 | 3.5 | 4.0 | 3.0 | 6.5 | 5.5 |
| 4 | 15.0 | 14.0 | 10.5 | 9.5 | 3.0 | 2.0 | 4.0 | 3.5 | 4.5 | 3.5 | 7.0 | 5.5 |
| 5 | 14.5 | 13.0 | 10.5 | 9.5 | 4.5 | 3.0 | 3.5 | 2.0 | 4.5 | 4.0 | 6.5 | 5.0 |
| 6 | 14.5 | 13.0 | 10.5 | 9.0 | 5.0 | 4.0 | 2.0 | 1.0 | 5.5 | 4.5 | 7.0 | 5.0 |
| 7 | 15.0 | 13.5 | 10.5 | 9.5 | 6.0 | 4.5 | 1.0 | 0.5 | 5.0 | 4.5 | 7.0 | 5.5 |
| 8 | 14.5 | 14.0 | 11.0 | 9.5 | 6.5 | 6.0 | 0.5 | 0.0 | 5.0 | 4.5 | 6.5 | 5.5 |
| 9 | 15.0 | 13.5 | 10.5 | 9.5 | 6.0 | 5.5 | 0.5 | 0.0 | 6.0 | 4.5 | 6.5 | 5.5 |
| 10 | 15.5 | 14.0 | 10.5 | 9.5 | 6.0 | 5.0 | 1.5 | 0.0 | 7.0 | 5.5 | 6.5 | 5.5 |
| 11 | 16.0 | 14.5 | 10.5 | 9.0 | 5.0 | 4.5 | 2.0 | 1.5 | 7.0 | 6.0 | 6.5 | 5.5 |
| 12 | 15.0 | 14.0 | 9.5 | 8.5 | 5.0 | 4.0 | 3.0 | 2.0 | 7.5 | 6.0 | 6.5 | 5.5 |
| 13 | 14.5 | 13.0 | 8.5 | 8.0 | 5.5 | 5.0 | 3.5 | 3.0 | 7.5 | 6.0 | 6.0 | 5.5 |
| 14 | 14.0 | 12.0 | 9.0 | 8.0 | 6.0 | 5.0 | 4.5 | 3.5 | 6.5 | 6.0 | 5.5 | 5.0 |
| 15 | 13.0 | 11.5 | 9.5 | 8.5 | 7.0 | 6.0 | 5.5 | 4.5 | 6.5 | 5.5 | 6.5 | 5.0 |
| 16 | 13.0 | 11.0 | 10.5 | 9.0 | 7.0 | 6.5 | 5.5 | 5.0 | 7.0 | 6.0 | 6.5 | 5.5 |
| 17 | 12.0 | 10.5 | 11.0 | 10.0 | 7.5 | 7.0 | 6.0 | 4.5 | 8.0 | 6.5 | 6.5 | 5.5 |
| 18 | 11.5 | 10.0 | 10.0 | 8.5 | 7.0 | 6.0 | 7.0 | 6.0 | 7.5 | 6.0 | 7.0 | 5.5 |
| 19 | 11.0 | 9.5 | 9.0 | 7.5 | 6.0 | 5.0 | 6.5 | 6.0 | 7.5 | 6.5 | 7.0 | 6.5 |
| 20 | 10.5 | 8.5 | 8.0 | 7.0 | 5.0 | 4.5 | 6.5 | 6.0 | 7.5 | 7.0 | 7.0 | 5.5 |
| 21 | 10.0 | 8.5 | 8.5 | 7.5 | 4.5 | 4.5 | 6.5 | 6.0 | 7.0 | 6.0 | 8.0 | 6.0 |
| 22 | 9.5 | 8.5 | 8.0 | 7.0 | 4.5 | 4.5 | 5.5 | 4.5 | 6.5 | 5.5 | 8.0 | 6.0 |
| 23 | 10.0 | 9.0 | 7.0 | 6.5 | 5.0 | 4.5 | 4.5 | 3.5 | 6.0 | 5.5 | 8.0 | 7.0 |
| 24 | 10.5 | 9.5 | 7.5 | 6.5 | 5.0 | 4.5 | 3.5 | 3.0 | 6.5 | 5.5 | 8.0 | 6.0 |
| 25 | 11.0 | 10.0 | 8.0 | 7.0 | 5.5 | 4.5 | 3.0 | 2.5 | 5.5 | 5.5 | 7.5 | 6.5 |
| 26 | 11.0 | 10.0 | 8.0 | 5.5 | 7.0 | 6.0 | 2.5 | 1.5 | 6.0 | 5.0 | 8.0 | 6.5 |
| 27 | 11.0 | 9.5 | 5.5 | 4.0 | 7.5 | 6.5 | 2.0 | 1.5 | 7.0 | 5.5 | 8.0 | 5.5 |
| 28 | 10.5 | 10.0 | 4.0 | 3.0 | 6.5 | 6.0 | 1.5 | 1.0 | 7.0 | 5.5 | 6.5 | 6.0 |
| 29 | 10.5 | 9.5 | 3.5 | 2.5 | 6.0 | 5.5 | 2.0 | 1.0 | --- | --- | 6.5 | 5.5 |
| 30 | 9.5 | 8.5 | 3.0 | 2.0 | 5.5 | 4.5 | 2.0 | 1.0 | --- | --- | 7.5 | 6.0 |
| 31 | 10.5 | 9.5 | --- | --- | 4.5 | 3.5 | 3.5 | 2.0 | --- | --- | 7.0 | 6.0 |
| MONTH | 17.5 | 8.5 | 11.0 | 2.0 | 7.5 | 1.0 | 7.0 | 0.0 | 8.0 | 3.0 | 8.0 | 5.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.5 | 6.0 | 15.0 | 14.0 | 11.5 | 10.5 | 19.5 | 18.0 | 22.5 | 20.5 | 17.0 | 15.0 |
| 2 | 7.5 | 5.5 | 14.0 | 11.5 | 12.0 | 10.5 | 18.0 | 16.0 | 22.5 | 20.5 | 16.0 | 15.5 |
| 3 | 9.0 | 7.0 | 12.0 | 10.5 | 11.5 | 10.5 | 16.5 | 15.5 | 23.0 | 20.5 | 16.5 | 15.5 |
| 4 | 10.0 | 8.0 | 11.0 | 10.0 | 11.5 | 10.5 | 16.0 | 15.0 | 22.5 | 20.0 | 16.0 | 15.0 |
| 5 | 10.5 | 8.5 | 11.0 | 9.5 | 14.5 | 10.5 | 16.0 | 13.5 | 22.5 | 20.0 | 16.0 | 14.5 |
| 6 | 11.5 | 9.0 | 11.5 | 8.5 | 15.0 | 12.5 | 17.5 | 13.5 | 23.0 | 20.5 | 16.0 | 14.5 |
| 7 | 11.0 | 10.0 | 11.5 | 10.0 | 15.5 | 13.0 | 19.0 | 15.5 | 22.5 | 20.5 | 16.0 | 14.5 |
| 8 | 11.0 | 10.0 | 12.0 | 10.5 | 14.5 | 13.5 | 18.5 | 16.0 | 23.0 | 20.5 | 16.0 | 14.5 |
| 9 | 10.5 | 9.5 | 13.5 | 11.0 | 15.0 | 12.5 | 17.0 | 16.0 | 23.5 | 20.5 | 16.0 | 14.5 |
| 10 | 10.0 | 8.5 | 13.0 | 10.5 | 15.5 | 13.0 | 17.0 | 15.0 | 23.5 | 20.0 | 16.0 | 15.0 |
| 11 | 11.5 | 9.0 | 11.5 | 10.5 | 15.0 | 13.5 | 18.0 | 16.0 | 23.5 | 20.5 | 16.5 | 15.0 |
| 12 | 11.0 | 9.5 | 12.0 | 10.5 | 14.5 | 13.0 | 16.5 | 16.0 | 24.5 | 21.5 | 16.5 | 14.5 |
| 13 | 10.5 | 9.5 | 12.0 | 11.0 | 15.0 | 13.0 | 16.5 | 15.0 | 23.0 | 20.0 | --- | --- |
| 14 | 10.0 | 8.5 | 11.5 | 11.0 | 16.0 | 13.5 | 18.5 | 15.5 | 23.0 | 20.0 | --- | --- |
| 15 | 10.0 | 9.5 | 11.5 | 10.5 | 17.0 | 14.5 | 20.0 | 16.5 | 23.5 | 20.5 | --- | --- |
| 16 | 10.0 | 8.5 | 11.0 | 10.5 | 18.0 | 15.0 | 20.0 | 18.5 | 23.5 | 20.5 | --- | --- |
| 17 | 10.0 | 8.5 | 11.0 | 10.0 | 18.0 | 16.0 | 19.5 | 17.5 | 23.5 | 20.5 | --- | --- |
| 18 | 9.5 | 8.0 | 11.0 | 10.0 | 18.0 | 16.0 | 18.0 | 16.0 | 21.5 | 20.0 | --- | --- |
| 19 | 10.5 | 8.0 | 12.0 | 9.5 | 17.5 | 16.0 | 19.0 | 15.5 | 20.5 | 20.0 | --- | --- |
| 20 | 10.5 | 9.0 | 12.0 | 11.0 | 17.0 | 16.0 | 18.5 | 16.0 | 20.0 | 19.5 | --- | --- |
| 21 | 10.5 | 9.5 | 13.0 | 11.5 | 16.0 | 15.5 | 19.5 | 15.0 | 19.5 | 17.0 | --- | --- |
| 22 | 12.0 | 9.5 | 12.5 | 11.0 | 18.0 | 15.5 | 20.5 | 16.5 | 20.0 | 18.0 | --- | --- |
| 23 | 13.0 | 11.0 | 12.5 | 10.5 | 18.5 | 16.0 | 21.0 | 17.5 | 18.5 | 18.0 | --- | --- |
| 24 | 13.0 | 11.5 | 13.5 | 11.0 | 19.0 | 16.0 | 21.5 | 17.5 | 18.0 | 15.5 | --- | --- |
| 25 | 13.5 | 12.0 | 12.5 | 11.0 | 19.0 | 17.5 | 21.0 | 19.5 | 16.5 | 15.5 | --- | --- |
| 26 | 13.5 | 11.5 | 12.0 | 11.0 | 19.0 | 15.5 | 19.5 | 18.0 | 17.5 | 14.0 | --- | --- |
| 27 | 14.0 | 11.0 | 12.0 | 10.5 | 19.0 | 15.5 | 19.0 | 17.5 | 16.5 | 15.5 | --- | --- |
| 28 | 14.0 | 12.0 | 11.5 | 10.5 | 20.0 | 16.0 | 19.0 | 18.0 | 16.0 | 15.5 | --- | --- |
| 29 | 14.5 | 12.0 | 11.5 | 10.5 | 19.5 | 16.0 | 20.0 | 16.0 | 16.0 | 15.0 | --- | --- |
| 30 | 15.5 | 13.0 | 11.5 | 10.5 | 20.5 | 17.0 | 21.0 | 18.0 | 15.5 | 14.5 | --- | --- |
| 31 | --- | --- | 11.0 | 10.5 | --- | --- | 22.0 | 20.0 | 16.5 | 14.0 | --- | --- |
| MONTH | 15.5 | 5.5 | 15.0 | 8.5 | 20.5 | 10.5 | 22.0 | 13.5 | 24.5 | 14.0 | 17.0 | 14.5 |

WILSON RIVER BASIN

411

14301500 WILSON RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°29'05", long 123°41'20", in SW¼SE¼ sec.8, T.1 S., R.8 W., Tillamook County, Hydrologic Unit 17100203, on right bank 0.2 mi (0.3 km) upstream from Negro Jack Creek, 8.0 mi (12.9 km) east of Tillamook, and at mile 11.4 (18.3 km).

DRAINAGE AREA.--161 mi² (417 km²), at cableway, 2.0 mi (3.2 km) downstream, where all discharge measurements are made.

PERIOD OF RECORD.--October 1914 to September 1915, August to November 1916, July 1931 to current year. Prior to January 1915 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1398: 1953. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 71.89 ft (21.912 m) above mean sea level. Dec. 18, 1914, to Nov. 4, 1916, nonrecording gage at site 2.8 mi (4.5 km) downstream at different datum. July 30, 1931, to Sept. 30, 1938, nonrecording gage at site 2.82 mi (4.54 km) downstream at datum 28.83 ft (8.787 m) lower. Oct. 1, 1938, to Oct. 17, 1968, water-stage recorder at site 2.1 mi (3.4 km) downstream at datum 29.76 ft (9.071 m) lower.

REMARKS.--Records good. No regulation. Small diversions for domestic use above station.

AVERAGE DISCHARGE.--47 years (water years 1915, 1932-77), 1,215 ft³/s (34.41 m³/s), 102.48 in/yr (2,603 mm/yr), 880,300 acre-ft/yr (1.09 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft³/s (1,020 m³/s) Jan. 20, 1972, gage height, 16.91 ft (5.154 m); maximum gage height, 20.26 ft (6.175 m) Dec. 22, 1964 (site and datum then in use); minimum discharge, 32 ft³/s (0.91 m³/s) Sept. 5, 1973, but may have been less for short period following a landslide Jan. 31, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1916 reached a stage of 20.8 ft (6.34 m), from floodmarks, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,680 ft³/s (189 m³/s) Mar. 7, gage height, 10.23 ft (3.118 m), no peak above base of 12,000 ft³/s (340 m³/s); minimum, 56 ft³/s (1.59 m³/s) Oct. 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|-----------|----------|-------|--------|------|------|-------|
| 1 | 65 | 782 | 174 | 451 | 341 | 4260 | 1340 | 298 | 1270 | 174 | 84 | 243 |
| 2 | 73 | 387 | 165 | 458 | 300 | 3170 | 1220 | 356 | 1050 | 172 | 83 | 208 |
| 3 | 79 | 283 | 162 | 410 | 263 | 2870 | 1090 | 716 | 913 | 176 | 83 | 286 |
| 4 | 74 | 232 | 157 | 378 | 263 | 2220 | 989 | 994 | 1140 | 179 | 81 | 1020 |
| 5 | 71 | 198 | 152 | 348 | 249 | 1710 | 963 | 1030 | 1040 | 169 | 82 | 918 |
| 6 | 68 | 174 | 149 | 317 | 241 | 1580 | 958 | 860 | 874 | 165 | 82 | 538 |
| 7 | 64 | 157 | 158 | 305 | 232 | 3310 | 938 | 720 | 751 | 155 | 80 | 398 |
| 8 | 59 | 137 | 286 | 276 | 222 | 5370 | 913 | 650 | 654 | 149 | 79 | 317 |
| 9 | 59 | 133 | 514 | 258 | 218 | 5280 | 846 | 567 | 585 | 145 | 77 | 274 |
| 10 | 64 | 131 | 407 | 256 | 293 | 3310 | 742 | 531 | 524 | 145 | 73 | 241 |
| 11 | 67 | 125 | 333 | 267 | 348 | 2460 | 658 | 497 | 483 | 141 | 70 | 218 |
| 12 | 65 | 119 | 288 | 333 | 451 | 2240 | 600 | 464 | 448 | 139 | 69 | 198 |
| 13 | 63 | 115 | 256 | 418 | 589 | 1920 | 615 | 427 | 418 | 142 | 66 | 181 |
| 14 | 62 | 141 | 236 | 433 | 517 | 1720 | 578 | 424 | 389 | 134 | 65 | 172 |
| 15 | 61 | 258 | 236 | 461 | 454 | 1550 | 567 | 493 | 365 | 127 | 68 | 167 |
| 16 | 61 | 436 | 234 | 480 | 418 | 1440 | 563 | 534 | 346 | 124 | 68 | 176 |
| 17 | 60 | 493 | 230 | 451 | 389 | 1310 | 520 | 545 | 322 | 125 | 67 | 165 |
| 18 | 57 | 611 | 247 | 439 | 356 | 1320 | 493 | 531 | 307 | 128 | 65 | 196 |
| 19 | 56 | 464 | 236 | 418 | 333 | 1360 | 464 | 514 | 293 | 122 | 70 | 451 |
| 20 | 56 | 381 | 222 | 395 | 365 | 1320 | 436 | 470 | 286 | 114 | 70 | 662 |
| 21 | 56 | 320 | 214 | 370 | 477 | 1220 | 424 | 464 | 281 | 112 | 72 | 768 |
| 22 | 58 | 281 | 208 | 343 | 1190 | 1200 | 418 | 427 | 267 | 110 | 73 | 619 |
| 23 | 58 | 252 | 226 | 322 | 1200 | 1220 | 398 | 404 | 249 | 104 | 87 | 589 |
| 24 | 76 | 245 | 226 | 300 | 943 | 1310 | 387 | 384 | 236 | 100 | 141 | 662 |
| 25 | 269 | 260 | 272 | 283 | 943 | 1200 | 384 | 370 | 224 | 99 | 171 | 823 |
| 26 | 241 | 230 | 1120 | 269 | 1220 | 1210 | 375 | 451 | 216 | 104 | 226 | 846 |
| 27 | 158 | 212 | 1670 | 256 | 2010 | 2240 | 351 | 500 | 206 | 96 | 157 | 691 |
| 28 | 128 | 208 | 1060 | 245 | 4040 | 2080 | 333 | 623 | 198 | 98 | 241 | 578 |
| 29 | 114 | 192 | 768 | 236 | --- | 1800 | 317 | 634 | 189 | 96 | 335 | 556 |
| 30 | 103 | 181 | 611 | 226 | --- | 1570 | 305 | 592 | 183 | 93 | 600 | 500 |
| 31 | 473 | --- | 510 | 269 | --- | 1410 | --- | 782 | --- | 87 | 359 | --- |
| TOTAL | 3018 | 8138 | 11727 | 10671 | 18865 | 66180 | 19185 | 17252 | 14707 | 4024 | 3944 | 13661 |
| MEAN | 97.4 | 271 | 378 | 344 | 674 | 2135 | 640 | 557 | 490 | 130 | 127 | 455 |
| MAX | 473 | 782 | 1670 | 480 | 4040 | 5370 | 1340 | 1030 | 1270 | 179 | 600 | 1020 |
| MIN | 56 | 115 | 149 | 226 | 218 | 1200 | 305 | 298 | 183 | 87 | 65 | 165 |
| CFSM | .61 | 1.68 | 2.35 | 2.14 | 4.19 | 13.3 | 3.98 | 3.46 | 3.04 | .81 | .79 | 2.83 |
| IN. | .70 | 1.88 | 2.71 | 2.47 | 4.36 | 15.29 | 4.43 | 3.99 | 3.40 | .93 | .91 | 3.16 |
| AC-FT | 5990 | 16140 | 23260 | 21170 | 37420 | 131300 | 38050 | 34220 | 29170 | 7980 | 7820 | 27100 |
| CAL YR 1976 | TOTAL | 314776 | MEAN 860 | MAX 8960 | MIN 56 | CFSM 5.34 | IN 72.73 | AC-FT | 624400 | | | |
| WTR YR 1977 | TOTAL | 191372 | MEAN 524 | MAX 5370 | MIN 56 | CFSM 3.26 | IN 44.22 | AC-FT | 379600 | | | |

NESTUCCA RIVER BASIN

14302800 MCGUIRE LAKE NEAR FAIRDALE, OR

LOCATION.--Lat 45°18'30", long 123°24'30", in NW¼SE¼ sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, on control tower in reservoir on Nestucca River, 0.3 mi (0.5 km) upstream from Walker Creek, and 5.0 mi (8.0 km) southwest of Fairdale.

DRAINAGE AREA.--2.85 mi² (7.38 km²).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level.

REMARKS.--Reservoir is formed by earthfill dam with ungated spillway. Capacity of reservoir is 3,840 acre-ft (4.73 hm³) between elevations 1,810.0 ft (551.69 m) and 1,865.5 ft (568.60 m). Dead storage negligible. Under normal operation, reservoir is filled in the spring (April or May) and drained when fall rains start. There is no planned storage during winter months; however, during periods of heavy runoff, inflow may be greater than capacity of outlet tunnel and there may be temporary storage. Water is used during summer months for municipal supply of city of McMinnville.

COOPERATION.--Elevation and capacity table furnished by city of McMinnville, Water and Light Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,890 acre-ft (4.80 hm³) Mar. 12, 1972, Feb. 19, Mar. 28, 1974, elevation, 1,865.8 ft (568.70 m); no contents most of time during winter months.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,320 acre-ft (4.09 hm³) July 14-23, elevation, 1,861.8 ft (567.48 m); minimum observed, reservoir empty Dec. 8-16.

MONTHEND ELEVATION AND CONTENTS AT 0900, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 1,858.9 | 2,960 | - |
| Oct. 31..... | 1,857.0 | 2,730 | -230 |
| Nov. 30..... | 1,838.7 | 1,110 | -1,620 |
| Dec. 31..... | 1,817.7 | 168 | -942 |
| CAL YR 1976..... | - | - | -1,170 |
| Jan. 31..... | 1,825.0 | 395 | +227 |
| Feb. 28..... | 1,832.7 | 742 | +347 |
| Mar. 31..... | 1,853.5 | 2,360 | +1,620 |
| Apr. 30..... | 1,857.0 | 2,730 | +370 |
| May 31..... | 1,859.8 | 3,070 | +340 |
| June 30..... | 1,861.4 | 3,270 | +200 |
| July 31..... | 1,861.0 | 3,220 | -50 |
| Aug. 31..... | 1,858.2 | 2,870 | -350 |
| Sept. 30..... | 1,859.1 | 2,980 | +110 |
| WTR YR 1977..... | - | - | +20 |

NESTUCCA RIVER BASIN

413

14302900 NESTUCCA RIVER NEAR FAIRDALE, OR

LOCATION.--Lat 45°18'40", long 123°25'05", in SW¼NW¼ sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, on right bank 100 ft (30 m) upstream from former Meadow Lake, 0.4 mi (0.6 km) downstream from Walker Creek, 5.3 mi (8.5 km) southwest of Fairdale, and at mile 49.3 (79.3 km).

DRAINAGE AREA.--6.18 mi² (16.01 km²).

PERIOD OF RECORD.--June 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,778.99 ft (542.236 m) above mean sea level (levels by city of McMinnville).

REMARKS.--Records good. Flow regulated since March 1969 by McGuire Lake about 1 mi (1.6 km) above station (see station 14302800); during winter months lake is empty except when inflow exceeds capacity of outlet tunnel.

AVERAGE DISCHARGE.--16 years (water years 1961-75, 1977), 32.4 ft³/s (0.918 m³/s), 71.20 in/yr (1,808 mm/yr), 23,470 acre-ft/yr (28.9 hm³/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 876 ft³/s (24.8 m³/s) Dec. 22, 1964, gage height, 10.43 ft (3.179 m); minimum, 0.76 ft³/s (0.022 m³/s) Aug. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 181 ft³/s (5.13 m³/s) Mar. 8, gage height, 4.47 ft (1.362 m); minimum, 0.91 ft³/s (0.026 m³/s) Oct. 21, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|--------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1 | 1.3 | 16 | 83 | 3.6 | 3.7 | 70 | 17 | 4.3 | 13 | 2.0 | 2.6 | 3.3 |
| 2 | 1.5 | 14 | 80 | 3.9 | 3.3 | 48 | 15 | 5.8 | 9.9 | 2.0 | 2.7 | 3.2 |
| 3 | 1.5 | 15 | 75 | 3.6 | 3.1 | 40 | 13 | 12 | 9.9 | 1.9 | 2.7 | 3.6 |
| 4 | 1.3 | 17 | 68 | 3.5 | 3.1 | 29 | 12 | 12 | 10 | 2.0 | 2.7 | 4.3 |
| 5 | 1.3 | 17 | 60 | 3.2 | 3.1 | 22 | 11 | 9.9 | 8.4 | 2.2 | 2.7 | 3.6 |
| 6 | 1.3 | 17 | 51 | 3.1 | 3.0 | 22 | 10 | 8.4 | 7.5 | 2.1 | 2.9 | 3.2 |
| 7 | 1.3 | 17 | 28 | 3.1 | 2.9 | 82 | 9.4 | 7.9 | 6.8 | 1.8 | 2.9 | 3.0 |
| 8 | 1.3 | 17 | 14 | 3.1 | 2.7 | 107 | 8.9 | 7.7 | 6.2 | 1.6 | 3.0 | 2.9 |
| 9 | 1.2 | 19 | 13 | 3.1 | 2.7 | 90 | 8.4 | 6.8 | 5.8 | 1.6 | 3.0 | 2.7 |
| 10 | 1.2 | 23 | 7.9 | 3.1 | 4.0 | 52 | 7.7 | 7.0 | 5.5 | 1.6 | 3.0 | 2.6 |
| 11 | 1.2 | 23 | 6.6 | 3.6 | 3.6 | 36 | 7.0 | 6.4 | 5.3 | 1.5 | 3.1 | 2.6 |
| 12 | 1.1 | 23 | 5.8 | 5.3 | 3.6 | 30 | 6.4 | 6.0 | 4.9 | 1.5 | 3.1 | 2.5 |
| 13 | 1.1 | 23 | 5.5 | 12 | 3.6 | 23 | 6.6 | 5.6 | 4.6 | 1.5 | 3.1 | 2.4 |
| 14 | 1.1 | 24 | 4.3 | 8.6 | 3.3 | 20 | 6.0 | 5.6 | 4.3 | 1.4 | 3.1 | 2.4 |
| 15 | 1.1 | 26 | 3.0 | 7.2 | 3.2 | 17 | 6.0 | 6.6 | 4.0 | 1.6 | 3.2 | 2.4 |
| 16 | 1.1 | 25 | 3.0 | 6.4 | 3.1 | 16 | 5.8 | 6.8 | 3.9 | 2.0 | 3.1 | 2.5 |
| 17 | 1.1 | 25 | 3.0 | 5.6 | 3.0 | 14 | 5.5 | 6.6 | 3.6 | 2.1 | 3.5 | 2.5 |
| 18 | 1.0 | 30 | 3.0 | 5.3 | 2.9 | 18 | 5.1 | 6.0 | 3.5 | 2.4 | 3.7 | 3.7 |
| 19 | 1.1 | 34 | 3.0 | 4.9 | 2.7 | 19 | 4.9 | 5.6 | 3.2 | 2.2 | 3.9 | 8.4 |
| 20 | 1.1 | 34 | 3.0 | 4.5 | 4.6 | 18 | 4.8 | 5.3 | 3.2 | 2.5 | 3.9 | 7.9 |
| 21 | 1.1 | 33 | 3.0 | 4.1 | 8.6 | 17 | 5.1 | 5.1 | 3.3 | 3.1 | 3.9 | 6.4 |
| 22 | 1.0 | 32 | 3.0 | 3.9 | 18 | 16 | 4.8 | 4.9 | 3.2 | 3.1 | 3.7 | 4.9 |
| 23 | .98 | 32 | 3.0 | 3.7 | 13 | 17 | 4.5 | 4.8 | 2.9 | 3.0 | 3.5 | 6.0 |
| 24 | 1.2 | 32 | 3.0 | 3.6 | 11 | 18 | 4.3 | 4.8 | 2.7 | 2.9 | 3.9 | 7.0 |
| 25 | 8.2 | 32 | 3.5 | 3.5 | 15 | 16 | 4.8 | 5.1 | 2.7 | 2.9 | 5.6 | 6.8 |
| 26 | 14 | 31 | 9.6 | 3.5 | 17 | 15 | 4.6 | 7.7 | 2.4 | 3.0 | 5.6 | 5.6 |
| 27 | 12 | 30 | 8.4 | 3.3 | 26 | 30 | 4.3 | 7.7 | 2.3 | 3.0 | 3.6 | 4.9 |
| 28 | 13 | 30 | 5.8 | 3.3 | 62 | 25 | 4.1 | 7.9 | 2.3 | 3.0 | 4.5 | 4.8 |
| 29 | 13 | 49 | 4.9 | 3.3 | --- | 22 | 4.0 | 7.0 | 2.2 | 2.7 | 4.5 | 5.8 |
| 30 | 13 | 86 | 4.3 | 3.3 | --- | 19 | 4.0 | 7.0 | 2.1 | 2.6 | 5.8 | 5.3 |
| 31 | 17 | --- | 3.9 | 3.7 | --- | 17 | --- | 12 | --- | 2.6 | 3.9 | --- |
| TOTAL | 118.68 | 826 | 572.5 | 135.9 | 235.8 | 985 | 215.0 | 216.3 | 149.6 | 69.4 | 110.4 | 127.2 |
| MEAN | 3.83 | 27.5 | 18.5 | 4.38 | 8.42 | 31.8 | 7.17 | 6.98 | 4.99 | 2.24 | 3.56 | 4.24 |
| MAX | 17 | 86 | 83 | 12 | 62 | 107 | 17 | 12 | 13 | 3.1 | 5.8 | 8.4 |
| MIN | .98 | 14 | 3.0 | 3.1 | 2.7 | 14 | 4.0 | 4.3 | 2.1 | 1.4 | 2.6 | 2.4 |
| AC-FT | 235 | 1640 | 1140 | 270 | 468 | 1950 | 426 | 429 | 297 | 138 | 219 | 252 |
| MEAN† | 1.85 | .34 | 3.22 | 8.10 | 14.6 | 58.1 | 13.4 | 12.5 | 8.37 | 2.03 | .21 | 6.10 |
| CFSM† | .30 | .06 | .52 | 1.31 | 2.36 | 9.40 | 2.17 | 2.02 | 1.35 | .33 | .03 | .99 |
| IN.† | .34 | .06 | .60 | 1.51 | 2.45 | 10.80 | 2.41 | 2.33 | 1.51 | .38 | .04 | 1.10 |
| AC-FT† | 114 | 20 | 198 | 497 | 810 | 3,570 | 796 | 769 | 497 | 125 | 13 | 362 |

CAL YR 1976 TOTAL 7,915.77 MEAN 21.6 MAX 266 MIN .91 AC-FT 15,700 MEAN† 22.4 CFSM† 3.62 IN.† 49.25 AC-FT† 16,280
WTR YR 1977 TOTAL 3,761.78 MEAN 10.3 MAX 107 MIN .98 AC-FT 7,460 MEAN† 10.7 CFSM† 1.73 IN.† 23.53 AC-FT† 7,770

† Adjusted for storage and diversion by McGuire Lake.

NESTUCCA RIVER BASIN

14303600 NESTUCCA RIVER NEAR BEAVER, OR

LOCATION.--Lat 45°16'00", long 123°50'45", in SE¼NE¼ sec.36, T.3 S., R.10 W., Tillamook County, Hydrologic Unit 17100203, on right bank 150 ft (46 m) upstream from Saling Creek, 1.2 mi (1.9 km) southwest of Beaver, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--180 mi² (466 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 43 ft (13 m), from river profile map.

REMARKS.--Water-discharge records good. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--13 years, 1,127 ft³/s (31.92 m³/s), 85.03 in/yr (2,160 mm/yr), 816,500 acre-ft/yr (1.01 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft³/s (833 m³/s) Jan. 11, 1972, gage height, 22.0 ft (6.71 m), from flood-mark; minimum, 32 ft³/s (0.91 m³/s) Sept. 14, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1962, reached a stage of 23.4 ft (7.13 m), discharge, 32,500 ft³/s (920 m³/s), caused by failure of Meadow Lake Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,260 ft³/s (121 m³/s) Mar. 8, gage height, 7.35 ft (2.240 m), no peak above base of 8,000 ft³/s (227 m³/s); minimum, 59 ft³/s (1.67 m³/s) Oct. 18, 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|--------|-------|-------|-------|--------|-------|-------|-------|------|------|-------|-------|--------|
| 1 | 70 | 424 | 235 | 302 | 249 | 3810 | 1360 | 303 | 919 | 180 | 96 | 215 | | |
| 2 | 80 | 263 | 222 | 354 | 214 | 3000 | 1220 | 423 | 812 | 178 | 94 | 189 | | |
| 3 | 105 | 202 | 218 | 322 | 198 | 2870 | 1110 | 674 | 796 | 180 | 94 | 297 | | |
| 4 | 91 | 174 | 210 | 302 | 194 | 2270 | 998 | 741 | 1020 | 186 | 94 | 734 | | |
| 5 | 80 | 170 | 206 | 277 | 191 | 1800 | 902 | 772 | 877 | 175 | 94 | 625 | | |
| 6 | 76 | 167 | 191 | 258 | 184 | 1630 | 828 | 704 | 788 | 172 | 91 | 437 | | |
| 7 | 70 | 154 | 184 | 249 | 180 | 2560 | 772 | 639 | 719 | 166 | 89 | 343 | | |
| 8 | 68 | 145 | 263 | 235 | 177 | 3700 | 749 | 590 | 646 | 161 | 89 | 284 | | |
| 9 | 68 | 142 | 388 | 218 | 174 | 3960 | 711 | 551 | 590 | 161 | 84 | 242 | | |
| 10 | 76 | 142 | 287 | 235 | 198 | 3150 | 653 | 544 | 551 | 158 | 79 | 215 | | |
| 11 | 80 | 142 | 235 | 235 | 210 | 2560 | 604 | 512 | 519 | 153 | 75 | 192 | | |
| 12 | 74 | 139 | 218 | 267 | 235 | 2480 | 564 | 478 | 485 | 150 | 72 | 183 | | |
| 13 | 72 | 139 | 180 | 382 | 302 | 2150 | 611 | 450 | 450 | 150 | 72 | 175 | | |
| 14 | 68 | 160 | 180 | 400 | 263 | 2060 | 557 | 430 | 417 | 145 | 72 | 169 | | |
| 15 | 66 | 235 | 180 | 365 | 235 | 1880 | 551 | 493 | 391 | 140 | 72 | 166 | | |
| 16 | 66 | 282 | 170 | 343 | 227 | 1680 | 538 | 525 | 367 | 137 | 70 | 180 | | |
| 17 | 64 | 302 | 167 | 317 | 227 | 1510 | 500 | 557 | 349 | 143 | 68 | 175 | | |
| 18 | 61 | 333 | 177 | 312 | 214 | 1500 | 478 | 525 | 338 | 156 | 68 | 215 | | |
| 19 | 59 | 277 | 167 | 302 | 206 | 1500 | 450 | 485 | 321 | 140 | 70 | 512 | | |
| 20 | 61 | 244 | 157 | 287 | 287 | 1400 | 437 | 457 | 310 | 134 | 72 | 674 | | |
| 21 | 61 | 227 | 154 | 272 | 360 | 1280 | 430 | 464 | 303 | 127 | 75 | 704 | | |
| 22 | 61 | 214 | 151 | 263 | 666 | 1180 | 410 | 423 | 284 | 124 | 77 | 570 | | |
| 23 | 62 | 202 | 174 | 249 | 659 | 1150 | 385 | 404 | 260 | 121 | 86 | 570 | | |
| 24 | 86 | 206 | 174 | 240 | 550 | 1120 | 367 | 398 | 242 | 119 | 161 | 764 | | |
| 25 | 272 | 222 | 198 | 227 | 723 | 1010 | 361 | 385 | 226 | 116 | 189 | 726 | | |
| 26 | 231 | 202 | 493 | 222 | 940 | 1020 | 343 | 519 | 220 | 119 | 338 | 653 | | |
| 27 | 151 | 191 | 748 | 214 | 1420 | 1930 | 326 | 525 | 210 | 113 | 169 | 584 | | |
| 28 | 127 | 184 | 525 | 210 | 3000 | 1830 | 315 | 564 | 195 | 110 | 248 | 525 | | |
| 29 | 121 | 180 | 424 | 202 | --- | 1700 | 310 | 538 | 189 | 107 | 367 | 519 | | |
| 30 | 110 | 206 | 371 | 194 | --- | 1530 | 297 | 519 | 186 | 104 | 551 | 525 | | |
| 31 | 282 | --- | 333 | 206 | --- | 1410 | --- | 711 | --- | 99 | 326 | --- | | |
| TOTAL | 3019 | 6270 | 7980 | 8461 | 12683 | 62630 | 18137 | 16303 | 13980 | 4424 | 4202 | 12362 | | |
| MEAN | 97.4 | 209 | 257 | 273 | 453 | 2020 | 605 | 526 | 466 | 143 | 136 | 412 | | |
| MAX | 282 | 424 | 748 | 400 | 3000 | 3960 | 1360 | 772 | 1020 | 186 | 551 | 764 | | |
| MIN | 59 | 139 | 151 | 194 | 174 | 1010 | 297 | 303 | 186 | 99 | 68 | 166 | | |
| CFSM | .54 | 1.16 | 1.43 | 1.52 | 2.52 | 11.2 | 3.36 | 2.92 | 2.59 | .79 | .76 | 2.29 | | |
| IN. | .62 | 1.30 | 1.65 | 1.75 | 2.62 | 12.94 | 3.75 | 3.37 | 2.89 | .91 | .87 | 2.55 | | |
| AC-FT | 5990 | 12440 | 15830 | 16780 | 25160 | 124200 | 35970 | 32340 | 27730 | 8780 | 8330 | 24520 | | |
| CAL YR 1976 | TOTAL | 280209 | MEAN | 766 | MAX | 6300 | MIN | 59 | CFSM | 4.26 | IN | 57.91 | AC-FT | 555800 |
| WTR YR 1977 | TOTAL | 170451 | MEAN | 467 | MAX | 3960 | MIN | 59 | CFSM | 2.59 | IN | 35.23 | AC-FT | 338100 |

14303600 NESTUCCA RIVER NEAR BEAVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1964 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.0°C July 1-3, 1967; minimum, 1.0°C sometime during period Dec. 28, 1968, to Feb. 8, 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C Aug. 1; minimum, 3.0°C Jan. 8-10.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 16.0 | 15.5 | 10.5 | 10.0 | 5.0 | 4.5 | 5.0 | 5.0 | 5.5 | 5.0 | 8.0 | 8.0 |
| 2 | 16.0 | 15.0 | 10.5 | 10.0 | 5.0 | 4.5 | 5.5 | 5.0 | 5.5 | 5.0 | 8.0 | 7.0 |
| 3 | 15.0 | 14.5 | 10.5 | 10.0 | 5.0 | 5.0 | 5.5 | 5.5 | 5.5 | 5.0 | 8.0 | 7.0 |
| 4 | 14.5 | 13.5 | 10.0 | 10.0 | 5.5 | 5.0 | 5.5 | 5.5 | 6.0 | 5.5 | 8.0 | 7.0 |
| 5 | 14.0 | 13.5 | 10.0 | 10.0 | 5.5 | 5.0 | 5.5 | 4.5 | 6.0 | 6.0 | 8.0 | 7.0 |
| 6 | 14.0 | 13.5 | 10.0 | 10.0 | 5.5 | 5.5 | 4.5 | 4.0 | 6.5 | 6.0 | 7.0 | 7.0 |
| 7 | 14.5 | 13.5 | 10.0 | 10.0 | 6.0 | 5.5 | 4.0 | 3.5 | 6.5 | 6.5 | 7.0 | 7.0 |
| 8 | 14.5 | 14.0 | 10.0 | 10.0 | 6.0 | 6.0 | 3.5 | 3.0 | 6.5 | 6.5 | 7.0 | 7.0 |
| 9 | 14.5 | 14.0 | 10.0 | 10.0 | 6.0 | 5.5 | 3.0 | 3.0 | 7.0 | 6.5 | 7.0 | 6.5 |
| 10 | 14.0 | 14.0 | 10.0 | 10.0 | 5.5 | 5.5 | 3.5 | 3.0 | 8.0 | 7.0 | 6.5 | 6.5 |
| 11 | 15.0 | 14.0 | 10.0 | 10.0 | 5.5 | 5.0 | 4.0 | 3.5 | 8.0 | 7.0 | 6.5 | 6.5 |
| 12 | 15.0 | 14.0 | 10.0 | 9.5 | 5.0 | 4.5 | 4.5 | 4.0 | 8.0 | 7.0 | 6.5 | 6.0 |
| 13 | 14.5 | 13.5 | 10.0 | 9.5 | 5.5 | 5.0 | 5.0 | 4.5 | 8.0 | 7.0 | 6.0 | 5.5 |
| 14 | 13.5 | 13.5 | 9.5 | 9.5 | 5.5 | 5.5 | 5.0 | 5.0 | 8.0 | 7.0 | 6.0 | 5.5 |
| 15 | 13.5 | 13.5 | 9.5 | 9.5 | 5.5 | 5.5 | 6.0 | 5.0 | 7.0 | 7.0 | 6.0 | 5.5 |
| 16 | 13.5 | 13.0 | 10.0 | 9.5 | 5.5 | 5.5 | 6.0 | 6.0 | 7.0 | 7.0 | 6.0 | 5.5 |
| 17 | 13.0 | 11.5 | 10.0 | 10.0 | 5.5 | 5.0 | 6.5 | 6.0 | 8.0 | 7.0 | 6.0 | 5.5 |
| 18 | 11.5 | 10.5 | 10.0 | 9.5 | 5.0 | 4.5 | 7.0 | 6.5 | 8.0 | 7.0 | 6.0 | 6.0 |
| 19 | 10.5 | 10.0 | 9.5 | 9.0 | 4.5 | 4.0 | 7.0 | 7.0 | 8.0 | 7.0 | 6.5 | 6.0 |
| 20 | 10.0 | 9.5 | 9.0 | 8.5 | 4.0 | 3.5 | 7.0 | 7.0 | 8.0 | 7.0 | 6.5 | 6.0 |
| 21 | 10.0 | 9.5 | 9.0 | 9.0 | 3.5 | 3.5 | 7.0 | 7.0 | 8.0 | 7.0 | 6.5 | 6.0 |
| 22 | 10.0 | 10.0 | 9.0 | 8.5 | 3.5 | 3.5 | 8.0 | 7.0 | 7.0 | 7.0 | 6.5 | 6.0 |
| 23 | 10.0 | 10.0 | 9.0 | 8.5 | 4.0 | 3.5 | 7.0 | 6.5 | 7.0 | 7.0 | 6.5 | 6.5 |
| 24 | 10.0 | 10.0 | 8.5 | 8.0 | 4.0 | 4.0 | 6.5 | 6.0 | 7.0 | 7.0 | 6.5 | 6.0 |
| 25 | 10.0 | 10.0 | 8.5 | 8.0 | 4.5 | 4.0 | 6.0 | 6.0 | 7.0 | 7.0 | 6.5 | 6.0 |
| 26 | 10.5 | 10.0 | 8.0 | 6.5 | 5.0 | 4.5 | 6.0 | 5.5 | 8.0 | 7.0 | 6.5 | 6.0 |
| 27 | 10.5 | 10.0 | 6.5 | 5.5 | 5.5 | 5.0 | 5.5 | 5.0 | 8.5 | 8.0 | 6.5 | 6.0 |
| 28 | 10.0 | 10.0 | 5.5 | 5.0 | 5.5 | 5.0 | 5.0 | 4.5 | 8.5 | 8.0 | 6.0 | 6.0 |
| 29 | 10.0 | 10.0 | 5.0 | 4.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | 6.5 | 6.0 |
| 30 | 10.0 | 9.5 | 5.0 | 4.5 | 5.5 | 5.5 | 4.5 | 4.5 | --- | --- | 7.0 | 6.0 |
| 31 | 10.5 | 9.5 | --- | --- | 5.5 | 5.0 | 5.0 | 4.5 | --- | --- | 7.0 | 7.0 |
| MONTH | 16.0 | 9.5 | 10.5 | 4.5 | 6.0 | 3.5 | 8.0 | 3.0 | 8.5 | 5.0 | 8.0 | 5.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.0 | 7.0 | 14.0 | 13.5 | 11.0 | 11.0 | 18.5 | 18.0 | 22.0 | 20.5 | --- | --- |
| 2 | 7.0 | 7.0 | 13.5 | 13.0 | 11.0 | 10.5 | 19.0 | 17.0 | 21.5 | 20.0 | --- | --- |
| 3 | 8.0 | 7.0 | 13.0 | 11.5 | 11.0 | 10.5 | 17.0 | 16.0 | 20.5 | 19.5 | --- | --- |
| 4 | 8.5 | 7.0 | 11.5 | 11.0 | 11.0 | 10.5 | 16.0 | 15.0 | 20.5 | 19.5 | --- | --- |
| 5 | 8.5 | 8.0 | 11.5 | 10.5 | 13.5 | 11.0 | 15.0 | 15.0 | 19.5 | 19.0 | --- | --- |
| 6 | 9.0 | 8.5 | 11.5 | 11.0 | 14.5 | 13.5 | 16.5 | 14.5 | 19.5 | 19.0 | --- | --- |
| 7 | 9.0 | 8.5 | 11.5 | 10.5 | 14.5 | 14.0 | 18.0 | 15.5 | 19.5 | 19.0 | 13.5 | 12.5 |
| 8 | 8.5 | 8.5 | 12.0 | 11.0 | 14.0 | 13.5 | 17.0 | 15.5 | 20.0 | 19.0 | 14.0 | 11.0 |
| 9 | 8.5 | 8.0 | 12.0 | 11.0 | 14.5 | 13.0 | 15.5 | 15.5 | 20.0 | 19.0 | 14.5 | 11.5 |
| 10 | 8.0 | 7.0 | 12.0 | 11.5 | 14.0 | 13.5 | 16.0 | 14.5 | 20.0 | 19.0 | 15.0 | 11.5 |
| 11 | 9.0 | 8.0 | 11.5 | 11.0 | 14.0 | 14.0 | 16.0 | 15.5 | 19.5 | 18.5 | 15.0 | 11.5 |
| 12 | 8.5 | 8.0 | 11.5 | 10.5 | 14.0 | 13.5 | 16.5 | 16.0 | 19.0 | 18.5 | 15.5 | 12.0 |
| 13 | 8.5 | 8.0 | 11.5 | 11.0 | 14.0 | 14.0 | 16.5 | 16.0 | 19.0 | 18.0 | 14.0 | 12.5 |
| 14 | 8.0 | 7.0 | 11.0 | 11.0 | 14.5 | 14.0 | 18.5 | 16.0 | 18.0 | 17.0 | 14.5 | 12.5 |
| 15 | 8.0 | 8.0 | 11.0 | 10.5 | 15.5 | 13.5 | 19.5 | 17.0 | 18.5 | 18.0 | 13.0 | 12.0 |
| 16 | 8.5 | 8.0 | 10.5 | 10.5 | 16.0 | 14.5 | 19.5 | 18.5 | 19.0 | 18.0 | 12.5 | 11.5 |
| 17 | 8.5 | 8.0 | 10.5 | 10.5 | 15.5 | 15.0 | 19.0 | 18.0 | 18.5 | 18.5 | 12.5 | 11.5 |
| 18 | 9.0 | 8.0 | 10.5 | 10.5 | 15.0 | 14.5 | 19.0 | 17.0 | --- | --- | 12.0 | 11.5 |
| 19 | 9.0 | 8.0 | 12.0 | 10.5 | 14.5 | 14.5 | 19.5 | 18.0 | --- | --- | 12.5 | 11.5 |
| 20 | 9.0 | 8.5 | 11.5 | 11.5 | 14.5 | 14.5 | 19.0 | 18.0 | --- | --- | 12.0 | 11.0 |
| 21 | 9.0 | 9.0 | 12.0 | 11.5 | 14.5 | 14.0 | 20.0 | 18.0 | --- | --- | 12.0 | 10.5 |
| 22 | 10.5 | 9.0 | 11.5 | 11.5 | 16.0 | 14.5 | 20.5 | 18.5 | --- | --- | 11.0 | 9.5 |
| 23 | 11.5 | 10.0 | 12.0 | 11.5 | 16.5 | 15.0 | 21.0 | 19.0 | --- | --- | 10.5 | 10.5 |
| 24 | 11.5 | 10.5 | 12.0 | 11.5 | 17.0 | 15.5 | 20.5 | 19.5 | --- | --- | 11.5 | 10.0 |
| 25 | 11.5 | 11.0 | 11.0 | 11.0 | 18.5 | 16.5 | 20.5 | 20.0 | --- | --- | 11.5 | 10.0 |
| 26 | 13.0 | 11.0 | 11.0 | 11.0 | 18.0 | 16.0 | 20.0 | 19.5 | --- | --- | 11.0 | 9.5 |
| 27 | 13.0 | 11.5 | 11.0 | 11.0 | 17.0 | 16.5 | 20.5 | 19.5 | --- | --- | 11.0 | 10.0 |
| 28 | 12.0 | 11.5 | 11.0 | 11.0 | 18.5 | 17.0 | 20.5 | 19.5 | --- | --- | 12.0 | 10.0 |
| 29 | 13.0 | 11.5 | 11.0 | 10.5 | 18.5 | 16.5 | 21.0 | 19.0 | --- | --- | 11.0 | 10.0 |
| 30 | 14.0 | 12.0 | 11.0 | 11.0 | 19.0 | 16.5 | 21.5 | 19.5 | --- | --- | 11.5 | 10.0 |
| 31 | --- | --- | 11.0 | 11.0 | --- | --- | 21.5 | 20.0 | --- | --- | --- | --- |
| MONTH | 14.0 | 7.0 | 14.0 | 10.5 | 19.0 | 10.5 | 21.5 | 14.5 | 22.0 | 17.0 | 15.5 | 9.5 |

SILETZ RIVER BASIN

14305500 SILETZ RIVER AT SILETZ, OR

LOCATION.--Lat 44°42'55", long 123°53'10", in NW¼SW¼ sec.11, T.10 S., R.10 W., Lincoln County, Hydrologic Unit 17100204, on right bank, 1.8 mi (2.9 km) downstream from Baker Creek, 1.5 mi (2.4 km) east of Siletz, and at mile 42.6 (68.5 km).

DRAINAGE AREA.--202 mi² (523 km²).

PERIOD OF RECORD.--October 1905 to November 1911, January to May 1912, January to June 1924, November 1924 to current year. Prior to December 1905 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1935: 1943, 1947-49(M), 1953-58(M).

GAGE.--Water-stage recorder. Datum of gage is 102.32 ft (31.187 m) above mean sea level. Oct. 1, 1905, to Sept. 30, 1938, nonrecording gages at various sites within 2.5 mi (4.0 km) downstream at different datums.

REMARKS.--Records good. Slight regulation from logponds. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--58 years (water years 1906-11, 1926-77), 1,578 ft³/s (44.69 m³/s), 106.09 in/yr (2,695 mm/yr), 1,143,000 acre-ft/yr (1.41 km³/yr).

EXTREMES FOR PERIOD OF RECORD (1905-12, 1924-38).--Maximum discharge, 34,600 ft³/s (980 m³/s) Nov. 22, 1909, gage height, 24.6 ft (7.50 m), site and datum then in use; minimum observed, 51 ft³/s (1.44 m³/s) Dec. 6, 7, 1929.

EXTREMES FOR PERIOD OF RECORD (1938-77).--Maximum discharge, 32,200 ft³/s (912 m³/s) Jan. 28, 1965, gage height, 27.32 ft (8.327 m), present site and datum; minimum, 48 ft³/s (1.36 m³/s) Sept. 25, 26, Oct. 4, 1965, Sept. 28, 29, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1921, reached a stage of 31.6 ft (9.63 m), at site 2.5 mi (4.0 km) downstream at different datum, from floodmark, discharge, 40,800 ft³/s (1,160 m³/s), from rating curve extended above 17,000 ft³/s (481 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,630 ft³/s (244 m³/s) Mar. 7, gage height, 11.07 ft (3.374 m), no peak above base of 14,000 ft³/s (396 m³/s); minimum, 76 ft³/s (2.15 m³/s) Oct. 19-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|--------|-------|-------|-------|--------|------|--------|
| 1 | 90 | 767 | 230 | 521 | 405 | 7410 | 1650 | 387 | 1240 | 220 | 109 | 233 |
| 2 | 95 | 464 | 220 | 645 | 347 | 5090 | 1490 | 473 | 1110 | 214 | 107 | 195 |
| 3 | 121 | 352 | 214 | 590 | 325 | 4630 | 1330 | 737 | 1010 | 211 | 101 | 303 |
| 4 | 105 | 284 | 208 | 553 | 311 | 3580 | 1220 | 902 | 1320 | 220 | 98 | 639 |
| 5 | 96 | 246 | 201 | 505 | 299 | 2760 | 1140 | 1080 | 1190 | 208 | 98 | 676 |
| 6 | 93 | 220 | 195 | 468 | 292 | 2370 | 1090 | 960 | 1050 | 204 | 98 | 446 |
| 7 | 88 | 204 | 192 | 446 | 284 | 4420 | 1040 | 835 | 931 | 192 | 98 | 347 |
| 8 | 85 | 192 | 356 | 419 | 276 | 6420 | 1050 | 743 | 822 | 187 | 96 | 288 |
| 9 | 85 | 181 | 608 | 392 | 269 | 5750 | 1020 | 669 | 743 | 184 | 95 | 254 |
| 10 | 91 | 173 | 464 | 392 | 329 | 4480 | 917 | 621 | 676 | 184 | 90 | 227 |
| 11 | 98 | 170 | 414 | 410 | 387 | 3460 | 841 | 590 | 621 | 176 | 85 | 211 |
| 12 | 91 | 162 | 374 | 505 | 419 | 3290 | 773 | 532 | 574 | 170 | 83 | 195 |
| 13 | 88 | 154 | 347 | 895 | 633 | 2850 | 798 | 500 | 532 | 167 | 82 | 184 |
| 14 | 85 | 195 | 320 | 982 | 542 | 2530 | 743 | 495 | 495 | 165 | 82 | 178 |
| 15 | 83 | 392 | 311 | 847 | 484 | 2230 | 706 | 579 | 464 | 159 | 82 | 173 |
| 16 | 83 | 505 | 296 | 761 | 446 | 1940 | 694 | 639 | 437 | 154 | 82 | 170 |
| 17 | 82 | 468 | 284 | 676 | 423 | 1710 | 639 | 639 | 410 | 152 | 80 | 170 |
| 18 | 79 | 645 | 292 | 621 | 392 | 1640 | 608 | 639 | 396 | 165 | 79 | 246 |
| 19 | 76 | 505 | 269 | 579 | 370 | 1670 | 569 | 590 | 379 | 154 | 82 | 859 |
| 20 | 76 | 432 | 254 | 537 | 405 | 1560 | 542 | 542 | 370 | 148 | 83 | 761 |
| 21 | 76 | 379 | 246 | 500 | 596 | 1410 | 521 | 553 | 374 | 141 | 83 | 786 |
| 22 | 76 | 343 | 240 | 468 | 982 | 1290 | 516 | 510 | 347 | 136 | 85 | 688 |
| 23 | 76 | 307 | 250 | 437 | 1050 | 1290 | 484 | 489 | 325 | 132 | 85 | 651 |
| 24 | 87 | 284 | 246 | 419 | 1180 | 1300 | 464 | 468 | 299 | 127 | 125 | 931 |
| 25 | 303 | 365 | 284 | 396 | 1430 | 1190 | 450 | 450 | 288 | 129 | 176 | 888 |
| 26 | 246 | 311 | 822 | 379 | 2310 | 1130 | 450 | 651 | 273 | 136 | 343 | 773 |
| 27 | 165 | 280 | 1310 | 365 | 3810 | 2590 | 423 | 688 | 261 | 132 | 195 | 663 |
| 28 | 141 | 261 | 968 | 347 | 7840 | 2450 | 410 | 761 | 250 | 125 | 292 | 590 |
| 29 | 134 | 250 | 773 | 334 | --- | 2150 | 401 | 737 | 240 | 123 | 414 | 516 |
| 30 | 125 | 240 | 657 | 320 | --- | 1890 | 392 | 700 | 233 | 119 | 450 | 489 |
| 31 | 265 | --- | 585 | 347 | --- | 1690 | --- | 866 | --- | 113 | 311 | --- |
| TOTAL | 3484 | 9731 | 12430 | 16056 | 26836 | 88170 | 23371 | 20025 | 17660 | 5047 | 4369 | 13730 |
| MEAN | 112 | 324 | 401 | 518 | 958 | 2844 | 779 | 646 | 589 | 163 | 141 | 458 |
| MAX | 303 | 767 | 1310 | 982 | 7840 | 7410 | 1650 | 1080 | 1320 | 220 | 450 | 931 |
| MIN | 76 | 154 | 192 | 320 | 269 | 1130 | 392 | 387 | 233 | 113 | 79 | 170 |
| CFSM | .55 | 1.60 | 1.99 | 2.56 | 4.74 | 14.1 | 3.86 | 3.20 | 2.92 | .81 | .70 | 2.27 |
| IN. | .64 | 1.79 | 2.29 | 2.96 | 4.94 | 16.24 | 4.30 | 3.69 | 3.25 | .93 | .80 | 2.53 |
| AC-FT | 6910 | 19300 | 24650 | 31850 | 53230 | 174900 | 46360 | 39720 | 35030 | 10010 | 8670 | 27230 |
| CAL YR 1976 | TOTAL | 374212 | MEAN | 1022 | MAX | 11800 | MIN | 76 | CFSM | 5.06 | IN | 68.91 |
| WTR YR 1977 | TOTAL | 240909 | MEAN | 660 | MAX | 7840 | MIN | 76 | CFSM | 3.27 | IN | 44.37 |
| | | | | | | | | | AC-FT | 742200 | | 477800 |

YAQUINA RIVER BASIN

417

14306030 YAQUINA RIVER NEAR CHITWOOD, OR

LOCATION.--Lat 44°39'29", long 123°50'15", in NE¼SW¼ sec.31, T.10 S., R.9 W., Lincoln County, Hydrologic Unit 17100204, on left bank 200 ft (60 m) below Thornton Creek and 1.1 mi (1.8 km) west of Chitwood.

DRAINAGE AREA.--71.0 mi² (183.9 km²).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 28.43 ft (8.665 m) above mean sea level.

REMARKS.--Records good except those below 20 ft³/s (0.57 m³/s), which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--5 years, 253 ft³/s (7.16 m³/s), 48.39 in/yr (1,229 mm/yr), 183,300 acre-ft/yr (226 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,150 ft³/s (174 m³/s) Nov. 16, 1973, gage height, 14.43 ft (4.398 m); minimum, 2.8 ft³/s (0.079 m³/s) Sept. 27, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft³/s (36.0 m³/s) Mar. 1, 9, no peak above base of 3,000 ft³/s (85.0 m³/s); maximum gage height, 6.66 ft (2.030 m) Mar. 9; minimum discharge, 6.3 ft³/s (0.18 m³/s) Oct. 1, 19-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|------|------|------|------|-------|------|------|------|-------|-------|--------|
| 1 | 6.8 | 36 | 14 | 25 | 26 | 1170 | 257 | 62 | 155 | 35 | 11 | 17 |
| 2 | 7.3 | 34 | 14 | 29 | 24 | 795 | 222 | 72 | 155 | 34 | 10 | 15 |
| 3 | 7.8 | 25 | 13 | 30 | 22 | 702 | 204 | 115 | 155 | 33 | 10 | 19 |
| 4 | 7.8 | 21 | 13 | 30 | 19 | 539 | 186 | 172 | 169 | 34 | 9.6 | 26 |
| 5 | 7.8 | 18 | 13 | 29 | 17 | 392 | 172 | 225 | 155 | 32 | 10 | 25 |
| 6 | 7.8 | 15 | 13 | 28 | 16 | 311 | 158 | 201 | 144 | 29 | 10 | 20 |
| 7 | 7.3 | 15 | 13 | 26 | 15 | 447 | 147 | 169 | 134 | 28 | 10 | 17 |
| 8 | 6.8 | 14 | 21 | 23 | 13 | 853 | 144 | 147 | 124 | 26 | 10 | 15 |
| 9 | 6.8 | 13 | 39 | 23 | 12 | 1130 | 134 | 132 | 115 | 26 | 10 | 14 |
| 10 | 7.3 | 13 | 29 | 23 | 11 | 1110 | 120 | 122 | 108 | 26 | 9.0 | 13 |
| 11 | 8.4 | 13 | 24 | 24 | 12 | 773 | 112 | 112 | 101 | 24 | 7.8 | 13 |
| 12 | 9.0 | 13 | 21 | 29 | 13 | 644 | 106 | 101 | 97 | 23 | 7.8 | 13 |
| 13 | 8.4 | 13 | 20 | 66 | 14 | 583 | 108 | 95 | 91 | 22 | 7.8 | 12 |
| 14 | 7.3 | 14 | 18 | 91 | 15 | 507 | 99 | 95 | 87 | 21 | 7.8 | 12 |
| 15 | 7.3 | 21 | 17 | 68 | 14 | 412 | 95 | 108 | 83 | 20 | 8.4 | 13 |
| 16 | 7.3 | 30 | 16 | 56 | 14 | 332 | 91 | 120 | 77 | 19 | 7.8 | 13 |
| 17 | 7.3 | 29 | 16 | 48 | 15 | 273 | 85 | 115 | 73 | 18 | 7.8 | 13 |
| 18 | 7.3 | 29 | 16 | 42 | 15 | 241 | 83 | 115 | 72 | 20 | 7.3 | 21 |
| 19 | 6.3 | 27 | 15 | 39 | 15 | 210 | 79 | 108 | 68 | 18 | 7.8 | 62 |
| 20 | 6.3 | 23 | 15 | 36 | 16 | 183 | 77 | 103 | 65 | 17 | 7.8 | 58 |
| 21 | 6.3 | 21 | 15 | 34 | 28 | 166 | 77 | 103 | 65 | 16 | 8.4 | 60 |
| 22 | 6.3 | 19 | 14 | 32 | 91 | 155 | 73 | 97 | 60 | 15 | 9.6 | 51 |
| 23 | 6.3 | 18 | 15 | 30 | 103 | 152 | 72 | 95 | 54 | 15 | 9.0 | 46 |
| 24 | 10 | 17 | 15 | 28 | 232 | 158 | 68 | 91 | 49 | 14 | 16 | 77 |
| 25 | 28 | 16 | 20 | 27 | 297 | 144 | 68 | 89 | 48 | 15 | 24 | 66 |
| 26 | 28 | 18 | 51 | 26 | 307 | 139 | 66 | 106 | 46 | 15 | 29 | 54 |
| 27 | 17 | 16 | 73 | 25 | 329 | 254 | 63 | 117 | 43 | 15 | 20 | 43 |
| 28 | 14 | 15 | 51 | 24 | 820 | 346 | 62 | 129 | 41 | 13 | 24 | 41 |
| 29 | 13 | 15 | 38 | 23 | --- | 346 | 62 | 127 | 39 | 13 | 36 | 36 |
| 30 | 11 | 15 | 32 | 23 | --- | 311 | 62 | 122 | 36 | 13 | 27 | 36 |
| 31 | 15 | --- | 28 | 24 | --- | 270 | --- | 137 | --- | 12 | 22 | --- |
| TOTAL | 303.3 | 586 | 712 | 1061 | 2525 | 14048 | 3352 | 3702 | 2709 | 661 | 402.7 | 921 |
| MEAN | 9.78 | 19.5 | 23.0 | 34.2 | 90.2 | 453 | 112 | 119 | 90.3 | 21.3 | 13.0 | 30.7 |
| MAX | 28 | 36 | 73 | 91 | 820 | 1170 | 257 | 225 | 169 | 35 | 36 | 77 |
| MIN | 6.3 | 13 | 13 | 23 | 11 | 139 | 62 | 62 | 36 | 12 | 7.3 | 12 |
| CFSM | .14 | .28 | .32 | .48 | 1.27 | 6.38 | 1.58 | 1.68 | 1.27 | .30 | .18 | .43 |
| IN. | .16 | .31 | .37 | .56 | 1.32 | 7.36 | 1.76 | 1.94 | 1.42 | .35 | .21 | .48 |
| AC-FT | 602 | 1160 | 1410 | 2100 | 5010 | 27860 | 6650 | 7340 | 5370 | 1310 | 799 | 1830 |
| CAL YR 1976 TOTAL | 69755.8 | | | 191 | | 3080 | 5.8 | | 2.69 | 36.55 | | 138400 |
| WTR YR 1977 TOTAL | 30983.0 | | | 84.9 | | 1170 | 6.3 | | 1.20 | 16.23 | | 61450 |

ALSEA RIVER BASIN

14306100 NORTH FORK ALSEA RIVER AT ALSEA, OR

LOCATION.--Lat 44°22'45", long 123°35'40", in SE¼ sec.1, T.14 S., R.8 W., Benton County, Hydrologic Unit 17100205, on left bank at Alsea, 0.2 mi (0.3 km) upstream from bridge on Lobster Valley Road, 0.7 mi (1.1 km) upstream from confluence with South Fork, and at mile 49.4 (79.5 km).

DRAINAGE AREA.--63.0 mi² (163 km²).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 272.31 ft (83.000 m) above mean sea level.

REMARKS.--Records good. No regulation. Some diversions by pumping above station.

AVERAGE DISCHARGE.--20 years, 286 ft³/s (8.100 m³/s), 61.65 in/yr (1,566 mm/yr), 207,200 acre-ft/yr (255 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s (399 m³/s) Dec. 22, 1964, gage height, 14.57 ft (4.441 m), from rating curve extended above 2,900 ft³/s (82.1 m³/s) on basis of slope-area measurement at gage height 11.80 ft (3.597 m); minimum, 12 ft³/s (0.34 m³/s) Sept. 25, Oct. 2, 1965, Aug. 11, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft³/s (37.9 m³/s) Mar. 7, gage height, 4.61 ft (1.405 m), no peak above base of 2,000 ft³/s (56.6 m³/s); minimum, 12 ft³/s (0.34 m³/s) Aug. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|-------|------|------|------|-------|------|------|------|------|------|-------|-------|--------|
| 1 | 17 | 72 | 24 | 36 | 26 | 826 | 191 | 62 | 94 | 32 | 19 | 26 | | |
| 2 | 20 | 50 | 24 | 43 | 25 | 617 | 175 | 67 | 85 | 31 | 18 | 24 | | |
| 3 | 24 | 40 | 24 | 42 | 25 | 602 | 160 | 115 | 85 | 31 | 18 | 25 | | |
| 4 | 23 | 33 | 24 | 42 | 24 | 447 | 148 | 139 | 105 | 32 | 18 | 30 | | |
| 5 | 20 | 30 | 23 | 40 | 24 | 325 | 141 | 132 | 97 | 31 | 18 | 33 | | |
| 6 | 20 | 27 | 23 | 37 | 24 | 293 | 132 | 113 | 89 | 30 | 18 | 29 | | |
| 7 | 19 | 26 | 23 | 36 | 23 | 746 | 125 | 101 | 80 | 30 | 17 | 25 | | |
| 8 | 19 | 25 | 34 | 36 | 23 | 974 | 128 | 97 | 74 | 29 | 17 | 25 | | |
| 9 | 20 | 25 | 68 | 36 | 23 | 902 | 119 | 89 | 69 | 29 | 15 | 23 | | |
| 10 | 24 | 25 | 47 | 33 | 23 | 687 | 109 | 83 | 65 | 30 | 14 | 22 | | |
| 11 | 26 | 25 | 39 | 36 | 23 | 508 | 101 | 80 | 62 | 30 | 14 | 22 | | |
| 12 | 23 | 24 | 34 | 45 | 23 | 486 | 96 | 75 | 60 | 29 | 14 | 21 | | |
| 13 | 21 | 25 | 31 | 81 | 23 | 432 | 97 | 70 | 57 | 29 | 13 | 21 | | |
| 14 | 21 | 30 | 29 | 89 | 23 | 363 | 90 | 70 | 54 | 29 | 14 | 21 | | |
| 15 | 21 | 37 | 29 | 66 | 21 | 307 | 89 | 72 | 53 | 27 | 15 | 22 | | |
| 16 | 21 | 43 | 27 | 55 | 20 | 255 | 85 | 78 | 50 | 25 | 14 | 25 | | |
| 17 | 21 | 40 | 26 | 47 | 20 | 221 | 80 | 80 | 49 | 25 | 15 | 26 | | |
| 18 | 21 | 52 | 26 | 43 | 19 | 204 | 77 | 78 | 47 | 26 | 15 | 33 | | |
| 19 | 20 | 43 | 25 | 40 | 19 | 196 | 75 | 75 | 46 | 25 | 16 | 109 | | |
| 20 | 20 | 37 | 24 | 37 | 23 | 183 | 74 | 70 | 45 | 24 | 16 | 165 | | |
| 21 | 20 | 34 | 24 | 36 | 42 | 167 | 72 | 69 | 46 | 23 | 17 | 70 | | |
| 22 | 20 | 33 | 23 | 33 | 130 | 155 | 70 | 64 | 43 | 21 | 18 | 47 | | |
| 23 | 21 | 30 | 26 | 33 | 115 | 170 | 67 | 65 | 42 | 21 | 18 | 43 | | |
| 24 | 29 | 30 | 24 | 31 | 260 | 178 | 65 | 62 | 39 | 21 | 31 | 50 | | |
| 25 | 76 | 31 | 29 | 30 | 257 | 160 | 65 | 59 | 38 | 21 | 33 | 52 | | |
| 26 | 52 | 27 | 61 | 30 | 356 | 145 | 64 | 69 | 38 | 24 | 40 | 46 | | |
| 27 | 34 | 26 | 83 | 29 | 483 | 236 | 62 | 92 | 36 | 22 | 29 | 41 | | |
| 28 | 29 | 26 | 57 | 27 | 908 | 245 | 60 | 96 | 35 | 21 | 30 | 43 | | |
| 29 | 27 | 25 | 47 | 27 | --- | 233 | 59 | 85 | 34 | 21 | 33 | 39 | | |
| 30 | 25 | 25 | 42 | 26 | --- | 207 | 57 | 80 | 33 | 19 | 36 | 35 | | |
| 31 | 42 | --- | 37 | 27 | --- | 185 | --- | 89 | --- | 19 | 30 | --- | | |
| TOTAL | 796 | 996 | 1057 | 1249 | 3005 | 11655 | 2933 | 2576 | 1750 | 807 | 633 | 1193 | | |
| MEAN | 25.7 | 33.2 | 34.1 | 40.3 | 107 | 376 | 97.8 | 83.1 | 58.3 | 26.0 | 20.4 | 39.8 | | |
| MAX | 76 | 72 | 83 | 89 | 908 | 974 | 191 | 139 | 105 | 32 | 40 | 165 | | |
| MIN | 17 | 24 | 23 | 26 | 19 | 145 | 57 | 59 | 33 | 19 | 13 | 21 | | |
| CFSM | .41 | .53 | .54 | .64 | 1.70 | 5.97 | 1.55 | 1.32 | .93 | .41 | .32 | .63 | | |
| IN. | .47 | .59 | .62 | .74 | 1.77 | 6.88 | 1.73 | 1.52 | 1.03 | .48 | .37 | .70 | | |
| AC-FT | 1580 | 1980 | 2100 | 2480 | 5960 | 23120 | 5820 | 5110 | 3470 | 1600 | 1260 | 2370 | | |
| CAL YR 1976 | TOTAL | 70342 | MEAN | 192 | MAX | 2580 | MIN | 17 | CFSM | 3.05 | IN | 41.54 | AC-FT | 139500 |
| WTR YR 1977 | TOTAL | 28650 | MEAN | 78.5 | MAX | 974 | MIN | 13 | CFSM | 1.25 | IN | 16.92 | AC-FT | 56830 |

ALSEA RIVER BASIN

419

14306400 FIVE RIVERS NEAR FISHER, OR

LOCATION.--Lat 44°20'15", long 123°49'35", W $\frac{1}{2}$ sec.19, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, in Siuslaw National Forest, on left bank at downstream side of abandoned highway bridge, 500 ft (152 m) downstream from Lobster Creek, 3.2 mi (5.1 km) north of Fisher, and at mile 3.3 (5.3 km).

DRAINAGE AREA.--114 mi² (295 km²).

PERIOD OF RECORD.--August 1958 to September 1963, October 1967 to current year.

REVISED RECORDS.--WSP 1718: 1959.

GAGE.--Water-stage recorder. Altitude of gage is 130 ft (39.6 m) from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years, 565 ft³/s (16.00 m³/s), 67.30 in/yr (1,709 mm/yr), 409,300 acre-ft/yr (505 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s (487 m³/s) Jan. 21, 1972, gage height, 21.08 ft (6.425 m); minimum, 16 ft³/s (0.45 m³/s) Oct. 1, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 22.3 ft (6.80 m), from floodmarks, discharge, 19,000 ft³/s (538 m³/s), from rating curve extended above 10,000 ft³/s (283 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4,000 ft³/s (113 m³/s) and maximum discharge, 4,160 ft³/s (118 m³/s) Mar. 7, gage height, 10.60 ft (3.231 m); minimum, 23 ft³/s (0.65 m³/s) Oct. 18, 19, Aug. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|-----------|----------|--------------|------|------|------|------|
| 1 | 27 | 188 | 41 | 80 | 58 | 1740 | 410 | 125 | 172 | 66 | 35 | 37 |
| 2 | 28 | 108 | 41 | 89 | 57 | 1220 | 372 | 131 | 154 | 64 | 34 | 32 |
| 3 | 33 | 82 | 39 | 101 | 54 | 1100 | 347 | 211 | 148 | 64 | 33 | 33 |
| 4 | 30 | 66 | 39 | 97 | 54 | 890 | 325 | 211 | 188 | 69 | 33 | 45 |
| 5 | 28 | 58 | 39 | 96 | 52 | 698 | 305 | 205 | 169 | 67 | 33 | 58 |
| 6 | 27 | 52 | 38 | 89 | 52 | 635 | 287 | 186 | 154 | 67 | 32 | 43 |
| 7 | 27 | 49 | 38 | 82 | 51 | 2140 | 270 | 167 | 144 | 63 | 32 | 35 |
| 8 | 26 | 46 | 77 | 80 | 51 | 2880 | 277 | 157 | 134 | 61 | 30 | 32 |
| 9 | 25 | 43 | 167 | 92 | 51 | 2450 | 268 | 146 | 127 | 61 | 30 | 30 |
| 10 | 29 | 41 | 112 | 108 | 52 | 1740 | 247 | 144 | 119 | 63 | 29 | 29 |
| 11 | 30 | 39 | 87 | 75 | 57 | 1300 | 233 | 140 | 115 | 58 | 27 | 28 |
| 12 | 29 | 38 | 77 | 79 | 55 | 1230 | 220 | 129 | 114 | 55 | 26 | 27 |
| 13 | 28 | 38 | 70 | 84 | 55 | 1110 | 226 | 123 | 106 | 55 | 25 | 27 |
| 14 | 27 | 49 | 66 | 104 | 52 | 918 | 209 | 125 | 104 | 54 | 25 | 27 |
| 15 | 27 | 69 | 63 | 103 | 51 | 761 | 201 | 136 | 101 | 52 | 25 | 27 |
| 16 | 26 | 80 | 60 | 96 | 49 | 638 | 199 | 161 | 96 | 51 | 25 | 28 |
| 17 | 26 | 74 | 57 | 89 | 49 | 564 | 184 | 155 | 92 | 51 | 23 | 30 |
| 18 | 25 | 82 | 55 | 84 | 48 | 516 | 176 | 146 | 92 | 51 | 23 | 54 |
| 19 | 25 | 72 | 54 | 80 | 48 | 468 | 171 | 136 | 91 | 48 | 26 | 263 |
| 20 | 25 | 64 | 51 | 77 | 66 | 423 | 167 | 127 | 91 | 46 | 26 | 516 |
| 21 | 25 | 58 | 49 | 74 | 144 | 390 | 163 | 129 | 92 | 45 | 26 | 203 |
| 22 | 25 | 57 | 48 | 72 | 480 | 365 | 159 | 121 | 87 | 43 | 27 | 119 |
| 23 | 26 | 52 | 51 | 69 | 397 | 382 | 154 | 123 | 82 | 42 | 26 | 92 |
| 24 | 37 | 51 | 49 | 66 | 1190 | 395 | 148 | 121 | 79 | 42 | 58 | 112 |
| 25 | 142 | 52 | 49 | 63 | 942 | 367 | 148 | 114 | 75 | 42 | 52 | 112 |
| 26 | 91 | 49 | 94 | 61 | 926 | 340 | 146 | 154 | 74 | 45 | 60 | 97 |
| 27 | 57 | 46 | 178 | 60 | 926 | 471 | 138 | 188 | 74 | 43 | 45 | 84 |
| 28 | 45 | 43 | 152 | 58 | 1870 | 528 | 133 | 213 | 70 | 39 | 38 | 91 |
| 29 | 41 | 42 | 119 | 57 | --- | 516 | 133 | 184 | 69 | 38 | 46 | 79 |
| 30 | 38 | 42 | 99 | 57 | --- | 462 | 129 | 167 | 67 | 38 | 55 | 80 |
| 31 | 51 | --- | 87 | 61 | --- | 412 | --- | 171 | --- | 37 | 45 | --- |
| TOTAL | 1126 | 1830 | 2246 | 2483 | 7937 | 28049 | 6545 | 4746 | 3280 | 1620 | 1050 | 2470 |
| MEAN | 36.3 | 61.0 | 72.5 | 80.1 | 283 | 905 | 218 | 153 | 109 | 52.3 | 33.9 | 82.3 |
| MAX | 142 | 188 | 178 | 108 | 1870 | 2880 | 410 | 213 | 188 | 69 | 60 | 516 |
| MIN | 25 | 38 | 38 | 57 | 48 | 340 | 129 | 114 | 67 | 37 | 23 | 27 |
| CFSM | .32 | .54 | .64 | .70 | 2.48 | 7.94 | 1.91 | 1.34 | .96 | .46 | .30 | .72 |
| IN. | .37 | .60 | .73 | .81 | 2.59 | 9.15 | 2.14 | 1.55 | 1.07 | .53 | .34 | .81 |
| AC-FT | 2230 | 3630 | 4450 | 4930 | 15740 | 55640 | 12980 | 9410 | 6510 | 3210 | 2080 | 4900 |
| CAL YR 1976 | TOTAL | 131021 | MEAN 358 | MAX 5110 | MIN 25 | CFSM 3.14 | IN 42.75 | AC-FT 259900 | | | | |
| WTR YR 1977 | TOTAL | 63382 | MEAN 174 | MAX 2880 | MIN 23 | CFSM 1.53 | IN 20.68 | AC-FT 125700 | | | | |

14306500 ALSEA RIVER NEAR TIDEWATER, OR

LOCATION.--Lat 44°23'10", long 123°49'50", in NW¼NW¼ sec.6, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, on right bank 0.9 mi (1.4 km) downstream from Grass Creek, 2.5 mi (4.0 km) upstream from Scott Creek, 3.8 mi (6.1 km) southeast of Tidewater, and at mile 21.0 ((33.8 km).

DRAINAGE AREA.--334 mi² (865 km²).

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 48.16 ft (14.679 m) above mean sea level. Prior to Nov. 16, 1939, nonrecording gage at present site and datum.

REMARKS.--Records excellent. No regulation. Diversion for irrigation above station.

AVERAGE DISCHARGE.--38 years, 1,535 ft³/s (43.47 m³/s), 62.41 in/yr (1,585 mm/yr), 1,112,000 acre-ft/yr (1.37 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft³/s (1,180 m³/s) Dec. 22, 1964, gage height, 27.44 ft (8.364 m); minimum, 45 ft³/s (1.27 m³/s) Sept. 26, 27, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on or about Feb. 3, 1890, reached a stage of 29.5 ft (8.99 m), from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,270 ft³/s (263 m³/s) Mar. 8, gage height, 12.12 ft (3.694 m), no peak above base of 13,000 ft³/s (368 m³/s); minimum, 62 ft³/s (1.76 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|--------|-------|-------|-------|--------|------|--------|
| 1 | 85 | 349 | 121 | 199 | 159 | 4840 | 1020 | 334 | 460 | 167 | 90 | 119 |
| 2 | 86 | 288 | 117 | 218 | 157 | 3100 | 940 | 343 | 422 | 163 | 86 | 101 |
| 3 | 95 | 195 | 116 | 244 | 152 | 2860 | 871 | 499 | 405 | 161 | 85 | 99 |
| 4 | 98 | 174 | 116 | 237 | 148 | 2250 | 814 | 602 | 481 | 165 | 83 | 112 |
| 5 | 92 | 156 | 114 | 232 | 146 | 1700 | 763 | 610 | 470 | 163 | 82 | 144 |
| 6 | 87 | 142 | 114 | 215 | 144 | 1440 | 719 | 555 | 425 | 159 | 82 | 131 |
| 7 | 86 | 131 | 111 | 202 | 142 | 4120 | 680 | 492 | 389 | 154 | 82 | 111 |
| 8 | 83 | 126 | 140 | 178 | 140 | 7360 | 684 | 460 | 364 | 146 | 79 | 98 |
| 9 | 80 | 121 | 349 | 197 | 138 | 6150 | 667 | 422 | 337 | 146 | 78 | 90 |
| 10 | 85 | 116 | 288 | 213 | 140 | 4680 | 618 | 405 | 319 | 150 | 72 | 86 |
| 11 | 93 | 112 | 222 | 195 | 150 | 3280 | 586 | 396 | 308 | 144 | 68 | 83 |
| 12 | 93 | 112 | 193 | 206 | 150 | 3000 | 555 | 370 | 299 | 138 | 66 | 80 |
| 13 | 87 | 111 | 176 | 247 | 154 | 2730 | 559 | 355 | 285 | 138 | 65 | 80 |
| 14 | 85 | 122 | 163 | 364 | 148 | 2240 | 529 | 352 | 275 | 135 | 63 | 78 |
| 15 | 83 | 163 | 156 | 322 | 144 | 1860 | 506 | 364 | 267 | 129 | 65 | 78 |
| 16 | 83 | 202 | 152 | 277 | 140 | 1540 | 495 | 415 | 257 | 126 | 65 | 80 |
| 17 | 82 | 202 | 146 | 249 | 138 | 1340 | 467 | 412 | 247 | 121 | 65 | 85 |
| 18 | 80 | 218 | 142 | 232 | 135 | 1210 | 449 | 405 | 242 | 119 | 63 | 111 |
| 19 | 78 | 211 | 138 | 218 | 133 | 1120 | 435 | 383 | 237 | 116 | 65 | 380 |
| 20 | 76 | 182 | 133 | 208 | 148 | 1030 | 425 | 358 | 234 | 114 | 67 | 1010 |
| 21 | 76 | 167 | 129 | 199 | 259 | 940 | 415 | 349 | 237 | 111 | 68 | 510 |
| 22 | 76 | 156 | 128 | 193 | 759 | 875 | 405 | 337 | 225 | 107 | 74 | 308 |
| 23 | 79 | 148 | 131 | 186 | 837 | 905 | 392 | 331 | 215 | 104 | 75 | 244 |
| 24 | 93 | 140 | 137 | 180 | 1960 | 965 | 380 | 334 | 206 | 103 | 121 | 269 |
| 25 | 294 | 150 | 138 | 176 | 1770 | 890 | 373 | 310 | 197 | 101 | 146 | 277 |
| 26 | 302 | 146 | 222 | 167 | 1920 | 828 | 376 | 364 | 193 | 106 | 170 | 259 |
| 27 | 182 | 135 | 409 | 165 | 1990 | 1140 | 361 | 442 | 184 | 107 | 150 | 222 |
| 28 | 142 | 129 | 376 | 159 | 4590 | 1350 | 349 | 548 | 180 | 101 | 126 | 222 |
| 29 | 128 | 126 | 288 | 157 | --- | 1320 | 340 | 481 | 176 | 98 | 148 | 211 |
| 30 | 117 | 122 | 244 | 154 | --- | 1170 | 331 | 432 | 172 | 96 | 172 | 199 |
| 31 | 131 | --- | 218 | 157 | --- | 1050 | --- | 439 | --- | 93 | 152 | --- |
| TOTAL | 3337 | 4852 | 5627 | 6546 | 16991 | 69283 | 16504 | 12899 | 8708 | 3981 | 2873 | 5877 |
| MEAN | 108 | 162 | 182 | 211 | 607 | 2235 | 550 | 416 | 290 | 128 | 92.7 | 196 |
| MAX | 302 | 349 | 409 | 364 | 4590 | 7360 | 1020 | 610 | 481 | 167 | 172 | 1010 |
| MIN | 76 | 111 | 111 | 154 | 133 | 828 | 331 | 310 | 172 | 93 | 63 | 78 |
| CFSM | .32 | .49 | .55 | .63 | 1.82 | 6.69 | 1.65 | 1.25 | .87 | .38 | .28 | .59 |
| IN. | .37 | .54 | .63 | .73 | 1.89 | 7.72 | 1.84 | 1.44 | .97 | .44 | .32 | .65 |
| AC-FT | 6620 | 9620 | 11160 | 12980 | 33700 | 137400 | 32740 | 25590 | 17270 | 7900 | 5700 | 11660 |
| CAL YR 1976 | TOTAL | 368925 | MEAN | 1008 | MAX | 15000 | MIN | 76 | CFSM | 3.02 | IN | 41.09 |
| WTR YR 1977 | TOTAL | 157478 | MEAN | 431 | MAX | 7360 | MIN | 63 | CFSM | 1.29 | IN | 17.54 |
| | | | | | | | | | AC-FT | 731800 | | 312400 |

BIG CREEK BASIN

421

14306900 BIG CREEK NEAR ROOSEVELT BEACH, OR

LOCATION.--Lat 44°10'05", long 124°03'55", in SE¼SE¼ sec.13, T.16 S., R.12 W., Lane County, Hydrologic Unit 17100205, on right bank 1.0 mi (1.6 km) downstream from Frying Pan Creek, 2.5 mi (4.0 km) east of Roosevelt Beach.

DRAINAGE AREA.--11.9 mi² (30.8 km²).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 141 ft (43.0 m) above mean sea level (by barometer).

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--5 years, 95.7 ft³/s (2.710 m³/s), 109.21 in/yr (2,774 mm/yr), 69,330 acre-ft/yr (85.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft³/s (60.9 m³/s) Nov. 30, 1975, gage height, 6.90 ft (2.103 m); minimum, 4.5 ft³/s (0.13 m³/s) Oct. 18-21, 24, 25, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 477 ft³/s (13.5 m³/s) Feb. 28, gage height, 5.24 ft (1.597 m), no peak above base of 800 ft³/s (22.7 m³/s); minimum, 5.4 ft³/s (0.15 m³/s) Aug. 10-13, 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|---------|------|------|------|-------|------|------|------|-------|-------|-------|-------|-------|
| 1 | 7.2 | 28 | 16 | 23 | 22 | 347 | 98 | 26 | 51 | 17 | 7.9 | 13 | | |
| 2 | 9.0 | 21 | 15 | 28 | 21 | 276 | 88 | 25 | 46 | 16 | 7.6 | 12 | | |
| 3 | 8.7 | 17 | 15 | 28 | 20 | 265 | 83 | 47 | 46 | 16 | 7.6 | 25 | | |
| 4 | 7.6 | 15 | 15 | 27 | 20 | 221 | 77 | 36 | 57 | 16 | 7.6 | 46 | | |
| 5 | 7.2 | 14 | 14 | 25 | 19 | 182 | 72 | 34 | 47 | 15 | 7.9 | 30 | | |
| 6 | 7.2 | 13 | 14 | 24 | 20 | 173 | 68 | 31 | 44 | 15 | 7.6 | 22 | | |
| 7 | 6.9 | 13 | 14 | 23 | 19 | 298 | 64 | 29 | 41 | 14 | 7.6 | 18 | | |
| 8 | 6.6 | 12 | 31 | 23 | 19 | 387 | 66 | 28 | 39 | 14 | 7.2 | 15 | | |
| 9 | 6.6 | 11 | 27 | 22 | 18 | 360 | 61 | 27 | 37 | 14 | 6.9 | 14 | | |
| 10 | 7.2 | 11 | 22 | 22 | 25 | 290 | 56 | 27 | 36 | 14 | 6.6 | 13 | | |
| 11 | 7.2 | 10 | 20 | 25 | 21 | 244 | 53 | 26 | 35 | 13 | 6.3 | 12 | | |
| 12 | 6.9 | 10 | 19 | 28 | 26 | 234 | 51 | 25 | 33 | 13 | 6.3 | 11 | | |
| 13 | 6.6 | 10 | 19 | 42 | 26 | 200 | 54 | 24 | 31 | 13 | 6.3 | 10 | | |
| 14 | 6.3 | 18 | 19 | 37 | 23 | 182 | 48 | 25 | 30 | 12 | 6.3 | 10 | | |
| 15 | 6.3 | 38 | 18 | 34 | 21 | 163 | 46 | 31 | 28 | 12 | 6.6 | 11 | | |
| 16 | 6.3 | 39 | 17 | 32 | 21 | 150 | 45 | 37 | 27 | 11 | 6.3 | 12 | | |
| 17 | 6.3 | 35 | 18 | 31 | 21 | 129 | 41 | 33 | 26 | 12 | 6.0 | 12 | | |
| 18 | 6.0 | 33 | 18 | 31 | 20 | 127 | 39 | 31 | 26 | 12 | 6.3 | 29 | | |
| 19 | 5.7 | 29 | 16 | 30 | 20 | 122 | 38 | 28 | 25 | 11 | 6.6 | 83 | | |
| 20 | 5.7 | 26 | 16 | 28 | 33 | 109 | 37 | 28 | 26 | 10 | 6.3 | 81 | | |
| 21 | 5.7 | 25 | 15 | 28 | 42 | 101 | 36 | 36 | 25 | 10 | 6.9 | 53 | | |
| 22 | 5.7 | 23 | 15 | 26 | 50 | 95 | 35 | 29 | 23 | 10 | 6.9 | 41 | | |
| 23 | 5.7 | 21 | 17 | 26 | 56 | 96 | 33 | 28 | 22 | 9.7 | 6.9 | 43 | | |
| 24 | 17 | 21 | 16 | 25 | 166 | 95 | 32 | 27 | 21 | 9.7 | 16 | 42 | | |
| 25 | 23 | 23 | 27 | 24 | 185 | 84 | 33 | 30 | 20 | 9.7 | 14 | 47 | | |
| 26 | 12 | 20 | 35 | 23 | 194 | 80 | 31 | 43 | 20 | 9.7 | 14 | 39 | | |
| 27 | 9.7 | 19 | 31 | 23 | 265 | 109 | 29 | 46 | 19 | 9.7 | 9.0 | 37 | | |
| 28 | 9.0 | 18 | 27 | 22 | 451 | 106 | 28 | 43 | 19 | 9.4 | 47 | 36 | | |
| 29 | 9.0 | 17 | 26 | 22 | --- | 106 | 28 | 40 | 19 | 9.4 | 25 | 33 | | |
| 30 | 8.3 | 17 | 23 | 21 | --- | 101 | 27 | 39 | 17 | 8.7 | 29 | 33 | | |
| 31 | 33 | --- | 23 | 24 | --- | 96 | --- | 54 | --- | 8.3 | 16 | --- | | |
| TOTAL | 275.6 | 607 | 618 | 827 | 1844 | 5528 | 1497 | 1013 | 936 | 374.3 | 328.5 | 883 | | |
| MEAN | 8.89 | 20.2 | 19.9 | 26.7 | 65.9 | 178 | 49.9 | 32.7 | 31.2 | 12.1 | 10.6 | 29.4 | | |
| MAX | 33 | 39 | 35 | 42 | 451 | 387 | 98 | 54 | 57 | 17 | 47 | 83 | | |
| MIN | 5.7 | 10 | 14 | 21 | 18 | 80 | 27 | 24 | 17 | 8.3 | 6.0 | 10 | | |
| CFSM | .75 | 1.70 | 1.67 | 2.24 | 5.54 | 15.0 | 4.19 | 2.75 | 2.62 | 1.02 | .89 | 2.47 | | |
| IN. | .86 | 1.90 | 1.93 | 2.59 | 5.76 | 17.28 | 4.68 | 3.17 | 2.93 | 1.17 | 1.03 | 2.76 | | |
| AC-FT | 547 | 1200 | 1230 | 1640 | 3660 | 10960 | 2970 | 2010 | 1860 | 742 | 652 | 1750 | | |
| CAL YR 1976 | TOTAL | 24601.3 | MEAN | 67.2 | MAX | 1070 | MIN | 5.7 | CFSM | 5.65 | IN | 76.90 | AC-FT | 48800 |
| WTR YR 1977 | TOTAL | 14731.4 | MEAN | 40.4 | MAX | 451 | MIN | 5.7 | CFSM | 3.40 | IN | 46.05 | AC-FT | 29220 |

SIUSLAW RIVER BASIN

14307580 LAKE CREEK NEAR DEADWOOD, OR

LOCATION.--Lat 44°04'58", long 123°47'05", in NW¼NW¼ sec.21, T.17 S., R.9 W., Lane County, Hydrologic Unit 17100206, on right bank 0.2 mi (0.3 km) upstream from Indian Creek, 1.5 mi (2.4 km) southwest of Deadwood, and at mile 2.6 (4.2 km).

DRAINAGE AREA.--174 mi² (451 km²).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 178.86 ft (54.517 m) above mean sea level.

REMARKS.--Records good. Flow slightly regulated by natural storage in Triangle Lake. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--10 years, 746 ft³/s (21.13 m³/s), 58.22 in/yr (1,479 mm/yr), 540,500 acre-ft/yr (666 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft³/s (558 m³/s) Jan. 21, 1972, gage height, 15.25 ft (4.648 m); minimum, 12 ft³/s (0.34 m³/s) Aug. 14, 15, 17, 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4,200 ft³/s (119 m³/s) and maximum discharge, 4,610 ft³/s (131 m³/s) Mar. 8, gage height, 6.44 ft (1.963 m); minimum, 12 ft³/s (0.34 m³/s) Aug. 14, 15, 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|------|----------|----------|--------|-----------|----------|--------------|------|------|------|------|
| 1 | 34 | 258 | 50 | 94 | 60 | 2310 | 549 | 168 | 192 | 46 | 20 | 41 |
| 2 | 36 | 156 | 49 | 120 | 56 | 1590 | 493 | 169 | 174 | 44 | 20 | 37 |
| 3 | 43 | 120 | 47 | 126 | 56 | 1400 | 447 | 228 | 166 | 45 | 19 | 40 |
| 4 | 40 | 100 | 47 | 121 | 55 | 1130 | 416 | 291 | 191 | 46 | 18 | 46 |
| 5 | 38 | 86 | 46 | 115 | 55 | 884 | 391 | 328 | 185 | 45 | 18 | 52 |
| 6 | 38 | 75 | 45 | 105 | 53 | 776 | 367 | 303 | 168 | 45 | 19 | 44 |
| 7 | 37 | 69 | 45 | 96 | 51 | 2360 | 350 | 271 | 152 | 42 | 18 | 41 |
| 8 | 36 | 64 | 58 | 90 | 51 | 3630 | 351 | 256 | 140 | 40 | 17 | 36 |
| 9 | 35 | 60 | 131 | 85 | 49 | 3380 | 343 | 234 | 130 | 41 | 17 | 33 |
| 10 | 36 | 56 | 114 | 80 | 53 | 2520 | 326 | 220 | 122 | 42 | 16 | 31 |
| 11 | 39 | 53 | 102 | 80 | 58 | 1790 | 309 | 211 | 113 | 39 | 14 | 30 |
| 12 | 37 | 52 | 91 | 85 | 56 | 1720 | 294 | 196 | 110 | 38 | 13 | 29 |
| 13 | 37 | 52 | 82 | 120 | 56 | 1600 | 289 | 184 | 104 | 38 | 13 | 27 |
| 14 | 36 | 60 | 74 | 143 | 55 | 1280 | 273 | 180 | 100 | 37 | 13 | 27 |
| 15 | 36 | 97 | 69 | 132 | 55 | 1040 | 262 | 192 | 95 | 36 | 13 | 27 |
| 16 | 36 | 138 | 65 | 121 | 53 | 860 | 257 | 221 | 91 | 34 | 13 | 28 |
| 17 | 34 | 121 | 62 | 111 | 51 | 734 | 243 | 221 | 84 | 33 | 12 | 30 |
| 18 | 33 | 122 | 61 | 103 | 49 | 657 | 229 | 210 | 83 | 34 | 13 | 45 |
| 19 | 31 | 110 | 58 | 96 | 47 | 608 | 221 | 196 | 80 | 32 | 14 | 176 |
| 20 | 31 | 97 | 56 | 91 | 55 | 554 | 216 | 182 | 79 | 31 | 14 | 440 |
| 21 | 31 | 87 | 52 | 86 | 130 | 500 | 212 | 180 | 80 | 29 | 15 | 226 |
| 22 | 31 | 80 | 51 | 78 | 445 | 464 | 206 | 169 | 75 | 28 | 16 | 142 |
| 23 | 32 | 73 | 51 | 73 | 494 | 489 | 195 | 166 | 72 | 28 | 16 | 122 |
| 24 | 42 | 67 | 50 | 68 | 1500 | 573 | 188 | 160 | 64 | 27 | 33 | 152 |
| 25 | 141 | 67 | 56 | 66 | 1210 | 552 | 188 | 151 | 60 | 25 | 41 | 148 |
| 26 | 110 | 64 | 104 | 62 | 1230 | 505 | 206 | 174 | 59 | 27 | 53 | 128 |
| 27 | 80 | 60 | 175 | 60 | 1060 | 628 | 191 | 196 | 55 | 28 | 43 | 108 |
| 28 | 67 | 55 | 157 | 58 | 2330 | 746 | 182 | 218 | 53 | 27 | 45 | 111 |
| 29 | 61 | 53 | 133 | 56 | --- | 729 | 176 | 205 | 50 | 25 | 59 | 98 |
| 30 | 57 | 51 | 116 | 56 | --- | 652 | 176 | 189 | 48 | 24 | 56 | 91 |
| 31 | 94 | --- | 103 | 60 | --- | 576 | --- | 189 | --- | 22 | 49 | --- |
| TOTAL | 1469 | 2603 | 2400 | 2837 | 9473 | 37237 | 8546 | 6458 | 3175 | 1078 | 740 | 2586 |
| MEAN | 47.4 | 86.8 | 77.4 | 91.5 | 338 | 1201 | 285 | 208 | 106 | 34.8 | 23.9 | 86.2 |
| MAX | 141 | 258 | 175 | 143 | 2330 | 3630 | 549 | 328 | 192 | 46 | 59 | 440 |
| MIN | 31 | 51 | 45 | 56 | 47 | 464 | 176 | 151 | 48 | 22 | 12 | 27 |
| CFSM | .27 | .50 | .45 | .53 | 1.94 | 6.90 | 1.64 | 1.20 | .61 | .20 | .14 | .50 |
| IN. | .31 | .56 | .51 | .61 | 2.03 | 7.96 | 1.83 | 1.38 | .68 | .23 | .16 | .55 |
| AC-FT | 2910 | 5160 | 4760 | 5630 | 18790 | 73860 | 16950 | 12810 | 6300 | 2140 | 1470 | 5130 |
| CAL YR 1976 TOTAL | 183979 | | MEAN 503 | MAX 8770 | MIN 28 | CFSM 2.89 | IN 39.33 | AC-FT 364900 | | | | |
| WTR YR 1977 TOTAL | 78602 | | MEAN 215 | MAX 3630 | MIN 12 | CFSM 1.24 | IN 16.80 | AC-FT 155900 | | | | |

SIUSLAW RIVER BASIN

423

14307620 SIUSLAW RIVER NEAR MAPLETON, OR

LOCATION.--Lat 44°03'45", long 123°52'55, in SW¼NW¼ sec.27, T.17 S., R.10 W., Lane County, Hydrologic Unit 17100206, on right bank 250 ft (76 m) above Shoemaker Creek, 2.5 mi (4.0 km) northwest of Mapleton, and at mile 23.7 (38.1 km).

DRAINAGE AREA.--588 mi² (1,523 km²).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 41 ft (12.5 m), from topographic map.

REMARKS.--Records good. No regulation or diversions above station.

AVERAGE DISCHARGE.--10 years, 2,221 ft³/s (62.90 m³/s), 51.29 in/yr (1,303 mm/yr), 1,609,000 acre-ft/yr (1.98 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,400 ft³/s (1,400 m³/s) Jan. 21, 1972, gage height, 28.45 ft (8.672 m); minimum, 45 ft³/s (1.27 m³/s) Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 reached a stage of about 28 ft (8.5 m), from information by local residents (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,400 ft³/s (323 m³/s) Mar. 8, gage height, 12.64 ft (3.853 m), no peak above base of 15,000 ft³/s (425 m³/s); minimum, 45 ft³/s (1.27 m³/s) Aug. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|--------|-------|-------|-------|--------|-------|-------|-------|------|------|-------|-------|---------|
| 1 | 101 | 616 | 189 | 286 | 220 | 6330 | 1310 | 435 | 524 | 171 | 76 | 138 | | |
| 2 | 101 | 460 | 185 | 341 | 214 | 4700 | 1180 | 440 | 495 | 165 | 73 | 122 | | |
| 3 | 108 | 359 | 185 | 381 | 203 | 3620 | 1070 | 546 | 466 | 165 | 68 | 125 | | |
| 4 | 111 | 301 | 182 | 395 | 198 | 2920 | 992 | 704 | 515 | 165 | 67 | 146 | | |
| 5 | 111 | 268 | 182 | 381 | 187 | 2270 | 923 | 909 | 537 | 165 | 64 | 183 | | |
| 6 | 106 | 240 | 176 | 345 | 190 | 1910 | 870 | 916 | 499 | 165 | 62 | 159 | | |
| 7 | 103 | 218 | 176 | 316 | 187 | 5330 | 820 | 826 | 463 | 162 | 64 | 138 | | |
| 8 | 101 | 205 | 199 | 271 | 183 | 9020 | 820 | 766 | 420 | 156 | 61 | 117 | | |
| 9 | 98 | 192 | 389 | 251 | 183 | 7770 | 807 | 704 | 381 | 151 | 59 | 105 | | |
| 10 | 96 | 185 | 380 | 304 | 187 | 6360 | 772 | 626 | 354 | 148 | 56 | 95 | | |
| 11 | 101 | 182 | 335 | 278 | 198 | 5030 | 731 | 592 | 341 | 148 | 54 | 89 | | |
| 12 | 106 | 182 | 304 | 293 | 201 | 4510 | 693 | 550 | 328 | 143 | 52 | 85 | | |
| 13 | 106 | 179 | 286 | 371 | 201 | 4630 | 682 | 511 | 312 | 140 | 49 | 81 | | |
| 14 | 103 | 189 | 264 | 455 | 201 | 3410 | 661 | 490 | 297 | 130 | 48 | 78 | | |
| 15 | 101 | 297 | 254 | 425 | 195 | 2680 | 631 | 503 | 286 | 130 | 48 | 78 | | |
| 16 | 98 | 428 | 240 | 395 | 193 | 2180 | 621 | 555 | 275 | 125 | 47 | 78 | | |
| 17 | 98 | 428 | 229 | 362 | 193 | 1870 | 587 | 564 | 264 | 117 | 46 | 81 | | |
| 18 | 96 | 415 | 229 | 328 | 187 | 1660 | 564 | 541 | 261 | 114 | 45 | 114 | | |
| 19 | 91 | 376 | 218 | 312 | 183 | 1510 | 546 | 515 | 254 | 114 | 47 | 381 | | |
| 20 | 89 | 335 | 212 | 293 | 190 | 1350 | 528 | 486 | 245 | 109 | 48 | 1010 | | |
| 21 | 89 | 301 | 205 | 278 | 336 | 1220 | 520 | 478 | 245 | 107 | 48 | 564 | | |
| 22 | 89 | 279 | 202 | 261 | 1050 | 1110 | 507 | 455 | 241 | 105 | 52 | 358 | | |
| 23 | 89 | 257 | 199 | 251 | 1520 | 1140 | 490 | 440 | 229 | 100 | 53 | 300 | | |
| 24 | 108 | 243 | 202 | 241 | 3510 | 1340 | 478 | 435 | 217 | 98 | 85 | 395 | | |
| 25 | 304 | 240 | 212 | 232 | 3050 | 1330 | 470 | 410 | 209 | 93 | 138 | 435 | | |
| 26 | 384 | 233 | 320 | 223 | 2910 | 1230 | 499 | 463 | 203 | 93 | 165 | 381 | | |
| 27 | 286 | 215 | 455 | 217 | 2540 | 1470 | 474 | 499 | 195 | 95 | 154 | 312 | | |
| 28 | 240 | 209 | 446 | 209 | 5720 | 1710 | 455 | 597 | 193 | 98 | 156 | 300 | | |
| 29 | 209 | 202 | 381 | 206 | --- | 1710 | 440 | 587 | 180 | 91 | 183 | 278 | | |
| 30 | 189 | 196 | 341 | 201 | --- | 1570 | 440 | 541 | 177 | 85 | 193 | 264 | | |
| 31 | 215 | --- | 308 | 206 | --- | 1390 | --- | 524 | --- | 81 | 171 | --- | | |
| TOTAL | 4227 | 8430 | 8085 | 9308 | 24530 | 94280 | 20581 | 17608 | 9606 | 3929 | 2532 | 6990 | | |
| MEAN | 136 | 281 | 261 | 300 | 876 | 3041 | 686 | 568 | 320 | 127 | 81.7 | 233 | | |
| MAX | 384 | 616 | 455 | 455 | 5720 | 9020 | 1310 | 916 | 537 | 171 | 193 | 1010 | | |
| MIN | 89 | 179 | 176 | 201 | 183 | 1110 | 440 | 410 | 177 | 81 | 45 | 78 | | |
| CFSM | .23 | .48 | .44 | .51 | 1.49 | 5.17 | 1.17 | .97 | .54 | .22 | .14 | .40 | | |
| IN. | .27 | .53 | .51 | .59 | 1.55 | 5.96 | 1.30 | 1.11 | .61 | .25 | .16 | .44 | | |
| AC-FT | 8380 | 16720 | 16040 | 18460 | 48660 | 187000 | 40820 | 34930 | 19050 | 7790 | 5020 | 13860 | | |
| CAL YR 1976 | TOTAL | 554667 | MEAN | 1515 | MAX | 30700 | MIN | 89 | CFSM | 2.58 | IN | 35.09 | AC-FT | 1100000 |
| WTR YR 1977 | TOTAL | 210106 | MEAN | 576 | MAX | 9020 | MIN | 45 | CFSM | .98 | IN | 13.29 | AC-FT | 416700 |

SIUSLAW RIVER BASIN

14307645 NORTH FORK SIUSLAW RIVER NEAR MINERVA, OR

LOCATION.--Lat 44°02'50", long 124°00'10", in NW¼SW¼ sec.34, T.17 S., R.11 W., Lane County, Hydrologic Unit 17100206, on left bank 10 ft (3 m) downstream from county road bridge, 0.3 mi (0.5 km) upstream from Condon Creek, 2.7 mi (4.3 km) southwest of Minerva, and at mile 13.09 (21.06 km).

DRAINAGE AREA.--41.2 mi² (106.7 km²).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder, and crest-stage gage. Altitude of gage is 40 ft (12 m), from topographic map.

REMARKS.--Records good. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--10 years, 293 ft³/s (8.298 m³/s), 96.58 in/yr (2,453 mm/yr), 212,300 acre-ft/yr (262 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft³/s (86.1 m³/s) Jan. 21, 1972, gage height, 23.01 ft (7.013 m); maximum gage height, 23.38 ft (7.126 m) Dec. 1, 1975 (backwater from debris); minimum discharge, 12 ft³/s (0.34 m³/s) Sept. 2, 3, 15-18, 1972, Aug. 12, 13, 17, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640 ft³/s (46.4 m³/s) Feb. 28, gage height, 14.81 ft (4.514 m), no peak above base of 1,800 ft³/s (51.0 m³/s); minimum daily, 12 ft³/s (0.34 m³/s) Aug. 12, 13, 17, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|----------|----------|--------|-----------|----------|--------------|------|------|------|------|
| 1 | 19 | 124 | 44 | 67 | 50 | 1290 | 282 | 69 | 120 | 35 | 18 | 33 |
| 2 | 20 | 76 | 41 | 90 | 46 | 941 | 248 | 69 | 106 | 34 | 18 | 27 |
| 3 | 22 | 59 | 40 | 88 | 43 | 955 | 226 | 111 | 101 | 34 | 16 | 50 |
| 4 | 20 | 49 | 39 | 84 | 42 | 713 | 209 | 110 | 127 | 35 | 16 | 80 |
| 5 | 19 | 43 | 37 | 79 | 41 | 542 | 194 | 112 | 114 | 34 | 15 | 78 |
| 6 | 19 | 39 | 37 | 73 | 42 | 476 | 180 | 101 | 103 | 34 | 15 | 50 |
| 7 | 18 | 36 | 35 | 69 | 40 | 848 | 169 | 91 | 94 | 32 | 15 | 38 |
| 8 | 18 | 33 | 55 | 64 | 39 | 1100 | 170 | 84 | 86 | 32 | 15 | 32 |
| 9 | 17 | 32 | 83 | 60 | 38 | 1080 | 161 | 78 | 80 | 31 | 15 | 28 |
| 10 | 18 | 31 | 64 | 59 | 46 | 849 | 148 | 76 | 75 | 32 | 14 | 25 |
| 11 | 20 | 29 | 57 | 62 | 48 | 671 | 141 | 73 | 73 | 31 | 13 | 23 |
| 12 | 18 | 28 | 53 | 74 | 51 | 697 | 135 | 68 | 70 | 29 | 12 | 22 |
| 13 | 18 | 28 | 50 | 122 | 60 | 611 | 140 | 65 | 65 | 29 | 12 | 21 |
| 14 | 16 | 36 | 48 | 135 | 53 | 516 | 128 | 65 | 62 | 27 | 13 | 21 |
| 15 | 16 | 125 | 46 | 115 | 49 | 444 | 123 | 78 | 59 | 26 | 13 | 21 |
| 16 | 16 | 204 | 44 | 101 | 47 | 380 | 121 | 95 | 56 | 26 | 13 | 20 |
| 17 | 16 | 132 | 44 | 89 | 45 | 343 | 112 | 86 | 54 | 25 | 12 | 20 |
| 18 | 16 | 130 | 46 | 81 | 43 | 341 | 108 | 78 | 55 | 25 | 13 | 46 |
| 19 | 17 | 105 | 42 | 76 | 42 | 348 | 102 | 73 | 54 | 24 | 13 | 307 |
| 20 | 16 | 87 | 40 | 72 | 57 | 312 | 99 | 69 | 54 | 24 | 13 | 597 |
| 21 | 16 | 76 | 39 | 65 | 115 | 285 | 96 | 79 | 55 | 23 | 13 | 227 |
| 22 | 16 | 69 | 38 | 64 | 225 | 263 | 93 | 70 | 49 | 22 | 13 | 132 |
| 23 | 16 | 61 | 40 | 61 | 199 | 276 | 88 | 69 | 47 | 22 | 12 | 119 |
| 24 | 26 | 57 | 38 | 58 | 715 | 320 | 84 | 67 | 44 | 21 | 33 | 172 |
| 25 | 92 | 68 | 49 | 55 | 710 | 286 | 84 | 63 | 43 | 21 | 26 | 182 |
| 26 | 53 | 57 | 115 | 53 | 851 | 262 | 83 | 95 | 41 | 22 | 42 | 157 |
| 27 | 36 | 52 | 131 | 51 | 872 | 414 | 77 | 101 | 40 | 22 | 25 | 126 |
| 28 | 30 | 49 | 106 | 49 | 1590 | 408 | 74 | 109 | 38 | 21 | 94 | 118 |
| 29 | 28 | 47 | 90 | 48 | --- | 379 | 73 | 98 | 37 | 21 | 76 | 101 |
| 30 | 26 | 46 | 79 | 46 | --- | 332 | 71 | 89 | 36 | 20 | 84 | 97 |
| 31 | 53 | --- | 71 | 51 | --- | 295 | --- | 111 | --- | 19 | 47 | --- |
| TOTAL | 751 | 2008 | 1741 | 2261 | 6199 | 16977 | 4019 | 2602 | 2038 | 833 | 749 | 2970 |
| MEAN | 24.2 | 66.9 | 56.2 | 72.9 | 221 | 548 | 134 | 83.9 | 67.9 | 26.9 | 24.2 | 99.0 |
| MAX | 92 | 204 | 131 | 135 | 1590 | 1290 | 282 | 112 | 127 | 35 | 94 | 597 |
| MIN | 16 | 28 | 35 | 46 | 38 | 262 | 71 | 63 | 36 | 19 | 12 | 20 |
| CFSM | .59 | 1.62 | 1.36 | 1.77 | 5.36 | 13.3 | 3.25 | 2.04 | 1.65 | .65 | .59 | 2.40 |
| IN. | .68 | 1.81 | 1.57 | 2.04 | 5.60 | 15.33 | 3.63 | 2.35 | 1.84 | .75 | .68 | 2.68 |
| AC-FT | 1490 | 3980 | 3450 | 4480 | 12300 | 33670 | 7970 | 5160 | 4040 | 1650 | 1490 | 5890 |
| CAL YR 1976 | TOTAL | 74152 | MEAN 203 | MAX 2510 | MIN 16 | CFSM 4.93 | IN 66.95 | AC-FT 147100 | | | | |
| WTR YR 1977 | TOTAL | 43148 | MEAN 118 | MAX 1590 | MIN 12 | CFSM 2.86 | IN 38.96 | AC-FT 85580 | | | | |

14307700 JACKSON CREEK NEAR TILLER, OR

LOCATION.--Lat 42°57'15", long 122°49'40", in SW¼NE¼ sec.21, T.30 S., R.1 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.5 mi (0.8 km) upstream from Chapman Creek, 0.8 mi (1.3 km) downstream from Beaver Creek, 6.5 mi (10.5 km) northeast of Tiller, and at mile 3.0 (4.8 km). Records include flow of Chapman Creek.

DRAINAGE AREA.--152 mi² (394 km²), at cableway 0.6 mi (1.0 km) downstream where all discharge measurements are made.

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 1935: 1956-57(M).

GAGE.--Water-stage recorder. Datum of gage is 1,240.25 ft (378.028 m) above mean sea level (levels by Douglas County Water Resources Survey).

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years, 319 ft³/s (9.034 m³/s), 28.50 in/yr (724 mm/yr), 231,100 acre-ft/yr (285 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft³/s (598 m³/s) Dec. 22, 1964, gage height, 18.0 ft (5.49 m), from floodmark, from rating curve extended above 5,100 ft³/s (144 m³/s) and basin runoff comparison; minimum, 11 ft³/s (0.31 m³/s) Jan. 6, 1977, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 664 ft³/s (18.8 m³/s) May 23, gage height, 3.47 ft (1.058 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum, 11 ft³/s (0.31 m³/s) Jan. 6, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|--------|-----------|----------|--------------|------|------|
| 1 | 24 | 26 | 19 | 18 | 22 | 101 | 221 | 174 | 258 | 37 | 18 | 17 |
| 2 | 24 | 28 | 19 | 27 | 20 | 88 | 229 | 315 | 226 | 47 | 18 | 16 |
| 3 | 27 | 25 | 18 | 31 | 20 | 115 | 185 | 318 | 201 | 39 | 17 | 15 |
| 4 | 25 | 23 | 18 | 27 | 20 | 95 | 212 | 418 | 182 | 36 | 17 | 15 |
| 5 | 24 | 22 | 18 | 26 | 20 | 84 | 272 | 548 | 172 | 34 | 16 | 15 |
| 6 | 24 | 21 | 18 | 16 | 20 | 93 | 284 | 470 | 162 | 34 | 16 | 14 |
| 7 | 23 | 20 | 18 | 18 | 20 | 95 | 309 | 391 | 149 | 33 | 16 | 14 |
| 8 | 22 | 20 | 21 | 16 | 20 | 151 | 366 | 335 | 135 | 31 | 18 | 13 |
| 9 | 22 | 20 | 27 | 16 | 20 | 182 | 309 | 331 | 122 | 29 | 17 | 13 |
| 10 | 21 | 20 | 22 | 28 | 20 | 154 | 233 | 478 | 112 | 29 | 16 | 13 |
| 11 | 21 | 20 | 22 | 31 | 20 | 130 | 192 | 548 | 116 | 28 | 16 | 13 |
| 12 | 21 | 20 | 22 | 37 | 20 | 132 | 182 | 470 | 102 | 27 | 15 | 13 |
| 13 | 21 | 20 | 21 | 33 | 20 | 117 | 218 | 384 | 92 | 27 | 15 | 13 |
| 14 | 20 | 24 | 20 | 32 | 20 | 97 | 195 | 335 | 83 | 26 | 15 | 12 |
| 15 | 20 | 35 | 19 | 28 | 20 | 83 | 174 | 309 | 76 | 25 | 15 | 12 |
| 16 | 20 | 39 | 19 | 27 | 20 | 74 | 195 | 377 | 71 | 24 | 14 | 13 |
| 17 | 20 | 29 | 19 | 26 | 20 | 69 | 172 | 548 | 68 | 24 | 14 | 13 |
| 18 | 20 | 26 | 18 | 28 | 20 | 67 | 149 | 504 | 65 | 24 | 14 | 14 |
| 19 | 20 | 24 | 15 | 29 | 19 | 76 | 135 | 430 | 61 | 24 | 14 | 20 |
| 20 | 20 | 23 | 17 | 29 | 19 | 107 | 128 | 410 | 58 | 24 | 14 | 24 |
| 21 | 20 | 22 | 20 | 28 | 26 | 101 | 128 | 388 | 59 | 23 | 15 | 21 |
| 22 | 20 | 21 | 20 | 28 | 32 | 115 | 137 | 391 | 54 | 22 | 15 | 17 |
| 23 | 20 | 20 | 19 | 27 | 31 | 162 | 138 | 571 | 52 | 21 | 14 | 17 |
| 24 | 21 | 20 | 18 | 25 | 31 | 187 | 149 | 619 | 49 | 20 | 27 | 48 |
| 25 | 35 | 20 | 18 | 23 | 28 | 172 | 167 | 508 | 46 | 20 | 36 | 32 |
| 26 | 40 | 20 | 21 | 19 | 34 | 138 | 151 | 504 | 45 | 20 | 30 | 25 |
| 27 | 26 | 20 | 21 | 21 | 45 | 165 | 138 | 458 | 43 | 19 | 25 | 22 |
| 28 | 24 | 19 | 20 | 21 | 102 | 182 | 137 | 388 | 41 | 19 | 20 | 212 |
| 29 | 22 | 19 | 19 | 20 | --- | 165 | 140 | 331 | 39 | 18 | 19 | 190 |
| 30 | 22 | 19 | 18 | 22 | --- | 140 | 145 | 290 | 37 | 19 | 19 | 76 |
| 31 | 23 | --- | 18 | 23 | --- | 132 | --- | 265 | --- | 18 | 19 | --- |
| TOTAL | 712 | 685 | 602 | 780 | 729 | 3769 | 5790 | 12806 | 2976 | 821 | 554 | 952 |
| MEAN | 23.0 | 22.8 | 19.4 | 25.2 | 26.0 | 122 | 193 | 413 | 99.2 | 26.5 | 17.9 | 31.7 |
| MAX | 40 | 39 | 27 | 37 | 102 | 187 | 366 | 619 | 258 | 47 | 36 | 212 |
| MIN | 20 | 19 | 15 | 16 | 19 | 67 | 128 | 174 | 37 | 18 | 14 | 12 |
| CFSM | .15 | .15 | .13 | .17 | .17 | .80 | 1.27 | 2.72 | .65 | .17 | .12 | .21 |
| IN. | .17 | .17 | .15 | .19 | .18 | .92 | 1.42 | 3.13 | .73 | .20 | .14 | .23 |
| AC-FT | 1410 | 1360 | 1190 | 1550 | 1450 | 7480 | 11480 | 25400 | 5900 | 1630 | 1100 | 1890 |
| CAL YR 1976 | TOTAL | 91293 | MEAN | 249 | MAX | 4000 | MIN 15 | CFSM 1.64 | IN 22.34 | AC-FT 181100 | | |
| WTR YR 1977 | TOTAL | 31176 | MEAN | 85.4 | MAX | 619 | MIN 12 | CFSM .56 | IN 7.63 | AC-FT 61840 | | |

UMPQUA RIVER BASIN

14308000 SOUTH UMPQUA RIVER AT TILLER, OR

LOCATION.--Lat 42°55'50", long 122°56'50", in NE¼ sec.33, T.30 S., R.2 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.3 mi (0.5 km) upstream from bridge on State Highway 227 at Tiller, 0.3 mi (0.5 km) upstream from Elk Creek, and at mile 187.31 (301.38 km).

DRAINAGE AREA.--449 mi² (1,163 km²).

PERIOD OF RECORD.--October 1910 to December 1911, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to December 1911, published as South Fork of Umpqua River at Tiller.

REVISED RECORDS.--WSP 1448: 1911(M), 1912, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 991.8 ft (302.30 m) above mean sea level (river-profile survey). Prior to Oct. 1, 1939, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records good. No regulation. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--39 years, 1,042 ft³/s (29.51 m³/s), 31.52 in/yr (801 mm/yr), 754,900 acre-ft/yr (931 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,200 ft³/s (1,700 m³/s) Dec. 22, 1964, gage height, 25.72 ft (7.839 m); minimum observed, 20 ft³/s (0.57 m³/s) Sept. 3, 4, 1911.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,850 ft³/s (52.4 m³/s) May 17, gage height, 4.15 ft (1.265 m), no peak above base of 7,000 ft³/s (198 m³/s); minimum, 36 ft³/s (1.02 m³/s) Aug. 19-21, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|-----------|--------|-----------|----------|--------------|-------|------|------|------|
| 1 | 66 | 91 | 66 | 64 | 73 | 524 | 757 | 421 | 685 | 112 | 54 | 64 |
| 2 | 66 | 106 | 64 | 90 | 66 | 400 | 868 | 757 | 638 | 126 | 53 | 56 |
| 3 | 71 | 95 | 64 | 105 | 61 | 496 | 696 | 797 | 567 | 121 | 51 | 51 |
| 4 | 71 | 84 | 64 | 95 | 62 | 478 | 751 | 1110 | 524 | 110 | 50 | 48 |
| 5 | 67 | 78 | 62 | 85 | 64 | 396 | 961 | 1470 | 501 | 106 | 48 | 47 |
| 6 | 66 | 74 | 62 | 75 | 66 | 464 | 974 | 1330 | 487 | 102 | 47 | 46 |
| 7 | 64 | 73 | 62 | 68 | 64 | 438 | 1040 | 1090 | 464 | 102 | 46 | 44 |
| 8 | 62 | 71 | 67 | 68 | 62 | 763 | 1250 | 905 | 421 | 98 | 44 | 43 |
| 9 | 61 | 69 | 98 | 71 | 62 | 929 | 1050 | 838 | 380 | 93 | 50 | 43 |
| 10 | 59 | 67 | 86 | 84 | 61 | 763 | 774 | 1050 | 345 | 91 | 54 | 41 |
| 11 | 59 | 67 | 76 | 104 | 61 | 607 | 643 | 1260 | 337 | 89 | 48 | 40 |
| 12 | 59 | 67 | 76 | 135 | 61 | 602 | 597 | 1110 | 304 | 88 | 44 | 40 |
| 13 | 59 | 67 | 74 | 138 | 61 | 562 | 659 | 923 | 272 | 86 | 41 | 40 |
| 14 | 54 | 74 | 69 | 131 | 61 | 438 | 617 | 809 | 252 | 84 | 40 | 39 |
| 15 | 56 | 124 | 67 | 117 | 61 | 356 | 553 | 751 | 233 | 82 | 40 | 38 |
| 16 | 56 | 191 | 66 | 104 | 59 | 307 | 572 | 980 | 217 | 80 | 39 | 39 |
| 17 | 61 | 124 | 66 | 98 | 59 | 283 | 529 | 1720 | 202 | 78 | 38 | 41 |
| 18 | 61 | 104 | 64 | 98 | 58 | 272 | 469 | 1550 | 197 | 74 | 38 | 44 |
| 19 | 61 | 93 | 53 | 102 | 58 | 380 | 417 | 1250 | 185 | 73 | 38 | 53 |
| 20 | 59 | 88 | 58 | 100 | 56 | 553 | 392 | 1110 | 177 | 73 | 36 | 76 |
| 21 | 59 | 84 | 64 | 98 | 66 | 478 | 384 | 1010 | 177 | 74 | 36 | 84 |
| 22 | 59 | 80 | 66 | 93 | 106 | 524 | 388 | 955 | 166 | 73 | 38 | 62 |
| 23 | 59 | 76 | 66 | 89 | 119 | 712 | 392 | 1270 | 155 | 69 | 38 | 54 |
| 24 | 62 | 74 | 58 | 84 | 119 | 707 | 409 | 1520 | 148 | 67 | 48 | 163 |
| 25 | 106 | 74 | 62 | 74 | 112 | 691 | 451 | 1280 | 140 | 66 | 126 | 140 |
| 26 | 163 | 73 | 68 | 62 | 138 | 557 | 447 | 1320 | 135 | 62 | 100 | 126 |
| 27 | 104 | 71 | 72 | 68 | 230 | 659 | 396 | 1330 | 128 | 61 | 98 | 100 |
| 28 | 84 | 67 | 66 | 68 | 538 | 780 | 380 | 1130 | 121 | 59 | 74 | 524 |
| 29 | 78 | 67 | 62 | 68 | --- | 680 | 384 | 948 | 117 | 58 | 73 | 874 |
| 30 | 76 | 69 | 60 | 70 | --- | 582 | 392 | 814 | 115 | 56 | 69 | 315 |
| 31 | 78 | --- | 58 | 74 | --- | 524 | --- | 723 | --- | 54 | 78 | --- |
| TOTAL | 2166 | 2542 | 2066 | 2780 | 2664 | 16905 | 18592 | 33531 | 8790 | 2567 | 1677 | 3375 |
| MEAN | 69.9 | 84.7 | 66.6 | 89.7 | 95.1 | 545 | 620 | 1082 | 293 | 82.8 | 54.1 | 113 |
| MAX | 163 | 191 | 98 | 138 | 538 | 929 | 1250 | 1720 | 685 | 126 | 126 | 874 |
| MIN | 54 | 67 | 53 | 62 | 56 | 272 | 380 | 421 | 115 | 54 | 36 | 38 |
| CFSM | .16 | .19 | .15 | .20 | .21 | 1.21 | 1.38 | 2.41 | .65 | .18 | .12 | .25 |
| IN. | .18 | .21 | .17 | .23 | .22 | 1.40 | 1.54 | 2.78 | .73 | .21 | .14 | .28 |
| AC-FT | 4300 | 5040 | 4100 | 5510 | 5280 | 33530 | 36880 | 66510 | 17430 | 5090 | 3330 | 6690 |
| CAL YR 1976 | TOTAL | 304113 | MEAN 831 | MAX 16000 | MIN 53 | CFSM 1.85 | IN 25.20 | AC-FT 603200 | | | | |
| WTR YR 1977 | TOTAL | 97655 | MEAN 268 | MAX 1720 | MIN 36 | CFSM .60 | IN 8.09 | AC-FT 193700 | | | | |

UMPQUA RIVER BASIN

427

14308500 ELK CREEK NEAR DREW, OR

LOCATION.--Lat 42°53'25", long 122°55'00", in SW¼ sec.11, T.31 S., R.2 W., Douglas County, Hydrologic Unit 17100302, on right bank 100 ft (30 m) downstream from Dixon Creek, 0.1 mi (0.2 km) upstream from Drew Creek, 1.3 mi (2.1 km) northwest of Drew, 3.3 mi (5.3 km) southeast of Tiller, and at mile 4.1 (6.6 km).

DRAINAGE AREA.--54.4 mi² (140.9 km²).

PERIOD OF RECORD.--September 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,279.25 ft (389.915 m) above mean sea level.

REMARKS.--Records good. No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--23 years, 86.0 ft³/s (2.436 m³/s), 62,310 acre-ft/yr (76.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s (251 m³/s) Dec. 22, 1964, gage height, 10.61 ft (3.234 m), from rating curve extended above 2,900 ft³/s (82.1 m³/s) on basis of slope-area measurement at gage height 10.34 ft (3.152 m); maximum gage height, 10.80 ft (3.292 m) Jan. 15, 1974; no flow at times in September 1974, and Aug. 16-22, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 11.8 ft (3.60 m), from floodmarks, probably for flood in January or November 1953, discharge, about 11,000 ft³/s (312 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 180 ft³/s (5.10 m³/s) May 23, gage height, 3.84 ft (1.170 m), no peak above base of 1,000 ft³/s (28.3 m³/s); no flow Aug. 16-22.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|------|-------|-------|------|------|------|-------|-------|-------|-------|
| 1 | 2.4 | 3.7 | 2.4 | 3.1 | 2.7 | 25 | 89 | 17 | 35 | 3.3 | .37 | .71 |
| 2 | 2.4 | 4.3 | 2.4 | 4.7 | 3.1 | 24 | 85 | 44 | 29 | 14 | .32 | .71 |
| 3 | 3.1 | 4.0 | 2.4 | 7.0 | 3.1 | 43 | 64 | 54 | 25 | 7.4 | .22 | .55 |
| 4 | 3.1 | 3.7 | 2.4 | 6.0 | 2.7 | 34 | 60 | 89 | 23 | 6.0 | .18 | .48 |
| 5 | 2.7 | 3.3 | 2.4 | 6.5 | 2.7 | 25 | 64 | 159 | 20 | 4.7 | .12 | .48 |
| 6 | 2.7 | 3.3 | 2.4 | 4.7 | 2.7 | 26 | 63 | 122 | 17 | 4.3 | .10 | .42 |
| 7 | 2.4 | 3.1 | 2.4 | 3.3 | 2.7 | 26 | 59 | 92 | 16 | 3.7 | .07 | .42 |
| 8 | 2.4 | 3.1 | 3.3 | 3.3 | 2.7 | 59 | 66 | 70 | 14 | 3.3 | .07 | .32 |
| 9 | 2.1 | 3.1 | 6.5 | 3.3 | 2.7 | 82 | 61 | 57 | 14 | 3.1 | .18 | .32 |
| 10 | 1.9 | 2.7 | 4.7 | 3.3 | 2.7 | 67 | 49 | 52 | 13 | 3.3 | .27 | .32 |
| 11 | 2.1 | 2.7 | 4.0 | 3.3 | 2.7 | 53 | 41 | 75 | 13 | 3.1 | .18 | .27 |
| 12 | 2.1 | 2.7 | 3.7 | 6.0 | 2.7 | 49 | 37 | 69 | 12 | 3.1 | .12 | .27 |
| 13 | 1.9 | 2.7 | 3.7 | 6.5 | 2.7 | 41 | 36 | 56 | 11 | 3.1 | .10 | .32 |
| 14 | 1.9 | 3.7 | 3.3 | 7.4 | 2.7 | 33 | 34 | 47 | 9.4 | 2.7 | .07 | .37 |
| 15 | 1.6 | 5.1 | 3.3 | 7.0 | 2.7 | 27 | 29 | 41 | 8.9 | 2.4 | .07 | .42 |
| 16 | 1.6 | 5.6 | 3.1 | 6.5 | 2.7 | 23 | 27 | 51 | 7.9 | 2.4 | .00 | .48 |
| 17 | 1.6 | 4.7 | 3.1 | 5.6 | 2.7 | 21 | 24 | 122 | 7.9 | 1.9 | .00 | .63 |
| 18 | 1.6 | 4.0 | 2.7 | 5.1 | 2.7 | 20 | 22 | 101 | 7.9 | 1.4 | .00 | .63 |
| 19 | 1.9 | 3.7 | 2.7 | 5.1 | 2.7 | 23 | 20 | 77 | 7.4 | 1.9 | .00 | .95 |
| 20 | 1.9 | 3.3 | 2.8 | 5.6 | 2.7 | 30 | 18 | 59 | 6.5 | 1.6 | .00 | 1.9 |
| 21 | 1.6 | 3.3 | 2.4 | 5.6 | 4.3 | 30 | 17 | 49 | 6.0 | 1.4 | .00 | 1.6 |
| 22 | 1.9 | 3.1 | 2.7 | 5.6 | 8.4 | 33 | 16 | 49 | 5.6 | .95 | .00 | 1.4 |
| 23 | 1.9 | 3.1 | 2.7 | 5.1 | 8.9 | 51 | 14 | 133 | 5.1 | .82 | .07 | 1.1 |
| 24 | 2.1 | 2.7 | 3.1 | 4.7 | 12 | 70 | 14 | 154 | 4.7 | .82 | .42 | 2.1 |
| 25 | 3.3 | 2.7 | 3.1 | 4.3 | 10 | 60 | 13 | 103 | 4.0 | .82 | 2.7 | 2.1 |
| 26 | 4.0 | 2.7 | 3.3 | 5.1 | 10 | 48 | 13 | 101 | 4.0 | .82 | 2.7 | 1.4 |
| 27 | 3.3 | 2.7 | 3.3 | 4.3 | 12 | 51 | 12 | 92 | 3.3 | .82 | 2.1 | 1.4 |
| 28 | 3.1 | 2.4 | 3.1 | 4.0 | 21 | 57 | 11 | 73 | 3.1 | .63 | 1.6 | 27 |
| 29 | 3.1 | 2.4 | 3.3 | 4.0 | --- | 56 | 12 | 59 | 2.7 | .63 | 1.4 | 33 |
| 30 | 3.1 | 2.7 | 3.1 | 4.0 | --- | 51 | 13 | 48 | 2.7 | .55 | 1.1 | 12 |
| 31 | 3.3 | --- | 2.7 | 3.1 | --- | 47 | --- | 41 | --- | .42 | .95 | --- |
| TOTAL | 74.1 | 100.3 | 96.5 | 153.1 | 141.4 | 1285 | 1083 | 2356 | 339.1 | 85.38 | 15.48 | 94.07 |
| MEAN | 2.39 | 3.34 | 3.11 | 4.94 | 5.05 | 41.5 | 36.1 | 76.0 | 11.3 | 2.75 | .50 | 3.14 |
| MAX | 4.0 | 5.6 | 6.5 | 7.4 | 21 | 82 | 89 | 159 | 35 | 14 | 2.7 | 33 |
| MIN | 1.6 | 2.4 | 2.4 | 3.1 | 2.7 | 20 | 11 | 17 | 2.7 | .42 | .00 | .27 |
| AC-FT | 147 | 199 | 191 | 304 | 280 | 2550 | 2150 | 4670 | 673 | 169 | 31 | 187 |
| CAL YR 1976 | TOTAL | 19017.79 | MEAN | 52.0 | MAX | 964 | MIN | .82 | AC-FT | 37720 | | |
| WTR YR 1977 | TOTAL | 5823.43 | MEAN | 16.0 | MAX | 159 | MIN | .00 | AC-FT | 11550 | | |

UMPQUA RIVER BASIN

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR

LOCATION.--Lat 42°58'05", long 123°09'60", in NW¼ sec.15, T.30 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.3 mi (0.5 km) upstream from Days Creek, 0.4 mi (0.6 km) southeast of community of Days Creek, and at mile 170.2 (273.9 km).

DRAINAGE AREA.--641 mi² (1,660 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 738.55 ft (225.110 m) above sea level.

REMARKS.--Water-discharge records good. No regulation. Many small diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft³/s (753 m³/s) Jan. 8, 1976, gage height, 17.72 ft (5.401 m); minimum, 31 ft³/s (0.88 m³/s) Sept. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,290 ft³/s (64.9 m³/s) May 17, gage height, 6.14 ft (1.871 m), no peak above base of 12,000 ft³/s (340 m³/s); minimum, 31 ft³/s (0.88 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|------|-------|--------|-----------|----------|-------|--------|------|------|
| 1 | 78 | 93 | 72 | 70 | 104 | 706 | 853 | 462 | 793 | 117 | 52 | 81 |
| 2 | 78 | 115 | 71 | 82 | 99 | 521 | 1130 | 846 | 730 | 130 | 50 | 62 |
| 3 | 79 | 115 | 70 | 156 | 91 | 688 | 900 | 914 | 636 | 145 | 47 | 55 |
| 4 | 84 | 99 | 69 | 168 | 87 | 670 | 880 | 1320 | 586 | 126 | 46 | 49 |
| 5 | 80 | 90 | 68 | 147 | 87 | 516 | 1110 | 1820 | 545 | 120 | 43 | 45 |
| 6 | 78 | 84 | 68 | 129 | 89 | 545 | 1130 | 1760 | 526 | 118 | 44 | 44 |
| 7 | 76 | 80 | 68 | 79 | 92 | 536 | 1180 | 1400 | 498 | 114 | 43 | 42 |
| 8 | 73 | 77 | 75 | 81 | 89 | 813 | 1390 | 1160 | 457 | 110 | 45 | 39 |
| 9 | 70 | 75 | 120 | 78 | 89 | 1140 | 1270 | 1030 | 411 | 105 | 53 | 37 |
| 10 | 68 | 72 | 120 | 98 | 89 | 1090 | 962 | 1170 | 371 | 103 | 52 | 36 |
| 11 | 66 | 71 | 97 | 134 | 88 | 826 | 780 | 1470 | 360 | 101 | 47 | 35 |
| 12 | 65 | 71 | 89 | 164 | 87 | 755 | 700 | 1350 | 329 | 98 | 44 | 34 |
| 13 | 65 | 70 | 89 | 188 | 87 | 749 | 742 | 1130 | 301 | 94 | 42 | 34 |
| 14 | 63 | 73 | 84 | 177 | 88 | 581 | 742 | 969 | 274 | 92 | 40 | 32 |
| 15 | 61 | 103 | 79 | 164 | 88 | 475 | 647 | 887 | 251 | 89 | 39 | 31 |
| 16 | 59 | 212 | 76 | 145 | 87 | 403 | 641 | 1090 | 234 | 88 | 37 | 32 |
| 17 | 59 | 164 | 76 | 134 | 86 | 360 | 619 | 2030 | 220 | 85 | 35 | 34 |
| 18 | 59 | 127 | 73 | 127 | 85 | 349 | 545 | 1920 | 213 | 80 | 34 | 39 |
| 19 | 59 | 109 | 65 | 134 | 82 | 423 | 489 | 1530 | 202 | 79 | 34 | 48 |
| 20 | 58 | 101 | 44 | 134 | 81 | 653 | 453 | 1330 | 192 | 81 | 34 | 61 |
| 21 | 58 | 94 | 62 | 132 | 95 | 592 | 440 | 1210 | 190 | 78 | 34 | 94 |
| 22 | 57 | 90 | 77 | 127 | 140 | 597 | 440 | 1100 | 185 | 74 | 34 | 79 |
| 23 | 59 | 87 | 76 | 121 | 173 | 813 | 440 | 1490 | 172 | 70 | 34 | 60 |
| 24 | 61 | 84 | 72 | 115 | 179 | 900 | 449 | 1900 | 163 | 66 | 47 | 86 |
| 25 | 83 | 83 | 69 | 108 | 173 | 880 | 484 | 1600 | 156 | 62 | 108 | 196 |
| 26 | 174 | 80 | 71 | 93 | 177 | 718 | 507 | 1570 | 149 | 60 | 127 | 134 |
| 27 | 143 | 78 | 85 | 79 | 249 | 712 | 449 | 1610 | 142 | 61 | 112 | 135 |
| 28 | 101 | 75 | 95 | 93 | 489 | 977 | 423 | 1380 | 132 | 57 | 100 | 254 |
| 29 | 89 | 70 | 88 | 92 | --- | 887 | 432 | 1160 | 124 | 54 | 81 | 1200 |
| 30 | 85 | 73 | 80 | 89 | --- | 768 | 440 | 984 | 117 | 54 | 82 | 427 |
| 31 | 84 | --- | 76 | 106 | --- | 664 | --- | 853 | --- | 54 | 77 | --- |
| TOTAL | 2372 | 2815 | 2424 | 3744 | 3450 | 21307 | 21667 | 40445 | 9659 | 2765 | 1697 | 3535 |
| MEAN | 76.5 | 93.8 | 78.2 | 121 | 123 | 687 | 722 | 1305 | 322 | 89.2 | 54.7 | 118 |
| MAX | 174 | 212 | 120 | 188 | 489 | 1140 | 1390 | 2030 | 793 | 145 | 127 | 1200 |
| MIN | 57 | 70 | 44 | 70 | 81 | 349 | 423 | 462 | 117 | 54 | 34 | 31 |
| CFSM | .12 | .15 | .12 | .19 | .19 | 1.07 | 1.13 | 2.04 | .50 | .14 | .09 | .18 |
| IN. | .14 | .16 | .14 | .22 | .20 | 1.24 | 1.26 | 2.35 | .56 | .16 | .10 | .21 |
| AC-FT | 4700 | 5580 | 4810 | 7430 | 6840 | 42260 | 42980 | 80220 | 19160 | 5480 | 3370 | 7010 |
| CAL YR 1976 | TOTAL | 357480 | MEAN 977 | MAX | 17300 | MIN 44 | CFSM 1.52 | IN 20.75 | AC-FT | 709100 | | |
| WTR YR 1977 | TOTAL | 115880 | MEAN 317 | MAX | 2030 | MIN 31 | CFSM .50 | IN 6.73 | AC-FT | 229800 | | |

UMPQUA RIVER BASIN

429

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1970 to current year.

TURBIDITY: November 1972 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.5°C Aug. 6-9, 1972; minimum, 0.0°C Dec. 8, 10-14, 17, 18, 1972, Feb. 5-8, Dec. 21, 22, 1976, Jan. 7-12, 27-30, 1977.

TURBIDITY: Maximum, 900 JTU Jan. 16, 1974; minimum, 0 JTU on many days during 1973, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 27.5°C Aug. 3; minimum, 0.0°C Dec. 21, 22, Jan. 7-12, 27-30.

TURBIDITY: Maximum, 50 JTU Mar. 11; minimum, 1 JTU on many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED IRON (FE) (UG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) | DIS- SOLVED SODIUM (NA) (MG/L) | DIS- SOLVED PO- TAS- SIUM (K) (MG/L) | BICAR- BONATE (HC03) (MG/L) |
|-------|------|--|-----------------------------|--|--|--|--|---|--|--|--------------------------------------|
| OCT | | | | | | | | | | | |
| 13... | 0930 | 64 | 13.5 | 143 | 11 | 30 | 15 | 4.2 | 7.9 | .9 | 55 |
| NOV | | | | | | | | | | | |
| 17... | 1545 | 158 | 12.5 | 148 | 12 | 20 | 14 | 3.7 | 7.4 | .8 | 57 |
| JAN | | | | | | | | | | | |
| 13... | 1500 | 183 | 2.0 | 149 | 16 | 30 | 15 | 4.0 | 8.0 | .6 | 56 |
| FEB | | | | | | | | | | | |
| 14... | 1145 | 91 | 8.5 | 159 | 15 | 30 | 15 | 4.0 | 8.2 | .7 | 56 |
| APR | | | | | | | | | | | |
| 06... | 0900 | 1200 | 8.5 | 69 | 14 | 110 | 6.9 | 1.7 | 3.4 | .5 | 31 |
| MAY | | | | | | | | | | | |
| 17... | 1010 | 2220 | 8.0 | 72 | 15 | 200 | 7.9 | 2.0 | 3.8 | .5 | 36 |
| JUN | | | | | | | | | | | |
| 29... | 0900 | 127 | 21.0 | 108 | 13 | 40 | 13 | 2.9 | 6.1 | .9 | 48 |
| AUG | | | | | | | | | | | |
| 04... | 1000 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | 1100 | 40 | 24.5 | 160 | 15 | 30 | 16 | 3.4 | 8.4 | 1.1 | 56 |
| SEP | | | | | | | | | | | |
| 26... | 1230 | 95 | 16.0 | -- | 14 | 30 | 16 | 3.4 | 7.4 | .8 | 49 |

| DATE | DIS- SOLVED SULFATE (S04) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA, MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) |
|-------|--|---|--|---|---|-------------------------------------|---|---|--|--|--|
| OCT | | | | | | | | | | | |
| 13... | 9.3 | 12 | .1 | .12 | .03 | 55 | 10 | .5 | 88 | 15.2 | .12 |
| NOV | | | | | | | | | | | |
| 17... | 9.3 | 9.6 | .0 | .10 | .02 | 50 | 3 | .5 | 85 | 36.3 | .12 |
| JAN | | | | | | | | | | | |
| 13... | 10 | 12 | .1 | .18 | .02 | 54 | 8 | .5 | 94 | 46.4 | .13 |
| FEB | | | | | | | | | | | |
| 14... | 10 | 13 | .0 | .00 | -- | 54 | 8 | .5 | 94 | 23.1 | .13 |
| APR | | | | | | | | | | | |
| 06... | 8.4 | 2.3 | .1 | .03 | .03 | 24 | 0 | .3 | 53 | 172 | .07 |
| MAY | | | | | | | | | | | |
| 17... | 3.6 | 2.0 | .3 | .03 | .07 | 28 | 0 | .3 | 53 | 318 | .07 |
| JUN | | | | | | | | | | | |
| 29... | 5.8 | 5.0 | .0 | -- | .01 | 44 | 5 | .4 | 70 | 24.0 | .10 |
| AUG | | | | | | | | | | | |
| 04... | -- | -- | -- | .01 | .02 | -- | -- | -- | -- | -- | -- |
| 15... | 13 | 13 | .1 | -- | .03 | 54 | 8 | .5 | 98 | 10.6 | .13 |
| SEP | | | | | | | | | | | |
| 26... | 8.1 | 9.9 | .1 | -- | .03 | 54 | 14 | .4 | 84 | 21.5 | .11 |

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | --- | --- | 12.5 | 11.0 | 3.0 | 2.0 | 3.5 | 2.5 | 4.0 | 2.0 | 6.5 | 5.0 |
| 2 | --- | --- | 13.0 | 11.5 | 3.0 | 2.0 | 3.5 | 2.5 | 4.0 | 1.5 | 5.5 | 4.5 |
| 3 | --- | --- | 14.5 | 12.0 | 3.0 | 1.5 | 3.0 | 2.5 | 3.5 | 1.0 | 5.5 | 4.5 |
| 4 | --- | --- | 14.0 | 11.5 | 2.5 | 2.0 | 3.5 | 2.5 | 3.5 | 1.5 | 6.5 | 4.5 |
| 5 | --- | --- | 13.0 | 11.0 | 2.5 | 1.5 | 3.5 | 2.0 | 3.0 | 2.0 | 8.0 | 4.5 |
| 6 | --- | --- | 12.0 | 11.0 | 3.0 | 2.0 | 2.0 | 0.5 | 4.5 | 2.5 | 6.5 | 5.0 |
| 7 | --- | --- | 11.5 | 10.0 | 3.0 | 2.5 | 1.0 | 0.0 | 4.5 | 2.5 | 6.5 | 5.0 |
| 8 | 17.0 | 14.5 | 11.5 | 10.0 | 4.0 | 3.0 | 0.5 | 0.0 | 5.5 | 3.5 | 6.5 | 5.5 |
| 9 | 16.5 | 14.5 | 11.0 | 9.0 | 4.0 | 3.0 | 0.0 | 0.0 | 6.0 | 4.0 | 6.0 | 5.5 |
| 10 | 16.5 | 14.0 | 10.5 | 9.5 | 4.5 | 3.5 | 1.5 | 0.0 | 7.5 | 5.0 | 6.0 | 4.5 |
| 11 | 17.5 | 15.0 | 10.0 | 9.0 | 4.5 | 3.5 | 1.0 | 0.0 | 7.5 | 5.0 | 6.0 | 4.5 |
| 12 | 17.0 | 14.0 | 11.0 | 9.5 | 4.5 | 3.5 | 2.0 | 0.0 | 8.0 | 5.5 | 6.5 | 5.5 |
| 13 | 16.5 | 13.5 | 10.5 | 9.0 | 4.5 | 3.5 | 2.0 | 1.0 | 9.0 | 6.5 | 6.5 | 5.0 |
| 14 | 16.0 | 13.0 | 10.0 | 9.0 | 4.5 | 3.5 | 2.5 | 0.5 | 9.5 | 7.0 | 6.0 | 4.0 |
| 15 | 15.0 | 12.5 | 11.0 | 10.0 | 4.5 | 3.0 | 2.5 | 0.0 | 9.0 | 6.5 | 6.0 | 4.5 |
| 16 | 14.5 | 12.0 | 12.5 | 10.0 | 4.0 | 3.0 | 3.0 | 0.5 | 8.5 | 6.5 | 7.0 | 4.0 |
| 17 | 13.5 | 11.0 | 12.0 | 11.0 | 3.5 | 2.5 | 3.0 | 1.0 | 9.0 | 6.5 | 6.0 | 5.0 |
| 18 | 13.0 | 10.5 | 12.5 | 11.5 | 3.5 | 2.5 | 3.0 | 1.0 | 8.5 | 6.0 | 6.5 | 5.0 |
| 19 | 12.5 | 10.0 | 12.0 | 11.0 | 2.5 | 1.0 | 3.0 | 1.0 | 8.5 | 5.5 | 7.5 | 6.0 |
| 20 | 12.0 | 10.0 | 11.0 | 9.5 | 1.5 | 0.5 | 3.0 | 1.0 | 8.0 | 6.5 | 9.0 | 6.5 |
| 21 | 12.0 | 9.5 | 10.0 | 9.0 | 1.0 | 0.0 | 3.0 | 1.5 | 7.5 | 6.0 | 9.5 | 6.5 |
| 22 | 11.5 | 10.0 | 9.5 | 8.5 | 1.5 | 0.0 | 4.0 | 2.5 | 8.0 | 5.5 | 9.5 | 6.5 |
| 23 | 11.5 | 10.0 | 10.0 | 9.0 | 2.0 | 1.0 | 4.0 | 2.5 | 7.0 | 5.5 | 8.0 | 7.0 |
| 24 | 11.5 | 9.5 | 9.0 | 8.0 | 1.5 | 0.5 | 4.0 | 2.5 | 7.0 | 5.0 | 7.5 | 6.5 |
| 25 | 11.0 | 9.5 | 8.5 | 8.0 | 2.0 | 1.0 | 3.0 | 2.0 | 6.5 | 5.5 | 7.5 | 6.0 |
| 26 | 12.0 | 9.0 | 8.0 | 6.5 | 2.5 | 1.0 | 2.5 | 1.0 | 7.5 | 5.5 | 8.5 | 6.5 |
| 27 | 11.5 | 8.5 | 6.5 | 5.0 | 3.5 | 2.0 | 2.0 | 0.0 | 7.5 | 6.0 | 7.5 | 6.5 |
| 28 | 11.0 | 8.0 | 5.0 | 3.0 | 3.0 | 2.5 | 2.0 | 0.0 | 8.0 | 6.5 | 7.0 | 5.5 |
| 29 | 10.5 | 9.5 | 4.0 | 2.5 | 3.0 | 2.5 | 2.0 | 0.0 | --- | --- | 6.5 | 5.0 |
| 30 | 12.0 | 10.0 | 3.5 | 2.0 | 3.5 | 2.5 | 2.0 | 0.0 | --- | --- | 7.5 | 5.0 |
| 31 | 12.0 | 10.5 | --- | --- | 3.5 | 2.5 | 3.0 | 1.0 | --- | --- | 6.5 | 5.5 |
| MONTH | 17.5 | 8.0 | 14.5 | 2.0 | 4.5 | 0.0 | 4.0 | 0.0 | 9.5 | 1.0 | 9.5 | 4.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 7.5 | 6.0 | 13.5 | 12.0 | 16.0 | 14.0 | 25.0 | 21.0 | 26.5 | 22.5 | 23.0 | 18.5 |
| 2 | 8.5 | 6.0 | 12.5 | 11.0 | 16.0 | 13.0 | 24.0 | 19.5 | 27.0 | 23.5 | 23.0 | 19.0 |
| 3 | 9.5 | 6.5 | 12.0 | 10.5 | 14.5 | 13.0 | 22.0 | 18.5 | 27.5 | 23.0 | 24.0 | 20.5 |
| 4 | 10.5 | 7.5 | 10.5 | 8.5 | 16.5 | 13.0 | 22.0 | 18.0 | 27.0 | 23.5 | 24.0 | 21.0 |
| 5 | 10.5 | 8.0 | 8.5 | 7.5 | 20.5 | 15.5 | 21.5 | 17.0 | 26.5 | 23.5 | 22.5 | 20.5 |
| 6 | 8.5 | 8.0 | 9.0 | 6.5 | 22.0 | 18.0 | 23.5 | 16.5 | 27.0 | 23.5 | 23.0 | 19.5 |
| 7 | 11.0 | 8.5 | 9.5 | 8.0 | 21.0 | 19.0 | 24.5 | 18.0 | 26.0 | 24.0 | 22.5 | 19.5 |
| 8 | 10.0 | 8.5 | 10.5 | 8.0 | 20.0 | 17.5 | 25.0 | 18.5 | --- | --- | 21.5 | 19.0 |
| 9 | 9.0 | 7.5 | 12.5 | 10.0 | 19.5 | 16.0 | 23.5 | 19.0 | --- | --- | 21.0 | 18.5 |
| 10 | 9.0 | 6.5 | 10.5 | 9.0 | 18.5 | 16.5 | 24.5 | 19.0 | --- | --- | 21.0 | 18.0 |
| 11 | 10.5 | 7.5 | 9.5 | 8.0 | 19.5 | 16.0 | 25.5 | 19.5 | --- | --- | 21.0 | 18.5 |
| 12 | 11.5 | 8.5 | 10.5 | 8.5 | 19.5 | 16.5 | 23.5 | 20.5 | --- | --- | 21.5 | 18.0 |
| 13 | 11.5 | 9.5 | 11.5 | 9.5 | 21.0 | 16.5 | 24.0 | 18.5 | --- | --- | 21.5 | 18.5 |
| 14 | 11.5 | 8.5 | 12.5 | 10.5 | 22.5 | 18.0 | 25.0 | 19.0 | --- | --- | 21.5 | 18.0 |
| 15 | 11.5 | 8.5 | 11.5 | 10.0 | 22.5 | 18.5 | 26.0 | 20.0 | --- | --- | 18.0 | 16.5 |
| 16 | 11.5 | 9.5 | 10.0 | 8.5 | 23.5 | 18.5 | 26.5 | 21.0 | 27.0 | 25.0 | 17.5 | 16.0 |
| 17 | 11.5 | 9.0 | 9.0 | 7.5 | 21.5 | 19.5 | 26.5 | 21.5 | 27.0 | 24.5 | 17.0 | 16.0 |
| 18 | 11.0 | 7.5 | 9.0 | 7.5 | 22.5 | 18.5 | 24.5 | 22.0 | 26.0 | 23.5 | 17.5 | 16.0 |
| 19 | 11.5 | 7.5 | 11.5 | 8.0 | 21.5 | 19.0 | 25.5 | 21.0 | 25.5 | 23.0 | 17.5 | 16.0 |
| 20 | 11.5 | 8.0 | 13.5 | 10.5 | 19.5 | 17.5 | 26.5 | 21.0 | 23.5 | 22.5 | 18.0 | 15.5 |
| 21 | 12.5 | 9.5 | 14.0 | 12.0 | 23.5 | 17.5 | 26.5 | 21.0 | 23.0 | 21.5 | 18.0 | 15.5 |
| 22 | 13.0 | 10.0 | 12.5 | 10.0 | 25.0 | 20.0 | 27.0 | 21.5 | 24.0 | 21.0 | 18.5 | 14.5 |
| 23 | 13.0 | 10.5 | 10.5 | 9.0 | 25.5 | 20.0 | 27.0 | 22.0 | 24.0 | 21.5 | 17.5 | 15.5 |
| 24 | 13.0 | 10.5 | 11.5 | 9.5 | 26.0 | 20.0 | 27.0 | 22.5 | 23.0 | 20.5 | 17.5 | 14.5 |
| 25 | 11.5 | 10.5 | 10.5 | 9.5 | 23.5 | 21.0 | 25.0 | 21.5 | 21.0 | 19.0 | 17.0 | 15.0 |
| 26 | 13.5 | 9.5 | 11.0 | 9.5 | 25.5 | 19.5 | 26.0 | 22.0 | 21.5 | 18.5 | 16.0 | 15.0 |
| 27 | 15.0 | 10.5 | 10.5 | 9.5 | 25.5 | 20.0 | 26.0 | 21.5 | 21.0 | 18.5 | 16.0 | 15.0 |
| 28 | 13.5 | 11.5 | 12.0 | 9.0 | 26.5 | 20.0 | 25.5 | 21.0 | 22.0 | 18.5 | 15.5 | 14.5 |
| 29 | 14.0 | 11.5 | 13.5 | 10.5 | 26.0 | 21.0 | 25.5 | 21.5 | 23.5 | 19.5 | 14.5 | 13.0 |
| 30 | 15.0 | 12.0 | 14.0 | 11.5 | 24.5 | 20.5 | 26.0 | 21.5 | 23.5 | 20.5 | 15.0 | 12.5 |
| 31 | --- | --- | 16.0 | 12.5 | --- | --- | 27.0 | 22.0 | 22.5 | 19.0 | --- | --- |
| MONTH | 15.0 | 6.0 | 16.0 | 6.5 | 26.5 | 13.0 | 27.0 | 16.5 | 27.5 | 18.5 | 24.0 | 12.5 |

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 1 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 2 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 15 | 1 | 2 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 31 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 | 1 | 1 | 1 |
| MONTH | 1 | 1 | 1 | 3 | 1 | 1 | 15 | 1 | 1 | 3 | 1 | 1 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | |
| 1 | 1 | 1 | 1 | 15 | 15 | 15 | 10 | 5 | 7 | 5 | 1 | 1 |
| 2 | 1 | 1 | 1 | 15 | 15 | 15 | 15 | 9 | 10 | 7 | 1 | 4 |
| 3 | 1 | 1 | 1 | 35 | 15 | 25 | 20 | 7 | 9 | 8 | 6 | 7 |
| 4 | 1 | 1 | 1 | 25 | 20 | 20 | 7 | 6 | 7 | 10 | 8 | 10 |
| 5 | 1 | 1 | 1 | 20 | 15 | 15 | 6 | 5 | 6 | 25 | 10 | 20 |
| 6 | 1 | 1 | 1 | 15 | 10 | 10 | 7 | 5 | 5 | 20 | 15 | 15 |
| 7 | 1 | 1 | 1 | 10 | 8 | 9 | 6 | 5 | 5 | 15 | 10 | 10 |
| 8 | 1 | 1 | 1 | 15 | 8 | 10 | 8 | 5 | 6 | 10 | 8 | 9 |
| 9 | 1 | 1 | 1 | 20 | 15 | 15 | 8 | 5 | 6 | 8 | 5 | 7 |
| 10 | 1 | 1 | 1 | 25 | 15 | 20 | 5 | 4 | 4 | 6 | 5 | 5 |
| 11 | 1 | 1 | 1 | 50 | 15 | 15 | 6 | 3 | 3 | 8 | 5 | 7 |
| 12 | 1 | 1 | 1 | 15 | 10 | 10 | 6 | 2 | 3 | 8 | 6 | 7 |
| 13 | 1 | 1 | 1 | 10 | 9 | 10 | 5 | 2 | 3 | 6 | 5 | 5 |
| 14 | 1 | 1 | 1 | 15 | 8 | 9 | 5 | 2 | 3 | 5 | 4 | 4 |
| 15 | 10 | 1 | 2 | 8 | 7 | 8 | 5 | 1 | 2 | 4 | 3 | 3 |
| 16 | 5 | 1 | 1 | 7 | 6 | 7 | 5 | 1 | 1 | 5 | 3 | 3 |
| 17 | 4 | 1 | 1 | 6 | 5 | 6 | 3 | 1 | 1 | 20 | 6 | 15 |
| 18 | 2 | 1 | 1 | 5 | 4 | 5 | 3 | 1 | 1 | 15 | 10 | 10 |
| 19 | 1 | 1 | 1 | 5 | 4 | 4 | 3 | 1 | 1 | 10 | 6 | 8 |
| 20 | 1 | 1 | 1 | 15 | 5 | 8 | 1 | 1 | 1 | 6 | 4 | 5 |
| 21 | 1 | 1 | 1 | 7 | 6 | 6 | 1 | 1 | 1 | 5 | 3 | 4 |
| 22 | 1 | 1 | 1 | 6 | 5 | 5 | 1 | 1 | 1 | 3 | 2 | 3 |
| 23 | 1 | 1 | 1 | 6 | 5 | 5 | 2 | 1 | 1 | 9 | 3 | 4 |
| 24 | 1 | 1 | 1 | 35 | 6 | 9 | 1 | 1 | 1 | 10 | 9 | 10 |
| 25 | 1 | 1 | 1 | 15 | 9 | 10 | 1 | 1 | 1 | 9 | 6 | 7 |
| 26 | 1 | 1 | 1 | 9 | 8 | 8 | 1 | 1 | 1 | 7 | 5 | 5 |
| 27 | 7 | 1 | 2 | 8 | 6 | 7 | 1 | 1 | 1 | 7 | 5 | 6 |
| 28 | 15 | 2 | 7 | 8 | 7 | 7 | 1 | 1 | 1 | 6 | 4 | 5 |
| 29 | --- | --- | --- | 8 | 7 | 8 | 1 | 1 | 1 | 4 | 3 | 4 |
| 30 | --- | --- | --- | 9 | 7 | 8 | 1 | 1 | 1 | 3 | 3 | 3 |
| 31 | --- | --- | --- | 9 | 6 | 7 | --- | --- | --- | 5 | 2 | 3 |
| MONTH | 15 | 1 | 1 | 50 | 4 | 10 | 20 | 1 | 3 | 25 | 1 | 6 |

UMPQUA RIVER BASIN

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 4 | 2 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 4 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | --- | 1 | --- | 1 | 1 | 1 |
| 7 | 2 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 3 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 13 | 2 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 14 | 5 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 2 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | --- | 1 | 1 | 1 | 1 | 1 |
| 17 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | 6 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 1 | 1 |
| 19 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| 26 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 20 | 1 | 2 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 25 | 10 | 15 |
| 31 | --- | --- | --- | 1 | 1 | 1 | 1 | 1 | 1 | 10 | 5 | 7 |
| MONTH | 6 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 25 | 1 | 1 |

UMPQUA RIVER BASIN

433

14309000 COW CREEK NEAR AZALEA, OR

LOCATION.--Lat 42°49'30", long 123°10'40", in N½ sec.4, T.32 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.8 mi (1.3 km) upstream from Whitehorse Creek, 4.5 mi (7.2 km) northeast of Azalea, and at mile 58.2 (93.6 km).

