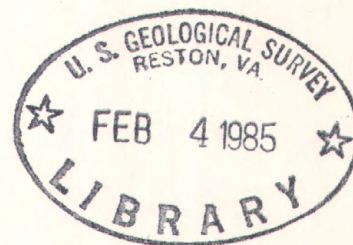




# Water Resources Data Oregon Water Year 1983

Volume 2. Western Oregon



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-83-2  
Prepared in cooperation with the Oregon Water Resources  
Department and with other agencies



CALENDAR FOR WATER YEAR 1983

1982

OCTOBER

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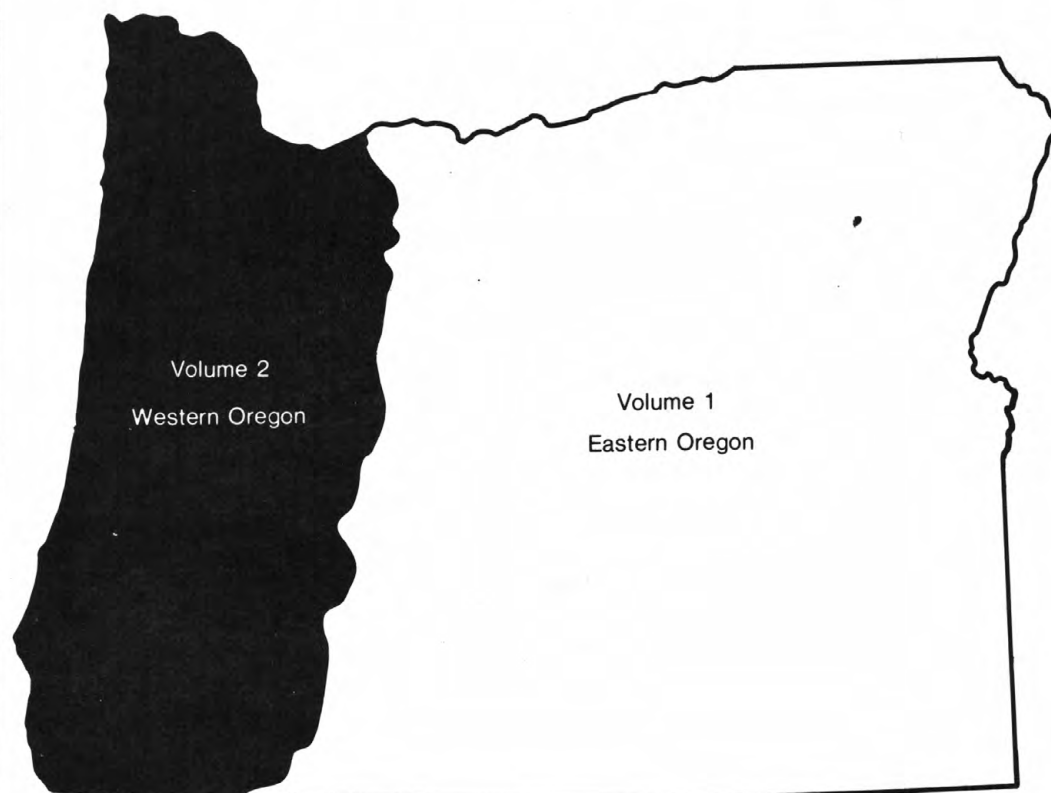




# Water Resources Data Oregon Water Year 1983

## Volume 2. Western Oregon

by L.L. Hubbard, T.D. Parks, D.L. Weiss, and L.E. Hubbard



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-83-2  
Prepared in cooperation with the Oregon Water Resources  
Department and with other agencies



UNITED STATES DEPARTMENT OF THE INTERIOR

WILLIAM P. CLARK, Secretary

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Portland, Oregon 97232

1984



## PREFACE

This volume of the annual Oregon hydrologic data report is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Oregon are contained in two volumes as follows:

Volume 1: Eastern Oregon  
Volume 2: Western Oregon

The report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the reports. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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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

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## WATER RESOURCES DATA FOR OREGON, 1983

### INTRODUCTION

Water resources data for the 1983 water year for Oregon consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; water levels and water quality of wells and springs; and water quality of precipitation. This report, in two volumes, contains discharge records for 254 gaging stations; stage only records for 6 gaging stations; stage and contents for 27 lakes and reservoirs; water quality for 81 stations; water levels for 56 observation wells; and water quality for 1 precipitation station. Also included are data for 33 crest-stage, partial-record stations. Locations of these sites, except for the precipitation station and observation wells, are shown on figures 2, 3, and 4. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements and analyses. 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 September 30, 1960, these water-supply papers were in an annual series and then in a multiyear 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 were published from 1935 to 1974 in a series of water-supply papers entitled, "Ground-water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the Branch of Distribution, U.S. Geological Survey, 1200 Eads Street, Arlington, VA 22202.

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-83-1." For archiving and general distribution, the reports for water years 1971-74 are also identified as water-data reports. These water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Additional information, including current prices, for ordering specific reports may be obtained from the office chief at the address given on the back of the title page or by telephone (503) 231-2009.

## 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 Transportation, State Highway Division,  
H. S. Coulter, State Highway Engineer.  
Oregon Department of Fish and Wildlife, J. R. Donaldson, Director.  
Oregon State University, R. W. MacVicar, President.  
Benton County Emergency Services, Reagan Crowell, Director.  
Coos Bay-North Bend Water Board, C. W. Heckard, General Manager.  
Eugene Water and Electric Board, Keith Parks, General Manager.  
Douglas County, K. L. Erickson, Director of Public Works.  
Wasco County, through The Northern Wasco County People's Utility  
District, H. E. Haake, Manager.  
City of McMinnville, A. H. Jones, General Manager.  
City of Portland, Bureau of Public Works, Carl Gobel, Administrator.  
The Confederated Tribes of the Umatilla Indian Reservation,  
E. H. Patawa, Chairman of the General Council.  
The Confederated Tribes of the Warm Springs Indian Reservation,  
Ralph Minnick, Secretary-Treasurer.

Assistance in the form of funds or services was provided by the Forest Service, U.S. Department of Agriculture; Corps of Engineers, U.S. Army; Bonneville Power Administration, U.S. Department of Energy; Bureau of Land Management, Bureau of Reclamation, Fish and Wildlife Service, National Park Service, U.S. Department of the Interior in collection of records for 100 stage and discharge stations and 45 water-quality stations published in this report.

The following organizations aided in collecting records for 35 stations under Federal Energy Regulatory Commission licenses: Eugene Water & Electric Board; Pacific Power & Light Co.; Portland General Electric Co.; Idaho Power Co., Idaho.

## GENERAL HYDROLOGIC CONDITIONS

The hydrology of Oregon is influenced by five mountain ranges with the Cascade Range providing a natural division between western and eastern Oregon. These ranges divide the state into drainage basins and greatly affect the distribution of precipitation. The Cascade Range provides a natural division between western and eastern Oregon. Hydrologic patterns are generally uniform from drainage basin to drainage basin throughout western Oregon, whereas in eastern Oregon hydrologic patterns vary widely between drainage basins.

Eastern Oregon Hydrology

Eastern Oregon has more complex hydrologic patterns than western Oregon. Precipitation is less than 10 in. per year in the semiarid regions, such as parts of the north-central area, the closed basin in south-central Oregon, and southeastern Oregon. The northeastern part of the state receives as much as 80 in. of precipitation per year, much of it occurring as snow fall. On the large streams, flooding can result from winter rains and (or) seasonal snowmelt; in the smaller drainage basins, flooding can result from winter rains, seasonal snowmelt, and convection storms.

Western Oregon Hydrology

Western Oregon, which composes about one-third of the total area of the state, has a climate characterized by moderate temperatures, wet winters, and dry summers. About 80 percent of the precipitation occurs between October and March. Annual precipitation ranges from about 20 in. per year in the lower elevations in the southern part of the area to about 200 in. per year in the Coast and Cascade Ranges. In general, streamflow characteristics are similar, with most of the runoff and flooding on both large and small streams being caused by winter rains. Major floods have occurred when winter rains combine with melting snow. The major hydrologic regions of western Oregon are: (1) the Willamette River valley, which drains the east slopes of the Coast Range and west slopes of the Cascade Range; (2) the north coast (where annual precipitation reaches 200 in. in some areas) and south coast, which drain the west slopes of the Coast Range; and (3) the Rogue and Umpqua Basins in southwestern Oregon, which drain the west slopes of the Cascade Range and cut through the Coast Range westward to the Pacific Ocean.



## WATER RESOURCES DATA FOR OREGON, 1983

## HYDROLOGIC CONDITIONS FOR WESTERN OREGON DURING THE 1983 WATER YEAR

During the 1983 water year flows were above average. As of April 1, the snow pack on the western side of the Cascades ranged from below average in the Willamette and Umpqua Basins to above average in the Rogue Basin, as reported by the U.S. Soil Conservation Service. In a normal season the Columbia basin snowpack reaches its maximum depth around April 1.

No major flooding or drought occurred during the 1983 water year.

Willamette River Basin

Precipitation in the Willamette River basin for the winter season was about 120 percent of normal and the snowpack was below average, ranging from 35 percent of normal on the Clackamas to 64 percent on the Santiam. Flows in the Willamette River basin were above average in the 1983 water year. A typical stream in the basin, such as the North Santiam River above Boulder Creek, near Detroit (station 14178000), which drains part of the Cascade Range, had a mean discharge that was 118 percent of the 57-year average. The Tualatin River at West Linn (station 14207500), which drains a part of the Coast Range, had a mean discharge that was 154 percent of the 55-year mean. The mean flow of Willamette River at Salem (station 14191000) was 125 percent of the 67-year mean.

Highest flows on most streams occurred in December, January and February as the result of general rainstorms.

The Sandy River near Marmot (station 14137000), adjacent to and just north of the Willamette River basin, had an average flow which was 106 percent of the 72 year average. Peak flow occurred on January 6 and had an exceedance probability of about 20 percent, which means there is about a 20 percent chance that a peak of this magnitude will occur in any one year. The Sandy River is a glacial fed stream.

North Coast Region

In the 1983 water year, flows in the north coast region were generally above average. The Nehalem River is typical of streams in that region and provides an index of the flow pattern. Average runoff at the Foss gaging station (14301000) was 116 percent of the 44-year average.

The peak flow for the year occurred on December 3 and represented a relatively small flood event, at an exceedance probability of 20 percent.

South Coast Region

Flows in the south coast region were well above average in the 1983 water year. The South Fork Coquille River is typical of streams in that region. Mean flow for the year at the gaging station at Powers (14325000) was 146 percent of the 64-year average. The peak for this occurred February 18 and represented a relatively small flood event, at an exceedance probability of 20 percent.

Southwest Region

Flows of streams in southwestern Oregon that drain the Cascade Range were well above average. The two principal streams are the Rogue and Umpqua Rivers. The Rogue River is regulated by Lost Creek Reservoir, but the Umpqua River is virtually uncontrolled. Umpqua River near Elkton (station 14321000) had a mean discharge in the 1983 water year which was 138 percent of the 78-year average.

Peak flow at Elkton was 156,000 ft<sup>3</sup>/s on February 18 and had an exceedance probability of about 15 percent.

## GROUND-WATER LEVELS IN WESTERN OREGON, 1983 WATER YEAR

Ground-water levels in western Oregon generally were at or above average throughout the year and ground-water storage increased during the year.

## 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, rodlike, 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  $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$  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 a group of coliform 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  $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$  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  $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$  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 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 (grams per cubic meter), and periphyton and benthic organisms in g/m<sup>2</sup> (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.

Cfs-day (ft<sup>3</sup>/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.

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

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 ( $\text{ft}^3/\text{s}$ ) 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.

Instantaneous discharge is the discharge at a given time.

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

Dissolved refers to that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate. It is recognized that certain kinds of samples cannot be filtered; to provide for this, procedures that are considered equivalent to filtering through a 0.45-micrometer membrane filter will be identified and announced at a later date.

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 ( $\text{CaCO}_3$ ).

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.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.



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

Cells/volume refers to the number of cells of any organism which are 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), 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 milliliters (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 streamflow 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, number, 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.

Plankton is the community of suspended, floating or weakly swimming organisms that live in the open water of lakes and rivers.

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.

Chlorophyta (green algae) have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats of floating "moss" in lakes.

Chrysophyta (yellow-green algae, yellow-brown algae, and diatoms) have pigments in which yellow-green to golden-brown algae predominate. The cell wall of these organisms, especially diatoms, often consists of two overlapping halves which are highly silicified.

Cryptophyta (cryptomonads) have pigments that are usually brown but also occur as red, blue or grass green. The cells are motile with two flagella and occur in freshwaters sometimes rich in organic and in nitrogenous materials.

Cyanophyta (blue-green algae) are groups of phytoplankton organisms having blue pigment in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Euglenophyta (euglenoids) are motile cells usually with one flagella and have a dominant grass-green pigment. They often occur in small pools rich in organic matter and are frequently present in sufficient amounts to color the water or the damp mud along river banks.

Pyrrhophyta (fire algae) have greenish-tan to golden-brown pigments. The cells are motile usually with two flagella. The freshwater forms are more abundant in pools, ditches, and small lakes with considerable vegetation.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the food web. The zooplankton community is dominated by small crustaceans and rotifers.

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.

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

Specific conductance is a measure of the ability of water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration 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, and it may vary in the same source with changes in the composition of the water.

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

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.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.



Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

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
<u>Genus.....</u>	<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 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 is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Formazin turbidity units (FTU), obtained from the Nephelometric method for turbidity determination which measures the intensity of light scattered by suspended particles at 90 degrees from the path of an incident light source.

Water year in Geological Survey reports dealing with surface-water supply refers to the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1983 is called "1983 water year."

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 (NASQAN) 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.

Precipitation program was initiated by the U.S. Geological Survey after the eruption of Mount St. Helens to collect data on the quantity and quality of precipitation for specific events. Primary objectives of the program are to determine (1) the general quality of precipitation and (2) the effect of ash from Mount St. Helens on the quality of precipitation.

## 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 indentation, each indentation 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 indicates 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 relations are 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 relations 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 determined by the Corps of Engineers. 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 only the instantaneous maximum discharge was revised; "(m)" only the instantaneous minimum was revised; and "(P)" 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 referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 10.

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. Under "EXTREMES," the extremes for the period of record are given first; information available outside the period of record is given second; and last, those for the current year are given. 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 nonrecording 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 the time of occurrence and corresponding gage heights with "EXTREMES FOR THE CURRENT YEAR", if they are all independent peaks (including the maximum for the year) above the selected base. 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.

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 line headed "MAX" and "MIN" gives the maximum and minimum daily discharges, respectively, for the month. Discharge

for the month may also 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 tables 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 to 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 a table of annual maximum stage and discharge at crest-stage stations. The table of partial-record stations is 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, the stability of the control, 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 are 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 ft<sup>3</sup>/s, to tenths between 1.0 and 10 ft<sup>3</sup>/s, to whole numbers between 10 and 1,000 ft<sup>3</sup>/s, and to three significant figures greater than 1,000 ft<sup>3</sup>/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 Oregon 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.

## WATER RESOURCES DATA FOR OREGON, 1983

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 National Water Data Exchange, NAWDEX, 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 33.

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 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 Oregon 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 other than 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 below.

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 10.)

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

\*°C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

### 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 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. A blank in the daily mean concentration column of the suspended-sediment discharge table indicates the value in the sediment discharge column was estimated.

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 1983 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 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 81 representative wells in the Oregon observation-well network are included in this report.

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) National Geodetic Vertical Datum of 1929 (NGVD), 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 1963-83 in selected observations 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 below (fig. 1). 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 by section number. For example, well 1S/32E-16CCC is in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.16, T.1 S., R.32 E., and will be labeled as 16CCC.

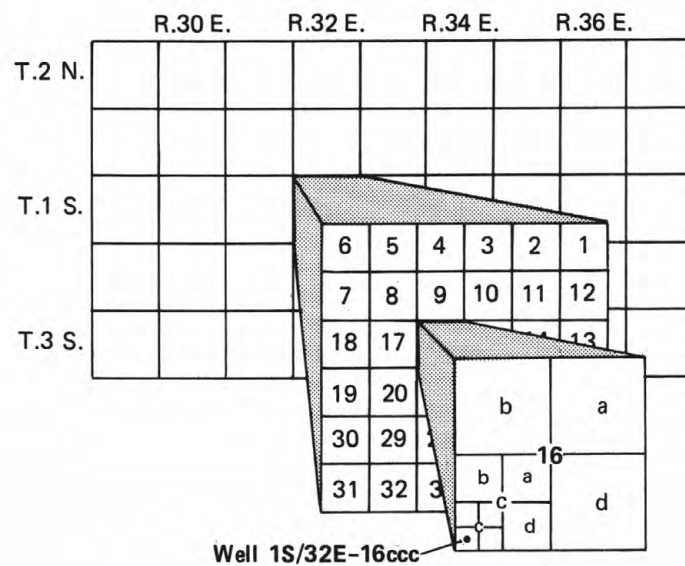


FIGURE 1.--Well-numbering system.

## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-seven 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, 604 South Pickett Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

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. USGS--TWRI, Book 1, Chapter D1. 1975. 65 pages.
- 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.
- 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.
- 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.
- 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.
- 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.
- 3-A3. MEASUREMENT OF PEAK DISCHARGE AT CULVERTS BY INDIRECT METHODS, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 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.
- 3-A5. MEASUREMENT OF PEAK DISCHARGE AT DAMS BY INDIRECT METHODS, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. GENERAL PROCEDURE FOR GAGING STREAMS, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968. 13 pages.
- 3-A7. STAGE MEASUREMENTS AT GAGING STATIONS, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. DISCHARGE MEASUREMENTS AT GAGING STATIONS, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. MEASUREMENT OF TIME OF TRAVEL AND DISPERSION IN STREAMS BY DYE TRACING, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.



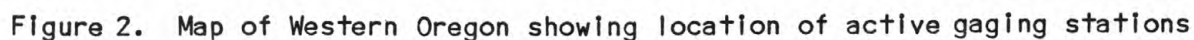
## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

- 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.
- 3-A12. FLUOROMETRIC PROCEDURES FOR DYE TRACING, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. Not currently available.
- 3-A13. COMPUTATION OF CONTINUOUS RECORDS OF STREAMFLOW, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 p.
- 3-A14. USE OF FLUMES IN MESURING DISCHARGE, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 p.
- 3-B1. AQUIFER-TEST DESIGN, OBSERVATION, AND DATA ANALYSIS, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 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.
- 3-B3. TYPE CURVES FOR SELECTED PROBLEMS OF FLOW TO WELLS IN CONFINED AQUIFERS, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
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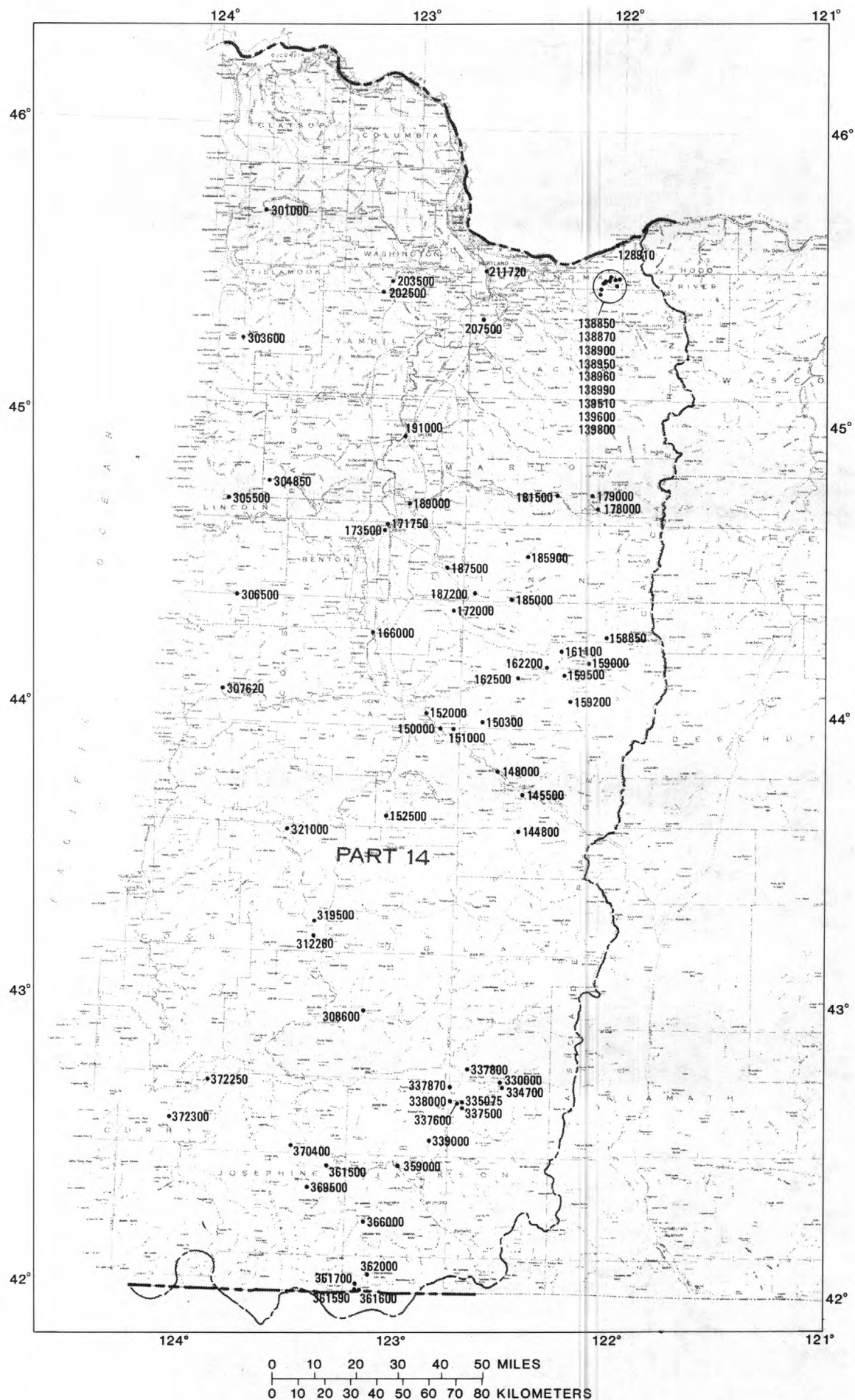


Figure 3. Map of Western Oregon showing sites where water-quality data are obtained



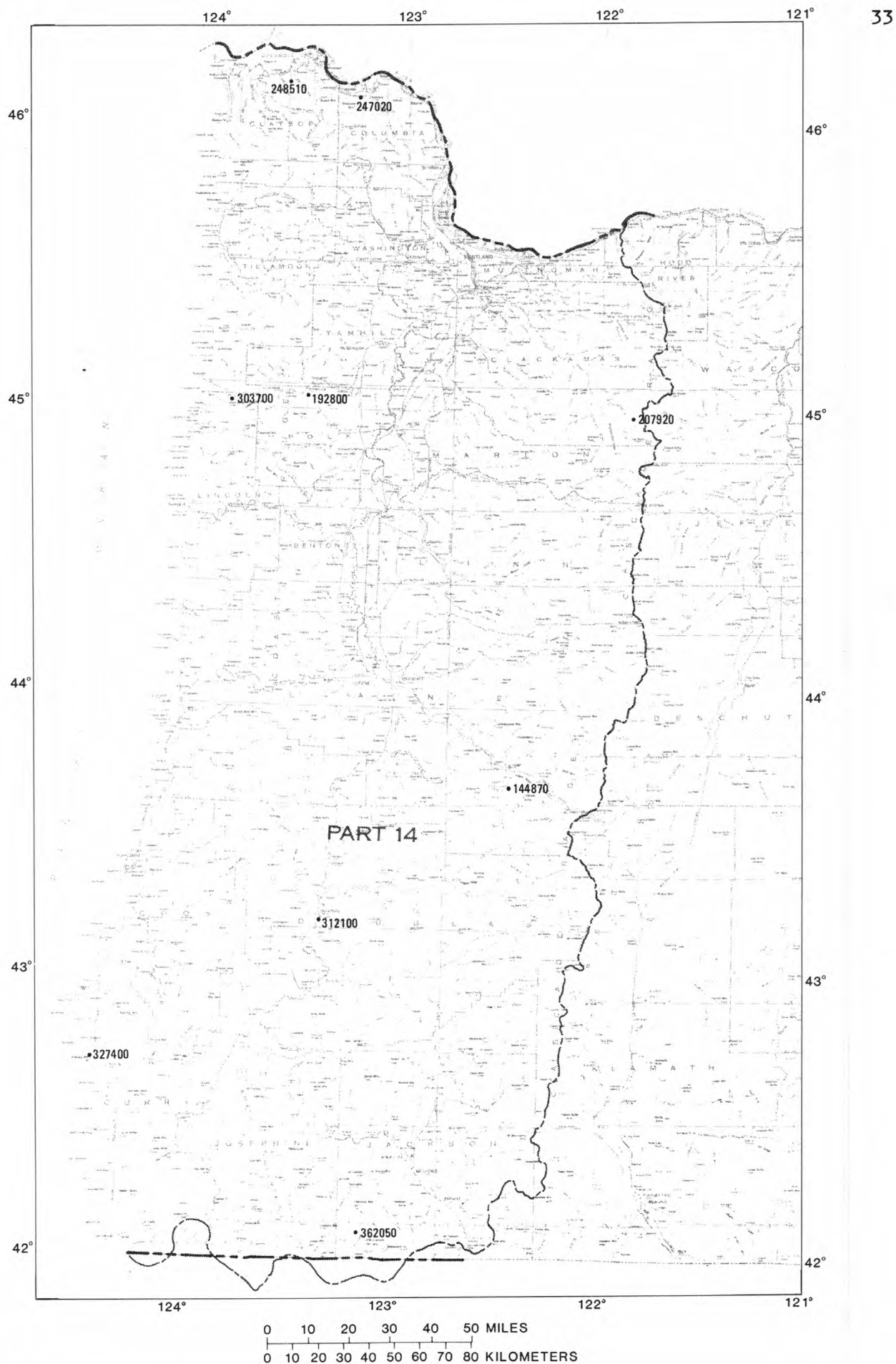


Figure 4. Map of Western Oregon showing location of partial-record stations



## COLUMBIA RIVER MAIN STEM

35

## 14128860 COLUMBIA RIVER AT BONNEVILLE DAM, OR

LOCATION.--Lat 45°38'36", long 121°56'21", in sec.22, T.2 N., R.7 E., Multnomah County, Hydrologic Unit 17080001, on north shore of Bradford Island, 200 ft upstream from Bonneville Dam, at mile 146.1.

DRAINAGE AREA.--239,900 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 76.61 ft May 20, 1981; minimum, 69.65 ft Oct. 25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 76.59 ft Aug. 27; minimum recorded, 71.46 ft Nov. 2, Feb. 4.

## GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	75.44	74.60	75.00	75.24	73.34	74.00	75.07	72.76	74.58	75.59	74.70	75.13
2	75.85	74.86	75.31	74.77	71.46	72.65	75.49	73.85	74.71	75.62	73.77	74.39
3	75.75	75.32	75.50	75.17	74.44	74.92	76.22	73.43	74.94	75.52	71.91	73.73
4	76.09	75.34	75.71	75.82	73.87	74.72	76.34	75.40	75.73	75.97	73.49	74.86
5	75.87	75.40	75.67	76.11	74.92	75.70	75.46	74.46	74.76	75.95	73.91	75.16
6	75.87	74.84	75.31	76.06	74.65	75.34	75.30	74.27	74.68	76.53	73.20	74.67
7	76.11	75.23	75.75	75.99	75.19	75.50	76.19	74.03	75.10	75.74	71.86	73.03
8	75.98	75.11	75.50	75.75	74.12	75.04	75.13	72.94	73.89	74.76	72.59	73.50
9	75.84	74.70	75.38	75.41	72.70	73.95	75.53	73.43	74.71	75.85	73.96	74.74
10	76.33	75.20	75.64	76.06	74.01	75.25	75.43	73.22	74.16	75.84	71.99	73.72
11	76.26	75.38	75.81	75.94	74.03	75.12	75.74	73.95	74.55	74.69	72.71	73.65
12	76.00	75.51	75.82	75.80	73.79	74.97	75.84	74.08	75.06	74.86	71.78	73.23
13	76.01	75.19	75.63	75.54	74.01	74.74	75.69	73.80	75.01	75.48	73.53	74.57
14	76.05	74.73	75.37	75.60	73.53	74.35	75.99	73.89	75.27	75.48	74.06	74.88
15	76.46	75.38	75.90	74.88	72.48	73.64	75.97	73.54	74.64	75.37	73.21	74.33
16	76.17	75.52	75.73	76.40	73.47	74.76	76.08	73.07	74.75	75.37	73.68	74.72
17	76.25	75.41	75.86	76.39	74.51	75.53	75.79	72.89	74.26	75.47	73.26	74.66
18	76.23	75.15	75.83	76.27	74.28	75.25	75.91	74.38	74.94	75.64	72.96	74.35
19	76.29	75.48	75.79	76.00	73.82	74.65	74.80	73.22	73.93	75.36	72.81	73.82
20	76.12	75.34	75.64	73.92	73.04	73.38	74.96	72.87	74.26	75.39	72.82	74.27
21	76.06	74.85	75.56	75.07	72.61	73.48	75.40	72.72	74.13	---	---	---
22	76.13	74.64	75.39	75.62	73.08	74.45	75.17	72.68	73.82	---	---	---
23	75.99	75.24	75.66	76.26	72.68	74.56	76.07	72.27	74.07	---	---	---
24	76.13	75.94	76.02	76.26	73.03	74.64	75.86	73.72	74.57	---	---	---
25	76.16	75.37	75.76	76.23	74.24	74.86	75.07	73.00	74.05	---	---	---
26	76.37	74.90	75.68	76.30	74.49	75.21	75.07	73.63	74.29	---	---	---
27	76.37	75.13	75.85	76.20	75.11	75.48	75.22	73.24	74.23	---	---	---
28	76.30	75.33	75.95	75.77	74.76	75.12	74.70	72.44	73.61	---	---	---
29	76.44	74.96	75.70	75.77	73.83	74.75	74.84	72.94	73.93	---	---	---
30	76.33	75.42	75.83	75.89	73.62	74.21	75.45	73.24	74.42	---	---	---
31	75.79	74.89	75.37	---	---	---	75.62	73.38	74.66	---	---	---
MONTH	76.46	74.60	75.64	76.40	71.46	74.67	76.34	72.27	74.51	---	---	---

## COLUMBIA RIVER MAIN STEM

14128860 COLUMBIA RIVER AT BONNEVILLE DAM, OR--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---									
2	---	---	---									
3	74.75	72.11	73.46									
4	74.28	71.46	72.75									
5	---	---	---									
6	---	---	---									
7	---	---	---									
8	---	---	---									
9	---	---	---									
10	---	---	---									
11	---	---	---									
12	---	---	---									
13	---	---	---									
14	---	---	---									
15	---	---	---									
16	---	---	---									
17	---	---	---									
18	---	---	---									
19	---	---	---									
20	---	---	---									
21	---	---	---									
22	---	---	---									
23	---	---	---									
24	---	---	---									
25	---	---	---									
26	---	---	---									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	75.34	74.05	74.71	76.53	75.34	76.07	75.38	74.53	75.07	76.28	75.20	75.74
2	75.49	74.18	74.99	76.40	74.84	75.71	75.64	74.59	75.07	76.25	74.95	75.47
3	75.52	74.37	74.88	76.12	74.58	75.25	75.47	74.43	74.98	76.57	75.21	75.82
4	75.45	73.98	74.96	76.51	75.28	75.85	75.66	74.74	75.27	76.11	75.55	75.87
5	75.52	74.53	75.05	76.46	74.63	75.61	75.84	74.80	75.14	76.08	75.36	75.78
6	75.12	73.86	74.63	76.29	75.23	75.84	75.79	74.03	74.54	76.10	74.94	75.74
7	75.51	74.64	75.15	76.00	75.01	75.57	75.60	74.09	74.65	76.52	74.63	75.52
8	75.70	74.46	75.06	76.27	75.43	75.80	75.41	73.78	74.42	76.28	75.10	75.69
9	75.57	73.97	74.76	76.14	75.38	75.79	75.22	74.25	74.71	76.00	74.91	75.60
10	75.23	73.13	74.56	76.23	75.64	75.86	75.19	74.14	74.56	76.10	74.85	75.71
11	75.57	75.01	75.23	76.44	75.08	75.85	75.50	74.71	75.02	76.02	74.88	75.49
12	75.62	75.05	75.41	76.56	75.51	76.08	75.60	73.91	74.83	75.73	74.96	75.48
13	76.04	74.66	75.49	75.83	74.74	75.20	75.98	74.27	74.92	75.94	75.45	75.66
14	76.37	74.00	75.04	75.60	74.31	74.83	75.42	74.14	74.68	76.40	75.38	75.98
15	75.55	74.25	74.78	75.53	74.07	74.65	74.95	74.17	74.57	76.15	75.13	75.61
16	76.23	75.51	75.97	75.74	74.48	75.02	75.11	72.90	73.93	76.08	74.96	75.60
17	76.32	75.22	75.70	75.16	74.61	74.88	75.94	74.70	75.13	76.37	74.58	75.54
18	76.43	75.52	76.03	75.54	74.52	75.09	76.24	74.76	75.32	76.21	75.57	75.79
19	76.17	75.63	75.97	75.76	74.04	75.08	76.28	74.47	75.55	76.06	75.25	75.69
20	76.17	74.90	75.65	75.33	74.56	74.97	76.24	75.25	75.84	76.11	75.07	75.72
21	76.36	75.13	75.93	75.69	74.85	75.25	76.25	75.14	75.75	75.97	75.49	75.74
22	76.22	75.46	75.76	75.78	75.13	75.39	76.05	74.62	75.36	76.21	75.51	75.88
23	76.13	74.95	75.65	75.65	74.36	75.11	76.05	74.95	75.55	76.17	74.98	75.52
24	75.78	74.55	75.24	75.56	74.20	75.03	76.24	75.59	75.92	76.32	74.85	75.76
25	76.26	75.06	75.76	75.84	74.46	75.15	76.19	74.84	75.48	76.46	75.04	75.57
26	76.44	74.54	75.61	75.71	74.36	75.06	76.24	75.08	75.73	76.17	75.17	75.78
27	75.68	74.21	74.70	75.38	74.12	74.82	76.59	75.07	75.66	76.26	75.00	75.72
28	75.56	74.21	74.89	75.30	73.70	74.64	76.18	75.09	75.51	76.38	74.92	75.83
29	76.43	75.23	75.85	75.38	74.08	74.80	75.92	75.17	75.55	76.20	75.00	75.64
30	76.50	74.90	75.91	75.87	74.43	75.33	76.11	75.35	75.76	76.20	75.10	75.70
31	---	---	---	75.56	74.66	75.06	76.18	74.94	75.41	---	---	---
MONTH	76.50	73.13	75.31	76.56	73.70	75.31	76.59	72.90	75.16	76.57	74.58	75.69



## COLUMBIA RIVER MAIN STEM

37

## 14128870 COLUMBIA RIVER BELOW BONNEVILLE DAM, OR

LOCATION.--Lat 45°38'20", long 121°57'16", in sec.21, T.2 N., R.7 E., Multnomah County, Hydrologic Unit 17080001, on left bank 0.4 mi downstream from Bonneville Dam left bank powerhouse, 0.5 mi upstream from Tanner Creek, and at mile 145.0.

DRAINAGE AREA.--239,900 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 30.40 ft June 11, 1981; minimum, 7.00 ft Oct. 4, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 28.83 ft June 2; minimum, 8.13 ft Oct. 10.

## GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	12.13	10.10	10.90	17.20	14.74	15.58	17.67	13.89	15.66	15.81	14.66	15.07
2	10.31	9.50	9.94	17.47	14.39	16.41	19.81	15.23	17.44	15.70	13.88	14.55
3	10.05	8.36	9.14	15.35	14.20	14.73	18.55	16.86	17.75	15.88	14.16	15.26
4	10.91	8.57	9.66	15.46	13.48	14.12	18.17	15.92	17.13	16.69	15.75	16.20
5	11.85	10.44	10.83	15.61	13.57	14.35	17.72	14.36	15.41	20.78	16.69	18.34
6	12.31	11.06	11.57	15.63	13.25	14.70	17.06	14.35	15.52	24.67	19.70	21.87
7	12.75	11.56	12.13	14.03	12.44	13.08	18.01	15.79	16.32	25.19	24.12	24.84
8	12.89	12.03	12.40	15.42	12.86	14.00	18.64	15.41	17.59	24.45	20.95	22.22
9	12.61	10.37	11.31	15.65	13.93	14.93	16.83	15.98	16.47	21.63	20.54	21.20
10	10.81	8.13	9.00	14.70	14.14	14.43	16.78	14.77	16.45	21.38	18.46	19.74
11	12.83	9.52	11.09	14.55	14.19	14.37	15.00	14.06	14.64	21.14	18.31	19.59
12	12.38	11.17	11.60	14.61	14.10	14.40	15.23	13.46	14.11	18.97	17.36	17.94
13	12.57	11.59	12.02	14.67	12.95	13.92	15.27	14.09	14.60	21.30	17.30	19.54
14	12.74	11.72	12.23	13.50	12.79	13.04	16.45	13.88	15.04	21.38	19.90	20.64
15	14.06	11.55	12.78	13.74	12.97	13.41	16.38	14.48	15.34	20.02	17.63	19.40
16	13.64	11.53	12.15	14.86	13.04	13.93	18.04	14.97	16.79	18.34	16.95	17.38
17	12.63	11.50	11.97	15.19	14.43	14.73	18.67	16.46	17.80	17.98	17.48	17.77
18	14.38	12.37	13.46	15.18	13.92	14.39	17.47	16.16	17.00	19.49	18.26	18.87
19	14.46	13.48	13.97	16.56	14.13	15.18	17.03	15.93	16.42	19.90	19.35	19.67
20	14.04	13.49	13.71	16.59	13.43	14.21	18.20	15.89	17.43	19.95	18.58	19.06
21	13.87	12.28	13.12	13.92	13.08	13.29	18.60	18.03	18.26	19.31	18.13	18.58
22	13.04	11.37	12.49	14.52	13.08	14.10	18.46	17.02	18.04	18.50	16.32	17.20
23	11.99	9.64	11.03	14.53	13.67	14.09	17.21	15.59	16.32	16.42	15.85	16.15
24	10.02	9.05	9.69	15.07	13.84	14.50	15.80	15.00	15.52	18.26	15.80	17.12
25	11.34	9.90	10.84	13.87	12.01	12.65	15.21	14.54	14.95	18.32	16.85	17.59
26	13.00	11.08	12.38	13.36	11.93	12.52	14.58	13.13	13.73	18.90	17.49	18.29
27	13.78	12.76	13.36	14.15	12.92	13.55	14.57	12.75	13.60	19.35	18.08	18.89
28	15.55	13.16	14.17	14.13	12.43	12.78	15.47	14.51	14.91	19.29	18.53	18.87
29	16.32	14.91	15.45	15.25	12.75	14.43	15.52	14.92	15.17	18.84	17.32	18.08
30	16.29	15.93	16.12	17.38	14.74	15.83	15.30	14.63	15.01	17.60	14.67	15.99
31	16.41	15.42	15.81	---	---	---	15.26	14.53	14.86	18.11	13.82	16.41
MONTH	16.41	8.13	12.14	17.47	11.93	14.19	19.81	12.75	15.98	25.19	13.82	18.46

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	20.15	16.11	18.69	25.64	24.61	25.03	26.74	25.83	26.41	23.80	22.63	23.17
2	19.88	17.08	18.54	26.27	24.64	25.49	26.76	26.47	26.61	23.57	22.42	23.02
3	20.60	19.26	20.20	26.13	25.74	25.93	26.73	23.62	25.35	24.17	22.23	23.45
4	21.32	19.74	20.60	27.46	25.86	26.32	24.50	22.87	23.70	23.94	22.51	23.11
5	20.54	14.40	18.55	26.89	25.36	26.38	23.18	22.75	22.98	23.97	22.48	23.08
6	17.12	13.55	15.40	25.48	24.84	25.10	24.56	22.48	23.67	23.54	22.32	22.83
7	20.37	16.91	18.38	27.59	24.77	25.55	24.76	22.11	23.57	24.75	22.91	24.09
8	19.99	18.32	19.21	27.16	25.88	26.62	22.54	20.46	21.27	24.98	23.71	24.33
9	21.30	18.49	19.49	27.27	25.97	26.55	20.55	18.58	19.37	25.42	23.57	24.10
10	21.51	19.41	20.39	27.74	25.77	26.99	21.10	19.99	20.74	25.77	23.60	24.65
11	21.73	19.68	20.43	26.74	25.87	26.21	22.09	20.36	21.45	26.12	25.41	25.73
12	21.34	19.27	20.42	26.55	25.58	26.28	22.15	19.99	20.86	26.21	22.76	23.78
13	19.31	17.91	18.27	27.05	26.15	26.64	23.13	21.48	22.44	24.27	22.79	23.37
14	18.68	17.90	18.25	27.53	25.87	27.09	22.12	21.05	21.48	24.01	23.02	23.48
15	19.22	17.91	18.73	27.70	27.14	27.37	21.32	19.99	20.71	23.13	21.28	22.46
16	21.64	19.12	20.09	27.46	27.10	27.26	20.20	19.93	20.05	24.49	20.79	22.26
17	20.44	19.20	19.69	27.89	27.26	27.62	20.07	19.06	19.71	22.55	20.40	21.14
18	21.92	19.51	20.97	28.19	27.63	27.85	20.65	19.11	19.96	22.71	20.14	21.64
19	22.36	21.85	22.22	27.95	27.18	27.65	20.91	19.26	20.51	22.39	20.19	21.17
20	23.25	22.36	22.72	27.57	26.41	27.01	19.43	18.32	18.92	22.63	21.14	21.83
21	24.12	22.66	23.40	26.53	25.83	26.20	17.85	16.73	17.12	21.65	20.16	20.89
22	24.36	24.02	24.17	25.90	25.30	25.60	19.87	16.77	17.20	22.63	18.79	20.88
23	24.58	24.16	24.38	25.42	25.03	25.27	21.57	19.81	20.83	23.01	20.88	22.00
24	24.94	24.41	24.55	25.28	24.93	25.06	24.45	21.28	22.11	24.33	22.00	23.22
25	24.61	23.81	24.20	25.10	24.84	24.96	25.05	21.05	23.15	24.89	22.36	24.00
26	23.83	23.48	23.61	24.53	22.90	23.48	25.83	24.75	25.50	27.04	24.50	25.50
27	24.52	23.23	23.38	23.78	22.77	22.99	25.77	24.17	25.19	27.63	26.46	26.94
28	25.05	23.86	24.48	24.48	23.25	23.87	25.90	22.92	24.60	27.99	26.84	27.51
29	---	---	---	27.09	23.69	25.40	24.93	23.20	24.05	28.22	27.12	27.67
30	---	---	---	27.75	26.37	26.91	23.98	23.02	23.53	28.33	27.28	27.85
31	---	---	---	26.73	25.92	26.45	---	---	---	28.65	28.00	28.24
MONTH	25.05	13.55	20.84	28.19	22.77	26.04	26.76	16.73	22.10	28.65	18.79	23.79
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	28.79	27.73	28.17	18.06	16.53	17.01	18.06	16.63	17.56	17.54	14.14	15.45
2	28.83	27.83	28.28	18.73	15.44	16.84	17.34	15.82	16.71	15.97	11.83	13.72
3	28.47	26.62	27.82	18.89	17.66	18.07	17.67	16.83	17.10	13.33	11.73	12.45
4	27.64	25.95	26.73	18.64	17.59	17.83	17.74	16.51	17.28	12.94	11.18	11.72
5	27.09	25.37	26.07	19.11	16.03	17.73	17.01	16.12	16.64	11.68	9.75	10.52
6	26.46	25.35	25.96	19.19	16.69	18.44	17.72	15.39	16.72	12.83	9.65	11.37
7	26.14	25.13	25.80	20.43	19.04	20.01	17.57	14.98	16.66	15.84	12.57	14.07
8	25.97	24.62	25.11	20.29	19.10	19.64	17.81	14.04	16.28	15.40	11.83	13.45
9	25.92	24.62	25.25	20.18	15.92	17.69	17.43	13.62	15.75	12.50	9.93	11.02
10	25.50	24.13	24.62	16.10	12.86	14.44	17.34	13.58	15.84	14.30	10.20	12.65
11	24.86	24.19	24.61	16.80	13.76	15.59	16.93	13.48	15.64	13.45	11.51	12.79
12	24.85	24.53	24.71	19.88	16.13	18.11	17.35	13.32	15.73	11.88	9.71	10.53
13	25.74	24.02	24.66	19.64	18.70	19.21	16.96	13.51	15.62	10.50	9.48	9.94
14	24.05	22.50	23.42	20.07	17.82	18.95	15.45	13.39	14.43	11.86	9.75	10.82
15	23.76	20.03	21.75	20.26	16.46	18.33	16.11	13.08	14.65	12.06	11.05	11.80
16	21.94	19.95	20.71	20.73	20.23	20.49	14.64	12.50	13.74	11.17	9.85	10.48
17	23.32	21.18	22.02	20.69	18.34	19.14	16.32	12.45	14.64	13.88	9.98	12.91
18	21.50	19.46	20.56	19.75	18.66	19.38	17.08	12.95	15.35	13.80	10.14	10.98
19	19.82	19.16	19.46	20.21	18.29	19.19	17.37	13.06	15.97	11.33	9.45	10.59
20	19.75	19.47	19.64	19.45	17.55	18.61	18.62	15.28	17.24	14.52	10.27	12.34
21	21.36	19.47	20.48	20.08	18.44	19.25	17.20	14.18	15.61	11.84	10.32	11.00
22	21.15	19.35	19.83	19.23	18.13	18.41	16.54	14.54	15.69	13.27	10.53	12.25
23	20.71	19.95	20.36	19.47	16.39	17.58	14.60	11.63	13.04	13.18	11.28	12.60
24	20.75	18.33	19.72	18.38	14.83	16.34	14.85	11.35	13.33	12.34	10.30	11.15
25	18.50	15.68	17.28	17.34	16.25	16.89	14.56	11.56	12.79	11.88	9.53	10.21
26	17.99	16.76	17.32	18.95	16.88	17.23	13.46	11.69	12.63	11.77	9.49	10.08
27	18.86	17.46	18.42	19.48	17.97	18.96	13.68	11.54	12.41	12.04	9.79	11.28
28	18.79	17.99	18.20	19.43	17.84	18.47	13.44	10.81	12.14	12.78	10.25	11.95
29	18.11	15.96	17.44	19.34	17.95	18.59	11.44	10.31	11.19	12.69	11.48	11.73
30	18.28	16.87	17.51	20.01	17.15	17.78	13.04	10.32	11.74	11.90	9.88	11.23
31	---	---	---	20.14	16.68	17.93	14.15	12.73	13.63	---	---	---
MONTH	28.83	15.68	22.40	20.73	12.86	18.13	18.62	10.31	14.96	17.54	9.45	11.77
YEAR	28.83	8.13	18.39									

## COLUMBIA RIVER MAIN STEM

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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 downstream from Tumult Creek, 1.0 mi west of Warrendale, 5.1 mi downstream from Bonneville Dam, and at mile 141.0.