DRAINAGE AREA.--78.0 mi² (202.0 km²).

PERIOD OF RECORD.--April 1926 to September 1928 (no winter records), April 1929 to December 1931, April 1932 to current year.

REVISED RECORDS.--WSP 984: 1933-36. WSP 1154: 1946(M), 1948(M). WSP 1448: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,694.32 ft (516.429 m) above mean sea level (Douglas County Road Department bench mark). Prior to July 19, 1949, nonrecording gage at same site and datum.

REMARKS.--Records fair. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--47 years (water years 1930-31, 1933-77), 111 ft³/s (3.144 m³/s), 19.33 in/yr (491 mm/yr), 80,420 acre-ft/yr (99.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) Jan. 15, 1974, gage height, 16.40 ft (4.999 m), from high-water mark in well; minimum recorded, 1.2 ft³/s (0.034 m³/s) Sept. 2, 1970, but may have been less during period of no gage-height record Sept. 4-30, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 152 ft³/s (4.30 m³/s) May 17, no peak above base of 1,300 ft³/s (36.8 m³/s); maximum gage height, 2.35 ft (0.716 m) Sept. 28; minimum discharge, 3.4 ft³/s (0.096 m³/s) Sept. 13.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-----------|---------|---------|----------|----------|-------------|------|-------|-------|-------|
| 1 | 16 | 16 | 14 | 14 | 13 | 51 | 46 | 26 | 41 | 11 | 5.0 | 6.6 |
| 2 | 17 | 19 | 13 | 20 | 12 | 46 | 49 | 66 | 37 | 27 | 5.0 | 6.9 |
| 3 | 17 | 16 | 14 | 22 | 12 | 67 | 45 | 70 | 35 | 17 | 5.0 | 7.8 |
| 4 | 16 | 15 | 14 | 20 | 12 | 58 | 46 | 74 | 32 | 13 | 5.0 | 7.2 |
| 5 | 15 | 15 | 13 | 20 | 12 | 46 | 53 | 82 | 30 | 12 | 5.0 | 7.2 |
| 6 | 15 | 14 | 15 | 13 | 12 | 41 | 56 | 89 | 29 | 12 | 5.0 | 7.2 |
| 7 | 14 | 14 | 15 | 16 | 13 | 40 | 55 | 73 | 27 | 10 | 5.0 | 7.5 |
| 8 | 13 | 13 | 18 | 18 | 13 | 71 | 59 | 62 | 26 | 10 | 4.8 | 6.6 |
| 9 | 12 | 13 | 25 | 16 | 13 | 87 | 56 | 52 | 26 | 9.4 | 4.8 | 6.4 |
| 10 | 13 | 14 | 20 | 17 | 12 | 76 | 46 | 48 | 24 | 9.8 | 4.8 | 5.8 |
| 11 | 13 | 13 | 17 | 19 | 12 | 60 | 41 | 59 | 24 | 9.4 | 4.8 | 5.1 |
| 12 | 12 | 14 | 16 | 22 | 12 | 57 | 39 | 54 | 22 | 9.1 | 4.9 | 4.6 |
| 13 | 12 | 14 | 16 | 20 | 12 | 51 | 39 | 47 | 21 | 9.1 | 5.8 | 4.4 |
| 14 | 11 | 17 | 15 | 19 | 12 | 44 | 38 | 44 | 20 | 8.8 | 5.6 | 4.4 |
| 15 | 12 | 20 | 15 | 17 | 13 | 38 | 33 | 43 | 19 | 8.4 | 6.1 | 4.9 |
| 16 | 12 | 19 | 15 | 16 | 13 | 33 | 32 | 64 | 18 | 7.8 | 6.1 | 6.1 |
| 17 | 13 | 17 | 14 | 16 | 13 | 32 | 30 | 133 | 17 | 7.2 | 5.8 | 7.5 |
| 18 | 13 | 16 | 12 | 15 | 13 | 32 | 29 | 94 | 18 | 6.9 | 5.3 | 7.8 |
| 19 | 13 | 16 | 11 | 15 | 13 | 35 | 27 | 74 | 17 | 7.8 | 5.8 | 10 |
| 20 | 11 | 15 | 15 | 15 | 14 | 39 | 26 | 62 | 16 | 7.8 | 5.8 | 12 |
| 21 | 10 | 15 | 16 | 15 | 24 | 38 | 25 | 52 | 17 | 7.5 | 6.6 | 9.1 |
| 22 | 11 | 15 | 17 | 14 | 35 | 37 | 24 | 49 | 16 | 6.6 | 6.9 | 7.8 |
| 23 | 12 | 15 | 15 | 14 | 28 | 48 | 23 | 92 | 14 | 6.4 | 6.9 | 7.8 |
| 24 | 13 | 15 | 14 | 13 | 31 | 64 | 22 | 128 | 14 | 6.1 | 18 | 9.8 |
| 25 | 19 | 15 | 14 | 12 | 27 | 57 | 22 | 94 | 12 | 5.6 | 20 | 10 |
| 26 | 17 | 15 | 14 | 12 | 27 | 49 | 23 | 90 | 12 | 5.6 | 12 | 8.8 |
| 27 | 14 | 14 | 17 | 12 | 28 | 46 | 22 | 83 | 12 | 6.1 | 11 | 8.8 |
| 28 | 14 | 13 | 15 | 13 | 45 | 52 | 21 | 70 | 11 | 5.8 | 9.1 | 59 |
| 29 | 14 | 14 | 15 | 13 | --- | 52 | 24 | 59 | 11 | 5.6 | 8.4 | 56 |
| 30 | 14 | 15 | 15 | 13 | --- | 47 | 24 | 52 | 10 | 5.6 | 8.1 | 20 |
| 31 | 14 | --- | 13 | 13 | --- | 44 | --- | 46 | --- | 5.3 | 7.5 | --- |
| TOTAL | 422 | 456 | 472 | 494 | 496 | 1538 | 1075 | 2131 | 628 | 279.7 | 219.9 | 333.1 |
| MEAN | 13.6 | 15.2 | 15.2 | 15.9 | 17.7 | 49.6 | 35.8 | 68.7 | 20.9 | 9.02 | 7.09 | 11.1 |
| MAX | 19 | 20 | 25 | 22 | 45 | 87 | 59 | 133 | 41 | 27 | 20 | 59 |
| MIN | 10 | 13 | 11 | 12 | 12 | 32 | 21 | 26 | 10 | 5.3 | 4.8 | 4.4 |
| CFSM | .17 | .20 | .20 | .20 | .23 | .64 | .46 | .88 | .27 | .12 | .09 | .14 |
| IN. | .20 | .22 | .23 | .24 | .24 | .73 | .51 | 1.02 | .30 | .13 | .10 | .16 |
| AC-FT | 837 | 904 | 936 | 980 | 984 | 3050 | 2130 | 4230 | 1250 | 555 | 436 | 661 |
| CAL YR 1976 | TOTAL | 25083.0 | MEAN 68.5 | MAX 836 | MIN 10 | CFSM .88 | IN 11.96 | AC-FT 49750 | | | | |
| WTR YR 1977 | TOTAL | 8544.7 | MEAN 23.4 | MAX 133 | MIN 4.4 | CFSM .30 | IN 4.08 | AC-FT 16950 | | | | |

UMPQUA RIVER BASIN

14309500 WEST FORK COW CREEK NEAR GLENDALE, OR

LOCATION.--Lat 42°48'15", long 123°36'35", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.32 S., R.8 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.6 mi (2.6 km) downstream from Bear Creek, 11 mi (18 km) northwest of Glendale, and at mile 0.8 (1.3 km).

DRAINAGE AREA.--86.9 mi² (225.1 km²).

PERIOD OF RECORD.--August 1955 to current year.

REVISED RECORDS.--WSP 1738: 1956, drainage area (former site). WSP 1935: 1956.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,000 ft (305 m), from topographic map. Prior to June 8, 1964, at site 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years, 277 ft³/s (7.845 m³/s), 43.29 in/yr (1,100 mm/yr), 200,700 acre-ft/yr (247 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s (445 m³/s) Dec. 22, 1964, gage height, 18.59 ft (5.666 m), from floodmark, from rating curve extended above 2,600 ft³/s (73.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 3.7 ft³/s (0.11 m³/s) Aug. 17, 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,370 ft³/s (38.8 m³/s) Mar. 7, gage height, 6.31 ft (1.923 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum, 3.7 ft³/s (0.11 m³/s) Aug. 17, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|-------|------|------|-------|-------|-------|-------|
| 1 | 7.9 | 13 | 11 | 12 | 14 | 387 | 193 | 35 | 62 | 16 | 6.4 | 8.3 |
| 2 | 7.9 | 25 | 11 | 18 | 14 | 314 | 196 | 39 | 57 | 16 | 6.4 | 7.5 |
| 3 | 7.5 | 14 | 11 | 33 | 13 | 591 | 167 | 101 | 54 | 16 | 6.4 | 7.1 |
| 4 | 7.9 | 16 | 11 | 36 | 13 | 392 | 154 | 137 | 52 | 16 | 6.1 | 6.8 |
| 5 | 7.9 | 14 | 10 | 33 | 13 | 261 | 149 | 139 | 48 | 16 | 5.8 | 6.8 |
| 6 | 7.9 | 13 | 11 | 27 | 13 | 221 | 137 | 184 | 43 | 16 | 5.4 | 7.1 |
| 7 | 7.9 | 13 | 10 | 21 | 13 | 752 | 123 | 152 | 40 | 15 | 5.4 | 7.1 |
| 8 | 7.9 | 12 | 13 | 20 | 14 | 942 | 119 | 139 | 37 | 14 | 5.8 | 6.1 |
| 9 | 7.5 | 11 | 31 | 22 | 15 | 1080 | 101 | 114 | 35 | 13 | 5.4 | 5.8 |
| 10 | 7.5 | 11 | 24 | 22 | 14 | 640 | 87 | 98 | 33 | 13 | 5.4 | 5.4 |
| 11 | 7.5 | 11 | 18 | 24 | 13 | 439 | 78 | 93 | 33 | 12 | 4.6 | 5.4 |
| 12 | 7.5 | 11 | 15 | 63 | 13 | 449 | 71 | 84 | 32 | 12 | 4.6 | 5.1 |
| 13 | 7.9 | 12 | 14 | 48 | 13 | 396 | 70 | 74 | 30 | 11 | 4.3 | 5.1 |
| 14 | 7.9 | 22 | 13 | 40 | 12 | 291 | 66 | 68 | 28 | 11 | 4.3 | 4.8 |
| 15 | 7.5 | 26 | 13 | 34 | 12 | 221 | 60 | 66 | 28 | 11 | 4.3 | 4.8 |
| 16 | 7.5 | 23 | 13 | 29 | 12 | 178 | 56 | 110 | 26 | 11 | 4.0 | 4.8 |
| 17 | 7.5 | 19 | 12 | 25 | 12 | 154 | 52 | 196 | 24 | 10 | 4.0 | 5.8 |
| 18 | 5.4 | 17 | 12 | 22 | 11 | 142 | 48 | 176 | 24 | 10 | 4.0 | 10 |
| 19 | 7.5 | 15 | 12 | 22 | 11 | 154 | 45 | 139 | 23 | 10 | 4.0 | 32 |
| 20 | 7.5 | 14 | 10 | 20 | 15 | 178 | 41 | 112 | 23 | 11 | 4.0 | 29 |
| 21 | 7.5 | 14 | 11 | 20 | 67 | 162 | 41 | 96 | 23 | 10 | 4.3 | 18 |
| 22 | 6.8 | 13 | 11 | 18 | 193 | 157 | 38 | 85 | 22 | 9.9 | 4.6 | 15 |
| 23 | 5.4 | 12 | 12 | 18 | 190 | 173 | 37 | 89 | 20 | 9.5 | 4.6 | 12 |
| 24 | 8.7 | 12 | 12 | 17 | 205 | 187 | 35 | 90 | 19 | 9.1 | 20 | 21 |
| 25 | 17 | 12 | 12 | 16 | 157 | 178 | 35 | 82 | 19 | 7.9 | 28 | 20 |
| 26 | 19 | 12 | 12 | 13 | 142 | 154 | 36 | 93 | 18 | 7.5 | 17 | 17 |
| 27 | 12 | 12 | 14 | 15 | 181 | 167 | 33 | 95 | 17 | 7.5 | 12 | 22 |
| 28 | 8.3 | 12 | 14 | 16 | 454 | 208 | 31 | 90 | 17 | 7.5 | 9.9 | 378 |
| 29 | 9.9 | 11 | 13 | 15 | --- | 230 | 31 | 84 | 16 | 7.1 | 9.5 | 230 |
| 30 | 15 | 11 | 13 | 17 | --- | 217 | 33 | 77 | 16 | 7.1 | 9.1 | 89 |
| 31 | 14 | --- | 13 | 15 | --- | 190 | --- | 68 | --- | 6.8 | 8.7 | --- |
| TOTAL | 275.1 | 433 | 412 | 751 | 1849 | 10205 | 2363 | 3205 | 919 | 349.9 | 228.3 | 996.8 |
| MEAN | 8.87 | 14.4 | 13.3 | 24.2 | 66.0 | 329 | 78.8 | 103 | 30.6 | 11.3 | 7.36 | 33.2 |
| MAX | 19 | 26 | 31 | 63 | 454 | 1080 | 196 | 196 | 62 | 16 | 28 | 378 |
| MIN | 5.4 | 11 | 10 | 12 | 11 | 142 | 31 | 35 | 16 | 6.8 | 4.0 | 4.8 |
| CFSM | .10 | .17 | .15 | .28 | .76 | 3.79 | .91 | 1.19 | .35 | .13 | .09 | .38 |
| IN. | .12 | .19 | .18 | .32 | .79 | 4.37 | 1.01 | 1.37 | .39 | .15 | .10 | .43 |
| AC-FT | 546 | 859 | 817 | 1490 | 3670 | 20240 | 4690 | 6360 | 1820 | 694 | 453 | 1980 |
| CAL YR 1976 | TOTAL | 49581.9 | MEAN | 135 | MAX | 2550 | MIN | 5.4 | CFSM | 1.55 | IN | 21.22 |
| WTR YR 1977 | TOTAL | 21987.1 | MEAN | 60.2 | MAX | 1080 | MIN | 4.0 | CFSM | .69 | IN | 9.41 |
| | | | | | | | | | AC-FT | 98350 | AC-FT | 43610 |

UMPQUA RIVER BASIN

435

14310000 COW CREEK NEAR RIDDLE, OR

LOCATION.--Lat 42°55'25", long 123°25'40", in NE¼ sec.32, T.30 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.4 mi (0.6 km) upstream from Council Creek, 3.8 mi (6.1 km) southwest of Riddle, and at mile 6.7 (10.8 km).

DRAINAGE AREA.--456 mi² (1,181 km²).

PERIOD OF RECORD.--September 1954 to current year.

REVISED RECORDS.--WSP 1935: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 682.60 ft (208.056 m) above mean sea level.

REMARKS.--Records excellent. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--23 years, 903 ft³/s (25.57 m³/s), 654,200 acre-ft/yr (807 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,400 ft³/s (1,090 m³/s) Jan. 15, 1974, gage height, 28.17 ft (8.586 m); minimum, 7.4 ft³/s (0.21 m³/s) Aug. 17-19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 29, 1950, reached a stage of about 28.5 ft (8.69 m), present site and datum, from slope-area measurement, discharge, 41,100 ft³/s (1,160 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,190 ft³/s (62.0 m³/s) Mar. 9, gage height, 4.46 ft (1.359 m), no peak above base of 10,000 ft³/s (283 m³/s); minimum, 7.4 ft³/s (0.21 m³/s) Aug. 17-19.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|----------|----------|---------|--------------|-------|-------|------|------|-------|------|
| 1 | 41 | 63 | 51 | 56 | 61 | 895 | 386 | 120 | 197 | 35 | 13 | 21 |
| 2 | 41 | 78 | 53 | 63 | 61 | 774 | 398 | 140 | 179 | 32 | 13 | 20 |
| 3 | 40 | 74 | 51 | 100 | 59 | 1040 | 364 | 255 | 162 | 31 | 13 | 19 |
| 4 | 38 | 65 | 51 | 131 | 56 | 903 | 327 | 434 | 152 | 37 | 12 | 18 |
| 5 | 40 | 59 | 51 | 113 | 55 | 619 | 317 | 410 | 143 | 43 | 11 | 17 |
| 6 | 40 | 58 | 50 | 102 | 55 | 485 | 317 | 492 | 131 | 38 | 11 | 17 |
| 7 | 38 | 55 | 48 | 82 | 56 | 739 | 303 | 459 | 115 | 36 | 11 | 17 |
| 8 | 37 | 53 | 55 | 70 | 58 | 1370 | 298 | 404 | 107 | 32 | 10 | 16 |
| 9 | 37 | 53 | 91 | 78 | 65 | 1790 | 283 | 332 | 102 | 31 | 10 | 15 |
| 10 | 37 | 53 | 95 | 82 | 59 | 1510 | 255 | 288 | 100 | 29 | 10 | 14 |
| 11 | 37 | 51 | 78 | 82 | 58 | 1000 | 225 | 264 | 98 | 28 | 9.4 | 14 |
| 12 | 37 | 51 | 68 | 155 | 55 | 880 | 201 | 260 | 91 | 27 | 8.3 | 14 |
| 13 | 36 | 51 | 63 | 152 | 55 | 826 | 186 | 237 | 88 | 26 | 8.3 | 14 |
| 14 | 36 | 61 | 61 | 126 | 55 | 651 | 182 | 213 | 84 | 24 | 8.3 | 14 |
| 15 | 36 | 80 | 58 | 110 | 53 | 519 | 175 | 197 | 76 | 24 | 8.3 | 14 |
| 16 | 36 | 76 | 56 | 98 | 53 | 416 | 162 | 242 | 72 | 23 | 8.3 | 14 |
| 17 | 35 | 72 | 56 | 88 | 53 | 359 | 152 | 381 | 68 | 22 | 7.8 | 15 |
| 18 | 35 | 68 | 56 | 80 | 53 | 322 | 143 | 465 | 68 | 21 | 7.8 | 18 |
| 19 | 35 | 63 | 55 | 76 | 53 | 327 | 134 | 392 | 66 | 20 | 7.8 | 41 |
| 20 | 35 | 59 | 53 | 74 | 55 | 359 | 126 | 322 | 65 | 20 | 7.8 | 74 |
| 21 | 35 | 58 | 50 | 72 | 105 | 348 | 123 | 269 | 63 | 20 | 8.3 | 51 |
| 22 | 33 | 56 | 50 | 70 | 416 | 332 | 118 | 237 | 61 | 20 | 8.9 | 38 |
| 23 | 36 | 55 | 53 | 68 | 434 | 359 | 113 | 255 | 58 | 18 | 9.4 | 36 |
| 24 | 37 | 55 | 55 | 68 | 606 | 404 | 107 | 386 | 50 | 17 | 19 | 40 |
| 25 | 53 | 55 | 55 | 65 | 434 | 404 | 105 | 434 | 50 | 17 | 48 | 53 |
| 26 | 66 | 55 | 55 | 63 | 343 | 364 | 105 | 381 | 48 | 17 | 43 | 45 |
| 27 | 59 | 51 | 58 | 58 | 375 | 348 | 98 | 364 | 47 | 16 | 31 | 47 |
| 28 | 56 | 51 | 59 | 58 | 657 | 410 | 91 | 332 | 43 | 16 | 27 | 416 |
| 29 | 53 | 51 | 59 | 59 | --- | 465 | 88 | 293 | 38 | 15 | 25 | 638 |
| 30 | 58 | 50 | 58 | 58 | --- | 453 | 98 | 255 | 35 | 14 | 24 | 303 |
| 31 | 59 | --- | 56 | 61 | --- | 410 | --- | 225 | --- | 14 | 23 | --- |
| TOTAL | 1292 | 1780 | 1808 | 2618 | 4498 | 20081 | 5980 | 9738 | 2657 | 763 | 462.7 | 2073 |
| MEAN | 41.7 | 59.3 | 58.3 | 84.5 | 161 | 648 | 199 | 314 | 88.6 | 24.6 | 14.9 | 69.1 |
| MAX | 66 | 80 | 95 | 155 | 657 | 1790 | 398 | 492 | 197 | 43 | 48 | 638 |
| MIN | 33 | 50 | 48 | 56 | 53 | 322 | 88 | 120 | 35 | 14 | 7.8 | 14 |
| AC-FT | 2560 | 3530 | 3590 | 5190 | 8920 | 39830 | 11860 | 19320 | 5270 | 1510 | 918 | 4110 |
| CAL YR 1976 | TOTAL | 151261.0 | MEAN 413 | MAX 6690 | MIN 31 | AC-FT 300000 | | | | | | |
| WTR YR 1977 | TOTAL | 53750.7 | MEAN 147 | MAX 1790 | MIN 7.4 | AC-FT 106600 | | | | | | |

UMPQUA RIVER BASIN

14311000 NORTH MYRTLE CREEK NEAR MYRTLE CREEK, OR

LOCATION.--Lat 43°02'30", long 123°15'30", in SW¼ sec.14, T.29 S., R.5 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.1 mi (0.2 km) downstream from Bilger Creek, 1.5 mi (2.4 km) northeast of town of Myrtle Creek, and at mile 2.1 (3.4 km).

DRAINAGE AREA.--54.2 mi² (140.4 km²).

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 1738: 1957.

GAGE.--Water-stage recorder. Datum of gage is 641.48 ft (195.523 m) above mean sea level (levels by City Engineer of Myrtle Creek). Prior to Oct. 1, 1975, at datum 0.30 ft (0.091 m) lower.

REMARKS.--Records fair. No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--22 years, 74.9 ft³/s (2.121 m³/s), 54,270 acre-ft/yr (66.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,260 ft³/s (92.3 m³/s) Jan. 20, 1964, gage height, 10.51 ft (3.203 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s); maximum gage height, 11.58 ft (3.530 m) Dec. 26, 1955 (backwater from debris); no flow at times in July 1973 and August 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 157 ft³/s (4.45 m³/s) Mar. 3, gage height, 3.05 ft (0.930 m), no peak above base of 1,100 ft³/s (31.2 m³/s); no flow at times in August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|----------|-------|-------|-------|------|------|------|-------|-------|-------|--------|
| 1 | 7.5 | 10 | 8.2 | 8.5 | 7.3 | 39 | 33 | 15 | 21 | 2.1 | 1.8 | 1.5 |
| 2 | 7.5 | 11 | 8.2 | 13 | 6.8 | 55 | 32 | 32 | 19 | 1.9 | 1.4 | 1.3 |
| 3 | 7.5 | 9.8 | 8.0 | 19 | 6.6 | 125 | 28 | 35 | 16 | 2.2 | 1.4 | 1.1 |
| 4 | 7.1 | 9.0 | 8.2 | 15 | 6.2 | 90 | 25 | 38 | 15 | 1.8 | 1.6 | .90 |
| 5 | 7.1 | 8.7 | 8.0 | 13 | 6.2 | 59 | 23 | 41 | 13 | 2.7 | 1.4 | .63 |
| 6 | 6.6 | 8.7 | 8.0 | 12 | 6.2 | 44 | 23 | 45 | 10 | 2.4 | 1.5 | .98 |
| 7 | 5.3 | 8.5 | 8.0 | 11 | 6.2 | 34 | 24 | 35 | 9.5 | 2.0 | 1.5 | .70 |
| 8 | 5.8 | 8.0 | 10 | 12 | 6.2 | 30 | 25 | 30 | 9.5 | 1.4 | .70 | .58 |
| 9 | 6.0 | 8.0 | 19 | 13 | 6.0 | 69 | 25 | 28 | 9.0 | 1.6 | .11 | .70 |
| 10 | 6.4 | 8.0 | 14 | 11 | 6.0 | 91 | 23 | 27 | 9.0 | 2.2 | .06 | .83 |
| 11 | 6.4 | 8.0 | 11 | 12 | 5.8 | 69 | 21 | 31 | 8.5 | 1.5 | .06 | .98 |
| 12 | 6.4 | 8.0 | 11 | 23 | 5.6 | 59 | 20 | 27 | 8.5 | 1.2 | .11 | .58 |
| 13 | 6.2 | 7.7 | 9.8 | 18 | 5.6 | 51 | 19 | 24 | 7.7 | 1.3 | .00 | .58 |
| 14 | 6.0 | 9.3 | 9.5 | 15 | 5.6 | 43 | 18 | 22 | 7.3 | 1.1 | .00 | .98 |
| 15 | 5.8 | 13 | 9.3 | 13 | 5.6 | 36 | 17 | 22 | 7.1 | 1.1 | .00 | 1.6 |
| 16 | 5.8 | 14 | 9.0 | 12 | 5.4 | 31 | 16 | 37 | 6.8 | .95 | .00 | 2.1 |
| 17 | 6.0 | 11 | 9.0 | 11 | 5.4 | 28 | 15 | 73 | 6.2 | 1.0 | .00 | 2.3 |
| 18 | 6.2 | 10 | 8.7 | 10 | 5.2 | 27 | 14 | 64 | 5.8 | .95 | .00 | 2.9 |
| 19 | 6.2 | 9.3 | 8.5 | 9.5 | 5.2 | 32 | 14 | 50 | 5.8 | 1.0 | .00 | 5.8 |
| 20 | 5.8 | 9.0 | 8.2 | 9.3 | 5.0 | 33 | 13 | 39 | 5.8 | 1.1 | .00 | 6.1 |
| 21 | 6.2 | 8.7 | 8.2 | 8.7 | 6.6 | 30 | 12 | 32 | 6.0 | 1.4 | .11 | 4.7 |
| 22 | 6.2 | 8.7 | 8.2 | 8.5 | 10 | 28 | 12 | 28 | 4.7 | 1.5 | .45 | 3.8 |
| 23 | 6.6 | 8.5 | 8.7 | 8.0 | 13 | 31 | 12 | 36 | 4.5 | 1.7 | .89 | 4.1 |
| 24 | 6.8 | 8.5 | 9.0 | 8.0 | 21 | 31 | 12 | 38 | 3.4 | 1.6 | 3.0 | 9.2 |
| 25 | 13 | 8.5 | 9.0 | 7.7 | 20 | 30 | 12 | 33 | 3.4 | 1.6 | 4.5 | 7.0 |
| 26 | 12 | 8.2 | 11 | 7.5 | 19 | 27 | 12 | 37 | 3.4 | 1.2 | 3.8 | 5.8 |
| 27 | 9.5 | 8.0 | 10 | 7.1 | 21 | 27 | 11 | 36 | 3.2 | 1.6 | 3.2 | 5.8 |
| 28 | 8.7 | 7.7 | 9.8 | 6.8 | 27 | 30 | 11 | 33 | 2.8 | 1.8 | 2.8 | 17 |
| 29 | 8.7 | 7.7 | 9.3 | 6.8 | --- | 35 | 12 | 28 | 2.4 | 1.4 | 2.5 | 19 |
| 30 | 8.7 | 8.0 | 9.3 | 6.6 | --- | 36 | 12 | 25 | 2.3 | 1.7 | 2.3 | 10 |
| 31 | 8.5 | --- | 8.7 | 7.1 | --- | 32 | --- | 22 | --- | 2.3 | 3.8 | --- |
| TOTAL | 222.5 | 271.5 | 294.8 | 343.1 | 255.7 | 1382 | 546 | 1063 | 236.6 | 49.30 | 38.99 | 119.54 |
| MEAN | 7.18 | 9.05 | 9.51 | 11.1 | 9.13 | 44.6 | 18.2 | 34.3 | 7.89 | 1.59 | 1.26 | 3.98 |
| MAX | 13 | 14 | 19 | 23 | 27 | 125 | 33 | 73 | 21 | 2.7 | 4.5 | 19 |
| MIN | 5.3 | 7.7 | 8.0 | 6.6 | 5.0 | 27 | 11 | 15 | 2.3 | .95 | .00 | .58 |
| AC-FT | 441 | 539 | 585 | 681 | 507 | 2740 | 1080 | 2110 | 469 | 98 | 77 | 237 |
| CAL YR 1976 | TOTAL | 19099.10 | MEAN | 52.2 | MAX | 1290 | MIN | 2.6 | AC-FT | 37880 | | |
| WTR YR 1977 | TOTAL | 4823.03 | MEAN | 13.2 | MAX | 125 | MIN | .0 | AC-FT | 9570 | | |

NOTE.--No gage-height record Apr. 5 to May 13.

UMPQUA RIVER BASIN

437

14311500 LOOKINGGLASS CREEK AT BROCKWAY, OR

LOCATION.--Lat 43°07'50", long 123°27'50", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.13, T.28 S., R.7 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.7 mi (2.7 km) northwest of Brockway and at mile 2.85 (4.59 km).

DRAINAGE AREA.--158 mi² (409 km²).

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 2135: Drainage area (former site).

GAGE.--Water-stage recorder. Altitude of gage is 540 ft (165 m), from topographic map. Prior to Oct. 5, 1967, water-stage recorder at site 2.3 mi (3.7 km) downstream at different datum.

REMARKS.--Records good. No regulation. Many diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--22 years, 289 ft³/s (8.184 m³/s), 209,400 acre-ft/yr (258 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) Dec. 26, 1955, gage height, 24.93 ft (7.599 m), site and datum then in use, from rating curve extended above 7,200 ft³/s (204 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 25.28 ft (7.705 m) Dec. 23, 1964 (backwater from South Umpqua River, site and datum then in use); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 844 ft³/s (23.9 m³/s) Mar. 9, 10, gage height, 4.95 ft (1.509 m), no peak above base of 3,000 ft³/s (85.0 m³/s); no flow in October and June through September.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|------|------|--------|------|------|--------|
| 1 | .97 | 6.1 | 3.8 | 4.6 | 5.7 | 331 | 92 | 21 | 21 | .00 | .00 | .00 |
| 2 | .90 | 6.7 | 3.8 | 4.9 | 5.7 | 262 | 83 | 24 | 18 | .00 | .00 | .00 |
| 3 | .90 | 8.2 | 3.8 | 7.1 | 5.4 | 296 | 73 | 29 | 18 | .00 | .00 | .00 |
| 4 | .90 | 7.8 | 3.8 | 15 | 5.4 | 236 | 64 | 84 | 18 | .00 | .00 | .00 |
| 5 | .85 | 7.1 | 3.8 | 16 | 5.4 | 159 | 55 | 123 | 17 | .00 | .00 | .00 |
| 6 | .90 | 4.6 | 3.8 | 14 | 5.4 | 113 | 49 | 135 | 15 | .00 | .00 | .00 |
| 7 | .90 | 4.3 | 3.8 | 12 | 5.4 | 96 | 46 | 110 | 8.9 | .00 | .00 | .00 |
| 8 | .85 | 4.1 | 4.1 | 9.8 | 5.1 | 100 | 44 | 82 | 7.1 | .00 | .00 | .00 |
| 9 | .85 | 4.1 | 5.4 | 8.5 | 4.9 | 548 | 42 | 63 | 8.1 | .00 | .00 | .00 |
| 10 | .69 | 4.1 | 9.3 | 8.2 | 4.9 | 634 | 38 | 51 | 7.8 | .00 | .00 | .00 |
| 11 | .47 | 3.8 | 9.8 | 9.3 | 4.9 | 355 | 35 | 45 | 7.4 | .00 | .00 | .00 |
| 12 | .20 | 3.6 | 7.8 | 19 | 4.9 | 302 | 32 | 39 | 6.4 | .00 | .00 | .00 |
| 13 | .07 | 3.6 | 6.4 | 30 | 4.3 | 293 | 30 | 34 | 6.8 | .00 | .00 | .00 |
| 14 | .03 | 3.8 | 5.7 | 23 | 4.3 | 228 | 29 | 31 | 6.8 | .00 | .00 | .00 |
| 15 | .01 | 4.6 | 5.1 | 18 | 4.3 | 178 | 27 | 28 | 6.4 | .00 | .00 | .00 |
| 16 | .00 | 6.0 | 4.3 | 15 | 4.3 | 140 | 25 | 34 | 5.5 | .00 | .00 | .00 |
| 17 | .00 | 8.2 | 4.9 | 13 | 4.3 | 114 | 23 | 36 | 3.9 | .00 | .00 | .00 |
| 18 | .00 | 7.4 | 4.6 | 12 | 4.1 | 98 | 22 | 36 | 3.4 | .00 | .00 | .10 |
| 19 | .00 | 7.1 | 4.6 | 11 | 4.1 | 98 | 21 | 34 | 7.1 | .00 | .00 | .80 |
| 20 | .00 | 6.0 | 4.9 | 9.8 | 3.8 | 92 | 20 | 30 | 6.1 | .00 | .00 | 4.0 |
| 21 | .00 | 5.7 | 4.6 | 9.3 | 5.4 | 83 | 19 | 26 | 3.7 | .00 | .00 | 2.4 |
| 22 | .00 | 5.4 | 4.3 | 8.5 | 52 | 73 | 18 | 25 | 2.6 | .00 | .00 | 1.0 |
| 23 | .00 | 5.2 | 4.3 | 8.2 | 93 | 75 | 17 | 28 | .83 | .00 | .00 | 1.0 |
| 24 | .00 | 4.9 | 4.3 | 7.8 | 159 | 93 | 17 | 31 | .14 | .00 | .00 | 2.0 |
| 25 | .97 | 4.9 | 4.3 | 7.1 | 100 | 100 | 15 | 29 | .04 | .00 | .00 | 4.0 |
| 26 | 3.2 | 4.6 | 4.3 | 6.7 | 79 | 94 | 15 | 29 | .02 | .00 | .00 | 5.0 |
| 27 | 5.7 | 4.6 | 4.6 | 6.1 | 82 | 91 | 14 | 29 | .03 | .00 | .00 | 6.0 |
| 28 | 4.6 | 4.6 | 4.6 | 5.4 | 153 | 102 | 13 | 28 | .01 | .00 | .00 | 7.8 |
| 29 | 4.3 | 4.3 | 4.6 | 5.4 | --- | 108 | 10 | 26 | .00 | .00 | .00 | 76 |
| 30 | 3.8 | 4.1 | 4.6 | 5.4 | --- | 113 | 11 | 25 | .00 | .00 | .00 | 39 |
| 31 | 3.6 | --- | 4.6 | 5.7 | --- | 101 | --- | 22 | --- | .00 | .00 | --- |
| TOTAL | 35.66 | 159.5 | 152.6 | 335.8 | 820.0 | 5706 | 999 | 1367 | 206.07 | .00 | .00 | 149.10 |
| MEAN | 1.15 | 5.32 | 4.92 | 10.8 | 29.3 | 184 | 33.3 | 44.1 | 6.87 | .000 | .000 | 4.97 |
| MAX | 5.7 | 8.2 | 9.8 | 30 | 159 | 634 | 92 | 135 | 21 | .00 | .00 | 76 |
| MIN | .00 | 3.6 | 3.8 | 4.6 | 3.8 | 73 | 10 | 21 | .00 | .00 | .00 | .00 |
| AC-FT | 71 | 316 | 303 | 666 | 1630 | 11320 | 1980 | 2710 | 409 | .00 | .00 | 296 |

CAL YR 1976 TOTAL 56098.36 MEAN 153 MAX 5720 MIN .00 AC-FT 111300
 WTR YR 1977 TOTAL 9930.73 MEAN 27.2 MAX 634 MIN .00 AC-FT 19700

NOTE.--No gage-height record Nov. 15 to Dec. 14.

UMPQUA RIVER BASIN

14312000 SOUTH UMPQUA RIVER NEAR BROCKWAY, OR

LOCATION.--Lat 43°08'00", long 123°23'50", in SW¼ sec.15, T.28 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on right bank 10 ft (3 m) downstream from Winston Bridge on State Highway 99, 2.5 mi (4.0 km) northeast of Brockway, 4.2 mi (6.8 km) downstream from Lookingglass Creek, and at mile 132.8 (213.7 km).

DRAINAGE AREA.--1,670 mi² (4,325 km²).

PERIOD OF RECORD.--December 1905 to June 1912, October 1923 to September 1926, January 1942 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1946(M), 1948(M), 1951. WSP 1448: Drainage area. WRD Oreg. 1972: 1965(M).

GAGE.--Water-stage recorder. Datum of gage is 462.52 ft (140.976 m) above mean sea level (State Highway Department bench mark). Prior to June 24, 1949, nonrecording gage at several sites within 400 ft (122 m) of present site at various datums. June 24, 1949, to Oct. 1, 1970, at datum 461.84 ft (140.769 m) above mean sea level (State Highway Department bench mark).

REMARKS.--Records good. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years (water years 1907-11, 1924-26, 1943-77), 2,905 ft³/s (82.27 m³/s), 23.62 in/yr (600 mm/yr), 2,105,000 acre-ft/yr (2.60 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft³/s (3,540 m³/s) Dec. 23, 1964, gage height, 34.28 ft (10.449 m); minimum, 16 ft³/s (0.45 m³/s) Aug. 23, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 21, 1927, reached a stage of about 31.2 ft (9.51 m), present site and datum, discharge (revised), 89,500 ft³/s (2,530 m³/s). Discharge for flood of February 1890, which reached a stage 1.9 ft (0.60 m) higher, according to local resident who lived nearby at time of both floods, has been found to be in error and should not be used.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,810 ft³/s (136 m³/s) Mar. 9, 10, gage height, 8.17 ft (2.490 m), no peak above base of 20,000 ft³/s (566 m³/s); minimum, 16 ft³/s (0.45 m³/s) Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|--------|-------|-------|-------|--------|-------|--------|-------|------|------|-------|-------|---------|
| 1 | 151 | 193 | 163 | 179 | 206 | 2170 | 1410 | 664 | 1130 | 137 | 40 | 99 | | |
| 2 | 151 | 204 | 165 | 181 | 206 | 1940 | 1880 | 920 | 1030 | 135 | 38 | 96 | | |
| 3 | 151 | 239 | 165 | 224 | 201 | 2130 | 1720 | 1290 | 929 | 135 | 36 | 90 | | |
| 4 | 151 | 233 | 163 | 360 | 190 | 2380 | 1490 | 1860 | 850 | 159 | 31 | 81 | | |
| 5 | 151 | 209 | 163 | 367 | 183 | 1720 | 1600 | 2390 | 784 | 135 | 29 | 76 | | |
| 6 | 149 | 193 | 161 | 316 | 183 | 1370 | 1710 | 2830 | 748 | 139 | 27 | 73 | | |
| 7 | 145 | 185 | 161 | 276 | 183 | 1320 | 1700 | 2430 | 700 | 130 | 23 | 71 | | |
| 8 | 139 | 176 | 163 | 212 | 188 | 2140 | 1820 | 2030 | 650 | 121 | 24 | 65 | | |
| 9 | 137 | 172 | 204 | 183 | 188 | 3410 | 1970 | 1700 | 637 | 109 | 27 | 56 | | |
| 10 | 137 | 168 | 283 | 190 | 188 | 4210 | 1610 | 1550 | 586 | 104 | 26 | 54 | | |
| 11 | 135 | 165 | 272 | 236 | 183 | 2790 | 1300 | 1840 | 543 | 99 | 24 | 51 | | |
| 12 | 131 | 163 | 230 | 327 | 181 | 2330 | 1130 | 1870 | 533 | 93 | 29 | 48 | | |
| 13 | 131 | 163 | 206 | 462 | 179 | 2350 | 1080 | 1630 | 492 | 87 | 27 | 46 | | |
| 14 | 128 | 170 | 198 | 421 | 179 | 1960 | 1130 | 1390 | 445 | 85 | 25 | 45 | | |
| 15 | 126 | 183 | 190 | 375 | 176 | 1590 | 1040 | 1250 | 409 | 79 | 22 | 46 | | |
| 16 | 122 | 236 | 183 | 343 | 172 | 1300 | 960 | 1320 | 359 | 74 | 20 | 48 | | |
| 17 | 121 | 339 | 179 | 304 | 170 | 1110 | 953 | 2340 | 335 | 78 | 20 | 51 | | |
| 18 | 119 | 279 | 179 | 272 | 165 | 1010 | 875 | 2850 | 321 | 74 | 19 | 57 | | |
| 19 | 121 | 233 | 176 | 259 | 168 | 1000 | 795 | 2360 | 314 | 72 | 18 | 74 | | |
| 20 | 121 | 215 | 170 | 262 | 170 | 1220 | 730 | 1970 | 296 | 67 | 17 | 98 | | |
| 21 | 121 | 201 | 155 | 255 | 212 | 1360 | 697 | 1720 | 279 | 59 | 17 | 151 | | |
| 22 | 122 | 190 | 153 | 252 | 571 | 1200 | 680 | 1530 | 268 | 59 | 18 | 159 | | |
| 23 | 121 | 188 | 168 | 242 | 771 | 1350 | 675 | 1670 | 247 | 58 | 18 | 149 | | |
| 24 | 130 | 183 | 174 | 233 | 1040 | 1650 | 664 | 2440 | 221 | 53 | 30 | 137 | | |
| 25 | 143 | 179 | 174 | 224 | 888 | 1670 | 675 | 2460 | 203 | 51 | 52 | 151 | | |
| 26 | 179 | 179 | 176 | 212 | 736 | 1540 | 713 | 2130 | 200 | 52 | 121 | 286 | | |
| 27 | 269 | 176 | 176 | 198 | 713 | 1330 | 691 | 2280 | 185 | 42 | 188 | 218 | | |
| 28 | 236 | 174 | 183 | 183 | 946 | 1660 | 627 | 2040 | 171 | 39 | 155 | 286 | | |
| 29 | 198 | 168 | 193 | 188 | --- | 1740 | 617 | 1740 | 157 | 41 | 145 | 1750 | | |
| 30 | 185 | 163 | 190 | 190 | --- | 1680 | 648 | 1480 | 147 | 42 | 117 | 1220 | | |
| 31 | 183 | --- | 181 | 190 | --- | 1500 | --- | 1270 | --- | 42 | 107 | --- | | |
| TOTAL | 4604 | 5919 | 5697 | 8116 | 9536 | 56130 | 33590 | 57244 | 14169 | 2650 | 1490 | 5832 | | |
| MEAN | 149 | 197 | 184 | 262 | 341 | 1811 | 1120 | 1847 | 472 | 85.5 | 48.1 | 194 | | |
| MAX | 269 | 339 | 283 | 462 | 1040 | 4210 | 1970 | 2850 | 1130 | 159 | 188 | 1750 | | |
| MIN | 119 | 163 | 153 | 179 | 165 | 1000 | 617 | 664 | 147 | 39 | 17 | 45 | | |
| CFSM | .09 | .12 | .11 | .16 | .20 | 1.08 | .67 | 1.11 | .28 | .05 | .03 | .12 | | |
| IN. | .10 | .13 | .13 | .18 | .21 | 1.25 | .75 | 1.28 | .32 | .06 | .03 | .13 | | |
| AC-FT | 9130 | 11740 | 11300 | 16100 | 18910 | 111300 | 66630 | 113500 | 28100 | 5260 | 2960 | 11570 | | |
| CAL YR 1976 | TOTAL | 704969 | MEAN | 1926 | MAX | 31600 | MIN | 110 | CFSM | 1.15 | IN | 15.70 | AC-FT | 1398000 |
| WTR YR 1977 | TOTAL | 204977 | MEAN | 562 | MAX | 4210 | MIN | 17 | CFSM | .34 | IN | 4.57 | AC-FT | 406600 |

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

LOCATION:--Lat 43°13'20", long 123°24'45", in NW¼SE¼ sec.16, T.27 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on left bank, 3.7 mi (6.0 km) west of Roseburg, and at mile 117.7 (189.4 km).

DRAINAGE AREA:--1,798 mi² (4,657 km²).

PERIOD OF RECORD:--Water years 1970 to current year.

PERIOD OF DAILY RECORD:--

SPECIFIC CONDUCTANCE: October 1970 to current year.

pH: August 1971 to current year.

DISSOLVED OXYGEN: October 1970 to current year.

WATER TEMPERATURES: October 1970 to current year.

TURBIDITY: March 1974 to current year.

INSTRUMENTATION:--Water-quality monitor since October 1970.

EXTREMES FOR PERIOD OF DAILY RECORD:--

SPECIFIC CONDUCTANCE: Maximum, 423 micromhos/cm Sept. 18, 1971; minimum, 41 micromhos/cm Mar. 2, 3, 1972.

pH: Maximum, 10.0 units Sept. 8, 9, 1971; minimum, 5.0 units Sept. 29, 1971.

DISSOLVED OXYGEN: Maximum, 16.0 mg/l July 30, 1977; minimum, 1.1 mg/l Sept. 15, 1977.

WATER TEMPERATURES: Maximum, 35.0°C July 16, 1976; minimum, 0.0°C Dec. 14, 16, 1972, Jan. 9, 1974.

TURBIDITY: Maximum recorded, 800 JTU Dec. 27, 1974; minimum recorded, 0 JTU on many days 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR:--

SPECIFIC CONDUCTANCE: Maximum recorded, 233 micromhos/cm Sept. 23; minimum recorded, 72 micromhos/cm Mar. 30.

pH: Maximum recorded, 9.8 units June 15; minimum recorded, 5.5 units Aug. 24.

DISSOLVED OXYGEN: Maximum recorded, 16.0 mg/l July 30; minimum recorded, 1.1 mg/l Sept. 15.

WATER TEMPERATURES: Maximum recorded, 32.0°C June 26; minimum recorded, 3.0°C Jan. 8, 10, 12, 17.

TURBIDITY: Maximum recorded, 55 JTU Mar. 9; minimum recorded, 0 JTU on many days during the year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DISCHARGE (CFS) | TEMPERATURE (DEG C) | PH (UNITS) | DISSOLVED OXYGEN (MG/L) | SPECIFIC CONDUCTANCE (MICRO-MHOS) | FECAL COLIFORM (7UM-MF) (COL./100 ML) | FECAL STREPTOCOCCI (TOCOCCKF AGAR) (COL./100 ML) | DISSOLVED SILICA (SIO2) (MG/L) | DISSOLVED CALCIUM (CA) (MG/L) |
|-----------|------|-------------------------------|---------------------|------------|-------------------------|-----------------------------------|---------------------------------------|--|--------------------------------|-------------------------------|
| OCT 20... | 1600 | -- | 15.0 | 8.0 | 14.0 | 178 | 880 | 811 | -- | 17 |
| NOV 17... | 1430 | 380 | 14.0 | 7.4 | 10.2 | 142 | 190 | 816 | -- | 18 |
| DEC 15... | 1500 | 187 | 6.5 | 7.4 | 13.0 | 164 | 81 | 812 | -- | 17 |
| JAN 06... | 1030 | 300 | 4.0 | 7.6 | 14.1 | 176 | 41 | 75 | -- | 18 |
| FEB 24... | 1600 | 1080 | 8.5 | 7.3 | 10.8 | 152 | 81600 | 1300 | .1 | 17 |
| MAR 16... | 1230 | 1120 | 8.0 | 7.0 | 12.2 | 100 | 826 | 21 | -- | 9.4 |
| APR 20... | 1400 | 640 | 14.5 | 7.4 | 10.1 | 98 | 81 | 27 | -- | 6.6 |
| MAY 18... | 1100 | 2840 | 12.0 | 7.8 | 11.5 | 68 | 8600 | 73 | -- | 9.3 |
| JUN 22... | 1400 | 270 | 23.5 | 8.6 | 10.8 | 104 | 98 | 68 | -- | 11 |
| JUL 26... | 1030 | 50 | 23.5 | 7.9 | 6.7 | 151 | 87 | >2500 | -- | 11 |
| AUG 02... | 1200 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 1630 | 34 | 23.0 | 6.8 | 4.4 | 200 | 82000 | 1800 | -- | 12 |
| SEP 23... | 1230 | 137 | 17.5 | 7.4 | 6.4 | 225 | 32 | 110 | 3.4 | 17 |

| DATE | DISSOLVED MAGNESIUM (MG/L) | DISSOLVED SODIUM (NA) (MG/L) | DISSOLVED POTASSIUM (K) (MG/L) | BICARBONATE (HCO3) (MG/L) | CARBONATE (CO3) (MG/L) | DISSOLVED SULFATE (SO4) (MG/L) | DISSOLVED CHLORIDE (CL) (MG/L) | DISSOLVED FLUORIDE (F) (MG/L) | DISSOLVED NITRATE (N) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) |
|-----------|----------------------------|------------------------------|--------------------------------|---------------------------|------------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|---------------------------------------|
| OCT 20... | 7.2 | -- | -- | 69 | 0 | -- | -- | -- | .00 | .21 |
| NOV 17... | 7.5 | -- | -- | 81 | 0 | -- | -- | -- | .36 | .32 |
| DEC 15... | 7.4 | -- | -- | 72 | 0 | -- | -- | -- | .12 | .12 |
| JAN 06... | 7.3 | -- | -- | 79 | 0 | -- | -- | -- | .21 | .11 |
| FEB 24... | 7.3 | 9.5 | 1.0 | 75 | 0 | 9.9 | 18 | .0 | .12 | .11 |
| MAR 16... | 4.3 | -- | -- | 48 | 0 | -- | -- | -- | .10 | .11 |
| APR 20... | 2.0 | -- | -- | 45 | 0 | -- | -- | -- | .00 | .05 |
| MAY 18... | 3.1 | -- | -- | 32 | 0 | -- | -- | -- | -- | .03 |
| JUN 22... | 4.3 | -- | -- | 52 | 0 | -- | -- | -- | .05 | .05 |
| JUL 26... | 5.6 | -- | -- | 54 | 0 | -- | -- | -- | -- | .59 |
| AUG 02... | -- | -- | -- | -- | -- | -- | -- | -- | .79 | -- |
| 24... | 7.0 | -- | -- | 69 | 0 | -- | -- | -- | -- | 1.3 |
| SEP 23... | 7.6 | 13 | 1.0 | 70 | 0 | 23 | 18 | .1 | -- | .34 |

B: RESULTS BASED ON NON-IDEAL COLONY COUNT

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TOTAL AMMONIA NITRO-GEN (N) (MG/L) | TOTAL ORGANIC NITRO-GEN (N) (MG/L) | TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L) | TOTAL NITRO-GEN (N) (MG/L) | TOTAL PHOS-PHORUS (P) (MG/L) | DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L) | DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) | HARD-NESS (CA,MG) (MG/L) | NON-CAR-BONATE HARD-NESS (MG/L) | ALKA-LINITY AS CAC03 (MG/L) |
|-----------|------------------------------------|------------------------------------|--------------------------------------|----------------------------|------------------------------|--|---|--------------------------|---------------------------------|-----------------------------|
| OCT 20... | .19 | .26 | .45 | .66 | .29 | 126 | -- | 72 | 16 | 57 |
| NOV 17... | .08 | .12 | .20 | .52 | .21 | 121 | -- | 76 | 9 | 66 |
| DEC 15... | .19 | .16 | .35 | .47 | .19 | 117 | -- | 73 | 14 | 59 |
| JAN 06... | .14 | .23 | .37 | .48 | .15 | 110 | -- | 75 | 10 | 65 |
| FEB 24... | .09 | .37 | .46 | .57 | .11 | -- | 100 | 73 | 11 | 62 |
| MAR 16... | .03 | .26 | .29 | .40 | .07 | 75 | -- | 41 | 2 | 39 |
| APR 20... | .14 | .02 | .16 | .21 | .09 | 82 | -- | 25 | 0 | 37 |
| MAY 18... | .07 | .00 | .00 | .03 | .07 | -- | -- | 36 | 10 | 26 |
| JUN 22... | .09 | .26 | .35 | .40 | .11 | 69 | -- | 45 | 3 | 43 |
| JUL 26... | .17 | .64 | .81 | 1.4 | .52 | 81 | -- | 51 | 6 | 44 |
| AUG 02... | -- | -- | -- | -- | .71 | -- | -- | -- | -- | -- |
| SEP 24... | 1.2 | .80 | 2.0 | 3.3 | 2.6 | 125 | -- | 59 | 2 | 57 |
| SEP 23... | .20 | .11 | .31 | .65 | .26 | -- | 118 | 74 | 16 | 57 |

| DATE | DIS-SOLVED ARSENIC (AS) (UG/L) | DIS-SOLVED BARIUM (BA) (UG/L) | DIS-SOLVED CAD-MIUM (CD) (UG/L) | HEXA-VALENT CHRO-MIUM (CR6) (UG/L) | DIS-SOLVED COBALT (CO) (UG/L) | DIS-SOLVED COPPER (CU) (UG/L) | DIS-SOLVED IRON (FE) (UG/L) |
|-----------|--------------------------------|-------------------------------|---------------------------------|------------------------------------|-------------------------------|-------------------------------|-----------------------------|
| FEB 24... | 0 | 0 | 1 | 0 | 0 | 3 | 50 |
| SEP 23... | 0 | 0 | 0 | 0 | 0 | 2 | 30 |

| DATE | DIS-SOLVED LEAD (PB) (UG/L) | DIS-SOLVED NICKEL (NI) (UG/L) | DIS-SOLVED SILVER (AG) (UG/L) | DIS-SOLVED ZINC (ZN) (UG/L) | DIS-SOLVED ALUM-INUM (AL) (UG/L) | DIS-SOLVED MERCURY (HG) (UG/L) |
|-----------|-----------------------------|-------------------------------|-------------------------------|-----------------------------|----------------------------------|--------------------------------|
| FEB 24... | 1 | 4 | 0 | 30 | 0 | .0 |
| SEP 23... | 3 | 1 | 0 | 10 | 0 | .0 |

PESTICIDE ANALYSES

| DATE | TOTAL ALDRIN (UG/L) | TOTAL LINDANE (UG/L) | TOTAL CHLOR-DANE (UG/L) | TOTAL DDD (UG/L) | TOTAL DDE (UG/L) | TOTAL DDT (UG/L) | TOTAL DI-ELDRIN (UG/L) | TOTAL ENDRIN (UG/L) | TOTAL ETHION (UG/L) | TOTAL TOX-APHENE (UG/L) | TOTAL HEPTA-CHLOR (UG/L) |
|------------|---------------------|----------------------|-------------------------|------------------|------------------|------------------|------------------------|---------------------|---------------------|-------------------------|--------------------------|
| OCT , 1976 | | | | | | | | | | | |
| 20... | .00 | .00 | .0 | .00 | .00 | .00 | .00 | .00 | -- | 0 | .00 |
| JAN , 1977 | | | | | | | | | | | |
| 06... | .00 | .00 | .0 | .00 | .00 | .00 | .00 | .00 | -- | 0 | .00 |
| APR 20... | .00 | .00 | .0 | .00 | .00 | .00 | .00 | .00 | .00 | 0 | .00 |
| JUL 26... | .00 | .00 | .0 | .00 | .00 | .00 | .00 | .00 | -- | 0 | .00 |

| DATE | TOTAL HEPTA-CHLOR EPOXIDE (UG/L) | TOTAL MALA-THION (UG/L) | TOTAL PARA-THION (UG/L) | TOTAL DI-AZINON (UG/L) | TOTAL METHYL PARA-THION (UG/L) | TOTAL 2,4-D (UG/L) | TOTAL 2,4,5-T (UG/L) | TOTAL SILVEX (UG/L) | TOTAL TRI-THION (UG/L) | TOTAL METHYL TRI-THION (UG/L) |
|------------|----------------------------------|-------------------------|-------------------------|------------------------|--------------------------------|--------------------|----------------------|---------------------|------------------------|-------------------------------|
| OCT , 1976 | | | | | | | | | | |
| 20... | .00 | -- | -- | -- | -- | .00 | .00 | .00 | -- | -- |
| JAN , 1977 | | | | | | | | | | |
| 06... | .00 | -- | -- | -- | -- | .00 | .09 | .00 | -- | -- |
| APR 20... | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 |
| JUL 26... | .00 | -- | -- | -- | -- | .05 | .04 | .00 | -- | -- |

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | --- | 161 | 99 | 175 | --- | 119 | 85 | 24 | 87 | 55 | --- | --- |
| 2 | 94 | 160 | 99 | 177 | 83 | 102 | 89 | 23 | 91 | 19 | --- | --- |
| 3 | 141 | 160 | 99 | 177 | 154 | 101 | 96 | 24 | 91 | 20 | 148 | --- |
| 4 | 203 | 154 | 98 | 177 | 152 | 101 | 93 | 25 | --- | 21 | --- | --- |
| 5 | --- | 150 | 93 | 176 | 151 | 98 | 93 | 59 | 91 | --- | --- | --- |
| 6 | --- | 138 | 100 | --- | 148 | 103 | 92 | 97 | 92 | --- | --- | --- |
| 7 | --- | 132 | 101 | --- | 148 | 107 | 89 | 94 | 93 | --- | --- | --- |
| 8 | --- | 128 | 101 | 141 | 147 | 108 | 90 | 93 | 95 | --- | --- | --- |
| 9 | --- | 129 | 99 | 139 | 144 | 97 | 87 | 92 | 95 | --- | --- | 200 |
| 10 | --- | 132 | 128 | --- | 142 | 94 | 84 | 93 | 96 | --- | --- | --- |
| 11 | --- | 130 | --- | --- | 139 | 95 | 95 | 92 | 97 | --- | --- | 200 |
| 12 | --- | 130 | --- | --- | 138 | 102 | 111 | 86 | 98 | --- | --- | 198 |
| 13 | --- | 38 | 33 | --- | 136 | 104 | 133 | 65 | 100 | 67 | --- | 198 |
| 14 | --- | 24 | 32 | --- | 136 | 102 | 39 | 83 | 104 | --- | --- | --- |
| 15 | --- | 23 | 77 | --- | 134 | 103 | --- | 85 | 105 | --- | --- | --- |
| 16 | 183 | 20 | 154 | --- | 131 | 105 | --- | 88 | 106 | --- | --- | --- |
| 17 | --- | 59 | 149 | --- | 129 | 106 | 29 | 88 | --- | --- | --- | --- |
| 18 | --- | 133 | 157 | --- | 127 | 109 | 29 | 82 | --- | --- | --- | --- |
| 19 | --- | 132 | 158 | --- | 125 | 113 | 29 | 76 | --- | --- | 217 | --- |
| 20 | --- | 129 | 161 | --- | 123 | 111 | 28 | 75 | --- | --- | --- | --- |
| 21 | --- | 126 | 163 | --- | 120 | 107 | 54 | 76 | --- | --- | --- | --- |
| 22 | --- | 121 | 166 | --- | 116 | 105 | 25 | 80 | 129 | --- | --- | --- |
| 23 | --- | 117 | 165 | --- | --- | 99 | 24 | 81 | 115 | --- | --- | 111 |
| 24 | --- | 113 | 168 | --- | 152 | 98 | 23 | 81 | --- | --- | --- | --- |
| 25 | --- | 110 | 169 | --- | 128 | 95 | 24 | 80 | --- | --- | --- | --- |
| 26 | --- | 107 | 168 | --- | 118 | 91 | 24 | 82 | 116 | --- | --- | --- |
| 27 | --- | 105 | 171 | --- | 119 | 86 | 23 | 84 | 116 | 155 | --- | --- |
| 28 | --- | 101 | 173 | --- | 122 | 87 | 23 | 82 | 116 | 160 | 99 | --- |
| 29 | --- | 102 | 173 | --- | --- | 84 | 22 | 82 | --- | --- | 73 | --- |
| 30 | 159 | 101 | 174 | --- | --- | 77 | 22 | 82 | --- | --- | --- | --- |
| 31 | 159 | --- | 175 | --- | --- | 82 | --- | 83 | --- | --- | --- | --- |

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 9.0 | 7.6 | --- | --- | | | | | --- | --- | 7.4 | 7.1 |
| 2 | 8.7 | 7.6 | --- | --- | | | | | --- | --- | 7.2 | 7.2 |
| 3 | 9.0 | 7.6 | --- | --- | | | | | 7.5 | 6.9 | 7.2 | 7.1 |
| 4 | 9.1 | 7.6 | --- | --- | | | | | 7.5 | 6.8 | 7.1 | 7.1 |
| 5 | 9.1 | 7.7 | --- | --- | | | | | 7.4 | 6.8 | 7.1 | 7.0 |
| 6 | 9.2 | 7.7 | --- | --- | | | | | 7.4 | 6.7 | 7.0 | 6.9 |
| 7 | 8.4 | 7.7 | --- | --- | | | | | 7.4 | 6.7 | 6.9 | 6.8 |
| 8 | 8.2 | 7.0 | --- | --- | | | | | 7.4 | 6.7 | 6.8 | 6.7 |
| 9 | 8.2 | 7.0 | --- | --- | | | | | 7.4 | 6.7 | 7.0 | 6.8 |
| 10 | 8.4 | 7.0 | --- | --- | | | | | 7.5 | 6.8 | 7.0 | 6.9 |
| 11 | 8.3 | 7.0 | --- | --- | | | | | 7.5 | 6.8 | 7.2 | 7.0 |
| 12 | 8.2 | 7.0 | --- | --- | | | | | 7.6 | 6.7 | 7.0 | 6.9 |
| 13 | 8.3 | 6.9 | --- | --- | | | | | 7.6 | 6.7 | 7.0 | 6.9 |
| 14 | 8.3 | 7.0 | --- | --- | | | | | 7.5 | 6.8 | 7.1 | 6.9 |
| 15 | 8.2 | 6.9 | --- | --- | | | | | 7.6 | 6.8 | 7.2 | 7.1 |
| 16 | 8.1 | 6.9 | --- | --- | | | | | 7.6 | 6.7 | 7.3 | 7.1 |
| 17 | 8.1 | 6.9 | --- | --- | | | | | 7.6 | 6.8 | 7.5 | 7.1 |
| 18 | 8.1 | 6.9 | 7.8 | 7.3 | | | | | 7.5 | 6.8 | 7.5 | 7.1 |
| 19 | 8.0 | 6.8 | 8.0 | 7.3 | | | | | 7.5 | 6.8 | 7.5 | 7.2 |
| 20 | 8.0 | 6.9 | 8.0 | 7.2 | | | | | 7.5 | 7.0 | 8.1 | 7.1 |
| 21 | 8.2 | 7.0 | 8.0 | 7.3 | | | | | 7.5 | 7.1 | --- | --- |
| 22 | 7.5 | 6.9 | 7.9 | 7.6 | | | | | 7.6 | 7.3 | 7.6 | 7.2 |
| 23 | 8.1 | 6.9 | 8.0 | 7.5 | | | | | 7.4 | 7.2 | 7.7 | 7.3 |
| 24 | 7.6 | 7.0 | 7.7 | 7.3 | | | | | 7.4 | 7.3 | 7.7 | 7.3 |
| 25 | 7.8 | 6.9 | 8.0 | 7.4 | | | | | 7.5 | 7.3 | 7.6 | 7.1 |
| 26 | 7.8 | 7.0 | 8.0 | 7.3 | | | | | 7.5 | 7.3 | 7.6 | 7.2 |
| 27 | 7.8 | 7.0 | 8.0 | 7.5 | | | | | 7.4 | 7.1 | 7.5 | 7.2 |
| 28 | 7.9 | 7.3 | 7.9 | 6.5 | | | | | 7.3 | 7.2 | 7.7 | 7.1 |
| 29 | 8.1 | 7.6 | --- | --- | | | | | --- | --- | --- | --- |
| 30 | --- | --- | --- | --- | | | | | --- | --- | --- | --- |
| 31 | --- | --- | --- | --- | | | | | --- | --- | --- | --- |
| MONTH | 9.2 | 6.8 | 8.0 | 6.5 | | | | | 7.6 | 6.7 | 8.1 | 6.7 |

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | --- | --- | --- | --- | 7.7 | 7.0 | --- | --- | 9.1 | 7.2 | --- | --- |
| 2 | --- | --- | --- | --- | 7.7 | 6.9 | --- | --- | 8.1 | 7.1 | --- | --- |
| 3 | 7.4 | 7.1 | --- | --- | 7.7 | 7.1 | --- | --- | 8.8 | 6.8 | --- | --- |
| 4 | 7.4 | 7.1 | --- | --- | 7.9 | 7.1 | --- | --- | 8.8 | 6.9 | --- | --- |
| 5 | 7.4 | 7.0 | --- | --- | 7.8 | 7.1 | --- | --- | --- | --- | --- | --- |
| 6 | 7.4 | 6.9 | 8.0 | 7.9 | 8.0 | 7.2 | --- | --- | --- | --- | --- | --- |
| 7 | 7.4 | 6.9 | 8.0 | 7.8 | 7.9 | 7.3 | --- | --- | --- | --- | --- | --- |
| 8 | 7.5 | 7.2 | 7.8 | 7.6 | 8.3 | 7.5 | --- | --- | --- | --- | --- | --- |
| 9 | 7.5 | 7.1 | 7.8 | 7.4 | 8.5 | 7.5 | --- | --- | --- | --- | 9.3 | 7.0 |
| 10 | 7.5 | 7.1 | 7.8 | 7.4 | 8.7 | 7.6 | --- | --- | --- | --- | 9.3 | 7.6 |
| 11 | 7.5 | 7.1 | 7.7 | 7.0 | 8.9 | 7.8 | --- | --- | --- | --- | 9.4 | 7.6 |
| 12 | 7.5 | 7.2 | 7.6 | 7.0 | 9.3 | 8.0 | --- | --- | --- | --- | 9.1 | 6.9 |
| 13 | --- | --- | 9.6 | 7.0 | 9.6 | 8.0 | --- | --- | --- | --- | 9.3 | 6.6 |
| 14 | --- | --- | 7.6 | 6.9 | 9.6 | 8.0 | 9.0 | 7.5 | --- | --- | 8.5 | 7.4 |
| 15 | --- | --- | 7.5 | 6.9 | 9.8 | 7.5 | 9.1 | 7.2 | --- | --- | --- | --- |
| 16 | --- | --- | 7.4 | 7.0 | 8.7 | 7.0 | 9.2 | 7.1 | --- | --- | --- | --- |
| 17 | --- | --- | 7.4 | 6.9 | 8.6 | 7.0 | 9.2 | 7.4 | --- | --- | --- | --- |
| 18 | --- | --- | 7.4 | 7.1 | 8.6 | 6.9 | 9.1 | 7.5 | --- | --- | --- | --- |
| 19 | --- | --- | 7.3 | 7.0 | 8.7 | 6.9 | 9.3 | 7.2 | --- | --- | --- | --- |
| 20 | --- | --- | 7.3 | 6.7 | 8.6 | 7.0 | 9.4 | 7.5 | --- | --- | --- | --- |
| 21 | --- | --- | 7.3 | 6.7 | 8.7 | 7.0 | 9.5 | 7.4 | --- | --- | --- | --- |
| 22 | --- | --- | 7.3 | 7.0 | 8.7 | 7.0 | 9.6 | 7.4 | --- | --- | --- | --- |
| 23 | --- | --- | 7.4 | 5.9 | 8.8 | 7.1 | 9.6 | 7.6 | 7.0 | 6.3 | --- | --- |
| 24 | --- | --- | 7.4 | 6.7 | 8.8 | 7.1 | 9.7 | 7.6 | 6.9 | 5.5 | --- | --- |
| 25 | --- | --- | 7.5 | 7.2 | 8.7 | 7.2 | 9.6 | 7.6 | 6.8 | 6.0 | --- | --- |
| 26 | --- | --- | 7.5 | 7.0 | 8.8 | 7.3 | 9.0 | 7.6 | 6.9 | 6.4 | --- | --- |
| 27 | --- | --- | 7.5 | 7.0 | 8.9 | 7.2 | 9.1 | 6.9 | 6.7 | 6.4 | --- | --- |
| 28 | --- | --- | 7.5 | 6.9 | 8.8 | 7.2 | 9.0 | 7.0 | 6.6 | 5.9 | --- | --- |
| 29 | --- | --- | 7.5 | 6.8 | 8.5 | 7.1 | 9.1 | 7.0 | --- | 6.0 | --- | --- |
| 30 | --- | --- | 7.6 | 6.9 | 8.7 | 7.3 | 9.2 | 7.1 | --- | --- | --- | --- |
| 31 | --- | --- | 7.6 | 6.9 | --- | --- | 9.2 | 7.1 | --- | --- | --- | --- |
| MONTH | 7.5 | 6.9 | 9.6 | 5.9 | 9.8 | 6.9 | 9.7 | 6.9 | 9.1 | 5.5 | 9.4 | 6.6 |

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|---------|-----|------|----------|------|------|----------|------|------|---------|------|------|
| | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | 13.7 | 6.8 | 9.8 | 9.5 | 6.2 | 7.3 | 12.1 | 11.2 | 11.5 | 13.4 | 12.4 | 12.8 |
| 2 | 11.9 | 6.7 | 9.1 | 9.4 | 7.9 | 8.8 | 12.2 | 11.5 | 11.8 | 13.8 | 12.7 | 13.2 |
| 3 | 13.2 | 7.2 | 9.7 | 10.3 | 7.7 | 8.8 | 12.6 | 11.4 | 12.0 | 14.1 | 12.8 | 13.3 |
| 4 | 13.9 | 7.3 | 10.2 | 10.4 | 7.8 | 9.0 | 12.4 | 10.9 | 11.6 | 14.0 | 13.0 | 13.4 |
| 5 | 13.4 | 7.9 | 10.2 | 9.5 | 7.6 | 8.6 | 12.3 | 11.1 | 11.6 | 14.0 | 13.1 | 13.5 |
| 6 | 13.1 | 7.5 | 9.9 | 10.2 | 7.1 | 8.6 | 12.4 | 11.0 | 11.6 | 14.0 | 12.5 | 13.3 |
| 7 | 13.2 | 7.6 | 10.0 | 9.6 | 7.2 | 8.2 | 12.2 | 10.9 | 11.5 | 13.9 | 12.4 | 13.4 |
| 8 | 13.3 | 7.3 | 9.9 | 9.3 | 7.1 | 8.0 | 11.9 | 10.4 | 11.1 | 14.1 | 12.7 | 13.3 |
| 9 | 12.6 | 6.8 | 9.3 | 10.9 | 7.1 | 9.0 | 11.4 | 9.8 | 10.5 | 14.2 | 12.7 | 13.3 |
| 10 | 13.3 | 6.6 | 9.7 | 10.4 | 8.3 | 9.2 | 11.1 | 9.6 | 10.1 | 13.3 | 12.9 | 13.5 |
| 11 | 13.2 | 6.6 | 9.3 | 10.5 | 8.0 | 8.9 | 10.9 | 9.5 | 10.0 | 13.6 | 12.7 | 13.1 |
| 12 | 12.4 | 6.3 | 8.8 | 9.7 | 7.7 | 8.5 | --- | --- | --- | 13.2 | 12.5 | 12.7 |
| 13 | 11.2 | 5.9 | 8.3 | --- | --- | --- | --- | --- | --- | 13.2 | 12.5 | 12.7 |
| 14 | 12.9 | 6.3 | 9.2 | --- | --- | --- | --- | --- | --- | 13.6 | 12.1 | 12.8 |
| 15 | 12.5 | 6.0 | 8.9 | --- | --- | --- | --- | --- | --- | 13.5 | 11.9 | 12.5 |
| 16 | 11.7 | 5.5 | 8.3 | 11.9 | 7.2 | 9.3 | 13.6 | 11.6 | 12.4 | 13.0 | 11.8 | 12.3 |
| 17 | 11.2 | 5.8 | 8.1 | 10.2 | 6.7 | 9.2 | 13.1 | 11.7 | 12.3 | 13.4 | 11.7 | 12.2 |
| 18 | 10.6 | 5.3 | 7.7 | 10.9 | 8.9 | 9.7 | 13.1 | 11.7 | 12.3 | 12.7 | 11.5 | 12.0 |
| 19 | 10.2 | 4.8 | 7.2 | 11.3 | 8.8 | 9.9 | 13.1 | 11.7 | 12.3 | 13.4 | 11.3 | 12.2 |
| 20 | 13.0 | 7.4 | 9.4 | 11.6 | 9.1 | 10.2 | 13.1 | 11.8 | 12.3 | 13.2 | 11.4 | 12.2 |
| 21 | 9.3 | 5.7 | 7.4 | 12.3 | 9.9 | 10.9 | 13.0 | 11.8 | 12.3 | 14.6 | 11.6 | 12.9 |
| 22 | 7.5 | 5.7 | 6.6 | 12.3 | 10.4 | 11.2 | 12.8 | 11.8 | 12.2 | 14.1 | 12.7 | 12.4 |
| 23 | 9.6 | 5.8 | 7.5 | 12.2 | 10.4 | 11.2 | 12.8 | 11.6 | 12.1 | 14.1 | 12.4 | 13.6 |
| 24 | 8.0 | 6.2 | 7.0 | 11.8 | 10.3 | 10.9 | 12.8 | 11.6 | 12.1 | 14.7 | 13.0 | 13.8 |
| 25 | 10.1 | 6.4 | 8.4 | 11.9 | 10.2 | 11.0 | 12.4 | 11.6 | 11.9 | 14.9 | 12.9 | 13.9 |
| 26 | 8.4 | 6.0 | 7.0 | --- | --- | --- | 12.9 | 11.8 | 12.2 | 15.3 | 13.4 | 14.2 |
| 27 | 9.3 | 6.0 | 7.5 | --- | --- | --- | 12.9 | 11.7 | 12.2 | 15.3 | 13.5 | 14.2 |
| 28 | 8.7 | 8.2 | 8.4 | --- | --- | --- | 12.8 | 11.9 | 12.2 | 15.0 | 13.3 | 14.4 |
| 29 | 8.6 | 7.8 | 8.4 | 10.0 | 8.8 | 9.4 | 13.3 | 11.9 | 12.3 | 15.1 | 13.2 | 14.1 |
| 30 | 8.9 | 7.1 | 8.2 | 11.7 | 10.3 | 11.0 | 12.9 | 12.1 | 12.4 | 15.0 | 13.1 | 14.1 |
| 31 | 9.8 | 6.6 | 8.7 | --- | --- | --- | 13.2 | 12.2 | 12.7 | 15.0 | 13.2 | 14.1 |
| MONTH | 13.9 | 4.8 | 8.6 | 12.3 | 6.2 | 9.5 | 13.6 | 9.5 | 11.8 | 15.3 | 11.3 | 13.2 |

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|------|------|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | |
| 1 | 14.3 | 12.9 | 13.4 | 12.0 | 9.6 | 11.6 | 10.8 | 9.6 | 10.2 | --- | --- | --- |
| 2 | 13.2 | 11.8 | 12.5 | 10.3 | 8.9 | 9.6 | 10.9 | 9.7 | 10.3 | --- | --- | --- |
| 3 | 13.5 | 11.3 | 12.2 | 9.7 | 9.1 | 9.4 | 11.1 | 10.3 | 10.7 | --- | --- | --- |
| 4 | 14.0 | 11.5 | 12.4 | 11.8 | 8.2 | 10.3 | 11.0 | 10.0 | 10.5 | --- | --- | --- |
| 5 | 13.6 | 11.8 | 0.4 | 11.7 | 10.7 | 11.3 | 10.9 | 10.0 | 10.4 | --- | --- | --- |
| 6 | 14.1 | 11.8 | 12.8 | 11.3 | 10.9 | 11.1 | 10.7 | 9.8 | 10.3 | 10.9 | 10.0 | 10.4 |
| 7 | 14.1 | 11.7 | 12.7 | 11.6 | 11.0 | 11.3 | 10.2 | 9.3 | 9.7 | 10.8 | 10.3 | 10.5 |
| 8 | 13.8 | 11.6 | 12.6 | 11.7 | 11.2 | 11.4 | 9.2 | 8.5 | 8.8 | 11.2 | 10.3 | 10.7 |
| 9 | 14.0 | 11.6 | 12.6 | 11.5 | 11.0 | 11.4 | 9.1 | 8.2 | 8.6 | 10.8 | 9.9 | 10.4 |
| 10 | 13.9 | 11.4 | 12.5 | 11.5 | 11.3 | 11.4 | 9.0 | 8.1 | 8.6 | 10.5 | 9.6 | 10.0 |
| 11 | 13.7 | 11.2 | 12.2 | 11.9 | 11.4 | 11.7 | 8.7 | 8.0 | 8.3 | 11.0 | 9.5 | 10.2 |
| 12 | 13.1 | 10.4 | 11.6 | 12.0 | 11.6 | 11.8 | 8.6 | 7.5 | 8.1 | 11.2 | 9.8 | 10.5 |
| 13 | 12.7 | 10.4 | 11.4 | 12.2 | 11.7 | 12.0 | --- | --- | --- | 11.1 | 8.9 | 10.2 |
| 14 | 12.1 | 10.0 | 10.9 | 12.4 | 11.8 | 12.1 | --- | --- | --- | 10.9 | 9.8 | 10.3 |
| 15 | 11.7 | 9.7 | 10.5 | 12.3 | 11.6 | 12.0 | --- | --- | --- | 10.8 | 9.8 | 10.3 |
| 16 | 11.5 | 9.3 | 10.3 | 12.1 | 11.6 | 11.9 | --- | --- | --- | 10.6 | 9.8 | 10.2 |
| 17 | 11.4 | 9.3 | 10.2 | 12.8 | 12.0 | 12.4 | --- | --- | --- | 11.1 | 10.0 | 10.5 |
| 18 | 11.5 | 9.5 | 10.4 | 13.0 | 12.2 | 12.6 | --- | --- | --- | 11.0 | 10.3 | 10.6 |
| 19 | 11.5 | 9.5 | 10.4 | 13.1 | 12.1 | 12.7 | --- | --- | --- | 11.3 | 10.4 | 10.8 |
| 20 | 11.0 | 9.5 | 10.2 | 13.1 | 11.7 | 12.6 | --- | --- | --- | 10.7 | 9.6 | 10.2 |
| 21 | 10.9 | 9.8 | 10.2 | 12.4 | 11.6 | 12.1 | --- | --- | --- | 10.2 | 9.0 | 9.6 |
| 22 | 10.9 | 9.7 | 10.2 | 12.3 | 10.0 | 11.2 | --- | --- | --- | 9.5 | 8.7 | 9.1 |
| 23 | 10.9 | 10.1 | 10.5 | 10.7 | 9.8 | 10.2 | --- | --- | --- | 10.4 | 9.0 | 9.6 |
| 24 | 10.8 | 10.4 | 10.6 | 10.7 | 10.0 | 10.3 | --- | --- | --- | 10.7 | 9.5 | 10.1 |
| 25 | 11.6 | 11.1 | 11.3 | 11.1 | 10.1 | 10.6 | --- | --- | --- | 10.2 | 8.8 | 9.8 |
| 26 | 12.3 | 11.6 | 11.8 | 10.9 | 10.0 | 10.4 | --- | --- | --- | 10.5 | 9.4 | 9.9 |
| 27 | 12.6 | 11.6 | 12.0 | 10.6 | 9.9 | 10.2 | --- | --- | --- | 10.7 | 9.4 | 10.0 |
| 28 | 12.1 | 11.6 | 11.8 | 10.6 | 9.9 | 10.3 | --- | --- | --- | 10.6 | 9.5 | 10.0 |
| 29 | --- | --- | --- | 10.6 | 9.9 | 10.2 | --- | --- | --- | 10.5 | 9.3 | 9.8 |
| 30 | --- | --- | --- | 10.7 | 9.9 | 10.3 | --- | --- | --- | 9.7 | 8.6 | 9.2 |
| 31 | --- | --- | --- | 10.8 | 10.2 | 10.5 | --- | --- | --- | 9.7 | 8.1 | 8.9 |
| MONTH | 14.3 | 9.3 | 11.1 | 13.1 | 8.2 | 11.2 | 11.1 | 7.5 | 9.5 | 11.3 | 8.1 | 10.1 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|-----|------|------|-----|--------|------|------|-----------|------|-----|------|
| JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | | |
| 1 | 10.2 | 8.8 | 9.5 | --- | --- | --- | 11.0 | 8.6 | 10.0 | --- | --- | --- |
| 2 | 10.5 | 8.6 | 9.6 | --- | --- | --- | 10.1 | 8.3 | 9.4 | --- | --- | --- |
| 3 | 10.2 | 8.3 | 9.2 | --- | --- | --- | 12.5 | 5.4 | 9.6 | --- | --- | --- |
| 4 | 10.6 | 8.5 | 9.4 | --- | --- | --- | 10.5 | 6.7 | 9.3 | --- | --- | --- |
| 5 | 10.6 | 8.2 | 9.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 11.0 | 8.3 | 9.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 10.8 | 7.9 | 9.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 10.9 | 7.9 | 9.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 11.3 | 8.1 | 9.5 | --- | --- | --- | --- | --- | --- | 14.0 | 4.1 | 8.9 |
| 10 | 11.6 | 8.0 | 9.6 | --- | --- | --- | --- | --- | --- | 14.4 | 4.4 | 9.4 |
| 11 | 11.7 | 8.5 | 9.9 | --- | --- | --- | --- | --- | --- | 14.5 | 4.1 | 9.2 |
| 12 | 11.6 | 8.6 | 9.9 | --- | --- | --- | --- | --- | --- | 12.6 | 4.0 | 8.2 |
| 13 | 12.0 | 8.6 | 10.3 | --- | --- | --- | --- | --- | --- | 11.3 | 3.3 | 7.1 |
| 14 | 13.5 | 8.9 | 11.0 | 14.7 | 4.4 | 9.4 | --- | --- | --- | 5.4 | 1.4 | 3.3 |
| 15 | 13.1 | 7.2 | 9.7 | 14.4 | 4.0 | 9.1 | --- | --- | --- | 6.9 | 1.1 | 3.7 |
| 16 | 11.5 | 6.6 | 8.9 | 14.7 | 3.6 | 8.3 | --- | --- | --- | 9.2 | 2.6 | 5.7 |
| 17 | 11.6 | 6.6 | 8.7 | 15.1 | 3.7 | 8.8 | --- | --- | --- | 8.4 | 3.1 | 5.7 |
| 18 | 11.9 | 6.5 | 9.0 | 12.3 | 3.4 | 7.6 | --- | --- | --- | 6.4 | 3.0 | 4.9 |
| 19 | 12.7 | 7.1 | 9.6 | 14.0 | 3.3 | 8.5 | --- | --- | --- | 7.5 | 3.3 | 5.5 |
| 20 | 12.0 | 7.1 | 9.3 | 13.9 | 3.5 | 8.3 | --- | --- | --- | 9.1 | 3.4 | 6.1 |
| 21 | 13.1 | 6.8 | 9.5 | 14.0 | 3.3 | 8.4 | --- | --- | --- | 10.8 | 4.3 | 7.4 |
| 22 | 11.5 | 6.0 | 8.5 | 14.5 | 3.5 | 8.4 | --- | --- | --- | 10.7 | 5.5 | 7.9 |
| 23 | 12.1 | 5.8 | 8.7 | 14.0 | 3.2 | 8.2 | 6.1 | 3.6 | 5.0 | 8.3 | 6.0 | 7.1 |
| 24 | 12.0 | 5.8 | 8.8 | 12.9 | 3.1 | 7.7 | 8.5 | 3.6 | 5.5 | 11.0 | 4.6 | 8.9 |
| 25 | 12.0 | 5.8 | 8.4 | 12.0 | 3.1 | 6.8 | 9.0 | 4.2 | 7.5 | 13.4 | 9.7 | 10.9 |
| 26 | 12.6 | 6.0 | 9.3 | 15.1 | 3.3 | 8.5 | 10.5 | 5.0 | 6.8 | 14.1 | 9.7 | 12.0 |
| 27 | 13.2 | 5.9 | 9.6 | 15.9 | 4.2 | 9.7 | 11.4 | 4.7 | 7.1 | 10.4 | 9.2 | 9.7 |
| 28 | 12.2 | 5.9 | 9.1 | 14.1 | 3.9 | 8.8 | 11.5 | 10.1 | 10.8 | 10.8 | 9.1 | 9.8 |
| 29 | 11.1 | 5.4 | 8.4 | 14.8 | 4.1 | 9.4 | --- | --- | --- | 11.1 | 3.9 | 8.0 |
| 30 | 12.3 | 5.4 | 8.7 | 16.0 | 4.7 | 9.8 | --- | --- | --- | --- | --- | --- |
| 31 | --- | --- | --- | 14.0 | 4.3 | 9.0 | --- | --- | --- | --- | --- | --- |
| MONTH | 13.5 | 5.4 | 9.3 | 16.0 | 3.1 | 8.6 | 12.5 | 3.6 | 8.1 | 14.5 | 1.1 | 7.6 |

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|------|-------|------|------|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 22.5 | 18.5 | 13.5 | 12.5 | 5.0 | 4.5 | --- | --- | 7.5 | 5.5 | 10.5 | 9.0 |
| 2 | 20.5 | 19.0 | 13.5 | 13.0 | 5.0 | 4.0 | --- | --- | 8.5 | 6.0 | 9.0 | 8.5 |
| 3 | 20.0 | 17.5 | 14.0 | 13.0 | 4.5 | 4.5 | --- | --- | 8.5 | 6.5 | 9.0 | 8.0 |
| 4 | 19.5 | 16.5 | 14.5 | 13.0 | 5.0 | 4.0 | --- | --- | 9.5 | 7.0 | 10.0 | 7.5 |
| 5 | 19.0 | 15.5 | 14.0 | 13.5 | 5.5 | 4.0 | --- | --- | 9.0 | 7.0 | 10.5 | 8.0 |
| 6 | 19.0 | 15.5 | 14.5 | 14.0 | 5.0 | 4.0 | --- | --- | 9.5 | 7.5 | 10.0 | 8.0 |
| 7 | 19.5 | 15.5 | 14.0 | 13.0 | 5.0 | 4.0 | 8.0 | 4.5 | 9.0 | 7.5 | 9.5 | 8.5 |
| 8 | 18.0 | 16.0 | 14.0 | 13.0 | 6.0 | 4.0 | 9.0 | 3.0 | 10.0 | 8.0 | 10.5 | 8.5 |
| 9 | 18.0 | 15.5 | 14.0 | 13.0 | 5.5 | 4.5 | 8.0 | 3.5 | 10.5 | 8.5 | 9.0 | 8.0 |
| 10 | 18.5 | 15.5 | 13.5 | 12.5 | 6.5 | 4.0 | 5.0 | 3.0 | 11.5 | 9.0 | 9.0 | 7.0 |
| 11 | 19.0 | 16.5 | 13.5 | 12.5 | --- | --- | 8.0 | 3.5 | 12.5 | 9.5 | 10.0 | 7.0 |
| 12 | 18.5 | 15.0 | --- | --- | --- | --- | 4.5 | 3.0 | 12.5 | 10.5 | 8.5 | 7.5 |
| 13 | 19.0 | 15.0 | --- | --- | --- | --- | 5.0 | 3.5 | 13.0 | 11.0 | 9.0 | 7.0 |
| 14 | 18.5 | 15.0 | --- | --- | --- | --- | 5.5 | 4.0 | 14.0 | 11.0 | 8.0 | 6.5 |
| 15 | 18.0 | 14.5 | --- | --- | --- | --- | 6.5 | 3.5 | 13.5 | 11.0 | 8.0 | 6.5 |
| 16 | 17.0 | 14.5 | --- | --- | --- | --- | 5.5 | 3.5 | 14.0 | 11.0 | 9.0 | 6.0 |
| 17 | 16.5 | 13.5 | --- | --- | --- | --- | 6.0 | 3.0 | 15.0 | 11.5 | 10.5 | 8.5 |
| 18 | 16.0 | 12.5 | --- | --- | --- | --- | 6.0 | 3.5 | 14.5 | 11.0 | 10.5 | 9.5 |
| 19 | 15.5 | 12.5 | --- | --- | --- | --- | 6.0 | 4.0 | 14.5 | 10.5 | 12.5 | 10.5 |
| 20 | 14.5 | 12.0 | --- | --- | --- | --- | 6.0 | 4.0 | 13.0 | 11.5 | 18.0 | 12.0 |
| 21 | 14.0 | 11.0 | --- | --- | --- | --- | 9.0 | 4.0 | 11.5 | 10.5 | --- | --- |
| 22 | 12.5 | 11.5 | --- | --- | --- | --- | 8.5 | 7.0 | 12.0 | 10.0 | 12.5 | 9.5 |
| 23 | 12.5 | 10.0 | --- | --- | --- | --- | 9.0 | 7.0 | 10.0 | 9.0 | 12.0 | 10.0 |
| 24 | 11.5 | 10.5 | --- | --- | --- | --- | 7.5 | 7.0 | 9.0 | 8.5 | 11.5 | 9.5 |
| 25 | 12.5 | 10.5 | --- | --- | --- | --- | 9.0 | 6.0 | 8.5 | 7.5 | 11.5 | 9.5 |
| 26 | 12.5 | 10.5 | 10.5 | 6.5 | --- | --- | 8.0 | 5.5 | 9.0 | 7.5 | 11.5 | 9.0 |
| 27 | 12.5 | 10.0 | 9.0 | 7.5 | --- | --- | 7.0 | 4.5 | 10.0 | 8.5 | 11.5 | 9.5 |
| 28 | 12.0 | 10.5 | 7.5 | 5.0 | --- | --- | 8.5 | --- | 10.0 | 9.0 | 11.0 | 9.0 |
| 29 | 12.0 | 11.0 | 5.5 | 4.5 | --- | --- | --- | 4.5 | --- | --- | 14.5 | 9.0 |
| 30 | 13.0 | 11.5 | 5.5 | 4.5 | --- | --- | 9.5 | --- | --- | --- | 20.0 | 15.0 |
| 31 | 13.0 | 11.0 | --- | --- | --- | --- | 7.0 | 5.0 | --- | --- | 19.0 | 17.0 |
| MONTH | 22.5 | 10.0 | 14.5 | 4.5 | 6.5 | 4.0 | 9.5 | 3.0 | 15.0 | 5.5 | 20.0 | 6.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 20.0 | 17.5 | --- | --- | 19.5 | 16.0 | --- | --- | 29.0 | 25.5 | --- | --- |
| 2 | 21.0 | 6.0 | --- | --- | 21.0 | 17.0 | --- | --- | 28.5 | 26.5 | --- | --- |
| 3 | 11.5 | 5.5 | --- | --- | 19.5 | 17.0 | --- | --- | 30.0 | 25.0 | --- | --- |
| 4 | 14.0 | 9.5 | --- | --- | 19.0 | 12.0 | --- | --- | 29.0 | 24.5 | --- | --- |
| 5 | 16.0 | 10.5 | --- | --- | 22.0 | 15.5 | --- | --- | 28.0 | 23.0 | --- | --- |
| 6 | 17.0 | 12.0 | 13.5 | 11.0 | 24.0 | 21.0 | --- | --- | 28.0 | 22.0 | --- | --- |
| 7 | 17.0 | 13.0 | 13.5 | 10.5 | 25.0 | 23.0 | --- | --- | 27.0 | 20.5 | --- | --- |
| 8 | 15.0 | 13.5 | 15.0 | 11.0 | 23.5 | 21.0 | --- | --- | 28.0 | 21.0 | --- | --- |
| 9 | 13.5 | 12.0 | 15.5 | 11.5 | 22.5 | 19.5 | --- | --- | 26.0 | 21.0 | 23.5 | 20.0 |
| 10 | 12.5 | 11.0 | 15.0 | 13.5 | 22.5 | 19.5 | --- | --- | 27.0 | 21.0 | 24.0 | 20.5 |
| 11 | 14.5 | 11.5 | 16.0 | 13.5 | 21.0 | 19.0 | --- | --- | 28.5 | 21.5 | 24.5 | 21.0 |
| 12 | 15.5 | 11.0 | 15.0 | 12.5 | 21.5 | 17.5 | --- | --- | 28.0 | 22.5 | 25.0 | 21.0 |
| 13 | --- | --- | 15.0 | 10.0 | 23.0 | 17.5 | --- | --- | 26.5 | 21.5 | 25.5 | 22.0 |
| 14 | --- | --- | 16.0 | 13.5 | 24.5 | 19.0 | 26.5 | 22.0 | 25.5 | 20.5 | 24.0 | 21.5 |
| 15 | --- | --- | 16.0 | 13.5 | 28.0 | 19.5 | 27.0 | 23.0 | 26.5 | 20.0 | 21.5 | 19.0 |
| 16 | --- | --- | 15.5 | 13.5 | 30.0 | 23.5 | 28.0 | 24.0 | --- | --- | 20.5 | 18.5 |
| 17 | --- | --- | 14.5 | 13.0 | 29.0 | 25.0 | 27.5 | 23.5 | --- | --- | 20.0 | 19.0 |
| 18 | --- | --- | 13.5 | 11.0 | 28.0 | 24.5 | 26.0 | 24.0 | --- | --- | 20.0 | 19.0 |
| 19 | --- | --- | 16.0 | 10.5 | 28.5 | 24.0 | 27.0 | 22.5 | --- | --- | 20.0 | 18.5 |
| 20 | --- | --- | 15.5 | 11.5 | 26.5 | 24.0 | 27.5 | 23.5 | --- | --- | 19.5 | 17.5 |
| 21 | --- | --- | 17.0 | 14.5 | 30.0 | 23.0 | 27.5 | 23.5 | --- | --- | 19.5 | 17.0 |
| 22 | --- | --- | 16.0 | 13.5 | 31.0 | 25.5 | 28.5 | 24.0 | --- | --- | 20.0 | 16.5 |
| 23 | --- | --- | 14.0 | 13.0 | 31.5 | 26.0 | 28.5 | 25.0 | 26.5 | 22.0 | 18.5 | 17.5 |
| 24 | --- | --- | 14.5 | 12.5 | 32.0 | 26.0 | 28.5 | 25.5 | 24.5 | 22.5 | 19.0 | 16.0 |
| 25 | --- | --- | 14.5 | 12.0 | 30.5 | 27.0 | 26.0 | 24.0 | 23.0 | 21.5 | 18.5 | 16.5 |
| 26 | --- | --- | 15.0 | 12.0 | 32.0 | 26.0 | 27.0 | 23.5 | 22.5 | 20.5 | 19.0 | 14.5 |
| 27 | --- | --- | 14.0 | 12.0 | 31.0 | 25.5 | 27.5 | 23.5 | 22.5 | 20.5 | 19.0 | 16.0 |
| 28 | --- | --- | 15.5 | 12.0 | 31.5 | 26.0 | 27.0 | 23.5 | 27.5 | 21.0 | 17.0 | 16.0 |
| 29 | --- | --- | 16.5 | 12.5 | 29.0 | 19.0 | 27.5 | 23.0 | --- | --- | 18.5 | 15.0 |
| 30 | --- | --- | 18.0 | 14.0 | 24.5 | 20.5 | 28.5 | 24.0 | --- | --- | --- | --- |
| 31 | --- | --- | 20.0 | 16.0 | --- | --- | 29.0 | 25.0 | --- | --- | --- | --- |
| MONTH | 21.0 | 5.5 | 20.0 | 10.0 | 32.0 | 12.0 | 29.0 | 22.0 | 30.0 | 20.0 | 25.5 | 14.5 |

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | | |
| 1 | 1 | 0 | 1 | 15 | 10 | 10 | 1 | 0 | 1 | 1 | 0 | 1 |
| 2 | 1 | 0 | 1 | 10 | 3 | 6 | 1 | 0 | 1 | 2 | 0 | 1 |
| 3 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 4 | 2 | 3 |
| 4 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 7 | 3 | 5 |
| 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 3 | 2 | 3 |
| 6 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 0 | 1 | 3 | 3 | 3 |
| 7 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 0 | 1 | 3 | 2 | 2 |
| 8 | 3 | 2 | 2 | 1 | 0 | 1 | 2 | 0 | 1 | 3 | 1 | 2 |
| 9 | 3 | 2 | 3 | 1 | 0 | 1 | 6 | 2 | 3 | 2 | 0 | 2 |
| 10 | 4 | 3 | 3 | 2 | 0 | 1 | 6 | 1 | 3 | 2 | 1 | 2 |
| 11 | 4 | 3 | 4 | 1 | 0 | 1 | --- | --- | --- | 5 | 1 | 2 |
| 12 | 4 | 3 | 4 | --- | --- | --- | --- | --- | --- | 15 | 4 | 9 |
| 13 | 5 | 4 | 4 | --- | --- | --- | --- | --- | --- | 9 | 4 | 6 |
| 14 | 5 | 5 | 5 | --- | --- | --- | --- | --- | --- | 5 | 4 | 5 |
| 15 | 6 | 5 | 6 | --- | --- | --- | --- | --- | --- | 6 | 3 | 5 |
| 16 | 6 | 5 | 6 | --- | --- | --- | 1 | 0 | 1 | 6 | 6 | 6 |
| 17 | 7 | 5 | 6 | --- | --- | --- | 1 | 0 | 1 | 6 | 4 | 5 |
| 18 | 7 | 6 | 7 | 2 | 0 | 2 | 1 | 0 | 1 | 4 | 3 | 4 |
| 19 | 7 | 6 | 7 | 2 | 0 | 1 | 1 | 0 | 1 | 4 | 3 | 4 |
| 20 | 8 | 6 | 7 | 2 | 0 | 1 | 5 | 0 | 1 | 4 | 3 | 3 |
| 21 | 8 | 7 | 7 | 1 | 0 | 1 | 1 | 0 | 1 | 4 | 2 | 3 |
| 22 | 8 | 7 | 8 | 1 | 0 | 1 | 1 | 0 | 1 | 3 | 2 | 2 |
| 23 | 9 | 8 | 9 | 1 | 0 | 1 | 1 | 0 | 1 | 3 | 2 | 2 |
| 24 | 9 | 9 | 9 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 2 |
| 25 | --- | --- | --- | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 2 |
| 26 | 10 | 9 | 10 | 1 | 0 | 1 | 2 | 0 | 1 | 2 | 1 | 2 |
| 27 | 10 | 3 | 8 | 1 | 0 | 1 | 2 | 1 | 2 | 2 | 1 | 2 |
| 28 | 10 | 5 | 9 | 1 | 0 | 1 | 2 | 0 | 1 | 2 | 1 | 2 |
| 29 | 10 | 7 | 10 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 2 |
| 30 | 10 | 6 | 10 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 |
| 31 | 10 | 1 | 4 | --- | --- | --- | 1 | 0 | 1 | 2 | 1 | 1 |
| MONTH | 10 | 0 | 5 | 15 | 0 | 1 | 6 | 0 | 1 | 15 | 0 | 3 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | |
| 1 | 3 | 2 | 2 | 20 | 10 | 15 | --- | --- | --- | --- | --- | --- |
| 2 | 3 | 2 | 3 | 20 | 15 | 20 | --- | --- | --- | --- | --- | --- |
| 3 | 2 | 1 | 2 | 20 | 15 | 15 | 4 | 4 | 4 | --- | --- | --- |
| 4 | 2 | 1 | 2 | 25 | 20 | 20 | 4 | 4 | 4 | --- | --- | --- |
| 5 | 2 | 1 | 1 | 20 | 15 | 20 | 7 | 6 | 6 | --- | --- | --- |
| 6 | 2 | 1 | 1 | 15 | 10 | 10 | 6 | 5 | 5 | 20 | 6 | 10 |
| 7 | 2 | 1 | 1 | 10 | 8 | 9 | 5 | 4 | 5 | 7 | 6 | 7 |
| 8 | 2 | 1 | 1 | 10 | 7 | 9 | 6 | 5 | 5 | 7 | 5 | 5 |
| 9 | 2 | 1 | 1 | 55 | 10 | 25 | 5 | 4 | 5 | 5 | 3 | 4 |
| 10 | 2 | 1 | 1 | 35 | 25 | 45 | 5 | 4 | 5 | 3 | 2 | 2 |
| 11 | 2 | 1 | 1 | 25 | 15 | 20 | 5 | 4 | 4 | 7 | 2 | 5 |
| 12 | 2 | 1 | 1 | 15 | 10 | 10 | 4 | 3 | 4 | 7 | 6 | 6 |
| 13 | 2 | 1 | 1 | 10 | 9 | 10 | --- | --- | --- | 9 | 4 | 7 |
| 14 | 2 | 1 | 1 | 10 | 8 | 9 | --- | --- | --- | 10 | 6 | 8 |
| 15 | 4 | 1 | 2 | 9 | 6 | 7 | --- | --- | --- | 6 | 5 | 6 |
| 16 | 2 | 1 | 2 | 7 | 6 | 7 | --- | --- | --- | 8 | 5 | 6 |
| 17 | 2 | 1 | 2 | 6 | 5 | 6 | --- | --- | --- | 9 | 5 | 7 |
| 18 | 2 | 1 | 2 | 6 | 4 | 5 | --- | --- | --- | 15 | 7 | 10 |
| 19 | 2 | 1 | 2 | 5 | 4 | 5 | --- | --- | --- | 15 | 9 | 10 |
| 20 | 2 | 1 | 2 | 4 | 3 | 4 | --- | --- | --- | 10 | 9 | 9 |
| 21 | 4 | 1 | 2 | 4 | 3 | 3 | --- | --- | --- | 9 | 6 | 8 |
| 22 | 7 | 4 | 6 | --- | --- | --- | --- | --- | --- | 7 | 5 | 6 |
| 23 | 10 | 4 | 6 | --- | --- | --- | --- | --- | --- | 6 | 4 | 5 |
| 24 | 15 | 8 | 10 | --- | --- | --- | --- | --- | --- | 6 | 5 | 5 |
| 25 | 15 | 9 | 10 | --- | --- | --- | --- | --- | --- | 10 | 7 | 9 |
| 26 | 15 | 10 | 10 | --- | --- | --- | --- | --- | --- | 10 | 8 | 10 |
| 27 | 10 | 9 | 10 | 4 | 4 | 4 | --- | --- | --- | 10 | 7 | 8 |
| 28 | 10 | 9 | 10 | --- | --- | --- | --- | --- | --- | 8 | 5 | 7 |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7 | 5 | 6 |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6 | 5 | 5 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5 | 4 | 4 |
| MONTH | 15 | 1 | 3 | 55 | 3 | 10 | 7 | 3 | 4 | 20 | 2 | 6 |

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 4 | 3 | 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | 4 | 3 | 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 3 | 2 | 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | 3 | 4 | 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 2 | 2 | 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 2 | 1 | 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 2 | 1 | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 2 | 1 | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 2 | 1 | 2 | --- | --- | --- | --- | --- | --- | 1 | 1 | 1 |
| 10 | 2 | 1 | 1 | --- | --- | --- | 2 | 1 | 1 | 1 | 0 | 1 |
| 11 | 1 | 1 | 1 | --- | --- | --- | 2 | 0 | 1 | 1 | 0 | 1 |
| 12 | 1 | 1 | 1 | --- | --- | --- | 2 | 1 | 1 | 2 | 0 | 1 |
| 13 | 1 | 0 | 1 | --- | --- | --- | 2 | 1 | 1 | 1 | 0 | 1 |
| 14 | 1 | 0 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 0 | 1 |
| 15 | 8 | 0 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 3 | 0 | 1 |
| 16 | 9 | 1 | 4 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 17 | 8 | 1 | 3 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 18 | 7 | 1 | 2 | 2 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 19 | 1 | 0 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 0 | 1 |
| 20 | 1 | 0 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 0 | 1 |
| 21 | 2 | 0 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 0 | 1 |
| 22 | 2 | 0 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 23 | 1 | 0 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 0 | 1 |
| 24 | 9 | 0 | 4 | 1 | 1 | 1 | 3 | 2 | 2 | 6 | 1 | 2 |
| 25 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 9 | 1 | 4 |
| 26 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 20 | 2 | 6 |
| 27 | 3 | 0 | 1 | 1 | 0 | 1 | 3 | 1 | 2 | 4 | 0 | 2 |
| 28 | 6 | 2 | 4 | 1 | 0 | 1 | 8 | 4 | 7 | 4 | 0 | 2 |
| 29 | 20 | 4 | 10 | 1 | 1 | 1 | 8 | 8 | 8 | 5 | 3 | 5 |
| 30 | 3 | 1 | 2 | 1 | 1 | 1 | --- | --- | --- | 5 | --- | --- |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MONTH | 20 | 0 | 2 | 2 | 0 | 1 | 8 | 0 | 2 | 20 | 0 | 1 |

UMPQUA RIVER BASIN

447

14312400 SILENT CREEK NEAR DIAMOND LAKE, OR

LOCATION.--Lat 43°07'36", long 122°09'33", in T.28 S., R.6 E. (unsurveyed), Douglas County, Hydrologic Unit 17100301, in Umpqua National Forest, on right bank 25 ft (8 m) upstream from Summer Homes Road and 3.7 mi (6.0 km) southwest of town of Diamond Lake.

DRAINAGE AREA.--8.24 mi² (21.34 km²).

PERIOD OF RECORD.--October 1971 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,190 ft (1,580 m), from topographic map.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--6 years, 31.4 ft³/s (0.889 m³/s), 22,750 acre-ft/yr (28.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65 ft³/s (1.84 m³/s) Sept. 13, 1975, gage height, 3.84 ft (1.170 m); minimum, 24 ft³/s (0.68 m³/s) Jan. 6-14, 1974, July 22 to Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33 ft³/s (0.93 m³/s) Sept. 28, gage height, 3.39 ft (1.033 m); minimum, 24 ft³/s (0.68 m³/s) July 22 to Sept. 13.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|--------|--------|-------------|------|------|------|------|------|------|
| 1 | 29 | 29 | 28 | 28 | 27 | 27 | 27 | 29 | 26 | 26 | 24 | 24 |
| 2 | 29 | 29 | 28 | 28 | 27 | 27 | 27 | 29 | 26 | 26 | 24 | 24 |
| 3 | 29 | 29 | 29 | 28 | 27 | 27 | 27 | 29 | 26 | 26 | 24 | 24 |
| 4 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 26 | 25 | 24 | 24 |
| 5 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 26 | 25 | 24 | 24 |
| 6 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 26 | 25 | 24 | 24 |
| 7 | 29 | 29 | 29 | 28 | 26 | 27 | 28 | 28 | 26 | 25 | 24 | 24 |
| 8 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 26 | 25 | 24 | 24 |
| 9 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 26 | 25 | 24 | 24 |
| 10 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 27 | 25 | 24 | 24 |
| 11 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 27 | 25 | 24 | 24 |
| 12 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 27 | 25 | 24 | 24 |
| 13 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 26 | 25 | 24 | 24 |
| 14 | 29 | 29 | 29 | 28 | 27 | 27 | 28 | 28 | 26 | 25 | 24 | 25 |
| 15 | 29 | 29 | 29 | 28 | 27 | 27 | 29 | 28 | 26 | 25 | 24 | 25 |
| 16 | 29 | 29 | 29 | 28 | 27 | 27 | 29 | 28 | 26 | 25 | 24 | 25 |
| 17 | 29 | 29 | 29 | 28 | 27 | 27 | 29 | 27 | 26 | 25 | 24 | 25 |
| 18 | 28 | 29 | 29 | 28 | 27 | 27 | 28 | 27 | 26 | 25 | 24 | 25 |
| 19 | 28 | 28 | 29 | 28 | 28 | 27 | 28 | 27 | 26 | 25 | 24 | 25 |
| 20 | 28 | 28 | 28 | 28 | 28 | 27 | 29 | 27 | 26 | 25 | 24 | 25 |
| 21 | 29 | 28 | 28 | 28 | 28 | 27 | 29 | 27 | 26 | 25 | 24 | 25 |
| 22 | 29 | 28 | 28 | 28 | 28 | 27 | 29 | 27 | 26 | 24 | 24 | 25 |
| 23 | 28 | 28 | 28 | 28 | 28 | 27 | 29 | 27 | 26 | 24 | 24 | 25 |
| 24 | 29 | 28 | 28 | 28 | 27 | 27 | 29 | 27 | 26 | 24 | 25 | 25 |
| 25 | 29 | 28 | 28 | 27 | 27 | 27 | 29 | 27 | 26 | 24 | 25 | 25 |
| 26 | 29 | 28 | 28 | 27 | 27 | 27 | 29 | 28 | 26 | 24 | 24 | 25 |
| 27 | 29 | 28 | 28 | 27 | 27 | 27 | 29 | 27 | 26 | 24 | 24 | 25 |
| 28 | 29 | 28 | 28 | 27 | 28 | 27 | 29 | 26 | 26 | 24 | 24 | 29 |
| 29 | 29 | 28 | 28 | 27 | --- | 27 | 29 | 26 | 26 | 24 | 24 | 26 |
| 30 | 29 | 28 | 28 | 27 | --- | 27 | 29 | 26 | 26 | 24 | 24 | 25 |
| 31 | 29 | --- | 28 | 27 | --- | 27 | --- | 26 | --- | 24 | 24 | --- |
| TOTAL | 895 | 858 | 885 | 861 | 761 | 837 | 851 | 853 | 783 | 768 | 746 | 742 |
| MEAN | 28.9 | 28.6 | 28.5 | 27.8 | 27.2 | 27.0 | 28.4 | 27.5 | 26.1 | 24.8 | 24.1 | 24.7 |
| MAX | 29 | 29 | 29 | 28 | 28 | 27 | 29 | 29 | 27 | 26 | 25 | 29 |
| MIN | 28 | 28 | 28 | 27 | 26 | 27 | 27 | 26 | 26 | 24 | 24 | 24 |
| AC-FT | 1780 | 1700 | 1760 | 1710 | 1510 | 1660 | 1690 | 1690 | 1550 | 1520 | 1480 | 1470 |
| CAL YR 1976 | TOTAL | 10956 | MEAN 29.9 | MAX 36 | MIN 28 | AC-FT 21730 | | | | | | |
| WTR YR 1977 | TOTAL | 9840 | MEAN 27.0 | MAX 29 | MIN 24 | AC-FT 19520 | | | | | | |

UMPQUA RIVER BASIN

14312450 DIAMOND LAKE NEAR DIAMOND LAKE, OR

LOCATION.--Lat 43°08'22", long 122°08'10", T.28 S., R.6 E. (unsurveyed), Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, at shore of lake, at mouth of Short Creek and 2.7 mi (4.3 km) south of town of Diamond Lake.

DRAINAGE AREA.--54.9 mi² (142.2 km²).

PERIOD OF RECORD.--October 1971 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 5,180.27 ft (1,578.946 m) above mean sea level. Gage readings have been reduced to elevations above mean sea level.

REMARKS.--Records good. Lake regulated by flash boards at outlet (Lake Creek). Flash boards are removed each fall and replaced after runoff each summer. Insignificant diversion from tributary streams for domestic use.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 77,140 acre-ft (95.1 hm³) June 5, 6, 1974, elevation, 5,183.67 ft (1,579.983 m); minimum, 73,020 acre-ft (90.0 hm³) Nov. 9, 1971, elevation, 5,182.38 ft (1,579.589 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 76,470 acre-ft (94.3 hm³) Mar. 9, elevation, 5,183.46 ft (1,579.919 m); minimum, 73,690 acre-ft (90.9 hm³) Dec. 7, elevation, 5,182.59 ft (1,579.653 m).

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 5182.96 | 5183.15 | 5182.63 | 5182.68 | 5182.91 | 5183.32 | 5183.33 | 5183.28 | 5183.28 | 5183.21 | 5183.11 | 5183.14 |
| 2 | 5182.98 | 5183.12 | 5182.62 | 5182.70 | 5182.92 | 5183.35 | 5183.30 | 5183.29 | 5183.26 | 5183.19 | 5183.11 | 5183.13 |
| 3 | 5182.99 | 5183.08 | 5182.62 | 5182.73 | 5182.92 | 5183.36 | 5183.29 | 5183.35 | 5183.25 | 5183.18 | 5183.11 | 5183.13 |
| 4 | 5183.01 | 5183.05 | 5182.61 | 5182.74 | 5182.93 | 5183.35 | 5183.29 | 5183.35 | 5183.24 | 5183.17 | 5183.10 | 5183.13 |
| 5 | 5183.02 | 5183.02 | 5182.61 | 5182.73 | 5182.95 | 5183.34 | 5183.28 | 5183.36 | 5183.24 | 5183.15 | 5183.09 | 5183.13 |
| 6 | 5183.04 | 5182.98 | 5182.60 | 5182.72 | 5182.97 | 5183.33 | 5183.27 | 5183.35 | 5183.24 | 5183.15 | 5183.09 | 5183.13 |
| 7 | 5183.05 | 5182.95 | 5182.59 | 5182.72 | 5182.97 | 5183.38 | 5183.27 | 5183.34 | 5183.23 | 5183.15 | 5183.09 | 5183.13 |
| 8 | 5183.07 | 5182.92 | 5182.64 | 5182.71 | 5182.97 | 5183.41 | 5183.29 | 5183.32 | 5183.22 | 5183.15 | 5183.09 | 5183.13 |
| 9 | 5183.08 | 5182.90 | 5182.63 | 5182.71 | 5182.97 | 5183.45 | 5183.29 | 5183.36 | 5183.21 | 5183.15 | 5183.08 | 5183.13 |
| 10 | 5183.10 | 5182.88 | 5182.63 | 5182.72 | 5182.98 | 5183.43 | 5183.28 | 5183.36 | 5183.32 | 5183.15 | 5183.07 | 5183.12 |
| 11 | 5183.12 | 5182.85 | 5182.62 | 5182.73 | 5183.00 | 5183.41 | 5183.28 | 5183.35 | 5183.31 | 5183.15 | 5183.07 | 5183.12 |
| 12 | 5183.13 | 5182.82 | 5182.62 | 5182.74 | 5183.00 | 5183.45 | 5183.29 | 5183.33 | 5183.35 | 5183.15 | 5183.09 | 5183.12 |
| 13 | 5183.14 | 5182.83 | 5182.62 | 5182.75 | 5183.01 | 5183.42 | 5183.30 | 5183.33 | 5183.34 | 5183.14 | 5183.08 | 5183.12 |
| 14 | 5183.16 | 5182.82 | 5182.62 | 5182.75 | 5183.02 | 5183.40 | 5183.30 | 5183.32 | 5183.32 | 5183.14 | 5183.08 | 5183.13 |
| 15 | 5183.17 | 5182.86 | 5182.61 | 5182.75 | 5183.02 | 5183.38 | 5183.30 | 5183.33 | 5183.31 | 5183.14 | 5183.08 | 5183.13 |
| 16 | 5183.18 | 5182.83 | 5182.60 | 5182.74 | 5183.02 | 5183.36 | 5183.30 | 5183.34 | 5183.30 | 5183.13 | 5183.08 | 5183.12 |
| 17 | 5183.17 | 5182.82 | 5182.60 | 5182.73 | 5183.02 | 5183.35 | 5183.31 | 5183.33 | 5183.30 | 5183.12 | 5183.07 | 5183.13 |
| 18 | 5183.16 | 5182.80 | 5182.61 | 5182.73 | 5183.02 | 5183.35 | 5183.28 | 5183.32 | 5183.29 | 5183.13 | 5183.07 | 5183.12 |
| 19 | 5183.17 | 5182.77 | 5182.61 | 5182.73 | 5183.02 | 5183.35 | 5183.28 | 5183.30 | 5183.27 | 5183.12 | 5183.07 | 5183.16 |
| 20 | 5183.17 | 5182.76 | 5182.61 | 5182.72 | 5183.05 | 5183.33 | 5183.27 | 5183.30 | 5183.27 | 5183.12 | 5183.07 | 5183.17 |
| 21 | 5183.17 | 5182.75 | 5182.62 | 5182.72 | 5183.12 | 5183.32 | 5183.26 | 5183.28 | 5183.26 | 5183.12 | 5183.06 | 5183.13 |
| 22 | 5183.18 | 5182.73 | 5182.62 | 5182.73 | 5183.16 | 5183.30 | 5183.26 | 5183.33 | 5183.25 | 5183.12 | 5183.05 | 5183.10 |
| 23 | 5183.17 | 5182.72 | 5182.62 | 5182.76 | 5183.20 | 5183.32 | 5183.24 | 5183.35 | 5183.24 | 5183.13 | 5183.04 | 5183.16 |
| 24 | 5183.21 | 5182.71 | 5182.62 | 5182.78 | 5183.21 | 5183.32 | 5183.24 | 5183.33 | 5183.24 | 5183.13 | 5183.12 | 5183.12 |
| 25 | 5183.23 | 5182.70 | 5182.64 | 5182.79 | 5183.23 | 5183.32 | 5183.24 | 5183.34 | 5183.24 | 5183.12 | 5183.15 | 5183.12 |
| 26 | 5183.20 | 5182.68 | 5182.66 | 5182.82 | 5183.24 | 5183.30 | 5183.24 | 5183.35 | 5183.22 | 5183.12 | 5183.14 | 5183.10 |
| 27 | 5183.19 | 5182.66 | 5182.66 | 5182.85 | 5183.28 | 5183.35 | 5183.24 | 5183.35 | 5183.20 | 5183.13 | 5183.13 | 5183.12 |
| 28 | 5183.19 | 5182.65 | 5182.65 | 5182.87 | 5183.32 | 5183.36 | 5183.25 | 5183.33 | 5183.20 | 5183.12 | 5183.13 | 5183.28 |
| 29 | 5183.18 | 5182.64 | 5182.65 | 5182.87 | --- | 5183.36 | 5183.26 | 5183.32 | 5183.18 | 5183.10 | 5183.14 | 5183.25 |
| 30 | 5183.07 | 5182.64 | 5182.65 | 5182.88 | --- | 5183.35 | 5183.26 | 5183.30 | 5183.17 | 5183.10 | 5183.14 | 5183.23 |
| 31 | 5183.17 | --- | 5182.65 | 5182.90 | --- | 5183.34 | --- | 5183.30 | --- | 5183.11 | 5183.12 | --- |
| MEAN | 5183.12 | 5182.84 | 5182.62 | 5182.76 | 5183.05 | 5183.36 | 5183.28 | 5183.33 | 5183.26 | 5183.14 | 5183.09 | 5183.14 |
| MAX | 5183.23 | 5183.15 | 5182.66 | 5182.90 | 5183.32 | 5183.45 | 5183.33 | 5183.36 | 5183.35 | 5183.21 | 5183.15 | 5183.28 |
| MIN | 5182.96 | 5182.64 | 5182.59 | 5182.68 | 5182.91 | 5183.30 | 5183.24 | 5183.28 | 5183.17 | 5183.10 | 5183.04 | 5183.10 |
| (†) | 75,540 | 73,850 | 73,880 | 74,680 | 76,020 | 76,090 | 75,830 | 75,960 | 75,540 | 75,360 | 75,380 | 75,740 |
| (‡) | +800 | -1,690 | +30 | +800 | +1,340 | +70 | -260 | +130 | -420 | -180 | +20 | +360 |
| CAL YR 1976 | MEAN | 5182.79 | MAX | 5183.23 | MIN | 5182.46 | AC-FT† | +60 | | | | |
| WTR YR 1977 | MEAN | 5183.08 | MAX | 5183.45 | MIN | 5182.59 | AC-FT† | +1,000 | | | | |

† Contents, in acre-feet, at end of month.

‡ Change in contents, in acre-feet.

UMPQUA RIVER BASIN

449

14312500 LAKE CREEK NEAR DIAMOND LAKE, OR

LOCATION.--Lat 43°11'10", long 122°09'55", in NW¼SW¼ sec.30, T.27 S., R.6 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on right bank 260 ft (79 m) downstream from outlet of Diamond Lake, 1.6 mi (2.6 km) northwest of town of Diamond Lake, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--54.9 mi² (142.2 km²).

PERIOD OF RECORD.--May 1922 to September 1925 (no winter records), October 1926 to September 1929, April, July, August 1930, October 1930 to September 1953, October 1971 to current year. Prior to October 1971 published as "at Diamond Lake, near Fort Klamath."

GAGE.--Water-stage recorder. Altitude of gage is 5,180 ft (1,580 m), from river-profile map. Prior to May 26, 1931, nonrecording gage at site 300 ft (91 m) downstream at different datum. May 26, 1931, to Oct. 6, 1933, nonrecording gage at present site and datum.

REMARKS.--Records fair. Flow regulated by gates and fish racks at lake outlet. No diversion above station.

AVERAGE DISCHARGE.--32 years (water years 1927-29, 1931-53, 1972-77), 57.1 ft³/s (1.617 m³/s), 41,370 acre-ft/yr (51.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 336 ft³/s (9.52 m³/s) Jan. 1, 1943, gage height, 2.8 ft (0.85 m), from rating curve extended above 120 ft³/s (3.40 m³/s); no flow Aug. 25-27, 1931, Sept. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 148 ft³/s (4.19 m³/s) Sept. 28, gage height, 2.27 ft (0.692 m); no flow Sept. 19.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-----------|---------|---------|-------------|------|------|------|------|------|--------|
| 1 | 6.8 | 125 | 49 | 40 | 26 | 56 | 59 | 52 | 53 | 27 | 18 | 21 |
| 2 | 6.8 | 112 | 48 | 42 | 27 | 58 | 56 | 59 | 52 | 26 | 18 | 21 |
| 3 | 6.8 | 103 | 46 | 45 | 25 | 63 | 55 | 60 | 52 | 25 | 18 | 22 |
| 4 | 6.8 | 97 | 45 | 45 | 28 | 62 | 52 | 63 | 49 | 23 | 18 | 21 |
| 5 | 6.8 | 92 | 45 | 46 | 28 | 60 | 49 | 62 | 46 | 23 | 18 | 20 |
| 6 | 7.5 | 90 | 45 | 46 | 29 | 59 | 49 | 59 | 45 | 22 | 17 | 19 |
| 7 | 6.8 | 86 | 44 | 46 | 29 | 63 | 48 | 58 | 45 | 22 | 17 | 19 |
| 8 | 6.3 | 85 | 41 | 46 | 30 | 70 | 46 | 55 | 44 | 22 | 17 | 19 |
| 9 | 7.1 | 81 | 41 | 40 | 31 | 78 | 46 | 53 | 42 | 21 | 17 | 18 |
| 10 | 7.5 | 78 | 41 | 35 | 33 | 76 | 45 | 59 | 48 | 21 | 18 | 18 |
| 11 | 8.4 | 75 | 39 | 35 | 33 | 73 | 45 | 60 | 59 | 21 | 20 | 18 |
| 12 | 11 | 73 | 36 | 36 | 34 | 76 | 45 | 59 | 60 | 21 | 20 | 18 |
| 13 | 9.8 | 70 | 36 | 36 | 33 | 75 | 45 | 56 | 64 | 21 | 21 | 18 |
| 14 | 11 | 72 | 39 | 36 | 35 | 72 | 45 | 55 | 58 | 20 | 21 | 18 |
| 15 | 15 | 72 | 39 | 48 | 35 | 67 | 45 | 56 | 45 | 21 | 21 | 18 |
| 16 | 21 | 70 | 36 | 48 | 37 | 64 | 42 | 58 | 45 | 21 | 20 | 18 |
| 17 | 30 | 69 | 34 | 46 | 37 | 63 | 42 | 58 | 44 | 21 | 19 | 19 |
| 18 | 37 | 67 | 33 | 48 | 39 | 62 | 42 | 55 | 41 | 21 | 19 | 11 |
| 19 | 36 | 66 | 32 | 48 | 39 | 60 | 40 | 53 | 39 | 19 | 19 | 6.0 |
| 20 | 36 | 64 | 33 | 46 | 33 | 59 | 40 | 52 | 39 | 19 | 19 | 73 |
| 21 | 33 | 59 | 32 | 46 | 27 | 58 | 37 | 52 | 39 | 19 | 19 | 121 |
| 22 | 33 | 56 | 32 | 28 | 32 | 55 | 36 | 52 | 34 | 19 | 19 | 116 |
| 23 | 45 | 55 | 32 | 7.1 | 35 | 56 | 37 | 58 | 31 | 19 | 18 | 116 |
| 24 | 59 | 53 | 32 | 6.8 | 37 | 58 | 41 | 58 | 30 | 19 | 22 | 130 |
| 25 | 63 | 52 | 33 | 5.7 | 39 | 56 | 50 | 59 | 30 | 19 | 23 | 135 |
| 26 | 62 | 53 | 34 | 4.6 | 41 | 55 | 49 | 62 | 30 | 19 | 21 | 128 |
| 27 | 59 | 53 | 35 | 4.8 | 45 | 59 | 48 | 60 | 29 | 19 | 22 | 121 |
| 28 | 53 | 52 | 40 | 5.0 | 53 | 63 | 48 | 58 | 28 | 18 | 23 | 140 |
| 29 | 52 | 50 | 39 | 27 | --- | 62 | 48 | 56 | 28 | 18 | 21 | 138 |
| 30 | 50 | 49 | 39 | 28 | --- | 60 | 49 | 56 | 27 | 18 | 21 | 128 |
| 31 | 103 | --- | 39 | 25 | --- | 59 | --- | 56 | --- | 18 | 21 | --- |
| TOTAL | 896.4 | 2179 | 1189 | 1046.0 | 950 | 1957 | 1379 | 1769 | 1276 | 642 | 605 | 1688.0 |
| MEAN | 28.9 | 72.6 | 38.4 | 33.7 | 33.9 | 63.1 | 46.0 | 57.1 | 42.5 | 20.7 | 19.5 | 56.3 |
| MAX | 103 | 125 | 49 | 48 | 53 | 78 | 59 | 63 | 64 | 27 | 23 | 140 |
| MIN | 6.3 | 45 | 32 | 4.6 | 25 | 55 | 36 | 52 | 27 | 18 | 17 | 6.0 |
| AC-FT | 1780 | 4320 | 2360 | 2070 | 1880 | 3880 | 2740 | 3510 | 2530 | 1270 | 1200 | 3350 |
| CAL YR 1976 | TOTAL | 22031.5 | MEAN 60.2 | MAX 125 | MIN 2.2 | AC-FT 43700 | | | | | | |
| WTR YR 1977 | TOTAL | 15576.4 | MEAN 42.7 | MAX 140 | MIN 4.6 | AC-FT 30900 | | | | | | |

UMPQUA RIVER BASIN

14313000 LEMOLO LAKE NEAR TOKETTE FALLS, OR

LOCATION.--Lat 43°19'10", long 122°11'20", in SE¼NW¼ sec.11, T.26 S., R.5 E., Douglas County, Hydrologic Unit 17100301, at Lemolo No. 1 diversion dam on North Umpqua River, 0.8 mi (1.3 km) downstream from Lake Creek, 13.0 mi (20.9 km) east of town of Toketee Falls, and at mile 93.01 (149.7 km).

DRAINAGE AREA.--170 mi² (440 km²).

PERIOD OF RECORD.--July 1954 to current year. Prior to October 1960, published as Lemolo Reservoir near Toketee Falls.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Pacific Power & Light Co.).

REMARKS.--Lake is formed by Lemolo No. 1 diversion dam. Storage began July 15, 1954. Usable capacity for normal operation, 12,520 acre-ft (15.4 hm³) between elevations 4,097.0 ft (1,248.77 m) and 4,148.5 ft (1,264.46 m). Dead storage below 4,097.0 ft (1,248.77 m), 1,040 acre-ft (1.28 hm³). Water is used for power generation. Figures given herein represent total contents.

COOPERATION.--Gage readings furnished by Pacific Power & Light Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 14,000 acre-ft (17.3 hm³) Dec. 24, 1964, elevation, 4,149.5 ft (1,264.77 m); minimum observed, 11 acre-ft (13,600 m³) Mar. 5, 1955, elevation, 4,055.4 ft (1,236.09 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 13,350 acre-ft (16.5 hm³) Aug. 14-19, elevation, 4,148.0 ft (1,264.31 m); minimum observed, 1,770 acre-ft (2.18 hm³) Jan. 28, elevation, 4,105.0 ft (1,251.20 m).

MONTHEND ELEVATION AND CONTENTS AT 0900, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|------------------|---------------------|-------------------------|-----------------------------------|
| Sept. 30..... | 4,137.9 | 9,520 | - |
| Oct. 31..... | 4,110.3 | 2,420 | -7,100 |
| Nov. 30..... | 4,106.3 | 1,920 | -500 |
| Dec. 31..... | 4,113.7 | 2,950 | +1,030 |
| CAL YR 1976..... | - | - | -5,440 |
| Jan. 31..... | 4,112.2 | 2,700 | -250 |
| Feb. 28..... | 4,134.2 | 8,290 | +5,590 |
| Mar. 31..... | 4,142.1 | 11,010 | +2,720 |
| Apr. 30..... | 4,142.0 | 10,970 | -40 |
| May 31..... | 4,146.0 | 15,520 | +1,550 |
| June 30..... | 4,145.8 | 12,440 | -80 |
| July 31..... | 4,147.4 | 13,100 | +660 |
| Aug. 31..... | 4,146.9 | 12,890 | -210 |
| Sept. 30..... | 4,138.8 | 9,820 | -3,070 |
| WTR YR 1977..... | - | - | +300 |

14313501 NORTH UMPQUA RIVER BELOW LEMOLO LAKE, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°19'20", long 122°11'40", in NW¼NW¼ sec.11, T.26 S., R.5 E., Douglas County, Hydrologic Unit 17100301, on right bank 0.4 mi (0.6 km) downstream from Lemolo Lake, 13 mi (21 km) east of town of Toketee Falls, and at mile 92.6 (148.9 km).

DRAINAGE AREA.--170 mi² (440 km²).

PERIOD OF RECORD.--October 1927 to December 1945, March 1946 to current year. Published as "below Lake Creek" prior to October 1952, as "below Lake Creek, near Toketee Falls" October 1952 to September 1953, and as "below Lemolo Reservoir near Toketee Falls" October 1953 to September 1960.

REVISED RECORDS.--WSP 1448: Drainage area. WRD OR-75-1: 1964(M).

GAGE.--Water-stage recorder. Altitude of gage is 4,025 ft (1,227 m), from river-profile map. Prior to July 15, 1954, at site 1 mi (2 km) upstream at datum about 65 ft (19.8 m) higher. July 15, 1954, to Sept. 25, 1955, at site 400 ft (122 m) upstream at datum 14.11 ft (4.301 m) higher.

REMARKS.--Records good. Flow regulated since 1954 by Lemolo Lake (see station 14313000); also slightly regulated by Diamond Lake. All records given herein include flow in Lemolo No. 1 power canal which, beginning July 1955, diverts 0.4 mi (0.6 km) above station for power generation with return flow 4.3 mi (6.9 km) downstream.

COOPERATION.--Records of daily power plant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--49 years, 424 ft³/s (12.01 m³/s), 33.87 in/yr (860 mm/yr), 307,200 acre-ft/yr (379 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 4,600 ft³/s (130 m³/s) Dec. 25, 1964, from rating curve extended above 450 ft³/s (12.7 m³/s) on basis of slope-area measurement of peak flow, gage height, 9.20 ft (2.804 m), from floodmark; minimum, 6.4 ft³/s (0.18 m³/s) July 17, 1954.

Combined flow, maximum discharge, 4,680 ft³/s (133 m³/s) Dec. 25, 1964, from river rating curve extended above 450 ft³/s (12.7 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 9.7 ft³/s (0.27 m³/s) May 13, 1955.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 263 ft³/s (7.45 m³/s) July 19, gage height, 5.55 ft (1.692 m); minimum, 21 ft³/s (0.59 m³/s) July 16-18, Sept. 14.

Combined flow, maximum daily discharge, 549 ft³/s (15.5 m³/s) May 1; minimum daily, 117 ft³/s (3.31 m³/s) May 30.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 519 | 429 | 381 | 320 | 202 | 222 | 244 | 549 | 443 | 242 | 291 | 252 |
| 2 | 518 | 519 | 388 | 301 | 233 | 230 | 344 | 529 | 460 | 294 | 291 | 256 |
| 3 | 520 | 527 | 363 | 355 | 252 | 228 | 301 | 367 | 537 | 302 | 285 | 251 |
| 4 | 519 | 526 | 331 | 337 | 263 | 223 | 342 | 461 | 452 | 301 | 261 | 276 |
| 5 | 516 | 527 | 385 | 337 | 227 | 224 | 357 | 467 | 432 | 299 | 254 | 260 |
| 6 | 510 | 446 | 387 | 334 | 244 | 226 | 374 | 427 | 449 | 301 | 254 | 257 |
| 7 | 512 | 445 | 385 | 332 | 231 | 229 | 357 | 454 | 435 | 301 | 264 | 258 |
| 8 | 510 | 451 | 385 | 478 | 334 | 241 | 354 | 540 | 364 | 300 | 238 | 253 |
| 9 | 506 | 393 | 388 | 543 | 298 | 303 | 352 | 513 | 369 | 302 | 254 | 269 |
| 10 | 500 | 331 | 371 | 482 | 260 | 457 | 323 | 348 | 371 | 292 | 304 | 359 |
| 11 | 495 | 514 | 383 | 360 | 258 | 538 | 355 | 350 | 190 | 299 | 272 | 336 |
| 12 | 492 | 428 | 385 | 362 | 228 | 465 | 337 | 118 | 189 | 274 | 268 | 443 |
| 13 | 485 | 409 | 385 | 361 | 225 | 545 | 403 | 121 | 346 | 328 | 267 | 519 |
| 14 | 485 | 408 | 371 | 367 | 231 | 319 | 127 | 125 | 459 | 330 | 270 | 516 |
| 15 | 497 | 410 | 348 | 364 | 227 | 337 | 340 | 122 | 541 | 345 | 284 | 364 |
| 16 | 518 | 404 | 350 | 382 | 232 | 348 | 355 | 123 | 371 | 343 | 283 | 522 |
| 17 | 517 | 414 | 331 | 365 | 242 | 346 | 356 | 392 | 451 | 386 | 286 | 525 |
| 18 | 518 | 410 | 329 | 295 | 227 | 337 | 358 | 392 | 333 | 289 | 300 | 523 |
| 19 | 517 | 416 | 332 | 368 | 228 | 339 | 466 | 390 | 326 | 203 | 301 | 523 |
| 20 | 451 | 415 | 335 | 350 | 222 | 334 | 544 | 370 | 333 | 154 | 285 | 465 |
| 21 | 505 | 428 | 335 | 329 | 221 | 333 | 264 | 353 | 238 | 206 | 305 | 363 |
| 22 | 516 | 387 | 329 | 315 | 223 | 333 | 433 | 359 | 243 | 292 | 305 | 334 |
| 23 | 517 | 390 | 332 | 314 | 226 | 338 | 350 | 352 | 262 | 265 | 305 | 333 |
| 24 | 524 | 391 | 333 | 366 | 225 | 265 | 338 | 352 | 271 | 263 | 309 | 323 |
| 25 | 523 | 389 | 333 | 463 | 238 | 259 | 359 | 354 | 225 | 279 | 303 | 326 |
| 26 | 521 | 395 | 337 | 463 | 224 | 264 | 357 | 294 | 228 | 294 | 308 | 326 |
| 27 | 426 | 395 | 334 | 428 | 224 | 266 | 343 | 347 | 229 | 294 | 308 | 332 |
| 28 | 519 | 397 | 335 | 266 | 223 | 270 | 340 | 343 | 228 | 292 | 308 | 264 |
| 29 | 518 | 382 | 332 | 136 | --- | 252 | 463 | 344 | 279 | 291 | 342 | 397 |
| 30 | 496 | 383 | 334 | 119 | --- | 252 | 543 | 117 | 275 | 291 | 251 | 493 |
| 31 | 430 | --- | 325 | 279 | --- | 279 | --- | 347 | --- | 293 | 389 | --- |
| TOTAL | 15600 | 12759 | 10972 | 10871 | 6668 | 9602 | 10779 | 10720 | 10329 | 8945 | 8945 | 10918 |
| MEAN | 503 | 425 | 354 | 351 | 238 | 310 | 359 | 346 | 344 | 289 | 289 | 364 |
| MAX | 524 | 527 | 388 | 543 | 334 | 545 | 544 | 549 | 541 | 386 | 389 | 525 |
| MIN | 426 | 331 | 325 | 119 | 202 | 222 | 127 | 117 | 189 | 154 | 238 | 251 |
| AC-FT | 30940 | 25310 | 21760 | 21560 | 13230 | 19050 | 21380 | 21260 | 20490 | 17740 | 17740 | 21660 |
| MEAN† | 388 | 417 | 371 | 347 | 389 | 354 | 359 | 371 | 343 | 299 | 285 | 312 |
| CFSM† | 2.28 | 2.45 | 2.18 | 2.04 | 2.29 | 2.08 | 2.11 | 2.18 | 2.02 | 1.76 | 1.68 | 1.84 |
| IN.† | 2.63 | 2.74 | 2.51 | 2.35 | 2.08 | 2.40 | 2.35 | 2.52 | 2.25 | 2.03 | 1.93 | 2.05 |
| AC-FT† | 23,840 | 24,810 | 22,790 | 21,310 | 18,820 | 21,770 | 21,340 | 22,810 | 20,410 | 18,400 | 17,530 | 18,590 |

CAL YR 1976 TOTAL 179,562 MEAN 491 MAX 800 MIN 297 AC-FT 356,200 MEAN† 484 CFSM† 2.85 IN.† 38.70 AC-FT† 350,760
WTR YR 1977 TOTAL 127,108 MEAN 348 MAX 549 MIN 117 AC-FT 252,100 MEAN† 349 CFSM† 2.05 IN.† 27.85 AC-FT† 252,400

† Adjusted for change in contents in Lemolo Lake.

14314501 CLEARWATER RIVER ABOVE TRAP CREEK, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°14'40", long 122°17'10", in SW¼ sec.1, T.27 S., R.4 E., Douglas County, Hydrologic Unit 17100301, on right bank 900 ft (274 m) downstream from Clearwater No. 1 diversion dam, 0.4 mi (0.6 km) upstream from Trap Creek, 8.7 mi (14.0 km) east of town of Toketee Falls, and at mile 7.8 (12.6 km).

DRAINAGE AREA.--41.6 mi² (107.7 km²).

PERIOD OF RECORD.--October 1927 to December 1945, March 1946 to current year. Monthly discharge only December 1927 to March 1928, published in WSP 1318. Prior to October 1952, published as "above Trap Creek."

REVISED RECORDS.--WSP 1124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,862.84 ft (1,177.394 m) above mean sea level (levels by Pacific Power & Light Co.). Prior to Dec. 1, 1953, at two sites about 0.4 mi (0.6 km) downstream at different datums.

REMARKS.--Records good. All records given herein include flow in Clearwater No. 1 power canal, completed in June 1953, which diverts 900 ft (274 m) above station for generation of power and returns water to Clearwater River 2.5 mi (4.0 km) below station.

COOPERATION.--Records of daily power plant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--49 years, 173 ft³/s (4.889 m³/s), 56.47 in/yr (1,434 mm/yr), 125,300 acre-ft/yr (154 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 848 ft³/s (24.0 m³/s) Dec. 23, 1964, gage height, 7.19 ft (2.192 m); maximum gage height, 7.87 ft (2.399 m) Dec. 23, 1964, log jam; minimum discharge, 0.08 ft³/s (0.002 m³/s) Sept. 21, 1977, result of beavers plugging release gate at diversion dam 900 ft (274 m) upstream.

Combined flow, maximum discharge, 1,020 ft³/s (28.9 m³/s) Dec. 23, 1964; minimum daily, 91 ft³/s (2.58 m³/s) Nov. 4-6, 1931.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 166 ft³/s (4.70 m³/s) May 26, gage height, 4.25 ft (1.295 m); minimum, 0.08 ft³/s (0.002 m³/s) Sept. 21, result of beavers plugging release gate at diversion dam 900 ft (274 m) upstream.

Combined flow, maximum daily discharge, 207 ft³/s (5.86 m³/s) June 3; minimum daily, 126 ft³/s (3.57 m³/s) Jan. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|----------|---------|---------|-----------|----------|-------|--------|------|------|------|
| 1 | 167 | 166 | 159 | 154 | 152 | 154 | 148 | 164 | 150 | 147 | 135 | 138 |
| 2 | 165 | 163 | 154 | 154 | 152 | 155 | 148 | 169 | 148 | 147 | 141 | 135 |
| 3 | 170 | 162 | 162 | 155 | 148 | 147 | 146 | 166 | 207 | 148 | 144 | 135 |
| 4 | 171 | 162 | 154 | 157 | 146 | 150 | 150 | 169 | 190 | 150 | 136 | 141 |
| 5 | 163 | 159 | 155 | 154 | 153 | 150 | 149 | 167 | 184 | 136 | 135 | 130 |
| 6 | 164 | 160 | 158 | 153 | 148 | 148 | 153 | 162 | 182 | 149 | 138 | 132 |
| 7 | 164 | 159 | 157 | 155 | 153 | 152 | 147 | 161 | 189 | 144 | 138 | 136 |
| 8 | 163 | 160 | 158 | 155 | 150 | 149 | 164 | 160 | 189 | 141 | 134 | 135 |
| 9 | 163 | 161 | 153 | 138 | 152 | 147 | 152 | 153 | 167 | 146 | 142 | 131 |
| 10 | 165 | 162 | 160 | 166 | 150 | 157 | 156 | 181 | 169 | 144 | 139 | 129 |
| 11 | 161 | 166 | 158 | 150 | 141 | 150 | 152 | 158 | 169 | 140 | 132 | 136 |
| 12 | 166 | 156 | 155 | 155 | 152 | 146 | 152 | 161 | 172 | 142 | 142 | 135 |
| 13 | 161 | 161 | 159 | 156 | 154 | 152 | 137 | 171 | 167 | 141 | 134 | 134 |
| 14 | 160 | 160 | 155 | 159 | 153 | 145 | 135 | 160 | 163 | 140 | 137 | 132 |
| 15 | 165 | 166 | 154 | 151 | 150 | 149 | 195 | 160 | 162 | 135 | 137 | 134 |
| 16 | 163 | 158 | 155 | 149 | 155 | 145 | 153 | 162 | 158 | 142 | 138 | 133 |
| 17 | 161 | 165 | 158 | 159 | 150 | 148 | 157 | 171 | 156 | 142 | 132 | 134 |
| 18 | 164 | 165 | 154 | 152 | 148 | 144 | 154 | 162 | 155 | 143 | 138 | 134 |
| 19 | 160 | 160 | 157 | 152 | 148 | 150 | 160 | 165 | 155 | 140 | 139 | 134 |
| 20 | 163 | 163 | 154 | 153 | 149 | 143 | 167 | 163 | 151 | 148 | 135 | 132 |
| 21 | 163 | 151 | 157 | 153 | 152 | 150 | 154 | 164 | 146 | 147 | 135 | 133 |
| 22 | 163 | 164 | 154 | 148 | 149 | 144 | 158 | 171 | 146 | 142 | 135 | 144 |
| 23 | 157 | 165 | 157 | 151 | 151 | 159 | 154 | 180 | 153 | 140 | 136 | 135 |
| 24 | 165 | 156 | 153 | 150 | 149 | 146 | 153 | 193 | 156 | 142 | 136 | 145 |
| 25 | 170 | 159 | 153 | 152 | 146 | 148 | 162 | 154 | 152 | 142 | 143 | 133 |
| 26 | 169 | 160 | 158 | 154 | 152 | 145 | 161 | 162 | 148 | 139 | 150 | 144 |
| 27 | 163 | 156 | 157 | 150 | 152 | 148 | 162 | 157 | 148 | 135 | 137 | 128 |
| 28 | 163 | 157 | 153 | 149 | 151 | 150 | 159 | 155 | 147 | 146 | 138 | 147 |
| 29 | 159 | 159 | 155 | 126 | --- | 151 | 160 | 154 | 150 | 135 | 132 | 161 |
| 30 | 164 | 155 | 154 | 149 | --- | 147 | 158 | 154 | 147 | 144 | 134 | 142 |
| 31 | 164 | --- | 156 | 174 | --- | 148 | --- | 152 | --- | 136 | 132 | --- |
| TOTAL | 5079 | 4816 | 4836 | 4733 | 4206 | 4617 | 4656 | 5081 | 4876 | 4413 | 4254 | 4092 |
| MEAN | 164 | 161 | 156 | 153 | 150 | 149 | 155 | 164 | 163 | 142 | 137 | 136 |
| MAX | 171 | 166 | 162 | 174 | 155 | 159 | 195 | 193 | 207 | 150 | 150 | 161 |
| MIN | 157 | 151 | 153 | 126 | 141 | 143 | 135 | 152 | 146 | 135 | 132 | 128 |
| CFSM | 3.94 | 3.87 | 3.75 | 3.68 | 3.61 | 3.58 | 3.73 | 3.94 | 3.92 | 3.41 | 3.29 | 3.27 |
| IN. | 4.54 | 4.31 | 4.32 | 4.23 | 3.76 | 4.13 | 4.16 | 4.54 | 4.36 | 3.95 | 3.80 | 3.66 |
| AC-FT | 10070 | 9550 | 9590 | 9390 | 8340 | 9160 | 9240 | 10080 | 9670 | 8750 | 8440 | 8120 |
| CAL YR 1976 | TOTAL | 71163 | MEAN 194 | MAX 330 | MIN 151 | CFSM 4.66 | IN 63.64 | AC-FT | 141200 | | | |
| WTR YR 1977 | TOTAL | 55659 | MEAN 152 | MAX 207 | MIN 126 | CFSM 3.65 | IN 49.77 | AC-FT | 110400 | | | |

14316001 FISH CREEK AT BIG CAMAS RANGER STATION, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°13'50", long 122°26'45", in SE¼ sec.10, T.27 S., R.3 E., Douglas County, Hydrologic Unit 17100301, on right bank 0.2 mi (0.3 km) upstream from Camas Creek, 0.7 mi (1.1 km) east of Big Camas ranger station, 3.2 mi (5.1 km) south of town of Toketee Falls, and at mile 4.7 (7.6 km).

DRAINAGE AREA.--68.8 mi² (178.2 km²).

PERIOD OF RECORD.--October 1947 to current year. Prior to October 1952, published as "at Big Camas ranger station."

REVISED RECORDS.--WSP 1448: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,858.52 ft (871.277 m) above mean sea level (levels by Pacific Power & Light Co.). Prior to July 10, 1951, water-stage recorder and July 10 to Aug. 10, 1951, nonrecording gage, at site 1,000 ft (305 m) upstream at datum 13.72 ft (4.182 m) higher. Aug. 11 to Nov. 3, 1951, nonrecording gage at site 200 ft (61 m) downstream at different datum. Nov. 4, 1951, to Sept. 30, 1956, water-stage recorder at present site at datum 1.92 ft (0.585 m) higher.

REMARKS.--Records good. All records given herein include flow in Fish Creek power canal (diversion began June 18, 1952), which diverts water 2 mi (3 km) above station for power generation at Fish Creek powerplant; diversion discharged to North Umpqua River 600 ft (183 m) downstream from Toketee powerplant.

COOPERATION.--Records of daily powerplant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--30 years, 238 ft³/s (6.740 m³/s), 46.98 in/yr (1,193 mm/yr), 172,400 acre-ft/yr (213 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 12,100 ft³/s (343 m³/s) Dec. 22, 1964, gage height, 13.9 ft (4.24 m), from floodmark; minimum, 2.3 ft³/s (0.06 m³/s) Sept. 25, 1957.

Combined flow, maximum discharge, 12,100 ft³/s (343 m³/s) Dec. 22, 1964; minimum daily, 24 ft³/s (0.68 m³/s) Jan. 6, 7, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 268 ft³/s (7.59 m³/s) May 3, gage height, 4.22 ft (1.286 m); minimum, 4.0 ft³/s (0.11 m³/s) Dec. 24.

Combined flow, maximum discharge, 379 ft³/s (10.7 m³/s) May 26, no peak above base of 900 ft³/s (25.5 m³/s); minimum daily, 24 ft³/s (0.68 m³/s) Jan. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|------|-------|-------|--------|-------|-------|
| 1 | 51 | 62 | 37 | 42 | 36 | 48 | 65 | 183 | 239 | 56 | 42 | 36 |
| 2 | 57 | 53 | 36 | 42 | 39 | 50 | 59 | 209 | 215 | 59 | 42 | 36 |
| 3 | 53 | 44 | 39 | 38 | 38 | 46 | 64 | 233 | 196 | 56 | 41 | 35 |
| 4 | 53 | 50 | 37 | 37 | 31 | 44 | 71 | 193 | 196 | 48 | 42 | 34 |
| 5 | 48 | 47 | 36 | 30 | 36 | 43 | 93 | 177 | 207 | 59 | 42 | 34 |
| 6 | 50 | 49 | 34 | 24 | 39 | 46 | 127 | 164 | 210 | 50 | 42 | 33 |
| 7 | 48 | 45 | 34 | 24 | 37 | 55 | 138 | 152 | 201 | 50 | 37 | 33 |
| 8 | 45 | 46 | 38 | 28 | 38 | 79 | 187 | 146 | 182 | 53 | 45 | 32 |
| 9 | 47 | 47 | 41 | 30 | 37 | 87 | 165 | 163 | 154 | 50 | 36 | 31 |
| 10 | 45 | 35 | 38 | 27 | 38 | 56 | 130 | 218 | 143 | 50 | 35 | 31 |
| 11 | 45 | 38 | 49 | 35 | 37 | 62 | 111 | 211 | 142 | 48 | 35 | 31 |
| 12 | 44 | 44 | 39 | 34 | 40 | 51 | 121 | 202 | 124 | 48 | 34 | 31 |
| 13 | 47 | 44 | 39 | 37 | 39 | 55 | 138 | 194 | 111 | 46 | 35 | 31 |
| 14 | 40 | 52 | 37 | 43 | 36 | 44 | 126 | 197 | 108 | 48 | 34 | 30 |
| 15 | 42 | 67 | 36 | 37 | 35 | 48 | 131 | 197 | 99 | 48 | 33 | 31 |
| 16 | 38 | 55 | 38 | 38 | 37 | 46 | 144 | 200 | 93 | 49 | 33 | 33 |
| 17 | 47 | 47 | 34 | 40 | 34 | 46 | 143 | 211 | 87 | 47 | 33 | 35 |
| 18 | 45 | 45 | 35 | 37 | 42 | 45 | 110 | 216 | 82 | 46 | 33 | 37 |
| 19 | 39 | 48 | 32 | 36 | 36 | 46 | 113 | 206 | 78 | 48 | 32 | 44 |
| 20 | 50 | 42 | 34 | 39 | 37 | 46 | 108 | 227 | 76 | 45 | 33 | 54 |
| 21 | 42 | 43 | 32 | 39 | 41 | 47 | 116 | 250 | 76 | 43 | 33 | 40 |
| 22 | 44 | 42 | 43 | 39 | 49 | 51 | 117 | 253 | 65 | 42 | 32 | 36 |
| 23 | 42 | 41 | 36 | 37 | 40 | 71 | 127 | 281 | 70 | 40 | 32 | 45 |
| 24 | 49 | 47 | 36 | 38 | 39 | 60 | 147 | 274 | 64 | 45 | 80 | 95 |
| 25 | 77 | 39 | 36 | 32 | 36 | 69 | 184 | 252 | 60 | 45 | 53 | 53 |
| 26 | 63 | 46 | 41 | 31 | 38 | 54 | 157 | 348 | 61 | 43 | 56 | 49 |
| 27 | 53 | 37 | 41 | 33 | 45 | 64 | 148 | 292 | 59 | 42 | 44 | 44 |
| 28 | 45 | 31 | 36 | 33 | 78 | 74 | 156 | 254 | 49 | 42 | 40 | 207 |
| 29 | 46 | 39 | 36 | 35 | --- | 63 | 155 | 228 | 67 | 41 | 40 | 141 |
| 30 | 46 | 38 | 38 | 40 | --- | 56 | 172 | 216 | 58 | 43 | 43 | 89 |
| 31 | 49 | --- | 40 | 33 | --- | 63 | --- | 222 | --- | 42 | 39 | --- |
| TOTAL | 1490 | 1363 | 1158 | 1088 | 1108 | 1715 | 3823 | 6769 | 3572 | 1472 | 1231 | 1491 |
| MEAN | 48.1 | 45.4 | 37.4 | 35.1 | 39.6 | 55.3 | 127 | 218 | 119 | 47.5 | 39.7 | 49.7 |
| MAX | 77 | 67 | 49 | 43 | 78 | 87 | 187 | 348 | 239 | 59 | 80 | 207 |
| MIN | 38 | 31 | 32 | 24 | 31 | 43 | 59 | 146 | 49 | 40 | 32 | 30 |
| CFSM | .70 | .66 | .54 | .51 | .58 | .80 | 1.85 | 3.17 | 1.73 | .69 | .58 | .72 |
| IN. | .81 | .74 | .63 | .59 | .60 | .93 | 2.07 | 3.66 | 1.93 | .80 | .67 | .81 |
| AC-FT | 2960 | 2700 | 2300 | 2160 | 2200 | 3400 | 7580 | 13430 | 7090 | 2920 | 2440 | 2960 |
| CAL YR 1976 | TOTAL | 69987 | MEAN | 191 | MAX | 1010 | MIN | 31 | CFSM | 2.78 | IN | 37.84 |
| WTR YR 1977 | TOTAL | 26280 | MEAN | 72.0 | MAX | 348 | MIN | 24 | CFSM | 1.05 | IN | 14.21 |
| | | | | | | | | | AC-FT | 138800 | AC-FT | 52130 |

UMPQUA RIVER BASIN

14316500 NORTH UMPQUA RIVER ABOVE COPELAND CREEK, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°17'45", long 122°32'10", in NW¼ sec.24, T.26 S., R.2 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on left bank 0.6 mi (1.0 km) upstream from Copeland Creek, 4.7 mi (7.6 km) west of town of Toketee Falls, and at mile 67.2 (108.1 km).

DRAINAGE AREA.--475 mi² (1,230 km²).

PERIOD OF RECORD.--September 1949 to current year. Monthly discharge only September 1949, published in WSP 1318. Prior to October 1952, published as "above Copeland Creek."

REVISED RECORDS.--WSP 1448: 1953(M), 1954, drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,580 ft (482 m), from river-profile map. Prior to Aug. 1, 1976, on right bank at same datum.

REMARKS.--Records excellent. Considerable fluctuation caused by powerplants upstream; flow slightly regulated by Diamond Lake and by Lemolo Lake (see station 14313000). No diversion above station.

AVERAGE DISCHARGE.--28 years, 1,532 ft³/s (43.39 m³/s), 1,110,000 acre-ft/yr (1.37 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,700 ft³/s (1,150 m³/s) Dec. 22, 1964, gage height, 19.1 ft (5.82 m), from floodmark, from rating curve extended above 7,200 ft³/s (204 m³/s) on basis of slope-area measurement of peak flow; minimum, 380 ft³/s (10.8 m³/s) Aug. 23, 1977; minimum daily, 565 ft³/s (16.0 m³/s) Sept. 13, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft³/s (53.5 m³/s) May 2, gage height, 6.58 ft (2.006 m); minimum, 380 ft³/s (10.8 m³/s) Aug. 23; minimum daily, 585 ft³/s (16.6 m³/s) Jan. 30 and Feb. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|-------|-------|-------|-------|-------|---------|-------|-------|-------|-------|
| 1 | 1030 | 930 | 840 | 738 | 645 | 864 | 966 | 1380 | 1210 | 680 | 705 | 665 |
| 2 | 1010 | 1050 | 822 | 816 | 670 | 732 | 996 | 1600 | 1290 | 768 | 705 | 645 |
| 3 | 1010 | 1040 | 816 | 792 | 645 | 700 | 984 | 1500 | 1490 | 804 | 700 | 625 |
| 4 | 1100 | 1030 | 816 | 762 | 640 | 720 | 1010 | 1500 | 1310 | 780 | 645 | 625 |
| 5 | 1030 | 942 | 828 | 792 | 660 | 744 | 1120 | 1440 | 1290 | 792 | 640 | 625 |
| 6 | 1070 | 894 | 822 | 798 | 635 | 680 | 1250 | 1350 | 1290 | 780 | 640 | 625 |
| 7 | 1000 | 882 | 828 | 828 | 762 | 750 | 1360 | 1390 | 1330 | 756 | 645 | 625 |
| 8 | 996 | 936 | 864 | 750 | 768 | 870 | 1530 | 1360 | 1250 | 744 | 670 | 630 |
| 9 | 1000 | 894 | 936 | 906 | 720 | 1080 | 1410 | 1260 | 1140 | 744 | 675 | 645 |
| 10 | 1000 | 858 | 804 | 978 | 645 | 1100 | 1150 | 1410 | 1070 | 756 | 660 | 705 |
| 11 | 1010 | 960 | 816 | 828 | 715 | 1040 | 1100 | 1500 | 906 | 756 | 665 | 726 |
| 12 | 1010 | 948 | 846 | 816 | 645 | 1130 | 1090 | 1090 | 846 | 710 | 715 | 810 |
| 13 | 996 | 870 | 864 | 936 | 650 | 1120 | 1120 | 1160 | 1010 | 774 | 650 | 930 |
| 14 | 948 | 894 | 828 | 876 | 650 | 840 | 930 | 1060 | 1060 | 762 | 650 | 930 |
| 15 | 966 | 930 | 768 | 732 | 650 | 822 | 1330 | 1050 | 1140 | 750 | 645 | 715 |
| 16 | 954 | 978 | 804 | 774 | 650 | 780 | 1150 | 1100 | 1010 | 768 | 665 | 852 |
| 17 | 954 | 900 | 756 | 852 | 685 | 786 | 1160 | 1350 | 984 | 780 | 705 | 936 |
| 18 | 1040 | 912 | 768 | 744 | 705 | 882 | 1100 | 1480 | 960 | 645 | 705 | 924 |
| 19 | 1010 | 912 | 762 | 756 | 585 | 834 | 1120 | 1360 | 930 | 645 | 715 | 918 |
| 20 | 972 | 906 | 768 | 828 | 650 | 840 | 1180 | 1440 | 822 | 655 | 690 | 882 |
| 21 | 1010 | 912 | 804 | 774 | 726 | 840 | 1090 | 1320 | 888 | 650 | 625 | 738 |
| 22 | 1000 | 840 | 732 | 732 | 600 | 900 | 1130 | 1380 | 816 | 655 | 675 | 738 |
| 23 | 1000 | 858 | 804 | 738 | 660 | 984 | 1040 | 1450 | 680 | 645 | 675 | 715 |
| 24 | 978 | 852 | 792 | 816 | 660 | 918 | 1140 | 1470 | 756 | 635 | 822 | 960 |
| 25 | 1100 | 858 | 792 | 846 | 635 | 882 | 1210 | 1390 | 774 | 726 | 816 | 726 |
| 26 | 1070 | 858 | 780 | 912 | 625 | 804 | 1180 | 1390 | 786 | 690 | 700 | 732 |
| 27 | 936 | 852 | 780 | 852 | 620 | 870 | 1180 | 1450 | 756 | 690 | 726 | 762 |
| 28 | 996 | 852 | 768 | 655 | 870 | 972 | 1150 | 1380 | 660 | 732 | 720 | 984 |
| 29 | 1040 | 852 | 756 | 605 | --- | 912 | 1160 | 1340 | 810 | 700 | 700 | 1160 |
| 30 | 990 | 792 | 756 | 585 | --- | 822 | 1330 | 1070 | 774 | 695 | 780 | 1030 |
| 31 | 900 | --- | 768 | 615 | --- | 852 | --- | 1320 | --- | 660 | 744 | --- |
| TOTAL | 31126 | 27192 | 24888 | 24432 | 18771 | 27070 | 34666 | 41740 | 30038 | 22327 | 21473 | 23583 |
| MEAN | 1004 | 906 | 803 | 788 | 670 | 873 | 1156 | 1346 | 1001 | 720 | 693 | 786 |
| MAX | 1100 | 1050 | 936 | 978 | 870 | 1130 | 1530 | 1600 | 1490 | 804 | 822 | 1160 |
| MIN | 900 | 792 | 732 | 585 | 585 | 680 | 930 | 1050 | 660 | 635 | 625 | 625 |
| AC-FT | 61740 | 53940 | 49370 | 48460 | 37230 | 53690 | 68760 | 82790 | 59580 | 44290 | 42590 | 46780 |
| CAL YR 1976 TOTAL | 526152 | | | 1438 | 5320 | 732 | AC-FT | 1044000 | | | | |
| WTR YR 1977 TOTAL | 327306 | | | 897 | 1600 | 585 | AC-FT | 649200 | | | | |

UMPQUA RIVER BASIN

455

14316700 STEAMBOAT CREEK NEAR GLIDE, OR

LOCATION.--Lat 43°21'00", long 122°43'40", in N½ sec.32, T.25½ S., R.1 E., Douglas County, Hydrologic Unit 17100301, in Umpqua National Forest, on right bank in Canton Creek Forest Service Park, 200 ft (61 m) downstream from Canton Creek, 19 mi (31 km) northeast of Glide, and at mile 0.5 (0.8 km).

DRAINAGE AREA.--227 mi² (588 km²).

PERIOD OF RECORD.--Annual maximum, water year 1956, June 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,128.55 ft (343.982 m) above mean sea level (levels by Bureau of Public Roads). Oct. 7, 1955, to June 13, 1956, nonrecording gage at site 100 ft (30 m) upstream at same datum.

REMARKS.--Records excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--21 years, 741 ft³/s (20.99 m³/s), 44.33 in/yr (1,126 mm/yr), 536,900 acre-ft/yr (662 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft³/s (1,440 m³/s) Dec. 22, 1964, gage height, 25.6 ft (7.80 m), from floodmark, from rating curve extended above 13,000 ft³/s (368 m³/s), on basis of slope-area measurement at 17.96 ft (5.474 m); minimum, 30 ft³/s (0.85 m³/s) Sept. 15-17, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,250 ft³/s (63.7 m³/s) Mar. 8, gage height, 4.95 ft (1.509 m), no peak above base of 8,000 ft³/s (227 m³/s); minimum, 31 ft³/s (0.88 m³/s) Aug. 17-21, 23, 24.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|-----------|--------|-----------|----------|--------------|-------|------|------|------|
| 1 | 50 | 137 | 56 | 66 | 71 | 788 | 836 | 390 | 440 | 84 | 43 | 59 |
| 2 | 51 | 143 | 55 | 137 | 67 | 530 | 930 | 680 | 390 | 82 | 43 | 51 |
| 3 | 56 | 103 | 54 | 191 | 63 | 590 | 728 | 836 | 347 | 82 | 42 | 47 |
| 4 | 54 | 84 | 54 | 139 | 61 | 545 | 874 | 1080 | 336 | 82 | 40 | 45 |
| 5 | 51 | 74 | 52 | 118 | 60 | 540 | 1110 | 1090 | 322 | 82 | 39 | 43 |
| 6 | 50 | 68 | 52 | 90 | 61 | 630 | 1060 | 958 | 319 | 79 | 39 | 41 |
| 7 | 50 | 64 | 52 | 85 | 60 | 806 | 1080 | 776 | 298 | 77 | 43 | 40 |
| 8 | 48 | 61 | 57 | 76 | 59 | 1710 | 1160 | 710 | 264 | 74 | 43 | 39 |
| 9 | 47 | 59 | 82 | 73 | 59 | 1610 | 867 | 665 | 233 | 73 | 43 | 37 |
| 10 | 46 | 57 | 73 | 90 | 59 | 951 | 640 | 830 | 213 | 73 | 39 | 36 |
| 11 | 46 | 56 | 67 | 84 | 59 | 704 | 540 | 874 | 196 | 68 | 36 | 36 |
| 12 | 46 | 56 | 64 | 159 | 59 | 800 | 512 | 740 | 184 | 67 | 35 | 35 |
| 13 | 45 | 55 | 63 | 179 | 59 | 686 | 580 | 620 | 172 | 66 | 35 | 34 |
| 14 | 45 | 64 | 59 | 216 | 59 | 526 | 526 | 550 | 161 | 64 | 34 | 34 |
| 15 | 43 | 104 | 57 | 170 | 59 | 427 | 467 | 540 | 152 | 63 | 34 | 34 |
| 16 | 43 | 143 | 56 | 137 | 59 | 370 | 476 | 710 | 143 | 61 | 33 | 34 |
| 17 | 42 | 106 | 56 | 122 | 57 | 347 | 432 | 1360 | 137 | 59 | 32 | 37 |
| 18 | 42 | 94 | 55 | 118 | 57 | 329 | 378 | 1320 | 132 | 59 | 31 | 41 |
| 19 | 42 | 85 | 52 | 112 | 56 | 415 | 340 | 930 | 126 | 61 | 31 | 57 |
| 20 | 42 | 77 | 50 | 106 | 56 | 615 | 319 | 788 | 122 | 59 | 31 | 77 |
| 21 | 42 | 73 | 52 | 101 | 74 | 530 | 315 | 692 | 126 | 57 | 32 | 70 |
| 22 | 42 | 68 | 51 | 95 | 161 | 645 | 322 | 615 | 118 | 55 | 32 | 56 |
| 23 | 42 | 66 | 52 | 88 | 189 | 854 | 336 | 655 | 110 | 52 | 31 | 57 |
| 24 | 50 | 63 | 54 | 84 | 186 | 650 | 374 | 670 | 104 | 51 | 61 | 207 |
| 25 | 218 | 61 | 55 | 79 | 179 | 560 | 423 | 600 | 101 | 50 | 112 | 154 |
| 26 | 194 | 60 | 70 | 73 | 224 | 476 | 386 | 776 | 97 | 50 | 87 | 148 |
| 27 | 101 | 57 | 108 | 73 | 390 | 734 | 329 | 806 | 94 | 48 | 88 | 110 |
| 28 | 77 | 56 | 104 | 71 | 1360 | 812 | 319 | 670 | 90 | 47 | 64 | 458 |
| 29 | 68 | 55 | 85 | 68 | --- | 675 | 326 | 565 | 85 | 46 | 68 | 454 |
| 30 | 66 | 55 | 76 | 68 | --- | 585 | 336 | 490 | 84 | 46 | 71 | 204 |
| 31 | 70 | --- | 68 | 70 | --- | 555 | --- | 445 | --- | 45 | 73 | --- |
| TOTAL | 1909 | 2304 | 1941 | 3338 | 3963 | 20995 | 17321 | 23431 | 5696 | 1962 | 1465 | 2775 |
| MEAN | 61.6 | 76.8 | 62.6 | 108 | 142 | 677 | 577 | 756 | 190 | 63.3 | 47.3 | 92.5 |
| MAX | 218 | 143 | 108 | 216 | 1360 | 1710 | 1160 | 1360 | 440 | 84 | 112 | 458 |
| MIN | 42 | 55 | 50 | 66 | 56 | 329 | 315 | 390 | 84 | 45 | 31 | 34 |
| CFSM | .27 | .34 | .28 | .48 | .63 | 2.98 | 2.54 | 3.33 | .84 | .28 | .21 | .41 |
| IN. | .31 | .38 | .32 | .55 | .65 | 3.44 | 2.84 | 3.84 | .93 | .32 | .24 | .45 |
| AC-FT | 3790 | 4570 | 3850 | 6620 | 7860 | 41640 | 34360 | 46480 | 11300 | 3890 | 2910 | 5500 |
| CAL YR 1976 | TOTAL | 207817 | MEAN 568 | MAX 14700 | MIN 42 | CFSM 2.50 | IN 34.06 | AC-FT 412200 | | | | |
| WTR YR 1977 | TOTAL | 87100 | MEAN 239 | MAX 1710 | MIN 31 | CFSM 1.05 | IN 14.27 | AC-FT 172800 | | | | |

UMPQUA RIVER BASIN

14318000 LITTLE RIVER AT PEEL, OR

LOCATION.--Lat 43°15'10", long 123°01'30", in NW¼ sec.2, T.27 S., R.3 W., Douglas County, Hydrologic Unit 17100301, on left bank 0.6 mi (1.0 km) southeast of Peel, 0.9 mi (1.5 km) downstream from Cavitt Creek, and at mile 6.3 (10.1 km).

DRAINAGE AREA.--177 mi² (458 km²).

PERIOD OF RECORD.--August 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 828.33 ft (252.475 m) above mean sea level.

REMARKS.--Records excellent except those for period of no gage-height record, which are fair. No regulation. Small diversions for rural domestic use and irrigation above station.

AVERAGE DISCHARGE.--23 years, 476 ft³/s (13.48 m³/s), 36.52 in/yr (928 mm/yr), 344,900 acre-ft/yr (425 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft³/s (598 m³/s) Dec. 11, 1956, gage height, 19.63 ft (5.983 m), from rating curve extended above 5,900 ft³/s (167 m³/s) on basis of slope-area measurement at gage height 16.55 ft (5.044 m); minimum, 14 ft³/s (0.40 m³/s) Sept. 2, 9, 10, 28, 29, 1967, Sept. 25-27, 1974, Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 22, 23, 1953, reached a stage of 20.6 ft (6.28 m), from floodmark, discharge, 22,700 ft³/s (643 m³/s), from rating curve extended above 5,900 ft³/s (167 m³/s) on basis of slope-area measurement at gage height 16.55 ft (5.044 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,700 ft³/s (48.1 m³/s) May 17, gage height, 5.54 ft (1.689 m), no peak above base of 6,000 ft³/s (170 m³/s); minimum, 14 ft³/s (0.40 m³/s) Aug. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|-------|------|------|------|------|
| 1 | 29 | 43 | 31 | 32 | 39 | 453 | 664 | 280 | 312 | 50 | 22 | 29 |
| 2 | 30 | 52 | 31 | 47 | 36 | 381 | 669 | 400 | 269 | 47 | 21 | 26 |
| 3 | 32 | 43 | 30 | 73 | 34 | 597 | 529 | 550 | 237 | 46 | 21 | 24 |
| 4 | 31 | 38 | 30 | 63 | 32 | 410 | 543 | 650 | 217 | 46 | 19 | 22 |
| 5 | 29 | 35 | 28 | 63 | 32 | 345 | 602 | 750 | 194 | 45 | 19 | 21 |
| 6 | 28 | 33 | 28 | 46 | 33 | 368 | 570 | 650 | 177 | 44 | 19 | 21 |
| 7 | 27 | 31 | 28 | 42 | 33 | 328 | 620 | 550 | 164 | 43 | 19 | 21 |
| 8 | 27 | 31 | 35 | 35 | 32 | 602 | 640 | 500 | 151 | 41 | 20 | 19 |
| 9 | 26 | 30 | 73 | 35 | 32 | 789 | 600 | 460 | 139 | 39 | 20 | 19 |
| 10 | 26 | 29 | 50 | 46 | 32 | 607 | 460 | 550 | 130 | 40 | 18 | 19 |
| 11 | 26 | 29 | 41 | 49 | 32 | 479 | 380 | 650 | 123 | 38 | 17 | 18 |
| 12 | 26 | 28 | 40 | 119 | 33 | 529 | 360 | 600 | 117 | 37 | 17 | 18 |
| 13 | 25 | 29 | 37 | 96 | 33 | 444 | 400 | 492 | 109 | 38 | 16 | 17 |
| 14 | 24 | 33 | 35 | 85 | 33 | 337 | 360 | 440 | 101 | 36 | 16 | 17 |
| 15 | 24 | 68 | 33 | 76 | 32 | 265 | 320 | 474 | 94 | 34 | 16 | 18 |
| 16 | 24 | 87 | 33 | 65 | 32 | 220 | 340 | 997 | 89 | 33 | 16 | 19 |
| 17 | 24 | 61 | 33 | 60 | 31 | 196 | 300 | 1540 | 85 | 31 | 15 | 20 |
| 18 | 23 | 59 | 32 | 57 | 31 | 199 | 260 | 1120 | 84 | 31 | 15 | 21 |
| 19 | 23 | 55 | 30 | 56 | 30 | 295 | 240 | 816 | 80 | 32 | 15 | 32 |
| 20 | 23 | 50 | 28 | 55 | 31 | 430 | 220 | 669 | 79 | 31 | 15 | 41 |
| 21 | 23 | 45 | 29 | 52 | 45 | 363 | 220 | 557 | 80 | 30 | 16 | 34 |
| 22 | 23 | 43 | 29 | 50 | 87 | 381 | 220 | 497 | 74 | 28 | 17 | 27 |
| 23 | 24 | 41 | 30 | 46 | 103 | 488 | 240 | 592 | 70 | 27 | 16 | 27 |
| 24 | 31 | 39 | 30 | 44 | 123 | 457 | 260 | 648 | 64 | 27 | 41 | 107 |
| 25 | 82 | 38 | 30 | 42 | 111 | 405 | 280 | 552 | 61 | 26 | 57 | 68 |
| 26 | 92 | 38 | 38 | 38 | 139 | 332 | 260 | 746 | 60 | 26 | 52 | 68 |
| 27 | 52 | 35 | 44 | 39 | 199 | 466 | 220 | 721 | 56 | 25 | 47 | 57 |
| 28 | 41 | 33 | 41 | 37 | 506 | 557 | 220 | 597 | 53 | 24 | 34 | 337 |
| 29 | 37 | 32 | 37 | 36 | --- | 510 | 220 | 488 | 51 | 24 | 37 | 341 |
| 30 | 35 | 32 | 35 | 35 | --- | 448 | 220 | 405 | 50 | 23 | 35 | 151 |
| 31 | 34 | --- | 33 | 36 | --- | 420 | --- | 341 | --- | 23 | 36 | --- |
| TOTAL | 1001 | 1240 | 1082 | 1655 | 1966 | 13101 | 11437 | 19282 | 3570 | 1065 | 744 | 1659 |
| MEAN | 32.3 | 41.3 | 34.9 | 53.4 | 70.2 | 423 | 381 | 622 | 119 | 34.4 | 24.0 | 55.3 |
| MAX | 92 | 87 | 73 | 119 | 506 | 789 | 669 | 1540 | 312 | 50 | 57 | 341 |
| MIN | 23 | 28 | 28 | 32 | 30 | 196 | 220 | 280 | 50 | 23 | 15 | 17 |
| CFSM | .18 | .23 | .20 | .30 | .40 | 2.39 | 2.15 | 3.51 | .67 | .19 | .14 | .31 |
| IN. | .21 | .26 | .23 | .35 | .41 | 2.75 | 2.40 | 4.05 | .75 | .22 | .16 | .35 |
| AC-FT | 1990 | 2460 | 2150 | 3280 | 3900 | 25990 | 22690 | 38250 | 7080 | 2110 | 1480 | 3290 |

CAL YR 1976 TOTAL 121649 MEAN 332 MAX 7450 MIN 23 CFSM 1.88 IN 25.57 AC-FT 241300
WTR YR 1977 TOTAL 57802 MEAN 158 MAX 1540 MIN 15 CFSM .89 IN 12.15 AC-FT 114700

NOTE.--No gage-height record Apr. 6 to May 12.

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR

LOCATION.--Lat 43°16'20", long 123°24'40", in NW¼NE¼ sec.33, T.26 S., R.6 W., Douglas County, Hydrologic Unit 17100301, on left bank 400 ft (122 m) downstream from county bridge, 3.0 mi (4.8 km) west of Winchester, and at mile 1.8 (2.9 km).

DRAINAGE AREA.--1,344 mi² (3,481 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1908 to December 1913, October 1923 to September 1929, August 1954 to current year. Prior to December 1908, monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1448: 1909-12, drainage area. WRD Oreg. 1972: 1965(M).

GAGE.--Water-stage recorder. Datum of gage is 372.97 ft (113.681 m) above mean sea level (Douglas County Road Department bench mark). Oct. 1, 1908, to Dec. 31, 1913, and Oct. 1, 1923, to Sept. 30, 1929, nonrecording gage at site 4.8 mi (7.7 km) upstream at different datums. Aug. 27, 1954, to Aug. 12, 1965, water-stage recorder on right bank at same datum.

REMARKS.--Water-discharge records excellent. Diurnal fluctuation caused by upstream powerplants; slight regulation by Lemolo Lake (see station 14313000) and Diamond Lake. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--34 years, 3,747 ft³/s (106.1 m³/s), 2,715,000 acre-ft/yr (3.35 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft³/s (4,250 m³/s) Dec. 22, 1964, gage height, 34.2 ft (10.42 m), from floodmark; minimum, 383 ft³/s (10.8 m³/s) Sept. 25, 1960; minimum daily, 578 ft³/s (16.4 m³/s) Sept. 14, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 29, 1950, reached a stage of 23.2 ft (7.07 m), from floodmark, at site 4.8 mi (7.7 km) upstream at different datum, discharge, 88,000 ft³/s (2,490 m³/s). Flood of Nov. 23, 1953, reached a stage of 28.4 ft (8.66 m), from floodmarks, present site and datum, discharge, 93,300 ft³/s (2,640 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,900 ft³/s (195 m³/s) May 17, gage height, 5.66 ft (1.725 m), no peak above base of 20,000 ft³/s (566 m³/s); minimum, 630 ft³/s (17.8 m³/s) Aug. 22.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-------|-------|-------|--------|--------|--------|-------|---------|-------|---------|
| 1 | 1170 | 1160 | 966 | 966 | 816 | 4040 | 3100 | 2330 | 2720 | 991 | 722 | 909 |
| 2 | 1170 | 1400 | 1010 | 974 | 854 | 2940 | 4000 | 3030 | 2430 | 886 | 742 | 794 |
| 3 | 1170 | 1480 | 991 | 1380 | 862 | 3220 | 3520 | 3630 | 2490 | 941 | 757 | 757 |
| 4 | 1170 | 1360 | 983 | 1320 | 832 | 3000 | 3290 | 4850 | 2550 | 1030 | 772 | 708 |
| 5 | 1260 | 1270 | 983 | 1210 | 824 | 2470 | 3890 | 5180 | 2260 | 1020 | 688 | 702 |
| 6 | 1180 | 1160 | 991 | 1170 | 824 | 2470 | 4120 | 5130 | 2190 | 1000 | 688 | 695 |
| 7 | 1200 | 1090 | 983 | 1090 | 832 | 2410 | 4120 | 4290 | 2140 | 991 | 688 | 688 |
| 8 | 1140 | 1110 | 1010 | 1080 | 925 | 4130 | 4750 | 3870 | 2070 | 941 | 702 | 682 |
| 9 | 1130 | 1110 | 1190 | 966 | 950 | 5660 | 4620 | 3610 | 1940 | 917 | 728 | 682 |
| 10 | 1130 | 1080 | 1220 | 1110 | 901 | 5110 | 3610 | 3590 | 1800 | 909 | 708 | 695 |
| 11 | 1130 | 1010 | 1040 | 1260 | 816 | 3750 | 3000 | 4210 | 1650 | 917 | 722 | 757 |
| 12 | 1140 | 1130 | 1030 | 1280 | 839 | 3610 | 2760 | 3980 | 1470 | 909 | 695 | 786 |
| 13 | 1140 | 1130 | 1060 | 1430 | 824 | 3720 | 2810 | 3170 | 1410 | 870 | 735 | 862 |
| 14 | 1120 | 1050 | 1110 | 1470 | 824 | 3020 | 2820 | 2920 | 1520 | 925 | 702 | 1010 |
| 15 | 1070 | 1160 | 1030 | 1400 | 824 | 2330 | 2580 | 2760 | 1550 | 901 | 682 | 1010 |
| 16 | 1080 | 1420 | 950 | 1210 | 816 | 2100 | 2730 | 4000 | 1590 | 893 | 669 | 801 |
| 17 | 1080 | 1380 | 983 | 1170 | 809 | 1910 | 2500 | 6130 | 1410 | 893 | 669 | 917 |
| 18 | 1080 | 1220 | 974 | 1200 | 870 | 1900 | 2380 | 6290 | 1410 | 909 | 735 | 1050 |
| 19 | 1170 | 1190 | 941 | 1090 | 901 | 2070 | 2160 | 5180 | 1360 | 772 | 735 | 1090 |
| 20 | 1150 | 1160 | 933 | 1080 | 757 | 2680 | 2160 | 4190 | 1320 | 757 | 750 | 1140 |
| 21 | 1090 | 1150 | 941 | 1130 | 832 | 2620 | 2120 | 3790 | 1210 | 764 | 722 | 1110 |
| 22 | 1140 | 1140 | 966 | 1070 | 1100 | 2530 | 2040 | 3410 | 1270 | 750 | 675 | 925 |
| 23 | 1120 | 1050 | 893 | 1030 | 1220 | 3150 | 2070 | 3570 | 1130 | 750 | 682 | 886 |
| 24 | 1150 | 1060 | 974 | 1010 | 1380 | 3270 | 2020 | 3810 | 1010 | 735 | 809 | 1030 |
| 25 | 1260 | 1050 | 966 | 1070 | 1300 | 2870 | 2200 | 3610 | 1060 | 715 | 1160 | 1520 |
| 26 | 1780 | 1050 | 983 | 1090 | 1290 | 2580 | 2310 | 3680 | 1070 | 786 | 1100 | 1200 |
| 27 | 1460 | 1030 | 1040 | 1140 | 1540 | 2530 | 2160 | 4290 | 1040 | 794 | 966 | 1140 |
| 28 | 1180 | 1030 | 1040 | 1070 | 2960 | 3810 | 2020 | 3850 | 1000 | 764 | 925 | 1310 |
| 29 | 1220 | 1030 | 1030 | 878 | --- | 3450 | 2020 | 3390 | 878 | 809 | 901 | 3130 |
| 30 | 1240 | 1030 | 983 | 794 | --- | 3150 | 2090 | 3030 | 991 | 772 | 893 | 2020 |
| 31 | 1170 | --- | 958 | 735 | --- | 2750 | --- | 2530 | --- | 772 | 958 | --- |
| TOTAL | 36690 | 34690 | 31152 | 34873 | 28522 | 95250 | 85970 | 121300 | 47939 | 26783 | 24080 | 31006 |
| MEAN | 1184 | 1156 | 1005 | 1125 | 1019 | 3073 | 2866 | 3913 | 1598 | 864 | 777 | 1034 |
| MAX | 1780 | 1480 | 1220 | 1470 | 2960 | 5660 | 4750 | 6290 | 2720 | 1030 | 1160 | 3130 |
| MIN | 1070 | 1010 | 893 | 735 | 757 | 1900 | 2020 | 2330 | 878 | 715 | 669 | 682 |
| CFSM | .88 | .86 | .75 | .84 | .76 | 2.29 | 2.13 | 2.91 | 1.19 | .64 | .58 | .77 |
| IN. | 1.02 | .96 | .86 | .97 | .79 | 2.64 | 2.38 | 3.36 | 1.33 | .74 | .67 | .86 |
| AC-FT | 72770 | 68810 | 61790 | 69170 | 56570 | 188900 | 170500 | 240600 | 95090 | 53120 | 47760 | 61500 |
| CAL YR 1976 | TOTAL | 1204852 | MEAN | 3292 | MAX | 50400 | MIN | 893 | CFSM | 2.45 | IN | 33.35 |
| WTR YR 1977 | TOTAL | 598255 | MEAN | 1639 | MAX | 6290 | MIN | 669 | CFSM | 1.22 | IN | 16.56 |
| | | | | | | | | | AC-FT | 2390000 | AC-FT | 1187000 |

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-69, 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.5°C Aug. 10, 1972; minimum, 0.0°C Jan. 6, 1971, Dec. 8-16, 1972, Jan. 6, 7, 1974, Jan. 8-10, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 3, 8, 11, 12, 16; minimum, 0.0°C Jan. 8-10.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 15.5 | 14.0 | 10.0 | 9.0 | 2.5 | 2.0 | 4.0 | 4.0 | 4.5 | 3.0 | 6.0 | 5.5 |
| 2 | 15.5 | 15.0 | 10.0 | 9.5 | 2.5 | 2.5 | 4.5 | 3.5 | 5.0 | 4.0 | 5.5 | 5.0 |
| 3 | 15.0 | 14.0 | 11.0 | 10.0 | 3.0 | 2.5 | 4.0 | 3.5 | 5.0 | 4.5 | 6.0 | 5.0 |
| 4 | 14.0 | 13.0 | 11.5 | 10.5 | 3.0 | 2.5 | 4.5 | 3.5 | 5.0 | 4.0 | 6.5 | 5.5 |
| 5 | 15.0 | 12.0 | 10.5 | 10.0 | 3.0 | 3.0 | 4.0 | 3.0 | 4.5 | 3.5 | 7.0 | 6.0 |
| 6 | 13.5 | 12.0 | 10.0 | 9.5 | 3.5 | 3.0 | 2.5 | 1.5 | 5.0 | 4.0 | 6.5 | 6.5 |
| 7 | 14.0 | 12.0 | 10.0 | 9.0 | 4.0 | 3.5 | 2.0 | 1.0 | 5.0 | 4.0 | 6.5 | 6.0 |
| 8 | 13.5 | 12.5 | 10.0 | 9.0 | 4.0 | 3.5 | 1.0 | 0.0 | 6.0 | 4.5 | 7.0 | 6.5 |
| 9 | 13.0 | 12.5 | 9.5 | 9.0 | 4.0 | 4.0 | 0.5 | 0.0 | 6.0 | 5.0 | 6.5 | 6.0 |
| 10 | 13.5 | 12.0 | 9.0 | 8.5 | 4.5 | 4.0 | 1.0 | 0.0 | 7.0 | 5.5 | 6.5 | 5.0 |
| 11 | 14.0 | 13.0 | 9.0 | 8.5 | 4.5 | 4.0 | 2.0 | 1.0 | 7.5 | 6.0 | 6.5 | 5.5 |
| 12 | 13.5 | 12.5 | 9.0 | 8.5 | 4.0 | 3.5 | 3.0 | 2.0 | 8.0 | 6.5 | 6.5 | 6.0 |
| 13 | 13.5 | 12.0 | 9.0 | 8.5 | 4.0 | 3.5 | 4.0 | 3.5 | 8.5 | 7.0 | 6.5 | 5.5 |
| 14 | 13.0 | 11.5 | 8.5 | 8.0 | 4.0 | 3.5 | 4.0 | 3.5 | 9.0 | 8.0 | 6.5 | 5.0 |
| 15 | 12.5 | 11.0 | 8.5 | 8.0 | 4.0 | 3.5 | 4.0 | 3.5 | 9.0 | 7.5 | 6.0 | 5.5 |
| 16 | 11.5 | 10.5 | 9.5 | 8.5 | 4.0 | 3.5 | 4.0 | 3.0 | 8.5 | 7.5 | 6.5 | 5.5 |
| 17 | 11.0 | 10.0 | 10.0 | 9.5 | 4.0 | 3.5 | 4.0 | 3.0 | 8.5 | 7.0 | 7.0 | 6.5 |
| 18 | 10.5 | 9.0 | 10.5 | 10.0 | 4.0 | 3.5 | 4.0 | 3.0 | 8.5 | 7.0 | 7.0 | 6.5 |
| 19 | 10.0 | 9.0 | 10.5 | 9.5 | 4.0 | 3.0 | 4.0 | 3.5 | 8.5 | 7.0 | 7.5 | 6.5 |
| 20 | 10.0 | 8.5 | 9.5 | 8.5 | 3.0 | 2.0 | 4.5 | 3.5 | 8.0 | 7.0 | 8.0 | 7.0 |
| 21 | 9.5 | 8.5 | 8.5 | 7.5 | 2.0 | 1.5 | 4.5 | 4.0 | 7.5 | 6.5 | 8.5 | 7.0 |
| 22 | 9.0 | 8.5 | 7.5 | 7.5 | 1.5 | 1.5 | 5.0 | 4.5 | 7.0 | 6.5 | 9.0 | 7.5 |
| 23 | 9.0 | 8.0 | 7.5 | 7.0 | 2.5 | 1.5 | 4.5 | 4.5 | 6.5 | 6.0 | 9.0 | 8.0 |
| 24 | 8.5 | 8.0 | 7.5 | 7.0 | 3.0 | 2.0 | 4.5 | 4.0 | 6.0 | 5.5 | 8.0 | 7.0 |
| 25 | 9.0 | 8.5 | 7.0 | 6.5 | 3.0 | 2.5 | 4.5 | 3.5 | 6.0 | 5.5 | 8.0 | 7.0 |
| 26 | 9.0 | 8.0 | 6.5 | 5.0 | 3.5 | 3.0 | 3.5 | 2.5 | 6.5 | 5.5 | 8.5 | 7.5 |
| 27 | 9.5 | 8.5 | 5.0 | 4.0 | 4.0 | 3.5 | 3.0 | 2.0 | 7.0 | 6.0 | 8.5 | 8.0 |
| 28 | 8.5 | 8.0 | 4.0 | 3.0 | 4.5 | 4.0 | 2.5 | 1.5 | 7.0 | 6.0 | 8.0 | 6.5 |
| 29 | 8.5 | 8.0 | 3.0 | 2.0 | 4.0 | 4.0 | 2.5 | 1.5 | --- | --- | 7.0 | 5.5 |
| 30 | 9.0 | 8.0 | 3.0 | 2.0 | 4.0 | 4.0 | 2.5 | 1.5 | --- | --- | 7.5 | 6.0 |
| 31 | 9.5 | 8.5 | --- | --- | 4.0 | 4.0 | 3.5 | 2.0 | --- | --- | 7.0 | 6.5 |
| MONTH | 15.5 | 8.0 | 11.5 | 2.0 | 4.5 | 1.5 | 5.0 | 0.0 | 9.0 | 3.0 | 9.0 | 5.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.5 | 6.5 | 13.5 | 11.5 | 15.5 | 14.5 | 23.0 | 21.0 | 25.0 | 22.0 | 20.0 | 17.5 |
| 2 | 8.5 | 6.5 | 12.5 | 11.5 | 15.5 | 14.0 | 22.5 | 20.5 | 24.5 | 22.5 | 19.5 | 18.0 |
| 3 | 9.0 | 7.0 | 12.0 | 10.5 | 15.0 | 13.5 | 20.5 | 19.0 | 25.5 | 22.0 | 20.5 | 18.5 |
| 4 | 10.0 | 8.0 | 10.5 | 9.0 | 14.5 | 13.0 | 19.5 | 18.5 | 25.0 | 22.0 | 21.0 | 19.0 |
| 5 | 10.5 | 9.0 | 9.0 | 8.0 | 17.5 | 14.5 | 19.0 | 17.5 | 24.5 | 21.5 | 20.0 | 19.0 |
| 6 | 11.0 | 8.5 | 9.5 | 7.5 | 19.5 | 18.0 | 20.0 | 17.0 | 25.0 | 21.5 | 20.5 | 18.0 |
| 7 | 11.0 | 9.0 | 9.5 | 8.5 | 19.5 | 18.5 | 21.0 | 18.0 | 25.0 | 22.0 | 20.5 | 18.0 |
| 8 | 10.5 | 9.5 | 11.0 | 8.0 | 19.0 | 17.5 | 22.0 | 18.5 | 25.5 | 22.0 | 20.0 | 18.0 |
| 9 | 9.5 | 8.0 | 12.5 | 9.5 | 18.5 | 16.5 | 20.5 | 19.0 | 25.0 | 22.0 | 20.0 | 17.5 |
| 10 | 8.5 | 7.0 | 12.0 | 10.0 | 18.5 | 17.0 | 21.0 | 18.0 | 25.0 | 22.0 | 20.0 | 17.5 |
| 11 | 10.0 | 8.0 | 11.0 | 9.0 | 17.0 | 16.0 | 22.5 | 19.0 | 25.5 | 22.5 | 19.5 | 17.5 |
| 12 | 11.0 | 9.0 | 11.0 | 9.0 | 17.5 | 15.0 | 21.0 | 19.5 | 25.5 | 22.5 | 19.5 | 17.0 |
| 13 | 11.0 | 10.5 | 11.5 | 10.0 | 19.5 | 16.0 | 21.5 | 18.5 | 24.5 | 22.5 | 19.5 | 17.5 |
| 14 | 11.0 | 9.0 | 12.0 | 11.0 | 20.5 | 17.5 | 22.0 | 19.0 | 24.0 | 21.0 | 18.0 | 16.5 |
| 15 | 11.0 | 10.0 | 12.0 | 11.5 | 20.5 | 18.5 | 23.0 | 20.5 | 24.5 | 21.5 | 16.5 | 14.5 |
| 16 | 11.0 | 10.0 | 11.0 | 9.5 | 20.5 | 18.0 | 23.5 | 21.0 | 25.5 | 22.0 | 15.0 | 14.0 |
| 17 | 11.0 | 9.5 | 9.5 | 8.5 | 20.0 | 18.5 | 23.5 | 21.0 | 25.0 | 22.0 | 15.0 | 14.0 |
| 18 | 10.5 | 9.5 | 10.0 | 8.5 | 19.5 | 17.5 | 22.0 | 21.0 | 24.0 | 22.5 | 14.5 | 14.0 |
| 19 | 10.5 | 9.0 | 11.5 | 8.5 | 19.5 | 17.5 | 23.0 | 20.0 | 23.5 | 21.5 | 14.5 | 13.5 |
| 20 | 10.5 | 9.5 | 13.5 | 10.5 | 18.5 | 17.5 | 23.5 | 20.5 | 22.0 | 20.5 | 14.0 | 13.5 |
| 21 | 11.0 | 10.0 | 14.0 | 12.0 | 20.5 | 16.5 | 24.0 | 20.5 | 21.5 | 20.0 | 14.5 | 13.0 |
| 22 | 11.5 | 10.5 | 13.5 | 11.5 | 21.5 | 19.0 | 24.5 | 21.0 | 22.0 | 19.5 | --- | --- |
| 23 | 11.5 | 11.0 | 11.5 | 10.5 | 22.5 | 19.0 | 24.5 | 21.5 | 21.5 | 19.5 | --- | --- |
| 24 | 12.5 | 11.0 | 12.5 | 10.0 | 23.5 | 20.0 | 25.0 | 22.0 | 20.5 | 19.5 | --- | --- |
| 25 | 11.5 | 11.0 | 12.5 | 11.0 | 23.0 | 21.0 | 23.5 | 21.5 | 19.0 | 18.0 | --- | --- |
| 26 | 12.5 | 10.5 | 12.5 | 10.5 | 23.5 | 20.5 | 23.5 | 20.5 | 18.5 | 17.0 | --- | --- |
| 27 | 13.0 | 11.5 | 11.5 | 10.0 | 23.5 | 20.5 | 23.5 | 21.0 | 18.5 | 17.5 | --- | --- |
| 28 | 13.0 | 12.0 | 12.0 | 9.5 | 23.5 | 21.0 | 23.5 | 21.0 | 19.0 | 17.5 | --- | --- |
| 29 | 13.5 | 12.0 | 13.5 | 10.5 | 23.5 | 21.0 | 23.5 | 20.5 | 19.5 | 17.5 | --- | --- |
| 30 | 13.5 | 12.5 | 14.0 | 12.0 | 22.5 | 21.0 | 24.0 | 21.0 | 19.5 | 18.0 | --- | --- |
| 31 | --- | --- | 15.0 | 13.5 | --- | --- | 24.5 | 21.5 | 19.5 | 18.0 | --- | --- |
| MONTH | 13.5 | 6.5 | 15.0 | 7.5 | 23.5 | 13.0 | 25.0 | 17.0 | 25.5 | 17.0 | 21.0 | 13.0 |

UMPQUA RIVER BASIN

459

14319900 CALAPOOYA CREEK AT NONPAREIL, OR

LOCATION.--Lat 43°25'04", long 123°09'13", in SW¼SE¼ sec.3, T.25 S., R.4 W., Douglas County, Hydrologic Unit 17100303, on left bank 0.3 mi (0.5 km) upstream from county road bridge, 0.9 mi (1.4 km) northeast of Nonpareil, and at mile 26.7 (43.0 km).

DRAINAGE AREA.--89.6 mi² (232.1 km²).

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 699.22 ft (213.122 m) above mean sea level (Douglas County Survey bench mark).

REMARKS.--Records good. No regulation. Only minor diversions by pumping for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 580 ft³/s (16.4 m³/s) Mar. 9, 1977, gage height, 4.24 ft (1.292 m); minimum, 5.3 ft³/s (0.15 m³/s) Aug. 17-19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 580 ft³/s (16.4 m³/s) Mar. 9, gage height, 4.24 ft (1.292 m), no peak above base of 2,700 ft³/s (76.5 m³/s); minimum, 5.3 ft³/s (0.15 m³/s) Aug. 17-19.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|---------|------|------|------|-------|------|-------|------|------|-------|-------|-------|-------|
| 1 | 15 | 56 | 21 | 25 | 23 | 344 | 255 | 60 | 127 | 26 | 11 | 15 | | |
| 2 | 15 | 56 | 20 | 33 | 23 | 298 | 249 | 112 | 118 | 25 | 10 | 14 | | |
| 3 | 18 | 43 | 20 | 65 | 23 | 421 | 217 | 186 | 108 | 26 | 9.2 | 12 | | |
| 4 | 17 | 36 | 20 | 63 | 22 | 311 | 197 | 222 | 104 | 26 | 9.2 | 11 | | |
| 5 | 15 | 32 | 19 | 58 | 22 | 240 | 192 | 249 | 95 | 26 | 8.5 | 11 | | |
| 6 | 15 | 29 | 19 | 48 | 22 | 205 | 186 | 264 | 87 | 26 | 8.5 | 11 | | |
| 7 | 14 | 26 | 19 | 40 | 21 | 211 | 181 | 231 | 80 | 25 | 9.2 | 11 | | |
| 8 | 13 | 23 | 23 | 38 | 21 | 279 | 225 | 228 | 74 | 22 | 9.2 | 9.2 | | |
| 9 | 13 | 22 | 75 | 36 | 20 | 527 | 203 | 178 | 69 | 22 | 9.2 | 8.5 | | |
| 10 | 13 | 22 | 49 | 34 | 20 | 436 | 168 | 158 | 67 | 22 | 7.9 | 8.5 | | |
| 11 | 13 | 21 | 40 | 32 | 19 | 324 | 148 | 186 | 65 | 22 | 6.8 | 8.5 | | |
| 12 | 13 | 21 | 36 | 54 | 19 | 334 | 133 | 165 | 63 | 20 | 6.1 | 8.5 | | |
| 13 | 13 | 20 | 32 | 50 | 19 | 311 | 136 | 145 | 61 | 21 | 6.1 | 7.9 | | |
| 14 | 13 | 27 | 29 | 48 | 19 | 252 | 133 | 133 | 57 | 20 | 5.5 | 7.9 | | |
| 15 | 13 | 40 | 27 | 46 | 19 | 205 | 122 | 148 | 52 | 19 | 6.1 | 8.5 | | |
| 16 | 13 | 53 | 25 | 42 | 19 | 171 | 112 | 354 | 50 | 18 | 6.8 | 10 | | |
| 17 | 13 | 41 | 25 | 40 | 18 | 148 | 104 | 548 | 47 | 17 | 6.1 | 12 | | |
| 18 | 13 | 40 | 23 | 36 | 17 | 145 | 97 | 480 | 47 | 16 | 5.3 | 13 | | |
| 19 | 14 | 37 | 22 | 34 | 17 | 163 | 89 | 351 | 47 | 17 | 5.3 | 26 | | |
| 20 | 15 | 34 | 21 | 32 | 17 | 186 | 85 | 268 | 47 | 16 | 5.8 | 30 | | |
| 21 | 15 | 32 | 19 | 30 | 27 | 173 | 81 | 216 | 49 | 15 | 6.8 | 22 | | |
| 22 | 16 | 30 | 19 | 30 | 63 | 165 | 77 | 182 | 44 | 14 | 9.2 | 17 | | |
| 23 | 16 | 27 | 20 | 28 | 79 | 189 | 73 | 193 | 40 | 14 | 10 | 17 | | |
| 24 | 21 | 26 | 21 | 26 | 104 | 220 | 69 | 196 | 36 | 14 | 39 | 59 | | |
| 25 | 75 | 26 | 21 | 24 | 87 | 228 | 67 | 173 | 34 | 12 | 33 | 49 | | |
| 26 | 60 | 25 | 25 | 24 | 101 | 197 | 67 | 210 | 34 | 13 | 33 | 54 | | |
| 27 | 37 | 22 | 32 | 23 | 124 | 234 | 62 | 213 | 31 | 14 | 25 | 44 | | |
| 28 | 29 | 22 | 28 | 23 | 327 | 282 | 58 | 196 | 30 | 13 | 17 | 135 | | |
| 29 | 26 | 21 | 27 | 23 | --- | 311 | 58 | 171 | 27 | 13 | 17 | 127 | | |
| 30 | 25 | 21 | 27 | 22 | --- | 285 | 58 | 150 | 26 | 11 | 19 | 82 | | |
| 31 | 22 | --- | 26 | 22 | --- | 249 | --- | 132 | --- | 11 | 19 | --- | | |
| TOTAL | 623 | 931 | 830 | 1129 | 1312 | 8044 | 3902 | 6698 | 1816 | 576 | 379.8 | 849.5 | | |
| MEAN | 20.1 | 31.0 | 26.8 | 36.4 | 46.9 | 259 | 130 | 216 | 60.5 | 18.6 | 12.3 | 28.3 | | |
| MAX | 75 | 56 | 75 | 65 | 327 | 527 | 255 | 548 | 127 | 26 | 39 | 135 | | |
| MIN | 13 | 20 | 19 | 22 | 17 | 145 | 58 | 60 | 26 | 11 | 5.3 | 7.9 | | |
| CFSM | .22 | .35 | .30 | .41 | .52 | 2.89 | 1.45 | 2.41 | .68 | .21 | .14 | .32 | | |
| IN. | .26 | .39 | .34 | .47 | .54 | 3.34 | 1.62 | 2.78 | .75 | .24 | .16 | .35 | | |
| AC-FT | 1240 | 1850 | 1650 | 2240 | 2600 | 15960 | 7740 | 13290 | 3600 | 1140 | 753 | 1680 | | |
| WTR YR 1977 | TOTAL | 27090.3 | MEAN | 74.2 | MAX | 548 | MIN | 5.3 | CFSM | .83 | IN | 11.25 | AC-FT | 53730 |

UMPQUA RIVER BASIN

14321000 UMPQUA RIVER NEAR ELKTON, OR
(National stream-quality accounting network station)

LOCATION.--Lat 43°35'10", long 123°33'15", in NW¼ sec.8, T.23 S., R.7 W., Douglas County, Hydrologic Unit 17100303, on left bank 3.5 mi (5.6 km) south of Elkton, 8.3 mi (13.4 km) upstream from Elk Creek, and at mile 56.9 (91.6 km).

DRAINAGE AREA.--3,683 mi² (9,539 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1905 to current year.

REVISED RECORDS.--WSP 1184: 1927(M), 1938(M), 1943(M), 1946(M). WSP 1448: 1911-13, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 90.42 ft (27.560 m) above mean sea level. Prior to June 29, 1972, at site 2,400 ft (732 m) downstream at same datum. See WSP 1931 or 2135 for history of changes prior to June 29, 1972.

REMARKS.--Water-discharge records excellent. Regulation by powerplants on North Umpqua River ordinarily does not affect discharge at this station. Diversions for irrigation above station.

AVERAGE DISCHARGE.--72 years, 7,510 ft³/s (212.7 m³/s), 27.69 in/yr (703 mm/yr), 5,441,000 acre-ft/yr (6.71 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 265,000 ft³/s (7,500 m³/s) Dec. 23, 1964, gage height, 51.95 ft (15.834 m), from floodmarks; minimum observed, 640 ft³/s (18.1 m³/s) July 18, 1926.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least December 1861, that of Dec. 23, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,100 ft³/s (371 m³/s) Mar. 10, gage height, 9.22 ft (2.810 m), no peak above base of 52,000 ft³/s (1,470 m³/s); minimum, 754 ft³/s (21.4 m³/s) Aug. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | |
|-------------------|---------|-------|-------|-------|--------|--------|--------|--------|--------|-------|-------|-------|---------|
| 1 | 1320 | 1450 | 1240 | 1230 | 1080 | 6390 | 4630 | 2760 | 3960 | 1120 | 884 | 1050 | |
| 2 | 1320 | 1420 | 1170 | 1230 | 1080 | 6970 | 5300 | 3060 | 3860 | 1160 | 875 | 1060 | |
| 3 | 1310 | 1600 | 1180 | 1230 | 1130 | 5950 | 5950 | 4430 | 3530 | 1100 | 840 | 987 | |
| 4 | 1320 | 1670 | 1200 | 1550 | 1150 | 6960 | 5240 | 5690 | 3580 | 1080 | 857 | 940 | |
| 5 | 1350 | 1610 | 1180 | 1660 | 1130 | 5850 | 5060 | 7240 | 3400 | 1140 | 875 | 903 | |
| 6 | 1370 | 1510 | 1180 | 1630 | 1110 | 4790 | 5710 | 8310 | 3120 | 1170 | 840 | 875 | |
| 7 | 1320 | 1390 | 1180 | 1560 | 1090 | 4560 | 5840 | 7860 | 2980 | 1110 | 813 | 866 | |
| 8 | 1320 | 1310 | 1210 | 1460 | 1090 | 5020 | 6000 | 6740 | 2880 | 1110 | 813 | 849 | |
| 9 | 1280 | 1280 | 1250 | 1380 | 1110 | 9130 | 6850 | 5950 | 2690 | 1090 | 813 | 849 | |
| 10 | 1270 | 1300 | 1370 | 1280 | 1090 | 12400 | 6190 | 5370 | 2520 | 1060 | 813 | 840 | |
| 11 | 1250 | 1280 | 1520 | 1320 | 1180 | 9430 | 5010 | 5600 | 2340 | 1040 | 813 | 849 | |
| 12 | 1260 | 1230 | 1400 | 1500 | 1110 | 7260 | 4280 | 6210 | 2150 | 1040 | 813 | 866 | |
| 13 | 1270 | 1280 | 1340 | 1630 | 1090 | 7330 | 3950 | 5540 | 1980 | 1050 | 804 | 930 | |
| 14 | 1260 | 1340 | 1310 | 1860 | 1110 | 6590 | 4050 | 4840 | 1900 | 1030 | 804 | 968 | |
| 15 | 1240 | 1300 | 1310 | 1960 | 1070 | 5370 | 3900 | 4350 | 1930 | 977 | 831 | 1130 | |
| 16 | 1220 | 1370 | 1300 | 1820 | 1070 | 4360 | 3720 | 4380 | 1930 | 968 | 796 | 1160 | |
| 17 | 1210 | 1610 | 1220 | 1600 | 1070 | 3800 | 3670 | 6740 | 1930 | 958 | 787 | 1110 | |
| 18 | 1210 | 1670 | 1200 | 1520 | 1070 | 3380 | 3440 | 9880 | 1750 | 949 | 770 | 1050 | |
| 19 | 1180 | 1570 | 1200 | 1510 | 1070 | 3280 | 3250 | 8970 | 1710 | 949 | 787 | 1340 | |
| 20 | 1250 | 1460 | 1180 | 1400 | 1090 | 3490 | 2960 | 7100 | 1660 | 930 | 813 | 1350 | |
| 21 | 1280 | 1400 | 1160 | 1380 | 1090 | 4240 | 2940 | 6160 | 1620 | 884 | 822 | 1380 | |
| 22 | 240 | 1370 | 1150 | 1390 | 1150 | 4100 | 2810 | 5410 | 1520 | 875 | 822 | 1420 | |
| 23 | 1240 | 1350 | 1160 | 1370 | 1470 | 4080 | 2730 | 5110 | 1510 | 875 | 787 | 1290 | |
| 24 | 1260 | 1280 | 1150 | 1310 | 2280 | 5020 | 2760 | 5600 | 1430 | 875 | 822 | 1310 | |
| 25 | 1320 | 1270 | 1160 | 1290 | 2630 | 5130 | 2690 | 6310 | 1300 | 875 | 903 | 1300 | |
| 26 | 1400 | 1260 | 1200 | 1300 | 2490 | 4760 | 2910 | 5930 | 1280 | 831 | 1090 | 1800 | |
| 27 | 1900 | 1250 | 1230 | 1310 | 2300 | 4290 | 2980 | 6270 | 1300 | 831 | 1180 | 1500 | |
| 28 | 1640 | 1250 | 1230 | 1360 | 2810 | 4740 | 2840 | 6440 | 1280 | 849 | 1100 | 1610 | |
| 29 | 1500 | 1240 | 1270 | 1310 | --- | 5890 | 2620 | 5720 | 1240 | 875 | 1140 | 1890 | |
| 30 | 1440 | 1240 | 1280 | 1190 | --- | 5580 | 2630 | 5060 | 1160 | 894 | 1080 | 4670 | |
| 31 | 1440 | --- | 1250 | 1100 | --- | 5110 | --- | 4400 | --- | 884 | 1060 | --- | |
| TOTAL | 41210 | 41560 | 38380 | 44640 | 38210 | 175250 | 122910 | 183430 | 65440 | 30579 | 27247 | 38142 | |
| MEAN | 1329 | 1385 | 1238 | 1440 | 1365 | 5653 | 4097 | 5917 | 2181 | 986 | 879 | 1271 | |
| MAX | 1900 | 1670 | 1520 | 1960 | 2810 | 12400 | 6850 | 9880 | 3960 | 1170 | 1180 | 4670 | |
| MIN | 1180 | 1230 | 1150 | 1100 | 1070 | 3280 | 2620 | 2760 | 1160 | 831 | 770 | 840 | |
| CFSM | .36 | .38 | .34 | .39 | .37 | 1.54 | 1.11 | 1.61 | .59 | .27 | .24 | .35 | |
| IN. | .42 | .42 | .39 | .45 | .39 | 1.77 | 1.24 | 1.85 | .66 | .31 | .28 | .39 | |
| AC-FT | 81740 | 82430 | 76130 | 88540 | 75790 | 347600 | 243800 | 363800 | 129800 | 60650 | 54040 | 75650 | |
| CAL YR 1976 TOTAL | 2098000 | MEAN | 5732 | MAX | 102000 | MIN | 1150 | CFSM | 1.56 | IN | 21.19 | AC-FT | 4161000 |
| WTR YR 1977 TOTAL | 846998 | MEAN | 2321 | MAX | 12400 | MIN | 770 | CFSM | .63 | IN | 8.56 | AC-FT | 1680000 |

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: April 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 30.0°C July 14, 1971; minimum, 0.0°C Jan. 7, 8, 11, 12, and probably Jan. 9, 10, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.5°C Aug. 3, 12; minimum, 2.0°C Jan. 9, 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PFR 100 ML) | DIS- SOLVED SILICA (SiO ₂) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) | DIS- SOLVED SODIUM (NA) (MG/L) |
|-------|------|--|-----------------------------|---------------|------------------------------------|--|--|--|---|--|---|--|
| OCT | | | | | | | | | | | | |
| 19... | 1200 | 1140 | 13.0 | 7.1 | 10.4 | 76 | 83 | 83 | 19 | 6.8 | 2.4 | 5.5 |
| NOV | | | | | | | | | | | | |
| 16... | 1030 | 1330 | 11.5 | 7.1 | 10.0 | 78 | 300 | 85 | 17 | 8.1 | 2.9 | 5.5 |
| DEC | | | | | | | | | | | | |
| 14... | 1100 | 1210 | 5.0 | 7.2 | 13.6 | 92 | 82 | 810 | 21 | 7.9 | 2.8 | 5.9 |
| JAN | | | | | | | | | | | | |
| 10... | 1030 | 1250 | 2.0 | 7.5 | 11.1 | 102 | 81 | 810 | 18 | 9.1 | 3.5 | 6.0 |
| FEB | | | | | | | | | | | | |
| 23... | 1030 | 1400 | 9.0 | 7.5 | 11.4 | 95 | 34 | 39 | 18 | 8.7 | 3.1 | 6.2 |
| MAR | | | | | | | | | | | | |
| 15... | 1000 | 5390 | 7.5 | 7.0 | 11.5 | 79 | 58 | 27 | 15 | 7.1 | 3.0 | 4.3 |
| APR | | | | | | | | | | | | |
| 19... | 0915 | 3310 | 12.5 | 7.0 | 10.6 | 66 | <1 | 24 | 15 | 6.6 | 2.1 | 3.9 |
| MAY | | | | | | | | | | | | |
| 17... | 0900 | 6250 | 13.5 | 7.5 | -- | 67 | 24 | 23 | 16 | 7.1 | 2.4 | 3.7 |
| JUN | | | | | | | | | | | | |
| 21... | 1000 | 1670 | 20.0 | 7.8 | 9.0 | 70 | 82 | 37 | 13 | 7.0 | 2.6 | 4.8 |
| JUL | | | | | | | | | | | | |
| 28... | 1630 | 930 | 25.5 | 8.9 | 11.8 | 73 | 85 | 86 | 17 | 5.0 | 2.4 | 5.2 |
| AUG | | | | | | | | | | | | |
| 23... | 0945 | 761 | 23.0 | 7.5 | 9.5 | 74 | 82 | 2200 | 16 | 5.1 | 2.5 | 4.6 |
| SEP | | | | | | | | | | | | |
| 19... | 1545 | 1420 | 18.0 | 8.5 | 9.4 | 82 | 39 | 240 | 20 | 7.0 | 2.5 | 5.4 |

| DATE | BICAR- BONATE (HCO ₃) (MG/L) | CAR- BONATE (CO ₃) (MG/L) | DIS- SOLVED SULFATE (SO ₄) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA, MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) |
|-------|---|--|---|---|--|--|--|---|---|-------------------------------------|---|
| OCT | | | | | | | | | | | |
| 19... | 33 | 0 | 5.1 | 3.0 | .1 | .01 | .28 | .29 | .06 | 27 | 0 |
| NOV | | | | | | | | | | | |
| 16... | 45 | 0 | 6.0 | 3.9 | .1 | .01 | .05 | .06 | .07 | 32 | 0 |
| DEC | | | | | | | | | | | |
| 14... | 35 | 0 | 4.8 | 4.8 | .1 | .15 | .21 | .36 | .08 | 31 | 3 |
| JAN | | | | | | | | | | | |
| 10... | 50 | -- | 5.1 | 6.3 | .1 | .01 | .05 | .06 | .07 | 37 | 0 |
| FEB | | | | | | | | | | | |
| 23... | 45 | 0 | 1.9 | 5.3 | .1 | .01 | .11 | .12 | .08 | 35 | 0 |
| MAR | | | | | | | | | | | |
| 15... | 35 | 0 | 5.1 | 3.8 | .1 | .09 | .07 | .16 | .06 | 30 | 1 |
| APR | | | | | | | | | | | |
| 19... | 33 | 0 | 3.3 | 2.8 | .0 | .03 | .01 | .04 | .04 | 25 | 0 |
| MAY | | | | | | | | | | | |
| 17... | 34 | 0 | 3.0 | 2.4 | .0 | .01 | .34 | .35 | .05 | 28 | 0 |
| JUN | | | | | | | | | | | |
| 21... | 35 | 0 | 3.1 | 2.7 | .1 | .01 | .23 | .24 | 2.1 | 28 | 0 |
| JUL | | | | | | | | | | | |
| 28... | 34 | 0 | .5 | 4.0 | .1 | .01 | .10 | .11 | .03 | 22 | 0 |
| AUG | | | | | | | | | | | |
| 23... | 35 | 0 | .1 | 2.8 | .1 | .02 | .22 | .24 | .06 | 23 | 0 |
| SEP | | | | | | | | | | | |
| 19... | 36 | 0 | 2.0 | 3.6 | .1 | .02 | -- | -- | .04 | 28 | 0 |

B: RESULTS BASED ON NON-IDEAL COLONY COUNT

UMPQUA RIVER BASIN

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) | DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) | TUR- BID- ITY (JTU) | SUS- PENDE SOL- MENT (MG/L) | SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) | SUS. SED. SIFVE DIAM. % FINER THAN .062 MM | ALKA- LITY AS CACO3 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|-----------|---|--|---|--|--|------------------------------|---|---|--|--|---|
| OCT 19... | .5 | 73 | 59 | 225 | .10 | 1 | 6 | 18 | 42 | 27 | -- |
| NOV 16... | .4 | 57 | 67 | 205 | .08 | 2 | 3 | 11 | 60 | 37 | -- |
| DEC 14... | .5 | 81 | 66 | 265 | .11 | 2 | 3 | 9.8 | 65 | 29 | -- |
| JAN 10... | .4 | 68 | 74 | 229 | .09 | 4 | 2 | 6.7 | 80 | 41 | 1.2 |
| FEB 23... | .5 | 61 | 66 | 231 | .08 | 4 | 3 | 11 | 85 | 37 | -- |
| MAR 15... | .3 | 56 | 56 | 815 | .08 | 15 | 12 | 175 | 87 | 29 | -- |
| APR 19... | .3 | 53 | 51 | 474 | .07 | 3 | 5 | 45 | 72 | 27 | 1.1 |
| MAY 17... | .3 | 59 | 52 | 996 | .08 | 10 | 14 | 236 | 67 | 28 | -- |
| JUN 21... | .4 | 46 | 51 | 207 | .06 | 1 | 4 | 18 | 63 | 29 | -- |
| JUL 28... | .5 | 48 | 52 | 121 | .07 | 2 | 2 | 5.0 | 62 | 28 | 1.8 |
| AUG 23... | .4 | 54 | 50 | 111 | .07 | 2 | 4 | 8.2 | 60 | 29 | -- |
| SEP 19... | .4 | 51 | 59 | 196 | .07 | 2 | 4 | 15 | 76 | 30 | -- |

| DATE | TOTAL IRON (FE) (UG/L) | DIS- SOLVED IRON (FE) (UG/L) | TOTAL MAN- GANESE (MN) (UG/L) | DIS- SOLVED MAN- GANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS- SOLVED ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | DIS- SOLVED CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | DIS- SOLVED CHRO- MIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|-----------|---------------------------------|--|---|--|------------------------------------|---|---|--|--|---|-----------------------------------|
| OCT 19... | 110 | 10 | 10 | 0 | 1 | 1 | <10 | 0 | 0 | 0 | <50 |
| JAN 10... | 200 | 30 | 10 | 0 | 1 | 1 | <10 | 1 | 0 | 0 | <50 |
| APR 19... | 270 | 40 | 20 | 10 | 1 | 0 | <10 | 1 | 0 | 0 | <50 |
| JUL 28... | 170 | 110 | 10 | 8 | 1 | 0 | <10 | 3 | 0 | 0 | <50 |

| DATE | DIS- SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS- SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS- SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS- SOLVED ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | DIS- SOLVED SELE- NIUM (SF) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS- SOLVED MERCURY (HG) (UG/L) |
|-----------|--|-----------------------------------|--|---------------------------------|--|---------------------------------|--|--|---|------------------------------------|---|
| OCT 19... | 0 | <10 | 1 | <100 | 1 | 10 | 0 | 0 | 0 | .0 | .0 |
| JAN 10... | 0 | 20 | 2 | <100 | 2 | 20 | 10 | 0 | 0 | .0 | .0 |
| APR 19... | 0 | 10 | 2 | <100 | 0 | 240 | 0 | 0 | 0 | .0 | .0 |
| JUL 28... | 1 | 20 | 2 | <100 | 44 | 8 | 4 | 0 | 0 | .0 | .0 |

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | OCT 19,76 1200 | NOV 16,76 1030 | DEC 14,76 1100 | JAN 10,77 1030 | FEB 23,77 1030 | |
|-------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------|
| TOTAL CELLS/ML | 1300 | 110 | 51 | 220 | 780 | |
| DIVERSITY: DIVISION | 0.3 | 0.4 | 0.0 | 0.4 | 0.2 | |
| ..CLASS | 0.3 | 0.4 | 0.0 | 0.4 | 0.2 | |
| ..ORDER | 0.3 | 1.2 | 0.0 | 1.1 | 1.0 | |
| ...FAMILY | 0.3 | 2.6 | 2.2 | 2.8 | 2.4 | |
|GENUS | 0.0 | 2.7 | 2.4 | 2.8 | 2.5 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| ..CHLOROPHYCEAE | | | | | | |
| ...CHLOROCOCCALES | | | | | | |
|OOCYSTACEAE | | | | | | |
|ANKISTRODESMUS | -- | - | -- | - | -- | - |
|DICTYOSPHAERIUM | -- | - | -- | - | -- | - |
|KIRCHNERIELLA | 80 | 6 | -- | - | -- | - |
|OOCYSTIS | -- | - | -- | - | 11 | 5 |
| ...SCENEDESMACEAE | | | | | | |
|ACTINASTRUM | -- | - | -- | - | -- | - |
|SCENEDESMUS | -- | - | 8 | 7 | -- | - |
| ...TETRASPORALES | | | | | | |
| ...PALMELLACEAE | | | | | | |
| ...SPHAEROCYSTIS | -- | - | -- | - | -- | - |
| ...VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ...CHLAMYDOMONAS | -- | - | -- | - | -- | - |
| ...ZYGNEATALES | | | | | | |
| ...ZYGNEMATAEAE | | | | | | |
| ...MOUGEOTIA | -- | - | -- | - | -- | - |
| CHRYSTOPHYTA | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | |
| ...CENTRALES | | | | | | |
| ...COSCINODISCAEAE | 1200# | 94 | -- | - | -- | - |
|CYCLOTELLA | -- | - | -- | - | 3 | 1 |
|MELOSIRA | -- | - | -- | - | 39# | 18 |
|STEPHANODISCUS | -- | - | 35# | 31 | -- | - |
| ...PENNALES | | | | | | |
| ...ACHNANTHACEAE | | | | | | |
|ACHNANTHES | -- | - | 3 | 2 | 3 | 6 |
|COCCONEIS | * | 0 | 3 | 2 | -- | - |
|RHOICOSPHEA | -- | - | 3 | 2 | 3 | 6 |
| ...CYMBELLACEAE | | | | | | |
|AMPHORA | -- | - | -- | - | -- | - |
|CYMBELLA | -- | - | -- | - | 3 | 6 |
|EPITHEMIA | * | 0 | 3 | 2 | 3 | 6 |
| ...DIATOMACEAE | | | | | | |
|DIATOMA | * | 0 | 19# | 17 | 14# | 28 |
| ...EUNOTIACEAE | | | | | | |
|EUNOTIA | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | |
|ASTERIONELLA | -- | - | -- | - | -- | - |
| ...FRAGILARIA | -- | - | 5 | 5 | 68# | 31 |
| ...HANNAEA | -- | - | -- | - | -- | - |
| ...SYNEDRA | -- | - | -- | - | -- | - |
| ...GOMPHONEMATAEAE | | | | | | |
|GOMPHONEMA | * | 0 | 3 | 2 | 3 | 6 |
| ...NAVICULACEAE | | | | | | |
|NAVICULA | -- | - | 3 | 2 | 3 | 6 |
|NEIDIUM | -- | - | -- | - | -- | - |
| ...PINNULARIA | -- | - | -- | - | -- | - |
| ...NITZSCHIAEAE | | | | | | |
| ...NITZSCHIA | -- | - | 30# | 26 | 20# | 39 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| ..CYANOPHYCEAE | | | | | | |
| ...CHROCOCCOCCALES | | | | | | |
|CHROCOCCOCCAEAE | | | | | | |
|ANACYSTIS | -- | - | -- | - | -- | - |
|HORMOGONALES | | | | | | |
| ...NOSTOCACEAE | | | | | | |
|ANABAENA | -- | - | -- | - | -- | - |
| ...OSCILLATORIAEAE | | | | | | |
|OSCILLATORIA | -- | - | -- | - | -- | - |
| ...RIVULARIAEAE | | | | | | |
|RAPHIDIOPSIS | -- | - | -- | - | 3 | 1 |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | |
| ...EUGLENALES | | | | | | |
|EUGLENACEAE | | | | | | |
|EUGLENA | -- | - | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | |
| ..DINOPHYCEAE | | | | | | |
| ...PERIDINIALES | | | | | | |
|PERIDINIAEAE | | | | | | |
|PERIDINIUM | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

UMPUA RIVER BASIN

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | MAR 15,77 1000 | MAY 17,77 0900 | JUN 21,77 1000 | AUG 23,77 0945 | SEP 19,77 1545 | | | | | |
|-------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------|--------------|--------------|--------------|--------------|
| TOTAL CELLS/ML | 1700 | 12000 | 490 | 2600 | 240 | | | | | |
| DIVERSITY: DIVISION | 0.5 | 1.1 | 1.0 | 0.9 | 1.6 | | | | | |
| ..CLASS | 0.5 | 1.1 | 1.0 | 0.9 | 1.6 | | | | | |
| ...ORDER | 1.3 | 1.1 | 1.6 | 1.6 | 1.8 | | | | | |
| ...FAMILY | 3.0 | 1.9 | 2.2 | 2.3 | 2.6 | | | | | |
|GENUS | 3.6 | 2.2 | 2.6 | 2.3 | 2.7 | | | | | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | | | |
| ...OOCYSTACEAE | | | | | | | | | | |
|ANKISTRODESMUS | 12 | 1 | -- | -- | | | | | -- | -- |
|DICTYOSPHAERIUM | -- | -- | -- | -- | 13 | 3 | 610# | 23 | -- | -- |
|KIRCHNERIELLA | -- | -- | -- | -- | 7 | 1 | -- | -- | -- | -- |
|OOCYSTIS | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
|SCENEDESMACEAE | | | | | | | | | | |
|ACTINASTRUM | -- | -- | -- | -- | -- | -- | 920# | 35 | -- | -- |
|SCENEDESMUS | 48 | 3 | -- | -- | 13 | 3 | -- | -- | 46# | 20 |
| ..TETRASPORALES | | | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | | | |
| ...SPHAEROCYSTIS | -- | -- | -- | -- | -- | -- | 360 | 14 | -- | -- |
| ...VOLVOCALES | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ...CHLAMYDOMONAS | -- | -- | * 0 | -- | -- | -- | -- | -- | 17 | 7 |
| ..ZYGNEMATALES | | | | | | | | | | |
| ...ZYGNEMATAEAE | | | | | | | | | | |
| ...MOUGEOTIA | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| CHRYSTOPHYTA | | | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | | | |
| ...CENTRALES | | | | | | | | | | |
| ...COSCINODISCAEAE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
|CYCLOTELLA | 340# | 20 | -- | -- | 250# | 52 | -- | -- | -- | -- |
|MELOSIRA | 85 | 5 | -- | -- | 16 | 3 | 180 | 7 | -- | -- |
|STEPHANODISCUS | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| ..PENNALES | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | |
| ...ACHNANTHES | 130 | 8 | 110 | 1 | 33 | 7 | -- | -- | 12 | 5 |
| ...COCCONEIS | 60 | 4 | 610 | 5 | 16 | 3 | -- | -- | 12 | 5 |
| ...RHOICOSPHEA | 73 | 4 | 500 | 4 | 7 | 1 | -- | -- | -- | -- |
| ...CYMBELLACEAE | | | | | | | | | | |
| ...AMPHORA | 12 | 1 | -- | -- | -- | -- | -- | -- | -- | -- |
| ...CYMBELLA | 60 | 4 | * 0 | -- | -- | -- | -- | -- | -- | -- |
| ...EPITHEMIA | 36 | 2 | 72 | 1 | 3 | 1 | * 0 | -- | 6 | 2 |
| ...DIATOMACEAE | | | | | | | | | | |
| ...DIATOMA | 73 | 4 | 500 | 4 | 13 | 3 | -- | -- | -- | -- |
| ...EUNOTIACEAE | | | | | | | | | | |
| ...EUNOTIA | -- | -- | -- | -- | 3 | 1 | -- | -- | -- | -- |
| ...FRAGILARIACEAE | | | | | | | | | | |
| ...ASTERIONELLA | -- | -- | 140 | 1 | -- | -- | -- | -- | -- | -- |
| ...FRAGILARIA | 85 | 5 | 2900# | 25 | 16 | 3 | -- | -- | -- | -- |
| ...HANNAEA | -- | -- | * 0 | -- | -- | -- | -- | -- | -- | -- |
| ...SYNEDRA | -- | -- | -- | -- | -- | -- | 40 | 2 | 6 | 2 |
| ...GOMPHONEMATAEAE | | | | | | | | | | |
| ...GOMPHONEMA | 97 | 6 | 72 | 1 | 7 | 1 | -- | -- | 29 | 12 |
| ...NAVICULACEAE | | | | | | | | | | |
| ...NAVICULA | 130 | 8 | 320 | 3 | -- | -- | -- | -- | 6 | 2 |
| ...NEIDIUM | 12 | 1 | -- | -- | -- | -- | -- | -- | -- | -- |
| ...PINNULARIA | 12 | 1 | -- | -- | -- | -- | -- | -- | -- | -- |
| ...NITZSCHIAEAE | | | | | | | | | | |
| ...NITZSCHIA | 330# | 20 | 290 | 2 | 13 | 3 | 510# | 19 | 17 | 7 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | | | |
| ...CHROCOCCOCCALES | | | | | | | | | | |
| ...CHROCOCCOCCAEAE | | | | | | | | | | |
|ANACYSTIS | -- | -- | -- | -- | 78# | 16 | -- | -- | 87# | 37 |
| ...HORMOGONALES | | | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | | | |
| ...ANABAENA | 73 | 4 | -- | -- | -- | -- | -- | -- | -- | -- |
| ...OSCILLATORIAEAE | | | | | | | | | | |
| ...OSCILLATORIA | -- | -- | 6200# | 52 | -- | -- | -- | -- | -- | -- |
| ...RIVULARIAEAE | | | | | | | | | | |
| ...RAPHIDIOPSIS | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | | | | | |
| ...EUGLENALES | | | | | | | | | | |
| ...EUGLENAEAE | | | | | | | | | | |
| ...EUGLENA | -- | -- | -- | -- | -- | -- | * 0 | -- | -- | -- |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | | | |
| ..DINOPHYCEAE | | | | | | | | | | |
| ...PERIDINIALES | | | | | | | | | | |
| ...PERIDINIAEAE | | | | | | | | | | |
| ...PERIDINIUM | -- | -- | * 0 | -- | -- | -- | -- | -- | -- | -- |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | LENGTH OF EXPO- SURE (DAYS) | BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) | CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- FLUOROM (MG/M2) |
|--------------|---|--|--|--|---|---|
| OCT 19... | 28 | 1394 | .662 | .281 | -- | -- |
| JAN 10... | 27 | 504 | 1.07 | 1.05 | -- | -- |
| MAY 17... | 28 | 4931 | -- | -- | .945 | .008 |

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|------|-------|------|------|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 18.5 | 18.0 | 11.5 | 11.0 | 5.0 | 4.5 | 5.0 | 5.0 | 5.5 | 5.0 | 8.5 | 8.0 |
| 2 | 18.5 | 17.5 | 11.5 | 11.0 | 4.5 | 4.5 | 5.5 | 5.0 | 5.5 | 5.0 | 8.0 | 7.5 |
| 3 | 17.5 | 17.0 | 12.0 | 11.5 | 4.5 | 4.5 | 5.5 | 5.0 | 5.5 | 5.5 | 8.0 | 7.5 |
| 4 | 17.0 | 15.5 | 12.5 | 12.0 | 4.5 | 4.0 | 5.5 | 5.0 | 6.0 | 5.5 | 8.0 | 7.0 |
| 5 | 16.0 | 15.0 | 12.0 | 12.0 | 4.0 | 4.0 | 5.5 | 4.5 | 6.5 | 5.5 | 8.5 | 7.5 |
| 6 | 16.5 | 15.0 | 12.0 | 11.5 | 4.5 | 4.0 | 4.5 | 3.5 | 7.0 | 6.5 | 8.5 | 8.5 |
| 7 | 17.0 | 15.5 | 12.0 | 11.5 | 4.5 | 4.0 | 3.5 | 3.0 | 7.5 | 7.0 | 9.0 | 8.5 |
| 8 | 17.0 | 16.0 | 12.5 | 12.0 | 4.5 | 4.0 | 3.0 | 2.5 | 7.5 | 7.0 | 8.5 | 8.0 |
| 9 | 16.5 | 15.5 | 12.5 | 12.0 | 5.0 | 4.5 | 2.5 | 2.0 | 8.0 | 7.5 | 8.0 | 8.0 |
| 10 | 16.0 | 15.5 | 12.5 | 12.0 | 5.0 | 4.5 | 2.5 | 2.0 | 8.0 | 7.5 | 8.0 | 7.5 |
| 11 | 16.0 | 15.5 | 12.0 | 11.5 | 5.5 | 5.0 | 3.0 | 2.5 | 8.5 | 8.0 | 8.0 | 7.0 |
| 12 | 16.0 | 15.0 | 12.0 | 11.5 | 5.0 | 5.0 | 3.5 | 3.0 | 9.5 | 8.5 | 8.0 | 8.0 |
| 13 | 16.0 | 15.0 | 11.5 | 11.0 | 5.0 | 5.0 | 4.0 | 3.5 | 10.0 | 9.5 | 8.5 | 7.5 |
| 14 | 15.5 | 14.5 | 11.5 | 11.0 | 5.5 | 5.0 | 4.0 | 3.5 | 10.5 | 9.5 | 8.0 | 7.5 |
| 15 | 15.5 | 14.5 | 11.5 | 11.0 | 5.5 | 5.5 | 4.5 | 4.0 | 10.5 | 10.0 | 8.0 | 7.5 |
| 16 | 15.0 | 14.0 | 12.0 | 11.5 | 5.5 | 5.5 | 5.0 | 4.5 | 11.0 | 10.0 | 8.0 | 7.0 |
| 17 | 14.5 | 13.5 | 12.0 | 11.5 | 5.5 | 5.5 | 5.5 | 5.0 | 11.5 | 11.0 | 8.5 | 7.5 |
| 18 | 14.0 | 12.5 | 12.5 | 12.0 | 6.0 | 5.5 | 5.5 | 5.0 | 11.5 | 11.0 | 8.5 | 8.0 |
| 19 | 13.5 | 12.0 | 12.0 | 11.5 | 6.0 | 5.5 | 5.5 | 5.0 | 11.5 | 11.0 | 9.5 | 8.5 |
| 20 | 13.0 | 12.0 | 11.0 | 11.0 | 5.5 | 5.0 | 5.5 | 5.0 | 11.0 | 10.5 | 10.0 | 8.5 |
| 21 | 12.5 | 11.5 | 11.0 | 10.5 | 5.0 | 5.0 | 5.5 | 5.5 | 10.5 | 10.0 | 11.0 | 9.5 |
| 22 | 12.0 | 11.0 | 11.0 | 11.0 | 5.0 | 4.5 | 6.0 | 5.5 | 10.0 | 9.5 | 11.5 | 10.0 |
| 23 | 11.5 | 10.5 | 11.0 | 10.5 | 5.0 | 4.5 | 5.5 | 5.5 | 10.0 | 9.0 | 11.5 | 10.5 |
| 24 | 11.0 | 10.0 | 10.5 | 10.0 | 5.0 | 4.5 | 6.0 | 5.0 | 9.0 | 8.0 | 11.0 | 10.0 |
| 25 | 10.5 | 10.0 | 10.5 | 10.0 | 4.5 | 4.5 | 5.5 | 5.0 | 8.0 | 7.5 | 11.0 | 10.0 |
| 26 | 11.0 | 10.0 | 10.0 | 8.5 | 4.5 | 4.5 | 5.0 | 4.5 | 8.0 | 7.5 | 10.5 | 10.0 |
| 27 | 10.5 | 10.0 | 8.5 | 7.0 | 5.0 | 4.5 | 5.0 | 4.0 | 8.5 | 8.0 | 11.0 | 10.0 |
| 28 | 10.5 | 10.0 | 7.0 | 6.0 | 5.0 | 5.0 | 4.5 | 4.0 | 8.5 | 8.0 | 10.5 | 9.5 |
| 29 | 10.5 | 10.0 | 6.0 | 5.5 | 5.0 | 5.0 | 4.5 | 4.0 | --- | --- | 10.0 | 9.5 |
| 30 | 10.5 | 10.0 | 5.5 | 5.0 | 5.5 | 5.0 | 4.5 | 4.0 | --- | --- | 10.0 | 9.0 |
| 31 | 11.0 | 10.5 | --- | --- | 5.0 | 5.0 | 5.0 | 4.5 | --- | --- | 9.0 | 8.5 |
| MONTH | 18.5 | 10.0 | 12.5 | 5.0 | 6.0 | 4.0 | 6.0 | 2.0 | 11.5 | 5.0 | 11.5 | 7.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 9.5 | 8.5 | 16.0 | 15.5 | 17.5 | 16.0 | 24.5 | 23.5 | 26.0 | 25.0 | 22.0 | 20.5 |
| 2 | 10.0 | 9.0 | 15.5 | 15.0 | 18.0 | 16.0 | 23.5 | 22.5 | 27.0 | 25.5 | 22.0 | 21.0 |
| 3 | 10.5 | 9.5 | 15.5 | 14.0 | 17.5 | 16.5 | 23.0 | 21.5 | 27.5 | 26.0 | 22.0 | 21.0 |
| 4 | 12.0 | 10.5 | 14.0 | 13.0 | 18.0 | 16.5 | 21.5 | 20.5 | 26.5 | 25.5 | 22.5 | 21.5 |
| 5 | 13.0 | 11.5 | 13.0 | 11.5 | 19.5 | 17.0 | 21.0 | 20.0 | 26.0 | 25.0 | 22.0 | 21.0 |
| 6 | 13.5 | 12.0 | 11.5 | 11.0 | 20.5 | 19.0 | 21.0 | 19.0 | 26.0 | 24.5 | 22.0 | 20.5 |
| 7 | 13.5 | 13.0 | 11.5 | 10.5 | 21.5 | 19.5 | 22.0 | 20.0 | 26.0 | 24.5 | 22.0 | 21.0 |
| 8 | 13.5 | 12.5 | 12.0 | 10.5 | 21.5 | 20.0 | 22.5 | 21.0 | 26.0 | 24.5 | 21.5 | 20.5 |
| 9 | 12.5 | 12.0 | 13.5 | 11.5 | 21.5 | 20.0 | 22.5 | 21.0 | 26.5 | 25.0 | 21.5 | 20.0 |
| 10 | 11.5 | 11.0 | 13.0 | 12.5 | 21.0 | 19.5 | 22.0 | 20.0 | 27.0 | 25.5 | 21.5 | 20.5 |
| 11 | 12.5 | 11.0 | 14.0 | 12.5 | 19.5 | 18.5 | 23.0 | 21.0 | 27.0 | 26.0 | 21.5 | 20.5 |
| 12 | 13.0 | 11.5 | 13.5 | 12.0 | 19.5 | 18.0 | 23.0 | 21.5 | 27.5 | 26.0 | 21.5 | 20.5 |
| 13 | 13.0 | 12.0 | 13.5 | 12.5 | 20.5 | 18.5 | 22.0 | 20.5 | 26.5 | 25.0 | 21.5 | 21.0 |
| 14 | 13.5 | 11.5 | 14.0 | 13.0 | 21.0 | 19.0 | 23.0 | 21.5 | 25.5 | 24.0 | 21.0 | 19.5 |
| 15 | 13.0 | 12.5 | 14.0 | 13.0 | 21.0 | 19.5 | 24.0 | 22.5 | 25.0 | 24.0 | 19.5 | 19.0 |
| 16 | 13.5 | 12.0 | 14.0 | 13.0 | 22.5 | 20.0 | 24.5 | 23.0 | 26.0 | 24.5 | 19.0 | 18.0 |
| 17 | 14.0 | 12.0 | 13.5 | 12.0 | 22.0 | 21.0 | 24.5 | 23.5 | 26.0 | 25.0 | 18.5 | 18.0 |
| 18 | 13.5 | 12.0 | 12.0 | 11.0 | 21.5 | 20.0 | 24.0 | 23.5 | 25.5 | 24.0 | 18.0 | 17.5 |
| 19 | 14.0 | 12.0 | 12.5 | 11.0 | 20.5 | 19.5 | 23.5 | 22.0 | 24.5 | 23.5 | 17.5 | 17.0 |
| 20 | 13.0 | 12.5 | 13.5 | 12.0 | 20.0 | 19.5 | 24.0 | 22.5 | 24.0 | 22.5 | 17.0 | 16.5 |
| 21 | 13.0 | 12.5 | 15.0 | 13.5 | 22.0 | 19.5 | 24.0 | 22.5 | 22.5 | 22.0 | 17.0 | 16.0 |
| 22 | 13.5 | 12.5 | 14.5 | 14.0 | 22.0 | 21.0 | 25.0 | 23.5 | 23.0 | 21.5 | 17.0 | 16.0 |
| 23 | 13.5 | 12.5 | 14.0 | 13.5 | 23.0 | 21.0 | 25.5 | 24.0 | 23.0 | 22.0 | 17.0 | 16.5 |
| 24 | 14.0 | 13.0 | 14.5 | 13.0 | 23.5 | 21.5 | 25.5 | 24.5 | 22.5 | 22.0 | 16.5 | 16.0 |
| 25 | 14.0 | 13.5 | 14.0 | 13.5 | 23.5 | 22.5 | --- | --- | 22.0 | 21.0 | 16.5 | 16.0 |
| 26 | 15.0 | 13.0 | 14.5 | 13.5 | 24.0 | 21.5 | --- | --- | 21.0 | 20.5 | 16.5 | 16.0 |
| 27 | 15.5 | 13.5 | 14.0 | 13.5 | 24.0 | 22.0 | --- | --- | 21.0 | 20.0 | 16.5 | 16.0 |
| 28 | 15.0 | 14.5 | 14.5 | 13.0 | 25.0 | 22.5 | --- | --- | 21.0 | 20.5 | 16.0 | 15.0 |
| 29 | 15.5 | 14.5 | 15.0 | 13.0 | 25.0 | 23.0 | 24.0 | 22.5 | 22.0 | 20.5 | 15.5 | 15.0 |
| 30 | 16.5 | 15.0 | 15.5 | 14.5 | 24.5 | 23.0 | 25.0 | 23.0 | 22.0 | 21.0 | 15.0 | 14.0 |
| 31 | --- | --- | 17.0 | 15.0 | --- | --- | 26.0 | 24.0 | 21.5 | 20.5 | --- | --- |
| MONTH | 16.5 | 8.5 | 17.0 | 10.5 | 25.0 | 16.0 | 26.0 | 19.0 | 27.5 | 20.0 | 22.5 | 14.0 |

TENMILE CREEK BASIN

14323280 EEL LAKE NEAR LAKESIDE, OR

LOCATION.--Lat 43°36'17", long 124°10'28", in SE¼NW¼ sec.6, T.23 S., R.12 W., Coos County, Hydrologic Unit 17100304, on west shore 0.1 mi (0.2 km) south of Clear Creek and 1.9 mi (3.1 km) north of Lakeside.

DRAINAGE AREA.--8.70 mi² (22.5 km²).

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 56.00 ft (17.069 m) above mean sea level; gage readings have been reduced to elevations above mean sea level.

REMARKS.--Lake not regulated. Lake outlet is a sand channel which is subject to shifting at high stages. Some water is pumped from lake for filtration and distribution purposes by Lakeside Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 64.25 ft (19.583 m) Dec. 22, 1973; minimum, 56.93 ft (17.352 m) Aug. 22, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 59.58 ft (18.160 m) Mar. 12, 13; minimum, 56.93 ft (17.352 m) Aug. 22, 23.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | --- | 57.53 | 57.90 | 58.06 | 58.03 | 58.81 | 58.86 | 58.10 | 58.07 | 57.61 | 57.18 | 57.14 |
| 2 | --- | 57.54 | 57.89 | 58.10 | 58.02 | 58.95 | 58.82 | 58.08 | 58.06 | 57.59 | 57.16 | 57.15 |
| 3 | --- | 57.55 | 57.88 | 58.11 | 58.00 | 59.06 | 58.78 | 58.13 | 58.06 | 57.58 | 57.14 | 57.17 |
| 4 | 57.44 | 57.56 | 57.87 | 58.13 | 57.99 | 59.06 | 58.74 | 58.13 | 58.07 | 57.56 | 57.13 | 57.18 |
| 5 | 57.43 | 57.57 | 57.86 | 58.12 | 57.98 | 59.03 | 58.70 | 58.15 | 58.05 | 57.54 | 57.13 | 57.19 |
| 6 | 57.42 | 57.57 | 57.86 | 58.12 | 57.97 | 59.08 | 58.66 | 58.13 | 58.04 | 57.52 | 57.12 | 57.19 |
| 7 | 57.41 | 57.57 | 57.85 | 58.12 | 57.95 | 59.29 | 58.62 | 58.11 | 58.02 | 57.51 | 57.10 | 57.19 |
| 8 | 57.40 | 57.57 | 57.95 | 58.11 | 57.95 | 59.43 | 58.61 | 58.08 | 57.98 | 57.50 | 57.09 | 57.19 |
| 9 | 57.40 | 57.57 | 57.95 | 58.10 | 57.95 | 59.52 | 58.58 | 58.06 | 57.95 | 57.48 | 57.08 | 57.18 |
| 10 | 57.40 | 57.57 | 57.95 | 58.10 | 57.96 | 59.52 | 58.55 | 58.07 | 57.94 | 57.46 | 57.07 | 57.18 |
| 11 | 57.40 | 57.57 | 57.95 | 58.12 | 57.95 | 59.52 | 58.52 | 58.05 | 57.92 | 57.45 | 57.05 | 57.18 |
| 12 | 57.39 | 57.57 | 57.95 | 58.15 | 57.97 | 59.58 | 58.50 | 58.03 | 57.89 | 57.44 | 57.04 | 57.18 |
| 13 | 57.39 | 57.60 | 57.94 | 58.18 | 57.97 | 59.57 | 58.49 | 58.01 | 57.87 | 57.42 | 57.03 | 57.18 |
| 14 | 57.38 | 57.62 | 57.94 | 58.20 | 57.96 | 59.51 | 58.45 | 58.00 | 57.85 | 57.40 | 57.02 | 57.18 |
| 15 | 57.38 | 57.86 | 57.93 | 58.20 | 57.95 | 59.44 | 58.44 | 58.04 | 57.82 | 57.38 | 57.01 | 57.17 |
| 16 | 57.38 | 57.90 | 57.93 | 58.19 | 57.95 | 59.36 | 58.43 | 58.09 | 57.80 | 57.37 | 56.99 | 57.17 |
| 17 | 57.37 | 57.95 | 57.94 | 58.18 | 57.95 | 59.30 | 58.40 | 58.09 | 57.78 | 57.36 | 56.98 | 57.17 |
| 18 | 57.36 | 57.97 | 57.94 | 58.17 | 57.94 | 59.28 | 58.37 | 58.08 | 57.76 | 57.35 | 56.98 | 57.20 |
| 19 | 57.36 | 57.98 | 57.93 | 58.16 | 57.94 | 59.25 | 58.34 | 58.06 | 57.75 | 57.34 | 56.97 | 57.26 |
| 20 | 57.36 | 57.97 | 57.92 | 58.15 | 58.01 | 59.19 | 58.32 | 58.05 | 57.76 | 57.33 | 56.96 | 57.30 |
| 21 | 57.35 | 57.98 | 57.92 | 58.14 | 58.07 | 59.14 | 58.30 | 58.05 | 57.75 | 57.31 | 56.94 | 57.31 |
| 22 | 57.35 | 57.97 | 57.92 | 58.13 | 58.13 | 59.10 | 58.27 | 58.04 | 57.74 | 57.30 | 56.93 | 57.31 |
| 23 | 57.34 | 57.96 | 57.93 | 58.12 | 58.21 | 59.10 | 58.25 | 58.04 | 57.72 | 57.28 | 56.93 | 57.38 |
| 24 | 57.42 | 57.97 | 57.92 | 58.10 | 58.26 | 59.07 | 58.23 | 58.02 | 57.71 | 57.27 | 56.96 | 57.42 |
| 25 | 57.44 | 57.96 | 57.98 | 58.08 | 58.37 | 59.02 | 58.22 | 58.04 | 57.70 | 57.25 | 56.99 | 57.44 |
| 26 | 57.45 | 57.95 | 58.03 | 58.07 | 58.48 | 58.97 | 58.20 | 58.05 | 57.69 | 57.24 | 57.01 | 57.45 |
| 27 | 57.45 | 57.94 | 58.05 | 58.06 | 58.58 | 58.98 | 58.17 | 58.07 | 57.67 | 57.23 | 57.04 | 57.49 |
| 28 | 57.45 | 57.92 | 58.06 | 58.05 | 58.76 | 58.95 | 58.15 | 58.07 | 57.65 | 57.22 | 57.06 | 57.51 |
| 29 | 57.46 | 57.91 | 58.07 | 58.04 | --- | 58.94 | 58.13 | 58.06 | 57.64 | 57.21 | 57.07 | 57.51 |
| 30 | 57.46 | 57.90 | 58.06 | 58.03 | --- | 58.90 | 58.12 | 58.05 | 57.63 | 57.20 | 57.10 | 57.52 |
| 31 | 57.50 | --- | 58.05 | 58.04 | --- | 58.88 | --- | 58.08 | --- | 57.19 | 57.12 | --- |
| MEAN | --- | 57.77 | 57.95 | 58.12 | 58.08 | 59.19 | 58.44 | 58.07 | 57.84 | 57.38 | 57.04 | 57.27 |
| MAX | --- | 57.98 | 58.07 | 58.20 | 58.76 | 59.58 | 58.86 | 58.15 | 58.07 | 57.61 | 57.18 | 57.52 |
| MIN | --- | 57.53 | 57.85 | 58.03 | 57.94 | 58.81 | 58.12 | 58.00 | 57.63 | 57.19 | 56.93 | 57.14 |

COOS RIVER BASIN

467

14324500 WEST FORK MILLICOMA RIVER NEAR ALLEGANY, OR

LOCATION.--Lat 43°28'35", long 124°03'20", in SW¼NW¼ sec.19, T.24 S., R.11 W., Coos County, Hydrologic Unit 17100304, on left bank at highway bridge, 40 ft (12 m) upstream from Daggett Creek, 3.8 mi (6.1 km) north of Allegany, and at mile 6.82 (10.97 km).

DRAINAGE AREA.--46.9 mi² (121.5 km²).

PERIOD OF RECORD.--September 1954 to current year.

REVISED RECORDS.--WSP 1718: 1955-59. WRD Oreg. 1973: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 76.95 ft (23.454 m) above mean sea level.

REMARKS.--Records fair. No regulation. Only minor diversions for irrigation above station.

AVERAGE DISCHARGE.--23 years, 255 ft³/s (7.222 m³/s), 73.84 in/yr (1,876 mm/yr), 184,700 acre-ft/yr (228 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft³/s (229 m³/s) Nov. 24, 1960, gage height, 15.86 ft (4.834 m); minimum, 1.8 ft³/s (0.051 m³/s) Sept. 5, 9, 1965, Sept. 8-10, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January or November 1953 reached a stage of about 17.9 ft (5.46 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,830 ft³/s (51.8 m³/s) Mar. 7, 8, gage height, 7.15 ft (2.179 m), no peak above base of 3,000 ft³/s (85.0 m³/s); minimum, 4.1 ft³/s (0.12 m³/s) Oct. 1, 2, 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|--------|------|------|------|-------|------|------|------|-------|-------|--------|
| 1 | 4.3 | 42 | 20 | 38 | 26 | 815 | 226 | 33 | 98 | 17 | 8.8 | 27 |
| 2 | 4.8 | 49 | 20 | 50 | 24 | 595 | 210 | 32 | 83 | 16 | 8.8 | 21 |
| 3 | 5.0 | 34 | 19 | 90 | 23 | 858 | 183 | 68 | 74 | 16 | 8.4 | 24 |
| 4 | 5.3 | 25 | 19 | 130 | 22 | 486 | 157 | 92 | 80 | 16 | 7.7 | 28 |
| 5 | 5.6 | 19 | 18 | 100 | 26 | 306 | 137 | 116 | 72 | 16 | 7.1 | 26 |
| 6 | 5.0 | 14 | 18 | 75 | 28 | 246 | 116 | 123 | 61 | 14 | 6.7 | 23 |
| 7 | 4.8 | 12 | 18 | 60 | 20 | 1350 | 103 | 98 | 54 | 14 | 6.7 | 20 |
| 8 | 4.6 | 9.6 | 30 | 55 | 23 | 1260 | 106 | 80 | 49 | 14 | 6.7 | 17 |
| 9 | 4.6 | 8.8 | 90 | 50 | 23 | 1120 | 96 | 66 | 48 | 14 | 7.1 | 14 |
| 10 | 5.0 | 8.1 | 70 | 48 | 23 | 738 | 86 | 66 | 44 | 14 | 6.1 | 13 |
| 11 | 5.3 | 7.4 | 50 | 55 | 27 | 471 | 78 | 68 | 42 | 14 | 6.4 | 12 |
| 12 | 5.3 | 7.1 | 44 | 100 | 29 | 600 | 72 | 57 | 40 | 13 | 6.1 | 11 |
| 13 | 5.3 | 6.7 | 36 | 90 | 31 | 577 | 83 | 49 | 39 | 12 | 5.9 | 10 |
| 14 | 5.0 | 9.2 | 34 | 80 | 30 | 412 | 78 | 48 | 36 | 12 | 5.6 | 9.6 |
| 15 | 4.6 | 108 | 30 | 60 | 28 | 318 | 70 | 64 | 34 | 11 | 5.6 | 9.2 |
| 16 | 4.1 | 195 | 28 | 55 | 26 | 249 | 70 | 140 | 33 | 10 | 5.9 | 9.2 |
| 17 | 4.3 | 106 | 26 | 50 | 25 | 208 | 64 | 174 | 31 | 9.6 | 5.9 | 9.2 |
| 18 | 4.3 | 81 | 24 | 46 | 24 | 195 | 57 | 145 | 30 | 8.8 | 5.9 | 14 |
| 19 | 4.3 | 61 | 22 | 42 | 23 | 232 | 54 | 116 | 30 | 8.4 | 5.9 | 49 |
| 20 | 4.6 | 55 | 22 | 40 | 29 | 229 | 51 | 96 | 30 | 8.4 | 5.9 | 74 |
| 21 | 4.6 | 50 | 22 | 38 | 76 | 193 | 48 | 88 | 30 | 8.1 | 6.1 | 61 |
| 22 | 4.8 | 44 | 22 | 36 | 213 | 162 | 45 | 80 | 28 | 8.1 | 6.7 | 40 |
| 23 | 4.8 | 38 | 22 | 34 | 237 | 176 | 42 | 76 | 26 | 7.7 | 7.4 | 40 |
| 24 | 8.4 | 36 | 22 | 32 | 502 | 243 | 40 | 74 | 23 | 8.4 | 26 | 112 |
| 25 | 33 | 32 | 24 | 30 | 441 | 213 | 39 | 64 | 23 | 9.2 | 34 | 92 |
| 26 | 30 | 30 | 34 | 28 | 471 | 179 | 40 | 110 | 22 | 9.2 | 26 | 83 |
| 27 | 14 | 28 | 65 | 26 | 416 | 321 | 35 | 142 | 21 | 9.2 | 20 | 62 |
| 28 | 8.4 | 26 | 60 | 26 | 1140 | 355 | 34 | 176 | 20 | 9.2 | 29 | 74 |
| 29 | 7.1 | 24 | 57 | 24 | --- | 338 | 35 | 147 | 19 | 8.8 | 74 | 72 |
| 30 | 5.9 | 22 | 49 | 24 | --- | 276 | 37 | 116 | 17 | 9.2 | 59 | 57 |
| 31 | 7.7 | --- | 42 | 24 | --- | 221 | --- | 101 | --- | 8.8 | 44 | --- |
| TOTAL | 224.8 | 1187.9 | 1057 | 1636 | 4006 | 13942 | 2492 | 2905 | 1237 | 354.1 | 465.4 | 1113.2 |
| MEAN | 7.25 | 39.6 | 34.1 | 52.8 | 143 | 450 | 83.1 | 93.7 | 41.2 | 11.4 | 15.0 | 37.1 |
| MAX | 33 | 195 | 90 | 130 | 1140 | 1350 | 226 | 176 | 98 | 17 | 74 | 112 |
| MIN | 4.1 | 6.7 | 18 | 24 | 20 | 162 | 34 | 32 | 17 | 7.7 | 5.6 | 9.2 |
| CFSM | .16 | .84 | .73 | 1.13 | 3.05 | 9.60 | 1.77 | 2.00 | .88 | .24 | .32 | .79 |
| IN. | .18 | .94 | .84 | 1.30 | 3.18 | 11.06 | 1.98 | 2.30 | .98 | .28 | .37 | .88 |
| AC-FT | 446 | 2360 | 2100 | 3250 | 7950 | 27650 | 4940 | 5760 | 2450 | 702 | 923 | 2210 |

CAL YR 1976 TOTAL 55768.3 MEAN 152 MAX 5000 MIN 2.2 CFSM 3.24 IN 44.23 AC-FT 110600
WTR YR 1977 TOTAL 30620.4 MEAN 83.9 MAX 1350 MIN 4.1 CFSM 1.79 IN 24.29 AC-FT 60740

NOTE.--No gage-height record Nov. 20 to Dec. 28, Dec. 31 to Jan. 31.

COOS RIVER BASIN

14324580 PONY CREEK AT COOS BAY, OR

LOCATION.--Lat 43°22'50", long 124°14'24", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.25 S., R.13 W., Coos County, Hydrologic Unit 17100304, at Ocean Boulevard in town of Coos Bay, 250 ft (76 m) below Lower Pony Creek Dam, and at mile 2.2 (3.5 km).

DRAINAGE AREA.--3.90 mi² (10.1 km²).

PERIOD OF RECORD.--July 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 12.23 ft (3.728 m) above mean sea level (Coos Bay-North Bend Water Board bench mark).

REMARKS.--Records excellent. Flow regulated by Upper and Lower Pony Creek Reservoirs (see stations 14324550 and 14324560) and diversion above station from Lower Pony Creek Reservoir to municipal water supply of Coos Bay-North Bend (station 14324570). Approximately 4.6 ft³/s (0.13 m³/s) is diverted to the Coos Bay-North Bend water treatment plant, maximum capacity, 10.8 ft³/s (0.31 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61 ft³/s (1.73 m³/s) Dec. 16, 1975, gage height, 3.98 ft (1.213 m); minimum, 0.01 ft³/s (<0.001 m³/s) on many days in 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6.7 ft³/s (0.19 m³/s) Nov. 1, gage height, 2.10 ft (0.640 m); minimum, 0.01 ft³/s (<0.001 m³/s) on many days.

MONTHLY DISCHARGE OF PONY CREEK, PONY CREEK DIVERSION AND MONTHLY CHANGE IN CONTENTS
OF RESERVOIRS NEAR COOS BAY, OR, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| | Runoff in acre-feet | | | | | |
|------------------|--|---|---|---|---|------------------------|
| | 14324580 Pony Creek at Coos Bay | 14324570 Diversion from Lower Pony Cr. Reservoir to City of Coos Bay | 14324560 Lower Pony Creek Reservoir Change in Contents | 14324550 Upper Pony Creek Reservoir Change in Contents | Pony Creek flow adjusted for Regulation and Diversion | Runoff in Inches |
| October..... | 46 | 360 | +14 | -324 | 96 | 0.46 |
| November..... | 18 | 304 | -50 | -84 | 188 | .90 |
| December..... | 5.3 | 288 | +33 | -170 | 156 | .75 |
| CAL YR 1976..... | - | - | - | - | - | - |
| January..... | 2.4 | 266 | -98 | +63 | 233 | 1.12 |
| February..... | 1.4 | 155 | -108 | +131 | 179 | .86 |
| March..... | 2.0 | 146 | +29 | +786 | 963 | 4.63 |
| April..... | .8 | 157 | -32 | +240 | 366 | 1.76 |
| May..... | .9 | 124 | -2 | +180 | 303 | 1.46 |
| June..... | 1.1 | 173 | +152 | -150 | 176 | .85 |
| July..... | 2.1 | 287 | +26 | -240 | 75 | .36 |
| August..... | 2.3 | 274 | +5 | -103 | 178 | .86 |
| September..... | 1.8 | 176 | -60 | +133 | 251 | 1.21 |
| WTR YR 1977..... | 84.1 | 2,710 | -91 | +462 | 3,164 | 15.22 |

COOS RIVER BASIN

469

14324580 PONY CREEK AT COOS BAY, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|------|------|------|------|---------|------------|------|------|------|------|
| 1 | .18 | 4.1 | .07 | .09 | .01 | .06 | .02 | .01 | .02 | .03 | .05 | .03 |
| 2 | .18 | 1.9 | .07 | .09 | .01 | .07 | .02 | .01 | .02 | .03 | .04 | .04 |
| 3 | .18 | .18 | .08 | .09 | .01 | .06 | .02 | .02 | .02 | .03 | .03 | .03 |
| 4 | .18 | .17 | .08 | .10 | .01 | .04 | .02 | .01 | .02 | .03 | .03 | .03 |
| 5 | .18 | .17 | .08 | .10 | .01 | .04 | .02 | .02 | .02 | .04 | .03 | .03 |
| 6 | .18 | .15 | .08 | .06 | .01 | .05 | .02 | .01 | .01 | .04 | .03 | .03 |
| 7 | .18 | .14 | .09 | .04 | .01 | .06 | .01 | .01 | .01 | .04 | .03 | .03 |
| 8 | .18 | .13 | .10 | .04 | .01 | .05 | .02 | .01 | .01 | .04 | .03 | .03 |
| 9 | .18 | .12 | .08 | .04 | .01 | .04 | .01 | .01 | .01 | .04 | .03 | .03 |
| 10 | .19 | .12 | .08 | .04 | .01 | .03 | .01 | .01 | .01 | .04 | .03 | .03 |
| 11 | .19 | .11 | .08 | .04 | .01 | .03 | .01 | .01 | .01 | .04 | .03 | .03 |
| 12 | .19 | .11 | .09 | .04 | .01 | .04 | .01 | .01 | .02 | .04 | .03 | .03 |
| 13 | .21 | .10 | .09 | .04 | .01 | .03 | .02 | .01 | .02 | .05 | .04 | .03 |
| 14 | .17 | .10 | .09 | .03 | .01 | .02 | .01 | .01 | .02 | .04 | .04 | .03 |
| 15 | .18 | .12 | .09 | .03 | .01 | .02 | .01 | .01 | .02 | .03 | .04 | .03 |
| 16 | .18 | .11 | .09 | .03 | .01 | .03 | .01 | .02 | .02 | .03 | .04 | .03 |
| 17 | .17 | .10 | .09 | .02 | .01 | .04 | .01 | .01 | .02 | .03 | .04 | .03 |
| 18 | .27 | .09 | .09 | .02 | .01 | .04 | .01 | .01 | .02 | .03 | .04 | .05 |
| 19 | .18 | .08 | .09 | .02 | .01 | .03 | .02 | .01 | .02 | .03 | .04 | .04 |
| 20 | .18 | .08 | .09 | .02 | .02 | .02 | .02 | .01 | .02 | .03 | .04 | .03 |
| 21 | .42 | .07 | .08 | .02 | .05 | .02 | .02 | .01 | .02 | .03 | .04 | .03 |
| 22 | .35 | .07 | .09 | .02 | .06 | .02 | .01 | .01 | .02 | .03 | .04 | .03 |
| 23 | .80 | .07 | .09 | .02 | .07 | .02 | .01 | .02 | .02 | .03 | .05 | .03 |
| 24 | 2.6 | .06 | .08 | .02 | .08 | .02 | .01 | .02 | .02 | .03 | .06 | .03 |
| 25 | 3.9 | .06 | .09 | .02 | .06 | .02 | .01 | .02 | .02 | .02 | .04 | .03 |
| 26 | 1.5 | .07 | .09 | .02 | .06 | .02 | .01 | .02 | .02 | .03 | .04 | .02 |
| 27 | .80 | .07 | .09 | .02 | .06 | .02 | .01 | .01 | .02 | .03 | .04 | .03 |
| 28 | 1.1 | .07 | .09 | .02 | .07 | .02 | .01 | .02 | .02 | .03 | .04 | .03 |
| 29 | 2.2 | .07 | .09 | .02 | --- | .02 | .01 | .02 | .02 | .03 | .04 | .03 |
| 30 | 2.2 | .07 | .09 | .02 | --- | .02 | .01 | .02 | .03 | .03 | .04 | .02 |
| 31 | 3.6 | --- | .09 | .02 | --- | .02 | --- | .03 | --- | .04 | .03 | --- |
| TOTAL | 23.20 | 8.86 | 2.67 | 1.20 | .72 | 1.02 | .41 | .43 | .55 | 1.04 | 1.17 | .92 |
| MEAN | .75 | .30 | .086 | .039 | .026 | .033 | .014 | .014 | .018 | .034 | .038 | .031 |
| MAX | 3.9 | 4.1 | .10 | .10 | .08 | .07 | .02 | .03 | .03 | .05 | .06 | .05 |
| MIN | .17 | .06 | .07 | .02 | .01 | .02 | .01 | .01 | .01 | .02 | .03 | .02 |
| AC-FT | 46 | 18 | 5.3 | 2.4 | 1.4 | 2.0 | .8 | .9 | 1.1 | 2.1 | 2.3 | 1.8 |
| CAL YR 1976 | TOTAL | 919.16 | MEAN | 2.51 | MAX | | | | | | | |
| WTR YR 1977 | TOTAL | 42.19 | MEAN | .12 | MAX | 25 | MIN .06 | AC-FT 1820 | | | | |
| | | | | | | 4.1 | MIN .01 | AC-FT 84 | | | | |

COQUILLE RIVER BASIN

14325000 SOUTH FORK COQUILLE RIVER AT POWERS, OR

LOCATION.--Lat 42°53'30", long 124°04'10", in SE¼ sec.12, T.31 S., R.12 W., Coos County, Hydrologic Unit 17100305, on left bank 0.6 mi (1.0 km) downstream from highway bridge at Powers, 0.9 mi (1.4 km) upstream from Woodward Creek, and at mile 64.5 (103.8 km).

DRAINAGE AREA.--169 mi² (438 km²).

PERIOD OF RECORD.--September 1916 to September 1926, October 1928 to current year.

REVISED RECORDS.--WSP 1184: 1946(M). WSP 1448: 1917-18(M), 1919, 1920(M), 1925.

GAGE.--Water-stage recorder. Datum of gage is 197.42 ft (60.174 m) above mean sea level. Prior to Nov. 17, 1938, nonrecording gages at various sites within 1 mi (2 km) of present site at different datums.

REMARKS.--Records good. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--58 years (water years 1917-26, 1930-77), 786 ft³/s (22.26 m³/s), 63.16 in/yr (1,604 mm/yr), 569,700 acre-ft/yr (702 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,900 ft³/s (1,380 m³/s) Dec. 22, 1964, gage height, 26.51 ft (8.080 m), from floodmarks, from rating curve extended above 19,000 ft³/s (538 m³/s) on basis of contracted-opening measurement at gage height 18.14 ft (5.529 m) and slope-area measurement of peak flow; minimum, 12 ft³/s (0.34 m³/s) Sept. 22-25, 27-30, 1939, Oct. 5, 1961, Oct. 16-20, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,290 ft³/s (178 m³/s) Mar. 7, gage height, 8.05 ft (2.454 m), no peak above base of 9,300 ft³/s (263 m³/s); minimum, 14 ft³/s (0.40 m³/s) Oct. 18-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|-----------|----------|--------------|------|------|------|------|
| 1 | 19 | 220 | 33 | 48 | 48 | 1160 | 760 | 160 | 297 | 66 | 28 | 44 |
| 2 | 20 | 171 | 33 | 69 | 47 | 878 | 831 | 157 | 267 | 64 | 28 | 40 |
| 3 | 21 | 97 | 32 | 241 | 45 | 1250 | 714 | 563 | 244 | 61 | 27 | 39 |
| 4 | 20 | 69 | 31 | 197 | 43 | 972 | 674 | 737 | 244 | 61 | 26 | 37 |
| 5 | 19 | 54 | 31 | 147 | 41 | 708 | 680 | 798 | 235 | 59 | 26 | 35 |
| 6 | 19 | 45 | 30 | 115 | 44 | 647 | 620 | 831 | 208 | 58 | 25 | 37 |
| 7 | 18 | 40 | 30 | 93 | 43 | 3930 | 574 | 674 | 192 | 56 | 25 | 34 |
| 8 | 17 | 37 | 39 | 80 | 43 | 3690 | 599 | 558 | 181 | 54 | 25 | 33 |
| 9 | 17 | 34 | 101 | 71 | 44 | 3260 | 510 | 462 | 168 | 52 | 24 | 31 |
| 10 | 17 | 33 | 76 | 73 | 41 | 1910 | 422 | 410 | 157 | 52 | 23 | 31 |
| 11 | 17 | 34 | 58 | 87 | 40 | 1260 | 369 | 449 | 155 | 51 | 23 | 30 |
| 12 | 17 | 34 | 51 | 267 | 40 | 1600 | 337 | 422 | 147 | 49 | 22 | 30 |
| 13 | 17 | 34 | 45 | 197 | 40 | 1280 | 357 | 369 | 138 | 48 | 22 | 28 |
| 14 | 16 | 73 | 43 | 152 | 39 | 952 | 369 | 330 | 131 | 47 | 22 | 27 |
| 15 | 16 | 85 | 40 | 128 | 38 | 737 | 326 | 326 | 126 | 45 | 22 | 28 |
| 16 | 16 | 87 | 39 | 111 | 37 | 605 | 304 | 748 | 117 | 44 | 22 | 28 |
| 17 | 15 | 73 | 38 | 97 | 37 | 531 | 280 | 1260 | 113 | 43 | 21 | 28 |
| 18 | 15 | 64 | 37 | 87 | 35 | 485 | 257 | 1020 | 111 | 40 | 21 | 43 |
| 19 | 15 | 56 | 37 | 80 | 34 | 510 | 235 | 773 | 107 | 40 | 21 | 270 |
| 20 | 15 | 52 | 35 | 74 | 48 | 569 | 223 | 605 | 103 | 39 | 21 | 247 |
| 21 | 15 | 48 | 34 | 69 | 308 | 558 | 208 | 500 | 101 | 38 | 22 | 140 |
| 22 | 15 | 45 | 33 | 66 | 719 | 552 | 194 | 431 | 97 | 37 | 23 | 97 |
| 23 | 15 | 43 | 35 | 63 | 542 | 636 | 184 | 449 | 93 | 35 | 22 | 78 |
| 24 | 18 | 40 | 35 | 58 | 620 | 912 | 176 | 414 | 87 | 34 | 165 | 171 |
| 25 | 66 | 39 | 34 | 55 | 414 | 857 | 178 | 369 | 84 | 34 | 126 | 131 |
| 26 | 66 | 38 | 37 | 54 | 389 | 702 | 186 | 495 | 82 | 33 | 84 | 103 |
| 27 | 40 | 37 | 74 | 51 | 467 | 785 | 163 | 510 | 76 | 33 | 67 | 103 |
| 28 | 31 | 37 | 63 | 49 | 1570 | 871 | 155 | 481 | 73 | 31 | 52 | 1000 |
| 29 | 30 | 35 | 56 | 48 | --- | 831 | 157 | 418 | 69 | 31 | 51 | 785 |
| 30 | 38 | 34 | 56 | 45 | --- | 754 | 155 | 365 | 67 | 30 | 54 | 389 |
| 31 | 33 | --- | 52 | 45 | --- | 680 | --- | 323 | --- | 29 | 51 | --- |
| TOTAL | 713 | 1788 | 1368 | 3017 | 5856 | 35072 | 11197 | 16407 | 4270 | 1394 | 1191 | 4117 |
| MEAN | 23.0 | 59.6 | 44.1 | 97.3 | 209 | 1131 | 373 | 529 | 142 | 45.0 | 38.4 | 137 |
| MAX | 66 | 220 | 101 | 267 | 1570 | 3930 | 831 | 1260 | 297 | 66 | 165 | 1000 |
| MIN | 15 | 33 | 30 | 45 | 34 | 485 | 155 | 157 | 67 | 29 | 21 | 27 |
| CFSM | .14 | .35 | .26 | .58 | 1.24 | 6.69 | 2.21 | 3.13 | .84 | .27 | .23 | .81 |
| IN. | .16 | .39 | .30 | .66 | 1.29 | 7.72 | 2.46 | 3.61 | .94 | .31 | .26 | .91 |
| AC-FT | 1410 | 3550 | 2710 | 5980 | 11620 | 69570 | 22210 | 32540 | 8470 | 2760 | 2360 | 8170 |
| CAL YR 1976 | TOTAL | 138418 | MEAN 378 | MAX 7580 | MIN 15 | CFSM 2.24 | IN 30.47 | AC-FT 274600 | | | | |
| WTR YR 1977 | TOTAL | 86390 | MEAN 237 | MAX 3930 | MIN 15 | CFSM 1.40 | IN 19.02 | AC-FT 171400 | | | | |

COQUILLE RIVER BASIN

471

14326800 NORTH FORK COQUILLE RIVER NEAR FAIRVIEW, OR

LOCATION.--Lat 43°10'45", long 124°05'10", in NE¼NE¼ sec.2, T.28 S., R.12 W., Coos County, Hydrologic Unit 17100305, on right bank 0.7 mi (1.1 km) downstream from Lost Creek, 2.6 mi (4.2 km) south of Fairview, and at mile 21.7 (34.9 km).

DRAINAGE AREA.--74.0 mi² (191.7 km²).

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WRD Oreg. 1972: 1964-67, 1969-71(M,P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 63.34 ft (19.306 m) above mean sea level (from stadia survey). Supplementary water-stage recorder and crest-stage gage 0.5 mi (0.8 km) upstream (used during periods of backwater at base gage).

REMARKS.--Records fair. No regulation. Several diversions for irrigation by pumping above station.

AVERAGE DISCHARGE.--14 years, 291 ft³/s (8.241 m³/s), 53.40 in/yr (1,356 mm/yr), 210,800 acre-ft/yr (260 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft³/s (220 m³/s) Mar. 2, 1972; maximum gage height at supplementary gage, 18.80 ft (5.730 m) Jan. 8, 1976, backwater from ponding in valley below; maximum gage height at supplementary gage unaffected by backwater, 18.03 ft (5.496 m), Jan. 8, 1976; minimum discharge, 2.0 ft³/s (0.057 m³/s) Sept. 9, 10, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft³/s (37.4 m³/s) Mar. 9, at supplementary gage, no peak above base of 3,000 ft³/s (85.0 m³/s); maximum gage height at supplementary gage unaffected by backwater, 7.90 ft (2.408 m) Mar. 9; minimum discharge, 4.4 ft³/s (0.12 m³/s) Aug. 5, 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|------|------|------|------|-------|---------|-----------|----------|--------------|-------|------|
| 1 | 6.0 | 47 | 15 | 20 | 25 | 662 | 285 | 55 | 104 | 21 | 6.0 | 33 |
| 2 | 5.6 | 71 | 14 | 25 | 25 | 523 | 257 | 54 | 95 | 20 | 5.8 | 23 |
| 3 | 7.2 | 41 | 14 | 98 | 23 | 847 | 227 | 117 | 87 | 19 | 5.5 | 21 |
| 4 | 8.0 | 28 | 14 | 102 | 22 | 497 | 203 | 159 | 98 | 19 | 4.8 | 25 |
| 5 | 7.2 | 22 | 13 | 84 | 21 | 326 | 184 | 239 | 95 | 19 | 4.4 | 21 |
| 6 | 6.8 | 19 | 13 | 69 | 22 | 267 | 169 | 239 | 81 | 18 | 4.6 | 18 |
| 7 | 6.4 | 17 | 12 | 58 | 20 | 1030 | 155 | 174 | 74 | 17 | 5.3 | 16 |
| 8 | 6.0 | 15 | 17 | 50 | 20 | 932 | 159 | 142 | 70 | 16 | 5.5 | 13 |
| 9 | 5.6 | 14 | 55 | 45 | 21 | 1150 | 151 | 123 | 64 | 16 | 6.0 | 12 |
| 10 | 5.6 | 14 | 43 | 42 | 22 | 848 | 139 | 120 | 59 | 15 | 5.5 | 11 |
| 11 | 5.6 | 14 | 32 | 48 | 23 | 564 | 130 | 132 | 59 | 14 | 5.0 | 11 |
| 12 | 5.6 | 13 | 27 | 82 | 24 | 791 | 117 | 114 | 58 | 12 | 4.6 | 10 |
| 13 | 5.6 | 13 | 25 | 75 | 24 | 743 | 123 | 102 | 54 | 12 | 4.6 | 10 |
| 14 | 5.2 | 17 | 21 | 66 | 24 | 526 | 122 | 98 | 50 | 11 | 4.4 | 10 |
| 15 | 4.4 | 51 | 20 | 59 | 23 | 399 | 111 | 109 | 49 | 11 | 4.6 | 10 |
| 16 | 5.2 | 100 | 20 | 54 | 21 | 314 | 105 | 184 | 45 | 10 | 4.6 | 10 |
| 17 | 5.2 | 60 | 19 | 49 | 20 | 265 | 98 | 209 | 42 | 10 | 4.8 | 11 |
| 18 | 5.2 | 47 | 18 | 45 | 20 | 246 | 90 | 174 | 44 | 9.3 | 4.8 | 14 |
| 19 | 5.2 | 39 | 18 | 42 | 19 | 299 | 87 | 155 | 44 | 8.7 | 4.6 | 57 |
| 20 | 6.0 | 32 | 18 | 40 | 22 | 266 | 82 | 135 | 41 | 8.4 | 4.8 | 64 |
| 21 | 6.0 | 28 | 17 | 37 | 68 | 231 | 78 | 127 | 45 | 8.4 | 5.0 | 54 |
| 22 | 6.0 | 25 | 17 | 34 | 184 | 216 | 74 | 120 | 40 | 7.8 | 5.3 | 37 |
| 23 | 6.4 | 22 | 17 | 32 | 196 | 265 | 70 | 125 | 35 | 7.8 | 5.3 | 30 |
| 24 | 9.0 | 21 | 17 | 30 | 311 | 358 | 66 | 132 | 32 | 6.9 | 50 | 112 |
| 25 | 23 | 19 | 17 | 29 | 282 | 302 | 64 | 115 | 31 | 7.5 | 44 | 90 |
| 26 | 36 | 18 | 20 | 27 | 352 | 255 | 64 | 123 | 30 | 7.8 | 32 | 87 |
| 27 | 34 | 17 | 25 | 27 | 311 | 317 | 59 | 132 | 28 | 7.8 | 34 | 66 |
| 28 | 26 | 17 | 26 | 25 | 794 | 352 | 56 | 142 | 26 | 7.5 | 30 | 88 |
| 29 | 13 | 16 | 25 | 25 | --- | 352 | 58 | 123 | 23 | 6.9 | 82 | 95 |
| 30 | 10 | 16 | 24 | 25 | --- | 326 | 56 | 112 | 22 | 6.6 | 63 | 71 |
| 31 | 10 | --- | 22 | 25 | --- | 285 | --- | 102 | --- | 6.0 | 54 | --- |
| TOTAL | 297.0 | 873 | 655 | 1469 | 2939 | 14754 | 3639 | 4187 | 1625 | 367.4 | 504.8 | 1130 |
| MEAN | 9.58 | 29.1 | 21.1 | 47.4 | 105 | 476 | 121 | 135 | 54.2 | 11.9 | 16.3 | 37.7 |
| MAX | 36 | 100 | 55 | 102 | 794 | 1150 | 285 | 239 | 104 | 21 | 82 | 112 |
| MIN | 4.4 | 13 | 12 | 20 | 19 | 216 | 56 | 54 | 22 | 6.0 | 4.4 | 10 |
| CFSM | .13 | .39 | .29 | .64 | 1.42 | 6.43 | 1.64 | 1.82 | .73 | .16 | .22 | .51 |
| IN. | .15 | .44 | .33 | .74 | 1.48 | 7.42 | 1.83 | 2.10 | .82 | .18 | .25 | .57 |
| AC-FT | 589 | 1730 | 1300 | 2910 | 5830 | 29260 | 7220 | 8300 | 3220 | 729 | 1000 | 2240 |
| CAL YR 1976 TOTAL | 63602.6 | | | 174 | | 5740 | MIN 4.0 | CFSM 2.35 | IN 31.97 | AC-FT 126200 | | |
| WTR YR 1977 TOTAL | 32440.2 | | | 88.9 | | 1150 | MIN 4.4 | CFSM 1.20 | IN 16.31 | AC-FT 64350 | | |

ROGUE RIVER BASIN

14328000 ROGUE RIVER ABOVE PROSPECT, OR

LOCATION.--Lat 42°46'30", long 122°29'55", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.19, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, Rogue River National Forest, on left bank 1.4 mi (2.3 km) upstream from Pacific Power & Light Co. diversion dam, 1.8 mi (2.9 km) northwest of Prospect, and at mile 173.4 (279.0 km).

DRAINAGE AREA.--312 mi² (808 km²).

PERIOD OF RECORD.--January 1908 to February 1912, October 1923 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1925, published as "near Prospect."

REVISED RECORDS.--WSP 1248: 1925, 1927(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,620 ft (799 m), from river-profile map. Prior to Feb. 17, 1912, nonrecording gage at several sites within a few hundred feet upstream at various datums.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--57 years (water years 1909-11, 1924-77), 823 ft³/s (23.31 m³/s), 35.82 in/yr (910 mm/yr), 596,300 acre-ft/yr (735 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s (634 m³/s) Dec. 22, 1964, gage height, 11.55 ft (3.520 m), from floodmark, from rating curve extended above 9,000 ft³/s (255 m³/s) on basis of slope-area measurement at 16,600 ft³/s (470 m³/s); minimum observed, 200 ft³/s (5.66 m³/s) Nov. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,180 ft³/s (33.4 m³/s) Sept. 28, gage height, 2.75 ft (0.838 m), no peak above base of 2,700 ft³/s (76.5 m³/s); minimum, 299 ft³/s (8.47 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|----------|----------|---------|-----------|----------|--------------|-------|-------|-------|-------|
| 1 | 525 | 573 | 425 | 407 | 402 | 491 | 486 | 716 | 702 | 388 | 323 | 319 |
| 2 | 568 | 535 | 425 | 425 | 393 | 455 | 491 | 825 | 668 | 411 | 323 | 315 |
| 3 | 540 | 509 | 425 | 416 | 393 | 450 | 496 | 832 | 635 | 384 | 323 | 315 |
| 4 | 530 | 504 | 425 | 411 | 393 | 425 | 562 | 810 | 628 | 379 | 319 | 311 |
| 5 | 525 | 499 | 421 | 402 | 393 | 435 | 668 | 788 | 635 | 375 | 319 | 311 |
| 6 | 519 | 493 | 421 | 344 | 397 | 440 | 723 | 730 | 642 | 375 | 319 | 307 |
| 7 | 519 | 488 | 421 | 407 | 393 | 455 | 788 | 709 | 628 | 370 | 319 | 307 |
| 8 | 514 | 483 | 425 | 388 | 402 | 584 | 942 | 668 | 603 | 366 | 323 | 303 |
| 9 | 509 | 483 | 435 | 379 | 402 | 579 | 832 | 675 | 567 | 362 | 323 | 303 |
| 10 | 509 | 483 | 421 | 450 | 402 | 507 | 702 | 773 | 545 | 362 | 315 | 303 |
| 11 | 504 | 483 | 425 | 460 | 407 | 481 | 675 | 759 | 609 | 353 | 311 | 303 |
| 12 | 504 | 478 | 421 | 425 | 407 | 491 | 695 | 723 | 539 | 353 | 311 | 303 |
| 13 | 504 | 478 | 421 | 411 | 407 | 465 | 759 | 695 | 512 | 353 | 311 | 311 |
| 14 | 504 | 530 | 416 | 407 | 407 | 450 | 716 | 688 | 502 | 353 | 311 | 311 |
| 15 | 499 | 545 | 416 | 397 | 407 | 440 | 695 | 682 | 481 | 349 | 311 | 311 |
| 16 | 499 | 523 | 416 | 397 | 407 | 435 | 759 | 695 | 465 | 349 | 307 | 319 |
| 17 | 499 | 475 | 416 | 397 | 407 | 435 | 716 | 709 | 455 | 344 | 307 | 319 |
| 18 | 499 | 465 | 407 | 402 | 402 | 430 | 668 | 695 | 450 | 344 | 311 | 340 |
| 19 | 493 | 455 | 407 | 402 | 397 | 440 | 635 | 682 | 440 | 349 | 307 | 349 |
| 20 | 493 | 450 | 407 | 411 | 407 | 460 | 635 | 695 | 435 | 344 | 307 | 357 |
| 21 | 493 | 445 | 407 | 411 | 440 | 465 | 642 | 716 | 435 | 340 | 311 | 340 |
| 22 | 493 | 445 | 411 | 411 | 435 | 496 | 661 | 744 | 425 | 336 | 307 | 323 |
| 23 | 493 | 440 | 411 | 407 | 416 | 556 | 661 | 817 | 416 | 336 | 307 | 332 |
| 24 | 493 | 440 | 402 | 402 | 411 | 534 | 675 | 795 | 411 | 336 | 357 | 440 |
| 25 | 584 | 440 | 411 | 397 | 402 | 496 | 737 | 751 | 402 | 336 | 370 | 370 |
| 26 | 551 | 435 | 435 | 393 | 411 | 491 | 709 | 832 | 397 | 336 | 379 | 370 |
| 27 | 509 | 421 | 421 | 393 | 425 | 534 | 668 | 788 | 393 | 332 | 349 | 349 |
| 28 | 504 | 430 | 411 | 393 | 562 | 523 | 675 | 730 | 388 | 327 | 340 | 709 |
| 29 | 504 | 430 | 417 | 393 | --- | 496 | 661 | 702 | 384 | 327 | 344 | 688 |
| 30 | 504 | 430 | 407 | 393 | --- | 481 | 688 | 682 | 379 | 327 | 340 | 425 |
| 31 | 519 | --- | 402 | 402 | --- | 475 | --- | 675 | --- | 323 | 327 | --- |
| TOTAL | 15903 | 14288 | 12931 | 12533 | 11527 | 14895 | 20420 | 22781 | 15171 | 10919 | 10031 | 10663 |
| MEAN | 513 | 476 | 417 | 404 | 412 | 480 | 681 | 735 | 506 | 352 | 324 | 355 |
| MAX | 584 | 573 | 435 | 460 | 562 | 584 | 942 | 832 | 702 | 411 | 379 | 709 |
| MIN | 493 | 421 | 402 | 344 | 393 | 425 | 486 | 668 | 379 | 323 | 307 | 303 |
| CFSM | 1.64 | 1.53 | 1.34 | 1.30 | 1.32 | 1.54 | 2.18 | 2.36 | 1.62 | 1.13 | 1.04 | 1.14 |
| IN. | 1.90 | 1.70 | 1.54 | 1.49 | 1.37 | 1.78 | 2.43 | 2.72 | 1.81 | 1.30 | 1.20 | 1.27 |
| AC-FT | 31540 | 28340 | 25650 | 24860 | 22860 | 29540 | 40500 | 45190 | 30090 | 21660 | 19900 | 21150 |
| CAL YR 1976 TOTAL | 306010 | | MEAN 836 | MAX 2340 | MIN 402 | CFSM 2.68 | IN 36.49 | AC-FT 607000 | | | | |
| WTR YR 1977 TOTAL | 172062 | | MEAN 471 | MAX 942 | MIN 303 | CFSM 1.51 | IN 20.51 | AC-FT 341300 | | | | |

14330000 ROGUE RIVER BELOW PROSPECT, OR

LOCATION.--Lat 42°43'50", long 122°30'55", in SE¼NW¼ sec.6, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 600 ft (183 m) downstream from Prospect No. 1 powerplant, 1.4 mi (2.3 km) downstream from Mill Creek, 2.0 mi (3.2 km) southwest of Prospect, 2.1 mi (3.4 km) upstream from South Fork Rogue River, and at mile 169.4 (272.6 km).

DRAINAGE AREA.--379 mi² (982 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1913 to September 1930, October 1968 to current year.

REVISED RECORDS.--WSP 1518: 1914-23, 1924(M), 1925, 1928.

GAGE.--Water-stage recorder. Altitude of gage is 1,970 ft (600 m), from topographic map. Prior to September 1927 nonrecording gage at site 1,000 ft (305 m) upstream, above powerplants, at different datum, also concurrent nonrecording gage on headrace to obtain equivalent combined flow.

REMARKS.--Water-discharge records good. Small fluctuations caused by powerplant 600 ft (183 m) above station. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--26 years, 1,225 ft³/s (34.69 m³/s), 887,500 acre-ft/yr (1,090 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s (309 m³/s) Jan. 18, 1971, gage height, 7.62 ft (2.323 m), from high-water mark; minimum, 235 ft³/s (6.66 m³/s) Sept. 12, 1977, caused by regulation of diversion gates upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 12.4 ft (3.78 m) Dec. 22, 1964, from floodmarks, discharge, 25,000 ft³/s (708 m³/s), from records for station above Prospect (see station 14328000) and for station below South Fork Rogue River near Prospect (see station 14335000) after adjusting for estimated intervening tributary inflow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft³/s (56.9 m³/s) Sept. 28, gage height, 3.07 ft (0.936 m); minimum, 235 ft³/s (6.66 m³/s) Sept. 12, caused by regulation of diversion gates upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|
| 1 | 1060 | 1130 | 994 | 952 | 934 | 1050 | 1050 | 1330 | 1380 | 952 | 815 | 790 |
| 2 | 1150 | 1090 | 994 | 1000 | 918 | 1010 | 1050 | 1460 | 1340 | 970 | 775 | 785 |
| 3 | 1100 | 1050 | 994 | 976 | 920 | 1010 | 1060 | 1470 | 1300 | 918 | 740 | 770 |
| 4 | 1070 | 1040 | 988 | 958 | 922 | 976 | 1140 | 1460 | 1280 | 912 | 735 | 770 |
| 5 | 1060 | 1040 | 988 | 929 | 923 | 988 | 1260 | 1430 | 1280 | 912 | 770 | 765 |
| 6 | 1060 | 1040 | 988 | 868 | 929 | 1000 | 1300 | 1370 | 1290 | 918 | 800 | 765 |
| 7 | 1060 | 1020 | 982 | 912 | 918 | 1020 | 1380 | 1350 | 1290 | 912 | 810 | 760 |
| 8 | 1050 | 1000 | 990 | 896 | 934 | 1170 | 1560 | 1310 | 1260 | 901 | 805 | 760 |
| 9 | 1050 | 976 | 1020 | 885 | 934 | 1170 | 1440 | 1310 | 1220 | 896 | 800 | 760 |
| 10 | 1050 | 1020 | 1010 | 994 | 929 | 1090 | 1300 | 1410 | 1170 | 890 | 795 | 770 |
| 11 | 1050 | 1020 | 1010 | 1020 | 934 | 1050 | 1290 | 1420 | 1260 | 890 | 790 | 755 |
| 12 | 1060 | 1020 | 1000 | 976 | 934 | 1070 | 1290 | 1380 | 1170 | 885 | 785 | 722 |
| 13 | 1000 | 1020 | 1000 | 964 | 940 | 1030 | 1360 | 1340 | 1140 | 879 | 785 | 760 |
| 14 | 1060 | 1090 | 990 | 958 | 940 | 1010 | 1300 | 1340 | 1120 | 879 | 785 | 760 |
| 15 | 1040 | 1140 | 985 | 946 | 934 | 994 | 1280 | 1320 | 1080 | 874 | 785 | 745 |
| 16 | 1040 | 1130 | 980 | 940 | 934 | 988 | 1330 | 1330 | 1050 | 868 | 780 | 770 |
| 17 | 1040 | 1060 | 970 | 946 | 934 | 988 | 1320 | 1340 | 1050 | 863 | 775 | 770 |
| 18 | 1040 | 1050 | 958 | 952 | 929 | 982 | 1260 | 1340 | 1060 | 863 | 775 | 800 |
| 19 | 1040 | 1040 | 952 | 970 | 923 | 1000 | 1210 | 1320 | 1050 | 868 | 775 | 795 |
| 20 | 1040 | 1030 | 952 | 958 | 934 | 1020 | 1200 | 1330 | 1040 | 852 | 770 | 825 |
| 21 | 1040 | 1020 | 958 | 958 | 1000 | 1020 | 1200 | 1350 | 1030 | 835 | 780 | 800 |
| 22 | 1040 | 1020 | 958 | 964 | 988 | 1050 | 1250 | 1380 | 1020 | 846 | 770 | 770 |
| 23 | 1030 | 1020 | 964 | 946 | 958 | 1140 | 1240 | 1480 | 994 | 846 | 765 | 785 |
| 24 | 1040 | 1010 | 946 | 940 | 946 | 1110 | 1270 | 1460 | 988 | 835 | 852 | 929 |
| 25 | 1140 | 1010 | 970 | 934 | 934 | 1070 | 1340 | 1400 | 976 | 841 | 874 | 820 |
| 26 | 1070 | 1010 | 1000 | 934 | 952 | 1050 | 1330 | 1490 | 964 | 835 | 874 | 825 |
| 27 | 1060 | 988 | 976 | 923 | 964 | 1110 | 1300 | 1460 | 958 | 830 | 835 | 805 |
| 28 | 1050 | 994 | 958 | 929 | 1140 | 1100 | 1290 | 1380 | 946 | 825 | 815 | 1210 |
| 29 | 1050 | 994 | 958 | 923 | --- | 1060 | 1280 | 1350 | 940 | 825 | 830 | 1300 |
| 30 | 1050 | 994 | 958 | 929 | --- | 1040 | 1290 | 1340 | 934 | 820 | 805 | 934 |
| 31 | 1050 | --- | 946 | 934 | --- | 1030 | --- | 1340 | --- | 820 | 805 | --- |
| TOTAL | 32740 | 31066 | 30337 | 29314 | 26479 | 32396 | 38170 | 42790 | 33580 | 27060 | 24655 | 24575 |
| MEAN | 1056 | 1036 | 979 | 946 | 946 | 1045 | 1272 | 1380 | 1119 | 873 | 795 | 819 |
| MAX | 1150 | 1140 | 1020 | 1020 | 1140 | 1170 | 1560 | 1490 | 1380 | 970 | 874 | 1300 |
| MIN | 1000 | 976 | 946 | 868 | 918 | 976 | 1050 | 1310 | 934 | 820 | 735 | 722 |
| AC-FT | 64940 | 61620 | 60170 | 58140 | 52520 | 64260 | 75710 | 84870 | 66610 | 53670 | 48900 | 48740 |
| CAL YR 1976 | TOTAL | 547693 | MEAN | 1496 | MAX | 3130 | MIN | 946 | AC-FT | 1086000 | | |
| WTR YR 1977 | TOTAL | 373162 | MEAN | 1022 | MAX | 1560 | MIN | 722 | AC-FT | 740200 | | |

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to current year.

pH: November 1976 to current year.

WATER TEMPERATURES: October 1968 to current year.

TURBIDITY: December 1976 to current year.

SUSPENDED SEDIMENT DISCHARGE: November 1976 to current year.

INSTRUMENTATION.--Water-quality monitor and automatic pumping sediment sampler since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 15.5°C June 25, 29, July 16, 21-24, 1977; minimum, 0.0°C Jan. 1, 2, 4, 5, 1970, Mar. 1, 1971.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 70 micromhos Jan. 9, 10; minimum recorded, 49 micromhos, May 27.

pH: Maximum, 7.9 units Jan. 4-9, July 18, 25, Aug. 2, 3, 7, 9, 13-15; minimum, 7.0 units Nov. 30.

WATER TEMPERATURES: Maximum, 15.5°C June 25, 29, July 16, 21-24; minimum recorded, 1.0°C Jan. 6-9.

TURBIDITY: Maximum, 330 JTU Mar. 9; minimum, 0 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum, 32 mg/l Jan. 20, 21; minimum, 1 mg/l on many days throughout year.