DRAINAGE AREA.--240,000 mi<sup>2</sup>, approximately.

## WATER-STAGE RECORDS

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 30.91 ft June 20, 1972; minimum, 4.49 ft July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 23.35 ft June 2; minimum, 5.64 ft Oct. 10.

## GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.26	7.20	7.83	12.46	11.30	11.88	13.75	11.67	12.50	11.61	10.59	11.01
2	7.85	6.82	7.39	12.75	11.38	12.27	15.08	12.40	13.55	11.53	10.61	10.93
3	7.47	6.12	6.86	11.72	10.53	10.94	15.61	14.27	14.68	11.90	11.05	11.47
4	7.95	6.17	7.08	11.75	10.17	10.85	15.61	14.09	14.64	13.40	11.87	12.51
5	8.81	7.28	7.80	11.94	10.25	10.83	14.85	12.24	13.22	15.94	13.44	14.60
6	9.59	8.05	8.57	12.03	10.44	11.35	13.34	12.01	12.72	20.15	15.96	17.78
7	9.76	8.56	9.02	10.80	9.33	9.88	13.34	12.79	13.00	21.73	20.18	21.23
8	9.78	8.58	9.08	11.16	9.44	10.21	14.11	12.49	13.57	21.45	18.74	19.94
9	9.44	7.31	8.29	11.58	10.57	11.13	12.63	12.28	12.45	18.72	18.17	18.47
10	7.89	5.64	6.44	10.92	10.40	10.66	12.47	11.92	12.30	18.36	16.01	17.23
11	8.63	6.23	7.60	10.85	10.45	10.63	11.84	10.83	11.23	17.11	15.74	16.36
12	8.88	7.82	8.27	11.00	10.30	10.62	11.50	10.26	10.73	15.92	14.56	15.06
13	8.77	8.01	8.48	10.84	9.83	10.41	11.55	10.96	11.34	16.39	14.17	15.43
14	9.37	8.28	8.81	10.08	9.13	9.50	12.46	10.72	11.40	16.78	15.89	16.35
15	10.11	8.76	9.39	10.37	9.61	9.94	12.61	11.59	12.16	15.89	14.44	15.36
16	10.02	8.47	9.20	11.42	9.58	10.36	14.86	12.17	13.68	14.41	13.37	13.72
17	9.53	8.49	8.96	11.92	10.81	11.28	15.47	14.59	14.99	13.76	13.38	13.58
18	10.27	9.10	9.63	11.84	10.86	11.29	14.65	14.12	14.38	14.96	13.59	14.24
19	10.19	9.62	9.92	12.74	10.95	11.62	14.55	13.37	13.90	15.53	14.98	15.26
20	10.23	9.53	9.84	12.77	10.46	11.23	14.86	13.14	14.09	15.55	14.46	14.99
21	10.21	8.68	9.41	10.68	9.88	10.17	15.27	14.79	14.97	14.66	14.04	14.38
22	9.47	8.82	9.11	10.30	9.80	10.08	15.29	14.45	15.00	14.16	12.70	13.39
23	9.10	7.50	8.24	10.28	9.61	9.89	14.47	13.06	13.74	12.73	11.90	12.41
24	7.64	6.43	7.05	10.45	9.79	10.24	13.04	12.11	12.67	13.81	11.91	12.97
25	8.19	7.24	7.67	9.85	8.37	8.93	12.12	11.62	11.90	13.91	13.01	13.50
26	9.48	8.02	8.87	9.18	8.01	8.50	11.61	10.50	11.10	14.99	13.76	14.18
27	9.83	9.25	9.58	10.42	8.93	9.56	10.85	10.07	10.42	15.65	14.31	15.02
28	10.96	9.43	10.01	10.46	9.30	9.85	11.82	10.57	11.06	15.38	14.73	15.03
29	12.39	10.93	11.53	11.90	9.89	10.95	12.00	11.20	11.51	15.01	13.96	14.49
30	12.54	12.17	12.38	13.74	11.29	12.20	11.70	10.84	11.27	14.29	12.23	13.10
31	12.52	11.72	12.11	---	---	---	11.52	10.66	11.00	13.55	11.09	12.60
MONTH	12.54	5.64	8.85	13.74	8.01	10.58	15.61	10.07	12.75	21.73	10.59	14.73

14128910 COLUMBIA RIVER AT WARRENDAL, OR--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	14.99	12.76	14.17	20.86	20.28	20.52	22.44	22.05	22.25	18.52	17.99	18.27
2	14.91	13.55	14.23	21.21	20.34	20.80	22.65	22.23	22.41	18.27	17.83	18.00
3	15.58	14.72	15.27	21.36	21.10	21.23	22.49	20.18	21.63	18.76	17.71	18.29
4	16.04	15.44	15.74	21.77	21.10	21.38	20.37	19.23	19.89	18.38	17.76	18.05
5	15.64	11.68	14.52	21.79	20.76	21.52	19.22	18.69	18.92	18.53	17.83	18.07
6	12.52	10.69	11.48	20.78	19.95	20.31	19.72	18.49	19.08	18.01	17.52	17.75
7	14.18	12.49	13.62	21.62	19.91	20.36	19.89	18.00	19.23	19.34	17.87	18.67
8	15.14	13.82	14.45	21.94	21.22	21.64	18.02	16.16	17.11	19.72	18.84	19.22
9	16.06	14.26	14.94	22.27	21.23	21.69	16.17	14.49	15.24	19.47	18.82	19.06
10	16.54	15.71	15.97	23.03	21.94	22.56	16.27	14.96	15.82	20.15	18.80	19.39
11	16.79	15.96	16.32	22.15	21.71	21.91	17.01	16.09	16.58	20.70	20.16	20.51
12	16.98	16.23	16.61	22.09	21.61	21.91	16.96	15.93	16.34	20.73	18.27	19.26
13	16.19	14.82	15.24	22.43	21.77	22.11	17.94	16.37	17.33	18.87	18.00	18.45
14	14.94	14.53	14.75	22.77	22.16	22.51	17.53	16.49	16.90	18.70	18.44	18.57
15	15.35	14.41	14.82	22.89	22.67	22.76	16.54	15.64	16.19	18.49	17.14	17.75
16	16.47	15.30	15.94	22.71	22.48	22.60	15.65	15.32	15.50	18.76	16.60	17.63
17	16.01	15.62	15.84	23.16	22.66	22.92	15.34	14.76	15.11	17.23	15.94	16.54
18	18.00	15.87	16.96	23.19	22.99	23.08	15.63	15.04	15.30	17.31	15.73	16.63
19	18.46	17.97	18.28	23.12	22.49	22.90	16.06	15.36	15.76	16.93	15.70	16.43
20	19.13	18.44	18.80	22.51	21.73	22.25	15.34	14.17	14.64	17.27	16.56	16.84
21	19.85	18.88	19.30	21.71	20.98	21.41	14.01	12.53	13.11	16.73	15.50	16.22
22	20.30	19.86	20.08	21.01	20.41	20.73	13.62	12.49	12.70	17.22	14.49	15.76
23	20.68	20.20	20.43	20.53	20.09	20.31	16.51	13.71	15.47	17.50	16.53	16.97
24	20.80	20.59	20.67	20.21	19.95	20.07	18.49	16.33	16.90	18.75	17.30	18.05
25	20.68	20.12	20.39	20.03	19.84	19.96	19.28	17.13	18.07	19.48	17.72	18.78
26	20.10	19.64	19.79	19.81	18.21	18.83	20.54	19.25	20.09	21.19	19.36	20.06
27	19.66	19.25	19.41	18.46	17.98	18.15	20.51	19.64	20.11	22.11	21.16	21.54
28	20.44	19.70	20.00	19.16	18.48	18.83	20.66	18.67	19.75	22.43	21.77	22.17
29	---	---	---	21.99	18.94	20.15	19.75	18.68	19.20	22.79	22.14	22.44
30	---	---	---	22.89	22.07	22.44	18.76	18.42	18.62	22.93	22.33	22.60
31	---	---	---	22.44	22.17	22.29	---	---	---	23.21	22.78	22.97
MONTH	20.80	10.69	16.72	23.19	17.98	21.29	22.65	12.49	17.51	23.21	14.49	18.74
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.25	22.64	22.95	13.07	12.45	12.66	13.62	12.52	13.18	12.02	10.18	11.10
2	23.35	22.64	22.98	13.57	11.71	12.58	12.62	12.12	12.40	11.84	8.92	10.44
3	23.10	21.92	22.72	13.66	13.14	13.52	12.89	12.41	12.62	9.31	8.86	9.07
4	22.13	21.13	21.66	13.60	13.25	13.36	13.02	12.47	12.83	9.43	8.23	8.79
5	21.41	20.43	20.94	14.39	12.29	13.54	12.72	12.11	12.40	8.83	7.15	7.97
6	20.88	20.38	20.71	14.33	12.26	13.58	12.97	11.71	12.41	9.29	6.97	8.25
7	20.72	20.21	20.52	15.55	14.29	15.12	12.97	11.55	12.48	11.39	8.93	10.12
8	20.62	19.75	20.07	15.40	14.75	15.02	13.25	11.34	12.42	11.40	9.29	10.36
9	20.42	19.59	19.96	15.39	12.41	13.95	12.77	10.54	11.89	9.52	7.52	8.53
10	20.35	19.23	19.73	12.40	9.99	11.26	12.76	10.66	11.98	10.67	7.64	9.06
11	19.68	19.18	19.50	12.11	10.15	11.43	12.48	10.63	11.77	10.56	9.02	9.67
12	19.76	19.49	19.62	14.87	12.08	13.33	12.61	10.43	11.71	9.41	7.04	8.00
13	20.20	19.12	19.64	15.17	14.57	14.82	12.41	10.68	11.64	8.10	6.92	7.30
14	19.11	18.04	18.60	15.33	14.12	14.78	11.17	10.33	10.80	8.07	7.03	7.61
15	18.67	15.89	17.38	15.04	13.22	13.92	11.55	10.04	10.79	8.68	8.06	8.36
16	16.56	15.38	15.85	15.89	15.07	15.62	10.44	9.26	10.09	8.18	7.09	7.59
17	17.56	16.49	16.96	15.92	14.12	14.83	11.58	9.25	10.49	9.72	7.06	8.82
18	16.90	15.19	16.05	14.96	14.43	14.75	12.22	9.97	11.15	9.72	7.45	8.30
19	15.21	14.65	14.91	15.24	14.03	14.72	12.53	10.28	11.61	8.07	6.99	7.57
20	15.11	14.86	14.97	14.45	13.62	14.06	13.61	11.42	12.61	9.55	7.13	8.50
21	16.16	14.84	15.51	15.15	14.15	14.69	12.94	11.28	11.80	8.41	7.26	7.73
22	16.13	14.92	15.35	14.19	13.84	14.01	12.02	11.04	11.59	9.72	7.64	8.71
23	15.85	14.93	15.51	14.47	12.48	13.45	11.33	9.16	9.95	9.83	8.52	9.29
24	15.66	14.61	15.24	13.47	11.27	12.36	10.29	8.68	9.69	9.72	7.95	8.44
25	14.56	12.31	13.45	12.78	12.09	12.54	10.28	8.82	9.37	8.87	6.88	7.67
26	13.34	12.34	12.92	13.38	12.64	12.80	10.06	8.80	9.28	8.63	6.84	7.56
27	14.08	13.10	13.75	14.55	13.52	14.12	9.87	8.36	9.12	8.96	7.34	8.09
28	14.15	13.58	13.80	14.66	13.65	14.03	9.65	8.26	8.93	9.16	7.91	8.47
29	13.68	12.65	13.13	14.44	13.83	14.05	8.63	7.95	8.19	9.24	8.04	8.42
30	13.35	12.87	13.09	14.28	12.88	13.29	9.25	7.63	8.41	8.80	7.35	8.10
31	---	---	---	14.60	12.92	13.56	10.10	9.28	9.71	---	---	---
MONTH	23.35	12.31	17.58	15.92	9.99	13.73	13.62	7.63	11.07	12.02	6.84	8.60
YEAR	23.35	5.64	14.33									



## COLUMBIA RIVER MAIN STEM

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14128910 COLUMBIA RIVER AT WARRENDALE, 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.

INSTRUMENTATION.--Specific conductance and temperature recorders since October 1975.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 242 micromhos May 15, 1977; minimum, 95 micromhos June 26, 27, 1982.

WATER TEMPERATURES: Maximum, 22.5°C Aug. 17, 18, 1977, Aug. 11, 1980; minimum recorded, 0.0°C many days in January and February, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 222 micromhos Jan. 20; minimum, 104 micromhos June 11, 12.

WATER TEMPERATURES: Maximum, 21.0°C Aug. 15, 17; minimum, 3.5°C on several days in January and February.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 15...	0900	139000	159	8.2	15.0	9.2	--	--	67	19	4.8
JAN 25...	1130	195000	188	8.0	4.0	12.6	21	91	78	21	6.1
APR 19...	1000	241000	168	8.3	10.0	12.2	K5	56	69	19	5.2
AUG 11...	0935	175000	132	8.3	20.0	8.6	K2	<500	57	16	4.2

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT 15...	7.7	1.6	64	13	3.7	.20	.100	.300	.60	.03
JAN 25...	8.1	1.7	75	18	5.0	.20	.080	.470	.40	.06
APR 19...	7.0	1.6	69	14	3.1	.20	.100	.270	.70	.12
AUG 11...	3.9	1.0	60	10	2.0	.10	.120	<.100	.50	.06

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 15...	.020	.050	10	96	99	36000	.60	--	--	--
JAN 25...	.060	.080	13	119	120	62700	12	12	6320	98
APR 19...	.050	.060	15	103	110	67000	5.9	16	10400	90
AUG 11...	.050	.060	7.2	75	81	35400	3.5	12	5670	94

## COLUMBIA RIVER MAIN STEM

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 15...	40	2	31	1	<1	<1	<3	--	27	10
JAN 25...	60	1	31	<1	<1	<1	<3	4	49	<1
APR 19...	50	1	29	<1	<1	<1	<3	6	78	<1
AUG 11...	20	2	26	<1	1	<1	<3	4	12	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 15...	8	7	.2	<10	1	<1	<1	100	<6	40
JAN 25...	16	2	<.1	<10	2	<1	<1	110	<6	22
APR 19...	11	8	<.1	<10	--	<1	<1	98	<6	27
AUG 11...	5	<1	<.1	<10	--	<1	<1	84	<6	15

K - Results based on colony count outside acceptable range (non-ideal colony count.)

## COLUMBIA RIVER MAIN STEM

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14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	166	173	199	181	198	164	171	161		---	140
2	139	169	173	202	178	194	166	172	157		---	140
3	139	168	173	201	177	191	166	174	151		---	140
4	141	167	170	193	178	190	166	174	142		---	141
5	143	165	174	185	177	190	166	172	132		---	143
6	145	166	174	184	178	188	165	170	124		---	144
7	147	166	178	181	179	183	167	167	116		---	144
8	147	172	177	174	180	174	166	162	111		---	144
9	148	178	177	171	182	171	166	159	108		---	145
10	149	181	178	175	185	170	166	156	106		---	145
11	153	182	179	178	183	171	168	154	105		---	148
12	156	182	182	181	182	175	168	155	105		---	150
13	158	182	183	183	179	179	169	157	108		---	152
14	159	184	183	186	178	181	169	159	110		---	155
15	162	189	185	186	174	185	169	159	112		---	157
16	164	190	193	187	171	186	171	159	112		---	158
17	166	185	195	189	167	189	171	158	114		---	158
18	168	175	197	196	162	192	171	156	116		134	156
19	169	171	199	208	161	188	170	156	116		134	153
20	167	---	194	219	164	186	170	155	118		134	150
21	167	---	190	217	169	183	172	154	120		135	150
22	166	176	189	209	171	182	167	155	120		136	152
23	164	178	188	202	171	181	165	155	120		137	154
24	165	179	185	195	171	181	164	156	120		137	154
25	165	177	186	190	175	181	164	156	---		138	155
26	164	177	190	183	179	179	164	155	---		139	157
27	---	176	191	178	182	177	166	155	---		139	158
28	---	176	192	181	191	176	166	157	---		140	162
29	---	175	191	184	---	173	165	158	---		140	165
30	165	174	192	185	---	166	166	158	---		141	167
31	164	---	195	184	---	164	---	160	---		140	---
MEAN	156	176	185	190	176	181	167	160	121		137	151

## COLUMBIA RIVER MAIN STEM

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	16.0	12.0	12.0	6.5	6.5	4.0	3.5	4.0	4.0	5.5	5.5
2	16.0	15.5	12.0	11.5	6.5	6.5	3.5	3.5	4.5	4.0	5.5	5.5
3	16.0	15.5	11.5	11.5	6.5	6.5	3.5	3.5	4.0	4.0	5.5	5.5
4	15.5	15.5	11.5	11.5	6.5	6.5	4.0	3.5	4.0	4.0	6.0	5.5
5	15.5	15.5	11.5	11.0	6.5	6.0	4.0	4.0	4.0	4.0	6.0	6.0
6	15.5	15.5	11.0	11.0	6.0	6.0	4.0	4.0	4.0	3.5	6.0	6.0
7	15.5	15.0	11.0	10.5	6.5	6.0	4.0	4.0	4.0	3.5	6.0	6.0
8	15.0	15.0	10.5	10.5	6.0	5.5	4.0	4.0	4.0	3.5	6.0	6.0
9	15.5	15.0	10.5	10.5	5.5	5.5	4.0	4.0	3.5	3.5	6.0	6.0
10	15.0	14.5	10.5	10.0	5.5	5.5	4.0	4.0	3.5	3.5	6.5	6.0
11	15.0	14.5	10.0	10.0	5.5	5.0	4.0	4.0	3.5	3.5	6.5	6.5
12	15.0	14.5	10.0	10.0	5.5	5.5	4.0	4.0	3.5	3.5	7.0	6.5
13	15.0	15.0	10.0	9.5	6.0	5.5	4.0	4.0	4.0	3.5	7.0	7.0
14	15.0	15.0	9.5	9.0	6.0	5.5	4.0	3.5	4.0	3.5	7.0	7.0
15	15.0	15.0	9.0	9.0	6.0	5.5	4.0	3.5	4.0	4.0	7.0	7.0
16	15.0	15.0	9.0	8.5	6.0	5.5	4.0	3.5	4.0	4.0	7.0	7.0
17	15.0	14.5	8.5	8.5	6.0	5.5	4.0	4.0	4.0	4.0	7.5	7.0
18	14.5	14.0	9.0	8.5	5.5	5.5	4.0	4.0	4.0	4.0	7.5	7.0
19	14.0	13.5	9.0	8.5	5.5	5.5	4.0	4.0	4.5	4.0	7.5	7.0
20	13.5	13.0	8.5	8.5	5.5	5.0	4.5	4.0	4.5	4.5	7.5	7.0
21	13.0	13.0	8.5	8.5	5.0	5.0	4.0	4.0	4.5	4.5	7.5	7.5
22	13.0	13.0	8.5	7.5	5.0	5.0	4.0	4.0	5.0	4.5	7.5	7.5
23	13.5	13.0	7.5	7.0	5.0	5.0	4.0	4.0	5.0	5.0	7.5	7.5
24	13.5	13.5	7.0	7.0	5.0	5.0	4.0	4.0	5.0	5.0	7.5	7.5
25	13.5	13.0	7.0	6.5	5.0	5.0	4.0	4.0	5.0	5.0	7.5	7.5
26	13.5	13.0	6.5	6.0	5.0	4.5	4.0	4.0	5.0	5.0	7.5	7.5
27	13.0	13.0	6.5	6.0	5.0	4.5	4.0	4.0	5.5	5.0	7.5	7.5
28	13.0	12.5	6.5	6.5	4.5	4.0	4.0	4.0	5.5	5.0	7.5	7.5
29	12.5	12.0	6.5	6.5	4.0	4.0	4.0	4.0	---	---	7.5	7.5
30	12.0	12.0	6.5	6.5	4.0	4.0	4.0	4.0	---	---	7.5	7.5
31	12.0	12.0	---	---	4.0	4.0	4.0	4.0	---	---	8.0	7.5
MONTH	16.0	12.0	12.0	6.0	6.5	4.0	4.5	3.5	5.5	3.5	8.0	5.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	8.0	11.5	11.5	16.0	15.5	17.0	17.0	20.5	20.0	20.5	20.0
2	8.0	7.5	11.5	11.5	15.5	15.5	17.0	17.0	20.5	20.0	20.5	20.0
3	8.0	7.5	11.5	11.5	16.0	15.5	17.5	17.0	20.5	20.0	20.5	20.0
4	8.0	8.0	12.0	11.5	15.5	15.5	18.0	17.5	20.5	20.0	20.0	19.5
5	8.5	8.0	12.0	12.0	15.5	15.5	18.0	17.5	20.0	20.0	19.5	19.5
6	8.5	8.0	12.0	12.0	16.0	15.5	18.0	17.5	20.5	20.0	19.5	19.5
7	8.5	8.5	12.0	12.0	16.0	15.5	18.0	17.5	20.5	20.5	19.5	19.0
8	8.5	8.5	12.0	12.0	16.0	16.0	17.5	17.5	20.5	20.0	19.5	19.0
9	8.5	8.5	12.0	11.5	16.0	16.0	17.5	17.5	20.0	20.0	19.0	19.0
10	8.5	8.5	11.5	11.5	16.0	15.5	18.0	17.5	20.0	20.0	19.0	19.0
11	8.5	8.5	12.0	11.5	16.0	15.5	18.0	18.0	20.0	20.0	19.0	19.0
12	9.0	8.5	12.0	12.0	16.0	15.5	18.5	18.0	20.0	19.5	19.0	19.0
13	9.0	8.5	12.0	12.0	16.0	16.0	18.5	18.0	20.5	20.0	19.0	19.0
14	9.5	9.0	12.0	12.0	16.0	16.0	18.0	18.0	20.5	20.5	19.5	19.0
15	9.5	9.0	12.0	12.0	16.5	16.0	18.0	18.0	21.0	20.5	19.5	19.5
16	9.5	9.0	12.0	12.0	16.5	16.0	18.5	18.0	20.5	20.5	19.5	19.0
17	10.0	9.5	12.5	12.0	16.0	16.0	19.0	18.5	21.0	20.5	19.0	18.5
18	10.0	9.5	13.0	12.5	16.0	16.0	19.0	18.5	20.5	20.0	18.5	18.0
19	10.0	10.0	13.0	12.5	16.5	16.0	19.0	19.0	20.5	20.5	18.0	17.5
20	10.5	10.0	13.5	13.0	16.5	16.0	19.0	19.0	20.5	20.0	17.5	17.0
21	10.5	10.0	14.0	13.0	16.5	16.0	19.5	18.5	20.5	20.0	17.0	16.5
22	10.5	10.5	14.0	13.5	17.0	16.5	19.5	19.0	20.5	20.0	17.0	17.0
23	10.5	10.5	14.5	13.5	16.5	16.5	19.5	19.0	20.5	20.0	17.5	17.0
24	11.0	10.5	14.5	14.0	16.5	16.5	19.5	19.0	20.5	20.0	17.5	17.5
25	11.0	10.5	15.0	14.5	16.5	16.0	19.0	19.0	20.0	20.0	17.5	17.5
26	11.0	10.5	15.0	15.0	17.0	16.5	19.5	19.0	20.0	20.0	17.5	17.5
27	11.5	11.0	15.5	15.0	17.0	16.5	19.5	19.0	20.5	20.0	17.5	17.0
28	11.5	11.0	16.0	15.5	17.5	17.0	20.0	19.0	20.5	20.5	17.0	17.0
29	11.5	11.0	16.5	16.0	17.0	17.0	20.0	19.5	20.5	20.5	17.0	16.5
30	11.5	11.5	16.5	16.0	17.0	17.0	20.5	20.0	20.5	20.0	16.5	16.0
31	---	---	16.0	16.0	---	---	20.5	20.0	20.5	20.5	---	---
MONTH	11.5	7.5	16.5	11.5	17.5	15.5	20.5	17.0	21.0	19.5	20.5	16.0



## SANDY RIVER BASIN

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## 14131400 ZIGZAG RIVER NEAR RHODODENDRON, OR

LOCATION.--Lat 45°18'32", long 121°51'31", in NE¼SE¼ sec.18, T.3 S., R.8 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank at bridge, 0.5 mi upstream from Devil Canyon Creek, 1.2 mi downstream from Lady Creek, and 2.8 mi southeast of Rhododendron.

DRAINAGE AREA.--14.8 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,191.52 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Small diversion for private water supply from Lady Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 438 ft<sup>3</sup>/s Jan. 6, 1983, gage height, 5.35 ft; minimum, 44 ft<sup>3</sup>/s Sept. 17, 23, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 25, 1980, reached a stage of 6.0 ft, discharge, 863 ft<sup>3</sup>/s, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 220 ft<sup>3</sup>/s and maximum discharge, 438 ft<sup>3</sup>/s Jan. 6, gage height, 5.35 ft; minimum daily, 48 ft<sup>3</sup>/s Aug. 20-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	54	81	68	72	96	101	120	85	107	85	66	66		
2	54	74	85	75	87	92	115	85	101	92	63	58		
3	54	70	180	76	82	89	107	83	93	85	60	58		
4	52	69	158	150	80	96	100	83	96	80	58	63		
5	51	83	136	174	77	93	97	88	95	80	58	55		
6	56	87	150	301	77	96	92	85	95	79	58	51		
7	68	79	125	345	75	103	88	87	96	77	58	51		
8	80	76	113	289	77	111	91	86	97	74	58	54		
9	68	72	106	240	79	117	90	83	94	68	58	55		
10	62	67	101	224	76	124	88	83	105	68	58	60		
11	59	64	95	189	89	108	86	85	97	69	58	62		
12	57	65	93	169	84	110	83	86	93	72	56	54		
13	53	64	90	162	86	114	82	85	89	82	56	49		
14	50	61	95	155	86	109	81	87	90	83	56	49		
15	50	62	115	144	88	105	80	95	89	82	54	49		
16	52	65	127	143	88	96	82	91	85	75	54	50		
17	59	87	105	139	144	90	84	91	87	74	52	50		
18	56	91	100	142	180	89	87	91	93	72	52	56		
19	54	82	95	137	133	90	88	91	98	80	50	53		
20	53	79	93	134	122	88	88	94	91	75	48	54		
21	56	74	96	123	124	88	90	94	87	69	48	52		
22	59	68	86	121	147	87	90	96	85	66	48	52		
23	55	72	85	118	131	85	92	99	86	65	48	54		
24	51	70	84	121	128	83	90	98	83	66	48	52		
25	53	68	84	114	117	84	86	103	76	68	54	51		
26	60	64	82	121	113	83	84	96	75	68	56	53		
27	61	68	78	114	105	83	83	101	74	68	52	52		
28	68	70	78	110	96	83	83	113	71	68	58	49		
29	122	72	77	104	---	121	83	121	77	67	70	49		
30	85	69	78	96	---	166	84	115	75	68	66	49		
31	78	---	75	92	---	135	---	113	---	70	64	---		
TOTAL	1890	2173	3133	4694	2867	3119	2694	2893	2680	2295	1743	1610		
MEAN	61.0	72.4	101	151	102	101	89.8	93.3	89.3	74.0	56.2	53.7		
MAX	122	91	180	345	180	166	120	121	107	92	70	66		
MIN	50	61	68	72	75	83	80	83	71	65	48	49		
CFSM	4.12	4.89	6.82	10.2	6.89	6.82	6.07	6.30	6.03	5.00	3.80	3.63		
IN.	4.75	5.46	7.87	11.80	7.21	7.84	6.77	7.27	6.74	5.77	4.38	4.05		
AC-FT	3750	4310	6210	9310	5690	6190	5340	5740	5320	4550	3460	3190		
CAL YR 1982	TOTAL	29054	MEAN	79.6	MAX	263	MIN	46	CFSM	5.38	IN.	73.03	AC-FT	57630
WTR YR 1983	TOTAL	31791	MEAN	87.1	MAX	345	MIN	48	CFSM	5.89	IN.	79.91	AC-FT	63060

NOTE.--No gage-height record July 27 to Sept. 2.

## 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 southeast of Government Camp.

DRAINAGE AREA.--8.00 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1910 to May 1912, April 1926 to current year. Published as "near Rowe" 1910-12.

REVISED RECORDS.--WSP 1398: 1911-12, 1926-27, 1933(M), 1949. WDR OR-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,445.53 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1910, nonrecording gage at site 0.2 mi upstream at different datum. Nov. 21, 1910, to May 31, 1912, and Apr. 21, 1926, to Sept. 30, 1933, at site 75 ft upstream from former site at different datums. Oct. 1, 1933, to Sept. 30, 1960, at datum 1.00 ft higher.

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

AVERAGE DISCHARGE.--58 years (water years 1911, 1927-83), 44.5 ft<sup>3</sup>/s, 75.54 in/yr, 32,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 4.75 ft, from rating curve extended above 310 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 10 ft<sup>3</sup>/s Nov. 27, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	0430	169	2.02	Jan. 6	1730	*333	*2.74
Dec. 4	0030	225	2.30	Feb. 17	2030	153	1.96
Dec. 6	0130	153	1.93	Mar. 29	2230	190	2.15

Minimum, 19 ft<sup>3</sup>/s Sept. 24-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	24	48	34	32	38	55	63	56	57	48	31	36		
2	25	39	43	32	37	53	58	57	56	53	30	27		
3	25	35	143	31	36	53	51	55	52	44	30	25		
4	23	36	123	95	35	62	50	54	50	40	28	25		
5	22	52	87	125	35	60	48	62	49	40	28	23		
6	26	54	104	248	36	62	47	55	49	39	28	23		
7	41	40	67	219	35	72	46	55	49	38	28	23		
8	57	36	57	141	34	87	44	54	49	38	29	25		
9	36	34	52	88	34	89	43	53	47	36	28	28		
10	29	33	48	99	35	103	41	50	61	35	28	30		
11	26	31	45	81	44	76	40	48	55	35	29	32		
12	24	31	45	67	41	74	39	48	54	38	27	25		
13	23	30	44	60	42	87	38	48	47	50	26	23		
14	23	28	43	54	40	70	37	53	45	48	27	23		
15	22	28	53	51	41	62	38	67	45	41	27	22		
16	24	29	88	50	45	57	40	55	44	37	26	22		
17	31	56	59	52	97	53	42	52	47	36	25	22		
18	28	61	49	52	106	50	47	56	56	34	25	24		
19	25	43	45	50	66	48	48	54	60	40	25	23		
20	24	38	45	46	63	47	50	56	52	36	24	22		
21	28	35	45	44	69	50	54	56	45	34	23	22		
22	36	33	42	42	93	50	51	55	44	33	23	22		
23	34	32	40	41	83	48	54	57	45	33	23	21		
24	27	31	38	48	77	46	55	58	43	37	23	21		
25	27	30	36	43	66	47	48	59	41	34	24	20		
26	35	29	35	54	59	45	46	57	40	33	27	21		
27	37	32	34	52	54	44	46	58	40	33	26	21		
28	45	41	33	44	52	44	49	60	40	33	25	19		
29	118	42	32	42	---	87	51	64	41	32	37	19		
30	53	37	32	40	---	99	52	59	42	31	33	19		
31	43	---	32	39	---	73	---	59	---	33	32	---		
TOTAL	1041	1124	1673	2162	1493	1953	1416	1730	1445	1172	845	708		
MEAN	33.6	37.5	54.0	69.7	53.3	63.0	47.2	55.8	48.2	37.8	27.3	23.6		
MAX	118	61	143	248	106	103	63	67	61	53	37	36		
MIN	22	28	32	31	34	44	37	48	40	31	23	19		
CFSM	4.20	4.69	6.75	8.71	6.66	7.87	5.90	6.97	6.02	4.72	3.41	2.95		
IN.	4.84	5.23	7.78	10.05	6.94	9.08	6.58	8.04	6.72	5.45	3.93	3.29		
AC-FT	2060	2230	3320	4290	2960	3870	2810	3430	2870	2320	1680	1400		
CAL YR 1982	TOTAL	18943	MEAN	51.9	MAX	251	MIN	22	CFSM	6.49	IN.	88.08	AC-FT	37570
WTR YR 1983	TOTAL	16762	MEAN	45.9	MAX	248	MIN	19	CFSM	5.74	IN.	77.94	AC-FT	33250

## 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 southwest of Marmot, 0.8 mi upstream from Sandy River Dam of Portland General Electric Co., 6.6 mi downstream from Salmon River, and at mile 30.9.

DRAINAGE AREA.--262 mi<sup>2</sup>.

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, 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 upstream at different datum. Oct. 20, 1933, to Sept. 30, 1958, water-stage recorder at site 0.6 mi upstream at different datum.

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

AVERAGE DISCHARGE.--72 years, 1,369 ft<sup>3</sup>/s, 70.96 in/yr, 991,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 17.05 ft, from rating curve extended above 7,000 ft<sup>3</sup>/s; minimum, 195 ft<sup>3</sup>/s Nov. 27, 28, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	0800	8,290	11.54	Jan. 6	1930	*22,000	*14.82
Dec. 3	0400	11,400	12.49	Feb. 18	0730	7,850	11.39
Jan. 4	1600	9,440	11.92	Mar. 30	0530	8,850	11.73

Minimum, 325 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	1460	1450	815	1090	1700	3520	928	980	1020	663	647
2	450	1190	2260	825	1020	1590	2940	938	937	1550	611	511
3	430	1010	8690	941	959	1480	2490	909	875	1440	579	446
4	425	928	6740	5990	911	1470	2170	877	810	1170	562	432
5	420	1360	3970	7930	870	1490	1960	920	769	1040	555	407
6	500	2580	5040	16600	900	1580	1740	912	746	949	535	391
7	600	1770	3330	15300	968	1950	1610	979	739	856	545	388
8	790	1380	2460	9460	985	2530	1450	1130	735	833	563	387
9	780	1140	1960	5590	1310	2980	1360	1190	717	784	563	448
10	700	985	1630	4150	1380	3330	1300	1250	1030	719	550	527
11	620	877	1410	3370	2060	2740	1240	1200	934	693	544	774
12	560	800	1310	2730	1890	2390	1150	1180	994	759	506	574
13	510	753	1420	2290	1940	2320	1080	1120	852	1110	483	495
14	477	696	1590	1950	1940	2310	1030	1110	786	1600	488	455
15	455	660	2440	1710	1860	2140	1000	1670	775	1340	482	427
16	443	660	4120	1600	1890	1900	987	1640	722	1140	453	409
17	606	1200	3080	1590	4150	1680	1000	1440	738	1010	436	392
18	666	1990	2400	1480	7240	1520	1030	1320	923	932	435	417
19	566	1940	2070	1620	4830	1370	1060	1200	1210	1030	429	451
20	516	1800	1980	1510	3580	1260	1070	1130	1450	972	414	389
21	507	1500	2100	1390	3140	1230	1150	1090	1140	876	404	370
22	569	1240	1990	1310	4260	1230	1130	1030	983	823	400	364
23	618	1070	1760	1380	3660	1170	1120	1010	953	802	400	367
24	550	958	1490	1630	3230	1100	1250	1000	950	777	403	371
25	518	884	1330	1500	2700	1190	1100	993	845	753	400	361
26	606	821	1260	1590	2330	1150	1040	956	796	701	424	363
27	736	822	1140	1650	2030	1250	979	919	761	672	407	371
28	893	1010	1040	1480	1810	1270	949	947	729	713	409	349
29	5890	1270	967	1340	---	2630	934	1030	768	672	537	338
30	2770	1390	909	1240	---	7350	920	960	780	647	664	330
31	1680	---	859	1180	---	4910	---	967	---	689	511	---
TOTAL	26301	36144	74195	103141	64933	64210	41759	33945	26427	29072	15355	12951
MEAN	848	1205	2393	3327	2319	2071	1392	1095	881	938	495	432
MAX	5890	2580	8690	16600	7240	7350	3520	1670	1450	1600	664	774
MIN	420	660	859	815	870	1100	920	877	717	647	400	330
CFSM	3.24	4.60	9.13	12.7	8.85	7.90	5.31	4.18	3.36	3.58	1.89	1.65
IN.	3.73	5.13	10.53	14.64	9.22	9.12	5.93	4.82	3.75	4.13	2.18	1.84
AC-FT	52170	71690	147200	204600	128800	127400	82830	67330	52420	57660	30460	25690

CAL YR 1982	TOTAL	538619	MEAN	1476	MAX	14000	MIN	387	CFSM	5.63	IN.	76.48	AC-FT	1068000
WTR YR 1983	TOTAL	528433	MEAN	1448	MAX	16600	MIN	330	CFSM	5.53	IN.	75.03	AC-FT	1048000

## 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 17080001, in Mount Hood National Forest, on right bank 600 ft below the confluence of Bedrock and Hickman Creeks and 8.6 mi north of Rhododendron.

DRAINAGE AREA.--8.17 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Altitude of gage is 2,540 ft, from topographic map.

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

AVERAGE DISCHARGE.--20 years, 60.0 ft<sup>3</sup>/s, 99.73 in/yr, 43,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,610 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 8.25 ft, from rating curve extended above 330 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 1.5 ft<sup>3</sup>/s Sept. 5-10, 28, 29, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	0300	596	3.77	Feb. 17	1730	637	3.89
Dec. 3	0130	900	4.61	Mar. 30	0030	816	4.39
Jan. 6	1630	*1,150	*5.22				

Minimum, 4.3 ft<sup>3</sup>/s Aug. 24-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	15	76	117	18	28	45	133	17	19	37	13	11		
2	15	52	205	20	26	41	99	17	20	77	13	9.0		
3	14	40	632	40	23	39	65	16	17	71	12	7.2		
4	12	38	370	559	21	40	52	15	15	50	11	6.7		
5	11	120	174	554	20	50	43	17	14	38	11	6.1		
6	17	169	223	932	24	64	37	20	13	31	9.6	5.7		
7	58	101	120	673	25	110	34	30	12	27	8.8	5.4		
8	94	68	82	378	22	204	29	43	11	26	8.3	5.9		
9	70	47	58	177	37	233	26	49	10	23	7.8	11		
10	44	36	44	179	64	188	23	48	33	21	7.3	55		
11	31	29	35	139	134	118	21	47	27	18	8.0	69		
12	24	25	32	98	132	95	20	50	28	21	7.3	32		
13	20	23	50	74	153	80	18	50	22	71	6.6	22		
14	17	20	79	57	132	82	17	57	19	106	6.2	17		
15	15	18	194	46	111	73	17	144	21	81	5.9	14		
16	17	21	238	42	124	61	18	106	18	58	5.6	13		
17	36	139	152	48	384	49	21	74	20	43	5.5	11		
18	33	185	99	41	380	41	26	56	48	34	5.4	17		
19	24	137	82	53	178	35	28	45	85	34	5.1	16		
20	21	103	76	52	158	31	28	37	72	28	5.0	12		
21	23	67	98	41	148	30	29	33	48	25	4.7	11		
22	24	47	79	39	258	32	29	29	36	22	4.7	9.8		
23	24	36	57	54	162	33	29	27	36	20	4.7	9.3		
24	21	29	42	59	130	31	32	25	34	19	4.7	8.7		
25	21	26	34	51	93	39	25	24	27	18	4.6	8.2		
26	40	23	30	50	74	41	22	22	24	17	4.6	7.8		
27	68	27	26	60	62	50	20	20	21	17	4.3	8.0		
28	142	61	23	52	51	61	18	18	19	18	4.5	7.6		
29	425	103	22	41	---	360	18	17	19	16	11	7.1		
30	140	112	21	36	---	491	17	16	19	15	11	6.8		
31	81	---	19	34	---	220	---	17	---	14	8.2	---		
TOTAL	1597	1978	3513	4697	3154	3067	994	1186	807	1096	229.4	430.3		
MEAN	51.5	65.9	113	152	113	98.9	33.1	38.3	26.9	35.4	7.40	14.3		
MAX	425	185	632	932	384	491	133	144	85	106	13	69		
MIN	11	18	19	18	20	30	17	15	10	14	4.3	5.4		
CFSM	6.30	8.07	13.8	18.6	13.8	12.1	4.05	4.69	3.29	4.33	.91	1.75		
IN.	7.27	9.01	16.00	21.39	14.36	13.96	4.53	5.40	3.67	4.99	1.04	1.96		
AC-FT	3170	3920	6970	9320	6260	6080	1970	2350	1600	2170	455	853		
CAL YR 1982	TOTAL	22814.9	MEAN	62.5	MAX	801	MIN	2.5	CFSM	7.65	IN.	103.88	AC-FT	45250
WTR YR 1983	TOTAL	22748.7	MEAN	62.3	MAX	932	MIN	4.3	CFSM	7.63	IN.	103.58	AC-FT	45120



## SANDY RIVER BASIN

49

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 upstream from North Fork, 7.0 mi southeast of Multnomah Falls, and at mile 14.8.