SEDIMENT DISCHARGE: Maximum, 83 tons (75 tonnes) Jan. 20, 21; minimum, 2.0 tons (1.8 tonnes) Sept. 11.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | --- | 60 | 63 | --- | 59 | --- | 52 | 51 | 62 | 65 | 64 |
| 2 | | --- | 60 | 62 | --- | 60 | --- | 51 | 51 | 62 | 65 | 64 |
| 3 | | --- | 60 | 63 | --- | 60 | --- | 50 | 51 | 62 | 66 | 64 |
| 4 | | --- | 60 | 64 | --- | 60 | --- | 50 | 52 | 62 | 66 | 64 |
| 5 | | --- | 60 | 66 | --- | 61 | --- | 51 | 51 | 62 | 66 | 64 |
| 6 | | --- | 60 | 67 | --- | 61 | --- | 53 | 51 | 62 | 65 | 64 |
| 7 | | --- | 60 | 68 | --- | 61 | --- | 53 | 51 | 62 | 64 | 64 |
| 8 | | --- | 60 | 69 | --- | 59 | --- | 54 | 51 | 63 | 64 | 65 |
| 9 | | --- | 60 | 69 | 61 | 58 | --- | 54 | 51 | 63 | 64 | 65 |
| 10 | | --- | 60 | 69 | 61 | 58 | --- | 53 | 53 | 62 | 64 | 64 |
| 11 | | --- | 60 | --- | 61 | 60 | --- | 52 | 52 | 63 | 64 | 65 |
| 12 | | --- | 60 | --- | 61 | 60 | --- | 53 | 52 | 63 | 64 | --- |
| 13 | | --- | 60 | --- | 61 | 60 | 55 | 54 | 54 | 63 | 64 | --- |
| 14 | | --- | 60 | --- | 61 | 60 | 55 | 53 | 54 | 63 | 64 | 65 |
| 15 | | --- | 61 | --- | 61 | 60 | 56 | 53 | 55 | 63 | 64 | 65 |
| 16 | --- | 61 | 61 | --- | 61 | 61 | 55 | 53 | 56 | 63 | 64 | 64 |
| 17 | 61 | 61 | 61 | --- | 61 | 61 | 54 | 53 | 57 | 63 | 64 | 64 |
| 18 | 61 | 61 | 61 | --- | 61 | 60 | 55 | 54 | 58 | 63 | 64 | 64 |
| 19 | 61 | 61 | 61 | --- | 61 | 60 | 55 | 54 | 58 | 63 | 65 | 64 |
| 20 | 61 | 61 | 61 | --- | 61 | 60 | 55 | 54 | 58 | 64 | 65 | 63 |
| 21 | 61 | 61 | 61 | --- | 60 | 60 | 55 | 53 | 59 | 64 | 64 | 64 |
| 22 | 61 | 61 | 61 | --- | 59 | 60 | 55 | 52 | 59 | 64 | 64 | 64 |
| 23 | 61 | 61 | 61 | --- | 60 | 59 | 55 | 51 | 60 | 64 | 64 | 64 |
| 24 | 61 | 61 | 61 | --- | 61 | 59 | 54 | 51 | 61 | 64 | 63 | 62 |
| 25 | 60 | 60 | 60 | --- | 61 | 60 | 53 | 51 | 61 | 64 | 62 | 63 |
| 26 | 60 | 60 | 60 | --- | 61 | 60 | 53 | 51 | 61 | 64 | 63 | 63 |
| 27 | 61 | 60 | 60 | --- | 61 | 60 | 53 | 50 | 61 | 65 | 63 | 64 |
| 28 | 61 | 60 | 60 | --- | 59 | 59 | 53 | 51 | 62 | 65 | 64 | 59 |
| 29 | 60 | 61 | 61 | --- | --- | 60 | 53 | 52 | 62 | 65 | 64 | 54 |
| 30 | 60 | 61 | 61 | --- | --- | --- | 53 | 52 | 62 | 65 | 64 | 59 |
| 31 | --- | 63 | 63 | --- | --- | --- | --- | 52 | --- | 65 | 64 | --- |

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|-----|------|
| | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
| 1 | | | | --- | --- | --- | 7.1 | 7.1 | 7.1 | 7.8 | 7.7 | 7.7 |
| 2 | | | | --- | --- | --- | 7.2 | 7.2 | 7.2 | 7.8 | 7.7 | 7.7 |
| 3 | | | | --- | --- | --- | 7.3 | 7.3 | 7.3 | 7.8 | 7.7 | 7.7 |
| 4 | | | | --- | --- | --- | 7.4 | 7.4 | 7.4 | 7.9 | 7.7 | 7.8 |
| 5 | | | | --- | --- | --- | 7.4 | 7.4 | 7.4 | 7.9 | 7.8 | 7.8 |
| 6 | | | | --- | --- | --- | 7.5 | 7.5 | 7.5 | 7.9 | 7.8 | 7.8 |
| 7 | | | | --- | --- | --- | 7.6 | 7.6 | 7.6 | 7.9 | 7.8 | 7.8 |
| 8 | | | | --- | --- | --- | 7.3 | 7.1 | 7.2 | 7.9 | 7.8 | 7.9 |
| 9 | | | | --- | --- | --- | 7.3 | 7.2 | 7.2 | 7.9 | 7.9 | 7.9 |
| 10 | | | | --- | --- | --- | 7.4 | 7.2 | 7.3 | 7.9 | 7.9 | 7.9 |
| 11 | | | | --- | --- | --- | 7.4 | 7.3 | 7.3 | --- | --- | --- |
| 12 | | | | --- | --- | --- | 7.4 | 7.3 | 7.4 | --- | --- | --- |
| 13 | | | | --- | --- | --- | 7.5 | 7.4 | 7.4 | --- | --- | --- |
| 14 | | | | --- | --- | --- | 7.6 | 7.5 | 7.5 | --- | --- | --- |
| 15 | | | | --- | --- | --- | 7.6 | 7.5 | 7.5 | --- | --- | --- |
| 16 | | | | --- | --- | --- | 7.1 | 7.1 | 7.1 | --- | --- | --- |
| 17 | | | | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | --- | --- | --- |
| 18 | | | | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 19 | | | | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 20 | | | | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 21 | | | | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 22 | | | | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 23 | | | | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 24 | | | | 7.7 | 7.0 | 7.4 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 25 | | | | 7.2 | 7.1 | 7.1 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 26 | | | | 7.3 | 7.2 | 7.2 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 27 | | | | 7.4 | 7.3 | 7.3 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 28 | | | | 7.4 | 7.3 | 7.3 | 7.6 | 7.6 | 7.6 | --- | --- | --- |
| 29 | | | | 7.5 | 7.0 | 7.2 | 7.7 | 7.6 | 7.6 | --- | --- | --- |
| 30 | | | | 7.1 | 7.1 | 7.1 | 7.8 | 7.6 | 7.7 | --- | --- | --- |
| 31 | | | | --- | --- | --- | 7.8 | 7.7 | 7.7 | --- | --- | --- |
| MONTH | | | | 7.7 | 7.0 | 7.4 | 7.8 | 7.1 | 7.5 | 7.9 | 7.7 | 7.8 |

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | |
| 1 | --- | --- | --- | 7.7 | 7.6 | 7.7 | --- | --- | --- | 7.7 | 7.5 | 7.5 |
| 2 | --- | --- | --- | 7.7 | 7.6 | 7.7 | --- | --- | --- | 7.6 | 7.5 | 7.6 |
| 3 | --- | --- | --- | 7.7 | 7.6 | 7.7 | --- | --- | --- | 7.6 | 7.5 | 7.6 |
| 4 | --- | --- | --- | 7.7 | 7.6 | 7.7 | --- | --- | --- | 7.6 | 7.5 | 7.6 |
| 5 | --- | --- | --- | 7.7 | 7.6 | 7.7 | --- | --- | --- | 7.6 | 7.5 | 7.6 |
| 6 | --- | --- | --- | 7.7 | 7.6 | 7.6 | --- | --- | --- | 7.6 | 7.5 | 7.6 |
| 7 | --- | --- | --- | 7.7 | 7.6 | 7.6 | --- | --- | --- | 7.7 | 7.5 | 7.6 |
| 8 | --- | --- | --- | 7.7 | 7.6 | 7.6 | --- | --- | --- | 7.7 | 7.5 | 7.6 |
| 9 | --- | --- | --- | 7.7 | 7.6 | 7.6 | --- | --- | --- | 7.7 | 7.5 | 7.6 |
| 10 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | --- | --- | --- | 7.6 | 7.5 | 7.6 |
| 11 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | --- | --- | --- | 7.6 | 7.5 | 7.6 |
| 12 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | 7.7 | 7.5 | 7.6 | 7.6 | 7.5 | 7.6 |
| 13 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 14 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 15 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 16 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 17 | 7.7 | 7.6 | 7.6 | 7.7 | 7.5 | 7.7 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 18 | 7.7 | 7.6 | 7.6 | 7.8 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 19 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 20 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 21 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 22 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | 7.7 | 7.5 | 7.6 | 7.6 | 7.5 | 7.6 |
| 23 | 7.8 | 7.6 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.5 | 7.6 | 7.6 | 7.5 | 7.5 |
| 24 | 7.8 | 7.6 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 25 | 7.8 | 7.6 | 7.7 | 7.7 | 7.6 | 7.6 | 7.6 | 7.5 | 7.6 | 7.6 | 7.5 | 7.6 |
| 26 | 7.8 | 7.6 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.5 | 7.6 | 7.6 | 7.5 | 7.5 |
| 27 | 7.8 | 7.6 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.5 | 7.6 | 7.6 | 7.5 | 7.6 |
| 28 | 7.7 | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | 7.7 | 7.5 | 7.6 | 7.6 | 7.5 | 7.6 |
| 29 | --- | --- | --- | 7.7 | 7.6 | 7.6 | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 30 | --- | --- | --- | --- | --- | --- | 7.7 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.7 | 7.4 | 7.5 |
| MONTH | 7.8 | 7.6 | 7.6 | 7.8 | 7.5 | 7.6 | 7.7 | 7.5 | 7.6 | 7.7 | 7.4 | 7.6 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | | |
| 1 | 7.7 | 7.4 | 7.5 | 7.8 | 7.4 | 7.5 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 2 | 7.7 | 7.5 | 7.6 | 7.8 | 7.5 | 7.6 | 7.9 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 3 | 7.7 | 7.4 | 7.5 | 7.8 | 7.5 | 7.6 | 7.9 | 7.4 | 7.6 | 7.8 | 7.4 | 7.5 |
| 4 | 7.7 | 7.4 | 7.5 | 7.8 | 7.5 | 7.6 | 7.8 | 7.5 | 7.7 | 7.8 | 7.4 | 7.5 |
| 5 | 7.7 | 7.4 | 7.5 | 7.8 | 7.5 | 7.6 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.5 |
| 6 | 7.7 | 7.4 | 7.5 | 7.8 | 7.5 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 7 | 7.7 | 7.3 | 7.5 | 7.8 | 7.5 | 7.6 | 7.9 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 8 | 7.7 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 9 | 7.7 | 7.4 | 7.5 | 7.8 | 7.5 | 7.6 | 7.9 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 10 | 7.7 | 7.4 | 7.5 | 7.8 | 7.5 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 11 | 7.6 | 7.4 | 7.5 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.5 |
| 12 | 7.7 | 7.4 | 7.5 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | --- | --- | --- |
| 13 | 7.7 | 7.4 | 7.5 | 7.8 | 7.5 | 7.6 | 7.9 | 7.4 | 7.6 | --- | --- | --- |
| 14 | 7.7 | 7.4 | 7.5 | 7.8 | 7.4 | 7.6 | 7.9 | 7.4 | 7.6 | 7.8 | 7.4 | 7.5 |
| 15 | 7.7 | 7.4 | 7.5 | 7.8 | 7.4 | 7.6 | 7.9 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 16 | 7.7 | 7.4 | 7.5 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.8 | 7.5 | 7.6 |
| 17 | 7.6 | 7.4 | 7.5 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.6 |
| 18 | 7.7 | 7.4 | 7.6 | 7.9 | 7.4 | 7.6 | 7.8 | 7.3 | 7.6 | 7.7 | 7.4 | 7.5 |
| 19 | 7.7 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 20 | 7.7 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 | 7.7 | 7.4 | 7.5 |
| 21 | 7.7 | 7.4 | 7.5 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 22 | 7.7 | 7.4 | 7.5 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 |
| 23 | 7.7 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.6 | 7.4 | 7.5 |
| 24 | 7.7 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 | 7.7 | 7.4 | 7.5 |
| 25 | 7.8 | 7.4 | 7.6 | 7.9 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 | 7.7 | 7.4 | 7.5 |
| 26 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.6 | 7.4 | 7.5 |
| 27 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.5 | 7.3 | 7.4 |
| 28 | 7.7 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 | 7.4 | 7.3 | 7.4 |
| 29 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 | 7.5 | 7.4 | 7.4 |
| 30 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.6 | 7.8 | 7.4 | 7.5 | 7.6 | 7.4 | 7.5 |
| 31 | --- | --- | --- | 7.8 | 7.4 | 7.6 | 7.7 | 7.4 | 7.5 | --- | --- | --- |
| MONTH | 7.8 | 7.3 | 7.5 | 7.9 | 7.4 | 7.6 | 7.9 | 7.3 | 7.6 | 7.8 | 7.3 | 7.5 |

ROGUE RIVER BASIN

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 10.5 | 8.5 | --- | --- | 3.5 | 2.5 | 3.0 | 2.0 | --- | --- | 3.5 | 2.0 |
| 2 | 9.5 | 8.5 | --- | --- | 3.5 | 2.5 | 3.0 | 2.0 | --- | --- | 3.0 | 2.0 |
| 3 | 9.0 | 7.5 | 7.5 | 6.5 | 3.5 | 2.5 | 2.5 | 2.0 | --- | --- | 3.0 | 2.0 |
| 4 | 8.0 | 6.5 | 7.0 | 6.0 | 4.5 | 3.5 | 3.0 | 2.5 | --- | --- | 4.0 | 2.5 |
| 5 | 8.5 | 6.5 | 6.5 | 5.5 | 4.0 | 3.0 | 3.0 | 1.5 | --- | --- | 4.5 | 2.5 |
| 6 | 9.0 | 7.0 | 7.0 | 5.5 | 3.5 | 2.5 | 2.0 | 1.0 | --- | --- | 4.0 | 3.0 |
| 7 | 9.5 | 7.5 | 6.5 | 5.5 | 3.0 | 2.5 | 2.0 | 1.0 | --- | --- | 4.0 | 3.5 |
| 8 | 9.5 | 7.5 | 7.0 | 6.0 | 4.0 | 3.0 | 1.5 | 1.0 | --- | --- | 4.0 | 3.5 |
| 9 | 9.0 | 7.0 | 6.5 | 5.5 | 4.0 | 3.0 | 1.5 | 1.0 | --- | --- | 4.0 | 2.5 |
| 10 | 8.5 | 7.0 | 6.5 | 6.0 | 3.5 | 2.5 | --- | --- | 5.0 | 4.0 | 4.0 | 2.0 |
| 11 | 8.5 | 6.5 | 7.0 | 6.0 | 3.0 | 2.0 | --- | --- | 5.0 | 3.5 | 3.0 | 2.5 |
| 12 | 8.0 | 6.5 | 6.5 | 5.5 | 3.0 | 2.5 | --- | --- | 5.0 | 3.5 | 4.0 | 3.0 |
| 13 | 8.5 | 6.0 | 6.0 | 5.0 | 3.0 | 2.5 | --- | --- | 5.0 | 4.0 | 3.5 | 2.5 |
| 14 | 8.0 | 6.0 | 6.0 | 5.5 | 3.5 | 2.5 | --- | --- | 5.0 | 3.5 | 4.0 | 2.5 |
| 15 | 7.5 | 5.5 | 6.5 | 6.0 | 3.5 | 2.5 | --- | --- | 5.0 | 3.5 | 4.0 | 3.0 |
| 16 | 7.0 | 5.5 | 7.5 | 6.5 | 3.0 | 3.0 | --- | --- | 5.0 | 3.5 | 5.0 | 3.0 |
| 17 | 7.0 | 5.5 | 7.0 | 6.5 | 3.5 | 2.5 | --- | --- | 5.5 | 4.0 | 4.5 | 3.0 |
| 18 | 6.5 | 5.0 | 6.5 | 6.0 | 3.0 | 2.0 | --- | --- | 5.0 | 3.5 | 4.5 | 2.5 |
| 19 | 6.5 | 5.0 | 6.0 | 4.5 | 2.5 | 1.5 | --- | --- | 5.0 | 3.0 | 5.5 | 4.0 |
| 20 | 6.5 | 5.0 | 5.0 | 4.0 | 2.5 | 1.5 | --- | --- | 4.5 | 4.0 | 6.5 | 4.0 |
| 21 | 6.5 | 5.0 | 5.5 | 4.5 | 2.5 | 1.5 | --- | --- | 4.0 | 3.5 | 6.5 | 4.0 |
| 22 | 7.0 | 5.5 | 5.0 | 4.5 | 3.0 | 2.0 | --- | --- | 3.5 | 3.0 | 5.5 | 4.0 |
| 23 | 6.5 | 5.0 | 5.0 | 4.0 | 3.5 | 3.0 | --- | --- | 3.0 | 2.0 | 5.5 | 4.0 |
| 24 | 5.5 | 5.0 | 4.5 | 4.0 | 3.0 | 2.0 | --- | --- | 3.5 | 2.0 | 4.0 | 3.0 |
| 25 | 6.5 | 5.5 | 5.0 | 4.5 | 3.0 | 2.0 | --- | --- | 3.5 | 3.0 | 5.0 | 2.5 |
| 26 | --- | --- | 4.5 | 3.0 | 3.5 | 2.5 | --- | --- | 3.5 | 2.5 | 6.0 | 3.0 |
| 27 | --- | --- | 3.0 | 2.0 | 3.5 | 3.0 | --- | --- | 4.5 | 3.0 | 5.5 | 4.0 |
| 28 | --- | --- | 3.0 | 2.0 | 3.0 | 2.5 | --- | --- | 4.5 | 3.0 | 4.5 | 2.5 |
| 29 | --- | --- | 3.5 | 2.0 | 3.5 | 2.5 | --- | --- | --- | --- | 4.5 | 2.5 |
| 30 | --- | --- | 3.5 | 2.5 | 3.5 | 3.0 | --- | --- | --- | --- | --- | --- |
| 31 | --- | --- | --- | --- | 3.0 | 2.5 | --- | --- | --- | --- | --- | --- |
| MONTH | 10.5 | 5.0 | 7.5 | 2.0 | 4.5 | 1.5 | 3.0 | 1.0 | 5.5 | 2.0 | 6.5 | 2.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | --- | --- | 7.5 | 7.0 | 12.0 | 10.0 | 14.5 | 12.0 | 14.5 | 12.0 | 12.0 | 9.5 |
| 2 | --- | --- | 8.0 | 6.5 | 10.5 | 8.0 | 14.5 | 11.5 | --- | --- | 12.0 | 9.5 |
| 3 | --- | --- | 7.0 | 6.5 | 10.0 | 8.5 | 13.0 | 10.5 | --- | --- | 13.0 | 10.0 |
| 4 | --- | --- | 6.5 | 5.0 | 12.5 | 8.5 | 12.0 | 10.0 | --- | --- | 13.5 | 10.5 |
| 5 | --- | --- | 5.0 | 4.5 | 14.0 | 10.5 | 11.5 | 8.5 | 14.0 | 11.0 | 13.0 | 11.0 |
| 6 | --- | --- | 6.5 | 4.5 | 14.0 | 11.5 | 12.5 | 8.5 | 14.0 | 11.0 | 13.0 | 10.0 |
| 7 | --- | --- | 6.5 | 5.0 | 14.0 | 12.0 | 13.5 | 9.5 | 14.0 | 11.5 | 12.5 | 10.0 |
| 8 | --- | --- | 7.5 | 5.0 | 14.5 | 12.0 | 14.0 | 10.5 | 14.0 | 10.0 | 11.5 | 9.5 |
| 9 | --- | --- | 7.0 | 6.0 | 13.5 | 11.0 | 14.0 | 11.0 | 14.0 | 11.0 | 11.5 | 8.5 |
| 10 | --- | --- | 6.5 | 6.0 | 13.5 | 10.5 | 14.0 | 10.0 | 14.5 | 11.0 | 11.5 | 8.5 |
| 11 | --- | --- | 6.5 | 5.0 | 10.5 | 9.5 | 14.5 | 10.5 | 15.0 | 11.5 | 12.0 | 9.0 |
| 12 | --- | --- | 7.5 | 6.0 | 12.5 | 9.0 | 14.5 | 11.5 | 15.0 | 12.0 | --- | --- |
| 13 | 7.0 | 5.5 | 8.5 | 6.0 | 13.0 | 10.0 | 14.0 | 10.5 | 14.5 | 12.5 | --- | --- |
| 14 | 6.5 | 4.0 | 9.0 | 7.5 | 13.5 | 10.0 | 14.0 | 10.5 | 14.5 | 12.0 | 12.0 | 10.0 |
| 15 | 7.5 | 5.0 | 8.0 | 6.5 | 13.5 | 9.5 | 15.0 | 11.0 | 15.0 | 12.0 | 10.5 | 9.0 |
| 16 | 7.5 | 6.0 | 6.5 | 5.0 | 13.5 | 10.0 | 15.5 | 12.0 | 15.0 | 12.0 | 9.5 | 8.5 |
| 17 | 6.5 | 4.5 | 7.0 | 5.5 | 12.0 | 11.0 | 15.0 | 12.0 | 15.0 | 12.0 | 9.0 | 8.0 |
| 18 | 6.5 | 4.0 | 7.0 | 5.5 | 13.0 | 10.0 | 14.5 | 12.5 | 14.0 | 12.5 | 9.5 | 8.5 |
| 19 | 7.0 | 4.0 | 9.5 | 6.0 | 13.5 | 10.5 | 15.0 | 12.0 | 14.5 | 11.0 | 10.0 | 9.0 |
| 20 | 7.5 | 5.0 | 10.5 | 7.5 | 12.0 | 10.5 | 15.0 | 11.5 | 13.0 | 11.5 | 9.5 | 8.5 |
| 21 | 8.0 | 6.0 | 10.5 | 8.5 | 13.5 | 9.5 | 15.5 | 12.0 | 14.0 | 11.0 | 9.5 | 8.0 |
| 22 | 7.5 | 6.5 | 9.5 | 7.5 | 15.0 | 10.5 | 15.5 | 12.0 | 13.5 | 11.0 | 9.0 | 7.0 |
| 23 | 7.0 | 6.0 | 7.5 | 6.5 | 14.5 | 11.0 | 15.5 | 12.0 | 13.0 | 10.5 | 8.0 | 7.0 |
| 24 | 8.0 | 6.0 | 9.0 | 6.5 | 14.5 | 11.0 | 15.5 | 12.5 | 12.5 | 11.0 | 9.0 | 7.0 |
| 25 | 7.5 | 6.5 | 8.0 | 7.5 | 15.5 | 11.0 | 15.0 | 12.0 | 12.0 | 10.5 | 9.5 | 8.0 |
| 26 | 8.0 | 5.5 | 8.0 | 7.0 | 15.0 | 11.5 | 14.5 | 12.0 | 10.5 | 9.5 | 10.0 | 8.0 |
| 27 | 9.0 | 6.0 | 7.5 | 6.5 | 15.0 | 11.5 | 14.5 | 11.5 | 10.5 | 9.0 | 9.0 | 8.5 |
| 28 | 8.0 | 7.0 | 9.0 | 5.5 | 15.0 | 11.5 | 14.0 | 11.5 | 10.5 | 9.5 | 10.5 | 8.5 |
| 29 | 8.0 | 6.5 | 10.0 | 7.0 | 15.5 | 11.5 | 13.5 | 10.5 | 12.0 | 9.5 | 11.5 | 9.5 |
| 30 | 8.5 | 7.0 | 10.5 | 7.5 | 15.0 | 12.0 | 14.0 | 10.5 | 12.5 | 10.0 | 13.5 | 7.5 |
| 31 | --- | --- | 12.0 | 8.5 | --- | --- | 14.5 | 11.5 | 12.0 | 10.0 | --- | --- |
| MONTH | 9.0 | 4.0 | 12.0 | 4.5 | 15.5 | 8.0 | 15.5 | 8.5 | 15.0 | 9.0 | 13.5 | 7.0 |

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | | |
| 1 | | | | | | | --- | --- | --- | 2 | 0 | 1 |
| 2 | | | | | | | --- | --- | --- | 3 | 1 | 2 |
| 3 | | | | | | | --- | --- | --- | 3 | 1 | 2 |
| 4 | | | | | | | --- | --- | --- | 3 | 1 | 2 |
| 5 | | | | | | | --- | --- | --- | 2 | 0 | 1 |
| 6 | | | | | | | --- | --- | --- | 2 | 0 | 1 |
| 7 | | | | | | | --- | --- | --- | 1 | 0 | 0 |
| 8 | | | | | | | --- | --- | --- | 2 | 0 | 1 |
| 9 | | | | | | | --- | --- | --- | 3 | 1 | 2 |
| 10 | | | | | | | --- | --- | --- | 2 | 1 | 2 |
| 11 | | | | | | | --- | --- | --- | --- | --- | --- |
| 12 | | | | | | | --- | --- | --- | --- | --- | --- |
| 13 | | | | | | | --- | --- | --- | --- | --- | --- |
| 14 | | | | | | | --- | --- | --- | --- | --- | --- |
| 15 | | | | | | | --- | --- | --- | --- | --- | --- |
| 16 | | | | | | | --- | --- | --- | --- | --- | --- |
| 17 | | | | | | | --- | --- | --- | --- | --- | --- |
| 18 | | | | | | | --- | --- | --- | --- | --- | --- |
| 19 | | | | | | | --- | --- | --- | --- | --- | --- |
| 20 | | | | | | | --- | --- | --- | --- | --- | --- |
| 21 | | | | | | | --- | --- | --- | --- | --- | --- |
| 22 | | | | | | | --- | --- | --- | --- | --- | --- |
| 23 | | | | | | | --- | --- | --- | --- | --- | --- |
| 24 | | | | | | | --- | --- | --- | --- | --- | --- |
| 25 | | | | | | | --- | --- | --- | --- | --- | --- |
| 26 | | | | | | | --- | --- | --- | --- | --- | --- |
| 27 | | | | | | | --- | --- | --- | --- | --- | --- |
| 28 | | | | | | | 3 | 1 | 2 | --- | --- | --- |
| 29 | | | | | | | 3 | 1 | 2 | --- | --- | --- |
| 30 | | | | | | | 3 | 1 | 2 | --- | --- | --- |
| 31 | | | | | | | 3 | 1 | 2 | --- | --- | --- |
| MONTH | | | | | | | 3 | 1 | 2 | 3 | 0 | 1 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | |
| 1 | --- | --- | --- | 3 | 0 | 1 | --- | --- | --- | 2 | 1 | 1 |
| 2 | --- | --- | --- | 2 | 1 | 1 | --- | --- | --- | 5 | 2 | 3 |
| 3 | --- | --- | --- | 3 | 0 | 1 | --- | --- | --- | 3 | 2 | 2 |
| 4 | --- | --- | --- | 2 | 0 | 1 | --- | --- | --- | 3 | 1 | 2 |
| 5 | --- | --- | --- | 2 | 0 | 1 | --- | --- | --- | 2 | 1 | 1 |
| 6 | --- | --- | --- | 2 | 0 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 7 | --- | --- | --- | 1 | 0 | 0 | --- | --- | --- | 1 | 1 | 1 |
| 8 | --- | --- | --- | 3 | 0 | 1 | --- | --- | --- | 1 | 1 | 1 |
| 9 | --- | --- | --- | 330 | 0 | 20 | --- | --- | --- | 1 | 1 | 1 |
| 10 | --- | --- | --- | 3 | 0 | 1 | --- | --- | --- | 2 | 1 | 1 |
| 11 | --- | --- | --- | 8 | 0 | 2 | --- | --- | --- | 1 | 1 | 1 |
| 12 | --- | --- | --- | 2 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |
| 13 | --- | --- | --- | 3 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 |
| 14 | --- | --- | --- | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | --- | --- | --- | 3 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
| 16 | --- | --- | --- | 5 | 3 | 4 | 2 | 1 | 2 | 1 | 1 | 1 |
| 17 | --- | --- | --- | 4 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 1 |
| 18 | --- | --- | --- | 4 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | --- | --- | --- | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 3 | 1 | 2 | 5 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | --- | --- | --- | 6 | 3 | 4 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | --- | --- | --- | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | --- | --- | --- | 2 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| 24 | 3 | 0 | 1 | 2 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 2 |
| 25 | 3 | 1 | 2 | 2 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |
| 26 | 3 | 0 | 2 | 2 | 0 | 1 | 2 | 1 | 1 | 3 | 1 | 2 |
| 27 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 2 |
| 28 | 3 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 |
| 29 | --- | --- | --- | 2 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| 30 | --- | --- | --- | --- | --- | --- | 2 | 1 | 1 | 2 | 1 | 1 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2 | 1 | 2 |
| MONTH | 3 | 0 | 1 | 330 | 0 | 2 | 2 | 1 | 1 | 5 | 1 | 1 |

ROGUE RIVER BASIN

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 2 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 2 | 2 | 1 | 1 | 2 | 1 | 1 | --- | --- | --- | 1 | 0 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 0 | 1 |
| 4 | 2 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- | 1 | 0 | 1 |
| 5 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 6 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 7 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 8 | 2 | 1 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 0 | 1 |
| 9 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 10 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 11 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 12 | 2 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | --- | --- | --- |
| 13 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | --- | --- | --- |
| 14 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 18 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 19 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 23 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 24 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | --- | --- | --- |
| 25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- |
| 26 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | --- | --- | --- |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 28 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 4 | 0 | 2 |
| 29 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 3 | 2 | 3 |
| 30 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 3 | 0 | 1 |
| 31 | --- | --- | --- | 1 | 1 | 1 | 1 | 0 | 1 | --- | --- | --- |
| MONTH | 3 | 1 | 1 | 3 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 |

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) |
|-------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 2 | 5.7 | 1 | 3.1 | 1 | 2.7 | 3 | 7.7 | 9 | 23 | 3 | 8.5 |
| 2 | 1 | 3.1 | 1 | 2.9 | 1 | 2.7 | 4 | 11 | 8 | 20 | 3 | 8.2 |
| 3 | 1 | 3.0 | 1 | 2.8 | 2 | 5.4 | 5 | 13 | 5 | 12 | 2 | 5.5 |
| 4 | 1 | 2.9 | 1 | 2.8 | 2 | 5.3 | 8 | 21 | 3 | 7.5 | 2 | 5.3 |
| 5 | 1 | 2.9 | 1 | 2.8 | 2 | 5.3 | 18 | 45 | 3 | 7.5 | 3 | 8.0 |
| 6 | 1 | 2.9 | 1 | 2.8 | 2 | 5.3 | 8 | 19 | 3 | 7.5 | 3 | 8.1 |
| 7 | 2 | 5.7 | 1 | 2.8 | 2 | 5.3 | 11 | 27 | 3 | 7.4 | 3 | 8.3 |
| 8 | 2 | 5.7 | 2 | 5.4 | 2 | 5.3 | 10 | 24 | 3 | 7.6 | 3 | 9.5 |
| 9 | 1 | 2.8 | 1 | 2.6 | 3 | 8.3 | 5 | 12 | 4 | 10 | 3 | 9.5 |
| 10 | 1 | 2.8 | 1 | 2.8 | 3 | 8.2 | 3 | 8.1 | 3 | 7.5 | 2 | 5.9 |
| 11 | 1 | 2.8 | 1 | 2.8 | 2 | 5.5 | 3 | 8.3 | 1 | 2.5 | 2 | 5.7 |
| 12 | 1 | 2.9 | 1 | 2.8 | 10 | 27 | 3 | 7.9 | 1 | 2.5 | 2 | 5.8 |
| 13 | 8 | 22 | 2 | 5.5 | 1 | 2.7 | 2 | 5.2 | 2 | 5.1 | 2 | 5.6 |
| 14 | 2 | 5.7 | 2 | 5.9 | 1 | 2.7 | 2 | 5.2 | 2 | 5.1 | 2 | 5.5 |
| 15 | 2 | 5.6 | 2 | 6.2 | 2 | 5.3 | 2 | 5.1 | 3 | 7.6 | 2 | 5.4 |
| 16 | 2 | 5.6 | 2 | 6.1 | 2 | 5.3 | 4 | 10 | 4 | 10 | 2 | 5.3 |
| 17 | 1 | 2.8 | 1 | 2.9 | 3 | 7.9 | 3 | 7.7 | 6 | 15 | 1 | 2.7 |
| 18 | 1 | 2.8 | 1 | 2.8 | 7 | 18 | 4 | 10 | 4 | 10 | 1 | 2.7 |
| 19 | 1 | 2.8 | 1 | 2.8 | 7 | 18 | 4 | 10 | 2 | 5.0 | 1 | 2.7 |
| 20 | 2 | 5.6 | 1 | 2.8 | 2 | 5.1 | 32 | 83 | 2 | 5.0 | 1 | 2.8 |
| 21 | 2 | 5.6 | 1 | 2.8 | 2 | 5.2 | 32 | 83 | 2 | 5.4 | 2 | 5.5 |
| 22 | 2 | 5.6 | 1 | 2.8 | 2 | 5.2 | 30 | 78 | 2 | 5.3 | 3 | 8.5 |
| 23 | 1 | 2.8 | 1 | 2.8 | 1 | 2.6 | 30 | 77 | 2 | 5.2 | 2 | 6.2 |
| 24 | 1 | 2.8 | 1 | 2.7 | 1 | 2.6 | 9 | 23 | 3 | 7.7 | 2 | 6.0 |
| 25 | 1 | 3.1 | 1 | 2.7 | 1 | 2.6 | 9 | 23 | 2 | 5.0 | 2 | 5.8 |
| 26 | 2 | 5.8 | 1 | 2.7 | 1 | 2.7 | 5 | 13 | 2 | 5.1 | 2 | 5.7 |
| 27 | 2 | 5.7 | 1 | 2.7 | 1 | 2.6 | 5 | 12 | 3 | 7.8 | 2 | 6.0 |
| 28 | 2 | 5.7 | 1 | 2.7 | 1 | 2.6 | 14 | 35 | 3 | 9.2 | 1 | 3.0 |
| 29 | 2 | 5.7 | 0 | .00 | 1 | 2.6 | 12 | 30 | --- | --- | 2 | 5.7 |
| 30 | 1 | 2.8 | 1 | 2.7 | 2 | 5.2 | 11 | 28 | --- | --- | 3 | 8.4 |
| 31 | 1 | 2.8 | --- | --- | 2 | 5.1 | 10 | 25 | --- | --- | 3 | 8.3 |
| TOTAL | --- | 144.5 | --- | 96.00 | --- | 190.3 | --- | 767.2 | --- | 228.5 | --- | 190.1 |

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) | MEAN CONCENTRATION (MG/L) | LOADS (T/DAY) |
|-------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|
| APRIL | | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 3 | 8.5 | 4 | 14 | 2 | 7.5 | 3 | 7.7 | 2 | 4.4 | 1 | 2.1 |
| 2 | 3 | 8.5 | 6 | 24 | 2 | 7.2 | 3 | 7.9 | 2 | 4.2 | 1 | 2.1 |
| 3 | 4 | 11 | 4 | 16 | 1 | 3.5 | 3 | 7.4 | 2 | 4.0 | 1 | 2.1 |
| 4 | 5 | 15 | 4 | 16 | 1 | 3.5 | 3 | 7.4 | 2 | 4.0 | 1 | 2.1 |
| 5 | 6 | 20 | 3 | 12 | 2 | 6.9 | 2 | 4.9 | 2 | 4.2 | 1 | 2.1 |
| 6 | 6 | 21 | 3 | 11 | 2 | 7.0 | 2 | 5.0 | 2 | 4.3 | 1 | 2.1 |
| 7 | 7 | 26 | 2 | 7.3 | 2 | 7.0 | 2 | 4.9 | 3 | 6.6 | 1 | 2.1 |
| 8 | 8 | 34 | 2 | 7.1 | 3 | 10 | 2 | 4.9 | 3 | 6.5 | 1 | 2.1 |
| 9 | 8 | 31 | 2 | 7.1 | 4 | 13 | 1 | 2.4 | 3 | 6.5 | 1 | 2.1 |
| 10 | 4 | 14 | 2 | 7.6 | 4 | 13 | 1 | 2.4 | 3 | 6.4 | 1 | 2.1 |
| 11 | 4 | 14 | 3 | 12 | 4 | 14 | 2 | 4.8 | 2 | 4.3 | 1 | 2.0 |
| 12 | 4 | 14 | 2 | 7.5 | 3 | 9.5 | 2 | 4.8 | 2 | 4.2 | 2 | 3.9 |
| 13 | 3 | 11 | 2 | 7.2 | 2 | 6.2 | 3 | 7.1 | 1 | 2.1 | 2 | 4.1 |
| 14 | 4 | 14 | 2 | 7.2 | 2 | 6.0 | 3 | 7.1 | 1 | 2.1 | 2 | 4.1 |
| 15 | 4 | 14 | 2 | 7.1 | 2 | 5.8 | 2 | 4.7 | 2 | 4.2 | 2 | 4.0 |
| 16 | 3 | 11 | 1 | 3.6 | 2 | 5.7 | 2 | 4.7 | 2 | 4.2 | 1 | 2.1 |
| 17 | 2 | 7.1 | 1 | 3.6 | 2 | 5.7 | 1 | 2.3 | 2 | 4.2 | 2 | 4.2 |
| 18 | 1 | 3.4 | 2 | 7.2 | 2 | 5.7 | 1 | 2.3 | 2 | 4.2 | 2 | 4.3 |
| 19 | 1 | 3.3 | 2 | 7.1 | 3 | 8.5 | 1 | 2.3 | 1 | 2.1 | 2 | 4.3 |
| 20 | 1 | 3.2 | 2 | 7.2 | 3 | 8.4 | 1 | 2.3 | 1 | 2.1 | 2 | 4.5 |
| 21 | 2 | 6.5 | 2 | 7.3 | 2 | 5.6 | 2 | 4.5 | 1 | 2.1 | 2 | 4.3 |
| 22 | 2 | 6.8 | 2 | 7.5 | 3 | 8.3 | 3 | 6.9 | 1 | 2.1 | 1 | 2.1 |
| 23 | 2 | 6.7 | 4 | 16 | 3 | 8.1 | 2 | 4.6 | 2 | 4.1 | 1 | 2.1 |
| 24 | 2 | 6.9 | 3 | 12 | 3 | 8.0 | 2 | 4.5 | 2 | 4.6 | 2 | 5.0 |
| 25 | 3 | 11 | 3 | 11 | 2 | 5.3 | 3 | 6.8 | 1 | 2.4 | 3 | 6.6 |
| 26 | 4 | 14 | 4 | 16 | 2 | 5.2 | 3 | 6.8 | 1 | 2.4 | 2 | 4.5 |
| 27 | 3 | 11 | 3 | 12 | 2 | 5.2 | 2 | 4.5 | 1 | 2.3 | 2 | 4.3 |
| 28 | 3 | 10 | 2 | 7.5 | 2 | 5.1 | 2 | 4.5 | 1 | 2.2 | 3 | 9.8 |
| 29 | 2 | 6.9 | 2 | 7.3 | 2 | 5.1 | 2 | 4.5 | 1 | 2.2 | 3 | 11 |
| 30 | 3 | 10 | 2 | 7.2 | 2 | 5.0 | 2 | 4.4 | 1 | 2.2 | 4 | 10 |
| 31 | --- | --- | 2 | 7.2 | --- | --- | 2 | 4.4 | 1 | 2.2 | --- | --- |
| TOTAL | --- | 373.8 | --- | 302.8 | --- | 215.0 | --- | 153.7 | --- | 113.6 | --- | 118.2 |

TOTAL LOAD FOR YEAR: 2893.70 TONS.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDED SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDED SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|-------|------|---|---|--|-------|------|---|---|--|
| DEC | | | | | JAN | | | | |
| 17... | 2400 | 964 | 3 | 56 | 17... | 1200 | 946 | 3 | 45 |
| 18... | 1200 | 952 | 8 | 42 | 18... | 1200 | 970 | 6 | 36 |
| 18... | 2400 | 952 | 6 | 35 | 19... | 1200 | 1010 | 4 | 50 |
| 19... | 1200 | 940 | 7 | 43 | 22... | 1200 | 970 | 16 | 50 |
| JAN | | | | | 23... | 1200 | 964 | 43 | 29 |
| 01... | 1200 | 958 | 4 | 0 | 29... | 1200 | 918 | 11 | 64 |
| 03... | 2400 | 964 | 6 | 28 | 30... | 1200 | 907 | 11 | 32 |
| 05... | 1200 | 964 | 26 | 6 | 31... | 1200 | 934 | 10 | 65 |
| 06... | 2400 | 929 | 6 | 15 | FEB | | | | |
| 07... | 1200 | 820 | 10 | 36 | 03... | 1200 | 918 | 8 | 48 |
| 07... | 2400 | 970 | 13 | 28 | 03... | 1310 | 918 | 1 | 60 |
| 08... | 1200 | 874 | 10 | 45 | 03... | 2400 | 918 | 0 | 100 |
| 12... | 1200 | 1010 | 3 | 100 | | | | | |
| 16... | 1200 | 929 | 4 | 64 | | | | | |

ROGUE RIVER BASIN

14332001 SOUTH FORK ROGUE RIVER NEAR PROSPECT, OR

LOCATION.--Lat 42°42'30", long 122°23'30", in SE¼SW¼ sec.7, T.33 S., R.4 E., Jackson County, Hydrologic Unit 17100307, in Rogue River National Forest on left bank 0.3 mi (0.5 km) downstream from South Fork dam and intake of South Fork power canal, 0.31 mi (0.50 km) downstream from Imnaha Creek, 5.6 mi (9.0 km) southeast of Prospect, and at mile 10.2 (16.4 km).

DRAINAGE AREA.--83.8 mi² (217 km²). Area at site above Imnaha Creek used October 1931 to September 1949, 61.3 mi² (158.8 km²), and Imnaha Creek near Prospect, 22.2 mi² (57.5 km²).

PERIOD OF RECORD.--April 1924 to September 1931, October 1949 to current year. Equivalent records for period October 1931 to September 1949 may be obtained from combined flow of South Fork Rogue River above Imnaha Creek, near Prospect and Imnaha Creek near Prospect.

REVISED RECORDS.--WSP 1318: 1925(M), 1927(M), 1930(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,300 ft (1,006 m), from topographic map. Prior to Sept. 10, 1965, at site 1,000 ft (305 m) upstream at different datum.

REMARKS.--Records good. All records given herein include flow in South Fork power canal (completed in March 1932) which diverts 1,500 ft (457 m) above station and returns water to Rogue River above South Fork Rogue River; practically no storage above diversion dam.

LONGEST DISCHARGE.--53 years (water years 1925-77), 179 ft³/s (5.069 m³/s), 129,700 acre-ft/yr (160 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 7,010 ft³/s (199 m³/s) Dec. 22, 1964, gage height, 11.1 ft (3.38 m), from floodmark, from rating curve extended above 410 ft³/s (11.6 m³/s) on basis of measurement of flow over dam of 3,180 ft³/s (90.1 m³/s); no flow Jan. 31, 1950, Sept. 29, 30, 1967 (entire flow diverted to canal).

Combined flow, maximum discharge, 7,010 ft³/s (199 m³/s) Dec. 22, 1964 (no flow in canal); minimum daily, about 38 ft³/s (1.08 m³/s) Aug. 1-31, 1931.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 133 ft³/s (3.77 m³/s) May 26, gage height, 2.34 ft (0.713 m); minimum daily, 0.60 ft³/s (0.017 m³/s) Aug. 29.

Combined flow, maximum discharge, 274 ft³/s (7.76 m³/s) May 26; minimum daily, 57 ft³/s (1.61 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|---------|--------|-------|--------|------|------|------|------|
| 1 | 84 | 93 | 77 | 70 | 68 | 72 | 76 | 150 | 219 | 97 | 68 | 63 |
| 2 | 98 | 88 | 75 | 76 | 69 | 72 | 76 | 176 | 204 | 100 | 78 | 62 |
| 3 | 105 | 88 | 76 | 70 | 66 | 72 | 75 | 191 | 191 | 94 | 62 | 62 |
| 4 | 102 | 87 | 77 | 73 | 65 | 68 | 80 | 167 | 194 | 91 | 61 | 61 |
| 5 | 95 | 88 | 77 | 70 | 67 | 72 | 84 | 155 | 209 | 90 | 72 | 61 |
| 6 | 96 | 82 | 74 | 69 | 70 | 74 | 94 | 144 | 219 | 86 | 65 | 58 |
| 7 | 96 | 84 | 75 | 70 | 67 | 76 | 100 | 144 | 210 | 87 | 64 | 60 |
| 8 | 93 | 82 | 74 | 69 | 69 | 84 | 122 | 140 | 202 | 88 | 72 | 60 |
| 9 | 96 | 84 | 77 | 72 | 69 | 82 | 122 | 131 | 183 | 84 | 66 | 60 |
| 10 | 94 | 80 | 74 | 71 | 69 | 76 | 104 | 187 | 164 | 82 | 64 | 60 |
| 11 | 91 | 83 | 76 | 72 | 67 | 78 | 104 | 178 | 169 | 81 | 64 | 58 |
| 12 | 96 | 81 | 75 | 72 | 69 | 79 | 102 | 171 | 157 | 81 | 64 | 58 |
| 13 | 91 | 81 | 75 | 73 | 70 | 76 | 118 | 159 | 160 | 80 | 64 | 60 |
| 14 | 91 | 95 | 74 | 66 | 68 | 74 | 118 | 162 | 153 | 79 | 62 | 58 |
| 15 | 91 | 86 | 73 | 74 | 68 | 73 | 117 | 166 | 136 | 78 | 62 | 57 |
| 16 | 91 | 87 | 72 | 69 | 69 | 73 | 125 | 159 | 128 | 77 | 62 | 61 |
| 17 | 89 | 85 | 73 | 70 | 67 | 72 | 142 | 157 | 126 | 76 | 61 | 60 |
| 18 | 90 | 84 | 74 | 70 | 67 | 72 | 120 | 155 | 121 | 76 | 62 | 61 |
| 19 | 89 | 83 | 72 | 71 | 67 | 72 | 119 | 150 | 124 | 76 | 62 | 66 |
| 20 | 88 | 81 | 70 | 72 | 68 | 67 | 118 | 155 | 119 | 76 | 62 | 68 |
| 21 | 87 | 81 | 71 | 69 | 69 | 73 | 120 | 169 | 127 | 73 | 62 | 61 |
| 22 | 87 | 80 | 72 | 69 | 69 | 74 | 125 | 182 | 105 | 74 | 61 | 63 |
| 23 | 89 | 79 | 73 | 70 | 70 | 79 | 123 | 204 | 107 | 73 | 60 | 60 |
| 24 | 89 | 80 | 71 | 69 | 67 | 78 | 124 | 200 | 106 | 71 | 71 | 86 |
| 25 | 105 | 80 | 72 | 69 | 67 | 74 | 144 | 188 | 105 | 71 | 69 | 62 |
| 26 | 88 | 76 | 74 | 66 | 68 | 74 | 139 | 228 | 103 | 70 | 63 | 61 |
| 27 | 90 | 76 | 75 | 70 | 69 | 79 | 138 | 231 | 101 | 69 | 65 | 63 |
| 28 | 91 | 79 | 72 | 69 | 81 | 76 | 141 | 201 | 97 | 69 | 64 | 148 |
| 29 | 90 | 77 | 70 | 66 | --- | 75 | 139 | 193 | 99 | 68 | 65 | 162 |
| 30 | 90 | 77 | 71 | 69 | --- | 74 | 134 | 189 | 96 | 68 | 62 | 59 |
| 31 | 93 | --- | 72 | 69 | --- | 73 | --- | 199 | --- | 68 | 61 | --- |
| TOTAL | 2865 | 2487 | 2283 | 2174 | 1919 | 2313 | 3443 | 5381 | 4434 | 2453 | 2000 | 2039 |
| MEAN | 92.4 | 82.9 | 73.6 | 70.1 | 68.5 | 74.6 | 115 | 174 | 148 | 79.1 | 64.5 | 68.0 |
| MAX | 105 | 95 | 77 | 76 | 81 | 84 | 144 | 231 | 219 | 100 | 78 | 162 |
| MIN | 84 | 76 | 70 | 66 | 65 | 67 | 75 | 131 | 96 | 68 | 60 | 57 |
| AC-FT | 5680 | 4930 | 4530 | 4310 | 3810 | 4590 | 6830 | 10670 | 8790 | 4870 | 3970 | 4040 |
| CAL YR 1976 | TOTAL | 65597 | MEAN | 179 | MAX 573 | MIN 62 | AC-FT | 130100 | | | | |
| WTR YR 1977 | TOTAL | 33791 | MEAN | 92.6 | MAX 231 | MIN 57 | AC-FT | 67020 | | | | |

ROGUE RIVER BASIN

481

14333500 RED BLANKET CREEK NEAR PROSPECT, OR

LOCATION.--Lat 42°46'40", long 122°25'35", in NW¼NE¼ sec.23, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 1.8 mi (2.9 km) downstream from Lick Creek, 3.7 mi (6.0 km) northeast of Prospect, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--45.5 mi² (117.8 km²).

PERIOD OF RECORD.--May 1925 to current year.

REVISED RECORDS.--WSP 1318: 1926-28, 1930. WSP 1348: 1943(M), 1948(M), 1953. WSP 1738: 1927(M), drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,780 ft (847 m), from river-profile map. Prior to Sept. 7, 1949, nonrecording gage at several sites within 2.5 mi (4.0 km) of present site at various datums.

REMARKS.--Records good. No regulation. Small diversion above station for irrigation below.

AVERAGE DISCHARGE.--52 years, 117 ft³/s (3.313 m³/s), 84,770 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,190 ft³/s (90.3 m³/s) Dec. 22, 1964, gage height, 7.85 ft (2.393 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s); minimum observed, 34 ft³/s (0.96 m³/s) Sept. 3, 4, 25, Oct. 9, 16, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 185 ft³/s (5.24 m³/s) Sept. 28, gage height, 3.02 ft (0.920 m), no peak above base of 300 ft³/s (8.50 m³/s); minimum, 41 ft³/s (1.16 m³/s) Sept. 12-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|------|------|-------|-------|------|------|
| 1 | 76 | 82 | 72 | 68 | 63 | 74 | 74 | 84 | 113 | 68 | 51 | 45 |
| 2 | 90 | 76 | 72 | 74 | 63 | 70 | 68 | 90 | 108 | 63 | 49 | 45 |
| 3 | 76 | 76 | 74 | 70 | 63 | 70 | 70 | 105 | 105 | 63 | 49 | 45 |
| 4 | 74 | 76 | 74 | 68 | 63 | 68 | 74 | 98 | 105 | 62 | 49 | 45 |
| 5 | 74 | 74 | 72 | 68 | 65 | 68 | 80 | 95 | 108 | 62 | 49 | 45 |
| 6 | 72 | 74 | 72 | 78 | 65 | 68 | 84 | 90 | 110 | 60 | 49 | 44 |
| 7 | 72 | 74 | 72 | 66 | 65 | 74 | 90 | 86 | 110 | 60 | 51 | 44 |
| 8 | 74 | 74 | 74 | 68 | 65 | 86 | 103 | 82 | 105 | 58 | 51 | 44 |
| 9 | 74 | 74 | 74 | 66 | 65 | 86 | 95 | 84 | 98 | 58 | 49 | 44 |
| 10 | 72 | 74 | 72 | 66 | 65 | 78 | 88 | 105 | 95 | 58 | 49 | 44 |
| 11 | 72 | 72 | 72 | 66 | 65 | 76 | 84 | 100 | 113 | 58 | 48 | 44 |
| 12 | 72 | 72 | 72 | 68 | 65 | 76 | 84 | 95 | 95 | 58 | 48 | 44 |
| 13 | 72 | 74 | 72 | 68 | 65 | 72 | 88 | 93 | 93 | 58 | 48 | 44 |
| 14 | 72 | 84 | 70 | 66 | 63 | 70 | 86 | 95 | 93 | 58 | 48 | 44 |
| 15 | 72 | 84 | 70 | 66 | 63 | 68 | 84 | 93 | 86 | 57 | 48 | 44 |
| 16 | 72 | 82 | 70 | 66 | 63 | 66 | 90 | 95 | 84 | 57 | 46 | 45 |
| 17 | 74 | 78 | 70 | 66 | 63 | 66 | 88 | 93 | 82 | 57 | 45 | 46 |
| 18 | 74 | 76 | 70 | 66 | 63 | 66 | 82 | 88 | 80 | 57 | 45 | 49 |
| 19 | 74 | 76 | 68 | 66 | 63 | 72 | 78 | 86 | 74 | 57 | 45 | 51 |
| 20 | 74 | 74 | 68 | 66 | 66 | 70 | 78 | 90 | 74 | 55 | 45 | 54 |
| 21 | 74 | 74 | 68 | 66 | 70 | 70 | 78 | 98 | 72 | 55 | 46 | 46 |
| 22 | 74 | 74 | 68 | 66 | 68 | 74 | 76 | 103 | 70 | 55 | 45 | 45 |
| 23 | 74 | 72 | 68 | 66 | 66 | 80 | 72 | 116 | 66 | 55 | 45 | 52 |
| 24 | 78 | 74 | 68 | 66 | 66 | 76 | 72 | 110 | 66 | 54 | 57 | 65 |
| 25 | 90 | 74 | 70 | 65 | 65 | 74 | 78 | 103 | 66 | 54 | 52 | 52 |
| 26 | 80 | 74 | 72 | 65 | 66 | 74 | 76 | 134 | 65 | 54 | 52 | 51 |
| 27 | 76 | 72 | 70 | 65 | 72 | 78 | 74 | 128 | 63 | 54 | 48 | 54 |
| 28 | 76 | 72 | 68 | 65 | 84 | 74 | 76 | 116 | 63 | 54 | 49 | 143 |
| 29 | 76 | 72 | 68 | 63 | --- | 72 | 76 | 110 | 62 | 54 | 48 | 108 |
| 30 | 76 | 72 | 68 | 63 | --- | 70 | 76 | 108 | 62 | 52 | 48 | 74 |
| 31 | 78 | --- | 68 | 65 | --- | 70 | --- | 110 | --- | 52 | 46 | --- |
| TOTAL | 2334 | 2256 | 2186 | 2071 | 1838 | 2256 | 2422 | 3083 | 2586 | 1777 | 1498 | 1600 |
| MEAN | 75.3 | 75.2 | 70.5 | 66.8 | 65.6 | 72.8 | 80.7 | 99.5 | 86.2 | 57.3 | 48.3 | 53.3 |
| MAX | 90 | 84 | 74 | 78 | 84 | 86 | 103 | 134 | 113 | 68 | 57 | 143 |
| MIN | 72 | 72 | 68 | 63 | 63 | 66 | 68 | 82 | 62 | 52 | 45 | 44 |
| AC-FT | 4630 | 4470 | 4340 | 4110 | 3650 | 4470 | 4800 | 6120 | 5130 | 3520 | 2970 | 3170 |
| CAL YR 1976 | TOTAL | 43852 | MEAN | 120 | MAX | 283 | MIN | 68 | AC-FT | 86980 | | |
| WTR YR 1977 | TOTAL | 25907 | MEAN | 71.0 | MAX | 143 | MIN | 44 | AC-FT | 51390 | | |

ROGUE RIVER BASIN

14334700 SOUTH FORK ROGUE RIVER, SOUTH OF PROSPECT, OR

LOCATION.--Lat 42°42'45", long 122°30'20", in NW¼SE¼ sec.7, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 200 ft (61 m) upstream from unnamed tributary, 0.6 mi (1.0 km) upstream from Smith Creek, 1.2 mi (1.9 km) downstream from Beaver Creek, 2.8 mi (4.5 km) southwest of Prospect, and at mile 2.4 (3.9 km).

DRAINAGE AREA.--246 mi² (637 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,030 ft (619 m), from topographic map.

REMARKS.--Water-discharge records good. Some regulation by South Fork canal dam upstream. Power diversions above station from South Fork Rogue River, Middle Fork Rogue River, and Red Blanket Creek divert water to Rogue River via Main Canal. During summer base flow all of streamflow is diverted for power except that for fish life. Base flow at station is principally from springs downstream from power diversions.

AVERAGE DISCHARGE.--9 years, 414 ft³/s (11.72 m³/s), 299,900 acre-ft/yr (370 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,880 ft³/s (280 m³/s) Mar. 3, 1972, gage height, 12.71 ft (3.874 m), from floodmark; minimum, 54 ft³/s (1.53 m³/s) Aug. 16-19, 1977; minimum daily, 54 ft³/s (1.53 m³/s) Sept. 24-30, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 20.1 ft (6.13 m), Dec. 22, 1964, from floodmarks at gage, discharge, 28,500 ft³/s (807 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 648 ft³/s (18.4 m³/s) Sept. 29, gage height, 5.29 ft (1.612 m); minimum, 54 ft³/s (1.53 m³/s) Aug. 16-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|--------------|------|-------|-------|------|------|------|
| 1 | 119 | 122 | 90 | 83 | 82 | 111 | 93 | 180 | 369 | 88 | 57 | 62 |
| 2 | 209 | 108 | 89 | 99 | 81 | 101 | 96 | 232 | 346 | 93 | 81 | 60 |
| 3 | 140 | 105 | 88 | 93 | 80 | 104 | 95 | 277 | 320 | 99 | 126 | 59 |
| 4 | 131 | 104 | 89 | 88 | 81 | 98 | 99 | 242 | 317 | 98 | 125 | 60 |
| 5 | 128 | 101 | 88 | 85 | 77 | 95 | 108 | 220 | 359 | 93 | 103 | 59 |
| 6 | 123 | 101 | 88 | 85 | 69 | 93 | 112 | 188 | 389 | 77 | 57 | 59 |
| 7 | 116 | 100 | 87 | 87 | 77 | 93 | 118 | 175 | 376 | 75 | 59 | 59 |
| 8 | 115 | 101 | 90 | 90 | 79 | 116 | 151 | 166 | 333 | 73 | 58 | 58 |
| 9 | 115 | 103 | 93 | 93 | 77 | 142 | 162 | 173 | 274 | 72 | 59 | 58 |
| 10 | 115 | 104 | 89 | 88 | 76 | 119 | 135 | 242 | 227 | 71 | 57 | 58 |
| 11 | 114 | 100 | 88 | 87 | 76 | 111 | 104 | 234 | 286 | 71 | 56 | 59 |
| 12 | 111 | 98 | 87 | 89 | 76 | 115 | 103 | 220 | 227 | 71 | 57 | 58 |
| 13 | 109 | 97 | 89 | 88 | 76 | 107 | 128 | 211 | 213 | 69 | 57 | 59 |
| 14 | 109 | 97 | 84 | 85 | 75 | 100 | 143 | 209 | 196 | 68 | 56 | 58 |
| 15 | 104 | 97 | 84 | 84 | 75 | 95 | 142 | 232 | 166 | 67 | 56 | 58 |
| 16 | 103 | 96 | 84 | 83 | 75 | 91 | 151 | 213 | 155 | 66 | 56 | 59 |
| 17 | 103 | 96 | 84 | 83 | 75 | 85 | 148 | 209 | 128 | 65 | 55 | 60 |
| 18 | 101 | 96 | 84 | 83 | 74 | 84 | 140 | 203 | 119 | 65 | 55 | 65 |
| 19 | 103 | 96 | 83 | 84 | 77 | 88 | 137 | 192 | 122 | 66 | 55 | 69 |
| 20 | 101 | 96 | 83 | 84 | 80 | 88 | 135 | 198 | 125 | 70 | 56 | 69 |
| 21 | 103 | 96 | 84 | 84 | 90 | 85 | 147 | 225 | 118 | 84 | 57 | 65 |
| 22 | 103 | 96 | 84 | 84 | 89 | 93 | 145 | 269 | 109 | 62 | 57 | 63 |
| 23 | 103 | 96 | 84 | 84 | 87 | 104 | 143 | 346 | 103 | 60 | 57 | 65 |
| 24 | 109 | 96 | 83 | 83 | 84 | 104 | 140 | 336 | 96 | 60 | 72 | 96 |
| 25 | 135 | 94 | 84 | 82 | 83 | 98 | 160 | 298 | 93 | 61 | 67 | 68 |
| 26 | 123 | 94 | 89 | 80 | 87 | 94 | 160 | 421 | 90 | 61 | 62 | 65 |
| 27 | 114 | 94 | 87 | 81 | 90 | 99 | 150 | 443 | 87 | 59 | 60 | 66 |
| 28 | 109 | 94 | 84 | 81 | 115 | 96 | 157 | 349 | 83 | 59 | 61 | 336 |
| 29 | 105 | 93 | 84 | 81 | --- | 94 | 153 | 320 | 81 | 59 | 68 | 362 |
| 30 | 107 | 91 | 84 | 81 | --- | 91 | 151 | 298 | 80 | 57 | 64 | 132 |
| 31 | 115 | --- | 83 | 82 | --- | 88 | --- | 311 | --- | 57 | 64 | --- |
| TOTAL | 3595 | 2962 | 2671 | 2644 | 2263 | 3082 | 4006 | 7832 | 5987 | 2196 | 2030 | 2524 |
| MEAN | 116 | 98.7 | 86.2 | 85.3 | 80.8 | 99.4 | 134 | 253 | 200 | 70.8 | 65.5 | 84.1 |
| MAX | 209 | 122 | 93 | 99 | 115 | 142 | 162 | 443 | 389 | 99 | 126 | 362 |
| MIN | 101 | 91 | 83 | 80 | 69 | 84 | 93 | 166 | 80 | 57 | 55 | 58 |
| AC-FT | 7130 | 5880 | 5300 | 5240 | 4490 | 6110 | 7950 | 15530 | 11880 | 4360 | 4030 | 5010 |
| CAL YR 1976 | TOTAL | 134495 | MEAN 367 | MAX 1460 | MIN 83 | AC-FT 266800 | | | | | | |
| WTR YR 1977 | TOTAL | 41792 | MEAN 114 | MAX 443 | MIN 55 | AC-FT 82890 | | | | | | |

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1968 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.5°C July 25, 26, 1976; minimum, 0.0°C Feb. 5, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.0°C Aug. 2; minimum, 0.5°C Jan. 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | --- | --- | 9.5 | 8.5 | 4.5 | 3.0 | 4.0 | 2.5 | 5.0 | 3.5 | 5.5 | 4.0 |
| 2 | --- | --- | 9.0 | 7.5 | 4.5 | 3.5 | 4.0 | 3.5 | 4.0 | 2.5 | 5.0 | 4.0 |
| 3 | --- | --- | 8.5 | 7.0 | 4.0 | 3.0 | 4.0 | 3.0 | 3.5 | 2.5 | 5.5 | 3.5 |
| 4 | --- | --- | 8.0 | 6.5 | 3.5 | 3.0 | 4.5 | 4.0 | 4.0 | 3.0 | 6.0 | 4.5 |
| 5 | --- | --- | 8.0 | 6.0 | 4.0 | 3.0 | 4.5 | 2.0 | 5.0 | 3.5 | 6.0 | 4.0 |
| 6 | --- | --- | 8.0 | 7.0 | 5.0 | 3.5 | 2.0 | 1.5 | 5.0 | 4.0 | 6.5 | 4.5 |
| 7 | --- | --- | 8.5 | 6.5 | 5.0 | 4.5 | 2.0 | 1.5 | 5.5 | 4.0 | 6.5 | 5.5 |
| 8 | --- | --- | 8.5 | 7.0 | 4.5 | 3.0 | 1.5 | 1.0 | 6.0 | 5.0 | 6.5 | 5.0 |
| 9 | --- | --- | 8.0 | 6.5 | 4.0 | 3.0 | 2.0 | 0.5 | 6.0 | 5.0 | 5.0 | 4.0 |
| 10 | --- | --- | 8.5 | 7.0 | 4.0 | 3.0 | 4.0 | 1.5 | 6.0 | 5.0 | 5.5 | 3.5 |
| 11 | --- | --- | 8.0 | 6.5 | 4.0 | 3.5 | 4.0 | 3.5 | 6.0 | 4.5 | 6.0 | 4.0 |
| 12 | --- | --- | 8.0 | 6.5 | 4.5 | 3.0 | 4.5 | 4.0 | 6.0 | 4.5 | 5.5 | 5.0 |
| 13 | --- | --- | 7.5 | 5.5 | 4.5 | 3.5 | 5.0 | 4.0 | 6.0 | 5.0 | 5.0 | 4.0 |
| 14 | 9.0 | --- | 8.0 | 6.5 | 4.5 | 3.5 | 4.5 | 3.5 | 6.0 | 4.5 | 5.5 | 4.0 |
| 15 | 8.5 | 6.0 | 9.0 | 7.5 | 4.0 | 3.0 | 3.5 | 3.0 | 6.0 | 4.5 | 5.5 | 4.0 |
| 16 | 8.5 | 6.0 | 8.5 | 7.5 | 3.5 | 2.5 | 3.5 | 2.5 | 6.5 | 4.5 | 6.0 | 4.0 |
| 17 | 8.0 | 6.0 | 8.5 | 7.0 | 3.0 | 2.0 | 4.0 | 3.0 | 6.5 | 5.5 | 6.0 | 4.5 |
| 18 | 7.5 | 5.5 | 8.5 | 8.0 | 3.0 | 2.0 | 4.5 | 3.0 | 6.0 | 4.0 | 6.0 | 5.0 |
| 19 | 7.5 | 5.5 | 7.5 | 5.5 | --- | 2.0 | 4.5 | 3.5 | 5.5 | 4.0 | 7.5 | 5.5 |
| 20 | 8.0 | 5.5 | 6.0 | 4.5 | --- | --- | 4.5 | 3.0 | 6.5 | 5.5 | 7.5 | 5.5 |
| 21 | 8.0 | 5.5 | 7.0 | 5.5 | 3.5 | --- | 5.0 | 4.0 | 6.0 | 5.0 | 7.5 | 5.0 |
| 22 | 8.0 | 6.0 | 6.5 | 4.5 | 4.0 | 3.0 | 5.0 | 4.5 | 6.0 | 5.0 | 8.5 | 5.0 |
| 23 | 7.5 | 6.0 | 6.5 | 5.5 | 4.5 | 4.0 | 4.5 | 3.5 | 5.5 | 4.5 | 8.5 | 6.0 |
| 24 | 7.5 | 6.0 | 6.0 | 4.0 | 3.5 | 2.5 | 4.0 | 3.0 | 5.5 | 4.0 | 6.0 | 5.0 |
| 25 | 8.0 | 7.0 | 4.0 | 2.5 | 4.5 | 3.0 | 3.0 | 2.5 | 5.5 | 5.0 | 6.5 | 3.5 |
| 26 | 7.5 | 6.0 | 3.5 | 2.0 | 4.5 | 3.5 | 3.0 | 2.0 | 6.5 | 4.5 | 8.0 | 4.5 |
| 27 | 7.0 | 5.0 | 4.0 | 2.5 | 4.5 | 3.5 | 3.0 | 2.0 | 7.0 | 5.5 | 7.5 | 6.0 |
| 28 | 7.0 | 5.0 | 4.0 | 3.0 | 3.5 | 2.5 | 3.0 | 2.0 | 7.0 | 4.5 | 6.5 | 4.5 |
| 29 | 8.0 | 7.0 | 4.0 | 3.0 | 4.5 | 3.5 | 3.0 | 2.0 | --- | --- | 6.0 | 4.5 |
| 30 | 8.5 | 7.0 | 4.0 | 3.0 | 4.5 | 4.0 | 4.0 | 2.0 | --- | --- | 7.0 | 4.5 |
| 31 | 9.0 | 7.5 | --- | --- | 4.0 | 3.0 | 5.0 | 4.0 | --- | --- | 6.5 | 5.0 |
| MONTH | 9.0 | 5.0 | 9.5 | 2.0 | 5.0 | 2.0 | 5.0 | 0.5 | 7.0 | 2.5 | 8.5 | 3.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|-----|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.0 | 5.5 | 9.0 | 7.0 | 12.5 | 8.5 | 16.5 | 13.5 | 16.0 | 13.5 | 13.0 | 10.0 |
| 2 | 8.0 | 5.5 | 9.0 | 6.5 | 11.5 | 6.0 | 16.5 | 12.5 | 18.0 | 14.5 | 13.0 | 10.5 |
| 3 | 9.0 | 5.5 | 7.5 | 5.5 | 10.5 | 7.5 | 15.0 | 11.0 | 17.0 | 13.5 | 13.5 | 11.0 |
| 4 | 10.0 | 6.0 | 7.5 | 5.0 | 14.5 | 8.5 | 14.0 | 11.0 | 16.5 | 13.0 | 14.0 | 11.5 |
| 5 | 10.0 | 6.0 | 6.5 | 4.5 | 15.5 | 9.0 | 13.0 | 9.0 | 16.0 | 12.0 | 14.5 | 12.0 |
| 6 | 10.0 | 6.0 | 9.0 | 4.5 | 14.5 | 10.0 | 14.5 | 10.0 | 16.0 | 12.5 | 13.5 | 11.0 |
| 7 | 11.0 | 6.0 | 8.0 | 5.5 | 14.5 | 10.5 | 15.5 | 11.5 | 16.5 | 13.5 | 13.5 | 11.0 |
| 8 | 10.5 | 7.0 | 10.0 | 4.5 | 15.0 | 10.5 | 16.0 | 12.5 | 16.0 | 13.0 | 12.5 | 10.0 |
| 9 | 7.0 | 5.5 | 8.0 | 6.0 | 13.5 | 9.5 | 15.5 | 12.0 | 16.0 | 13.0 | 11.5 | 9.0 |
| 10 | 8.5 | 4.0 | 7.5 | 6.0 | 12.5 | 10.0 | 15.0 | 11.0 | 16.0 | 13.0 | 12.5 | 9.5 |
| 11 | 10.0 | 6.0 | 9.0 | 5.5 | 12.0 | 9.5 | 16.0 | 12.0 | 16.5 | 13.0 | 12.5 | 10.0 |
| 12 | 10.5 | 6.0 | 9.0 | 6.5 | 15.0 | 8.5 | 16.5 | 13.0 | 16.0 | 13.0 | 12.5 | 10.0 |
| 13 | 10.0 | 7.5 | 11.0 | 5.5 | 14.5 | 9.5 | 15.5 | 11.5 | 16.0 | 13.5 | 12.5 | 10.0 |
| 14 | 9.5 | 4.5 | 10.0 | 7.0 | 15.5 | 9.5 | 16.0 | 12.0 | 16.0 | 13.0 | 12.5 | 11.0 |
| 15 | 10.0 | 5.5 | 9.0 | 6.0 | 15.0 | 9.0 | 17.0 | 13.0 | 16.0 | 13.0 | 12.0 | 10.0 |
| 16 | 10.5 | 7.0 | 8.5 | 5.5 | 15.5 | 9.5 | 17.0 | 13.5 | 16.0 | 13.0 | 10.5 | 9.5 |
| 17 | 9.0 | 4.5 | 9.0 | 5.5 | 13.5 | 11.0 | 16.5 | 13.0 | 16.0 | 13.0 | 10.5 | 9.5 |
| 18 | 9.0 | 4.0 | 8.0 | 5.0 | 15.5 | 11.0 | 16.0 | 13.5 | 16.0 | 13.5 | 11.5 | 10.0 |
| 19 | 9.5 | 4.5 | 12.0 | 6.0 | 16.5 | 11.5 | 17.0 | 13.5 | 15.5 | 12.5 | 11.5 | 10.5 |
| 20 | 10.0 | 5.0 | 13.0 | 7.0 | 14.5 | 11.5 | 17.5 | 13.5 | 15.0 | 12.5 | 11.5 | 10.0 |
| 21 | 10.5 | 6.5 | 12.5 | 8.0 | 16.5 | 10.5 | 17.0 | 13.0 | 15.5 | 12.5 | 11.0 | 9.5 |
| 22 | 9.5 | 6.5 | 9.5 | 7.0 | 17.5 | 12.0 | 17.0 | 13.0 | 14.5 | 12.0 | 10.0 | 7.5 |
| 23 | 9.0 | 6.5 | 9.0 | 6.5 | 17.0 | 12.0 | 17.5 | 13.5 | 14.5 | 11.5 | 9.5 | 8.5 |
| 24 | 10.5 | 6.5 | 10.5 | 6.5 | 17.0 | 12.0 | 17.0 | 14.0 | 15.0 | 13.0 | 10.5 | 9.0 |
| 25 | 9.5 | 7.0 | 9.0 | 6.0 | 17.5 | 12.5 | 16.5 | 13.5 | 13.5 | 11.5 | 11.0 | 9.5 |
| 26 | 11.0 | 6.0 | 8.5 | 6.5 | 17.5 | 13.0 | 17.0 | 13.5 | 13.0 | 11.0 | 11.0 | 9.5 |
| 27 | 11.5 | 5.5 | 9.0 | 5.0 | 17.0 | 13.0 | 16.5 | 13.0 | 12.5 | 10.5 | 11.0 | 10.0 |
| 28 | 9.5 | 6.5 | 11.0 | 5.5 | 17.0 | 12.5 | 16.0 | 13.0 | 13.5 | 11.5 | 10.5 | 10.0 |
| 29 | 10.0 | 7.0 | 12.0 | 6.0 | 17.0 | 13.0 | 15.5 | 12.0 | 14.0 | 11.5 | 11.0 | 9.0 |
| 30 | 10.5 | 7.0 | 12.0 | 6.5 | 17.0 | 13.5 | 16.0 | 12.0 | 14.5 | 12.5 | 9.5 | 7.0 |
| 31 | --- | --- | 14.0 | 8.0 | --- | --- | 16.5 | 13.0 | 13.5 | 11.0 | --- | --- |
| MONTH | 11.5 | 4.0 | 14.0 | 4.5 | 17.5 | 6.0 | 17.5 | 9.0 | 18.0 | 10.5 | 14.5 | 7.0 |

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) | MEAN CONCEN- TRATION (MG/L) | LOADS (T/DAY) |
|---------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|--------------------------------------|------------------|
| OCTOBER | | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 3 | 0.96 | 2 | 0.66 | 0 | .00 | 1 | 0.22 | 2 | 0.44 | 4 | 1.2 |
| 2 | 3 | 1.7 | 2 | 0.58 | 0 | .00 | 1 | 0.27 | 2 | 0.44 | 1 | 0.27 |
| 3 | 3 | 1.1 | 2 | 0.57 | 0 | .00 | 1 | 0.25 | 2 | 0.43 | 1 | 0.28 |
| 4 | 3 | 1.1 | 2 | 0.56 | 0 | .00 | 1 | 0.24 | 2 | 0.44 | 1 | 0.26 |
| 5 | 3 | 1.0 | 2 | 0.55 | 0 | .00 | 1 | 0.23 | 2 | 0.42 | 1 | 0.26 |
| 6 | 3 | 1.0 | 2 | 0.55 | 0 | .00 | 1 | 0.23 | 2 | 0.37 | 4 | 1.0 |
| 7 | 3 | 0.94 | 2 | 0.54 | 0 | .00 | 1 | 0.23 | 2 | 0.42 | 4 | 1.0 |
| 8 | 3 | 0.93 | 2 | 0.55 | 0 | .00 | 1 | 0.24 | 2 | 0.43 | 5 | 1.6 |
| 9 | 3 | 0.93 | 2 | 0.56 | 0 | .00 | 1 | 0.25 | 2 | 0.42 | 5 | 1.9 |
| 10 | 3 | 0.93 | 2 | 0.56 | 0 | .00 | 1 | 0.24 | 1 | 0.21 | 3 | 0.96 |
| 11 | 3 | 0.92 | 2 | 0.54 | 0 | .00 | 1 | 0.23 | 1 | 0.21 | 3 | 0.90 |
| 12 | 3 | 0.90 | 2 | 0.53 | 0 | .00 | 1 | 0.24 | 1 | 0.21 | 2 | 0.62 |
| 13 | 3 | 0.88 | 2 | 0.52 | 0 | .00 | 1 | 0.24 | 3 | 0.62 | 3 | 0.87 |
| 14 | 3 | 0.88 | 2 | 0.52 | 0 | .00 | 1 | 0.23 | 3 | 0.61 | 2 | 0.54 |
| 15 | 3 | 0.84 | 2 | 0.52 | 0 | .00 | 1 | 0.23 | 3 | 0.61 | 2 | 0.51 |
| 16 | 3 | 0.83 | 1 | 0.26 | 0 | .00 | 1 | 0.22 | 3 | 0.61 | 1 | 0.25 |
| 17 | 3 | 0.83 | 1 | 0.26 | 0 | .00 | 1 | 0.22 | 4 | 0.81 | 1 | 0.23 |
| 18 | 3 | 0.82 | 1 | 0.26 | 0 | .00 | 1 | 0.22 | 3 | 0.60 | 1 | 0.23 |
| 19 | 3 | 0.83 | 1 | 0.26 | 0 | .00 | 1 | 0.23 | 3 | 0.62 | 1 | 0.24 |
| 20 | 3 | 0.82 | 1 | 0.26 | 0 | .00 | 1 | 0.23 | 3 | 0.65 | 1 | 0.24 |
| 21 | 3 | 0.83 | 1 | 0.26 | 0 | .00 | 1 | 0.23 | 3 | 0.73 | 1 | 0.23 |
| 22 | 3 | 0.83 | 0 | .00 | 0 | .00 | 1 | 0.23 | 2 | 0.48 | 1 | 0.25 |
| 23 | 3 | 0.83 | 0 | .00 | 0 | .00 | 1 | 0.23 | 2 | 0.47 | 1 | 0.28 |
| 24 | 3 | 0.88 | 0 | .00 | 0 | .00 | 1 | 0.22 | 2 | 0.45 | 1 | 0.28 |
| 25 | 3 | 1.1 | 0 | .00 | 0 | .00 | 1 | 0.22 | 2 | 0.45 | 1 | 0.26 |
| 26 | 3 | 1.0 | 0 | .00 | 0 | .00 | 1 | 0.22 | 2 | 0.47 | 1 | 0.25 |
| 27 | 3 | 0.92 | 0 | .00 | 0 | .00 | 1 | 0.22 | 1 | 0.24 | 1 | 0.27 |
| 28 | 2 | 0.59 | 0 | .00 | 1 | 0.23 | 1 | 0.22 | 3 | 0.93 | 1 | 0.26 |
| 29 | 2 | 0.57 | 0 | .00 | 1 | 0.23 | 1 | 0.22 | --- | --- | 1 | 0.25 |
| 30 | 2 | 0.58 | 0 | .00 | 1 | 0.23 | 1 | 0.22 | --- | --- | 1 | 0.25 |
| 31 | 2 | 0.62 | --- | --- | 1 | 0.22 | 1 | 0.22 | --- | --- | 1 | 0.24 |
| TOTAL | --- | 27.89 | --- | 9.87 | --- | 0.91 | --- | 7.14 | --- | 13.79 | --- | 16.18 |
| APRIL | | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 1 | 0.25 | 13 | 6.3 | 5 | 5.0 | 1 | 0.24 | 2 | 0.31 | 5 | 0.84 |
| 2 | 1 | 0.26 | 10 | 6.3 | 3 | 2.8 | 1 | 0.25 | 2 | 0.44 | 4 | 0.65 |
| 3 | 1 | 0.26 | 10 | 7.5 | 2 | 1.7 | 1 | 0.27 | 6 | 2.0 | 3 | 0.48 |
| 4 | 1 | 0.27 | 7 | 4.6 | 2 | 1.7 | 1 | 0.26 | 5 | 1.7 | 3 | 0.49 |
| 5 | 1 | 0.29 | 5 | 3.0 | 2 | 1.9 | 1 | 0.25 | 5 | 1.4 | 2 | 0.32 |
| 6 | 1 | 0.30 | 4 | 2.0 | 2 | 2.1 | 0 | .00 | 5 | 0.77 | 2 | 0.32 |
| 7 | 2 | 0.64 | 4 | 1.9 | 2 | 2.0 | 0 | .00 | 5 | 0.80 | 2 | 0.32 |
| 8 | 4 | 1.6 | 5 | 2.2 | 2 | 1.8 | 0 | .00 | 4 | 0.63 | 2 | 0.31 |
| 9 | 5 | 2.2 | 5 | 2.3 | 3 | 2.2 | 0 | .00 | 3 | 0.48 | 2 | 0.31 |
| 10 | 7 | 2.6 | 5 | 3.3 | 4 | 2.5 | 0 | .00 | 3 | 0.46 | 2 | 0.31 |
| 11 | 10 | 2.8 | 5 | 3.2 | 6 | 4.6 | 0 | .00 | 3 | 0.45 | 2 | 0.32 |
| 12 | 10 | 2.8 | 5 | 3.0 | 5 | 3.1 | 0 | .00 | 3 | 0.46 | 2 | 0.31 |
| 13 | 11 | 3.8 | 4 | 2.3 | 4 | 2.3 | 0 | .00 | 3 | 0.46 | 2 | 0.32 |
| 14 | 8 | 3.1 | 4 | 2.3 | 4 | 2.1 | 1 | 0.18 | 3 | 0.45 | 2 | 0.31 |
| 15 | 3 | 1.2 | 4 | 2.5 | 3 | 1.3 | 1 | 0.18 | 3 | 0.45 | 2 | 0.31 |
| 16 | 4 | 1.6 | 4 | 2.3 | 3 | 1.3 | 1 | 0.18 | 3 | 0.45 | 2 | 0.32 |
| 17 | 4 | 1.6 | 3 | 1.7 | 3 | 1.0 | 1 | 0.18 | 3 | 0.45 | 2 | 0.32 |
| 18 | 4 | 1.5 | 3 | 1.6 | 3 | 0.96 | 1 | 0.18 | 3 | 0.45 | 3 | 0.53 |
| 19 | 2 | 0.74 | 4 | 2.1 | 3 | 0.99 | 1 | 0.18 | 3 | 0.45 | 4 | 0.75 |
| 20 | 2 | 0.73 | 4 | 2.1 | 3 | 1.0 | 1 | 0.19 | 4 | 0.60 | 5 | 0.93 |
| 21 | 2 | 0.79 | 5 | 3.0 | 2 | 0.64 | 1 | 0.23 | 5 | 0.77 | 5 | 0.88 |
| 22 | 2 | 0.78 | 7 | 5.1 | 2 | 0.59 | 1 | 0.17 | 3 | 0.46 | 5 | 0.85 |
| 23 | 2 | 0.77 | 10 | 9.3 | 2 | 0.56 | 1 | 0.16 | 3 | 0.46 | 5 | 0.88 |
| 24 | 3 | 1.1 | 10 | 9.1 | 2 | 0.52 | 1 | 0.16 | 4 | 0.78 | 5 | 1.3 |
| 25 | 4 | 1.7 | 10 | 8.0 | 2 | 0.50 | 2 | 0.33 | 5 | 0.90 | 5 | 0.92 |
| 26 | 4 | 1.7 | 10 | 11 | 2 | 0.49 | 2 | 0.33 | 4 | 0.67 | 4 | 0.70 |
| 27 | 2 | 0.81 | 7 | 8.4 | 2 | 0.47 | 2 | 0.32 | 4 | 0.65 | 5 | 0.89 |
| 28 | 3 | 1.3 | 7 | 6.6 | 2 | 0.45 | 2 | 0.32 | 10 | 1.6 | 69 | 87 |
| 29 | 4 | 1.7 | 5 | 4.3 | 2 | 0.44 | 2 | 0.32 | 12 | 2.2 | 20 | 20 |
| 30 | 9 | 3.7 | 5 | 4.0 | 2 | 0.43 | 2 | 0.31 | 13 | 2.2 | 5 | 1.8 |
| 31 | --- | --- | 5 | 4.2 | --- | --- | 2 | 0.31 | 14 | 2.4 | --- | --- |
| TOTAL | --- | 42.89 | --- | 135.5 | --- | 47.44 | --- | 5.50 | --- | 26.75 | --- | 123.99 |

TOTAL LOAD FOR YEAR: 457.85 TONS.

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|-------|------|---|--|--|-------|------|---|--|--|
| OCT | | | | | FEB | | | | |
| 14... | 1315 | 112 | 3 | 45 | 20... | 1200 | 76 | 14 | 40 |
| FEB | | | | | 21... | 1200 | 89 | 14 | 42 |
| 01... | 1200 | 82 | 16 | 39 | 22... | 1200 | 88 | 12 | 35 |
| 09... | 1430 | 79 | 8 | 56 | 23... | 1135 | 84 | 14 | 40 |
| 13... | 1200 | 76 | 16 | 30 | 23... | 1145 | 84 | 12 | 32 |
| 14... | 1200 | 75 | 68 | 16 | 23... | 1223 | 84 | 9 | 47 |
| 15... | 1200 | 75 | 14 | 29 | MAR | | | | |
| 17... | 1200 | 75 | 23 | 39 | 09... | 1240 | 144 | 17 | 52 |
| 18... | 1200 | 74 | 15 | 45 | 09... | 1246 | 145 | 5 | 97 |
| 19... | 1200 | 78 | 15 | 41 | | | | | |
| DATE | TIME | DIS- CHARGE (CFS) | SUS- PENDE SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | DATE | TIME | DIS- CHARGE (CFS) | SUS- PENDE SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
| FEB | | | | | MAR | | | | |
| 25... | 1200 | 84 | 3 | 47 | 11... | 1200 | 111 | 11 | 34 |
| 26... | 1200 | 87 | 2 | 58 | 12... | 1200 | 115 | 8 | 38 |
| 27... | 1200 | 90 | 3 | 44 | 13... | 1200 | 107 | 9 | 29 |
| 28... | 1200 | 115 | 13 | 57 | 14... | 1200 | 100 | 7 | 42 |
| MAR | | | | | 15... | 1200 | 95 | 7 | 41 |
| 01... | 1200 | 111 | 6 | 59 | 16... | 1200 | 91 | 5 | 41 |
| 02... | 1200 | 101 | 4 | 41 | 19... | 1200 | 88 | 4 | 34 |
| 03... | 1200 | 104 | 4 | 44 | 23... | 1200 | 10 | 4 | 27 |
| 04... | 1200 | 98 | 2 | 56 | APR | | | | |
| 05... | 1200 | 95 | 3 | 65 | 09... | 1200 | 162 | 16 | 25 |
| 06... | 1200 | 93 | 13 | 30 | 10... | 1200 | 135 | 16 | 25 |
| 07... | 1200 | 93 | 14 | 40 | 11... | 1200 | 104 | 26 | 14 |
| 08... | 1200 | 116 | 19 | 30 | 12... | 1200 | 103 | 25 | 19 |
| 09... | 1200 | 142 | 17 | 51 | 13... | 1200 | 128 | 30 | 30 |
| 10... | 1200 | 119 | 9 | 55 | | | | | |

ROGUE RIVER BASIN

14335040 LOST CREEK LAKE NEAR MCLEOD, OR

LOCATION.--Lat 42°40'16", long 122°40'25", in SW¼ sec.26, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, in outlet structure of Lost Creek Dam on Rogue River, 1.0 mi (1.6 km) northeast of McLeod and at mile 157.2 (252.9 km).

DRAINAGE AREA.--674 mi² (1,746 km²).

PERIOD OF RECORD.--February to September 1977.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam completed in October 1976. Storage began in February 1977. Total capacity, 465,000 acre-ft (573 hm³) between elevations 1,551.0 ft (472.74 m) and 1,872.0 ft (570.59 m), maximum pool elevation. Elevation of gated spillway crest, 1,823.0 ft (555.65 m). Usable storage, 315,000 acre-ft (388 hm³) between elevation 1,751.0 ft (533.70 m) and 1,872.0 ft (570.59 m). Water is used for flood control, recreation, power generation, pollution abatement, domestic use and other purposes.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 152,300 acre-ft (188 hm³) June 24, elevation, 1,752.28 ft (534.095 m); minimum observed, 1,680 acre-ft (2.07 hm³) Feb. 18, elevation, 1,585.40 ft (483.230 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | | | |
|---------|--------|---------|---------|---------|---------|
| 1,585.4 | 1,680 | 1,660.0 | 35,180 | 1,800.0 | 254,600 |
| 1,600.0 | 4,040 | 1,700.0 | 74,180 | 1,850.0 | 393,100 |
| 1,630.0 | 15,250 | 1,750.0 | 148,200 | 1,872.0 | 465,000 |

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|-----|-----|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | | | | | --- | 1619.60 | 1655.60 | 1700.00 | 1741.10 | 1751.85 | 1745.70 | 1737.30 |
| 2 | | | | | --- | 1621.40 | 1656.80 | 1701.60 | 1742.30 | 1751.84 | 1745.44 | 1737.00 |
| 3 | | | | | --- | 1623.20 | 1657.90 | 1703.40 | 1743.40 | 1751.75 | 1745.17 | 1736.70 |
| 4 | | | | | --- | 1624.70 | 1659.20 | 1705.00 | 1744.40 | 1751.67 | 1744.87 | 1736.40 |
| 5 | | | | | --- | 1625.90 | 1660.80 | 1706.90 | 1745.40 | 1751.58 | 1744.58 | 1736.10 |
| 6 | | | | | --- | 1627.30 | 1662.50 | 1708.20 | 1746.43 | 1751.46 | 1744.32 | 1735.80 |
| 7 | | | | | --- | 1628.70 | 1664.10 | 1709.50 | 1747.43 | 1751.33 | 1744.10 | 1735.40 |
| 8 | | | | | --- | 1630.60 | 1666.90 | 1710.80 | 1748.16 | 1751.20 | 1744.00 | 1735.00 |
| 9 | | | | | --- | 1632.70 | 1669.30 | 1711.80 | 1748.69 | 1751.06 | 1743.40 | 1734.70 |
| 10 | | | | | --- | 1634.40 | 1671.00 | 1713.20 | 1749.10 | 1750.92 | 1743.10 | 1734.30 |
| 11 | | | | | --- | 1635.70 | 1672.50 | 1714.70 | 1749.72 | 1750.78 | 1742.90 | 1733.80 |
| 12 | | | | | --- | 1636.30 | 1674.20 | 1716.00 | 1750.14 | 1750.63 | 1742.50 | 1733.30 |
| 13 | | | | | --- | 1638.10 | 1675.90 | 1717.20 | 1750.52 | 1750.45 | 1742.30 | 1732.80 |
| 14 | | | | | --- | 1639.00 | 1677.70 | 1718.40 | 1750.84 | 1750.27 | 1742.00 | 1732.40 |
| 15 | | | | | --- | 1639.90 | 1679.30 | 1719.60 | 1751.15 | 1750.03 | 1741.70 | 1731.90 |
| 16 | | | | | --- | 1640.80 | 1681.00 | 1720.70 | 1751.39 | 1749.66 | 1741.40 | 1731.50 |
| 17 | | | | | --- | 1641.40 | 1682.70 | 1721.90 | 1751.57 | 1749.28 | 1741.10 | 1731.10 |
| 18 | | | | | 1585.40 | 1642.10 | 1684.10 | 1723.10 | 1751.75 | 1749.00 | 1740.80 | 1730.80 |
| 19 | | | | | 1593.90 | 1642.60 | 1685.50 | 1724.20 | 1751.89 | 1748.80 | 1740.50 | 1730.40 |
| 20 | | | | | 1597.90 | 1643.70 | 1686.80 | 1725.30 | 1752.03 | 1748.59 | 1740.20 | 1730.10 |
| 21 | | | | 1601.80 | 1644.60 | 1688.00 | 1726.50 | 1752.18 | 1748.38 | 1739.90 | 1729.80 | |
| 22 | | | | 1604.90 | 1645.50 | 1689.40 | 1727.60 | 1752.26 | 1718.14 | 1739.60 | 1729.40 | |
| 23 | | | | 1607.60 | 1646.70 | 1690.50 | 1729.40 | 1752.26 | 1747.90 | 1739.30 | 1729.00 | |
| 24 | | | | 1609.70 | 1647.80 | 1691.70 | 1730.80 | 1752.28 | 1747.66 | 1739.10 | 1729.00 | |
| 25 | | | | 1611.30 | 1648.80 | 1692.80 | 1732.10 | 1752.19 | 1747.43 | 1739.00 | 1728.60 | |
| 26 | | | | 1613.10 | 1649.50 | 1694.50 | 1733.80 | 1752.08 | 1747.18 | 1738.80 | 1728.30 | |
| 27 | | | | 1615.00 | 1650.50 | 1695.60 | 1735.40 | 1752.02 | 1746.94 | 1738.60 | 1728.00 | |
| 28 | | | | 1617.50 | 1651.20 | 1696.70 | 1736.60 | 1751.98 | 1746.69 | 1738.30 | 1728.70 | |
| 29 | | | | --- | 1652.40 | 1697.70 | 1737.80 | 1751.92 | 1746.44 | 1738.10 | 1729.60 | |
| 30 | | | | --- | 1653.50 | 1698.70 | 1738.80 | 1751.85 | 1746.19 | 1737.80 | 1729.50 | |
| 31 | | | | --- | 1654.50 | --- | 1740.00 | --- | 1745.94 | 1737.60 | --- | |
| MEAN | | | | --- | 1639.13 | 1678.65 | 1720.65 | 1749.61 | 1748.82 | 1741.49 | 1733.16 | |
| MAX | | | | --- | 1654.50 | 1698.70 | 1740.00 | 1752.28 | 1751.85 | 1745.70 | 1764.40 | |
| MIN | | | | --- | 1619.60 | 1655.60 | 1700.00 | 1741.10 | 1718.14 | 1737.60 | 1728.00 | |
| (†) | | | | | 9,340 | 30,910 | 72,670 | 130,900 | 151,500 | 141,000 | 126,900 | 114,100 |
| (‡) | | | | | +9,340 | +21,570 | +41,760 | +58,230 | +20,600 | -10,500 | -14,100 | -12,800 |

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

ROGUE RIVER BASIN

487

14335075 ROGUE RIVER AT MCLEOD, OR

LOCATION.--Lat 42°39'35", long 122°41'30", in SW¼NW¼ sec.34, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.3 mi (0.5 km) upstream from mouth of Big Butte Creek, 0.1 (0.2 km) southwest of McLeod, and at mile 155.6 (250.4 km).

DRAINAGE AREA.--690 mi² (1,787 km²), approximately.

PERIOD OF RECORD.--May 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to current year.

pH: November 1976 to current year.

WATER TEMPERATURES: November 1976 to current year.

DISSOLVED OXYGEN: November 1976 to current year.

TURBIDITY: May 1973 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1976 to current year.

INSTRUMENTATION.--Water-quality monitor and automatic pumping sediment sampler since November 1976.

REMARKS.--Water-discharge records, obtained by subtracting Big Butte Creek near McLeod (station 14337500) from Rogue River near McLeod (station 14337600), are used for computation of daily sediment loads.

EXTREMES FOR PERIOD OF DAILY RECORD.--

TURBIDITY: Maximum, 550 JTU Jan. 15, 1974; minimum, 0 JTU on many days each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 72 micromhos Dec. 2; minimum, 53 micromhos July 7-9, 11.

pH: Maximum, 8.1 units Dec. 10; minimum, 7.0 units on many days.

WATER TEMPERATURES: Maximum, 14.5°C on several days in August and September; minimum, 0.5°C Jan. 9.

DISSOLVED OXYGEN: Maximum, 15.7 mg/l Jan. 8; minimum, 6.8 mg/l Aug. 20.

TURBIDITY: Maximum, 20 JTU June 29; minimum, 0 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum, 15 mg/l Mar. 28; minimum, 1 mg/l many days throughout year.

SEDIMENT LOADS: Maximum, 36 tons (33 tonnes) Mar. 28; minimum, 1.8 tons (1.6 tonnes) Mar. 1.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | --- | --- | 65 | 66 | 67 | 64 | 58 | 56 | 56 | 58 | 65 |
| 2 | | 68 | 71 | 64 | 66 | 67 | 65 | 59 | 57 | 56 | 59 | 65 |
| 3 | | 68 | 70 | 63 | 66 | 67 | 65 | 58 | 57 | 56 | 59 | 65 |
| 4 | | 69 | 68 | 64 | 66 | 66 | 64 | 58 | 56 | 57 | 59 | 65 |
| 5 | | 68 | 67 | 65 | 66 | 66 | 64 | 58 | 56 | 56 | 60 | 65 |
| 6 | | 69 | 66 | 65 | 66 | 66 | 64 | 58 | 56 | 56 | 60 | 65 |
| 7 | | 69 | 64 | 65 | 66 | 66 | 64 | 59 | 56 | 55 | 60 | 65 |
| 8 | | 69 | 63 | 65 | 66 | 65 | 64 | 59 | 57 | 54 | 60 | 65 |
| 9 | | 69 | 61 | 65 | 66 | 65 | 64 | 58 | 56 | 54 | 60 | 65 |
| 10 | | 69 | 68 | 65 | 66 | 65 | 64 | 58 | 56 | 55 | 60 | 65 |
| 11 | | 68 | 68 | 63 | 66 | 65 | 64 | 57 | 56 | 55 | 61 | 65 |
| 12 | | 69 | 68 | 64 | 66 | 65 | 63 | 57 | 56 | 55 | 61 | 66 |
| 13 | | 68 | 68 | 64 | 66 | 65 | 63 | 57 | 56 | 55 | 61 | 65 |
| 14 | | 68 | 68 | 65 | 66 | 64 | 63 | 57 | 56 | 55 | 61 | 66 |
| 15 | | 68 | 68 | 65 | 66 | 64 | 63 | 57 | 56 | 55 | 62 | 66 |
| 16 | | 68 | 68 | 65 | 66 | 64 | 62 | 57 | 56 | 55 | 61 | 66 |
| 17 | | 69 | 67 | 64 | 66 | 64 | 62 | 57 | 55 | 56 | 62 | 66 |
| 18 | | 69 | 67 | 65 | 66 | 64 | 62 | 57 | 56 | 56 | 62 | 66 |
| 19 | | 69 | 68 | 65 | 67 | 64 | 62 | 57 | 56 | 56 | 62 | 66 |
| 20 | | 68 | 67 | 65 | --- | 64 | 61 | 57 | 56 | 56 | 63 | 66 |
| 21 | | 68 | 67 | 65 | --- | 64 | 61 | 57 | 56 | 56 | 63 | 66 |
| 22 | | 70 | 66 | 65 | --- | 64 | 61 | 57 | 56 | 57 | 63 | 67 |
| 23 | | 70 | 65 | 65 | 67 | 64 | 61 | 58 | 56 | 57 | 64 | 67 |
| 24 | | 70 | 65 | 65 | 66 | 65 | 60 | 57 | 56 | 57 | 64 | 67 |
| 25 | | 69 | 65 | 65 | 66 | 65 | 60 | 57 | 56 | 57 | 64 | 67 |
| 26 | | 69 | 64 | 65 | 66 | 65 | 60 | 57 | 56 | 58 | 64 | 67 |
| 27 | | 69 | 64 | 65 | 66 | 65 | 60 | 57 | 57 | 58 | 64 | 67 |
| 28 | | 69 | 65 | 65 | 67 | 65 | 60 | 57 | 56 | 58 | 64 | 67 |
| 29 | | 69 | 65 | 66 | --- | 65 | 59 | 57 | 57 | 58 | 64 | 67 |
| 30 | | --- | 65 | 66 | --- | 65 | 59 | 57 | 56 | 58 | 64 | 67 |
| 31 | | --- | 65 | 66 | --- | 65 | --- | 57 | --- | 58 | 65 | --- |

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | | |
|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | | | --- | --- | --- | --- | 7.8 | 7.7 | 7.9 | 7.7 | 7.8 | 7.7 |
| 2 | | | 7.9 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 |
| 3 | | | 7.9 | 7.7 | 7.9 | 7.6 | 7.9 | 7.7 | 7.8 | 7.7 | 7.7 | 7.7 |
| 4 | | | 7.9 | 7.7 | 7.9 | 7.7 | 7.9 | 7.7 | 7.9 | 7.7 | 7.7 | 7.7 |
| 5 | | | 8.0 | 7.7 | 7.9 | 7.7 | 7.9 | 7.7 | 7.8 | 7.7 | 7.7 | 7.7 |
| 6 | | | 8.0 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.9 | 7.7 | 7.8 | 7.6 |
| 7 | | | 8.0 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.9 | 7.7 | 7.8 | 7.6 |
| 8 | | | 8.0 | 7.7 | 7.8 | 7.6 | 7.8 | 7.7 | 7.9 | 7.7 | 7.8 | 7.7 |
| 9 | | | 7.9 | 7.7 | 7.8 | 7.6 | 7.8 | 7.7 | 7.9 | 7.7 | 7.7 | 7.6 |
| 10 | | | 7.9 | 7.7 | 8.1 | 7.8 | 7.8 | 7.7 | 7.9 | 7.7 | 7.7 | 7.6 |
| 11 | | | 8.0 | 7.7 | 7.9 | 7.8 | 7.8 | 7.6 | 7.9 | 7.7 | 7.8 | 7.6 |
| 12 | | | 7.9 | 7.7 | 7.9 | 7.7 | 7.8 | 7.6 | 7.9 | 7.7 | 7.7 | 7.6 |
| 13 | | | 7.9 | 7.7 | 7.9 | 7.7 | 7.8 | 7.7 | 7.9 | 7.7 | 7.7 | 7.6 |
| 14 | | | 7.9 | 7.7 | 7.9 | 7.7 | 7.8 | 7.7 | 7.9 | 7.7 | 7.7 | 7.6 |
| 15 | | | 7.9 | 7.6 | 7.9 | 7.7 | 7.8 | 7.7 | 7.9 | 7.7 | 7.7 | 7.6 |
| 16 | | | 7.8 | 7.6 | 7.9 | 7.6 | 7.8 | 7.7 | 7.9 | 7.7 | 7.7 | 7.6 |
| 17 | | | 7.8 | 7.6 | 7.8 | 7.7 | 7.8 | 7.6 | 7.9 | 7.7 | 7.7 | 7.6 |
| 18 | | | 7.8 | 7.6 | 7.8 | 7.6 | 7.8 | 7.6 | 7.8 | 7.7 | 7.7 | 7.6 |
| 19 | | | 7.9 | 7.6 | 7.8 | 7.6 | 7.8 | 7.7 | 7.8 | 7.7 | 7.7 | 7.6 |
| 20 | | | 7.8 | 7.7 | 7.7 | 7.6 | 7.8 | 7.7 | --- | --- | 7.7 | 7.6 |
| 21 | | | 7.9 | 7.6 | 7.7 | 7.6 | 7.9 | 7.6 | --- | --- | 7.7 | 7.6 |
| 22 | | | 7.8 | 7.6 | 7.9 | 7.5 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.6 |
| 23 | | | 7.8 | 7.6 | 7.9 | 7.6 | 7.8 | 7.7 | 7.8 | 7.7 | 7.7 | 7.6 |
| 24 | | | 7.9 | 7.6 | 7.9 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.6 |
| 25 | | | 7.9 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.6 |
| 26 | | | 7.9 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.7 | 7.6 |
| 27 | | | 7.9 | 7.7 | 7.9 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.7 | 7.6 |
| 28 | | | 7.9 | 7.7 | 7.9 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 | 7.6 |
| 29 | | | 7.8 | 7.7 | 7.9 | 7.7 | 7.8 | 7.7 | --- | --- | 7.9 | 7.7 |
| 30 | | | --- | --- | 7.9 | 7.7 | 7.8 | 7.7 | --- | --- | 7.9 | 7.7 |
| 31 | | | --- | --- | 7.9 | 7.7 | 7.9 | 7.7 | --- | --- | 7.8 | 7.7 |
| MONTH | | | 8.0 | 7.6 | 8.1 | 7.5 | 7.9 | 7.6 | 7.9 | 7.7 | 7.9 | 7.6 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|-----|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 7.8 | 7.7 | 7.8 | 7.6 | 8.0 | 7.5 | 7.9 | 7.4 | 7.6 | 7.3 | 7.2 | 7.0 |
| 2 | 7.8 | 7.7 | 7.9 | 7.6 | 8.1 | 7.5 | 7.9 | 7.4 | 7.6 | 7.0 | 7.3 | 7.0 |
| 3 | 7.8 | 7.7 | 7.8 | 7.6 | 8.0 | 7.5 | 7.8 | 7.4 | 7.4 | 7.0 | 7.2 | 7.0 |
| 4 | 7.9 | 7.7 | 7.8 | 7.6 | 8.1 | 7.5 | 7.8 | 7.4 | 7.5 | 7.0 | 7.6 | 7.0 |
| 5 | 7.9 | 7.7 | 7.8 | 7.6 | 8.1 | 7.5 | 7.8 | 7.4 | 7.7 | 7.0 | 7.6 | 7.3 |
| 6 | 7.9 | 7.7 | 7.8 | 7.6 | 8.0 | 7.5 | 7.7 | 7.4 | 7.6 | 7.3 | 7.3 | 7.1 |
| 7 | 7.9 | 7.7 | 7.8 | 7.6 | 8.0 | 7.5 | 7.7 | 7.1 | 7.7 | 7.3 | 7.3 | 7.0 |
| 8 | 7.9 | 7.7 | 7.8 | 7.6 | 8.0 | 7.5 | 7.3 | 7.1 | 7.6 | 7.0 | 7.3 | 7.0 |
| 9 | 7.9 | 7.7 | 7.8 | 7.5 | 7.9 | 7.5 | 7.2 | 7.1 | 7.5 | 7.0 | 7.3 | 7.0 |
| 10 | 7.9 | 7.7 | 7.8 | 7.6 | 7.9 | 7.5 | 7.2 | 7.1 | 7.1 | 7.0 | 7.2 | 7.0 |
| 11 | 7.8 | 7.6 | 7.8 | 7.6 | 7.9 | 7.5 | 7.2 | 7.1 | 7.2 | 7.0 | 7.6 | 7.0 |
| 12 | 7.8 | 7.6 | 7.8 | 7.5 | 8.0 | 7.5 | 7.2 | 7.1 | 7.1 | 7.0 | 7.3 | 7.0 |
| 13 | 7.8 | 7.6 | 7.8 | 7.5 | 7.9 | 7.5 | 7.2 | 7.1 | 7.1 | 7.0 | 7.2 | 7.0 |
| 14 | 7.8 | 7.6 | 7.8 | 7.5 | 7.9 | 7.5 | 7.2 | 7.1 | 7.4 | 7.0 | 7.3 | 7.0 |
| 15 | 7.8 | 7.6 | 7.8 | 7.5 | 7.9 | 7.5 | 7.3 | 7.1 | 7.6 | 7.3 | 7.1 | 7.0 |
| 16 | 7.8 | 7.6 | 7.9 | 7.5 | 8.0 | 7.4 | 7.5 | 7.3 | 7.5 | 7.3 | 7.2 | 7.0 |
| 17 | 7.8 | 7.6 | 7.9 | 7.5 | 7.9 | 7.4 | 7.5 | 7.3 | 7.4 | 7.0 | 7.2 | 7.0 |
| 18 | 7.8 | 7.6 | 7.8 | 7.5 | 8.0 | 7.4 | 7.6 | 7.3 | 7.1 | 7.0 | 7.6 | 7.0 |
| 19 | 7.8 | 7.6 | 7.9 | 7.5 | 8.0 | 7.4 | 7.6 | 7.1 | 7.1 | 7.0 | 7.3 | 7.0 |
| 20 | 7.8 | 7.6 | 7.9 | 7.5 | 8.0 | 7.4 | 7.6 | 7.1 | 7.1 | 7.0 | 7.2 | 7.0 |
| 21 | 7.8 | 7.6 | 7.9 | 7.5 | 8.0 | 7.4 | 7.6 | 7.3 | 7.1 | 7.0 | 7.3 | 7.1 |
| 22 | 7.8 | 7.6 | 7.8 | 7.5 | 8.0 | 7.4 | 7.6 | 7.0 | 7.1 | 7.0 | 7.3 | 7.1 |
| 23 | 7.8 | 7.6 | 7.9 | 7.5 | 8.0 | 7.4 | 7.6 | 7.1 | 7.3 | 7.0 | 7.3 | 7.1 |
| 24 | 7.8 | 7.6 | 7.9 | 7.6 | 8.0 | 7.4 | 7.6 | 7.3 | 7.5 | 7.3 | 7.4 | 7.2 |
| 25 | 7.8 | 7.6 | 8.0 | 7.6 | 7.9 | 7.4 | 7.6 | 7.3 | 7.4 | 7.0 | 7.3 | 7.2 |
| 26 | 7.8 | 7.6 | 8.0 | 7.5 | 7.9 | 7.4 | 7.6 | 7.3 | 7.3 | 7.0 | 7.4 | 7.2 |
| 27 | 7.8 | 7.6 | 8.0 | 7.6 | 7.9 | 7.4 | 7.6 | 7.3 | 7.4 | 7.0 | 7.3 | 7.2 |
| 28 | 7.8 | 7.6 | 8.0 | 7.5 | 7.9 | 7.4 | 7.6 | 7.3 | 7.5 | 7.3 | 7.2 | 7.2 |
| 29 | 7.9 | 7.6 | 8.0 | 7.5 | 7.9 | 7.4 | 7.6 | 7.0 | 7.5 | 7.0 | 7.3 | 7.2 |
| 30 | 7.8 | 7.6 | 8.0 | 7.5 | 7.9 | 7.4 | 7.6 | 7.2 | 7.2 | 7.0 | 7.4 | 7.2 |
| 31 | --- | --- | 8.0 | 7.5 | --- | --- | 7.6 | 7.3 | 7.2 | 7.0 | --- | --- |
| MONTH | 7.9 | 7.6 | 8.0 | 7.5 | 8.1 | 7.4 | 7.9 | 7.0 | 7.7 | 7.0 | 7.6 | 7.0 |

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | | --- | | --- | | --- | 3.0 | 2.5 | 5.0 | 3.5 | 5.5 | 4.5 |
| 2 | | | 9.0 | --- | 4.0 | --- | 3.5 | 3.0 | 4.5 | 2.5 | 5.0 | 5.0 |
| 3 | | | 8.5 | --- | 4.0 | 3.0 | 3.5 | 2.5 | 4.0 | 2.0 | 5.5 | 5.0 |
| 4 | | | 8.0 | --- | 4.5 | 3.5 | 4.0 | 3.0 | 4.5 | 2.5 | 6.0 | 4.5 |
| 5 | | | 7.0 | --- | 4.0 | 3.0 | 3.5 | 2.0 | 4.0 | 3.0 | 5.5 | 4.5 |
| 6 | | | 8.0 | --- | 4.0 | 3.0 | 2.5 | 1.0 | 5.0 | 3.5 | 5.0 | 4.5 |
| 7 | | | 7.5 | --- | 4.0 | 3.0 | 2.5 | 1.0 | 5.0 | 3.5 | 5.0 | 4.5 |
| 8 | | | 8.0 | --- | 4.0 | 3.5 | 2.5 | 1.0 | 6.0 | 4.5 | 5.5 | 4.5 |
| 9 | | | 7.5 | --- | 5.0 | 4.0 | 2.5 | 0.5 | 6.0 | 4.5 | 5.5 | 5.0 |
| 10 | | | 7.5 | --- | 4.0 | 3.0 | 3.0 | 1.5 | 6.0 | 4.5 | 6.0 | 5.0 |
| 11 | | | 8.0 | 6.5 | 3.5 | 2.5 | 3.0 | 2.5 | 6.0 | 4.0 | 6.0 | 5.5 |
| 12 | | | 7.5 | --- | 3.0 | 2.5 | 3.5 | 2.5 | 6.5 | 4.5 | 6.0 | 5.0 |
| 13 | | | 6.5 | 5.5 | 3.5 | 3.0 | 4.0 | 3.0 | 6.5 | 5.0 | 6.0 | 5.0 |
| 14 | | | 6.5 | 6.0 | 3.5 | 2.5 | 4.0 | 3.0 | 6.5 | 4.5 | 6.0 | 5.0 |
| 15 | | | 7.5 | 6.5 | 4.0 | 3.0 | 3.5 | 2.5 | 6.5 | 4.5 | 5.5 | 5.0 |
| 16 | | | 8.0 | --- | 4.0 | 3.0 | 3.5 | 2.5 | 6.5 | 4.5 | 6.0 | 5.0 |
| 17 | | | 7.5 | --- | 4.0 | 3.0 | 3.5 | 2.5 | 7.0 | 5.0 | 6.0 | 5.0 |
| 18 | | | 7.5 | 7.0 | 3.0 | 2.5 | 4.0 | 2.5 | 5.5 | 4.0 | 5.5 | 5.0 |
| 19 | | | 7.0 | 5.5 | 3.0 | 2.0 | 4.0 | 3.0 | --- | --- | 6.0 | 5.0 |
| 20 | | | 6.0 | 5.0 | 3.0 | 1.5 | 4.0 | 2.5 | --- | --- | 6.5 | 5.0 |
| 21 | | | 6.0 | 5.0 | 3.0 | 1.5 | 5.0 | 3.5 | --- | --- | 6.5 | 5.0 |
| 22 | | | 5.5 | 4.5 | 3.5 | 2.5 | 5.0 | 3.5 | --- | --- | 6.5 | 5.0 |
| 23 | | | 5.5 | 4.0 | 4.5 | 3.0 | 4.5 | 3.0 | 5.0 | 4.5 | 5.5 | 5.0 |
| 24 | | | 5.0 | 4.0 | 3.0 | 2.5 | 4.0 | 2.5 | 5.5 | 4.5 | 6.5 | 5.0 |
| 25 | | | 5.5 | 4.5 | 3.5 | 2.5 | 3.5 | 2.0 | 4.5 | 4.0 | 7.0 | 5.5 |
| 26 | | | 5.0 | 3.5 | 3.5 | 3.5 | 3.5 | 1.5 | 5.0 | 4.0 | 6.5 | 5.5 |
| 27 | | | --- | --- | 4.0 | 3.5 | 3.5 | 1.5 | 5.5 | 4.5 | 6.0 | 5.5 |
| 28 | | | --- | --- | 3.5 | 3.0 | 3.5 | 2.0 | 5.0 | 4.5 | 6.5 | 5.5 |
| 29 | | | --- | --- | 3.5 | 3.0 | 3.5 | 2.0 | --- | --- | 7.0 | 6.0 |
| 30 | | | --- | --- | 4.5 | 3.5 | 3.5 | 2.0 | --- | --- | 7.5 | 6.0 |
| 31 | | | --- | --- | 3.5 | 2.5 | 5.0 | 3.0 | --- | --- | 7.0 | 6.0 |
| MONTH | | | 9.0 | 3.5 | 5.0 | 1.5 | 5.0 | 0.5 | 7.0 | 2.0 | 7.5 | 4.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|-----|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 7.0 | 5.5 | 9.0 | 8.5 | 9.5 | 8.0 | 11.0 | 10.0 | 13.5 | 12.0 | 14.5 | 13.0 |
| 2 | 7.5 | 6.0 | 9.5 | 8.0 | 10.0 | 8.0 | 11.0 | 9.5 | 13.5 | 12.0 | 14.0 | 13.0 |
| 3 | 8.0 | 6.5 | 9.0 | 8.0 | 9.5 | 8.0 | 10.5 | 10.0 | 13.5 | 12.0 | 14.5 | 13.0 |
| 4 | 8.5 | 6.5 | 9.0 | 8.0 | 10.0 | 8.0 | 10.5 | 9.5 | 13.5 | 12.0 | 14.5 | 13.5 |
| 5 | 9.0 | 6.5 | 8.5 | 8.0 | 10.5 | 8.0 | 11.0 | 9.5 | 14.0 | 12.0 | 14.5 | 13.0 |
| 6 | 9.0 | 7.0 | 9.5 | 7.5 | 10.5 | 8.0 | 10.0 | 10.0 | 14.0 | 12.0 | 14.5 | 13.0 |
| 7 | 9.0 | 7.0 | 9.0 | 7.5 | 10.5 | 8.5 | 11.0 | 9.5 | 14.0 | 12.5 | 14.5 | 13.0 |
| 8 | 8.0 | 7.0 | 9.0 | 7.5 | 10.5 | 8.5 | 11.0 | 9.5 | 13.5 | 12.0 | 14.0 | 13.0 |
| 9 | 8.0 | 7.0 | 8.5 | 7.5 | 10.0 | 8.5 | 11.0 | 9.5 | 13.5 | 12.5 | 14.0 | 13.0 |
| 10 | 8.5 | 7.0 | 8.0 | 7.5 | 10.0 | 9.0 | 11.0 | 10.0 | 14.0 | 12.5 | 14.0 | 13.0 |
| 11 | 9.0 | 7.5 | 9.0 | 7.5 | 10.0 | 9.0 | 11.5 | 10.0 | 14.0 | 12.0 | 14.5 | 13.0 |
| 12 | 9.0 | 7.0 | 9.0 | 7.5 | 10.5 | 8.5 | 11.5 | 10.0 | 14.0 | 12.5 | 14.0 | 13.0 |
| 13 | 9.0 | 7.0 | 9.0 | 7.5 | 10.0 | 8.5 | 11.5 | 10.5 | 14.0 | 12.5 | 14.0 | 13.0 |
| 14 | 8.5 | 6.5 | 8.5 | 7.5 | 10.5 | 9.0 | 11.5 | 10.5 | 14.0 | 12.5 | 14.0 | 12.5 |
| 15 | 9.0 | 7.0 | 8.5 | 7.5 | 10.0 | 8.5 | 11.5 | 10.5 | 14.5 | 12.5 | 13.5 | 13.0 |
| 16 | 9.0 | 7.0 | 9.0 | 7.5 | 10.5 | 8.5 | 12.0 | 11.0 | 14.5 | 13.0 | 13.5 | 13.0 |
| 17 | 9.0 | 6.5 | 9.0 | 7.5 | 9.5 | 9.0 | 12.0 | 11.0 | 14.0 | 13.0 | 13.5 | 13.0 |
| 18 | 9.0 | 6.5 | 8.5 | 7.5 | 10.0 | 9.5 | 12.0 | 11.0 | 14.0 | 12.5 | 13.5 | 13.0 |
| 19 | 9.0 | 6.5 | 9.5 | 8.0 | 10.5 | 9.0 | 12.5 | 11.0 | 14.0 | 12.5 | 13.5 | 12.5 |
| 20 | 8.5 | 7.0 | 9.5 | 7.5 | 10.0 | 9.0 | 12.5 | 11.0 | 14.0 | 13.0 | 13.0 | 12.5 |
| 21 | 9.0 | 7.0 | 9.5 | 8.0 | 10.5 | 9.0 | 12.5 | 11.0 | 14.5 | 12.5 | 13.5 | 12.5 |
| 22 | 8.5 | 7.0 | 8.5 | 7.5 | 10.5 | 9.5 | 12.5 | 11.0 | 14.5 | 12.5 | 13.0 | 12.5 |
| 23 | 8.5 | 7.5 | 9.0 | 7.5 | 10.5 | 9.0 | 13.0 | 11.0 | 13.5 | 13.0 | 12.5 | 10.5 |
| 24 | 8.5 | 7.5 | 9.5 | 7.5 | 10.5 | 9.0 | 13.0 | 11.0 | 14.5 | 13.0 | 11.0 | 10.5 |
| 25 | 8.5 | 7.5 | 9.0 | 8.0 | 10.5 | 9.5 | 12.5 | 11.5 | 13.5 | 13.0 | 11.0 | 10.5 |
| 26 | 9.0 | 7.5 | 9.0 | 7.5 | 10.5 | 9.5 | 13.0 | 11.5 | 14.0 | 13.0 | 11.5 | 10.5 |
| 27 | 9.0 | 7.5 | 9.0 | 7.5 | 11.0 | 9.5 | 13.0 | 11.5 | 14.0 | 13.0 | 11.0 | 10.5 |
| 28 | 8.5 | 7.5 | 9.5 | 7.5 | 11.0 | 9.5 | 13.0 | 11.5 | 14.0 | 13.0 | 11.0 | 10.5 |
| 29 | 9.5 | 7.5 | 10.0 | 7.5 | 11.0 | 9.5 | 13.0 | 11.5 | 14.5 | 13.0 | 11.0 | 10.5 |
| 30 | 9.5 | 8.0 | 9.5 | 7.5 | 10.5 | 9.5 | 13.5 | 11.5 | 14.0 | 13.0 | 11.0 | 10.5 |
| 31 | --- | --- | 9.5 | 8.0 | --- | --- | 13.5 | 12.0 | 14.0 | 13.0 | --- | --- |
| MONTH | 9.5 | 5.5 | 10.0 | 7.5 | 11.0 | 8.0 | 13.5 | 9.5 | 14.5 | 12.0 | 14.5 | 10.5 |

ROGUE RIVER BASIN

14335075 ROGUE RIVER AT MCLEOD, OR—Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---------|-----|-----|----------|------|------|----------|------|------|---------|------|------|------|
| OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | | |
| 1 | | | | --- | --- | --- | --- | --- | --- | 12.6 | 12.1 | 12.4 |
| 2 | | | | 12.2 | 11.6 | 11.9 | 13.3 | 12.9 | 13.1 | 12.6 | 11.9 | 12.3 |
| 3 | | | | 12.2 | 11.7 | 11.9 | 13.3 | 12.3 | 12.8 | 12.7 | 12.2 | 12.4 |
| 4 | | | | 12.2 | 11.7 | 11.9 | 12.5 | 12.0 | 12.2 | 12.6 | 11.9 | 12.3 |
| 5 | | | | 12.2 | 11.7 | 11.9 | 12.7 | 11.9 | 12.3 | 13.0 | 12.0 | 12.5 |
| 6 | | | | 11.9 | 11.2 | 11.5 | 12.4 | 11.3 | 11.9 | 14.9 | 12.3 | 13.3 |
| 7 | | | | 11.6 | 10.6 | 11.2 | 11.7 | 11.0 | 11.3 | 15.6 | 14.7 | 15.2 |
| 8 | | | | 11.8 | 10.4 | 11.1 | 11.0 | 10.3 | 10.7 | 15.7 | 15.0 | 15.3 |
| 9 | | | | 12.0 | 11.4 | 11.8 | 13.4 | 10.0 | 11.0 | 15.4 | 14.9 | 15.2 |
| 10 | | | | 12.0 | 11.0 | 11.5 | 13.8 | 13.2 | 13.5 | 15.2 | 13.6 | 14.7 |
| 11 | | | | 12.0 | 11.4 | 11.7 | 13.8 | 13.2 | 13.4 | 13.9 | 12.6 | 13.3 |
| 12 | | | | 12.2 | 11.7 | 11.9 | 13.6 | 13.1 | 13.3 | 14.7 | 13.6 | 14.1 |
| 13 | | | | 12.4 | 12.0 | 12.2 | 13.5 | 13.0 | 13.2 | 14.8 | 14.3 | 14.6 |
| 14 | | | | 12.1 | 10.5 | 11.3 | 13.6 | 13.0 | 13.3 | 14.8 | 14.4 | 14.6 |
| 15 | | | | 12.0 | 10.3 | 11.1 | 13.9 | 13.5 | 13.7 | 15.1 | 14.7 | 14.9 |
| 16 | | | | 11.7 | 10.3 | 11.2 | 14.0 | 13.3 | 13.6 | 15.4 | 14.8 | 15.0 |
| 17 | | | | 11.9 | 11.2 | 11.6 | 13.8 | 13.3 | 13.5 | 15.2 | 14.7 | 15.0 |
| 18 | | | | 11.6 | 10.9 | 11.3 | 13.9 | 13.4 | 13.7 | 15.1 | 14.5 | 14.8 |
| 19 | | | | 11.4 | 11.0 | 11.2 | 14.2 | 13.7 | 13.9 | 14.7 | 14.0 | 14.4 |
| 20 | | | | 12.1 | 11.2 | 11.6 | 14.2 | 13.8 | 14.0 | 14.4 | 13.9 | 14.2 |
| 21 | | | | 13.3 | 12.2 | 12.9 | 14.2 | 13.6 | 13.9 | 14.2 | 13.7 | 14.0 |
| 22 | | | | 13.6 | 12.8 | 13.3 | 14.1 | 13.4 | 13.7 | 14.2 | 13.5 | 14.0 |
| 23 | | | | 13.3 | 12.7 | 13.0 | 13.6 | 12.9 | 13.3 | 14.5 | 13.8 | 14.1 |
| 24 | | | | 13.1 | 12.5 | 12.8 | 13.6 | 13.0 | 13.4 | 14.6 | 14.0 | 14.4 |
| 25 | | | | 12.6 | 12.0 | 12.3 | 13.4 | 12.8 | 13.1 | 14.9 | 14.2 | 14.5 |
| 26 | | | | 12.8 | 12.2 | 12.4 | 13.3 | 12.7 | 12.9 | 15.1 | 14.5 | 14.8 |
| 27 | | | | 12.9 | 12.2 | 12.7 | 12.9 | 12.5 | 12.7 | 15.1 | 14.4 | 14.8 |
| 28 | | | | 12.9 | 12.2 | 12.6 | 13.0 | 12.6 | 12.8 | 15.0 | 14.4 | 14.7 |
| 29 | | | | 12.6 | 12.2 | 12.4 | 12.8 | 12.3 | 12.5 | 15.0 | 13.7 | 14.3 |
| 30 | | | | --- | --- | --- | 12.4 | 12.1 | 12.3 | 14.1 | 13.6 | 13.8 |
| 31 | | | | --- | --- | --- | 12.8 | 12.3 | 12.5 | 13.7 | 13.2 | 13.5 |
| MONTH | | | | 13.6 | 10.3 | 11.9 | 14.2 | 10.0 | 12.9 | 15.7 | 11.9 | 14.1 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|------|------|-------|------|------|-------|------|------|------|------|------|------|
| FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | |
| 1 | 13.6 | 13.0 | 13.4 | 11.0 | 10.7 | 10.9 | 11.7 | 11.4 | 11.6 | 11.2 | 10.9 | 11.0 |
| 2 | 13.7 | 13.1 | 13.4 | 10.8 | 10.6 | 10.7 | 11.5 | 11.0 | 11.2 | 11.2 | 10.8 | 11.0 |
| 3 | 13.6 | 13.0 | 13.4 | 11.3 | 10.6 | 10.9 | 11.2 | 10.6 | 10.8 | 11.0 | 10.5 | 10.8 |
| 4 | 13.5 | 12.8 | 13.2 | 12.2 | 11.2 | 11.7 | 10.9 | 10.4 | 10.6 | 11.0 | 10.6 | 10.8 |
| 5 | 13.1 | 12.5 | 12.9 | 12.8 | 12.2 | 12.6 | 10.6 | 10.0 | 10.3 | 10.9 | 10.6 | 10.7 |
| 6 | 12.7 | 12.1 | 12.4 | 12.7 | 12.4 | 12.6 | 10.6 | 10.2 | 10.4 | 10.9 | 10.5 | 10.6 |
| 7 | 12.5 | 11.8 | 12.2 | 12.9 | 12.5 | 12.7 | 11.5 | 10.7 | 11.1 | 11.1 | 10.6 | 10.9 |
| 8 | 12.0 | 11.4 | 11.8 | 13.0 | 12.6 | 12.8 | 11.5 | 11.1 | 11.3 | 11.6 | 11.0 | 11.3 |
| 9 | 12.0 | 11.4 | 11.7 | 12.9 | 12.6 | 12.8 | 11.7 | 11.1 | 11.4 | 11.9 | 11.3 | 11.6 |
| 10 | 11.9 | 11.1 | 11.5 | 13.1 | 12.7 | 12.8 | 11.7 | 11.3 | 11.5 | 12.1 | 11.4 | 11.8 |
| 11 | 11.7 | 11.0 | 11.4 | 12.9 | 12.5 | 12.7 | 11.7 | 11.3 | 11.5 | 12.0 | 11.5 | 11.7 |
| 12 | 11.6 | 10.9 | 11.3 | 12.7 | 12.5 | 12.6 | 12.0 | 11.5 | 11.6 | 12.0 | 11.6 | 11.8 |
| 13 | 11.3 | 10.5 | 11.0 | 12.8 | 12.5 | 12.6 | 11.6 | 11.2 | 11.5 | 12.2 | 11.8 | 12.0 |
| 14 | 11.3 | 10.6 | 10.9 | 12.7 | 12.4 | 12.5 | 11.9 | 11.3 | 11.6 | 12.4 | 11.8 | 12.0 |
| 15 | 11.0 | 10.5 | 10.8 | 12.6 | 12.4 | 12.5 | 11.6 | 11.0 | 11.3 | 12.3 | 11.9 | 12.1 |
| 16 | 12.1 | 10.6 | 11.0 | 12.6 | 12.4 | 12.5 | 11.5 | 11.0 | 11.2 | 12.4 | 11.9 | 12.1 |
| 17 | 13.2 | 12.2 | 12.7 | 12.6 | 12.4 | 12.5 | 11.4 | 11.0 | 11.2 | 12.5 | 12.0 | 12.2 |
| 18 | 13.6 | 12.3 | 12.8 | 12.7 | 12.3 | 12.5 | 11.5 | 11.0 | 11.2 | 12.6 | 12.0 | 12.2 |
| 19 | 12.8 | 12.4 | 12.6 | 12.7 | 12.4 | 12.5 | 11.4 | 10.9 | 11.1 | 12.5 | 12.0 | 12.2 |
| 20 | --- | --- | --- | 12.6 | 12.3 | 12.5 | 11.4 | 11.0 | 11.2 | 12.4 | 11.8 | 12.1 |
| 21 | --- | --- | --- | 12.5 | 12.1 | 12.3 | 11.6 | 11.2 | 11.4 | 12.4 | 11.7 | 12.0 |
| 22 | 12.1 | 12.0 | 12.0 | 12.2 | 11.9 | 12.1 | 11.7 | 11.4 | 11.6 | 12.0 | 11.6 | 11.8 |
| 23 | 11.9 | 11.8 | 11.9 | 12.1 | 11.7 | 11.9 | 11.8 | 11.4 | 11.6 | 11.9 | 11.5 | 11.8 |
| 24 | 12.0 | 11.7 | 11.8 | 11.9 | 11.5 | 11.7 | 11.8 | 11.4 | 11.6 | 12.2 | 11.5 | 11.9 |
| 25 | 11.9 | 11.6 | 11.8 | 11.8 | 11.4 | 11.6 | 11.9 | 11.4 | 11.6 | 12.3 | 11.5 | 11.9 |
| 26 | 11.7 | 11.3 | 11.5 | 11.5 | 10.8 | 11.2 | 11.9 | 11.4 | 11.6 | 12.3 | 11.7 | 12.0 |
| 27 | 11.4 | 11.0 | 11.2 | 11.8 | 10.3 | 11.2 | 11.8 | 11.4 | 11.5 | 12.5 | 12.1 | 12.3 |
| 28 | 11.2 | 10.9 | 11.0 | 12.4 | --- | --- | 11.7 | 11.3 | 11.5 | 12.8 | 12.0 | 12.4 |
| 29 | --- | --- | --- | 12.3 | 11.9 | 12.1 | 11.7 | 11.1 | 11.3 | 12.9 | 12.1 | 12.4 |
| 30 | --- | --- | --- | 12.1 | 11.6 | 11.9 | 11.4 | 10.9 | 11.2 | 13.0 | 12.4 | 12.6 |
| 31 | --- | --- | --- | 11.8 | 11.6 | 11.7 | --- | --- | --- | 13.2 | 12.5 | 12.9 |
| MONTH | 13.7 | 10.5 | 12.0 | 13.1 | 10.3 | 12.1 | 12.0 | 10.0 | 11.3 | 13.2 | 10.5 | 11.8 |

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|------|------|------|------|------|------|--------|------|------|-----------|------|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | |
| 1 | 13.5 | 12.8 | 13.1 | 13.2 | 12.1 | 12.5 | 11.1 | 10.0 | 10.5 | 9.0 | 8.2 | 8.7 |
| 2 | 13.7 | 13.0 | 13.4 | 13.2 | 12.2 | 12.7 | 11.0 | 8.8 | 10.1 | 9.5 | 7.6 | 8.5 |
| 3 | 13.9 | 13.3 | 13.6 | 13.2 | 11.1 | 12.4 | 10.6 | 8.8 | 9.2 | 8.1 | 7.1 | 7.6 |
| 4 | 14.1 | 13.1 | 13.6 | 12.3 | 11.4 | 11.8 | 10.2 | 8.6 | 9.2 | 8.9 | 7.3 | 8.5 |
| 5 | 13.8 | 12.1 | 13.2 | 12.2 | 11.3 | 11.8 | 10.5 | 8.6 | 9.4 | 9.2 | 8.5 | 8.9 |
| 6 | 13.0 | 11.8 | 12.5 | 11.9 | 11.4 | 11.7 | 10.5 | 9.5 | 10.0 | 9.0 | 8.0 | 8.5 |
| 7 | 12.4 | 11.5 | 12.0 | 13.1 | 11.1 | 12.1 | 10.0 | 9.1 | 9.6 | 9.1 | 8.2 | 8.6 |
| 8 | 12.4 | 11.7 | 12.0 | 12.0 | 11.0 | 11.5 | 9.5 | 7.6 | 8.7 | 9.4 | 8.7 | 9.0 |
| 9 | 12.4 | 11.5 | 12.0 | 11.9 | 11.0 | 11.5 | 9.4 | 7.7 | 8.2 | 9.5 | 8.6 | 9.0 |
| 10 | 12.4 | 11.6 | 12.0 | 11.8 | 11.0 | 11.4 | 8.6 | 7.8 | 8.2 | 9.5 | 8.7 | 9.0 |
| 11 | 12.6 | 11.6 | 12.0 | 11.7 | 10.9 | 11.2 | 8.7 | 8.0 | 8.3 | 10.8 | 8.8 | 10.2 |
| 12 | 12.4 | 11.7 | 12.0 | 11.4 | 10.6 | 11.0 | 8.9 | 8.1 | 8.5 | 10.2 | 8.8 | 9.5 |
| 13 | 12.7 | 11.8 | 12.2 | 11.2 | 10.2 | 10.7 | 9.2 | 8.5 | 8.7 | 9.5 | 8.7 | 9.1 |
| 14 | 12.7 | 11.8 | 12.3 | 10.8 | 10.1 | 10.5 | 10.1 | 8.7 | 9.3 | 9.5 | 8.7 | 9.0 |
| 15 | 12.3 | 11.1 | 11.9 | 11.0 | 9.9 | 10.3 | 10.7 | 9.9 | 10.3 | 9.0 | 8.4 | 8.7 |
| 16 | 12.0 | 11.0 | 11.5 | 11.4 | 10.6 | 10.9 | 10.5 | 9.7 | 10.0 | 8.7 | 8.0 | 8.4 |
| 17 | 11.8 | 10.9 | 11.4 | 11.2 | 10.5 | 10.8 | 9.8 | 7.9 | 8.9 | 8.7 | 7.9 | 8.2 |
| 18 | 11.8 | 10.2 | 11.1 | 11.3 | 10.0 | 10.7 | 8.1 | 7.3 | 7.8 | 10.2 | 8.3 | 9.6 |
| 19 | 11.6 | 10.3 | 10.9 | 11.2 | 9.1 | 10.3 | 7.5 | 6.9 | 7.2 | 10.0 | 8.9 | 9.4 |
| 20 | 11.7 | 10.4 | 11.0 | 11.2 | 9.2 | 10.3 | 7.3 | 6.8 | 7.0 | 9.7 | 9.0 | 9.3 |
| 21 | 11.8 | 10.8 | 11.4 | 11.3 | 10.5 | 10.8 | 7.6 | 6.9 | 7.3 | 10.0 | 9.4 | 9.6 |
| 22 | 12.3 | 11.1 | 11.7 | 11.2 | 9.0 | 10.4 | 7.7 | 7.1 | 7.3 | 10.1 | 9.4 | 9.7 |
| 23 | 12.5 | 11.4 | 12.0 | 10.7 | 9.1 | 9.9 | 8.3 | 7.0 | 7.3 | 10.8 | 9.5 | 10.0 |
| 24 | 12.5 | 11.3 | 11.9 | 10.3 | 9.5 | 9.9 | 8.6 | 8.1 | 8.4 | 11.2 | 10.6 | 10.9 |
| 25 | 12.6 | 11.5 | 12.0 | 10.3 | 9.5 | 9.9 | 9.0 | 7.8 | 8.6 | 11.2 | 10.6 | 10.8 |
| 26 | 12.8 | 11.6 | 12.1 | 10.6 | 9.6 | 10.1 | 9.6 | 8.5 | 8.9 | 11.0 | 10.4 | 10.7 |
| 27 | 12.8 | 11.5 | 12.1 | 10.6 | 9.7 | 10.1 | 10.2 | 8.7 | 9.3 | 10.8 | 10.4 | 10.6 |
| 28 | 12.9 | 11.8 | 12.3 | 10.5 | 9.7 | 10.1 | 10.6 | 10.0 | 10.3 | 10.7 | 10.4 | 10.5 |
| 29 | 13.1 | 11.8 | 12.4 | 10.6 | 8.7 | 10.0 | 10.5 | 8.6 | 9.8 | 11.0 | 10.5 | 10.7 |
| 30 | 13.2 | 11.9 | 12.4 | 10.6 | 9.6 | 10.2 | 9.2 | 8.6 | 8.9 | 10.9 | 10.3 | 10.6 |
| 31 | --- | --- | --- | 11.0 | 10.1 | 10.5 | 9.2 | 8.6 | 8.8 | --- | --- | --- |
| MONTH | 14.1 | 10.2 | 12.1 | 13.2 | 8.7 | 10.9 | 11.1 | 6.8 | 8.8 | 11.2 | 7.1 | 9.4 |

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|-----|---------|------|-----|----------|------|-----|----------|------|-----|---------|------|
| | | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | |
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 3 | 1 | 2 |
| 2 | --- | --- | --- | 3 | 2 | 3 | 3 | 1 | 2 | 2 | 0 | 1 |
| 3 | --- | --- | --- | 5 | 0 | 2 | 3 | 2 | 3 | 2 | 0 | 1 |
| 4 | --- | --- | --- | 3 | 1 | 1 | 4 | 2 | 3 | 3 | 1 | 2 |
| 5 | 0 | 0 | 0 | 3 | 1 | 2 | 3 | 2 | 3 | 3 | 1 | 2 |
| 6 | 0 | 0 | 0 | 3 | 1 | 2 | 3 | 2 | 3 | 3 | 0 | 1 |
| 7 | 0 | 0 | 0 | 3 | 1 | 2 | 4 | 2 | 3 | 2 | 0 | 1 |
| 8 | 1 | 0 | 0 | 3 | 0 | 2 | 3 | 2 | 3 | 2 | 0 | 1 |
| 9 | 0 | 0 | 0 | 3 | 1 | 2 | 3 | 3 | 3 | 3 | 0 | 1 |
| 10 | 0 | 0 | 0 | 2 | 1 | 2 | 3 | 0 | 2 | 2 | 0 | 1 |
| 11 | 0 | 0 | 0 | 3 | 0 | 1 | 5 | 2 | 4 | 2 | 0 | 1 |
| 12 | 0 | 0 | 0 | 1 | 0 | 1 | 6 | 3 | 5 | 3 | 0 | 1 |
| 13 | 15 | 0 | 1 | 2 | 0 | 1 | 6 | 5 | 5 | 1 | 0 | 1 |
| 14 | 0 | 0 | 0 | 1 | 0 | 1 | 7 | 3 | 5 | 2 | 0 | 1 |
| 15 | 0 | 0 | 0 | 1 | 0 | 1 | 5 | 3 | 3 | 1 | 0 | 1 |
| 16 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 3 | 3 | 1 | 0 | 1 |
| 17 | 0 | 0 | 0 | 1 | 0 | 1 | 5 | 3 | 5 | 4 | 0 | 2 |
| 18 | 0 | 0 | 0 | 1 | 1 | 1 | 6 | 4 | 5 | 4 | 0 | 2 |
| 19 | 0 | 0 | 0 | 10 | 0 | 5 | 6 | 4 | 5 | 2 | 0 | 1 |
| 20 | 2 | 0 | 0 | 15 | 10 | 15 | 6 | 1 | 4 | 3 | 0 | 1 |
| 21 | 0 | 0 | 0 | 15 | 15 | 15 | 3 | 1 | 3 | 9 | 1 | 4 |
| 22 | 0 | 0 | 0 | 15 | 0 | 8 | 3 | 0 | 2 | 3 | 1 | 2 |
| 23 | 0 | 0 | 0 | 6 | 3 | 5 | 3 | 1 | 2 | 1 | 0 | 1 |
| 24 | 0 | 0 | 0 | 7 | 5 | 6 | 3 | 2 | 3 | 4 | 0 | 1 |
| 25 | 0 | 0 | 0 | 7 | 5 | 7 | 3 | 1 | 2 | 1 | 0 | 1 |
| 26 | 0 | 0 | 0 | 8 | 6 | 7 | 2 | 1 | 2 | 2 | 0 | 1 |
| 27 | --- | --- | --- | 9 | 7 | 8 | 2 | 0 | 2 | 2 | 0 | 1 |
| 28 | --- | --- | --- | 10 | 7 | 8 | 3 | 1 | 2 | 3 | 0 | 1 |
| 29 | --- | --- | --- | 9 | 8 | 9 | 3 | 1 | 2 | 1 | 0 | 1 |
| 30 | --- | --- | --- | --- | --- | --- | 2 | 1 | 1 | 1 | 0 | 1 |
| 31 | --- | --- | --- | --- | --- | --- | 3 | 1 | 2 | 3 | 0 | 1 |
| MONTH | 15 | 0 | 0 | 15 | 0 | 4 | 7 | 0 | 3 | 9 | 0 | 1 |

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | |
| 1 | 3 | 0 | 1 | --- | --- | --- | 5 | 3 | 3 | 3 | 2 | 2 |
| 2 | 3 | 0 | 1 | 3 | 1 | 2 | 3 | 1 | 2 | 2 | 2 | 2 |
| 3 | 3 | 0 | 2 | 3 | 1 | 2 | 5 | 1 | 3 | 2 | 1 | 2 |
| 4 | 3 | 0 | 1 | --- | --- | --- | 7 | 2 | 4 | 2 | 1 | 1 |
| 5 | 3 | 0 | 1 | --- | --- | --- | 7 | 3 | 5 | 2 | 1 | 1 |
| 6 | 1 | 0 | 1 | --- | --- | --- | 7 | 3 | 5 | 2 | 1 | 1 |
| 7 | 1 | 0 | 1 | --- | --- | --- | 7 | 1 | 4 | 1 | 1 | 1 |
| 8 | 2 | 0 | 1 | --- | --- | --- | 7 | 3 | 4 | 2 | 1 | 1 |
| 9 | 2 | 0 | 1 | 6 | 3 | 5 | 3 | 1 | 1 | 2 | 1 | 1 |
| 10 | --- | --- | --- | 6 | 3 | 4 | 3 | 0 | 1 | 2 | 1 | 1 |
| 11 | --- | --- | --- | 5 | 4 | 5 | 9 | 1 | 4 | 2 | 1 | 2 |
| 12 | --- | --- | --- | 7 | 4 | 5 | 15 | 1 | 6 | 2 | 1 | 2 |
| 13 | --- | --- | --- | 7 | 3 | 5 | 4 | 3 | 4 | 2 | 1 | 2 |
| 14 | --- | --- | --- | --- | --- | --- | 3 | 2 | 2 | 2 | 1 | 2 |
| 15 | --- | --- | --- | --- | --- | --- | 3 | 2 | 3 | 2 | 1 | 1 |
| 16 | --- | --- | --- | --- | --- | --- | 3 | 2 | 3 | 1 | 1 | 1 |
| 17 | --- | --- | --- | --- | --- | --- | 3 | 2 | 2 | 2 | 1 | 1 |
| 18 | --- | --- | --- | --- | --- | --- | 3 | 2 | 2 | 2 | 1 | 1 |
| 19 | --- | --- | --- | --- | --- | --- | 3 | 2 | 2 | 2 | 1 | 1 |
| 20 | --- | --- | --- | --- | --- | --- | 3 | 2 | 2 | 2 | 1 | 1 |
| 21 | --- | --- | --- | --- | --- | --- | 3 | 2 | 3 | 2 | 1 | 2 |
| 22 | 2 | 0 | 1 | --- | --- | --- | 3 | 2 | 3 | 2 | 1 | 1 |
| 23 | 2 | 0 | 1 | --- | --- | --- | 3 | 2 | 3 | 2 | 1 | 2 |
| 24 | 5 | 0 | 3 | --- | --- | --- | 3 | 2 | 2 | 2 | 2 | 2 |
| 25 | 5 | 3 | 4 | --- | --- | --- | 2 | 2 | 2 | 2 | 1 | 2 |
| 26 | 3 | 1 | 3 | 2 | 0 | 1 | 2 | 2 | 2 | 2 | 1 | 2 |
| 27 | --- | --- | --- | 9 | 0 | 1 | 2 | 2 | 2 | 2 | 1 | 1 |
| 28 | --- | --- | --- | 10 | 0 | 3 | 2 | 2 | 2 | 2 | 1 | 1 |
| 29 | --- | --- | --- | 10 | 0 | 4 | 2 | 2 | 2 | 2 | 1 | 2 |
| 30 | --- | --- | --- | 5 | 3 | 4 | 2 | 2 | 2 | 2 | 1 | 2 |
| 31 | --- | --- | --- | 5 | 3 | 3 | --- | --- | --- | 2 | 2 | 2 |
| MONTH | 5 | 0 | 1 | 10 | 0 | 3 | 15 | 0 | 2 | 3 | 1 | 1 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|-----|-----|------|-----|-----|--------|-----|-----|-----------|-----|-----|------|
| JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | | |
| 1 | 2 | 2 | 2 | 1 | 1 | 1 | 7 | 1 | 2 | 1 | 0 | 1 |
| 2 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 1 | 1 |
| 3 | 2 | 2 | 2 | 1 | 1 | 1 | 5 | 1 | 2 | 1 | 1 | 1 |
| 4 | 2 | 2 | 2 | 1 | 0 | 1 | 8 | 1 | 2 | 2 | 1 | 1 |
| 5 | 2 | 2 | 2 | 1 | 0 | 0 | 6 | 1 | 2 | 1 | 1 | 1 |
| 6 | 3 | 2 | 2 | 1 | 0 | 0 | 2 | 1 | 2 | 2 | 1 | 1 |
| 7 | 2 | 2 | 2 | 10 | 1 | 3 | 2 | 1 | 2 | 1 | 1 | 1 |
| 8 | 5 | 2 | 3 | 5 | 1 | 2 | 10 | 1 | 3 | 3 | 1 | 1 |
| 9 | 3 | 3 | 3 | 1 | 1 | 1 | 4 | 2 | 2 | 1 | 1 | 1 |
| 10 | 3 | 2 | 3 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 |
| 11 | 3 | 2 | 2 | 3 | 1 | 1 | 2 | 1 | 2 | 5 | 1 | 1 |
| 12 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 1 | 4 | 1 | 1 |
| 13 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 |
| 14 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 |
| 15 | 2 | 2 | 2 | 3 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 |
| 16 | 2 | 2 | 2 | 2 | 1 | 2 | 6 | 0 | 3 | 1 | 1 | 1 |
| 17 | 2 | 2 | 2 | 2 | 1 | 1 | 8 | 2 | 3 | 1 | 1 | 1 |
| 18 | 3 | 1 | 2 | 2 | 1 | 1 | 9 | 1 | 2 | 5 | 1 | 1 |
| 19 | --- | --- | --- | 2 | 1 | 1 | 6 | 1 | 2 | 1 | 1 | 1 |
| 20 | --- | --- | --- | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 0 |
| 21 | --- | --- | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 22 | --- | --- | --- | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 23 | --- | --- | --- | 1 | 1 | 1 | 5 | 1 | 2 | 0 | 0 | 0 |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 0 |
| 25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 26 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 27 | 10 | 1 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 29 | 20 | 1 | 3 | 1 | 1 | 1 | 4 | 1 | 1 | 0 | 0 | 0 |
| 30 | 5 | 1 | 1 | 3 | 1 | 1 | 3 | 1 | 1 | 0 | 0 | 0 |
| 31 | --- | --- | --- | 2 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- |
| MONTH | 20 | 1 | 1 | 10 | 0 | 1 | 10 | 0 | 1 | 5 | 0 | 0 |

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MEAN DISCHARGE (CFS) | MEAN CONCEN- TRATION (MG/L) | SEDIMENT DISCHARGE (TONS/DAY) | MEAN DISCHARGE (CFS) | MEAN CONCEN- TRATION (MG/L) | SEDIMENT DISCHARGE (TONS/DAY) | MEAN DISCHARGE (CFS) | MEAN CONCEN- TRATION (MG/L) | SEDIMENT DISCHARGE (TONS/DAY) |
|---------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| OCTOBER | | | | NOVEMBER | | | DECEMBER | | |
| 1 | 1150 | 2 | 6.2 | 1220 | 2 | 6.6 | 1030 | 6 | 17 |
| 2 | 1340 | 3 | 11 | 1190 | 2 | 6.4 | 1030 | 2 | 5.6 |
| 3 | 1250 | 3 | 10 | 1140 | 2 | 6.2 | 1000 | 4 | 11 |
| 4 | 1200 | 3 | 9.7 | 1100 | 3 | 8.9 | 1030 | 3 | 8.3 |
| 5 | 1190 | 3 | 9.6 | 1090 | 3 | 8.8 | 1030 | 3 | 8.3 |
| 6 | 1180 | 2 | 6.4 | 1090 | 3 | 8.8 | 1000 | 2 | 5.4 |
| 7 | 1160 | 2 | 6.3 | 1080 | 3 | 8.7 | 1000 | 3 | 8.1 |
| 8 | 1150 | 2 | 6.2 | 1070 | 3 | 8.7 | 1030 | 1 | 2.8 |
| 9 | 1140 | 2 | 6.2 | 1070 | 5 | 14 | 1070 | 4 | 12 |
| 10 | 1140 | 2 | 6.2 | 1070 | 1 | 2.9 | 998 | 3 | 8.1 |
| 11 | 1140 | 2 | 6.2 | 1070 | 1 | 2.9 | 1020 | 3 | 8.3 |
| 12 | 1140 | 2 | 6.2 | 1070 | 1 | 2.9 | 1030 | 3 | 8.3 |
| 13 | 1100 | 3 | 8.9 | 1050 | 1 | 2.8 | 1020 | 3 | 8.3 |
| 14 | 1140 | 3 | 9.2 | 1160 | 2 | 6.3 | 1000 | 3 | 8.1 |
| 15 | 1120 | 3 | 9.1 | 1190 | 2 | 6.4 | 995 | 3 | 8.1 |
| 16 | 1120 | 3 | 9.1 | 1260 | 4 | 14 | 1000 | 3 | 8.1 |
| 17 | 1140 | 3 | 9.2 | 1150 | 3 | 9.3 | 1010 | 3 | 8.2 |
| 18 | 1110 | 2 | 6.0 | 1110 | 5 | 15 | 1000 | 3 | 8.1 |
| 19 | 1130 | 2 | 6.1 | 1100 | 5 | 15 | 1000 | 3 | 8.1 |
| 20 | 1130 | 2 | 6.1 | 1090 | 5 | 15 | 1000 | 3 | 8.1 |
| 21 | 1120 | 2 | 6.0 | 1070 | 6 | 17 | 997 | 2 | 5.4 |
| 22 | 1120 | 2 | 6.0 | 1070 | 2 | 5.8 | 995 | 1 | 2.7 |
| 23 | 1110 | 2 | 6.0 | 1060 | 2 | 5.7 | 995 | 1 | 2.7 |
| 24 | 1110 | 3 | 9.0 | 1070 | 2 | 5.8 | 993 | 2 | 5.4 |
| 25 | 1220 | 3 | 9.9 | 1060 | 1 | 2.9 | 995 | 2 | 5.4 |
| 26 | 1240 | 3 | 10 | 1060 | 2 | 5.7 | 1040 | 2 | 5.6 |
| 27 | 1150 | 3 | 9.3 | 1030 | 2 | 5.6 | 1020 | 2 | 5.5 |
| 28 | 1140 | 3 | 9.2 | 1030 | 1 | 2.8 | 995 | 2 | 5.4 |
| 29 | 1140 | 2 | 6.2 | 1030 | 1 | 2.8 | 995 | 2 | 5.4 |
| 30 | 1140 | 2 | 6.2 | 1030 | 1 | 2.8 | 995 | 3 | 8.1 |
| 31 | 1130 | 2 | 6.1 | --- | --- | --- | 999 | 3 | 8.1 |
| TOTAL | 35790 | --- | 237.8 | 32880 | --- | 226.5 | 31312 | --- | 228.0 |
| JANUARY | | | | FEBRUARY | | | MARCH | | |
| 1 | 985 | 2 | 5.3 | 942 | 1 | 2.5 | 678 | 1 | 1.8 |
| 2 | 1070 | 2 | 5.8 | 947 | 1 | 2.6 | 697 | 2 | 3.8 |
| 3 | 1050 | 3 | 8.5 | 943 | 1 | 2.5 | 693 | 2 | 3.7 |
| 4 | 1010 | 3 | 8.2 | 945 | 1 | 2.6 | 711 | 3 | 5.8 |
| 5 | 982 | 3 | 8.0 | 945 | 1 | 2.6 | 722 | 3 | 5.8 |
| 6 | 913 | 3 | 7.4 | 942 | 1 | 2.5 | 719 | 2 | 3.9 |
| 7 | 950 | 3 | 7.7 | 942 | 2 | 5.1 | 729 | 2 | 3.9 |
| 8 | 961 | 2 | 5.2 | 942 | 1 | 2.5 | 746 | 2 | 4.0 |
| 9 | 933 | 2 | 5.0 | 942 | 1 | 2.5 | 746 | 3 | 6.0 |
| 10 | 1020 | 5 | 14 | 942 | 1 | 2.5 | 772 | 3 | 6.3 |
| 11 | 1100 | 5 | 15 | 942 | 2 | 5.1 | 786 | 3 | 6.4 |
| 12 | 1050 | 3 | 8.5 | 942 | 2 | 5.1 | 782 | 2 | 4.2 |
| 13 | 1020 | 3 | 8.3 | 942 | 2 | 5.1 | 795 | 2 | 4.3 |
| 14 | 990 | 2 | 5.3 | 942 | 1 | 2.5 | 799 | 2 | 4.3 |
| 15 | 986 | 2 | 5.3 | 942 | 1 | 2.5 | 807 | 2 | 4.4 |
| 16 | 990 | 3 | 8.0 | 943 | 1 | 2.5 | 799 | 3 | 6.5 |
| 17 | 982 | 3 | 8.0 | 943 | 2 | 5.1 | 801 | 3 | 6.5 |
| 18 | 982 | 3 | 8.0 | 643 | 4 | 6.9 | 804 | 2 | 4.3 |
| 19 | 980 | 3 | 7.9 | 498 | 3 | 4.0 | 813 | 2 | 4.4 |
| 20 | 970 | 3 | 7.9 | 543 | 2 | 2.9 | 822 | 2 | 4.4 |
| 21 | 958 | 3 | 7.8 | 575 | 2 | 3.1 | 813 | 2 | 4.4 |
| 22 | 958 | 3 | 7.8 | 591 | 2 | 3.2 | 820 | 2 | 4.4 |
| 23 | 960 | 3 | 7.8 | 618 | 2 | 3.3 | 830 | 2 | 4.5 |
| 24 | 962 | 1 | 2.6 | 632 | 2 | 3.4 | 835 | 2 | 4.5 |
| 25 | 953 | 1 | 2.6 | 645 | 2 | 3.5 | 846 | 3 | 6.9 |
| 26 | 955 | 2 | 5.2 | 638 | 2 | 3.4 | 850 | 4 | 9.2 |
| 27 | 943 | 2 | 5.1 | 654 | 2 | 3.5 | 852 | 14 | 32 |
| 28 | 943 | 3 | 7.6 | 665 | 3 | 5.4 | 896 | 15 | 36 |
| 29 | 945 | 3 | 7.7 | --- | --- | --- | 733 | 10 | 20 |
| 30 | 945 | 3 | 7.7 | --- | --- | --- | 729 | 6 | 12 |
| 31 | 942 | 3 | 7.6 | --- | --- | --- | 714 | 5 | 9.6 |
| TOTAL | 30388 | --- | 226.8 | 22730 | --- | 98.4 | 24139 | --- | 238.2 |

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MEAN DISCHARGE (CFS) | MEAN CONCEN- TRATION (MG/L) | SEDIMENT DISCHARGE (TONS/DAY) | MEAN DISCHARGE (CFS) | MEAN CONCEN- TRATION (MG/L) | SEDIMENT DISCHARGE (TONS/DAY) | MEAN DISCHARGE (CFS) | MEAN CONCEN- TRATION (MG/L) | SEDIMENT DISCHARGE (TONS/DAY) |
|-------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|----------------------------|--------------------------------------|-------------------------------------|
| APRIL | | | MAY | | | JUNE | | | |
| 1 | 710 | 4 | 7.7 | 818 | 6 | 13 | 721 | 6 | 12 |
| 2 | 694 | 4 | 7.5 | 774 | 5 | 10 | 713 | 4 | 7.7 |
| 3 | 693 | 4 | 7.5 | 749 | 4 | 8.1 | 714 | 3 | 5.8 |
| 4 | 691 | 4 | 7.5 | 702 | 4 | 7.6 | 721 | 3 | 5.8 |
| 5 | 700 | 4 | 7.6 | 719 | 4 | 7.8 | 723 | 3 | 5.9 |
| 6 | 698 | 5 | 9.4 | 714 | 4 | 7.7 | 761 | 3 | 6.2 |
| 7 | 693 | 5 | 9.4 | 699 | 5 | 9.4 | 797 | 3 | 6.5 |
| 8 | 650 | 4 | 7.0 | 696 | 5 | 9.4 | 872 | 5 | 12 |
| 9 | 649 | 4 | 7.0 | 698 | 5 | 9.4 | 972 | 6 | 16 |
| 10 | 659 | 5 | 8.9 | 744 | 5 | 10 | 978 | 4 | 11 |
| 11 | 660 | 7 | 12 | 787 | 4 | 8.5 | 975 | 4 | 11 |
| 12 | 642 | 9 | 16 | 785 | 3 | 6.4 | 983 | 5 | 13 |
| 13 | 635 | 6 | 10 | 779 | 3 | 6.3 | 986 | 5 | 13 |
| 14 | 637 | 5 | 8.6 | 775 | 4 | 8.4 | 991 | 4 | 11 |
| 15 | 636 | 5 | 8.6 | 749 | 4 | 8.1 | 1000 | 4 | 11 |
| 16 | 643 | 5 | 8.7 | 713 | 3 | 5.8 | 993 | 4 | 11 |
| 17 | 645 | 5 | 8.7 | 706 | 3 | 5.7 | 983 | 4 | 11 |
| 18 | 638 | 5 | 8.6 | 712 | 3 | 5.8 | 985 | 4 | 11 |
| 19 | 633 | 5 | 8.5 | 719 | 3 | 5.8 | 985 | 4 | 11 |
| 20 | 643 | 6 | 10 | 710 | 2 | 3.8 | 988 | 3 | 8.0 |
| 21 | 665 | 6 | 11 | 706 | 2 | 3.8 | 990 | 3 | 8.0 |
| 22 | 711 | 6 | 12 | 708 | 3 | 5.7 | 1000 | 3 | 8.1 |
| 23 | 752 | 6 | 12 | 699 | 3 | 5.7 | 1030 | 3 | 8.3 |
| 24 | 746 | 5 | 10 | 727 | 3 | 5.9 | 1050 | 4 | 11 |
| 25 | 738 | 5 | 10 | 723 | 2 | 3.9 | 1110 | 4 | 12 |
| 26 | 730 | 5 | 9.9 | 691 | 2 | 3.7 | 1120 | 4 | 12 |
| 27 | 739 | 5 | 10 | 723 | 2 | 3.9 | 1050 | 4 | 11 |
| 28 | 752 | 5 | 10 | 726 | 2 | 3.9 | 1010 | 8 | 22 |
| 29 | 787 | 5 | 11 | 724 | 2 | 3.9 | 1020 | 12 | 33 |
| 30 | 794 | 5 | 11 | 722 | 2 | 3.9 | 1020 | 12 | 33 |
| 31 | --- | --- | --- | 722 | 2 | 3.9 | --- | --- | --- |
| TOTAL | 20663 | --- | 286.1 | 22619 | --- | 205.2 | 28241 | --- | 358.3 |
| JULY | | | AUGUST | | | SEPTEMBER | | | |
| 1 | 1020 | 12 | 33 | 997 | 4 | 11 | 1000 | 3 | 8.1 |
| 2 | 1020 | 8 | 22 | 987 | 4 | 11 | 1000 | 3 | 8.1 |
| 3 | 1010 | 6 | 16 | 1000 | 4 | 11 | 998 | 2 | 5.4 |
| 4 | 1010 | 7 | 19 | 1040 | 4 | 11 | 992 | 2 | 5.4 |
| 5 | 1010 | 7 | 19 | 1040 | 4 | 11 | 1020 | 3 | 8.3 |
| 6 | 1020 | 12 | 33 | 1000 | 4 | 11 | 1010 | 3 | 8.2 |
| 7 | 1030 | 10 | 28 | 999 | 4 | 11 | 1010 | 3 | 8.2 |
| 8 | 1020 | 5 | 14 | 992 | 5 | 13 | 992 | 3 | 8.0 |
| 9 | 1020 | 5 | 14 | 1020 | 5 | 14 | 1060 | 2 | 5.7 |
| 10 | 1020 | 3 | 8.3 | 1000 | 2 | 5.4 | 1090 | 2 | 5.9 |
| 11 | 1010 | 3 | 8.2 | 1000 | 2 | 5.4 | 1080 | 4 | 12 |
| 12 | 1010 | 2 | 5.5 | 997 | 2 | 5.4 | 1100 | 4 | 12 |
| 13 | 1020 | 2 | 5.5 | 997 | 2 | 5.4 | 1100 | 2 | 5.9 |
| 14 | 1010 | 2 | 5.5 | 999 | 2 | 5.4 | 1110 | 3 | 9.0 |
| 15 | 1070 | 2 | 5.8 | 994 | 3 | 8.1 | 1120 | 3 | 9.1 |
| 16 | 1210 | 4 | 13 | 994 | 4 | 11 | 1110 | 3 | 9.0 |
| 17 | 1210 | 4 | 13 | 997 | 5 | 13 | 1110 | 3 | 9.0 |
| 18 | 1110 | 3 | 9.0 | 1010 | 4 | 11 | 1100 | 3 | 8.9 |
| 19 | 1040 | 3 | 8.4 | 1000 | 4 | 11 | 1100 | 2 | 5.9 |
| 20 | 1010 | 3 | 8.2 | 1000 | 3 | 8.1 | 1100 | 2 | 5.9 |
| 21 | 1020 | 2 | 5.5 | 985 | 3 | 8.0 | 1120 | 2 | 6.0 |
| 22 | 1030 | 2 | 5.6 | 1000 | 5 | 13 | 1120 | 2 | 6.0 |
| 23 | 1040 | 2 | 5.6 | 1010 | 5 | 14 | 1120 | 3 | 9.1 |
| 24 | 1020 | 2 | 5.5 | 1000 | 4 | 11 | 1110 | 3 | 9.0 |
| 25 | 1010 | 2 | 5.5 | 1000 | 4 | 11 | 1110 | 3 | 9.0 |
| 26 | 1010 | 3 | 8.2 | 1010 | 3 | 8.2 | 1100 | 3 | 8.9 |
| 27 | 1010 | 3 | 8.2 | 1010 | 3 | 8.2 | 1100 | 4 | 12 |
| 28 | 1010 | 3 | 8.2 | 1010 | 3 | 8.2 | 1070 | 4 | 12 |
| 29 | 1010 | 3 | 8.2 | 1010 | 3 | 8.2 | 1090 | 4 | 12 |
| 30 | 1010 | 3 | 8.2 | 1010 | 3 | 8.2 | 1130 | 4 | 12 |
| 31 | 1000 | 3 | 8.1 | 1010 | 3 | 8.2 | --- | --- | --- |
| TOTAL | 32050 | --- | 365.2 | 31118 | --- | 299.4 | 32272 | --- | 254.0 |
| YEAR | 344202 | | 3023.9 | | | | | | |

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | DIS- CHARGE (CFS) | SUS- PENDED SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | DATE | TIME | DIS- CHARGE (CFS) | SUS- PENDED SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|--------------|------|-------------------------|---|--|--------------|------|-------------------------|---|--|
| MAR 06... | 1200 | 719 | 2 | 90 | MAR 07... | 1200 | 729 | 2 | 90 |

ROGUE RIVER BASIN

496

14335500 SOUTH FORK BIG BUTTE CREEK NEAR BUTTE FALLS, OR

LOCATION.--Lat 42°32'25", long 122°33'15", in NE¼SW¼ sec.11, T.35 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 10 ft (3 m) downstream from Ginger Creek, 0.6 mi (1.0 km) east of town of Butte Falls, and at mile 14.0 (22.5 km).

DRAINAGE AREA.--138 mi² (357 km²).

PERIOD OF RECORD.--September 1910 to October 1911 (published as "at Butte Falls"), August to October 1915, October 1917 to September 1922, March 1925 to current year. Monthly discharge only August, September 1915, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1911, 1918-19, 1921-22, 1929. WSP 1318: 1918-19. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Oct. 1, 1968. Altitude of gage is 2,360 ft (719 m), from river-profile map. Sept. 21, 1910, to Sept. 30, 1922, nonrecording gage at site 300 ft (91 m) upstream at different datums.

REMARKS.--Records good. Flow slightly regulated since 1952 by Willow Creek Reservoir, capacity, 7,320 acre-ft (9.03 hm³). Diversions for irrigation above station and for municipal water supply for Medford (since 1927) and Butte Falls.

AVERAGE DISCHARGE.--58 years (water years 1911, 1918-22, 1926-77), 159 ft³/s (4.503 m³/s), 115,200 acre-ft/yr (142 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s (357 m³/s) Dec. 22, 1964, gage height, 7.65 ft (2.332 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 33 ft³/s (0.93 m³/s) Oct. 2, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 179 ft³/s (5.07 m³/s) Sept. 28, gage height, 1.53 ft (0.466 m), no peak above base of 450 ft³/s (12.7 m³/s); minimum, 49 ft³/s (1.39 m³/s) Dec. 24, Jan. 6, 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|------|------|-------|-------|------|------|
| 1 | 72 | 72 | 64 | 56 | 59 | 68 | 74 | 75 | 101 | 68 | 61 | 57 |
| 2 | 77 | 72 | 64 | 68 | 57 | 68 | 77 | 81 | 96 | 68 | 61 | 57 |
| 3 | 74 | 70 | 64 | 62 | 57 | 79 | 74 | 98 | 94 | 66 | 59 | 59 |
| 4 | 74 | 70 | 64 | 57 | 57 | 70 | 74 | 90 | 90 | 66 | 66 | 56 |
| 5 | 75 | 68 | 64 | 57 | 57 | 66 | 74 | 90 | 87 | 66 | 66 | 56 |
| 6 | 74 | 68 | 64 | 54 | 57 | 64 | 72 | 87 | 81 | 66 | 64 | 56 |
| 7 | 74 | 68 | 61 | 56 | 57 | 64 | 74 | 85 | 85 | 64 | 70 | 52 |
| 8 | 72 | 68 | 61 | 54 | 57 | 66 | 79 | 85 | 85 | 62 | 74 | 52 |
| 9 | 72 | 68 | 64 | 54 | 57 | 85 | 79 | 85 | 83 | 62 | 62 | 54 |
| 10 | 72 | 66 | 61 | 59 | 57 | 75 | 75 | 103 | 83 | 62 | 61 | 54 |
| 11 | 72 | 66 | 61 | 61 | 57 | 68 | 72 | 110 | 87 | 64 | 59 | 54 |
| 12 | 68 | 66 | 61 | 62 | 56 | 74 | 72 | 103 | 83 | 62 | 59 | 56 |
| 13 | 68 | 66 | 61 | 61 | 56 | 70 | 74 | 94 | 79 | 62 | 61 | 52 |
| 14 | 68 | 72 | 59 | 59 | 56 | 66 | 74 | 94 | 79 | 62 | 61 | 52 |
| 15 | 68 | 72 | 59 | 59 | 56 | 64 | 74 | 96 | 77 | 64 | 59 | 54 |
| 16 | 70 | 70 | 59 | 57 | 56 | 61 | 74 | 101 | 74 | 62 | 57 | 56 |
| 17 | 66 | 68 | 59 | 57 | 61 | 59 | 74 | 101 | 75 | 61 | 57 | 57 |
| 18 | 66 | 66 | 59 | 59 | 64 | 57 | 72 | 101 | 75 | 61 | 57 | 57 |
| 19 | 66 | 68 | 57 | 59 | 54 | 62 | 72 | 98 | 77 | 61 | 57 | 61 |
| 20 | 68 | 68 | 57 | 59 | 56 | 61 | 74 | 96 | 74 | 62 | 59 | 61 |
| 21 | 68 | 68 | 57 | 59 | 61 | 59 | 74 | 94 | 74 | 62 | 61 | 57 |
| 22 | 70 | 66 | 57 | 59 | 61 | 59 | 74 | 103 | 68 | 62 | 61 | 56 |
| 23 | 70 | 66 | 57 | 59 | 59 | 66 | 72 | 128 | 68 | 62 | 57 | 57 |
| 24 | 72 | 64 | 56 | 57 | 59 | 66 | 72 | 123 | 66 | 62 | 66 | 68 |
| 25 | 75 | 66 | 57 | 56 | 59 | 68 | 74 | 113 | 66 | 68 | 62 | 61 |
| 26 | 75 | 66 | 57 | 54 | 62 | 68 | 74 | 135 | 66 | 62 | 62 | 57 |
| 27 | 72 | 64 | 57 | 54 | 62 | 70 | 72 | 130 | 70 | 62 | 61 | 61 |
| 28 | 72 | 64 | 56 | 54 | 74 | 68 | 72 | 120 | 64 | 61 | 61 | 133 |
| 29 | 72 | 64 | 57 | 56 | --- | 66 | 72 | 113 | 62 | 62 | 62 | 108 |
| 30 | 72 | 64 | 57 | 57 | --- | 66 | 72 | 108 | 64 | 62 | 61 | 64 |
| 31 | 74 | --- | 56 | 57 | --- | 66 | --- | 101 | --- | 61 | 59 | --- |
| TOTAL | 2208 | 2024 | 1847 | 1792 | 1641 | 2069 | 2212 | 3141 | 2333 | 1957 | 1903 | 1835 |
| MEAN | 71.2 | 67.5 | 59.6 | 57.8 | 58.6 | 66.7 | 73.7 | 101 | 77.8 | 63.1 | 61.4 | 61.2 |
| MAX | 77 | 72 | 64 | 68 | 74 | 85 | 79 | 135 | 101 | 68 | 74 | 133 |
| MIN | 66 | 64 | 56 | 54 | 54 | 57 | 72 | 75 | 62 | 61 | 57 | 52 |
| AC-FT | 4380 | 4010 | 3660 | 3550 | 3250 | 4100 | 4390 | 6230 | 4630 | 3880 | 3770 | 3640 |
| CAL YR 1976 | TOTAL | 48835 | MEAN | 133 | MAX | 525 | MIN | 56 | AC-FT | 96860 | | |
| WTR YR 1977 | TOTAL | 24962 | MEAN | 68.4 | MAX | 135 | MIN | 52 | AC-FT | 49510 | | |

ROGUE RIVER BASIN

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR

LOCATION.--Lat 42°39'05", long 122°41'25", in NE¼NW¼ sec.3, T.34 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 225 ft (69 m) upstream from county road bridge, 0.9 mi (1.4 km) south of McLeod, and at mile 0.64 (1.03 km).

DRAINAGE AREA.--245 mi² (635 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to September 1957. October 1967 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,525.95 ft (465.110 m) above mean sea level. Oct. 9, 1945, to Sept. 30, 1957, non-recording gage at site 260 ft (79 m) downstream at datum 0.53 ft (0.162 m) higher.

REMARKS.--Water-discharge records fair. Slight regulation by fish hatchery 600 ft (183 m) above station. Several diversions in the vicinity of Butte Falls, the two largest being the city of Medford diversion and Eagle Point Irrigation District Canal.

AVERAGE DISCHARGE.--22 years, 300 ft³/s (8.496 m³/s), 217,400 acre-ft/yr (268 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft³/s (253 m³/s) Dec. 22, 1955, gage height, 12.75 ft (3.886 m), site and datum then in use, from rating curve extended above 3,300 ft³/s (93.5 m³/s) on basis of slope-area measurement of peak flow; minimum, 6.4 ft³/s (0.18 m³/s) June 23, 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 18.6 ft (5.67 m), present site, from floodmark by local resident, discharge, 16,800 ft³/s (476 m³/s), from rating curve, at former site, extended above 9,000 ft³/s (255 m³/s) and field estimate of overflow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 603 ft³/s (17.1 m³/s) Sept. 28, gage height, 4.18 ft (1.274 m), no peak above base of 1,800 ft³/s (51.0 m³/s); minimum, 6.4 ft³/s (0.18 m³/s) June 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|----------|--------|--------------|------|------|------|------|------|------|
| 1 | 66 | 156 | 60 | 57 | 58 | 179 | 77 | 66 | 118 | 37 | 44 | 43 |
| 2 | 87 | 134 | 57 | 83 | 53 | 173 | 81 | 103 | 113 | 39 | 43 | 41 |
| 3 | 68 | 98 | 58 | 79 | 57 | 246 | 75 | 96 | 105 | 40 | 43 | 37 |
| 4 | 62 | 89 | 58 | 73 | 55 | 186 | 77 | 156 | 98 | 41 | 43 | 37 |
| 5 | 62 | 73 | 58 | 66 | 55 | 161 | 75 | 125 | 83 | 37 | 43 | 40 |
| 6 | 62 | 73 | 58 | 68 | 58 | 164 | 77 | 131 | 77 | 39 | 43 | 40 |
| 7 | 62 | 73 | 57 | 98 | 58 | 161 | 75 | 133 | 73 | 37 | 49 | 40 |
| 8 | 60 | 73 | 60 | 62 | 58 | 164 | 89 | 123 | 73 | 39 | 55 | 37 |
| 9 | 60 | 72 | 64 | 60 | 58 | 272 | 96 | 115 | 69 | 37 | 44 | 35 |
| 10 | 60 | 72 | 62 | 60 | 58 | 209 | 81 | 101 | 69 | 39 | 46 | 41 |
| 11 | 58 | 72 | 60 | 66 | 58 | 177 | 75 | 103 | 79 | 40 | 44 | 41 |
| 12 | 57 | 70 | 58 | 79 | 58 | 199 | 77 | 85 | 71 | 46 | 44 | 39 |
| 13 | 57 | 70 | 58 | 73 | 58 | 180 | 79 | 66 | 62 | 47 | 44 | 39 |
| 14 | 57 | 77 | 58 | 70 | 58 | 165 | 77 | 57 | 57 | 46 | 43 | 35 |
| 15 | 57 | 77 | 58 | 64 | 58 | 150 | 73 | 96 | 54 | 41 | 41 | 32 |
| 16 | 102 | 75 | 60 | 60 | 57 | 153 | 71 | 125 | 49 | 44 | 41 | 41 |
| 17 | 134 | 75 | 58 | 58 | 57 | 150 | 69 | 125 | 52 | 40 | 39 | 41 |
| 18 | 131 | 77 | 58 | 58 | 126 | 147 | 71 | 120 | 57 | 41 | 39 | 44 |
| 19 | 142 | 75 | 53 | 60 | 112 | 150 | 71 | 113 | 57 | 39 | 39 | 57 |
| 20 | 139 | 73 | 53 | 60 | 112 | 147 | 71 | 103 | 54 | 40 | 47 | 41 |
| 21 | 142 | 73 | 57 | 62 | 150 | 150 | 69 | 101 | 52 | 39 | 44 | 40 |
| 22 | 142 | 83 | 58 | 62 | 159 | 125 | 64 | 118 | 44 | 41 | 41 | 41 |
| 23 | 142 | 147 | 58 | 60 | 144 | 92 | 60 | 288 | 24 | 41 | 41 | 43 |
| 24 | 147 | 136 | 55 | 58 | 156 | 98 | 60 | 213 | 15 | 41 | 46 | 50 |
| 25 | 161 | 62 | 58 | 57 | 136 | 87 | 62 | 168 | 32 | 41 | 44 | 41 |
| 26 | 159 | 62 | 58 | 55 | 156 | 77 | 69 | 272 | 35 | 43 | 46 | 41 |
| 27 | 153 | 62 | 58 | 57 | 159 | 81 | 60 | 216 | 35 | 43 | 41 | 41 |
| 28 | 150 | 60 | 58 | 57 | 186 | 85 | 60 | 171 | 36 | 41 | 41 | 280 |
| 29 | 150 | 60 | 58 | 55 | --- | 79 | 64 | 153 | 32 | 40 | 41 | 292 |
| 30 | 153 | 60 | 58 | 55 | --- | 77 | 96 | 136 | 33 | 41 | 37 | 94 |
| 31 | 156 | --- | 55 | 58 | --- | 79 | --- | 123 | --- | 68 | 41 | --- |
| TOTAL | 3238 | 2459 | 1797 | 1990 | 2568 | 4563 | 2201 | 4101 | 1808 | 1288 | 1337 | 1764 |
| MEAN | 104 | 82.0 | 58.0 | 64.2 | 91.7 | 147 | 73.4 | 132 | 60.3 | 41.5 | 43.1 | 58.8 |
| MAX | 161 | 156 | 64 | 98 | 186 | 272 | 96 | 288 | 118 | 68 | 55 | 292 |
| MIN | 57 | 60 | 53 | 55 | 53 | 77 | 60 | 57 | 15 | 37 | 37 | 32 |
| AC-FT | 6420 | 4880 | 3560 | 3950 | 5090 | 9050 | 4370 | 8130 | 3590 | 2550 | 2650 | 3500 |
| CAL YR 1976 | TOTAL | 85456 | MEAN 233 | MAX 1730 | MIN 53 | AC-FT 169500 | | | | | | |
| WTR YR 1977 | TOTAL | 29114 | MEAN 79.8 | MAX 292 | MIN 15 | AC-FT 57750 | | | | | | |

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1970 to current year.

REMARKS.--In addition to water temperature record, water-quality samples were collected approximately biweekly.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.0°C June 27, July 15-17, 1973, Aug. 2, 1977; minimum, 0.0°C Feb. 28 to Mar. 2, 1971, Feb. 2, 1972, Jan. 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 24.0°C Aug. 2; minimum, 0.0°C Jan. 8, 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SUS- PENDE SEDIM- ENT (MG/L) | SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) |
|-------|------|---|-----------------------------|--|---------------|------------------------------------|--|---|
| OCT | | | | | | | | |
| 14... | 1000 | 56 | -- | -- | -- | -- | 3 | .46 |
| NOV | | | | | | | | |
| 23... | 1200 | 147 | 6.0 | 115 | 7.2 | 12.0 | 3 | 1.2 |
| DEC | | | | | | | | |
| 09... | 1000 | 70 | 4.5 | 113 | 7.8 | 12.1 | 3 | .57 |
| 22... | 1100 | 58 | -- | 133 | 7.8 | 12.6 | 1 | .16 |
| JAN | | | | | | | | |
| 03... | 1445 | 81 | 4.5 | 127 | 8.0 | 10.9 | 4 | .87 |
| FEB | | | | | | | | |
| 01... | 1300 | 60 | 5.5 | 126 | 8.4 | 12.9 | 1 | .16 |
| 18... | 1130 | 134 | -- | 116 | 8.2 | 12.4 | 5 | 1.8 |
| 22... | 1330 | 159 | 7.5 | 117 | 8.4 | 12.4 | 5 | 2.1 |
| MAR | | | | | | | | |
| 03... | 1230 | 246 | 5.0 | -- | -- | -- | 15 | 10 |
| 08... | 1400 | 176 | 8.5 | 119 | 8.3 | 12.1 | 4 | 1.9 |
| 09... | 1030 | 338 | 6.0 | -- | -- | -- | 44 | 40 |
| 21... | 1400 | 153 | 10.5 | 115 | 8.2 | 11.2 | 3 | 1.2 |
| APR | | | | | | | | |
| 12... | 1330 | 79 | 12.5 | 133 | 8.2 | 10.6 | 6 | 1.3 |
| 25... | 1500 | 66 | -- | 122 | 8.1 | 9.6 | 3 | .53 |
| MAY | | | | | | | | |
| 11... | 1200 | 118 | 10.0 | 118 | 8.2 | 11.6 | 13 | 4.1 |
| 23... | 1200 | 321 | 10.0 | -- | -- | -- | 28 | 24 |
| 25... | 1330 | 168 | 12.0 | 100 | 8.6 | -- | -- | -- |
| JUN | | | | | | | | |
| 13... | 1100 | 68 | 15.0 | 138 | 8.4 | 10.2 | 2 | .37 |
| JUL | | | | | | | | |
| 11... | 1130 | 70 | 16.5 | 137 | 8.4 | 10.0 | 2 | .38 |
| 22... | 1500 | 42 | 21.0 | 134 | 8.7 | 9.7 | 4 | .45 |
| AUG | | | | | | | | |
| 15... | 1400 | 42 | 20.0 | 132 | 8.6 | 10.3 | 2 | .23 |
| 29... | 1600 | 43 | 18.0 | 124 | 8.9 | 10.1 | 3 | .35 |
| SEP | | | | | | | | |
| 13... | 1500 | 37 | 17.0 | 120 | 8.6 | 10.8 | 2 | .20 |

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDIM- ENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDIM- ENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|-------|------|---|--|--|-------|------|---|--|--|
| OCT | | | | | MAY | | | | |
| 14... | 1000 | 57 | 4 | 82 | 11... | 1209 | 118 | 13 | 85 |
| FEB | | | | | 23... | 1205 | 321 | 28 | 89 |
| 22... | 1400 | 159 | 5 | 77 | JUN | | | | |
| MAR | | | | | 13... | 1200 | 68 | 2 | 94 |
| 03... | 1230 | 246 | 15 | 74 | | | | | |
| 09... | 1040 | 338 | 49 | 88 | | | | | |

ROGUE RIVER BASIN

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-----------|------|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 16.5 | 12.5 | 11.5 | 9.5 | 5.0 | 2.5 | 3.5 | 2.0 | 6.5 | 4.0 | 7.0 | 5.5 |
| 2 | 14.5 | 12.5 | 11.0 | 9.5 | 4.5 | 2.5 | 4.0 | 3.5 | 5.5 | 2.5 | 6.0 | 5.0 |
| 3 | 14.0 | 10.5 | 10.5 | 8.5 | 5.0 | 2.5 | 4.5 | 3.5 | 5.0 | 2.0 | 6.5 | 4.5 |
| 4 | 13.0 | 9.0 | 10.0 | 7.5 | 5.0 | 3.5 | 5.0 | 3.5 | 5.5 | 2.5 | 8.0 | 5.0 |
| 5 | 13.5 | 9.0 | 8.5 | 6.5 | 4.5 | 2.5 | 4.5 | 2.0 | 5.5 | 3.5 | 8.5 | 5.0 |
| 6 | 14.5 | 10.0 | 10.0 | 7.0 | 4.5 | 2.5 | 2.5 | 0.5 | 7.0 | 5.0 | 7.5 | 5.5 |
| 7 | 14.5 | 10.5 | 9.5 | 7.0 | 4.5 | 2.5 | 3.0 | 1.0 | 6.5 | 4.0 | 8.0 | 6.5 |
| 8 | 15.0 | 10.5 | 9.5 | 7.5 | 5.5 | 3.5 | 2.0 | 0.0 | 8.0 | 5.5 | 8.5 | 6.5 |
| 9 | 14.0 | 10.0 | 9.0 | 7.0 | 5.5 | 4.5 | 2.0 | 0.0 | 8.5 | 5.5 | 7.5 | 6.0 |
| 10 | 13.5 | 10.0 | 9.5 | 8.0 | 5.0 | 4.0 | 4.5 | 1.5 | 8.0 | 5.5 | 8.0 | 5.0 |
| 11 | 13.5 | 9.5 | 9.5 | 7.5 | 4.5 | 2.5 | 5.0 | 4.0 | 8.0 | 5.0 | 7.5 | 5.0 |
| 12 | 13.0 | 9.0 | 9.5 | 7.5 | 4.0 | 2.5 | 5.0 | 3.5 | 8.5 | 5.0 | 7.5 | 5.5 |
| 13 | 12.5 | 8.5 | 8.0 | 6.0 | 4.5 | 3.0 | 5.0 | 4.5 | 9.0 | 5.5 | 6.5 | 5.0 |
| 14 | 12.5 | 8.5 | 8.5 | 7.5 | 4.5 | 2.5 | 5.5 | 4.0 | 8.5 | 5.0 | 7.5 | 5.0 |
| 15 | 12.0 | 8.0 | 10.0 | 8.5 | 4.5 | 3.0 | 4.0 | 2.5 | 8.5 | 5.0 | 7.0 | 5.5 |
| 16 | 11.0 | 8.0 | 11.5 | 10.0 | 4.5 | 3.0 | 4.0 | 2.5 | 9.0 | 5.0 | 9.0 | 4.5 |
| 17 | 10.5 | 7.5 | 10.0 | 9.5 | 4.0 | 2.5 | 4.0 | 2.0 | 10.0 | 6.5 | 8.0 | 5.5 |
| 18 | 10.0 | 6.5 | 10.0 | 9.5 | 3.0 | 1.5 | 5.0 | 2.5 | 8.0 | 5.0 | 7.5 | 6.0 |
| 19 | 10.0 | 6.5 | 9.5 | 7.0 | 3.0 | 0.5 | 5.0 | 3.0 | 8.5 | 4.5 | 9.0 | 7.0 |
| 20 | 10.0 | 7.0 | 7.5 | 5.5 | 3.0 | 0.5 | 5.0 | 2.5 | 8.0 | 6.0 | 10.0 | 6.0 |
| 21 | 10.0 | 7.0 | 8.0 | 6.0 | 3.0 | 1.0 | 6.0 | 4.0 | 7.5 | 6.0 | 10.5 | 6.0 |
| 22 | 10.0 | 7.0 | 7.5 | 5.5 | 4.0 | 2.0 | 5.5 | 4.0 | 7.5 | 6.0 | 11.5 | 6.5 |
| 23 | 9.5 | 7.0 | 7.0 | 5.0 | 5.0 | 3.0 | 5.0 | 2.5 | 6.5 | 5.5 | 9.5 | 7.5 |
| 24 | 8.0 | 7.0 | 6.5 | 4.5 | 3.0 | 1.5 | 4.5 | 2.5 | 7.5 | 5.0 | 9.0 | 6.5 |
| 25 | 9.5 | 8.0 | 7.5 | 5.5 | 4.5 | 2.5 | 4.0 | 1.5 | 7.0 | 6.0 | 10.0 | 5.0 |
| 26 | 9.5 | 7.5 | 6.0 | 3.5 | 4.5 | 4.0 | 4.0 | 1.0 | 7.5 | 6.0 | 11.0 | 5.5 |
| 27 | 9.0 | 6.5 | 4.0 | 2.0 | 5.0 | 4.0 | 4.5 | 1.0 | 9.0 | 6.5 | 9.5 | 7.0 |
| 28 | 8.5 | 6.0 | 4.0 | 1.5 | 4.5 | 3.0 | 4.5 | 1.5 | 8.0 | 6.5 | 9.5 | 5.5 |
| 29 | 9.0 | 7.5 | 4.5 | 2.0 | 4.5 | 3.5 | 4.5 | 1.5 | --- | --- | 8.5 | 5.5 |
| 30 | 10.0 | 8.5 | 5.0 | 2.5 | 5.0 | 3.5 | 4.5 | 1.5 | --- | --- | 10.0 | 5.5 |
| 31 | 10.0 | 9.0 | --- | --- | 4.0 | 2.0 | 6.5 | 4.0 | --- | --- | 7.5 | 6.0 |
| MONTH | 16.5 | 6.0 | 11.5 | 1.5 | 5.5 | 0.5 | 6.5 | 0.0 | 10.0 | 2.0 | 11.5 | 4.5 |
| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 10.5 | 6.5 | 13.0 | 11.0 | 17.0 | 13.5 | 21.0 | 17.0 | 21.5 | 17.0 | 18.5 | 12.5 |
| 2 | 11.5 | 6.5 | 14.5 | 10.0 | 17.0 | 10.5 | 21.5 | 15.0 | 24.0 | 17.5 | 19.0 | 13.0 |
| 3 | 12.5 | 6.5 | 13.0 | 10.5 | 15.0 | 12.0 | 17.5 | 14.5 | 23.0 | 17.0 | 19.5 | 14.0 |
| 4 | 14.0 | 7.5 | 12.0 | 9.0 | 19.5 | 12.0 | 17.0 | 14.0 | 23.0 | 16.5 | 20.5 | 14.5 |
| 5 | 14.0 | 7.5 | 10.0 | 8.5 | 21.5 | 14.0 | 17.5 | 11.5 | 22.0 | 15.5 | 20.5 | 15.0 |
| 6 | 14.5 | 8.0 | 12.0 | 7.0 | 21.0 | 15.5 | 20.0 | 12.0 | 22.0 | 15.5 | 20.0 | 13.5 |
| 7 | 14.5 | 8.0 | 12.0 | 8.5 | 20.5 | 16.0 | 21.5 | 14.0 | 21.0 | 17.0 | 19.0 | 13.5 |
| 8 | 12.0 | 10.0 | 14.0 | 7.0 | 20.5 | 15.5 | 21.5 | 15.0 | 21.0 | 15.5 | 18.0 | 12.5 |
| 9 | 10.5 | 7.5 | 11.5 | 9.0 | 19.0 | 14.0 | 21.0 | 15.0 | 21.0 | 16.0 | 17.5 | 12.0 |
| 10 | 12.0 | 6.0 | 11.0 | 9.5 | 16.5 | 14.0 | 21.0 | 13.5 | 22.0 | 15.5 | 18.0 | 12.0 |
| 11 | 14.5 | 8.5 | 12.0 | 8.5 | 16.5 | 13.5 | 22.0 | 14.5 | 22.5 | 16.0 | 18.0 | 12.5 |
| 12 | 14.5 | 8.0 | 15.0 | 9.5 | 19.5 | 12.0 | 21.5 | 16.0 | 22.0 | 16.5 | 18.0 | 12.5 |
| 13 | 13.5 | 10.0 | 14.5 | 9.0 | 19.0 | 14.5 | 21.0 | 14.0 | 21.5 | 16.5 | 18.0 | 12.5 |
| 14 | 13.5 | 7.0 | 13.5 | 10.5 | 20.5 | 14.5 | 21.5 | 14.5 | 21.5 | 16.0 | 18.0 | 13.5 |
| 15 | 14.0 | 8.5 | 12.5 | 9.5 | 20.5 | 13.5 | 22.5 | 15.5 | 22.0 | 16.0 | 15.0 | 12.5 |
| 16 | 15.0 | 10.5 | 12.5 | 8.5 | 21.0 | 13.5 | 22.5 | 16.0 | 22.5 | 16.0 | 13.5 | 11.0 |
| 17 | 13.5 | 7.5 | 12.5 | 9.0 | 17.5 | 15.0 | 22.0 | 15.5 | 21.5 | 16.5 | 13.0 | 11.5 |
| 18 | 13.5 | 7.0 | 11.0 | 8.5 | 18.5 | 14.0 | 21.0 | 16.5 | 21.5 | 17.0 | 14.0 | 12.0 |
| 19 | 14.0 | 7.0 | 16.0 | 8.5 | 20.0 | 14.5 | 23.0 | 16.5 | 21.0 | 15.5 | 15.0 | 12.0 |
| 20 | 13.5 | 8.5 | 17.5 | 10.5 | 17.0 | 14.0 | 23.0 | 16.5 | 19.0 | 15.5 | 14.5 | 12.0 |
| 21 | 15.5 | 10.0 | 17.0 | 12.5 | 20.5 | 12.5 | 23.0 | 16.5 | 20.5 | 15.0 | 15.0 | 11.0 |
| 22 | 13.5 | 10.0 | 14.0 | 10.5 | 22.0 | 15.0 | 23.0 | 16.5 | 20.5 | 14.5 | 14.0 | 9.0 |
| 23 | 12.5 | 10.0 | 12.5 | 9.5 | 21.5 | 15.5 | 23.5 | 16.5 | 20.0 | 14.5 | 11.5 | 10.0 |
| 24 | 13.5 | 9.5 | 15.0 | 10.0 | 22.0 | 15.0 | 23.0 | 17.0 | 20.0 | 16.5 | 14.0 | 10.0 |
| 25 | 12.0 | 10.0 | 13.5 | 10.0 | 22.5 | 15.5 | 22.5 | 17.0 | 16.5 | 14.0 | 14.0 | 11.5 |
| 26 | 15.5 | 9.0 | 13.5 | 11.0 | 22.5 | 16.0 | 23.0 | 16.0 | 16.0 | 13.0 | 16.0 | 11.5 |
| 27 | 16.0 | 9.0 | 13.5 | 8.5 | 22.5 | 16.0 | 22.5 | 16.0 | 16.5 | 13.0 | 14.0 | 12.0 |
| 28 | 13.0 | 10.5 | 15.5 | 9.0 | 22.5 | 15.0 | 22.0 | 16.0 | 18.0 | 14.5 | 12.5 | 11.5 |
| 29 | 15.0 | 11.0 | 16.5 | 10.0 | 23.0 | 16.0 | 21.5 | 15.0 | 19.5 | 14.0 | 13.0 | 11.0 |
| 30 | 15.0 | 10.5 | 16.5 | 10.5 | 22.0 | 16.0 | 22.5 | 15.0 | 20.0 | 15.0 | 12.5 | 9.0 |
| 31 | --- | --- | 19.0 | 11.5 | --- | --- | 22.0 | 15.0 | 19.0 | 13.5 | --- | --- |
| MONTH | 16.0 | 6.0 | 19.0 | 7.0 | 23.0 | 10.5 | 23.5 | 11.5 | 24.0 | 13.0 | 20.5 | 9.0 |

14337600 ROGUE RIVER NEAR MCLEOD, OR

LOCATION.--Lat 42°39'20", long 122°42'50", in SW¼ sec.33, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on left bank at Obstinate J Ranch, 1.3 mi (2.1 km) downstream from Big Butte Creek, 1.6 mi (2.6 km) southwest of McLeod, and at mile 154.0 (247.8 km).

DRAINAGE AREA.--938 mi² (2,429 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,489.08 ft (453.872 m) above mean sea level.

REMARKS.--Water-discharge records good. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Diversions for irrigation above station; most of flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--12 years, 2,176 ft³/s (61.62 m³/s), 1,577,000 acre-ft/yr (1.94 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) Mar. 3, 1972, gage height, 12.24 ft (3.731 m); minimum, 468 ft³/s (13.3 m³/s) Feb. 18, 1977, result of closure of Lost Creek dam, minimum prior to that time, 604 ft³/s (17.1 m³/s) Sept. 5, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1928, 20.35 ft (6.203 m) Dec. 22, 1964, from floodmarks, discharge, 74,300 ft³/s (2,100 m³/s), from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,570 ft³/s (44.5 m³/s) Mar. 28, gage height, 2.07 ft (0.631 m); minimum, 468 ft³/s (13.3 m³/s) Feb. 18, result of closure of Lost Creek dam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 1220 | 1380 | 1090 | 1040 | 1000 | 857 | 787 | 884 | 838 | 1050 | 1040 | 1050 |
| 2 | 1430 | 1320 | 1090 | 1150 | 1000 | 871 | 775 | 877 | 825 | 1050 | 1030 | 1040 |
| 3 | 1320 | 1240 | 1060 | 1130 | 1000 | 939 | 769 | 845 | 819 | 1050 | 1050 | 1040 |
| 4 | 1260 | 1190 | 1090 | 1090 | 1000 | 897 | 769 | 857 | 819 | 1050 | 1080 | 1030 |
| 5 | 1250 | 1160 | 1090 | 1050 | 1000 | 884 | 775 | 845 | 806 | 1050 | 1080 | 1060 |
| 6 | 1240 | 1160 | 1060 | 981 | 1000 | 884 | 775 | 845 | 838 | 1060 | 1050 | 1050 |
| 7 | 1220 | 1150 | 1060 | 1050 | 1000 | 890 | 769 | 832 | 871 | 1070 | 1050 | 1050 |
| 8 | 1210 | 1140 | 1090 | 1020 | 1000 | 910 | 740 | 819 | 945 | 1050 | 1050 | 1030 |
| 9 | 1200 | 1140 | 1130 | 993 | 1000 | 1020 | 745 | 813 | 1040 | 1060 | 1060 | 1100 |
| 10 | 1200 | 1140 | 1060 | 1080 | 1000 | 981 | 740 | 845 | 1050 | 1050 | 1050 | 1130 |
| 11 | 1200 | 1140 | 1080 | 1160 | 1000 | 963 | 735 | 890 | 1050 | 1050 | 1050 | 1120 |
| 12 | 1200 | 1140 | 1090 | 1120 | 1000 | 981 | 720 | 871 | 1050 | 1050 | 1040 | 1130 |
| 13 | 1150 | 1120 | 1080 | 1100 | 1000 | 975 | 715 | 845 | 1050 | 1070 | 1040 | 1140 |
| 14 | 1200 | 1240 | 1060 | 1060 | 1000 | 963 | 715 | 832 | 1050 | 1060 | 1040 | 1140 |
| 15 | 1180 | 1270 | 1050 | 1050 | 1000 | 957 | 710 | 845 | 1050 | 1120 | 1040 | 1150 |
| 16 | 1220 | 1330 | 1060 | 1050 | 1000 | 951 | 715 | 838 | 1040 | 1250 | 1040 | 1150 |
| 17 | 1270 | 1220 | 1070 | 1040 | 1000 | 951 | 715 | 832 | 1040 | 1250 | 1040 | 1150 |
| 18 | 1240 | 1190 | 1060 | 1040 | 769 | 951 | 710 | 832 | 1040 | 1150 | 1050 | 1140 |
| 19 | 1270 | 1170 | 1050 | 1040 | 609 | 963 | 705 | 832 | 1040 | 1080 | 1040 | 1150 |
| 20 | 1270 | 1160 | 1050 | 1030 | 655 | 969 | 715 | 813 | 1040 | 1050 | 1050 | 1140 |
| 21 | 1260 | 1140 | 1050 | 1020 | 725 | 963 | 735 | 806 | 1040 | 1060 | 1030 | 1160 |
| 22 | 1260 | 1150 | 1050 | 1020 | 750 | 945 | 775 | 825 | 1050 | 1070 | 1040 | 1160 |
| 23 | 1250 | 1210 | 1050 | 1020 | 762 | 922 | 813 | 987 | 1050 | 1080 | 1050 | 1160 |
| 24 | 1260 | 1210 | 1050 | 1020 | 787 | 934 | 806 | 939 | 1070 | 1060 | 1050 | 1160 |
| 25 | 1380 | 1120 | 1050 | 1010 | 781 | 934 | 800 | 890 | 1140 | 1050 | 1050 | 1150 |
| 26 | 1400 | 1120 | 1100 | 1010 | 794 | 928 | 800 | 963 | 1150 | 1050 | 1050 | 1140 |
| 27 | 1310 | 1100 | 1080 | 1000 | 813 | 934 | 800 | 939 | 1090 | 1050 | 1050 | 1140 |
| 28 | 1290 | 1090 | 1050 | 1000 | 851 | 981 | 813 | 897 | 1040 | 1050 | 1050 | 1350 |
| 29 | 1290 | 1090 | 1050 | 1000 | --- | 813 | 851 | 877 | 1050 | 1050 | 1050 | 1380 |
| 30 | 1290 | 1090 | 1050 | 1000 | --- | 806 | 890 | 857 | 1050 | 1050 | 1050 | 1220 |
| 31 | 1290 | --- | 1050 | 1000 | --- | 794 | --- | 845 | --- | 1070 | 1050 | --- |
| TOTAL | 39030 | 35320 | 33100 | 32374 | 25296 | 28711 | 22882 | 26717 | 30031 | 33310 | 32490 | 34010 |
| MEAN | 1259 | 1177 | 1068 | 1044 | 903 | 926 | 763 | 862 | 1001 | 1075 | 1048 | 1134 |
| MAX | 1430 | 1380 | 1130 | 1160 | 1000 | 1020 | 890 | 987 | 1150 | 1250 | 1080 | 1380 |
| MIN | 1150 | 1090 | 1050 | 981 | 609 | 794 | 705 | 806 | 806 | 1050 | 1030 | 1030 |
| AC-FT | 77420 | 70060 | 65650 | 64210 | 50170 | 56950 | 45390 | 52990 | 59570 | 66070 | 64440 | 67460 |

| | | | | | | | | | | |
|-------------|-------|--------|------|------|-----|------|-----|------|-------|---------|
| CAL YR 1976 | TOTAL | 776760 | MEAN | 2122 | MAX | 7180 | MIN | 1050 | AC-FT | 1541000 |
| WTR YR 1977 | TOTAL | 373271 | MEAN | 1023 | MAX | 1430 | MIN | 609 | AC-FT | 740400 |

ROGUE RIVER BASIN

14337600 ROGUE RIVER NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1970 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.0°C July 17, 18, Aug. 7, 1973; minimum, 0.5°C Jan. 3-5, 14, 15, 1971.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.0°C Aug. 15, 16, 23; minimum recorded, 1.0°C Jan. 6, but may have been lower during period of no record in January.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 12.0 | 10.0 | 8.5 | 7.5 | --- | --- | 3.0 | 2.5 | --- | --- | 6.0 | 5.0 |
| 2 | 11.0 | 10.0 | 9.0 | 8.0 | --- | --- | 3.5 | 3.0 | --- | --- | 5.5 | 5.0 |
| 3 | 10.5 | 8.5 | 8.5 | 7.5 | --- | --- | 3.5 | 2.5 | --- | --- | 6.0 | 5.0 |
| 4 | 10.0 | 7.5 | 8.0 | 7.0 | 4.5 | 3.5 | 4.0 | 3.0 | --- | --- | 6.5 | 5.0 |
| 5 | 10.0 | 7.5 | 7.0 | 6.5 | 4.0 | 3.0 | 3.5 | 2.0 | --- | --- | 6.5 | 5.0 |
| 6 | 10.5 | 8.0 | 8.0 | 6.5 | 4.0 | 3.0 | 3.5 | 1.0 | --- | --- | 6.0 | 5.0 |
| 7 | 11.0 | 8.5 | 7.5 | 6.5 | 4.0 | 3.0 | 4.0 | --- | --- | --- | 6.0 | 5.5 |
| 8 | 11.0 | 9.0 | 8.0 | 6.5 | 4.5 | 3.5 | --- | --- | --- | --- | 6.5 | 5.0 |
| 9 | 10.5 | 8.5 | 7.5 | 6.5 | 5.0 | 4.0 | --- | --- | --- | --- | 6.5 | 5.0 |
| 10 | 10.5 | 8.0 | 7.5 | 6.5 | 4.0 | 3.5 | --- | --- | --- | --- | 7.0 | 5.0 |
| 11 | 10.0 | 8.0 | 8.0 | 6.5 | 4.0 | 3.0 | --- | --- | --- | --- | 6.5 | 5.5 |
| 12 | 9.5 | 7.5 | 7.5 | 6.5 | 3.5 | 2.5 | --- | --- | --- | --- | 6.5 | 5.5 |
| 13 | 9.5 | 7.0 | 6.5 | 5.5 | 4.0 | 3.0 | --- | --- | --- | --- | 6.0 | 5.0 |
| 14 | 9.0 | 7.0 | 6.5 | 6.0 | 4.0 | 2.5 | --- | --- | --- | --- | 6.5 | 5.0 |
| 15 | 8.5 | 6.5 | 7.5 | 6.5 | 4.0 | 3.0 | --- | --- | --- | --- | 6.0 | 5.5 |
| 16 | 8.5 | 6.5 | 8.5 | 7.5 | 4.0 | 3.0 | --- | --- | --- | --- | 7.0 | 5.0 |
| 17 | 8.5 | 6.5 | 8.0 | 7.5 | 4.0 | 3.0 | --- | --- | --- | --- | 6.5 | 5.0 |
| 18 | 8.0 | 6.0 | 7.5 | 7.5 | 3.0 | 2.0 | 5.0 | 3.5 | 5.5 | --- | 6.5 | 5.5 |
| 19 | 8.0 | 6.0 | 7.0 | 5.5 | 3.0 | 1.5 | 5.0 | 4.0 | 6.0 | 4.0 | 7.0 | 5.5 |
| 20 | 8.0 | 6.0 | 6.0 | 5.0 | 2.5 | 1.5 | 5.0 | 3.5 | 5.5 | 4.5 | 7.5 | 5.5 |
| 21 | 8.0 | 6.0 | 6.0 | 5.0 | 2.5 | 1.5 | 5.0 | 3.5 | 6.0 | 5.0 | 8.0 | 5.5 |
| 22 | 8.0 | 6.0 | 6.0 | 5.0 | 3.5 | 2.0 | 5.0 | 4.0 | 6.0 | 5.0 | 8.0 | 5.5 |
| 23 | 7.5 | 6.0 | 6.0 | 5.0 | 4.5 | 3.0 | 5.5 | 4.0 | 5.5 | 5.0 | 6.5 | 6.0 |
| 24 | 6.5 | 6.0 | 5.5 | 4.5 | 3.0 | 2.5 | 5.0 | 4.0 | 6.0 | 4.5 | 7.5 | 5.5 |
| 25 | 7.5 | 6.5 | 6.0 | 5.0 | 3.5 | 2.5 | 5.5 | 4.0 | 5.5 | 4.5 | 8.0 | 6.0 |
| 26 | 7.5 | 6.0 | 5.0 | 3.5 | 3.5 | 3.5 | 5.5 | 4.0 | 5.5 | 4.5 | 7.5 | 5.5 |
| 27 | 7.0 | 5.5 | 3.5 | 2.5 | 4.0 | 3.5 | 5.0 | 4.0 | 6.5 | 5.0 | 7.0 | 6.0 |
| 28 | 7.0 | 5.5 | 3.5 | 2.0 | 3.5 | 3.0 | 5.0 | 3.5 | 6.0 | 5.0 | 7.0 | 5.5 |
| 29 | 7.0 | 6.5 | --- | --- | 3.5 | 3.0 | --- | --- | --- | --- | 7.5 | 6.5 |
| 30 | 8.0 | 6.5 | --- | --- | 4.5 | 3.5 | --- | --- | --- | --- | 8.5 | 6.5 |
| *31 | 8.0 | 7.0 | --- | --- | 3.5 | 2.5 | --- | --- | --- | --- | 7.5 | 6.5 |
| MONTH | 12.0 | 5.5 | 9.0 | 2.0 | 5.0 | 1.5 | 5.5 | 1.0 | 6.5 | 4.0 | 8.5 | 5.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|-----|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 8.0 | 6.0 | 9.5 | 8.5 | 11.5 | 9.0 | 12.5 | 10.5 | 14.5 | 12.5 | 15.5 | 13.5 |
| 2 | 9.0 | 6.0 | 11.0 | 8.5 | 11.5 | 8.5 | 12.5 | 10.5 | 15.0 | 13.0 | 15.5 | 13.5 |
| 3 | 9.5 | 6.5 | 10.0 | 8.5 | 11.0 | 8.5 | 11.5 | 10.5 | 15.0 | 12.5 | 15.5 | 13.5 |
| 4 | 10.0 | 7.0 | 9.5 | 8.0 | 12.5 | 9.0 | 11.5 | 10.5 | 15.0 | 12.5 | 15.5 | 14.0 |
| 5 | 10.0 | 7.0 | 9.0 | 8.0 | 12.5 | 9.0 | 12.5 | 10.0 | 15.5 | 12.5 | 15.5 | 13.5 |
| 6 | 10.0 | 7.0 | 10.5 | 7.5 | 12.5 | 9.0 | 12.5 | 10.5 | 15.5 | 13.0 | 15.5 | 13.5 |
| 7 | 10.5 | 7.5 | 10.0 | 7.5 | 12.5 | 9.5 | 13.0 | 10.5 | 15.0 | 13.0 | 15.5 | 13.5 |
| 8 | 9.0 | 7.5 | 10.5 | 7.0 | 12.0 | 9.5 | 12.5 | 10.5 | 15.0 | 13.0 | 15.0 | 13.5 |
| 9 | 8.5 | 7.5 | 9.5 | 7.5 | 11.5 | 9.0 | 12.5 | 10.5 | 15.0 | 13.0 | 15.0 | 13.5 |
| 10 | 9.5 | 7.0 | 9.0 | 8.0 | 11.0 | 9.0 | 13.0 | 11.0 | 15.5 | 13.0 | 15.0 | 13.5 |
| 11 | 10.0 | 7.5 | 10.0 | 8.0 | 11.0 | 9.5 | 13.0 | 11.0 | 15.5 | 13.0 | 15.5 | 13.5 |
| 12 | 10.0 | 7.0 | 10.5 | 8.0 | 12.0 | 9.0 | 13.0 | 11.0 | 15.5 | 13.0 | 15.0 | 13.5 |
| 13 | 10.0 | 7.5 | 10.5 | 7.5 | 12.0 | 9.5 | 13.0 | 11.0 | 15.5 | 13.0 | 15.0 | 13.5 |
| 14 | 10.0 | 7.0 | 10.0 | 8.5 | 12.0 | 9.5 | 13.5 | 11.5 | 15.5 | 13.5 | 15.0 | 13.0 |
| 15 | 10.0 | 7.5 | 10.0 | 8.0 | 12.0 | 9.0 | 13.5 | 11.5 | 16.0 | 13.5 | 14.0 | 13.0 |
| 16 | 10.0 | 7.5 | 10.0 | 7.5 | 12.0 | 9.0 | 14.0 | 11.5 | 16.0 | 13.5 | 14.5 | 13.5 |
| 17 | 10.0 | 6.5 | 10.0 | 7.5 | 10.5 | 9.5 | 14.0 | 11.5 | 15.5 | 13.5 | 14.0 | 13.5 |
| 18 | 10.0 | 6.5 | 9.5 | 7.5 | 11.5 | 10.0 | 13.0 | 12.0 | 15.5 | 13.5 | 14.5 | 13.5 |
| 19 | 10.0 | 6.5 | 11.0 | 8.0 | 12.0 | 9.5 | 14.0 | 12.0 | 15.5 | 13.5 | 14.5 | 13.0 |
| 20 | 9.5 | 7.0 | 11.5 | 8.0 | 11.0 | 9.5 | 14.0 | 12.0 | 15.0 | 13.5 | 14.0 | 13.0 |
| 21 | 10.5 | 7.5 | 11.5 | 8.5 | 12.0 | 9.5 | 14.0 | 12.0 | 15.5 | 13.5 | 14.0 | 13.0 |
| 22 | 9.5 | 7.5 | 9.0 | 8.0 | 12.0 | 10.0 | 14.5 | 12.0 | 15.5 | 13.5 | 14.0 | 12.5 |
| 23 | 9.0 | 7.5 | 10.0 | 8.5 | 12.0 | 9.5 | 14.5 | 12.0 | 16.0 | 13.5 | 13.0 | 11.5 |
| 24 | 9.5 | 7.5 | 11.0 | 8.5 | 12.5 | 9.5 | 14.5 | 12.0 | 15.5 | 14.0 | 12.0 | 11.0 |
| 25 | 9.0 | 7.5 | 10.5 | 8.5 | 12.0 | 10.0 | 14.5 | 12.0 | 14.5 | 13.5 | 12.0 | 11.0 |
| 26 | 10.0 | 7.5 | 11.0 | 9.0 | 12.0 | 10.0 | 14.5 | 12.5 | 14.5 | 13.5 | 12.5 | 11.0 |
| 27 | 10.0 | 7.5 | 11.0 | 8.0 | 12.5 | 10.5 | 14.5 | 12.5 | 15.0 | 13.5 | 11.5 | 11.0 |
| 28 | 9.0 | 7.5 | 11.5 | 7.5 | 12.5 | 10.5 | 14.5 | 12.5 | 15.0 | 14.0 | 12.0 | 11.0 |
| 29 | 10.5 | 7.5 | 11.5 | 8.0 | 12.5 | 10.5 | 14.5 | 12.0 | 15.5 | 14.0 | 12.0 | 11.0 |
| 30 | 10.5 | 8.5 | 11.5 | 8.5 | 12.0 | 10.5 | 15.0 | 12.5 | 15.5 | 13.5 | 12.0 | 10.5 |
| 31 | --- | --- | 12.0 | 9.0 | --- | --- | 15.0 | 12.5 | 15.0 | 13.5 | --- | --- |
| MONTH | 10.5 | 6.0 | 12.0 | 7.0 | 12.5 | 8.5 | 15.0 | 10.0 | 16.0 | 12.5 | 15.5 | 10.5 |

ROGUE RIVER BASIN

501

14337800 ELK CREEK NEAR CASCADE GORGE, OR

LOCATION.--Lat 42°46'25", long 122°40'15", in NW¼ sec.23, T.32 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.1 mi (0.2 km) downstream from Sugarpine Creek, 6.5 mi (10.5 km) northwest of town of Cascade Gorge, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--78.8 mi² (204.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,820 ft (555 m), from topographic map.

REMARKS.--Water-discharge records good. No regulation. Many diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft³/s (192 m³/s) Jan. 15, 1974, gage height, 8.9 ft (2.71 m), from floodmark; minimum daily, 0.72 ft³/s (0.020 m³/s) Aug. 24, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 231 ft³/s (6.54 m³/s) May 23, gage height, 3.68 ft (1.122 m), no peak above base of 1,600 ft³/s (45.3 m³/s); minimum, 1.2 ft³/s (0.034 m³/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|---------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | 5.7 | 11 | 7.6 | 10 | 9.5 | 25 | 84 | 43 | 58 | 12 | 2.5 | 4.6 | | |
| 2 | 11 | 12 | 7.3 | 12 | 8.7 | 15 | 92 | 77 | 53 | 16 | 2.4 | 3.9 | | |
| 3 | 8.3 | 9.8 | 7.3 | 12 | 8.3 | 18 | 77 | 76 | 48 | 12 | 2.4 | 3.6 | | |
| 4 | 7.6 | 9.1 | 7.3 | 11 | 8.0 | 42 | 92 | 100 | 44 | 10 | 2.2 | 3.6 | | |
| 5 | 7.6 | 8.7 | 7.6 | 10 | 8.0 | 48 | 123 | 150 | 39 | 9.5 | 2.2 | 3.6 | | |
| 6 | 7.3 | 8.7 | 7.6 | 9.4 | 8.3 | 53 | 126 | 121 | 36 | 9.1 | 2.2 | 3.4 | | |
| 7 | 6.9 | 8.0 | 7.6 | 9.0 | 8.3 | 63 | 130 | 100 | 33 | 8.7 | 2.4 | 3.2 | | |
| 8 | 6.3 | 8.0 | 8.0 | 8.7 | 8.7 | 135 | 145 | 83 | 28 | 8.0 | 2.5 | 3.0 | | |
| 9 | 6.3 | 8.0 | 11 | 9.4 | 9.5 | 159 | 112 | 76 | 27 | 7.6 | 2.2 | 2.7 | | |
| 10 | 6.0 | 8.0 | 9.1 | 9.8 | 9.1 | 108 | 84 | 88 | 25 | 7.3 | 2.2 | 2.7 | | |
| 11 | 6.0 | 8.0 | 8.7 | 11 | 9.1 | 84 | 72 | 119 | 27 | 6.9 | 1.9 | 2.7 | | |
| 12 | 6.3 | 8.0 | 9.8 | 15 | 9.1 | 86 | 67 | 108 | 25 | 6.6 | 1.6 | 2.7 | | |
| 13 | 6.0 | 7.6 | 8.3 | 14 | 8.7 | 72 | 72 | 90 | 22 | 6.6 | 1.3 | 2.5 | | |
| 14 | 5.7 | 12 | 9.1 | 14 | 8.7 | 54 | 67 | 76 | 20 | 6.3 | 1.6 | 2.4 | | |
| 15 | 5.7 | 18 | 7.6 | 13 | 8.0 | 43 | 61 | 67 | 18 | 6.0 | 1.6 | 2.2 | | |
| 16 | 5.7 | 17 | 7.6 | 14 | 7.6 | 37 | 61 | 76 | 17 | 5.7 | 1.6 | 3.0 | | |
| 17 | 5.4 | 12 | 8.0 | 12 | 7.3 | 35 | 55 | 117 | 17 | 5.4 | 1.7 | 3.4 | | |
| 18 | 5.7 | 11 | 7.6 | 12 | 7.0 | 33 | 49 | 126 | 17 | 5.4 | 1.9 | 4.6 | | |
| 19 | 5.7 | 10 | 7.6 | 13 | 7.0 | 44 | 45 | 106 | 15 | 5.4 | 1.5 | 5.7 | | |
| 20 | 5.7 | 9.5 | 7.6 | 14 | 6.6 | 64 | 43 | 92 | 14 | 5.1 | 1.6 | 6.6 | | |
| 21 | 5.4 | 9.5 | 8.0 | 14 | 10 | 60 | 42 | 81 | 15 | 4.6 | 2.2 | 5.7 | | |
| 22 | 5.4 | 9.1 | 8.0 | 14 | 15 | 67 | 41 | 83 | 14 | 4.6 | 2.4 | 4.6 | | |
| 23 | 5.4 | 8.7 | 7.6 | 13 | 14 | 96 | 41 | 188 | 12 | 4.3 | 1.9 | 4.6 | | |
| 24 | 6.3 | 8.3 | 8.3 | 12 | 19 | 110 | 40 | 194 | 12 | 3.9 | 5.1 | 9.1 | | |
| 25 | 11 | 8.0 | 7.6 | 9.4 | 12 | 106 | 41 | 145 | 11 | 3.6 | 8.7 | 6.9 | | |
| 26 | 12 | 8.0 | 8.0 | 9.8 | 14 | 81 | 41 | 150 | 10 | 3.9 | 11 | 6.0 | | |
| 27 | 9.1 | 8.3 | 8.3 | 9.8 | 27 | 86 | 37 | 128 | 9.8 | 3.6 | 6.9 | 5.4 | | |
| 28 | 8.0 | 8.0 | 8.0 | 9.4 | 38 | 90 | 35 | 108 | 9.5 | 3.4 | 6.3 | 60 | | |
| 29 | 8.0 | 8.0 | 7.3 | 9.1 | --- | 76 | 34 | 92 | 9.1 | 3.2 | 6.9 | 51 | | |
| 30 | 8.3 | 7.6 | 6.9 | 8.7 | --- | 63 | 35 | 79 | 8.7 | 3.2 | 5.7 | 20 | | |
| 31 | 9.1 | --- | 7.6 | 9.1 | --- | 55 | --- | 67 | --- | 2.5 | 5.1 | --- | | |
| TOTAL | 218.9 | 287.9 | 247.9 | 351.6 | 314.5 | 2108 | 2044 | 3206 | 694.1 | 200.4 | 101.7 | 243.4 | | |
| MEAN | 7.06 | 9.60 | 8.00 | 11.3 | 11.2 | 68.0 | 68.1 | 103 | 23.1 | 6.46 | 3.28 | 8.11 | | |
| MAX | 12 | 18 | 11 | 15 | 38 | 159 | 145 | 194 | 58 | 16 | 11 | 60 | | |
| MIN | 5.4 | 7.6 | 6.9 | 8.7 | 6.6 | 15 | 34 | 43 | 8.7 | 2.5 | 1.3 | 2.2 | | |
| CFSM | .09 | .12 | .10 | .14 | .14 | .86 | .86 | 1.31 | .29 | .08 | .04 | .10 | | |
| IN. | .10 | .14 | .12 | .17 | .15 | 1.00 | .96 | 1.51 | .33 | .09 | .05 | .11 | | |
| AC-FT | 434 | 571 | 492 | 697 | 624 | 4180 | 4050 | 6360 | 1380 | 397 | 202 | 483 | | |
| CAL YR 1976 | TOTAL | 36729.5 | MEAN | 100 | MAX | 1690 | MIN | 5.4 | CFSM | 1.27 | IN | 17.34 | AC-FT | 72850 |
| WTR YR 1977 | TOTAL | 10018.4 | MEAN | 27.4 | MAX | 194 | MIN | 1.3 | CFSM | .35 | IN | 4.73 | AC-FT | 19870 |

ROGUE RIVER BASIN

14337800 ELK CREEK NEAR CASCADE GORGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to October 1976, August to September 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.5°C July 29, 30, 1973; minimum, 1.0°C Dec. 31, 1974, Jan. 2, 1975, Feb. 4-7, 10, 11, 1976.

EXTREMES FOR OCTOBER, AUGUST TO SEPTEMBER.--

WATER TEMPERATURES: Maximum, 27.0°C Aug. 19; minimum, 5.5°C Oct. 18, 19.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 19.0 | 14.0 | | | | | | | | | | |
| 2 | 16.5 | 13.0 | | | | | | | | | | |
| 3 | 16.0 | 11.0 | | | | | | | | | | |
| 4 | 15.0 | 9.0 | | | | | | | | | | |
| 5 | 15.0 | 9.0 | | | | | | | | | | |
| 6 | 16.5 | 10.0 | | | | | | | | | | |
| 7 | 17.0 | 10.5 | | | | | | | | | | |
| 8 | 17.0 | 11.0 | | | | | | | | | | |
| 9 | 15.5 | 10.0 | | | | | | | | | | |
| 10 | 15.5 | 9.5 | | | | | | | | | | |
| 11 | 14.5 | 9.0 | | | | | | | | | | |
| 12 | 14.5 | 8.5 | | | | | | | | | | |
| 13 | 14.0 | 7.5 | | | | | | | | | | |
| 14 | 13.5 | 7.5 | | | | | | | | | | |
| 15 | 13.0 | 7.0 | | | | | | | | | | |
| 16 | 12.5 | 7.0 | | | | | | | | | | |
| 17 | 12.0 | 6.5 | | | | | | | | | | |
| 18 | 11.0 | 5.5 | | | | | | | | | | |
| 19 | --- | 5.5 | | | | | | | | | | |
| 20 | --- | --- | | | | | | | | | | |
| 21 | --- | --- | | | | | | | | | | |
| 22 | --- | --- | | | | | | | | | | |
| 23 | --- | --- | | | | | | | | | | |
| 24 | --- | --- | | | | | | | | | | |
| 25 | --- | --- | | | | | | | | | | |
| 26 | --- | --- | | | | | | | | | | |
| 27 | --- | --- | | | | | | | | | | |
| 28 | --- | --- | | | | | | | | | | |
| 29 | --- | --- | | | | | | | | | | |
| 30 | --- | --- | | | | | | | | | | |
| 31 | --- | --- | | | | | | | | | | |
| MONTH | 19.0 | 5.5 | | | | | | | | | | |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | | | | | | | | | --- | --- | 21.5 | 12.5 |
| 2 | | | | | | | | | --- | --- | 22.5 | 13.5 |
| 3 | | | | | | | | | --- | --- | 23.5 | 15.5 |
| 4 | | | | | | | | | --- | --- | 24.5 | 15.5 |
| 5 | | | | | | | | | --- | --- | 24.5 | 16.5 |
| 6 | | | | | | | | | --- | --- | 23.5 | 14.0 |
| 7 | | | | | | | | | --- | --- | 20.5 | 14.0 |
| 8 | | | | | | | | | --- | --- | 21.5 | 12.5 |
| 9 | | | | | | | | | --- | --- | 21.0 | 11.5 |
| 10 | | | | | | | | | --- | --- | 22.0 | 12.5 |
| 11 | | | | | | | | | --- | --- | 22.0 | 13.0 |
| 12 | | | | | | | | | --- | --- | 22.0 | 12.5 |
| 13 | | | | | | | | | --- | --- | 21.5 | 13.0 |
| 14 | | | | | | | | | --- | --- | 21.5 | 14.5 |
| 15 | | | | | | | | | --- | --- | 15.0 | 13.0 |
| 16 | | | | | | | | | --- | --- | 15.5 | 12.0 |
| 17 | | | | | | | | | --- | --- | 15.0 | 12.5 |
| 18 | | | | | | | | | 26.0 | --- | 17.0 | 13.0 |
| 19 | | | | | | | | | 27.0 | 16.0 | 17.0 | 17.0 |
| 20 | | | | | | | | | 23.0 | 16.0 | 17.0 | 17.0 |
| 21 | | | | | | | | | 26.5 | 17.5 | 17.0 | 17.0 |
| 22 | | | | | | | | | 25.0 | 14.5 | 17.0 | 8.5 |
| 23 | | | | | | | | | 24.5 | 15.0 | 13.0 | 10.5 |
| 24 | | | | | | | | | 21.5 | 17.0 | 14.0 | 10.5 |
| 25 | | | | | | | | | 17.0 | 15.0 | 16.0 | 11.5 |
| 26 | | | | | | | | | 18.0 | 14.5 | 17.0 | 12.0 |
| 27 | | | | | | | | | 19.0 | 13.5 | 14.5 | 13.0 |
| 28 | | | | | | | | | 20.0 | 15.5 | 13.0 | 11.5 |
| 29 | | | | | | | | | 22.0 | 14.5 | 13.5 | 10.5 |
| 30 | | | | | | | | | 22.5 | 16.0 | 13.5 | 8.5 |
| 31 | | | | | | | | | 21.0 | 13.5 | --- | --- |
| MONTH | | | | | | | | | 27.0 | 13.5 | 24.5 | 8.5 |

ROGUE RIVER BASIN

503

14338000 ELK CREEK NEAR TRAIL, OR

LOCATION.--Lat 42°39'50", long 122°44'50", in SW¼ sec.30, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 3.3 mi (5.3 km) northeast of Trail and at mile 0.4 (0.6 km).

DRAINAGE AREA.--133 mi² (344 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Prior to March 1946 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,456.56 ft (443.959 m) above mean sea level. Prior to July 5, 1946, nonrecording gage at various sites within 1.0 mi (1.6 km) of present site at different datums. July 5, 1946, to June 22, 1950, nonrecording gage, and June 23, 1950, to May 23, 1954, water-stage recorder, at site 0.3 mi (0.5 km) upstream at datum 12.14 ft (3.700 m) higher.

REMARKS.--Water-discharge records fair. No regulation. Diversions above station for irrigation.

AVERAGE DISCHARGE.--32 years, 233 ft³/s (6.599 m³/s), 168,800 acre-ft/yr (208 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,200 ft³/s (544 m³/s) Dec. 22, 1964, gage height, 18.84 ft (5.742 m), from rating curve extended above 4,700 ft³/s (133 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.40 ft³/s (0.011 m³/s) Aug. 16, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 331 ft³/s (9.37 m³/s) May 23, gage height, 3.98 ft (1.213 m), no peak above base of 2,700 ft³/s (76.5 m³/s); minimum, 1.5 ft³/s (0.042 m³/s) Aug. 12, 13, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|------|------|-----------|----------|---------|--------------|------|------|-------|-------|-------|
| 1 | 9.9 | 13 | 12 | 16 | 16 | 109 | 160 | 48 | 81 | 11 | 2.2 | 5.1 |
| 2 | 17 | 15 | 12 | 20 | 15 | 83 | 180 | 107 | 71 | 14 | 2.4 | 4.7 |
| 3 | 14 | 14 | 12 | 23 | 14 | 101 | 136 | 101 | 63 | 10 | 2.2 | 4.1 |
| 4 | 12 | 13 | 12 | 20 | 15 | 101 | 141 | 141 | 57 | 8.6 | 1.8 | 3.8 |
| 5 | 13 | 12 | 12 | 18 | 15 | 88 | 186 | 226 | 49 | 7.7 | 2.2 | 3.5 |
| 6 | 11 | 12 | 12 | 17 | 14 | 97 | 180 | 199 | 41 | 7.7 | 2.0 | 3.5 |
| 7 | 10 | 12 | 12 | 16 | 15 | 99 | 177 | 160 | 37 | 6.5 | 2.4 | 3.2 |
| 8 | 9.9 | 12 | 12 | 15 | 15 | 219 | 196 | 130 | 35 | 5.8 | 2.9 | 3.2 |
| 9 | 9.4 | 12 | 16 | 15 | 15 | 269 | 163 | 111 | 35 | 5.8 | 3.5 | 3.8 |
| 10 | 9.0 | 12 | 15 | 18 | 15 | 205 | 121 | 115 | 35 | 5.8 | 2.9 | 3.8 |
| 11 | 9.0 | 11 | 14 | 18 | 15 | 150 | 97 | 166 | 38 | 5.4 | 2.2 | 3.5 |
| 12 | 9.0 | 11 | 13 | 26 | 15 | 141 | 86 | 155 | 33 | 5.1 | 1.8 | 3.5 |
| 13 | 9.0 | 11 | 14 | 26 | 15 | 128 | 90 | 130 | 29 | 4.7 | 2.0 | 3.2 |
| 14 | 9.0 | 14 | 13 | 26 | 15 | 94 | 86 | 107 | 26 | 5.1 | 2.4 | 3.2 |
| 15 | 8.6 | 20 | 13 | 23 | 14 | 72 | 77 | 94 | 23 | 4.4 | 2.2 | 2.9 |
| 16 | 8.1 | 23 | 13 | 20 | 14 | 59 | 74 | 105 | 22 | 4.4 | 2.4 | 3.5 |
| 17 | 8.1 | 18 | 12 | 19 | 14 | 52 | 68 | 199 | 21 | 4.1 | 2.4 | 3.5 |
| 18 | 8.1 | 15 | 16 | 19 | 14 | 50 | 61 | 209 | 22 | 3.8 | 2.2 | 5.1 |
| 19 | 8.1 | 14 | 12 | 20 | 14 | 60 | 55 | 163 | 20 | 4.1 | 2.0 | 6.5 |
| 20 | 7.7 | 14 | 12 | 22 | 14 | 103 | 51 | 134 | 20 | 4.1 | 2.0 | 7.7 |
| 21 | 8.1 | 14 | 13 | 23 | 17 | 97 | 47 | 113 | 20 | 3.8 | 1.8 | 7.7 |
| 22 | 8.1 | 13 | 14 | 23 | 33 | 105 | 45 | 109 | 18 | 3.2 | 2.2 | 6.9 |
| 23 | 8.6 | 13 | 14 | 21 | 35 | 148 | 44 | 251 | 17 | 2.9 | 2.4 | 6.1 |
| 24 | 9.0 | 12 | 11 | 19 | 41 | 174 | 44 | 306 | 16 | 2.9 | 4.1 | 7.7 |
| 25 | 11 | 12 | 14 | 18 | 38 | 183 | 44 | 236 | 15 | 3.2 | 5.8 | 9.4 |
| 26 | 14 | 12 | 14 | 20 | 38 | 141 | 47 | 222 | 14 | 2.9 | 8.1 | 7.7 |
| 27 | 12 | 12 | 14 | 23 | 51 | 136 | 39 | 199 | 14 | 2.4 | 9.4 | 6.9 |
| 28 | 11 | 12 | 14 | 19 | 101 | 150 | 37 | 163 | 13 | 2.4 | 7.7 | 65 |
| 29 | 11 | 12 | 13 | 18 | --- | 132 | 35 | 136 | 12 | 2.2 | 7.3 | 128 |
| 30 | 12 | 12 | 13 | 17 | --- | 109 | 35 | 115 | 12 | 2.2 | 6.5 | 41 |
| 31 | 12 | --- | 13 | 17 | --- | 95 | --- | 95 | --- | 2.2 | 5.4 | --- |
| TOTAL | 316.7 | 402 | 406 | 615 | 647 | 3750 | 2802 | 4745 | 909 | 158.4 | 106.8 | 367.7 |
| MEAN | 10.2 | 13.4 | 13.1 | 19.8 | 23.1 | 121 | 93.4 | 153 | 30.3 | 5.11 | 3.45 | 12.3 |
| MAX | 17 | 23 | 16 | 26 | 101 | 269 | 196 | 306 | 81 | 14 | 9.4 | 128 |
| MIN | 7.7 | 11 | 11 | 15 | 14 | 50 | 35 | 48 | 12 | 2.2 | 1.8 | 2.9 |
| AC-FT | 628 | 797 | 805 | 1220 | 1280 | 7440 | 5560 | 9410 | 1800 | 314 | 212 | 729 |
| CAL YR 1976 TOTAL | 55883.0 | | | MEAN 153 | MAX 2730 | MIN 5.8 | AC-FT 110800 | | | | | |
| WTR YR 1977 TOTAL | 15225.6 | | | MEAN 41.7 | MAX 306 | MIN 1.8 | AC-FT 30200 | | | | | |

ROGUE RIVER BASIN

14338000 ELK CREEK NEAR TRAIL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1973 to current year.

TURBIDITY: January 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 30.0°C July 26, 27, 1975; minimum recorded, 0.0°C many days during December 1976 to February 1977.

TURBIDITY: Maximum recorded, 1,000 JTU (upper limit of meter) Sept. 14, 1975, but may have been higher; minimum, 0 JTU at times.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.5°C Aug. 3; minimum recorded, 0.0°C many days during December to February.

TURBIDITY: Maximum, 200 JTU Oct. 2; minimum, 0 JTU many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SUS- PENDE SEDI- MENT (MG/L) | SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) |
|-------|------|---|-----------------------------|--|---------------|------------------------------------|--|---|
| OCT | | | | | | | | |
| 13... | 1250 | 9.0 | 11.0 | -- | -- | -- | 3 | .07 |
| NOV | | | | | | | | |
| 23... | 1300 | 13 | 11.0 | 204 | 7.0 | 11.9 | 1 | .04 |
| DEC | | | | | | | | |
| 10... | 1335 | 15 | 2.4 | 158 | 7.8 | 13.9 | 0 | .00 |
| 22... | 1210 | 17 | .2 | 207 | 7.7 | 13.2 | 1 | .05 |
| JAN | | | | | | | | |
| 13... | 1400 | 26 | 2.8 | 180 | 7.6 | 12.5 | 1 | .07 |
| FEB | | | | | | | | |
| 01... | 1330 | 16 | 4.1 | 185 | 7.9 | 13.0 | 1 | .04 |
| 22... | 1430 | 34 | 7.8 | 189 | 8.1 | 12.1 | 8 | .73 |
| MAR | | | | | | | | |
| 03... | 1300 | 95 | 4.0 | -- | -- | -- | 8 | 2.1 |
| 09... | 1000 | 301 | 5.2 | 91 | 7.5 | 12.2 | 46 | 37 |
| 22... | 1400 | 111 | 10.5 | 90 | 8.0 | 10.5 | 8 | 2.4 |
| APR | | | | | | | | |
| 14... | 1600 | 83 | 12.9 | 95 | 7.9 | 10.0 | 6 | 1.3 |
| 27... | 1100 | 41 | 12.3 | 92 | 7.8 | 10.4 | 3 | .33 |
| MAY | | | | | | | | |
| 11... | 1230 | 171 | 10.6 | 88 | 7.7 | 11.4 | 10 | 4.6 |
| 23... | 1005 | 236 | -- | 360 | -- | -- | 14 | 8.9 |
| 25... | 1400 | 229 | 12.4 | 74 | 8.2 | -- | -- | -- |
| JUN | | | | | | | | |
| 07... | 0930 | 38 | 19.2 | 106 | 7.7 | 9.2 | 2 | .21 |
| JUL | | | | | | | | |
| 11... | 1300 | 5.4 | 24.0 | 171 | 8.3 | 9.9 | 1 | .01 |
| 22... | 1200 | 3.2 | 23.6 | 177 | 7.7 | 9.4 | 3 | .03 |
| AUG | | | | | | | | |
| 15... | 1430 | 2.4 | 31.2 | 203 | 9.1 | 11.7 | 1 | .01 |
| 30... | 1600 | 6.2 | 24.8 | 187 | 9.0 | 10.1 | 1 | .02 |
| SEP | | | | | | | | |
| 13... | 1530 | 2.9 | 22.8 | 194 | 9.1 | 12.8 | -- | -- |

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDI- MENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|-------|------|---|--|--|-------|------|---|--|--|
| OCT | | | | | MAY | | | | |
| 13... | 1250 | 9.0 | 3 | 84 | 11... | 1250 | 171 | 11 | 89 |
| FEB | | | | | 23... | 1005 | 236 | 14 | 96 |
| 22... | 1440 | 34 | 8 | 90 | JUN | | | | |
| MAR | | | | | 07... | 1030 | 38 | 2 | 100 |
| 03... | 1300 | 95 | 8 | 74 | | | | | |
| 09... | 1000 | 301 | 46 | 79 | | | | | |
| 22... | 1410 | 111 | 8 | 62 | | | | | |

14338000 ELK CREEK NEAR TRAIL, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 21.5 | 16.5 | 14.0 | 12.0 | 3.5 | --- | 1.0 | 0.0 | 5.5 | 2.5 | 6.0 | 4.0 |
| 2 | 19.0 | 15.5 | 15.0 | 12.0 | 3.0 | 0.5 | 1.5 | 1.0 | 4.5 | 0.5 | 5.0 | 3.5 |
| 3 | 18.0 | 13.0 | 14.5 | 12.0 | 3.5 | 0.5 | 2.5 | 1.0 | 4.0 | 0.0 | 5.5 | 2.5 |
| 4 | 17.0 | 11.5 | 13.0 | 10.5 | 3.5 | 1.0 | 3.5 | 1.5 | 4.5 | 0.5 | 7.5 | 3.5 |
| 5 | 17.5 | 12.0 | 10.5 | 8.5 | 2.5 | 0.5 | 2.5 | 0.5 | 4.5 | 1.5 | 8.0 | 3.5 |
| 6 | 18.5 | 13.0 | 11.0 | 8.0 | 2.5 | 0.5 | 0.5 | 0.0 | 6.5 | 2.5 | 6.0 | 4.0 |
| 7 | 19.0 | 13.5 | 10.5 | 7.5 | 3.0 | 0.0 | 0.0 | 0.0 | 5.5 | 2.5 | 6.0 | 5.0 |
| 8 | 19.0 | 14.0 | 10.5 | 7.5 | 3.5 | 1.0 | 0.0 | 0.0 | 7.5 | 4.5 | 7.0 | 5.0 |
| 9 | 18.0 | 13.0 | 10.0 | 7.5 | 4.5 | 3.0 | 0.0 | 0.0 | 7.5 | 4.5 | 6.5 | 4.5 |
| 10 | 17.5 | 12.5 | 10.5 | 8.5 | 3.5 | 2.0 | 0.0 | 0.0 | 8.0 | 5.0 | 8.0 | 3.0 |
| 11 | 17.0 | 12.0 | 11.0 | 8.0 | 3.0 | 1.0 | 1.0 | 0.0 | 7.5 | 4.0 | 7.0 | 3.5 |
| 12 | 17.0 | 11.5 | 11.0 | 8.5 | 2.0 | 0.5 | 2.5 | 0.5 | 8.5 | 4.0 | 7.5 | 5.0 |
| 13 | 16.0 | 10.5 | 9.0 | 6.5 | --- | --- | 3.0 | 2.0 | 9.0 | 5.5 | 6.0 | 4.0 |
| 14 | 15.5 | 10.5 | 10.0 | 8.0 | --- | --- | 4.0 | 2.0 | 9.0 | 4.5 | 7.0 | 3.5 |
| 15 | 15.0 | 9.5 | 11.0 | 9.0 | --- | --- | 3.5 | 1.5 | 9.0 | 5.0 | 6.0 | 4.0 |
| 16 | 14.5 | 9.5 | 12.5 | 10.5 | --- | --- | 3.0 | 1.5 | 9.0 | 5.0 | 8.5 | 3.0 |
| 17 | 14.0 | 8.5 | 12.0 | 11.0 | --- | --- | 2.5 | 0.5 | 10.0 | 6.0 | 7.5 | 4.5 |
| 18 | 13.0 | 8.0 | 11.5 | 11.0 | --- | --- | 3.0 | 0.0 | 9.0 | 4.0 | 7.0 | 5.0 |
| 19 | 13.0 | 8.0 | 11.0 | 9.0 | --- | --- | 2.5 | 0.5 | 9.0 | 4.0 | 8.5 | 6.0 |
| 20 | 13.0 | 8.0 | 8.5 | 6.5 | --- | --- | 3.0 | 0.0 | 7.5 | 5.5 | 10.0 | 6.0 |
| 21 | 13.0 | 8.0 | 8.5 | 6.5 | --- | --- | 4.0 | 1.5 | 6.5 | 5.0 | 10.5 | 4.5 |
| 22 | 12.5 | 8.5 | 8.0 | 5.5 | 0.0 | 0.0 | 4.0 | 1.5 | 7.5 | 5.0 | 11.0 | 5.5 |
| 23 | 12.0 | 8.0 | 7.0 | 4.5 | 0.5 | 0.0 | 3.5 | 0.5 | 5.5 | 4.0 | 9.0 | 6.5 |
| 24 | 10.5 | 8.0 | 6.0 | 4.0 | 0.0 | 0.0 | 3.0 | 0.0 | 6.5 | 3.5 | 7.5 | 4.5 |
| 25 | 11.5 | 8.5 | 7.0 | 4.5 | 0.5 | 0.0 | 2.0 | 0.0 | 6.5 | 4.5 | 8.5 | 4.0 |
| 26 | 12.0 | 8.5 | --- | 3.5 | 1.5 | 0.5 | 1.5 | 0.0 | 7.0 | 4.5 | 10.0 | 4.5 |
| 27 | 11.5 | 7.0 | --- | --- | 3.0 | 1.5 | 1.5 | 0.0 | 8.0 | 5.5 | 8.0 | 6.0 |
| 28 | 10.5 | 7.0 | --- | --- | 2.5 | 1.5 | 2.0 | 0.0 | 7.0 | 5.5 | 7.5 | 4.0 |
| 29 | 10.5 | 9.0 | --- | --- | 2.5 | 1.5 | 2.0 | 0.0 | --- | --- | 7.0 | 4.0 |
| 30 | 12.0 | 9.5 | --- | --- | 3.0 | 1.0 | 2.0 | 0.0 | --- | --- | 9.0 | 4.0 |
| 31 | 12.5 | 10.5 | --- | --- | 1.5 | 0.0 | 5.0 | 1.5 | --- | --- | 6.5 | 4.5 |
| MONTH | 21.5 | 7.0 | 15.0 | 3.5 | 4.5 | 0.0 | 5.0 | 0.0 | 10.0 | 0.0 | 11.0 | 2.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 7.5 | 5.5 | 14.5 | 12.0 | 19.0 | 14.5 | 26.0 | 20.0 | 26.0 | 20.5 | 22.5 | 16.0 |
| 2 | 10.5 | 4.0 | 15.5 | 10.0 | 18.5 | 12.0 | 25.5 | 18.0 | 29.0 | 21.5 | 23.0 | 17.0 |
| 3 | 11.5 | 5.0 | 13.5 | 10.5 | 16.5 | 13.0 | 22.0 | 16.5 | 29.5 | 21.0 | 24.0 | 18.0 |
| 4 | 13.0 | 6.0 | 11.5 | 8.5 | 22.0 | 13.5 | 21.5 | 16.0 | 28.5 | 21.0 | 25.0 | 19.0 |
| 5 | 12.5 | 6.0 | 10.0 | 7.5 | 24.5 | 16.0 | 20.5 | 14.0 | 28.0 | 19.5 | 25.0 | 19.5 |
| 6 | 13.0 | 6.5 | 12.5 | 6.5 | 25.5 | 18.5 | 24.5 | 14.0 | 27.5 | 20.0 | 24.0 | 17.5 |
| 7 | 13.5 | 6.5 | 12.5 | 8.0 | 25.0 | 19.0 | 26.0 | 16.0 | 27.0 | 21.5 | 23.0 | 17.5 |
| 8 | 11.5 | 9.0 | 13.5 | 7.0 | 24.0 | 18.0 | 26.5 | 17.5 | 27.5 | 20.0 | 22.0 | 16.5 |
| 9 | 9.0 | 6.0 | 12.5 | 9.0 | 22.0 | 16.0 | 26.0 | 17.5 | 26.5 | 20.5 | 21.5 | 15.5 |
| 10 | 10.5 | 4.5 | 11.0 | 9.0 | 19.5 | 16.5 | 26.0 | 16.0 | 28.0 | 20.0 | 22.0 | 16.0 |
| 11 | 13.5 | 7.5 | 12.0 | 8.0 | 20.5 | 15.5 | 27.0 | 17.0 | 28.5 | 20.5 | 22.0 | 16.5 |
| 12 | 14.0 | 7.5 | 15.0 | 8.5 | 23.0 | 14.5 | 26.0 | 19.0 | 27.5 | 21.0 | 22.0 | 16.0 |
| 13 | 14.0 | 10.0 | 14.5 | 8.5 | 24.0 | 16.5 | 25.5 | 16.0 | 27.0 | 22.0 | 22.0 | 16.5 |
| 14 | 13.0 | 6.5 | 13.5 | 10.5 | 24.5 | 16.5 | 27.0 | 17.0 | 27.0 | 21.5 | 21.5 | 17.5 |
| 15 | 14.5 | 8.5 | 13.0 | 9.5 | 24.5 | 15.5 | 27.5 | 18.5 | 27.5 | 20.5 | 18.5 | 15.5 |
| 16 | 15.0 | 10.0 | 12.5 | 9.0 | 25.5 | 16.0 | 28.0 | 19.0 | 28.0 | 21.0 | 16.5 | 14.0 |
| 17 | 13.5 | 7.0 | 12.0 | 8.0 | 20.5 | 18.5 | 27.5 | 18.5 | 26.5 | 21.0 | 16.5 | 14.5 |
| 18 | 13.0 | 6.5 | 10.5 | 7.0 | 22.5 | 17.5 | 26.0 | 20.0 | 26.5 | 22.5 | 18.5 | 15.0 |
| 19 | 14.0 | 6.5 | 15.0 | 7.5 | 24.5 | 17.0 | 28.0 | 19.5 | 25.5 | 20.5 | 17.5 | 15.5 |
| 20 | 14.0 | 8.0 | 17.0 | 10.0 | 20.5 | 16.5 | 28.0 | 19.0 | 23.5 | 20.5 | 17.0 | 14.5 |
| 21 | 16.5 | 10.0 | 17.0 | 12.0 | 25.5 | 15.5 | 28.0 | 19.5 | 26.0 | 20.5 | 18.0 | 13.5 |
| 22 | 14.0 | 10.0 | 14.5 | 10.5 | 27.5 | 18.5 | 28.5 | 19.5 | 25.0 | 19.0 | 17.5 | 11.5 |
| 23 | 13.5 | 10.0 | 12.0 | 9.0 | 27.0 | 18.0 | 28.5 | 20.0 | 23.5 | 19.0 | 15.5 | 13.0 |
| 24 | 14.0 | 10.0 | 14.0 | 8.5 | 27.0 | 17.5 | 28.5 | 20.5 | 24.0 | 20.5 | 17.0 | 12.5 |
| 25 | 13.0 | 10.5 | 12.0 | 9.0 | 27.5 | 18.0 | 27.0 | 20.5 | 21.5 | 18.0 | 18.0 | 14.0 |
| 26 | 16.5 | 9.0 | 12.0 | 9.5 | 28.0 | 18.5 | 28.5 | 19.5 | 19.0 | 16.5 | 19.5 | 14.5 |
| 27 | 18.0 | 10.0 | 13.0 | 7.5 | 27.5 | 18.5 | 28.0 | 19.5 | 20.0 | 15.5 | 18.0 | 15.0 |
| 28 | 14.5 | 11.5 | 15.0 | 7.5 | 28.0 | 18.0 | 26.0 | 19.0 | 20.5 | 17.0 | 15.5 | 13.5 |
| 29 | 17.0 | 11.5 | 16.5 | 9.0 | 28.0 | 18.5 | 26.5 | 18.0 | 24.0 | 17.0 | 14.5 | 11.5 |
| 30 | 16.5 | 12.0 | 17.0 | 10.5 | 26.5 | 19.0 | 27.5 | 18.5 | 24.0 | 18.5 | 14.5 | 11.0 |
| 31 | --- | --- | 19.5 | 12.5 | --- | --- | 28.5 | 19.0 | 22.5 | 16.5 | --- | --- |
| MONTH | 18.0 | 4.0 | 19.5 | 6.5 | 28.0 | 12.0 | 28.5 | 14.0 | 29.5 | 15.5 | 25.0 | 11.0 |

14338000 ELK CREEK NEAR TRAIL, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | | |
| 1 | 5 | 0 | 1 | 6 | 1 | 1 | 6 | 0 | 0 | 1 | 0 | 0 |
| 2 | 200 | 2 | 70 | 5 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 3 | 65 | 3 | 20 | 2 | 1 | 1 | 4 | 0 | 0 | 2 | 1 | 1 |
| 4 | 3 | 1 | 2 | 4 | 0 | 1 | 4 | 0 | 0 | 1 | 1 | 1 |
| 5 | 2 | 1 | 1 | 3 | 0 | 1 | 3 | 0 | 0 | 7 | 0 | 1 |
| 6 | 3 | 1 | 1 | 2 | 1 | 1 | 6 | 0 | 0 | 3 | 0 | 1 |
| 7 | 3 | 1 | 1 | 7 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 |
| 8 | 3 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 15 | 0 | 1 |
| 9 | 6 | 1 | 2 | 2 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 |
| 10 | 3 | 1 | 1 | 7 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 |
| 11 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 |
| 12 | 15 | 1 | 2 | 3 | 0 | 1 | 2 | 0 | 0 | 4 | 1 | 2 |
| 13 | 4 | 1 | 1 | 90 | 0 | 5 | 3 | 0 | 0 | 4 | 1 | 2 |
| 14 | 2 | 1 | 1 | 3 | 1 | 1 | 1 | 0 | 0 | 2 | 1 | 2 |
| 15 | 4 | 1 | 1 | 6 | 1 | 2 | 3 | 0 | 0 | 1 | 1 | 1 |
| 16 | 7 | 0 | 2 | 10 | 1 | 3 | 15 | 0 | 1 | 4 | 1 | 1 |
| 17 | 4 | 1 | 1 | 25 | 1 | 3 | 1 | 0 | 0 | 3 | 0 | 1 |
| 18 | 2 | 0 | 1 | 6 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 1 |
| 19 | 3 | 1 | 1 | 0 | 0 | 0 | 15 | 0 | 1 | 3 | 0 | 1 |
| 20 | 3 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 21 | 1 | 1 | 1 | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 1 |
| 22 | 1 | 1 | 1 | 3 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 |
| 23 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 1 |
| 24 | 1 | 1 | 1 | 8 | 0 | 2 | 2 | 0 | 0 | 3 | 0 | 1 |
| 25 | 2 | 1 | 1 | 3 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 |
| 26 | 25 | 1 | 4 | 6 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 |
| 27 | 7 | 1 | 2 | 3 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 0 |
| 28 | 2 | 1 | 1 | 3 | 1 | 2 | 1 | 0 | 0 | 4 | 0 | 1 |
| 29 | 6 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 |
| 30 | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| 31 | 4 | 1 | 1 | --- | --- | --- | 0 | 0 | 0 | 1 | 0 | 0 |
| MONTH | 200 | 0 | 4 | 90 | 0 | 1 | 15 | 0 | 0 | 15 | 0 | 0 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | |
| 1 | 2 | 0 | 0 | 25 | 15 | 20 | 7 | 0 | --- | 35 | 0 | --- |
| 2 | 1 | 0 | 0 | 15 | 15 | 15 | 5 | 2 | 4 | 65 | 15 | 35 |
| 3 | 2 | 0 | 0 | 20 | 15 | 15 | 2 | 0 | 1 | 20 | 10 | 15 |
| 4 | 3 | 0 | 0 | 20 | 15 | 20 | 0 | 0 | --- | 20 | 15 | 20 |
| 5 | 0 | 0 | 0 | 15 | 15 | 15 | 2 | 0 | 1 | 35 | 15 | 25 |
| 6 | 0 | 0 | 0 | 15 | 10 | 15 | 3 | 0 | 1 | 20 | 10 | 15 |
| 7 | 1 | 0 | 0 | 15 | 10 | 10 | 0 | 0 | --- | 10 | 8 | 9 |
| 8 | 0 | 0 | 0 | 50 | 10 | 30 | 1 | 0 | --- | 8 | 5 | 6 |
| 9 | 0 | 0 | 0 | 70 | 20 | 45 | 85 | 0 | --- | 5 | 2 | 4 |
| 10 | 1 | 0 | 0 | 40 | 20 | 25 | 0 | 0 | --- | 5 | 2 | 3 |
| 11 | 0 | 0 | 0 | 20 | 15 | 20 | 1 | 0 | --- | 15 | 3 | 10 |
| 12 | 1 | 0 | 0 | 15 | 15 | 15 | 0 | 0 | --- | 9 | 5 | 7 |
| 13 | 1 | 0 | 0 | 20 | 15 | 15 | 0 | 0 | --- | 9 | 3 | 4 |
| 14 | 1 | 0 | 0 | 8 | 6 | 8 | 0 | 0 | --- | 6 | 2 | 3 |
| 15 | 0 | 0 | 0 | 7 | 3 | 5 | 0 | 0 | --- | 3 | 1 | 2 |
| 16 | 0 | 0 | 0 | 9 | 2 | 3 | 0 | 0 | --- | 4 | 0 | 1 |
| 17 | 2 | 0 | 0 | 5 | 1 | 2 | 0 | 0 | --- | 9 | 2 | 7 |
| 18 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | --- | 9 | 4 | 6 |
| 19 | 2 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | --- | 6 | 2 | 4 |
| 20 | 0 | 0 | 0 | 5 | 1 | 3 | 0 | 0 | --- | 3 | 0 | 2 |
| 21 | 0 | 0 | 0 | 7 | 2 | 3 | 0 | 0 | --- | 6 | 0 | 1 |
| 22 | 20 | 1 | 10 | 10 | 1 | 2 | 0 | 0 | --- | 2 | 0 | 0 |
| 23 | 6 | 4 | 5 | 5 | 1 | 3 | 0 | 0 | --- | 50 | 2 | 25 |
| 24 | 7 | 4 | 6 | 8 | 4 | 6 | 0 | 0 | --- | 40 | 15 | 20 |
| 25 | 8 | 6 | 7 | 9 | 5 | 7 | 0 | 0 | --- | 10 | 6 | 8 |
| 26 | 6 | 5 | 5 | 4 | 2 | 3 | 0 | 0 | --- | 15 | 5 | 8 |
| 27 | 8 | 5 | 7 | 2 | 1 | 2 | 0 | 0 | --- | 10 | 5 | 8 |
| 28 | 25 | 8 | 15 | 3 | 2 | 3 | 0 | 0 | --- | 8 | 3 | 4 |
| 29 | --- | --- | --- | 2 | 1 | 2 | 0 | 0 | --- | 3 | 2 | 3 |
| 30 | --- | --- | --- | 1 | 0 | 1 | 0 | 0 | --- | 10 | 1 | 3 |
| 31 | --- | --- | --- | 0 | 0 | 0 | --- | --- | --- | 2 | 1 | 1 |
| MONTH | 25 | 0 | 1 | 70 | 0 | 10 | 85 | 0 | 1 | 65 | 0 | 8 |

ROGUE RIVER BASIN

507

14338000 ELK CREEK NEAR TRAIL, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 3 | 1 | 2 | 2 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 0 | 1 | 10 | 0 | --- | 4 | 1 | 1 | 1 | 1 | 1 |
| 3 | 4 | 0 | 1 | 7 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 2 | 0 | 1 | 1 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 7 | 0 | 1 | 35 | 0 | --- | 2 | 1 | 1 | 1 | 1 | 1 |
| 6 | 5 | 1 | 1 | 2 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 2 | 0 | --- | 0 | 0 | --- | 4 | 1 | 1 | 1 | 1 | 1 |
| 8 | 0 | 0 | --- | 0 | 0 | --- | 4 | 1 | 1 | 2 | 1 | 1 |
| 9 | 25 | 0 | --- | 0 | 0 | --- | 15 | 1 | 4 | 2 | 1 | 1 |
| 10 | 1 | 0 | --- | 5 | 0 | --- | 10 | 6 | 7 | 1 | 1 | 1 |
| 11 | 3 | 0 | --- | 1 | 0 | --- | 8 | 6 | 7 | 1 | 1 | 1 |
| 12 | 0 | 0 | --- | 6 | 1 | 1 | 8 | 6 | 7 | 3 | 1 | 1 |
| 13 | 0 | 0 | --- | 1 | 1 | 1 | 8 | 7 | 7 | 7 | 1 | 2 |
| 14 | 0 | 0 | --- | 1 | 1 | 1 | 10 | 7 | 9 | 1 | 1 | 1 |
| 15 | 15 | 0 | --- | 1 | 1 | 1 | 15 | 1 | 8 | 1 | 1 | 1 |
| 16 | 5 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 4 | 0 | --- | 30 | 1 | 2 | 1 | 1 | 1 | 20 | 1 | 2 |
| 18 | 0 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | 3 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 0 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 45 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | 3 | 0 | --- | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 2 | 0 | --- | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 1 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 15 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 7 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 0 | 0 | --- | 9 | 1 | 1 | 3 | 1 | 1 | 55 | 1 | 15 |
| 29 | 1 | 0 | --- | 1 | 1 | 1 | 1 | 1 | 1 | 50 | 10 | 30 |
| 30 | 0 | 0 | --- | 6 | 1 | 1 | 1 | 1 | 1 | 15 | 4 | 7 |
| 31 | --- | --- | --- | 5 | 1 | 1 | 1 | 1 | 1 | --- | --- | --- |
| MONTH | 45 | 0 | 1 | 35 | 0 | 1 | 15 | 1 | 2 | 55 | 1 | 2 |

ROGUE RIVER BASIN

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR

LOCATION.--Lat 42°31'30", long 122°50'30", in SE¼ sec.17, T.35 S., R.1 W., Jackson County, Hydrologic Unit 17100307, on right bank 50 ft (15 m) upstream from Dodge Bridge, 0.7 mi (1.1 km) downstream from Reese Creek, 4.3 mi (6.9 km) northwest of Eagle Point, and at mile 138.61 (223.02 km).

DRAINAGE AREA.--1,215 mi² (3,147 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1094: 1942(M), 1943, 1945(M), 1946. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,271.39 ft (387.520 m) above mean sea level. Prior to Dec. 21, 1938, nonrecording gage, Dec. 21, 1938, to Aug. 15, 1968, water-stage recorder, at datum 2.27 ft (0.692 m) higher, Aug. 16, 1968, to Sept. 30, 1976, water-stage recorder, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Diversions for irrigation above station; most of flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--39 years, 2,636 ft³/s (74.65 m³/s), 1,910,000 acre-ft/yr (2.36 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,600 ft³/s (2,480 m³/s) Dec. 22, 1964, gage height, 12.78 ft (3.895 m), datum then in use, from rating curve extended above 23,000 ft³/s (651 m³/s); minimum, 567 ft³/s (16.1 m³/s) Feb. 18, 1977, result of closure of Lost Creek dam, minimum prior to that time 611 ft³/s (17.3 m³/s) Aug. 6, 14, 29, Sept. 9, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft³/s (56.9 m³/s) Sept. 29, gage height, 2.38 ft (0.725 m); minimum, 567 ft³/s (16.1 m³/s) Feb. 18, result of closure of Lost Creek dam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|
| 1 | 1280 | 1420 | 1180 | 1160 | 1110 | 1060 | 960 | 978 | 960 | 1130 | 1120 | 1130 |
| 2 | 1330 | 1400 | 1180 | 1240 | 1110 | 1080 | 996 | 1080 | 935 | 1130 | 1110 | 1130 |
| 3 | 1390 | 1320 | 1180 | 1240 | 1110 | 1180 | 952 | 996 | 918 | 1130 | 1110 | 1120 |
| 4 | 1370 | 1270 | 1180 | 1200 | 1110 | 1120 | 960 | 1070 | 910 | 1120 | 1130 | 1120 |
| 5 | 1330 | 1240 | 1180 | 1170 | 1110 | 1090 | 987 | 1130 | 886 | 1120 | 1180 | 1120 |
| 6 | 1310 | 1240 | 1180 | 1160 | 1110 | 1070 | 1010 | 1140 | 886 | 1120 | 1130 | 1150 |
| 7 | 1300 | 1230 | 1180 | 1160 | 1110 | 1090 | 969 | 1070 | 926 | 1140 | 1130 | 1140 |
| 8 | 1300 | 1220 | 1190 | 1170 | 1110 | 1210 | 978 | 1010 | 960 | 1130 | 1140 | 1140 |
| 9 | 1280 | 1220 | 1240 | 1160 | 1110 | 1430 | 943 | 987 | 1120 | 1130 | 1140 | 1130 |
| 10 | 1260 | 1210 | 1190 | 1160 | 1110 | 1340 | 894 | 1010 | 1130 | 1130 | 1130 | 1220 |
| 11 | 1260 | 1220 | 1180 | 1240 | 1110 | 1230 | 878 | 1100 | 1150 | 1110 | 1130 | 1220 |
| 12 | 1260 | 1210 | 1180 | 1240 | 1110 | 1220 | 846 | 1090 | 1140 | 1130 | 1120 | 1220 |
| 13 | 1250 | 1210 | 1170 | 1200 | 1110 | 1210 | 838 | 1030 | 1140 | 1140 | 1120 | 1230 |
| 14 | 1240 | 1290 | 1170 | 1180 | 1110 | 1150 | 846 | 996 | 1130 | 1140 | 1120 | 1220 |
| 15 | 1260 | 1330 | 1170 | 1170 | 1110 | 1130 | 830 | 996 | 1130 | 1170 | 1110 | 1220 |
| 16 | 1270 | 1410 | 1170 | 1170 | 1110 | 1090 | 823 | 987 | 1110 | 1280 | 1110 | 1230 |
| 17 | 1310 | 1290 | 1170 | 1170 | 1130 | 1070 | 830 | 1070 | 1100 | 1290 | 1110 | 1220 |
| 18 | 1300 | 1250 | 1170 | 1170 | 969 | 1080 | 823 | 1110 | 1110 | 1240 | 1120 | 1230 |
| 19 | 1300 | 1240 | 1170 | 1170 | 640 | 1100 | 800 | 1050 | 1100 | 1150 | 1120 | 1240 |
| 20 | 1260 | 1230 | 1170 | 1170 | 709 | 1130 | 800 | 1010 | 1100 | 1130 | 1120 | 1220 |
| 21 | 1300 | 1220 | 1170 | 1170 | 808 | 1140 | 815 | 969 | 1100 | 1140 | 1140 | 1240 |
| 22 | 1290 | 1220 | 1170 | 1160 | 862 | 1140 | 854 | 996 | 1100 | 1140 | 1120 | 1240 |
| 23 | 1290 | 1270 | 1170 | 1160 | 870 | 1180 | 902 | 1330 | 1110 | 1150 | 1120 | 1240 |
| 24 | 1300 | 1270 | 1170 | 1140 | 902 | 1200 | 886 | 1390 | 1110 | 1130 | 1140 | 1240 |
| 25 | 1420 | 1210 | 1170 | 1120 | 910 | 1220 | 894 | 1230 | 1180 | 1140 | 1150 | 1240 |
| 26 | 1470 | 1200 | 1180 | 1110 | 918 | 1120 | 886 | 1270 | 1200 | 1130 | 1140 | 1230 |
| 27 | 1370 | 1190 | 1180 | 1110 | 943 | 1120 | 878 | 1240 | 1160 | 1130 | 1140 | 1230 |
| 28 | 1330 | 1180 | 1170 | 1110 | 1020 | 1240 | 878 | 1140 | 1100 | 1120 | 1140 | 1560 |
| 29 | 1330 | 1180 | 1170 | 1110 | --- | 978 | 926 | 1080 | 1100 | 1120 | 1140 | 1690 |
| 30 | 1330 | 1180 | 1170 | 1110 | --- | 943 | 960 | 1020 | 1120 | 1120 | 1130 | 1360 |
| 31 | 1330 | --- | 1170 | 1110 | --- | 918 | --- | 996 | --- | 1140 | 1130 | --- |
| TOTAL | 40620 | 37570 | 36490 | 36110 | 28441 | 35279 | 26842 | 33571 | 32121 | 35520 | 34990 | 36920 |
| MEAN | 1310 | 1252 | 1177 | 1165 | 1016 | 1138 | 895 | 1083 | 1071 | 1146 | 1129 | 1231 |
| MAX | 1470 | 1420 | 1240 | 1240 | 1130 | 1430 | 1010 | 1390 | 1200 | 1290 | 1180 | 1690 |
| MIN | 1240 | 1180 | 1170 | 1110 | 640 | 918 | 800 | 969 | 886 | 1110 | 1110 | 1120 |
| AC-FT | 80570 | 74520 | 72380 | 71620 | 56410 | 69980 | 53240 | 66590 | 63710 | 70450 | 69400 | 73230 |
| CAL YR 1976 | TOTAL | 895860 | MEAN | 2448 | MAX | 12400 | MIN | 1170 | AC-FT | 1777000 | | |
| WTR YR 1977 | TOTAL | 414474 | MEAN | 1136 | MAX | 1690 | MIN | 640 | AC-FT | 822100 | | |

ROGUE RIVER BASIN

509

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.0°C July 27, 28, 1975; minimum, 0.0°C Jan. 6-8, 10, 11, 1974, Jan. 6-9, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 19.5°C Aug. 2; minimum, 0.0°C Jan. 6-9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SUS- PENDE SEDIM- ENT (MG/L) | SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) |
|-------|------|---|-----------------------------|--|---------------|------------------------------------|--|---|
| OCT | | | | | | | | |
| 13... | 1050 | 1260 | 8.0 | -- | -- | -- | 4 | 14 |
| NOV | | | | | | | | |
| 23... | 1420 | 1270 | 5.0 | 78 | 7.0 | 12.2 | 2 | 6.9 |
| DEC | | | | | | | | |
| 10... | 1420 | 1190 | 4.0 | 62 | 7.9 | 13.7 | 1 | 3.2 |
| 22... | 1330 | 1130 | 2.5 | 79 | -- | 13.6 | 1 | 3.1 |
| JAN | | | | | | | | |
| 14... | 1100 | 1190 | 3.5 | 76 | 8.0 | 11.6 | 2 | 6.4 |
| FEB | | | | | | | | |
| 01... | 1430 | 1120 | 5.5 | 72 | 8.0 | 12.7 | -- | -- |
| 18... | 1255 | 1150 | -- | -- | -- | -- | 2 | 6.2 |
| 22... | 1300 | 862 | 6.5 | 84 | 8.0 | 12.6 | 4 | 9.3 |
| MAR | | | | | | | | |
| 03... | 1350 | 1200 | 5.5 | -- | -- | -- | 10 | 32 |
| 09... | 1430 | 1570 | 6.5 | -- | -- | -- | 29 | 123 |
| 11... | 1430 | 1430 | 7.0 | 83 | 8.2 | 12.6 | -- | -- |
| 24... | 1000 | 1200 | 6.0 | 76 | 7.7 | 11.8 | 4 | 13 |
| APR | | | | | | | | |
| 11... | 1500 | 878 | 12.5 | 78 | 8.1 | 11.3 | -- | -- |
| 29... | 1030 | 962 | 10.0 | 69 | 7.8 | 11.2 | 4 | 10 |
| MAY | | | | | | | | |
| 11... | 1330 | 1130 | 11.5 | 76 | 8.0 | 11.8 | 6 | 18 |
| 25... | 1445 | 1200 | 12.5 | 67 | 8.4 | 11.8 | -- | -- |
| JUN | | | | | | | | |
| 06... | 1105 | 846 | 13.0 | -- | -- | -- | 4 | 9.1 |
| JUL | | | | | | | | |
| 11... | 1000 | 1130 | 12.5 | 67 | 7.9 | 10.3 | 4 | 12 |
| 25... | 1200 | 1130 | 13.5 | 67 | 8.2 | 10.5 | -- | -- |
| AUG | | | | | | | | |
| 16... | 1400 | 1050 | 17.5 | 67 | 8.5 | 11.0 | -- | -- |
| SEP | | | | | | | | |
| 01... | 1600 | 1130 | 17.5 | 68 | 8.7 | 10.8 | 2 | 6.1 |
| 13... | 1600 | 1170 | 17.0 | 66 | 8.1 | 11.0 | -- | -- |

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDIM- ENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | DATE | TIME | INSTAN- TANEOUS DIS- CHARGE (CFS) | SUS- PENDE SEDIM- ENT (MG/L) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM |
|-------|------|---|--|--|-------|------|---|--|--|
| MAR | | | | | JUN | | | | |
| 03... | 1350 | 1200 | 10 | 74 | 06... | 1105 | 846 | 4 | 73 |
| 09... | 1430 | 1570 | 29 | 80 | | | | | |
| MAY | | | | | | | | | |
| 11... | 1350 | 1130 | 6 | 85 | | | | | |

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | | MIN | | MAX | | MIN | | MAX | | MIN | | MAX | | MIN | | | | | | | | |
|---------|------|------|------|----------|-----|-----|-----|----------|-----|-----|------|---------|-----|--|-----|----------|--|--|--|-------|--|--|--|
| OCTOBER | | | | NOVEMBER | | | | DECEMBER | | | | JANUARY | | | | FEBRUARY | | | | MARCH | | | |
| 1 | 14.5 | 11.5 | 10.0 | 8.5 | 4.0 | 2.5 | 2.5 | 1.5 | 5.5 | 3.5 | 6.5 | 5.0 | | | | | | | | | | | |
| 2 | 13.5 | 11.5 | 10.5 | 8.5 | 4.0 | 2.5 | 3.5 | 2.5 | 4.5 | 2.5 | 6.0 | 5.0 | | | | | | | | | | | |
| 3 | 12.5 | 10.0 | 9.5 | 8.5 | 4.0 | 2.0 | 3.5 | 2.5 | 4.5 | 2.0 | 6.5 | 4.5 | | | | | | | | | | | |
| 4 | 11.5 | 9.0 | 9.0 | 8.0 | 4.5 | 2.5 | 3.5 | 2.5 | 4.5 | 2.0 | 7.5 | 4.5 | | | | | | | | | | | |
| 5 | 11.5 | 8.5 | 8.0 | 7.0 | 4.0 | 2.5 | 3.5 | 1.5 | 4.0 | 3.0 | 8.0 | 4.5 | | | | | | | | | | | |
| 6 | 12.0 | 9.0 | 8.0 | 6.5 | 4.0 | 2.0 | 2.5 | 0.0 | 6.0 | 3.5 | 7.0 | 5.0 | | | | | | | | | | | |
| 7 | 12.5 | 10.0 | 8.0 | 6.5 | 3.5 | 2.0 | 2.0 | 0.0 | 5.5 | 3.5 | 6.5 | 5.5 | | | | | | | | | | | |
| 8 | 13.0 | 10.0 | 8.5 | 6.5 | 4.0 | 2.5 | 3.0 | 0.0 | 6.5 | 4.5 | 7.0 | 5.0 | | | | | | | | | | | |
| 9 | 12.5 | 10.0 | 8.0 | 6.5 | 4.5 | 3.0 | --- | 0.0 | 6.5 | 4.5 | 7.0 | 5.5 | | | | | | | | | | | |
| 10 | 12.0 | 9.5 | 8.0 | 7.0 | 4.0 | 1.0 | 2.5 | 1.0 | 7.0 | 5.0 | 7.5 | 4.5 | | | | | | | | | | | |
| 11 | 11.5 | 9.0 | 8.5 | 7.0 | 3.5 | 3.0 | 3.0 | 2.5 | 7.0 | 4.5 | 7.0 | 5.0 | | | | | | | | | | | |
| 12 | 11.5 | 8.5 | 8.5 | 7.0 | 3.5 | 2.5 | 3.5 | 3.0 | 7.0 | 4.5 | 7.5 | 5.5 | | | | | | | | | | | |
| 13 | 12.0 | 8.0 | 7.5 | 6.0 | 3.5 | 2.5 | 4.0 | 3.0 | 7.5 | 5.0 | 7.0 | 5.0 | | | | | | | | | | | |
| 14 | 11.0 | 6.5 | 7.0 | 6.5 | 3.5 | 2.5 | 5.0 | 3.5 | 7.0 | 4.5 | 7.0 | 4.5 | | | | | | | | | | | |
| 15 | 10.5 | 7.5 | 8.0 | 7.0 | 3.5 | 2.5 | 3.5 | 3.0 | 7.0 | 4.5 | 6.5 | 5.0 | | | | | | | | | | | |
| 16 | 9.5 | 7.5 | 9.0 | 8.0 | 3.5 | 3.0 | 3.0 | 2.5 | 7.0 | 4.5 | 8.0 | 4.5 | | | | | | | | | | | |
| 17 | 9.5 | 7.0 | 9.0 | 8.5 | 3.5 | 2.5 | 3.0 | 2.5 | 8.0 | 5.5 | 7.0 | 5.0 | | | | | | | | | | | |
| 18 | 9.0 | 6.5 | 8.5 | 8.0 | 3.0 | 2.0 | 3.5 | 2.5 | 7.0 | --- | 7.0 | 5.5 | | | | | | | | | | | |
| 19 | 9.0 | 6.5 | 8.0 | 6.5 | 2.0 | 1.0 | 3.5 | 2.5 | 7.5 | --- | 8.5 | 6.0 | | | | | | | | | | | |
| 20 | 9.0 | 6.5 | 6.5 | 5.0 | 1.5 | 0.5 | 4.0 | 2.5 | 6.5 | 5.0 | 9.0 | 5.0 | | | | | | | | | | | |
| 21 | 9.0 | 6.5 | 6.5 | 5.0 | 1.5 | 0.5 | 4.5 | 3.0 | 6.0 | 5.0 | 9.5 | 5.0 | | | | | | | | | | | |
| 22 | 9.0 | 7.0 | 6.5 | 5.0 | 2.5 | 1.0 | 4.5 | 3.0 | 7.0 | 5.5 | 10.0 | 6.0 | | | | | | | | | | | |
| 23 | 8.5 | 6.5 | 5.5 | 5.0 | 4.0 | 2.5 | 3.5 | 3.0 | 6.0 | 5.0 | 8.5 | 6.5 | | | | | | | | | | | |
| 24 | 7.5 | 6.5 | 5.5 | 4.5 | 3.0 | 1.5 | 3.5 | 2.0 | 6.5 | 4.5 | 8.5 | 5.5 | | | | | | | | | | | |
| 25 | 8.0 | 7.0 | 6.0 | 5.0 | 3.0 | 2.0 | 3.0 | 1.0 | 6.0 | 5.0 | 9.0 | 5.0 | | | | | | | | | | | |
| 26 | 8.5 | 7.0 | 5.5 | 4.0 | 3.5 | 3.0 | 3.0 | 1.0 | 7.0 | 5.0 | 9.5 | 5.5 | | | | | | | | | | | |
| 27 | 8.0 | 6.0 | 4.0 | 2.0 | 4.0 | 3.5 | 3.0 | 1.0 | 7.5 | 5.0 | 8.5 | 6.0 | | | | | | | | | | | |
| 28 | 7.5 | 5.5 | 3.0 | 1.5 | 4.0 | 2.5 | 3.5 | 1.0 | 7.5 | 6.0 | 8.0 | 5.5 | | | | | | | | | | | |
| 29 | 8.0 | 7.0 | 3.5 | 1.5 | 3.5 | 2.5 | 3.5 | 1.0 | --- | --- | 8.0 | 5.0 | | | | | | | | | | | |
| 30 | 8.5 | 7.5 | 4.0 | 2.0 | 4.0 | 2.5 | 3.0 | 1.0 | --- | --- | 9.5 | 5.5 | | | | | | | | | | | |
| 31 | 9.0 | 8.0 | --- | --- | 3.5 | 2.0 | 5.0 | 3.0 | --- | --- | 8.0 | 5.5 | | | | | | | | | | | |
| MONTH | 14.5 | 5.5 | 10.5 | 1.5 | 4.5 | 0.5 | 5.0 | 0.0 | 8.0 | 2.0 | 10.0 | 4.5 | | | | | | | | | | | |

| DAY | MAX | | MIN | | MAX | | MIN | | MAX | | MIN | | MAX | | MIN | | | | | | | | |
|-------|------|-----|------|------|------|------|------|------|------|------|------|------|-----|--|-----|--------|--|--|--|-----------|--|--|--|
| APRIL | | | | MAY | | | | JUNE | | | | JULY | | | | AUGUST | | | | SEPTEMBER | | | |
| 1 | 9.5 | 6.5 | 11.5 | 9.5 | 15.5 | 11.5 | 15.5 | 11.5 | 17.5 | 13.5 | 18.0 | --- | | | | | | | | | | | |
| 2 | 10.0 | 5.5 | 14.0 | 9.0 | 15.0 | 10.0 | 16.5 | 11.0 | 19.5 | 14.0 | 18.0 | 13.0 | | | | | | | | | | | |
| 3 | 11.0 | 6.0 | 12.5 | 10.0 | 14.0 | 10.5 | 14.5 | 10.5 | 19.0 | 13.5 | 18.5 | 13.0 | | | | | | | | | | | |
| 4 | 12.0 | 7.5 | 12.0 | 9.0 | 17.0 | 10.5 | 15.0 | 11.0 | 19.0 | 13.0 | 18.5 | 14.0 | | | | | | | | | | | |
| 5 | 12.0 | 7.5 | 10.5 | 8.5 | 18.0 | 12.0 | 15.0 | 10.0 | 19.0 | 13.0 | 19.0 | 14.0 | | | | | | | | | | | |
| 6 | 12.0 | 8.0 | 12.5 | 8.0 | 17.0 | 12.5 | 17.0 | 10.0 | 19.0 | 13.0 | 18.0 | 13.0 | | | | | | | | | | | |
| 7 | 12.0 | 8.0 | 13.0 | 9.0 | 16.5 | 12.0 | 17.5 | 11.0 | 18.5 | 14.0 | 18.0 | 13.0 | | | | | | | | | | | |
| 8 | 11.5 | 9.0 | 13.0 | 8.0 | 16.5 | 12.0 | 17.0 | 11.5 | 18.5 | 13.5 | 17.5 | 13.0 | | | | | | | | | | | |
| 9 | 9.5 | 7.5 | 12.0 | 9.0 | 15.0 | 10.5 | 16.5 | 11.5 | 18.5 | 13.5 | 17.5 | 12.5 | | | | | | | | | | | |
| 10 | 10.5 | 6.0 | 10.5 | 9.0 | 13.0 | 10.5 | 17.0 | 10.5 | 19.0 | 13.0 | 17.5 | 13.0 | | | | | | | | | | | |
| 11 | 12.5 | 8.0 | 12.0 | 8.5 | 15.0 | 10.0 | 18.0 | 11.5 | 17.0 | 13.0 | 18.0 | 13.0 | | | | | | | | | | | |
| 12 | 14.5 | 8.0 | 13.5 | 9.0 | 16.0 | 9.5 | 17.5 | 12.0 | 16.5 | 14.0 | 17.5 | 13.0 | | | | | | | | | | | |
| 13 | 12.0 | 9.5 | 13.5 | 9.0 | 16.0 | 10.5 | 17.5 | 11.0 | 17.5 | 13.5 | 17.5 | 13.0 | | | | | | | | | | | |
| 14 | 11.5 | 7.0 | 12.0 | 10.0 | 16.0 | 10.5 | 18.0 | 11.5 | 18.5 | 13.5 | 17.5 | 13.5 | | | | | | | | | | | |
| 15 | 12.0 | 8.0 | 11.5 | 9.0 | 16.0 | 10.0 | 18.0 | 12.0 | 18.5 | 13.0 | 14.5 | 13.0 | | | | | | | | | | | |
| 16 | 12.5 | 9.0 | 11.5 | 8.5 | 16.5 | 10.0 | 18.0 | 12.0 | 18.0 | 12.5 | --- | 12.5 | | | | | | | | | | | |
| 17 | 11.5 | 7.0 | 11.5 | 8.5 | 14.0 | 11.0 | 17.5 | 12.0 | --- | --- | --- | --- | | | | | | | | | | | |
| 18 | 11.5 | 6.5 | 11.5 | 8.5 | 15.0 | 10.5 | 17.0 | 12.5 | --- | --- | --- | --- | | | | | | | | | | | |
| 19 | 12.0 | 7.0 | 14.0 | 8.5 | 15.5 | 11.0 | 18.5 | 13.0 | --- | --- | --- | --- | | | | | | | | | | | |
| 20 | 11.5 | 7.5 | 15.0 | 10.0 | 14.0 | 10.0 | 18.5 | 12.5 | --- | --- | --- | --- | | | | | | | | | | | |
| 21 | 13.0 | 8.5 | 15.0 | 11.0 | 17.0 | 10.5 | 18.5 | 12.5 | --- | --- | --- | --- | | | | | | | | | | | |
| 22 | 12.0 | 8.0 | 13.0 | 9.5 | 17.5 | 11.5 | 18.5 | 12.5 | --- | --- | --- | --- | | | | | | | | | | | |
| 23 | 10.5 | 8.0 | 11.5 | 9.0 | 17.0 | 11.0 | 18.5 | 12.5 | --- | --- | --- | --- | | | | | | | | | | | |
| 24 | 10.5 | 8.0 | 13.0 | 9.5 | 17.0 | 11.0 | 18.5 | 13.0 | --- | --- | --- | --- | | | | | | | | | | | |
| 25 | 10.5 | 8.0 | 12.5 | 10.0 | 17.5 | 11.0 | 18.5 | 13.0 | --- | --- | --- | --- | | | | | | | | | | | |
| 26 | 13.0 | 7.0 | 13.0 | 9.5 | 17.5 | 11.0 | 19.0 | 13.0 | --- | --- | --- | --- | | | | | | | | | | | |
| 27 | 13.5 | 8.0 | 13.0 | 8.5 | 17.0 | 11.0 | 18.5 | 13.0 | --- | --- | --- | --- | | | | | | | | | | | |
| 28 | 12.0 | 8.5 | 14.0 | 8.5 | 17.5 | 11.0 | 18.0 | 12.5 | --- | --- | --- | --- | | | | | | | | | | | |
| 29 | 13.0 | 8.5 | 14.5 | 9.5 | 17.5 | 11.5 | 18.0 | 12.5 | --- | --- | --- | --- | | | | | | | | | | | |
| 30 | 13.5 | 9.5 | 15.0 | 10.0 | 16.0 | 11.5 | 18.5 | 12.5 | --- | --- | --- | --- | | | | | | | | | | | |
| 31 | --- | --- | 16.0 | 11.0 | --- | --- | 19.0 | 13.0 | --- | --- | --- | --- | | | | | | | | | | | |
| MONTH | 14.5 | 5.5 | 16.0 | 8.0 | 18.0 | 9.5 | 19.0 | 10.0 | 19.5 | 12.5 | 19.0 | 12.5 | | | | | | | | | | | |

14341500 SOUTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR

LOCATION.--Lat 42°24'30", long 122°36'00", in SE¼ sec.29, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on left bank 0.5 mi (0.8 km) upstream from intake of Rogue River Valley Canal, 1.4 mi (2.3 km) southeast of Lakecreek, and at mile 18.1 (29.1 km).

DRAINAGE AREA.--138 mi² (357 km²).

PERIOD OF RECORD.--April 1921 to current year.

REVISED RECORDS.--WSP 934: 1925(M). WSP 1398: 1922, 1927(M), 1937, 1941-42.

GAGE.--Water-stage recorder. Altitude of gage is 1,725 ft (526 m), by barometer. Supplementary nonrecording gage at site 25 ft (8 m) upstream used Jan. 12 to Sept. 6, 1965. Apr. 15 to June 17, 1921, nonrecording gage, and June 18, 1921, to Sept. 6, 1965, water-stage recorder at site 75 ft (23 m) upstream at datum 5.0 ft (1.52 m) lower.

REMARKS.--Records good. No regulation. Diversions for irrigation above station; also, in December 1958 Dead Indian collection canal began diverting above station from Code Creek and Dead Indian Creek and in December 1959 South Fork Little Butte collection canal began diverting above station from South Fork Little Butte Creek, Daley Creek, and Beaver Dam Creek. These are transbasin diversions to Howard Prairie Reservoir in Klamath River basin, but eventually this water is diverted back to Rogue River basin for irrigation of lands in the Ashland-Medford area and power development enroute.

AVERAGE DISCHARGE.--56 years, 105 ft³/s (2.974 m³/s), 76,070 acre-ft/yr (93.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,660 ft³/s (217 m³/s) Dec. 2, 1962, gage height, 8.35 ft (2.545 m), site and datum then in use; minimum, 2.0 ft³/s (0.057 m³/s) Aug. 10, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 280 ft³/s (7.93 m³/s) May 26, gage height, 6.50 ft (1.981 m), no peak above base of 500 ft³/s (14.2 m³/s); minimum, 8.0 ft³/s (0.23 m³/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|-------|-------|
| 1 | 21 | 17 | 15 | 16 | 16 | 24 | 46 | 59 | 75 | 21 | 10 | 11 |
| 2 | 21 | 15 | 15 | 20 | 14 | 23 | 49 | 81 | 66 | 21 | 11 | 11 |
| 3 | 17 | 15 | 15 | 19 | 14 | 29 | 43 | 81 | 59 | 21 | 11 | 11 |
| 4 | 15 | 15 | 16 | 18 | 14 | 25 | 46 | 75 | 54 | 20 | 9.0 | 11 |
| 5 | 14 | 15 | 15 | 18 | 14 | 25 | 50 | 70 | 46 | 20 | 9.0 | 11 |
| 6 | 14 | 15 | 15 | 17 | 15 | 25 | 56 | 64 | 42 | 19 | 10 | 11 |
| 7 | 13 | 14 | 15 | 16 | 15 | 24 | 66 | 68 | 43 | 18 | 12 | 11 |
| 8 | 13 | 14 | 16 | 16 | 16 | 25 | 93 | 60 | 43 | 18 | 15 | 11 |
| 9 | 13 | 14 | 18 | 16 | 16 | 36 | 86 | 57 | 56 | 17 | 13 | 11 |
| 10 | 13 | 14 | 17 | 17 | 15 | 33 | 68 | 88 | 57 | 17 | 12 | 11 |
| 11 | 13 | 14 | 17 | 17 | 15 | 30 | 62 | 127 | 75 | 14 | 11 | 10 |
| 12 | 13 | 14 | 16 | 18 | 14 | 32 | 60 | 108 | 45 | 14 | 11 | 9.6 |
| 13 | 13 | 15 | 16 | 18 | 15 | 29 | 70 | 88 | 56 | 15 | 12 | 9.0 |
| 14 | 13 | 17 | 16 | 18 | 15 | 27 | 68 | 81 | 49 | 13 | 13 | 8.6 |
| 15 | 13 | 20 | 16 | 17 | 14 | 24 | 64 | 86 | 43 | 13 | 10 | 9.6 |
| 16 | 13 | 19 | 16 | 17 | 14 | 23 | 66 | 144 | 40 | 13 | 9.6 | 11 |
| 17 | 14 | 18 | 16 | 17 | 14 | 22 | 64 | 163 | 37 | 13 | 9.6 | 12 |
| 18 | 14 | 17 | 16 | 17 | 14 | 22 | 59 | 136 | 40 | 13 | 9.6 | 12 |
| 19 | 14 | 17 | 16 | 17 | 14 | 22 | 56 | 127 | 36 | 11 | 9.6 | 14 |
| 20 | 14 | 17 | 15 | 17 | 13 | 25 | 51 | 121 | 31 | 12 | 10 | 15 |
| 21 | 14 | 16 | 15 | 17 | 16 | 26 | 54 | 111 | 30 | 12 | 11 | 13 |
| 22 | 14 | 16 | 15 | 17 | 18 | 30 | 54 | 111 | 28 | 11 | 11 | 12 |
| 23 | 14 | 16 | 14 | 17 | 17 | 42 | 54 | 199 | 25 | 11 | 11 | 12 |
| 24 | 14 | 15 | 14 | 17 | 17 | 40 | 51 | 189 | 24 | 11 | 14 | 17 |
| 25 | 15 | 15 | 14 | 17 | 16 | 34 | 48 | 148 | 23 | 11 | 15 | 17 |
| 26 | 16 | 15 | 15 | 17 | 17 | 33 | 54 | 189 | 22 | 12 | 16 | 14 |
| 27 | 15 | 14 | 16 | 16 | 19 | 40 | 52 | 185 | 21 | 11 | 14 | 14 |
| 28 | 15 | 14 | 15 | 16 | 23 | 36 | 57 | 136 | 21 | 11 | 13 | 48 |
| 29 | 14 | 14 | 16 | 16 | --- | 34 | 56 | 117 | 21 | 12 | 12 | 75 |
| 30 | 14 | 15 | 16 | 16 | --- | 32 | 54 | 98 | 20 | 11 | 11 | 34 |
| 31 | 16 | --- | 16 | 16 | --- | 32 | --- | 81 | --- | 10 | 11 | --- |
| TOTAL | 449 | 466 | 483 | 528 | 434 | 904 | 1757 | 3448 | 1228 | 446 | 356.4 | 476.8 |
| MEAN | 14.5 | 15.5 | 15.6 | 17.0 | 15.5 | 29.2 | 58.6 | 111 | 40.9 | 14.4 | 11.5 | 15.9 |
| MAX | 21 | 20 | 18 | 20 | 23 | 42 | 93 | 199 | 75 | 21 | 16 | 75 |
| MIN | 13 | 14 | 14 | 16 | 13 | 22 | 43 | 57 | 20 | 10 | 9.0 | 8.6 |
| AC-FT | 891 | 924 | 958 | 1050 | 861 | 1790 | 3490 | 6840 | 2440 | 885 | 707 | 946 |

CAL YR 1976 TOTAL 26352.0 MEAN 72.0 MAX 320 MIN 13 AC-FT 52270
WTR YR 1977 TOTAL 10976.2 MEAN 30.1 MAX 199 MIN 8.6 AC-FT 21770

14342500 NORTH FORK LITTLE BUTTE CREEK AT FISH LAKE, NEAR LAKECREEK, OR

LOCATION.--Lat 42°22'35", long 122°21'20", in SE¼SW¼ sec.4, T.37 S., R.4 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.5 mi (0.8 km) downstream from Fish Lake dam, 14 mi (23 km) east of Lakecreek, and at mile 15.2 (24.5 km).

DRAINAGE AREA.--20.8 mi² (53.9 km²).

PERIOD OF RECORD.--October 1914 to July 1915, June 1916 to current year. Monthly discharge only November 1916 to May 1917, published in WSP 1318.

REVISED RECORDS.--WSP 654: Drainage area (former site). WSP 1218: 1917(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,571.41 ft (1,393.366 m) above mean sea level. Oct. 1, 1914, to July 31, 1915, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum. June 1, 1916, to July 9, 1918, nonrecording gage and July 10, 1918, to Oct. 28, 1932, water-stage recorder at site 0.25 mi (0.40 km) upstream at different datums.

REMARKS.--Records good. Since 1915, Fish Lake (see below) has stored water for irrigation by Medford Irrigation District. Cascade Canal diverts from Fourmile Lake in Klamath River basin and discharges into lava bed 1.0 mi (1.6 km) above Fish Lake; diversion began August 1923. No diversion from creek above station.

AVERAGE DISCHARGE.--61 years (water years 1917-77), 36.5 ft³/s (1.034 m³/s), 26,440 acre-ft/yr (32.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 940 ft³/s (26.6 m³/s) June 5, 1917, computed from rate of change in contents of reservoir after break in dam occurred; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 103 ft³/s (2.92 m³/s) Aug. 2, 3, gage height, 1.73 ft (0.527 m); minimum, 0.68 ft³/s (0.019 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|----------|-------|-------|-------|--------|--------|-------|-------|-------|-------|--------|---------|
| 1 | 27 | 17 | 16 | 16 | 16 | 16 | 16 | 21 | 23 | 65 | 96 | 72 |
| 2 | 18 | 17 | 16 | 16 | 16 | 16 | 16 | 24 | 23 | 65 | 98 | 74 |
| 3 | 17 | 17 | 16 | 16 | 15 | 16 | 16 | 23 | 23 | 65 | 102 | 79 |
| 4 | 17 | 17 | 16 | 16 | 15 | 16 | 17 | 20 | 23 | 65 | 100 | 78 |
| 5 | 17 | 17 | 16 | 16 | 15 | 16 | 17 | 19 | 23 | 63 | 100 | 78 |
| 6 | 17 | 17 | 16 | 16 | 15 | 16 | 17 | 20 | 23 | 61 | 99 | 76 |
| 7 | 17 | 18 | 16 | 16 | 15 | 16 | 17 | 20 | 23 | 61 | 96 | 74 |
| 8 | 17 | 18 | 16 | 16 | 15 | 16 | 17 | 20 | 23 | 63 | 96 | 72 |
| 9 | 17 | 18 | 16 | 16 | 15 | 16 | 17 | 21 | 23 | 69 | 95 | 74 |
| 10 | 17 | 18 | 16 | 16 | 15 | 16 | 17 | 21 | 23 | 69 | 95 | 88 |
| 11 | 16 | 18 | 16 | 16 | 15 | 16 | 17 | 21 | 23 | 69 | 93 | 79 |
| 12 | 16 | 18 | 16 | 16 | 15 | 16 | 17 | 21 | 23 | 69 | 93 | 78 |
| 13 | 16 | 18 | 16 | 16 | 15 | 16 | 17 | 21 | 23 | 69 | 92 | 76 |
| 14 | 16 | 18 | 16 | 16 | 15 | 16 | 17 | 21 | 23 | 69 | 90 | 74 |
| 15 | 16 | 18 | 16 | 16 | 15 | 16 | 18 | 21 | 21 | 67 | 88 | 74 |
| 16 | 16 | 18 | 16 | 16 | 15 | 16 | 18 | 23 | 21 | 67 | 92 | 74 |
| 17 | 17 | 18 | 16 | 16 | 15 | 16 | 18 | 23 | 21 | 65 | 92 | 72 |
| 18 | 16 | 18 | 16 | 16 | 15 | 17 | 18 | 23 | 23 | 65 | 92 | 69 |
| 19 | 16 | 18 | 16 | 16 | 15 | 17 | 18 | 23 | 29 | 65 | 88 | 67 |
| 20 | 16 | 18 | 16 | 16 | 15 | 17 | 18 | 24 | 40 | 69 | 87 | 61 |
| 21 | 16 | 18 | 16 | 16 | 16 | 17 | 18 | 23 | 40 | 72 | 87 | 50 |
| 22 | 16 | 18 | 16 | 16 | 15 | 16 | 18 | 24 | 48 | 72 | 87 | 40 |
| 23 | 16 | 18 | 16 | 16 | 15 | 16 | 18 | 24 | 50 | 70 | 87 | 40 |
| 24 | 16 | 18 | 16 | 16 | 15 | 16 | 18 | 24 | 53 | 69 | 85 | 38 |
| 25 | 16 | 18 | 16 | 16 | 15 | 16 | 19 | 24 | 63 | 76 | 83 | 25 |
| 26 | 16 | 17 | 16 | 16 | 15 | 16 | 20 | 24 | 76 | 81 | 78 | 25 |
| 27 | 16 | 16 | 16 | 16 | 15 | 16 | 20 | 24 | 74 | 83 | 76 | 26 |
| 28 | 17 | 16 | 16 | 16 | 16 | 16 | 20 | 24 | 76 | 90 | 76 | 20 |
| 29 | 17 | 16 | 16 | 16 | --- | 15 | 20 | 23 | 76 | 95 | 74 | 1.0 |
| 30 | 17 | 16 | 16 | 16 | --- | 15 | 20 | 23 | 70 | 93 | 74 | .76 |
| 31 | 17 | --- | 16 | 16 | --- | 16 | --- | 23 | --- | 93 | 72 | --- |
| TOTAL | 522 | 525 | 496 | 496 | 424 | 498 | 534 | 690 | 1103 | 2214 | 2763 | 1754.76 |
| MEAN | 16.8 | 17.5 | 16.0 | 16.0 | 15.1 | 16.1 | 17.8 | 22.3 | 36.8 | 71.4 | 89.1 | 58.5 |
| MAX | 27 | 18 | 16 | 16 | 16 | 17 | 20 | 24 | 76 | 95 | 102 | 88 |
| MIN | 16 | 16 | 16 | 16 | 15 | 15 | 16 | 19 | 21 | 61 | 72 | .76 |
| AC-FT | 1040 | 1040 | 984 | 984 | 841 | 988 | 1060 | 1370 | 2190 | 4390 | 5480 | 3480 |
| (†) | 5,660 | 5,960 | 6,200 | 6,300 | a6,460 | a6,460 | 6,460 | 6,920 | 5,480 | 4,340 | a2,620 | 2,010 |
| CAL YR 1976 TOTAL | 13833.00 | | | | | | | | | | | |
| MEAN | 37.8 | | | | | | | | | | | |
| MAX | 99 | | | | | | | | | | | |
| MIN | 16 | | | | | | | | | | | |
| AC-FT | 27440 | | | | | | | | | | | |
| WTR YR 1977 TOTAL | 12019.76 | | | | | | | | | | | |
| MEAN | 32.9 | | | | | | | | | | | |
| MAX | 102 | | | | | | | | | | | |
| MIN | .76 | | | | | | | | | | | |
| AC-FT | 23840 | | | | | | | | | | | |

† Monthend contents, in acre-feet, of Fish Lake.
a Interpolated.

14343000 NORTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR

LOCATION.--Lat 42°24'10", long 122°32'10", in NW¼ sec.36, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 1.2 mi (1.9 km) upstream from Wasson Canyon, 4.9 mi (7.9 km) east of Lakecreek, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--43.8 mi² (113.4 km²).

PERIOD OF RECORD.--September 1911 to March 1913, July to September 1917, May 1922 to December 1964, September 1965 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "above Medford intake, near Lakecreek" 1922-28, 1931-40. Records for April to September 1916, May 1917 to September 1919, April to September 1921, and October 1923 to September 1924 at site 3 mi (5 km) upstream not equivalent owing to diversions and difference in drainage areas.

REVISED RECORDS.--WSP 1518: 1912-13. WSP 1738: Drainage area (former site).

GAGE.--Water-stage recorder. Concrete control since Oct. 9, 1968. Altitude of gage is 2,160 ft (658 m), from topographic map. Sept. 10, 1911, to Mar. 31, 1913, and July 1 to Sept. 30, 1917, nonrecording gage at site 1,000 ft (305 m) downstream at different datums. May 26, 1922, to Dec. 31, 1964, water-stage recorder at site 1,000 ft (305 m) downstream at datum 2,125.01 ft (644.703 m) above mean sea level.

REMARKS.--Records good. Flow partly regulated since 1915 by Fish Lake (published with station 14342500). Diversions for irrigation above station; some water diverted into Fish Lake from Fourmile Lake, in Klamath River basin, since 1923.

AVERAGE DISCHARGE.--55 years (water years 1912, 1923-64, 1966-77), 72.2 ft³/s (2.045 m³/s), 52,310 acre-ft/yr (64.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft³/s (49.6 m³/s) Dec. 22, 1964, gage height, 3.70 ft (1.128 m), site and datum then in use; minimum, 11 ft³/s (0.31 m³/s) Oct. 29 to Nov. 8, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 126 ft³/s (3.57 m³/s) Aug. 4, gage height, 3.28 ft (1.000 m); minimum, 20 ft³/s (0.57 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|-----------|---------|--------|-------------|------|------|------|------|------|------|
| 1 | 51 | 39 | 39 | 34 | 37 | 39 | 54 | 42 | 51 | 89 | 111 | 86 |
| 2 | 40 | 39 | 39 | 38 | 37 | 40 | 48 | 44 | 51 | 86 | 111 | 88 |
| 3 | 39 | 39 | 39 | 36 | 36 | 44 | 44 | 55 | 50 | 83 | 117 | 92 |
| 4 | 39 | 38 | 39 | 36 | 36 | 40 | 44 | 49 | 49 | 84 | 115 | 91 |
| 5 | 39 | 38 | 39 | 36 | 36 | 40 | 44 | 50 | 48 | 84 | 115 | 91 |
| 6 | 39 | 38 | 39 | 36 | 36 | 39 | 44 | 51 | 48 | 84 | 113 | 91 |
| 7 | 39 | 38 | 39 | 36 | 36 | 39 | 43 | 49 | 47 | 84 | 113 | 88 |
| 8 | 39 | 38 | 40 | 35 | 36 | 40 | 47 | 47 | 45 | 83 | 111 | 84 |
| 9 | 39 | 38 | 40 | 35 | 36 | 48 | 44 | 49 | 45 | 91 | 111 | 86 |
| 10 | 39 | 38 | 39 | 35 | 36 | 42 | 43 | 64 | 45 | 89 | 109 | 92 |
| 11 | 39 | 38 | 39 | 35 | 36 | 41 | 43 | 70 | 48 | 89 | 109 | 89 |
| 12 | 39 | 38 | 39 | 35 | 36 | 43 | 42 | 57 | 45 | 88 | 108 | 88 |
| 13 | 38 | 38 | 39 | 36 | 35 | 40 | 44 | 54 | 45 | 89 | 108 | 86 |
| 14 | 38 | 39 | 38 | 36 | 34 | 40 | 43 | 51 | 44 | 88 | 108 | 84 |
| 15 | 38 | 39 | 37 | 35 | 34 | 39 | 42 | 52 | 43 | 88 | 108 | 84 |
| 16 | 38 | 39 | 37 | 35 | 34 | 39 | 42 | 80 | 43 | 88 | 108 | 84 |
| 17 | 38 | 39 | 37 | 35 | 34 | 39 | 41 | 75 | 43 | 86 | 111 | 84 |
| 18 | 38 | 40 | 37 | 35 | 34 | 38 | 40 | 64 | 44 | 86 | 109 | 80 |
| 19 | 38 | 40 | 37 | 35 | 34 | 42 | 40 | 59 | 48 | 88 | 108 | 78 |
| 20 | 37 | 40 | 37 | 35 | 34 | 41 | 39 | 57 | 61 | 88 | 108 | 75 |
| 21 | 37 | 40 | 37 | 36 | 36 | 40 | 39 | 54 | 60 | 92 | 106 | 65 |
| 22 | 37 | 40 | 37 | 36 | 36 | 41 | 38 | 59 | 67 | 92 | 104 | 52 |
| 23 | 37 | 40 | 37 | 36 | 36 | 44 | 38 | 80 | 70 | 92 | 102 | 52 |
| 24 | 37 | 40 | 37 | 36 | 36 | 43 | 38 | 65 | 72 | 92 | 104 | 50 |
| 25 | 39 | 40 | 37 | 36 | 37 | 41 | 39 | 60 | 78 | 96 | 102 | 39 |
| 26 | 38 | 39 | 37 | 36 | 37 | 39 | 40 | 74 | 94 | 102 | 96 | 39 |
| 27 | 38 | 39 | 36 | 36 | 37 | 42 | 40 | 67 | 92 | 102 | 91 | 41 |
| 28 | 38 | 39 | 36 | 37 | 42 | 42 | 40 | 61 | 94 | 106 | 89 | 67 |
| 29 | 38 | 39 | 35 | 37 | --- | 41 | 40 | 57 | 96 | 111 | 89 | 33 |
| 30 | 38 | 39 | 35 | 37 | --- | 41 | 40 | 55 | 94 | 111 | 88 | 21 |
| 31 | 39 | --- | 35 | 37 | --- | 39 | --- | 54 | --- | 109 | 88 | --- |
| TOTAL | 1200 | 1168 | 1168 | 1109 | 1004 | 1266 | 1263 | 1805 | 1760 | 2840 | 3270 | 2180 |
| MEAN | 38.7 | 38.9 | 37.7 | 35.8 | 35.9 | 40.8 | 42.1 | 58.2 | 58.7 | 91.6 | 105 | 72.7 |
| MAX | 51 | 40 | 40 | 38 | 42 | 48 | 54 | 80 | 96 | 111 | 117 | 92 |
| MIN | 37 | 38 | 35 | 34 | 34 | 38 | 38 | 42 | 43 | 83 | 88 | 21 |
| AC-FT | 2380 | 2320 | 2320 | 2200 | 1990 | 2510 | 2510 | 3580 | 3490 | 5630 | 6490 | 4320 |
| CAL YR 1976 | TOTAL | 25920 | MEAN 70.8 | MAX 140 | MIN 35 | AC-FT 51410 | | | | | | |
| WTR YR 1977 | TOTAL | 20033 | MEAN 54.9 | MAX 117 | MIN 21 | AC-FT 39740 | | | | | | |

14350000 EMIGRANT CREEK NEAR ASHLAND, OR

LOCATION.--Lat 43°09'50", long 122°36'15", in SE¼NE¼ sec.20, T.39 S., R.2 E., Jackson County, Hydrologic Unit 17100309, on left bank 0.1 mi (0.2 km) downstream from Emigrant Dam, 6 mi (10 km) southeast of Ashland, and at mile 29.2 (47.0 km).

DRAINAGE AREA.--64.3 mi² (166.5 km²).

PERIOD OF RECORD.--January to June 1920, October 1920 to July 1922, February 1923 to May 1924 (incomplete), October 1924 to November 1925, February to August 1926, October 1926 to September 1928, April 1929 to September 1930, April 1931 to October 1932 (incomplete), April 1933 to September 1935, April 1936 to September 1939 (incomplete), April 1940 to September 1947, January 1948 to October 1952 (incomplete), December 1952 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1448: 1921, 1927-28, 1937, 1953(M).

GAGE.--Water-stage recorder and artificial control. Datum of gage is 2,042.80 ft (622.645 m) above mean sea level (Bureau of Reclamation bench mark). Prior to Oct. 1, 1926, water-stage recorder or nonrecording gage at several nearby sites at various datums. Oct. 1, 1926, to Feb. 24, 1959, water-stage recorder near present site at datum 10.93 ft (3.331 m) higher. Feb. 25, 1959, to May 7, 1961, water-stage recorder at site 1.0 mi (1.6 km) downstream at different datum.

REMARKS.--Records good. Flow regulated since 1924 by Emigrant Lake (see below). Several diversions above station for irrigation; the principal diversion canals are Ashland lateral and East lateral (see below). From June 1923 to August 1960, water diverted by Keene Creek Canal from Klamath River basin into Emigrant Creek above station. Beginning May 1960, water from Klamath River basin diverted to Emigrant Creek above station via Green Springs powerplant diversion.