DRAINAGE AREA.--47.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,080 ft, from topographic map.

REMARKS.--Water-discharge records excellent. Water stored since 1915 in Bull Run Lake, usable capacity, 12,270 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--17 years, 426 ft<sup>3</sup>/s, 120.77 in/yr, 308,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,610 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 13.22 ft; minimum, 33 ft<sup>3</sup>/s Sept. 27, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	0200	3,800	9.17	Jan. 6	1400	*5,490	*10.73
Dec. 3	0100	5,120	10.40	Mar. 29	2230	4,590	9.90

Minimum, 63 ft<sup>3</sup>/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	132	555	845	168	278	378	1030	202	200	320	121	120		
2	141	415	1320	185	254	346	823	205	235	560	116	111		
3	136	335	3750	281	234	325	647	199	202	502	111	90		
4	118	353	2310	3230	217	323	550	188	179	357	107	84		
5	107	864	1080	3130	201	371	484	197	163	279	101	79		
6	164	1110	1280	4600	238	435	425	225	153	231	98	75		
7	395	699	751	4010	270	650	387	300	143	199	95	72		
8	691	471	519	2580	253	1100	346	414	135	182	92	71		
9	519	352	407	1250	408	1250	323	513	128	161	91	90		
10	350	288	337	1370	504	1190	303	481	366	142	89	400		
11	265	248	289	1030	802	764	286	445	322	129	92	483		
12	219	221	283	699	819	626	274	445	330	169	90	271		
13	184	202	398	535	940	564	264	416	268	804	84	202		
14	161	181	572	443	776	614	256	426	232	954	81	164		
15	144	166	1250	379	639	589	249	820	223	627	79	143		
16	145	183	1690	349	716	500	248	625	198	451	76	127		
17	254	781	1080	385	2090	423	251	468	210	352	75	117		
18	247	1080	749	340	2200	366	259	388	381	291	73	144		
19	196	919	651	415	1120	321	260	330	574	279	72	149		
20	171	735	676	443	949	288	258	293	471	248	71	117		
21	184	507	836	375	848	277	261	270	352	219	69	105		
22	228	379	615	340	1370	277	263	252	298	196	69	99		
23	219	304	466	445	974	278	269	240	350	181	67	95		
24	195	261	371	487	894	264	296	227	355	169	67	91		
25	193	234	318	430	668	329	255	216	289	159	66	87		
26	284	211	295	430	554	328	247	204	256	152	66	85		
27	445	222	262	492	477	383	228	192	229	146	64	84		
28	849	385	234	439	417	443	217	182	205	184	64	80		
29	2510	649	213	372	---	2200	213	176	197	151	107	76		
30	905	727	194	343	---	2920	204	168	200	136	127	75		
31	555	---	178	318	---	1600	---	180	---	128	88	---		
TOTAL	11306	14037	24219	30293	20110	20722	10376	9887	7844	9058	2668	3986		
MEAN	365	468	781	977	718	668	346	319	261	292	86.1	133		
MAX	2510	1110	3750	4600	2200	2920	1030	820	574	954	127	483		
MIN	107	166	178	168	201	264	204	168	128	128	64	71		
CFSM	7.62	9.77	16.3	20.4	15.0	13.9	7.22	6.66	5.45	6.10	1.80	2.78		
IN.	8.78	10.90	18.81	23.53	15.62	16.09	8.06	7.68	6.09	7.03	2.07	3.10		
AC-FT	22430	27840	48040	60090	39890	41100	20580	19610	15560	17970	5290	7910		
CAL YR 1982	TOTAL	156701	MEAN	429	MAX	4360	MIN	47	CFSM	8.96	IN.	121.70	AC-FT	310800
WTR YR 1983	TOTAL	164506	MEAN	451	MAX	4600	MIN	64	CFSM	9.42	IN.	127.76	AC-FT	326300

## SANDY RIVER BASIN

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.

WATER TEMPERATURES: October 1977 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1977 to current year.

INSTRUMENTATION.--Conductivity/temperature recorder since October 1977. Automatic pumping sediment sampler since October 1977.

REMARKS.--Sediment concentrations and corresponding sediment discharges reported as 0 mg/l or 0 tons should be interpreted as &lt;1 due to the limitations of sampling equipment, analytical methods, rounding errors, and the likelihood of minor amounts of sediment transport occurring at even the lowest of discharges.

COOPERATION.--Chemical data were analyzed by the City of Portland Water Quality Laboratory and were reviewed by the U.S. Geological Survey.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 38 micromhos July 19, 1979; minimum recorded, 9 micromhos Jan. 23, 1982.

WATER TEMPERATURES: Maximum, 17.0°C July 19, 20, 1979; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 290 mg/l Dec. 2, 1977; minimum, 0 mg/l on many days.

SEDIMENT DISCHARGE: Maximum daily, 5,930 tons Dec. 2, 1977; minimum, 0 tons on many days.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 29 micromhos Aug. 27; minimum, 11 micromhos Jan. 6.

WATER TEMPERATURES: Maximum, 15.5°C May 29; minimum, 1.0°C Dec. 29 to Jan. 2.

SEDIMENT CONCENTRATIONS: Maximum daily, 63 mg/l Jan. 6; minimum, 0 mg/l on many days throughout the year.

SEDIMENT DISCHARGE: Maximum daily, 852 tons Jan. 6; minimum, 0 tons on many days throughout the year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
02...	1130	149	24	7.3	8.5	7	45	6
09...	1050	535	20	7.1	8.0	3	5	4
16...	1100	131	24	7.4	9.0	2	9	2
23...	1020	216	22	7.3	8.0	4	4	10
30...	1015	895	18	7.1	6.5	6	4	8
NOV								
06...	0950	1050	18	7.1	6.0	10	4	14
13...	1020	209	22	7.3	4.0	2	<1	6
20...	1020	749	17	7.1	4.0	5	11	14
27...	1020	200	21	7.2	2.5	4	1	<1
DEC								
04...	1015	2250	14	7.0	5.0	4	3	8
11...	1015	289	20	7.1	2.0	2	<1	<1
18...	1020	713	16	7.1	4.0	<1	<1	<1
25...	0922	320	20	7.1	3.5	<1	<1	<1
JAN								
01...	1005	163	22	7.2	1.0	4	<1	2
08...	1030	2870	13	6.9	4.0	2	2	10
15...	1010	379	19	7.2	3.5	2	<1	4
22...	1020	323	19	7.2	3.5	1	<1	4
29...	1025	372	18	7.2	4.0	<1	<1	<1
FEB								
05...	1045	200	21	7.2	2.5	<1	<1	<1
12...	1040	796	16	7.1	4.0	4	<1	3
19...	1246	1060	16	7.0	5.0	9	<5	8
26...	1020	547	17	7.1	5.0	<1	<1	1
MAR								
05...	1030	338	19	7.1	5.5	<1	<1	<1
12...	1010	625	17	7.1	5.5	<1	<1	4
19...	0955	326	20	7.1	4.0	1	<1	1
26...	0900	306	20	7.1	4.5	<1	<1	2
APR								
02...	0845	845	17	7.0	4.0	6	<1	<1
09...	1030	323	20	7.1	4.0	5	<1	3
16...	1115	242	21	7.3	5.0	1	<1	2
23...	1045	255	20	7.1	6.5	<1	<1	3
30...	1050	203	21	7.2	7.0	<1	<1	1
MAY								
07...	0945	263	20	7.3	6.5	14	2	13
14...	0915	375	19	7.3	6.5	<1	1	1
21...	1015	273	20	7.4	8.5	<1	2	<1
28...	0950	183	23	7.3	12.0	3	18	4
JUN								
04...	0900	183	22	7.3	8.0	19	6	24
11...	1015	317	20	7.3	8.5	28	13	24
18...	1045	366	20	7.3	8.0	48	18	58
25...	1015	292	20	7.2	8.0	5	6	4

## SANDY RIVER BASIN

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14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
02...	<.020	.040	.005	1.1	11	.16	<5
09...	--	--	--	--	--	.28	<5
16...	--	--	--	--	--	.19	<5
23...	<.020	.040	<.003	1.6	9.8	.17	<5
30...	--	--	--	--	--	.54	<5
NOV							
06...	--	--	--	--	--	.50	5
13...	<.020	.050	<.003	.90	10	.20	<5
20...	--	--	--	--	--	.32	<5
27...	--	--	--	--	--	.19	<5
DEC							
04...	<.020	.050	.005	1.9	7.1	1.0	5
11...	--	--	--	--	--	.20	<5
18...	--	--	--	--	--	.35	<5
25...	<.020	.020	<.003	.90	9.7	.16	<5
JAN							
01...	--	--	--	--	--	.21	<5
08...	--	--	--	--	--	1.0	5
15...	<.020	.060	<.003	.80	9.9	.25	<5
22...	--	--	--	--	--	.25	<5
29...	--	--	--	--	--	.29	<5
FEB							
05...	<.020	.040	<.003	.80	10	.20	<5
12...	--	--	--	--	--	.40	<5
19...	--	--	--	--	--	.28	<5
26...	<.020	.030	.005	1.0	8.5	.24	<5
MAR							
05...	--	--	--	--	--	.22	<5
12...	--	--	--	--	--	.24	<5
19...	<.020	.020	<.003	.80	10	.20	<5
26...	--	--	--	--	--	.16	<5
APR							
02...	--	--	--	--	--	.29	<5
09...	<.020	.030	<.003	.80	10	.21	<5
16...	--	--	--	--	--	.20	<5
23...	--	--	--	--	--	.19	<5
30...	<.020	.030	<.003	.80	10	.16	<5
MAY							
07...	--	--	--	--	--	.24	<5
14...	--	--	--	--	--	.26	<5
21...	<.020	.030	<.003	.90	9.9	.19	<5
28...	--	--	--	--	--	.21	<5
JUN							
04...	--	--	--	--	--	.20	<5
11...	<.020	.040	.003	2.5	9.3	.25	<5
18...	--	--	--	--	--	.30	5
25...	--	--	--	--	--	.20	<5

## SANDY RIVER BASIN

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JUL								
02...	1035	535	19	7.2	8.5	35	21	42
09...	1020	163	22	7.3	9.0	8	9	8
16...	1035	464	19	7.2	9.0	14	4	16
23...	1035	185	23	7.3	12.0	7	8	8
30...	0912	144	25	7.3	12.0	22	5	21
AUG								
06...	1040	99	26	7.3	12.0	3	6	2
13...	0841	92	28	7.4	12.0	4	10	4
20...	1020	71	28	7.4	11.5	1	4	6
27...	1000	66	29	7.4	12.0	1	7	2
SEP								
03...	0930	92	28	7.3	11.0	4	4	2
10...	1015	99	27	7.3	9.5	55	24	72
17...	1040	116	25	7.3	9.5	1	2	4
24...	1000	92	27	7.3	9.5	1	2	<1

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUL							
02...	<.020	.030	<.003	2.6	8.7	.30	5
09...	--	--	--	--	--	.20	<5
16...	--	--	--	--	--	.20	<5
23...	<.020	.020	.004	1.1	11	.17	<5
30...	--	--	--	--	--	.16	<5
AUG							
06...	--	--	--	--	--	.15	<5
13...	<.020	.040	.006	.80	12	.12	<5
20...	--	--	--	--	--	.14	<5
27...	--	--	--	--	--	.18	<5
SEP							
03...	<.020	.040	.003	1.3	13	.20	<5
10...	--	--	--	--	--	.30	<5
17...	--	--	--	--	--	.25	<5
24...	<.020	.030	.003	.80	12	.20	<5



## SANDY RIVER BASIN

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14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	21	16	22	20	18	16	21	22	21	25	26
2	25	21	16	22	20	19	16	21	21	19	25	26
3	24	21	13	23	20	19	17	21	21	19	25	27
4	25	22	15	14	21	19	18	21	22	20	25	27
5	25	20	17	14	21	19	18	21	23	21	25	27
6	24	18	16	12	21	18	19	21	23	22	26	27
7	22	20	17	12	20	18	20	19	24	22	26	27
8	21	20	18	13	20	17	20	18	24	22	26	27
9	21	20	19	15	19	16	20	17	24	22	26	27
10	21	21	20	15	18	15	20	18	21	23	26	24
11	22	22	20	16	17	16	21	18	20	24	26	21
12	23	23	21	18	17	17	21	18	20	23	26	22
13	24	23	19	19	17	18	21	18	21	20	27	23
14	25	24	18	20	17	17	21	18	21	17	27	24
15	25	25	16	20	16	17	21	16	22	18	27	24
16	25	24	15	20	16	18	21	16	22	19	27	25
17	24	21	16	20	15	19	21	18	22	20	27	25
18	23	18	17	20	13	20	21	18	20	21	27	25
19	23	18	17	19	15	20	21	19	18	22	27	24
20	23	19	18	19	15	21	21	20	18	22	27	25
21	24	20	17	19	15	21	21	20	20	22	27	25
22	23	20	17	19	14	21	21	20	20	23	27	26
23	23	20	18	18	15	21	21	21	20	23	27	26
24	24	20	19	18	15	21	20	21	20	23	27	27
25	24	22	20	18	16	20	20	21	21	24	27	27
26	23	22	20	18	17	20	20	21	21	24	27	27
27	22	21	20	18	17	19	21	22	22	24	28	26
28	22	19	21	18	18	19	21	22	22	24	28	26
29	20	18	21	19	---	15	21	23	22	24	27	26
30	20	17	21	19	---	14	21	23	23	25	26	27
31	21	---	22	19	---	15	---	22	---	25	27	---
MEAN	23	21	18	18	17	18	20	20	21	22	26	26

## SANDY RIVER BASIN

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	7.5	7.0	6.5	5.0	4.5	1.5	1.0	4.0	3.5	6.0	5.0
2	9.0	8.5	6.5	5.5	5.0	4.5	2.0	1.0	4.0	3.5	6.0	5.0
3	9.0	8.5	7.0	6.0	5.5	5.0	2.5	1.5	3.5	3.0	6.5	6.0
4	8.5	8.0	7.5	7.0	5.5	4.5	4.0	2.5	3.0	2.5	6.5	6.0
5	8.0	7.0	7.0	6.0	5.5	4.5	4.5	4.0	3.0	2.5	6.0	5.5
6	8.5	8.0	7.0	6.0	5.5	4.0	4.5	4.0	3.5	2.5	6.0	5.0
7	8.0	7.5	6.0	5.0	4.5	3.0	5.5	4.5	3.0	2.5	5.5	5.5
8	9.0	8.0	5.0	4.5	3.5	2.5	5.5	3.5	3.0	3.0	6.0	5.0
9	9.0	8.5	5.0	4.0	2.5	2.0	4.5	3.5	3.5	2.5	6.5	5.5
10	9.0	8.0	4.5	4.0	2.5	2.0	5.0	4.5	4.0	3.5	6.0	5.5
11	9.0	7.5	4.0	3.5	3.0	2.0	4.5	4.0	4.5	3.5	6.0	5.0
12	9.5	8.0	4.5	3.5	4.0	3.0	4.5	4.0	4.5	4.0	6.5	5.5
13	9.5	8.5	4.5	4.0	4.5	4.0	5.0	4.0	4.5	4.0	6.0	5.0
14	9.5	8.5	4.0	3.0	4.0	4.0	4.5	4.0	4.5	4.0	5.0	4.5
15	9.5	8.5	4.5	3.0	5.0	4.0	4.5	3.5	4.5	4.0	5.5	4.0
16	9.5	9.0	5.0	4.0	5.5	5.0	4.5	4.0	5.0	4.5	5.5	4.5
17	9.0	6.5	6.5	5.0	5.0	3.5	5.0	4.5	5.0	4.5	6.0	5.0
18	6.5	5.5	6.5	5.5	4.5	4.0	5.0	4.5	4.5	4.0	6.0	4.5
19	6.0	5.5	5.5	5.0	4.5	4.0	4.5	4.0	5.0	4.0	5.5	4.0
20	6.5	5.0	5.0	4.0	4.0	3.5	4.0	3.5	5.0	4.5	6.0	4.5
21	7.5	6.5	4.0	4.0	4.5	4.0	4.0	3.0	5.5	5.0	6.0	5.5
22	9.0	7.5	4.0	2.5	4.0	3.5	4.5	3.5	6.0	5.0	6.0	5.0
23	8.5	8.0	2.5	2.0	4.0	3.5	5.0	4.0	6.5	5.5	6.0	5.5
24	8.5	8.0	2.5	1.5	3.5	3.5	5.0	4.5	6.0	5.0	6.5	5.0
25	9.0	8.0	2.5	2.0	4.0	3.5	5.0	4.5	5.5	4.5	5.5	5.0
26	8.5	7.5	2.5	2.0	4.0	3.0	5.5	5.0	5.0	4.5	5.5	4.5
27	7.5	7.0	3.5	2.5	3.0	2.0	5.5	4.5	5.0	4.0	5.0	4.0
28	7.5	6.0	4.5	3.5	2.0	1.5	4.5	3.5	5.5	4.5	5.0	3.5
29	7.5	7.0	4.5	4.0	2.0	1.0	4.5	4.0	---	---	5.5	4.5
30	7.0	6.5	5.0	4.0	1.5	1.0	4.5	4.0	---	---	5.5	4.5
31	7.0	6.5	---	---	1.5	1.0	4.5	4.0	---	---	5.5	4.0
MONTH	9.5	5.0	7.5	1.5	5.5	1.0	5.5	1.0	6.5	2.5	6.5	3.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.0	4.5	8.0	7.0	9.0	9.0	10.5	9.5	14.5	12.5	13.0	12.0
2	5.0	3.5	7.5	6.5	9.0	8.5	9.5	8.5	14.0	12.5	12.5	11.5
3	4.5	3.5	8.0	6.5	9.0	8.0	11.0	8.5	14.0	12.0	12.0	11.0
4	6.0	4.0	8.5	6.0	9.0	8.0	12.5	8.5	13.5	11.5	12.0	11.5
5	6.0	3.5	8.0	7.0	11.5	8.0	11.0	10.0	14.0	12.0	11.5	11.0
6	6.5	4.0	8.0	7.0	12.5	9.0	10.0	9.5	14.0	11.5	11.0	10.0
7	6.0	5.0	7.5	5.5	14.0	10.0	9.5	9.0	13.5	12.0	11.0	10.0
8	5.0	4.0	5.5	4.0	14.0	11.5	10.0	8.5	13.5	12.5	10.5	9.5
9	4.5	3.5	5.0	3.5	13.0	10.5	10.0	9.0	14.0	12.0	10.0	9.5
10	3.5	2.5	6.0	4.5	10.5	9.0	12.0	9.0	13.5	12.0	11.0	9.5
11	4.5	2.5	7.5	5.0	9.0	8.5	13.5	10.0	12.0	11.0	11.5	10.5
12	5.0	3.5	8.0	5.0	9.5	8.5	12.0	11.0	13.0	10.5	11.5	9.5
13	5.5	3.5	8.5	5.5	12.0	8.0	11.0	10.0	14.0	11.5	12.0	10.0
14	6.0	3.5	7.0	6.5	11.0	10.0	10.0	9.0	14.5	12.5	12.0	11.0
15	7.0	4.0	6.5	5.0	10.5	9.5	9.5	9.0	14.0	12.0	11.0	9.5
16	7.5	4.5	6.5	6.0	10.5	8.5	11.0	9.0	13.0	11.5	10.5	9.5
17	8.0	5.0	8.5	6.0	10.5	9.0	11.0	9.0	13.5	11.5	10.0	9.5
18	8.5	6.5	8.0	7.0	9.0	8.0	12.5	10.0	13.5	12.0	9.5	8.0
19	8.0	6.5	10.0	6.5	8.5	8.0	11.5	11.0	13.0	12.0	8.0	7.0
20	8.0	7.0	11.0	7.5	9.0	8.0	11.5	10.0	12.5	11.5	8.0	7.0
21	7.5	7.0	11.0	8.5	11.0	7.5	13.0	9.5	13.0	11.0	8.5	7.5
22	7.0	6.5	11.5	7.5	9.5	9.0	14.0	11.0	12.5	11.0	9.5	8.0
23	8.0	6.5	12.5	9.0	9.0	8.5	14.0	12.0	12.5	11.5	10.0	9.0
24	7.0	6.0	12.5	9.0	9.5	8.0	12.5	11.0	12.0	11.0	10.5	9.5
25	6.0	5.0	13.0	10.0	11.0	8.0	11.5	10.5	12.0	10.5	10.5	9.0
26	7.0	5.5	12.5	9.5	12.5	9.5	12.5	10.0	13.0	11.5	10.0	9.5
27	8.5	5.5	13.5	9.5	12.0	10.0	11.5	10.5	13.0	12.0	10.0	8.5
28	8.5	6.5	15.0	11.5	11.5	9.5	12.0	10.5	13.0	12.0	8.5	7.0
29	8.5	7.0	15.5	12.5	11.5	10.0	13.5	10.0	12.5	11.5	7.5	6.0
30	8.5	6.5	14.0	10.5	10.5	9.5	15.0	11.5	13.0	12.0	7.5	6.5
31	---	---	10.5	9.0	---	---	14.0	13.0	13.0	12.0	---	---
MONTH	8.5	2.5	15.5	3.5	14.0	7.5	15.0	8.5	14.5	10.5	13.0	6.0

14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	1	.36	2	3.0	1	2.3	1	.45	2	1.5	1	1.0
2	0	.00	3	3.4	6	50	---	.50	2	1.4	2	1.9
3	1	.37	2	1.8	32	351	---	.76	2	1.3	2	1.8
4	2	.64	2	1.9	8	61	28	318	2	1.2	3	2.6
5	3	.87	4	9.3	2	5.8	12	115	3	1.6	3	3.0
6	2	.89	2	6.0	2	6.9	63	852	3	1.9	2	2.3
7	2	2.1	1	1.9	1	2.0	25	267	2	1.5	2	3.5
8	4	7.5	2	2.5	1	1.4	4	28	2	1.4	---	5.9
9	1	1.4	1	.95	0	.00	4	13	1	1.1	1	3.4
10	1	.95	1	.78	1	.91	1	3.7	1	1.4	0	.00
11	1	.72	1	.67	1	.78	2	5.6	1	2.2	1	2.1
12	3	1.8	1	.60	1	.76	1	1.9	2	4.4	0	.00
13	4	2.0	1	.55	2	2.1	2	2.9	2	5.1	1	1.5
14	4	1.7	1	.49	2	3.1	2	2.4	1	2.1	1	1.7
15	3	1.2	1	.45	2	6.8	---	1.0	2	3.5	1	1.6
16	1	.39	1	.49	4	18	1	.94	2	3.9	0	.00
17	1	.69	4	8.4	3	8.7	1	1.0	7	54	1	1.1
18	3	2.0	2	5.8	2	4.0	1	.92	4	24	1	.99
19	3	1.6	1	2.5	2	3.5	0	.00	3	9.1	1	.87
20	3	1.4	1	2.0	2	3.7	1	1.2	2	5.1	0	.00
21	2	.99	---	1.4	1	2.3	2	2.0	1	2.3	1	.75
22	1	.62	1	1.0	0	.00	1	.92	1	3.7	0	.00
23	1	.59	1	.82	0	.00	0	.00	1	2.6	1	.75
24	1	.53	1	.70	0	.00	0	.00	1	2.4	1	.71
25	2	1.0	1	.63	0	.00	1	1.2	2	3.6	0	.00
26	3	2.3	1	.57	0	.00	1	1.2	2	3.0	0	.00
27	2	2.4	0	.00	1	.71	1	1.3	2	2.6	0	.00
28	2	4.6	1	1.0	1	.63	1	1.2	1	1.1	1	1.2
29	20	160	0	.00	1	.58	1	1.0	---	---	12	114
30	4	9.8	0	.00	1	.52	1	.93	---	---	---	113
31	2	3.0	---	---	1	.48	1	.86	---	---	---	4.3
TOTAL	---	214.41	---	59.60	---	537.97	---	1626.88	---	149.0	---	269.97

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	---	2.8	2	1.1	1	.54	3	2.6	1	.33	2	.65
2	0	.00	1	.55	2	1.3	4	6.0	2	.63	1	.30
3	1	1.7	1	.54	1	.55	2	2.7	1	.30	1	.24
4	0	.00	0	.00	1	.48	2	1.9	1	.29	1	.23
5	0	.00	1	.53	2	.88	2	1.5	1	.27	1	.21
6	1	1.1	---	.61	2	.83	2	1.2	1	.26	1	.20
7	0	.00	1	.81	2	.77	0	.00	1	.26	1	.19
8	0	.00	1	1.1	2	.73	0	.00	2	.50	1	.19
9	1	.87	1	1.4	2	.69	0	.00	1	.25	2	.49
10	0	.00	---	1.3	3	2.2	0	.00	1	.24	2	2.2
11	0	.00	---	1.2	2	1.7	1	.35	1	.25	1	1.3
12	1	.74	---	1.2	2	1.8	1	.46	1	.24	1	.73
13	0	.00	2	2.2	2	1.4	4	8.8	1	.23	1	.55
14	0	.00	0	.00	2	1.3	3	7.7	1	.22	1	.44
15	0	.00	1	2.2	2	1.2	2	3.4	1	.21	1	.39
16	1	.67	0	.00	2	1.1	1	1.2	2	.41	1	.34
17	0	.00	1	1.3	3	1.7	2	1.9	1	.20	1	.32
18	0	.00	0	.00	2	2.1	1	.79	1	.20	2	.78
19	0	.00	1	.89	3	4.1	1	.75	1	.19	2	.80
20	1	.70	2	1.6	0	.00	1	.67	1	.19	2	.63
21	0	.00	1	.73	0	.00	0	.00	1	.19	0	.00
22	2	1.4	1	.68	2	1.6	0	.00	2	.37	0	.00
23	2	1.5	0	.00	2	1.9	0	.00	1	.18	1	.26
24	1	.80	0	.00	3	2.8	1	.46	1	.18	1	.25
25	0	.00	0	.00	1	.78	1	.43	1	.18	1	.23
26	2	1.3	0	.00	1	.69	1	.41	2	.36	1	.23
27	1	.62	1	.52	1	.62	1	.39	2	.35	1	.23
28	0	.00	1	.49	2	1.1	1	.50	1	.17	1	.22
29	1	.58	2	.95	2	1.1	1	.41	2	.58	1	.21
30	1	.55	2	.91	2	1.1	1	.37	2	.69	1	.20
31	---	---	1	.49	---	---	1	.35	2	.48	---	---
TOTAL	---	15.33	---	23.30	---	37.06	---	45.24	---	9.40	---	13.01

## SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°28'56", long 122°01'36", in NE¼SE¼ sec.14, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, on right bank, 6.4 mi north of Brightwood and 0.6 mi above Bull Run Reservoir Number One.

DRAINAGE AREA.--5.46 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR OR-78-1: 1976. WDR OR-82-2: 1976(P), 1978-79(P), 1981.

GAGE.--Water-stage recorder. Altitude of gage is 1,440 ft, from topographic map.

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

AVERAGE DISCHARGE.--8 years, 35.5 ft<sup>3</sup>/s, 88.29 in/yr, 25,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft<sup>3</sup>/s Dec. 2, 1977, gage height, 5.64 ft; minimum, 1.9 ft<sup>3</sup>/s Aug. 17-23, 1977, Sept. 16-18, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 2	2400	513	4.61	Jan. 6	1400	*550	*4.68
Jan. 4	1230	468	4.52	Mar. 29	2230	459	4.50

Minimum, 4.1 ft<sup>3</sup>/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	11	47	71	15	22	32	99	15	16	25	11	9.5		
2	13	36	143	16	20	29	75	15	18	45	10	8.8		
3	12	31	365	23	18	26	58	15	16	46	9.7	6.9		
4	10	33	200	328	17	25	48	14	15	31	9.2	6.4		
5	9.2	69	98	289	16	28	44	14	13	26	8.6	6.0		
6	15	87	126	453	20	31	36	15	12	22	8.2	5.5		
7	29	55	75	377	21	48	32	19	12	19	7.8	5.3		
8	56	40	53	243	21	83	28	28	11	18	7.4	5.1		
9	47	33	41	127	39	107	26	38	10	16	7.2	6.4		
10	35	28	33	130	49	108	24	38	35	14	7.0	21		
11	27	24	29	97	75	67	23	36	29	13	7.4	27		
12	21	21	28	65	74	54	22	38	32	15	6.9	17		
13	17	18	38	48	77	45	21	36	25	83	6.5	13		
14	15	17	60	37	64	46	20	38	21	107	6.1	11		
15	13	15	126	31	54	44	20	76	19	62	5.8	9.6		
16	13	16	157	29	59	38	20	54	17	41	5.6	8.6		
17	22	69	98	31	176	33	20	38	17	31	5.4	7.8		
18	22	96	72	28	212	28	20	31	24	25	5.3	9.2		
19	17	80	64	35	109	25	19	26	35	25	5.2	9.6		
20	15	68	80	34	87	22	19	23	31	22	5.0	7.4		
21	17	49	99	30	78	21	19	20	26	19	4.9	6.8		
22	20	37	70	29	122	21	19	19	23	17	4.8	6.4		
23	19	31	51	36	87	21	20	17	29	16	4.6	6.0		
24	16	27	39	44	85	20	23	16	28	15	4.6	5.7		
25	17	23	33	36	66	24	19	15	25	14	4.5	5.4		
26	25	21	31	34	52	24	19	15	22	13	4.4	5.3		
27	31	23	27	36	43	29	17	14	19	12	4.3	5.5		
28	60	37	24	32	37	35	16	13	17	17	4.3	5.1		
29	241	58	21	28	---	217	16	13	17	14	7.8	4.8		
30	79	64	19	26	---	281	15	12	17	12	10	4.6		
31	47	---	17	25	---	150	---	12	---	12	6.4	---		
TOTAL	991.2	1253	2388	2792	1800	1762	857	773	631	847	205.9	256.7		
MEAN	32.0	41.8	77.0	90.1	64.3	56.8	28.6	24.9	21.0	27.3	6.64	8.56		
MAX	241	96	365	453	212	281	99	76	35	107	11	27		
MIN	9.2	15	17	15	16	20	15	12	10	12	4.3	4.6		
CFSM	5.86	7.66	14.1	16.5	11.8	10.4	5.24	4.56	3.85	5.00	1.22	1.57		
IN.	6.75	8.54	16.27	19.02	12.26	12.00	5.84	5.27	4.30	5.77	1.40	1.75		
AC-FT	1970	2490	4740	5540	3570	3490	1700	1530	1250	1680	408	509		
CAL YR 1982	TOTAL	14826.1	MEAN	40.6	MAX	506	MIN	2.4	CFSM	7.44	IN.	101.01	AC-FT	29410
WTR YR 1983	TOTAL	14556.8	MEAN	39.9	MAX	453	MIN	4.3	CFSM	7.31	IN.	99.18	AC-FT	28870



14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.

WATER TEMPERATURES: October 1977 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1977 to current year.

INSTRUMENTATION.--Conductivity/temperature recorder since October 1977. Automatic pumping sediment sampler since October 1977.

REMARKS.--Sediment concentrations and corresponding sediment discharges reported as 0 mg/l or 0 tons should be interpreted as &lt;1 due to the limitations of sampling equipment, analytical methods, rounding errors, and the likelihood of minor amounts of sediment transport occurring at even the lowest of discharges.

COOPERATION.--Chemical data were analyzed by the City of Portland Water Quality laboratory and were reviewed by the U.S. Geological Survey.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 30 micromhos Aug. 5, 12, 13, 17-19, 27, Sept. 10, 11, 16-18, 1980; minimum, 9 micromhos Dec. 4, 1978.

WATER TEMPERATURES: Maximum recorded, 15.0°C Aug. 8, 9, 1978, Aug. 9-11, 1981; minimum recorded, 0.0°C on several days in 1978-80.

SEDIMENT CONCENTRATIONS: Maximum, 200 mg/l Jan. 23, Feb. 20, 1982; minimum, 0 mg/l on many days.

SEDIMENT DISCHARGE: Maximum, 345 tons Dec. 2, 1977; minimum, 0 tons on many days.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 27 micromhos Aug. 29 to Sept. 1, Sept. 4, 6; minimum, 12 micromhos Jan. 6, Mar. 29, 30.

WATER TEMPERATURES: Maximum, 13.5°C May 29; minimum, 2.0°C Dec. 31, Jan. 1.

SEDIMENT CONCENTRATIONS: Maximum, 9 mg/l Jan. 6; minimum, 0 mg/l many days throughout the year.

SEDIMENT DISCHARGE: Maximum, 12 tons Jan. 6; minimum, 0 tons on many days throughout the year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
03...	1120	12	23	7.3	8.0	<1	4	4
10...	1105	35	20	7.2	8.0	<1	3	2
17...	1115	17	24	7.3	7.5	<1	4	2
20...	1300	14	22	7.1	6.0	--	--	--
24...	1140	16	23	7.3	8.0	2	2	6
31...	1050	45	20	7.2	7.0	2	2	6
NOV								
07...	1015	55	19	7.2	5.5	3	2	<1
14...	1035	16	22	7.2	4.0	<1	<1	4
21...	1110	47	19	7.2	5.0	<1	<1	<1
28...	1055	37	20	7.2	4.5	1	1	2
DEC								
05...	1120	82	18	7.1	5.5	3	<1	<1
12...	1130	26	21	7.2	4.0	2	<1	<1
19...	1125	64	18	7.1	5.0	<1	<1	<1
26...	1100	30	20	7.2	4.0	<1	2	2
JAN								
02...	1145	14	22	7.2	3.0	2	<1	4
09...	1125	123	17	7.1	4.5	<1	2	<1
16...	1245	29	21	7.2	5.0	<1	<1	<1
22...	1220	27	20	7.2	4.5	<1	<1	2
29...	1245	28	19	7.2	5.0	<1	<1	<1
FEB								
05...	1300	16	21	7.2	3.5	1	<1	<1
12...	1320	73	17	7.1	4.5	<1	<1	1
19...	1400	97	17	7.0	5.0	<1	<1	12
26...	1245	48	19	7.1	5.0	<1	<1	<1
MAR								
05...	1250	25	20	7.2	5.5	1	<1	<1
12...	1230	55	18	7.1	5.5	<1	<1	<1
19...	1230	24	20	7.2	5.0	<1	<1	1
26...	1005	21	21	7.1	5.0	<1	<1	<1
APR								
02...	1120	73	18	7.1	4.5	<1	<1	<1
09...	1245	25	20	7.2	4.0	3	<1	3
16...	1330	19	21	7.2	6.0	<1	1	1
23...	1320	18	21	7.2	7.0	<1	<1	<1
30...	1250	15	21	7.3	7.0	4	<1	6
MAY								
07...	1220	17	21	7.3	6.0	4	5	3
14...	1130	31	19	7.3	6.0	20	10	25
21...	1245	20	20	7.3	8.5	4	1	4
28...	1205	12	22	7.4	11.5	1	9	2
JUN								
04...	1125	13	22	7.4	8.0	1	2	<1
11...	1230	19	20	7.3	8.0	4	18	8
18...	1250	24	20	7.3	8.0	4	6	4

## SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
03...	<.020	.060	.003	1.1	10	.20	<5
10...	--	--	--	--	--	.21	<5
17...	--	--	--	--	--	.26	<5
20...	--	--	--	--	--	--	--
24...	<.020	.040	<.003	1.1	9.7	.20	<5
31...	--	--	--	--	--	.30	<5
NOV							
07...	--	--	--	--	--	.20	<5
14...	<.020	.040	<.003	.80	10	.26	<5
21...	--	--	--	--	--	.32	<5
28...	--	--	--	--	--	.29	<5
DEC							
05...	<.020	.050	<.003	1.1	7.8	.34	5
12...	--	--	--	--	--	.25	<5
19...	--	--	--	--	--	.24	<5
26...	<.020	.030	<.003	.80	9.8	.20	<5
JAN							
02...	--	--	--	--	--	.27	<5
09...	--	--	--	--	--	.41	<5
16...	<.020	.050	.003	.70	10	.26	<5
22...	--	--	--	--	--	.25	<5
29...	--	--	--	--	--	.29	<5
FEB							
05...	<.020	.040	<.003	.70	10	.27	<5
12...	--	--	--	--	--	.50	<5
19...	--	--	--	--	--	.30	<5
26...	<.020	.040	.003	.90	8.6	.22	<5
MAR							
05...	--	--	--	--	--	.23	<5
12...	--	--	--	--	--	.26	<5
19...	<.020	.020	<.003	.70	9.8	.23	<5
26...	--	--	--	--	--	.12	<5
APR							
02...	--	--	--	--	--	.29	<5
09...	<.020	.070	.003	.70	9.6	.30	<5
16...	--	--	--	--	--	.32	<5
23...	--	--	--	--	--	.21	<5
30...	<.020	.040	<.003	.70	10	.17	<5
MAY							
07...	--	--	--	--	--	.33	<5
14...	--	--	--	--	--	.25	<5
21...	<.020	.040	<.003	.90	9.3	.29	<5
28...	--	--	--	--	--	.23	<5
JUN							
04...	--	--	--	--	--	.25	<5
11...	<.020	.050	<.003	2.1	8.7	.28	<5
18...	--	--	--	--	--	.25	5

## SANDY RIVER BASIN

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14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JUN								
25...	1250	24	20	7.3	8.5	4	1	2
JUL								
02...	1310	41	20	7.2	8.0	25	23	32
09...	1240	16	21	7.2	8.5	1	4	4
16...	1250	40	20	7.2	8.5	6	4	10
23...	1305	16	22	7.2	11.0	19	6	22
30...	1042	12	23	7.3	10.5	3	3	1
AUG								
06...	1310	6.6	24	7.3	11.5	2	30	6
13...	1017	5.7	25	7.4	10.5	1	8	2
20...	1235	5.0	25	7.4	11.0	2	4	4
27...	1300	4.0	26	7.4	12.0	1	8	<1
SEP								
03...	1220	6.6	26	7.3	10.5	3	2	<1
10...	1240	16	24	7.2	9.0	72	57	100
17...	1315	7.7	24	7.3	9.5	1	4	4
24...	1250	5.4	25	7.3	10.0	2	1	2
28...	0800	4.1	23	7.1	7.0	--	--	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUN							
25...	--	--	--	--	--	.20	<5
JUL							
02...	<.020	.040	<.003	2.3	8.6	.37	5
09...	--	--	--	--	--	.25	<5
16...	--	--	--	--	--	.21	<5
23...	<.002	.030	.003	1.3	11	.22	<5
30...	--	--	--	--	--	.12	<5
AUG							
06...	--	--	--	--	--	.20	<5
13...	<.020	.050	.005	.70	12	.12	<5
20...	--	--	--	--	--	.21	<5
27...	--	--	--	--	--	.25	<5
SEP							
03...	<.020	.060	.005	1.1	11	.32	<5
10...	--	--	--	--	--	.58	<5
17...	--	--	--	--	--	.25	<5
24...	<.020	.040	<.003	.90	12	.25	<5
28...	--	--	--	--	--	--	--

## SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	20	19	21	20	20	16	20	20	21	23	25
2	23	21	18	21	20	20	17	20	19	20	23	25
3	23	21	14	21	21	21	18	19	19	19	23	26
4	23	21	16	14	21	21	18	19	19	20	24	26
5	23	20	18	14	21	20	18	19	19	21	24	26
6	23	18	17	12	21	20	19	19	22	21	25	26
7	22	19	19	13	20	19	19	18	24	21	24	26
8	21	19	19	15	20	18	19	19	24	21	24	25
9	21	20	20	17	19	17	20	20	25	21	24	25
10	21	20	20	17	19	17	20	20	22	22	25	24
11	21	20	21	17	17	18	20	20	21	22	25	22
12	22	21	21	18	17	19	20	19	21	22	25	22
13	22	21	20	19	17	19	20	19	21	19	25	23
14	22	21	19	19	17	19	20	19	22	17	25	23
15	23	22	16	20	17	19	21	17	22	17	25	23
16	23	22	15	20	17	19	21	17	22	18	25	24
17	23	20	17	20	15	20	21	17	22	19	25	23
18	22	18	18	20	14	20	21	17	21	20	25	23
19	22	19	18	19	16	20	22	17	20	20	25	23
20	22	19	18	19	17	21	22	18	20	20	25	23
21	23	20	17	19	17	21	22	18	22	21	25	23
22	23	20	18	20	16	20	21	18	21	22	25	23
23	23	21	19	19	17	20	21	19	21	22	25	23
24	23	21	20	18	18	20	20	19	21	22	25	23
25	23	21	20	19	18	20	20	20	21	22	25	23
26	23	21	20	19	19	19	21	20	22	23	26	23
27	22	22	21	19	19	19	22	20	22	23	26	23
28	22	20	21	19	19	18	22	21	22	23	26	22
29	18	19	21	19	---	15	21	22	22	23	26	23
30	19	19	21	19	---	14	21	22	22	23	27	23
31	20	---	21	20	---	15	---	21	---	23	27	---
MEAN	22	20	19	18	18	19	20	19	21	21	25	24



## SANDY RIVER BASIN

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14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	---	.00	---	.13	1	.19	0	.00	0	.00	0	.00
2	---	.00	---	.10	4	4.0	1	.04	0	.00	0	.00
3	0	.00	---	.08	8	9.4	---	.06	0	.00	0	.00
4	1	.03	---	.09	3	1.6	4	4.1	0	.00	0	.00
5	---	.02	2	.37	2	.53	2	1.6	1	.04	0	.00
6	1	.04	1	.23	2	.68	9	12	1	.05	0	.00
7	1	.08	0	.00	0	.00	3	3.1	1	.06	1	.13
8	1	.15	0	.00	0	.00	2	1.3	1	.06	1	.22
9	1	.13	0	.00	0	.00	1	.34	1	.11	1	.29
10	1	.09	1	.08	0	.00	1	.35	2	.26	1	.29
11	0	.00	1	.06	0	.00	0	.00	1	.20	1	.18
12	0	.00	1	.06	0	.00	0	.00	1	.20	1	.15
13	0	.00	1	.05	0	.00	0	.00	1	.21	1	.12
14	0	.00	1	.05	1	.16	0	.00	1	.17	1	.12
15	0	.00	1	.04	2	.68	0	.00	1	.15	0	.00
16	0	.00	1	.04	2	.85	0	.00	1	.16	0	.00
17	1	.06	1	.19	0	.00	0	.00	1	.48	1	.09
18	1	.06	1	.26	---	.00	0	.00	1	.57	0	.00
19	1	.05	0	.00	0	.00	0	.00	1	.29	1	.07
20	1	.04	0	.00	0	.00	---	.00	1	.23	0	.00
21	1	.05	1	.13	0	.00	---	.00	1	.21	0	.00
22	1	.05	2	.20	0	.00	0	.00	2	.66	0	.00
23	1	.05	1	.08	0	.00	0	.00	1	.23	0	.00
24	1	.04	1	.07	0	.00	0	.00	1	.23	0	.00
25	1	.05	1	.06	0	.00	0	.00	0	.00	1	.06
26	1	.07	0	.00	0	.00	0	.00	0	.00	1	.06
27	1	.08	1	.06	0	.00	0	.00	0	.00	0	.00
28	---	.69	1	.10	0	.00	0	.00	0	.00	1	.09
29	---	3.4	1	.16	0	.00	0	.00	---	---	3	2.0
30	1	.21	1	.17	0	.00	0	.00	---	---	---	1.5
31	---	.13	---	---	0	.00	0	.00	---	---	2	.81
TOTAL	---	5.57	---	2.86	---	18.09	---	22.89	---	4.57	---	6.18

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	1	.27	0	.00	1	.04	1	.07	1	.03	1	.03
2	0	.00	1	.04	1	.05	1	.12	1	.03	2	.05
3	0	.00	1	.04	1	.04	1	.12	0	.00	1	.02
4	1	.13	1	.04	1	.04	1	.08	0	.00	1	.02
5	0	.00	1	.04	1	.04	1	.07	0	.00	1	.02
6	0	.00	0	.00	1	.03	1	.06	0	.00	1	.01
7	1	.09	1	.05	1	.03	1	.05	0	.00	1	.01
8	0	.00	1	.08	1	.03	1	.05	0	.00	0	.00
9	0	.00	0	.00	1	.03	1	.04	1	.02	1	.02
10	1	.06	1	.10	1	.09	0	.00	1	.02	2	.11
11	1	.06	1	.10	2	.16	0	.00	1	.02	1	.07
12	1	.06	1	.10	1	.09	0	.00	0	.00	1	.05
13	0	.00	1	.10	1	.07	1	.22	0	.00	1	.04
14	0	.00	1	.10	1	.06	0	.00	0	.00	1	.03
15	0	.00	1	.21	1	.05	0	.00	0	.00	0	.00
16	0	.00	1	.15	1	.05	0	.00	0	.00	1	.02
17	1	.05	1	.10	1	.05	0	.00	0	.00	1	.02
18	1	.05	1	.08	2	.13	0	.00	0	.00	1	.02
19	1	.05	1	.07	2	.19	0	.00	0	.00	1	.03
20	0	.00	1	.06	1	.08	0	.00	0	.00	0	.00
21	1	.05	1	.05	1	.07	0	.00	0	.00	0	.00
22	0	.00	1	.05	1	.06	0	.00	0	.00	0	.00
23	1	.05	1	.05	1	.08	0	.00	0	.00	0	.00
24	1	.06	1	.04	1	.08	0	.00	0	.00	0	.00
25	1	.05	1	.04	1	.07	0	.00	0	.00	0	.00
26	1	.05	2	.08	1	.06	0	.00	0	.00	0	.00
27	0	.00	1	.04	1	.05	0	.00	0	.00	0	.00
28	0	.00	0	.00	0	.00	1	.05	2	.02	0	.00
29	0	.00	0	.00	0	.00	1	.04	2	.04	1	.01
30	0	.00	1	.03	1	.05	0	.00	1	.03	1	.01
31	---	---	1	.03	---	---	0	.00	2	.03	---	---
TOTAL	---	1.08	---	1.87	---	1.87	---	0.97	---	0.24	---	0.59

## 14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR

LOCATION.--Lat 45°29'40", long 122°02'05", near line between SE¼ and SW¼ sec.11, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, on left bank 7.0 mi southeast of Multnomah Falls and at mouth.