AVERAGE DISCHARGE.--37 years (water years 1925, 1927-30, 1934-35, 1941-47, 1954-77), 31.6 ft³/s (0.895 m³/s), 22,890 acre-ft/yr (28.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,260 ft³/s (149 m³/s) Feb. 20, 1927, by computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 71 ft³/s (2.01 m³/s) June 30, July 1, gage height, 1.35 ft (0.411 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|
| 1 | 14 | .00 | .00 | .00 | .10 | .10 | .30 | 12 | .20 | 67 | 45 | 29 |
| 2 | 8.0 | .00 | .00 | .00 | .00 | .10 | .50 | .20 | .20 | 62 | 46 | 32 |
| 3 | 8.0 | .10 | .10 | .10 | .00 | .10 | .50 | .10 | .20 | 62 | 54 | 32 |
| 4 | 7.4 | .10 | .10 | .10 | .10 | .10 | .40 | .10 | .20 | 58 | 61 | 31 |
| 5 | 6.8 | .10 | .10 | .10 | .10 | .10 | .30 | .10 | .20 | 53 | 64 | 31 |
| 6 | .70 | .10 | .10 | .10 | .10 | .10 | .30 | .10 | .20 | 53 | 66 | 31 |
| 7 | .20 | .10 | .10 | .10 | .00 | .10 | .30 | .10 | 7.3 | 53 | 64 | 31 |
| 8 | .20 | .10 | .10 | .10 | .00 | .10 | .30 | .10 | 12 | 52 | 55 | 31 |
| 9 | .30 | .10 | .10 | .10 | .10 | .10 | .30 | .10 | 11 | 51 | 51 | 31 |
| 10 | .30 | .10 | .10 | .10 | .10 | .10 | .30 | .10 | 10 | 51 | 47 | 28 |
| 11 | .30 | .10 | .00 | .10 | .10 | .00 | .30 | .10 | 2.0 | 46 | 44 | 26 |
| 12 | .20 | .10 | .10 | .10 | .10 | .10 | .30 | .20 | .20 | 45 | 43 | 26 |
| 13 | .30 | .00 | .10 | .10 | .10 | .10 | .30 | .20 | 9.1 | 45 | 44 | 26 |
| 14 | .20 | .10 | .00 | .10 | .10 | .10 | .30 | .20 | 22 | 45 | 44 | 27 |
| 15 | .20 | .00 | .00 | .10 | .10 | .10 | .30 | .20 | 15 | 48 | 43 | 28 |
| 16 | .10 | .10 | .00 | .10 | .10 | .10 | .30 | .20 | 9.3 | 48 | 42 | 28 |
| 17 | .10 | .10 | .00 | .10 | .10 | .10 | .30 | .20 | 11 | 48 | 43 | 28 |
| 18 | .00 | .10 | .00 | .10 | .10 | .10 | 12 | .20 | 15 | 47 | 41 | 28 |
| 19 | .00 | .10 | .00 | .10 | .10 | .10 | 10 | .20 | 18 | 47 | 39 | 21 |
| 20 | .00 | .10 | .00 | .10 | .00 | .10 | 10 | .20 | 18 | 52 | 36 | 17 |
| 21 | .00 | .10 | .00 | .10 | .10 | .10 | 12 | .30 | 18 | 58 | 44 | 14 |
| 22 | .00 | .10 | .00 | .10 | .10 | .10 | 12 | .30 | 26 | 60 | 33 | 13 |
| 23 | .00 | .10 | .00 | .10 | .10 | .10 | 12 | .40 | 46 | 57 | 33 | 13 |
| 24 | .00 | .10 | .10 | .00 | .10 | .10 | 12 | .40 | 51 | 56 | 33 | 11 |
| 25 | .00 | .10 | .10 | .00 | .10 | .10 | 12 | .40 | 56 | 52 | 29 | 9.3 |
| 26 | .00 | .10 | .10 | .10 | .10 | .10 | 12 | .30 | 62 | 49 | 25 | 9.3 |
| 27 | .00 | .00 | .10 | .10 | .10 | .10 | 12 | .30 | 61 | 48 | 26 | 9.3 |
| 28 | .00 | .00 | .00 | .10 | .10 | .10 | 12 | .30 | 62 | 48 | 26 | 3.3 |
| 29 | .00 | .00 | .00 | .10 | --- | .20 | 12 | .30 | 68 | 47 | 26 | .30 |
| 30 | .00 | .00 | .10 | .10 | --- | .20 | 12 | .30 | 71 | 46 | 27 | .20 |
| 31 | .00 | --- | .00 | .10 | --- | .20 | --- | .20 | --- | 46 | 28 | --- |
| TOTAL | 47.30 | 2.20 | 1.50 | 2.70 | 2.30 | 3.30 | 157.60 | 18.40 | 682.10 | 1600 | 1302 | 644.70 |
| MEAN | 1.53 | .073 | .048 | .087 | .082 | .11 | 5.25 | .59 | 22.7 | 51.6 | 42.0 | 21.5 |
| MAX | 14 | .10 | .10 | .10 | .10 | .20 | 12 | 12 | 71 | 67 | 66 | 32 |
| MIN | .00 | .00 | .00 | .00 | .00 | .00 | .30 | .10 | .20 | 45 | 25 | .20 |
| AC-FT | 94 | 4.4 | 3.0 | 5.4 | 4.6 | 6.5 | 313 | 36 | 1350 | 3170 | 2580 | 1280 |
| (†) | 13,940 | 16,820 | 20,100 | 22,990 | 25,680 | 29,210 | 28,460 | 31,320 | 27,260 | 17,880 | 9,490 | 5,700 |
| (‡) | 139 | 0 | 0 | 0 | 0 | 0 | 2,940 | 2,200 | 5,880 | 8,060 | 7,820 | 4,940 |

CAL YR 1976 TOTAL 5480.00 MEAN 15.0 MAX 87 MIN .00 AC-FT 10870
WTR YR 1977 TOTAL 4464.10 MEAN 12.2 MAX 71 MIN .00 AC-FT 8850

† Monthend contents, in acre-feet, of Emigrant Lake.

‡ Diversion, in acre-feet, by East Lateral.

a Interpolated.

14353000 WEST FORK ASHLAND CREEK NEAR ASHLAND, OR

LOCATION.--Lat 42°08'55", long 122°42'55", near line between NW¼ and SW¼ sec.38, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, in Rogue River National Forest, on left bank 0.3 mi (0.5 km) above city diversion, 2.5 mi (4.0 km) south of Ashland, and at mile 0.4 (0.6 km).

DRAINAGE AREA.--10.5 mi² (27.2 km²), at diversion dam 0.3 mi (0.5 km) downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60, 1963, annual maximum; December 1974 to current year. Monthly discharge only for some periods published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 2,962.75 ft (903.046 m) above mean sea level. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 0.2 mi (0.3 km) upstream at different datum. Oct. 14, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.3 mi (0.5 km) downstream at different datum.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--10 years (water years 1925-32, 1976-77), 7.99 ft³/s (0.226 m³/s), 10.33 in/yr (262 mm/yr), 5,790 acre-ft/yr (7.14 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 330 ft³/s (9.35 m³/s) Dec. 2, 1962, gage height, 15.51 ft (4.727 m), site and datum then in use, from rating curve defined by computation of peak flow over dam; minimum, 1.3 ft³/s (0.037 m³/s) Aug. 29, 1931, Sept. 8, 9, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1900. Discharge, 4,780 ft³/s (135 m³/s) by slope-area measurement of peak flow, gage height, 9.5 ft (2.90 m), from flood marks. Peak believed to be affected by release from debris dams breaking upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21 ft³/s (0.59 m³/s) Nov. 15, no peak above base of 50 ft³/s (1.42 m³/s); maximum gage height, 1.86 ft (0.567 m) May 22; minimum discharge, 1.3 ft³/s (0.037 m³/s) Sept. 8, 9.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|--------|-------|-------|-----------|--------|---------|----------|---------|------------|------|------|------|
| 1 | 2.9 | 2.9 | 3.8 | 3.1 | 2.6 | 2.8 | 2.7 | 4.9 | 8.3 | 5.0 | 1.7 | 1.5 |
| 2 | 3.7 | 2.9 | 3.7 | 3.4 | 2.5 | 2.7 | 2.5 | 5.2 | 8.0 | 4.7 | 1.7 | 1.5 |
| 3 | 3.3 | 2.8 | 3.7 | 3.0 | 2.5 | 2.8 | 2.8 | 5.2 | 8.0 | 4.2 | 1.7 | 1.4 |
| 4 | 3.1 | 2.7 | 3.7 | 3.0 | 2.5 | 2.7 | 3.6 | 4.6 | 8.5 | 4.3 | 1.7 | 1.5 |
| 5 | 3.0 | 2.8 | 3.7 | 2.8 | 2.5 | 2.8 | 4.3 | 4.7 | 8.7 | 4.3 | 1.6 | 1.5 |
| 6 | 2.9 | 2.7 | 3.7 | 2.0 | 2.4 | 3.0 | 4.9 | 4.7 | 8.9 | 4.3 | 1.6 | 1.4 |
| 7 | 2.9 | 3.0 | 3.7 | 2.1 | 2.4 | 3.1 | 5.6 | 4.6 | 8.9 | 4.1 | 4.3 | 1.4 |
| 8 | 2.8 | 3.1 | 3.9 | 2.1 | 2.5 | 3.1 | 6.2 | 4.6 | 8.7 | 3.9 | 2.6 | 1.4 |
| 9 | 2.8 | 3.3 | 4.1 | 2.9 | 2.4 | 3.3 | 5.5 | 4.9 | 8.0 | 3.8 | 2.1 | 1.6 |
| 10 | 2.8 | 3.5 | 4.2 | 3.1 | 2.4 | 2.9 | 4.9 | 5.2 | 8.3 | 3.6 | 1.9 | 1.7 |
| 11 | 2.8 | 4.7 | 4.6 | 3.1 | 2.3 | 2.9 | 4.9 | 5.5 | 8.5 | 3.4 | 1.8 | 1.7 |
| 12 | 2.8 | 5.0 | 4.3 | 3.1 | 2.3 | 3.0 | 5.0 | 5.5 | 8.0 | 3.2 | 1.7 | 1.7 |
| 13 | 2.8 | 5.6 | 4.1 | 3.0 | 2.3 | 2.6 | 5.3 | 5.5 | 8.3 | 3.0 | 1.7 | 1.7 |
| 14 | 2.7 | 9.2 | 3.9 | 3.0 | 2.2 | 2.6 | 4.7 | 5.2 | 7.6 | 2.9 | 1.6 | 1.7 |
| 15 | 2.7 | 8.3 | 3.9 | 2.9 | 2.2 | 2.6 | 5.0 | 5.2 | 7.4 | 2.7 | 1.6 | 1.8 |
| 16 | 2.7 | 4.7 | 3.5 | 2.9 | 2.2 | 2.6 | 5.3 | 5.5 | 7.1 | 2.7 | 1.6 | 2.3 |
| 17 | 2.7 | 4.4 | 3.4 | 3.1 | 2.1 | 2.6 | 4.7 | 5.6 | 6.9 | 2.6 | 1.6 | 2.8 |
| 18 | 2.7 | 4.3 | 3.3 | 3.1 | 2.1 | 2.6 | 4.4 | 5.3 | 6.9 | 2.5 | 1.6 | 3.0 |
| 19 | 2.6 | 4.3 | 3.2 | 3.2 | 2.1 | 2.8 | 4.2 | 5.5 | 6.7 | 2.6 | 1.6 | 3.6 |
| 20 | 2.6 | 4.2 | 3.2 | 3.1 | 2.4 | 2.8 | 4.2 | 6.2 | 6.5 | 2.5 | 1.7 | 3.8 |
| 21 | 2.6 | 4.1 | 3.2 | 3.2 | 3.2 | 2.8 | 4.3 | 6.5 | 6.3 | 2.4 | 1.9 | 3.1 |
| 22 | 2.7 | 4.1 | 3.3 | 3.0 | 2.8 | 3.2 | 4.6 | 8.5 | 6.0 | 2.4 | 1.6 | 2.7 |
| 23 | 2.7 | 4.1 | 3.3 | 2.9 | 2.7 | 3.5 | 4.7 | 11 | 5.5 | 2.1 | 1.6 | 3.0 |
| 24 | 2.7 | 4.1 | 3.1 | 2.7 | 2.6 | 3.1 | 4.7 | 9.9 | 5.2 | 1.9 | 1.7 | 8.0 |
| 25 | 3.0 | 4.1 | 3.3 | 2.6 | 2.6 | 3.0 | 4.9 | 9.2 | 4.9 | 1.9 | 1.9 | 4.7 |
| 26 | 2.9 | 4.2 | 3.3 | 2.6 | 2.6 | 2.9 | 4.4 | 9.9 | 4.9 | 1.9 | 1.8 | 4.2 |
| 27 | 2.8 | 3.6 | 3.2 | 2.6 | 2.8 | 3.1 | 4.3 | 9.2 | 4.7 | 1.9 | 1.6 | 4.6 |
| 28 | 2.8 | 3.9 | 3.1 | 2.6 | 3.2 | 3.0 | 4.3 | 8.5 | 4.4 | 1.9 | 1.6 | 8.7 |
| 29 | 2.7 | 4.1 | 3.1 | 2.6 | --- | 2.8 | 4.3 | 8.3 | 4.3 | 1.9 | 1.6 | 8.5 |
| 30 | 2.8 | 4.1 | 3.1 | 2.6 | --- | 2.5 | 4.4 | 8.0 | 4.3 | 1.8 | 1.5 | 3.2 |
| 31 | 2.9 | --- | 3.0 | 2.6 | --- | 2.5 | --- | 8.5 | --- | 1.7 | 1.5 | --- |
| TOTAL | 87.9 | 124.8 | 110.6 | 88.0 | 69.4 | 88.7 | 135.6 | 201.1 | 208.7 | 92.1 | 55.7 | 89.7 |
| MEAN | 2.84 | 4.16 | 3.57 | 2.84 | 2.48 | 2.86 | 4.52 | 6.49 | 6.96 | 2.97 | 1.80 | 2.99 |
| MAX | 3.7 | 9.2 | 4.6 | 3.4 | 3.2 | 3.5 | 6.2 | 11 | 8.9 | 5.0 | 4.3 | 8.7 |
| MIN | 2.6 | 2.7 | 3.0 | 2.0 | 2.1 | 2.5 | 2.5 | 4.6 | 4.3 | 1.7 | 1.5 | 1.4 |
| CFSM | .27 | .40 | .34 | .27 | .24 | .27 | .43 | .62 | .66 | .28 | .17 | .29 |
| IN. | .31 | .44 | .39 | .31 | .25 | .31 | .48 | .71 | .74 | .33 | .20 | .32 |
| AC-FT | 174 | 248 | 219 | 175 | 138 | 176 | 269 | 399 | 414 | 183 | 110 | 178 |
| CAL YR 1976 TOTAL | 2638.9 | | | MEAN 7.21 | MAX 22 | MIN 2.6 | CFSM .69 | IN 9.35 | AC-FT 5230 | | | |
| WTR YR 1977 TOTAL | 1352.3 | | | MEAN 3.70 | MAX 11 | MIN 1.4 | CFSM .35 | IN 4.79 | AC-FT 2680 | | | |

14353500 EAST FORK ASHLAND CREEK NEAR ASHLAND, OR

LOCATION.--Lat 42°09'10", long 122°42'30", near line between NE¼ and NW¼ sec.28, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, Rogue River National Forest, on left bank 0.1 mi (0.2 km) above city diversion dam, 2.5 mi (4.0 km) south of Ashland, and at mile 0.2 (0.3 km).

DRAINAGE AREA.--8.14 mi² (21.1 km²), at diversion dam 0.1 mi (0.2 km) downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60, 1963, annual maximum; December 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,903.70 ft (885.048 m) above mean sea level. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 200 ft (61.0 m) downstream at different datum. Oct. 19, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.1 mi (0.2 km) downstream at different datum.

REMARKS.--Records good. No regulation or diversion.

AVERAGE DISCHARGE.--10 years (water years 1925-32, 1976-77), 8.19 ft³/s (0.232 m³/s), 13.66 in/yr (347 mm/yr), 5,930 acre-ft/yr (7.31 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335 ft³/s (9.49 m³/s) Dec. 2, 1962, gage height, 5.42 ft (1.652 m), site and datum then in use, from rating curve defined by computations of peak flow over dam; minimum, 0.47 ft³/s (0.013 m³/s) Mar. 14, 1977, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1925. Discharge, 5,630 ft³/s (159 m³/s) by slope-area measurement of peak flow, gage height, 10.2 ft (3.11 m) from flood marks. Peak believed to be affected by release from debris dams breaking upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13 ft³/s (0.37 m³/s) May 22, gage height, 1.62 ft (0.494 m), no peak above base of 40 ft³/s (1.13 m³/s); minimum, 0.47 ft³/s (0.013 m³/s) Mar. 14, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|-----------|---------|---------|----------|----------|------------|-------|------|------|------|
| 1 | 3.0 | 3.0 | 3.1 | 2.6 | 2.5 | 2.7 | 2.8 | 4.1 | 6.5 | 3.9 | 2.1 | 1.7 |
| 2 | 3.7 | 2.8 | 3.1 | 3.0 | 2.5 | 2.7 | 2.8 | 4.6 | 6.0 | 3.6 | 2.1 | 1.7 |
| 3 | 3.6 | 2.8 | 2.8 | 2.7 | 2.5 | 2.7 | 3.0 | 4.4 | 5.8 | 3.3 | 2.1 | 1.6 |
| 4 | 3.4 | 2.7 | 2.8 | 2.8 | 2.3 | 2.4 | 3.4 | 3.7 | 5.8 | 3.3 | 2.0 | 1.7 |
| 5 | 3.3 | 2.7 | 2.8 | 2.7 | 2.5 | 2.6 | 4.1 | 3.7 | 6.0 | 3.4 | 2.0 | 1.7 |
| 6 | 3.1 | 2.6 | 2.8 | 2.5 | 2.5 | 2.6 | 4.1 | 3.6 | 6.0 | 3.4 | 2.0 | 1.7 |
| 7 | 3.0 | 2.6 | 2.8 | 2.5 | 2.5 | 3.0 | 5.0 | 3.6 | 5.8 | 3.3 | 4.1 | 1.7 |
| 8 | 2.8 | 2.6 | 3.0 | 2.6 | 2.6 | 3.1 | 5.8 | 3.6 | 5.8 | 3.1 | 2.5 | 1.6 |
| 9 | 2.8 | 2.6 | 3.1 | 2.6 | 2.6 | 3.3 | 4.8 | 3.9 | 5.6 | 3.0 | 2.2 | 1.6 |
| 10 | 2.8 | 2.6 | 3.0 | 2.8 | 2.5 | 2.8 | 3.9 | 4.1 | 6.0 | 3.0 | 2.1 | 1.6 |
| 11 | 2.8 | 2.6 | 3.3 | 3.1 | 2.5 | 2.8 | 3.7 | 4.4 | 6.5 | 3.0 | 2.0 | 1.6 |
| 12 | 2.8 | 2.6 | 3.1 | 2.8 | 2.5 | 2.8 | 3.9 | 4.6 | 5.8 | 3.0 | 2.0 | 1.6 |
| 13 | 2.7 | 2.7 | 3.1 | 2.8 | 2.5 | 2.3 | 4.3 | 4.8 | 6.0 | 2.8 | 1.9 | 1.6 |
| 14 | 2.7 | 5.2 | 3.0 | 2.7 | 2.5 | 2.4 | 3.6 | 4.8 | 5.4 | 2.8 | 1.9 | 1.6 |
| 15 | 2.7 | 6.7 | 3.0 | 2.7 | 2.3 | 2.7 | 3.7 | 4.6 | 5.0 | 2.7 | 1.7 | 1.6 |
| 16 | 2.7 | 4.3 | 3.0 | 2.7 | 2.3 | 2.7 | 4.4 | 5.0 | 4.8 | 2.6 | 1.7 | 2.0 |
| 17 | 2.6 | 3.7 | 3.0 | 2.8 | 2.2 | 2.6 | 3.4 | 4.8 | 4.6 | 2.6 | 1.7 | 2.4 |
| 18 | 2.6 | 3.4 | 2.8 | 2.8 | 2.2 | 2.6 | 3.3 | 4.8 | 4.8 | 2.6 | 1.7 | 2.4 |
| 19 | 2.6 | 3.4 | 2.7 | 3.0 | 2.2 | 2.6 | 3.1 | 5.0 | 4.6 | 2.6 | 1.6 | 2.7 |
| 20 | 2.6 | 3.3 | 2.7 | 3.0 | 2.6 | 2.7 | 3.3 | 5.8 | 4.4 | 2.6 | 1.7 | 2.6 |
| 21 | 2.6 | 3.1 | 2.7 | 3.0 | 3.3 | 2.7 | 3.4 | 6.0 | 4.6 | 2.5 | 2.0 | 2.4 |
| 22 | 2.6 | 3.1 | 2.7 | 3.0 | 2.6 | 3.0 | 3.4 | 7.9 | 4.3 | 2.6 | 1.8 | 2.2 |
| 23 | 2.6 | 3.1 | 2.7 | 2.8 | 2.5 | 3.4 | 3.4 | 9.7 | 4.1 | 2.5 | 1.7 | 2.2 |
| 24 | 2.7 | 3.1 | 3.1 | 2.6 | 2.5 | 3.0 | 3.4 | 8.6 | 3.9 | 2.3 | 2.0 | 3.5 |
| 25 | 3.1 | 3.1 | 2.8 | 2.6 | 2.6 | 2.8 | 3.6 | 7.4 | 3.7 | 2.2 | 2.1 | 2.3 |
| 26 | 3.0 | 3.0 | 2.8 | 2.6 | 2.6 | 2.8 | 3.3 | 8.1 | 3.6 | 2.3 | 2.0 | 2.1 |
| 27 | 3.0 | 2.7 | 2.7 | 2.6 | 2.7 | 3.0 | 3.3 | 7.4 | 3.6 | 2.2 | 2.0 | 2.2 |
| 28 | 2.8 | 3.1 | 2.6 | 2.6 | 3.1 | 2.7 | 3.3 | 6.7 | 3.4 | 2.2 | 2.0 | 7.6 |
| 29 | 2.8 | 3.1 | 2.6 | 2.6 | --- | 2.8 | 3.3 | 6.2 | 3.3 | 2.2 | 1.8 | 6.5 |
| 30 | 2.8 | 3.1 | 2.6 | 2.6 | --- | 2.8 | 3.6 | 6.2 | 3.3 | 2.2 | 1.8 | 2.8 |
| 31 | 3.0 | --- | 2.6 | 2.6 | --- | 2.7 | --- | 6.5 | --- | 2.1 | 1.7 | --- |
| TOTAL | 89.3 | 95.4 | 88.9 | 84.8 | 70.7 | 85.8 | 110.4 | 168.6 | 149.0 | 85.9 | 62.0 | 70.5 |
| MEAN | 2.88 | 3.18 | 2.87 | 2.74 | 2.53 | 2.77 | 3.68 | 5.44 | 4.97 | 2.77 | 2.00 | 2.35 |
| MAX | 3.7 | 6.7 | 3.3 | 3.1 | 3.3 | 3.4 | 5.8 | 9.7 | 6.5 | 3.9 | 4.1 | 7.6 |
| MIN | 2.6 | 2.6 | 2.6 | 2.5 | 2.2 | 2.3 | 2.8 | 3.6 | 3.3 | 2.1 | 1.6 | 1.6 |
| CFSM | .35 | .39 | .35 | .34 | .31 | .34 | .45 | .67 | .61 | .34 | .25 | .29 |
| IN. | .41 | .44 | .41 | .39 | .32 | .39 | .50 | .77 | .68 | .39 | .28 | .32 |
| AC-FT | 177 | 189 | 176 | 168 | 140 | 170 | 219 | 334 | 296 | 170 | 123 | 140 |
| CAL YR 1976 | TOTAL | 2367.0 | MEAN 6.47 | MAX 18 | MIN 2.6 | CFSM .80 | IN 10.82 | AC-FT 4690 | | | | |
| WTR YR 1977 | TOTAL | 1161.3 | MEAN 3.18 | MAX 9.7 | MIN 1.6 | CFSM .39 | IN 5.31 | AC-FT 2300 | | | | |

ROGUE RIVER BASIN

517

14357500 BEAR CREEK AT MEDFORD, OR

LOCATION.--Lat 42°19'40", long 122°52'10", in NW¼ sec.30, T.37 S., R.1 W., Jackson County, Hydrologic Unit 17100308, on left bank 40 ft (12 m) upstream from Main Street Bridge in Medford and at mile 9.91 (15.95 km).

DRAINAGE AREA.--289 mi² (749 km²).

PERIOD OF RECORD.--March 1915 to June 1920 (no low-flow records), October 1920 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1044: 1944. WSP 1448: 1916, 1917(M), 1918-20, 1922, 1924, 1927(M), 1928, 1930. WSP 1568: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,343.98 ft (409.645 m) above mean sea level. See WSP 1738 for history of changes prior to Dec. 31, 1947.

REMARKS.--Records good. Flow partly regulated since 1924 by Emigrant Lake (published with station 14350000). Numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--57 years (water years 1921-77), 115 ft³/s (3.257 m³/s), 83,320 acre-ft/yr (103 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s (411 m³/s) Dec. 2, 1962, gage height, 8.04 ft (2.451 m); maximum gage height, about 11.0 ft (3.35 m) Feb. 20, 1927, from floodmarks, present datum, site then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,170 ft³/s (33.1 m³/s) Sept. 28, gage height, 2.64 ft (0.805 m); minimum, 2.3 ft³/s (0.065 m³/s) Oct. 19.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|------|------|------|-------|-------|------|------|
| 1 | 73 | 6.7 | 25 | 19 | 18 | 27 | 38 | 28 | 44 | 50 | 28 | 34 |
| 2 | 92 | 14 | 24 | 49 | 18 | 29 | 29 | 63 | 41 | 40 | 23 | 24 |
| 3 | 53 | 24 | 24 | 37 | 18 | 31 | 18 | 71 | 35 | 38 | 25 | 24 |
| 4 | 43 | 24 | 25 | 28 | 17 | 27 | 22 | 61 | 28 | 44 | 28 | 34 |
| 5 | 32 | 25 | 24 | 29 | 17 | 24 | 27 | 46 | 25 | 44 | 29 | 35 |
| 6 | 32 | 28 | 24 | 21 | 18 | 24 | 32 | 58 | 24 | 40 | 29 | 35 |
| 7 | 27 | 28 | 24 | 21 | 19 | 25 | 23 | 54 | 22 | 31 | 61 | 27 |
| 8 | 18 | 28 | 27 | 21 | 21 | 25 | 14 | 49 | 25 | 37 | 59 | 27 |
| 9 | 17 | 28 | 35 | 21 | 21 | 43 | 22 | 49 | 31 | 46 | 40 | 32 |
| 10 | 17 | 28 | 23 | 22 | 19 | 54 | 18 | 46 | 34 | 38 | 35 | 37 |
| 11 | 14 | 28 | 23 | 38 | 19 | 51 | 14 | 67 | 56 | 41 | 25 | 38 |
| 12 | 11 | 28 | 23 | 41 | 18 | 51 | 14 | 69 | 65 | 31 | 28 | 37 |
| 13 | 11 | 28 | 22 | 27 | 16 | 51 | 19 | 54 | 61 | 29 | 27 | 24 |
| 14 | 11 | 35 | 22 | 24 | 16 | 49 | 24 | 44 | 56 | 34 | 27 | 23 |
| 15 | 11 | 43 | 23 | 24 | 16 | 46 | 17 | 44 | 47 | 34 | 29 | 23 |
| 16 | 10 | 40 | 22 | 23 | 17 | 43 | 15 | 71 | 28 | 35 | 25 | 27 |
| 17 | 9.0 | 27 | 21 | 22 | 18 | 44 | 22 | 116 | 28 | 34 | 29 | 44 |
| 18 | 9.0 | 24 | 21 | 23 | 17 | 47 | 16 | 94 | 34 | 31 | 38 | 59 |
| 19 | 3.8 | 22 | 18 | 23 | 21 | 47 | 16 | 88 | 35 | 25 | 35 | 88 |
| 20 | 7.8 | 21 | 19 | 23 | 15 | 51 | 16 | 69 | 31 | 25 | 35 | 90 |
| 21 | 10 | 21 | 19 | 23 | 37 | 51 | 21 | 56 | 28 | 28 | 35 | 83 |
| 22 | 9.0 | 21 | 21 | 23 | 28 | 51 | 17 | 75 | 25 | 32 | 31 | 61 |
| 23 | 7.8 | 32 | 21 | 22 | 34 | 65 | 21 | 176 | 25 | 28 | 27 | 49 |
| 24 | 9.0 | 35 | 21 | 22 | 27 | 63 | 17 | 155 | 28 | 25 | 32 | 67 |
| 25 | 9.0 | 34 | 21 | 19 | 23 | 59 | 17 | 96 | 31 | 27 | 43 | 59 |
| 26 | 6.7 | 34 | 22 | 19 | 23 | 54 | 21 | 108 | 32 | 24 | 59 | 49 |
| 27 | 6.7 | 32 | 22 | 18 | 24 | 54 | 18 | 123 | 29 | 23 | 54 | 58 |
| 28 | 4.6 | 34 | 21 | 18 | 29 | 56 | 17 | 90 | 25 | 22 | 43 | 702 |
| 29 | 5.5 | 32 | 21 | 18 | --- | 56 | 27 | 73 | 29 | 24 | 41 | 388 |
| 30 | 6.7 | 32 | 21 | 18 | --- | 54 | 23 | 61 | 29 | 24 | 41 | 103 |
| 31 | 6.7 | --- | 19 | 19 | --- | 47 | --- | 49 | --- | 25 | 44 | --- |
| TOTAL | 583.3 | 836.7 | 698 | 755 | 584 | 1399 | 615 | 2303 | 1031 | 1009 | 1105 | 2381 |
| MEAN | 18.8 | 27.9 | 22.5 | 24.4 | 20.9 | 45.1 | 20.5 | 74.3 | 34.4 | 32.5 | 35.6 | 79.4 |
| MAX | 92 | 43 | 35 | 49 | 37 | 65 | 38 | 176 | 65 | 50 | 61 | 702 |
| MIN | 3.8 | 6.7 | 18 | 18 | 15 | 24 | 14 | 28 | 22 | 22 | 23 | 23 |
| AC-FT | 1160 | 1660 | 1380 | 1500 | 1160 | 2770 | 1220 | 4570 | 2040 | 2000 | 2190 | 4720 |
| CAL YR 1976 | TOTAL | 29809.0 | MEAN | 81.4 | MAX | 316 | MIN | 3.8 | AC-FT | 59130 | | |
| WTR YR 1977 | TOTAL | 13300.0 | MEAN | 36.4 | MAX | 702 | MIN | 3.8 | AC-FT | 26380 | | |

ROGUE RIVER BASIN

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR

LOCATION.--Lat 42°26'15", long 122°59'10", in SW¼ sec.18, T.36 S., R.2 W., Jackson County, Hydrologic Unit 17100308, on right bank at Raygold, 0.1 mi (0.2 km) downstream from Gold Ray Dam, 1.0 mi (1.6 km) downstream from Bear Creek, 5.6 mi (9.0 km) northwest of Central Point, and at mile 125.8 (202.4 km).

DRAINAGE AREA.--2,053 mi² (5,317 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1905 to current year. Prior to October 1921, published as "near Tolo."

REVISED RECORDS.--WSP 1248: 1906, 1914(M), 1915. WSP 1398: 1910(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,121.78 ft (341.919 m) above mean sea level. Prior to Sept. 19, 1914, nonrecording gage and Sept. 19, 1914, to Sept. 30, 1956, water-stage recorder, at site 300 ft (91 m) upstream at same datum.

REMARKS.--Water-discharge records excellent. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Minor fluctuations caused by fishway operations at Gold Ray dam 0.1 mi (0.2 km) above station. Slight regulation by Fish Lake (published with station 14342500) and Emigrant Lake (published with station 14350000). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--72 years, 2,976 ft³/s (84.28 m³/s), 2,156,000 acre-ft/yr (2.66 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 131,000 ft³/s (3,710 m³/s) Dec. 23, 1964, gage height, 23.43 ft (7.141 m), from rating curve extended above 63,000 ft³/s (1,780 m³/s) on basis of slope-area measurement of 113,000 ft³/s (3,200 m³/s); minimum, 619 ft³/s (17.5 m³/s) Feb. 19, 1977, result of closure of Lost Creek dam; minimum daily, 616 ft³/s (17.4 m³/s) Sept. 6, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 32 ft (10 m), discharge not determined, and flood in February 1890 reached a stage of about 27.5 ft (8.38 m), discharge not determined, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,830 ft³/s (165 m³/s) Sept. 29, gage height, 4.06 ft (1.237 m); minimum, 619 ft³/s (17.5 m³/s) Feb. 19, result of closure of Lost Creek dam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|
| 1 | 1490 | 1520 | 1360 | 1300 | 1290 | 1190 | 1130 | 1080 | 1170 | 1200 | 1090 | 1180 |
| 2 | 1760 | 1540 | 1350 | 1530 | 1270 | 1140 | 1210 | 1430 | 1110 | 1220 | 1070 | 1160 |
| 3 | 1660 | 1450 | 1320 | 1550 | 1240 | 1340 | 1130 | 1290 | 1040 | 1190 | 1050 | 1130 |
| 4 | 1540 | 1440 | 1350 | 1440 | 1230 | 1260 | 1110 | 1400 | 1020 | 1200 | 1070 | 1160 |
| 5 | 1500 | 1420 | 1340 | 1390 | 1220 | 1170 | 1130 | 1350 | 981 | 1200 | 1150 | 1170 |
| 6 | 1490 | 1420 | 1340 | 1290 | 1230 | 1150 | 1130 | 1420 | 950 | 1190 | 1080 | 1190 |
| 7 | 1460 | 1420 | 1340 | 1240 | 1220 | 1160 | 1100 | 1350 | 1000 | 1170 | 1150 | 1180 |
| 8 | 1430 | 1420 | 1360 | 1270 | 1230 | 1270 | 1100 | 1270 | 1000 | 1160 | 1190 | 1160 |
| 9 | 1420 | 1420 | 1470 | 1240 | 1240 | 1650 | 1100 | 1230 | 1180 | 1160 | 1130 | 1170 |
| 10 | 1420 | 1410 | 1360 | 1320 | 1230 | 1650 | 1050 | 1280 | 1200 | 1160 | 1130 | 1220 |
| 11 | 1410 | 1410 | 1350 | 1460 | 1230 | 1420 | 1000 | 1570 | 1290 | 1150 | 1100 | 1250 |
| 12 | 1410 | 1400 | 1360 | 1540 | 1230 | 1360 | 934 | 1530 | 1310 | 1140 | 1080 | 1280 |
| 13 | 1360 | 1400 | 1350 | 1430 | 1220 | 1380 | 903 | 1350 | 1310 | 1140 | 1110 | 1280 |
| 14 | 1350 | 1490 | 1340 | 1400 | 1230 | 1300 | 934 | 1230 | 1310 | 1150 | 1130 | 1290 |
| 15 | 1410 | 1580 | 1330 | 1360 | 1220 | 1250 | 910 | 1210 | 1280 | 1170 | 1120 | 1270 |
| 16 | 1380 | 1660 | 1340 | 1350 | 1200 | 1220 | 903 | 1360 | 1230 | 1310 | 1090 | 1300 |
| 17 | 1430 | 1520 | 1340 | 1330 | 1190 | 1200 | 872 | 1650 | 1190 | 1340 | 1080 | 1340 |
| 18 | 1420 | 1460 | 1320 | 1330 | 1130 | 1200 | 872 | 1580 | 1230 | 1320 | 1090 | 1380 |
| 19 | 1420 | 1430 | 1290 | 1340 | 662 | 1220 | 834 | 1500 | 1250 | 1150 | 1100 | 1440 |
| 20 | 1410 | 1420 | 1290 | 1360 | 727 | 1270 | 826 | 1340 | 1250 | 1130 | 1120 | 1410 |
| 21 | 1400 | 1410 | 1300 | 1340 | 849 | 1270 | 849 | 1250 | 1190 | 1130 | 1150 | 1420 |
| 22 | 1410 | 1400 | 1310 | 1330 | 942 | 1270 | 879 | 1270 | 1170 | 1130 | 1130 | 1390 |
| 23 | 1400 | 1410 | 1310 | 1320 | 950 | 1360 | 958 | 2160 | 1170 | 1140 | 1120 | 1380 |
| 24 | 1400 | 1400 | 1310 | 1310 | 1000 | 1440 | 942 | 2240 | 1170 | 1130 | 1150 | 1440 |
| 25 | 1510 | 1390 | 1300 | 1290 | 981 | 1440 | 950 | 1810 | 1230 | 1110 | 1200 | 1420 |
| 26 | 1610 | 1390 | 1350 | 1290 | 981 | 1370 | 965 | 1870 | 1260 | 1100 | 1220 | 1380 |
| 27 | 1490 | 1370 | 1370 | 1270 | 1010 | 1350 | 934 | 2070 | 1240 | 1100 | 1210 | 1370 |
| 28 | 1440 | 1360 | 1330 | 1280 | 1080 | 1470 | 934 | 1680 | 1130 | 1080 | 1210 | 3210 |
| 29 | 1440 | 1360 | 1320 | 1270 | --- | 1260 | 1000 | 1520 | 1130 | 1080 | 1210 | 3980 |
| 30 | 1450 | 1370 | 1320 | 1270 | --- | 1200 | 1080 | 1390 | 1130 | 1100 | 1170 | 1880 |
| 31 | 1450 | --- | 1310 | 1280 | --- | 1130 | --- | 1280 | --- | 1110 | 1170 | --- |
| TOTAL | 45170 | 43090 | 41430 | 41720 | 31232 | 40360 | 29669 | 45960 | 35121 | 36060 | 35070 | 43830 |
| MEAN | 1457 | 1436 | 1336 | 1346 | 1115 | 1302 | 989 | 1483 | 1171 | 1163 | 1131 | 1461 |
| MAX | 1760 | 1660 | 1470 | 1550 | 1290 | 1650 | 1210 | 2240 | 1310 | 1340 | 1220 | 3980 |
| MIN | 1350 | 1360 | 1290 | 1240 | 662 | 1130 | 826 | 1080 | 950 | 1080 | 1050 | 1130 |
| AC-FT | 89590 | 85470 | 82180 | 82750 | 61950 | 80050 | 58850 | 91160 | 69660 | 71520 | 69560 | 86940 |
| CAL YR 1976 TOTAL | 1023040 | | | 2795 | | 13100 | | 1290 | | 2029000 | | |
| WTR YR 1977 TOTAL | 468712 | | | 1284 | | 3980 | | 662 | | 929700 | | |

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 22.0°C July 25, 26, 1976; minimum, 0.0°C Jan. 7, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.0°C June 6, 7; minimum recorded, 1.5°C Dec. 21, 22, but may have been lower during period of no record.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 17.0 | 15.0 | 11.0 | 9.5 | 4.5 | 3.0 | 3.5 | 3.0 | 6.0 | 4.5 | 8.0 | 7.0 |
| 2 | 16.5 | 14.5 | 11.0 | 10.0 | 4.5 | 3.5 | --- | --- | 6.0 | 4.0 | 7.5 | 6.5 |
| 3 | 14.5 | 12.5 | 11.0 | 10.5 | 4.5 | 3.0 | --- | --- | 5.0 | 3.5 | 7.5 | 6.0 |
| 4 | 14.0 | 12.0 | 10.5 | 9.5 | 4.5 | 3.5 | --- | --- | 5.0 | 3.5 | 8.0 | 6.0 |
| 5 | 13.5 | 11.5 | 9.5 | 8.5 | 4.5 | 3.5 | --- | --- | 5.0 | 4.0 | 8.5 | 7.0 |
| 6 | 14.0 | 12.0 | 8.5 | 8.0 | 4.0 | 3.0 | --- | --- | 6.0 | 4.0 | 8.5 | 7.5 |
| 7 | 14.5 | 12.5 | 9.0 | 8.0 | 4.0 | 3.0 | --- | --- | 6.0 | 5.0 | 8.5 | 7.0 |
| 8 | 15.0 | 13.0 | 9.0 | 8.0 | 4.5 | 3.5 | --- | --- | 7.5 | 5.5 | 8.0 | 7.0 |
| 9 | 15.0 | 13.0 | 9.0 | 8.0 | 5.0 | 4.5 | --- | --- | 7.5 | 6.5 | 8.0 | 7.5 |
| 10 | 14.0 | 12.0 | 8.5 | 8.0 | 5.0 | 5.0 | --- | --- | 8.0 | 6.5 | 8.5 | 6.5 |
| 11 | 13.5 | 11.5 | 9.5 | 8.0 | 5.0 | 4.0 | --- | --- | 8.0 | 6.5 | 8.5 | 7.0 |
| 12 | 13.0 | 11.5 | 9.5 | 8.5 | 4.0 | 3.5 | --- | --- | 8.0 | 6.5 | 8.5 | 7.5 |
| 13 | 13.0 | 11.0 | 9.0 | 7.5 | 4.0 | 3.5 | 5.0 | --- | 8.0 | 7.0 | 8.0 | 7.0 |
| 14 | 12.5 | 10.5 | 8.0 | 7.5 | 4.0 | 3.5 | 5.5 | 4.5 | 8.0 | 7.0 | 8.0 | 6.5 |
| 15 | 12.0 | 10.5 | 9.5 | 8.0 | 4.0 | 3.5 | 5.5 | 4.0 | 8.0 | 6.5 | 7.5 | 7.0 |
| 16 | 11.5 | 10.0 | 10.0 | 9.0 | 4.0 | 3.5 | 4.0 | 4.0 | 8.5 | 6.5 | 8.5 | 6.0 |
| 17 | 11.0 | 9.5 | 10.0 | 10.0 | 4.0 | 4.0 | 4.0 | 3.5 | 9.0 | 7.5 | 8.5 | 7.0 |
| 18 | 11.0 | 9.0 | 10.0 | 9.5 | 3.5 | 3.0 | 4.0 | 3.5 | 9.0 | 7.0 | 8.0 | 7.0 |
| 19 | 10.0 | 8.5 | 9.5 | 9.0 | 3.0 | 2.0 | 4.0 | 3.5 | 8.0 | 7.0 | 9.5 | 7.5 |
| 20 | 10.0 | 8.5 | 9.0 | 7.0 | 2.0 | 2.0 | 4.0 | 3.5 | 8.0 | 7.5 | 10.0 | 8.0 |
| 21 | 10.0 | 8.5 | 7.0 | 6.0 | 2.0 | 1.5 | 5.0 | 4.0 | 8.0 | 7.0 | 10.5 | 8.5 |
| 22 | 10.0 | 8.5 | 7.0 | 6.0 | 2.5 | 1.5 | 5.0 | 4.0 | 8.0 | 6.5 | 11.0 | 9.0 |
| 23 | 10.0 | 8.5 | 6.5 | 6.0 | 4.0 | 2.5 | 4.5 | 4.0 | 8.0 | 7.0 | 11.0 | 9.5 |
| 24 | 9.5 | 8.0 | 6.5 | 6.0 | 4.0 | 3.0 | 4.5 | 3.5 | 7.5 | 6.0 | 9.5 | 8.0 |
| 25 | 9.0 | 7.5 | 7.0 | 5.5 | 3.5 | 2.5 | 4.0 | 2.5 | 7.5 | 7.0 | 10.0 | 7.0 |
| 26 | 9.0 | 7.5 | 6.5 | 5.0 | 4.0 | 3.0 | 3.5 | 2.5 | 8.0 | 7.0 | 10.5 | 8.0 |
| 27 | 9.0 | 7.5 | 5.5 | 3.5 | 4.5 | 4.0 | 3.5 | 2.0 | 8.5 | 7.5 | 10.5 | 9.5 |
| 28 | 9.0 | 7.5 | 4.0 | 2.5 | 4.5 | 4.0 | 3.5 | 2.0 | 8.5 | 8.0 | 9.5 | 7.5 |
| 29 | 8.5 | 8.0 | 4.0 | 2.5 | 4.0 | 3.5 | 3.5 | 2.5 | --- | --- | 8.5 | 7.5 |
| 30 | 9.5 | 8.5 | 4.5 | 3.0 | 4.5 | 3.5 | 3.5 | 2.5 | --- | --- | 10.0 | 7.5 |
| 31 | 10.5 | 9.0 | --- | --- | 4.0 | 3.5 | 5.5 | 3.5 | --- | --- | 10.0 | 8.5 |
| MONTH | 17.0 | 7.5 | 11.0 | 2.5 | 5.0 | 1.5 | 5.5 | 2.0 | 9.0 | 3.5 | 11.0 | 6.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 10.5 | 8.0 | 14.5 | 13.5 | 18.0 | 16.5 | 18.0 | 17.0 | 20.0 | 19.0 | 18.5 | 16.5 |
| 2 | 10.5 | 8.5 | 14.5 | 12.0 | 18.0 | 15.0 | 18.5 | 16.5 | 20.5 | 18.0 | 18.5 | 17.5 |
| 3 | 12.0 | 9.5 | 14.5 | 13.5 | 17.0 | 15.5 | 18.0 | 16.5 | 20.5 | 19.5 | 19.0 | 15.0 |
| 4 | 13.5 | 10.5 | 13.5 | 11.5 | 16.0 | 14.5 | 16.5 | 15.0 | 20.5 | 19.0 | 20.0 | 18.0 |
| 5 | 13.5 | 11.5 | 13.0 | 11.5 | 19.0 | 15.5 | 16.5 | 15.0 | 20.5 | 18.5 | 20.0 | 18.0 |
| 6 | 14.0 | 11.5 | 12.5 | 10.0 | 21.0 | 19.0 | 17.5 | 14.5 | 20.0 | 18.5 | 20.0 | 17.5 |
| 7 | 13.5 | 12.0 | 14.0 | 11.5 | 21.0 | 18.5 | 18.5 | 16.5 | 20.5 | 19.0 | 19.0 | 17.5 |
| 8 | 13.5 | 12.0 | 14.0 | 11.5 | 19.5 | 18.0 | 18.5 | 17.5 | 20.5 | 18.5 | 18.5 | 16.5 |
| 9 | 12.0 | 10.5 | 14.5 | 12.5 | 19.5 | 17.0 | 18.5 | 17.0 | 20.0 | 18.5 | 18.0 | 16.5 |
| 10 | 11.5 | 9.0 | 13.5 | 11.5 | 17.0 | 15.0 | 18.0 | 16.5 | 20.0 | 18.5 | 18.0 | 16.5 |
| 11 | 13.5 | 11.0 | 13.5 | 11.0 | 17.0 | 14.0 | 19.0 | 17.0 | 20.5 | 18.5 | 18.0 | 16.5 |
| 12 | 14.0 | 12.0 | 14.5 | 12.0 | 18.0 | 15.5 | 19.0 | 18.0 | 20.5 | 19.0 | 18.0 | 16.5 |
| 13 | 13.5 | 13.0 | 15.0 | 13.0 | 18.5 | 17.0 | 18.5 | 16.5 | 20.0 | 19.0 | 18.0 | 15.0 |
| 14 | 13.0 | 11.0 | 15.0 | 13.5 | 18.5 | 16.5 | 18.5 | 17.0 | 20.0 | 18.5 | 18.0 | 17.0 |
| 15 | 13.5 | 12.0 | 14.5 | 12.5 | 18.5 | 16.5 | 19.0 | 17.5 | 20.0 | 18.5 | 18.0 | 14.5 |
| 16 | 14.0 | 12.5 | 13.5 | 11.5 | 18.5 | 16.5 | 19.5 | 17.5 | 20.5 | 19.0 | 15.5 | 14.0 |
| 17 | 13.5 | 11.5 | 12.5 | 11.0 | 18.5 | 15.0 | 19.0 | 17.0 | 20.5 | 19.5 | 15.5 | 14.5 |
| 18 | 12.5 | 11.0 | 13.0 | 11.0 | 16.0 | 14.5 | 19.0 | 17.5 | 20.0 | 19.0 | 16.0 | 14.5 |
| 19 | 13.0 | 11.0 | 14.0 | 11.0 | 18.0 | 16.0 | 19.5 | 17.5 | 19.5 | 18.0 | 16.5 | 15.0 |
| 20 | 13.0 | 11.5 | 16.5 | 14.0 | 17.5 | 15.5 | 19.5 | 18.0 | 19.5 | 17.5 | 16.5 | 15.0 |
| 21 | 14.5 | 12.0 | 17.0 | 15.0 | 18.5 | 15.0 | 19.5 | 18.0 | 20.0 | 17.5 | 16.5 | 14.5 |
| 22 | 14.5 | 12.5 | 17.0 | 13.0 | 19.5 | 18.0 | 19.5 | 18.5 | 20.0 | 18.0 | 16.0 | 14.0 |
| 23 | 13.0 | 11.5 | 13.0 | 11.0 | 19.5 | 18.0 | 20.0 | 18.5 | 19.5 | 18.0 | 15.5 | 14.0 |
| 24 | 12.5 | 11.0 | 13.5 | 12.0 | 19.0 | 17.5 | 20.0 | 18.5 | 19.5 | 18.5 | 15.5 | 13.5 |
| 25 | 12.5 | 11.0 | 15.5 | 13.5 | 19.0 | 17.5 | 19.5 | 18.5 | 18.5 | 16.5 | 16.0 | 14.5 |
| 26 | 13.5 | 10.0 | 15.0 | 13.0 | 19.0 | 17.5 | 19.5 | 18.0 | 17.5 | 15.5 | 16.5 | 14.5 |
| 27 | 14.5 | 12.5 | 14.5 | 11.0 | 19.0 | 17.5 | 19.0 | 18.0 | 17.5 | 16.0 | 16.5 | 14.0 |
| 28 | 14.5 | 13.5 | 14.0 | 12.0 | 19.0 | 17.5 | 19.0 | 17.5 | 19.0 | 17.0 | 15.0 | 14.0 |
| 29 | 14.0 | 12.0 | 15.5 | 13.5 | 19.0 | 18.0 | 19.0 | 17.5 | 19.5 | 17.0 | 15.5 | 13.5 |
| 30 | 14.5 | 13.0 | 17.0 | 14.5 | 19.0 | 17.5 | 19.5 | 17.5 | 19.5 | 17.0 | 15.0 | 13.0 |
| 31 | --- | --- | 17.0 | 15.5 | --- | --- | 20.0 | 18.5 | 19.5 | 17.5 | --- | --- |
| MONTH | 14.5 | 8.0 | 17.0 | 10.0 | 21.0 | 14.0 | 20.0 | 14.5 | 20.5 | 15.5 | 20.0 | 13.0 |

ROGUE RIVER BASIN

14361500 ROGUE RIVER AT GRANTS PASS, OR

LOCATION.--Lat 42°25'50", long 123°19'00", in NW¼ sec.20, T.36 S., R.5 W., Josephine County, Hydrologic Unit 17100308, on right bank at city of Grants Pass filter plant, 0.6 mi (1.0 km) upstream from bridge on State Highway 99 at Grants Pass, and at mile 101.8 (163.8 km).

DRAINAGE AREA.--2,459 mi² (6,369 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 885.28 ft (269.833 m) above mean sea level. Prior to Aug. 8, 1957, at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records excellent prior to May, fair thereafter. Flow regulated since February 1977 by Lost Creek Lake (station 14355040), slight regulation by Fish Lake and Emigrant Lake. Large fluctuations at times caused by Savage Rapids Dam 5.5 mi (8.8 km) above station. Many diversions from Rogue River and tributaries above station, the largest of which is at Savage Rapids Dam of Grants Pass Irrigation District, 5.5 mi (8.8 km) above station.

AVERAGE DISCHARGE.--39 years, 3,515 ft³/s (99.54 m³/s), 2,547,000 acre-ft/yr (3.14 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 152,000 ft³/s (4,300 m³/s) Dec. 23, 1964, gage height, 34.15 ft (10.409 m), from rating curve extended above 93,000 ft³/s (2,630 m³/s); minimum, 195 ft³/s (5.52 m³/s) Jan. 30, 1961; minimum daily, 606 ft³/s (17.2 m³/s) Sept. 10, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 42 ft (13 m), present datum (information furnished by Corps of Engineers). Flood in February 1890 reached a stage of about 35 ft (11 m), present datum, and that of Feb. 21, 1927, about 31 ft (9 m), present datum, according to local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,880 ft³/s (195 m³/s) Sept. 29, gage height, 4.74 ft (1.445 m), no peak above base of 13,000 ft³/s (368 m³/s); minimum, 600 ft³/s (17.0 m³/s) Apr. 19, caused by regulation at Savage Rapids Dam; minimum daily, 710 ft³/s (20.1 m³/s) Apr. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|
| 1 | 2110 | 1540 | 1410 | 1340 | 1320 | 1310 | 1140 | 1170 | 1100 | 1060 | 927 | 1010 |
| 2 | 1660 | 1600 | 1400 | 1520 | 1300 | 1250 | 1280 | 1540 | 1020 | 1130 | 895 | 1010 |
| 3 | 1710 | 1520 | 1400 | 1650 | 1270 | 1330 | 1270 | 1260 | 919 | 1100 | 879 | 992 |
| 4 | 1550 | 1500 | 1410 | 1540 | 1260 | 1340 | 1190 | 1400 | 887 | 1070 | 887 | 1000 |
| 5 | 1490 | 1470 | 1400 | 1450 | 1250 | 1140 | 1070 | 1330 | 855 | 1070 | 944 | 1020 |
| 6 | 1480 | 1470 | 1390 | 1370 | 1260 | 1190 | 1110 | 1460 | 816 | 1040 | 935 | 1010 |
| 7 | 1460 | 1480 | 1390 | 1270 | 1260 | 1180 | 1070 | 1400 | 808 | 1020 | 944 | 1030 |
| 8 | 1430 | 1460 | 1410 | 1300 | 1250 | 1260 | 1070 | 1300 | 816 | 984 | 1020 | 1020 |
| 9 | 1420 | 1480 | 1520 | 1270 | 1270 | 1780 | 1070 | 1270 | 879 | 992 | 968 | 1030 |
| 10 | 1420 | 1460 | 1440 | 1310 | 1270 | 1950 | 1050 | 1240 | 1040 | 992 | 944 | 1070 |
| 11 | 1410 | 1460 | 1420 | 1460 | 1260 | 1620 | 976 | 1540 | 1140 | 968 | 911 | 1110 |
| 12 | 1400 | 1460 | 1410 | 1580 | 1260 | 1520 | 968 | 1700 | 1200 | 927 | 887 | 1120 |
| 13 | 1400 | 1460 | 1410 | 1500 | 1260 | 1530 | 935 | 1490 | 1160 | 919 | 895 | 1130 |
| 14 | 1350 | 1520 | 1390 | 1460 | 1260 | 1450 | 919 | 1250 | 1170 | 935 | 919 | 1130 |
| 15 | 1400 | 1650 | 1380 | 1420 | 1250 | 1360 | 863 | 1210 | 1110 | 944 | 919 | 1110 |
| 16 | 1380 | 1730 | 1390 | 1390 | 1240 | 1320 | 919 | 1330 | 1050 | 1050 | 903 | 1160 |
| 17 | 1440 | 1620 | 1390 | 1370 | 1220 | 1280 | 952 | 1700 | 992 | 1120 | 879 | 1220 |
| 18 | 1430 | 1540 | 1360 | 1370 | 1190 | 1280 | 863 | 1700 | 1050 | 1130 | 879 | 1330 |
| 19 | 1420 | 1500 | 1340 | 1380 | 808 | 1290 | 710 | 1610 | 1080 | 992 | 895 | 1360 |
| 20 | 1410 | 1480 | 1330 | 1400 | 734 | 1340 | 783 | 1430 | 1080 | 919 | 927 | 1350 |
| 21 | 1410 | 1470 | 1340 | 1380 | 863 | 1380 | 847 | 1300 | 1030 | 903 | 968 | 1340 |
| 22 | 1400 | 1460 | 1350 | 1370 | 1010 | 1360 | 887 | 1250 | 1000 | 903 | 952 | 1330 |
| 23 | 1400 | 1460 | 1360 | 1370 | 1050 | 1440 | 960 | 2120 | 976 | 927 | 944 | 1300 |
| 24 | 1420 | 1470 | 1350 | 1350 | 1110 | 1600 | 984 | 2530 | 1010 | 935 | 968 | 1340 |
| 25 | 1510 | 1450 | 1340 | 1330 | 1060 | 1610 | 1040 | 2000 | 1070 | 919 | 1040 | 1360 |
| 26 | 1630 | 1450 | 1380 | 1310 | 1040 | 1540 | 1040 | 1800 | 1120 | 887 | 1090 | 1320 |
| 27 | 1530 | 1430 | 1420 | 1290 | 1070 | 1490 | 855 | 2310 | 1120 | 895 | 1070 | 1290 |
| 28 | 1490 | 1410 | 1380 | 1300 | 1150 | 1540 | 919 | 1800 | 1020 | 887 | 1070 | 2740 |
| 29 | 1490 | 1390 | 1360 | 1300 | --- | 1520 | 1020 | 1590 | 984 | 895 | 1070 | 5000 |
| 30 | 1500 | 1420 | 1360 | 1290 | --- | 1340 | 1140 | 1410 | 976 | 911 | 1030 | 2280 |
| 31 | 1500 | --- | 1350 | 1310 | --- | 1230 | --- | 1250 | --- | 935 | 1010 | --- |
| TOTAL | 46050 | 44810 | 42980 | 42950 | 32545 | 43770 | 29900 | 47690 | 30478 | 30359 | 29569 | 41512 |
| MEAN | 1485 | 1494 | 1386 | 1385 | 1162 | 1412 | 997 | 1538 | 1016 | 979 | 954 | 1384 |
| MAX | 2110 | 1730 | 1520 | 1650 | 1320 | 1950 | 1280 | 2530 | 1200 | 1130 | 1090 | 5000 |
| MIN | 1350 | 1390 | 1330 | 1270 | 734 | 1140 | 710 | 1170 | 808 | 887 | 879 | 992 |
| AC-FT | 91340 | 88880 | 85250 | 85190 | 64550 | 86820 | 59310 | 94590 | 60450 | 60220 | 58650 | 82340 |
| CAL YR 1976 | TOTAL | 1059010 | MEAN | 2893 | MAX | 14900 | MIN | 1240 | AC-FT | 2101000 | | |
| WTR YR 1977 | TOTAL | 462613 | MEAN | 1267 | MAX | 5000 | MIN | 710 | AC-FT | 917600 | | |

14361500 ROGUE RIVER AT GRANTS PASS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C June 7, 1977; minimum, 0.5°C Jan. 7, 8, 11, 1974, Jan. 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.5°C June 7; minimum, 0.5°C Jan. 8, 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|------|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 17.0 | 15.5 | 11.0 | 9.5 | 4.0 | 2.5 | 4.0 | 3.0 | 5.5 | 4.0 | 8.5 | 7.5 |
| 2 | 17.0 | 15.0 | 11.5 | 10.0 | 4.0 | 3.0 | 3.5 | 3.0 | 5.5 | 4.0 | 8.0 | 7.0 |
| 3 | 15.0 | 13.5 | 11.0 | 10.5 | 4.0 | 2.5 | 4.0 | 3.0 | 5.0 | 3.5 | 7.5 | 6.5 |
| 4 | 14.0 | 12.0 | 11.0 | 10.5 | 4.0 | 3.0 | 4.5 | 3.5 | 5.0 | 3.5 | 7.0 | 6.5 |
| 5 | 13.5 | 11.5 | 10.5 | 9.5 | 4.0 | 3.0 | 4.5 | 4.0 | 5.0 | 4.0 | 8.0 | 7.0 |
| 6 | 14.0 | 11.5 | 9.5 | 8.5 | 4.0 | 3.0 | 4.0 | 2.5 | 6.0 | 4.5 | 8.5 | 7.5 |
| 7 | 14.5 | 12.0 | 9.0 | 8.0 | 3.5 | 2.5 | 3.0 | 1.5 | 6.5 | 5.0 | 8.5 | 8.0 |
| 8 | 15.0 | 12.5 | 9.0 | 8.0 | 4.0 | 3.0 | 1.5 | 0.5 | 6.5 | 5.5 | 9.0 | 8.0 |
| 9 | 15.0 | 13.0 | 8.5 | 7.5 | 4.5 | 3.5 | 1.0 | 0.5 | 7.5 | 6.0 | 8.5 | 8.0 |
| 10 | 14.5 | 12.5 | 8.5 | 8.0 | 5.0 | 4.0 | 2.5 | 1.0 | 8.0 | 6.5 | 8.5 | 7.5 |
| 11 | 14.0 | 12.0 | 9.0 | 8.0 | 4.5 | 4.5 | 3.5 | 2.0 | 8.5 | 7.0 | 8.0 | 7.5 |
| 12 | 13.5 | 11.5 | 9.5 | 8.0 | 4.5 | 4.0 | 4.5 | 3.5 | 8.5 | 6.5 | 8.5 | 7.5 |
| 13 | 13.0 | 11.0 | 9.0 | 8.0 | 4.0 | 3.5 | 4.5 | 4.0 | 8.5 | 7.0 | 8.5 | 7.5 |
| 14 | 12.5 | 10.5 | 8.5 | 7.5 | 4.0 | 3.5 | 5.0 | 4.0 | 8.5 | 7.0 | 8.5 | 7.0 |
| 15 | 12.0 | 10.0 | 9.0 | 7.5 | 4.0 | 3.5 | 5.0 | 4.0 | 8.5 | 7.0 | 8.0 | 7.0 |
| 16 | 12.0 | 10.0 | 10.0 | 8.5 | 4.0 | 3.5 | 5.0 | 4.0 | 8.5 | 7.0 | 8.5 | 7.0 |
| 17 | 11.5 | 9.5 | 10.5 | 9.5 | 4.0 | 3.5 | 4.0 | 3.5 | 9.0 | 7.5 | 8.5 | 7.0 |
| 18 | 10.5 | 8.5 | 10.5 | 10.0 | 3.5 | 3.5 | 4.0 | 3.5 | 9.0 | 7.5 | 9.0 | 7.5 |
| 19 | 10.5 | 8.0 | 10.0 | 9.5 | 3.5 | 2.5 | 4.0 | 3.5 | 8.5 | 7.0 | 9.5 | 7.5 |
| 20 | 10.0 | 8.0 | 9.5 | 8.0 | 2.5 | 2.0 | 4.0 | 3.5 | 8.0 | 7.5 | 10.0 | 8.5 |
| 21 | 10.0 | 8.0 | 8.5 | 6.5 | 2.0 | 1.5 | 4.5 | 3.5 | 8.0 | 7.5 | 10.5 | 9.0 |
| 22 | 10.0 | 8.5 | 7.5 | 6.0 | 2.0 | 1.5 | 5.0 | 4.0 | 7.5 | 7.0 | 11.5 | 9.5 |
| 23 | 10.0 | 8.5 | 7.0 | 6.0 | 2.5 | 2.0 | 5.0 | 4.0 | 7.5 | 7.0 | 11.5 | 10.0 |
| 24 | 9.5 | 8.0 | 6.5 | 6.0 | 3.5 | 2.5 | 5.0 | 4.0 | 7.5 | 6.5 | 10.5 | 9.5 |
| 25 | 8.5 | 7.5 | 6.5 | 6.0 | 3.5 | 2.5 | 4.5 | 3.5 | 7.5 | 6.5 | 9.5 | 9.0 |
| 26 | 9.0 | 7.0 | 6.0 | 5.5 | 3.5 | 2.5 | 3.5 | 2.0 | 8.0 | 7.5 | 9.5 | 9.0 |
| 27 | 9.0 | 7.0 | 5.5 | 4.0 | 4.5 | 3.5 | 3.5 | 2.0 | 8.5 | 7.5 | 10.5 | 9.5 |
| 28 | 8.5 | 7.0 | 4.5 | 2.5 | 4.0 | 4.0 | 3.5 | 2.0 | 8.5 | 8.0 | 10.5 | 9.0 |
| 29 | 8.5 | 7.5 | 3.5 | 2.0 | 4.0 | 4.0 | 3.5 | 2.0 | --- | --- | 9.0 | 8.0 |
| 30 | 9.5 | 8.0 | 3.5 | 2.0 | 4.0 | 3.5 | 3.5 | 2.0 | --- | --- | 9.5 | 8.0 |
| 31 | 10.0 | 8.5 | --- | --- | 4.0 | 3.5 | 4.5 | 3.0 | --- | --- | 9.5 | 8.0 |
| MONTH | 17.0 | 7.0 | 11.5 | 2.0 | 5.0 | 1.5 | 5.0 | 0.5 | 9.0 | 3.5 | 11.5 | 6.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 10.5 | 8.5 | 16.0 | 14.0 | 20.0 | 17.0 | 22.0 | 19.5 | 21.5 | 20.0 | 21.0 | 18.5 |
| 2 | 11.0 | 9.0 | 15.5 | 14.0 | 20.5 | 17.0 | 21.0 | 18.5 | 21.0 | 20.0 | 21.0 | 18.0 |
| 3 | 12.0 | 9.5 | 14.5 | 13.0 | 19.0 | 17.0 | 20.5 | 17.5 | 21.5 | 20.5 | 21.0 | 18.0 |
| 4 | 13.5 | 9.5 | 15.0 | 13.0 | 19.5 | 16.5 | 20.0 | 17.5 | 22.5 | 21.0 | 21.5 | 19.0 |
| 5 | 15.0 | 11.0 | 13.5 | 12.0 | 20.5 | 17.0 | 19.5 | 16.5 | 22.5 | 21.0 | 22.0 | 19.5 |
| 6 | 15.5 | 12.0 | 13.5 | 11.5 | 21.5 | 18.5 | 19.5 | 15.5 | 23.0 | 20.5 | 22.5 | 19.5 |
| 7 | 15.5 | 12.5 | 13.5 | 11.5 | 23.5 | 21.0 | 20.0 | 16.0 | 22.5 | 20.5 | 21.5 | 19.5 |
| 8 | 15.5 | 13.0 | 15.0 | 11.5 | 23.0 | 20.5 | 21.0 | 17.0 | 22.5 | 20.5 | 21.0 | 18.5 |
| 9 | 14.5 | 12.5 | 15.5 | 12.5 | 22.0 | 19.0 | 21.5 | 18.0 | 22.0 | 20.5 | 20.5 | 18.0 |
| 10 | 13.5 | 11.0 | 15.0 | 13.0 | 20.0 | 18.0 | 21.5 | 18.0 | 22.0 | 20.0 | 20.0 | 17.5 |
| 11 | 13.5 | 10.5 | 14.0 | 12.5 | 19.0 | 17.0 | 21.5 | 18.0 | 21.5 | 20.5 | 20.0 | 17.5 |
| 12 | 15.0 | 11.0 | 14.0 | 12.5 | 19.0 | 16.5 | 22.0 | 18.5 | 21.5 | 20.5 | 20.0 | 17.5 |
| 13 | 15.5 | 12.5 | 15.5 | 13.0 | 20.5 | 16.5 | 22.0 | 18.5 | 21.5 | 20.5 | 20.0 | 17.5 |
| 14 | 15.5 | 12.5 | 16.5 | 14.0 | 21.0 | 18.0 | 21.5 | 18.5 | 22.0 | 20.0 | 20.0 | 18.0 |
| 15 | 15.5 | 12.0 | 16.0 | 14.0 | 21.0 | 18.0 | 21.5 | 18.5 | 21.5 | 20.0 | 18.5 | 17.0 |
| 16 | 15.5 | 12.5 | 15.0 | 12.5 | 21.5 | 18.0 | 21.5 | 19.0 | 21.5 | 20.0 | 17.0 | 15.5 |
| 17 | 15.5 | 12.0 | 13.5 | 12.5 | 20.0 | 18.0 | 22.0 | 19.0 | 21.5 | 20.5 | 15.5 | 15.0 |
| 18 | 15.5 | 12.0 | 13.0 | 12.0 | 20.0 | 17.5 | 21.5 | 19.5 | 21.5 | 20.5 | 16.0 | 15.0 |
| 19 | 15.0 | 13.5 | 14.0 | 12.0 | 19.0 | 17.0 | 22.5 | 19.5 | 21.5 | 20.0 | 16.5 | 15.5 |
| 20 | 14.0 | 11.5 | 16.0 | 12.5 | 19.0 | 16.5 | 22.0 | 19.5 | 22.0 | 19.5 | 17.0 | 15.5 |
| 21 | 15.0 | 12.5 | 18.0 | 14.5 | 20.5 | 17.0 | 22.5 | 19.5 | 22.0 | 19.0 | 17.0 | 15.5 |
| 22 | 15.5 | 13.0 | 16.5 | 15.5 | 20.5 | 17.5 | 22.0 | 20.0 | 21.5 | 19.0 | 16.5 | 15.0 |
| 23 | 16.0 | 13.0 | 15.0 | 13.0 | 22.0 | 18.5 | 22.0 | 20.0 | 22.0 | 19.0 | 16.0 | 14.5 |
| 24 | 15.0 | 13.5 | 14.5 | 13.0 | 22.0 | 19.5 | 22.5 | 20.5 | 21.5 | 19.5 | 16.0 | 14.5 |
| 25 | 14.0 | 13.0 | 15.0 | 14.0 | 22.0 | 19.5 | 23.0 | 20.0 | 20.0 | 18.5 | 16.0 | 14.5 |
| 26 | 14.5 | 11.5 | 15.5 | 14.5 | 22.5 | 19.0 | 22.0 | 20.0 | 19.5 | 18.0 | 17.0 | 15.5 |
| 27 | 15.5 | 11.5 | 14.5 | 13.5 | 22.0 | 19.5 | 22.0 | 19.5 | 18.5 | 17.0 | 16.5 | 15.5 |
| 28 | 15.5 | 12.5 | 14.5 | 13.0 | 22.0 | 19.0 | 22.0 | 19.0 | 19.5 | 17.0 | 16.0 | 14.0 |
| 29 | 16.0 | 14.0 | 16.0 | 13.5 | 21.5 | 19.0 | 22.0 | 19.0 | 20.5 | 17.5 | 15.0 | 14.0 |
| 30 | 16.0 | 14.0 | 17.5 | 15.0 | 22.0 | 19.0 | 22.0 | 19.0 | 21.5 | 18.5 | 14.5 | 13.5 |
| 31 | --- | --- | 19.0 | 16.0 | --- | --- | 21.5 | 19.5 | 21.5 | 19.0 | --- | --- |
| MONTH | 16.0 | 8.5 | 19.0 | 11.5 | 23.5 | 16.5 | 23.0 | 15.5 | 23.0 | 17.0 | 22.5 | 13.5 |

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR

LOCATION.--Lat 42°03'30", long 123°06'50", in SE¼ sec.25, T.40 S., R.4 W., Jackson County, Hydrologic Unit 17100309, on right bank 0.2 mi (0.3 km) downstream from French Gulch, 1.2 mi (1.9 km) downstream from Squaw Creek, 2.6 mi (4.2 km) northeast of Copper, and at mile 46.3 (74.5 km).

DRAINAGE AREA.--223 mi² (578 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,759.66 ft (536.344 m) above mean sea level.

REMARKS.--Water-discharge records good. Some storage during winter in Squaw Lakes Reservoir, capacity, 1,100 acre-ft (1.36 hm³) on Squaw Creek above station. Diversion for irrigation above station in Applegate River basin; also diversion above station for irrigation into Thompson Creek basin.

AVERAGE DISCHARGE.--39 years, 446 ft³/s (12.63 m³/s), 323,100 acre-ft/yr (398 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft³/s (844 m³/s) Jan. 15, 1974, gage height, 25.38 ft (7.736 m), from high-water mark in well, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of four slope-area measurements of peak flows made in 1950, 1955, 1964, and 1974; minimum, 19 ft³/s (0.54 m³/s) Sept. 12-15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 857 ft³/s (24.3 m³/s) Sept. 28, gage height, 2.59 ft (0.789 m), no peak above base of 2,000 ft³/s (56.6 m³/s); minimum, 19 ft³/s (0.54 m³/s) Sept. 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|-------|-------|-------|--------|------|------|
| 1 | 54 | 52 | 44 | 40 | 40 | 101 | 80 | 227 | 200 | 68 | 31 | 24 |
| 2 | 55 | 50 | 44 | 55 | 38 | 82 | 80 | 244 | 179 | 66 | 31 | 23 |
| 3 | 59 | 47 | 44 | 54 | 40 | 79 | 82 | 255 | 163 | 59 | 30 | 22 |
| 4 | 55 | 46 | 44 | 47 | 37 | 71 | 107 | 216 | 163 | 55 | 28 | 22 |
| 5 | 54 | 44 | 44 | 49 | 37 | 71 | 166 | 189 | 166 | 57 | 27 | 23 |
| 6 | 52 | 44 | 43 | 46 | 38 | 77 | 205 | 168 | 163 | 54 | 26 | 22 |
| 7 | 52 | 43 | 44 | 68 | 38 | 101 | 249 | 161 | 156 | 52 | 41 | 22 |
| 8 | 50 | 44 | 46 | 57 | 44 | 163 | 331 | 148 | 143 | 52 | 43 | 21 |
| 9 | 50 | 44 | 54 | 49 | 50 | 187 | 238 | 153 | 132 | 49 | 35 | 21 |
| 10 | 47 | 44 | 49 | 49 | 44 | 125 | 187 | 168 | 127 | 43 | 31 | 21 |
| 11 | 44 | 52 | 49 | 68 | 43 | 101 | 171 | 173 | 134 | 40 | 28 | 21 |
| 12 | 44 | 52 | 47 | 73 | 44 | 101 | 181 | 171 | 132 | 43 | 27 | 20 |
| 13 | 40 | 52 | 46 | 59 | 44 | 88 | 222 | 158 | 163 | 44 | 26 | 19 |
| 14 | 41 | 101 | 44 | 49 | 43 | 82 | 203 | 158 | 148 | 44 | 25 | 19 |
| 15 | 41 | 86 | 44 | 46 | 43 | 77 | 192 | 153 | 116 | 43 | 25 | 20 |
| 16 | 41 | 73 | 44 | 46 | 41 | 73 | 235 | 148 | 101 | 43 | 25 | 21 |
| 17 | 43 | 62 | 44 | 44 | 40 | 71 | 205 | 143 | 95 | 46 | 24 | 26 |
| 18 | 43 | 59 | 46 | 47 | 38 | 70 | 176 | 136 | 95 | 46 | 24 | 40 |
| 19 | 43 | 57 | 62 | 49 | 37 | 70 | 156 | 130 | 95 | 41 | 22 | 64 |
| 20 | 43 | 54 | 56 | 49 | 47 | 71 | 153 | 136 | 86 | 43 | 21 | 54 |
| 21 | 41 | 50 | 55 | 52 | 110 | 75 | 153 | 153 | 84 | 40 | 22 | 41 |
| 22 | 41 | 49 | 41 | 52 | 88 | 92 | 163 | 176 | 77 | 35 | 20 | 34 |
| 23 | 41 | 49 | 40 | 47 | 79 | 123 | 166 | 230 | 73 | 37 | 20 | 30 |
| 24 | 43 | 47 | 41 | 44 | 71 | 110 | 176 | 211 | 70 | 35 | 22 | 47 |
| 25 | 55 | 46 | 38 | 43 | 64 | 99 | 200 | 195 | 66 | 38 | 28 | 41 |
| 26 | 49 | 46 | 41 | 49 | 61 | 92 | 179 | 320 | 61 | 47 | 30 | 34 |
| 27 | 46 | 44 | 44 | 49 | 68 | 97 | 161 | 282 | 57 | 37 | 28 | 37 |
| 28 | 44 | 43 | 41 | 46 | 114 | 93 | 166 | 230 | 55 | 34 | 26 | 547 |
| 29 | 44 | 44 | 41 | 46 | --- | 88 | 181 | 213 | 54 | 32 | 26 | 423 |
| 30 | 47 | 44 | 41 | 44 | --- | 86 | 216 | 200 | 54 | 31 | 25 | 153 |
| 31 | 47 | --- | 40 | 40 | --- | 80 | --- | 203 | --- | 30 | 24 | --- |
| TOTAL | 1449 | 1568 | 1401 | 1556 | 1481 | 2896 | 5380 | 5848 | 3408 | 1384 | 841 | 1912 |
| MEAN | 46.7 | 52.3 | 45.2 | 50.2 | 52.9 | 93.4 | 179 | 189 | 114 | 44.6 | 27.1 | 63.7 |
| MAX | 59 | 101 | 62 | 73 | 114 | 187 | 331 | 320 | 200 | 68 | 43 | 547 |
| MIN | 40 | 43 | 38 | 40 | 37 | 70 | 80 | 130 | 54 | 30 | 20 | 19 |
| AC-FT | 2870 | 3110 | 2780 | 3090 | 2940 | 5740 | 10670 | 11600 | 6760 | 2750 | 1670 | 3790 |
| CAL YR 1976 | TOTAL | 78163 | MEAN | 214 | MAX | 1150 | MIN | 38 | AC-FT | 155000 | | |
| WTR YR 1977 | TOTAL | 29124 | MEAN | 79.8 | MAX | 547 | MIN | 19 | AC-FT | 57770 | | |

14362000 APPLGATE RIVER NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January to September 1977.

TURBIDITY: February 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C July 23, Aug. 2, 3, 1977; minimum, 0.0°C many days in January and February, 1977.

TURBIDITY: Maximum recorded, 1,000 JTU Jan. 15, 1974 (meter inundated), Mar. 30, 1974; minimum, 0 JTU on many days each year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 26.0°C July 23, Aug. 2, 3; minimum, 0.0°C many days in January and February.

TURBIDITY: Maximum, 850 JTU June 13; minimum, 0 JTU on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | | | | | | | --- | --- | 4.5 | 1.0 | 7.0 | 3.5 |
| 2 | | | | | | | --- | --- | 3.5 | 0.0 | 5.5 | 3.5 |
| 3 | | | | | | | --- | --- | 3.5 | 0.0 | 6.5 | 4.0 |
| 4 | | | | | | | --- | --- | 4.5 | 0.0 | 8.0 | 3.0 |
| 5 | | | | | | | --- | --- | 4.5 | 1.5 | 8.5 | 3.0 |
| 6 | | | | | | | 1.0 | 0.0 | 5.5 | 2.0 | 7.5 | 3.5 |
| 7 | | | | | | | 0.5 | 0.0 | 6.0 | 1.5 | 7.0 | 5.5 |
| 8 | | | | | | | 0.5 | 0.0 | 7.0 | 3.5 | 8.5 | 4.5 |
| 9 | | | | | | | 0.0 | 0.0 | 6.0 | 2.5 | 7.0 | 4.5 |
| 10 | | | | | | | 1.5 | 0.0 | 7.5 | 3.5 | 8.0 | 3.5 |
| 11 | | | | | | | 2.0 | 0.0 | 7.5 | 3.0 | 7.5 | 3.0 |
| 12 | | | | | | | 2.5 | 0.5 | 7.5 | 3.5 | 7.5 | 4.5 |
| 13 | | | | | | | 4.0 | 1.0 | 8.0 | 3.5 | 7.0 | 3.0 |
| 14 | | | | | | | 3.0 | 0.0 | 7.5 | 3.0 | 6.5 | 3.0 |
| 15 | | | | | | | 3.0 | 0.0 | 8.0 | 3.0 | 5.5 | 3.0 |
| 16 | | | | | | | 2.5 | 0.0 | 7.5 | 3.5 | 9.0 | 3.0 |
| 17 | | | | | | | 3.0 | 0.0 | 8.5 | 4.0 | 7.5 | 4.0 |
| 18 | | | | | | | 4.0 | 0.0 | 7.5 | 2.5 | 7.5 | 4.5 |
| 19 | | | | | | | 3.5 | 0.5 | 7.5 | 2.5 | 10.0 | 5.0 |
| 20 | | | | | | | 4.0 | 0.5 | 7.0 | 4.0 | 11.0 | 5.5 |
| 21 | | | | | | | 4.5 | 2.0 | 5.5 | 4.0 | 11.0 | 4.5 |
| 22 | | | | | | | 4.5 | 2.0 | 7.0 | 3.0 | 11.5 | 5.0 |
| 23 | | | | | | | 4.0 | 1.0 | 4.5 | 2.5 | 9.0 | 6.0 |
| 24 | | | | | | | 3.5 | 0.5 | 6.0 | 2.0 | 7.5 | 5.0 |
| 25 | | | | | | | 3.0 | 0.0 | 6.0 | 3.0 | 9.0 | 5.0 |
| 26 | | | | | | | 2.0 | 0.0 | 7.0 | 3.5 | 10.5 | 3.5 |
| 27 | | | | | | | 2.5 | 0.0 | 7.5 | 4.0 | 8.0 | 5.5 |
| 28 | | | | | | | 2.5 | 0.0 | 6.5 | 4.5 | 8.0 | 4.0 |
| 29 | | | | | | | 2.5 | 0.0 | --- | --- | 7.0 | 4.5 |
| 30 | | | | | | | 2.5 | 0.0 | --- | --- | 9.0 | 4.0 |
| 31 | | | | | | | 3.5 | 0.5 | --- | --- | 7.5 | 4.0 |
| MONTH | | | | | | | 4.5 | 0.0 | 8.5 | 0.0 | 11.5 | 3.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|-----|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 10.5 | 5.5 | 12.0 | 9.0 | 17.0 | 11.5 | 21.0 | 18.5 | 23.5 | 19.0 | 21.0 | 14.5 |
| 2 | 11.5 | 5.5 | 12.5 | 8.0 | 16.5 | 9.5 | 22.0 | 15.5 | 26.0 | 19.5 | 21.5 | 15.5 |
| 3 | 12.5 | 5.0 | 11.5 | 8.0 | 15.5 | 10.5 | 20.0 | 15.0 | 26.0 | 19.0 | 22.0 | 15.5 |
| 4 | 13.0 | 6.0 | 11.5 | 6.5 | 19.5 | 11.5 | 19.5 | 15.0 | 25.5 | 19.0 | 22.5 | 17.0 |
| 5 | 12.5 | 6.0 | 9.5 | 6.5 | 21.0 | 13.0 | 19.0 | 13.0 | 25.0 | 18.0 | 23.0 | 17.5 |
| 6 | 12.0 | 5.5 | 11.5 | 6.0 | 22.0 | 15.0 | 21.5 | 13.0 | 24.5 | 18.0 | 22.5 | 17.0 |
| 7 | 13.0 | 6.0 | 10.5 | 6.5 | 19.5 | 15.5 | 22.5 | 14.5 | 25.5 | 19.5 | 21.0 | --- |
| 8 | 9.5 | 7.0 | 12.0 | 6.0 | 20.0 | 14.5 | 23.0 | 16.0 | 24.5 | 18.5 | --- | --- |
| 9 | 8.0 | 5.5 | 11.0 | 7.0 | 17.0 | 13.5 | 22.5 | 16.0 | 24.0 | 18.5 | --- | --- |
| 10 | 10.0 | 4.0 | 10.0 | 7.5 | 15.5 | 14.0 | 22.5 | 15.0 | 25.0 | 18.0 | --- | --- |
| 11 | 12.0 | 6.0 | 10.5 | 7.0 | 18.5 | 13.0 | 23.5 | 15.0 | 25.5 | 18.5 | --- | --- |
| 12 | 12.5 | 5.5 | 12.0 | 7.0 | 20.5 | 13.5 | 23.5 | 17.0 | 23.5 | 19.0 | --- | --- |
| 13 | 11.5 | 7.5 | 13.5 | 7.0 | 19.0 | 13.0 | 23.0 | 15.5 | 24.5 | 18.5 | --- | --- |
| 14 | 11.5 | 5.5 | 12.5 | 8.0 | 20.0 | 13.0 | 23.5 | 15.5 | 24.0 | 18.5 | --- | --- |
| 15 | 12.5 | 6.0 | 12.0 | 7.5 | 20.5 | 13.0 | 24.0 | 16.0 | 24.5 | 18.0 | --- | --- |
| 16 | 12.0 | 7.5 | 12.0 | 7.0 | 21.0 | 13.5 | 24.5 | 16.5 | 25.5 | 18.0 | --- | --- |
| 17 | 11.0 | 5.0 | 12.0 | 7.5 | 18.0 | 15.5 | 25.0 | 17.0 | 23.5 | 18.5 | --- | --- |
| 18 | 11.0 | 7.0 | 10.5 | 7.0 | 19.5 | 14.5 | 23.0 | 17.5 | 23.5 | 18.5 | --- | --- |
| 19 | 11.5 | 4.5 | 15.0 | 6.5 | 20.5 | 14.5 | 25.0 | 17.5 | 23.5 | 18.0 | --- | --- |
| 20 | 11.0 | 5.5 | 15.5 | 9.0 | 19.0 | 14.5 | 25.0 | 17.5 | 22.5 | 18.0 | --- | --- |
| 21 | 14.0 | 7.0 | 16.0 | 9.5 | 22.0 | 14.0 | 25.0 | 17.5 | 23.5 | 18.5 | --- | --- |
| 22 | 13.5 | 7.0 | 12.5 | 9.5 | 23.5 | 16.0 | 25.0 | 17.5 | 23.0 | 17.0 | --- | --- |
| 23 | 14.0 | 8.0 | 11.0 | 8.5 | 23.0 | 16.5 | 26.0 | 18.5 | 23.0 | 17.5 | --- | --- |
| 24 | 13.0 | 8.5 | 14.5 | 8.0 | 23.0 | 15.5 | 25.5 | 18.5 | 21.5 | 19.0 | --- | --- |
| 25 | 11.0 | 8.0 | 13.0 | 8.5 | 24.0 | 16.0 | 24.5 | 18.5 | 19.5 | 16.5 | --- | --- |
| 26 | 13.0 | 6.5 | 12.0 | 8.5 | 24.0 | 16.5 | 24.5 | 17.0 | 19.0 | 16.0 | --- | --- |
| 27 | 14.5 | 7.0 | 12.5 | 6.5 | 23.5 | 17.0 | 24.0 | 16.5 | 19.0 | 14.5 | --- | --- |
| 28 | 11.5 | 8.0 | 14.5 | 7.0 | 23.5 | 15.5 | 23.5 | 16.5 | 21.5 | 17.0 | 5.5 | --- |
| 29 | 12.5 | 9.0 | 15.5 | 8.0 | 24.0 | 16.5 | 24.0 | 16.5 | 22.0 | 16.0 | --- | --- |
| 30 | 12.0 | 9.5 | 16.0 | 9.5 | 22.5 | 17.0 | 24.5 | 17.0 | 21.5 | 17.0 | --- | --- |
| 31 | --- | --- | 18.0 | 10.5 | --- | --- | 25.0 | 17.5 | 20.5 | 15.0 | --- | --- |
| MONTH | 14.5 | 4.0 | 18.0 | 6.0 | 24.0 | 9.5 | 26.0 | 13.0 | 26.0 | 14.5 | 23.0 | 14.5 |

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|------|
| OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | | |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 1 | 1 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 1 | 2 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 2 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 3 |
| 13 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 7 | 1 | 4 | 7 | 0 | 1 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 15 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 |
| 28 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | 0 | 0 | --- | --- | --- | 0 | 0 | 0 | 0 | 0 | 0 |
| MONTH | 7 | 0 | 0 | 15 | 0 | 0 | 8 | 0 | 0 | 10 | 0 | 0 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|----------|-----|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|
| FEBRUARY | | | MARCH | | | APRIL | | | MAY | | | |
| 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | --- | --- | --- |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | --- | --- | --- |
| 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | --- | --- | --- |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | --- | --- | --- |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 1 | 0 | 1 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 3 | 1 | 0 | 0 |
| 7 | 0 | 0 | 0 | 8 | 0 | 1 | 15 | 2 | 5 | 1 | 0 | 0 |
| 8 | 0 | 0 | 0 | 20 | 1 | 6 | 30 | 3 | 10 | 1 | 0 | 0 |
| 9 | 1 | 0 | 0 | 30 | 3 | 9 | 3 | 1 | 2 | 1 | 0 | 0 |
| 10 | 0 | 0 | 0 | 4 | 0 | 1 | 1 | 1 | 1 | 3 | 0 | 1 |
| 11 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 4 | 0 | 1 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 2 | 0 | 1 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 1 | 0 | 1 |
| 14 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
| 15 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 2 | 1 | 0 | 0 |
| 17 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 20 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 |
| 21 | 45 | 0 | 9 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 |
| 22 | 10 | 1 | 4 | 0 | 0 | 0 | 5 | 0 | 1 | 4 | 0 | 1 |
| 23 | 3 | 0 | 1 | 1 | 0 | 0 | 15 | 0 | 3 | 10 | 1 | 4 |
| 24 | 1 | 0 | 0 | 0 | 0 | 0 | 60 | 3 | 20 | 2 | 1 | 1 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 1 | 3 | 1 | 1 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | --- | --- | --- | 10 | 2 | 7 |
| 27 | 4 | 0 | 1 | 0 | 0 | 0 | --- | --- | --- | 6 | 1 | 2 |
| 28 | 35 | 0 | 10 | 0 | 0 | 0 | --- | --- | --- | 1 | 0 | 1 |
| 29 | --- | --- | --- | 0 | 0 | 0 | --- | --- | --- | 2 | 0 | 1 |
| 30 | --- | --- | --- | 0 | 0 | 0 | --- | --- | --- | 1 | 0 | 1 |
| 31 | --- | --- | --- | 0 | 0 | 0 | --- | --- | --- | 1 | 0 | 1 |
| MONTH | 45 | 0 | 0 | 30 | 0 | 0 | 60 | 0 | 2 | 10 | 0 | 1 |

ROGUE RIVER BASIN

525

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|------|-----|------|------|-----|------|--------|-----|------|-----------|-----|------|
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 2 | 0 | 1 | --- | --- | --- | 2 | 1 | 1 | 1 | 0 | 0 |
| 2 | 1 | 0 | 1 | --- | --- | --- | 2 | 1 | 1 | 1 | 0 | 1 |
| 3 | 1 | 0 | 0 | --- | --- | --- | 3 | 1 | 1 | 1 | 0 | 1 |
| 4 | 1 | 0 | 0 | --- | --- | --- | 2 | 1 | 1 | 1 | 0 | 1 |
| 5 | 1 | 0 | 1 | --- | --- | --- | 2 | 2 | 2 | 1 | 0 | 1 |
| 6 | 1 | 0 | 1 | --- | --- | --- | 3 | 2 | 2 | 1 | 0 | 1 |
| 7 | 8 | 0 | 1 | --- | --- | --- | 20 | 3 | 7 | 1 | 0 | 0 |
| 8 | 1 | 0 | 1 | --- | --- | --- | --- | --- | --- | 1 | 0 | 0 |
| 9 | 2 | 0 | 1 | --- | --- | --- | --- | --- | --- | 1 | 0 | 0 |
| 10 | 2 | 1 | 1 | 1 | 0 | 0 | --- | --- | --- | 1 | 0 | 0 |
| 11 | 3 | 1 | 2 | 5 | 0 | 0 | --- | --- | --- | 1 | 0 | 0 |
| 12 | 100 | 1 | 15 | 1 | 0 | 0 | --- | --- | --- | 0 | 0 | 0 |
| 13 | 850 | 10 | 130 | 2 | 0 | 0 | --- | --- | --- | 0 | 0 | 0 |
| 14 | 50 | 8 | 15 | 0 | 0 | 0 | --- | --- | --- | 0 | 0 | 0 |
| 15 | 8 | 3 | 4 | 1 | 0 | 0 | --- | --- | --- | 0 | 0 | 0 |
| 16 | 4 | 2 | 3 | 0 | 0 | 0 | --- | --- | --- | 0 | 0 | 0 |
| 17 | 4 | 1 | 2 | 6 | 0 | 0 | --- | --- | --- | 0 | 0 | 0 |
| 18 | 2 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 2 |
| 20 | 1 | 1 | 1 | 8 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 |
| 21 | 1 | 1 | 1 | 5 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 22 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| 23 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 24 | --- | --- | --- | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 25 | --- | --- | --- | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 26 | --- | --- | --- | 170 | 2 | 45 | 1 | 0 | 0 | 1 | 0 | 0 |
| 27 | --- | --- | --- | 6 | 2 | 4 | 1 | 0 | 0 | 70 | 0 | 6 |
| 28 | --- | --- | --- | 4 | 1 | 2 | 1 | 0 | 0 | 180 | 10 | 55 |
| 29 | --- | --- | --- | 7 | 1 | 2 | 1 | 0 | 1 | 25 | 1 | 8 |
| 30 | --- | --- | --- | 15 | 1 | 2 | 1 | 0 | 1 | 6 | 0 | 1 |
| 31 | --- | --- | --- | 4 | 1 | 1 | 1 | 0 | 0 | --- | --- | --- |
| MONTH | 850 | 0 | 8 | 170 | 0 | 2 | 20 | 0 | 0 | 180 | 0 | 2 |

RUGUE RIVER BASIN

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR

LOCATION.--Lat 42°14'30", long 123°08'20", in NE¼ sec.26, T.38 S., R.4 W., Jackson County, Hydrologic Unit 17100309, on left bank 0.9 mi (1.4 km) downstream from Keeler Creek, 1.8 mi (2.9 km) southeast of Applegate, and at mile 26.7 (43.0 km).

DRAINAGE AREA.--483 mi² (1,251 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1738: Drainage area. WSP 1935: 1953(M), 1956(M). WDR OR-76-1: 1956(M), 1965(M).

GAGE.--Water-stage recorder. Datum of gage is 1,285.33 ft (391.769 m) above mean sea level. Prior to Dec. 23, 1938, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. No appreciable regulation. Many diversions for irrigation above station. McDonald Creek Canal diverts from McDonald Creek above station for irrigation in Bear Creek basin. Thompson Creek Irrigation Association ditch diverts above station for irrigation in Thompson Creek basin. Fowler-Keeler and Berryman ditches divert above station for irrigation below.

AVERAGE DISCHARGE.--39 years, 552 ft³/s (15.63 m³/s), 399,900 acre-ft/yr (493 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft³/s (1,050 m³/s) Jan. 15, 1974, gage height, 20.41 ft (6.221 m), from rating curve extended above 18,000 ft³/s (510 m³/s) on basis of average of slope-area measurements of flow at gage heights 18.00 ft (5.486 m) and 19.57 ft (5.965 m); minimum, 6.0 ft³/s (0.17 m³/s) Aug. 4, 1977, affected by manipulation of irrigation diversions above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 20, 1927, reached a stage of 18.7 ft (5.70 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft³/s (30.3 m³/s) Sept. 28, gage height, 3.46 ft (1.055 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum, 6.0 ft³/s (0.17 m³/s) Aug. 4, affected by manipulation of irrigation diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|------|------|------|------|------|-------|-------|--------|-------|------|
| 1 | 45 | 64 | 60 | 60 | 57 | 121 | 92 | 223 | 218 | 17 | 12 | 18 |
| 2 | 49 | 64 | 57 | 70 | 55 | 94 | 90 | 253 | 203 | 36 | 8.5 | 16 |
| 3 | 49 | 64 | 55 | 70 | 54 | 89 | 87 | 259 | 185 | 24 | 6.5 | 15 |
| 4 | 45 | 61 | 58 | 65 | 58 | 83 | 94 | 250 | 176 | 24 | 8.5 | 15 |
| 5 | 46 | 58 | 60 | 65 | 55 | 78 | 139 | 215 | 182 | 26 | 18 | 14 |
| 6 | 44 | 57 | 60 | 60 | 57 | 82 | 179 | 203 | 179 | 24 | 18 | 15 |
| 7 | 43 | 55 | 60 | 85 | 57 | 89 | 209 | 194 | 179 | 25 | 21 | 17 |
| 8 | 43 | 55 | 60 | 70 | 58 | 155 | 312 | 182 | 162 | 19 | 29 | 15 |
| 9 | 40 | 55 | 65 | 65 | 68 | 203 | 262 | 182 | 147 | 14 | 30 | 15 |
| 10 | 36 | 53 | 65 | 60 | 64 | 157 | 197 | 191 | 149 | 16 | 26 | 13 |
| 11 | 33 | 55 | 62 | 70 | 61 | 125 | 173 | 203 | 160 | 16 | 23 | 13 |
| 12 | 31 | 62 | 62 | 85 | 60 | 116 | 168 | 212 | 139 | 11 | 19 | 13 |
| 13 | 29 | 60 | 60 | 72 | 60 | 110 | 197 | 197 | 203 | 12 | 20 | 13 |
| 14 | 30 | 87 | 60 | 68 | 60 | 100 | 197 | 194 | 182 | 11 | 18 | 13 |
| 15 | 30 | 100 | 60 | 65 | 58 | 94 | 179 | 188 | 142 | 11 | 17 | 13 |
| 16 | 32 | 90 | 60 | 62 | 58 | 90 | 209 | 182 | 123 | 15 | 19 | 14 |
| 17 | 35 | 76 | 62 | 64 | 54 | 85 | 200 | 182 | 114 | 19 | 20 | 13 |
| 18 | 36 | 70 | 65 | 65 | 49 | 83 | 162 | 173 | 114 | 19 | 18 | 14 |
| 19 | 36 | 68 | 75 | 68 | 49 | 82 | 147 | 173 | 104 | 17 | 18 | 22 |
| 20 | 35 | 67 | 70 | 68 | 49 | 83 | 132 | 171 | 94 | 14 | 18 | 53 |
| 21 | 32 | 67 | 65 | 70 | 98 | 85 | 128 | 179 | 85 | 13 | 20 | 42 |
| 22 | 33 | 67 | 55 | 70 | 128 | 94 | 130 | 200 | 78 | 12 | 18 | 32 |
| 23 | 37 | 65 | 50 | 68 | 100 | 123 | 130 | 288 | 73 | 12 | 16 | 29 |
| 24 | 40 | 61 | 50 | 65 | 100 | 130 | 139 | 272 | 64 | 9.6 | 18 | 30 |
| 25 | 50 | 61 | 50 | 61 | 85 | 116 | 160 | 241 | 44 | 9.6 | 18 | 44 |
| 26 | 54 | 61 | 55 | 55 | 78 | 104 | 165 | 291 | 36 | 12 | 19 | 30 |
| 27 | 50 | 60 | 55 | 60 | 78 | 104 | 142 | 319 | 33 | 12 | 19 | 25 |
| 28 | 49 | 55 | 55 | 60 | 100 | 108 | 144 | 265 | 27 | 11 | 18 | 505 |
| 29 | 54 | 58 | 55 | 57 | --- | 100 | 162 | 241 | 15 | 12 | 17 | 557 |
| 30 | 55 | 61 | 55 | 57 | --- | 98 | 200 | 226 | 15 | 12 | 18 | 226 |
| 31 | 55 | --- | 55 | 62 | --- | 94 | --- | 218 | --- | 12 | 19 | --- |
| TOTAL | 1276 | 1937 | 1836 | 2042 | 1908 | 3275 | 4925 | 6767 | 3625 | 497.2 | 567.5 | 1854 |
| MEAN | 41.2 | 64.6 | 59.2 | 65.9 | 68.1 | 106 | 164 | 218 | 121 | 16.0 | 18.3 | 61.8 |
| MAX | 55 | 100 | 75 | 85 | 128 | 203 | 312 | 319 | 218 | 36 | 30 | 557 |
| MIN | 29 | 53 | 50 | 55 | 49 | 78 | 87 | 171 | 15 | 9.6 | 6.5 | 13 |
| AC-FT | 2530 | 3840 | 3640 | 4050 | 3780 | 6500 | 9770 | 13420 | 7190 | 986 | 1130 | 3680 |
| CAL YR 1976 | TOTAL | 89959.0 | MEAN | 246 | MAX | 1350 | MIN | 13 | AC-FT | 178400 | | |
| WTR YR 1977 | TOTAL | 30509.7 | MEAN | 83.6 | MAX | 557 | MIN | 6.5 | AC-FT | 60520 | | |

NOTE.--No gage-height record Dec. 5 to Jan. 12.

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.0°C July 29, 30, Aug. 3, 4, 1974; minimum, 0.0°C Jan. 31, Feb. 1, 1975, Jan. 2, Feb. 5-7, Dec. 19-22, 24, 1976, Jan. 6-9, 25-28, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 26.5°C Aug. 4; minimum, 0.0°C Dec. 19-22, 24, Jan. 6-9, 25-28.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 19.5 | 16.5 | 13.5 | 11.5 | 3.5 | 1.5 | 2.5 | 1.0 | 5.0 | 2.5 | 7.0 | 5.5 |
| 2 | 18.5 | 16.0 | 13.5 | 11.0 | 3.0 | 1.5 | 3.0 | 2.0 | 4.5 | 1.5 | 6.5 | 5.5 |
| 3 | 16.5 | 13.5 | 13.0 | 11.0 | 3.5 | 1.0 | 3.5 | 2.0 | 4.5 | 1.0 | 7.5 | 5.5 |
| 4 | 15.5 | 12.0 | 12.0 | 9.5 | 3.0 | 1.5 | 4.0 | 2.5 | 5.0 | 1.5 | 9.0 | 5.0 |
| 5 | 16.0 | 12.0 | 10.5 | 8.0 | 3.0 | 1.0 | 4.0 | 2.5 | 4.5 | 3.0 | 10.0 | 5.0 |
| 6 | 16.5 | 13.0 | 9.5 | 7.5 | 3.0 | 1.5 | 2.0 | 0.0 | 6.0 | 2.5 | 8.5 | 6.0 |
| 7 | 17.0 | 13.5 | 10.0 | 7.0 | 3.5 | 1.5 | 1.0 | 0.0 | 6.0 | 3.0 | 10.0 | 7.0 |
| 8 | 17.0 | 14.0 | 10.0 | 8.0 | 4.0 | 2.0 | 0.5 | 0.0 | 7.0 | 4.5 | 9.0 | 6.0 |
| 9 | 16.5 | 13.5 | 9.5 | 7.5 | 4.5 | 3.5 | 0.5 | 0.0 | 7.0 | 4.0 | 9.0 | 6.5 |
| 10 | 15.5 | 13.0 | 10.0 | 8.5 | 3.5 | 2.0 | 3.0 | 0.5 | 8.0 | 5.0 | 10.0 | 5.5 |
| 11 | 16.0 | 13.5 | 10.5 | 8.5 | 3.0 | 1.5 | 2.5 | 0.5 | 8.0 | 4.5 | 9.0 | 5.0 |
| 12 | 15.5 | 12.5 | 10.5 | 8.5 | 2.5 | 1.0 | 3.0 | 1.5 | 8.5 | 5.0 | 9.0 | 6.0 |
| 13 | 15.0 | 12.0 | 9.5 | 7.0 | 3.0 | 1.5 | 3.5 | 2.0 | 8.5 | 5.5 | 8.5 | 5.0 |
| 14 | 14.5 | 12.0 | 8.5 | 7.5 | 3.0 | 1.5 | 4.0 | 2.5 | 8.5 | 5.0 | 8.0 | 4.0 |
| 15 | 14.0 | 11.5 | 11.0 | 8.5 | 3.0 | 1.5 | 3.5 | 1.5 | 9.0 | 5.5 | 7.5 | 5.0 |
| 16 | 14.0 | 11.5 | 12.0 | 10.0 | 3.0 | 1.5 | 3.0 | 1.5 | 9.0 | 5.5 | 9.5 | 4.5 |
| 17 | 13.5 | 10.5 | 11.5 | 10.5 | 2.5 | 1.5 | 3.0 | 1.0 | 9.0 | 6.5 | 8.5 | 5.5 |
| 18 | 13.0 | 10.0 | 11.0 | 10.5 | 2.0 | 0.5 | 3.5 | 1.0 | 8.0 | 5.0 | 9.0 | 6.0 |
| 19 | 12.5 | 10.0 | 10.5 | 9.5 | 1.0 | 0.0 | 3.0 | 1.0 | 8.5 | 5.0 | 11.5 | 7.5 |
| 20 | 12.5 | 9.5 | 9.0 | 6.5 | 0.5 | 0.0 | 3.5 | 1.0 | 7.5 | 6.0 | 12.0 | 7.0 |
| 21 | 12.5 | 10.0 | 8.5 | 6.5 | 0.5 | 0.0 | 4.5 | 2.5 | 7.0 | 6.0 | 12.5 | 6.5 |
| 22 | 12.0 | 10.0 | 8.0 | 6.0 | 1.0 | 0.0 | 4.0 | 2.0 | 8.0 | 5.0 | 13.5 | 7.5 |
| 23 | 11.5 | 9.5 | 7.0 | 5.0 | 2.0 | 0.5 | 3.5 | 1.5 | 6.5 | 5.0 | 10.5 | 8.0 |
| 24 | 11.0 | 9.0 | 6.5 | 5.0 | 2.0 | 0.0 | 3.0 | 1.0 | 7.5 | 4.0 | --- | 6.5 |
| 25 | 11.0 | 9.5 | 7.0 | 6.0 | 2.5 | 0.5 | 2.5 | 0.0 | 7.5 | 5.5 | --- | --- |
| 26 | 10.5 | 8.0 | 6.0 | 4.5 | 3.0 | 1.0 | 2.5 | 0.0 | 8.5 | 5.5 | --- | --- |
| 27 | 10.5 | 8.0 | 4.5 | 2.0 | 4.0 | 2.5 | 3.0 | 0.0 | 9.5 | 6.5 | --- | --- |
| 28 | 10.0 | 7.5 | 3.0 | 1.0 | 3.5 | 2.0 | 3.0 | 0.0 | 9.0 | 7.0 | --- | --- |
| 29 | 11.0 | 9.5 | 3.5 | 1.0 | 3.0 | 2.0 | 3.0 | 0.5 | --- | --- | --- | --- |
| 30 | 12.0 | 10.5 | 3.5 | 1.5 | 3.0 | 2.0 | 3.5 | 0.5 | --- | --- | --- | --- |
| 31 | 13.0 | 10.0 | --- | --- | 2.5 | 1.0 | 4.5 | 2.0 | --- | --- | --- | --- |
| MONTH | 19.5 | 7.5 | 13.5 | 1.0 | 4.5 | 0.0 | 4.5 | 0.0 | 9.5 | 1.0 | 13.5 | 4.0 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | --- | --- | 14.5 | 11.5 | 19.0 | 14.5 | 23.0 | 18.5 | 23.0 | 19.5 | 21.5 | 16.5 |
| 2 | --- | --- | 14.5 | 11.0 | 18.5 | 12.5 | 21.5 | 16.5 | 26.0 | 19.5 | 21.5 | 17.5 |
| 3 | --- | --- | 14.5 | 11.0 | 16.5 | 12.5 | 19.5 | 16.5 | 26.0 | 20.0 | 22.5 | 17.0 |
| 4 | --- | --- | 13.5 | 9.5 | 21.5 | 13.5 | 20.5 | 16.0 | 26.5 | 20.0 | 23.0 | 18.0 |
| 5 | --- | --- | 13.0 | 9.0 | 23.5 | 15.5 | 19.0 | 15.0 | 24.5 | 19.0 | 23.0 | 19.0 |
| 6 | --- | --- | 13.5 | 8.5 | 24.0 | 17.5 | 21.0 | 15.0 | 24.5 | 19.0 | 22.5 | 17.5 |
| 7 | --- | --- | 13.5 | 9.5 | 22.5 | 18.0 | 22.0 | 16.5 | 25.0 | 20.0 | 21.5 | 18.0 |
| 8 | --- | --- | 16.0 | 8.5 | 21.0 | 15.5 | 22.5 | 17.5 | 24.0 | 20.0 | 21.0 | 17.0 |
| 9 | --- | --- | 14.5 | 10.0 | 19.5 | 15.5 | 22.0 | 17.0 | 23.5 | 19.5 | 20.5 | 16.0 |
| 10 | --- | --- | 12.5 | 10.0 | 17.0 | 15.5 | 22.0 | 16.0 | 24.5 | 19.0 | 20.5 | 15.5 |
| 11 | --- | --- | 13.0 | 9.0 | 20.5 | 14.5 | 23.0 | 16.5 | 25.5 | 19.5 | 20.5 | 16.5 |
| 12 | --- | --- | 14.5 | 9.5 | 22.0 | 15.0 | 23.0 | 18.0 | 24.0 | 20.5 | 20.5 | 15.5 |
| 13 | --- | --- | 16.0 | 9.5 | 21.0 | 16.0 | 22.5 | 16.0 | 24.0 | 19.5 | 20.5 | 16.5 |
| 14 | --- | --- | 15.5 | 11.0 | 22.0 | 15.5 | 23.5 | 16.5 | 23.5 | 19.5 | 19.5 | 16.5 |
| 15 | --- | --- | 14.0 | 10.5 | 22.0 | 15.0 | 23.5 | 17.0 | 24.0 | 19.0 | 17.5 | 15.0 |
| 16 | --- | --- | 14.0 | 9.5 | 22.5 | 15.5 | 23.5 | 17.5 | 25.0 | 19.5 | 16.0 | 14.0 |
| 17 | --- | --- | 15.5 | 9.5 | 20.0 | 17.0 | 23.0 | 18.0 | 23.0 | 20.0 | 16.5 | 14.5 |
| 18 | --- | --- | 12.5 | 9.5 | 20.5 | 16.5 | 23.5 | 18.5 | 23.0 | 18.5 | 18.0 | 15.0 |
| 19 | 14.5 | --- | 17.0 | 8.5 | 21.5 | 16.0 | 24.0 | 19.0 | 23.5 | 19.0 | 18.0 | 16.0 |
| 20 | 14.0 | 8.0 | 19.0 | 12.0 | 20.5 | 16.0 | 24.0 | 18.5 | 22.5 | 18.5 | 18.0 | 15.5 |
| 21 | 16.0 | 9.5 | 17.5 | 12.0 | 23.0 | 15.5 | 24.0 | 18.5 | 23.0 | 19.0 | 17.5 | 15.0 |
| 22 | 15.5 | 9.5 | 14.5 | 11.0 | 24.0 | 18.5 | 25.0 | 19.0 | 23.0 | 17.5 | 17.0 | 13.5 |
| 23 | 16.0 | 10.5 | 14.0 | 10.0 | 23.5 | 18.5 | 25.5 | 19.5 | 23.5 | 18.5 | 16.0 | 15.0 |
| 24 | 15.0 | 11.0 | 16.0 | 10.0 | 23.5 | 17.0 | 24.5 | 19.5 | 21.5 | 19.0 | 17.0 | 14.0 |
| 25 | 12.5 | 10.0 | 15.0 | 11.0 | 23.5 | 18.0 | 24.0 | 19.0 | 19.5 | 17.5 | 18.5 | 15.5 |
| 26 | 16.0 | 8.5 | 15.5 | 11.0 | 23.5 | 18.0 | 24.5 | 18.5 | 20.0 | 16.5 | 18.5 | 15.5 |
| 27 | 17.0 | 9.5 | 14.5 | 8.5 | 23.0 | 19.0 | 23.0 | 17.5 | 19.5 | 16.5 | 17.5 | 16.0 |
| 28 | 14.0 | 10.5 | 16.5 | 9.5 | 23.5 | 17.5 | 23.0 | 17.0 | 22.0 | 18.0 | 16.0 | 13.5 |
| 29 | 15.5 | 11.5 | 17.5 | 10.5 | 23.5 | 18.0 | 24.0 | 17.5 | 22.5 | 18.0 | 15.0 | 12.5 |
| 30 | 16.0 | 12.0 | 17.5 | 11.5 | 22.0 | 17.5 | 24.5 | 17.5 | 22.5 | 19.0 | 15.5 | 11.5 |
| 31 | --- | --- | 20.0 | 13.0 | --- | --- | 24.5 | 18.5 | 21.0 | 16.5 | --- | --- |
| MONTH | 17.0 | 8.0 | 20.0 | 8.5 | 24.0 | 12.5 | 25.5 | 15.0 | 26.5 | 16.5 | 23.0 | 11.5 |

14370400 ROGUE RIVER NEAR MERLIN, OR

LOCATION.--Lat 42°29'50", long 123°29'15", in SE¼ sec.26, T.35 S., R.7 W., Josephine County, Hydrologic Unit 17100310, on left bank at Robertson Bridge, 3.4 mi (5.5 km) upstream from Jumpoff Joe Creek, 3.7 mi (6.0 km) southwest of Merlin, and at mile 86.8 (139.7 km).

DRAINAGE AREA.--3,271 mi² (5,263 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 3-5, 1977; minimum, 0.0°C Jan. 9, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 3-5; minimum, 0.0°C Jan. 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|------|-------|------|-----|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 18.5 | 16.0 | 11.0 | 10.0 | 4.0 | 2.5 | 3.5 | 3.0 | 5.0 | 3.5 | 9.0 | 7.0 |
| 2 | 17.5 | 16.0 | 12.0 | 11.0 | 4.0 | 3.0 | 3.5 | 3.0 | 5.5 | 4.0 | 8.0 | 7.5 |
| 3 | 16.0 | 14.5 | 12.0 | 11.5 | 4.0 | 3.5 | 4.0 | 3.0 | 5.5 | 3.5 | 8.5 | 6.5 |
| 4 | 15.0 | 13.0 | 12.0 | 11.5 | 4.5 | 3.0 | 4.5 | 3.5 | 5.5 | 3.5 | 9.0 | 6.5 |
| 5 | 15.0 | 13.0 | 11.5 | 10.5 | 4.5 | 3.0 | 5.0 | 3.5 | 4.5 | 3.5 | 9.5 | 6.5 |
| 6 | 15.0 | 13.0 | 10.5 | 9.5 | 4.5 | 3.5 | 3.5 | 2.5 | 6.0 | 4.0 | 9.5 | 7.0 |
| 7 | 15.5 | 13.5 | 9.5 | 9.0 | 4.0 | 3.0 | 2.5 | 1.5 | 6.0 | 5.0 | 9.0 | 7.5 |
| 8 | 16.0 | 14.0 | 9.5 | 9.0 | 4.5 | 3.0 | 2.0 | 0.5 | 7.5 | 5.0 | 9.5 | 7.5 |
| 9 | 16.0 | 14.0 | 9.0 | 8.5 | 4.5 | 3.5 | 1.0 | 0.0 | 7.0 | 5.5 | 9.5 | 7.5 |
| 10 | 16.0 | 13.5 | 9.5 | 8.5 | 5.5 | 4.5 | 2.0 | 0.5 | 8.0 | 6.0 | 9.5 | 7.0 |
| 11 | 15.5 | 13.5 | 10.0 | 8.5 | 4.5 | 4.5 | 2.5 | 2.0 | 9.0 | 6.5 | 9.5 | 7.0 |
| 12 | 15.0 | 13.0 | 10.0 | 9.0 | 4.5 | 4.0 | 4.0 | 2.5 | 9.0 | 7.0 | 10.0 | 7.0 |
| 13 | 14.5 | 12.5 | 9.5 | 9.0 | 4.0 | 4.0 | 4.5 | 4.0 | 9.5 | 7.0 | 8.5 | 6.5 |
| 14 | 14.0 | 11.5 | 9.0 | 8.5 | 4.0 | 3.5 | 5.0 | 4.0 | 9.0 | 7.0 | 9.0 | 6.5 |
| 15 | 13.5 | 11.0 | 9.5 | 8.5 | 4.0 | 3.5 | 4.5 | 4.0 | 9.5 | 7.0 | 8.5 | 6.5 |
| 16 | 13.0 | 11.0 | 10.5 | 9.5 | 4.0 | 3.5 | 4.5 | 4.0 | 9.0 | 7.0 | 9.5 | 6.5 |
| 17 | 12.5 | 10.5 | 10.5 | 10.0 | 4.0 | 3.5 | 3.5 | 3.5 | 10.0 | 7.5 | 9.5 | 7.0 |
| 18 | 12.0 | 10.0 | 11.0 | 10.0 | 4.0 | 3.5 | 4.0 | 3.5 | 9.5 | 7.0 | 9.5 | 7.0 |
| 19 | 11.5 | 9.5 | 11.0 | 10.0 | 3.5 | 3.0 | 3.5 | 3.5 | 12.5 | 4.0 | 10.5 | 8.0 |
| 20 | 11.5 | 9.0 | 10.0 | 8.5 | 3.0 | 2.5 | 4.0 | 3.5 | 10.5 | 4.0 | 11.5 | 7.5 |
| 21 | 11.0 | 9.0 | 9.0 | 7.5 | 2.0 | 1.5 | 4.5 | 3.5 | 8.5 | 6.5 | 12.5 | 8.5 |
| 22 | 11.0 | 9.5 | 7.5 | 7.0 | 2.0 | 1.5 | 4.5 | 3.5 | 8.5 | 7.0 | 12.5 | 8.5 |
| 23 | 11.0 | 9.0 | 7.5 | 7.0 | 3.0 | 1.5 | 5.0 | 4.0 | 8.0 | 6.5 | 12.0 | 9.5 |
| 24 | 9.5 | 9.0 | 7.0 | 6.5 | 3.0 | 2.0 | 4.5 | 4.0 | 8.0 | 6.0 | 11.0 | 9.0 |
| 25 | 10.0 | 8.5 | 7.5 | 6.5 | 3.5 | 2.5 | 4.5 | 3.5 | 8.0 | 6.5 | 12.0 | 8.5 |
| 26 | 9.5 | 8.5 | 7.0 | 5.5 | 3.0 | 2.5 | 4.0 | 2.5 | 8.5 | 6.5 | 12.0 | 8.0 |
| 27 | 9.5 | 8.5 | 5.5 | 4.0 | 4.0 | 3.0 | 3.5 | 1.5 | 9.5 | 7.5 | 12.0 | 9.0 |
| 28 | 9.5 | 8.5 | 4.5 | 3.5 | 4.0 | 4.0 | 3.5 | 1.5 | 9.5 | 8.0 | 11.5 | 8.5 |
| 29 | 9.5 | 8.5 | 3.5 | 2.5 | 4.5 | 4.0 | 3.5 | 2.0 | --- | --- | 10.5 | 8.0 |
| 30 | 10.5 | 9.0 | 3.5 | 2.5 | 4.0 | 3.5 | 3.0 | 1.5 | --- | --- | 11.0 | 7.5 |
| 31 | 10.5 | 9.5 | --- | --- | 4.0 | 3.5 | 4.5 | 2.5 | --- | --- | 10.0 | 7.5 |
| MONTH | 18.5 | 8.5 | 12.0 | 2.5 | 5.5 | 1.5 | 5.0 | 0.0 | 12.5 | 3.5 | 12.5 | 6.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 11.5 | 8.5 | 15.5 | 14.5 | 20.0 | 18.0 | 23.0 | 21.5 | 23.5 | 21.5 | 21.5 | 19.0 |
| 2 | 12.0 | 9.5 | 16.0 | 14.0 | 20.5 | 17.5 | 22.0 | 19.5 | 24.5 | 22.0 | 21.5 | 19.5 |
| 3 | 13.5 | 9.5 | 15.5 | 13.5 | 20.0 | 18.0 | 21.0 | 19.0 | 25.5 | 22.0 | 21.5 | 19.5 |
| 4 | 14.0 | 10.5 | 15.5 | 12.5 | 21.5 | 17.5 | 20.5 | 18.5 | 25.5 | 22.0 | 22.0 | 20.0 |
| 5 | 14.5 | 12.0 | 14.5 | 12.5 | 23.0 | 19.5 | 20.0 | 18.0 | 25.5 | 22.0 | 22.0 | 20.5 |
| 6 | 15.5 | 12.5 | 15.0 | 11.5 | 24.0 | 21.5 | 20.5 | 17.0 | 24.5 | 22.0 | 22.0 | 19.5 |
| 7 | 16.0 | 13.5 | 14.5 | 12.0 | 24.5 | 22.5 | 21.0 | 18.5 | 25.0 | 22.5 | 21.5 | 20.0 |
| 8 | 15.5 | 13.5 | 16.0 | 11.5 | 23.0 | 21.5 | 21.5 | 19.0 | 24.5 | 22.0 | 20.5 | 19.5 |
| 9 | 14.5 | 12.5 | 16.0 | 13.0 | 22.0 | 19.5 | 22.0 | 19.5 | 23.5 | 21.5 | 20.0 | 18.0 |
| 10 | 14.0 | 11.5 | 15.5 | 13.0 | 21.5 | 19.5 | 22.0 | 19.5 | 23.5 | 21.5 | 20.0 | 18.0 |
| 11 | 14.5 | 12.0 | 15.0 | 13.0 | 21.5 | 18.5 | 23.0 | 20.0 | 25.0 | 22.0 | 20.0 | 18.0 |
| 12 | 14.5 | 12.0 | 16.5 | 12.5 | 21.0 | 18.5 | 22.5 | 20.5 | 24.0 | 22.0 | 20.0 | 17.5 |
| 13 | 15.0 | 13.5 | 16.5 | 12.5 | 21.5 | 18.5 | 22.5 | 19.5 | 24.5 | 21.5 | 20.0 | 18.5 |
| 14 | 15.5 | 12.0 | 16.5 | 14.0 | 22.5 | 19.5 | 23.0 | 20.0 | 24.0 | 21.5 | 20.0 | 18.5 |
| 15 | 16.0 | 13.0 | 16.0 | 14.0 | 22.5 | 19.5 | 23.0 | 21.0 | 24.0 | 21.0 | 19.0 | 16.5 |
| 16 | 16.0 | 13.5 | 15.5 | 13.5 | 22.5 | 19.5 | 23.0 | 20.5 | 24.5 | 21.5 | 17.0 | 16.0 |
| 17 | 15.0 | 12.5 | 15.5 | 13.0 | 22.0 | 19.5 | 23.5 | 21.0 | 24.5 | 22.0 | 17.0 | 15.5 |
| 18 | 14.5 | 12.0 | 15.0 | 12.5 | 22.0 | 19.5 | 23.0 | 21.5 | 24.0 | 21.0 | 16.5 | 15.0 |
| 19 | 16.5 | 7.0 | 16.5 | 12.0 | 21.5 | 19.5 | 24.0 | 20.5 | 24.0 | 21.0 | 16.5 | 15.5 |
| 20 | 20.0 | 4.5 | 18.0 | 13.5 | 20.5 | 18.0 | 24.0 | 21.0 | 22.0 | 21.0 | 17.0 | 15.0 |
| 21 | 16.5 | 11.5 | 18.5 | 15.5 | 22.0 | 18.5 | 24.0 | 21.0 | 22.5 | 20.5 | 17.5 | 15.5 |
| 22 | 17.0 | 12.0 | 18.0 | 15.0 | 22.0 | 20.0 | 24.5 | 21.5 | 22.5 | 20.0 | 17.5 | 14.5 |
| 23 | 16.5 | 13.5 | 16.5 | 14.5 | 23.0 | 20.5 | 25.0 | 22.0 | 22.5 | 20.0 | 17.0 | 15.0 |
| 24 | 16.0 | 14.0 | 16.5 | 12.5 | 23.5 | 21.0 | 24.5 | 22.0 | 21.5 | 20.5 | 17.0 | 14.5 |
| 25 | 14.5 | 13.5 | 16.0 | 13.5 | 24.0 | 21.5 | 24.5 | 22.0 | 20.0 | 19.0 | 17.0 | 15.0 |
| 26 | 16.0 | 12.0 | 16.5 | 14.0 | 24.0 | 21.0 | 24.5 | 21.0 | 20.0 | 18.5 | 18.0 | 15.0 |
| 27 | 16.5 | 10.0 | 16.5 | 13.5 | 23.0 | 21.5 | 24.5 | 20.5 | 19.5 | 18.0 | 17.5 | 15.5 |
| 28 | 16.5 | 9.0 | 17.0 | 12.5 | 23.0 | 20.5 | 23.0 | 20.0 | 20.0 | 18.0 | 16.5 | 15.0 |
| 29 | 16.5 | 14.0 | 18.5 | 13.5 | 23.0 | 21.0 | 23.0 | 20.0 | 21.0 | 18.0 | 16.0 | 14.0 |
| 30 | 17.0 | 15.0 | 19.5 | 15.0 | 23.5 | 20.5 | 24.0 | 20.5 | 21.0 | 19.0 | 15.0 | 13.5 |
| 31 | --- | --- | 20.5 | 16.5 | --- | --- | 24.0 | 21.0 | 21.0 | 18.5 | --- | --- |
| MONTH | 20.0 | 4.5 | 20.5 | 11.5 | 24.5 | 17.5 | 25.0 | 17.0 | 25.5 | 18.0 | 22.0 | 13.5 |

ROGUE RIVER BASIN

529

14371500 GRAVE CREEK AT PEASE BRIDGE, NEAR PLACER, OR

LOCATION.--Lat 42°38'30", long 123°12'40", in SE¼ sec.6, T.34 S., R.4 W., Josephine County, Hydrologic Unit 17100310, on right bank 0.5 mi (0.8 km) downstream from Pease Bridge, 0.5 mi (0.8 km) upstream from Boulder Creek, 5.4 mi (8.7 km) east of Placer, and at mile 27.1 (43.6 km).

DRAINAGE AREA.--22.1 mi² (57.2 km²) at measuring site 0.5 mi (0.8 km) upstream.

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1945 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,354.2 ft (717.56 m) above mean sea level (Bureau of Reclamation bench mark). Prior to Aug. 4, 1955, at sites 0.5 mi (0.8 km) upstream at datum 29.9 ft (9.11 m) higher.

REMARKS.--Records good. No regulation. One small diversion above station. Prior to 1945, Columbia upper ditch diverted water about 2 mi (3 km) above station, bypassing station. Records herein are for measuring site.

AVERAGE DISCHARGE.--32 years (water years 1946-77), 59.4 ft³/s (1.682 m³/s), 36.50 in/yr (927 mm/yr), 43,040 acre-ft/yr (53.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft³/s (177 m³/s) Dec. 22, 1964, gage height, 11.20 ft (3.414 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of slope-area measurement at gage height 9.66 ft (2.944 m); minimum, 0.12 ft³/s (0.003 m³/s) July 15, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76 ft³/s (2.15 m³/s) Mar. 8, gage height, 2.24 ft (0.683 m), no peak above base of 850 ft³/s (24.1 m³/s); minimum, 0.35 ft³/s (0.010 m³/s) Aug. 21-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|-------|------|-------|-------|------|-------|------|-------|-------|-------|-------|
| 1 | 2.0 | 4.9 | 2.9 | 3.4 | 4.2 | 35 | 31 | 11 | 19 | 4.2 | .76 | .92 |
| 2 | 2.0 | 5.1 | 2.5 | 5.3 | 4.7 | 28 | 32 | 17 | 17 | 9.9 | .71 | .92 |
| 3 | 2.2 | 4.0 | 2.7 | 5.5 | 4.9 | 30 | 33 | 26 | 16 | 5.1 | .67 | .80 |
| 4 | 2.0 | 3.4 | 2.7 | 4.7 | 4.0 | 28 | 46 | 31 | 14 | 4.4 | .62 | .80 |
| 5 | 2.0 | 3.2 | 2.7 | 4.4 | 3.8 | 26 | 60 | 33 | 13 | 4.0 | .62 | .76 |
| 6 | 2.0 | 3.0 | 2.7 | 4.2 | 4.4 | 29 | 60 | 36 | 12 | 3.6 | .58 | .76 |
| 7 | 1.9 | 2.9 | 2.7 | 4.2 | 4.4 | 37 | 60 | 39 | 11 | 3.2 | .58 | .71 |
| 8 | 1.7 | 2.7 | 3.2 | 4.2 | 4.9 | 67 | 57 | 33 | 10 | 3.0 | .58 | .71 |
| 9 | 1.6 | 2.7 | 5.1 | 4.2 | 5.3 | 67 | 45 | 29 | 10 | 2.9 | .53 | .67 |
| 10 | 1.6 | 2.7 | 4.2 | 4.2 | 5.1 | 47 | 35 | 26 | 9.9 | 2.7 | .53 | .67 |
| 11 | 1.6 | 2.7 | 3.8 | 4.2 | 5.1 | 40 | 31 | 29 | 10 | 2.5 | .50 | .62 |
| 12 | 1.4 | 2.7 | 3.6 | 5.5 | 5.1 | 40 | 30 | 28 | 9.6 | 2.3 | .50 | .62 |
| 13 | 1.4 | 2.9 | 3.4 | 6.2 | 5.1 | 35 | 31 | 25 | 8.4 | 2.3 | .47 | .58 |
| 14 | 1.3 | 4.0 | 3.2 | 6.7 | 5.1 | 29 | 29 | 22 | 8.4 | 2.0 | .47 | .58 |
| 15 | 1.3 | 6.2 | 3.2 | 6.2 | 4.7 | 24 | 25 | 20 | 8.1 | 1.9 | .43 | .58 |
| 16 | 1.3 | 5.5 | 3.0 | 6.0 | 4.4 | 21 | 24 | 26 | 7.0 | 1.7 | .43 | .62 |
| 17 | 1.3 | 4.4 | 2.8 | 5.3 | 4.4 | 20 | 21 | 44 | 7.3 | 1.4 | .40 | .67 |
| 18 | 1.3 | 4.0 | 2.6 | 5.5 | 4.2 | 21 | 18 | 44 | 7.8 | 1.4 | .40 | .86 |
| 19 | 1.3 | 3.8 | 2.3 | 6.2 | 3.8 | 26 | 16 | 37 | 7.6 | 1.6 | .40 | 2.5 |
| 20 | 1.3 | 3.4 | 2.5 | 7.0 | 4.0 | 33 | 15 | 31 | 7.6 | 1.7 | .40 | 2.7 |
| 21 | 1.3 | 3.2 | 2.5 | 7.3 | 9.9 | 35 | 14 | 27 | 7.8 | 1.4 | .40 | 1.9 |
| 22 | 1.3 | 3.2 | 2.9 | 7.8 | 13 | 44 | 13 | 26 | 7.0 | 1.3 | .37 | 1.3 |
| 23 | 1.3 | 3.0 | 2.9 | 7.0 | 13 | 55 | 13 | 42 | 6.7 | 1.2 | .37 | 1.3 |
| 24 | 1.9 | 2.9 | 3.4 | 6.0 | 11 | 50 | 12 | 50 | 6.2 | 1.1 | .80 | 1.9 |
| 25 | 3.8 | 2.9 | 2.9 | 6.7 | 9.9 | 48 | 12 | 42 | 6.2 | 1.0 | 2.5 | 1.9 |
| 26 | 3.2 | 2.9 | 3.2 | 6.7 | 12 | 43 | 12 | 41 | 5.3 | .92 | 2.5 | 1.6 |
| 27 | 2.5 | 2.7 | 4.2 | 6.7 | 20 | 47 | 11 | 37 | 5.1 | .92 | 1.9 | 1.6 |
| 28 | 2.3 | 2.5 | 3.8 | 6.2 | 52 | 44 | 11 | 33 | 4.7 | .92 | 1.6 | 33 |
| 29 | 2.7 | 2.9 | 3.6 | 5.8 | --- | 38 | 11 | 29 | 4.2 | .86 | 1.3 | 22 |
| 30 | 3.0 | 2.9 | 3.6 | 5.5 | --- | 34 | 9.9 | 24 | 4.0 | .80 | 1.2 | 8.6 |
| 31 | 3.2 | --- | 3.4 | 4.2 | --- | 31 | --- | 22 | --- | .76 | 1.0 | --- |
| TOTAL | 59.0 | 103.3 | 98.2 | 173.0 | 232.4 | 1152 | 817.9 | 960 | 270.9 | 72.98 | 24.52 | 93.15 |
| MEAN | 1.90 | 3.44 | 3.17 | 5.58 | 8.30 | 37.2 | 27.3 | 31.0 | 9.03 | 2.35 | .79 | 3.11 |
| MAX | 3.8 | 6.2 | 5.1 | 7.8 | 52 | 67 | 60 | 50 | 19 | 9.9 | 2.5 | 33 |
| MIN | 1.3 | 2.5 | 2.3 | 3.4 | 3.8 | 20 | 9.9 | 11 | 4.0 | .76 | .37 | .58 |
| CFSM | .09 | .16 | .14 | .25 | .38 | 1.68 | 1.24 | 1.40 | .41 | .11 | .04 | .14 |
| IN. | .10 | .17 | .17 | .29 | .39 | 1.94 | 1.38 | 1.62 | .46 | .12 | .04 | .16 |
| AC-FT | 117 | 205 | 195 | 343 | 461 | 2280 | 1620 | 1900 | 537 | 145 | 49 | 185 |

CAL YR 1976 TOTAL 10211.20 MEAN 27.9 MAX 550 MIN 1.2 CFSM 1.26 IN 17.19 AC-FT 20250
WTR YR 1977 TOTAL 4057.35 MEAN 11.1 MAX 67 MIN .37 CFSM .50 IN 6.83 AC-FT 8050

ROGUE RIVER BASIN

14372250 ROGUE RIVER AT MARIAL, OR

LOCATION.--Lat 42°43'00", long 123°53'05", in NW¼SE¼ sec.9, T.33 S., R.10 W., Curry County, Hydrologic Unit 17100310, on right bank 0.2 mi (0.3 km) downstream from Mule Creek and at mile 48.2 (77.6 km).

DRAINAGE AREA.--3,812 mi² (6,134 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 27.5°C Aug. 5, 1977; minimum recorded, 1.5°C Jan. 11, 1977, but may have been lower during period of no record.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.5°C Aug. 5; minimum recorded, 1.5°C Jan. 11, but may have been lower during period of no record.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|------|------|
| OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | | |
| 1 | 18.5 | 18.0 | 11.5 | 11.0 | 3.5 | 3.0 | --- | --- | 4.5 | 4.0 | 8.5 | 8.0 |
| 2 | 18.5 | 17.5 | 12.0 | 11.5 | 3.5 | 3.5 | --- | --- | 4.5 | 4.5 | 8.5 | 7.5 |
| 3 | 18.0 | 16.0 | 12.5 | 12.0 | --- | --- | --- | --- | 4.5 | 4.5 | 8.0 | 7.5 |
| 4 | 16.0 | 15.0 | 13.0 | 12.5 | --- | --- | --- | --- | 5.0 | 4.5 | 8.5 | 7.5 |
| 5 | 15.5 | 14.5 | 12.5 | 12.0 | --- | --- | --- | --- | 5.0 | 5.0 | 8.5 | 8.0 |
| 6 | 15.0 | 14.5 | 12.0 | 11.5 | --- | --- | --- | --- | 5.5 | 5.0 | 8.5 | 8.5 |
| 7 | 15.5 | 14.5 | 11.5 | 11.0 | --- | --- | --- | --- | 6.5 | 5.5 | 9.0 | 8.5 |
| 8 | 15.5 | 15.0 | 11.0 | 10.5 | --- | --- | --- | --- | 7.0 | 6.5 | 9.0 | 8.5 |
| 9 | 16.0 | 15.5 | 10.5 | 10.0 | --- | --- | --- | --- | 7.0 | 6.5 | 9.0 | 8.0 |
| 10 | 16.0 | 15.5 | 10.0 | 10.0 | --- | --- | 1.5 | --- | 7.5 | 7.0 | 9.0 | 8.0 |
| 11 | 16.0 | 15.5 | 10.0 | 9.5 | --- | --- | 3.0 | 1.5 | 8.0 | 7.5 | 9.0 | 8.0 |
| 12 | 15.5 | 15.0 | 10.0 | 10.0 | --- | --- | 4.0 | 3.0 | 8.5 | 8.0 | 8.5 | 8.0 |
| 13 | 15.0 | 14.5 | 10.0 | 10.0 | --- | --- | 4.5 | 4.0 | 9.0 | 8.5 | 9.0 | 8.0 |
| 14 | 14.5 | 14.0 | 10.5 | 10.0 | --- | --- | 5.0 | 4.5 | 9.0 | 8.5 | 8.5 | 7.5 |
| 15 | 14.0 | 13.0 | 10.0 | 9.5 | --- | --- | 5.0 | 5.0 | 9.0 | 8.5 | 8.5 | 7.5 |
| 16 | 13.5 | 12.5 | 10.0 | 10.0 | --- | --- | 5.0 | 5.0 | 9.0 | 8.5 | 8.5 | 7.5 |
| 17 | 13.0 | 12.0 | 11.0 | 10.0 | --- | --- | 5.0 | 5.0 | 9.0 | 8.5 | 8.5 | 8.0 |
| 18 | 12.5 | 12.0 | 11.5 | 11.0 | --- | --- | 5.0 | 4.5 | 9.0 | 8.5 | 9.0 | 8.5 |
| 19 | 12.0 | 11.5 | 11.0 | 11.0 | --- | --- | 4.5 | 4.5 | 9.0 | 8.5 | 9.5 | 9.0 |
| 20 | 11.5 | 11.0 | 11.0 | 10.5 | --- | --- | 4.5 | 4.0 | 9.0 | 8.5 | 10.0 | 9.5 |
| 21 | 11.5 | 10.5 | 10.5 | 9.5 | --- | --- | 4.5 | 4.0 | 9.0 | 8.0 | 10.5 | 10.0 |
| 22 | 11.0 | 10.5 | 9.5 | 9.0 | --- | --- | 5.0 | 4.5 | 8.5 | 7.5 | 11.0 | 10.5 |
| 23 | 11.0 | 10.5 | 9.0 | 8.0 | --- | --- | 5.0 | 5.0 | 8.0 | 7.5 | 11.5 | 10.5 |
| 24 | 11.0 | 10.5 | 8.0 | 8.0 | --- | --- | 5.0 | 5.0 | 7.5 | 7.0 | 11.0 | 10.5 |
| 25 | 10.5 | 10.5 | 8.0 | 7.5 | --- | --- | 5.0 | 4.5 | 7.5 | 7.0 | 11.0 | 10.0 |
| 26 | 10.5 | 10.0 | 7.5 | 7.0 | --- | --- | 4.5 | 4.0 | 8.0 | 7.5 | 11.5 | 10.0 |
| 27 | 10.0 | 9.5 | 7.0 | 5.5 | --- | --- | 4.0 | 3.0 | 8.5 | 8.0 | 11.5 | 10.5 |
| 28 | 10.0 | 9.5 | 5.5 | 4.5 | --- | --- | 3.5 | 2.5 | 8.5 | 8.0 | 11.0 | 10.0 |
| 29 | 10.0 | 9.5 | 4.5 | 4.0 | --- | --- | 3.0 | 2.5 | --- | --- | 10.5 | 9.5 |
| 30 | 10.5 | 10.0 | 4.0 | 3.0 | --- | --- | 3.5 | 3.0 | --- | --- | 10.0 | 9.5 |
| 31 | 11.0 | 10.0 | --- | --- | --- | --- | 4.0 | 3.5 | --- | --- | 10.0 | 9.5 |
| MONTH | 18.5 | 9.5 | 13.0 | 3.0 | --- | --- | 5.0 | 1.5 | 9.0 | 4.0 | 11.5 | 7.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|------|------|------|------|------|------|------|--------|------|-----------|------|------|
| APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | | |
| 1 | 10.0 | 9.5 | 16.5 | 16.0 | 19.5 | 18.5 | 25.5 | 22.0 | 24.0 | 23.0 | 22.0 | 20.0 |
| 2 | 11.5 | 9.5 | 16.5 | 16.0 | 20.0 | 18.5 | 23.5 | 21.5 | 24.5 | 23.5 | 22.0 | 20.0 |
| 3 | 12.0 | 11.0 | 16.0 | 15.0 | 19.0 | 18.0 | 22.0 | 20.5 | 25.0 | 23.5 | 22.5 | 21.0 |
| 4 | 13.0 | 12.0 | 15.5 | 14.5 | 19.5 | 18.0 | 21.5 | 20.0 | 27.0 | 23.5 | 23.0 | 21.5 |
| 5 | 14.0 | 12.5 | 14.5 | 13.5 | 21.5 | 18.5 | 20.0 | 19.0 | 27.5 | 23.5 | 23.5 | 21.5 |
| 6 | 14.5 | 13.0 | 14.0 | 13.5 | 23.5 | 21.0 | 21.0 | 18.5 | 26.0 | 23.5 | 22.5 | 21.0 |
| 7 | 15.0 | 13.5 | 14.0 | 13.0 | 24.5 | 22.0 | 21.5 | 19.5 | 25.0 | 23.5 | 22.5 | 21.5 |
| 8 | 15.0 | 14.0 | 15.0 | 13.5 | 24.0 | 22.0 | 22.0 | 19.5 | 27.0 | 23.5 | 22.0 | 20.5 |
| 9 | 14.5 | 13.5 | 15.5 | 14.5 | 23.0 | 21.5 | 22.5 | 20.0 | 24.5 | 24.0 | 21.5 | 20.0 |
| 10 | 13.5 | 13.0 | 15.0 | 14.5 | 21.5 | 20.0 | 22.5 | 20.5 | 24.0 | 23.5 | 21.0 | 19.5 |
| 11 | 14.5 | 13.0 | 15.0 | 14.5 | 21.5 | 19.5 | 23.0 | 21.0 | 25.5 | 23.0 | 21.0 | 19.5 |
| 12 | 15.0 | 13.5 | 15.0 | 14.0 | 21.5 | 19.5 | 23.5 | 21.5 | 26.5 | 23.5 | 20.5 | 19.0 |
| 13 | 15.0 | 13.5 | 15.5 | 14.0 | 22.0 | 20.0 | 23.5 | 21.5 | 24.5 | 23.0 | 21.0 | 19.5 |
| 14 | 15.0 | 13.5 | 15.5 | 15.0 | 22.5 | 20.5 | 23.5 | 21.5 | 24.0 | 23.0 | 21.0 | 19.5 |
| 15 | 15.0 | 14.0 | 15.5 | 14.5 | 22.5 | 21.0 | 25.5 | 21.5 | 24.5 | 23.0 | 19.5 | 18.5 |
| 16 | 15.5 | 14.5 | 15.0 | 14.5 | 23.0 | 21.0 | 26.0 | 22.0 | 24.5 | 23.0 | 18.5 | 17.5 |
| 17 | 16.0 | 13.5 | 15.5 | 14.5 | 22.0 | 21.5 | 24.5 | 22.0 | 24.5 | 23.0 | 17.5 | 17.0 |
| 18 | 15.5 | 14.0 | 15.0 | 14.0 | 22.5 | 20.5 | 23.5 | 22.0 | 24.0 | 23.0 | 17.0 | 16.5 |
| 19 | 15.5 | 13.5 | 15.5 | 14.0 | 22.0 | 20.5 | 24.0 | 21.5 | 25.0 | 22.5 | 16.5 | 16.0 |
| 20 | 14.5 | 13.5 | 16.5 | 15.0 | 21.5 | 20.5 | 24.0 | 22.0 | 23.5 | 22.5 | 17.0 | 16.5 |
| 21 | 15.0 | 13.5 | 17.5 | 16.5 | 22.0 | 20.0 | 25.0 | 22.0 | 23.5 | 22.0 | 16.5 | 16.5 |
| 22 | 16.0 | 14.0 | 17.0 | 16.0 | 23.0 | 20.0 | 26.5 | 22.5 | 23.5 | 21.5 | 17.0 | 16.0 |
| 23 | 16.5 | 14.0 | 16.0 | 15.0 | 24.0 | 21.5 | 27.0 | 23.0 | 23.5 | 22.0 | 17.0 | 16.5 |
| 24 | 16.5 | 15.0 | 16.5 | 15.0 | 24.0 | 22.0 | 25.0 | 23.5 | 22.5 | 22.0 | 17.0 | 16.0 |
| 25 | 16.0 | 15.0 | 16.0 | 14.5 | 24.5 | 22.0 | 24.5 | 23.0 | 22.0 | 21.0 | 16.5 | 16.0 |
| 26 | 16.5 | 14.5 | 16.0 | 14.0 | 25.0 | 22.5 | 24.5 | 22.5 | 21.0 | 20.0 | 17.5 | 16.5 |
| 27 | 16.5 | 15.0 | 15.5 | 14.5 | 24.5 | 22.5 | 24.5 | 22.5 | 20.0 | 19.5 | 17.0 | 16.5 |
| 28 | 16.5 | 15.5 | 16.5 | 14.0 | 23.5 | 22.5 | 24.5 | 22.5 | 20.5 | 19.5 | 16.5 | 15.5 |
| 29 | 16.5 | 15.0 | 17.0 | 14.5 | 24.0 | 22.5 | 24.0 | 22.0 | 21.5 | 20.0 | 16.0 | 15.0 |
| 30 | 16.5 | 15.5 | 18.0 | 16.0 | 23.0 | 22.0 | 26.0 | 22.0 | 22.0 | 20.0 | 15.5 | 14.5 |
| 31 | --- | --- | 18.5 | 17.5 | --- | --- | 24.0 | 22.5 | 22.0 | 20.0 | --- | --- |
| MONTH | 16.5 | 9.5 | 18.5 | 13.0 | 25.0 | 18.0 | 27.0 | 18.5 | 27.5 | 19.5 | 23.5 | 14.5 |

ROGUE RIVER BASIN

531

14372300 ROGUE RIVER NEAR AGNESS, OR
(National stream-quality accounting network station)

LOCATION.--Lat 42°34'50", long 124°03'30", in NE¼NW¼ sec.6, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100310, on left bank 0.8 mi (1.3 km) upstream from Shasta Costa Creek, 1.5 mi (2.4 km) north of Agness, 2.6 mi (4.2 km) upstream from Illinois River, and at mile 29.7 (47.8 km).

DRAINAGE AREA.--3,939 mi² (10,202 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 113.81 ft (34.689 m) above mean sea level (levels by U.S. Bureau of Public Roads).

REMARKS.--Water-discharge records good. Occasional diurnal fluctuation caused by powerplants upstream; slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation and mining.

AVERAGE DISCHARGE.--17 years, 6,326 ft³/s (179.2 m³/s), 4,583,000 acre-ft/yr (5.65 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290,000 ft³/s (8,210 m³/s) Dec. 23, 1964, from slope-area measurement; maximum gage height, 68.03 ft (20.736 m) Dec. 23, 1964, from floodmark (backwater from Illinois River); minimum discharge, 608 ft³/s (17.2 m³/s) July 9, 10, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,450 ft³/s (211 m³/s) Sept. 29, gage height, 5.89 ft (1.795 m), no peak above base of 35,000 ft³/s (991 m³/s); minimum, 745 ft³/s (21.1 m³/s) Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-------|-------|-------|--------|-------|--------|-------|---------|-------|-------|
| 1 | 2000 | 1740 | 1560 | 1530 | 1470 | 2980 | 1940 | 1430 | 1800 | 902 | 861 | 990 |
| 2 | 1900 | 1760 | 1570 | 1610 | 1480 | 2760 | 1860 | 1570 | 1600 | 1050 | 861 | 990 |
| 3 | 1800 | 1760 | 1560 | 1880 | 1450 | 2760 | 1960 | 2170 | 1400 | 1120 | 821 | 990 |
| 4 | 1700 | 1670 | 1540 | 1900 | 1410 | 2610 | 1930 | 2230 | 1300 | 1110 | 773 | 967 |
| 5 | 1620 | 1650 | 1540 | 1800 | 1410 | 2310 | 1890 | 2390 | 1200 | 1100 | 773 | 979 |
| 6 | 1590 | 1620 | 1530 | 1700 | 1400 | 2070 | 1880 | 2340 | 1200 | 1070 | 831 | 979 |
| 7 | 1590 | 1620 | 1530 | 1600 | 1410 | 3060 | 1940 | 2320 | 1200 | 1050 | 831 | 967 |
| 8 | 1580 | 1610 | 1560 | 1500 | 1430 | 4140 | 1940 | 2170 | 1200 | 1010 | 861 | 979 |
| 9 | 1550 | 1610 | 1670 | 1500 | 1410 | 4900 | 1920 | 2000 | 1300 | 956 | 923 | 956 |
| 10 | 1520 | 1610 | 1700 | 1600 | 1400 | 4980 | 1870 | 1930 | 1400 | 934 | 871 | 979 |
| 11 | 1520 | 1600 | 1600 | 1700 | 1420 | 3920 | 1720 | 1940 | 1600 | 956 | 831 | 1020 |
| 12 | 1520 | 1590 | 1580 | 1900 | 1410 | 3600 | 1560 | 2210 | 1700 | 923 | 802 | 1080 |
| 13 | 1500 | 1610 | 1580 | 1930 | 1400 | 3310 | 1500 | 2150 | 1600 | 871 | 802 | 1100 |
| 14 | 1500 | 1710 | 1570 | 1810 | 1400 | 3020 | 1450 | 1920 | 1500 | 861 | 811 | 1090 |
| 15 | 1450 | 1780 | 1550 | 1720 | 1390 | 2640 | 1440 | 1750 | 1460 | 881 | 841 | 1080 |
| 16 | 1500 | 1880 | 1540 | 1670 | 1380 | 2400 | 1310 | 1840 | 1390 | 892 | 841 | 1090 |
| 17 | 1480 | 1890 | 1550 | 1620 | 1370 | 2210 | 1330 | 1990 | 1300 | 1010 | 820 | 1180 |
| 18 | 1530 | 1770 | 1550 | 1580 | 1330 | 2110 | 1330 | 2290 | 1230 | 1090 | 802 | 1310 |
| 19 | 1520 | 1700 | 1530 | 1570 | 1300 | 2110 | 1190 | 2210 | 1250 | 1100 | 802 | 1590 |
| 20 | 1520 | 1660 | 1500 | 1580 | 903 | 2130 | 1000 | 2030 | 1290 | 934 | 821 | 1560 |
| 21 | 1510 | 1630 | 1490 | 1590 | 1110 | 2150 | 1030 | 1830 | 1270 | 861 | 861 | 1430 |
| 22 | 1520 | 1620 | 1490 | 1580 | 1770 | 2190 | 1060 | 1710 | 1190 | 841 | 913 | 1400 |
| 23 | 1510 | 1610 | 1510 | 1570 | 1940 | 2310 | 1080 | 1850 | 1130 | 821 | 892 | 1390 |
| 24 | 1540 | 1610 | 1520 | 1550 | 2330 | 2520 | 1150 | 2970 | 1070 | 851 | 979 | 1440 |
| 25 | 1640 | 1610 | 1520 | 1530 | 2040 | 2600 | 1200 | 2980 | 1060 | 861 | 1000 | 1410 |
| 26 | 1660 | 1590 | 1530 | 1500 | 1880 | 2500 | 1260 | 2550 | 1070 | 851 | 1120 | 1420 |
| 27 | 1730 | 1580 | 1580 | 1480 | 1890 | 2400 | 1250 | 2660 | 1110 | 811 | 1120 | 1440 |
| 28 | 1660 | 1580 | 1590 | 1450 | 2860 | 2380 | 1060 | 2840 | 1090 | 811 | 1120 | 2280 |
| 29 | 1620 | 1550 | 1580 | 1460 | --- | 2420 | 1080 | 2380 | 967 | 802 | 1110 | 5560 |
| 30 | 1620 | 1550 | 1540 | 1450 | --- | 2210 | 1240 | 2200 | 913 | 811 | 1090 | 4500 |
| 31 | 1650 | --- | 1530 | 1450 | --- | 2070 | --- | 2000 | --- | 831 | 1020 | --- |
| TOTAL | 49550 | 49770 | 48190 | 50310 | 43393 | 85770 | 44370 | 66850 | 38790 | 28972 | 27804 | 44146 |
| MEAN | 1598 | 1659 | 1555 | 1623 | 1550 | 2767 | 1479 | 2156 | 1293 | 935 | 897 | 1472 |
| MAX | 2000 | 1890 | 1700 | 1930 | 2860 | 4980 | 1960 | 2980 | 1800 | 1120 | 1120 | 5560 |
| MIN | 1450 | 1550 | 1490 | 1450 | 903 | 2070 | 1000 | 1430 | 913 | 802 | 773 | 956 |
| AC-FT | 98280 | 98720 | 95580 | 99790 | 86070 | 170100 | 88010 | 132600 | 76940 | 57470 | 55150 | 87560 |
| CAL YR 1976 | TOTAL | 1451130 | MEAN | 3965 | MAX | 27300 | MIN | 1370 | AC-FT | 2878000 | | |
| WTR YR 1977 | TOTAL | 577915 | MEAN | 1583 | MAX | 5560 | MIN | 773 | AC-FT | 1146000 | | |

ROGUE RIVER BASIN

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1960 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.5°C on several days in 1962, Aug. 3, 6, 9-11, 1977; minimum, 1.0°C Jan. 22-25, 1962, Dec. 9-16, 1972, Jan. 9, 10, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 26.5°C Aug. 3, 6, 9-11; minimum, 1.0°C Jan. 9, 10.