DRAINAGE AREA.--8.32 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 1,060 ft, from topographic map. Prior to Oct. 1, 1978, at site 700 ft upstream at datum 18.7 ft higher.

REMARKS.--Records excellent. Regulation at times since 1958 by North Fork dam, capacity, about 1,030 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--18 years, 77.7 ft<sup>3</sup>/s, 126.82 in/yr, 56,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft<sup>3</sup>/s, probably affected by surge from release of water temporarily impounded by landslide upstream from station, Jan. 20, 1972, gage height, 9.89 ft, from floodmark, from rating curve extended above 850 ft<sup>3</sup>/s on basis of estimate of peak flow from slope-area survey; minimum, 9.1 ft<sup>3</sup>/s Oct. 2-14, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	0100	1,280	6.64	Mar. 29	2330	960	6.20
Jan. 6	1330	*1,410	*6.76				

Minimum, 16 ft<sup>3</sup>/s Aug. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	26	94	143	33	60	82	192	32	38	108	25	34		
2	30	69	251	39	54	72	162	33	39	126	25	29		
3	27	58	693	58	49	65	123	30	30	83	24	22		
4	25	63	301	740	46	61	106	28	27	60	23	21		
5	24	118	160	512	43	81	87	30	25	54	22	20		
6	38	129	172	1080	59	92	73	39	23	49	22	19		
7	66	97	111	930	62	136	66	55	22	45	21	19		
8	88	74	85	546	57	208	57	63	21	44	21	19		
9	70	60	69	243	95	238	55	94	25	38	21	21		
10	51	52	58	263	109	223	53	85	59	35	21	92		
11	43	46	50	187	143	145	51	81	52	32	23	68		
12	37	43	54	128	155	131	49	73	55	48	21	41		
13	33	40	75	97	176	107	49	67	46	235	20	33		
14	30	36	98	80	147	111	49	70	40	184	20	28		
15	28	34	178	69	130	107	49	140	38	113	20	26		
16	33	42	229	69	155	92	46	99	36	83	20	25		
17	54	107	160	74	323	79	44	77	42	67	19	23		
18	43	131	123	67	356	68	42	67	145	56	19	30		
19	35	128	112	96	204	60	40	56	118	61	19	26		
20	32	114	123	95	197	54	38	49	81	50	19	22		
21	38	88	138	78	176	55	38	45	59	44	19	21		
22	50	69	104	76	259	57	40	41	54	40	19	21		
23	43	58	83	108	184	58	46	38	78	36	18	20		
24	37	51	69	113	208	53	49	36	73	34	18	19		
25	40	45	60	88	158	71	41	33	56	32	17	19		
26	59	42	56	89	130	66	41	31	48	31	17	19		
27	71	51	49	105	110	75	40	29	42	31	16	19		
28	131	91	45	86	93	89	36	28	38	40	17	18		
29	328	113	41	75	---	454	34	25	37	30	32	18		
30	126	123	38	77	---	527	33	25	44	28	31	18		
31	90	---	35	70	---	294	---	26	---	26	22	---		
TOTAL	1826	2266	3963	6371	3938	4011	1829	1625	1491	1943	651	810		
MEAN	58.9	75.5	128	206	141	129	61.0	52.4	49.7	62.7	21.0	27.0		
MAX	328	131	693	1080	356	527	192	140	145	235	32	92		
MIN	24	34	35	33	43	53	33	25	21	26	16	18		
CFSM	7.08	9.07	15.4	24.8	16.9	15.5	7.33	6.30	5.97	7.54	2.52	3.25		
IN.	8.16	10.13	17.72	28.49	17.61	17.93	8.18	7.27	6.67	8.69	2.91	3.62		
AC-FT	3620	4490	7860	12640	7810	7960	3630	3220	2960	3850	1290	1610		
CAL YR 1982	TOTAL	28035	MEAN	76.8	MAX	1160	MIN	14	CFSM	9.23	IN.	125.35	AC-FT	55610
WTR YR 1983	TOTAL	30724	MEAN	84.2	MAX	1080	MIN	16	CFSM	10.1	IN.	137.37	AC-FT	60940

14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1978 to current year.

pH: October 1980 to September 1981.

WATER TEMPERATURES: October 1978 to current year.

SEDIMENT DISCHARGE: October 1978 to current year.

INSTRUMENTATION.--Water-quality monitor, prior to October 1980, conductivity/temperature recorder. Automatic pumping sediment sampler since October 1978.

COOPERATION.--Chemical data were analyzed by the city of Portland Water Quality Laboratory and were reviewed by the U.S. Geological Survey.

REMARKS.--Sediment concentrations and corresponding sediment discharges reported as 0 mg/l or 0 tons should be interpreted as &lt;1 due to the limitations of sampling equipment, analytical methods, rounding errors, and the likelihood of minor amounts of sediment transport occurring at even the lowest of discharges.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 103 micromhos Jan. 13, 1981 (cement spill); minimum, 9 micromhos Dec. 25, 1980, Jan. 6, 1983.

pH: Maximum, 9.8 units Jan. 13, 1981 (cement spill); minimum, 6.3 units, June 19, 1981.

WATER TEMPERATURES: Maximum recorded, 14.0°C July 18-20, 1979, July 27, Aug. 9, 1981; minimum, 0.0°C on several days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 205 mg/l Dec. 25, 1980; minimum, 0 mg/l on many days each year.

SEDIMENT DISCHARGE: Maximum daily, 633 tons Dec. 25, 1980; minimum, 0 tons on many days each year.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 40 micromhos Aug. 26, 28; minimum recorded, 9 micromhos Jan. 6.

WATER TEMPERATURES: Maximum, 13.5°C May 29; minimum, 2.0°C Dec. 28 to Jan. 3.

SEDIMENT CONCENTRATIONS: Maximum daily, 43 mg/l Jan. 6; minimum, 0 mg/l on many days throughout the year.

SEDIMENT DISCHARGE: Maximum daily, 139 tons Jan. 6; minimum, 0 tons on many days throughout the year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
02...	1240	32	33	7.4	8.5	1	7	6
09...	1210	69	23	7.3	9.0	1	<1	2
16...	1215	28	31	7.5	9.0	<1	4	<1
18...	1030	42	29	7.0	7.0	--	--	--
23...	1140	42	28	7.4	8.5	2	2	<1
30...	1130	125	19	7.1	6.5	16	4	22
NOV								
06...	1050	123	19	7.2	6.0	11	16	38
13...	1130	38	26	7.3	4.5	<1	<1	2
20...	1125	116	18	7.1	4.0	6	1	10
27...	1130	42	24	7.3	4.0	4	<1	2
DEC								
04...	1120	253	14	7.0	5.0	13	4	16
11...	1115	50	22	7.2	3.0	2	<1	2
18...	1130	108	16	7.1	4.0	5	<1	<1
25...	0955	60	22	7.2	3.5	5	<1	<1
JAN								
01...	1120	33	27	7.3	2.0	<1	<1	<1
08...	1150	533	12	6.9	3.5	10	2	14
15...	1115	69	21	7.2	4.5	2	<1	2
22...	1120	64	21	7.1	4.0	2	<1	6
29...	1130	70	21	7.2	4.5	<1	2	2
FEB								
05...	1140	42	26	7.2	3.0	1	<1	2
12...	1140	167	17	7.1	4.0	4	<1	4
19...	1320	162	16	7.0	4.5	3	<1	6
26...	1120	151	17	7.0	5.0	2	<1	1
MAR								
05...	1130	62	23	7.1	6.0	<1	<1	<1
12...	1110	141	18	7.0	6.0	2	<1	<1
19...	1105	52	23	7.1	5.0	<1	<1	1
26...	0930	59	23	7.2	5.0	<1	<1	<1
APR								
02...	0945	162	17	7.0	4.0	2	<1	1
09...	1130	55	23	7.0	4.0	1	<1	1
16...	1215	44	25	7.3	7.0	<1	<1	<1
23...	1155	38	27	7.2	7.5	<1	<1	2
30...	1150	33	29	7.3	7.0	<1	<1	6
MAY								
07...	1050	46	27	7.4	6.5	6	3	5
14...	1015	59	24	7.3	7.0	1	5	1
21...	1120	45	26	7.4	9.0	<1	1	2
28...	1050	28	31	7.4	11.0	1	8	1
JUN								
04...	1005	31	30	7.0	8.0	1	12	<1
11...	1115	69	24	7.3	9.0	7	13	14
18...	1140	109	22	7.3	9.0	66	26	72

## SANDY RIVER BASIN

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14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
02...	<.020	.030	.010	1.1	14	.27	<5
09...	--	--	--	--	--	.26	<5
16...	--	--	--	--	--	.20	<5
18...	--	--	--	--	--	--	--
23...	<.020	.030	.003	2.0	12	.24	5
30...	--	--	--	--	--	.54	<5
NOV							
06...	--	--	--	--	--	.48	5
13...	<.020	.020	.007	1.1	11	.25	<5
20...	--	--	--	--	--	.56	<5
27...	--	--	--	--	--	.29	<5
DEC							
04...	<.020	.050	.004	2.0	6.3	1.0	5
11...	--	--	--	--	--	.30	<5
18...	--	--	--	--	--	.44	<5
25...	<.020	.020	<.003	1.1	9.4	.18	<5
JAN							
01...	--	--	--	--	--	.26	<5
08...	--	--	--	--	--	1.1	5
15...	<.020	.050	.004	1.4	9.9	.29	<5
22...	--	--	--	--	--	.27	<5
29...	--	--	--	--	--	.34	<5
FEB							
05...	<.020	.030	.006	.90	12	.29	<5
12...	--	--	--	--	--	.45	<5
19...	--	--	--	--	--	.26	<5
26...	<.020	.030	.006	1.1	7.9	.30	<5
MAR							
05...	--	--	--	--	--	.26	<5
12...	--	--	--	--	--	.25	<5
19...	<.020	.010	.005	.90	11	.21	<5
26...	--	--	--	--	--	.14	<5
APR							
02...	--	--	--	--	--	.39	<5
09...	<.020	.020	<.003	.90	11	.40	<5
16...	--	--	--	--	--	.24	<5
23...	--	--	--	--	--	.20	<5
30...	<.020	.030	.009	.80	13	.17	<5
MAY							
07...	--	--	--	--	--	.32	<5
14...	--	--	--	--	--	.21	<5
21...	<.020	.030	.006	.90	12	.21	<5
28...	--	--	--	--	--	.26	<5
JUN							
04...	--	--	--	--	--	.22	<5
11...	<.020	.030	.007	2.1	10	.35	<5
18...	--	--	--	--	--	.44	10



## SANDY RIVER BASIN

14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JUN								
25...	1120	58	24	7.3	9.0	4	3	6
JUL								
02...	1140	131	21	7.2	9.5	26	15	20
09...	1120	40	27	7.3	9.0	1	1	<1
16...	1140	83	22	7.3	10.0	2	4	6
20...	1100	50	24	7.2	10.5	--	--	--
25...	1140	37	28	7.4	11.0	4	2	2
30...	0830	27	32	7.4	11.0	2	2	2
AUG								
06...	1140	22	35	7.4	11.0	1	6	<1
11...	1000	--	36	7.4	10.0	--	--	--
13...	0924	20	37	7.5	10.0	30	8	28
20...	1125	24	39	7.6	10.0	2	2	4
27...	1105	16	40	7.5	10.0	1	2	8
SEP								
03...	1035	22	37	7.5	10.0	2	4	4
10...	1115	59	36	7.4	9.0	55	16	66
17...	1140	23	34	7.5	9.0	1	1	<1
24...	1110	20	37	7.5	9.5	1	<1	2
29...	1000	19	37	7.3	6.5	--	--	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SI02)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUN							
25...	--	--	--	--	--	.25	<5
JUL							
02...	<.020	.030	<.003	2.6	8.5	.44	10
09...	--	--	--	--	--	.24	<5
16...	--	--	--	--	--	.31	<5
20...	--	--	--	--	--	--	--
25...	<.020	.020	.008	1.1	13	.20	<5
30...	--	--	--	--	--	.12	<5
AUG							
06...	--	--	--	--	--	.20	<5
11...	--	--	--	--	--	--	--
13...	<.020	.040	.010	.70	16	.12	<5
20...	--	--	--	--	--	.20	<5
27...	--	--	--	--	--	.29	<5
SEP							
03...	<.020	.030	.012	1.4	16	.29	<5
10...	--	--	--	--	--	.66	<5
17...	--	--	--	--	--	.20	<5
24...	<.020	.030	.010	.70	16	.24	<5
29...	--	--	--	--	--	--	--

## SANDY RIVER BASIN

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14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	20	17	28	22	20	16	29	28	23	33	33
2	33	21	17	27	23	20	17	29	27	20	34	33
3	33	23	12	24	24	21	18	29	28	21	34	35
4	34	23	14	13	25	22	19	30	29	23	34	36
5	34	20	16	12	25	21	20	30	30	24	33	36
6	33	18	15	11	25	20	21	29	30	25	34	37
7	28	19	17	---	23	18	22	25	31	25	34	37
8	25	20	18	---	24	16	23	24	32	26	34	37
9	24	22	19	---	21	16	23	21	32	26	34	35
10	26	23	20	---	20	16	24	22	24	27	34	29
11	27	24	21	---	19	17	24	22	23	28	35	25
12	29	25	21	---	18	18	24	22	23	27	35	28
13	30	25	19	---	17	18	25	22	25	20	36	29
14	31	26	18	19	18	18	25	22	26	17	37	30
15	32	27	15	20	18	19	25	18	26	19	37	31
16	32	26	14	21	17	19	25	20	27	20	37	32
17	29	21	15	20	15	20	26	21	27	22	37	33
18	29	18	16	21	14	22	27	22	22	23	38	32
19	30	18	17	19	15	22	27	24	20	23	38	33
20	30	18	17	19	15	23	28	25	21	24	38	34
21	30	20	16	20	16	24	28	26	23	25	39	35
22	29	21	17	21	15	23	27	27	24	26	39	35
23	29	22	19	19	16	23	27	28	22	27	39	36
24	29	23	20	18	16	24	26	29	22	28	39	37
25	29	24	21	19	17	22	27	29	23	28	39	37
26	26	25	22	20	17	22	27	30	24	29	39	37
27	25	24	23	19	18	21	28	30	25	30	39	37
28	23	20	24	20	19	21	28	31	26	29	39	37
29	17	19	25	21	---	15	29	32	27	30	36	38
30	19	18	26	21	---	13	29	32	27	32	35	38
31	20	---	27	22	---	15	---	30	---	33	37	---
MEAN	28	22	19	20	19	20	25	26	26	25	36	34

## SANDY RIVER BASIN

14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	0	.00	1	.25	1	.39	---	.09	0	.00	0	.00
2	0	.00	1	.19	16	.32	---	.11	0	.00	0	.00
3	0	.00	0	.00	40	1.10	---	.16	0	.00	0	.00
4	0	.00	2	.34	3	4.3	35	90	0	.00	0	.00
5	0	.00	2	.64	1	.43	10	15	0	.00	0	.00
6	1	.10	1	.35	3	1.4	43	139	0	.00	0	.00
7	1	.18	0	.00	2	.60	31	77	0	.00	0	.00
8	0	.00	0	.00	1	.23	10	16	0	.00	1	.56
9	0	.00	0	.00	1	.19	3	2.0	0	.00	2	1.3
10	0	.00	0	.00	1	.16	5	3.6	1	.29	3	1.8
11	---	.00	0	.00	1	.14	4	2.0	1	.39	3	1.2
12	0	.00	0	.00	1	.15	5	1.7	1	.42	3	1.1
13	0	.00	0	.00	1	.20	3	.79	0	.00	3	.87
14	0	.00	1	.10	2	.53	3	.65	0	.00	3	.90
15	0	.00	1	.09	3	1.4	4	.75	0	.00	2	.58
16	0	.00	1	.11	3	1.9	4	.75	1	.42	---	.50
17	0	.00	0	.00	0	.00	3	.60	3	2.4	---	.21
18	0	.00	1	.35	0	.00	3	.54	1	.96	---	.18
19	0	.00	0	.00	1	.30	2	.52	0	.00	---	.16
20	0	.00	0	.00	1	.33	2	.51	0	.00	---	.15
21	1	.10	0	.00	1	.37	1	.21	0	.00	---	.15
22	1	.14	0	.00	0	.00	1	.21	1	.70	---	.15
23	1	.12	0	.00	0	.00	1	.29	1	.50	---	.16
24	1	.10	0	.00	1	.19	1	.31	0	.00	---	.14
25	1	.11	0	.00	1	.16	1	.24	0	.00	2	.38
26	0	.00	0	.00	1	.15	0	.00	0	.00	2	.36
27	0	.00	0	.00	1	.13	0	.00	0	.00	2	.41
28	6	4.0	0	.00	1	.12	1	.23	0	.00	2	.48
29	9	11	0	.00	1	.11	1	.20	---	---	16	32
30	1	.34	0	.00	1	.10	1	.21	---	---	3	5.2
31	0	.00	---	---	1	.09	1	.19	---	---	---	1.6
TOTAL	---	16.19	---	2.42	---	156.07	---	353.86	---	6.08	---	50.54

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	---	1.0	---	.09	1	.10	---	.58	1	.07	2	.18
2	---	.87	---	.09	1	.11	2	.68	1	.07	1	.08
3	---	.66	---	.08	1	.08	1	.22	1	.06	2	.12
4	---	.57	---	.08	1	.07	1	.16	1	.06	1	.06
5	2	.47	---	.08	1	.07	2	.29	1	.06	2	.11
6	2	.39	---	.11	0	.00	1	.13	1	.06	1	.05
7	2	.36	---	.30	0	.00	1	.12	1	.06	1	.05
8	3	.46	---	.34	0	.00	1	.12	1	.06	1	.05
9	2	.30	---	.51	0	.00	1	.10	1	.06	1	.06
10	2	.29	1	.23	0	.00	1	.09	1	.06	3	.75
11	3	.41	1	.22	0	.00	1	.09	1	.06	2	.37
12	2	.26	1	.20	0	.00	2	.26	1	.06	1	.11
13	2	.26	1	.18	0	.00	5	3.7	1	.05	1	.09
14	2	.26	1	.19	0	.00	---	.50	1	.05	1	.08
15	2	.26	1	.38	0	.00	---	.31	1	.05	1	.07
16	1	.12	1	.27	1	.10	1	.22	1	.05	1	.07
17	1	.12	2	.42	1	.11	1	.18	1	.05	---	.06
18	1	.11	2	.36	1	.39	1	.15	1	.05	---	.08
19	1	.11	1	.15	1	.32	1	.16	1	.05	---	.07
20	1	.10	1	.13	1	.22	2	.27	1	.05	---	.06
21	0	.00	1	.12	1	.16	---	.12	1	.05	---	.06
22	1	.11	---	.11	1	.15	---	.11	1	.05	---	.06
23	---	.12	---	.10	1	.21	1	.10	1	.05	---	.05
24	---	.13	---	.10	1	.20	1	.09	1	.05	---	.05
25	---	.22	---	.09	1	.15	1	.09	1	.05	---	.05
26	---	.11	---	.08	---	.13	1	.08	1	.05	---	.05
27	---	.11	1	.08	---	.11	1	.08	1	.04	---	.05
28	---	.10	1	.08	---	.10	1	.11	1	.05	1	.05
29	1	.09	1	.07	---	.10	1	.08	3	.26	1	.05
30	---	.09	1	.07	---	.12	1	.08	1	.08	1	.05
31	---	---	1	.07	---	---	1	.07	1	.06	---	---
TOTAL	---	8.46	---	5.38	---	3.00	---	9.34	---	1.93	---	3.09

## SANDY RIVER BASIN

14138950 DEER CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°29'31", long 122°03'27", in SE¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, on left bank 240 ft (73 m) upstream from culvert on Forest Service road S10, 300 ft (91 m) upstream from Bull Run Reservoir Number One, and 9.6 mi (15.4 km) northeast of Bull Run.

DRAINAGE AREA.--1.62 mi<sup>2</sup> (4.20 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: October 1977 to current year.

COOPERATION.--Chemical data were analyzed by the City of Portland Water Quality Laboratory and reviewed by the U.S. Geological Survey.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT							
02...	1310	3.7	23	7.2	10.0	7	8
09...	1220	8.2	20	7.2	9.5	2	3
16...	1240	3.5	22	7.2	10.5	1	4
23...	1200	4.3	21	7.2	10.0	2	3
30...	1150	20	17	7.1	8.0	6	6
NOV							
06...	1115	17	18	7.1	7.5	9	5
13...	1150	5.2	19	7.2	5.0	<1	1
20...	1145	17	16	7.1	6.0	3	2
27...	1150	5.4	16	7.1	5.0	4	2
DEC							
04...	1140	50	14	7.0	6.5	2	<1
11...	1140	8.0	17	7.1	4.0	3	1
18...	1155	19	15	7.1	5.5	<1	<1
25...	1004	10	17	7.0	4.0	<1	<1
JAN							
01...	1145	5.7	17	7.1	2.0	3	<1
08...	1210	97	13	6.9	5.5	6	1
15...	1135	7.3	15	7.1	5.5	4	<1
23...	1030	8.7	16	7.0	5.5	<1	<1
30...	1035	6.4	16	7.0	5.0	5	<1
FEB							
06...	1030	3.7	17	7.0	4.0	14	1
15...	1115	14	15	7.0	6.0	1	<1
20...	0940	21	15	7.0	6.0	2	5
27...	1020	11	15	7.0	5.5	1	<1
MAR							
06...	1045	6.8	16	7.0	6.5	<1	1
13...	1035	9.3	16	7.0	7.0	<1	<1
20...	1035	4.9	16	7.0	5.5	<1	<1
27...	1030	5.1	17	7.0	6.0	<1	<1
APR							
03...	1035	16	16	7.0	5.0	<1	<1
10...	1045	5.9	17	7.0	4.0	2	<1
17...	1020	3.9	17	7.1	7.0	<1	<1
24...	1055	3.7	18	7.0	7.0	2	2
MAY							
01...	1030	2.5	20	7.0	8.0	23	6
08...	1125	5.9	18	7.2	5.0	14	2
15...	0940	11	17	7.1	6.0	3	1
22...	0950	4.0	18	7.2	8.5	1	4
26...	0955	--	--	--	10.0	--	--
29...	1000	2.5	21	7.2	14.5	2	14
JUN							
05...	1020	4.0	19	7.1	9.0	1	5
12...	1030	9.0	18	7.1	9.5	6	15
19...	1050	11	18	7.1	9.0	7	13



## SANDY RIVER BASIN

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14138950 DEER CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
02...	<1	<.020	.030	<.003	9.3	.15	<5
09...	12	--	--	--	--	.19	<5
16...	6	--	--	--	--	.15	<5
23...	4	<.020	.010	<.003	8.5	.14	<5
30...	10	--	--	--	--	.26	<5
NOV							
06...	24	--	--	--	--	.21	<5
13...	<1	<.020	.020	<.003	7.4	.12	<5
20...	8	--	--	--	--	.22	<5
27...	4	--	--	--	--	.20	<5
DEC							
04...	6	<.020	.030	<.003	5.7	.32	<5
11...	2	--	--	--	--	.18	<5
18...	<1	--	--	--	--	.26	<5
25...	<1	<.020	.020	<.003	6.8	.14	<5
JAN							
01...	2	--	--	--	--	.15	<5
08...	8	--	--	--	--	.39	<5
15...	<1	<.020	.050	<.003	6.8	.21	<5
23...	6	--	--	--	--	.20	<5
30...	2	--	--	--	--	.20	<5
FEB							
06...	17	<.020	.020	<.003	7.2	.20	<5
15...	3	--	--	--	--	.21	<5
20...	8	--	--	--	--	.15	<5
27...	4	<.020	.020	<.003	6.2	.20	<5
MAR							
06...	6	--	--	--	--	.16	<5
13...	<1	--	--	--	--	.14	<5
20...	8	<.020	.010	<.003	7.6	.19	<5
27...	<1	--	--	--	--	.20	<5
APR							
03...	1	--	--	--	--	.20	<5
10...	2	<.020	<.010	<.003	6.8	.16	<5
17...	1	--	--	--	--	.13	<5
24...	1	--	--	--	--	.16	<5
MAY							
01...	15	<.020	.030	<.003	8.0	.20	<5
08...	7	--	--	--	--	.24	<5
15...	25	--	--	--	--	.25	<5
22...	<1	<.020	.020	<.003	7.9	.15	<5
26...	--	--	--	--	--	--	--
29...	1	--	--	--	--	.20	<5
JUN							
05...	<1	--	--	--	--	.16	<5
12...	12	<.020	.020	<.003	7.4	.20	<5
19...	14	--	--	--	--	.21	<5

## SANDY RIVER BASIN

14138950 DEER CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN							
26...	0955	6.8	19	7.1	10.0	1	2
JUL							
05...	0910	12	18	7.1	9.5	8	8
10...	1050	5.1	20	7.1	10.0	11	4
17...	1010	11	18	7.1	9.5	8	8
24...	1020	5.3	19	7.2	11.5	6	7
31...	1025	3.4	21	7.1	14.0	3	4
AUG							
07...	0945	2.0	22	7.1	14.0	1	8
14...	0806	1.6	24	7.3	14.0	1	6
21...	0725	1.1	25	7.2	12.5	5	6
28...	0950	.73	26	7.3	14.0	14	4
SEP							
04...	1030	1.9	25	7.2	13.0	15	8
11...	0945	4.4	24	7.3	12.0	14	6
18...	1010	2.4	24	7.2	9.5	140	37
25...	1010	1.6	26	7.3	10.0	2	17

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUN							
26...	<1	--	--	--	--	.20	<5
JUL							
05...	2	<.020	.010	<.003	7.3	.20	<5
10...	14	--	--	--	--	.18	<5
17...	10	--	--	--	--	.18	<5
24...	12	<.020	.010	<.003	8.2	.15	<5
31...	4	--	--	--	--	.18	<5
AUG							
07...	2	--	--	--	--	.13	<5
14...	6	<.020	.030	.005	10	.14	<5
21...	8	--	--	--	--	.09	<5
28...	20	--	--	--	--	.19	<5
SEP							
04...	20	<.020	.030	<.003	10	.13	<5
11...	24	--	--	--	--	.19	<5
18...	200	--	--	--	--	.19	<5
25...	4	<.020	.020	<.003	9.9	.20	<5

## SANDY RIVER BASIN

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14138960 COUGAR CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°29'28", long 122°03'40", in SW¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, at culvert on Forest Service road S10, 300 ft (91 m) upstream from Bull Run Reservoir Number One, and 9.4 mi (15.1 km) northeast of Bull Run.

DRAINAGE AREA.--3.06 mi<sup>2</sup> (7.93 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: October 1977 to current year.

COOPERATION.--Chemical data were analyzed by the City of Portland Water Quality Laboratory and reviewed by the U.S. Geological Survey.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT							
02...	1320	8.9	17	7.1	9.0	2	5
09...	1230	18	15	7.0	9.0	3	1
16...	1250	8.9	16	7.1	9.5	<1	2
18...	1000	--	16	7.0	7.0	--	--
23...	1210	11	16	7.1	9.0	<1	10
30...	1200	32	14	7.0	7.0	3	10
NOV							
06...	1125	32	14	7.0	6.5	6	2
13...	1200	12	16	7.1	5.5	2	<2
20...	1155	29	14	7.0	5.0	<1	<1
27...	1200	13	16	7.1	4.5	8	1
DEC							
04...	1150	4.2	12	6.9	5.5	1	2
11...	1150	16	16	7.1	4.5	<1	<1
18...	1205	27	14	7.0	5.0	5	<1
25...	1010	18	16	7.0	4.5	<1	<1
JAN							
01...	1155	9.7	18	7.0	3.0	2	<1
08...	1220	60	12	6.9	4.5	5	1
15...	1145	23	16	7.0	5.5	5	5
23...	1040	25	14	7.0	5.0	<1	<1
30...	1045	21	14	7.0	5.0	<1	<1
FEB							
06...	1040	14	16	7.0	4.0	32	<1
15...	1125	32	13	7.0	5.0	<2	<1
20...	0940	34	12	6.9	5.0	1	<5
27...	1030	29	14	7.0	5.0	2	<1
MAR							
06...	1055	21	15	7.0	6.0	<1	<1
12...	1045	26	14	7.0	6.0	<1	<1
20...	1045	17	15	7.0	5.5	<1	<1
27...	1040	17	15	7.0	5.5	<1	<1
APR							
03...	1045	28	14	7.0	4.0	<1	<1
10...	1055	16	16	7.0	4.0	<1	<1
17...	1030	41	16	7.1	7.0	<1	8
24...	1105	13	15	7.0	6.5	2	2
MAY							
01...	1035	9.3	16	7.0	7.0	5	4
08...	1135	12	15	7.1	5.0	8	6
15...	0950	30	13	7.1	5.5	10	1
22...	1000	13	16	7.1	8.0	<1	1
29...	1010	8.4	18	7.1	12.5	5	13
JUN							
05...	1030	9.3	16	7.0	8.5	1	1
12...	1040	18	15	7.1	8.5	3	6
19...	1100	22	14	7.0	8.0	5	4

## SANDY RIVER BASIN

14138960 COUGAR CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
02...	<1	<.020	.020	<.003	7.2	.15	<5
09...	6	--	--	--	--	.16	<5
16...	2	--	--	--	--	.13	<5
18...	--	--	--	--	--	--	--
23...	2	<.020	.010	<.003	6.9	.16	<5
30...	8	--	--	--	--	.25	<5
NOV							
06...	2	--	--	--	--	.19	<5
13...	<1	<.020	.020	<.003	6.8	.14	<5
20...	2	--	--	--	--	.16	<5
27...	<1	--	--	--	--	.18	<5
DEC							
04...	2	<.020	.020	.004	5.0	.41	<5
11...	<1	--	--	--	--	.15	<5
18...	<1	--	--	--	--	.19	<5
25...	<1	<.020	.020	<.003	7.3	.13	<5
JAN							
01...	6	--	--	--	--	.14	<5
08...	4	--	--	--	--	.60	<5
15...	<1	<.020	.050	<.003	7.1	.19	<5
23...	2	--	--	--	--	.20	<5
30...	<1	--	--	--	--	.26	<5
FEB							
06...	31	<.020	.030	<.003	7.0	.18	<5
15...	3	--	--	--	--	.21	<5
20...	6	--	--	--	--	.14	<5
27...	5	<.020	.020	<.003	6.0	.13	<5
MAR							
06...	1	--	--	--	--	.12	<5
12...	<1	--	--	--	--	.13	<5
20...	<1	<.020	.010	<.003	7.4	.11	<5
27...	<1	--	--	--	--	.20	<5
APR							
03...	1	--	--	--	--	.15	<5
10...	<1	<.020	.030	<.003	7.0	.13	<5
17...	<1	--	--	--	--	.13	<5
24...	6	--	--	--	--	.14	<5
MAY							
01...	10	<.020	.030	<.003	7.4	.19	<5
08...	10	--	--	--	--	.16	<5
15...	10	--	--	--	--	.19	<5
22...	4	<.020	.020	<.003	6.8	.15	<5
29...	3	--	--	--	--	.18	<5
JUN							
05...	<1	--	--	--	--	.14	<5
12...	<1	<.020	.010	<.003	6.5	.17	<5
19...	4	--	--	--	--	.17	<5

## SANDY RIVER BASIN

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14138960 COUGAR CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN							
26...	1005	15	15	7.1	9.5	<1	1
JUL							
03...	0920	20	14	7.1	8.5	1	4
10...	1100	11	16	7.1	9.5	2	2
17...	1020	20	14	7.0	9.0	2	2
24...	1030	12	17	7.1	10.5	<1	4
31...	1035	8.9	18	7.1	13.5	4	4
AUG							
07...	0955	6.0	20	7.0	12.5	4	8
11...	1130	4.8	20	7.1	12.0	--	--
14...	0827	4.5	21	7.2	12.5	6	4
21...	0734	3.1	22	7.1	11.5	6	3
28...	1000	2.3	22	7.2	13.0	1	8
SEP							
04...	1040	3.6	20	7.2	12.0	5	2
11...	0955	8.9	18	7.1	11.0	2	3
18...	1020	5.4	18	7.1	9.5	33	12
25...	1020	4.8	20	7.1	9.5	1	4
29...	1530	3.7	19	7.5	9.0	--	--

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUN							
26...	<1	--	--	--	--	.20	<5
JUL							
03...	2	<.020	.010	<.003	6.4	.16	<5
10...	4	--	--	--	--	.15	<5
17...	<1	--	--	--	--	.13	<5
24...	6	<.020	.020	<.003	7.5	.12	<5
31...	4	--	--	--	--	.15	<5
AUG							
07...	<1	--	--	--	--	.15	<5
11...	--	--	--	--	--	--	--
14...	2	<.020	.070	<.003	9.3	.12	<5
21...	6	--	--	--	--	.22	<5
28...	2	--	--	--	--	.16	<5
SEP							
04...	<1	<.020	.030	<.003	8.8	.15	<5
11...	2	--	--	--	--	.17	<5
18...	36	--	--	--	--	.16	<5
25...	2	<.020	.030	<.003	8.4	.27	<5
29...	--	--	--	--	--	--	--



## SANDY RIVER BASIN

14138990 BEAR CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°29'18", long 122°04'58", in NW¼NW¼ sec.16, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, at culvert on Forest Service road S10, 400 ft (122 m) upstream from Bull Run Reservoir Number One, and 8.3 mi (13.4 km) northeast of Bull Run.

DRAINAGE AREA.--1.68 mi<sup>2</sup> (4.35 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: October 1977 to current year.

COOPERATION.--Chemical data were analyzed by the City of Portland Water Quality Laboratory and reviewed by the U.S. Geological Survey.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT							
02...	1330	1.9	17	7.1	10.0	4	2
09...	1240	4.9	16	7.0	9.0	<1	<1
16...	1300	--	16	7.1	10.0	<1	14
23...	1220	3.3	17	7.1	9.0	<1	<1
30...	1210	29	16	7.0	8.0	4	2
NOV							
06...	1135	27	16	7.0	7.0	12	2
13...	1210	6.4	15	7.1	6.0	<1	2
20...	1205	30	16	7.0	6.0	1	<1
27...	1210	7.5	15	7.0	5.0	3	<1
DEC							
04...	1200	81	14	7.0	6.0	1	2
11...	1200	16	15	7.0	4.5	2	<1
18...	1215	43	15	7.0	5.5	3	<1
25...	1019	20	15	7.1	5.0	3	<1
JAN							
01...	1205	6.4	15	7.0	3.0	<1	<1
08...	1230	88	13	6.9	5.0	4	<1
15...	1155	9.2	14	7.0	6.0	2	<1
23...	1050	8.3	15	7.0	6.0	12	<1
30...	1055	7.0	15	7.0	5.5	<1	<1
FEB							
06...	1050	3.8	15	7.0	5.0	3	<1
13...	1035	14	15	7.0	6.0	2	<1
20...	0948	35	14	6.9	6.0	1	<1
27...	1040	16	14	7.0	5.5	3	<1
MAR							
06...	1105	7.4	15	7.0	6.0	<1	<1
13...	1055	12	15	7.0	6.5	<1	<1
20...	1055	5.4	15	7.0	6.0	<1	<1
27...	1050	4.5	15	7.0	6.0	<1	<1
APR							
03...	1055	23	15	7.0	5.0	<1	<1
10...	1105	6.3	15	7.0	5.0	3	1
17...	1040	3.8	15	7.0	7.0	<1	<1
24...	1115	3.2	15	7.0	7.0	<1	1
MAY							
01...	1040	2.1	16	7.0	7.5	<1	2
08...	1145	4.3	16	7.1	5.5	9	14
15...	1000	8.8	16	7.1	6.5	<1	4
22...	1010	4.0	16	7.0	8.0	<1	1
29...	1020	2.0	18	7.0	12.0	1	9
JUN							
05...	1040	2.8	16	7.0	8.5	1	6
12...	1050	6.0	16	7.1	9.0	2	4
19...	1110	6.0	16	7.1	8.5	3	14
26...	1015	4.8	16	7.1	9.5	2	10

## SANDY RIVER BASIN

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14138990 BEAR CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
02...	12	<.020	.030	<.003	7.9	.11	<5
09...	6	--	--	--	--	.13	<5
16...	6	--	--	--	--	.12	<5
23...	<1	<.020	.020	<.003	7.4	.12	<5
30...	8	--	--	--	--	.21	<5
NOV							
06...	12	--	--	--	--	.17	<5
13...	4	<.020	.020	<.003	6.9	.12	<5
20...	8	--	--	--	--	.18	<5
27...	2	--	--	--	--	.16	<5
DEC							
04...	<1	<.020	.020	<.003	5.8	.37	<5
11...	2	--	--	--	--	.15	<5
18...	2	--	--	--	--	.20	<5
25...	2	<.020	.010	<.003	6.9	.17	<5
JAN							
01...	<1	--	--	--	--	.14	<5
08...	6	--	--	--	--	.86	<5
15...	6	<.020	.070	<.003	7.1	.20	<5
23...	6	--	--	--	--	.20	<5
30...	<1	--	--	--	--	.20	<5
FEB							
06...	2	<.020	.020	<.003	6.8	.20	<5
13...	7	--	--	--	--	.20	<5
20...	4	--	--	--	--	.17	<5
27...	5	<.020	.060	<.003	6.2	.15	<5
MAR							
06...	6	--	--	--	--	.12	<5
13...	<1	--	--	--	--	.14	<5
20...	<1	<.020	<.010	<.003	7.0	.18	<5
27...	<1	--	--	--	--	.14	<5
APR							
03...	<1	--	--	--	--	.20	<5
10...	4	<.020	<.010	<.003	6.9	.14	<5
17...	<1	--	--	--	--	.16	<5
24...	1	--	--	--	--	.13	<5
MAY							
01...	<1	<.020	.030	<.003	7.3	.12	<5
08...	10	--	--	--	--	.19	<5
15...	1	--	--	--	--	.20	<5
22...	<1	<.020	.020	<.003	7.2	.15	<5
29...	<1	--	--	--	--	.19	<5
JUN							
05...	<1	--	--	--	--	.13	<5
12...	<1	<.020	.030	<.003	7.3	.16	<5
19...	4	--	--	--	--	.17	<5
26...	<1	--	--	--	--	.15	<5

## SANDY RIVER BASIN

14138990 BEAR CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUL							
03...	0930	5.4	16	7.1	9.0	2	2
10...	1110	3.5	16	7.0	9.5	2	2
17...	1030	11	16	7.0	9.0	1	4
24...	1040	4.3	16	7.1	10.5	2	1
31...	1045	2.3	17	7.1	12.5	2	3
AUG							
07...	1005	1.7	18	7.0	12.5	3	14
14...	0839	1.1	18	7.1	13.0	18	8
21...	0739	1.0	18	7.0	12.0	<1	7
28...	1010	.40	18	7.1	13.0	1	4
SEP							
04...	1050	1.4	18	7.1	12.5	2	8
11...	1005	2.0	19	7.1	11.5	5	9
18...	1030	1.4	18	7.0	10.0	8	5
25...	1030	1.1	19	7.1	10.0	<1	1

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUL							
03...	2	<.020	.010	<.003	7.2	.16	<5
10...	2	--	--	--	--	.15	<5
17...	4	--	--	--	--	.15	<5
24...	8	<.020	.010	<.003	7.7	.12	<5
31...	<1	--	--	--	--	.12	<5
AUG							
07...	6	--	--	--	--	.14	<5
14...	18	<.020	.030	<.003	8.4	.11	<5
21...	<1	--	--	--	--	.09	<5
28...	2	--	--	--	--	.12	<5
SEP							
04...	6	<.020	.020	<.003	8.9	.13	<5
11...	4	--	--	--	--	.16	<5
18...	12	--	--	--	--	.16	<5
25...	<1	<.020	.020	<.003	8.3	.14	<5

## 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 northeast of Bull Run, and at mile 11.2.

DRAINAGE AREA.--74.6 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to Oct. 9, 1930, Oct. 1, 1962, to Dec. 31, 1975, nonrecording gage and Oct. 9, 1930, to Sept. 30, 1962, water-stage recorder 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 at crest of spillway, elevation, 1,036.0 ft; capacity increased in October 1954 to 30,140 acre-ft at elevation 1,044.0 ft by installation of three gates 40 ft wide and 8 ft 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 Mar. 31, 1931, elevation, 1,047.40 ft; minimum observed, 169 acre-ft Jan. 10, 1960, elevation, 887.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 31,060 acre-ft June 10, elevation, 1,046.15 ft; minimum, 25,130 acre-ft Oct. 3, elevation, 1,031.22 ft.

Capacity table (elevation, in feet, and capacity, in acre-feet)

870	0	970	8,050
890	213	990	12,370
910	1,130	1,010	17,950
930	2,680	1,030	24,680
950	4,900	1,048	31,860

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1032.24	1034.50	1035.49	1034.38	1034.87	1037.36	1041.12	1044.70	1045.27	1045.42	1045.05	1039.45
2	1032.11	1035.26	1038.50	1034.45	1034.72	1037.22	1040.46	1044.82	1045.37	1045.65	1045.13	1039.32
3	1031.70	1034.64	1039.98	1034.69	1034.65	1037.17	1041.47	1044.92	1045.33	1045.05	1045.22	1039.96
4	1032.62	1034.72	1036.87	1040.51	1036.12	1037.15	1042.41	1045.05	1045.41	1044.31	1045.25	1040.52
5	1033.43	1035.69	1035.87	1039.51	1036.72	1037.36	1042.63	1045.24	1045.40	1044.43	1045.17	1039.48
6	1033.70	1035.22	1035.70	1042.19	1037.07	1037.39	1042.62	1044.94	1045.31	1044.48	1045.16	1039.99
7	1035.85	1034.52	1035.50	1038.96	1035.15	1038.04	1042.52	1044.80	1045.29	1044.52	1045.14	1039.30
8	1035.47	1034.74	1035.25	1037.88	1034.49	1038.78	1042.43	1045.27	1045.22	1044.60	1045.11	1039.80
9	1034.54	1034.66	1034.40	1035.40	1034.86	1038.92	1042.40	1044.98	1045.27	1044.46	1044.92	1039.06
10	1035.62	1034.79	1034.78	1035.98	1035.32	1038.49	1042.26	1044.04	1045.92	1044.17	1044.68	1041.70
11	1034.69	1035.14	1034.86	1035.39	1034.88	1037.94	1042.25	1043.99	1045.45	1044.40	1044.61	1043.02
12	1035.63	1034.48	1034.49	1034.87	1035.37	1037.85	1042.40	1044.07	1045.25	1045.24	1044.50	1040.17
13	1035.38	1034.96	1034.75	1034.41	1035.48	1037.68	1042.44	1044.19	1045.16	1045.66	1044.40	1037.92
14	1035.49	1034.14	1035.18	1035.66	1035.18	1037.75	1042.44	1044.76	1045.15	1044.67	1044.24	1035.25
15	1035.32	1034.51	1036.27	1034.38	1035.42	1037.67	1042.60	1044.78	1045.17	1045.04	1043.90	1035.01
16	1035.38	1034.69	1036.26	1035.48	1035.27	1037.47	1042.83	1044.45	1044.93	1044.77	1043.41	1035.14
17	1035.49	1035.47	1035.39	1034.28	1038.52	1037.38	1043.03	1044.77	1044.83	1045.13	1042.90	1035.12
18	1035.24	1034.40	1035.65	1035.00	1037.30	1037.23	1043.31	1044.97	1045.63	1045.46	1042.28	1035.11
19	1035.22	1035.73	1035.20	1034.56	1035.21	1037.15	1043.47	1045.16	1045.76	1045.39	1047.66	1034.56
20	1035.43	1035.24	1035.69	1035.36	1035.43	1037.04	1043.50	1045.25	1044.67	1044.99	1040.98	1035.32
21	1035.39	1034.02	1035.44	1034.88	1035.20	1037.04	1043.52	1045.07	1044.61	1045.06	1040.31	1035.05
22	1034.58	1034.43	1035.12	1034.17	1035.15	1037.02	1043.65	1044.80	1045.05	1045.25	1039.70	1035.74
23	1034.72	1034.69	1034.50	1034.42	1035.05	1037.02	1043.84	1044.97	1045.34	1045.25	1039.18	1035.21
24	1035.25	1034.65	1034.73	1034.71	1035.04	1037.00	1044.18	1045.24	1045.32	1045.16	1039.13	1034.89
25	1035.68	1034.54	1034.85	1034.53	1036.25	1037.17	1044.19	1045.25	1044.92	1045.23	1039.16	1035.52
26	1035.15	1034.46	1034.42	1034.88	1037.66	1037.19	1044.17	1045.25	1044.29	1045.27	1038.75	1036.05
27	1034.77	1034.75	1034.70	1034.76	1037.54	1037.27	1044.07	1045.26	1044.31	1045.20	1038.28	1035.09
28	1036.45	1034.46	1034.78	1034.79	1037.42	1037.52	1044.26	1045.39	1044.69	1045.22	1037.89	1034.81
29	1036.90	1035.61	1034.76	1034.54	---	1042.36	1044.45	1045.44	1044.76	1045.14	1037.98	1035.35
30	1035.26	1035.62	1034.74	1034.79	---	1039.98	1044.57	1045.48	1044.90	1045.15	1038.65	1034.86
31	1034.64	---	1034.53	1034.14	---	1040.80	---	1045.29	---	1045.12	1039.19	---
MEAN	1034.82	1034.82	1035.44	1035.61	1035.76	1037.85	1042.98	1044.92	1045.13	1045.00	1042.32	1037.26
MAX	1036.90	1035.73	1039.98	1042.19	1038.52	1042.36	1044.57	1045.48	1045.92	1045.66	1045.25	1043.02
MIN	1031.70	1034.02	1034.40	1034.14	1034.49	1037.00	1040.46	1043.99	1044.29	1044.17	1037.89	1034.56
(+)	26410	26790	26370	26220	27480	28820	30390	30690	30530	30620	28180	26500
(#)	+1260	+380	-420	-150	+1260	+1340	+1570	+300	-160	+90	-2440	-1680
CAL YR 1982	MEAN	1034.64	MAX	1045.56	MIN	1009.42	AC-FT#	-980				
WTR YR 1983	MEAN	1039.35	MAX	1045.92	MIN	1031.70	AC-FT#	+1350				

+ Contents in acre-feet, at 2400, on last day of month.

# Change in contents, in acre-feet.

## SANDY RIVER BASIN

14139510 FIVEMILE CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°28'57", long 122°05'25", in SW¼NE¼ sec.17, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, at culvert on Forest Service road S10, 800 ft (244 m) upstream from Bull Run Reservoir Number Two, and 7.9 mi (12.7 km) northeast of Bull Run.

DRAINAGE AREA.--0.79 mi<sup>2</sup> (2.05 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: October 1977 to current year.

COOPERATION.--Chemical data were analyzed by the City of Portland Water Quality Laboratory and reviewed by the U.S. Geological Survey.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT							
16...	1320	.56	17	7.0	10.5	<1	2
23...	1250	.66	17	7.1	10.0	1	<1
30...	1240	9.6	17	7.0	8.0	10	2
NOV							
06...	1205	4.9	17	7.0	8.0	10	8
13...	1240	1.4	18	7.0	6.5	<1	3
20...	1240	7.3	16	7.0	7.0	2	1
27...	1240	1.7	16	7.0	6.0	3	1
DEC							
04...	1235	16	15	7.0	7.0	4	<1
11...	1230	2.4	16	7.0	5.5	4	<1
18...	1245	8.0	15	7.0	6.5	<1	<1
25...	1035	3.3	15	6.8	6.0	<1	<1
JAN							
01...	1235	1.1	16	7.0	3.0	3	<1
08...	1310	35	13	6.9	5.5	3	2
15...	1225	4.1	15	7.0	7.0	<1	<1
23...	1120	4.1	15	7.0	5.0	2	<1
30...	1130	3.4	15	7.0	6.0	<1	<1
FEB							
06...	1125	.39	16	7.0	5.0	1	<1
13...	1205	8.9	15	7.0	6.5	2	<1
20...	1007	15	15	6.9	7.0	<1	<1
27...	1110	8.9	15	7.0	6.0	1	<1
MAR							
06...	1135	3.0	16	7.0	7.0	<1	<1
13...	1125	7.5	15	7.0	7.0	<1	<1
20...	1125	1.3	16	7.0	6.5	<1	<1
27...	1130	.97	16	7.0	6.0	<1	<1
APR							
03...	1125	9.7	15	7.0	6.0	<1	<1
10...	1135	.97	16	7.0	5.0	<1	<1
17...	1110	.28	16	7.0	8.0	<1	<1
24...	1145	.20	16	6.9	7.0	2	<1
MAY							
01...	1100	.12	17	7.0	8.0	2	4
08...	1215	.97	16	7.0	5.5	2	7
15...	1030	3.3	16	7.1	7.0	<1	2
22...	1040	.28	17	7.1	9.0	6	2
29...	1050	.12	18	7.0	13.5	<1	26
JUN							
05...	1110	.28	17	7.0	9.0	3	6
12...	1120	2.0	17	7.1	9.0	8	10
19...	1140	1.3	17	7.1	9.0	4	12
23...	1045	1.3	17	7.1	10.0	2	2
JUL							
03...	1000	1.4	17	7.1	9.5	2	6
10...	1140	.39	17	7.1	10.0	5	4



## SANDY RIVER BASIN

81

14139510 FIVEMILE CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
16...	12	--	--	--	--	.13	<5
23...	2	<.020	.020	<.003	8.0	.14	<5
30...	18	--	--	--	--	.28	<5
NOV							
06...	14	--	--	--	--	.20	<5
13...	<1	<.020	.020	<.003	8.0	.14	<5
20...	<1	--	--	--	--	.25	<5
27...	6	--	--	--	--	.19	<5
DEC							
04...	2	<.020	.020	<.003	6.8	.31	<5
11...	6	--	--	--	--	.19	<5
18...	<1	--	--	--	--	.23	<5
25...	<1	<.020	.020	<.003	7.1	.18	<5
JAN							
01...	4	--	--	--	--	.19	<5
08...	2	--	--	--	--	.44	<5
15...	4	<.020	.054	<.003	7.2	.20	<5
23...	6	--	--	--	--	.19	<5
30...	2	--	--	--	--	.20	<5
FEB							
06...	<1	<.020	.030	<.003	7.3	.20	<5
13...	12	--	--	--	--	.22	<5
20...	<1	--	--	--	--	.15	<5
27...	4	<.020	.040	<.003	6.8	.16	<5
MAR							
06...	1	--	--	--	--	.16	<5
13...	2	--	--	--	--	.17	<5
20...	<1	<.020	.020	<.003	7.4	.17	<5
27...	<1	--	--	--	--	.15	<5
APR							
03...	<1	--	--	--	--	.19	<5
10...	2	<.020	.020	<.003	7.1	.17	<5
17...	<1	--	--	--	--	.18	<5
24...	3	--	--	--	--	.16	<5
MAY							
01...	4	<.020	.040	<.003	7.8	.15	<5
08...	5	--	--	--	--	.49	<5
15...	1	--	--	--	--	.20	<5
22...	3	<.020	.040	<.003	7.7	.16	<5
29...	<1	--	--	--	--	.19	<5
JUN							
05...	6	--	--	--	--	.15	<5
12...	8	<.020	.020	<.003	7.4	.20	<5
19...	<1	--	--	--	--	.19	<5
23...	4	--	--	--	--	.20	<5
JUL							
03...	2	<.020	.010	<.003	7.6	.20	<5
10...	2	--	--	--	--	.20	<5

## SANDY RIVER BASIN

14139510 FIVEMILE CREEK NEAR BULL RUN, OR--Continued  
 WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUL							
17...	1100	4.6	17	7.0	9.0	2	5
24...	1110	1.3	17	7.1	10.5	1	2
31...	1115	.28	17	7.0	13.0	5	7
AUG							
07...	1035	.16	19	6.9	13.0	7	12
14...	0913	.12	20	7.1	14.0	8	10
21...	0758	.08	19	7.0	12.0	12	6
SEP							
04...	1120	.12	19	7.0	12.5	6	7
11...	1035	.24	19	7.0	12.0	4	4
18...	1050	.20	19	7.0	10.0	8	28
25...	1050	.20	19	7.0	10.5	<1	<1

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUL							
17...	4	--	--	--	--	.20	<5
24...	<1	<.020	.020	<.003	8.1	.14	<5
31...	2	--	--	--	--	.18	<5
AUG							
07...	2	--	--	--	--	.17	<5
14...	14	<.020	.050	<.003	9.3	.20	<5
21...	14	--	--	--	--	.12	<5
SEP							
04...	10	<.020	.040	<.003	9.0	.21	<5
11...	6	--	--	--	--	.20	<5
18...	12	--	--	--	--	.24	<5
25...	<1	<.020	.030	<.003	8.6	.19	<5

## SANDY RIVER BASIN

83

14139600 CAMP CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°27'41", long 122°06'13", in SW¼SW¼ sec.20, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, 15 ft (4.6 m) downstream from falls at confluence with West Branch of Camp Creek, 0.3 mi (0.5 km) upstream from Bull Run Reservoir Number Two, and 6.6 mi (10.6 km) northeast of Bull Run.

DRAINAGE AREA.--3.27 mi<sup>2</sup> (8.47 km<sup>2</sup>).

PERIOD OF RECORD.--Chemical analyses: October 1977 to current year.

COOPERATION.--Chemical data were analyzed by the City of Portland Water Quality Laboratory and reviewed by the U.S. Geological Survey.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
03...	1215	10	21	7.3	9.0	2	12	<1
10...	1145	24	20	7.2	9.0	<1	3	4
17...	1155	11	21	7.3	9.0	2	3	<1
24...	1220	8.9	21	7.3	9.0	2	9	2
31...	1130	51	19	7.2	8.5	2	9	2
NOV								
07...	1045	44	19	7.2	7.0	<1	1	<1
14...	1115	15	20	7.2	5.5	<1	2	<1
21...	1145	51	18	7.2	6.0	<1	<1	<1
28...	1145	22	19	7.2	6.5	<1	<1	<1
DEC								
05...	1150	69	18	7.1	7.0	1	<1	<1
12...	1200	25	19	7.1	6.0	1	<1	<1
19...	1200	53	17	7.1	6.5	2	<1	<1
26...	1145	33	18	7.1	6.0	<1	1	<1
JAN								
02...	1230	14	19	7.1	4.0	5	<1	<1
09...	1215	103	15	7.0	6.0	<1	<1	<1
16...	1130	19	18	7.1	6.0	<1	<1	<1
23...	1245	21	18	7.1	6.0	<1	<1	<1
30...	1220	19	18	7.1	6.0	<1	1	<1
FEB								
06...	1300	13	18	7.1	5.0	4	<1	7
13...	1240	45	17	7.1	6.0	<1	<1	<1
19...	1420	82	16	7.1	6.0	<1	<1	2
26...	1330	47	17	7.1	6.5	1	<1	4
MAR								
06...	1235	127	18	7.1	7.0	<1	<1	4
13...	1230	36	18	7.1	7.0	<1	<1	<1
20...	1240	16	18	7.1	6.5	<1	<1	<1
26...	1027	12	18	7.1	6.0	<1	<1	<1
APR								
03...	1210	55	17	7.0	6.0	1	<1	<1
10...	1215	19	18	7.0	5.0	<1	<1	<1
17...	1145	13	19	7.2	7.5	<1	<1	1
24...	1230	9.2	19	7.2	7.0	<1	<1	2
MAY								
01...	1150	5.8	20	7.1	8.0	<1	3	<1
08...	1245	13	19	7.3	6.0	2	7	1
15...	1140	25	19	7.2	7.0	2	1	2
22...	1130	13	20	7.3	9.0	<1	3	<1
29...	1145	5.6	21	7.2	13.0	1	7	<1
JUN								
05...	1150	4.7	20	7.1	9.5	2	2	<1
12...	1200	13	20	7.2	9.5	4	10	4
19...	1210	13	19	7.1	9.0	5	4	4
26...	1140	18	20	7.1	10.0	2	3	<1

## SANDY RIVER BASIN

14139600 CAMP CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
03...	<.020	.030	<.003	.90	9.4	.24	<5
10...	--	--	--	--	--	.30	<5
17...	--	--	--	--	--	.23	<5
24...	<.020	.020	<.003	1.0	9.5	.24	<5
31...	--	--	--	--	--	.33	<5
NOV							
07...	--	--	--	--	--	.24	<5
14...	<.020	.020	<.003	.70	9.1	.23	<5
21...	--	--	--	--	--	.31	<5
28...	--	--	--	--	--	.25	<5
DEC							
05...	<.020	.040	<.003	.90	7.7	.34	<5
12...	--	--	--	--	--	.26	<5
19...	--	--	--	--	--	.28	<5
26...	<.020	.020	<.003	.60	8.3	.25	<5
JAN							
02...	--	--	--	--	--	.32	<5
09...	--	--	--	--	--	.43	<5
16...	<.020	.030	<.003	.60	8.4	.35	<5
23...	--	--	--	--	--	.29	<5
30...	--	--	--	--	--	.26	<5
FEB							
06...	<.020	.030	<.003	.70	8.3	.29	<5
13...	--	--	--	--	--	.26	<5
19...	--	--	--	--	--	.21	<5
26...	<.020	.040	<.003	.70	7.8	.25	<5
MAR							
06...	--	--	--	--	--	.21	<5
13...	--	--	--	--	--	.20	<5
20...	<.020	.010	<.003	.50	8.8	.23	<5
26...	--	--	--	--	--	.12	<5
APR							
03...	--	--	--	--	--	.25	<5
10...	<.020	.030	<.003	.60	8.4	.20	<5
17...	--	--	--	--	--	.27	<5
24...	--	--	--	--	--	.20	<5
MAY							
01...	<.020	.040	<.003	.60	8.9	.20	<5
08...	--	--	--	--	--	.46	<5
15...	--	--	--	--	--	.30	<5
22...	<.020	.030	.003	.60	8.9	.21	<5
29...	--	--	--	--	--	.25	<5
JUN							
05...	--	--	--	--	--	.26	<5
12...	<.020	.020	<.003	1.4	9.1	.29	<5
19...	--	--	--	--	--	.27	<5
26...	--	--	--	--	--	.29	<5

## SANDY RIVER BASIN

85

14139600 CAMP CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JUL								
03...	1035	25	19	7.1	9.5	4	10	4
10...	1235	12	20	7.2	10.0	1	8	6
17...	1210	34	20	7.1	9.0	2	2	2
24...	1200	17	20	7.3	10.0	2	2	4
30...	1105	10	21	7.2	11.0	2	1	3
AUG								
07...	1115	4.7	22	7.1	12.5	2	7	2
13...	1125	3.5	22	7.2	12.0	1	10	<1
21...	0656	2.9	23	7.2	12.0	1	4	2
28...	1120	1.6	23	7.3	13.0	1	3	2
SEP								
04...	1215	2.9	23	7.3	12.5	2	6	2
11...	1115	3.5	22	7.2	11.5	2	11	2
18...	1130	3.5	22	7.2	10.0	2	23	8
25...	1145	2.3	23	7.2	10.0	<1	1	<1

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUL							
03...	<.020	.020	<.003	1.4	8.6	.32	<5
10...	--	--	--	--	--	.22	<5
17...	--	--	--	--	--	.40	<5
24...	<.020	.040	.003	.70	9.3	.20	<5
30...	--	--	--	--	--	.12	<5
AUG							
07...	--	--	--	--	--	.30	<5
13...	<.020	.040	<.003	.60	11	.14	<5
21...	--	--	--	--	--	.13	<5
28...	--	--	--	--	--	.24	<5
SEP							
04...	<.020	.030	<.003	1.0	11	.23	<5
11...	--	--	--	--	--	.25	<5
18...	--	--	--	--	--	.33	<5
25...	<.020	.030	<.003	.60	10	.28	<5



## SANDY RIVER BASIN

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 north of Brightwood and at mile 2.5.

DRAINAGE AREA.--7.93 mi<sup>2</sup>.

PERIOD OF RECORD.--July to November 1964, June 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,960 ft, from topographic map.

REMARKS.--Records excellent below 200 ft<sup>3</sup>/s, fair above. No regulation or diversion above station.

AVERAGE DISCHARGE.--18 years, 68.4 ft<sup>3</sup>/s, 117.13 in/yr, 49,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,990 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 7.20 ft, from rating curve extended above 320 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 6.9 ft<sup>3</sup>/s Oct. 9-13, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	0500	586	3.96	Jan. 6	1700	*987	*5.10
Dec. 3	0230	771	4.50	Mar. 30	0400	716	4.33
Jan. 4	1330	909	4.94				

Minimum, 12 ft<sup>3</sup>/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	27	87	148	30	43	57	181	30	34	66	22	27		
2	29	60	223	40	39	51	146	31	35	116	21	25		
3	27	47	502	120	36	45	109	30	30	94	20	20		
4	24	56	305	540	33	45	88	28	27	66	19	18		
5	22	145	173	434	31	54	75	28	26	52	19	17		
6	29	190	224	782	46	61	64	31	25	45	18	16		
7	65	111	123	632	50	108	59	47	24	39	17	16		
8	97	75	83	375	47	188	52	78	23	38	17	16		
9	73	56	63	214	97	215	50	98	22	34	17	19		
10	52	45	51	196	113	193	48	87	83	30	16	72		
11	41	38	43	141	157	117	49	74	61	28	18	80		
12	33	33	44	98	144	97	47	69	60	33	17	43		
13	29	30	74	75	157	83	44	62	47	160	16	32		
14	26	27	119	60	128	97	42	69	41	175	16	28		
15	24	25	224	51	109	86	42	176	42	108	15	25		
16	24	28	239	48	110	70	42	108	35	76	15	22		
17	42	121	172	55	251	59	42	79	38	58	15	21		
18	38	171	124	46	327	51	40	65	72	48	14	26		
19	29	154	106	69	193	45	39	54	107	51	14	26		
20	26	130	134	70	175	40	37	46	81	43	14	20		
21	29	84	161	56	147	40	39	41	60	37	14	19		
22	32	62	112	57	232	41	39	37	51	33	13	17		
23	30	49	81	78	145	40	41	34	63	30	13	16		
24	27	40	62	84	145	37	49	31	55	28	14	16		
25	29	35	52	67	102	50	39	30	45	26	13	15		
26	45	32	49	65	87	48	38	28	39	26	13	15		
27	59	36	41	75	75	59	35	26	35	25	13	15		
28	120	64	36	63	66	77	33	25	32	34	13	14		
29	404	113	33	53	---	263	32	24	32	26	24	13		
30	150	124	31	53	---	482	30	23	34	24	29	12		
31	85	---	28	50	---	294	---	29	---	23	20	---		
TOTAL	1767	2268	3860	4777	3285	3193	1671	1618	1359	1672	519	721		
MEAN	57.0	75.6	125	154	117	103	55.7	52.2	45.3	53.9	16.7	24.0		
MAX	404	190	502	782	327	482	181	176	107	175	29	80		
MIN	22	25	28	30	31	37	30	23	22	23	13	12		
CFSM	7.19	9.53	15.8	19.4	14.8	13.0	7.02	6.58	5.71	6.80	2.11	3.03		
IN.	8.29	10.64	18.11	22.41	15.41	14.98	7.84	7.59	6.38	7.84	2.43	3.38		
AC-FT	3500	4500	7660	9480	6520	6330	3310	3210	2700	3320	1030	1430		
CAL YR 1982	TOTAL	26172	MEAN	71.7	MAX	998	MIN	10	CFSM	9.04	IN.	122.77	AC-FT	51910
WTR YR 1983	TOTAL	26710	MEAN	73.2	MAX	782	MIN	12	CFSM	9.23	IN.	125.30	AC-FT	52980

## SANDY RIVER BASIN

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14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'38", long 122°06'20", in NE¼NE¼ sec.31, T.1 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 6.2 mi northeast of Bull Run, and at mile 0.6.

DRAINAGE AREA.--15.4 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 990 ft from topographic map.

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

AVERAGE DISCHARGE.--9 years, 110 ft<sup>3</sup>/s, 97.00 in/yr, 79,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,520 ft<sup>3</sup>/s Dec. 2, 1977, gage height, 8.32 ft, from rating curve extended above 810 ft<sup>3</sup>/s; minimum, 8.0 ft<sup>3</sup>/s Oct. 12, 13, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,600 ft<sup>3</sup>/s and maximum discharge, 1,840 ft<sup>3</sup>/s Jan. 6, gage height, 7.55 ft; minimum, 18 ft<sup>3</sup>/s Aug. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	52	148	214	47	75	107	281	42	51	91	37	38		
2	51	112	311	50	69	95	232	42	56	147	35	37		
3	48	92	849	80	63	85	184	41	52	156	33	31		
4	41	94	459	971	58	79	155	38	47	122	32	29		
5	37	170	257	692	54	86	133	37	43	99	30	27		
6	42	259	308	1440	69	97	115	41	40	88	29	25		
7	82	182	209	1230	84	140	103	60	38	75	28	24		
8	130	133	153	590	80	231	91	103	36	70	27	24		
9	134	104	117	331	141	283	84	143	34	64	27	27		
10	99	85	96	271	167	279	80	150	107	53	26	68		
11	79	72	81	221	231	198	78	128	96	47	27	128		
12	66	61	78	164	207	157	75	117	100	53	27	74		
13	55	55	114	129	222	134	71	107	84	195	25	59		
14	47	48	164	107	203	141	68	107	73	285	24	51		
15	41	42	299	92	174	134	66	225	71	193	23	44		
16	39	44	340	84	173	117	66	177	62	143	22	40		
17	60	137	256	90	320	104	65	133	60	113	22	44		
18	59	224	198	78	478	90	63	111	95	94	22	50		
19	45	220	177	103	308	80	60	93	137	96	21	44		
20	41	204	211	114	254	71	58	80	120	82	20	35		
21	43	154	248	103	219	67	59	71	98	72	20	32		
22	49	118	199	96	306	69	56	62	84	64	20	29		
23	48	96	152	123	229	64	58	56	104	58	19	28		
24	43	81	116	128	230	60	71	51	98	52	19	26		
25	42	70	99	114	190	76	60	47	84	48	19	26		
26	62	62	91	109	155	75	59	43	75	45	19	25		
27	80	63	79	113	134	92	55	39	67	41	18	25		
28	140	96	70	104	119	113	51	37	59	57	19	24		
29	657	149	63	92	---	351	47	35	56	45	31	22		
30	255	184	57	88	---	773	44	33	56	40	41	22		
31	157	---	51	86	---	429	---	40	---	38	27	---		
TOTAL	2824	3559	6116	8040	5012	4877	2688	2489	2183	2826	789	1158		
MEAN	91.1	119	197	259	179	157	89.6	80.3	72.8	91.2	25.5	38.6		
MAX	657	259	849	1440	478	773	281	225	137	285	41	128		
MIN	37	42	51	47	54	60	44	33	34	38	18	22		
CFSM	5.92	7.73	12.8	16.8	11.6	10.2	5.82	5.21	4.73	5.92	1.66	2.51		
IN.	6.82	8.60	14.77	19.42	12.11	11.78	6.49	6.01	5.27	6.83	1.91	2.80		
AC-FT	5600	7060	12130	15950	9940	9670	5330	4940	4330	5610	1560	2300		
CAL YR 1982	TOTAL	40812	MEAN	112	MAX	1550	MIN	14	CFSM	7.27	IN.	98.58	AC-FT	80950
WTR YR 1983	TOTAL	42561	MEAN	117	MAX	1440	MIN	18	CFSM	7.60	IN.	102.81	AC-FT	84420

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1978 to current year.

pH: November 1980 to September 1981.

WATER TEMPERATURES: October 1978 to current year.

SEDIMENT DISCHARGE: October 1978 to current year.

INSTRUMENTATION.--Water-quality monitor, prior to October 1980 conductivity/temperature recorder. Automatic pumping sampler since October 1978.

REMARKS.--Sediment concentrations and corresponding sediment discharges reported as 0 mg/l or 0 tons should be interpreted as &lt;1 due to the limitations of sampling equipment, analytical methods, rounding errors, and the likelihood of minor amounts of sediment transport occurring at even the lowest of discharges.

COOPERATION.--Chemical data were analyzed by the city of Portland Water Quality Laboratory and were reviewed by the U.S. Geological Survey.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 44 micromhos Sept. 16-19, 1981; minimum, 9 micromhos Jan. 4, 1983.

WATER TEMPERATURES: Maximum, 17.0°C July 18-20, 1979, Aug. 9-12, 1981; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum, 52 mg/l Jan. 23, 1982; minimum, 0 mg/l on many days throughout each year.

SEDIMENT DISCHARGE: Maximum, 265 tons Jan. 23, 1982; minimum, 0 tons on many days throughout each year.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 37 micromhos Aug. 25-29; minimum, 9 micromhos Jan. 4.

WATER TEMPERATURES: Maximum, 15.5°C May 29; minimum, 2.0°C Dec. 29 to Jan. 1.

SEDIMENT CONCENTRATIONS: Maximum, 32 mg/l Jan. 6; minimum, 0 mg/l on many days throughout the year.

SEDIMENT DISCHARGE: Maximum, 138 tons Jan. 6; minimum, 0 tons on many days throughout the year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
03...	1245	47	27	7.4	9.0	1	6	8
10...	1215	99	23	7.3	8.0	6	6	2
17...	1235	57	27	7.4	8.5	3	4	2
24...	1250	47	27	7.3	8.5	6	<1	10
31...	1150	151	21	7.2	7.5	6	<1	10
NOV								
07...	1115	186	20	7.2	6.0	4	<1	<1
14...	1145	48	25	7.3	4.0	<1	<1	<1
21...	1210	155	21	7.2	5.0	<1	<1	<1
28...	1215	95	22	7.2	5.0	4	1	10
DEC								
05...	1220	219	19	7.1	6.0	--	--	--
12...	1220	73	23	7.2	4.5	2	<1	<1
19...	1225	173	20	7.1	5.0	<1	<1	<1
26...	1215	92	22	7.2	4.0	<1	<1	<1
JAN								
02...	1250	46	26	7.2	3.0	<1	<1	<1
09...	1245	313	17	7.1	5.0	1	1	2
16...	1050	83	24	7.1	5.0	4	<1	4
22...	1250	92	22	7.2	5.0	<1	3	4
29...	1320	93	22	7.2	5.0	<1	<1	2
FEB								
05...	1330	54	26	7.3	3.5	<1	<1	2
12...	1400	211	19	7.1	5.0	4	1	1
19...	1445	300	18	7.1	5.5	<1	<1	4
26...	1415	149	20	7.1	6.0	2	<1	2
MAR								
05...	1340	81	24	7.2	6.5	1	<1	2
12...	1300	160	21	7.1	6.5	<1	<1	<1
19...	1300	80	24	7.2	5.0	<1	<1	<1
26...	1040	74	25	7.2	5.5	<1	<1	<1
APR								
02...	1155	219	19	7.1	5.0	<1	<1	<1
09...	1330	84	23	7.1	5.0	3	<1	<1
16...	1400	65	26	7.4	6.5	1	<1	1
23...	1400	54	27	7.2	8.0	<1	<1	<1
30...	1315	53	28	7.3	7.5	2	<1	<1
MAY								
07...	1300	56	28	7.4	7.0	3	2	2
14...	1200	101	24	7.3	7.0	4	4	1
21...	1315	70	25	7.4	10.0	2	2	1
28...	1240	38	30	7.5	14.0	5	6	1
JUN								
04...	1150	48	28	7.4	9.0	1	7	6
11...	1310	95	24	7.3	9.0	7	17	12
18...	1330	101	24	7.4	9.0	16	14	26
25...	1330	86	24	7.3	10.0	3	4	6

## SANDY RIVER BASIN

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14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
03...	<.020	.040	<.003	1.6	11	.29	<5
10...	--	--	--	--	--	.33	<5
17...	--	--	--	--	--	.36	10
24...	<.020	.020	.003	1.7	11	.30	<5
31...	--	--	--	--	--	.44	<5
NOV							
07...	--	--	--	--	--	.42	5
14...	<.020	.020	<.003	1.0	11	.24	5
21...	--	--	--	--	--	.54	5
28...	--	--	--	--	--	.31	10
DEC							
05...	<.020	.040	<.003	1.3	8.8	.54	5
12...	--	--	--	--	--	.36	<5
19...	--	--	--	--	--	.35	<5
26...	<.020	.030	<.003	1.1	9.9	.29	<5
JAN							
02...	--	--	--	--	--	.33	<5
09...	--	--	--	--	--	.68	5
16...	<.020	.030	<.003	.90	11	.35	<5
22...	--	--	--	--	--	.38	<5
29...	--	--	--	--	--	.31	<5
FEB							
05...	<.020	.030	<.003	.80	12	.31	<5
12...	--	--	--	--	--	.60	5
19...	--	--	--	--	--	.35	5
26...	<.020	.030	<.003	1.1	8.8	.33	<5
MAR							
05...	--	--	--	--	--	.30	<5
12...	--	--	--	--	--	.32	<5
19...	<.020	.020	<.003	.80	11	.31	<5
26...	--	--	--	--	--	.18	<5
APR							
02...	--	--	--	--	--	.51	<5
09...	<.020	.020	<.003	.80	11	.34	<5
16...	--	--	--	--	--	.29	<5
23...	--	--	--	--	--	.25	<5
30...	<.020	.040	<.003	.80	12	.21	<5
MAY							
07...	--	--	--	--	--	.35	<5
14...	--	--	--	--	--	.44	<5
21...	<.020	.030	.005	.90	11	.26	<5
28...	--	--	--	--	--	.30	<5
JUN							
04...	--	--	--	--	--	.31	<5
11...	<.020	.020	.004	2.8	10	.40	<5
18...	--	--	--	--	--	.45	5
25...	--	--	--	--	--	.29	<5

## SANDY RIVER BASIN

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JUL								
02...	1345	133	22	7.3	9.5	81	42	84
09...	1310	59	26	7.3	10.0	4	3	6
16...	1315	133	22	7.2	10.0	9	6	4
23...	1335	58	24	7.4	12.5	14	4	22
30...	1020	46	30	7.4	13.0	7	1	3
AUG								
06...	1330	29	32	7.5	14.0	1	3	<1
12...	1100	27	34	7.4	12.5	--	--	--
13...	1153	26	35	7.6	13.0	1	8	14
20...	1305	21	36	7.6	11.0	1	4	1
27...	1330	19	38	7.6	14.0	1	4	4
SEP								
03...	1300	30	33	7.5	12.0	2	3	<1
10...	1315	40	34	7.4	10.0	45	37	46
17...	1340	34	30	7.5	10.0	<1	2	2
24...	1330	26	33	7.5	10.5	<1	1	<1
28...	1030	25	32	7.4	8.5	--	--	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SI02)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUL							
02...	<.020	.040	<.003	3.1	9.2	.49	10
09...	--	--	--	--	--	.30	<5
16...	--	--	--	--	--	.34	<5
23...	<.020	.030	.003	1.1	12	.24	<5
30...	--	--	--	--	--	.18	<5
AUG							
06...	--	--	--	--	--	.28	<5
12...	--	--	--	--	--	--	--
13...	<.020	.020	.007	.80	14	.16	<5
20...	--	--	--	--	--	.23	<5
27...	--	--	--	--	--	.21	<5
SEP							
03...	<.020	.030	.003	1.7	13	.31	<5
10...	--	--	--	--	--	.58	<5
17...	--	--	--	--	--	.27	<5
24...	<.020	.020	<.003	1.0	13	.26	<5
28...	--	--	--	--	--	--	--



## SANDY RIVER BASIN

91

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	22	18	26	23	22	18	28	29	25	30	33
2	27	---	18	26	23	23	19	28	28	---	31	32
3	27	---	15	22	24	23	20	28	28	---	31	32
4	27	23	16	13	24	24	21	29	29	---	31	33
5	27	22	18	14	25	24	22	29	29	---	32	33
6	28	20	17	14	24	23	23	29	30	---	33	33
7	26	22	19	12	23	21	23	27	31	---	34	33
8	24	22	20	14	23	19	24	24	31	25	34	33
9	23	22	20	16	21	18	24	20	31	26	33	33
10	23	22	21	17	20	18	24	20	25	27	34	31
11	24	22	22	18	18	19	25	20	23	28	34	25
12	25	23	23	19	19	20	25	21	23	27	---	26
13	25	23	21	21	18	21	26	21	23	24	---	27
14	26	24	20	22	18	20	26	21	24	19	---	27
15	27	24	18	23	19	21	26	18	24	20	---	28
16	27	25	17	23	19	21	26	18	25	22	---	29
17	27	22	18	23	17	22	27	20	25	23	---	29
18	26	19	19	24	15	23	27	21	23	24	---	29
19	26	18	19	22	17	24	27	22	21	24	---	28
20	27	19	18	21	18	24	28	23	21	24	---	29
21	27	20	19	22	19	25	27	24	22	25	---	30
22	27	21	19	22	17	25	28	25	23	26	---	30
23	28	21	20	21	18	25	27	26	22	26	---	31
24	28	22	20	21	18	26	26	27	22	27	36	32
25	28	23	21	21	19	25	26	28	23	27	36	32
26	27	23	21	22	20	25	26	28	24	28	37	32
27	26	23	23	22	20	23	27	29	26	29	37	32
28	24	22	23	21	21	23	27	30	26	28	37	32
29	19	20	24	22	---	18	27	31	27	28	36	31
30	20	19	24	22	---	15	27	31	27	29	34	32
31	21	---	24	22	---	17	---	31	---	30	35	---
MEAN	26	22	20	20	20	22	25	25	26	26	34	31

## SANDY RIVER BASIN

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	8.0	7.5	6.5	5.5	5.0	2.5	2.0	5.0	4.5	6.5	6.0
2	9.0	8.5	7.0	6.0	5.5	5.0	3.0	2.5	4.5	4.0	6.5	5.5
3	9.0	8.5	7.5	7.0	6.5	5.5	3.5	3.0	4.0	3.5	7.0	6.0
4	8.5	8.0	8.0	7.5	6.5	5.5	4.5	3.0	4.0	3.5	7.0	6.5
5	8.5	7.5	7.5	7.0	6.5	5.5	5.0	4.5	3.5	3.5	6.5	6.5
6	8.5	8.0	7.5	6.5	6.5	5.0	5.0	5.0	4.5	3.5	6.5	6.0
7	8.0	8.0	6.5	6.0	5.0	4.5	6.0	5.0	4.0	3.5	6.5	6.0
8	8.5	8.0	6.0	5.5	4.5	4.0	6.0	4.5	4.0	3.5	6.5	6.0
9	9.0	8.0	5.5	5.0	4.0	3.5	5.0	4.5	4.0	3.5	7.0	6.5
10	8.5	8.0	5.0	4.5	3.5	3.5	5.5	5.0	5.0	4.0	7.0	6.5
11	8.5	8.0	4.5	4.0	4.0	3.5	5.0	4.5	5.0	4.5	7.0	6.0
12	9.0	8.0	5.0	4.0	4.5	4.0	4.5	4.5	5.0	5.0	7.0	6.0
13	9.0	8.5	5.0	4.0	5.0	4.5	5.0	4.5	5.0	4.5	6.5	6.0
14	9.0	8.5	4.0	3.5	5.0	4.5	4.5	4.5	5.0	4.5	6.0	5.5
15	9.5	8.5	4.5	3.5	5.5	5.0	5.0	4.0	5.5	4.5	6.0	5.0
16	9.5	9.0	5.5	4.5	6.0	5.5	5.5	5.0	5.5	5.0	6.0	5.0
17	9.0	7.5	6.5	5.5	5.5	4.5	5.5	5.5	5.5	5.5	6.5	5.5
18	7.5	6.5	6.5	6.0	5.0	4.5	6.0	5.5	5.5	5.0	6.0	5.0
19	6.5	6.0	6.0	5.5	5.0	5.0	5.5	5.0	5.5	5.0	6.0	5.0
20	7.0	6.0	5.5	4.0	5.0	4.5	5.0	4.5	5.5	5.5	6.0	5.0
21	8.0	7.0	5.0	4.5	5.0	5.0	4.5	4.0	6.0	5.5	6.5	6.0
22	9.0	8.0	4.5	3.5	5.0	4.5	5.0	4.5	6.5	6.0	6.5	6.0
23	9.0	8.5	3.5	3.0	4.5	4.0	5.5	4.5	7.0	6.0	6.5	6.0
24	9.0	8.5	3.5	2.5	4.5	4.0	5.5	5.5	6.5	5.5	6.5	6.0
25	9.0	8.5	3.5	3.0	4.5	4.0	5.5	5.0	6.0	5.5	6.5	6.0
26	8.5	8.0	4.0	3.5	4.5	4.0	6.0	5.5	6.0	5.5	6.0	5.0
27	8.0	7.5	4.5	4.0	4.0	3.0	6.0	5.0	5.5	5.0	6.0	5.0
28	8.0	7.0	5.0	4.5	3.0	2.5	5.0	4.5	6.0	5.5	5.5	4.5
29	8.0	7.5	5.0	5.0	2.5	2.0	5.5	5.0	---	---	6.0	5.0
30	7.5	7.0	5.5	5.0	2.5	2.0	5.5	5.0	---	---	6.0	5.5
31	7.5	7.0	---	---	2.0	2.0	5.5	5.0	---	---	6.0	5.5
MONTH	9.5	6.0	8.0	2.5	6.5	2.0	6.0	2.0	7.0	3.5	7.0	4.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	5.5	8.0	7.5	10.0	9.5	10.0	9.5	13.5	12.5	13.0	12.5
2	5.5	4.5	8.0	7.5	9.5	9.0	---	---	14.0	12.5	12.5	12.0
3	5.0	4.5	8.5	7.5	9.5	9.0	---	---	13.5	12.5	12.5	11.5
4	6.0	5.0	8.5	7.0	9.5	9.0	---	---	13.5	12.0	12.5	11.5
5	6.5	4.5	8.5	8.0	11.0	9.0	---	---	14.0	12.5	12.0	11.5
6	6.5	4.5	8.5	7.5	12.0	9.5	---	---	14.0	12.5	11.5	10.5
7	6.5	5.5	8.0	6.5	13.5	10.5	---	---	14.0	13.0	11.5	10.5
8	6.0	5.0	6.5	5.5	13.5	12.0	10.0	9.0	13.5	13.0	11.0	10.5
9	5.5	4.0	5.5	5.0	12.5	11.0	10.0	9.0	14.0	12.5	11.0	10.0
10	4.5	3.5	6.0	5.5	11.0	9.5	11.5	9.0	13.5	12.5	10.5	10.0
11	5.0	3.5	7.0	5.5	9.5	9.0	12.5	10.0	13.0	12.0	11.5	10.5
12	5.5	4.5	7.5	5.5	10.0	8.5	12.0	11.0	13.5	11.5	11.5	10.0
13	6.0	4.0	8.5	6.0	11.5	8.5	11.0	10.0	14.0	12.0	11.5	10.5
14	6.0	4.5	7.5	7.0	10.5	10.0	10.0	9.0	15.0	13.0	11.5	11.0
15	6.5	4.5	7.0	6.0	10.0	9.5	9.5	9.0	14.5	13.5	11.0	10.0
16	7.0	5.0	7.0	6.0	10.5	9.0	10.5	9.0	14.0	12.5	11.0	10.0
17	7.5	6.0	8.0	6.5	10.0	9.0	10.5	9.0	14.0	12.5	10.0	9.5
18	8.5	7.0	8.0	7.0	9.0	8.5	12.0	9.5	14.0	13.0	9.5	8.5
19	8.0	7.5	9.5	6.5	9.0	8.5	11.0	10.5	14.0	12.5	8.5	8.0
20	8.5	7.5	10.5	8.0	9.5	8.0	11.0	10.0	13.5	12.5	8.5	7.5
21	8.0	7.5	10.5	8.5	11.0	8.0	12.5	9.5	13.5	12.0	9.0	8.0
22	7.5	7.0	11.0	8.5	10.0	9.0	13.0	11.0	13.5	12.0	9.5	8.5
23	8.0	7.0	12.0	9.5	9.0	8.5	13.0	11.5	13.0	12.0	10.0	9.5
24	7.5	6.5	12.5	10.0	9.5	8.5	12.0	11.0	13.0	12.0	10.5	10.0
25	6.5	6.0	12.5	11.0	10.5	8.5	11.5	11.0	13.0	11.5	10.0	9.5
26	7.5	6.0	12.5	10.5	11.0	9.5	11.5	10.5	13.5	12.0	10.5	9.5
27	8.0	6.5	13.0	11.0	11.5	10.0	11.5	11.0	14.0	12.5	10.0	9.0
28	8.5	7.5	14.5	12.0	11.0	10.0	11.5	11.0	13.5	13.0	9.0	8.0
29	9.0	8.0	15.5	13.5	11.0	10.0	12.5	10.5	13.0	12.5	8.0	7.0
30	8.5	7.5	14.0	11.5	10.5	10.0	14.0	11.5	13.0	12.5	8.0	7.0
31	---	---	11.5	10.0	---	---	13.5	13.0	13.0	12.5	---	---
MONTH	9.0	3.5	15.5	5.0	13.5	8.0	14.0	9.0	15.0	11.5	13.0	7.0

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	0	.00	0	.00	2	1.2	1	.13	0	.00	0	.00
2	1	.14	0	.00	5	8.8	1	.14	0	.00	0	.00
3	1	.13	0	.00	14	42	1	.22	0	.00	0	.00
4	1	.11	0	.00	3	3.7	24	83	0	.00	0	.00
5	0	.00	2	.92	2	1.4	7	15	0	.00	0	.00
6	0	.00	0	.00	2	1.7	32	138	0	.00	0	.00
7	0	.00	0	.00	0	.00	13	49	0	.00	0	.00
8	0	.00	0	.00	0	.00	3	4.8	0	.00	0	.00
9	0	.00	0	.00	0	.00	2	1.8	1	.38	0	.00
10	0	.00	1	.23	0	.00	1	.73	1	.45	0	.00
11	0	.00	0	.00	0	.00	1	.60	2	1.2	1	.53
12	0	.00	1	.16	0	.00	1	.44	1	.56	1	.42
13	0	.00	0	.00	0	.00	1	.35	1	.60	0	.00
14	0	.00	0	.00	1	.44	0	.00	0	.00	0	.00
15	0	.00	0	.00	2	1.6	0	.00	0	.00	1	.36
16	0	.00	0	.00	1	.92	0	.00	0	.00	1	.32
17	0	.00	1	.37	0	.00	0	.00	6	8.4	1	.28
18	0	.00	1	.60	0	.00	0	.00	4	5.0	1	.24
19	0	.00	1	.59	0	.00	0	.00	1	.83	1	.22
20	0	.00	1	.55	0	.00	0	.00	0	.00	1	.19
21	0	.00	1	.42	1	.67	0	.00	0	.00	1	.18
22	0	.00	1	.32	1	.54	0	.00	1	.83	1	.19
23	0	.00	1	.26	1	.41	0	.00	0	.00	1	.17
24	0	.00	1	.22	1	.31	0	.00	1	.62	1	.16
25	0	.00	1	.19	1	.27	0	.00	0	.00	1	.21
26	0	.00	0	.00	0	.00	0	.00	0	.00	---	.20
27	0	.00	1	.17	0	.00	0	.00	0	.00	---	.25
28	3	3.0	0	.00	0	.00	0	.00	0	.00	1	.31
29	14	28	1	.40	0	.00	0	.00	---	---	10	16
30	0	.00	1	.50	0	.00	0	.00	---	---	17	45
31	0	.00	---	---	0	.00	0	.00	---	---	2	2.3
TOTAL	---	31.38	---	5.90	---	63.96	---	294.21	---	18.87	---	67.53

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	2	1.5	1	.11	0	.00	0	.00	1	.10	1	.10
2	2	1.3	1	.11	1	.15	0	.00	1	.09	1	.10
3	2	.99	1	.11	1	.14	0	.00	1	.09	1	.08
4	1	.42	1	.10	1	.13	0	.00	1	.09	0	.00
5	2	.72	0	.00	1	.12	0	.00	0	.00	0	.00
6	1	.31	1	.11	0	.00	0	.00	0	.00	1	.07
7	1	.28	1	.16	0	.00	0	.00	0	.00	1	.06
8	2	.49	1	.28	0	.00	0	.00	0	.00	1	.06
9	2	.45	1	.39	0	.00	0	.00	0	.00	1	.07
10	1	.22	1	.40	1	.29	0	.00	0	.00	2	.37
11	1	.21	1	.35	1	.26	0	.00	0	.00	1	.35
12	1	.20	1	.32	0	.00	0	.00	0	.00	0	.00
13	1	.19	1	.29	0	.00	3	2.5	0	.00	0	.00
14	1	.18	1	.29	0	.00	1	.77	0	.00	0	.00
15	2	.36	3	1.8	0	.00	2	1.0	0	.00	0	.00
16	1	.18	2	.96	0	.00	0	.00	0	.00	0	.00
17	3	.53	2	.72	0	.00	---	.31	0	.00	0	.00
18	2	.34	1	.30	1	.26	1	.25	0	.00	0	.00
19	1	.16	1	.25	1	.37	1	.26	0	.00	0	.00
20	1	.16	1	.22	0	.00	0	.00	0	.00	0	.00
21	1	.16	2	.38	0	.00	0	.00	0	.00	0	.00
22	2	.30	1	.17	1	.23	1	.17	0	.00	0	.00
23	1	.16	1	.15	1	.28	1	.16	0	.00	0	.00
24	1	.19	1	.14	0	.00	1	.14	0	.00	0	.00
25	1	.16	1	.13	0	.00	0	.00	0	.00	0	.00
26	1	.16	1	.12	0	.00	0	.00	0	.00	0	.00
27	1	.15	0	.00	0	.00	0	.00	0	.00	0	.00
28	1	.14	0	.00	0	.00	0	.00	0	.00	0	.00
29	1	.13	0	.00	0	.00	0	.00	0	.00	1	.06
30	1	.12	0	.00	0	.00	1	.11	1	.11	1	.06
31	---	---	0	.00	---	---	1	.10	0	.00	---	---
TOTAL	---	10.86	---	8.36	---	2.23	---	5.77	---	0.48	---	1.38

## SANDY RIVER BASIN

## 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 headworks dam on Bull Run River, 4.4 mi northeast of Bull Run, and at mile 6.5.