WATER QUALITY DATA. WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | TIME | INSTANTANEOUS DIS- CHARGE (CFS) | TEMPER- ATURE (DEG C) | PH (UNITS) | DIS- SOLVED OXYGEN (MG/L) | SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) | FECAL COLI- FORM .7UM-MF (COL./ 100 ML) | FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML) | DIS- SOLVED SILICA (SI02) (MG/L) | DIS- SOLVED CAL- CIUM (CA) (MG/L) | DIS- SOLVED MAG- NE- SIUM (MG) | DIS- SOLVED SODIUM (NA) (MG/L) |
|-------|------|--|-----------------------------|---------------|------------------------------------|--|--|--|--|--|---|--|
| OCT | | | | | | | | | | | | |
| 20... | 0900 | 1510 | 11.0 | 7.2 | 10.3 | 102 | 82 | 814 | 26 | 9.7 | 3.7 | 5.9 |
| NOV | | | | | | | | | | | | |
| 17... | 0830 | 1910 | 10.5 | 7.1 | 9.8 | 118 | 20 | 810 | 24 | 11 | 4.1 | 6.0 |
| DEC | | | | | | | | | | | | |
| 15... | 0930 | 1550 | 4.0 | 7.2 | 12.5 | 108 | 83 | 83 | 27 | 9.7 | 3.8 | 6.1 |
| JAN | | | | | | | | | | | | |
| 11... | 1000 | 1610 | 2.0 | 7.5 | 12.6 | 114 | 82 | 820 | 26 | 9.8 | 4.2 | 6.0 |
| FEB | | | | | | | | | | | | |
| 24... | 1000 | 2440 | 7.0 | 7.5 | 11.9 | 111 | 100 | 44 | 20 | 11 | 5.2 | 5.9 |
| MAR | | | | | | | | | | | | |
| 16... | 0800 | 2470 | 8.0 | 7.4 | 11.3 | 116 | 83 | 88 | 19 | 10 | 4.4 | 5.3 |
| APR | | | | | | | | | | | | |
| 20... | 0830 | 1200 | 13.0 | 7.4 | 9.9 | 113 | <1 | 23 | 18 | 11 | 4.6 | 5.5 |
| MAY | | | | | | | | | | | | |
| 17... | 1700 | 2080 | 15.0 | 7.8 | -- | 117 | 82 | 82 | 18 | 12 | 4.7 | 5.3 |
| JUN | | | | | | | | | | | | |
| 22... | 0900 | 1310 | 21.0 | 7.7 | 8.5 | 104 | 82 | 140 | 18 | 10 | 4.0 | 5.6 |
| JUL | | | | | | | | | | | | |
| 27... | 1100 | 760 | 23.0 | 7.3 | 8.5 | 92 | 85 | 1500 | 20 | 8.4 | 3.5 | 5.7 |
| AUG | | | | | | | | | | | | |
| 24... | 1015 | 1010 | 22.0 | 6.9 | 8.8 | 98 | 120 | 3000 | 24 | 9.0 | 4.1 | 5.0 |
| SEP | | | | | | | | | | | | |
| 22... | 0900 | 1400 | 15.5 | 7.4 | 9.1 | 114 | 812 | 660 | 26 | 11 | 4.1 | 5.9 |

| DATE | BICAR- BONATE (HCO3) (MG/L) | CAR- BONATE (CO3) (MG/L) | DIS- SOLVED SULFATE (SO4) (MG/L) | DIS- SOLVED CHLO- RIDE (CL) (MG/L) | DIS- SOLVED FLUO- RIDE (F) (MG/L) | TOTAL NITRITE PLUS NITRATE (N) (MG/L) | TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) | TOTAL NITRO- GEN (N) (MG/L) | TOTAL PHOS- PHORUS (P) (MG/L) | HARD- NESS (CA+MG) (MG/L) | NON- CAR- BONATE HARD- NESS (MG/L) |
|-------|--------------------------------------|-----------------------------------|--|---|--|--|--|---|---|------------------------------------|---|
| OCT | | | | | | | | | | | |
| 20... | 48 | 0 | 5.8 | 2.5 | .1 | .11 | .40 | .51 | .06 | 39 | 0 |
| NOV | | | | | | | | | | | |
| 17... | 61 | 0 | 6.9 | 3.1 | .1 | .13 | .15 | .28 | .10 | 44 | 0 |
| DEC | | | | | | | | | | | |
| 15... | 49 | 0 | 4.2 | 3.4 | .1 | .11 | .48 | .59 | .08 | 40 | 0 |
| JAN | | | | | | | | | | | |
| 11... | 62 | -- | 4.2 | 3.6 | .2 | .15 | .13 | .28 | .10 | 42 | 0 |
| FEB | | | | | | | | | | | |
| 24... | 60 | 0 | 3.0 | 5.2 | .1 | .20 | .22 | .42 | .13 | 49 | 0 |
| MAR | | | | | | | | | | | |
| 16... | 59 | 0 | 5.9 | 3.8 | .1 | .10 | .18 | .28 | .10 | 45 | 0 |
| APR | | | | | | | | | | | |
| 20... | 59 | 0 | 5.7 | 3.5 | .1 | .03 | .24 | .27 | .09 | 46 | 0 |
| MAY | | | | | | | | | | | |
| 17... | 61 | 0 | 6.7 | 3.3 | .0 | .05 | .38 | .43 | .10 | 49 | 0 |
| JUN | | | | | | | | | | | |
| 22... | 54 | 0 | 3.8 | 2.9 | .0 | .04 | .20 | .24 | .05 | 41 | 0 |
| JUL | | | | | | | | | | | |
| 27... | 48 | 0 | 7.5 | 2.9 | .1 | .03 | .30 | .33 | .13 | 35 | 0 |
| AUG | | | | | | | | | | | |
| 24... | 54 | 0 | 2.5 | 3.3 | .1 | .03 | .04 | .07 | .14 | 39 | 0 |
| SEP | | | | | | | | | | | |
| 22... | 59 | 0 | 2.6 | 3.5 | .1 | .12 | .02 | .14 | .10 | 44 | 0 |

B# RESULTS BASED ON NON-IDEAL COLONY COUNT

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | SODIUM AD- SORP- TION RATIO | DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) | DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) | DIS- SOLVED SOLIDS (TONS PER DAY) | DIS- SOLVED SOLIDS (TONS PER AC-FT) | TUR- BID- ITY (JTU) | SUS- PENDEO SEDI- MENT (MG/L) | SUS- PENDEO SEDI- MENT DIS- CHARGE (T/DAY) | SUS. SED. SIEVE DIAM. % FINER THAN .062 MM | ALKA- LITY AS CAC03 (MG/L) | TOTAL ORGANIC CARBON (C) (MG/L) |
|--------------|---|--|---|--|--|------------------------------|---|--|--|--|---|
| OCT 20... | .4 | 92 | 79 | 375 | .13 | 2 | 3 | 12 | 75 | 39 | 1.4 |
| NOV 17... | .4 | 78 | 87 | 402 | .11 | 2 | 9 | 46 | 53 | 50 | -- |
| DEC 15... | .4 | 97 | 80 | 406 | .13 | 3 | -- | -- | -- | 40 | -- |
| JAN 11... | .4 | 86 | 86 | 374 | .12 | 3 | 2 | 8.7 | 84 | 51 | 676 |
| FEB 24... | .4 | 79 | 81 | 520 | .11 | 11 | 18 | 119 | 82 | 49 | -- |
| MAR 16... | .3 | 76 | 79 | 507 | .10 | 7 | 6 | 40 | 78 | 48 | -- |
| APR 20... | .4 | 93 | 79 | 301 | .13 | 2 | 4 | 13 | 76 | 48 | 1.5 |
| MAY 17... | .3 | 81 | 81 | 455 | .11 | 3 | 10 | 56 | 54 | 50 | -- |
| JUN 22... | .4 | 72 | 72 | 255 | .10 | 3 | 6 | 21 | 45 | 44 | -- |
| JUL 27... | .4 | 64 | 73 | 131 | .09 | 5 | 11 | 23 | 48 | 39 | 2.7 |
| AUG 24... | .3 | 74 | 76 | 202 | .10 | 4 | 12 | 33 | 75 | 44 | -- |
| SEP 22... | .4 | 78 | 84 | 295 | .11 | 5 | 10 | 38 | 61 | 48 | -- |

| DATE | TOTAL IRON (FE) (UG/L) | DIS- SOLVED IRON (FE) (UG/L) | TOTAL MAN- GANESE (MN) (UG/L) | DIS- SOLVED MAN- GANESE (MN) (UG/L) | TOTAL ARSENIC (AS) (UG/L) | DIS- SOLVED ARSENIC (AS) (UG/L) | TOTAL CAD- MIUM (CD) (UG/L) | DIS- SOLVED CAD- MIUM (CD) (UG/L) | TOTAL CHRO- MIUM (CR) (UG/L) | DIS- SOLVED CHRO- MIUM (CR) (UG/L) | TOTAL COBALT (CO) (UG/L) |
|--------------|---------------------------------|--|---|--|------------------------------------|---|---|--|--|---|-----------------------------------|
| OCT 20... | 230 | 20 | 20 | 0 | 1 | 1 | <10 | 2 | 0 | 0 | <50 |
| JAN 11... | 140 | 60 | 10 | 0 | 1 | 0 | <10 | 1 | 0 | 0 | <50 |
| APR 20... | 210 | 50 | 20 | 20 | 1 | 1 | <10 | 2 | 0 | 0 | <50 |
| JUL 27... | 370 | 80 | 30 | 0 | 1 | 0 | <10 | 2 | 5 | 0 | <50 |

| DATE | DIS- SOLVED COBALT (CO) (UG/L) | TOTAL COPPER (CU) (UG/L) | DIS- SOLVED COPPER (CU) (UG/L) | TOTAL LEAD (PB) (UG/L) | DIS- SOLVED LEAD (PB) (UG/L) | TOTAL ZINC (ZN) (UG/L) | DIS- SOLVED ZINC (ZN) (UG/L) | TOTAL SELE- NIUM (SE) (UG/L) | DIS- SOLVED SELE- NIUM (SE) (UG/L) | TOTAL MERCURY (HG) (UG/L) | DIS- SOLVED MERCURY (HG) (UG/L) |
|--------------|--|-----------------------------------|--|---------------------------------|--|---------------------------------|--|--|---|------------------------------------|---|
| OCT 20... | 0 | 10 | 10 | <100 | 15 | 30 | 30 | 0 | 0 | .0 | .0 |
| JAN 11... | 0 | <10 | 2 | <100 | 0 | 30 | 10 | 0 | 0 | .0 | .0 |
| APR 20... | 0 | 10 | 2 | <100 | 18 | 20 | 10 | 1 | 1 | .0 | .0 |
| JUL 27... | 1 | 20 | 3 | <100 | 22 | 20 | 4 | 0 | 0 | .6 | .0 |

| DATE | LENGTH OF EXPO- SURE (DAYS) | BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS) | CHLOR-A PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- SPECT- METRIC (MG/M2) | CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M2) | CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) |
|--------------|---|--|--|--|---|--|
| JAN 11... | 27 | 52.0 | 5.93 | .450 | -- | -- |
| SEP 22... | 15 | .00 | -- | -- | .048 | .020 |

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

PESTICIDE ANALYSES

| DATE | TOTAL ALDRIN (UG/L) | TOTAL LINDANE (UG/L) | TOTAL CHLOR- DANE (UG/L) | TOTAL DDD (UG/L) | TOTAL DDE (UG/L) | TOTAL DDT (UG/L) | TOTAL DI- ELDRIN (UG/L) | TOTAL ENDRIN (UG/L) | TOTAL ETHION (UG/L) | TOTAL TOX- APHENE (UG/L) | TOTAL HEPTA- CHLOR (UG/L) | TOTAL HEPTA- CHLOR EPOXIDE (UG/L) |
|------------|---------------------------|----------------------------|-----------------------------------|------------------------|------------------------|------------------------|----------------------------------|---------------------------|---------------------------|-----------------------------------|------------------------------------|---|
| NOV , 1976 | | | | | | | | | | | | |
| 17... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FEB , 1977 | | | | | | | | | | | | |
| 24... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MAY | | | | | | | | | | | | |
| 17... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| AUG | | | | | | | | | | | | |
| 24... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

| DATE | TOTAL METH- OXY- CHLOR (UG/L) | TOTAL MALA- THION (UG/L) | TOTAL PARA- THION (UG/L) | TOTAL DI- AZINON (UG/L) | TOTAL METHYL PARA- THION (UG/L) | TOTAL ATRA- ZINE (UG/L) | SIMA- ZINE TOTAL COUL- SON COND. (UG/L) | TOTAL 2,4-D (UG/L) | TOTAL 2,4,5-T (UG/L) | TOTAL SILVEX (UG/L) | TOTAL TRI- THION (UG/L) | TOTAL METHYL TRI- THION (UG/L) |
|------------|---|-----------------------------------|-----------------------------------|----------------------------------|---|----------------------------------|---|--------------------------|----------------------------|---------------------------|----------------------------------|--|
| NOV , 1976 | | | | | | | | | | | | |
| 17... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FEB , 1977 | | | | | | | | | | | | |
| 24... | ND | ND | ND | ND | ND | ND | .58 | ND | ND | ND | ND | ND |
| MAY | | | | | | | | | | | | |
| 17... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| AUG | | | | | | | | | | | | |
| 24... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND: SPECIFICALLY LOOKED FOR BUT NOT DETECTED

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | OCT 20,76 0900 | NOV 17,76 0830 | DEC 15,76 0930 | JAN 11,77 1000 | FEB 24,77 1000 | MAR 16,77 0800 | | | | |
|-------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------|--------------|--------------|--------------|
| TOTAL CELLS/ML | 1400 | 780 | 2000 | 730 | 5600 | 1600 | | | | |
| DIVERSITY: DIVISION | 0.0 | 1.3 | 0.2 | 0.0 | 0.6 | 0.1 | | | | |
| ..CLASS | 0.0 | 1.3 | 0.2 | 0.0 | 0.6 | 0.1 | | | | |
| ...ORDER | 0.3 | 1.7 | 0.2 | 0.2 | 0.6 | 0.1 | | | | |
| ...FAMILY | 2.5 | 2.5 | 2.5 | 2.1 | 2.9 | 2.5 | | | | |
| ...GENUS | 2.7 | 2.8 | 2.7 | 2.4 | 3.2 | 3.2 | | | | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | |
| ...SCHROEDERIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | | | | | |
| ...COELASTRUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...HYDRODICTYACEAE | | | | | | | | | | |
| ...PEDIASTRUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | | | |
| ...GOLENKINIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | | | |
| ...ANKISTRODESMUS | -- | - | -- | - | 15 | 1 | -- | - | -- | - |
| ...DICTYOSPHAERIUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...KIRCHNERIELLA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...SELENASTRUM | -- | - | * 0 | -- | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | | | |
| ...CRUCIGENIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMUS | -- | - | 57 | 7 | 30 | 2 | * 0 | 140 | 3 | -- |
| ...TETRASPORALES | | | | | | | | | | |
| ...COCCOMYXACEAE | | | | | | | | | | |
| ...ELAKATOTHRIX | -- | - | -- | - | -- | - | -- | - | -- | 17 |
| ...VOLVOCALES | | | | | | | | | | 1 |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ...CHLAMYDOMONAS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...VOLVOCAEAE | | | | | | | | | | |
| ...EUDORINA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...ZYGNEMATALES | | | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | | | |
| ...COSMARUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | | | |
| ...CENTRALES | | | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | | | |
| ...CYCLOTELLA | 88 | 6 | -- | - | 15 | 1 | 6 | 1 | -- | - |
| ...MELOSIRA | -- | - | -- | - | -- | - | 11 | 2 | -- | - |
| ...STEPHANODISCUS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...PENNALES | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | |
| ...ACHNANTHES | 88 | 6 | -- | - | 150 | 8 | 55 | 8 | 250 | 4 |
| ...COCCONEIS | * 0 | | 25 | 3 | 30 | 2 | 11 | 2 | 110 | 2 |
| ...RHOICOSPHEMIA | 88 | 6 | 81 | 10 | 130 | 7 | 22 | 3 | 1000# | 18 |
| ...CYMBELLACEAE | | | | | | | | | | 290# |
| ...AMPHORA | -- | - | -- | - | 15 | 1 | -- | - | -- | - |
| ...CYMBELLA | 88 | 6 | 79 | 10 | 75 | 4 | 6 | 1 | 320 | 6 |
| ...EPTHEMIA | -- | - | 12 | 2 | -- | - | -- | - | -- | 290# |
| ...DIATOMACEAE | | | | | | | | | | 17 |
| ...DIATOMA | 44 | 3 | * 0 | | 60 | 3 | 55 | 8 | 210 | 4 |
| ...FRAGILARIACEAE | | | | | | | | | | 1 |
| ...ASTERIONELLA | -- | - | -- | - | -- | - | -- | - | -- | 67 |
| ...FRAGILARIA | -- | - | 44 | 6 | 220 | 11 | 22 | 3 | 1100# | 20 |
| ...HANNAEA | -- | - | -- | - | -- | - | -- | - | -- | 100 |
| ...SYNEDRA | 88 | 6 | 5 | 1 | -- | - | 22 | 3 | 36 | 1 |
| ...GOMPHONEMACEAE | | | | | | | | | | 50 |
| ...GOMPHONEIS | -- | - | -- | - | -- | - | -- | - | -- | 17 |
| ...GOMPHONEMA | 88 | 6 | 32 | 4 | 90 | 5 | 50 | 7 | 390 | 7 |
| ...NAVICULACEAE | | | | | | | | | | 50 |
| ...NAVICULA | 310# | 22 | 10 | 1 | 240 | 12 | 72 | 10 | 390 | 7 |
| ...PINNULARIA | -- | - | -- | - | -- | - | -- | - | -- | 100 |
| ...NITZSCHACEAE | | | | | | | | | | 6 |
| ...NITZSCHIA | 530# | 38 | * 0 | | 880# | 45 | 400# | 55 | 1200# | 21 |
| ...SURIPELLACEAE | | | | | | | | | | 420# |
| ...CYMATOPLEURA | -- | - | -- | - | -- | - | * 0 | -- | -- | - |
| ...SURIELLA | -- | - | -- | - | 15 | 1 | -- | - | -- | 34 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | | | |
| ...CHROCOCCOCCALES | | | | | | | | | | |
| ...CHROCOCCOCCAEAE | | | | | | | | | | |
| ...ANACYSTIS | -- | - | 320# | 41 | -- | - | * 0 | -- | - | -- |
| ...HORMOGONALES | | | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | | | |
| ...ANABAENA | -- | - | -- | - | -- | - | -- | - | 180 | 3 |
| ...OSCILLATORIACEAE | | | | | | | | | | -- |
| ...OSCILLATORIA | -- | - | 110 | 14 | -- | - | -- | - | 280 | 5 |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | | | | | |
| ...EUGLENALES | | | | | | | | | | |
| ...EUGLENAEAE | | | | | | | | | | |
| ...TRACHELOMONAS | -- | - | -- | - | -- | - | -- | - | -- | - |

 NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

| DATE TIME | MAY 17,77 1700 | | JUN 22,77 0900 | | JUL 27,77 1100 | | AUG 24,77 1015 | | SEP 22,77 0900 | |
|-------------------------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|
| TOTAL CELLS/ML | 4600 | | 3900 | | 4800 | | 1900 | | 920 | |
| DIVERSITY: DIVISION | 1.4 | | 0.9 | | 0.7 | | 1.3 | | 0.7 | |
| ..CLASS | 1.4 | | 0.9 | | 0.7 | | 1.3 | | 0.7 | |
| ...ORDER | 1.9 | | 1.4 | | 1.6 | | 1.5 | | 0.9 | |
| ...FAMILY | 2.6 | | 2.6 | | 3.2 | | 2.3 | | 3.0 | |
|GENUS | 2.8 | | 2.7 | | 3.5 | | 2.5 | | 3.3 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| ..CHLOROPHYCEAE | | | | | | | | | | |
| ...CHLOROCOCCALES | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | |
| ...SCHROEDERIA | -- | - | -- | - | -- | - | 18 | 1 | -- | - |
| ...COELASTRACEAE | | | | | | | | | | |
| ...COELASTRUM | 140 | 3 | 200 | 5 | 410 | 9 | 140 | 7 | -- | - |
| ...HYDRODICTYACEAE | | | | | | | | | | |
| ...PEDIASTRUM | -- | - | 400 | 10 | -- | - | 36 | 2 | 110 | 12 |
| ...MICRACTINIACEAE | | | | | | | | | | |
| ...GOLENKINIA | * | 0 | -- | - | -- | - | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | | | |
| ...ANKISTRODESMUS | * | 0 | * | 0 | 120 | 3 | -- | - | 7 | 1 |
| ...DICTYOSPHAERIUM | -- | - | -- | - | -- | - | 45 | 2 | -- | - |
| ...KIRCHNERIELLA | -- | - | * | 0 | -- | - | -- | - | -- | - |
| ...SELENASTRUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | | | |
| ...CRUCIGENIA | * | 0 | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMUS | 210 | 5 | 520 | 13 | 280 | 6 | 36 | 2 | 53 | 6 |
| ...TETRASPORALES | | | | | | | | | | |
| ...COCCOMYXACEAE | | | | | | | | | | |
| ...ELAKATOTHRIX | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...VOLVOCALES | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ...CHLAMYDOMONAS | * | 0 | -- | - | -- | - | -- | - | -- | - |
| ...VOLVOACEAE | | | | | | | | | | |
| ...EUDORINA | 280 | 6 | -- | - | -- | - | -- | - | -- | - |
| ...ZYGNEMATALES | | | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | | | |
| ...COSMARUM | -- | - | -- | - | 160 | 3 | -- | - | -- | - |
| CHRYSTOPHYTA | | | | | | | | | | |
| ..BACILLARIOPHYCEAE | | | | | | | | | | |
| ...CENTRALES | | | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | | | |
| ...CYCLOTELLA | 210 | 5 | 560 | 14 | 850# | 18 | 31 | 2 | 33 | 4 |
| ...MELOSIRA | 26 | 1 | 38 | 1 | 330 | 7 | 31 | 2 | -- | - |
| ...STEPHANODISCUS | -- | - | -- | - | -- | - | 13 | 1 | -- | - |
| ...PENNALES | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | |
| ...ACHNANTHES | * | 0 | -- | - | 120 | 3 | 54 | 3 | 110 | 12 |
| ...COCCONEIS | 35 | 1 | 38 | 1 | 120 | 3 | 27 | 1 | 140# | 15 |
| ...RHOICOSPHEINIA | 260 | 6 | 38 | 1 | 200 | 4 | -- | - | -- | - |
| ...CYMBELLACEAE | | | | | | | | | | |
| ...AMPHORA | -- | - | -- | - | -- | - | 31 | 2 | -- | - |
| ...CYMBELLA | 88 | 2 | -- | - | -- | - | -- | - | 46 | 5 |
| ...EPITHEMIA | * | 0 | -- | - | -- | - | 31 | 2 | 27 | 3 |
| ...DIATOMACEAE | | | | | | | | | | |
| ...DIATOMA | 79 | 2 | 38 | 1 | 240 | 5 | * | 0 | 33 | 4 |
| ...FRAGILARIACEAE | | | | | | | | | | |
| ...ASTERIONELLA | -- | - | -- | - | -- | - | 13 | 1 | -- | - |
| ...FRAGILARIA | 240 | 5 | 1600# | 41 | -- | - | -- | - | -- | - |
| ...HANNAEA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...SYNEDRA | 79 | 2 | 25 | 1 | 280 | 6 | 49 | 3 | 13 | 1 |
| ...GOMPHONEMATAACEAE | | | | | | | | | | |
| ...GOMPHONEIS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...GOMPHONEMA | 88 | 2 | 51 | 1 | 410 | 9 | 49 | 3 | 110 | 12 |
| ...NAVICULACEAE | | | | | | | | | | |
| ...NAVICULA | 190 | 4 | 100 | 3 | 330 | 7 | 36 | 2 | 73 | 8 |
| ...PINNULARIA | -- | - | 25 | 1 | -- | - | -- | - | -- | - |
| ...NITZSCHACEAE | | | | | | | | | | |
| ...NITZSCHIA | 61 | 1 | 240 | 6 | 890# | 19 | 120 | 6 | 170# | 18 |
| ...SURIARELLACEAE | | | | | | | | | | |
| ...CYMATOPLEURA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...SURIARELLA | -- | - | -- | - | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| ..CYANOPHYCEAE | | | | | | | | | | |
| ...CHROCCOCCOCCALES | | | | | | | | | | |
| ...CHROCCOCCOCCAEAE | | | | | | | | | | |
| ...ANACYSTIS | 97 | 2 | -- | - | -- | - | 1200# | 60 | -- | - |
| ...HORMOGONALES | | | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | | | |
| ...ANABAENA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | | | |
| ...OSCILLATORIA | 2500# | 53 | -- | - | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| ..EUGLENOPHYCEAE | | | | | | | | | | |
| ...EUGLENALES | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | |
| ...TRACHELOMONAS | -- | - | -- | - | -- | - | -- | - | * | 0 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|---------|------|----------|------|----------|-----|---------|-----|----------|-----|-------|------|
| | OCTOBER | | NOVEMBER | | DECEMBER | | JANUARY | | FEBRUARY | | MARCH | |
| 1 | 19.0 | 18.0 | 11.5 | 10.5 | 4.0 | 3.0 | 4.5 | 4.5 | 5.0 | 3.5 | 8.5 | 7.5 |
| 2 | 19.0 | 17.5 | 12.5 | 11.0 | 4.0 | 3.0 | 4.5 | 4.0 | 5.0 | 4.0 | 8.0 | 7.5 |
| 3 | 18.0 | 16.5 | 13.0 | 11.5 | 4.0 | 3.5 | 4.5 | 4.0 | 5.0 | 4.0 | 8.0 | 7.5 |
| 4 | 17.0 | 15.5 | 13.5 | 12.5 | 4.5 | 3.5 | 4.5 | 4.0 | 5.5 | 4.0 | 8.5 | 7.5 |
| 5 | 16.5 | 14.5 | 13.0 | 12.0 | 4.0 | 3.5 | 4.5 | 4.0 | 5.0 | 4.5 | 9.0 | 7.5 |
| 6 | 16.0 | 14.0 | 12.5 | 11.5 | 4.0 | 3.5 | 4.0 | 3.5 | 6.0 | 5.0 | 8.5 | 8.0 |
| 7 | 16.5 | 14.5 | 12.0 | 11.0 | 4.5 | 3.5 | 3.5 | 2.5 | 6.0 | 5.5 | 8.5 | 8.0 |
| 8 | 16.5 | 14.5 | 11.5 | 10.5 | 4.5 | 4.0 | 2.5 | 1.5 | 7.0 | 5.5 | 9.0 | 8.0 |
| 9 | 16.5 | 15.0 | 10.5 | 10.0 | 5.0 | 4.0 | 2.0 | 1.0 | 7.5 | 6.5 | 8.5 | 8.0 |
| 10 | 17.0 | 15.0 | 10.5 | 10.0 | 4.5 | 4.0 | 2.0 | 1.0 | 8.0 | 6.5 | 8.5 | 7.5 |
| 11 | 17.0 | 15.0 | 10.0 | 10.0 | 4.5 | 4.0 | 2.5 | 1.5 | 8.5 | 7.5 | 8.5 | 7.5 |
| 12 | 16.5 | 14.5 | 10.5 | 9.5 | 5.0 | 4.0 | 3.5 | 2.5 | 9.0 | 7.5 | 8.5 | 7.5 |
| 13 | 16.0 | 14.0 | 10.5 | 10.0 | 5.0 | 4.5 | 4.5 | 3.5 | 9.5 | 8.5 | 9.0 | 7.5 |
| 14 | 15.5 | 13.5 | 10.5 | 10.0 | 4.5 | 4.0 | 5.5 | 4.5 | 9.5 | 8.5 | 8.5 | 7.5 |
| 15 | 15.0 | 13.0 | 10.5 | 10.0 | 4.5 | 4.0 | 5.5 | 5.0 | 9.5 | 8.5 | 8.5 | 7.5 |
| 16 | 14.0 | 12.5 | 11.0 | 10.0 | 4.5 | 4.0 | 5.5 | 4.5 | 9.5 | 8.5 | 9.5 | 7.5 |
| 17 | 13.5 | 12.0 | 11.0 | 10.0 | 4.5 | 4.0 | 5.0 | 4.5 | 9.5 | 8.5 | 8.5 | 7.5 |
| 18 | 13.0 | 11.5 | 12.0 | 11.0 | 4.5 | 4.0 | 5.0 | 4.5 | 9.5 | 8.5 | 9.0 | 7.5 |
| 19 | 13.0 | 11.0 | 11.0 | 10.5 | 4.0 | 3.5 | 4.5 | 4.0 | 9.5 | 8.5 | 10.0 | 8.5 |
| 20 | 12.5 | 11.0 | 11.0 | 10.5 | 3.5 | 3.0 | 4.5 | 4.0 | 9.0 | 8.5 | 10.5 | 8.5 |
| 21 | 12.0 | 11.0 | 10.5 | 10.0 | 3.5 | 3.0 | 5.0 | 4.0 | 9.0 | 8.0 | 11.0 | 9.0 |
| 22 | 11.5 | 10.0 | 10.0 | 9.0 | 3.0 | 2.5 | 5.0 | 4.0 | 8.5 | 7.5 | 12.0 | 9.5 |
| 23 | 11.5 | 10.0 | 9.5 | 8.5 | 3.0 | 2.5 | 5.5 | 4.5 | 7.5 | 7.0 | 11.0 | 10.0 |
| 24 | 11.0 | 10.0 | 8.5 | 8.0 | 3.0 | 2.5 | 5.0 | 4.5 | 7.5 | 7.0 | 11.5 | 9.5 |
| 25 | 11.5 | 10.0 | 8.5 | 7.5 | 3.5 | 3.0 | 5.0 | 4.0 | 7.5 | 7.0 | 11.5 | 9.5 |
| 26 | 11.5 | 10.0 | 7.5 | 6.5 | 4.0 | 3.0 | 4.5 | 4.0 | 8.0 | 7.0 | 11.5 | 10.0 |
| 27 | 11.0 | 10.0 | 6.5 | 5.5 | 4.5 | 3.5 | 4.0 | 3.5 | 8.5 | 7.5 | 11.5 | 10.0 |
| 28 | 10.5 | 9.5 | 5.5 | 4.5 | 4.5 | 4.0 | 4.0 | 3.0 | 8.0 | 8.0 | 10.5 | 9.0 |
| 29 | 10.5 | 9.5 | 4.5 | 4.0 | 5.0 | 4.0 | 3.5 | 2.5 | --- | --- | 10.5 | 9.0 |
| 30 | 11.0 | 10.0 | 4.0 | 3.5 | 5.0 | 4.5 | 3.5 | 2.5 | --- | --- | 11.0 | 9.0 |
| 31 | 11.0 | 10.0 | --- | --- | 5.0 | 4.5 | 4.0 | 3.5 | --- | --- | 10.0 | 9.0 |
| MONTH | 19.0 | 9.5 | 13.5 | 3.5 | 5.0 | 2.5 | 5.5 | 1.0 | 9.5 | 3.5 | 12.0 | 7.5 |

| DAY | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
| | APRIL | | MAY | | JUNE | | JULY | | AUGUST | | SEPTEMBER | |
| 1 | 10.5 | 9.0 | 16.0 | 15.5 | 19.5 | 17.0 | 24.5 | 22.0 | 25.5 | 22.5 | 22.5 | 19.5 |
| 2 | 11.5 | 9.0 | 17.0 | 15.5 | 20.0 | 17.5 | 24.0 | 21.0 | 26.0 | 23.5 | 22.5 | 20.0 |
| 3 | 12.5 | 10.0 | 16.0 | 14.5 | 18.5 | 17.5 | 23.5 | 20.5 | 26.5 | 23.0 | 23.5 | 20.5 |
| 4 | 13.5 | 11.0 | 15.0 | 14.0 | 19.5 | 17.5 | 23.0 | 20.5 | 26.0 | 22.5 | 23.0 | 21.0 |
| 5 | 13.5 | 11.5 | 14.0 | 13.0 | 22.0 | 18.5 | 21.5 | 19.0 | 26.0 | 22.5 | 23.5 | 21.5 |
| 6 | 14.5 | 12.5 | 15.5 | 12.5 | 23.5 | 19.5 | 21.5 | 18.0 | 26.5 | 22.5 | 23.5 | 21.0 |
| 7 | 14.5 | 13.0 | 13.5 | 13.0 | 24.0 | 21.0 | 22.5 | 19.0 | 26.0 | 22.5 | 23.0 | 21.0 |
| 8 | 14.5 | 13.5 | 16.0 | 12.5 | 23.5 | 21.0 | 22.5 | 19.0 | 26.0 | 22.5 | 22.5 | 20.0 |
| 9 | 14.0 | 13.0 | 16.0 | 13.5 | 23.5 | 20.5 | 23.0 | 19.5 | 26.5 | 23.0 | 22.0 | 19.5 |
| 10 | 13.5 | 12.5 | 15.0 | 14.0 | 21.5 | 20.0 | 23.5 | 19.5 | 26.5 | 23.0 | 22.0 | 19.5 |
| 11 | 14.5 | 12.0 | 15.5 | 13.5 | 22.0 | 19.0 | 24.5 | 20.5 | 26.5 | 23.0 | 21.5 | 19.0 |
| 12 | 14.5 | 12.5 | 15.0 | 13.5 | 22.5 | 19.0 | 24.0 | 21.0 | 25.0 | 22.5 | 22.0 | 19.0 |
| 13 | 14.5 | 13.5 | 15.5 | 13.5 | 22.5 | 20.0 | 24.0 | 20.5 | 25.0 | 22.0 | 21.5 | 19.0 |
| 14 | 14.5 | 12.5 | 16.5 | 14.0 | 23.0 | 20.5 | 24.5 | 21.0 | 24.5 | 22.0 | 20.5 | 19.0 |
| 15 | 15.0 | 13.0 | 15.5 | 14.0 | 23.5 | 21.0 | 25.0 | 21.5 | 25.0 | 22.0 | 19.5 | 18.5 |
| 16 | 15.0 | 13.5 | 15.0 | 14.0 | 23.5 | 21.0 | 25.5 | 22.0 | 26.0 | 22.0 | 18.5 | 18.0 |
| 17 | 15.5 | 13.0 | 15.0 | 13.5 | 22.5 | 21.0 | 25.5 | 22.5 | 24.5 | 22.5 | 18.0 | 17.0 |
| 18 | 15.5 | 13.0 | 15.5 | 14.0 | 23.0 | 20.5 | 24.0 | 22.5 | 24.0 | 22.0 | 17.0 | 16.5 |
| 19 | 15.5 | 13.0 | 17.0 | 13.5 | 23.0 | 20.5 | 24.5 | 22.0 | 25.0 | 22.0 | 17.5 | 16.0 |
| 20 | 15.0 | 12.5 | 17.0 | 14.0 | 22.0 | 20.5 | 25.0 | 21.5 | 23.5 | 22.0 | 17.5 | 16.0 |
| 21 | 15.0 | 12.5 | 18.0 | 15.5 | 23.5 | 20.0 | 25.5 | 21.5 | 24.0 | 21.5 | 17.0 | 16.0 |
| 22 | 15.5 | 12.5 | 16.5 | 16.0 | 24.0 | 21.0 | 25.5 | 22.0 | 24.5 | 21.0 | 17.5 | 16.0 |
| 23 | 17.0 | 13.0 | 16.0 | 15.0 | 24.0 | 21.0 | 26.0 | 22.5 | 24.0 | 21.0 | 16.5 | 16.5 |
| 24 | 17.0 | 14.0 | 17.0 | 14.5 | 25.0 | 21.5 | 25.5 | 22.5 | 23.0 | 21.5 | 17.5 | 16.0 |
| 25 | 15.0 | 14.5 | 15.5 | 14.5 | 25.0 | 21.5 | 25.5 | 22.5 | 21.5 | 20.5 | 16.5 | 16.0 |
| 26 | 17.5 | 14.0 | 16.5 | 14.5 | 25.5 | 22.0 | 25.5 | 22.5 | 21.5 | 20.0 | 17.5 | 16.0 |
| 27 | 17.5 | 14.5 | 15.5 | 14.5 | 25.0 | 22.0 | 25.0 | 22.0 | 21.0 | 19.5 | 17.0 | 16.5 |
| 28 | 16.0 | 14.5 | 16.5 | 14.0 | 25.5 | 22.0 | 25.0 | 22.0 | 20.5 | 19.0 | 16.5 | 15.5 |
| 29 | 17.0 | 14.5 | 17.5 | 15.0 | 25.0 | 22.0 | 25.0 | 21.5 | 22.5 | 19.5 | 16.0 | 14.5 |
| 30 | 17.0 | 15.0 | 18.5 | 15.5 | 24.0 | 21.5 | 25.5 | 22.0 | 22.5 | 20.0 | 15.5 | 14.5 |
| 31 | --- | --- | 19.5 | 16.5 | --- | --- | 25.5 | 22.5 | 22.5 | 19.5 | --- | --- |
| MONTH | 17.5 | 9.0 | 19.5 | 12.5 | 25.5 | 17.0 | 26.0 | 18.0 | 26.5 | 19.0 | 23.5 | 14.5 |

14372500 EAST FORK ILLINOIS RIVER NEAR TAKILMA, OR

LOCATION.--Lat 42°00'10", long 123°37'30", in SE¼NE¼ sec.15, T.41 S., R.8 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on right bank 0.3 mi (0.5 km) downstream from Dunn Creek (California-Oregon State line), 3.4 mi (5.5 km) south of Takilma, and at mile 71.2 (114.6 km).

DRAINAGE AREA.--42.3 mi² (109.6 km²).

PERIOD OF RECORD.--April to September 1926, April 1927 to April 1932, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1318. Records prior to 1942 water year not equivalent owing to large diversions.

REVISED RECORDS.--WSP 1184: 1948. WSP 1288: 1951(P). WSP 1398: 1946, 1947(M), 1949. WSP 1738: Drainage area (former site).

GAGE.--Water-stage recorder. Altitude of gage is 1,780 ft (543 m), from topographic map. Prior to Oct. 31, 1946, nonrecording gage at sites 0.6 mi (1.0 km) downstream at different datums. Oct. 31, 1946, to May 13, 1949, nonrecording gage and May 14, 1949, to Aug. 23, 1965, water-stage recorder at site 0.6 mi (1.0 km) downstream at datum 1,746.6 ft (532.36 m) above mean sea level.

REMARKS.--Records fair. No regulation. Two small diversions for irrigation above station.

AVERAGE DISCHARGE.--36 years (water years 1942-77), 180 ft³/s (5.098 m³/s), 57.79 in/yr (1,468 mm/yr), 130,400 acre-ft/yr (161 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s (445 m³/s) Dec. 22, 1964, gage height, 14.90 ft (4.542 m), present site and datum, from floodmark, from rating curve extended above 4,400 ft³/s (125 m³/s) on basis of slope-area measurement of peak flow; minimum, 4.6 ft³/s (0.13 m³/s) Nov. 3, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 587 ft³/s (16.6 m³/s) Sept. 28, gage height, 4.16 ft (1.268 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum, 5.4 ft³/s (0.15 m³/s) Sept. 13-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------------|---------|-------|------|------|------|------|------|------|------|-------|-------|-------|
| 1 | 10 | 13 | 11 | 13 | 15 | 137 | 65 | 100 | 73 | 20 | 8.7 | 6.8 |
| 2 | 10 | 12 | 11 | 38 | 15 | 96 | 65 | 103 | 66 | 19 | 11 | 6.6 |
| 3 | 11 | 11 | 11 | 35 | 14 | 77 | 70 | 153 | 59 | 18 | 8.7 | 6.4 |
| 4 | 11 | 10 | 11 | 25 | 13 | 67 | 90 | 147 | 58 | 17 | 8.2 | 6.4 |
| 5 | 11 | 9.6 | 11 | 20 | 14 | 65 | 120 | 135 | 58 | 17 | 7.8 | 6.6 |
| 6 | 10 | 9.3 | 11 | 17 | 15 | 73 | 125 | 121 | 56 | 16 | 7.6 | 6.4 |
| 7 | 10 | 8.9 | 11 | 16 | 15 | 131 | 135 | 112 | 53 | 16 | 12 | 6.2 |
| 8 | 9.6 | 8.9 | 13 | 15 | 25 | 251 | 150 | 104 | 48 | 15 | 12 | 6.0 |
| 9 | 9.4 | 8.5 | 16 | 14 | 25 | 315 | 125 | 106 | 44 | 15 | 10 | 6.0 |
| 10 | 9.0 | 10 | 12 | 18 | 22 | 191 | 100 | 109 | 41 | 14 | 9.0 | 6.0 |
| 11 | 8.6 | 11 | 12 | 30 | 20 | 137 | 90 | 106 | 39 | 13 | 8.2 | 5.8 |
| 12 | 8.4 | 11 | 12 | 38 | 20 | 159 | 90 | 100 | 37 | 13 | 7.8 | 5.7 |
| 13 | 8.0 | 12 | 11 | 27 | 20 | 137 | 110 | 93 | 35 | 13 | 7.4 | 5.7 |
| 14 | 7.8 | 33 | 11 | 25 | 20 | 104 | 100 | 92 | 33 | 13 | 7.2 | 5.4 |
| 15 | 7.8 | 36 | 12 | 22 | 19 | 84 | 95 | 86 | 31 | 13 | 7.2 | 5.7 |
| 16 | 7.8 | 26 | 12 | 21 | 19 | 71 | 100 | 80 | 30 | 13 | 7.0 | 6.5 |
| 17 | 8.0 | 20 | 12 | 20 | 18 | 65 | 95 | 74 | 29 | 12 | 6.2 | 8.3 |
| 18 | 8.2 | 18 | 12 | 20 | 17 | 61 | 85 | 72 | 28 | 12 | 6.2 | 15 |
| 19 | 8.2 | 16 | 12 | 23 | 16 | 61 | 80 | 71 | 27 | 11 | 6.4 | 33 |
| 20 | 8.2 | 15 | 12 | 25 | 28 | 65 | 75 | 72 | 26 | 11 | 6.0 | 30 |
| 21 | 8.0 | 14 | 12 | 25 | 70 | 75 | 75 | 77 | 26 | 11 | 5.8 | 17 |
| 22 | 7.8 | 13 | 12 | 24 | 92 | 85 | 80 | 81 | 25 | 11 | 5.8 | 12 |
| 23 | 7.9 | 13 | 12 | 22 | 81 | 100 | 80 | 80 | 24 | 10 | 5.8 | 12 |
| 24 | 10 | 12 | 11 | 20 | 77 | 90 | 85 | 71 | 23 | 10 | 6.2 | 31 |
| 25 | 18 | 12 | 12 | 19 | 62 | 80 | 90 | 67 | 22 | 11 | 8.0 | 20 |
| 26 | 13 | 12 | 14 | 18 | 53 | 75 | 80 | 117 | 21 | 10 | 8.6 | 15 |
| 27 | 10 | 12 | 15 | 17 | 67 | 80 | 72 | 110 | 20 | 9.0 | 8.0 | 15 |
| 28 | 9.3 | 12 | 13 | 16 | 172 | 80 | 72 | 93 | 19 | 8.7 | 7.4 | 372 |
| 29 | 9.6 | 12 | 13 | 16 | --- | 75 | 71 | 83 | 19 | 8.7 | 7.4 | 214 |
| 30 | 10 | 12 | 13 | 15 | --- | 70 | 86 | 76 | 18 | 8.7 | 7.2 | 93 |
| 31 | 11 | --- | 12 | 15 | --- | 60 | --- | 73 | --- | 8.3 | 7.0 | --- |
| TOTAL | 296.6 | 423.2 | 375 | 669 | 1044 | 3217 | 2756 | 2964 | 1088 | 397.4 | 241.8 | 985.5 |
| MEAN | 9.57 | 14.1 | 12.1 | 21.6 | 37.3 | 104 | 91.9 | 95.6 | 36.3 | 12.8 | 7.80 | 32.9 |
| MAX | 18 | 36 | 16 | 38 | 172 | 315 | 150 | 153 | 73 | 20 | 12 | 372 |
| MIN | 7.8 | 8.5 | 11 | 13 | 13 | 60 | 65 | 67 | 18 | 8.3 | 5.8 | 5.4 |
| CFSM | .23 | .33 | .29 | .51 | .88 | 2.46 | 2.17 | 2.26 | .86 | .30 | .18 | .78 |
| IN. | .26 | .37 | .33 | .59 | .92 | 2.83 | 2.42 | 2.61 | .96 | .35 | .21 | .87 |
| AC-FT | 588 | 839 | 744 | 1330 | 2070 | 6380 | 5470 | 5880 | 2160 | 788 | 480 | 1950 |
| CAL YR 1976 TOTAL | 32234.3 | | | | | | | | | | | |
| MEAN 88.1 | | | | | | | | | | | | |
| MAX 1270 | | | | | | | | | | | | |
| MIN 7.8 | | | | | | | | | | | | |
| CFSM 2.08 | | | | | | | | | | | | |
| IN 28.35 | | | | | | | | | | | | |
| AC-FT 63940 | | | | | | | | | | | | |
| WTR YR 1977 TOTAL | 14457.5 | | | | | | | | | | | |
| MEAN 39.6 | | | | | | | | | | | | |
| MAX 372 | | | | | | | | | | | | |
| MIN 5.4 | | | | | | | | | | | | |
| CFSM .94 | | | | | | | | | | | | |
| IN 12.71 | | | | | | | | | | | | |
| AC-FT 28680 | | | | | | | | | | | | |

NOTE.--No gage-height record Mar. 20 to Apr. 26.

14375100 SUCKER CREEK BELOW LITTLE GRAYBACK CREEK, NEAR HOLLAND, OR

LOCATION.--Lat 42°09'35", long 123°28'40", in NE¼SW¼ sec.24, T.39 S., R.7 W., Josephine County, Hydrologic Unit 17100311, on right bank 500 ft (152 m) downstream from Little Grayback Creek, 2.0 mi (3.2 km) downstream from Grayback Creek, 3.7 mi (6.0 km) north-east of Holland, and at mile 9.3 (15.0 km).

DRAINAGE AREA.--83.9 mi² (217.3 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,700 ft (518 m), from topographic map.

REMARKS.--Records good. Grayback Canal and 3 small diversions from Grayback and Cave Creeks divert water for domestic use and irrigation above station. Return flow from these diversions enters creek above station.

AVERAGE DISCHARGE.--12 years, 241 ft³/s (6.825 m³/s), 39.01 in/yr (991 mm/yr), 174,600 acre-ft/yr (215 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,550 ft³/s (242 m³/s) Jan. 15, 1974, gage height, 8.20 ft (2.499 m); minimum, 12 ft³/s (0.34 m³/s) Oct. 20, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1940, 10.8 ft (3.292 m) on Dec. 22, 1964, from floodmark, discharge, 19,300 ft³/s (547 m³/s), from estimate based on slope-area measurement of peak flow at site 0.7 mi (1.1 km) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 522 ft³/s (14.8 m³/s) Sept. 28, gage height, 2.85 ft (0.869 m), no peak above base of 850 ft³/s (24.1 m³/s); minimum, 14 ft³/s (0.40 m³/s) Sept. 12-14.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|-------|------|------|------|------|------|------|-------|-------|------|-------|
| 1 | 31 | 44 | 31 | 31 | 26 | 103 | 74 | 115 | 119 | 48 | 20 | 17 |
| 2 | 33 | 38 | 30 | 62 | 25 | 84 | 76 | 115 | 106 | 41 | 20 | 16 |
| 3 | 35 | 36 | 30 | 54 | 24 | 87 | 76 | 149 | 101 | 38 | 19 | 16 |
| 4 | 32 | 33 | 30 | 46 | 24 | 79 | 98 | 128 | 101 | 38 | 19 | 16 |
| 5 | 31 | 32 | 30 | 41 | 24 | 76 | 125 | 119 | 101 | 36 | 18 | 17 |
| 6 | 31 | 32 | 30 | 35 | 25 | 79 | 135 | 115 | 98 | 36 | 18 | 16 |
| 7 | 30 | 31 | 30 | 35 | 24 | 98 | 145 | 122 | 95 | 35 | 20 | 16 |
| 8 | 30 | 31 | 38 | 32 | 35 | 145 | 160 | 119 | 87 | 33 | 21 | 15 |
| 9 | 29 | 31 | 43 | 33 | 33 | 191 | 132 | 122 | 81 | 32 | 19 | 15 |
| 10 | 29 | 32 | 33 | 33 | 29 | 128 | 109 | 132 | 79 | 32 | 18 | 15 |
| 11 | 29 | 33 | 33 | 39 | 30 | 101 | 101 | 128 | 76 | 31 | 17 | 15 |
| 12 | 29 | 33 | 32 | 48 | 30 | 106 | 101 | 125 | 71 | 31 | 17 | 15 |
| 13 | 27 | 35 | 31 | 41 | 29 | 95 | 112 | 119 | 69 | 30 | 17 | 15 |
| 14 | 27 | 71 | 30 | 39 | 27 | 84 | 106 | 115 | 69 | 29 | 17 | 15 |
| 15 | 27 | 60 | 30 | 35 | 27 | 76 | 101 | 109 | 62 | 29 | 16 | 15 |
| 16 | 27 | 48 | 30 | 33 | 29 | 71 | 109 | 109 | 60 | 27 | 16 | 18 |
| 17 | 27 | 41 | 30 | 33 | 27 | 71 | 101 | 106 | 60 | 26 | 16 | 21 |
| 18 | 27 | 38 | 29 | 36 | 27 | 67 | 89 | 103 | 58 | 26 | 16 | 27 |
| 19 | 27 | 36 | 30 | 36 | 26 | 69 | 84 | 101 | 56 | 27 | 16 | 54 |
| 20 | 27 | 35 | 29 | 36 | 38 | 79 | 84 | 101 | 56 | 26 | 16 | 35 |
| 21 | 27 | 35 | 30 | 36 | 74 | 81 | 81 | 103 | 54 | 25 | 17 | 24 |
| 22 | 27 | 33 | 29 | 35 | 76 | 95 | 87 | 122 | 52 | 25 | 16 | 21 |
| 23 | 29 | 33 | 29 | 32 | 71 | 109 | 87 | 142 | 48 | 24 | 16 | 23 |
| 24 | 33 | 32 | 29 | 30 | 69 | 101 | 89 | 122 | 46 | 23 | 20 | 46 |
| 25 | 48 | 32 | 27 | 30 | 62 | 92 | 98 | 115 | 44 | 23 | 23 | 26 |
| 26 | 38 | 32 | 35 | 29 | 64 | 87 | 89 | 164 | 43 | 23 | 23 | 23 |
| 27 | 35 | 32 | 38 | 27 | 87 | 95 | 84 | 142 | 41 | 22 | 21 | 25 |
| 28 | 32 | 32 | 31 | 27 | 132 | 89 | 87 | 128 | 39 | 22 | 20 | 319 |
| 29 | 33 | 32 | 32 | 25 | --- | 84 | 92 | 122 | 38 | 22 | 20 | 164 |
| 30 | 38 | 32 | 31 | 25 | --- | 79 | 103 | 115 | 38 | 21 | 18 | 58 |
| 31 | 39 | --- | 30 | 27 | --- | 74 | --- | 119 | --- | 20 | 18 | --- |
| TOTAL | 964 | 1095 | 970 | 1101 | 1194 | 2875 | 3015 | 3746 | 2048 | 901 | 568 | 1118 |
| MEAN | 31.1 | 36.5 | 31.3 | 35.5 | 42.6 | 92.7 | 101 | 121 | 68.3 | 29.1 | 18.3 | 37.3 |
| MAX | 48 | 71 | 43 | 62 | 132 | 191 | 160 | 164 | 119 | 48 | 23 | 319 |
| MIN | 27 | 31 | 27 | 25 | 24 | 67 | 74 | 101 | 38 | 20 | 16 | 15 |
| CFSM | .37 | .44 | .37 | .42 | .51 | 1.11 | 1.20 | 1.44 | .81 | .35 | .22 | .45 |
| IN. | .43 | .49 | .43 | .49 | .53 | 1.27 | 1.34 | 1.66 | .91 | .40 | .25 | .50 |
| AC-FT | 1910 | 2170 | 1920 | 2180 | 2370 | 5700 | 5980 | 7430 | 4060 | 1790 | 1130 | 2220 |
| CAL YR 1976 | TOTAL | 46519 | MEAN | 127 | MAX | 650 | MIN | 27 | CFSM | 1.51 | IN | 20.63 |
| WTR YR 1977 | TOTAL | 19595 | MEAN | 53.7 | MAX | 319 | MIN | 15 | CFSM | .64 | IN | 8.69 |
| | | | | | | | | | AC-FT | 92270 | | 38870 |

ROGUE RIVER BASIN

14375500 WEST FORK ILLINOIS RIVER BELOW ROCK CREEK, NEAR O'BRIEN, OR

LOCATION.--Lat 42°02'20", long 123°44'50", in SW¼SE¼ sec.34, T.40 S., R.9 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on left bank 0.2 mi (0.3 km) downstream from Rock Creek, 3.0 mi (4.8 km) southwest of O'Brien, and at mile 12.8 (20.6 km).

DRAINAGE AREA.--42.4 mi² (109.8 km²).

PERIOD OF RECORD.--September 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,516.14 ft (462.119 m) above mean sea level.

REMARKS.--Records good. Occasional diurnal fluctuation caused by logpond upstream. Three small diversions from Elk Creek for irrigation above station.

AVERAGE DISCHARGE.--23 years, 215 ft³/s (6.089 m³/s), 68.86 in/yr (1,749 mm/yr), 155,800 acre-ft/yr (192 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft³/s (456 m³/s) Dec. 22, 1964, gage height, 16.05 ft (4.892 m), from rating curve extended above 6,200 ft³/s (176 m³/s), on basis of slope-area measurement at gage height 14.79 ft (4.508 m); minimum, 1.5 ft³/s (0.042 m³/s) Sept. 2-4, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft³/s (34.6 m³/s) Mar. 9, gage height, 6.35 ft (1.935 m), no peak above-base of 2,500 ft³/s (70.8 m³/s); minimum, 2.2 ft³/s (0.062 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|---------|-------|------|------|-------|------|------|-------|-------|-------|--------|
| 1 | 6.5 | 19 | 12 | 16 | 17 | 377 | 80 | 35 | 32 | 11 | 3.5 | 4.5 |
| 2 | 6.8 | 15 | 12 | 112 | 17 | 237 | 77 | 45 | 31 | 10 | 3.5 | 3.9 |
| 3 | 7.6 | 14 | 11 | 131 | 17 | 210 | 73 | 151 | 28 | 11 | 3.0 | 3.9 |
| 4 | 7.3 | 12 | 11 | 89 | 16 | 167 | 75 | 172 | 28 | 11 | 3.0 | 4.1 |
| 5 | 7.0 | 11 | 11 | 60 | 16 | 142 | 80 | 206 | 26 | 11 | 2.8 | 4.1 |
| 6 | 7.0 | 11 | 11 | 47 | 16 | 141 | 76 | 166 | 25 | 10 | 2.8 | 4.1 |
| 7 | 7.0 | 10 | 11 | 39 | 16 | 462 | 70 | 135 | 24 | 8.2 | 3.0 | 3.7 |
| 8 | 6.0 | 10 | 12 | 34 | 17 | 778 | 71 | 117 | 23 | 8.2 | 3.0 | 3.1 |
| 9 | 6.0 | 11 | 16 | 31 | 16 | 949 | 64 | 97 | 23 | 8.2 | 3.0 | 2.8 |
| 10 | 6.0 | 17 | 10 | 38 | 15 | 470 | 58 | 86 | 22 | 8.2 | 2.8 | 2.6 |
| 11 | 6.0 | 13 | 9.7 | 74 | 15 | 285 | 53 | 83 | 22 | 7.9 | 2.8 | 2.5 |
| 12 | 6.0 | 13 | 9.7 | 151 | 15 | 347 | 48 | 76 | 21 | 7.6 | 2.8 | 2.3 |
| 13 | 6.0 | 14 | 11 | 98 | 15 | 296 | 46 | 67 | 20 | 7.3 | 2.8 | 2.6 |
| 14 | 6.2 | 38 | 12 | 75 | 14 | 215 | 43 | 61 | 19 | 7.0 | 3.0 | 2.6 |
| 15 | 6.5 | 49 | 12 | 62 | 14 | 166 | 41 | 56 | 18 | 6.5 | 2.8 | 3.3 |
| 16 | 5.2 | 32 | 11 | 53 | 13 | 137 | 39 | 53 | 17 | 6.5 | 2.6 | 3.9 |
| 17 | 5.2 | 25 | 11 | 46 | 14 | 118 | 37 | 50 | 17 | 6.2 | 2.6 | 6.8 |
| 18 | 6.0 | 21 | 10 | 40 | 14 | 105 | 35 | 47 | 17 | 6.0 | 2.8 | 13 |
| 19 | 6.8 | 20 | 9.7 | 37 | 13 | 104 | 34 | 45 | 16 | 6.0 | 3.0 | 28 |
| 20 | 5.7 | 17 | 9.1 | 34 | 21 | 108 | 33 | 42 | 16 | 5.7 | 3.0 | 23 |
| 21 | 6.5 | 16 | 9.7 | 31 | 106 | 105 | 31 | 40 | 16 | 5.5 | 3.1 | 14 |
| 22 | 5.5 | 15 | 9.7 | 29 | 279 | 107 | 31 | 39 | 15 | 5.5 | 3.0 | 10 |
| 23 | 6.0 | 15 | 10 | 27 | 241 | 119 | 29 | 39 | 14 | 5.2 | 3.0 | 10 |
| 24 | 10 | 15 | 10 | 26 | 226 | 145 | 28 | 37 | 13 | 5.0 | 5.0 | 19 |
| 25 | 18 | 14 | 11 | 24 | 178 | 152 | 31 | 35 | 9.1 | 5.0 | 6.0 | 15 |
| 26 | 13 | 12 | 13 | 23 | 170 | 141 | 31 | 42 | 9.4 | 5.2 | 6.2 | 10 |
| 27 | 10 | 12 | 17 | 21 | 232 | 142 | 28 | 42 | 9.4 | 4.3 | 5.5 | 13 |
| 28 | 9.1 | 13 | 14 | 18 | 651 | 132 | 26 | 38 | 10 | 4.3 | 5.0 | 528 |
| 29 | 9.7 | 13 | 17 | 17 | --- | 113 | 26 | 36 | 8.8 | 4.3 | 5.2 | 239 |
| 30 | 10 | 13 | 16 | 17 | --- | 98 | 29 | 34 | 9.1 | 3.7 | 5.5 | 96 |
| 31 | 13 | --- | 15 | 18 | --- | 86 | --- | 33 | --- | 3.5 | 5.0 | --- |
| TOTAL | 237.6 | 510 | 364.6 | 1518 | 2394 | 7154 | 1423 | 2205 | 558.8 | 215.0 | 111.1 | 1078.8 |
| MEAN | 7.66 | 17.0 | 11.8 | 49.0 | 85.5 | 231 | 47.4 | 71.1 | 18.6 | 6.94 | 3.58 | 36.0 |
| MAX | 18 | 49 | 17 | 151 | 651 | 949 | 80 | 206 | 32 | 11 | 6.2 | 528 |
| MIN | 5.2 | 10 | 9.1 | 16 | 13 | 86 | 26 | 33 | 8.8 | 3.5 | 2.6 | 2.3 |
| CFSM | .18 | .40 | .28 | 1.16 | 2.02 | 5.45 | 1.12 | 1.68 | .44 | .16 | .08 | .85 |
| IN. | .21 | .45 | .32 | 1.33 | 2.10 | 6.28 | 1.25 | 1.93 | .49 | .19 | .10 | .95 |
| AC-FT | 471 | 1010 | 723 | 3010 | 4750 | 14190 | 2820 | 4370 | 1110 | 426 | 220 | 2140 |
| CAL YR 1976 | TOTAL | 36866.4 | MEAN | 101 | MAX | 1820 | MIN | 4.7 | CFSM | 2.38 | IN | 32.34 |
| WTR YR 1977 | TOTAL | 17769.9 | MEAN | 48.7 | MAX | 949 | MIN | 2.3 | CFSM | 1.15 | IN | 15.59 |
| | | | | | | | | | AC-FT | 73120 | | |
| | | | | | | | | | AC-FT | 35250 | | |

14377100 ILLINOIS RIVER NEAR KERBY, OR

LOCATION.--Lat 42°13'55", long 123°39'45", in SE¼SE¼ sec.29, T.38 S., R.8 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on right bank 1.6 mi (2.6 km) upstream from Josephine Creek, 2.5 mi (4.0 km) northwest of Kerby, and at mile 50.3 (80.9 km).

DRAINAGE AREA.--380 mi² (984 km²).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,198.08 ft (365.175 m) above mean sea level. Prior to Jan. 28, 1965, water-stage recorder, and Jan. 28 to Sept. 30, 1965, nonrecording gage 700 ft (213 m) downstream at datum 2.99 ft (0.911 m) lower.

REMARKS.--Records good. No regulation. Diversions for irrigation above station. Some diversions for mining and logpond operation.

AVERAGE DISCHARGE.--16 years, 1,290 ft³/s (36.53 m³/s), 46.10 in/yr (1,171 mm/yr), 934,600 acre-ft/yr (1.15 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,200 ft³/s (2,610 m³/s) Dec. 22, 1964, gage height, 45.28 ft (13.801 m), from floodmark, site and datum then in use, from rating curve extended above 30,000 ft³/s (850 m³/s) on basis of slope-area measurement of peak flow; minimum, 14 ft³/s (0.40 m³/s) Aug. 11, 13, 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,470 ft³/s (127 m³/s) Mar. 9, gage height, 10.35 ft (3.155 m), no peak above base of 11,000 ft³/s (312 m³/s); minimum, 14 ft³/s (0.40 m³/s) Aug. 11, 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|----------|----------|--------|-----------|----------|--------------|------|------|------|------|
| 1 | 72 | 97 | 113 | 122 | 133 | 1790 | 513 | 342 | 303 | 59 | 28 | 22 |
| 2 | 72 | 105 | 115 | 249 | 132 | 1170 | 505 | 403 | 294 | 57 | 30 | 22 |
| 3 | 64 | 102 | 113 | 455 | 128 | 981 | 496 | 597 | 276 | 58 | 40 | 23 |
| 4 | 72 | 102 | 112 | 406 | 127 | 848 | 525 | 859 | 260 | 58 | 29 | 22 |
| 5 | 67 | 99 | 112 | 313 | 127 | 759 | 636 | 848 | 249 | 59 | 23 | 25 |
| 6 | 67 | 91 | 112 | 256 | 125 | 735 | 689 | 803 | 232 | 57 | 19 | 25 |
| 7 | 67 | 88 | 112 | 220 | 123 | 1200 | 693 | 738 | 226 | 54 | 19 | 23 |
| 8 | 64 | 90 | 118 | 197 | 128 | 3180 | 767 | 669 | 218 | 53 | 18 | 23 |
| 9 | 62 | 90 | 128 | 176 | 135 | 3620 | 686 | 613 | 199 | 54 | 18 | 18 |
| 10 | 62 | 94 | 133 | 178 | 135 | 2220 | 575 | 581 | 193 | 65 | 18 | 18 |
| 11 | 63 | 99 | 127 | 216 | 130 | 1470 | 502 | 562 | 189 | 58 | 14 | 18 |
| 12 | 63 | 97 | 122 | 487 | 128 | 1550 | 453 | 547 | 178 | 46 | 15 | 18 |
| 13 | 63 | 102 | 120 | 439 | 125 | 1410 | 458 | 505 | 161 | 47 | 15 | 22 |
| 14 | 62 | 146 | 118 | 359 | 123 | 1110 | 453 | 470 | 153 | 45 | 17 | 18 |
| 15 | 63 | 224 | 118 | 306 | 122 | 905 | 422 | 444 | 142 | 43 | 18 | 18 |
| 16 | 62 | 232 | 118 | 271 | 118 | 777 | 414 | 425 | 135 | 32 | 18 | 19 |
| 17 | 60 | 197 | 117 | 245 | 115 | 693 | 398 | 411 | 122 | 32 | 18 | 23 |
| 18 | 59 | 172 | 113 | 228 | 113 | 632 | 369 | 390 | 112 | 31 | 18 | 33 |
| 19 | 59 | 157 | 112 | 218 | 110 | 603 | 342 | 382 | 104 | 32 | 18 | 49 |
| 20 | 58 | 151 | 110 | 210 | 117 | 619 | 315 | 354 | 96 | 33 | 18 | 85 |
| 21 | 57 | 144 | 107 | 199 | 245 | 623 | 301 | 347 | 94 | 31 | 18 | 84 |
| 22 | 57 | 140 | 102 | 189 | 924 | 659 | 285 | 347 | 91 | 30 | 18 | 62 |
| 23 | 59 | 137 | 99 | 180 | 964 | 749 | 287 | 388 | 85 | 26 | 18 | 53 |
| 24 | 64 | 135 | 102 | 172 | 1030 | 859 | 262 | 359 | 80 | 30 | 20 | 62 |
| 25 | 74 | 132 | 102 | 165 | 848 | 821 | 271 | 342 | 69 | 30 | 25 | 81 |
| 26 | 87 | 130 | 108 | 157 | 693 | 770 | 294 | 388 | 67 | 29 | 25 | 80 |
| 27 | 83 | 127 | 113 | 151 | 803 | 777 | 269 | 467 | 62 | 29 | 25 | 77 |
| 28 | 78 | 123 | 122 | 146 | 2010 | 767 | 258 | 417 | 57 | 28 | 23 | 1460 |
| 29 | 78 | 122 | 122 | 140 | --- | 686 | 260 | 380 | 59 | 28 | 21 | 1790 |
| 30 | 80 | 120 | 122 | 137 | --- | 616 | 287 | 342 | 55 | 25 | 21 | 689 |
| 31 | 87 | --- | 122 | 137 | --- | 556 | --- | 320 | --- | 25 | 22 | --- |
| TOTAL | 2085 | 3845 | 3564 | 7324 | 10011 | 34155 | 12985 | 15040 | 4561 | 1284 | 647 | 4962 |
| MEAN | 67.3 | 128 | 115 | 236 | 358 | 1102 | 433 | 485 | 152 | 41.4 | 20.9 | 165 |
| MAX | 87 | 232 | 133 | 487 | 2010 | 3620 | 767 | 859 | 303 | 65 | 40 | 1790 |
| MIN | 57 | 88 | 99 | 122 | 110 | 556 | 258 | 320 | 55 | 25 | 14 | 18 |
| CFSM | .18 | .34 | .30 | .62 | .94 | 2.90 | 1.14 | 1.28 | .40 | .11 | .06 | .43 |
| IN. | .20 | .38 | .35 | .72 | .98 | 3.34 | 1.27 | 1.47 | .45 | .13 | .06 | .49 |
| AC-FT | 4140 | 7630 | 7070 | 14530 | 19860 | 67750 | 25760 | 29830 | 9050 | 2550 | 1280 | 9840 |
| CAL YR 1976 | TOTAL | 233263 | MEAN 637 | MAX 9490 | MIN 47 | CFSM 1.68 | IN 22.84 | AC-FT 462700 | | | | |
| WTR YR 1977 | TOTAL | 100463 | MEAN 275 | MAX 3620 | MIN 14 | CFSM .72 | IN 9.83 | AC-FT 199300 | | | | |

ROGUE RIVER BASIN

14378200 ILLINOIS RIVER NEAR AGNESS, OR

LOCATION.--Lat 42°31'15", long 124°02'35", in SW¼NW¼ sec.29, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100311, on right bank 0.6 mi (1.0 km) downstream from Lawson Creek, 1.4 mi (2.3 km) upstream from Fox Creek, 2.8 mi (4.5 km) southeast of Agness, and at mile 3.0 (4.8 km).

DRAINAGE AREA.--988 mi² (2,559 km²), at cable section 2.1 mi (3.4 km) downstream where all measurements are made.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 125.86 ft (38.362 m) above mean sea level.

REMARKS.--Records good. No regulation. Many diversions above station for irrigation, mining, and logpond operation. Records include flow of Fox Creek. All records given herein are for measuring site.

AVERAGE DISCHARGE.--17 years, 4,249 ft³/s (120.3 m³/s), 58.40 in/yr (1,483 mm/yr), 3,078,000 acre-ft/yr (3.80 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 225,000 ft³/s (6,370 m³/s) Dec. 22, 1964, estimated on basis of runoff ratio with station near Selma; maximum gage height, 56.91 ft (17.346 m) Dec. 22, 1964, from floodmark (backwater from Rogue River); minimum discharge, 125 ft³/s (3.54 m³/s) Sept. 14-16, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,400 ft³/s (323 m³/s) Mar. 8, gage height, 10.51 ft (3.203 m), no peak above base of 35,000 ft³/s (991 m³/s); minimum, 105 ft³/s (2.97 m³/s) Aug. 17-21, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | | |
|-------------|-------|--------|-------|-------|-------|--------|-------|-------|-------|-------|------|-------|-------|---------|
| 1 | 210 | 371 | 260 | 281 | 343 | 4590 | 1570 | 870 | 912 | 291 | 142 | 150 | | |
| 2 | 206 | 371 | 256 | 484 | 334 | 3120 | 1540 | 956 | 870 | 299 | 139 | 147 | | |
| 3 | 203 | 312 | 253 | 992 | 325 | 2730 | 1520 | 1870 | 835 | 291 | 133 | 142 | | |
| 4 | 199 | 281 | 249 | 967 | 320 | 2340 | 1620 | 2250 | 821 | 279 | 130 | 142 | | |
| 5 | 199 | 264 | 249 | 769 | 316 | 2030 | 1940 | 2170 | 787 | 275 | 133 | 142 | | |
| 6 | 199 | 253 | 245 | 620 | 320 | 1940 | 2090 | 2100 | 746 | 272 | 126 | 139 | | |
| 7 | 196 | 242 | 245 | 528 | 316 | 6150 | 2100 | 1900 | 700 | 272 | 121 | 139 | | |
| 8 | 193 | 231 | 260 | 473 | 325 | 10100 | 2210 | 1730 | 666 | 262 | 119 | 139 | | |
| 9 | 193 | 228 | 334 | 430 | 334 | 10300 | 2050 | 1580 | 640 | 259 | 119 | 131 | | |
| 10 | 191 | 245 | 303 | 441 | 325 | 7140 | 1740 | 1500 | 607 | 255 | 117 | 131 | | |
| 11 | 188 | 268 | 285 | 576 | 325 | 4790 | 1520 | 1470 | 601 | 255 | 114 | 130 | | |
| 12 | 188 | 273 | 273 | 1300 | 320 | 4470 | 1410 | 1410 | 582 | 255 | 112 | 126 | | |
| 13 | 188 | 268 | 264 | 1250 | 312 | 4160 | 1370 | 1330 | 557 | 245 | 110 | 126 | | |
| 14 | 186 | 595 | 264 | 984 | 307 | 3370 | 1360 | 1250 | 524 | 234 | 110 | 125 | | |
| 15 | 186 | 673 | 256 | 820 | 303 | 2820 | 1280 | 1190 | 507 | 231 | 108 | 125 | | |
| 16 | 183 | 627 | 256 | 713 | 294 | 2400 | 1220 | 1220 | 486 | 224 | 107 | 133 | | |
| 17 | 183 | 534 | 253 | 633 | 290 | 2140 | 1180 | 1210 | 470 | 217 | 105 | 201 | | |
| 18 | 183 | 451 | 249 | 576 | 281 | 1960 | 1100 | 1160 | 449 | 198 | 105 | 507 | | |
| 19 | 180 | 399 | 245 | 540 | 277 | 1880 | 1040 | 1110 | 428 | 201 | 105 | 1060 | | |
| 20 | 180 | 361 | 238 | 517 | 420 | 1870 | 978 | 1060 | 408 | 195 | 105 | 1030 | | |
| 21 | 180 | 338 | 235 | 489 | 926 | 1870 | 934 | 1000 | 398 | 192 | 107 | 529 | | |
| 22 | 178 | 320 | 231 | 468 | 1850 | 2010 | 891 | 978 | 389 | 189 | 107 | 393 | | |
| 23 | 178 | 307 | 231 | 446 | 2220 | 2240 | 863 | 1040 | 375 | 177 | 107 | 326 | | |
| 24 | 193 | 298 | 228 | 430 | 2370 | 2400 | 842 | 1040 | 361 | 174 | 139 | 454 | | |
| 25 | 316 | 294 | 224 | 409 | 1190 | 2310 | 877 | 970 | 348 | 168 | 189 | 379 | | |
| 26 | 290 | 285 | 238 | 394 | 1710 | 2110 | 927 | 1150 | 333 | 166 | 195 | 348 | | |
| 27 | 245 | 277 | 303 | 380 | 1850 | 2150 | 863 | 1190 | 319 | 163 | 186 | 345 | | |
| 28 | 231 | 268 | 277 | 371 | 4410 | 2200 | 814 | 1190 | 311 | 155 | 171 | 1770 | | |
| 29 | 228 | 268 | 316 | 357 | --- | 2010 | 800 | 1100 | 295 | 153 | 171 | 4450 | | |
| 30 | 228 | 264 | 307 | 347 | --- | 1820 | 807 | 1020 | 291 | 150 | 166 | 1890 | | |
| 31 | 228 | --- | 290 | 343 | --- | 1660 | --- | 963 | --- | 150 | 161 | --- | | |
| TOTAL | 6329 | 10166 | 8117 | 18328 | 22913 | 103080 | 39456 | 40977 | 16016 | 6847 | 4059 | 15849 | | |
| MEAN | 204 | 339 | 262 | 591 | 818 | 3325 | 1315 | 1322 | 534 | 221 | 131 | 528 | | |
| MAX | 316 | 673 | 334 | 1300 | 4410 | 10300 | 2210 | 2250 | 912 | 299 | 195 | 4450 | | |
| MIN | 178 | 228 | 224 | 281 | 277 | 1660 | 800 | 870 | 291 | 150 | 105 | 125 | | |
| CFSM | .21 | .34 | .27 | .60 | .83 | 3.37 | 1.33 | 1.34 | .54 | .22 | .13 | .53 | | |
| IN. | .24 | .38 | .31 | .69 | .86 | 3.88 | 1.49 | 1.54 | .60 | .26 | .15 | .60 | | |
| AC-FT | 12550 | 20160 | 16100 | 36350 | 45450 | 204500 | 78260 | 81280 | 31770 | 13580 | 8050 | 31440 | | |
| CAL YR 1976 | TOTAL | 709784 | MEAN | 1939 | MAX | 24900 | MIN | 150 | CFSM | 1.96 | IN | 26.72 | AC-FT | 1408000 |
| WTR YR 1977 | TOTAL | 292137 | MEAN | 800 | MAX | 10300 | MIN | 105 | CFSM | .81 | IN | 11.00 | AC-FT | 579500 |

CHETCO RIVER BASIN

543

14400000 CHETCO RIVER NEAR BROOKINGS, OR

LOCATION.--Lat 42°07'25", long 124°11'10", in SE¼ sec.12, T.40 S., R.13 W., Curry County, Hydrologic Unit 17100312, on right bank 16 ft (5 m) upstream from bridge, 0.5 mi (0.8 km) upstream from Elk Creek, 6.8 mi (10.9 km) northeast of Brookings, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--271 mi² (702 km²).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 50 ft (15 m), from topographic map.

REMARKS.--Records good. No regulation or diversion above station.

AVERAGE DISCHARGE.--8 years, 2,198 ft³/s (62.25 m³/s), 110.14 in/yr (2,798 mm/yr), 1,592,000 acre-ft/yr (1.96 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,800 ft³/s (1,860 m³/s) Jan. 16, 1971, gage height, 27.45 ft (8.367 m); minimum, 45 ft³/s (1.27 m³/s) Oct. 21-23, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 32.25 ft (9.830 m), from high-water mark on bridge pier, discharge, 85,400 ft³/s (2,420 m³/s), from rating curve extended above 45,000 ft³/s (1,270 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,200 ft³/s (430 m³/s) Mar. 9, gage height, 12.08 ft (3.682 m), no peak above base of 20,000 ft³/s (566 m³/s); minimum, 63 ft³/s (1.78 m³/s) Oct. 8, 9, 12-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------------|-------|--------|------|-------|-------|--------|-------|-------|-------|--------|-------|--------|
| 1 | 73 | 322 | 118 | 161 | 172 | 3440 | 1010 | 387 | 478 | 177 | 86 | 91 |
| 2 | 71 | 313 | 118 | 587 | 158 | 2550 | 970 | 451 | 451 | 185 | 86 | 86 |
| 3 | 69 | 211 | 115 | 1240 | 147 | 2490 | 947 | 1780 | 429 | 169 | 83 | 83 |
| 4 | 69 | 151 | 112 | 891 | 141 | 2140 | 947 | 1780 | 459 | 164 | 82 | 82 |
| 5 | 67 | 121 | 109 | 612 | 154 | 1840 | 1040 | 1500 | 429 | 162 | 80 | 82 |
| 6 | 67 | 104 | 106 | 453 | 168 | 1640 | 1030 | 1340 | 399 | 160 | 80 | 79 |
| 7 | 67 | 94 | 103 | 366 | 151 | 6040 | 986 | 1170 | 379 | 155 | 80 | 78 |
| 8 | 67 | 87 | 115 | 316 | 168 | 10900 | 1110 | 1030 | 363 | 151 | 80 | 75 |
| 9 | 65 | 85 | 175 | 278 | 168 | 8520 | 986 | 909 | 343 | 147 | 79 | 71 |
| 10 | 67 | 107 | 151 | 377 | 151 | 4940 | 836 | 843 | 332 | 144 | 79 | 69 |
| 11 | 67 | 134 | 124 | 561 | 147 | 3450 | 754 | 829 | 328 | 140 | 76 | 69 |
| 12 | 67 | 127 | 112 | 1560 | 137 | 3310 | 701 | 780 | 317 | 136 | 74 | 67 |
| 13 | 67 | 121 | 109 | 1170 | 131 | 2830 | 695 | 714 | 307 | 132 | 72 | 67 |
| 14 | 65 | 432 | 103 | 861 | 124 | 2430 | 670 | 657 | 296 | 128 | 72 | 67 |
| 15 | 65 | 823 | 103 | 686 | 121 | 2120 | 627 | 615 | 286 | 124 | 72 | 67 |
| 16 | 65 | 686 | 101 | 568 | 112 | 1850 | 592 | 615 | 273 | 118 | 71 | 72 |
| 17 | 65 | 477 | 101 | 488 | 109 | 1630 | 564 | 575 | 263 | 116 | 70 | 158 |
| 18 | 65 | 356 | 98 | 425 | 103 | 1490 | 525 | 542 | 263 | 113 | 69 | 464 |
| 19 | 67 | 288 | 95 | 387 | 98 | 1440 | 496 | 531 | 257 | 113 | 69 | 1470 |
| 20 | 67 | 243 | 92 | 351 | 239 | 1390 | 473 | 492 | 247 | 113 | 69 | 1390 |
| 21 | 67 | 214 | 90 | 321 | 632 | 1320 | 455 | 473 | 247 | 109 | 71 | 695 |
| 22 | 69 | 194 | 90 | 292 | 1560 | 1260 | 437 | 455 | 238 | 107 | 71 | 424 |
| 23 | 67 | 179 | 90 | 269 | 1480 | 1370 | 424 | 468 | 229 | 104 | 69 | 340 |
| 24 | 82 | 165 | 87 | 252 | 1610 | 1620 | 412 | 451 | 221 | 102 | 130 | 664 |
| 25 | 187 | 158 | 90 | 230 | 1290 | 1570 | 459 | 433 | 209 | 102 | 187 | 564 |
| 26 | 165 | 147 | 131 | 214 | 1350 | 1460 | 478 | 695 | 206 | 102 | 193 | 416 |
| 27 | 107 | 141 | 202 | 202 | 1580 | 1450 | 412 | 740 | 195 | 101 | 151 | 367 |
| 28 | 89 | 134 | 165 | 190 | 4920 | 1450 | 395 | 657 | 187 | 97 | 122 | 2060 |
| 29 | 82 | 131 | 194 | 183 | --- | 1310 | 399 | 586 | 180 | 94 | 115 | 2780 |
| 30 | 85 | 128 | 190 | 172 | --- | 1190 | 375 | 536 | 172 | 94 | 107 | 1260 |
| 31 | 118 | --- | 172 | 179 | --- | 1080 | --- | 501 | --- | 91 | 99 | --- |
| TOTAL | 2460 | 6873 | 3761 | 14842 | 17321 | 81520 | 20205 | 23535 | 8983 | 3950 | 2844 | 14257 |
| MEAN | 79.4 | 229 | 121 | 479 | 619 | 2630 | 674 | 759 | 299 | 127 | 91.7 | 475 |
| MAX | 187 | 823 | 202 | 1560 | 4920 | 10900 | 1110 | 1780 | 478 | 185 | 193 | 2780 |
| MIN | 65 | 85 | 87 | 161 | 98 | 1080 | 375 | 387 | 172 | 91 | 69 | 67 |
| CFSM | .29 | .85 | .45 | 1.77 | 2.28 | 9.71 | 2.49 | 2.80 | 1.10 | .47 | .34 | 1.75 |
| IN. | .34 | .94 | .52 | 2.04 | 2.38 | 11.19 | 2.77 | 3.23 | 1.23 | .54 | .39 | 1.96 |
| AC-FT | 4880 | 13630 | 7460 | 29440 | 34360 | 161700 | 40080 | 46680 | 17820 | 7830 | 5640 | 28280 |
| CAL YR 1976 | TOTAL | 398196 | MEAN | 1088 | MAX | 20000 | MIN | 65 | CFSM | 4.02 | IN | 54.66 |
| WTR YR 1977 | TOTAL | 200551 | MEAN | 549 | MAX | 10900 | MIN | 65 | CFSM | 2.03 | IN | 27.53 |
| | | | | | | | | | AC-FT | 789800 | AC-FT | 397800 |

COLUMBIA RIVER BASIN

Discharge at ungaged sites

Monthly records for the following sites have been computed by routing methods described in USGS Circular 550. Circular 550 contains monthly records for these sites for water years 1928-65, including monthly flows adjusted for major upstream storage. Figures given here represent unadjusted flows, and are rated fair. Adjusted records are available from Northwest Water Resources Data Center, Portland, Oregon.

- 14144700 COLUMBIA RIVER AT VANCOUVER, WA.--Lat 45°37'15", long 122°40'20", in NE¼NW¼ sec.34, T.2 N., R.1 E., Clark County, Hydrologic Unit 17080001, 5.0 mi (8.0 km) upstream from Willamette River, and at mile 106.5 (171.4 km). Drainage area, 241,000 mi² (624,200 km²), approximately. Records available, monthly discharge October 1927 to current year. Daily discharge for October 1963 to September 1969, published in annual data reports for Oregon, 1965-67, 1969.
- 14211808 WILLAMETTE RIVER (mouth) AT PORTLAND, OR.--Lat 45°37'09", long 122°47'27", Multnomah County, Hydrologic Unit 17090012, center of channel at bifurcation of Willamette River and Multnomah Channel, and at mile 3.4 (5.5 km). Drainage area 11,200 mi² (29,000 km²), approximately. Records available, monthly discharge October 1927 to September 1972. See station 14211720 for equivalent records for current year.
- 14222870 COLUMBIA RIVER AT SAINT HELENS, OR.--Lat 45°51'58", long 122°47'00", Columbia County, Hydrologic Unit 17080003, center of channel at intersection of Township (4/5N) line and Oregon-Washington boundary, 0.6 mi (1.0 km) east of Saint Helens and at mile 86.0 (138.3 km). Drainage area, 253,900 mi² (657,600 km²), approximately. Records available, monthly discharge October 1927 to current year.
- 14245300 COLUMBIA RIVER AT LONGVIEW, WA.--Lat 46°06'22", long 122°57'14", Cowlitz County, Hydrologic Unit 17080003, at Longview Bridge, 1.0 mi (1.6 km) south of Longview, 2.0 mi (3.2 km) downstream from Cowlitz River, and at mile 66.0 (106.2 km). Drainage area, 256,700 mi² (664,900 km²), approximately. Records available, monthly discharge October 1927 to current year.
- 14280000 COLUMBIA RIVER AT MOUTH, NEAR ASTORIA, OR.--Lat 46°15', long 124°05', Clatsop County, Hydrologic Unit 17080006, center of channel at river mouth, due north from original end of south jetty, 12.3 mi (19.8 km) northwest of Astoria, and at mile 0. Drainage area, 258,000 mi² (668,200 km²), approximately. Records available, monthly discharge October 1927 to current year.

MONTHLY AND ANNUAL MEAN DISCHARGE IN CUBIC FEET PER SECOND

| WATER YEAR | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUNE | JULY | AUG | SEPT | ANNUAL |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 14144700 COLUMBIA RIVER AT VANCOUVER, WA | | | | | | | | | | | | | |
| 1977 | 146,200 | 133,500 | 137,700 | 148,400 | 132,700 | 135,200 | 114,700 | 142,700 | 131,600 | 93,400 | 95,710 | 102,700 | 126,200 |
| 14222870 COLUMBIA RIVER AT SAINT HELENS, OR | | | | | | | | | | | | | |
| 1977 | 164,600 | 152,200 | 149,600 | 162,900 | 142,300 | 167,800 | 135,300 | 170,100 | 149,600 | 102,100 | 105,000 | 118,000 | 143,300 |
| 14245300 COLUMBIA RIVER AT LONGVIEW, WA | | | | | | | | | | | | | |
| 1977 | 170,900 | 159,800 | 156,500 | 170,200 | 148,100 | 179,000 | 141,300 | 176,200 | 155,400 | 104,500 | 108,400 | 123,100 | 149,500 |
| 14280000 COLUMBIA RIVER AT MOUTH, NEAR ASTORIA, OR | | | | | | | | | | | | | |
| 1977 | 173,900 | 157,900 | 160,200 | 171,000 | 155,200 | 191,200 | 148,300 | 179,800 | 161,500 | 107,000 | 108,900 | 125,600 | 153,400 |



Figure 4.--Map of Oregon showing locations of partial-record stations.

Crest-stage partial-record stations

The following table contains annual maximum discharge for crest-stage stations. A crest-stage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

| | | | | | | Annual maximum | |
|--------------------------------|--|--|--|------------------------|---------|------------------------|--|
| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Date | Gage height (ft) | Dis- charge (ft ³ /s) |
| QUINN RIVER BASIN (NEVADA) | | | | | | | |
| 10352200 | BLUE MOUNTAIN CREEK TRIBUTARY NEAR MCDERMITT, NV (Station discon- tinued) | Lat 42°17'03", long 117°43'06", in SW¼ sec.7, T.38 S., R.43 E., Malheur County, at culvert on BLM access road, 0.1 mile upstream from mouth, 0.5 mile south of Reservoir No. 4, and 22 miles north of McDermitt. | a2.2 | 1972-77 | - | - | 0 |
| 10352300 | JACKSON CREEK TRIBU- TARY NEAR MCDERMITT, NV (Station discontinued) | Lat 42°14'00", long 117°44'20", in N½ sec. 36, T.38 S., R.42 E., Malheur County, at culvert on BLM Star Valley Road 930-0, 15 miles north of McDermitt. | a6.6 | 1969-77 | - | - | <1 |
| 10352400 | TURNER CREEK NEAR MCDERMITT, NV (Station discontinued) | Lat 42°02'18", long 118°06'55", in SW¼ sec.2, T.41 S., R.39 E., Malheur County, at culvert on BLM access road, 20 miles west of McDermitt. | a2.0 | 1972-77 | - | - | 0 |
| SILVER LAKE BASIN | | | | | | | |
| 10390400 | BRIDGE CREEK NEAR THOMPSON RESERVOIR, OR | Lat 43°01'30", long 121°12'00" in S¼ sec.29, T.29 S., R.13 E., Lake County, in Fremont National Forest, at culvert on Forest Service road 2800, 7.2 miles northwest of Thompson Reservoir, and 11 miles southwest of town of Silver Lake. | 10.6 | 1965-77 | 6-13-77 | 9.37 | 39 |
| MALHEUR AND HARNEY LAKES BASIN | | | | | | | |
| 10392300 | SILVIES RIVER NEAR SENECA, OR | Lat 44°10'30", long 119°12'50", in NW¼NW¼ sec.23, T.16 S., R.29 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1611, 100 feet downstream from Wickiup Creek, and 12 miles northwest of Seneca. | 18.4 | 1967-77 | 8- 9-77 | - | b1.0 |
| 10392800 | CROWSFOOT CREEK NEAR BURNS, OR | Lat 43°53'55", long 119°29'50", in NE¼ sec.29, T.19 S., R.27 E., Harney County, in Ochoco National Forest, at culvert on Forest Service road 1939, 1 mile upstream from mouth, and 31 miles northwest of Burns. | 8.50 | 1966-77 | 4- 8-77 | 8.35 | 22 |
| 10393900 | DEVINE CANYON NEAR BURNS, OR | Lat 43°46'20", long 119°00'05", in NE¼ sec.9, T.21 S., R.31 E., Harney County, at culvert at U.S. Highway 395, at junction with road to Baker Corral, 0.7 mile north of Ochoco National Forest boundary, and 15 miles north of Burns. | 4.96 | 1965-77 | 4- 4-77 | 12.32 | c.17 |
| 10395800 | DONNER UND BLITZEN RIVER TRIBUTARY NEAR FRENCHGLEN, OR (Station discontinued) | Lat 42°39'33", long 118°50'00", in NE¼NE¼ sec.4, T.34 S., R.32½ E., Harney County, at culvert on BLM Steens Mountain Road, 12 mi (19.3 km) south of Frenchglen. | 4.81 | 1975-77 | - | - | 0 |
| 10396400 | MUD CREEK TRIBUTARY NEAR FRENCHGLEN, OR (Station discontinued) | Lat 42°46'56", long 118°46'17", in NW¼SW¼ sec.19, T.32 S., R.32 ¾ E., Harney County, at culvert on BLM Steens Mountain Road, 9 mi (14.5 km) east of Frenchglen. | .53 | 1975-77 | - | - | 0 |
| 10406100 | KUENY CANYON NEAR NEAR FRENCHGLEN, OR (Station discontinued) | Lat 42°41'45", long 118°57'28", in NW¼SE¼ sec.21, T.33 S., R.32 E., Harney County, at culvert on BLM Steens Mountain Road, 10 mi (16.1 km) south of Frenchglen. | 9.76 | 1975-77 | - | - | 0 |
| CATLOW VALLEY BASIN | | | | | | | |
| 10406350 | PEARL WISE CANYON NEAR FIELDS, OR (station discontinued) | Lat 42°20'33", long 118°48'26", in NW¼SE¼ sec.12, T.37 S., R.32 ¾ E., Harney County, at culvert on Highway 205, 7 mi (11.3 km) northwest of Fields. | 5.05 | 1975-77 | - | - | 0 |
| SUNRISE VALLEY BASIN | | | | | | | |
| 10406400 | SUNRISE VALLEY TRIBUTARY NEAR FOLLYFARM, OR (Station discontinued) | Lat 43°04'45", long 118°11'15", in SW¼ sec.4, T.29 S., R.37 E., Malheur County, at culvert on State Highway 78, 2.5 miles east of county line, 3 miles north of Follyfarm, and 30.5 miles northwest of Burns Junction. | .78 | 1973-77 | - | - | 0 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Annual maximum | | |
|---------------------|--|--|----------------------------------|------------------|----------------|------------------|---------------------------------|
| | | | | | Date | Gage height (ft) | Dis-charge (ft ³ /s) |
| PUEBLO VALLEY BASIN | | | | | | | |
| 10406490 | FIELDS CREEK TRIBUTARY NEAR FIELDS, OR (Station discontinued) | Lat 42°16'48", long 118°40'06", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.37 S., R.33 E., Harney County, at culvert on Highway 205 (Pueblo Valley Road), 1.1 mi (1.8 km) north of Fields. | 8.85 | 1975-77 | - | - | 0 |
| GOOSE LAKE BASIN | | | | | | | |
| 11341100 | SALT CREEK NEAR LAKEVIEW, OR | Lat 42°17'35", long 120°20'45", in NW $\frac{1}{4}$ sec.10, T.38 S., R.20 E., Lake County, at culvert on U.S. Highway 395, 1.7 miles upstream from mouth 2.6 miles north of Warner Valley Junction, and 7.6 miles north of Lakeview. | 5.62 | 1964-77 | 6-13-77 | 12.80 | .60 |
| 11341200 | CRANE CREEK NEAR LAKEVIEW, OR | Lat 42°07'05", long 120°17'25", in NW $\frac{1}{4}$ sec.7, T.40 S., R.21 E., Lake County, in Fremont National Forest, at culvert on Crane Creek road, 1.5 miles east of crossing at U.S. Highway 395, and 6 miles southeast of Lakeview. | 11.4 | 1966-77 | 6-13-77 | 11.91 | 47 |
| KLAMATH RIVER BASIN | | | | | | | |
| 11491800 | MOSQUITO CREEK NEAR SHEVLIN, OR | Lat 43°05'40", long 121°32'50", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.32, T.28 S., R.10 E., Klamath County, in Winema National Forest, at culvert on Forest Service road 283A, 150 ft south of intersection with road 283, 2 miles southwest of Jacks Corral, and 8 miles southeast of Shevlin. | 2.63 | 1965-77 | 6-13-77 | 7.23 | 4.5 |
| 11494800 | BROWNSWORTH CREEK NEAR BLY, OR | Lat 42°25'40", long 120°50'20", in NW $\frac{1}{4}$ sec.28, T.36 S., R.16 E., Lake County, at culvert on Forest Service road 3610, in Fremont National Forest, 2 miles upstream from Hammond Creek, and about 12 miles east of Bly. | 2.20 | 1965-77 | 6-13-77 | 11.75 | 35 |
| 11497800 | CURRIER CREEK NEAR PAISLEY, OR | Lat 42°42'55", long 120°52'50", in NW $\frac{1}{4}$ sec.18, T.33 S., R.16 E., Lake County, in Fremont National Forest, at culvert on Forest Service road 337, 100 ft east of junction with road 3313, 1.4 miles upstream from mouth, and 17 miles west of Paisley. | 2.46 | 1965-77 | 6-13-77 | 11.75 | 4.5 |
| 11501300 | CRYSTAL CREEK NEAR CHILOQUIN, OR | Lat 42°33'45", long 121°50'20", in SE $\frac{1}{4}$ sec.2, T.35 S., R.7 E., Klamath County, in Winema National Forest, at culvert on Chiloquin Ridge road, 200 ft upstream from mouth, and 1.5 miles southeast of Chiloquin. | 5.77 | 1965-77 | 1- 1-77 | 13.13 | 12 |
| 11505550 | LOST CREEK NEAR ROCKY POINT, OR | Lat 42°29'35", long 122°11'30", in SE $\frac{1}{4}$ sec.26, T.35 S., R.5 E., Klamath County, in Winema National Forest, at culvert on Forest Service road 3561, 1.5 miles east of Long Lake, and 5.5 miles west of Rocky Point. | 13.2 | 1966-77 | 5-23-77 | 8.75 | 29 |
| 11509400 | KLAMATH RIVER TRIBUTARY NEAR KENO, OR | Lat 42°07'50", long 121°57'50", in SW $\frac{1}{4}$ sec.35, T.39 S., R.7 E., Klamath County, at culvert on State Highway 66, 0.3 mile upstream from mouth, 1.8 miles west of Keno, and 4.0 miles east of Klamath River bridge. | 1.02 | 1964-77 | - | 11.14 | .28 |
| SNAKE RIVER BASIN | | | | | | | |
| 13172930 | SPRING CREEK TRIBUTARY NEAR ROCKVILLE, OR (Station discontinued) | Lat 43°13'22", long 117°08'43", in SW $\frac{1}{4}$ sec.7, T.27 S., R.46 E., Malheur County, at culvert on BLM access road, 6 miles west of State line, and 5 miles south of Rockville. | .76 | 1972-77 | 6-11-77 | 10.41 | 12 |
| OWYHEE RIVER BASIN | | | | | | | |
| 13177805 | TENT CREEK NEAR MCDERMITT, NV (Station discontinued) | Lat 42°02'00", long 117°16'15", in NW $\frac{1}{4}$ sec.12, T.41 S., R.46 E., Malheur County, at culvert on BLM Star Valley access road, 8 mi southwest of Lookout Lake, and 23 mi east of McDermitt. | 11.6 | 1974-77 | - | - | 0 |
| 13177885 | POLE CREEK TRIBUTARY NEAR MCDERMITT, NV (Station discontinued) | Lat 42°09'02", long 117°23'36", in SW $\frac{1}{4}$ sec.25, T.39 S., R.45 E., Malheur County, at culvert on BLM Star Valley road, 21 miles northeast of McDermitt. | 1.0 | 1971-77 | - | - | 0 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| | | | | | | Annual maximum | | |
|-------------------------------|--|--|----------------------------------|------------------|---------|------------------|---------------------------------|--|
| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Date | Gage height (ft) | Dis-charge (ft ³ /s) | |
| OWYHEE RIVER BASIN--Continued | | | | | | | | |
| 13177895 | ANTELOPE CREEK TRIBUTARY NEAR MCDERMITT, NV (Station discontinued) | Lat 42°15'55", long 117°31'45", in NW¼ sec.23, T.38 S., R.44 E., Malheur County, at culvert on BLM Star Valley road, 21 miles northeast of McDermitt. | 3.20 | 1971-77 | - | - | 0 | |
| 13177980 | INDIAN CREEK NEAR JORDAN VALLEY, OR (Station discontinued) | Lat 42°39'25", long 117°12'10", in NE¼ sec.28, T.33 S., R.45 E., Malheur County, at culvert on BLM Soldier Creek project road, 24 miles south of Jordan Valley. | 44.0 | 1970-77 | - | - | 0 | |
| 13181300 | CROOKED CREEK NEAR BURNS JUNCTION, OR (Station discontinued) | Lat 42°24'09", long 117°51'27", in SW¼ sec.36, T.36 S., R.41 E., Malheur County, at twin culverts on U.S. Highway 95, 0.6 mile south of Basque maintenance yards, and 24.5 miles south of Burns Junction. | 46.2 | 1973-77 | - | - | 0 | |
| 13181400 | CROOKED CREEK TRIBUTARY AT BURNS JUNCTION, OR (Station discontinued) | Lat 42°45'48", long 117°51'15", in SW¼ sec.19, T.32 S., R.40 E., Malheur County, at culvert on U.S. Highway 95, 0.95 mile south of Burns Junction, and 13 miles southwest of Rome. | 4.83 | 1973-77 | - | - | 0 | |
| 13182100 | DAGO GULCH NEAR ROCKVILLE, OR (Station discontinued) | Lat 43°17'37", long 117°15'14", in SW¼SE¼ sec.18, T.26 S., R.45 E., Malheur County, at culvert on Bureau of Land Management Leslie Gulch Road, 0.2 mile west of Runaway Creek, and 8 miles west of Rockville. | 3.09 | 1970-77 | - | - | 0 | |
| 13182150 | LONG GULCH NEAR ROCKVILLE, OR (Station discontinued) | Lat 43°19'17", long 117°11'42", in NW¼NE¼ sec.10, T.26 S., R.45 E., Malheur County, at culvert on Bureau of Land Management Leslie Gulch Road, 1.3 miles upstream from Bannock Gulch, and 4 miles west of Rockville. | 1.38 | 1970-77 | - | - | 0 | |
| MALHEUR RIVER BASIN | | | | | | | | |
| 13213900 | MALHEUR RIVER TRIBUTARY NEAR DREWSEY OR | Lat 43°46'56", long 118°21'30", in S½ sec.36, T.20 S., R.35 E., Harney County, at culvert on county road to Drewsey, 200 feet north of U.S. Highway 20, and 2 miles south of Drewsey. | 2.28 | 1964-77 | - | - | 0 | |
| 13219300 | MALHEUR RIVER TRIBUTARY NEAR HARPER, OR | Lat 43°48'51", long 117°39'13", in SE¼ sec.23, T.20 S., R.41 E., Malheur County, at culvert on U.S. Highway 20, 4 miles southwest of Harper. | .10 | 1968-77 | - | - | 0 | |
| 13228300 | LYTLE CREEK NEAR VALE, OR | Lat 43°57'26", long 117°13'33", in SE¼ sec.32, T.18 S., R.45 E., Malheur County, at culvert on Lytle Boulevard, 2 miles south of Vale. | 6.46 | 1968-77 | 6-15-77 | 11.21 | 117 | |
| 13229400 | LOST VALLEY CREEK TRIBUTARY NEAR IRONSIDE, OR | Lat 44°18'50", long 117°54'10", in SW¼ sec.26, T.14 S., R.39 E., Malheur County, at culvert on U.S. Highway 26, 2.2 miles east of Ironside. | 1.86 | 1966-77 | - | - | 0 | |
| 13231700 | CANYON CREEK TRIBUTARY NEAR BROGAN, OR | Lat 44°15'50", long 117°37'15", in NW¼ sec.18, T.15 S., R.42 E., Malheur County, at culvert on U.S. Highway 26, 0.3 mile upstream from mouth, and 5.8 miles west of Brogan. | 1.24 | 1967-77 | - | - | b2 | |
| MOORES HOLLOW BASIN | | | | | | | | |
| 13269200 | MOORES HOLLOW TRIBUTARY NEAR WEISER, ID | Lat 44°07'30", long 117°10'10", in SE¼SE¼ sec.18, T.16 S., R.46 E., Malheur County, at culvert on Interstate Highway 80N, 7.0 miles southeast of junction with U.S. Highway 30, and 8.0 miles southwest of Weiser. | .90 | 1964-77 | 8-25-77 | 13.09 | 28 | |
| BURNT RIVER BASIN | | | | | | | | |
| 13272300 | JOB CREEK TRIBUTARY NEAR UNITY, OR | Lat 44°27'50", long 118°12'00", in S½ sec.5, T.13 S., R.37 E., Baker County, on State Highway 7, 100 feet north of U.S. Highway 26 junction, and 2 miles north of Unity. | - | 1966-77 | 6-14-77 | 11.99 | 10 | |
| 13274600 | BURNT RIVER TRIBUTARY AT DURKEE, OR | Lat 44°32'25", long 117°24'55", in SE¼ sec.28, T.11 S., R.43 E., Baker County, at culvert on Interstate Highway 80N, 0.6 mile upstream from mouth, and 0.8 mile southeast of Durkee. | 1.80 | 1966-77 | 6-15-77 | 8.70 | 74 | |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Annual maximum | | |
|---------------------------|---|---|----------------------------------|------------------|----------------|------------------|---------------------------------|
| | | | | | Date | Gage height (ft) | Dis-charge (ft ³ /s) |
| POWDER RIVER BASIN | | | | | | | |
| 13286300 | WATERSPOUT CREEK NEAR BAKER, OR | Lat 44°50'10", long 117°33'45", in SE¼ sec.28, T.8 S., R.42 E., Baker County, at culvert on State Highway 86, 14 miles east of Baker. | .96 | 1968-77 | 8- 6-77 | 16.08 | 98 |
| 13289100 | IMMIGRANT GULCH NEAR RICHLAND, OR | Lat 44°47'10", long 117°08'05", in NW¼ sec.18, T.9 S., R.46 E., Baker County, at culvert on State Highway 86, 1.9 miles northeast of Richland, and 2.0 miles above maximum flow line of Brownlee Reservoir. | 6.64 | 1964-77 | 5-24-77 | - | c.2 |
| PINE CREEK BASIN | | | | | | | |
| 13290150 | NORTH PINE CREEK NEAR HOMESTEAD, OR | Lat 45°05'25", long 116°53'45", in NW¼ sec.31, T.5 S., R.48 E., Baker County, at culvert on Forest Service road S51, 300 ft upstream from Doe Creek, and 5 miles northwest of Homestead. | 2.89 | 1965-77 | 5-10-77 | - | c1.5 |
| IMNAHA RIVER BASIN | | | | | | | |
| 13291400 | DEER CREEK NEAR IMNAHA, OR | Lat 45°33'00", long 116°47'30", in SW¼ sec.23, T.1 N., R.48 E., Wallowa County, in Wallowa-Whitman National Forest, at culvert on Forest Service road N206, 2 miles southeast of Imnaha. | 1.73 | 1965-77 | - | - | 0 |
| GRANDE RONDE RIVER BASIN | | | | | | | |
| 13318100 | MCINTYRE CREEK NEAR STARKEY, OR | Lat 45°19'40", long 118°26'55", in SE¼SE¼ sec.5, T.3 S., R.35 E., Union County, in Wallowa-Whitman National Forest, at culvert on Forest Service road S217, 1.8 miles south of Union County line, and 7 miles north of Starkey. | 1.80 | 1966-77 | 4- 8-77 | 13.68 | 7.8 |
| 13320400 | LITTLE CREEK AT HIGH VALLEY, NEAR UNION, OR | Lat 45°12'45", long 117°46'30", in SW¼SE¼ sec.14, T.4 S., R.40 E., Union County, at county road bridge, 4 miles east of Union. | 15.8 | 1948, 1952-77 | 6- 7-77 | 10.00 | 38 |
| 13322300 | DRY CREEK NEAR BINGHAM SPRINGS, OR | Lat 45°38'10", long 118°06'55", in NE¼SE¼ sec.24, T.2 N., R.37 E., Umatilla County, in Umatilla National Forest, at culvert on Forest Service road N32 (Ruckel Road), at Umatilla County line, 9 miles southeast of Bingham Springs. | 1.37 | 1956-77 | 4- 7-77 | 29.68 | 16 |
| 13324150 | RYSDAM CANYON TRIBUTARY NEAR MINAM, OR | Lat 45°36'55", long 117°47'45", in NE¼ sec.34, T.2 N., R.40 E., Union County, at culvert on county road, 0.2 mile upstream from mouth, 3.5 miles west of Minam. | .99 | 1967-77 | - | - | 0 |
| 13329700 | TROUT CREEK TRIBUTARY NEAR CHICO, OR | Lat 45°35'50", long 117°15'35", in center of sec.1, T.1 N., R.44 E., Wallowa County at culvert on State Highway 3, 0.2 mile upstream from mouth, 1.0 mile south of Wallowa-Whitman National Forest boundary and 9.5 miles southwest of Chico. | .26 | 1967-77 | - | - | 0 |
| 13329750 | TROUT CREEK TRIBUTARY AT ENTERPRISE, OR | Lat 45°26'20", long 117°17'00", in NW¼ sec.35, T.1 S., R.44 E., Wallowa County, at culvert on State Highway 3, 0.9 mile north of junction with State Highway 82 in Enterprise. | 4.38 | 1967-77 | - | - | 0 |
| 13333050 | BUFORD CREEK NEAR FLORA, OR | Lat 45°53'25", long 117°17'00", on sec. line 23 and 26, T.5 N., R.44 E., Wallowa County, at two culverts on county road, 1.0 mile west of junction with State Highway 3, 1.5 miles southeast of Flora. | .47 | 1967-77 | 5- 2-77 | 8.26 | 5.6 |
| 13333100 | DOE CREEK NEAR IMNAHA, OR | Lat 45°44'50", long 117°01'20", in NE¼ sec.14, T.3 N., R.46 E., Wallowa County, in Wallowa-Whitman National Forest, at culvert on Forest Service road N431, 0.1 mile north of Vigne Forest Camp, and 16 miles northwest of Imnaha. | 5.49 | 1965-77 | 4-25-77 | 5.64 | 19 |
| WALLA WALLA RIVER BASIN | | | | | | | |
| 14016080 | DRY CREEK TRIBUTARY NEAR MILTON-FREEWATER, OR | Lat 45°53'05", long 118°23'28", in NE¼ sec.26, T.5 N., R.35 E., Umatilla County, at culvert on State Highway 11, 2.6 miles south of Milton-Freewater. | 1.22 | 1967-77 | - | - | 0 |
| COLD SPRINGS CANYON BASIN | | | | | | | |
| 14019120 | NORTH FORK COLD SPRINGS CANYON TRIBUTARY AT HOLDMAN, OR | Lat 45°52'40", long 118°55'10", in N½ sec.34, T.5 N., R.31 E., Umatilla County, at culvert on county road, at mouth, and 0.6 mile east of Holdman. | 2.86 | 1967-77 | - | - | 0 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Annual maximum | | |
|----------------------|--|--|--|------------------------|----------------|------------------------|--|
| | | | | | Date | Gage height (ft) | Dis- charge (ft ³ /s) |
| UMATILLA RIVER BASIN | | | | | | | |
| 14019400 | ELBOW CREEK NEAR BINGHAM SPRINGS, OR | Lat 45°42'45", long 118°11'54", in NE¼ sec.28, T.3 N., R.37 E., Umatilla County, in Umatilla National Forest, at culvert on Forest Service road N32, 200 ft upstream from mouth, and 2.6 miles southeast of Bingham Springs. | .68 | 1965-77 | 3- 9-77 | 11.61 | 9.0 |
| 14020800 | MISSION CREEK AT ST. ANDREWS MISSION, OR | Lat 45°38'05", long 118°37'18", in SE¼ sec.24, T.2 N., R.33 E., Umatilla County, at culvert on county road, 0.1 mile east of St. Andrews School, and 8 miles east of Pendleton. | 4.45 | 1958, 1963-77 | 4- 7-77 | 14.49 | 9.0 |
| 14021600 | NELSON CREEK AT PENDLETON, OR | Lat 45°40'56", long 118°48'24", on line between sec.3 and 4, T.2 N., R.32 E., Umatilla County, at culvert on U.S. Highway 395, 0.7 mile upstream from mouth, and 0.5 mile northwest of Pendleton. | 2.56 | 1958-77 | - | - | 0 |
| JUNIPER CANYON BASIN | | | | | | | |
| 14034240 | LITTLE JUNIPER CANYON NEAR PINE PINE, OR | Lat 45°33'32", long 119°36'00", in NE¼NW¼ sec.19, T.1 N., R.26 E., Morrow County, at culvert on county road, 8.0 miles west of Pine City. | 4.87 | 1968-77 | - | - | 0 |
| WILLOW CREEK BASIN | | | | | | | |
| 14034370 | WILLOW CREEK TRIBUTARY NEAR HEPPNER, OR | Lat 45°13'40", long 119°20'00", in SW¼ sec.9, T.4 S., R.28 E., Morrow County, at culvert on Willow Creek Road, 300 ft above mouth, and 16.1 miles southeast of Heppner. | 1.11 | 1958-77 | - | - | 0 |
| 14034830 | CASON CANYON AT RUGGS, OR | Lat 45°15'50", long 119°41'05", in SW¼NE¼ sec.34, T.3 S., R.25 E., Morrow County, at culvert on Rhea Creek road, at junction with State Highway 207, at Ruggs. | 2.21 | 1968-77 | - | - | 0 |
| JOHN DAY RIVER BASIN | | | | | | | |
| 14036800 | JOHN DAY RIVER NEAR PRAIRIE CITY, OR | Lat 44°19'10", long 118°33'25", in SE¼SW¼ sec.30, T.14 S., R.35 E., Grant County at culvert on Forest Service road 1427, in Mal- heur National Forest, 200 ft downstream from Call Creek, and 12 miles southeast of Prairie City. | 17.4 | 1968-77 | 6- 8-77 | 7.72 | 39 |
| 14038550 | EAST FORK CANYON CREEK NEAR CANYON CITY, OR | Lat 44°14'45", long 118°54'40", in NE¼ sec.30, T.15 S., R.32 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1451, at mouth, and 10 miles south of Canyon City. | 24.8 | 1965-77 | 4- 1-77 | 10.78 | 49 |
| 14038600 | VANCE CREEK NEAR CANYON CITY, OR | Lat 44°17'20", long 118°58'50", in NE¼ sec.10, T.15 S., R.31 E., Grant County, at culvert on U.S. Highway 395, at confluence with South Fork, 1.0 mile upstream from mouth, and 9.5 miles south of Canyon City. | 6.54 | 1964-77 | 4-27-77 | - | b.5 |
| 14038750 | BEECH CREEK NEAR FOX, OR | Lat 44°34'05", long 119°06'30", in SE¼ sec.33, T.11 S., R.30 E., Grant County, at culvert on U.S. Highway 395, at entrance to Beech Creek Forest Camp, and 6.8 miles south of Fox. | 1.94 | 1965-77 | 4-27-77 | - | b.5 |
| 14038900 | FIELDS CREEK NEAR MOUNT VERNON, OR | Lat 44°23'35", long 119°18'25", in SE¼ sec.35, T.13 S., R.28 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1451, 0.3 mile upstream from Big Canyon and 10 miles west of Mt. Vernon. | 17.5 | 1965-77 | - | - | 0 |
| 14039200 | VENATOR CREEK NEAR SILVIES, OR | Lat 43°59'55", long 119°16'30", in NW¼ sec.20, T.18 S., R.29 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1877, 1.5 miles above mouth, and 16 miles west of Silvies. | 11.9 | 1966-77 | 4- 8-77 | - | a2.0 |
| 14039400 | JACKASS CREEK NEAR DAYVILLE, OR (Station discontinued) | Lat 44°21'10", long 119°33'10", in SW¼ sec.13, T.14 S., R.25 E., Grant County, at culvert on BLM road (project no. 205), at mouth, 10.4 road miles south of Dayville, | 3.95 | 1969-77 | 5-10-77 | 10.12 | 85 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Annual maximum | | |
|---------------------------------|--|---|----------------------------------|------------------|----------------|------------------|---------------------------------|
| | | | | | Date | Gage height (ft) | Dis-charge (ft ³ /s) |
| JOHN DAY RIVER BASIN--Continued | | | | | | | |
| 14040700 | WHISKY CREEK NEAR MITCHELL, OR | Lat 44°31'21", long 119°55'18", in SE¼ sec.14, T.12 S., R.23 E., Wheeler County, at culvert on U.S. Highway 26, 13.6 miles east of Mitchell. | 2.22 | 1968-77 | - | - | 0 |
| 14040900 | BRUIN CREEK NEAR DALE, OR | Lat 44°53'51", long 118°47'35", in SW¼ sec.6, T.8 S., R.33 E., Grant County, at culvert on Forest Service road SA-12, 12 miles southeast of Dale. | 4.63 | 1969-77 | 8-26-77 | - | b1.0 |
| 14041900 | LINE CREEK NEAR LEHMAN SPRINGS, OR | Lat 45°10'10", long 118°42'40", in NW¼ sec.3, T.5 S., R.33 E., Umatilla County, in Umatilla National Forest, at culvert on Forest Service road 524, 0.2 mile upstream from mouth, and 2 miles west of Lehman Springs. | 2.27 | 1965-77 | 4- 7-77 | 11.89 | 34 |
| 14043800 | BRIDGE CREEK NEAR PRAIRIE CITY, OR | Lat 44°32'30", long 118°32'25", in NE¼ sec.7, T.12 S., R.35 E., Grant County, at culvert at intersection of Looney Springs Road and U.S. Highway 26, 3.1 miles east of Dixie Summit, and 13.4 miles east of Prairie City. | 6.93 | 1964-77 | 4-25-77 | 7.06 | c5.0 |
| 14043850 | COTTONWOOD CREEK NEAR GALENA, OR | Lat 44°39'10", long 118°51'55", in SE¼ sec.33, T.10 S., R.32 E., Grant County, in Malheur National Forest, at culvert on Forest Service road 1015, 2.5 miles upstream from mouth, and 4 miles south of Galena. | 3.89 | 1965-77 | 4- 7-77 | 11.03 | 46 |
| 14043900 | GRANITE CREEK NEAR DALE, OR | Lat 44°53'40", long 119°00'50", in NW¼ sec.8, T.8 S., R.31 E., Grant County, at culvert on U.S. Highway 395, 4.7 miles north of bridge on Middle Fork John Day River, and 8.2 miles south of Dale. | 1.90 | 1965-77 | 4-27-77 | - | b.1 |
| 14044100 | PAUL CREEK NEAR LONG CREEK, OR | Lat 44°43'26", long 119°07'54", in SE¼ sec.5, T.10 S., R.30 E., Grant County, at culvert on State Highway 207, 1.5 miles east of long Creek. | 3.50 | 1968-77 | 4-27-77 | - | b.01 |
| 14046250 | IVES CANYON NEAR SPRAY, OR | Lat 44°51'35", long 119°42'50", in SE¼NE¼ sec.22, T.8 S., R.25 E., Wheeler County, at culvert on State Highway 207, 4 miles south of National Forest boundary, and 4 miles north-east of Spray. | 2.73 | 1967-77 | 8- 8-77 | 13.60 | 52 |
| 14046300 | BIG SERVICE CREEK NEAR SERVICE CREEK, OR | Lat 44°53'38", long 120°04'11", in NE¼NE¼ sec.10, T.8 S., R.22 E., Wheeler County, at culvert on State Highway 19, 7.8 miles north of Service Creek. | 5.56 | 1968-77 | 4-26-77 | - | b.05 |
| 14046400 | DONNELLY CREEK TRIBU-TARY NEAR SERVICE CREEK, OR | Lat 44°46'20", long 120°00'10", in SE¼ sec.19, T.9 S., R.23 E., Wheeler County, at two culverts on State Highway 207, 1.8 miles south of Service Creek. | 1.85 | 1964-77 | - | - | 0 |
| 14046650 | CARROL CREEK NEAR MITCHELL, OR | Lat 44°33'07", long 120°20'25", in SW¼ sec.4, T.12 S., R.20 E., Wheeler County, at culvert on U.S. Highway 26, 11.5 miles west of Mitchell. | .28 | 1968-77 | - | - | 0 |
| 14046900 | JOHN DAY RIVER TRIBU-TARY NEAR CLARNO, OR | Lat 44°54'20", long 120°34'05", in NE¼ sec.4, T.8 S., R.18 E., Wasco County, at culvert on State Highway 218, 5 miles west of Clarno, and 8 miles east of Antelope. | 1.36 | 1969-77 | - | - | 0 |
| 14047350 | ROCK CREEK NEAR HARDMAN, OR | Lat 45°04'40", long 119°34'10", in NE¼ sec.2, T.6 S., R.26 E., Morrow County, in Umatilla National Forest, at culvert on Forest Service road 618, 0.5 mile upstream from mouth, and 8.5 miles southeast of Hardman. | 6.25 | 1965-77 | 4-25-77 | - | b.25 |
| 14047450 | WEST FORK DRY CREEK NEAR GOOSEBERRY, OR | Lat 45°17'12", long 119°57'53", in SE¼SE¼ sec.20, T.3 S., R.23 E., Morrow County, at culvert on State Highway 206, 3.5 miles west of Gooseberry, and 10 miles northeast of Condon. | .81 | 1965-77 | - | - | 0 |
| 14047470 | JUNIPER CANYON TRIBU-TARY NEAR MIKKALO, OR | Lat 45°27'51", long 120°11'54", in SW¼ sec.21, T.1 S., R.21 E., Gilliam County, at culvert on Mikkalo Road, 0.1 mile upstream from mouth, and 1.7 miles east of Mikkalo. | 1.94 | 1972-77 | - | - | 0 |
| 14048020 | GRASS VALLEY CANYON NEAR GRASS VALLEY, OR | Lat 45°22'25", long 120°46'27", on sec. lines 23 and 26, T.2 S., R.16 E., Sherman County, at culvert on county road, 1 mile northeast of Grass Valley. | 8.15 | 1958-77 | - | - | 0 |
| 14048040 | GORDON HOLLOW AT DEMOSS SPRINGS, OR | Lat 45°30'40", long 120°40'55", in NW¼ sec.3, T.1 S., R.17 E., Sherman County, at culvert on U.S. Highway 97 at DeMoss Springs. | 8.86 | 1959-77 | 11- 3-76 | 7.6 | c11 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Date | Annual maximum | |
|-----------------------|---|---|----------------------------------|------------------|---------|------------------|--------------------------------|
| | | | | | | Gage height (ft) | Discharge (ft ³ /s) |
| SPANISH HOLLOW BASIN | | | | | | | |
| 14048300 | SPANISH HOLLOW AT WASCO, OR | Lat 45°35'20", long 120°41'40", in NE¼ sec.9, T.1 N., R.17 E., Sherman County, at culvert on street in southeast Wasco, 1 block east of U.S. Highway 97. | 8.05 | 1959-77 | - | - | 0 |
| 14048310 | SPANISH HOLLOW TRIBUTARY AT WASCO, OR | Lat 45°35'30", long 120°42'55", on sec. lines 5 and 8, T.1 N., R.17 E., Sherman County, on State Highway 206, 0.9 mile west of junction of Highway 97 in Wasco. | 6.13 | 1967-77 | - | - | 0 |
| DESCHUTES RIVER BASIN | | | | | | | |
| 14077800 | WOLF CREEK TRIBUTARY NEAR PAULINA, OR | Lat 44°16'39", long 119°49'00", in NW¼NW¼ sec.14, T.15 S., R.24 E., Crook County, in Ochoco National Forest, at culvert on Forest Service road 1438, 1.7 miles south of Crook County line, 13 miles northeast of Paulina. | 2.15 | 1965-77 | 5-10-77 | 8.30 | 30 |
| 14078200 | LIZARD GULCH NEAR HAMPTON, OR | Lat 43°35'20", long 119°59'00", in SW¼ sec.8, T.23 S., R.23 E., Lake County, in Glass Mountain conservation area, at culvert on U.S. Highway 20, and 15.5 miles east of Hampton. | 19.6 | 1965-77 | 6- 7-77 | 8.73 | 22 |
| 14078280 | MIDDLE FORK CAMP CREEK NEAR PAULINA, OR (Station discontinued) | Lat 43°57'24", long 120°15'30", in NW¼ sec.6, T.19 S., R.21 E., Crook County, at two culverts on Camp Creek road, 0.2 mile upstream from mouth, and 20 miles southwest of Paulina. | - | 1972-77 | 6- 7-77 | 9.06 | 32 |
| 14078300 | CEMETERY CREEK NEAR PAULINA, OR | Lat 44°06'36", long 120°10'30", in SW¼ sec.11, T.17 S., R.21 E., Crook County, at culvert on State Highway 380, 13.2 miles west of Paulina. | a5.1 | 1968-77 | - | - | 0 |
| 14078400 | LOOKOUT CREEK NEAR POST, OR | Lat 44°18'40", long 120°14'24", in SW¼ sec.32, T.14 S., R.21 E., Crook County, in Ochoco National Forest, at culvert on Forest Service Road 143, and 16 miles northeast of Post. | 7.53 | 1966-77 | - | - | 0 |
| 14079750 | CROOKED RIVER TRIBUTARY NEAR POST, OR | Lat 44°10'42", long 120°34'06", in SE¼ sec.16, T.16 S., R.18 E., Crook County, at culvert on county road, 5.4 miles west of Post. | a.3 | 1968-77 | - | - | 0 |
| 14080100 | BEAR CREEK TRIBUTARY NEAR BROTHERS, OR (Station discontinued) | Lat 43°56'17", long 120°34'51", in SE¼NE¼ sec.8, T.19 S., R.18 E., Crook County, at culvert on BLM Bear Creek road, 9 miles north of Brothers. | .86 | 1972-77 | 6- 7-77 | 2.26 | 2.2 |
| 14080180 | SAGE HOLLOW TRIBUTARY NEAR MILLICAN, OR (Station discontinued) | Lat 43°58'41", long 120°43'07", in NE¼SW¼ sec.29, T.18 S., R.17 E., Crook County, at culvert on State Highway 27, 1.0 mile upstream from Bear Creek, and 12 miles northeast of Millican. | 3.50 | 1972-77 | 6- 7-77 | 9.14 | 7.6 |
| 14080300 | BEAR CREEK TRIBUTARY NEAR MILLICAN, OR (Station discontinued) | Lat 44°03'40", long 120°44'20", near sec. lines 30 and 31, T.17 S., R.17 E., Crook County at culvert on State Highway 27, 15 miles northeast of Millican. | 6.59 | 1969-77 | - | - | 0 |
| 14080600 | DRY CREEK NEAR PRINEVILLE, OR | Lat 44°12'12", long 120°45'36", in NW¼ sec.12, T.16 S., R.16 E., Crook County, at culvert on Juniper Canyon road, 8 miles southeast of Prineville. | 14.5 | 1968-77 | - | - | 0 |
| 14081800 | AHALT CREEK NEAR MITCHELL, OR | Lat 44°26'00", long 120°21'05", in NE¼ sec.20, T.13 S., R.20 E., Crook County, at culvert on Forest Service road 1222, 200 ft upstream from mouth. | 2.28 | 1956-77 | - | - | 0 |
| 14082400 | WILDCAT CREEK NEAR PRINEVILLE, OR | Lat 44°24'47", long 120°30'00", in NW¼ sec.30, T.13 S., R.19 E., Crook County, at culvert on U.S. Highway 26, 18.5 miles northeast of Prineville. | 3.66 | 1968-77 | - | - | 0 |
| 14084400 | OCHOCO RESERVOIR TRIBUTARY NEAR PRINEVILLE, OR | Lat 44°18'09", long 120°43'00", in NW¼ sec.5, T.15 S., R.17 E., Crook County, at culvert on U.S. Highway 26, 6 miles east of Prineville. | .63 | 1968-77 | - | - | 0 |
| 14092300 | WILLOW CREEK TRIBUTARY NEAR CULVER, OR | Lat 44°30'38", long 121°04'15", in SE¼ sec.20, T.12 S., R.14 E., Jefferson County, in Crooked River National Grasslands, at culvert on U.S. Highway 26, 0.4 mile upstream from mouth, and 7 miles east of Culver. | 7.47 | 1965-77 | - | - | 0 |
| 14093700 | WOODS HOLLOW AT ASHWOOD, OR | Lat 44°44'10", long 120°45'10", in SW¼ sec.36, T.9 S., R.16 E., Jefferson County, at culvert on county road, 0.1 mile upstream from mouth, and 0.3 mile north of Ashwood. | 1.42 | 1959-77 | - | - | 0 |
| 14094300 | COW CANYON CREEK NEAR ANTELOPE, OR | Lat 44°50'35", long 120°55'40", in NW¼SW¼ sec.27, T.8 S., R.15 E., Jefferson County, at culvert on U.S. Highway 97, 2.6 miles north of Willowdale, and 11 miles southwest of Antelope. | 2.71 | 1959-77 | - | - | 0 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| | | | | | Annual maximum | | |
|----------------------------------|--|---|----------------------------------|------------------|----------------|------------------|--------------------------------|
| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Date | Gage height (ft) | Discharge (ft ³ /s) |
| DESCHUTES RIVER BASIN--Continued | | | | | | | |
| 14095200 | SAGEBRUSH CREEK TRIBUTARY NEAR GATEWAY, OR | Lat 44°45'33", long 121°02'02", in SE¼NE¼ sec.27, T.9 S., R.14 E., Jefferson County, at culvert on former U.S. Highway 97, 1 mile upstream from mouth and 11 miles north of Madras. | 7.4 | 1957-77 | - | - | 0 |
| 14100800 | JORDAN CREEK NEAR TYGH VALLEY, OR | Lat 45°20'27", long 121°20'45", in SW¼NE¼ sec.6, T.3 S., R.12 E., Wasco County, in Mt. Hood National Forest, at culvert on Forest Service road S207, 10.5 miles northwest of Tygh Valley. | 9.01 | 1965-77 | 11- 2-76 | 10.84 | c7 |
| 14102300 | BOX ELDER CANYON NEAR GRASS VALLEY, OR (Station discontinued) | Lat 45°21'37", long 120°54'10", in SW¼ sec.26, T.2 S., R.15 E., Sherman County, at culvert on BLM Deschutes River access road, at mouth, and 6 miles west of Grass Valley. | 2.21 | 1971-77 | - | - | 0 |
| FIFTEENMILE CREEK BASIN | | | | | | | |
| 14104100 | RAMSEY CREEK NEAR DURFUR, OR | Lat 45°24'03", long 121°22'27", in NW¼ sec.13, T.2 S., R.11 E., Wasco County, in Mt. Hood National Forest, at culvert on Forest Service road S207, 12 miles west of Dufur. | 3.87 | 1965-77 | 11- 2-76 | 9.67 | c5 |
| WILLAMETTE RIVER BASIN | | | | | | | |
| 14144870 | MIDDLE FORK WILLAMETTE RIVER TRIBUTARY NEAR OAKRIDGE, OR | Lat 43°40'20", long 122°26'00", in SW¼ sec.10, T.22 S., R.3 E., Lane County, at culvert on Rigdon Road, 400 ft upstream from flow line of Hills Creek Reservoir, and 5.0 miles south of Oakridge. | .50 | 1960-77 | 4- 8-77 | 14.68 | 5.8 |
| 14145690 | SWAMP CREEK NEAR MCCREDIE SPRINGS, OR (Station discontinued) | Lat 43°39'40", long 122°12'45", in SE¼ sec.16, T.22 S., R.5 E., Lane County, in Willamette National Forest, at culvert on Forest Service road 2156, 0.7 mile upstream from mouth, and 6 miles southeast of McCredie Springs. | 1.51 | 1965-77 | 4- 8-77 | 7.60 | 8.4 |
| 14147400 | TUMBLE CREEK NEAR WESTFIR, OR (Station discontinued) | Lat 43°52'50", long 122°22'30", in NW¼ sec.31, T.19 S., R.4 E., Lane County, in Willamette National Forest, at culvert on Forest Service road 196, at mouth, and 10.5 miles northeast of Westfir. | 1.52 | 1965-77 | 4- 8-77 | 7.39 | 3.0 |
| 14148700 | FERN CREEK NEAR LOWELL, OR (Station discontinued) | Lat 43°51'50", long 122°41'05", in W½NW¼ sec.3, T.20 S., R.1 E., Lane County, at culvert on State Highway 58, at mouth, and 6 miles southeast of Lowell. | .44 | 1954-77 | 4- 8-77 | 4.62 | 3.2 |
| 14158950 | TWISTY CREEK NEAR BELKNAP SPRINGS, OR (Station discontinued) | Lat 44°13'30", long 122°02'35", in NE¼ sec.35, (unsurveyed), T.15 S., R.6 E., Lane County, in Willamette National Forest, at culvert on Forest Service road 1558, 0.8 mile upstream from mouth, and 2.5 miles north of Belknap springs. | 1.18 | 1965-77 | 4- 7-77 | 19.30 | 8.3 |
| 14169700 | BEAR CREEK NEAR CHESHIRE, OR (Station discontinued) | Lat 44°09'30", long 123°21'10", in SE¼ sec.24, T.16 S., R.6 W., Lane County, at culvert on State Highway 36 and 4.2 miles southwest of Cheshire. | 5.19 | 1957-77 | 3- 7-77 | 17.03 | 57 |
| 14178600 | SHORT CREEK AT BREITENBUSH HOT SPRINGS, OR (Station discontinued) | Lat 44°47'10", long 121°58'55", in S½SW¼ sec.17, T.9 S., R.7 E., Marion County, in Willamette National Forest, at culvert on Forest Service road S906, 0.5 mile above mouth and 0.5 mile northwest of Breitenbush Hot Springs. | 2.00 | 1965-77 | 2- 7-77 | 4.87 | c1.9 |
| 14178800 | WIND CREEK NEAR DETROIT, OR (Station discontinued) | Lat 44°45'20", long 122°07'10", in NE¼ sec.31, T.9 S., R.6 E., Marion County, at culvert on Breitenbush River road, 0.1 mile upstream from mouth, and 2 miles northeast of Detroit. | 1.03 | 1954-77 | 12-27-76 | 9.36 | 38 |
| 14184900 | SHEEK CREEK NEAR CASCADIA, OR (Station discontinued) | Lat 44°23'25", long 122°30'25", in SW¼SE¼ sec.36, T.13 S., R.2 E., Linn County, at culvert on U.S. Highway 20 at Cascadia ranger station, 0.1 mile upstream from mouth, and 1.5 miles west of Cascadia. | .89 | 1953-77 | 2- 9-77 | 11.38 | c1 |
| 14190600 | SOAP CREEK TRIBUTARY NEAR SUVER, OR (Station discontinued) | Lat 44°42'00", long 123°13'10", in SW¼NE¼ sec.18, T.10 S., R.4 W., Benton County, at culvert on U.S. Highway 99W, 1.2 miles south of Polk County line and 3 miles south of Suver. | .57 | 1953-77 | - | - | 0 |
| 14192100 | GLENN CREEK NEAR SALEM, OR (Station discontinued) | Lat 44°57'05", long 123°05'00", in SE¼NW¼ sec.20, T.7 S., R.3 W., Polk County, at culvert on Glenn Creek road, 1.5 miles northwest of Salem. | 2.72 | 1952-77 | - | - | 0 |
| 14192800 | SOUTH YAMHILL RIVER TRIBUTARY NEAR WILLAMINA, OR | Lat 45°02'38", long 123°28'20", in SW¼ sec.18, T.6 S., R.6 W., Polk County, at culvert on State Highway 22, 2.2 miles upstream from mouth, and 3 miles southeast of Willamina. | 1.81 | 1954-77 | 11- 2-76 | 6.23 | c1.9 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Annual maximum | | |
|-----------------------------------|--|--|----------------------------------|------------------|----------------|------------------|---------------------------------|
| | | | | | Date | Gage height (ft) | Dis-charge (ft ³ /s) |
| WILLAMETTE RIVER BASIN--Continued | | | | | | | |
| 14204100 | BATEMAN CREEK NEAR GLENWOOD, OR (Station discontinued) | Lat 45°37'30", long 123°15'40", in SW $\frac{1}{4}$ sec.26, T.2 N., R.5 W., Washington County, at culvert on State Highway 6, at mouth, 1.5 miles south of Glenwood. | 1.27 | 1952-77 | 9-16-77 | 9.94 | c2.0 |
| 14206900 | FANNO CREEK AT 56TH AVE. IN PORTLAND, OR | Lat 45°29'17", long 122°44'01", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.1 S., R.1 E., Multnomah County, at SW 56th Avenue in Portland. | 2.37 | 1975-77 | 3- 7-77 | 3.48 | 92 |
| 14207920 | POOP CREEK NEAR BIG BOTTOM, OR | Lat 44°58'35", long 121°50'35", in SW $\frac{1}{4}$ sec.9 (unsurveyed), T.7 S., R.8 E., Clackamas County, in Mt. Hood National Forest, at culvert on Forest Service road S650, at mouth, and 3 miles southeast of Big Bottom. | 1.74 | 1966-77 | - | - | 0 |
| 14208200 | COLLAWASH RIVER TRIBU- TARY NEAR BREITEN- BUSH HOT SPRINGS, OR (Station discontinued) | Lat 44°55'50", long 122°00'40", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.25, T.7 S., R.6 E., Marion County, at culvert on Forest Service road S63, 0.5 mile north of Russ Creek, and 10 miles north of Breitenbush Hot Springs. | .39 | 1966-77 | - | - | 0 |
| 14208850 | EAST FORK SHELLROCK CREEK NEAR GOVERN- MENT CAMP, OR (Station discontinued) | Lat 45°08'30", long 121°53'55", in NW $\frac{1}{4}$ sec.13, T.5 S., R.7 E., Clackamas County, in Mt. Hood National Forest, at culvert on Forest Service road 58B, 5 miles west of Timothy Lake, and 13.5 miles southwest of Government Camp. | 2.30 | 1965-77 | 10-26-76 | 9.91 | c5.5 |
| 14209100 | KINK CREEK NEAR GOVERNMENT CAMP, OR (Station discontinued) | Lat 45°04'15", long 121°57'45", in SW $\frac{1}{4}$ sec.4, T.6 S., R.7 E., Clackamas County, at culvert 0.1 mile downstream from Kelly Creek, 0.2 mile upstream from mouth at Lake Harriet on the Oak Grove Fork Clackamas River, and 19 miles southwest of Government Camp. | 3.75 | 1958-77 | - | - | 0 |
| 14209750 | WHISKY CREEK NEAR ESTACADA, OR (Station discontinued) | Lat 45°12'50", long 122°09'30", in E $\frac{1}{2}$ NW $\frac{1}{4}$ sec.23, T.4 S., R.5 E., Clackamas County, in Mt. Hood National Forest, at culvert on Forest Service road S457, 0.1 mile upstream from mouth, and 10 miles southeast of Estacada. | 1.06 | 1965-77 | - | - | 0 |
| 14209900 | DUBOIS CREEK AT ESTACADA, OR (Station discontinued) | Lat 45°16'55", long 122°20'35", in NW $\frac{1}{4}$ sec.29, T.3 S., R.4 E., Clackamas County, at culvert 0.4 mile upstream from mouth, and 0.5 mile southwest of Estacada. | 2.52 | 1957-77 | - | - | 0 |
| 14211301 | TRYON CREEK TRIBU- TARY AT DOLPH COURT IN PORTLAND, OR | Lat 45°27'43", long 122°42'18", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.1 S., R.1 E., Multnomah County, at Dolph Court in Portland. | .36 | 1975-77 | 3- 7-77 | 1.88 | 16 |
| 14211800 | SALTZMAN CREEK AT PORTLAND, OR (Station discontinued) | Lat 45°33'54", long 122°44'28", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.13, T.1 N., R.1 W., Multnomah County, at culvert at intersection of N.W. Balboa and Culebra Streets in Portland, 430 feet down- stream from U.S. Highway 30, and 0.3 mile up- stream from mouth. | 1.46 | 1952-77 | 8-25-76 | 1.2 | 4.7 |
| CLATSKANIE RIVER BASIN | | | | | | | |
| 14247020 | FALL CREEK NEAR CLATSKANIE, OR | Lat 46°05'47", long 123°14'56", in NW $\frac{1}{4}$ sec.13, T.7 N., R.5 W., Columbia County, at culvert on private road, 100 feet south of State Highway 47, 2.5 miles west of Clatskanie. | 2.07 | 1972-77 | - | - | - |
| BIG CREEK BASIN | | | | | | | |
| 14248510 | LITTLE CREEK NEAR KNAPPA, OR | Lat 46°08'44", long 123°36'16", in SW $\frac{1}{4}$ sec.30, T.8 N., R.7 W., Clatsop County, at culvert on Hillcrest Road, 3 miles south of Knappa. | 1.53 | 1972-77 | - | - | - |
| ASBURY CREEK BASIN | | | | | | | |
| 14299500 | ASBURY CREEK NEAR CANNON BEACH, OR (Station discontinued) | Lat 45°48'55", long 123°57'50", in SW $\frac{1}{4}$ sec.19, T.4 N., R.10 W., Clatsop County, at culvert on U.S. Highway 101, at Arch Cape, 0.1 mile upstream from mouth and 6 miles south of Cannon Beach. | 1.97 | 1952-77 | 3- 8-77 | 6.74 | 112 |
| NEHALEM RIVER BASIN | | | | | | | |
| 14300400 | FISHHAWK CREEK NEAR JEWEL, OR (Station discontinued) | Lat 45°58'45", long 123°36'10", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.6 N., R.7 W., Clatsop County, at two cul- verts on State Highway 202, 6.5 miles northwest of Jewel. | .71 | 1971-77 | 11-15-76 | 15.67 | c5.7 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Date | Annual maximum | |
|-----------------------------|---|---|----------------------------------|------------------|---------|------------------|--------------------------------|
| | | | | | | Gage height (ft) | Discharge (ft ³ /s) |
| LITTLE NESTUCCA RIVER BASIN | | | | | | | |
| 14303650 | SQUAW CREEK NEAR NESKOWIN, OR (Station discontinued) | Lat 45°06'56", long 123°53'41", in NW¼ sec.27, T.5 S., R.10 W., Tillamook County, in Siuslaw National Forest, at culvert on Forest Service road 5533, 1 mile upstream from mouth, and 4 miles east of Neskowin. | 2.11 | 1965-77 | 3- 8-77 | 13.52 | 86 |
| SALMON RIVER BASIN | | | | | | | |
| 14303700 | ALDER BROOK NEAR ROSE LODGE, OR | Lat 45°01'20", long 123°51'10", in SE¼ sec.25, T.6 S., R.10 W., Lincoln County, at culvert on State Highway 18, 0.1 mile upstream from mouth, and 1.5 miles northeast of Rose Lodge. | 1.09 | 1954-77 | 7- 8-77 | 11.04 | c1.7 |
| ALSEA RIVER BASIN | | | | | | | |
| 14306830 | LYNDON CREEK NEAR WALDPOR, OR (Station discontinued) | Lat 44°27'02", long 123°58'50", in SE¼ sec.11, T.13 S., R.11 W., Lincoln County, in Siuslaw National Forest, at culvert on Forest Service road 1245, 0.9 mile upstream from mouth, and 4 miles northeast of Waldport. | .90 | 1965-77 | - | - | 0 |
| SIUSLAW RIVER BASIN | | | | | | | |
| 14307610 | SIUSLAW RIVER TRIBUTARY NRAR RAINROCK, OR (Station discontinued) | Lat 44°04'00", long 123°52'45", in NW¼ sec.27, T.17 S., R.10 W., Lane County, at culvert on State Highway 36, at mouth, and 1.3 miles west of Rainrock. | .42 | 1957-77 | 3- 8-77 | 6.28 | 6.6 |
| 14307640 | SAM CREEK NEAR MINERVA, OR (Station discontinued) | Lat 44°09'08", long 123°56'49", in NE¼ sec.25, T.16 S., R.11 W., Lane County, in Siuslaw National Forest, at culvert on Forest Service road 1658, 5.5 miles north of Minerva. | 2.58 | 1965-77 | 2-28-77 | 9.62 | 140 |
| UMPQUA RIVER BASIN | | | | | | | |
| 14307685 | MULT CREEK NEAR TILLER, OR (Station discontinued) | Lat 43°06'00", long 122°44'55", in SW¼ sec.30, T.28 S., R.1 E., Douglas County, in Umpqua National Forest, at culvert on Forest Service road 2719, at mouth, and 15.5 miles northeast of Tiller. | 2.65 | 1965-77 | 5-11-77 | 7.94 | 38 |
| 14308950 | BEAVER CREEK NEAR DREW, OR (Station discontinued) | Lat 42°48'40", long 122°59'30", in NE¼NE¼ sec.12, T.32 S., R.3 W., Douglas County, in Umpqua National Forest, at culvert on Forest road 3232, 0.2 mile upstream from mouth and 7 miles southwest of Drew. | 1.61 | 1965-77 | 9-28-77 | 7.29 | 13 |
| 14312100 | PARROTT CREEK AT ROSEBURG, OR | Lat 43°11'45", long 123°20'50", in NE¼ sec.25, T.27 S., R.6 W., Douglas County, at culvert on Starmer Street between Marsters and Booth Streets in Roseburg, 0.5 mile upstream from mouth. | 2.42 | 1952-77 | 3- 8-77 | 8.34 | 2.0 |
| 14312700 | THIELSEN CREEK NEAR DIAMOND LAKE, OR (Station discontinued) | Lat 43°13'10", long 122°08'15", in SW¼ sec.17, T.27 S., R.6 E., (unsurveyed), Douglas County, in Umpqua National Forest, at culvert on State Highway 209, and 3 miles north of resort of Diamond Lake. | 12.2 | 1966-77 | 5-26-77 | 9.14 | 6.7 |
| 14316600 | DOG CREEK NEAR IDLEYLD PARK, OR (Station discontinued) | Lat 43°17'55", long 122°38'15", in NE¼ sec.24, T.26 S., R.1 E., Douglas County, in Umpqua National Forest, at culvert on State Highway 138, 6.5 miles southeast of Steamboat ranger station, and 19 miles east of Idleyld Park. | 3.93 | 1965-77 | 5-26-77 | 7.57 | 33 |
| 14317700 | WHITE CREEK NEAR PEEL, OR | Lat 43°13'20", long 122°51'10", in NW¼ sec.17, T.27 S., R.1 W., Douglas County, in Umpqua National Forest, at culvert on Forest Service road 274, 0.4 mile upstream from mouth, and 9.5 miles east of Peel. | 3.92 | 1965-77 | 9-28-77 | 8.75 | 39 |
| 14322850 | SAWYER CREEK NEAR ELKTON, OR (Station discontinued) | Lat 43°35'54", long 123°40'12", in NW¼SE¼ sec.5, T.23 S., R.8 W., Douglas County, at culvert on BLM Sawyer Creek road, 6 miles southwest of Elkton. | a.3 | 1971-77 | 3- 8-77 | 8.47 | 9.2 |
| 14323020 | BUCK CREEK TRIBUTARY NEAR SCOTTSBURG, OR | Lat 43°35'30", long 123°46'00", in NE¼NE¼ sec.9, T.23 S., R.9 W., Douglas County, at culvert on Buck Creek road, at mouth, and 5 miles south of Scottsburg. | - | 1971-77 | 3- 8-77 | 8.20 | 1.2 |
| 14323170 | SMITH RIVER TRIBUTARY NEAR GARDINER, OR (Station discontinued) | Lat 43°44'35", long 124°02'30", in SW¼SW¼ sec.17, T.21 S., R.11 W., Douglas County, at culvert on Smith River road, 3.5 miles east of Gardiner. | .13 | 1971-77 | 3- 8-77 | 8.10 | 3.0 |

Annual maximum discharge at crest-stage partial-record stations--Continued

| Station No. | Station name | Location | Drainage area (mi ²) | Period of record | Annual maximum | | |
|----------------------|--|---|----------------------------------|------------------|----------------|------------------|---------------------------------|
| | | | | | Date | Gage height (ft) | Dis-charge (ft ³ /s) |
| COOS RIVER BASIN | | | | | | | |
| 14324520 | DAGGET CREEK NEAR ALLEGANY, OR (Station discontinued) | Lat 43°27'45", long 124°03'05", in N½ sec.30, T.24 S., R.11 W., Coos County, at culvert on West Fork Millicoma River road, 5 miles north of Allegany. | .41 | 1971-77 | 3- 8-77 | 11.13 | 8.8 |
| COQUILLE RIVER BASIN | | | | | | | |
| 14326600 | GETTYS CREEK NEAR MYRTLE POINT, OR (Station discontinued) | Lat 43°00'30", long 124°12'40", in SE¼SE¼ sec.35, T.29 S., R.13 W., Coos County, at culvert on county road, 0.2 mile upstream from mouth, and 5.5 miles southwest of Myrtle Point. | 1.45 | 1953-77 | 3- 8-77 | 9.44 | 48 |
| 14326820 | MIDDLE CREEK TRIBUTARY NEAR MCKINLEY, OR (Station discontinued) | Lat 43°11'50", long 124°01'25", in SE¼SE¼ sec.29, T.27 S., R.11 W., Coos County, at culvert on Middle Creek road, 0.6 mile north of McKinley, and 8 miles east of Coquille. | 1.29 | 1971-77 | 3- 8-77 | 17.01 | 14 |
| 14327050 | GLEN AIKEN CREEK TRIBUTARY NEAR COQUILLE, OR (Station discontinued) | Lat 43°08'50", long 124°09'50", in SE¼NE¼ sec.18, T.28 S., R.12 W., Coos County, at culvert on Glen Aiken Creek road, 3 miles southeast of Coquille. | .33 | 1971-77 | 3- 7-77 | 8.84 | 9.0 |
| ELK CREEK BASIN | | | | | | | |
| 14327240 | MILBURY CREEK NEAR PORT ORFORD, OR (Station discontinued) | Lat 43°43'20", long 124°15'00", in NW¼ sec.16, T.33 S., R.13 W., Curry County, in Siskiyou National Forest, at culvert on Forest Service road 325, at mouth, and 13 miles east of Port Orford. | .80 | 1966-77 | 3- 8-77 | 28.84 | 140 |
| BRUSH CREEK BASIN | | | | | | | |
| 14327400 | DRY RUN CREEK NEAR PORT ORFORD, OR | Lat 42°41'20", long 124°26'00", in NW¼ sec.25, T.33 S., R.15 W., Curry County, at culvert in Humbug Mountain State Park and 5 miles south-east of Port Orford. | .86 | 1954-77 | 3- 7-77 | 14.75 | 48 |
| ROGUE RIVER BASIN | | | | | | | |
| 14327490 | NATIONAL CREEK NEAR UNION CREEK, OR (Station discontinued) | Lat 43°00'15", long 122°21'50", in E½ sec.32, T.29 S., R.4 E., Douglas County, at culvert on Forest Service road 2967 in Rogue River National Forest, 0.3 mile upstream from mouth, and 9 miles northeast of town of Union Creek. | 19.3 | 1965-77 | 5- 3-77 | 17.55 | 58 |
| 14333490 | ELKHORN CREEK NEAR PROSPECT, OR (Station discontinued) | Lat 42°47'18", long 122°23'55", in SW¼NW¼ sec.18, T.32 S., R.4 E., Jackson County, at culvert on Forest Service road 3227 in Rogue River National Forest, 0.2 mile upstream from mouth, and 5 miles northeast of Prospect. | 1.50 | 1965-77 | 5-23-77 | 8.40 | 11 |
| 14335080 | FIRELINE CREEK NEAR BUTTE FALLS, OR (Station discontinued) | Lat 42°34'10", long 122°24'10", in SE¼ sec.36, T.34 S., R.3 E., Jackson County, in Rogue River National Forest, at culvert on Forest Service road 3520B, 0.8 mile upstream from mouth, and 8 miles east of Butte Falls. | 4.77 | 1966-77 | 3-23-77 | 8.55 | 31 |
| 14361300 | JONES CREEK NEAR GRANTS PASS, OR (Station discontinued) | Lat 42°26'10", long 123°17'10", in SE¼ sec.16, T.36 S., R.6 W., Josephine County, at culvert on Interstate Highway 5 and traffic interchange for Foothill Boulevard, and 2 miles east of Grants Pass. | 7.41 | 1952-77 | 3-23-77 | 12.92 | 64 |
| 14362050 | KINNEY CREEK NEAR MCKEE BRIDGE, OR | Lat 42°05'35", long 123°07'40", in NW¼ sec.13, T.40 S., R.4 W., Jackson County, in Rogue River National Forest, at culvert on Forest Service road 405, 1.3 miles upstream from mouth, and 4 miles southwest of McKee Bridge. | 2.83 | 1965-77 | 5-22-77 | 8.19 | 14 |
| HUNTER CREEK BASIN | | | | | | | |
| 14378550 | HUNTER CREEK NEAR GOLD BEACH, OR (Station discontinued) | Lat 42°24'25", long 124°15'05", in NW¼ sec.4 (unsurveyed), T.37 S., R.13 W., Curry County, in Siskiyou National Forest, at culvert on Forest Service road 368, 8.5 miles east of Gold Beach. | .98 | 1965-77 | 3- 8-77 | 9.09 | 146 |
| RANSOM CREEK BASIN | | | | | | | |
| 14378900 | RANSOM CREEK NEAR BROOKINGS, OR (Station discontinued) | Lat 42°03'45", long 124°18'00", in NE¼ sec.1, T.41 S., R.14 W., Curry County, at culvert on U.S. Highway 101, 0.1 mile upstream from mouth, and 1.2 miles northwest of Brookings. | .74 | 1953-77 | 3- 7-77 | 23.16 | 29 |

a Approximately.

b Estimated.

c Maximum observed.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES IN OREGON

Measurements of streamflow at point, other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterick (*), measurements of peak flow a (†).

Discharge measurements at miscellaneous sites during water year 1977

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | | | | | | |
|-----------------------------|--------------|---------------------------------|-----------------------------|--|--------------------------------|--------------------|---------------------------------|---|---|---------|-----|
| | | | | | Date | Discharge (cfs) | | | | | |
| Part 10 SILVIES RIVER BASIN | | | | | | | | | | | |
| East Fork Silvies River | Malheur Lake | SW¼ sec.5, T.25 S., R.32½ E. | Indeter- minate | - | 10-20-76 | 0 | | | | | |
| | | | | | 12- 1-76 | 3.90 | | | | | |
| | | | | | 12-22-76 | .24 | | | | | |
| | | | | | 1- 6-77 | 0 | | | | | |
| | | | | | 1-24-77 | 0 | | | | | |
| | | | | | 2- 9-77 | 0 | | | | | |
| | | | | | 2-16-77 | 0 | | | | | |
| | | | | | 3- 9-77 | 0 | | | | | |
| | | | | | 3-22-77 | 0 | | | | | |
| | | | | | 4- 7-77 | 0 | | | | | |
| | | | | | 5- 5-77 | 0 | | | | | |
| | | | | | 5-31-77 | 0 | | | | | |
| | | | | | 7- 5-77 | 0 | | | | | |
| | | | | | 8- 3-77 | 0 | | | | | |
| | | | | | 9- 8-77 | 0 | | | | | |
| West Fork Silvies River |do..... | SE¼SW¼ sec.24, T.25 S., R.32 E. | Indeter- minate | - | 10-20-76 | 3.81 | | | | | |
| | | | | | 12- 1-76 | 0 | | | | | |
| | | | | | 1- 3-77 | 0 | | | | | |
| | | | | | 1- 6-77 | 0 | | | | | |
| | | | | | 1-24-77 | 0 | | | | | |
| | | | | | 2- 9-77 | 0 | | | | | |
| | | | | | 2-16-77 | 0 | | | | | |
| | | | | | 3- 9-77 | 4.20 | | | | | |
| | | | | | 4- 7-77 | 0 | | | | | |
| | | | | | 5- 4-77 | 0 | | | | | |
| | | | | | 7- 5-77 | 0 | | | | | |
| | | | | | 8- 3-77 | 0 | | | | | |
| | | | | | MALHEUR AND HARNEY LAKES BASIN | | | | | | |
| | | | | | Malheur Slough |do..... | NW¼SE¼ sec.31, T.24 S., R.33 E. | - | - | 3-11-72 | 0 |
| | | | | | | | | | | 3-18-72 | .49 |
| 3-31-72 | 0 | | | | | | | | | | |
| 4-19-72 | 0 | | | | | | | | | | |
| 5- 3-72 | 0 | | | | | | | | | | |
| 6-27-72 | 0 | | | | | | | | | | |
| 1-10-73 | 0 | | | | | | | | | | |
| 3- 6-73 | .10 | | | | | | | | | | |
| 3-20-73 | .01 | | | | | | | | | | |
| 4- 4-73 | 0 | | | | | | | | | | |
| 4-18-73 | 0 | | | | | | | | | | |
| 5- 1-73 | 0 | | | | | | | | | | |
| 5-15-73 | 0 | | | | | | | | | | |
| 9-25-73 | 0 | | | | | | | | | | |
| 1-16-74 | 9.03 | | | | | | | | | | |
| 11-14-74 | 0 | | | | | | | | | | |
| 12-17-74 | 0 | | | | | | | | | | |
| 1-17-75 | 0 | | | | | | | | | | |
| 3-13-75 | .39 | | | | | | | | | | |
| 4-23-75 | .10 | | | | | | | | | | |
| 6-10-75 | 0 | | | | | | | | | | |
| 7- 1-75 | 0 | | | | | | | | | | |
| 7-17-75 | 0 | | | | | | | | | | |
| 8-27-75 | 0 | | | | | | | | | | |
| 11-19-75 | 0 | | | | | | | | | | |
| 12-10-75 | 0 | | | | | | | | | | |
| 1- 8-76 | 0 | | | | | | | | | | |
| 1-27-76 | 0 | | | | | | | | | | |
| 2-11-76 | 0 | | | | | | | | | | |
| 3-11-76 | 1.23 | | | | | | | | | | |
| 3-17-76 | .29 | | | | | | | | | | |
| 5- 6-76 | 0 | | | | | | | | | | |
| 6-16-76 | 0 | | | | | | | | | | |
| 7-29-76 | 0 | | | | | | | | | | |
| 9- 9-76 | 0 | | | | | | | | | | |
| 10- 5-76 | 0 | | | | | | | | | | |
| 10-20-76 | 0 | | | | | | | | | | |
| 12- 1-76 | 0 | | | | | | | | | | |
| 12-20-76 | 0 | | | | | | | | | | |

Discharge measurements at miscellaneous sites during water year 1977--Continued

| Discharge Measurements at miscellaneous sites during water year 1977--Continued | | | | | | |
|---|-----------------------------------|----------------------------------|-----------------------|--|--|--|
| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
| | | | | | Date | Discharge (cfs) |
| Part 10 MALHEUR AND HARNEY LAKES BASIN--Continued | | | | | | |
| Malheur Slough (Continued) | Malheur Lake | NW¼SE¼ sec.31, T.24 S., R.33 E. | - | - | 1- 6-77 1-24-77 2- 9-77 2-16-77 3- 9-77 3-22-77 4- 7-77 5- 4-77 5-31-77 7- 5-77 8- 3-77 9- 8-77 | 0 0 0 0 0 .80 .01 0 0 0 0 0 |
| Sodhouse Spring |do..... | NE¼SW¼ sec.35., T.27 S., R.31 E. | - | - | 10- 6-62 7-10-73 7-24-73 8- 8-73 10- 4-73 10-16-73 | *11.0 *11.0 *14.6 18.4 *12.1 *12.0 |
| Little Blitzen River | Donner Und Blitzen River | SW¼ sec.32, T.33 S., R.32 3/4 E. | - | - | 9-13-77 | *1.74 |
| Bridge Creek | Mud Creek | NW¼ sec.33, T.31 S., R.32 E. | a30 | 1911-16† 1930†, 1937-70† | 8-10-77 | *9.18 |
| Krumbo Creek | Donner Und Blitzen River | SW¼ sec.20, T.30 S., R.32 E. | a35 | - | 8-10-77 | 0 |
| Kiger Creek |do..... | NE¼ sec.10, T.30 S., R.33 E. | a75 | - | 8-10-77 | *4.90 |
| McCoy Creek |do..... | SE¼ sec.2, T.30 S., R.32 E. | a45 | - | 8-14-63 | *2.31 |
| Part 11 KLAMATH RIVER BASIN | | | | | | |
| North Junction Spring | Crater Lake | Lat 42°57'54", long 122°09'10" | - | 1967-68 | 9- 8-77 | 0 |
| Bear Creek | Klamath Marsh | Lat 42°58'15", long 122°00'20". | - | 1967-68 | 8-11-77 | .05 |
|do..... |do..... | Lat 42°58'15", long 122°00'10". | - | 1967-68 | 8-11-77 | 0 |
| Boundary Springs | Rogue River | Lat 43°03'55", long 122°13'55". | - | 1967-68 | 8-12-77 | 27.4 |
| Big Springs Creek | Williamson River in Klamath Marsh | SE¼ sec.22, T.30 S., R.8 E. | a80 | 1915-27, 1930, 1949-54, 1956-57, 1959-62, 1964-71, 1973, 1975 | 6-16-77 8- 9-77 | *37.2 *36.2 |
| Williamson River | Upper Klamath Lake | NW¼ sec.2, T.34 S., R.7 E. | a1,330 | 1912-13*, 1917-25*, 1942, 1949-54, 1956, 1959-62, 1964-71, 1973 | 8-24-77 | *22.6 |
| Larkin Creek | Williamson River | SW¼ sec.11, T.34 S., R.7 E. | (b) | 1924-25, 1950-53, 1956, 1957-62, 1964-71, 1973 | 8-25-77 | *14.8 |
| Shakespeare Creek |do..... | SE¼SE¼ sec.10, T.34 S., R.7 E. | (b) | 1964-71, 1973 | 8-25-77 | *9.7 |
| Spring Creek |do..... | NE¼ sec.9, T.34 S., R.7 E. | 21.0 | 1905, 1914-17, 1919-20, 1922-29, 1931-34, 1949-54, 1956, 1959-62, 1964-71, 1973 | 8-23-77 | *293 |

Discharge measurements at miscellaneous sites during water year 1977--Continued

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
|----------------------------------|---------------|---------------------------------|-----------------------|---|--------------|-----------------|
| | | | | | Date | Discharge (cfs) |
| Part 10 KLAMATH RIVER--Continued | | | | | | |
| Fivemile Creek | North Fork | NE½ sec.34, T.35 S., R.13 E. | a40 | 1917-21½, 1922-23, 1925-26, 1949-54, 1956, 1959-71, 1975 | 9- 7-77 | *18.0 |
| Medicine Springs | Sprague River | SE½NE½ sec.13, T.36 S., R.12 E. | (b) | 1966-71, 1975 | 9- 7-77 | *16.6 |
| Sycan River |do..... | SE½ sec.8, T.35 E., R.12 E. | a540 | 1912-14, 1915-25½, 1926, 1949-54, 1956, 1959-71, 1973, 1975 | 9- 7-77 | *7.85 |
| Kamkaun Springs |do..... | SE½SE½ sec.25, T.34 S., R.8 E. | (b) | 1949, 1951-54, 1956, 1959-62, 1964-71, 1973, 1975 | 9- 8-77 | *42.3 |
| Wood River Springs | Wood River | SE½ sec.3, T.33 S., R.7½ E. | (b) | 1956, 1959-71, 1973 | 8-26-77 | *133 |
| Wood River | Agency Lake | NW¼ sec.22, T.33 S., R.7½ E. | a90 | 1904-10, 1911-36½, 1949-71 | 8-26-77 | *131 |
| Fort Creek | Wood River | SW½ sec.26, T.33 S., R.7½ E. | (b) | 1906-11, 1915-18, 1920-21, 1923-25, 1927-29, 1931, 1949-53, 1955-56, 1959-71, 1973 | 8-26-77 | *65.4 |
| Crooked Creek | Agency Lake | SE½ sec.13, T.34 S., R.7½ E. | - | 1905-09, 1915-18, 1920-21, 1923-24, 1928, 1949-50, 1952-53, 1956, 1959-65, 1965-67½, 1973 | 8-26-77 | *74.1 |
| Spencer Creek | Klamath River | SW¼ sec.20, T.39 S., R.7 E. | a90 | 1927, 1929-32½, 1934, 1949-53, 1955-56, 1959-71, 1973 | 8-22-77 | *6.2 |
| Jenny Creek | Klamath Lake | NW¼ sec.35, T.48 N., R.5 W. | 211 | 1922-28 | 8-29-77 | *12.7 |
| Munson Springs | Munson Creek | Lat 42°54'20", long 122°08'00". | - | 1967-68 | 8-12-77 | *.08 |
| Headquarter Spring |do..... | Lat 42°54'10", long 122°08'10". | - | 1967-68 | 8-12-77 | *.05 |
| Unnamed Tributary |do..... | Lat 42°53'38", long 122°07'45" | - | 1967-68 | 8-12-77 | *1.26 |

Discharge measurements at miscellaneous sites during water year 1977--Continued

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
|--|------------------------------|---------------------------------|-----------------------------|--|-------------------------------|-------------------------|
| | | | | | Date | Discharge (cfs) |
| Part 11 KLAMATH RIVER BASIN--Continued | | | | | | |
| Munson Creek | Annie Creek | Lat 42°52'45", long 122°08'15". | - | 1967-68 | 6-14-77 7-12-77 8-11-77 | *6.37 *3.26 *2.28 |
| Annie Creek | Wood River | Lat 42°46'00", long 122°03'20". | - | 1967-68 | 6-16-77 7-13-77 8-12-77 | *48.1 *38.0 *36.2 |
| Sun Creek | Annie Creek | Lat 42°48'55", long 122°02'05". | - | 1967-68 | 8-11-77 | *8.66 |
| Part 13 OWYHEE RIVER BASIN | | | | | | |
| Crooked Creek | Owyhee River | Sec.6, T.32 S., R.41 E. | 1,700 | 1949-52+ | 9- 9-77 | 22.9 |
| Part 13 MALHEUR RIVER BASIN | | | | | | |
| Malheur River | Snake River | NE½SE½ sec.5, T.20 S., R.34 E. | - | - | 9- 8-77 | 3.35 |
| South Fork Malheur River | Malheur River | Sec.35, T.24 S., R.36 E. | - | - | 10- 5-77 | 0 |
|do..... |do..... | T.23 S., R.37 E. | - | - | 9- 8-77 | 2.42 |
| Part 13 IMNAHA RIVER BASIN | | | | | | |
| Imnaha River | Snake River | NW¼ sec.31, T.4 S., R.48 E. | 99.6 | 1944-53+ | 8- 8-77 | *53.4 |
| Little Sheep Creek | Big Sheep Creek | SE¼ sec.31, T.1 N., R.48 E. | - | - | 8-11-77 | 11.2 |
| Part 13 GRANDE RONDE RIVER BASIN | | | | | | |
| Indian Creek | Grande Ronde River | S½ sec.33, T.1 S., R.40 E. | a22 | 1938-50+ | 8-19-77 | *3.32 |
| Lookingglass Creek |do..... | SW¼ sec.29, T.3 N., R.40 E. | - | - | 8-11-77 | *51.3 |
| Wallowa River |do..... | SE¼ sec.20, T.3 S., R.45 E. | - | - | 8-11-77 | *36.4 |
| Wenaha River |do..... | NW¼ sec.4, T.5 N., R.43 E. | - | - | 8-10-77 | *141 |
| Chesnimnus Creek | Joseph Creek | SE¼ sec.26, T.3 N., R.45 E. | - | - | 8-10-77 | *2.08 |
| Part 14 UMATILLA RIVER BASIN | | | | | | |
| Line Creek | Meacham Creek | SE¼ sec.18, T.2 N., R.36 E. | - | - | 8-25-77 | *0.11 |
| Boston Creek |do..... | NW¼ sec.6, T.2 N., R.26 E. | - | - | 8-25-77 | *1.47 |
| Eagle Creek | Wildhorse Creek | SE¼ sec.4, T.3 N., R.35 E. | - | - | 8-25-77 | 1.47 |
| Umatilla River | Columbia River | NW¼ sec.4, T.2 N., R.35 E. | - | - | 8-25-77 | 51.0 |
| Part 14 JOHN DAY RIVER BASIN | | | | | | |
| South Fork John Day River | John Day River | SW¼ sec.29, T.17 S., R.28 E. | - | - | 8-17-77 | 0 |
| Pine Creek | South Fork John Day River | NW¼ sec.9, T.17 S., R.27 E. | - | - | 8-17-77 | *.26 |
| Deer Creek |do..... | SE¼ sec.12, T.16 S., R.27 E. | - | - | 8-17-77 | 0 |
| South Fork John Day River | John Day River | SE¼ sec.26, T.14 S., R.26 E. | - | - | 8-17-77 | *1.66 |
| Tex Creek | Murderers Creek | SW¼ sec.18, T.15 S., R.29 E. | - | - | 8-17-77 | 0 |

Discharge measurements at miscellaneous sites during water year 1977--Continued

| Discharge measurements at miscellaneous sites during water year 1977--Continued | | | | | | |
|---|---------------------------|---|-----------------------|--|---|--|
| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
| | | | | | Date | Discharge (cfs) |
| Part 14 JOHN DAY RIVER BASIN--Continued | | | | | | |
| Murders Creek | South Fork John Day River | SW $\frac{1}{4}$ sec.18, T.15 S., R.29 E. | - | - | 8-17-77 | *.26 |
|do..... |do..... | NE $\frac{1}{4}$ sec.36, T.14 S., R.26 E. | - | - | 8-17-77 | *.97 |
| South Fork John Day River | John Day River | Sec.35, T.14 S., R.26 E. | - | - | 8-17-77 | *3.35 |
| Black Canyon Creek | South Fork John Day River | Sec.26, T.14 S., R.26 E. | - | - | 8-17-77 | *5.31 |
| Desolation Creek | North Fork John Day River | W $\frac{1}{2}$ sec.6, T.7 S., R.32 E. | 108 | 1949-58 $\frac{1}{2}$ | 8-16-77 | *7.78 |
| North Fork John Day River | John Day River | SE $\frac{1}{4}$ sec.35, T.6 S., R.31 E. | 525 | 1929-58 $\frac{1}{2}$ | 8-16-77 | *50.2 |
| Camas Creek | North Fork John Day River | SW $\frac{1}{4}$ sec.33, T.4 S., R.33 E. | 60.7 | 1950-70 $\frac{1}{2}$ | 8-16-77 | *.98 |
| Cable Creek | Camas Creek | NW $\frac{1}{4}$ sec.10, T.5 S., R.32 E. | a39 | 1914-17, 1919-24, 1932-37 | 8-16-77 | *1.18 |
| Wall Creek | North Fork John Day River | NE $\frac{1}{4}$ sec.18, T.18 S., R.28 E. | - | - | 8-16-77 | 0 |
| Part 14 DESCHUTES RIVER BASIN | | | | | | |
| Deschutes River | Columbia River | SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.21 S., R.8 E. | - | 1938-49 $\frac{1}{2}$, 1950, 1952-57, 1960-76 | 10-22-76 12- 2-76 12-28-76 2- 9-77 3-31-77 5- 5-77 6- 3-77 6-28-77 7-26-77 8-31-77 | b623 b464 b464 b314 b270 b654 b459 b535 b689 b516 |
| Metolius River | Deschutes River | NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.12 S., R.9 E. | 163 | 1972-74 | 8-30-77 | *1,190 |
| Jefferson Creek | Metolius River | SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.11 S., R.9 E. | 27.8 | 1972-74 | 8-30-77 | *63.7 |
| Whitewater River |do..... | SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.21, T.10 S., R.10 E., (station 14090500). | 30.6 | 1911-14 $\frac{1}{2}$, 1972-74 | 8-30-77 | 118 |
| Seekseequa Creek | Deschutes River | SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.27, T.10 S., R.12 E. | 47.3 | 1972-74 | 8-31-77 | *1.02 |
| Warm Springs River |do..... | NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.18, T.7 S., R.11 E., (station 14095500). | 107 | 1915-16, 1948-54 $\frac{1}{2}$, 1972-74 | 9- 1-77 | 107 |
| Badger Creek | Warm Springs River | NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.20, T.7 S., R.11 E. | 37.2 | 1972-74 | 9- 1-77 | *7.52 |
| Beaver Creek |do..... | NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.7 S., R.11 E. | 115 | 1972-74 | 8-29-77 | *37.3 |
| Buck Springs |do..... | Lat 44°50'44", long 121°19'32". | - | 1973-74 | 8-31-77 | *.75 |
| White River | Deschutes River | SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.5 S., R.10 E., (station 14099000). | 115 | 1941-50 $\frac{1}{2}$ | 9- 1-77 | 70.5 |
| Dog River | Hood River | Lat 45°24'30", long 121°31'10", (station 14113400). | 4.50 | 1959-71 $\frac{1}{2}$ | 9- 1-77 | *1.28 |

Discharge measurements at miscellaneous sites during water year 1977--Continued

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
|--------------------------------|------------------------------|--|-----------------------|--|--|---------------------------------------|
| | | | | | Date | Discharge (cfs) |
| Part 14 WILLAMETTE RIVER BASIN | | | | | | |
| Salt Creek | Middle Fork Willamette River | SW¼ sec.23, T.21 S., R.3 E. | 113 | 1913-14, 1933-51 ⁺ | 8-10-77 | *86.6 |
| Little Fall Creek | Fall Creek | Sec.25, T.18 S., R.1 W. | 52.5 | 1935-48 ⁺ | 8-10-77 | *13.6 |
| Horse Creek | McKenzie River | SW¼ sec.24, T.16 S., R.5 E. | - | - | 8-11-77 | *24.0 |
| Seperation Creek | Horse Creek | Sec.1, T.17 S., R.6 E. | - | 1973 | 8-11-77 | 236 |
| French Pete Creek | South Fork McKenzie River | Lat 44°02'32", long 122°11'40" (unsurveyed). | 31.2 | 1970-76 | 8- 9-77 | *13.5 |
| Quartz Creek | McKenzie River | SE¼NW¼ sec.6, T.17 S., R.4 E. | - | 1964-65, 1973 | 8- 9-77 | *10.1 |
| North Fork Rock Creek | Rock Creek | NE¼ sec.14, T.12 S., R.7 W. | - | 1973, 1975-76 | 5-18-77 7- 6-77 8-16-77 | *5.73 *2.37 *1.23 |
| South Fork Rock Creek |do..... | SE¼ sec.14, T.12 S., R.7 W. | - | 1973, 1975-76 | 5-18-77 7- 6-77 8-16-77 | *9.57 *4.06 *2.15 |
| Stillson Creek |do..... | SE¼ sec.13, T.12 S., R.7 W. | - | 1973, 1975-76 | 5-18-77 7- 6-77 8-16-77 | *.39 *.28 *.17 |
| Middle Fork Rock Creek |do..... | SE¼ sec.19, T.12 S., R.6 W. | - | 1973, 1975-76 | 5-18-77 7- 6-77 8-16-77 | *1.09 *.58 *.29 |
| Griffith Creek |do..... | SE¼NW¼ sec.30, T.12 S., R.6 W. | - | 1973, 1975-76 | 5-18-77 7- 6-77 8-16-77 | *2.25 *1.04 *.77 |
| Little North Santiam River | North Santiam River | SW¼NW¼ sec.22, T.8 S., R.4 E. | 53.1 | 1973-76 | 12- 6-76 2-16-77 5-12-77 7-12-77 9-20-77 | *44.1 *77.4 485 *38.8 274 |
| Marion Forks Creek |do..... | SE¼NW¼ sec.22, T.11 S., R.7 E. | - | 1973 | 9-15-77 | *79.1 |
| Breitenbush River |do..... | NW¼ sec.25, T.9 S., R.8 E. | - | 1973 | 9-12-77 | *102 |
| Rock Creek | South Yamhill River | NE¼SE¼ sec.14, T.6 S., R.8 W. | - | - | 9-14-77 | *11.0 |
| Coast Creek | Willamina Creek | NE¼NW¼ sec.12, T.5 S., R.7 W. | - | - | 8-18-77 | *3.46 |
| East Fork Dairy Creek | Dairy Creek | SE¼SW¼ sec.9, T.1 N., R.3 W. | 65.5 | 1967, 1973-76 | 9-16-77 | *6.04 |
| Rock Creek | Tualatin River | SW¼NW¼ sec.9, T.1 S., R.2 W. | 74.0 | 1973-76 | 9-15-77 | *13.7 |
| Fanno Creek |do..... | NE¼NW¼ sec.13, T.2 S., R.1 W. | 31.5 | 1967, 1973-76 | 9-15-77 | *1.84 |
| Crystal Springs Creek | Johnson Creek | Lat 45°28'44", long 122°38'18", in SW¼SW¼ sec.13, T.1 S., R.1 E. | - | - | 9-26-77 | 12.5 |
| Unnamed Spring | Columbia River | Lat 45°32'27", long 122°23'34", in SE¼NE¼ sec.26, T.1 N., R.3 E. | - | - | 9-26-77 | .14 |
| Part 14 TRASK RIVER BASIN | | | | | | |
| E.F. Trask River | S.F. Trask River | SE¼SE¼ sec.1, T.2 S., R.8 W. | - | - | 8-15-77 | *17.1 |
| N.F. Trask River | Trask River | SE¼SE¼ sec.25, T.1 S., R.8 W. | - | - | 8-15-77 | *39.4 |
| Trask River | Pacific Ocean | NW¼NW¼ sec.31, T.1 S., R.8 W. | 145 | 1932-55 ⁺ 1963-72 ⁺ | 8-15-77 | *69.2 |

Discharge measurements at miscellaneous sites during water year 1977--Continued

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
|--------------------------------|---------------|--|-----------------------|---|--------------|-----------------|
| | | | | | Date | Discharge (cfs) |
| Part 14 SALMON RIVER BASIN | | | | | | |
| Salmon River | Pacific Ocean | NE $\frac{1}{2}$ SW $\frac{1}{2}$ sec.29, T.6 S., R.10 W. | 60.4 | 1931-32, 1934-37, 1949, 1951-52, 1973-74 | 8-15-77 | *33.2 |
| Part 14 SILETZ RIVER BASIN | | | | | | |
| Euchre Creek | Siletz River | NW $\frac{1}{2}$ NW $\frac{1}{2}$ sec.22, T.9 S., R.10 W. | 13.4 | 1924, 1926, 1935, 1973-74 | 8-16-77 | *13.4 |
| Part 14 NORTH-MID COAST BASINS | | | | | | |
| Fogarty Creek | Pacific Ocean | NE $\frac{1}{2}$ NE $\frac{1}{2}$ sec.32, T.8 S., R.11 W. | 5.20 | 1931, 1934-36 1973-74 | 8-16-77 | *.90 |
| South Depoe Bay Creek |do..... | SW $\frac{1}{2}$ NE $\frac{1}{2}$ sec.8, T.9 S., R.11 W. | 3.98 | 1972-73 | 8-16-77 | *1.00 |
| Rocky Creek |do..... | SW $\frac{1}{2}$ NE $\frac{1}{2}$ sec.19, T.9 S., R.11 W. | 5.36 | 1931, 1934-37, 1949, 1952-57, 1973-74 | 8-16-77 | *1.78 |
| Spencer Creek |do..... | NW $\frac{1}{2}$ SW $\frac{1}{2}$ sec.4, T.10 S., R.11 W. | 5.51 | 1931, 1934-37, 1973-74 | 8-16-77 | *1.67 |
| Moloch Creek |do..... | NW $\frac{1}{2}$ SE $\frac{1}{2}$ sec.17, T.10 S., R.11 W. | 2.23 | 1931, 1934-37, 1973-74 | 8-16-77 | *.78 |
| Elk Creek | Yaquina River | SE $\frac{1}{2}$ NW $\frac{1}{2}$ sec.24, T.11 S., R.10 W. | 85.0 | 1932, 1934, 1937, 1949, 1951-52, 1973-74 | 8-17-77 | *8.40 |
| Theil Creek | Pacific Ocean | NW $\frac{1}{2}$ NE $\frac{1}{2}$ sec.6, T.12 S., R.11 W. | 4.10 | 1931, 1934-37, 1973-74 | 8-17-77 | *1.02 |
| N.F. Beaver Creek | Beaver Creek | NW $\frac{1}{2}$ SW $\frac{1}{2}$ sec.22, T.12 S., R.11 W. | 14.3 | 1973-74 | 8-17-77 | *7.23 |
| Part 14 ALSEA RIVER BASIN | | | | | | |
| Fall Creek | Alsea River | SE $\frac{1}{2}$ NE $\frac{1}{2}$ sec.35, T.13 S., R.9 W. | 29.4 | 1959-63 $\frac{1}{2}$, 1973 | 8-17-77 | *13.6 |
| Drift Creek |do..... | NE $\frac{1}{2}$ sec.24, T.12 S., R.10 W. | 20.5 | 1959-63 $\frac{1}{2}$, 1965-70 $\frac{1}{2}$ | 8-16-77 | *6.36 |
| Needle Branch | Drift Creek | SW $\frac{1}{2}$ sec.24, T.12 S., R.10 W. | .27 | 1959-73 $\frac{1}{2}$ | 8-16-77 | *.004 |
| Flynn Creek | Meadow Creek | SW $\frac{1}{2}$ sec.12, T.12 S., R.10 W. | .78 | 1959-73 $\frac{1}{2}$, 1973-74 | 8-16-77 | *.14 |
| Deer Creek | Horse Creek | SW $\frac{1}{2}$ sec.11, T.12 S., R.10 W. | 1.17 | 1959-73 | 8-16-77 | *.34 |
| Part 14 CAPE CREEK BASIN | | | | | | |
| Cape Creek | Pacific Ocean | SW $\frac{1}{2}$ SW $\frac{1}{2}$ sec.2, T.15 S., R.12 W. | - | - | 8-15-77 | *9.4 |
| Part 14 TENMILE CREEK BASIN | | | | | | |
| Tenmile Creek |do..... | NE $\frac{1}{2}$ sec.34, T.15 S., R.12 W. | - | - | 8-15-77 | *11.7 |
| Part 14 BIG CREEK BASIN | | | | | | |
| Big Creek |do..... | SW $\frac{1}{2}$ sec.15, T.16 S., R.12 W. | - | - | 8-15-77 | *1.00 |

Discharge measurements at miscellaneous sites during water year 1977--Continued

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
|-----------------------------|---------------------|---|-----------------------|-----------------------------------|--|--|
| | | | | | Date | Discharge (cfs) |
| Part 14 SIUSLAW RIVER BASIN | | | | | | |
| Siuslaw River | Pacific Ocean | NE¼ sec.11, T.20 S., R.6 W. | 81.8 | 1968-75 | 8- 9-77 | *1.51 |
|do..... |do..... | NE¼ sec.35, T.19 S., R.7 W. | 120 | 1968-75 | 8- 9-77 | *3.36 |
| Esmond Creek | Siuslaw River | NE¼ sec.16, T.19 S., R.8 W. | 15.6 | 1968-75 | 8- 9-77 | *.89 |
| Wolf Creek |do..... | NW¼ sec.36, T.18 S., R.8 W. | 59.0 | 1968-75 | 8-10-77 | *5.88 |
| Siuslaw River | Pacific Ocean | SE¼ sec.16, T.18 S., R.8 W. | 267 | 1931-40+ | 8-10-77 | *18.7 |
| Chickahominy Creek | Siuslaw River | SW¼ sec.6, T.18 S., R.7 W. | 12.5 | 1968-75 | 8-10-77 | *.84 |
| Wildcat Creek |do..... | NW¼ sec.23, T.18 S., R.8 W. | 51.9 | 1968-75 | 8-10-77 | *3.30 |
| Lake Creek |do..... | SW¼ sec.20, T.16 S., R.7 W. | 52.5 | 1931-55+ 1968-75 | 8-11-77 | *2.93 |
| Deadwood Creek |do..... | SE¼NE¼ sec.10, T.17 S., R.9 W. | 57.4 | 1968-75 | 8-11-77 | *9.5 |
| Indian Creek |do..... | NE¼ sec.11, T.17 S., R.10 W. | 37.0 | 1968-75 | 8-11-77 | *13.9 |
| Knowles Creek |do..... | NE¼ sec.28, T.18 S., R.10 W. | 17.7 | 1968-75 | 8-11-77 | *.24 |
| Sweet Creek |do..... | NW¼ sec.28, T.18 S., R.10 W. | 19.8 | 1968-75 | 8-11-77 | *2.75 |
| Condon Creek |do..... | NE¼ sec.33, T.17 S., R.11 W. | 9.91 | 1968-75 | 8-15-77 | *5.60 |
| Part 14 UMPQUA RIVER BASIN | | | | | | |
| Middle Creek | West Fork Cow Creek | SW¼ sec.1, T.32 S., R.7 W. | - | - | 9-16-77 | *1.41 |
| Hansen Creek | Diamond Lake | Lat 43°08'35", long 122°09'45" (unsurveyed) at mouth. | - | 1972-76 | 4-18-77 6-21-77 | 0 0 |
| Discovery Creek |do..... | Lat 43°08'20", long 122°09'40" (unsurveyed) at mouth. | - | 1972-76 | 4-18-77 6-21-77 | 0 0 |
| Unnamed Creek |do..... | Lat 43°08'10", long 122°09'35". | - | - | 10- 5-76 11-16-76 5-10-77 5-26-77 6-21-77 | 0 .03 .02 .01 0 |
| Short Creek |do..... | Lat 43°08'20", long 122°08'10" (unsurveyed) at mouth. | (a) | 1972-76 | 10- 5-76 11-15-76 1- 4-77 2-16-77 3-30-77 4-19-77 4-26-77 6-20-77 8-10-77 9-19-77 | 10.0 9.38 9.22 9.50 10.5 10.2 9.86 9.75 9.48 8.23 |
| Camp Creek |do..... | Lat 43°08'35", long 122°08'00" (unsurveyed) at mouth. | - | 1972-76 | 10- 5-76 4-18-77 6-21-77 | 0 0 0 |
| Dry Creek |do..... | Lat 43°08'50", long 122°08'00" (unsurveyed) at mouth. | - | 1972-76 | 4-18-77 6-21-77 | 0 0 |
| Porcupine Creek |do..... | Lat 43°09'45", long 122°08'00" (unsurveyed) at mouth. | - | 1972-76 | 10- 5-76 11-16-76 4-18-77 6-21-77 | .02 .02 0 0 |
| Rabbit Creek |do..... | Lat 43°09'50", long 122°07'55" (unsurveyed) at mouth. | - | 1972-76 | 10- 5-76 4-18-77 4-26-77 5-10-77 5-26-77 6-21-77 | .05 .01 .02 .01 .02 0 |

Discharge measurements at miscellaneous sites during water year 1977--Continued

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
|---------------------------------------|----------------------------|--|-----------------------|-----------------------------------|--|--|
| | | | | | Date | Discharge (cfs) |
| Part 14 UMPQUA RIVER BASIN--Continued | | | | | | |
| Spruce Creek | Diamond Lake | Lat 43°10'05", long 122°07'55" (unsurveyed) at mouth. | - | 1972-76 | 10- 5-76 4-18-77 6-21-77 | .02 0 0 |
| Two Bear Creek |do..... | Lat 43°10'35", long 122°08'10" (unsurveyed) at mouth. | - | 1972-76 | 10- 5-76 11-16-76 2-16-77 4-18-77 4-26-77 5-10-77 5-26-77 6-21-77 | .15 .13 .06 .05 .05 .05 .04 0 |
| Rock Creek | North Umpqua River | NE¼NE¼ sec.1, T.26 S., R.3 W. | 97.4 | 1957-73† | 8-10-77 | *23.1 |
| Big Tom Foley Creek | Elk Creek | SE¼ sec.3, T.22 S., R.7 W. | - | - | 9- 2-77 | *.91 |
| Part 14 TENMILE CREEK BASIN | | | | | | |
| Eel Creek | Tenmile Creek | NE¼NE¼ sec.13, T.23 S., R.13 W. | 11.0 | 1957-76 | 8-17-77 | *2.29 |
| Part 14 COOS RIVER BASIN | | | | | | |
| Tioga Creek | Coos River | SW¼ sec.31, T.25 S., R.9 W. | - | - | 8-17-77 | *1.51 |
| Part 14 COQUILLE RIVER BASIN | | | | | | |
| South Fork Coquille River | Coquille River | SW¼SW¼ sec.18, T.32 S., R.11 W. | - | - | 9-22-77 | *78.3 |
| Twelvemile Creek | Middle Fork Coquille River | SE¼ sec.10, T.30 S., R.9 W. | - | - | 8-18-77 | *.02 |
| East Fork Coquille River |do..... | SE¼ sec.10, T.28 S., R.11 W. | - | - | 8-17-77 | *4.02 |
| Elk Creek |do..... | SW¼ sec.28, T.28 S., R.11 W. | - | - | 8-18-77 | *.48 |
| North Fork Coquille River |do..... | SE¼ sec.10, T.29 S., R.12 W. | 282 | - | 8-18-77 | *11.1 |
| Part 14 ROGUE RIVER BASIN | | | | | | |
| Dutton Creek | Castle Creek | Lat 42°53'40", long 122°10'00". | - | 1967-68 | 6-14-77 7-12-77 | *.55 *.31 |
| Castle Creek | Rogue River | Lat 42°54'45", long 122°17'00". | - | 1967-68 | 6-14-77 7-12-77 | *1.71 *.49 |
| Castle Creek tributary | Castle Creek | Lat 42°53'30", long 122°10'00". | - | 1967-68 | 6-14-77 | *.39 |
|do..... |do..... | Lat 42°53'25", long 122°09'45". | - | 1967-68 | 7-12-77 | *.02 |
| Whisky Creek | Unnamed Marsh | Lat 42°53'40", long 122°17'00". | - | 1967-68 | 9-20-77 | *.30 |
| Thousand Springs | Union Creek | Lat 42°53'00", long 122°17'00". | - | 1967-68 | 9-20-77 | *28.0 |
| Galls Creek | Rogue River | Sec.21, T.36 S., R.3 W. | - | - | 8- 8-77 | *.05 |
| West Branch Elk Creek | Elk Creek | Lat 42°42'40", long 122°44'55", in SW¼ sec.7, T.33 S., R.1 E. | 14.2 | 1973-76† | 9-15-77 | .55 |
| Elliott Creek | Applegate River | Lat 42°00'16", long 123°09'00", SW¼ sec.17, T.48 N., R.11 W., Calif. | 51.8 | - | 9- 7-77 | 6.89 |
| Carberry Creek |do..... | Lat 42°01'34", long 123°10'10", SE¼ sec.3, T.41 S., R.4 W. | 68.9 | - | 9-16-77 | 4.23 |

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES IN OREGON

567

Discharge measurements at miscellaneous sites during water year 1977--Continued

| Stream | Tributary to | Location | Drainage area (sq mi) | Measured previously (water years) | Measurements | |
|--------------------------------------|-----------------|--------------------------------|-----------------------------|--|--------------|--------------------|
| | | | | | Date | Discharge (cfs) |
| Part 14 ROGUE RIVER BASIN--Continued | | | | | | |
| Beaver Creek | Applegate River | NW¼ sec.5, T.40 S., R.3 W. | - | - | 9-16-77 | *.02 |
| Althouse Creek | Illinois River | SE¼ sec.9, T.40 S., R.7 W. | 23.8 | 1944-53† | 9- 5-77 | *4.28 |
| Deer Creek |do..... | SW¼NE¼ sec.18, T.38 S., R.6 W. | a23 | 1941-56† | 9-14-77 | *.62 |
| South Fork Pistol River | Pistol River | SE¼ sec.19, T.38 S., R.13 W. | - | - | 9-14-77 | *3.79 |
| North Fork Chetco River | Chetco River | NW¼ sec.35, T.40 S., R.13 W. | - | - | 9-15-77 | *1.45 |

† Operated as a continuous record gaging station.

a Springfed.

b Base flow from intervening springs can be obtained by subtracting flow of Deschutes River below Crane Prairie Reservoir.

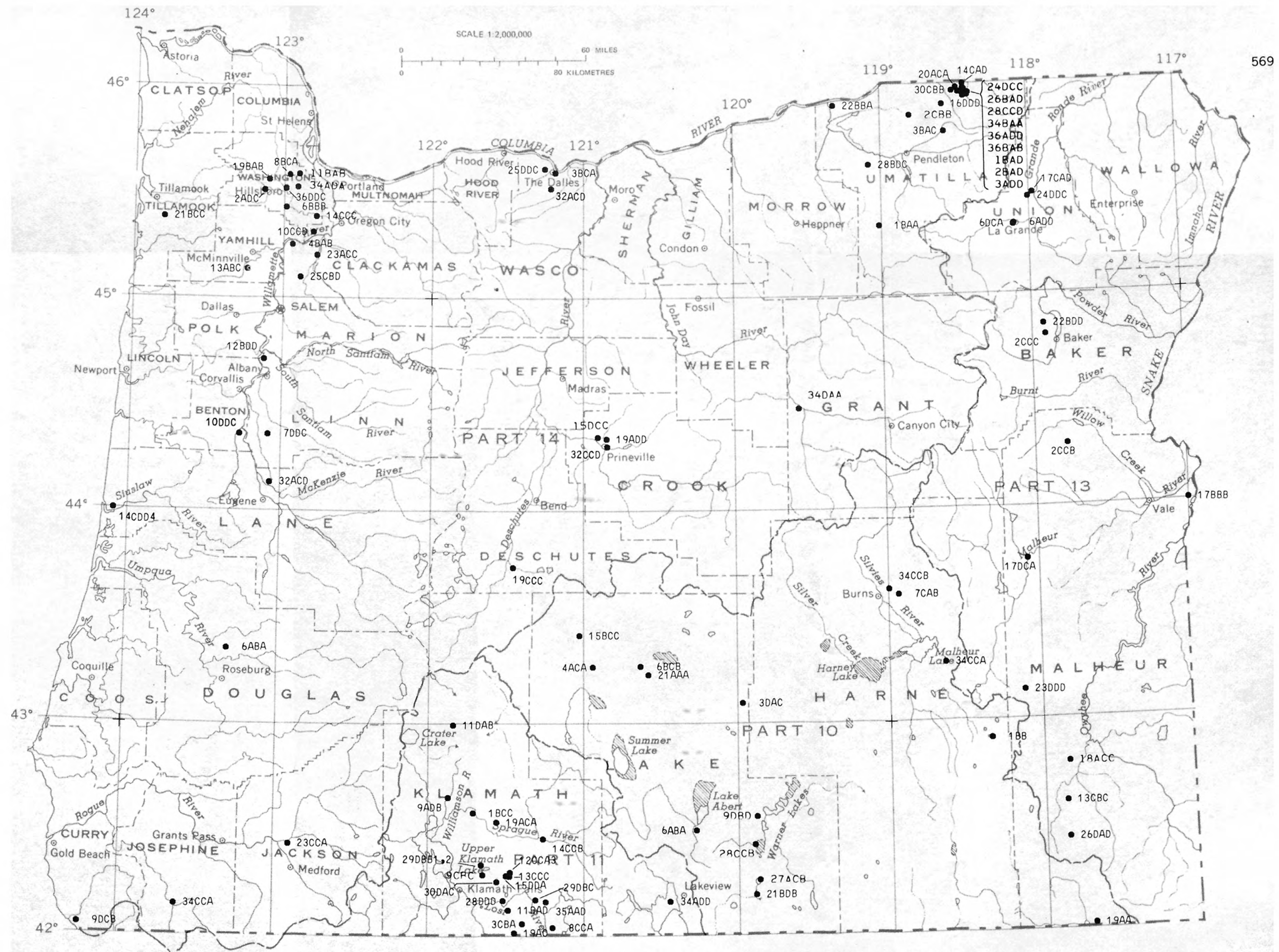


Figure 5.--Map of Oregon showing locations of observation wells.

BAKER COUNTY

445125117551501. Local number, 8S/39E-22bdd.

LOCATION.--Lat 44°51'16", long 117°55'15", Hydrologic Unit 17050203.

Owner: Baker County.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug observation well, size 18x18 in (460 x 460 mm), depth 11 ft (3.4 m) cribbed with wood to 9 ft (2.7 m), perforated 12-in (300 mm) steel casing 7-11 ft (2-3 m).

DATUM.--Land surface datum is 3,385.78 ft (1,031.99 m) above mean sea level. Measuring point: Top of 1½-in (30 mm) pipe, 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1936, 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.52 ft (0.46 m) below datum, Feb. 22, 1973; lowest measured, 9.87 ft (3.01 m) below datum, Sept. 29, 1939.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|-------------|-------|-------------|--------|-------------|-------|-------------|
| NOV 5 | 4.61 | FEB 5 | 4.91 | MAY 24 | 5.95 | AUG 9 | 8.38 |

444820117543501. Local number 9S/39E-2ccc.

LOCATION.--Lat 44°48'12", long 117°54'33", Hydrologic Unit 17050203.

Owner: Kermit Hansen.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused well, diam 12 in (300 mm), depth 321 ft (98 m) perforated 0-321 ft (0-98 m).

DATUM.--Altitude of land surface datum is about 3,410 ft (1,039 m). Measuring point: Top of casing, 0.30 ft (0.09 m) above datum.

PERIOD OF RECORD.--1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.37 ft (0.42 m) below datum, Feb. 17, 1965; lowest measured 13.95 ft (4.25 m) below datum, Jan. 20, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|-------------|-------|-------------|--------|-------------|-------|-------------|
| NOV 5 | 11.33 | FEB 8 | 12.36 | MAY 24 | 11.35 | AUG 9 | 12.70 |

BENTON COUNTY

442145123163201. Local number 14S/5W-10ddc.

LOCATION.--Lat 44°21'45", long 123°16'32", Hydrologic Unit 17090003.

Owner: Chris Lindseth.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Driven unused well, diam 1½ in (30 mm), depth 19 ft (5.8 m), cased to 19 ft (5.8 m).

DATUM.--Land surface datum is 267.49 ft (81.53 m) above mean sea level. Measuring point: Top of 1½-in (30 mm) pipe, 2.40 ft (0.73 m) above datum.

PERIOD OF RECORD.--1929-30, 1935-36, 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.21 ft (0.06 m) above datum, Feb. 26, 1936; lowest measured, 16.38 ft (4.99 m) below datum, Sept. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|-------------|-------|-------------|--------|-------------|--------|-------------|
| JAN 6 | 15.43 | APR 6 | 13.95 | JUL 11 | 16.40 | SEP 28 | 16.38 |
| MAR 8 | 15.09 | | | | | | |

CLACKAMAS COUNTY

451905122475801. Local number 3S/1W-10ccd.

LOCATION.--Lat 45°19'05", long 122°47'58", Hydrologic Unit 17090007.

Owner: Pamouskis. Formerly Charles Jenkins.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), reported depth 115 ft (35 m).

DATUM.--Altitude of land surface datum is 235 ft (72 m). Measuring point: Top of casing extension, 1.45 ft (0.44 m) above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.42 ft (20.85 m) below datum, May 12, 1956; lowest measured 91.26 ft (27.82 m) below datum, Oct. 17, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 11 | 88.07 | MAR 17 | 87.18 | APR 18 | 85.95 | JUL 18 | 89.13 |
| JAN 18 | 87.52 | | | | | | |

GROUND-WATER LEVELS

CROOK COUNTY

442100120541701. Local number 14S/15E-15dec.

LOCATION.--Lat 44°21'00", long 120°54'48", Hydrologic Unit 17070305.

Owner: Williams. Formerly L.H. McPhetridge.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 4 in (100 mm), depth 210 ft (64 m).

DATUM.--Land surface datum is 2,846.8 ft (867.7 m) above mean sea level. Measuring point: Center of pressure gage, 6.50 ft (1.98 m) above datum.

PERIOD OF RECORD.--1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 75.5 ft (23.0 m) above datum, Mar. 12, 1964; lowest measured, 34.5 ft (10.5 m) above datum, May 13, 1977.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|------|-------------|--------|-------------|--------|-------------|--------|-------------|
| - | - | FEB 11 | 41½ | MAY 13 | 34½ | AUG 12 | 46 |

442029120504801. Local number 14S/16E-19add.

LOCATION.--Lat 44°20'29", long 120°50'48", Hydrologic Unit 17070305.

OWNER: Leslie Clausen.

AQUIFER.--Sandy material.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 47 ft (14 m).

DATUM.--Altitude of land surface datum is 2,970 ft (905 m). Measuring point: Top of casing, 1.50 ft (0.46 m) below datum.

PERIOD OF RECORD.--1944, 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.93 ft (0.28 m) below datum, Aug. 13, 1965; lowest measured, 21.22 ft (6.47 m) below datum, Apr. 28, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|------|-------------|------|-------------|------|-------------|
| OCT 13 | 9.36 | - | - | - | - | - | - |

441819120503301. Local number 14S/16E-32ccd.

LOCATION.--Lat 44°18'19", long 120°50'33", Hydrologic Unit 17070305.

Owner: Olen Ford. Formerly Roy Fuller.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused artesian well, diam 5 in (130 mm), depth (160 ft (49 m).

DATUM.--Land surface datum is 2,865.90 ft (873.53 m) above mean sea level. Measuring point: Hole in casing, 1.70 ft (0.52 m) above datum.

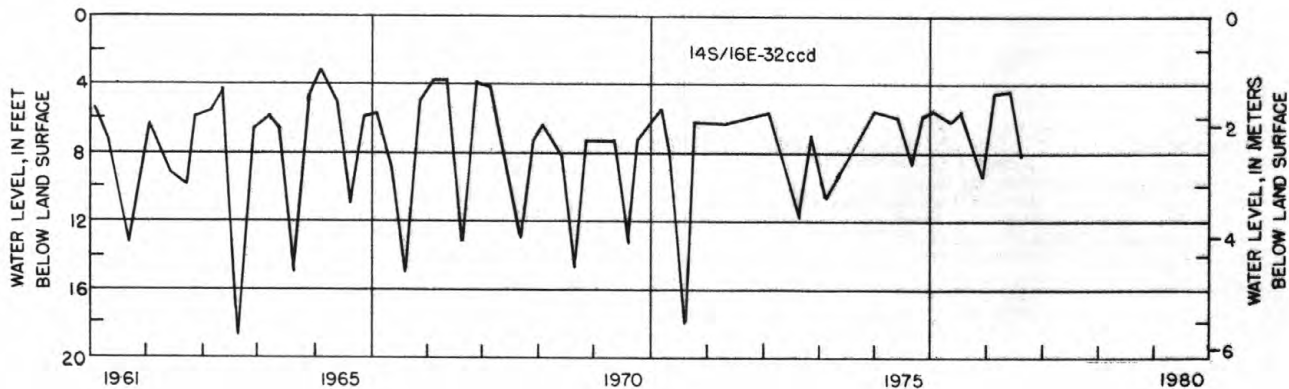
REMARKS.--Hydrograph revised for measurements shown in years 1968 and 1975.

PERIOD OF RECORD.--1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.82 ft (0.56 m) above datum, Dec. 8, 1945; lowest measured, 21.36 ft (6.51 m) below datum, Aug. 8, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| NOV 30 | 9.36 | FEB 18 | 4.51 | MAY 13 | 4.24 | AUG 12 | 8.06 |



GROUND-WATER LEVELS

573

CURRY COUNTY

420205124145501. Local number 41S/13W-9dcb.

LOCATION.--Lat 42°02'05", long 124°14'55", Hydrologic Unit 17100312.

Owner: Minnie Clendenin.

AQUIFER.--Sandstone and gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 10 in (250 mm), depth 59 ft (18 m), cased to 45 ft (14 m), perforated 30-45 ft (9-14 m).

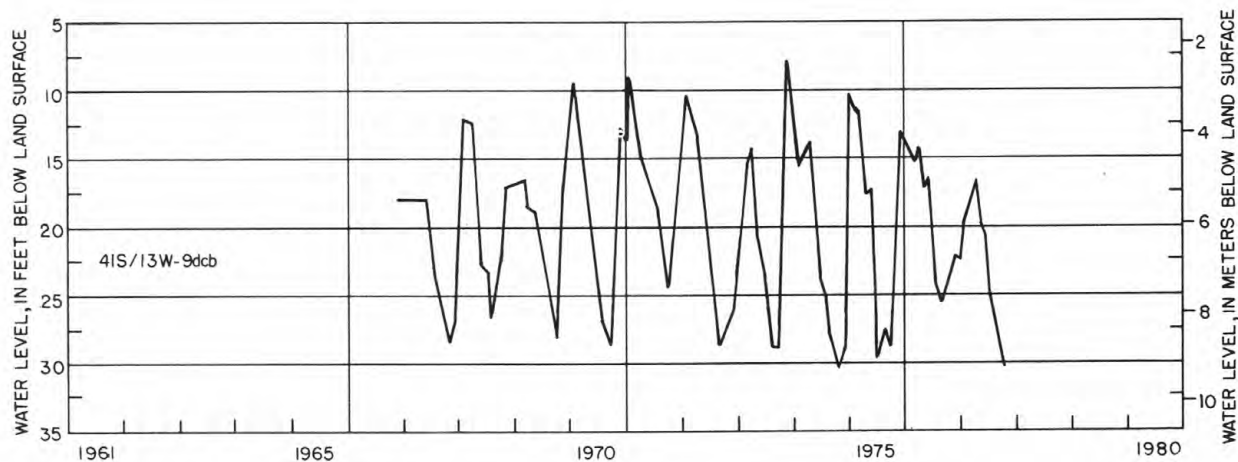
DATUM.--Altitude of land surface datum is unknown. Measuring point: Top of casing 0.9 ft (0.9 m) above datum.

PERIOD OF RECORD.--1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.42 ft (2.26 m) below datum, Jan. 30, 1970; lowest measured, 30.52 ft (9.30 m) below datum, Sept. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| NOV 30 | 22.00 | JAN 26 | 19.16 | MAR 28 | 16.54 | JUN 28 | 24.94 |
| DEC 6 | 22.42 | FEB 23 | 20.86 | APR 26 | 19.76 | SEP 28 | 30.52 |
| | | | | MAY 24 | 20.98 | | |



DESCHUTES COUNTY

434400121275001. Local number 21S/11E-19ccc.

LOCATION.--Lat 43°44'01", long 121°27'57", Hydrologic Unit 17070302.

Owner: Inez Kellems.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Dug domestic and stock well, diam 6 in (150 mm) depth 100 ft (30 m), cased to 70 ft (21 m).

DATUM.--Altitude of land surface datum is about 4,220 ft (1,286 m). Measuring point: Top of casing, 0.20 ft (0.06 m) above datum.

PERIOD OF RECORD.--1945, 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.90 ft (3.32 m) below datum, Aug. 14, 1956; lowest measured, 41.63 ft (12.69 m) below datum Oct. 23, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|-------------|--------|-------------|--------|-------------|-------|-------------|
| OCT 5 | 17.63 | JAN 12 | 22.95 | APR 14 | 23.86 | JUL 6 | 22.05 |

GROUND-WATER LEVELS

DOUGLAS COUNTY

432051123195601. Local number 26S/5W-6aba.

LOCATION.--Lat 43°20'51", long 123°19'56", Hydrologic Unit 17100301.

Owner: Stanley Mohr.

AQUIFER.--Sandstone and siltstone.

WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in (200 mm), depth 225 ft (69 m), cased to 20 ft (6 m).

DATUM.--Altitude of land surface datum is 580 ft (177 m). Measuring point: Hole in casing seal, 0.7 ft (0.21 m) above datum.

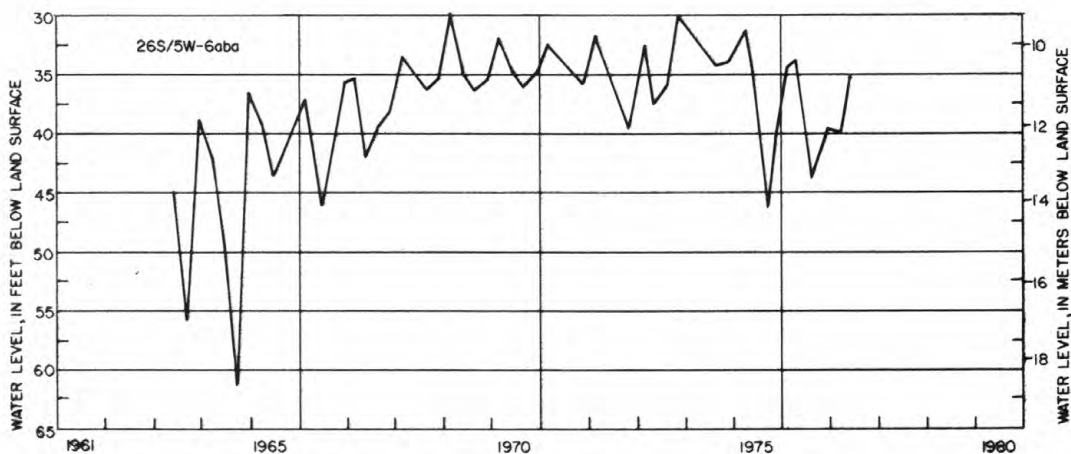
PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.15 ft (9.19 m) below datum, Feb. 13, 1969; lowest measured 61.19 ft (18.65 m) below datum, Sept. 10, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| NOV 9 | 39.08 | MAR 30 | 35.64 | MAY 19 | 35.71 | AUG 17 | 44.76 |
| FEB 22 | 39.64 | | | | | | |

b May be affected by recent pumping.



GRANT COUNTY

442845119343001. Local number 12S/26E-34daa.

LOCATION.--Lat 44°28'59", long 119°34'25", Hydrologic Unit 17070201.

Owner: Dayville Cemetery.

AQUIFER.--Tuffaceous sand and gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 6 in (150 mm), depth 477 ft (145 m), cased to 222 ft (68 m), perforated 177-222 ft (54-68 m).

DATUM.--Altitude of land surface datum is about 2,340 ft (713 m). Measuring point: Top hole in casing seal 1.50 ft (0.5 m) below datum.

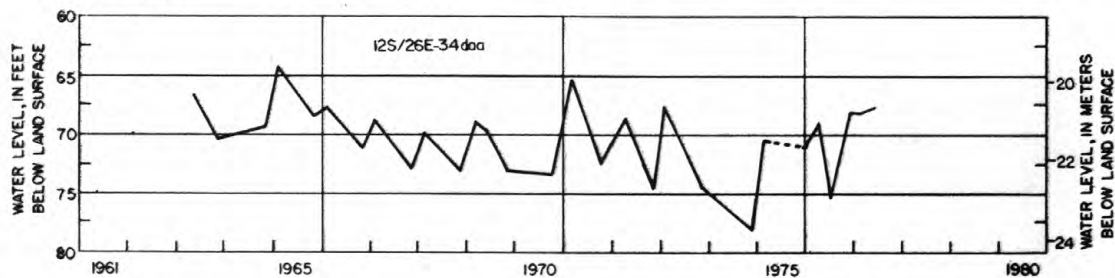
PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 64.33 ft (19.61 m) below datum, Feb. 19, 1965; lowest measured 78.14 ft (23.82 m) below datum, Nov. 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|-------------|--------|-------------|--------|-------------|--------|-------------|
| DEC 8 | 68.30 | FEB 18 | 68.20 | MAY 13 | 67.60 | AUG 12 | a |

a Well being pumped.



HARNEY COUNTY

433701118595401. Local number 22S/31E-34ccb.

LOCATION.--Lat 43°37'01", long 118°59'54", Hydrologic Unit 17120001.

Owner: Jay Hoyt.

AQUIFER.--Volcanic or sedimentary rock.

WELL CHARACTERISTICS.--Drilled stock well, diam 18 to 8 in (460 to 200 mm), depth 288 ft (88 m), cased to 68 ft (21 m).

DATUM.--Land surface datum is 4,153.17 ft (1,265.89 m) above mean sea level. Measuring point: Top of well cover, 1.00 ft (0.30 m) above datum.

REMARKS.--Hydrograph revised for measurements shown from 1970 through 1975.

PERIOD OF RECORD.--1936 to current year.

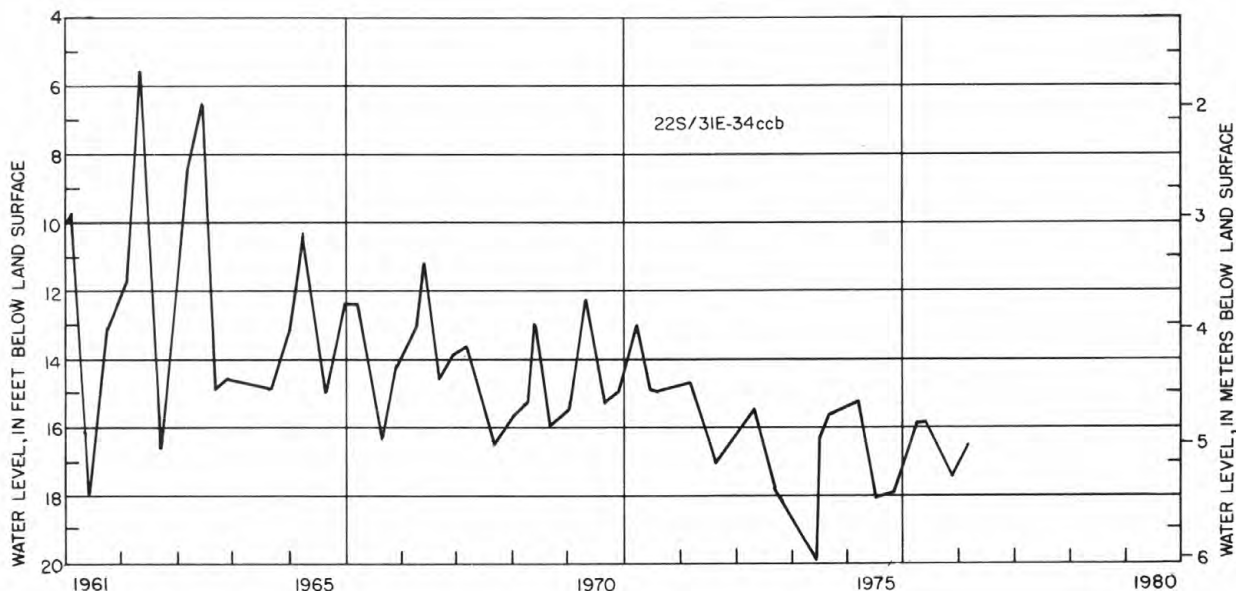
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.50 ft (0.46 m) below datum, Apr. 21, 1936; lowest measured, 19.82 ft (6.04 m) below datum, June 6, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|-------|-------------|--------|-------------|--------|-------------|
| NOV 17 | 17.43 | MAR 3 | 16.57 | MAY 26 | 25.89 | AUG 24 | a |

a Well being pumped.

b May be affected by recent pumping.



433527118560502. Local number 23S/32E-7cab.

LOCATION.--Lat 43°35'27", long 118°56'05", Hydrologic Unit 17120001.

Owner: Dorland Ray.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 18 in (460 mm), depth 93 ft (28 m), cased to 60 ft (18 m).

DATUM.--Land surface datum is 4,135.24 ft (1,260.42 m) above mean sea level. Measuring point: Top of casing, 0.36 ft (0.11 m) below datum.

PERIOD OF RECORD.--1928 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.07 ft (0.63 m) below datum, May 19, 1965; lowest measured, 38.37 ft (11.70 m) below datum, July 30, 1931.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|-------|-------------|--------|-------------|--------|-------------|
| NOV 17 | 9.60 | MAR 3 | 7.78 | MAY 26 | 18.31 | AUG 25 | a |

a Well being pumped.

GROUND-WATER LEVELS

HARNEY COUNTY

431551118381001. Local number 26S/33E-34cca.

LOCATION.--Lat 43°15'51", long 118°38'10", Hydrologic Unit 17120001.

Owner: Davis Farms.

AQUIFER.--Cinders.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 14 in (350 mm), depth 81 ft (25 m), cased to 30 ft (9 m).

DATUM.--Altitude of land surface datum is 4,120 ft (1,256 m). Measuring point: Top of casing, 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.66 ft (5.99 m) below datum, Dec. 2, 1965; lowest measured, 22.10 ft (6.74 m) below datum, Mar. 9, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|------|-------------|--------|-------------|
| DEC 15 | 23.60 | MAR 18 | 19.90 | - | - | SEP 15 | 21.20 |

425400118205001. Local number 31S/35E-1bb.

LOCATION.--Lat 42°54'00", long 118°20'50", Hydrologic Unit 17120009.

Owner: Fred Pallock.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in (200 mm), depth 32 ft (10 m).

DATUM.--Altitude of land surface datum is 4,270 ft (1,302 m). Measuring point: Top of casing, 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.35 ft (0.72 m) below datum, Aug. 20, 1975; lowest measured, 18.12 ft (5.52 m) below datum, Nov. 20, 1963, May 21, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|-------|-------------|--------|-------------|--------|-------------|
| NOV 17 | 7.25 | MAR 2 | 7.45 | MAY 25 | 8.04 | AUG 24 | 9.22 |

JACKSON COUNTY

422517122543401. Local number 36S/2W-23cca.

LOCATION.--Lat 42°25'17", long 122°54'34", Hydrologic Unit 17100308.

Owner: U.S. Geological Survey.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled observation well, diam 8 in (200 mm), depth 110 ft (33 m), cased to 106 ft (32 m).

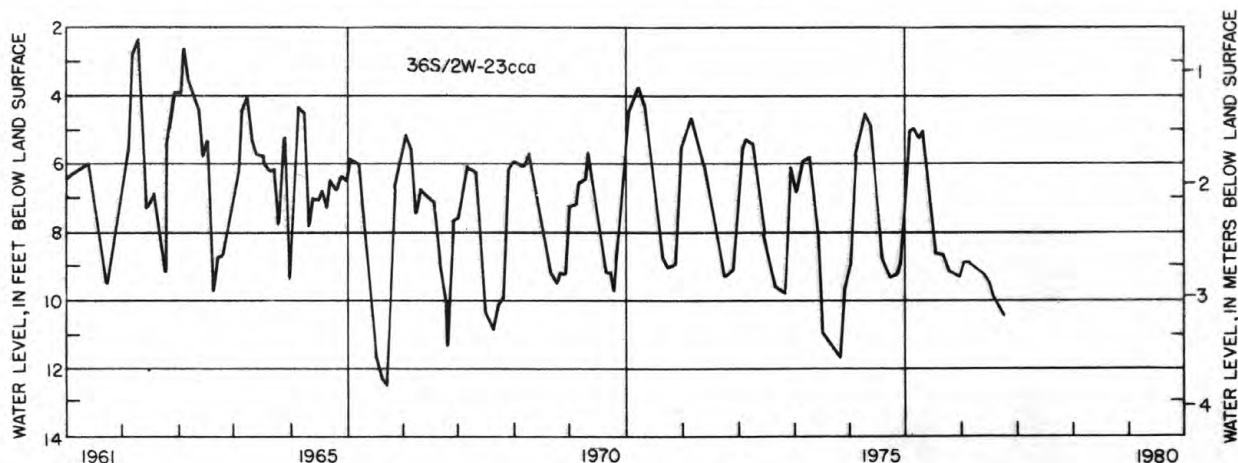
DATUM.--Altitude of land surface datum is 1,230 ft (375 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above datum.

PERIOD OF RECORD.--1953-54, 1956, 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.27 ft (0.69 m) below datum, Mar. 5, 1962; lowest measured, 12.47 ft (3.80 m) below datum, Sept. 23, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 20 | 9.13 | JAN 20 | 9.12 | APR 20 | 9.06 | JUL 21 | 9.99 |
| NOV 19 | 9.19 | FEB 22 | 8.99 | MAY 20 | 9.19 | AUG 22 | 10.27 |
| DEC 20 | 9.24 | MAR 18 | 8.86 | JUN 20 | 9.58 | SEP 20 | 10.51 |



GROUND-WATER LEVELS

577

JOSEPHINE COUNTY

420756123380201. Local number 39S/8W-34caa.

LOCATION.--Lat 42°07'56", long 123°38'02", Hydrologic Unit 17100311.

Owner: U.S. Geological Survey.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled observation well, diam 6 in (150 mm), depth 114 ft (35 m), cased to 114 ft (35 m), perforated

27-45 ft (8-14 m), 84-110 ft (?) (26-34 m).

DATUM.--Altitude of land surface datum is 1,350 ft (411 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above datum.

REMARKS.--Well obstructed by rocks, no water level information available for 1977 water year.

PERIOD OF RECORD.--1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.54 ft (1.08 m) below datum, Jan. 27, 1954; lowest measured, 24.88 ft (7.58 m) below datum, Jan. 18, 1960.

KLAMATH COUNTY

425908121505501. Local number 30S/7E-11dab.

LOCATION.--Lat 42°59'08", long 121°50'55", Hydrologic Unit 18010201.

Owner: Crown Zellerbach Corp.

WELL CHARACTERISTICS.--Drilled industrial well, diam 6 in (150 mm), depth 123 ft (37 m).

DATUM.--Altitude of land surface datum is 4,610 ft (1,405 m). Measuring point: Top of casing, 0.40 ft (0.12 m) above datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.98 ft (14.93 m) below datum, July 26, 1974; lowest measured, 76.61 ft (23.35 m) below datum, Nov. 4, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|------|----------------|------|----------------|--------|----------------|
| OCT 21 | 65.43 | - | - | - | - | JUL 29 | 71.28 |

423832121524801. Local number 34S/7E-9adb.

LOCATION.--Lat 42°38'32", long 121°52'48", Hydrologic Unit 18010201.

Owner: State of Oregon.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 221 ft (67 m), cased to 43 ft (13 m).

DATUM.--Altitude of land surface datum is 4,220 ft (1,286 m). Measuring point: Bolt above top of casing, 4.86 ft (1.48 m) below datum.

PERIOD OF RECORD.--1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.49 ft (5.64 m) below datum, Jan. 31, 1975; lowest measured, 26.87 ft (8.19 m) below datum, Apr. 30, 1976

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|------|----------------|
| OCT 21 | 19.42 | JAN 28 | 19.35 | APR 28 | 19.80 | - | - |

423408121430901. Local number 35S/8E-1bcc.

LOCATION.--Lat 42°34'08", long 121°43'09", Hydrologic Unit 18010202.

Owner: H.G. Wolff.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 102 ft (31 m).

DATUM.--Altitude of land surface datum is 4,305 ft (1,312 m). Measuring point: Top of casing 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.45 ft (0.44 m) below datum, Apr. 8, 1956; lowest measured, 17.00 ft (5.18 m) below datum, July 27, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 10.67 | - | - | APR 27 | 11.72 | JUL 27 | 17.00 |

GROUND-WATER LEVELS

KLAMATH COUNTY--Continued

423131121340801. Local number 35S/10E-19aca.

LOCATION.--Lat 42°31'31", long 121°34'08", Hydrologic Unit 18010202.

Owner: Wolf Butte Ranch.

AQUIFER.--Volcanic rock.

WELL CHARACTERISTICS.--Drilled domestic well, diam, 6 in (150 mm), depth 360 ft (110 m), cased to 70 ft (21 m).

DATUM.--Altitude of land surface datum is 4,300 ft (1,311 m). Measuring point: Top of casing, 0.50 ft (0.15 m), above datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.98 ft (2.13 m) below datum, Apr. 18, 1956; lowest measured, 40.72 ft (12.41 m) below datum, July 24, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 23.70 | JAN 26 | 25.55 | APR 27 | 21.48 | JUL 27 | 10.24 |

422642121160901. Local number 36S/12E-14ccb.

LOCATION.--Lat 42°26'42", long 121°16'09", Hydrologic Unit 18010202.

Owner: Jim Godowa.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused well, diam 6 in (150 mm), depth 48 ft (15 m).

DATUM.--Altitude of land surface datum is 4,345 ft (1,324 m). Measuring point: Top of casing, 1.50 ft (0.46 m) below datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.71 ft (0.22 m) below datum, July 17, 1973; lowest measured, 6.64 ft (2.02 m) below datum, Aug. 26, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 10 | 2.67 | JAN 26 | 2.30 | APR 27 | 2.97 | JUL 27 | 3.92 |

421920121400002. Local number 37S/10E-29dbb1.

LOCATION.--Lat 42°19'20", long 121°40'00", Hydrologic Unit 180102004.

Owner: Edgewood Ranch. Formerly Don Roberts.

AQUIFER.--Sedimentary rocks.

WELL CHARACTERISTICS.--Drilled stock well, diam 10 in (250 mm), depth 100 ft (30 m).

DATUM.--Altitude of land surface datum is 4,187 ft (1,276 m). Measuring point: Top of casing, 2.50 ft (0.76 m) above datum.

REMARKS.--Well obstructed at about 10 ft, measurement discontinued.

PERIOD OF RECORD.--1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.50 ft (1.98 m) below datum, Apr. 14, 1970; lowest measured, 13.52 ft (4.12 m) below datum, Nov. 19, 1949.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|------|----------------|------|----------------|------|----------------|
| OCT 21 | 10.52 | - | - | - | - | - | - |

421920121400001. Local number 37S/10E-29dbb2.

LOCATION.--Lat 42°19'20", long 121°40'00", Hydrologic Unit 18010204.

Owner: Edgewood Ranch. Formerly Don Roberts.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled stock well, diam 18 in (460 mm), depth 800 ft (244 m), cased to 20 ft (6.1 m).

DATUM.--Altitude of land surface datum is 4,186 ft (1,276 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.78 ft (6.33 m) below datum, Apr. 17, 1958; lowest measured, 31.24 ft (9.52 m) below datum, July 31, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 21 | 30.14 | JAN 27 | 30.57 | APR 28 | 30.35 | JUL 28 | 28.71 |

GROUND-WATER LEVELS

579

KLAMATH COUNTY--Continued

421630121392701. Local number 38S/10E-9cbc. Formerly 38S/10E-9ccb.

LOCATION.--Lat 42°16'30", long 121°39'27", Hydrologic Unit 18010204.

Owner: Underwood Ranch.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled stock well, diam 6 in (150 mm), depth 135 ft (41 m), cased to 25 ft (8 m).

DATUM.--Altitude of land surface datum is 4,210 ft (1,283 m). Measuring point: Top of casing, 0.70 ft (0.21 m) above datum.

PERIOD OF RECORD.--1949-1972, 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 107.55 ft (32.78 m) below datum; lowest measured, 121.71 ft (37.10 m) below datum, July 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 21 | 115.13 | JAN 27 | 112.18 | APR 28 | 115.33 | JUL 28 | 121.71 |

421710121285001. Local number 38S/11½E-12cca3.

LOCATION.--Lat 42°17'10", long 121°28'50", Hydrologic Unit 18010204.

Owner: Frank Challis.

AQUIFER.--Red porous lava rock.

WELL CHARACTERISTICS.--Drilled unused well, diam 12 in (300 m), depth 150 ft (46 m), cased to 5 ft (1.5 m).

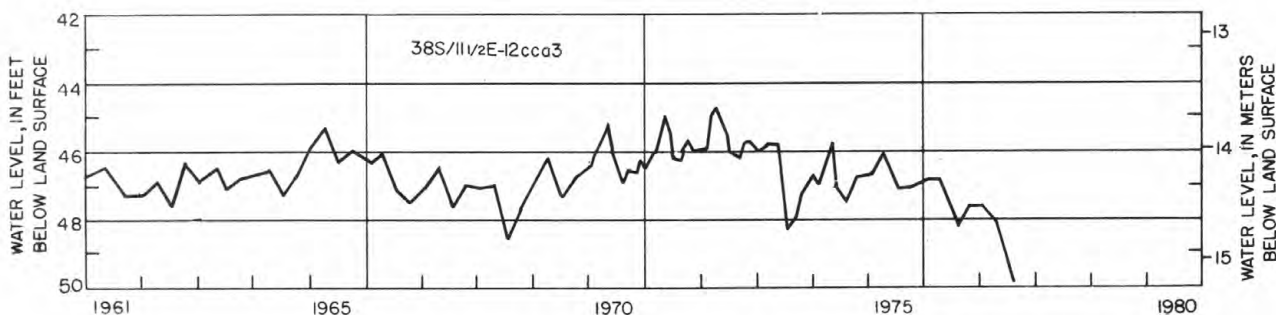
DATUM.--Altitude of land surface datum is 4,161 ft (1,268 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1949 to current year, continuous recording gage installed May 12, 1970, removed June 12, 1975.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.02 ft (13.42 m) below datum, Aug. 6, 1958; lowest measured, 49.82 ft (15.19 m) below datum, July 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 21 | 47.60 | JAN 27 | 47.59 | APR 28 | 48.05 | JUL 28 | 49.82 |



421605121290501. Local number 38S/11½E-13ccc.

LOCATION.--Lat 42°16'05", long 121°29'05", Hydrologic Unit 18010204.

Owner: Herman Pendegraft.

AQUIFER.--Cinders.

WELL CHARACTERISTICS.--Drilled unused well, diam 20 in (510 mm), depth 600 ft (183 m), cased to 16 ft (4.9 m).

DATUM.--Altitude of land surface datum is 4,152 ft (1,266 m). Measuring point: Top south side of casing, 0.42 ft (0.13 m) above datum.

PERIOD OF RECORD.--1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.54 ft (5.65 m) below datum, Jan. 28, 1965; lowest measured, 29.53 ft (9.00 m) below datum, Oct. 16, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 21 | 24.36 | JAN 27 | 25.05 | APR 28 | 25.96 | JUL 28 | 25.89 |

GROUND-WATER LEVELS

KLAMATH COUNTY--Continued

421612121302501. Local number 38S/11½E-15dda.

LOCATION.--Lat 42°16'12", long 121°30'25", Hydrologic Unit 18010204.

Owner: George McCollum.

AQUIFER.--Lava rock and cinders.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 12 in (300 mm), depth 495 ft (151 m).

DATUM.--Altitude of land surface datum is 4,185 ft (1,276 m). Measuring point: Airline hole in pumpbase, 1.05 ft (0.32 m) above datum.

PERIOD OF RECORD.--1948, 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 71.26 ft (21.72 m) below datum, Apr. 24, 1975; lowest measured, 81.55 ft (24.86 m) below datum, July 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 21 | 78.99 | JAN 27 | 78.83 | APR 28 | 79.38 | JUL 28 | 81.55 |

421431121340401. Local number 38S/11½E-30dac.

LOCATION.--Lat 42°14'31", long 121°34'04", Hydrologic Unit 18010204.

Owner: George McCollum.

AQUIFER.--Broken lava rock and cinders.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 14 in (350 mm), depth 175 ft (53 m), cased to 120 ft (37 m).

DATUM.--Altitude of land surface datum is 4,217 ft (1,285 m). Measuring point: Top of hole in pumpbase, 1.00 ft (0.30 m) above datum.

PERIOD OF RECORD.--1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 99.94 ft (30.46 m) below datum, Apr. 17, 1958; lowest measured, 117.48 ft (35.81 m) below datum, Oct. 16, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 21 | 107.18 | JAN 27 | 105.73 | APR 28 | 106.44 | JUL 28 | a |

a Well being pumped.

420908121313701. Local number 39S/11½E-28ddd.

LOCATION.--Lat 42°09'08", long 121°31'37", Hydrologic Unit 18010204.

Owner: Lost River Ranch.

AQUIFER.--Diatomite.

WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 6 in (150 mm), depth 460 ft (140 m), cased to 60 ft (18 m).

DATUM.--Altitude of land surface datum is 4,105 ft (1,251 m). Measuring point: Top south side of concrete curb, 0.30 ft (0.09 m) above datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.50 ft (1.98 m) below datum, Aug. 25, 1955; lowest measured, 37.16 ft (11.33 mm) below datum, July 24, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 21 | 25.68 | JAN 27 | 28.03 | APR 28 | b53.06 | JUL 28 | a |

a Well being pumped.

b May be affected by recent pumping.

420919121190201. Local number 39S/12E-29dbc.

LOCATION.--Lat 42°09'19", long 121°19'02", Hydrologic Unit 18010204.

Owner: Robert Vogel.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 88 ft (27 m).

DATUM.--Altitude of land surface datum is 4,140 ft (1,262 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.34 ft (4.07 m) below datum, July 24, 1957; lowest measured, 25.46 ft (7.76 m) below datum, Feb. 18, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 21 | 20.89 | JAN 27 | b25.70 | APR 28 | a25.95 | JUL 28 | 16.72 |

a Well being pumped.

b May be affected by recent pumping.

KLAMATH COUNTY--Continued

420845121150601. Local number 39S/12E-35add.

LOCATION.--Lat 42°08'45", long 121°15'06", Hydrologic Unit 18010204.

Owner: Quentin Steele.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 6 in (150 mm), depth 360 ft (110 m).

DATUM.--Altitude of land surface datum is 4,180 ft (1,274 m). Measuring point: Top of casing at datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.26 ft (10.14 m) below datum, Aug. 5, 1958; lowest measured, 43.42 ft (13.23 m) below datum, May 2, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 21 | 38.99 | JAN 27 | b46.45 | APR 28 | 42.18 | JUL 28 | a50.46 |

a Well being pumped.

b May be affected by recent pumping.

420623121293601. Local number 40S/11E-11bad.

LOCATION.--Lat 42°06'23", long 121°29'36", Hydrologic Unit 18010204.

Owner: A.W. Shaupp.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled irrigation and stock well, diam 12 in (300 mm), depth 992 ft (302 m).

DATUM.--Altitude of land surface datum is 4,150 ft (1,265 m). Measuring point: Top of ½-in (6 mm) hole in pumpbase flange, 0.60 ft (0.18 m) above datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.38 ft (2.55 m) below datum, Apr. 7, 1956; lowest measured, 28.83 ft (8.79 m) below datum, July 22, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 21 | 19.56 | JAN 27 | 21.10 | APR 28 | a | JUL 28 | a |

a Well being pumped.

420232121241201. Local number 41S/12E-3cba.

LOCATION.--Lat 42°02'32", long 121°24'12", Hydrologic Unit 18010204.

Owner: Al Prescott. Formerly George Rajnus.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled domestic well, diam 4 in (100 mm), depth 76 ft (23 m).

DATUM.--Altitude of land surface datum is 4,110 ft (1,253 m). Top of casing, 0.30 ft (0.09 m) above datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.75 ft (0.23 m) below datum, Feb. 18, 1955; lowest measured, 4.56 ft (1.39 m) below datum, July 24, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 3.24 | JAN 26 | 3.23 | APR 27 | 2.89 | JUL 27 | 3.59 |

415954121271501. Local number 41S/12E-19dcc.

LOCATION.--Lat 41°59'54", long 121°27'15", Hydrologic Unit 18010204.

Owner: Barney Hoyt. Formerly Jack German.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug domestic and stock well, diam unknown, depth about 30 ft (9 m).

DATUM.--Altitude of land surface datum is 4,045 ft (1,233 m). Measuring point: Edge of concrete curb, 1.50 ft (0.46 m) below datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.18 ft (0.97 m) below datum, May 3, 1961; lowest measured, 11.67 ft (3.56 m) below datum, June 11, 1960.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 6.20 | JAN 26 | 7.10 | APR 27 | 6.59 | JUL 27 | 5.63 |

KLAMATH COUNTY--Continued

420124121122801. Local number 41S/14E-8cca.

LOCATION.--Lat 42°01'24", long 121°12'28", Hydrologic Unit 18010204.

Owner: Charles Kilgore.

AQUIFER.--Basalt fragments.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 16 to 12 in (410 to 300 mm), depth 210 ft (64 m), cased to 8 ft (2 m).

DATUM.--Altitude of land surface datum is 4,160 ft (1,268 m). Measuring point: Hole in pumpbase, 1.00 ft (0.30 m) above datum.

PERIOD OF RECORD.--1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.84 ft (4.52 m) below datum, Jan. 28, 1965; lowest measured, 21.12 ft (6.44 m) below datum, Apr. 25, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|------|----------------|
| OCT 16 | 17.31 | JAN 27 | 18.78 | APR 28 | 19.19 | - | - |

LAKE COUNTY

432435121015001. Local number 25S/14E-15bcc.

LOCATION.--Lat 43°24'35", long 121°01'50", Hydrologic Unit 17120005.

Owner: Al Soto. Formerly Ira A. Dutcher.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled unused well, diam 18 in (460 mm), depth 220 ft (67 m).

DATUM.--Altitude of land surface datum is about 4,350 ft (1,326 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1932, 1935-36, 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.88 ft (12.46 m) below datum, Oct. 7, 1974; lowest measured, 52.88 ft (16.18 m) below datum Oct. 22, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|--------|----------------|--------|----------------|-------|----------------|
| OCT 4 | 43.36 | JAN 11 | 43.24 | APR 13 | a | JUL 5 | a |

a Well being pumped.

431536120563901. Local number 27S/15E-4acal.

LOCATION.--Lat 43°15'36", long 120°56'39", Hydrologic Unit 17120005.

Owner: M.Y. Parks.

AQUIFER.--Basaltic fragments.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 16 in (410 mm), depth 257 ft (78 m), cased to 14 ft (4 m).

DATUM.--Altitude of land surface datum is about 4,335 ft (1,321 m). Measuring point: Top of pumpbase flange, 2.00 ft (0.61 m) above datum.

PERIOD OF RECORD.--1932, 1935-36, 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.30 ft (10.76 m) below datum, May 15, 1975; lowest measured, 37.60 ft (11.46 m) below datum, Aug. 27, 1970, Aug. 20, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|-------|----------------|
| OCT 20 | 36.50 | JAN 12 | 36.19 | MAR 20 | 36.20 | JUL 6 | 37.37 |
| NOV 20 | 36.30 | FEB 21 | 36.91 | APR 14 | 36.49 | | |

431547120380201. Local number 27S/18E-6bcb.

LOCATION.--Lat 43°15'47", long 120°38'02", Hydrologic Unit 17120005.

Owner: Rose T. Morici.

AQUIFER.--Sand.

WELL CHARACTERISTICS.--Drilled unused well, diam 8 in (200 mm), depth 83 ft (25 m), cased to 10 ft (3 m).

DATUM.--Altitude of land surface datum is about 4,317 ft (1,316 m). Measuring point: Top of casing, 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.94 ft (4.86 m) below datum, Oct. 8, 1974; lowest measured, 25.19 ft (7.68 m) below datum, Apr. 1, 1953.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|--------|----------------|--------|----------------|-------|----------------|
| OCT 5 | 16.94 | JAN 12 | 17.60 | APR 14 | 17.72 | JUL 5 | 17.64 |

GROUND-WATER LEVELS

583

LAKE COUNTY--Continued

431320120350001. Local number 27S/18E-21aaa.

LOCATION.--Lat 43°13'20", long 120°35'00", Hydrologic Unit 1712005.

Owner: Chewaucan Land & Cattle Co.

AQUIFER.--Basalt (?).

WELL CHARACTERISTICS.--Drilled abandoned oil-test well, diam 6½ in (165 mm), depth 635 ft (193 m).

DATUM.--Altitude of land surface datum is about 4,330 ft (1,320 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.41 ft (8.05 m) below datum, Apr. 5, 1967; lowest measured, 28.53 ft (8.70 m) below datum, Nov. 6, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|--------|----------------|--------|----------------|-------|----------------|
| OCT 5 | 27.95 | JAN 12 | 27.29 | APR 14 | 27.07 | JUL 5 | 27.64 |

430508119582001. Local number 29S/23E-3dac.

LOCATION.--Lat 43°05'08", long 119°58'20", Hydrologic Unit 1712005.

Owner: U.S. Soil Conservation Service.

AQUIFER.--Basalt (?).

WELL CHARACTERISTICS.--Drilled stock well, diam 8 in (200 mm), depth 177 ft (54 m).

DATUM.--Altitude of land surface datum is about 4,225 ft (1,288 m). Measuring point: Top of casing collar, at datum.

PERIOD OF RECORD.--1945, 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.42 ft (4.395 m) below datum, July 27, 1965; lowest measured, 19.62 ft (5.97 m) below datum, Apr. 23, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 19 | 17.83 | JAN 25 | a | APR 26 | 17.74 | JUL 26 | 17.80 |

a Well being pumped.

423250119531501. Local number 35S/24E-9dbd.

LOCATION.--Lat 42°32'45", long 119°53'22", Hydrologic Unit 17120007.

Owner: U.S. Bureau of Land Management.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled well, diam 8 in (200 mm), depth 376 ft (115 m), cased to 22 ft (8 m).

DATUM.--Altitude of land surface datum is 4,470 ft (1,362 m).

REMARKS.--Hogback Well on Rabbit Hills SW quadrangle map.

PERIOD OF RECORD.--1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.17 ft (2.19 m) below datum, Feb. 1, 1966; lowest measured, 9.03 ft (2.75 m) below datum, Oct. 23, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 19 | 7.90 | JAN 25 | 7.75 | APR 26 | 7.73 | JUL 26 | 8.53 |

422900120165201. Local number 36S/21E-6aba.

LOCATION.--Lat 42°29'02", long 120°16'54", Hydrologic Unit 17120006.

Owner: S.V. Carroll.

AQUIFER.--Sand.

WELL CHARACTERISTICS.--Dug unused well, size 8 x 8 ft (2.4 x 2.4 m), depth 21 ft (6 m), uncased.

DATUM.--Land surface datum is 4,321.6 ft (1,317.2 m) above mean sea level. Measuring point: Top of 1-in (25 mm) pipe, 4.50 ft (1.37 m) above datum.

PERIOD OF RECORD.--1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.27 ft (2.22 m) below datum, Apr. 11, 1972; lowest measured, 17.21 ft (5.25 m) below datum, Aug. 27, 1938.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 18 | 11.56 | JAN 25 | 11.79 | APR 26 | 11.96 | JUL 26 | 12.21 |

GROUND-WATER LEVELS

LAKE COUNTY--Continued

422450119541101. Local number 36S/24E-28ccb.

LOCATION.--Lat 42°24'45", long 119°54'11", Hydrologic Unit 17120007.

Owner: Lloyd Grisel.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 40 ft (12 m).

DATUM.--Altitude of land surface datum is 4,508 ft (1,374 m). Measuring point: 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.17 ft (5.23 m) below datum, Apr. 12, 1959; lowest measured, 27.56 ft (8.40 m) below datum, Jan. 11, 1962.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 19 | 25.28 | JAN 25 | 25.78 | APR 26 | 23.01 | JUL 26 | 24.47 |

421445119523001. Local number 38S/24E-27acb.

LOCATION.--Lat 42°14'55", long 119°52'28", Hydrologic Unit 17120007.

Owner: Charles Crump.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled unused artesian well, diam 6 in (150 mm), depth 81 ft (25 m), cased to 60 ft (18 m).

DATUM.--Altitude of land surface datum is about 4,495 ft (1,370 m). Measuring point: Top of casing at datum.

PERIOD OF RECORD.--1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing several times, 1952-58, 1963-66, 1969-71, 1973-76; lowest measured, 2.19 ft (0.67 m) below datum, Jan. 15, 1960.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 19 | 0.20 | JAN 25 | 0.07 | APR 26 | 0.10 | JUL 26 | 0.46 |

420842120271301. Local number 39S/19E-34add.

LOCATION.--Lat 42°08'42", long 120°27'13", Hydrologic Unit 18020001.

Owner: Daryl Jamison. Formerly William Hoffman.

WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 6 in (150 mm), depth 110 ft (34 m), cased to 110 ft (34 m).

DATUM.--Altitude of land surface datum is 4,792 ft (1,461 m). Measuring point: Top of vent pipe, 2.00 ft (0.61 m) above datum.

PERIOD OF RECORD.--1960 to current year.

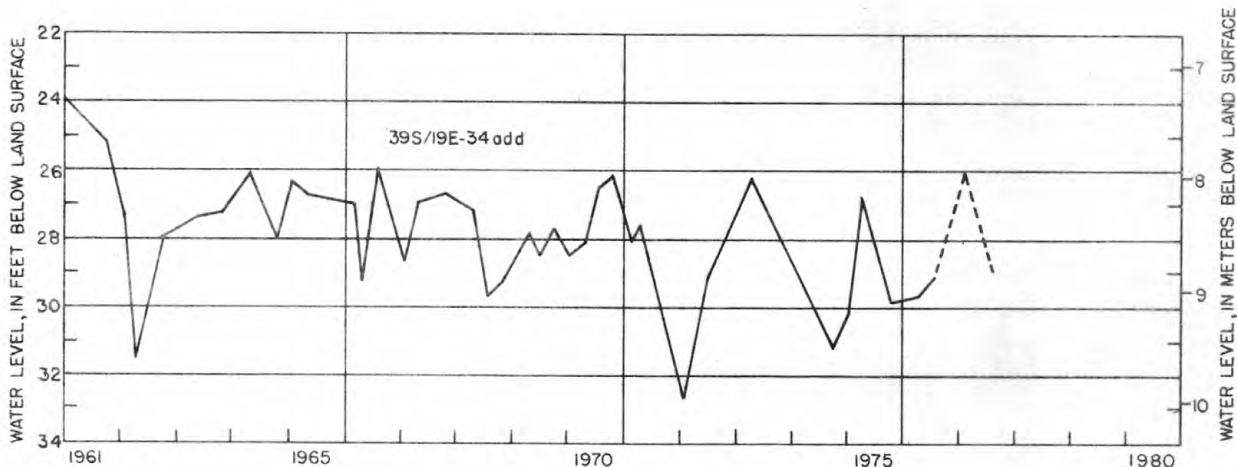
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.78 ft (7.25 m) below datum, Oct. 13, 1960; lowest measured, b31.43 ft (9.58 m) below datum, May 1, 1962.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 19 | a31.67 | JAN 25 | 26.01 | APR 26 | a42.23 | JUL 26 | b28.94 |

a Well being pumped.

b May be affected by recent pumping.



LAKE COUNTY--Continued

421032119535802. Local number 39S/24E-21bdb.

LOCATION.--Lat 42°10'34", long 119°53'48", Hydrologic Unit 17120007.

Owner: E.G. & T.M. Sanford. Formerly J.G. Dyke.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled domestic well; diam 6 in (150 mm), depth 165 ft (50 m).

DATUM.--Altitude of land surface datum is about 4,580 ft (1,396 m). Measuring point: Top of Casing, 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.00 ft (2.74 m) below datum, July 23, 1974; lowest measured, 19.34 ft (5.90 m) below datum, Jan. 15, 1960.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 19 | 16.85 | JAN 25 | 19.33 | APR 26 | 17.60 | JUL 26 | 18.28 |

LANE COUNTY

440803123042601. Local number 16S/3W-32acd.

LOCATION.--Lat 44°08'03", long 123°04'26", Hydrologic Unit 17090004.

Owner: Peter Gutowski.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Dug and drilled irrigation well in sand and gravel, diam 8 in (200 mm), depth 40 ft (12 m).

DATUM.--Land-surface datum is 388.98 ft (118.56 m) above mean sea level. Measuring point: Top of casing, 8.00 ft (2.44 m) below datum.

REMARKS.--Continuous water-level recorder installed Feb. 16, 1977.

PERIOD OF RECORD.--1928-30, 1935-36, 1938 to current year. Published every fifth day February 20 to September 20, 1977.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.53 ft (1.99 m) below datum, Jan. 16, 1936; lowest measured, 21.88 ft (6.67 m) below datum, Aug. 15, 1977.

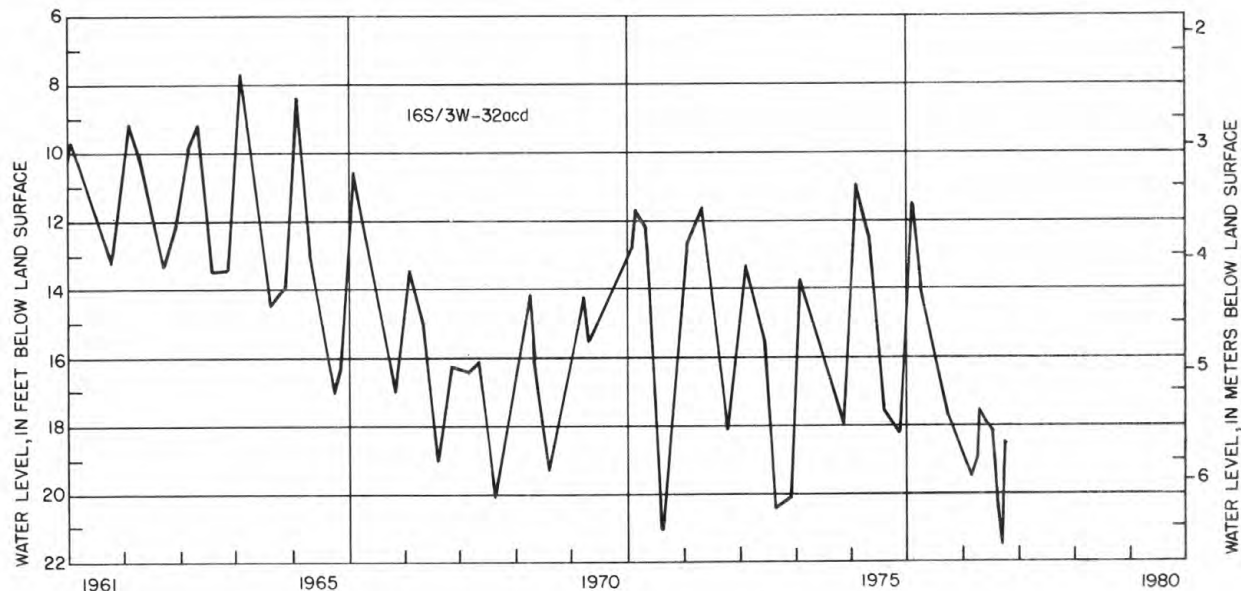
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, OCT. 1, 1976 TO FEB 16, 1977

| | |
|--------|-------|
| OCT 1 | 17.75 |
| JAN 14 | 19.03 |
| FEB 16 | 19.49 |

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR FEBRUARY 1977 TO OCTOBER 1977
MEAN VALUES

| DAY | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 5 | | 19.38 | 17.61 | 17.89 | 17.84 | 19.25 | 21.88 | 18.99 |
| 10 | | 19.20 | 17.57 | 17.91 | 17.87 | 19.81 | 21.71 | 18.69 |
| 15 | | 18.90 | 17.55 | 17.92 | 18.15 | 20.42 | 21.57 | 18.48 |
| 20 | 19.54 | 18.33 | 17.59 | 17.89 | 18.39 | 21.08 | 21.40 | 18.24 |
| 25 | 19.54 | 18.01 | 17.71 | 17.89 | 18.68 | 21.28 | 20.59 | - |
| EOM | 19.50 | 17.75 | 17.82 | 17.86 | 18.98 | 21.49 | 19.48 | - |

WTR YEAR 1977 MAX 17.55 APR 15, 1977 MIN 21.88 AUG 5, 1977



GROUND-WATER LEVELS

LANE COUNTY--Continued

440000124054004. Local number 18S/12W-14cdd4.

LOCATION.--Lat 44°00'01", long 124°05'40", Hydrologic Unit 17100206.

Owner: U.S. Geological Survey.

AQUIFER.--Sand.

WELL CHARACTERISTICS.--Drilled observation well, diam 6 in (150 mm), depth 59 ft (18 m), cased to 59 ft (18 m), screened 44-59 ft (13-18 m).

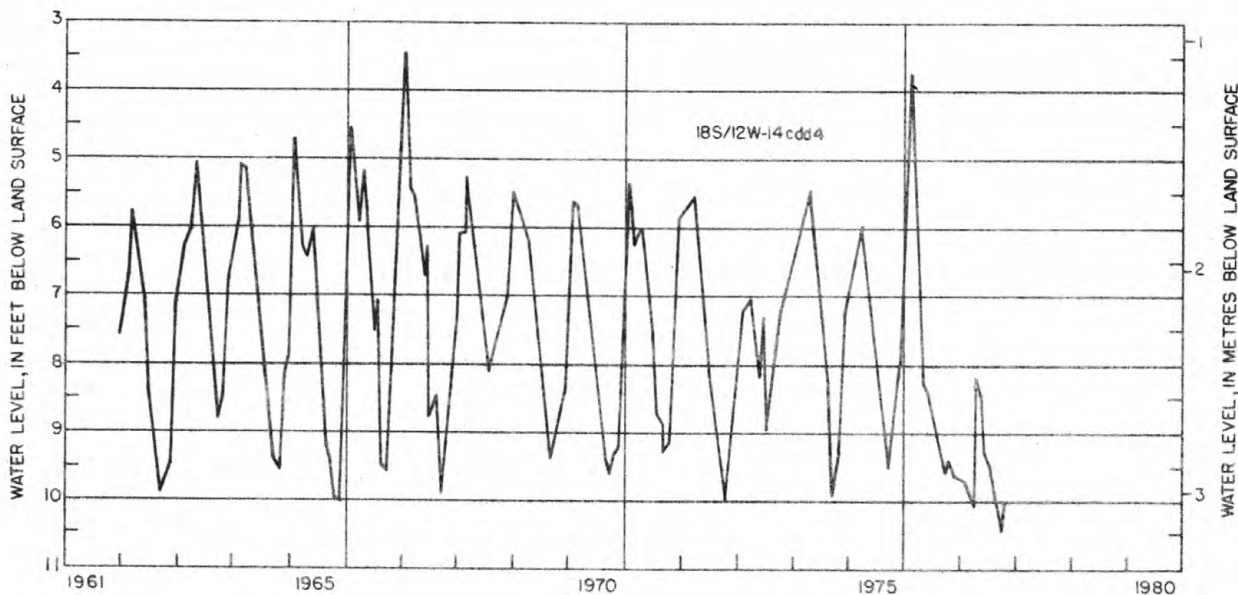
DATUM.--Altitude of land surface datum is 70 ft (21 m). Measuring point: Top of casing at datum.

PERIOD OF RECORD.--1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.44 ft (1.05 m) below datum, Jan. 31, 1967; lowest measured, 10.40 ft (3.17 m) below datum Aug. 24, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 22 | 9.43 | JAN 23 | 9.77 | APR 23 | 8.44 | JUL 22 | 9.98 |
| NOV 22 | 9.67 | FEB 21 | 10.05 | MAY 23 | 9.29 | AUG 24 | 10.40 |
| JAN 7 | 9.80 | MAR 24 | 8.20 | JUN 22 | 9.52 | SEP 21 | 10.09 |



LINN COUNTY

444300123072501. Local number 10S/4W-12bdd.

LOCATION.--Lat 44°42'58", long 123°07'25", Hydrologic Unit 17090003.

Owner: Henry Roefler.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in (200 mm), depth 32 ft (10 m).

DATUM.--Land-surface datum is 185.74 ft (56.61 m) above mean sea level. Measuring point: Top of casing, 3.20 ft (0.98 m) above datum.

PERIOD OF RECORD.--1928-30, 1935-36, 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.62 ft (2.32 m) below datum, Jan. 14, 1936; lowest measured, dry, Aug. 2, Sept. 29, 1972, Oct. 15, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|-------------|-------|-------------|--------|-------------|--------|-------------|
| JAN 6 | 23.59 | APR 6 | 21.74 | JUL 12 | 25.95 | SEP 28 | 25.57 |
| MAR 8 | 25.09 | | | | | | |

LINN COUNTY--Continued

442140123052501. Local number 14S/3W-7ddc.

LOCATION.--Lat 44°21'40", long 123°05'25", Hydrologic Unit 17090003.

Owner: H.H. Kirk.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 8 in (200 m), depth 123 ft (37 m), cased to 110 ft (34 m), perforated 35-110 ft (11-34 m).

DATUM.--Altitude of land surface datum is 288 ft (88 m). Measuring point: 0.55 ft (0.17 m) above datum.

PERIOD OF RECORD.--1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.59 ft (0.79 m) below datum, Apr. 4, 1963; lowest measured, is 13.30 ft (4.05 m) below datum, Oct. 11, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 22 | 11.76 | JAN 20 | 12.11 | APR 21 | 6.58 | JUL 20 | 10.08 |
| NOV 24 | 12.43 | FEB 17 | 12.50 | MAY 20 | 7.75 | AUG 22 | 11.36 |
| DEC 28 | 12.03 | MAR 22 | 6.69 | JUN 21 | 8.81 | SEP 26 | 11.88 |

MALHEUR COUNTY

441710117472301. Local number 15S/40E-2ccb.

LOCATION.--Lat 44°17'11", long 117°47'22", Hydrologic Unit 17050119.

Owner: Rankin Crow.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 10 in (250 mm), depth 310 ft (94 m), cased to 170 ft (52 m).

DATUM.--Altitude of land surface datum is about 3,898.3 ft (1,188.2 m). Measuring point: 1.00 ft (0.30 m) above datum.

PERIOD OF RECORD.--1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.06 ft (9.47 m) below datum, Mar. 18, 1951; lowest measured, 57.10 ft (17.40 m) below datum, Nov. 5, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|-------|----------------|--------|----------------|-------|----------------|
| NOV 5 | 57.10 | FEB 3 | 55.67 | MAY 16 | a | AUG 4 | a |

a Well being pumped.

440007117000401. Local number 18S/47E-17bbb.

LOCATION.--Lat 44°00'36", long 117°00'13", Hydrologic Unit 17050115.

Owner: Earl Weaver.

WELL CHARACTERISTICS.--Drilled domestic well, diam 3 in (80 mm), depth 135 ft (41 m), cased to 135 ft (41 m).

DATUM.--Altitude of land surface datum is about 2,180 ft (664 m). Measuring point: Top of casing, 0.95 ft (0.29 m) above datum.

PERIOD OF RECORD.--1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.91 ft (2.11 m) below datum, Sept. 9, 1952; lowest measured, 15.15 ft (4.62 m) below datum, Aug. 31, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|-------|----------------|--------|----------------|--------|----------------|
| NOV 15 | 11.58 | MAR 3 | 11.92 | MAY 24 | 12.81 | AUG 23 | 8.43 |

434450118044001. Local number 21S/38E-17dca.

LOCATION.--Lat 43°44'50", long 118°04'40", Hydrologic Unit 17050116.

Owner: Walter Bodkin.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug stock well, diam 12 in (300 mm), depth 14 ft (4.2 m) cribbed to bottom.

DATUM.--Altitude of land surface datum is about 2,960 ft (902 m). Measuring point: At land surface datum.

PERIOD OF RECORD.--1945-56, 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.07 ft (0.94 m) below datum, June 23, 1952; lowest measured, 11.33 ft (3.45 m) below datum, Feb. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| NOV 15 | 7.54 | FEB 28 | 11.33 | MAY 23 | 4.63 | AUG 22 | 5.18 |

GROUND-WATER LEVELS

MALHEUR COUNTY--Continued

430730118073001. Local number 28S/37E-23ddd.

LOCATION.--Lat 43°07'30", long 118°07'30", Hydrologic Unit 17050110.

Owner: Earl Obenchain.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug domestic well, diam 4 ft (1.2 m), depth 30 ft (9 m), cribbed with rock to bottom.

DATUM.--Altitude of land surface datum is about 4,060 ft (1,240 m). Measuring point: Top of south side of concrete casing, 1.85 ft (0.56 m) above datum.

PERIOD OF RECORD.--1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.95 ft (0.59 m) below datum, Mar. 8, 1967; lowest measured, 18.40 ft (5.61 m) below datum, Jan. 22, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| DEC 15 | 9.67 | MAR 17 | 9.55 | JUN 29 | 9.95 | SEP 15 | 14.25 |

424639117510501. Local number 32S/40E-18acc.

LOCATION.--Lat 42°46'38", long 117°51'03", Hydrologic Unit 17050109.

Owner: Clarence J. Eckstein.

AQUIFER.--Volcanic rock.

WELL CHARACTERISTICS.--Drilled domestic and public-supply well, diam 6 in (150 mm), depth 358 ft (109 m), cased to 160 ft (49 m).

DATUM.--Altitude of land surface datum is about 3,930 ft (1,200 m). Measuring point: Hole in top of casing, 0.70 ft (0.21 m) above datum.

PERIOD OF RECORD.--1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 234.21 ft (71.39 m) below datum, Mar. 1, 1977; lowest measured, 243.89 ft (74.34 m) below datum June 4, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|-------|----------------|--------|----------------|------|----------------|
| NOV 16 | 235.25 | MAR 1 | 234.21 | MAY 24 | 234.96 | - | - |

423527117522501. Local number 34S/39E-13cbc.

LOCATION.--Lat 42°35'27", long 117°52'25", Hydrologic Unit 17050109.

Owner: Civil Aeronautics Administration.

AQUIFER.--Basalt (?).

WELL CHARACTERISTICS.--Drilled observation well, diam 10 in (250 mm), depth 246 ft (75 m).

DATUM.--Altitude of land surface datum is 4,050 ft (1,234 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1954-56, 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 193.53 ft (58.99 m) below datum, Aug. 19, 1975; lowest measured, 207.20 ft (63.15 m) below datum, Sept. 13, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|-------|----------------|--------|----------------|--------|----------------|
| NOV 16 | 194.58 | MAR 1 | 193.87 | MAY 24 | 194.06 | AUG 23 | 193.59 |

422504117515501. Local number 36S/41E-26dad.

LOCATION.--Lat 42°25'04", long 117°51'55", Hydrologic Unit 17050109.

Owner: U.S. Bureau of Land Management.

AQUIFER.--Basalt (?).

WELL CHARACTERISTICS.--Drilled unused well, diam 8 in (200 mm), depth 222 ft (68 m).

DATUM.--Altitude of land surface datum is 4,200 ft (1,280 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above datum.

PERIOD OF RECORD.--1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 194.07 ft (59.15 m) below datum, May 2, 1962; lowest measured, 219.12 ft (66.79 m) below datum, Nov. 16, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|-------|----------------|--------|----------------|--------|----------------|
| NOV 16 | 209.89 | MAR 1 | 208.69 | MAY 24 | 212.33 | AUG 23 | 209.13 |

GROUND-WATER LEVELS

589

MALHEUR COUNTY--Continued

420010117431001. Local number 41S/43E-19aa.

LOCATION.--Lat 42°00'10", long 117°43'10", Hydrologic Unit 16040201.

Owner: Victor Albisu.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 98 ft (30 m).

DATUM.--Altitude of land surface datum is 4,420 ft (1,347 m). Measuring point: Top of casing, 5.35 ft (1.63 m) below datum.

PERIOD OF RECORD.--1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.23 ft (3.73 m) below datum, Sept. 19, 1972; lowest measured, 32.11 ft (9.79 m) below datum, Aug. 23, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|-------|----------------|--------|----------------|--------|----------------|
| NOV 16 | 13.94 | MAR 1 | 13.60 | MAY 24 | 16.61 | AUG 23 | 20.23 |

MARION COUNTY

451232122462301. Local number 4S/1W-23acc.

LOCATION.--Lat 45°12'32", long 122°46'23", Hydrologic Unit 17090009.

Owner: Donald Olmstead.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug unused well, diam 4 ft (1.2 m), depth 60 ft (18 m), cribbed with brick to bottom.

DATUM.--Altitude of land surface datum is about 180 ft (55 m). Measuring point: Top of concrete well cover, 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1945 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.78 ft (13.65 m) below datum, June 7, 1961; lowest measured, dry, Oct. 18, 1967, Apr. 16, July 17, Oct. 15, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 11 | 53.47 | JAN 18 | 53.63 | MAR 16 | 54.10 | APR 18 | 54.55 |

451530122563101. Local number 4S/2W-4bab.

LOCATION.--Lat 45°15'30", long 122°56'31", Hydrologic Unit 17090007.

Owner: Dorety Real Estate. Formerly Dr. C.A. Bump.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug domestic well, diam 36 in (910 mm), depth 23 ft (7 m), cribbed with concrete tile to bottom.

DATUM.--Land surface datum is 123.57 ft (37.66 m) above mean sea level. Measuring point: Edge of concrete curb, 1.80 ft (0.55 m) above datum.

PERIOD OF RECORD.--1928-30, 1935-36, 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.60 ft (0.49 m) below datum, Dec. 21, 1955; lowest measured, 19.90 ft (6.07 m) below datum, Dec. 5, 1939.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|-------|----------------|-------|----------------|-------|----------------|
| OCT 26 | 15.25 | FEB 2 | 15.97 | MAY 4 | 14.71 | AUG 3 | 16.46 |

GROUND-WATER LEVELS

MARION COUNTY--Continued

450620122530501. Local number 5S/2W-25cbd.

LOCATION.--Lat 45°06'20", long 122°52'58", Hydrologic Unit 17090009.

Owner: Agricultural Research Corp. (Sam H. Brown).

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 18 to 6 in (460 to 150 mm), depth 252 ft (77 m), casing perforated 117-147 ft (36-45 m), 215-245 ft (65-75 m).

DATUM.--Land surface datum is 180.31 ft (54.96 m) above mean sea level. Measuring point: Top edge of seal around pump column, 0.65 ft (0.20 m) below datum.

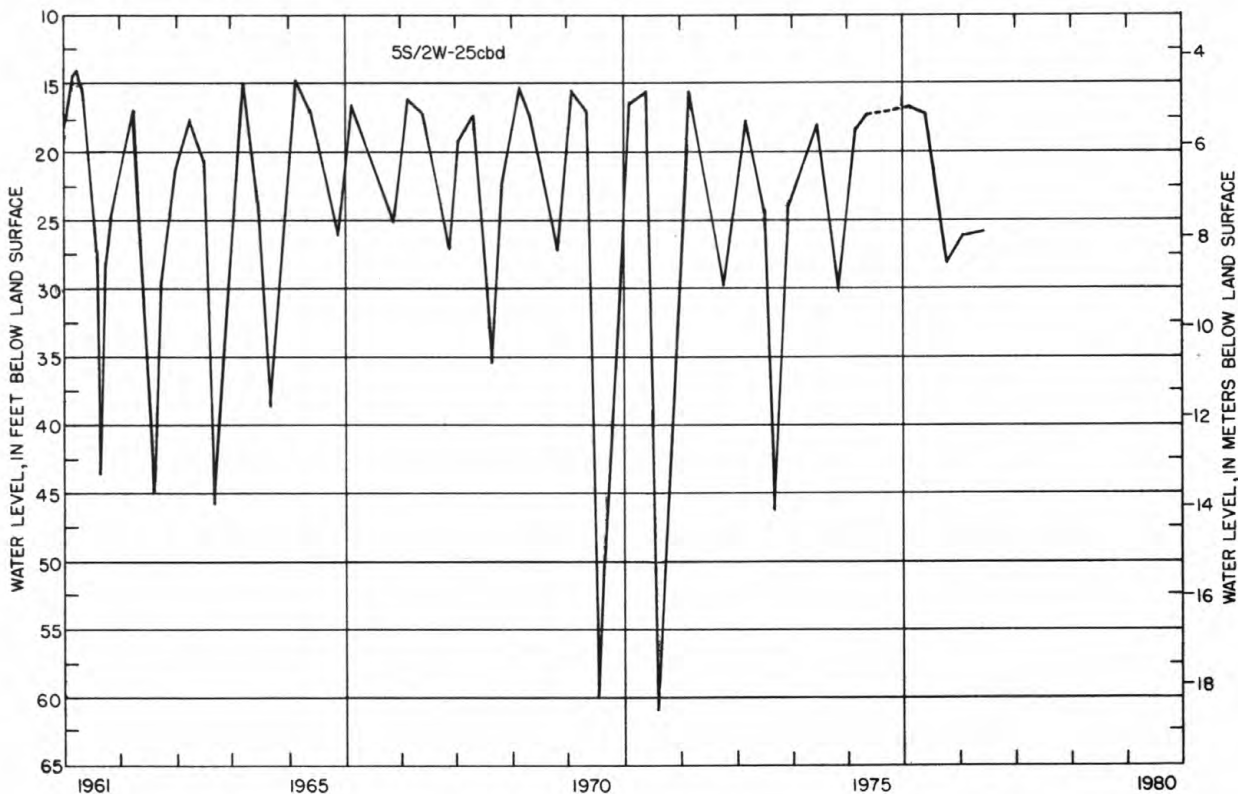
PERIOD OF RECORD.--1929-30, 1935-36, 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.74 ft (4.19 m) below datum, Mar. 11, 1948; lowest measured, b/ 61.03 ft (18.60 m) below datum, Aug. 3, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|-------|-------------|-------|-------------|-------|-------------|
| OCT 26 | 27.98 | FEB 2 | 26.25 | MAY 4 | 25.94 | AUG 3 | b70.60 |

b May be affected by recent pumping.



TILLAMOOK COUNTY

452300123481501. Local number 2S/9W-21bcc.

LOCATION.--Lat 45°23'03", long 123°48'08", Hydrologic Unit 17100203.

Owner: Vern Darby.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 128 ft (39 m).

DATUM.--Altitude of land surface datum is about 120 ft (37 m). Measuring point: Top of casing, at datum.

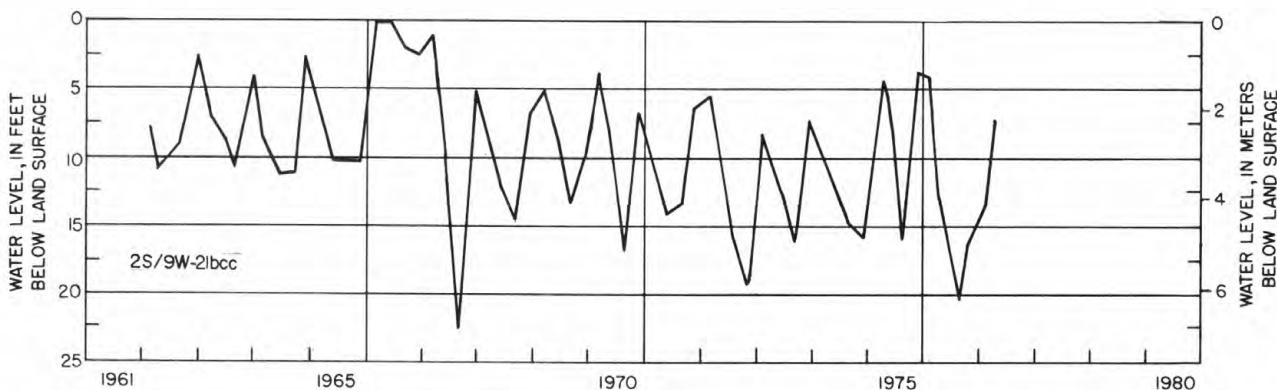
PERIOD OF RECORD.--1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing, Feb. 21, 1966; lowest measured, 22.89 ft (6.98 m) below datum, Aug. 2, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|-------------|--------|-------------|--------|-------------|--------|-------------|
| NOV 8 | 16.10 | FEB 25 | 13.92 | MAR 31 | 7.27 | MAY 17 | 10.71 |
| | | | | | | AUG 16 | b25.26 |

b May be affected by recent pumping.



UMATILLA COUNTY

453730119042501. Local number 2N/30E-28bdc.

LOCATION.--Lat 45°37'35", long 119°04'25", Hydrologic Unit 17070103.

Owner: Cunningham Sheep Co.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled unused well, diam 6 in (150 mm), depth 81 ft (25 m).

DATUM.--Altitude of land surface datum is 1,440 ft (439 m). Measuring point: Top of casing, 0.40 ft (0.12 m) above datum.

PERIOD OF RECORD.--1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 59.20 ft (18.04 m) below datum, May 11, Aug. 10, 1977; lowest measured, 68.28 ft (20.81 m) below datum, Sept. 19, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|------|-------------|
| FEB 16 | 59.21 | MAY 11 | 59.20 | AUG 10 | 59.20 | - | - |

454639118330901. Local number 3N/34E-3bac.

LOCATION.--Lat 45°46'25", long 118°33'08", Hydrologic Unit 17070103.

Owner: Berkley Davis.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 12 in (300 mm), depth 1,263 ft (385 m), deepened from 298 ft (91 m) in 1972; cased to 60 ft (18 m).

DATUM.--Altitude of land surface datum is 1,544 ft (471 m). Measuring point: Center of air gage, 1.90 ft (0.58 m) above datum.

PERIOD OF RECORD.--1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4 ft (1.5 m) below datum, May 2, 1954; lowest measured, 130.5 ft (39.8 m) below datum, Oct. 2, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|-------------|--------|-------------|--------|-------------|--------|-------------|
| DEC 7 | 121.5 | FEB 17 | 89.5 | MAY 12 | a | AUG 11 | a |

a Well being pumped.

UMATILLA COUNTY--Continued

455120118470501. Local number 4N/32E-2cbb.

LOCATION.--Lat 45°51'20", long 118°46'55", Hydrologic Unit 17070103.

Owner: L.F. King.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 10 in (250 mm), reported depth 527 ft (161 m).

DATUM.--Altitude of land surface datum is 1,650 ft (503 m). Measuring point: Hole in pumpbase, at datum.

PERIOD OF RECORD.--1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11 ft (3 m) below datum, Aug. 26, 1953; lowest measured, b/ 60.85 ft (18.50 m) below datum, Aug. 25, 1959.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|--------|----------------|--------|----------------|--------|----------------|
| DEC 7 | 14.58 | FEB 17 | 14.53 | MAY 12 | b71.14 | AUG 11 | 17.13 |

b May be affected by recent pumping.

455425119182001. Local number 5N/28E-22bba.

LOCATION.--Lat 45°54'25", long 119°18'08", Hydrologic Unit 17070101.

Owner: L.J. Martin.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 189 ft (58 m), cased to 8 ft (2.4 m).

DATUM.--Altitude of land surface datum is 440 ft (134 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.39 ft (1.34 m) below datum, Feb. 15, 1965; lowest measured, 23.96 ft (7.30 m) below datum, Aug. 4, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|--------|----------------|--------|----------------|-------|----------------|
| DEC 4 | 6.48 | FEB 17 | b33.03 | MAY 12 | b79.02 | AUG 9 | b83.97 |

b May be affected by recent pumping.

455420118334001. Local number 5N/34E-16ddc.

LOCATION.--Lat 45°54'18", long 118°33'40", Hydrologic Unit 17070102.

Owner: R.M. Thompson.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 6 in (150 mm), depth 228 ft (69 m).

DATUM.--Altitude of land surface datum is 2,130 ft (649 m). Measuring point: Top of hole in sanitary seal, 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 139.91 ft (42.64 m) below datum, Feb. 17, 1977; lowest measured, b/ 162.50 ft (49.53 m) below datum, Nov. 30, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|--------|----------------|--------|----------------|--------|----------------|
| DEC 7 | 141.44 | FEB 17 | 139.91 | MAY 12 | 140.25 | AUG 11 | b156.86 |

b May be affected by recent pumping.

455652118230001. Local number 5N/35E-1bad.

LOCATION.--Lat 45°56'52", long 118°23'00", Hydrologic Unit 17070102.

Owner: W. Bingman.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug irrigation well, size 6 x 8 ft (1.8 x 2.4 m), depth 37 ft (11 m), curbed with wood.

DATUM.--Land surface datum is 995.60 ft (303.46 m) above mean sea level. Measuring point: At datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.22 ft (4.03 m) below datum, Dec. 19, 1946; lowest measured, 35.43 ft (10.80 m) below datum, Feb. 16, 1937.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 25.17 | JAN 20 | 23.60 | APR 20 | 24.56 | JUL 20 | 29.11 |
| NOV 22 | 24.81 | FEB 18 | 23.88 | MAY 20 | 24.30 | AUG 24 | 28.20 |
| DEC 20 | 24.31 | MAR 21 | 24.75 | JUN 20 | 26.68 | SEP 22 | 27.32 |

GROUND-WATER LEVELS

593

UMATILLA COUNTY--Continued

455650118241501. Local number 5N/35E-2bad.

LOCATION.--Lat 45°56'50", long 118°24'15", Hydrologic Unit 17070102.

Owner: K.A. Townsend.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug irrigation well, size 5 x 5 ft (1.5 x 1.5 m), depth 23 ft (7 m), curbed with concrete.

DATUM.--Land surface datum is 975.82 ft (297.43 m) above mean sea level. Measuring point: Top of plank pump support, at datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.91 ft (3.02 m) below datum, Nov. 28, 1949; lowest measured, dry, several times, 1957-77.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 20 | Dry | JAN 20 | Dry | APR 20 | Dry | JUL 20 | 18.64 |
| NOV 22 | Dry | FEB 18 | Dry | MAY 20 | 20.45 | AUG 24 | 18.84 |
| DEC 20 | Dry | MAR 21 | Dry | JUN 20 | 19.00 | SEP 22 | Dry |

455635118244501. Local number 5N/35E-3add.

LOCATION.--Lat 45°56'35", long 118°24'45", Hydrologic Unit 17070102.

Owner: Van Houten.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug and drilled well, dug part 42 x 42 in (1,070 x 1,070 mm), 37 ft (11 m) of concrete cribbing. Drilled and cased to depth of 124 ft (38 m), diameter unknown.

DATUM.--Land surface datum is 958.20 ft (292.06 m) above mean sea level. Measuring point: Top east side of well curb, 0.85 ft (0.26 m) above datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.53 ft (4.12 m) below datum, Sept. 20, 1961; lowest measured, dry several times, 1952-1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 20 | 38.44 | JAN 20 | Dry | APR 20 | 32.90 | JUL 20 | 33.72 |
| NOV 22 | Dry | FEB 18 | Dry | MAY 20 | 28.65 | AUG 24 | 22.22 |
| DEC 20 | Dry | MAR 21 | Dry | JUN 20 | 29.67 | SEP 22 | 35.03 |

455958118244501. Local number 6N/35E-14cad.

LOCATION.--Lat 45°59'58", long 118°24'45", Hydrologic Unit 17070102.

Owner: H. Miller.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug well, diam 7 ft (2.1 m), depth 15 ft (4.6 m), cribbed with concrete to 8 ft (2.4 m).

DATUM.--Land surface datum is 789.76 ft (240.72 m) above mean sea level. Measuring point: Top east side of concrete curb, at datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.47 ft (1.06 m) below datum, Aug. 8, 1933; lowest measured, dry Apr. 22, 1966, May 27, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 20 | 11.13 | JAN 20 | 12.18 | APR 20 | 14.58 | JUL 20 | a12.06 |
| NOV 22 | 11.67 | FEB 18 | 12.09 | MAY 20 | 11.75 | AUG 24 | 14.92 |
| DEC 20 | 12.12 | MAR 21 | 11.65 | JUN 20 | a14.13 | SEP 22 | 9.87 |

a Well being pumped.

GROUND-WATER LEVELS

UMATILLA COUNTY--Continued

455900118274001. Local number 6N/35E-20aca.

LOCATION.--Lat 45°59'00", long 118°27'40", Hydrologic Unit 17070102.

Owner: J.E. Courtney.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug and drilled irrigation well, size of dug part 5 x 5 ft (1.5 x 1.5 m), depth 23 ft (7 m), cased with Concrete. Diam, depth, and casing of drilled part unknown.

DATUM.--Land surface datum is 736.32 ft (224.43 m) above mean sea level. Measuring point: Hole in top north side of concrete platform, 0.30 ft (0.09 m) above datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.08 ft (0.33 m) below datum, July 5, 1933; lowest measured, dry, several times, 1961-75.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 20 | 13.12 | JAN 20 | 13.57 | APR 20 | 16.00 | JUL 20 | a |
| NOV 22 | 11.13 | FEB 18 | 14.66 | MAY 20 | 15.38 | AUG 24 | 19.75 |
| DEC 20 | 11.66 | MAR 21 | 15.48 | JUN 20 | a | SEP 22 | 17.95 |

a Well being pumped.

455840118244501. Local number 6N/35E-24dcc.

LOCATION.--Lat 45°58'40", long 118°24'45", Hydrologic Unit 17070102.

Owner: G. Ransom.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug and drilled irrigation well, size 6 x 6 ft (1.8 x 1.8 m) to 10-in (250 mm) diam, depth 165 ft (50 m), cased to 45 ft (14 m).

DATUM.--Land surface datum is 864.30 ft (263.44 m) above mean sea level. Measuring point: Top of 4- x 6-in (100 x 150 mm) plank on east side of well curb, 0.50 ft (0.15 m) above datum.

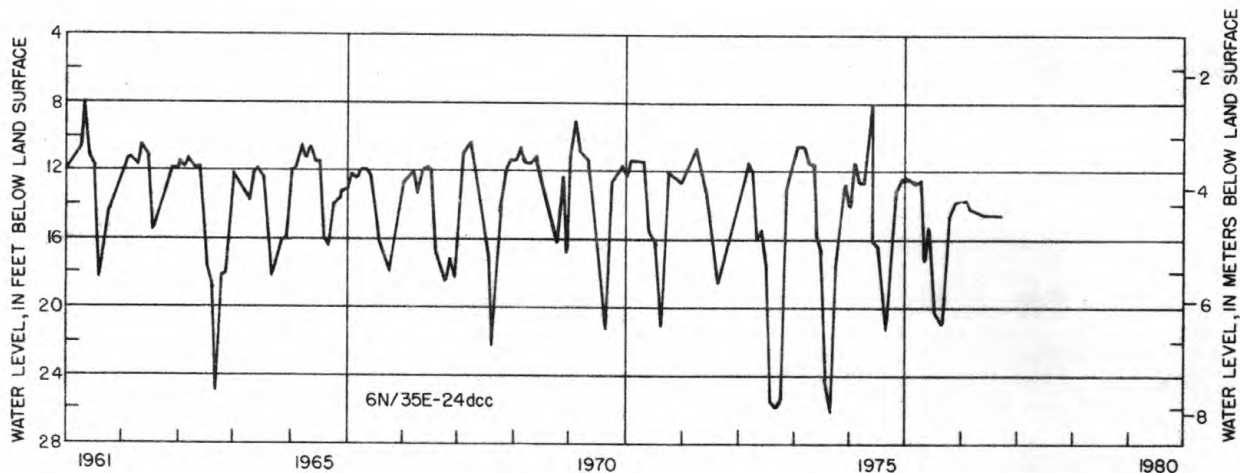
PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.65 ft (2.33 m) below datum, July 29, 1948; lowest measured, 26.04 ft (7.94 m) below datum, Aug. 26, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|--------|-------------|--------|-------------|--------|-------------|
| OCT 20 | 14.61 | JAN 20 | 13.67 | APR 20 | a18.07 | JUL 20 | a23.84 |
| NOV 22 | 13.84 | FEB 18 | 14.02 | MAY 20 | 14.35 | AUG 24 | a29.78 |
| DEC 20 | 13.94 | MAR 21 | a14.05 | JUN 20 | a19.87 | SEP 22 | 14.47 |

a Well being pumped.



GROUND-WATER LEVELS

595

UMATILLA COUNTY--Continued

455830118241502. Local number 6N/35E-26bad.

LOCATION.--Lat 45°58'30", long 118°24'15", Hydrologic Unit 17070102.

Owner: Earl Ransom.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug and drilled irrigation well, size 6 x 6 ft (1.8 x 1.8 m) to 8-in (200 mm) diam, depth 46 ft (14 m), dug part cased with concrete.

DATUM.--Land surface datum is 867.12 ft (264.30 m) above mean sea level. Measuring point: Top of 4- x 4-in (100 x 100 mm) stringer, 0.48 ft (0.15 m) above datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.81 ft (2.38 m) below datum, May 25, 1939; lowest measured, 31.37 ft (9.56 m) below datum, Feb. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 22.37 | JAN 20 | 30.98 | APR 20 | a28.37 | JUL 20 | a26.08 |
| NOV 22 | 29.29 | FEB 18 | 31.37 | MAY 20 | 17.87 | AUG 24 | 22.77 |
| DEC 20 | 30.40 | MAR 21 | 30.92 | JUN 20 | a20.10 | SEP 22 | 16.27 |

a Well being pumped.

455745118265001. Local number 6N/35E-28ccd.

LOCATION.--Lat 45°57'45", long 118°26'50", Hydrologic Unit 17070102.

Owner: Lottie McKnight Estate.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug unused well, size 7 x 7 ft (2.1 x 2.1 m), depth 29 ft (9 m), cribbed with concrete to 16 ft (4.9 m). DATUM.--Land surface datum is 817.01 ft (249.02 m) above mean sea level. Measuring point: Top north side of concrete curb, at datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.05 ft (0.62 m) below datum, June 15, 1955; lowest measured, dry, several times 1957-1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 18.13 | JAN 20 | Dry | APR 20 | 22.97 | JUL 20 | 21.48 |
| NOV 22 | 21.95 | FEB 18 | Dry | MAY 20 | 15.18 | AUG 24 | 26.10 |
| DEC 20 | 27.93 | MAR 21 | 26.11 | JUN 20 | 14.97 | SEP 22 | 18.67 |

455805118293001. Local number 6N/35E-30cbb.

LOCATION.--Lat 45°58'05", long 118°29'30", Hydrologic Unit 17070102.

Owner: Dan Selleck.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug domestic well, size 5 x 5 ft (1.5 x 1.5 m), depth 30 ft (9 m), cribbed with concrete to 10 ft (3.0 m). DATUM.--Land surface datum is 687.21 ft (209.46 m) above mean sea level. Measuring point: Top of concrete curb, 0.41 ft (0.12 m) above datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.10 ft (3.38 m) below datum, June 25, 1946; lowest measured, dry, several times, 1957, 1960-77.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 29.04 | JAN 20 | Dry | APR 20 | 27.29 | JUL 20 | Dry |
| NOV 22 | 27.16 | FEB 18 | - | MAY 20 | - | AUG 24 | Dry |
| DEC 20 | 31.13 | MAR 21 | 26.22 | JUN 20 | Dry | SEP 22 | 28.69 |

GROUND-WATER LEVELS

UMATILLA COUNTY--Continued

455740118252501. Local number 6N/35E-34baa.

LOCATION.--Lat 45°57'40", long 118°25'25", Hydrologic Unit 17070102.

Owner: Mrs. Jessie Reese.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug irrigation well, size 8 x 8 ft (2.4 x 2.4 m), depth 54 ft (16 m), cribbed with concrete to 20 ft (6.1 m).

DATUM.--Land surface datum is 881.55 ft (268.70 m) above mean sea level. Measuring point: Top north side of concrete curb,

0.60 ft (0.18 m) above datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.65 ft (4.16 m) below datum, May 24, 1939; lowest measured, dry, several times, 1955-1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 41.85 | JAN 20 | Dry | APR 20 | 39.96 | JUL 20 | 42.30 |
| NOV 22 | 52.67 | FEB 18 | Dry | MAY 20 | 25.92 | AUG 24 | 48.17 |
| DEC 20 | Dry | MAR 21 | 49.20 | JUN 20 | 35.47 | SEP 22 | 37.15 |

455728118223501. Local number 6N/35E-36add.

LOCATION.--Lat 45°57'28", long 118°22'35", Hydrologic Unit 17070102.

Owner: Walter Hermann.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug domestic well, size 4 x 4 ft (1.2 x 1.2 m), depth 44 ft (13 m), cribbed with concrete to 18 ft (5 m).

DATUM.--Land surface datum is 929.75 ft (283.39 m) above mean sea level. Measuring point: Zero of nonrecording float gage, top of concrete curb, 2.00 ft (0.61 m) above datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.88 ft (1.79 m) below datum, June 20, 1933; lowest measured, dry, Mar. 23, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | - | JAN 20 | 39.23 | APR 20 | 39.14 | JUL 20 | 30.29 |
| NOV 22 | 35.38 | FEB 18 | 40.55 | MAY 20 | - | AUG 24 | 28.30 |
| DEC 20 | 37.84 | MAR 21 | 41.68 | JUN 20 | - | SEP 22 | 26.45 |

455730118231501. Local number 6N/35E-36bab.

LOCATION.--Lat 45°57'30", long 118°23'15", Hydrologic Unit 17070102.

Owner: James Busch.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Dug irrigation well, size 5 x 5 ft (1.5 x 1.5 m), depth 41 ft (12 m), cribbed with concrete to 25 ft (8 m).

DATUM.--Land surface datum is 925.95 ft (282.23 m) above mean sea level. Measuring point: Top west side of concrete curb, 2.20 ft (0.67 m) above datum.

PERIOD OF RECORD.--1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.75 ft (2.67 m) below datum, June 12, 1950; lowest measured, dry several times, 1963-1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 20 | 32.65 | JAN 20 | 28.72 | APR 20 | 28.99 | JUL 20 | 36.98 |
| NOV 22 | 29.03 | FEB 18 | 30.01 | MAY 20 | 31.24 | AUG 24 | 39.93 |
| DEC 20 | 29.92 | MAR 21 | 33.67 | JUN 20 | 36.41 | SEP 22 | 34.39 |

452015119003201. Local number 3S/30°E-1baa.

LOCATION.--Lat 45°20'25", long 119°00'29", Hydrologic Unit 17070103.

Owner: Joe Pedro.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled unused well, diam 6 in (150 mm), reported depth 99 ft (30 m).

DATUM.--Altitude of land surface datum is 3,180 ft (970 m). Measuring point: Top of steel blocks beneath jet connector, 1.00 ft (0.30 m) below datum.

PERIOD OF RECORD.--1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.01 ft (6.71 m) below datum, Apr. 16, 1968; lowest measured, 39.81 ft (12.13 m) below datum, May 7, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|------|----------------|--------|----------------|--------|----------------|--------|----------------|
| - | - | FEB 17 | 28.33 | MAY 12 | 28.23 | AUG 11 | 28.86 |

UNION COUNTY

452730117595901. Local number 1S/38E-24ddc.

LOCATION.--Lat 45°27'26", long 117°59'50", Hydrologic Unit 17060104.

Owner: H.L. Wagner.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 12 to 8 in (300 to 200 mm), depth 1,150 ft (350 m), cased to bottom.

DATUM.--Altitude of land surface datum is 2,750 ft (838 m). Measuring point: Center line of pressure gage, 6.00 ft

(1.83 m) above datum.

PERIOD OF RECORD.--1950-74, 1977.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 107 ft (33 m) above datum, Dec. 30, 1951; lowest measured, 53 ft (16 m) above datum, Aug. 13, 1951.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|-------|----------------|--------|----------------|-------|----------------|
| NOV 5 | 81.1 | FEB 8 | 81.6 | MAY 24 | a34.6 | AUG 9 | 58.0 |

a Well being pumped.

452840117580501. Local number 1S/39E-17cad.

LOCATION.--Lat 45°28'34", long 117°57'48", Hydrologic Unit 17060104.

Owner: A.F. Furman.

AQUIFER.--Sand.

WELL CHARACTERISTICS.--Drilled domestic well, diam 4 in (100 mm), depth 46 ft (14 m).

DATUM.--Altitude of land surface datum is 2,735 ft (834 m). Measuring point: Top of coupling on casing, 1.00 ft (0.30 m) above datum.

PERIOD OF RECORD.--1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.40 ft (1.34 m) below datum, Feb. 17, 1965; lowest measured, 19.54 ft (5.96 m) below datum, Aug. 29, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|-------|----------------|--------|----------------|-------|----------------|
| NOV 5 | 10.64 | FEB 8 | 10.70 | MAY 24 | 11.03 | AUG 9 | 11.62 |

452003118055101. Local number 3S/38E-6add.

LOCATION.--Lat 45°20'03", long 118°05'51", Hydrologic Unit 17060104.

Owner: City of La Grande.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled municipal well, diam 14 in (350 mm), depth 1,391 ft (424 m).

DATUM.--Altitude of land surface datum is 2,790 ft (850 m). Measuring point: Concrete sidewalk, at datum.

PERIOD OF RECORD.--1957-63, 1965-67, 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.9 ft (38.47 m) above datum, Jan. 3, 1962; lowest measured, 13.8 ft (4.21 m) above datum, May 14, 1977.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|--------|----------------|--------|----------------|-------|----------------|
| MAR 9 | 20.8 | MAY 14 | 13.8 | JUL 23 | 16.2 | AUG 9 | 13.9 |
| APR 4 | 20.8 | | | | | | |

451942118060601. Local number 3S/38E-6dca.

LOCATION.--Lat 45°19'42", long 118°06'06", Hydrologic Unit 17060104.

Owner: Mrs. C.L. Gilstrap.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in (200 mm), depth 20 ft (6 m), cased to 20 ft (6 m).

DATUM.--Altitude of land surface datum is 2,795 ft (852 m). Measuring point: Top of casing, 2.00 ft (0.61 m) below datum.

PERIOD OF RECORD.--1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.50 ft (5.03 m) below datum, Feb. 18, 1958; lowest measured, 21.86 ft (6.66 m) below datum, Aug. 7, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|-------|----------------|-------|----------------|--------|----------------|-------|----------------|
| NOV 5 | 20.20 | FEB 8 | 20.08 | MAY 24 | 19.70 | AUG 9 | 19.63 |

GROUND-WATER LEVELS

WASCO COUNTY

453608121110301. Local number 1N/13E-3bca.

LOCATION.--Lat 45°36'08", long 121°11'03", Hydrologic Unit 17070105.

Owner: City of The Dalles.

AQUIFER.--Basalt.

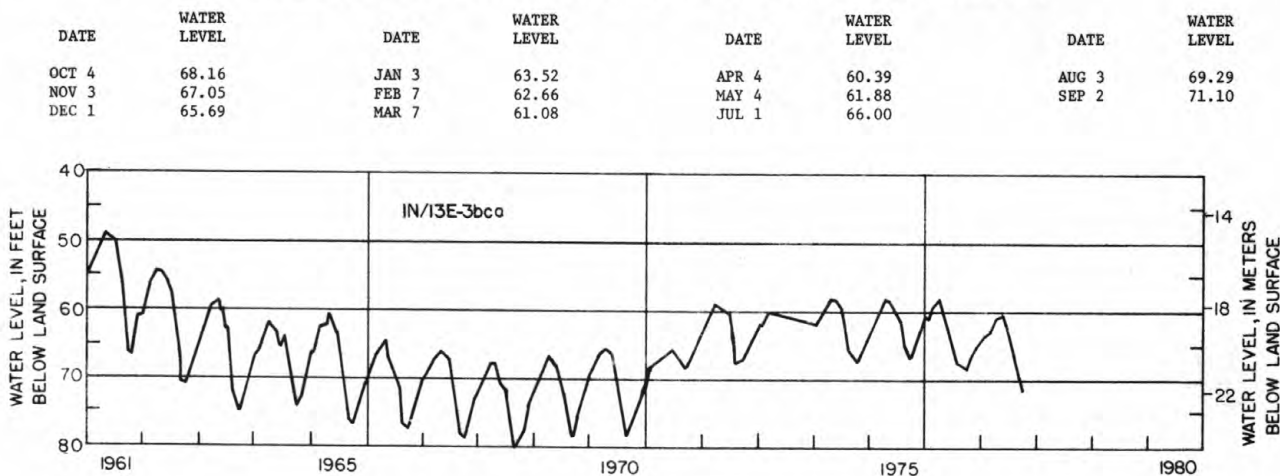
WELL CHARACTERISTICS.--Drilled municipal well, diam 12 in (300 mm), depth 200 ft (61 m), cased to 62 ft (19 m).

DATUM.--Altitude of land surface datum is 99.5 ft (30.3 m). Measuring point: Hole in pumpbase, 6.40 ft (1.95 m) below datum.

PERIOD OF RECORD.--1926-30, 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.90 ft (5.20 m) below datum, July 19, 1928; lowest measured, 80.63 ft (24.58 m) below datum Aug. 16, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977



453140121125001. Local number 1N/13E-32acd.

LOCATION.--Lat 45°31'37", long 121°12'50", Hydrologic Unit 17070105.

Owner: Milton Martin.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 8 in (200 mm), depth 336 ft (102 m), cased to 44 ft (13 m).

DATUM.--Altitude of land surface datum is about 1,170 ft (357 m). Measuring point: Center line of pressure gage, 1.50 ft (0.46 m) above datum.

PERIOD OF RECORD.--1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 186.5 ft (56.8 m) above datum, Apr. 1, 1953; lowest measured, 30.8 ft (9.4 m) above datum, Sept. 14, 1977.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|------|-------------|-------|-------------|-------|-------------|--------|-------------|
| - | - | MAR 8 | a83.0 | JUN 2 | a41.5 | SEP 14 | 30.8 |

a Well being pumped.

453715121151701. Local number 2N/12E-25ddc.

LOCATION.--Lat 45°37'15", long 121°15'17", Hydrologic Unit 17070105.

Owner: Ernest A. Kuck.

AQUIFER.--Sandstone of Dalles Formation.

WELL CHARACTERISTICS.--Drilled well, diam 8 in (200 mm), depth 443 ft (135 m), cased to 250 ft (76 m).

DATUM.--Altitude of land surface datum is about 500 ft (152 m). Measuring point: Airline port in pumpbase, 0.80 ft (0.24 m) above datum.

PERIOD OF RECORD.--1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 66.20 ft (20.18 m) below datum, May 1, 1955; lowest measured, 151.54 ft (46.19 m) below datum, Aug. 6, 1953.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|-------|-------------|-------|-------------|--------|-------------|
| NOV 30 | 115.42 | MAR 9 | 109.70 | JUN 3 | a | SEP 16 | 139.02 |

a Well being pumped.

WASHINGTON COUNTY

453514122575801. Local number 1N/2W-8bca.

LOCATION.--Lat 45°35'14", long 122°57'58", Hydrologic Unit 17090010.

Owner: T.R. Connell.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), reported depth 60 ft (18 m), cased to 60 ft (18 m), perforated 28-60 ft (9-18 m).

DATUM.--Altitude of land surface datum is 200 ft (61 m). Measuring point: Top of casing, 0.40 ft (0.12 m) above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.30 ft (0.01 m) above datum, Dec. 20, 1955; lowest measured, 26.91 ft (8.20 m) below datum, July 15, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 14 | 21.86 | MAR 18 | 12.08 | APR 21 | 12.19 | JUL 22 | 18.07 |
| JAN 20 | 21.07 | | | | | | |

453529122535602. Local number 1N/2W-11bab.

LOCATION.--Lat 45°35'27", long 122°54'00", Hydrologic Unit 17090010.

Owner: Albert Zander.

AQUIFER.--Basalt.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 125 ft (38 m), cased to 105 ft (32 m).

DATUM.--Altitude of land surface datum is 290 ft (88 m). Measuring point: Top of casing, 1.65 ft (0.50 m) below datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.80 ft (17.62 m) below datum, Mar. 17, 1952; lowest measured, 82.93 ft (25.28 m) below datum, July 17, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 14 | 68.12 | MAR 17 | 64.42 | APR 21 | 65.60 | JUL 22 | 72.64 |
| JAN 20 | 65.85 | | | | | | |

453147122543201. Local number 1N/2W-34ada.

LOCATION.--Lat 45°31'47", long 122°54'32", Hydrologic Unit 17090010.

Owner: E.L. Lewis.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug domestic well, size 36 x 36 in (910 x 910 mm), depth 23 ft (7 m), cased with concrete to 23 ft (7 m).

DATUM.--Altitude of land surface datum is 200 ft (61 m). Measuring point: Top of 1½-in (38 mm) vent pipe, 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft (0.58 m) below datum, Dec. 20, 1955, Jan. 16, 1961; lowest measured, 19.90 ft (6.07 m) below datum, Sept. 22, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 14 | 17.37 | MAR 17 | 15.47 | APR 24 | 15.24 | JUL 22 | 16.74 |
| JAN 20 | 17.95 | | | | | | |

453349123062001. Local number 1N/3W-19baa.

LOCATION.--Lat 45°33'46", long 123°06'20", Hydrologic Unit 17090010.

Owner: A.J. Giesbers.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Bored domestic well, diam 6 in (150 mm), depth 56 ft (17 m), cased to 54 ft (16 m).

DATUM.--Altitude of land surface datum is 170 ft (52 m). Measuring point: Top of casing, 0.35 ft (0.11 m) above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.79 ft (0.24 m) below datum, Feb. 2, 1967; lowest measured, 12.82 ft (3.91 m) below datum, Nov. 2, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 14 | 8.07 | MAR 18 | 3.08 | APR 21 | 3.82 | JUL 22 | 7.00 |
| JAN 20 | 5.65 | | | | | | |

GROUND-WATER LEVELS

WASHINGTON COUNTY--Continued

453117122593402. Local number 1N/3W-36ddc.

LOCATION.--Lat 45°31'17", long 122°59'34", Hydrologic Unit 17090010.

Owner: Birdseye Cannery, Hillsboro.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused well, diam 12 in (300 mm), reported depth 171 ft (52 m).

DATUM.--Altitude of land surface datum is 180 ft (55 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.02 ft (2.14 m) below datum, Jan. 28, 1970; lowest measured, 22.16 ft (6.75 m) below datum, Sept. 22, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 14 | 17.57 | JAN 20 | 17.55 | APR 21 | 16.60 | JUL 22 | 17.80 |

453050123081001. Local number 1S/4W-2adc.

LOCATION.--Lat 45°30'50", long 123°08'10", Hydrologic Unit 17090010.

Owner: Myron Sheelar.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 6 in (150 mm), depth 85 ft (26 m).

DATUM.--altitude of land surface datum is 170 ft (52 m). Measuring point: Top of casing, 0.80 ft (0.24 m) above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.81 ft (2.38 m) below datum, Jan. 13, 1959; lowest measured, 16.94 ft (5.16 m) below datum, Nov. 2, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|--------|----------------|--------|----------------|--------|----------------|
| OCT 14 | 14.74 | JAN 20 | a23.20 | APR 21 | 16.66 | JUL 22 | 16.07 |

a Well being pumped.

452328122465201. Local number 2S/1W-14ccc.

LOCATION.--Lat 45°23'28", long 122°46'52", Hydrologic Unit 17090010.

Owner: A.J. Martinazzi.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Dug domestic and stock well, diam 36 in (910 mm), depth 51 ft (16 m), cased with concrete tile to 51 ft (16 m).

DATUM.--Altitude of land surface datum is 160 ft (49 m). Measuring point: Inner lip of casing, at datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.56 ft (12.67 m) below datum, Feb. 18, 1956; lowest measured, dry, July 8, Sept. 26, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|----------------|-------|----------------|-------|----------------|--------|----------------|
| JAN 3 | 50.55 | APR 4 | 50.18 | JUL 8 | Dry | SEP 26 | Dry |
| MAR 22 | 50.21 | | | | | | |

WASHINGTON COUNTY--Continued

452600122592201. Local number 2S/2W-6bbb.

LOCATION.--Lat 45°25'58", long 122°59'20", Hydrologic Unit 17090010.

Owner: S.R. Rotchstrom.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 6 in (150 mm), reported depth 486 ft (148 m), cased to 250 ft (76 m).

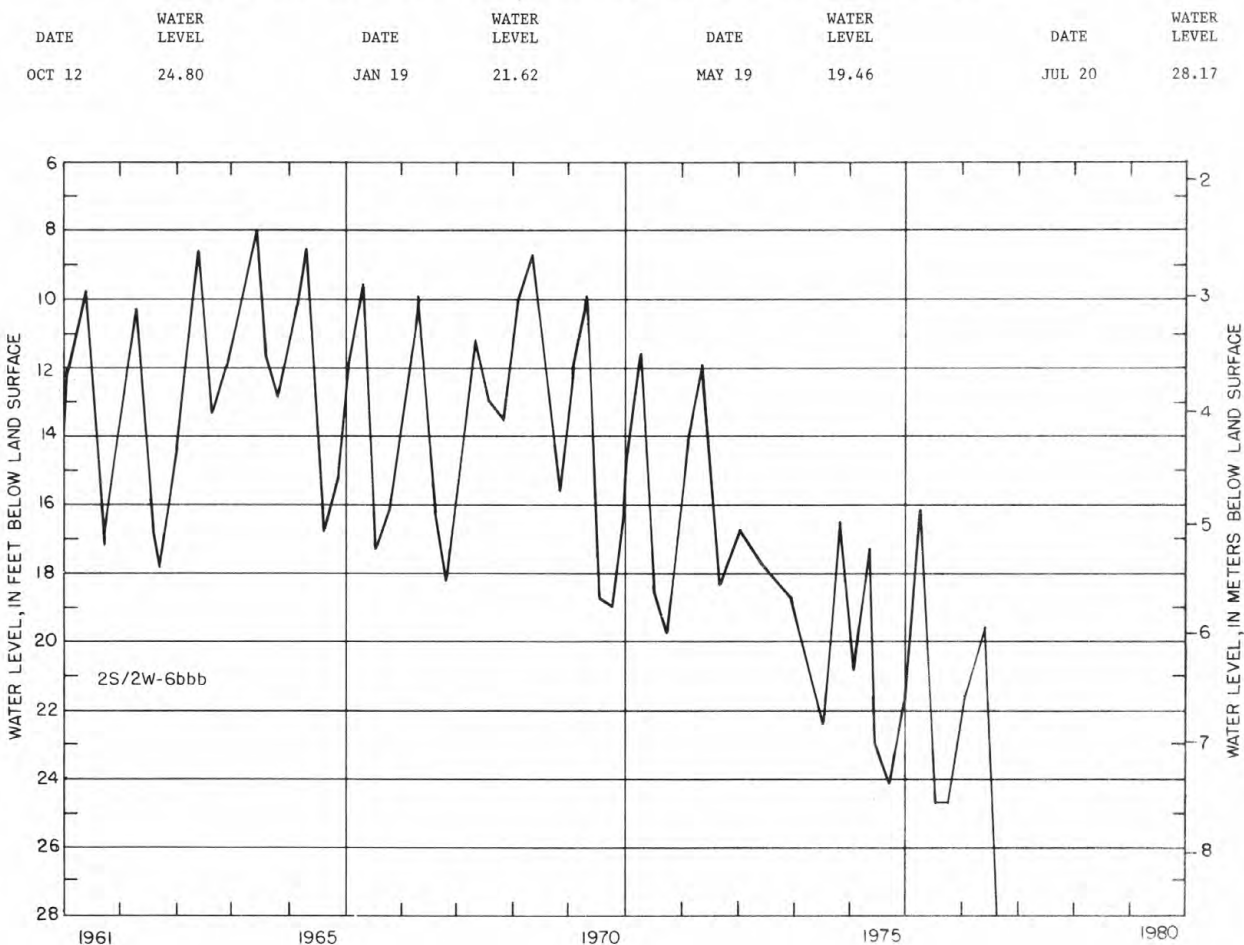
DATUM.--Altitude of land surface datum is 190 ft (58 m). Measuring point: Hole in south side of pumpbase, 0.60 ft (0.18 m) above datum.

REMARKS.--Hydrograph revised for measurements shown in 1974.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.66 ft (1.42 m) below datum, Mar. 16, 1951; lowest measured, 28.17 ft (8.59 m) below datum, July 20, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977



YAMHILL COUNTY

450829123143801. Local number 5S/5W-13abc.

LOCATION.--Lat 45°08'29", long 123°14'38", Hydrologic Unit 17090008.

Owner: George Fuller.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic and stock well, diam 7 in (180 mm), depth 64 ft (20 m).

DATUM.--Land surface datum is 151.09 ft (46.05 m) above mean sea level. Measuring point: Top of casing, 0.50 ft (0.15 m) above datum.

PERIOD OF RECORD.--1928-30, 1935-36, 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.25 ft (2.52 m) below datum, Apr. 1, 1963; lowest measured, 28.67 ft (8.74 m) below datum, July 8, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|--------|-------------|-------|-------------|-------|-------------|--------|-------------|
| JAN 3 | 22.22 | APR 4 | 16.98 | JUL 8 | 28.67 | SEP 26 | 27.64 |
| MAR 22 | 21.65 | | | | | | |

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FACTORS FOR CONVERTING U.S. CUSTOMARY UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the U.S. customary units published herein to the International System of Units (SI). Subsequent reports will contain both the U.S. customary and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

| Multiply U.S. customary units | By | To obtain SI units |
|--|------------------------|--|
| <i>Length</i> | | |
| inches (in) | 2.54×10^1 | millimeters (mm) |
| | 2.54×10^{-2} | meters (m) |
| feet (ft) | 3.048×10^{-1} | meters (m) |
| miles (mi) | 1.609×10^0 | kilometers (km) |
| <i>Area</i> | | |
| acres | 4.047×10^3 | square meters (m ²) |
| | 4.047×10^{-1} | square hectometers (hm ²) |
| | 4.047×10^{-3} | square kilometers (km ²) |
| square miles (mi ²) | 2.590×10^0 | square kilometers (km ²) |
| <i>Volume</i> | | |
| gallons (gal) | 3.785×10^0 | liters (L) |
| | 3.785×10^0 | cubic decimeters (dm ³) |
| | 3.785×10^{-3} | cubic meters (m ³) |
| million gallons | 3.785×10^3 | cubic meters (m ³) |
| | 3.785×10^{-3} | cubic hectometers (hm ³) |
| cubic feet (ft ³) | 2.832×10^1 | cubic decimeters (dm ³) |
| | 2.832×10^{-2} | cubic meters (m ³) |
| cfs-days | 2.447×10^3 | cubic meters (m ³) |
| | 2.447×10^{-3} | cubic hectometers (hm ³) |
| acre-feet (acre-ft) | 1.233×10^3 | cubic meters (m ³) |
| | 1.233×10^{-3} | cubic hectometers (hm ³) |
| | 1.233×10^{-6} | cubic kilometers (km ³) |
| <i>Flow</i> | | |
| cubic feet per second (ft ³ /s) | 2.832×10^1 | liters per second (L/s) |
| | 2.832×10^1 | cubic decimeters per second (dm ³ /s) |
| | 2.832×10^{-2} | cubic meters per second (m ³ /s) |
| gallons per minute (gal/min) | 6.309×10^{-2} | liters per second (L/s) |
| | 6.309×10^{-2} | cubic decimeters per second (dm ³ /s) |
| | 6.309×10^{-5} | cubic meters per second (m ³ /s) |
| million gallons per day | 4.381×10^1 | cubic decimeters per second (dm ³ /s) |
| | 4.381×10^{-2} | cubic meters per second (m ³ /s) |
| <i>Mass</i> | | |
| tons (short) | 9.072×10^{-1} | megagrams (Mg) or metric tons |

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