DRAINAGE AREA.--102 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1961 to current year. Prior to October 1975, monthend contents only.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (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 at crest of spillway, elevation, 860.0 ft. 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 Dec. 22, 1964, elevation, 866.00 ft; no contents at times during low-flow periods.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 22,550 acre-ft Jan. 6, elevation, 863.53 ft; minimum, 19,750 acre-ft Sept. 27, elevation, 857.16 ft.

Capacity table (elevation, in feet, and capacity in acre-feet)

752	0	830	10,000
770	234	850	16,800
790	1,860	870	25,500
810	5,070		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	858.64	860.69	860.04	858.59	857.98	860.55	861.18	860.25	860.31	860.52	860.13	859.37
2	859.40	860.18	861.24	858.48	858.05	860.48	861.04	860.25	860.34	860.83	860.02	859.76
3	859.80	860.03	861.99	858.95	858.01	860.29	860.70	860.24	860.13	860.80	859.92	859.34
4	859.50	859.24	861.10	862.64	857.56	860.27	860.70	860.21	860.06	860.58	859.82	858.87
5	859.12	860.52	860.59	862.16	858.09	860.35	860.69	860.25	860.09	860.48	859.76	859.82
6	859.56	860.08	860.44	863.38	859.46	860.40	860.63	860.48	860.03	860.42	859.68	859.24
7	859.95	859.35	859.74	862.38	859.69	860.74	860.56	860.39	860.03	860.39	859.51	859.67
8	860.81	859.29	859.22	861.53	859.17	861.13	860.49	860.61	860.03	860.39	859.37	859.06
9	860.66	858.99	859.16	860.89	859.91	861.24	860.48	860.81	860.06	860.39	859.37	859.73
10	860.05	858.76	859.55	860.85	859.62	861.05	860.49	860.78	860.60	860.40	859.44	859.61
11	860.25	859.32	859.76	860.20	859.83	860.77	860.41	860.60	860.54	860.10	859.51	860.57
12	860.13	859.86	859.74	859.80	859.48	860.69	860.39	860.62	860.51	860.16	859.54	859.80
13	860.06	858.87	859.87	858.43	859.61	860.60	860.40	860.54	860.35	861.66	859.33	859.29
14	860.03	858.87	859.04	859.05	859.15	860.62	860.41	860.58	860.34	860.92	859.03	859.63
15	860.02	857.92	860.85	859.63	859.27	860.58	860.34	861.05	860.34	860.72	859.00	859.33
16	860.08	858.13	860.93	859.31	859.16	860.47	860.35	860.73	860.38	860.69	859.08	858.79
17	860.13	860.05	860.58	859.00	861.46	860.38	860.35	860.56	860.31	860.35	859.12	858.98
18	860.07	860.42	859.90	859.07	861.20	860.32	860.35	860.53	860.59	860.44	859.16	858.60
19	860.03	859.69	859.71	859.40	860.47	860.25	860.36	860.43	860.79	860.49	859.21	859.50
20	860.03	859.76	859.93	859.31	860.34	860.19	860.39	860.43	860.73	860.46	859.45	858.91
21	860.05	859.65	860.34	859.68	860.10	860.19	860.37	860.42	860.41	860.26	859.68	859.16
22	860.34	859.51	859.78	859.69	860.56	860.17	860.34	860.43	860.41	860.28	859.73	858.57
23	860.17	859.72	859.41	859.60	860.11	860.18	860.37	860.19	860.56	860.27	859.82	858.38
24	860.02	859.67	859.68	859.42	860.16	860.13	860.37	860.24	860.55	860.27	859.68	858.61
25	860.04	859.60	860.14	859.27	859.89	860.24	860.37	860.27	860.55	860.17	859.25	858.03
26	860.10	859.23	859.66	858.98	860.73	860.27	860.35	860.25	860.53	860.24	859.18	857.48
27	860.29	858.94	859.16	859.37	860.65	860.34	860.32	860.17	860.27	860.24	859.26	858.12
28	861.25	858.99	859.24	859.36	860.61	860.66	860.22	860.05	860.31	860.30	859.53	858.27
29	861.62	859.85	859.28	859.25	---	862.75	860.26	860.05	860.32	860.17	859.87	857.67
30	860.91	859.80	859.11	858.77	---	861.91	860.26	860.19	860.34	860.14	859.65	857.95
31	860.73	---	858.92	858.86	---	861.39	---	860.31	---	860.13	859.24	---
MEAN	860.12	859.50	859.94	859.85	859.65	860.63	860.46	860.42	860.36	860.44	859.49	859.00
MAX	861.62	860.69	861.99	863.38	861.46	862.75	861.18	861.05	860.79	861.66	860.13	860.57
MIN	858.64	857.92	858.92	858.43	857.56	860.13	860.22	860.05	860.03	860.10	859.00	857.48
(+)	21320	20910	20520	20500	21270	21610	21110	21140	21150	20060	20670	20100
(#)	+770	-410	-390	-20	+770	+340	-500	+30	+10	-90	-390	-570

CAL YR 1982 MEAN 859.60 MAX 863.10 MIN 848.42 AC-FT# -610  
WTR YR 1983 MEAN 859.99 MAX 863.38 MIN 857.48 AC-FT# -450

† Contents in acre-feet, at 2400, on last day of month.  
# Change in contents, in acre-feet.

## 14140001 BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'15", long 122°10'40", in NE¼SW¼ sec.34, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on left bank 1.8 mi downstream from Bull Run Reservoir Number Two, 2.7 mi northeast of Bull Run, and at mile 4.7.

DRAINAGE AREA.--107 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to July 27, 1909, nonrecording gage at site 1.5 mi upstream at different datum. July 27, 1909, to Sept. 30, 1959, water-stage recorder at site 2.5 mi upstream at different datums.

REMARKS.--Records excellent except those below 10 ft<sup>3</sup>/s, which are fair. Water stored since 1915 in Bull Run Lake, capacity, 12,270 acre-ft, and since 1958 in North Fork Reservoir, capacity, 1,030 acre-ft. 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, 147,500 acre-ft of which 26,130 acre-ft was used for power generation and returned to Bull Run River.

COOPERATION.--Records of daily diversion furnished by Portland Water Bureau.

AVERAGE DISCHARGE.--76 years, 779 ft<sup>3</sup>/s, 98.87 in/yr, 564,400 acre-ft/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 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 17.21 ft, from rating curve extended above 8,800 ft<sup>3</sup>/s on basis of computation of peak flow over dam; minimum, 1.1 ft<sup>3</sup>/s Oct. 4, 1974.

Combined flow, maximum discharge, 25,100 ft<sup>3</sup>/s Dec. 22, 1964; minimum daily, 63 ft<sup>3</sup>/s Aug. 13-16, 1926.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 12,200 ft<sup>3</sup>/s Jan. 6, gage height, 13.27 ft; minimum, 5.2 ft<sup>3</sup>/s Sept. 26, 29.

Combined flow, maximum discharge, 12,500 ft<sup>3</sup>/s Jan. 6; minimum daily, 154 ft<sup>3</sup>/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	1130	1640	487	665	879	2110	330	404	498	265	178
2	226	825	1770	391	506	794	1910	320	401	909	238	169
3	205	774	6690	472	489	745	1320	339	384	1100	234	163
4	154	879	5150	4510	316	667	1010	305	353	938	247	161
5	159	972	2560	6240	168	697	1010	280	289	617	238	160
6	177	2090	2600	9660	162	834	925	381	305	537	228	187
7	180	1590	1820	9830	864	987	831	581	284	470	249	180
8	951	913	1370	6060	873	1650	758	636	277	451	238	173
9	1120	824	1140	3400	735	2210	706	1050	246	444	228	184
10	621	605	638	2500	1160	2370	693	1180	520	429	217	169
11	615	353	601	2230	1650	1710	632	944	766	315	213	194
12	278	451	752	1610	1570	1340	543	828	691	233	195	1170
13	428	558	789	1490	1670	1190	542	785	577	1200	238	916
14	302	545	1330	551	1660	1180	532	695	469	2270	260	755
15	323	513	1770	848	1220	1140	487	1350	433	1260	241	362
16	305	324	3090	563	1440	1040	441	1280	427	1040	244	358
17	437	681	2420	1070	2200	900	438	859	441	771	254	177
18	487	1960	1740	519	4410	840	437	711	490	533	268	330
19	361	1640	1590	858	2900	683	441	628	936	692	277	187
20	306	1630	1500	750	1960	609	452	532	1090	643	226	190
21	375	1420	1820	786	1840	583	464	545	732	512	222	197
22	513	860	1660	848	2450	577	448	534	481	377	251	184
23	438	609	1360	907	1970	556	450	418	627	393	252	323
24	299	619	818	939	1870	526	469	336	699	389	204	181
25	304	588	660	949	1380	584	453	350	670	345	211	186
26	558	594	901	887	763	631	458	346	651	302	227	164
27	718	530	685	906	1130	696	421	334	493	333	222	168
28	914	836	496	856	998	788	374	297	315	383	181	185
29	4730	787	492	815	---	2370	320	280	382	341	166	162
30	2280	1420	488	774	---	6440	326	242	385	290	164	239
31	1300	---	490	769	---	3200	---	365	---	287	192	---
TOTAL	20221	27520	50830	63475	39019	39416	20401	18061	15218	19302	7090	8352
MEAN	652	917	1640	2048	1394	1271	680	583	507	623	229	278
MAX	4730	2090	6690	9830	4410	6440	2110	1350	1090	2270	277	1170
MIN	154	324	488	391	162	526	320	242	246	233	164	160
AC-FT	40110	54590	100800	125900	77390	78180	40470	35820	30180	38290	14060	16570
MEAN†	685	917	1626	2044	1430	1299	698	588	505	623	183	241
CFSM†	6.40	8.57	15.2	19.1	13.4	12.1	6.52	5.50	4.72	5.82	1.71	2.25
IN.†	7.39	9.56	17.53	22.03	13.92	14.00	7.28	6.34	5.26	6.71	1.97	2.51
AC-FT†	42140	54560	99990	125700	79420	79860	41540	36150	30030	38290	11230	14320

CAL YR 1982 TOTAL 324484 MEAN 889 MAX 8660 MIN 140 AC-FT 643600 MEAN† 887 CFSM† 8.29 IN.† 112.53 AC-FT† 642000  
WTR YR 1983 TOTAL 328905 MEAN 901 MAX 9830 MIN 154 AC-FT 652400 MEAN† 902 CFSM† 8.43 IN.† 114.51 AC-FT† 653300

† Adjusted for change 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 NE¼NE¼ sec.10, T.2 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on left bank 0.25 mi upstream from Portland General Electric Co. dam and tunnel from Sandy River, 3.0 mi east of Bull Run, and at mile 1.95.

DRAINAGE AREA.--22.3 mi<sup>2</sup>.

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. WRD OR-82-2: 1972(P), 1974-76(P), 1978-81(P).

GAGE.--Water-stage recorder. Altitude of gage is 720 ft, from topographic map. May 23, 1911, to Apr. 29, 1913, nonrecording gage at site 0.85 mi downstream at different datum, 0.5 mi downstream from Sandy River diversion tunnel. July 1, 1919, to Sept. 30, 1931, water-stage recorder at site 0.1 mi downstream at different datum. Oct 1, 1931, to Nov. 3, 1967, at site 0.1 mi downstream at datum 712 ft National Geodetic Vertical Datum of 1929. Nov. 4, 1967, to Aug. 8, 1971, water-stage recorder at site 0.1 mi downstream at datum 697.44 ft National Geodetic Vertical Datum of 1929 (Portland General Electric Co. bench mark).

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

AVERAGE DISCHARGE.--64 years (water years 1920-83), 147 ft<sup>3</sup>/s, 89.52 in/yr, 106,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,320 ft<sup>3</sup>/s Nov. 20, 1921, gage height, 9.18 ft, site and datum then in use, from rating curve extended above 2,200 ft<sup>3</sup>/s; minimum, 8 ft<sup>3</sup>/s Aug. 20, Sept. 16, 17, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	0630	1,440	4.84	Jan. 4	1330	1,870	5.30
Dec. 3	0200	1,800	5.23	Jan. 6	0930	*1,950	*5.38

Minimum, 21 ft<sup>3</sup>/s Aug. 26-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	72	210	263	76	93	155	348	63	85	137	49	52		
2	72	146	416	79	84	140	285	64	97	215	46	48		
3	70	114	1070	113	78	125	234	61	77	201	43	38		
4	59	113	642	1140	73	117	213	57	65	145	41	33		
5	52	237	367	916	69	127	197	57	60	116	39	31		
6	55	352	516	1660	84	141	170	66	55	99	37	29		
7	96	234	306	1310	101	197	155	88	51	88	35	28		
8	212	166	220	854	100	317	134	119	49	86	34	27		
9	185	129	171	488	148	366	124	148	46	78	33	32		
10	123	105	142	447	179	374	119	169	131	68	32	83		
11	93	89	121	333	305	254	112	167	118	62	39	138		
12	75	78	118	238	267	207	104	167	125	72	37	75		
13	64	73	177	188	290	176	99	152	97	245	32	55		
14	56	66	225	156	257	176	98	148	82	401	30	46		
15	51	61	418	135	222	165	96	369	94	274	29	41		
16	49	63	517	127	233	147	95	244	80	188	28	38		
17	79	206	341	143	487	129	95	168	79	143	27	35		
18	89	324	243	123	751	115	95	138	139	116	26	39		
19	64	273	212	157	476	101	91	113	199	132	25	51		
20	55	242	251	154	373	92	87	96	176	115	24	37		
21	55	188	311	132	310	90	91	85	128	99	24	32		
22	60	151	256	120	494	96	87	76	107	88	24	30		
23	61	123	204	142	323	91	90	70	124	79	23	29		
24	57	105	165	160	360	84	105	64	119	72	24	28		
25	53	93	145	137	282	115	85	60	98	68	23	26		
26	70	85	135	136	232	111	84	56	87	64	22	25		
27	93	87	117	145	198	130	77	52	78	60	21	27		
28	176	136	104	134	173	142	71	49	71	80	22	25		
29	954	216	95	114	---	439	67	45	75	63	43	24		
30	345	221	89	106	---	860	65	45	75	55	66	23		
31	196	---	82	107	---	560	---	62	---	51	37	---		
TOTAL	3791	4686	8439	10270	7042	6339	3773	3318	2867	3760	1015	1225		
MEAN	122	156	272	331	252	204	126	107	95.6	121	32.7	40.8		
MAX	954	352	1070	1660	751	860	348	369	199	401	66	138		
MIN	49	61	82	76	69	84	65	45	46	51	21	23		
CFSM	5.47	7.00	12.2	14.8	11.3	9.15	5.65	4.80	4.29	5.43	1.47	1.83		
IN.	6.32	7.82	14.08	17.13	11.75	10.57	6.29	5.53	4.78	6.27	1.69	2.04		
AC-FT	7520	9290	16740	20370	13970	12570	7480	6580	5690	7460	2010	2430		
CAL YR 1982	TOTAL	55812	MEAN	153	MAX	1570	MIN	17	CFSM	6.86	IN.	93.10	AC-FT	110700
WTR YR 1983	TOTAL	56525	MEAN	155	MAX	1660	MIN	21	CFSM	6.95	IN.	94.29	AC-FT	112100

## WILLAMETTE RIVER BASIN

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## 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 upstream from Windfall Creek, 8.3 mi upstream from Hills Creek Dam, 10.2 mi south of Oakridge, and at mile 240.8.

DRAINAGE AREA.--258 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,556.83 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 21, 1967, at site 0.5 mi upstream at different datums. June 22, 1967, to June 23, 1971, water-stage recorder at same site at datum 5.00 ft higher.

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

AVERAGE DISCHARGE.--25 years, 814 ft<sup>3</sup>/s, 42.85 in/yr, 589,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,800 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.96 ft, from floodmark, site and datum then in use, from rating curve extended above 5,100 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 187 ft<sup>3</sup>/s Sept. 15, 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	1000	4,510	8.62	Feb. 22	0700	6,650	9.71
Dec. 16	2200	4,290	8.49	May 30	0500	7,530	10.09
Feb. 17	2100	*8,630	*10.50				

Minimum, 271 ft<sup>3</sup>/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	398	852	1090	663	847	1120	2300	968	1530	896	386	361		
2	383	713	1260	659	790	1040	2200	972	1270	1060	381	349		
3	374	623	2430	824	743	983	1840	957	1100	883	374	341		
4	362	563	3930	1720	702	969	1550	994	1040	770	372	334		
5	353	524	3200	1670	669	970	1370	1130	993	713	363	330		
6	400	564	3620	1950	691	1020	1220	1130	988	678	359	326		
7	507	516	2380	2720	737	1140	1120	1100	1020	659	355	320		
8	473	494	1740	2490	777	1440	1050	1160	1070	659	354	320		
9	437	472	1390	1990	1710	1450	1000	1130	1060	614	353	320		
10	406	453	1170	1590	1660	1590	934	1050	1170	575	350	320		
11	385	435	1010	1330	1690	1470	874	985	1120	549	349	319		
12	370	419	931	1180	1650	1610	819	964	967	533	341	315		
13	354	409	935	1080	1560	2350	774	947	883	529	335	313		
14	348	394	1160	1000	1450	2210	740	961	848	530	334	309		
15	338	385	1870	949	1470	1840	715	1050	833	507	331	309		
16	333	396	3570	942	1500	1550	704	1050	800	489	336	305		
17	342	628	3580	934	4050	1330	729	1040	785	495	334	305		
18	336	1030	2290	937	5200	1170	800	1070	829	475	332	305		
19	326	1150	1840	1010	3300	1040	871	1150	792	463	329	305		
20	321	992	1730	937	2390	949	933	1250	746	466	332	285		
21	326	858	2070	881	2340	895	1040	1430	697	446	330	281		
22	352	746	1820	863	2770	870	1100	1470	671	432	333	284		
23	1010	648	1460	988	2470	858	1070	1650	658	426	353	306		
24	726	593	1190	1030	2140	818	1060	1890	643	426	348	290		
25	574	568	1030	961	1810	801	973	2070	611	428	362	281		
26	706	559	959	1120	1550	772	916	2010	602	424	392	278		
27	692	605	907	1650	1360	847	856	1860	594	411	349	278		
28	623	847	839	1390	1210	844	846	1930	587	405	352	278		
29	1840	1490	777	1180	---	1330	888	1990	578	397	402	274		
30	1620	1480	732	1020	---	5250	910	1840	574	390	418	273		
31	1090	---	697	921	---	3180	---	1650	---	389	376	---		
TOTAL	17105	20406	53607	38579	49236	43706	32202	40848	26059	17117	11015	9214		
MEAN	552	680	1729	1244	1758	1410	1073	1318	869	552	355	307		
MAX	1840	1490	3930	2720	5200	5250	2300	2070	1530	1060	418	361		
MIN	321	385	697	659	669	772	704	947	574	389	329	273		
CFSM	2.14	2.64	6.70	4.82	6.81	5.47	4.16	5.11	3.37	2.14	1.38	1.19		
IN.	2.47	2.94	7.73	5.56	7.10	6.30	4.64	5.89	3.76	2.47	1.59	1.33		
AC-FT	33930	40480	106300	76520	97660	86690	63870	81020	51690	33950	21850	18280		
CAL YR 1982	TOTAL	360399	MEAN	987	MAX	6580	MIN	288	CFSM	3.83	IN.	51.96	AC-FT	714900
WTR YR 1983	TOTAL	359094	MEAN	984	MAX	5250	MIN	273	CFSM	3.81	IN.	51.78	AC-FT	712300

## 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.

INSTRUMENTATION.--Temperature recorder 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, 18.5°C July 30; minimum recorded, 2.0°C Nov. 15.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

99

14144800 MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	8.0	6.5	8.0	5.5	11.0	9.5	16.5	13.0	14.5	11.5
2	---	---	8.5	6.0	9.0	6.5	11.0	8.5	18.0	13.0	14.5	11.0
3	---	---	11.0	6.5	12.0	6.5	14.0	8.5	17.5	12.0	15.0	10.5
4	---	---	10.0	6.0	12.0	7.0	15.5	8.5	18.0	12.5	15.5	10.5
5	---	---	8.5	6.0	12.5	7.0	15.0	10.5	17.0	12.5	15.0	11.0
6	---	---	8.5	5.0	13.5	7.5	13.0	10.5	18.0	11.5	---	---
7	---	---	8.5	5.5	13.5	8.5	11.0	9.0	16.0	11.5	---	---
8	---	---	7.0	5.0	13.5	9.0	12.0	8.5	17.0	12.0	---	---
9	---	---	7.5	4.5	13.0	8.0	14.0	9.0	18.0	12.0	---	---
10	---	---	8.0	5.0	10.0	8.0	15.0	8.0	15.0	13.0	---	---
11	---	---	10.5	5.5	10.5	6.5	16.5	9.5	17.0	12.0	---	---
12	---	---	11.5	5.5	12.5	7.5	16.5	10.5	17.0	10.5	---	---
13	---	---	11.0	6.0	14.0	7.5	15.5	11.0	16.0	11.0	---	---
14	---	---	8.0	5.5	12.5	9.0	14.0	10.5	17.5	11.5	---	---
15	---	---	9.0	6.0	13.5	8.5	14.5	10.0	18.0	12.0	---	---
16	---	---	10.5	6.0	13.0	8.0	14.5	9.0	18.0	11.0	---	---
17	---	---	11.0	5.5	11.0	9.0	14.5	10.0	18.0	11.5	---	---
18	---	---	11.5	5.5	10.0	8.0	16.0	10.0	18.0	11.5	---	---
19	---	---	11.5	6.0	10.5	7.0	14.5	11.0	14.5	12.0	---	---
20	---	---	12.0	6.5	12.0	7.5	16.0	10.0	17.0	11.5	---	---
21	---	---	11.5	6.5	13.0	7.0	16.0	9.0	17.0	11.5	---	---
22	---	---	12.0	6.0	12.0	8.5	17.0	10.5	14.5	11.5	---	---
23	---	---	12.0	6.0	12.0	8.5	17.0	11.5	13.5	12.0	---	---
24	---	---	12.0	6.5	14.0	7.5	16.5	12.0	16.5	11.0	---	---
25	8.0	---	12.0	6.0	14.5	8.0	14.0	11.5	15.5	11.5	---	---
26	8.5	5.0	11.5	5.5	14.5	9.5	16.5	10.5	16.5	11.5	---	---
27	8.5	4.5	12.5	6.0	15.5	9.5	14.5	11.0	16.5	11.5	---	---
28	9.5	6.0	12.0	6.5	13.5	9.5	17.0	11.5	15.0	12.0	---	---
29	10.5	6.0	12.0	7.5	14.0	10.0	18.0	12.0	13.5	12.0	---	---
30	9.0	6.0	10.5	6.0	11.5	10.0	18.5	12.0	14.0	12.0	---	---
31	---	---	8.0	7.0	---	---	18.0	13.0	13.0	11.0	---	---
MONTH	10.5	4.5	12.5	4.5	15.5	5.5	18.5	8.0	18.0	10.5	15.5	10.5

## WILLAMETTE RIVER BASIN

## 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 downstream from Hills Creek, 3.5 mi southeast of Oakridge, and at mile 232.5.

DRAINAGE AREA.--389 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (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 at elevation 1,543.0 ft, top of spillway gates, and usable capacity is 248,900 acre-ft between elevations 1,414.0 ft, minimum power pool, and 1,543.0 ft. 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 June 25, 1971, elevation, 1,542.52 ft; minimum, 104,800 acre-ft Jan. 2, 1969, elevation, 1,412.52 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 350,100 acre-ft May 20, 21, 30, July 1, elevation, 1,541.02 ft; minimum, 163,100 acre-ft Jan. 4, elevation, 1,452.81 ft.

## 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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1498.06	1479.36	1457.11	1454.55	1461.31	1495.71	1526.27	1532.99	1540.75	1541.01	1540.63	1526.45
2	1497.18	1478.71	1457.53	1453.54	1462.45	1496.42	1525.47	1533.39	1540.77	1540.98	1540.46	1525.57
3	1496.25	1477.82	1460.32	1452.83	1463.39	1497.03	1524.23	1533.90	1540.80	1540.83	1540.06	1524.68
4	1495.29	1476.85	1465.47	1454.01	1464.09	1497.77	1523.01	1534.50	1540.79	1540.78	1539.51	1523.76
5	1494.31	1475.83	1468.95	1455.10	1464.71	1498.80	1522.47	1535.39	1540.78	1540.81	1538.94	1522.87
6	1493.46	1474.88	1473.03	1456.71	1465.45	1499.91	1522.38	1536.23	1540.83	1540.87	1538.39	1521.94
7	1492.78	1473.80	1474.85	1459.79	1466.26	1501.26	1522.42	1536.61	1540.87	1540.94	1537.81	1521.02
8	1492.01	1472.70	1475.28	1462.38	1467.30	1502.53	1522.37	1537.14	1540.90	1540.92	1537.36	1520.27
9	1491.17	1471.55	1474.71	1463.86	1470.33	1503.44	1522.48	1537.65	1540.88	1540.86	1537.10	1519.58
10	1490.26	1470.36	1473.79	1464.51	1472.10	1504.31	1522.54	1538.14	1540.98	1540.84	1536.85	1518.88
11	1489.30	1469.12	1473.13	1465.18	1473.27	1504.76	1522.82	1538.47	1540.96	1540.85	1536.60	1518.21
12	1488.32	1467.85	1472.64	1465.45	1474.31	1505.49	1523.28	1538.77	1540.88	1540.85	1536.32	1517.51
13	1487.30	1466.54	1471.72	1465.35	1475.05	1507.31	1523.69	1539.31	1540.79	1540.83	1536.05	1516.81
14	1486.27	1465.17	1471.00	1464.92	1476.21	1508.93	1524.21	1539.83	1540.75	1540.78	1535.77	1516.11
15	1485.22	1463.78	1471.36	1464.39	1477.96	1509.96	1524.73	1540.43	1540.81	1540.77	1535.50	1515.40
16	1484.14	1462.44	1474.96	1463.84	1479.93	1510.59	1525.24	1540.92	1540.84	1540.78	1535.22	1514.68
17	1483.10	1461.51	1478.22	1463.27	1486.52	1510.90	1525.77	1540.95	1540.87	1540.85	1534.93	1513.96
18	1482.03	1461.41	1478.26	1462.72	1495.74	1510.99	1526.38	1540.94	1540.89	1540.86	1534.63	1513.24
19	1480.93	1461.55	1476.61	1462.27	1499.17	1510.92	1527.07	1540.98	1540.86	1540.93	1534.34	1512.53
20	1479.82	1461.42	1474.61	1461.66	1498.97	1510.74	1527.82	1541.02	1540.82	1540.90	1534.04	1511.79
21	1479.10	1460.98	1473.39	1460.95	1498.64	1510.86	1528.55	1540.98	1540.79	1540.87	1533.75	1511.06
22	1478.53	1460.29	1471.55	1460.26	1499.01	1511.57	1529.25	1540.96	1540.78	1540.84	1533.17	1510.36
23	1479.06	1459.40	1469.85	1459.92	1498.77	1512.35	1529.83	1540.99	1540.77	1540.80	1532.90	1509.67
24	1479.08	1458.38	1467.60	1459.63	1498.01	1513.09	1530.34	1541.00	1540.76	1540.77	1532.62	1508.94
25	1478.84	1457.29	1464.96	1459.14	1496.81	1513.80	1530.78	1540.93	1540.77	1540.77	1532.09	1508.21
26	1479.04	1456.19	1462.20	1459.11	1496.32	1514.53	1531.13	1540.73	1540.78	1540.78	1531.30	1507.45
27	1478.60	1455.25	1460.08	1460.44	1495.73	1515.38	1531.46	1540.73	1540.78	1540.78	1530.47	1506.70
28	1477.84	1454.76	1458.24	1460.86	1495.76	1516.22	1531.81	1540.89	1540.76	1540.77	1529.63	1505.93
29	1479.04	1455.86	1457.40	1460.81	---	1517.65	1532.17	1541.01	1540.77	1540.77	1528.91	1505.16
30	1479.87	1456.99	1456.53	1460.46	---	1523.89	1532.55	1540.89	1540.78	1540.73	1528.12	1504.38
31	1479.84	---	1455.59	1460.50	---	1526.26	---	1540.82	---	1540.68	1527.29	---
MEAN	1485.68	1465.60	1468.42	1460.59	1481.20	1508.50	1526.42	1538.95	1540.82	1540.83	1534.86	1515.10
MAX	1498.06	1479.36	1478.26	1465.45	1499.17	1526.26	1532.55	1541.02	1540.98	1541.01	1540.63	1526.45
MIN	1477.84	1454.76	1455.59	1452.83	1461.31	1495.71	1522.37	1532.99	1540.75	1540.68	1527.29	1504.38
(†)	210700	169900	167600	175800	242800	312300	328000	249500	349400	349200	314900	261500
(‡)	-38800	-40800	-2300	-8200	+67000	+69500	+15700	+21500	-100	-200	-34300	-53400
CAL YR 1982	MEAN	1505.23	MAX	1541.19	MIN	1453.36	AC-FT‡	-75200				
WTR YR 1983	MEAN	1505.71	MAX	1541.02	MIN	1452.83	AC-FT‡	+12000				

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.



## WILLAMETTE RIVER BASIN

101

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 upstream from highway bridge, 0.4 mi upstream from Salt Creek, 1.1 mi downstream from Hills Creek Dam, 2.3 mi southeast of Oakridge, and at mile 231.4.

DRAINAGE AREA.--392 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929 (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 and 1,000 ft 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.--49 years, 1,153 ft<sup>3</sup>/s, 39.94 in/yr, 835,300 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 12.06 ft, site and datum then in use, from rating curve extended above 13,000 ft<sup>3</sup>/s; minimum observed, 0.70 ft<sup>3</sup>/s Sept. 8-11, 13, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,360 ft<sup>3</sup>/s Dec. 20, gage height, 6.85 ft; minimum, 33 ft<sup>3</sup>/s Apr. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1480	1710	1750	1790	508	1650	3540	796	2000	921	552	1500
2	1480	1660	1740	1780	81	751	4560	797	1500	1480	687	1500
3	1480	1720	1740	1770	157	742	4550	627	1350	1420	1010	1510
4	1500	1720	1750	1780	317	587	4110	538	1330	1100	1210	1510
5	1500	1710	1780	1780	318	313	2850	546	1270	852	1210	1510
6	1490	1710	1790	1790	319	320	1860	569	1160	783	1210	1510
7	1500	1710	1800	1810	321	333	1560	1130	1220	825	1200	1500
8	1490	1710	2130	1820	323	813	1560	1140	1330	997	1050	1250
9	1500	1710	2500	1840	579	1230	1280	1120	1350	943	735	1210
10	1500	1710	2480	1840	1410	1430	1210	993	1390	804	739	1210
11	1500	1700	1900	1260	1810	1680	946	1040	1500	694	746	1210
12	1490	1700	1750	1430	1810	1660	529	1040	1420	716	746	1200
13	1490	1710	2130	1650	1810	1660	529	665	1280	732	740	1200
14	1500	1720	2420	1740	1290	1660	346	697	1100	797	734	1200
15	1500	1720	3080	1740	696	1670	311	709	966	714	735	1190
16	1500	1710	3590	1740	527	1630	310	872	971	599	735	1190
17	1500	1700	3590	1740	573	1620	309	1440	968	539	741	1190
18	1500	1710	4080	1740	410	1620	338	1480	1050	577	747	1200
19	1500	1710	4890	1730	1470	1610	300	1470	1120	629	741	1170
20	1500	1720	4940	1760	4080	1580	295	1620	1020	721	741	1200
21	1150	1710	5130	1750	4060	1150	489	1880	949	633	741	1200
22	1110	1710	5090	1750	4070	443	595	1880	889	617	1090	1190
23	1110	1710	4130	1750	4120	314	780	1990	889	617	796	1190
24	1110	1710	4030	1760	4120	313	795	2330	830	577	753	1180
25	1110	1720	4050	1780	4080	314	783	2740	765	505	1140	1210
26	805	1720	4060	1780	2780	312	806	2800	770	510	1490	1200
27	1370	1710	3210	1510	2520	311	735	2260	780	515	1490	1210
28	1630	1720	2830	1790	1710	313	775	2120	778	545	1500	1210
29	1650	1730	1870	1790	---	489	796	2240	725	550	1510	1210
30	1710	1750	1800	1790	---	916	796	2470	723	554	1510	1210
31	1710	---	1790	1250	---	2010	---	2160	---	552	1500	---
TOTAL	44365	51360	89820	53230	46269	31444	38643	44159	33393	23018	30529	38170
MEAN	1431	1712	2897	1717	1652	1014	1288	1424	1113	743	985	1272
MAX	1710	1750	5130	1840	4120	2010	4560	2800	2000	1480	1510	1510
MIN	805	1660	1740	1250	81	311	295	538	723	505	552	1170
AC-FT	88000	101900	178200	105600	91770	62370	76650	87590	66240	45660	60550	75710
MEAN†	800	1027	2861	1851	2859	2145	1552	1774	1044	739	427	375
CFSM†	2.04	2.62	7.30	4.72	7.29	5.47	3.96	4.53	2.66	1.89	1.09	0.96
IN.†	2.35	2.92	8.42	5.44	7.60	6.31	4.42	5.22	2.97	2.17	1.26	1.07
AC-FT†	49200	61100	175900	113800	158800	131900	92350	109100	62140	45460	26250	22310

CAL YR 1982 TOTAL 571250 MEAN 1565 MAX 5130 MIN 132 AC-FT 1133000 MEAN† 1461 CFSM† 3.73 IN.† 50.62 AC-FT† 1058000  
WTR YR 1983 TOTAL 524400 MEAN 1437 MAX 5130 MIN 81 AC-FT 1040000 MEAN† 1453 CFSM† 3.71 IN.† 50.33 AC-FT† 1052000

† Adjusted for change in contents in Hills Creek Lake.

## WILLAMETTE RIVER BASIN

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.

INSTRUMENTATION.--Temperature recorder since October 1960.

## 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, 16.0°C Sept. 30; minimum, 5.0°C on several days in December, January, and February.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	15.0	12.0	11.5	7.0	6.5	5.0	5.0	6.0	5.5	7.0	6.5
2	15.5	15.0	12.0	11.5	7.0	6.5	5.0	5.0	6.5	5.0	6.5	6.0
3	15.5	15.0	11.5	11.5	7.0	6.5	5.5	5.0	6.5	5.0	6.5	6.0
4	15.5	15.0	11.5	11.0	7.0	6.5	5.5	5.5	6.0	5.0	6.5	6.0
5	15.5	15.0	11.0	11.0	6.5	6.5	5.5	5.5	5.5	5.0	6.5	6.0
6	15.5	15.0	11.0	11.0	6.5	6.5	5.5	5.5	5.5	5.5	6.5	6.0
7	15.0	15.0	11.0	10.5	6.5	6.0	5.5	5.5	5.5	5.5	6.5	6.0
8	15.0	14.5	10.5	10.5	6.5	6.5	5.5	5.5	6.0	5.5	6.5	6.0
9	15.0	14.5	10.5	10.0	6.5	6.5	5.5	5.5	6.0	5.5	6.5	6.5
10	15.0	14.5	10.0	10.0	6.5	6.5	5.5	5.5	5.5	5.5	6.5	6.5
11	15.0	14.5	10.0	9.5	6.5	6.0	6.0	5.5	5.5	5.5	7.0	6.5
12	15.0	14.5	9.5	9.5	6.5	6.0	5.5	5.5	6.0	5.5	6.5	6.5
13	15.0	14.5	9.5	9.0	6.5	6.0	5.5	5.5	6.0	5.5	7.5	6.5
14	14.5	14.5	9.0	9.0	6.5	6.0	5.5	5.0	6.0	5.5	7.0	6.5
15	14.5	14.0	9.0	9.0	6.5	6.0	5.5	5.0	6.0	5.5	7.0	6.5
16	14.5	14.0	9.0	9.0	6.5	6.0	5.5	5.0	6.5	6.0	6.5	6.5
17	14.5	14.0	9.0	9.0	6.0	6.0	5.5	5.0	6.5	6.0	6.5	6.5
18	14.5	14.0	9.0	8.5	6.0	6.0	5.5	5.5	7.0	6.0	6.5	6.5
19	14.5	14.0	8.5	8.5	6.0	6.0	5.5	5.5	6.5	6.0	6.5	6.0
20	14.0	14.0	8.5	8.5	6.0	6.0	5.5	5.5	6.0	6.0	6.5	6.5
21	14.0	13.5	8.5	8.0	6.0	6.0	5.5	5.5	6.5	6.0	6.5	6.0
22	14.0	13.5	8.0	7.5	6.0	6.0	5.5	5.5	6.5	6.5	6.5	6.0
23	13.5	13.0	8.0	7.5	6.0	6.0	5.5	5.5	7.0	6.5	6.5	6.0
24	13.5	13.0	7.5	7.5	6.0	6.0	5.5	5.5	6.5	6.0	6.5	6.0
25	13.5	13.0	7.5	7.5	6.0	5.5	5.5	5.5	7.0	6.5	6.5	6.0
26	13.5	11.5	7.5	7.5	6.0	5.5	5.5	5.5	7.0	7.0	6.5	6.0
27	13.5	13.0	7.5	7.0	5.5	5.5	5.5	5.5	7.0	6.5	7.0	6.0
28	13.0	13.0	7.5	7.0	5.5	5.5	5.5	5.5	7.0	6.5	6.5	6.0
29	13.0	12.5	7.0	7.0	5.5	5.5	5.5	5.5	---	---	6.5	6.0
30	12.5	12.0	7.0	6.5	5.5	5.0	5.5	5.5	---	---	6.5	6.5
31	12.5	12.0	---	---	5.0	5.0	6.0	5.5	---	---	7.0	6.5
MONTH	15.5	11.5	12.0	6.5	7.0	5.0	6.0	5.0	7.0	5.0	7.5	6.0

## WILLAMETTE RIVER BASIN

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14145500 MIDDLE FORK WILLAMETTE RIVER ABOVE SALT CREEK, NEAR OAKRIDGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	7.0	7.0	6.5	9.0	8.5	10.0	8.5	10.0	9.0	13.5	13.0
2	7.5	7.0	7.0	6.5	9.0	8.0	10.0	9.5	10.5	9.5	13.5	13.0
3	7.5	7.0	7.5	6.0	9.0	7.5	10.0	9.5	11.0	10.0	13.5	13.0
4	7.0	7.0	7.5	6.0	8.5	7.5	10.0	8.5	11.5	10.5	13.5	13.5
5	7.5	6.5	7.0	6.0	8.5	7.5	10.0	8.5	12.0	11.0	14.0	13.5
6	7.0	6.5	7.0	6.0	9.0	7.5	9.5	8.5	11.5	11.0	14.0	13.5
7	7.0	6.5	7.0	6.0	9.0	7.5	9.5	8.5	12.0	11.0	14.0	13.5
8	6.5	6.5	7.5	7.0	9.0	7.5	9.5	9.0	11.5	10.5	14.0	13.5
9	7.0	6.5	7.5	6.5	9.0	7.5	9.5	9.0	11.0	10.5	14.0	13.5
10	7.5	6.5	7.5	7.0	9.0	8.0	9.5	8.5	11.5	10.0	14.0	13.5
11	7.0	6.0	8.0	7.0	9.0	8.5	10.0	8.5	11.5	10.5	14.0	13.5
12	6.5	6.0	8.0	6.5	9.0	8.0	9.5	8.5	11.0	10.5	14.0	13.5
13	7.0	6.0	7.5	6.5	9.0	8.0	10.0	8.5	11.5	11.0	14.0	14.0
14	7.0	6.0	7.5	6.5	9.0	8.0	10.5	8.5	11.5	10.5	14.5	14.0
15	7.5	6.0	7.0	6.5	9.0	7.5	10.0	9.0	11.5	11.0	14.5	14.0
16	7.5	6.0	8.0	7.0	9.0	8.0	9.5	8.5	11.5	10.5	14.5	14.0
17	7.0	6.0	8.0	7.0	9.0	8.0	10.0	8.5	11.5	10.5	14.5	14.0
18	7.0	6.0	8.5	7.0	8.5	8.0	9.5	9.0	11.5	10.5	14.5	14.0
19	7.0	6.0	8.5	7.0	9.0	8.0	10.0	9.0	12.0	11.0	15.0	14.0
20	7.0	6.0	8.5	7.0	8.5	8.0	10.0	9.5	11.5	11.0	15.0	14.0
21	7.0	6.0	8.5	7.5	9.0	8.0	10.0	9.0	12.0	11.0	14.5	14.5
22	6.5	6.0	8.5	7.5	9.0	8.0	10.0	9.0	12.5	11.5	14.5	14.5
23	6.5	6.0	8.5	7.5	9.5	8.0	10.0	9.0	12.0	11.0	15.0	14.5
24	6.5	6.0	9.0	8.0	9.0	8.0	10.5	9.0	12.0	11.0	15.0	14.5
25	6.5	6.5	9.5	8.5	9.0	8.0	10.0	8.5	12.5	12.0	15.0	14.5
26	7.0	6.5	9.5	8.5	9.5	8.0	10.0	9.0	13.0	12.5	15.0	14.5
27	7.0	6.5	9.5	8.0	9.0	8.0	10.0	9.0	13.0	12.5	15.5	15.0
28	7.0	6.0	9.5	8.0	9.0	8.0	10.0	9.5	13.0	12.5	15.5	15.0
29	7.0	6.5	9.5	8.5	9.0	8.0	10.0	9.0	13.0	13.0	15.5	15.0
30	7.0	6.5	10.0	8.5	9.0	8.0	10.5	9.5	13.0	13.0	16.0	15.5
31	---	---	9.5	8.5	---	---	10.5	9.5	13.0	13.0	---	---
MONTH	7.5	6.0	10.0	6.0	9.5	7.5	10.5	8.5	13.0	9.0	16.0	13.0

## 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 upstream from Salmon Creek Falls, 0.1 mi upstream from Needle Creek, 4.6 mi east of Oakridge, and at mile 5.84.

DRAINAGE AREA.--117 mi<sup>2</sup>, at measuring cable 0.6 mi 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1914, nonrecording gage at several sites within 4 mi of present site at various datums. Oct. 1, 1914, to Oct. 14, 1919, water-stage recorder at site 1.8 mi downstream at different datum. Nov. 5, 1933, to Oct. 27, 1964, water-stage recorder at site 0.8 mi downstream at datum 40.53 ft lower. Oct. 28, 1964, to Aug. 27, 1965, nonrecording gage at site 0.6 mi downstream at different datum.

REMARKS.--Records good. No regulation or diversion above station. All records given herein are for measuring cable site.

AVERAGE DISCHARGE.--56 years (water years 1914-19, 1934-83), 427 ft<sup>3</sup>/s, 49.56 in/yr, 309,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 9.15 ft, from floodmark, site and datum then in use, from rating curve extended above 2,100 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 63 ft<sup>3</sup>/s Jan. 8, 1937.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	0600	2,230	4.30	Jan. 7	1230	2,410	4.43
Dec. 6	0130	2,580	4.58	Feb. 18	0300	*2,960	*4.89

Minimum, 142 ft<sup>3</sup>/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	208	520	540	341	383	570	1120	456	592	403	207	177		
2	197	417	850	333	359	523	1070	463	507	526	205	176		
3	197	355	1980	369	339	490	941	449	444	481	200	170		
4	187	313	1930	1140	320	498	818	464	412	423	197	167		
5	184	294	1800	1150	310	502	739	544	387	386	195	162		
6	203	316	2270	1300	318	522	665	561	370	360	192	161		
7	275	291	1450	2130	325	554	608	562	367	347	187	159		
8	295	277	1070	1880	332	663	560	604	367	353	187	159		
9	282	266	852	1360	541	705	529	633	357	337	186	160		
10	261	253	699	1090	600	732	493	623	454	314	184	157		
11	240	240	591	893	694	685	464	584	468	302	184	157		
12	222	230	522	772	699	725	432	571	405	292	183	151		
13	207	221	502	673	686	847	410	559	365	283	180	151		
14	197	213	538	599	712	840	385	560	346	290	178	151		
15	188	206	673	548	785	818	380	677	339	276	177	151		
16	180	209	1310	521	745	739	370	729	316	269	174	151		
17	189	247	1460	510	1410	671	380	696	313	270	171	150		
18	189	319	1160	491	2610	602	400	656	348	258	171	149		
19	178	374	967	512	1700	541	448	626	357	256	171	154		
20	172	383	878	467	1260	499	470	623	356	256	171	150		
21	170	355	938	440	1140	470	523	657	333	243	168	148		
22	180	320	848	434	1170	459	529	666	316	238	168	148		
23	385	292	736	474	1100	442	505	693	309	232	174	150		
24	319	274	622	488	1030	426	523	742	302	229	173	148		
25	286	265	556	458	890	432	505	764	288	226	172	147		
26	316	263	532	489	776	416	481	738	281	224	174	145		
27	303	276	494	572	682	437	456	683	276	218	170	145		
28	303	323	450	540	613	442	442	692	270	216	183	145		
29	897	526	413	496	---	499	448	712	266	211	203	143		
30	999	614	385	447	---	1340	449	671	265	207	197	143		
31	692	---	362	412	---	1310	---	610	---	211	181	---		
TOTAL	9101	9452	28378	22329	22529	19399	16543	19268	10776	9137	5663	4625		
MEAN	294	315	915	720	805	626	551	622	359	295	183	154		
MAX	999	614	2270	2130	2610	1340	1120	764	592	526	207	177		
MIN	170	206	362	333	310	416	370	449	265	207	168	143		
CFSM	2.51	2.69	7.82	6.15	6.88	5.35	4.71	5.32	3.07	2.52	1.56	1.32		
IN.	2.89	3.01	9.02	7.10	7.16	6.17	5.26	6.13	3.43	2.91	1.80	1.47		
AC-FT	18050	18750	56290	44290	44690	38480	32810	38220	21370	18120	11230	9170		
CAL YR 1982	TOTAL	186351	MEAN	511	MAX	3440	MIN	132	CFSM	4.37	IN.	59.25	AC-FT	369600
WTR YR 1983	TOTAL	177200	MEAN	485	MAX	2610	MIN	143	CFSM	4.15	IN.	56.34	AC-FT	351500

## WILLAMETTE RIVER BASIN

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14146700 GRAY CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'48", long 122°30'38", in NE¼SE¼ sec.24, T.21 S., R.2 E., Lane County, Hydrologic Unit 17090001, Willamette National Forest, on left bank 0.9 mi upstream from La Duke Road bridge, and 1.5 mi southwest of Oakridge.

DRAINAGE AREA.--5.06 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,300 ft, from topographic map.

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

AVERAGE DISCHARGE.--5 years, 14.2 ft<sup>3</sup>/s, 38.11 in/yr, 10,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,230 ft<sup>3</sup>/s Dec. 6, 1981, gage height, 7.05 ft, from rating curve extended above 160 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow, result of release of water from bursting logjam; minimum, 0.14 ft<sup>3</sup>/s Sept. 8, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 140 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	0530	282	3.81	Feb. 17	2200	*483	*4.10
Jan. 4	0930	156	3.28	Mar. 30	0430	388	3.93

Minimum, 0.38 ft<sup>3</sup>/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	6.2	9.3	25	8.8	12	11	42	12	3.4	8.9	1.4	1.3		
2	5.0	6.7	45	8.5	10	10	35	10	3.4	17	1.3	1.1		
3	4.7	5.3	82	14	8.8	9.5	30	9.0	3.1	10	1.3	.95		
4	4.1	4.5	67	97	7.8	9.0	25	8.0	2.7	6.8	1.3	.86		
5	3.7	4.2	51	58	7.0	9.0	20	8.0	2.4	5.2	1.2	.77		
6	8.6	9.1	70	56	8.2	12	17	8.9	2.3	4.4	1.1	.74		
7	21	8.7	33	83	13	16	15	9.8	2.1	4.2	1.1	.70		
8	15	6.8	21	62	21	22	12	17	2.1	4.6	1.1	.68		
9	9.5	5.5	15	46	71	19	11	23	1.9	4.7	1.1	.69		
10	7.2	4.7	11	29	57	23	9.2	20	5.7	4.0	1.1	.65		
11	5.9	4.1	8.4	20	48	19	8.3	18	7.7	3.4	1.1	.60		
12	5.1	3.7	7.5	17	48	22	7.3	15	5.6	3.0	1.0	.56		
13	4.5	3.4	8.6	14	39	45	6.5	12	4.2	2.7	.96	.54		
14	4.1	3.2	18	11	41	33	6.0	9.7	3.6	3.1	.90	.51		
15	3.8	3.0	41	10	46	28	5.6	13	3.3	2.6	.87	.48		
16	3.7	3.0	163	9.7	36	21	5.6	17	2.8	2.4	.86	.45		
17	4.9	4.7	118	9.0	201	17	6.0	13	2.7	2.5	.79	.44		
18	5.9	28	60	9.0	205	13	6.6	9.9	3.7	2.3	.71	.51		
19	5.0	33	40	10	110	10	9.3	8.2	5.2	2.2	.69	.68		
20	4.4	26	36	9.3	60	8.8	12	6.9	5.0	2.5	.69	.52		
21	4.4	21	66	8.4	32	7.9	13	5.8	4.1	2.2	.68	.44		
22	7.5	15	57	9.9	34	8.4	12	5.0	3.5	2.0	.66	.51		
23	38	10	32	19	30	9.5	11	4.4	3.2	1.9	.67	.90		
24	16	8.2	22	21	22	8.6	13	4.0	2.9	1.8	.67	.70		
25	8.8	8.1	17	17	18	8.3	14	3.6	2.5	1.8	1.5	.58		
26	11	9.5	17	30	16	8.6	15	3.3	2.4	1.6	1.8	.53		
27	11	12	18	56	14	10	13	3.1	2.2	1.6	1.1	.58		
28	9.9	17	15	34	13	11	11	2.8	2.1	1.5	.92	.57		
29	38	50	13	23	---	17	16	2.6	2.0	1.5	2.3	.52		
30	27	47	12	17	---	184	14	2.5	2.0	1.4	2.7	.53		
31	15	---	10	14	---	84	---	2.9	---	1.4	1.6	---		
TOTAL	318.9	374.7	1199.5	830.6	1228.8	714.6	421.4	288.4	99.8	115.2	35.17	19.59		
MEAN	10.3	12.5	38.7	26.8	43.9	23.1	14.0	9.30	3.33	3.72	1.13	.65		
MAX	38	50	163	97	205	184	42	23	7.7	17	2.7	1.3		
MIN	3.7	3.0	7.5	8.4	7.0	7.9	5.6	2.5	1.9	1.4	.66	.44		
CFSM	2.04	2.47	7.65	5.30	8.68	4.57	2.77	1.84	.66	.74	.22	.13		
IN.	2.34	2.75	8.82	6.11	9.03	5.25	3.10	2.12	.73	.85	.26	.14		
AC-FT	633	743	2380	1650	2440	1420	836	572	198	228	70	39		
CAL YR 1982	TOTAL	6141.33	MEAN	16.8	MAX	187	MIN	.16	CFSM	3.32	IN.	45.15	AC-FT	12180
WTR YR 1983	TOTAL	5646.66	MEAN	15.5	MAX	205	MIN	.44	CFSM	3.06	IN.	41.51	AC-FT	11200



## WILLAMETTE RIVER BASIN

14146950 WALDO LAKE NEAR OAKRIDGE, OR

LOCATION.--Lat 43°46'05", long 122°03'10", in SE¼WN¼ sec.7, T.21 S., R.6 E., Lane County, Hydrologic Unit 170900001, 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 east of Oakridge, and at mile 43.51.

DRAINAGE AREA.--30.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Nonrecording gage. Altitude of gage is 5,410 ft, from topographic map; gage readings have been reduced to National Geodetic Vertical Datum of 1929. Present gage is at same site and datum as former gage for Waldo Lake outlet near Oakridge (see station 14147000) for period 1936-53.

REMARKS.--Lake not regulated. Lake level was lowered approximately 0.5 ft when low rock dam in artificial outlet channel was removed Sept. 23, 1971. Lake outlet is an old artificial outlet channel 30 ft 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 0.51 ft<sup>3</sup>/s Oct. 1, 1981. The maximum stage of the lake during period 1936-53 was 5,412.98 ft, which occurred Jan. 2, 1943. At times during this period the lake elevation could have been as much as 2 ft below elevation 5,410 ft. A high-water mark noted Sept. 3, 1936, indicated that an elevation of 5,413.2 ft 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; minimum observed, 759,400 acre-ft Oct. 9, 1980, elevation, 5,410.14 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 770,100 acre-ft July 21, elevation, 5,411.87 ft; minimum observed, 764,900 acre-ft Oct. 13, elevation, 5,411.04 ft.

## ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)
Oct. 13 .....	5,411.04	764,900
July 21 .....	5,411.87	770,100

## 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 northwest of Oakridge and at mile 1.0.

DRAINAGE AREA.--246 mi<sup>2</sup>, at measuring section 0.5 mi 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 National Geodetic Vertical Datum of 1929 (river profile survey). Oct. 1, 1909, to March 31, 1916, water-stage recorder or nonrecording gage at several sites within 0.8 mi of present site at various datums. Sept. 10, 1935, to Oct. 3, 1938, nonrecording gage at present site and datum.

REMARKS.--Records excellent except those for period of no gage-height record July 13 to Aug. 16, which are fair. 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.--54 years (water years 1910-15, 1936-83), 792 ft<sup>3</sup>/s, 43.72 in/yr, 573,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.14 ft, from floodmark, from rating curve extended above 7,100 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 22 ft<sup>3</sup>/s Aug. 20, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	1830	3,500	5.95	Feb. 18	0400	*5,990	*7.96
Dec. 6	0430	5,370	7.50	Mar. 30	0630	4,450	6.78
Jan. 7	1200	4,880	7.12				

Minimum, 161 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	298	1060	1320	733	794	1170	2470	826	878	601	260	241		
2	272	841	1670	714	742	1070	2310	826	795	771	260	234		
3	273	708	4020	812	696	987	2060	795	711	708	260	221		
4	255	618	4340	2560	659	985	1800	783	651	629	240	213		
5	244	568	3740	2540	627	1000	1590	837	612	574	240	208		
6	271	688	4760	3060	634	1080	1420	857	583	539	240	203		
7	465	636	3220	4520	691	1160	1280	877	562	526	240	200		
8	516	582	2320	3830	713	1410	1170	1010	547	537	240	197		
9	474	538	1800	2870	1160	1480	1090	1090	534	510	240	199		
10	409	499	1470	2230	1270	1580	1020	1070	645	474	220	194		
11	361	465	1240	1810	1520	1460	965	1000	682	451	220	194		
12	327	439	1090	1550	1520	1480	897	984	616	427	220	190		
13	300	416	1060	1360	1520	1790	838	946	559	400	220	186		
14	281	396	1170	1220	1550	1810	791	931	525	420	220	184		
15	267	379	1430	1100	1650	1680	752	1130	515	400	220	183		
16	254	377	2670	1040	1590	1500	725	1320	488	380	200	180		
17	267	518	3210	1010	2700	1340	721	1220	472	380	202	177		
18	274	810	2550	967	5280	1210	767	1120	526	360	199	178		
19	254	1030	2050	1020	3520	1080	890	1040	542	360	196	189		
20	241	1050	1810	950	2740	985	904	1000	540	340	197	177		
21	238	920	1880	887	2560	926	951	1020	505	340	193	171		
22	248	802	1790	863	2800	907	954	1010	477	320	190	171		
23	663	700	1590	987	2470	872	920	1020	463	320	197	171		
24	573	629	1360	1020	2180	830	931	1060	459	300	198	171		
25	468	588	1210	950	1860	886	914	1070	435	300	192	169		
26	514	570	1180	985	1610	860	924	1050	420	300	210	166		
27	526	588	1100	1170	1400	915	860	980	407	280	193	166		
28	517	732	994	1120	1250	901	815	955	395	280	208	166		
29	2600	1280	908	1030	---	1080	848	963	388	280	284	163		
30	2390	1520	841	931	---	3750	816	912	384	280	315	163		
31	1460	---	785	859	---	3090	---	868	---	260	252	---		
TOTAL	16500	20947	60578	46698	47706	41274	33393	30570	16316	13047	6966	5625		
MEAN	532	698	1954	1506	1704	1331	1113	986	544	421	225	188		
MAX	2600	1520	4760	4520	5280	3750	2470	1320	878	771	315	241		
MIN	238	377	785	714	627	830	721	783	384	260	190	163		
CFSM	2.16	2.84	7.94	6.12	6.93	5.41	4.52	4.01	2.21	1.71	.91	.76		
IN.	2.50	3.17	9.16	7.06	7.21	6.24	5.05	4.62	2.47	1.97	1.05	.85		
AC-FT	32730	41550	120200	92630	94620	81870	66240	60640	32360	25880	13820	11160		
CAL YR 1982	TOTAL	352326	MEAN	965	MAX	6890	MIN	163	CFSM	3.92	IN.	53.28	AC-FT	698800
WTR YR 1983	TOTAL	339620	MEAN	930	MAX	5280	MIN	163	CFSM	3.78	IN.	51.36	AC-FT	673600

## 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 downstream from Whitehead Creek, 4.2 mi downstream from North Fork of Middle Fork Willamette River, 7.0 mi northwest of Oakridge, and at mile 220.2.

DRAINAGE AREA.--924 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. Mar. 22, 1911, to Sept. 30, 1912, nonrecording gage at site 4.0 mi 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 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.--61 years, 2,776 ft<sup>3</sup>/s, 2,011,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,800 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 18.8 ft, from floodmark, site and datum then in use, from rating curve extended above 39,000 ft<sup>3</sup>/s; minimum, 322 ft<sup>3</sup>/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 in February 1890 at site used 1923-50, from information by local resident, discharge, about 55,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,100 ft<sup>3</sup>/s Feb. 18, gage height, 6.19 ft; minimum, 1,340 ft<sup>3</sup>/s July 30, Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2260	3670	4240	3200	2260	3880	8010	2580	4150	2240	1360	2170
2	2200	3260	4720	3150	1710	2930	8530	2600	3460	3250	1420	2160
3	2210	3110	9020	3300	1660	2710	8110	2440	3060	3030	1670	2130
4	2180	2960	9450	5970	1760	2610	7220	2330	2910	2580	1900	2110
5	2160	2870	8420	6040	1700	2390	5730	2510	2780	2240	1890	2090
6	2210	3060	10400	6700	1700	2450	4500	2590	2620	2090	1880	2080
7	2570	2980	7640	9300	1830	2580	3930	3040	2620	2070	1870	2070
8	2610	2900	6230	8600	1840	3330	3730	3360	2710	2270	1780	1920
9	2550	2830	5680	6960	3000	3890	3340	3560	2740	2180	1500	1800
10	2440	2760	5100	5780	4020	4250	3140	3380	3000	1970	1490	1800
11	2360	2690	4320	4610	4720	4360	2810	3240	3220	1810	1500	1800
12	2290	2650	3770	4280	4680	4390	2330	3150	2960	1780	1490	1780
13	2240	2620	4070	4140	4600	5040	2230	2760	2690	1740	1470	1780
14	2200	2590	4570	3960	4210	5090	2000	2700	2470	1880	1460	1770
15	2180	2570	5520	3770	3860	4920	1900	3010	2300	1730	1450	1770
16	2160	2550	8790	3670	3530	4520	1860	3400	2240	1610	1450	1770
17	2180	2730	9950	3620	5750	4200	1840	3800	2200	1560	1430	1750
18	2200	3220	8880	3530	11500	3930	1960	3720	2380	1550	1430	1760
19	2160	3630	8430	3610	8170	3690	2130	3600	2480	1570	1430	1760
20	2130	3710	8100	3520	9010	3490	2150	3670	2390	1670	1440	1760
21	1850	3530	8420	3430	8520	3050	2400	4040	2230	1570	1430	1750
22	1800	3320	8230	3400	8830	2350	2560	4070	2110	1510	1700	1750
23	2660	3130	6980	3620	8320	2160	2650	4210	2070	1500	1500	1760
24	2440	2980	6360	3680	7830	2070	2710	4670	2010	1470	1450	1750
25	2240	2920	6070	3600	7250	2140	2660	5110	1880	1390	1780	1750
26	2050	2890	5980	3660	5780	2100	2700	5160	1850	1380	2130	1750
27	2490	2890	5320	3790	5110	2180	2550	4600	1830	1370	2090	1750
28	2740	3110	4660	3950	4140	2190	2500	4420	1800	1380	2130	1750
29	5390	4010	3700	3780	---	2510	2600	4600	1750	1370	2240	1750
30	5640	4640	3420	3590	---	7730	2580	4700	1730	1360	2270	1740
31	4290	---	3300	3040	---	7880	---	4330	---	1360	2180	---
TOTAL	79080	92780	199740	137250	137290	111010	103360	111350	74640	56480	52210	55530
MEAN	2551	3093	6443	4427	4903	3581	3445	3592	2488	1822	1684	1851
MAX	5640	4640	10400	9300	11500	7880	8530	5160	4150	3250	2270	2170
MIN	1800	2550	3300	3040	1660	2070	1840	2330	1730	1360	1360	1740
AC-FT	156900	184000	396200	272200	272300	220200	205000	220900	148000	112000	103600	110100
CAL YR 1982	TOTAL	1321160	MEAN	3620	MAX	14600	MIN	1070	AC-FT	2621000		
WTR YR 1983	TOTAL	1210720	MEAN	3317	MAX	11500	MIN	1360	AC-FT	2401000		

## WILLAMETTE RIVER BASIN

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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.

INSTRUMENTATION.--Temperature recorder since September 1950.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 3, 1961; minimum, 0.0°C Jan. 20-22, 1962, Feb. 2, 1979, Jan. 28-30, 1980.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.5°C July 30; minimum, 3.0°C Feb. 5.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

14148000 MIDDLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIDGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	6.5	8.5	7.5	10.0	8.5	12.0	10.5	15.5	14.0	14.0	12.5
2	7.5	6.5	9.5	7.5	10.5	8.5	11.5	10.5	17.5	13.5	15.0	12.0
3	7.5	6.0	11.5	7.5	12.5	8.5	13.5	10.0	15.5	13.5	15.5	12.5
4	8.0	6.5	11.0	8.0	12.5	9.0	14.5	11.0	16.0	13.0	15.5	12.5
5	8.0	6.5	9.5	8.0	13.0	9.0	14.0	12.0	16.0	13.0	15.5	12.5
6	8.0	6.0	9.0	7.0	13.5	9.5	13.5	12.0	16.5	12.5	15.0	12.5
7	8.0	6.5	8.5	7.0	14.0	10.0	12.0	10.5	15.5	13.5	15.0	12.5
8	8.0	6.5	8.0	6.5	14.0	10.5	12.5	10.0	14.5	13.5	14.0	12.0
9	7.0	6.0	8.0	6.0	13.0	11.0	13.5	10.5	16.0	13.5	15.0	11.5
10	7.5	5.5	8.5	6.5	11.0	9.5	14.5	10.0	14.5	13.5	15.0	11.5
11	8.0	6.0	10.5	7.0	12.0	9.0	16.0	11.5	17.0	12.5	16.0	13.0
12	7.0	5.5	11.0	7.0	13.0	9.5	16.0	12.0	17.0	12.5	16.0	13.0
13	8.5	5.5	11.5	8.0	13.5	9.5	16.0	12.5	16.5	13.0	16.0	13.0
14	9.0	5.0	10.0	8.0	13.0	10.5	14.5	11.5	18.0	13.0	16.0	13.0
15	9.5	5.5	8.5	7.5	13.5	10.0	13.0	11.0	17.5	13.5	16.0	13.0
16	10.5	6.0	10.5	7.0	13.0	10.0	15.5	11.0	17.5	13.5	15.5	12.5
17	9.5	6.5	10.5	7.0	11.5	10.5	15.5	11.5	17.5	13.0	15.0	13.0
18	10.5	7.5	11.0	8.5	10.5	9.5	16.0	11.5	16.5	13.0	13.5	12.5
19	10.0	8.0	11.5	7.5	11.5	9.0	15.5	12.5	14.0	12.5	15.0	11.5
20	10.0	7.5	12.0	8.0	12.5	9.0	16.0	12.0	15.5	12.5	15.0	11.5
21	10.5	8.0	11.5	8.5	13.5	9.0	17.0	11.5	16.0	12.0	15.0	12.0
22	9.0	7.5	12.0	8.5	12.5	10.5	17.5	12.5	13.0	12.0	15.5	12.5
23	8.5	7.0	12.0	9.0	12.0	10.0	17.5	13.5	14.0	12.0	15.0	13.5
24	8.5	6.5	12.0	9.0	14.0	9.5	15.0	13.5	15.5	11.5	16.0	13.5
25	8.5	6.5	12.0	9.0	14.5	10.0	14.5	12.5	15.0	12.0	16.0	13.0
26	9.0	6.5	12.0	9.0	14.5	11.0	17.0	12.0	15.0	12.5	15.5	13.0
27	9.5	6.5	12.5	9.5	15.5	11.5	14.5	12.5	15.5	12.5	14.5	12.5
28	10.0	7.5	12.5	10.0	13.5	11.5	17.0	12.5	14.0	12.5	14.5	12.5
29	11.0	7.5	13.0	10.5	14.5	11.0	18.0	13.0	14.0	12.5	14.5	12.0
30	10.0	8.0	11.5	10.0	12.0	11.0	18.5	13.5	14.0	12.5	14.0	11.5
31	---	---	10.0	9.0	---	---	17.0	14.5	13.5	12.5	---	---
MONTH	11.0	5.0	13.0	6.0	15.5	8.5	18.5	10.0	18.0	11.5	16.0	11.5



## 14149000 LOOKOUT POINT LAKE NEAR LOWELL, OR

LOCATION.--Lat 43°54'50", long 122°45'00", in 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 east of Lowell, and at mile 206.9.

DRAINAGE AREA.--991 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (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 at elevation 929 ft, and usable capacity is 349,200 acre-ft between elevations 819 ft and 929 ft, 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 Dec. 26, 1964, elevation, 931.09 ft; minimum observed since first filling, 91,450 acre-ft Dec. 1, 1954, elevation, 811.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 447,300 acre-ft June 21, elevation, 927.02 ft; minimum, 122,400 acre-ft Jan. 3, elevation, 826.73 ft.

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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	893.44	874.73	837.64	829.70	837.36	880.35	906.04	918.72	925.09	926.28	926.35	915.78
2	892.52	874.15	836.75	827.84	837.76	880.70	906.37	919.47	924.74	926.49	925.96	915.52
3	891.48	873.08	840.08	827.27	838.05	881.62	906.38	920.17	924.95	926.56	926.07	915.22
4	890.61	871.91	846.18	829.17	838.38	882.48	905.95	920.68	925.13	926.39	925.95	914.93
5	889.76	870.52	847.84	831.95	839.38	883.18	905.12	921.38	925.46	926.49	925.93	914.64
6	889.10	869.38	847.45	835.10	839.75	883.96	904.30	922.17	925.60	926.39	925.91	914.33
7	888.60	868.10	846.38	839.90	840.30	884.95	904.48	923.06	925.80	926.33	925.86	914.01
8	888.06	866.70	847.74	842.27	841.38	884.30	904.83	924.31	925.90	926.41	925.69	913.61
9	887.64	865.24	849.65	841.82	843.32	885.05	905.65	925.18	925.94	926.37	925.42	913.15
10	887.13	863.70	847.84	840.32	845.70	886.62	906.24	925.32	926.16	926.22	925.17	912.60
11	886.58	862.15	844.65	837.64	848.15	888.18	906.70	925.36	926.20	925.99	924.88	912.07
12	885.95	860.42	841.90	834.80	850.55	889.76	907.30	925.45	926.10	926.16	924.58	911.50
13	885.16	858.35	838.20	833.10	852.47	892.26	907.59	925.60	925.80	926.21	924.24	910.62
14	884.30	856.68	837.68	833.52	854.63	893.55	907.91	925.58	925.78	926.21	923.88	909.68
15	883.48	854.95	836.12	833.50	856.85	893.95	908.24	925.72	925.93	926.15	923.50	908.77
16	882.60	853.24	841.73	833.25	858.70	894.20	908.56	926.15	926.07	926.08	923.03	907.95
17	881.82	851.70	848.17	833.05	862.60	894.03	908.84	926.00	926.19	925.92	922.58	907.14
18	880.95	850.70	850.32	832.87	871.65	894.00	909.23	925.73	926.39	925.82	922.17	906.32
19	879.94	850.08	851.08	832.70	875.95	894.47	909.69	925.68	926.57	925.92	921.43	905.47
20	879.18	849.43	851.36	832.55	878.37	894.85	910.27	925.74	926.76	925.98	920.86	904.62
21	878.40	848.58	851.34	831.80	879.03	895.26	910.88	926.02	926.44	925.98	920.30	903.72
22	877.42	847.50	850.40	831.60	880.58	895.90	911.62	926.15	926.07	926.00	919.58	902.85
23	877.05	846.08	849.58	831.55	881.72	896.40	912.43	926.40	925.99	925.95	918.78	901.99
24	876.30	844.54	848.20	831.65	881.27	896.48	913.29	926.73	925.96	926.08	917.94	901.07
25	875.51	842.88	846.50	831.30	880.75	897.00	914.10	926.61	925.91	926.35	917.26	900.21
26	874.58	841.26	844.74	831.40	880.00	897.49	914.92	926.30	925.85	926.39	916.78	899.88
27	873.62	839.60	842.38	831.35	881.20	898.20	915.62	925.81	925.78	926.41	916.54	898.45
28	872.72	838.35	839.44	831.70	881.53	898.82	916.40	925.70	925.75	926.41	916.37	897.58
29	873.75	838.33	835.80	833.55	---	899.80	917.18	925.73	925.68	926.41	916.29	896.69
30	874.85	838.89	833.36	835.00	---	904.27	917.93	925.70	925.74	926.38	916.18	895.82
31	875.04	---	831.60	836.12	---	905.77	---	925.40	---	926.36	915.98	---
MEAN	882.50	855.71	843.94	833.53	859.19	891.87	909.47	924.65	925.86	926.23	921.98	907.54
MAX	893.44	874.73	851.36	842.27	881.72	905.77	917.93	926.73	926.76	926.56	926.35	915.78
MIN	872.72	838.33	831.60	827.27	837.36	880.35	904.30	918.72	924.74	925.82	915.98	895.82
(+)	251500	149800	133000	143300	273000	360900	409300	440400	441900	444500	401400	323300
(+)	-66700	-101700	-16800	+10300	+129700	+87900	+48400	+31100	+1500	+2600	-43100	-78100

CAL YR 1982 MEAN 890.24 MAX 927.15 MIN 830.00 AC-FT# -133000  
WTR YR 1983 MEAN 890.36 MAX 926.76 MIN 827.27 AC-FT# +5000

+ Contents, in acre-feet, at 2400, on last day of month.

# Change in contents, in acre-feet.

## WILLAMETTE RIVER BASIN

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 upstream from Lost Creek, 2.0 mi northwest of Dexter, 2.6 mi downstream from Dexter Dam, and at mile 201.2.

DRAINAGE AREA.--1,001 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929 (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 upstream at different datum, and June 9, 1955, to Feb. 18, 1977, at datum 3.00 ft 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.--37 years, 3,171 ft<sup>3</sup>/s, 2,297,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,600 ft<sup>3</sup>/s Jan. 18, 1953, gage height, 12.46 ft, site and datum then in use, from rating curve extended above 33,000 ft<sup>3</sup>/s; minimum daily, 100 ft<sup>3</sup>/s Nov. 25, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 13.9 ft Dec. 28, 1945, former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft<sup>3</sup>/s Dec. 21, gage height, 9.33 ft; minimum, 964 ft<sup>3</sup>/s Feb. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3690	4300	6460	5280	1470	2300	9770	1270	5330	1560	1350	2790
2	3870	4310	6920	5080	1150	1310	9740	1270	4290	2610	1460	2780
3	4030	4850	6820	4550	1130	1310	9970	1270	2860	3300	1650	2770
4	4020	4910	2980	3890	1140	1310	9730	1270	2220	3270	1670	2510
5	3480	5260	8280	3910	1190	1310	8630	1260	2220	2070	1870	2360
6	3470	5210	5770	3950	1200	1310	7180	1190	2230	2300	1960	2420
7	3750	5380	7150	4620	1210	1620	4670	1080	2450	2310	1970	2630
8	3810	5350	9470	6360	1210	4660	2900	1110	2570	2130	1970	2730
9	3460	5310	9540	8950	1210	3310	2130	2160	2740	2200	1860	2650
10	3330	5160	9550	9090	1670	1980	2060	3680	2830	2190	1910	2640
11	3340	5270	9550	9070	2380	1980	2060	3490	3520	2250	2200	2620
12	3340	5250	9560	8800	2360	1980	1720	3130	3380	1530	2100	2760
13	3590	5510	9550	6900	2380	1980	1640	2480	3240	1480	1980	3400
14	3660	5070	7520	4120	1860	3340	1360	2850	2550	1900	1990	3390
15	3660	5040	7510	4020	1310	4550	1230	2960	2030	1930	2030	3420
16	3630	5100	3860	3990	1320	4520	1230	3170	2060	1920	2310	3210
17	3670	5040	3520	4000	1340	4520	1250	4240	2050	1620	2300	3300
18	3700	5020	7710	3990	1110	4500	1250	4440	2060	1600	2290	3310
19	3720	5020	9200	3990	2420	3300	1240	3680	2070	1610	2400	3340
20	3600	5020	9180	4000	6600	3040	1230	3760	2090	1490	2520	3330
21	3040	5020	10300	4010	8530	2270	1250	4000	2920	1560	2510	3330
22	3660	5010	11300	4000	8030	1270	1250	4000	2880	1470	2970	3310
23	3660	5060	9720	3990	7620	1420	1250	3960	2480	1380	2950	3290
24	3640	5100	9680	3990	10100	2060	1250	4140	2010	1150	2920	3280
25	3660	5110	9660	4000	9620	1310	1260	5880	1900	1140	2970	3300
26	3530	5110	9640	4000	8810	1240	1260	6220	1880	1350	3010	3280
27	4170	4810	9540	4000	7910	1240	1260	6490	1890	1580	2630	3140
28	4340	4650	9390	4000	5940	1260	1260	4960	1890	1430	2540	3220
29	4240	4810	9150	1950	---	1300	1270	4960	1890	1360	2430	3230
30	4330	4980	7300	1730	---	1590	1270	5340	1690	1350	2280	3250
31	4300	---	6260	1870	---	5460	---	5370	---	1340	2530	---
TOTAL	115390	151040	252040	146100	102220	74550	93570	105080	76220	56380	69530	90990
MEAN	3722	5035	8130	4713	3651	2405	3119	3390	2541	1819	2243	3033
MAX	4340	5510	11300	9090	10100	5460	9970	6490	5330	3300	3010	3420
MIN	3040	4300	2980	1730	1110	1240	1230	1080	1690	1140	1350	2360
AC-FT	228900	299600	499900	289800	202800	147900	185600	208400	151200	111800	137900	180500
CAL YR 1982	TOTAL	1488400	MEAN	4078	MAX	15400	MIN	1170	AC-FT	2952000		
WTR YR 1983	TOTAL	1333110	MEAN	3652	MAX	11300	MIN	1080	AC-FT	2644000		

## WILLAMETTE RIVER BASIN

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14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1955 to current year.

INSTRUMENTATION.--Temperature recorder since August 1955.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.5°C Sept. 17, 21, 22, 24, 25, 1961; minimum, 3.0°C Jan. 2, 7-9, Feb. 2-4, 1979.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.0°C Oct. 15, Sept. 9, 24-26; minimum, 5.0°C Dec. 31 to Jan. 2, Feb. 4, 5.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	15.0	13.5	12.5	8.5	8.0	5.5	5.0	6.5	5.5	7.5	7.0
2	15.5	15.0	13.5	12.5	8.5	8.0	5.5	5.0	6.5	5.5	7.5	6.5
3	15.5	15.0	13.0	12.5	8.5	8.0	5.5	5.5	6.5	5.5	8.0	7.0
4	15.5	15.0	13.0	12.5	9.0	8.0	6.0	5.5	6.5	5.0	8.0	7.0
5	15.5	14.5	12.5	12.0	8.5	8.0	5.5	5.5	6.5	5.0	8.5	7.0
6	15.5	15.0	12.5	12.0	8.5	7.5	6.0	5.5	6.0	5.5	8.0	7.0
7	15.0	14.5	12.5	11.5	8.0	7.5	6.0	5.5	6.0	5.5	7.5	7.0
8	15.0	15.0	12.0	11.5	7.5	7.0	6.0	5.5	6.0	5.5	7.5	7.0
9	15.5	14.5	12.0	11.5	7.5	7.0	6.0	5.5	6.0	5.5	7.5	7.5
10	15.5	14.5	11.5	11.0	7.5	7.0	6.0	5.5	6.0	5.5	8.0	7.5
11	15.5	15.0	11.5	11.0	7.0	6.5	6.0	5.5	6.0	5.5	8.5	7.0
12	15.5	15.0	11.5	10.5	7.0	7.0	6.0	5.5	7.0	6.0	8.5	7.5
13	15.5	15.0	11.0	10.5	7.0	6.5	6.0	5.5	6.5	6.0	9.0	7.5
14	15.5	15.0	11.0	10.0	7.0	6.5	6.0	5.5	6.0	6.0	8.0	7.5
15	16.0	15.0	10.5	10.0	7.0	6.5	5.5	5.5	6.5	6.0	8.0	7.5
16	15.5	15.0	10.5	10.5	7.5	7.0	5.5	5.5	7.0	6.0	8.0	7.0
17	15.5	14.5	11.0	10.5	7.5	7.0	6.0	5.5	7.0	6.0	8.0	7.0
18	15.0	14.0	10.5	10.5	7.0	6.5	6.0	5.5	6.5	6.0	7.5	7.0
19	15.0	14.0	10.5	10.0	7.0	6.5	6.0	5.5	6.5	6.5	8.5	7.5
20	14.5	14.0	10.5	10.0	6.5	6.5	6.0	5.5	6.5	6.5	8.5	7.0
21	14.5	14.0	10.0	9.5	6.5	6.5	5.5	5.5	6.5	6.5	8.5	7.0
22	14.5	14.0	10.0	9.5	6.5	6.5	5.5	5.5	6.5	6.5	8.5	7.0
23	15.0	14.5	9.5	8.5	6.5	6.5	6.0	5.5	7.0	6.5	8.5	7.0
24	15.0	14.0	9.0	8.5	6.5	6.0	6.0	5.5	7.0	6.5	9.0	7.5
25	14.5	14.0	9.0	8.5	6.5	6.0	6.0	5.5	6.5	6.5	8.5	7.5
26	14.5	14.0	9.0	8.5	6.5	6.0	6.5	6.0	7.0	6.0	8.0	7.5
27	14.5	14.0	9.0	8.5	6.5	6.0	6.5	6.0	7.0	6.5	7.5	7.5
28	14.0	13.5	9.0	8.0	6.0	5.5	6.0	5.5	7.0	6.5	8.5	7.5
29	14.0	13.5	9.0	8.0	6.0	5.5	6.5	5.5	---	---	8.5	7.5
30	14.0	13.5	8.5	8.0	5.5	5.5	6.0	5.5	---	---	9.0	7.5
31	14.0	13.5	---	---	5.5	5.0	6.5	5.5	---	---	8.5	8.0
MONTH	16.0	13.5	13.5	8.0	9.0	5.0	6.5	5.0	7.0	5.0	9.0	6.5

## WILLAMETTE RIVER BASIN

14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.5	11.0	10.0	10.0	10.0	12.5	12.0	14.5	13.0	15.0	14.0
2	8.0	7.5	11.0	10.0	---	---	13.0	12.5	15.0	12.5	15.0	14.0
3	7.5	7.0	12.5	10.0	---	---	14.0	12.0	14.0	13.0	15.0	14.0
4	8.0	7.0	11.5	10.0	---	---	13.5	12.5	15.0	12.5	15.5	14.0
5	8.0	7.5	10.5	10.0	---	---	13.0	12.5	14.5	13.0	15.5	14.0
6	8.5	7.5	11.5	10.0	---	---	13.0	12.0	15.0	12.5	15.5	14.0
7	8.5	7.5	11.0	10.0	---	---	13.0	12.0	15.0	12.5	15.5	14.0
8	9.0	7.5	11.0	9.5	---	---	13.5	12.0	14.0	13.0	15.0	14.0
9	8.5	7.5	11.0	9.5	---	---	13.5	12.0	14.0	13.0	16.0	14.0
10	9.0	7.5	10.5	9.5	13.0	11.5	15.0	12.0	14.0	13.0	15.5	14.0
11	9.0	7.5	11.5	9.5	12.5	11.5	14.5	12.5	14.5	13.0	15.5	14.5
12	9.0	7.5	11.0	9.5	---	---	13.5	12.5	15.0	12.5	15.5	14.5
13	10.0	7.5	11.5	9.5	---	---	13.5	12.5	15.0	12.5	15.5	14.5
14	10.0	7.5	11.0	9.5	12.5	11.5	14.0	12.5	15.0	12.5	15.5	14.5
15	10.5	8.0	10.5	9.5	13.5	11.5	14.0	12.5	15.0	12.5	15.5	14.5
16	11.0	8.0	10.5	9.5	13.0	11.5	14.0	12.5	15.0	12.5	15.5	14.5
17	11.0	8.5	10.5	9.0	12.5	11.5	14.5	12.5	15.0	13.0	15.5	14.5
18	11.5	9.0	10.5	9.5	12.5	11.5	14.5	12.5	15.0	13.5	15.0	14.0
19	11.0	9.5	10.5	9.5	12.5	11.5	14.5	13.0	14.5	13.5	15.0	14.0
20	11.0	9.5	10.5	10.0	13.0	11.5	13.5	13.0	14.5	13.5	15.0	13.5
21	11.5	9.5	11.0	10.0	13.0	11.5	15.0	12.5	15.0	13.5	15.5	14.0
22	---	9.0	11.0	10.0	13.0	12.0	15.5	13.0	14.5	13.5	15.5	14.5
23	---	---	11.0	10.0	13.0	12.0	14.0	13.0	14.5	13.5	15.5	15.0
24	---	---	10.5	10.0	13.5	11.5	14.0	13.0	14.5	13.5	16.0	15.0
25	---	---	10.5	10.0	13.5	11.5	15.0	13.0	14.5	13.5	16.0	15.0
26	---	---	10.5	10.5	13.0	12.0	15.0	13.0	15.0	13.5	16.0	15.0
27	12.0	---	11.0	10.5	14.0	12.0	14.0	13.0	15.0	13.5	15.5	15.0
28	12.0	9.5	11.0	10.5	13.0	12.0	14.5	12.5	14.5	13.5	15.5	14.5
29	12.0	10.0	11.0	10.0	14.0	12.0	15.0	12.5	15.0	14.0	15.5	14.5
30	12.0	10.0	11.0	10.5	12.5	12.0	15.0	12.5	14.5	14.0	15.5	14.5
31	---	---	10.5	10.0	---	---	13.5	13.0	14.5	14.0	---	---
MONTH	12.0	7.0	12.5	9.0	14.0	10.0	15.5	12.0	15.0	12.5	16.0	13.5

## WILLAMETTE RIVER BASIN

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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 downstream from North Fork, 8.0 mi northeast of Lowell, and at mile 14.4.

DRAINAGE AREA.--118 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 844.42 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--20 years, 414 ft<sup>3</sup>/s, 47.65 in/yr, 299,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft<sup>3</sup>/s Jan. 21, 1972, which may have been caused by release from breakup of temporary logjam 12 mi upstream, gage height, 11.84 ft; minimum, 16 ft<sup>3</sup>/s Oct. 3, 4, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	0400	3,840	6.74	Feb. 18	0300	*5,530	*7.94
Jan. 4	1100	3,850	6.75	Mar. 30	0500	4,960	7.55

Minimum, 39 ft<sup>3</sup>/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	91	467	1110	290	295	463	1430	325	217	398	74	66		
2	76	342	1480	285	268	412	1410	306	202	593	73	70		
3	99	267	3100	379	242	373	1380	279	174	408	70	58		
4	81	217	2620	2590	221	382	1130	258	150	305	68	53		
5	70	206	2060	1830	204	428	922	263	138	241	66	51		
6	139	525	2630	2030	243	629	759	275	129	206	64	49		
7	474	472	1540	2950	395	685	635	394	122	184	63	48		
8	363	370	996	2180	487	784	535	691	115	189	62	47		
9	223	293	747	1600	1340	751	483	939	111	188	62	47		
10	150	240	582	1070	1110	874	447	844	252	158	63	45		
11	115	201	461	803	1010	748	431	685	242	142	64	47		
12	95	175	413	645	823	687	391	590	210	132	64	46		
13	83	156	498	524	765	840	360	476	171	126	59	45		
14	75	142	752	443	832	906	336	407	147	146	57	44		
15	69	131	908	388	865	868	312	585	138	128	55	43		
16	66	131	1770	354	756	719	293	734	124	117	55	43		
17	90	185	1960	325	1760	584	280	580	124	112	53	42		
18	90	476	1430	302	4010	483	270	463	157	110	53	44		
19	75	752	1040	388	2040	407	287	388	174	107	52	52		
20	68	983	881	378	1360	359	265	337	186	114	51	44		
21	68	816	978	345	1250	334	305	298	158	106	51	41		
22	91	630	969	347	1400	327	276	267	138	96	50	40		
23	726	463	811	543	1050	325	273	242	133	91	49	40		
24	404	361	667	542	874	304	381	221	137	88	49	41		
25	246	310	575	447	752	462	440	202	120	88	49	40		
26	294	304	568	466	645	439	561	186	111	88	49	40		
27	280	314	546	582	554	559	456	173	108	82	50	40		
28	282	421	468	553	488	587	380	161	102	81	48	40		
29	2510	1000	406	455	---	735	392	151	98	79	103	40		
30	1450	1290	359	378	---	3510	333	143	97	75	122	39		
31	716	---	321	332	---	2160	---	174	---	73	73	---		
TOTAL	9659	12640	33646	24744	26039	22124	16153	12037	4485	5051	1921	1385		
MEAN	312	421	1085	798	930	714	538	388	150	163	62.0	46.2		
MAX	2510	1290	3100	2950	4010	3510	1430	939	252	593	122	70		
MIN	66	131	321	285	204	304	265	143	97	73	48	39		
CFSM	2.64	3.57	9.19	6.76	7.88	6.05	4.56	3.29	1.27	1.38	.53	.39		
IN.	3.05	3.98	10.61	7.80	8.21	6.97	5.09	3.79	1.41	1.59	.61	.44		
AC-FT	19160	25070	66740	49080	51650	43880	32040	23880	8900	10020	3810	2750		
CAL YR 1982	TOTAL	167973	MEAN	460	MAX	3340	MIN	28	CFSM	3.90	IN.	52.95	AC-FT	333200
WTR YR 1983	TOTAL	169884	MEAN	465	MAX	4010	MIN	39	CFSM	3.94	IN.	53.56	AC-FT	337000



## WILLAMETTE RIVER BASIN

14150300 FALL CREEK NEAR LOWELL, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1963 to current year.

INSTRUMENTATION.-- Temperature recorder since August 1963.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 25.0°C Aug. 1, 1979; minimum, 0.0°C at times in 1972, 1976-80.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.0°C Aug. 14, 15; minimum recorded, 3.5°C Feb. 5.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.5	8.5	9.0	8.5			---	---	6.5	5.0	8.5	7.5
2	10.0	9.0	8.5	7.0			---	---	5.5	5.0	8.0	7.0
3	10.5	10.0	9.0	7.0			---	---	5.5	4.0	8.5	7.5
4	11.0	10.0	9.5	9.0			---	---	4.5	4.0	9.0	8.5
5	10.5	9.5	9.0	8.5			---	---	5.0	3.5	8.5	7.5
6	9.5	9.5	9.0	7.5			---	---	6.5	5.0	8.0	7.5
7	9.5	9.0	7.5	6.5			---	---	6.0	5.5	8.0	7.5
8	10.5	9.5	7.0	6.0			---	---	6.5	5.5	8.5	7.5
9	10.5	9.5	6.5	5.5			---	---	6.5	6.0	9.0	8.0
10	10.0	9.5	5.5	4.5			---	---	7.0	6.0	9.0	8.5
11	10.0	9.5	5.0	4.5			6.5	---	8.0	7.0	9.0	8.0
12	10.5	9.5	5.5	4.5			6.5	5.5	8.0	7.0	9.0	8.0
13	10.5	9.5	5.5	5.0			6.0	5.0	7.5	7.0	8.5	7.5
14	10.5	9.5	5.0	4.0			5.5	5.0	7.0	6.5	7.5	7.0
15	11.0	10.0	---	4.0			6.0	5.0	7.5	6.5	7.5	6.0
16	11.5	11.0	---	---			7.0	6.0	7.5	7.0	8.0	6.0
17	11.5	10.0	---	---			8.0	7.0	8.0	7.0	8.5	7.0
18	10.0	8.0	---	---			8.0	7.0	7.5	7.0	---	7.0
19	8.0	7.0	---	---			8.0	6.5	8.0	7.0	---	---
20	8.5	7.0	---	---			6.5	6.0	8.0	7.0	---	---
21	10.0	8.5	---	---			6.0	5.0	8.5	7.5	---	---
22	11.0	10.0	---	---			6.5	5.5	9.0	7.5	---	---
23	11.0	10.5	---	---			7.0	6.0	9.0	8.5	---	---
24	10.5	9.5	---	---			7.0	6.5	8.5	7.5	---	---
25	10.5	10.0	---	---			7.5	6.0	8.0	7.0	---	---
26	10.5	9.5	---	---			8.0	7.5	8.0	6.5	---	---
27	9.5	9.0	---	---			8.0	7.0	8.0	6.5	---	---
28	9.0	8.0	---	---			7.0	5.5	8.0	7.0	---	---
29	10.5	9.0	---	---			7.5	6.5	---	---	---	---
30	10.0	9.5	---	---			7.0	5.5	---	---	---	---
31	9.5	9.0	---	---			7.0	6.5	---	---	---	---
MONTH	11.5	7.0	9.5	4.0			8.0	5.0	9.0	3.5	9.0	6.0

## WILLAMETTE RIVER BASIN

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14150300 FALL CREEK NEAR LOWELL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1					---	---	13.0	11.5	17.0	16.0	16.0	15.0
2					---	---	12.0	11.0	18.5	16.0	16.0	14.5
3					---	---	14.0	10.5	17.0	16.5	16.5	14.0
4					---	---	15.0	11.5	18.0	15.5	16.0	14.0
5					---	---	14.5	13.0	18.5	16.5	16.0	13.0
6					---	---	13.5	12.5	19.0	16.0	16.0	13.0
7					---	---	13.0	11.5	18.5	16.5	16.5	14.0
8					---	---	13.0	11.0	18.0	16.5	14.5	13.0
9					---	---	13.5	11.5	17.0	16.0	14.5	12.5
10					---	---	15.0	11.0	16.5	16.0	14.0	12.5
11					---	---	16.5	13.0	17.5	15.0	15.5	14.0
12					---	---	16.0	14.5	18.0	14.5	16.5	14.0
13					---	---	15.0	13.5	18.5	15.5	16.5	14.0
14					---	---	14.5	13.0	20.0	16.5	16.5	14.5
15					---	---	13.5	12.5	20.0	17.0	15.5	14.0
16					---	---	15.0	12.5	19.5	16.0	15.5	13.0
17					---	---	15.5	13.5	19.0	15.5	15.0	13.0
18					---	---	16.0	14.0	19.0	16.0	13.0	12.0
19					---	---	15.5	15.0	17.5	16.0	12.5	10.5
20					12.5	---	16.5	14.0	18.5	16.0	12.5	10.0
21					14.0	10.5	17.5	14.0	18.5	15.5	13.0	10.5
22					13.5	12.5	18.0	15.0	16.5	15.0	14.0	12.0
23					13.0	12.0	17.5	16.0	16.5	15.5	14.0	13.5
24					14.5	11.0	17.0	15.5	17.5	14.5	15.5	13.5
25					15.0	12.0	16.0	14.5	17.5	14.5	15.0	13.0
26					14.0	13.0	17.0	14.0	18.5	16.0	15.0	13.5
27					15.5	13.0	16.0	15.0	18.0	15.5	14.0	12.5
28					15.0	13.5	16.5	15.0	17.5	16.0	12.5	10.5
29					15.5	13.5	18.5	15.5	16.5	15.5	11.0	9.0
30					14.5	13.0	19.5	16.5	16.0	15.5	10.5	8.5
31					---	---	18.5	17.0	16.5	15.5	---	---
MONTH					15.5	10.5	19.5	10.5	20.0	14.5	16.5	8.5

## WILLAMETTE RIVER BASIN

## 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 northeast of Lowell, and at mile 7.2.

DRAINAGE AREA.--184 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (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 at elevation 834 ft and usable capacity is 115,500 acre-ft between elevation 728 ft and 834 ft. 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 May 30, 31, 1972; maximum elevation, 832.98 ft 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, 120,300 acre-ft July 3, elevation, 831.39 ft; minimum, 156 acre-ft Dec. 14, elevation, 681.41 ft.

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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	805.38	762.04	731.65	728.47	731.58	788.76	814.87	826.63	830.62	831.09	830.05	826.55
2	803.75	759.19	730.29	728.29	732.90	789.73	813.78	827.06	830.83	831.37	830.02	826.13
3	802.12	756.34	736.55	728.53	734.04	790.32	812.66	827.38	830.93	831.28	829.96	825.96
4	800.44	753.35	746.26	736.52	735.07	791.16	812.19	827.68	830.96	831.09	829.90	824.96
5	798.67	750.39	751.91	740.95	735.98	792.18	812.54	828.01	830.94	830.77	829.83	824.24
6	797.09	748.86	758.97	743.48	737.25	793.56	812.99	828.10	830.94	830.42	829.76	823.39
7	796.03	747.15	759.37	752.67	739.18	794.60	813.44	828.40	830.96	830.39	829.66	822.45
8	794.79	745.04	753.53	754.68	741.52	795.44	813.99	829.13	830.96	830.33	829.57	821.51
9	793.22	742.37	744.50	753.52	747.95	796.29	814.60	829.59	830.96	830.25	829.52	820.59
10	791.54	739.98	735.20	750.56	752.69	797.12	815.18	829.49	831.28	830.16	829.45	819.64
11	789.72	737.82	725.00	746.31	755.26	797.61	815.66	829.53	831.25	830.22	829.38	818.70
12	787.80	735.00	712.80	741.23	757.64	798.37	816.15	829.60	831.03	830.21	829.30	817.70
13	785.79	732.20	695.00	736.28	759.00	799.38	816.63	829.58	830.75	830.20	829.19	816.68
14	783.72	729.50	688.39	733.60	763.16	800.61	817.08	829.59	830.69	830.23	829.11	815.62
15	781.52	726.78	704.08	733.03	765.93	801.50	817.53	829.84	830.76	830.20	829.02	814.58
16	779.33	725.03	720.22	732.92	768.34	801.98	817.96	829.97	830.81	830.14	828.92	813.53
17	777.20	723.99	732.15	732.77	774.38	802.34	818.34	829.66	830.89	830.18	828.79	812.55
18	775.01	723.91	739.12	732.60	785.58	802.80	818.74	829.71	831.02	830.13	828.67	811.61
19	772.92	724.87	741.67	732.73	787.34	803.17	819.16	829.76	830.94	830.13	828.56	810.66
20	770.83	727.45	740.74	732.75	784.19	803.43	819.58	829.75	830.88	830.14	828.42	809.72
21	768.73	728.75	738.90	731.72	783.70	803.87	820.10	829.73	830.74	830.11	828.33	808.70
22	767.01	728.76	736.70	730.20	786.34	804.48	820.47	829.79	830.64	830.06	828.19	807.65
23	767.34	727.82	735.08	729.86	787.29	805.08	820.92	829.80	830.63	830.03	828.03	806.57
24	766.66	727.10	734.43	729.47	787.80	805.64	821.55	829.89	830.64	830.00	827.84	805.52
25	765.51	726.64	733.56	728.54	787.99	806.47	822.29	829.93	830.65	830.05	827.63	804.41
26	764.26	726.08	733.20	728.25	787.86	807.32	823.20	829.98	830.63	830.05	827.46	803.28
27	762.87	725.62	733.04	728.88	787.44	808.39	823.95	829.98	830.63	830.06	827.26	802.11
28	761.41	725.84	732.48	729.25	787.79	809.29	824.63	830.10	830.60	830.07	827.11	800.94
29	766.22	728.95	731.56	729.13	---	810.15	825.32	830.19	830.58	830.06	827.08	799.75
30	767.11	732.49	730.34	729.13	---	815.20	826.00	830.23	830.62	830.06	827.06	798.56
31	764.97	---	728.89	730.04	---	816.03	---	830.40	---	830.05	826.82	---
MEAN	780.93	735.64	732.76	735.37	763.76	801.04	818.05	829.31	830.83	830.31	828.71	813.80
MAX	805.38	762.04	759.37	754.68	787.99	816.03	826.00	830.40	831.28	831.37	830.05	826.55
MIN	761.41	723.91	688.39	728.25	731.58	788.76	812.19	826.63	830.58	830.00	826.82	798.56
(+)	33750	11880	10040	10610	56210	94370	110900	118500	118900	117900	112300	69100
(#)	-46910	-21870	-1840	+570	+45600	+38160	+16530	+7600	+400	-1000	-5600	-43200

WTR YR:1983 MEAN 791.85 MAX 831.37 MIN 688.39 AC-FT# -11560

† Contents, in acre-feet, at 2400, on last day of month.

# Change in contents, in acre-feet.

## 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., Lane County, Hydrologic Unit 17090001, on right bank 10 ft upstream from highway bridge, 1.1 mi downstream from Fall Creek Dam, 2.3 mi southeast of town of Fall Creek, and at mile 6.1.

DRAINAGE AREA.--186 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Oct. 1 to Dec. 31, 1911, nonrecording gage at site 0.25 mi 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.--48 years, 584 ft<sup>3</sup>/s, 42.64 in/yr, 423,100 acre-ft/yr, adjusted for storage since January 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft<sup>3</sup>/s Dec. 11, 1956, gage height, 18.80 ft, from rating curve extended above 9,700 ft<sup>3</sup>/s; minimum, 1.5 ft<sup>3</sup>/s Oct. 7, 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,120 ft<sup>3</sup>/s Dec. 8, gage height, 7.66 ft; minimum, 41 ft<sup>3</sup>/s Feb. 1.

REVISIONS.--Revised figures of discharge for the water year 1981, superseding those published in the report for 1981 are given herein.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230	317	1650	749	147	96	75	75	285	176	142	144
2	1230	317	1510	627	147	94	75	75	221	178	142	142
3	1250	321	191	460	101	81	227	75	210	178	140	142
4	1250	329	204	352	75	96	498	72	210	161	140	142
5	1230	325	2750	303	77	94	498	72	210	106	142	142
6	1230	390	2960	306	77	94	498	72	210	102	147	142
7	1260	562	2940	253	77	94	398	72	241	138	147	142
8	1260	652	2550	253	77	94	221	72	1130	142	147	142
9	1150	842	1720	221	77	86	166	72	1740	142	147	140
10	932	1050	1180	210	75	70	467	72	1100	142	147	140
11	786	1040	988	210	98	96	1080	72	657	144	147	140
12	738	1010	877	213	75	66	1410	72	437	144	147	140
13	733	802	786	194	75	66	1490	107	441	144	147	140
14	728	464	770	161	81	66	1150	161	707	144	147	140
15	723	329	754	158	79	66	976	190	830	144	147	340
16	733	329	539	158	88	67	877	347	682	144	147	907
17	733	256	471	158	86	67	702	559	594	144	147	1210
18	728	166	383	163	120	67	608	714	460	144	144	1210
19	743	142	352	163	101	67	585	1260	471	144	144	1210
20	743	133	329	163	101	67	292	993	526	144	144	1200
21	733	224	348	149	98	67	75	758	467	144	144	1200
22	728	1170	907	138	98	69	75	646	380	144	144	1210
23	717	1240	2410	138	98	67	75	487	376	144	144	1250
24	672	1220	1980	140	99	67	75	566	445	144	144	1270
25	390	1030	199	140	116	75	75	1240	348	144	144	1270
26	325	759	61	142	98	74	75	1060	306	144	144	1270
27	325	632	808	142	96	72	75	759	275	144	144	1200
28	325	502	2000	147	96	70	75	603	215	144	144	1120
29	321	749	1550	147	---	74	75	475	213	144	144	963
30	321	1110	1130	147	---	74	75	376	191	142	144	963
31	317	---	938	147	---	77	---	314	---	142	144	---
TOTAL	24584	18412	36235	7052	2633	2380	13043	12488	14578	4485	4486	19771
MEAN	793	614	1169	227	94.0	76.8	435	403	486	145	145	659
MAX	1260	1240	2960	749	147	96	1490	1260	1740	178	147	1270
MIN	317	133	61	138	75	66	75	72	191	102	140	140
AC-FT	48760	36520	71870	13990	5220	4720	25870	24770	28920	8900	8900	39220
MEAN†	39	362	1263	301	909	519	841	512	525	112	39	46
CFSM†	0.21	1.95	6.79	1.62	4.89	2.79	4.52	2.75	2.82	0.60	0.21	0.25
IN.†	0.24	2.17	7.83	1.86	5.09	3.22	5.05	3.17	3.15	0.70	0.24	0.28
AC-FT†	2410	21550	77670	18490	50510	31940	50040	31470	31220	6900	2400	2740

CAL YR 1980 TOTAL 180536 MEAN 493 MAX 3930 MIN 34 AC-FT 358100 MEAN† 494 CFSM† 2.66 IN.† 36.13 AC-FT† 358310  
WTR YR 1981 TOTAL 160147 MEAN 439 MAX 2960 MIN 61 AC-FT 317700 MEAN† 452 CFSM† 2.43 IN.† 33.01 AC-FT† 327399

† Adjusted for change in contents in Fall Creek Lake.

## WILLAMETTE RIVER BASIN

14151000 FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK, OR--Continued  
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1190	1740	1910	487	56	141	3040	84	142	206	112	368
2	1180	1520	2440	432	53	77	3050	161	142	534	118	444
3	1170	1350	2460	434	54	77	3030	218	168	603	143	552
4	1160	1330	549	1300	55	75	2060	193	202	596	154	585
5	1160	1240	1060	1190	55	75	1040	197	202	594	154	640
6	1180	1160	1100	1820	59	81	710	326	190	594	154	758
7	1170	1150	2110	779	65	283	519	408	152	356	154	803
8	1170	1130	3610	2150	65	537	304	413	140	319	152	804
9	1180	1170	3430	2560	83	537	215	1030	140	333	151	802
10	1170	1020	3260	2520	77	740	215	1400	173	294	151	802
11	1180	893	3400	2460	509	748	215	917	391	161	151	802
12	1170	881	3400	2370	357	498	162	786	473	193	151	835
13	1170	698	2580	2090	218	496	122	706	471	197	151	848
14	1170	695	1380	1290	140	505	101	578	263	199	151	845
15	1160	693	330	664	74	619	81	623	140	199	150	839
16	1150	598	372	494	74	697	81	864	140	199	149	836
17	1140	467	341	464	95	575	81	1040	139	179	155	773
18	1130	610	317	448	125	375	81	626	159	171	166	738
19	1030	801	769	466	1760	317	81	483	333	171	166	738
20	978	819	1500	483	3780	317	81	471	348	171	166	738
21	968	836	1880	686	2380	191	81	414	348	171	166	762
22	872	836	1990	813	517	54	81	328	312	171	166	778
23	797	832	1600	806	989	55	81	303	221	171	194	775
24	797	641	1110	803	997	55	81	237	189	130	213	772
25	796	518	1020	803	992	56	83	213	166	112	213	767
26	845	515	871	688	988	58	82	210	166	112	213	785
27	888	511	790	613	987	62	82	196	163	112	213	797
28	896	511	781	632	544	199	83	142	163	112	213	794
29	907	749	775	632	---	403	87	142	150	112	215	785
30	1350	1080	769	529	---	974	84	142	142	112	215	784
31	1740	---	759	273	---	2450	---	142	---	112	299	---
TOTAL	33864	26994	48663	32179	16148	12327	16094	13993	6528	7696	5319	22349
MEAN	1092	900	1570	1038	577	398	536	451	218	248	172	745
MAX	1740	1740	3610	2560	3780	2450	3050	1400	473	603	299	848
MIN	796	467	317	273	53	54	81	84	139	112	112	368
AC-FT	67170	53540	96520	63830	32030	24450	31920	27760	12950	15270	10550	44330
MEAN†	329	532	1540	1047	1398	1018	814	565	224	232	81	19
CFSM†	1.77	2.86	8.28	5.63	7.52	5.47	4.38	3.04	1.20	1.25	0.44	0.10
IN.†	2.04	3.19	9.55	6.49	7.83	6.31	4.89	3.50	1.35	1.44	0.50	0.11
AC-FT†	20260	31670	94680	64400	77630	62610	48450	34760	13350	14270	4950	1130

CAL YR 1982 TOTAL 238336 MEAN 653 MAX 3610 MIN 38 AC-FT 472700 MEAN† 626 CFSM† 3.37 IN.† 45.68 AC-FT† 453000  
WTR YR 1983 TOTAL 242154 MEAN 663 MAX 3780 MIN 53 AC-FT 480300 MEAN† 647 CFSM† 3.48 IN.† 47.26 AC-FT† 468740

† Adjusted for change in contents in Fall Creek Lake.



## WILLAMETTE RIVER BASIN

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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.

INSTRUMENTATION.--Temperature recorder since August 1950.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C July 28, 1958; minimum recorded, 0.5°C on several days in 1962 and 1965.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.0°C Aug. 11-17; minimum, 3.5°C Jan. 2, 3.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.5	9.5	11.5	11.5	7.0	7.0	4.5	4.0	7.5	6.0	9.5	7.0
2	10.0	9.5	11.5	11.5	7.0	7.0	4.0	3.5	7.5	6.0	9.0	8.0
3	10.5	10.0	12.0	11.5	8.0	7.0	4.0	3.5	7.5	6.0	9.5	8.0
4	10.5	10.0	11.5	11.5	8.0	7.5	4.5	4.0	7.5	6.0	9.0	8.0
5	11.5	10.5	12.0	11.5	8.0	8.0	6.0	4.5	7.0	5.5	9.5	8.0
6	12.0	11.5	12.0	11.5	8.5	7.5	6.0	5.5	6.5	6.0	9.5	8.0
7	13.0	12.0	11.5	11.0	8.5	8.0	7.0	5.5	6.5	6.0	9.0	7.5
8	13.5	13.0	11.0	10.0	8.0	7.5	7.0	5.5	6.5	6.0	8.0	7.5
9	13.5	13.5	10.5	10.0	7.5	7.5	7.0	7.0	6.5	6.0	8.0	7.5
10	14.0	13.5	10.0	9.5	7.5	7.0	7.5	7.0	6.5	6.0	8.0	7.5
11	14.5	14.0	10.0	9.5	7.0	6.5	7.0	7.0	6.5	6.0	8.0	7.5
12	14.5	14.5	9.5	9.0	7.0	6.5	7.0	6.5	6.5	6.0	8.0	8.0
13	15.0	14.5	9.5	9.0	7.0	6.0	6.5	6.0	6.5	6.0	8.5	7.5
14	15.0	15.0	9.5	9.0	7.0	6.5	6.0	6.0	7.5	6.0	8.5	8.0
15	15.5	15.0	9.0	8.5	7.5	7.0	6.0	5.5	7.5	6.5	8.0	7.5
16	15.5	15.5	8.5	8.0	8.0	7.5	6.0	5.5	7.5	6.0	8.0	8.0
17	15.5	15.5	8.5	8.0	8.0	8.0	6.5	6.0	7.5	7.0	8.5	8.0
18	16.0	15.5	8.5	8.0	8.0	7.5	6.5	6.0	7.5	6.5	8.5	8.0
19	15.5	15.5	8.5	8.5	7.5	7.5	6.5	6.0	7.0	6.5	9.0	8.0
20	15.5	15.0	8.5	7.5	7.5	7.0	6.0	6.0	7.0	6.5	8.5	8.0
21	15.0	15.0	8.0	7.5	7.5	7.0	6.5	6.0	7.5	7.0	9.0	8.0
22	15.0	15.0	7.5	7.5	7.0	7.0	6.5	6.0	7.5	7.0	10.0	8.0
23	15.5	14.5	7.5	6.5	7.0	6.5	6.5	6.0	7.0	7.0	10.0	8.0
24	14.5	13.5	6.5	6.0	6.5	6.5	6.5	6.0	7.5	7.0	10.5	8.0
25	14.0	13.5	6.0	5.5	6.5	6.0	6.5	6.0	7.0	7.0	10.0	8.0
26	14.0	13.5	6.0	5.5	6.0	5.5	7.0	6.5	7.5	7.0	10.0	8.0
27	14.0	13.5	6.0	5.5	5.5	5.5	7.0	6.5	7.5	7.0	11.0	8.0
28	13.5	13.5	6.5	5.5	5.5	5.5	7.0	7.0	8.0	7.0	10.0	8.0
29	13.5	12.0	6.5	6.0	5.5	5.0	7.0	6.5	---	---	8.5	8.0
30	12.0	12.0	7.0	6.5	5.0	5.0	7.0	6.5	---	---	8.0	7.5
31	12.0	11.5	---	---	5.0	4.5	7.5	6.5	---	---	8.0	7.5
MONTH	16.0	9.5	12.0	5.5	8.5	4.5	7.5	3.5	8.0	5.5	11.0	7.0

## WILLAMETTE RIVER BASIN

14151000 FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	8.0	9.0	8.5	12.5	11.5	9.0	8.5	10.0	9.0	9.5	9.0
2	8.0	8.0	9.0	8.0	12.5	12.0	8.5	8.5	17.5	9.0	9.5	9.0
3	8.0	8.0	9.0	8.0	13.0	11.5	9.0	8.5	17.0	16.0	9.5	9.0
4	8.0	7.5	11.0	8.0	13.0	12.0	9.0	8.5	17.5	16.0	9.5	9.0
5	8.0	7.5	11.5	8.0	13.0	12.0	8.5	8.5	17.5	16.5	9.5	9.0
6	8.0	8.0	8.0	7.5	13.0	12.5	9.0	8.5	17.5	16.5	9.5	9.0
7	8.5	8.0	8.0	8.0	13.5	12.5	9.0	8.5	17.5	16.5	9.5	9.0
8	9.0	8.0	8.0	8.0	13.0	12.0	9.0	8.5	17.0	17.0	9.5	9.0
9	9.0	8.0	8.5	8.0	13.5	12.0	9.0	8.5	17.5	16.5	9.5	9.5
10	9.0	8.0	8.5	8.0	13.5	11.5	9.5	8.5	17.5	17.0	9.5	9.5
11	8.5	8.0	9.0	8.0	12.0	10.0	10.0	8.5	18.0	16.5	9.5	9.5
12	9.0	7.5	9.0	8.5	10.5	10.0	9.0	8.5	18.0	17.0	10.0	9.5
13	10.0	7.5	9.0	8.5	10.5	10.0	9.5	8.5	18.0	17.0	10.0	9.5
14	10.5	7.5	9.5	8.5	13.5	10.5	9.5	8.5	18.0	17.0	10.0	9.5
15	10.5	7.5	9.0	9.0	14.0	12.5	9.5	8.5	18.0	17.0	10.0	10.0
16	10.5	7.5	9.0	8.5	14.0	13.0	9.5	8.5	18.0	17.5	10.0	10.0
17	10.0	8.0	9.0	8.5	14.0	13.0	10.0	8.5	18.0	9.0	10.5	10.0
18	10.5	8.0	9.5	8.5	13.5	13.0	10.0	8.5	10.0	9.0	10.5	10.0
19	9.5	8.0	10.0	9.0	13.0	11.0	9.5	9.0	9.5	9.0	10.5	10.0
20	9.5	8.5	10.0	9.0	12.0	11.0	10.0	9.0	10.0	9.0	11.0	10.5
21	10.0	8.5	10.0	9.5	12.0	11.0	10.0	8.5	10.0	9.0	11.0	10.5
22	9.0	8.0	11.0	10.0	12.5	11.5	10.0	9.0	9.5	9.0	11.0	10.5
23	9.0	8.0	11.0	10.5	14.0	12.5	9.5	9.0	9.5	9.0	11.0	11.0
24	10.0	8.0	12.5	10.5	14.5	13.0	9.5	9.0	10.0	9.0	11.5	11.0
25	10.0	8.0	12.0	11.0	14.5	13.5	10.0	9.0	10.0	9.0	11.5	11.5
26	9.5	8.0	12.5	11.5	14.5	13.5	10.5	9.0	10.0	9.0	12.0	11.5
27	10.5	8.0	12.5	11.5	15.0	13.5	9.5	9.0	10.0	9.0	12.0	11.5
28	10.5	8.5	13.5	11.0	14.5	13.5	10.0	9.0	9.5	9.0	12.5	12.0
29	10.5	8.5	13.0	11.0	14.5	8.5	11.0	9.0	9.5	9.0	12.5	12.5
30	10.0	8.0	12.5	11.5	8.5	8.5	11.0	8.5	9.5	9.0	13.0	12.5
31	---	---	12.0	12.0	---	---	9.5	9.0	9.5	9.0	---	---
MONTH	10.5	7.5	13.5	7.5	15.0	8.5	11.0	8.5	18.0	9.0	13.0	9.0

## WILLAMETTE RIVER BASIN

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## 14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR

LOCATION.--Lat 43°59'55", long 122°54'20", in SW¼SW¼ sec.14, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090001, on right bank 25 ft downstream from highway bridge at Jasper, 0.1 mi downstream from Hills Creek, and at mile 195.0.

DRAINAGE AREA.--1,340 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. September 1905 to February 1912 and July 1913 to March 1917, nonrecording gage at approximately same site at datum about 1.5 ft higher Oct. 22, 1952, to Sept. 30, 1953, nonrecording gage at site 25 ft 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.--40 years (water years 1906-11, 1914-16, 1953-83), 4,108 ft<sup>3</sup>/s, 2,976,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,000 ft<sup>3</sup>/s Nov. 23, 1909, gage height, 17.4 ft, datum then in use, from graph based on gage readings, from rating curve extended above 42,000 ft<sup>3</sup>/s; minimum, 366 ft<sup>3</sup>/s Dec. 5, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,200 ft<sup>3</sup>/s Apr. 2, gage height, 8.16 ft; minimum, 1,350 ft<sup>3</sup>/s July 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5060	6470	9350	6070	1970	3390	14300	1850	5690	2060	1560	3410
2	5210	6220	10400	5810	1560	2080	14500	1850	4860	3550	1660	3480
3	5370	6430	11500	5470	1500	1990	14800	1900	3470	4390	1920	3570
4	5370	6450	5790	6800	1490	1950	13200	1850	2750	4290	1970	3360
5	4840	6640	11200	6530	1510	1980	10500	1820	2720	3100	2180	3220
6	4840	6690	9210	7510	1580	2310	8460	1870	2700	3210	2290	3400
7	5200	6790	10300	8210	1920	2720	6180	1900	2860	3040	2300	3650
8	5270	6710	13900	10000	1890	6140	4080	2180	2980	2750	2300	3810
9	4900	6660	13800	12800	3070	5050	3150	3790	3140	2830	2190	3710
10	4710	6390	13200	12500	3260	4220	2980	5860	3390	2770	2230	3700
11	4720	6260	13300	12100	4160	4020	2940	5220	4240	2690	2570	3680
12	4710	6260	13300	11600	4140	3570	2500	4560	4200	1950	2470	3820
13	4920	6450	12900	9440	3900	3590	2320	3860	4050	1830	2320	4450
14	5010	6090	9700	6310	3240	5010	2000	3970	3220	2280	2320	4470
15	5010	5980	8480	5360	2430	6350	1780	4180	2430	2340	2350	4500
16	4970	5830	6620	5080	2360	6230	1750	4590	2440	2330	2680	4290
17	5020	5660	6340	5020	3170	5980	1740	5690	2420	1990	2680	4310
18	5040	5960	9520	4970	6190	5640	1730	5580	2480	1920	2680	4280
19	4970	6550	10900	5050	6450	4430	1710	4690	2680	1920	2780	4310
20	4790	6800	11500	5090	12100	4020	1680	4660	2730	1840	2910	4290
21	4270	6720	13100	5220	12700	3190	1700	4840	3530	1870	2900	4310
22	4760	6490	14300	5380	9710	1820	1690	4730	3500	1790	3320	4310
23	5260	6370	12300	5620	9630	1910	1690	4660	3060	1660	3370	4300
24	4950	6140	11200	5580	12100	2580	1760	4730	2460	1420	3360	4280
25	4840	5920	10900	5480	11400	1950	1830	5950	2280	1360	3410	4290
26	4820	5880	10700	5390	10300	1800	1860	6310	2260	1540	3450	4290
27	5350	5660	10400	5310	9210	2000	1800	6480	2260	1810	3090	4180
28	5570	5620	10100	5300	7190	2140	1780	5330	2260	1670	2970	4240
29	6180	6630	9790	3300	---	2480	2020	5270	2240	1580	2960	4240
30	6530	7910	8070	2810	---	5110	1890	5550	2010	1560	2810	4260
31	6610	---	7170	2690	---	9500	---	5620	---	1540	3060	---
TOTAL	159070	190630	329240	203800	150130	115150	130320	131340	91310	70880	81060	120410
MEAN	5131	6354	10620	6574	5362	3715	4344	4237	3044	2286	2615	4014
MAX	6610	7910	14300	12800	12700	9500	14800	6480	5690	4390	3450	4500
MIN	4270	5620	5790	2690	1490	1800	1680	1820	2010	1360	1560	3220
AC-FT	315500	378100	653000	404200	297800	228400	258500	260500	181100	140600	160800	238800
CAL YR 1982	TOTAL	1893680	MEAN	5188	MAX	18000	MIN	1480	AC-FT	3756000		
WTR YR 1983	TOTAL	1773340	MEAN	4858	MAX	14800	MIN	1360	AC-FT	3517000		

## WILLAMETTE RIVER BASIN

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.

INSTRUMENTATION.--Temperature recorder October 1953 to December 1962, October 1963 to current year.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 21.0°C June 1, 2, 1978; minimum, 1.5°C Jan. 25-27, 1969.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.0°C July 30; minimum, 4.5°C Dec. 31 to Jan. 2, Feb. 3-5.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	12.5	12.5	11.5	8.5	7.5	5.0	4.5	6.5	5.5	8.0	7.0
2	13.0	12.5	12.5	11.5	8.0	7.5	5.5	4.5	6.0	5.0	8.0	7.0
3	14.0	13.0	12.5	11.5	9.5	8.0	5.5	5.0	6.5	4.5	9.0	7.5
4	14.0	13.0	12.0	12.0	9.5	8.5	6.5	5.0	6.5	4.5	8.5	8.0
5	14.0	13.0	12.0	11.5	10.0	8.5	6.5	6.0	6.0	4.5	9.0	7.5
6	13.5	13.0	11.5	11.5	9.0	8.0	7.5	6.0	6.0	5.0	8.5	8.0
7	14.0	13.0	11.5	10.5	9.0	7.5	8.0	6.5	6.0	5.5	8.5	7.5
8	14.5	13.5	11.0	10.5	8.5	7.5	8.0	6.5	6.0	5.5	8.5	7.5
9	15.0	13.5	10.5	10.5	8.5	7.0	7.0	6.0	6.5	6.0	8.5	8.0
10	15.5	14.0	10.5	10.0	8.0	6.5	7.0	6.0	6.5	5.5	9.5	8.0
11	15.5	14.0	10.5	10.0	7.5	6.5	7.0	5.5	7.0	6.5	10.0	8.0
12	15.5	14.0	10.5	10.0	7.5	7.0	6.5	6.0	8.0	6.5	9.5	8.0
13	15.5	14.5	10.0	10.0	8.0	6.5	6.5	5.5	7.5	6.5	9.5	8.0
14	15.5	14.5	10.0	9.5	7.5	7.0	6.5	5.5	7.0	6.5	9.0	7.5
15	15.5	14.5	10.0	9.5	8.0	7.0	5.5	5.0	7.5	6.5	9.0	7.5
16	15.5	15.0	10.0	9.5	8.5	7.5	5.5	5.0	8.0	6.5	8.5	7.0
17	15.0	14.5	10.5	10.0	8.5	7.5	6.0	5.5	8.0	7.0	9.0	7.5
18	15.5	14.0	10.0	9.5	8.5	7.0	6.0	5.5	8.5	7.0	9.0	7.5
19	15.0	14.0	9.5	9.0	8.5	7.0	6.0	5.5	8.0	7.0	9.5	7.0
20	14.5	14.0	9.0	8.5	8.5	7.0	6.0	5.0	8.0	7.0	8.5	7.5
21	14.5	14.5	9.0	8.5	8.0	6.5	5.5	5.0	8.0	7.5	8.5	8.0
22	15.0	14.0	8.5	8.0	7.5	6.5	5.5	5.0	8.0	7.5	8.5	7.5
23	14.5	13.5	8.5	7.5	8.0	6.5	6.5	5.5	8.5	7.5	9.5	7.5
24	14.5	13.5	8.0	7.5	7.5	6.0	6.5	5.5	8.0	7.0	9.5	7.5
25	14.5	13.5	8.0	7.5	7.0	6.0	6.0	5.5	7.5	7.0	9.0	7.5
26	14.0	13.5	8.0	7.5	7.5	6.0	6.5	6.0	8.0	7.0	8.0	7.0
27	14.0	13.0	8.0	8.0	7.0	5.5	6.5	6.0	8.0	7.0	9.0	7.0
28	13.0	13.0	8.0	8.0	6.5	5.5	6.0	5.5	8.0	7.0	8.5	7.0
29	13.0	12.5	8.0	7.5	6.0	5.0	6.5	6.0	---	---	8.5	8.0
30	12.5	12.0	8.0	7.5	6.0	5.0	6.0	5.5	---	---	9.5	8.0
31	12.5	12.0	---	---	5.5	4.5	7.0	6.0	---	---	9.0	8.0
MONTH	15.5	12.0	12.5	7.5	10.0	4.5	8.0	4.5	8.5	4.5	10.0	7.0

## WILLAMETTE RIVER BASIN

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14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.0	11.0	10.0	10.5	10.0	13.0	12.0	15.0	13.5	15.0	13.5
2	8.5	7.5	11.5	10.0	11.5	10.0	13.0	11.5	17.0	13.0	15.5	13.0
3	8.5	7.5	13.5	9.5	13.5	10.0	14.0	11.5	15.5	13.5	15.5	13.0
4	8.5	7.5	11.5	9.5	14.0	10.5	14.5	11.5	16.5	13.5	15.0	13.0
5	9.0	7.5	12.5	10.0	14.5	10.5	12.5	11.5	16.0	13.5	15.5	12.5
6	9.0	7.5	11.5	9.0	15.0	11.0	13.5	11.5	17.0	13.5	15.0	13.0
7	9.0	7.5	11.0	9.0	15.0	11.5	13.0	11.5	16.5	13.5	15.0	13.0
8	9.5	7.5	9.5	8.5	13.5	12.0	14.0	11.5	15.0	14.0	14.5	13.0
9	8.0	7.5	10.0	8.0	14.0	11.5	14.5	11.5	15.0	13.5	15.0	12.5
10	9.5	7.0	10.0	9.0	13.5	12.0	16.0	11.5	15.0	13.5	14.0	12.5
11	10.5	7.5	11.5	9.0	13.5	11.5	16.0	12.0	16.0	13.5	15.0	13.0
12	9.5	7.0	12.0	9.0	14.0	11.0	14.5	12.5	17.0	13.0	15.0	13.0
13	10.5	6.5	12.5	9.5	14.5	11.0	14.0	12.5	17.0	13.5	15.5	13.0
14	11.5	7.0	10.5	10.0	13.5	11.5	14.5	12.0	17.5	13.5	15.0	13.5
15	12.0	7.5	11.0	9.5	15.0	11.5	15.0	12.0	17.0	13.5	15.0	13.5
16	12.5	8.0	11.0	9.5	14.5	11.5	15.0	12.0	17.0	13.5	15.0	13.0
17	12.0	8.5	11.5	9.0	13.0	12.0	16.0	12.5	17.0	13.5	15.0	13.0
18	13.5	9.0	11.5	9.5	13.0	12.0	16.0	12.5	16.5	13.5	14.5	13.0
19	12.5	10.5	12.0	9.5	13.0	11.5	15.5	13.0	15.0	13.0	15.0	13.0
20	12.0	10.0	12.5	9.5	14.0	11.5	17.0	13.0	15.5	13.0	15.0	13.0
21	13.0	10.0	12.5	10.0	14.5	11.5	17.0	12.5	16.0	13.5	15.5	13.0
22	11.5	10.0	12.5	10.0	13.5	12.0	17.5	13.0	15.5	13.5	15.0	13.5
23	10.5	9.5	13.0	10.5	13.5	12.0	15.0	13.0	15.0	13.5	14.5	13.5
24	12.0	8.5	13.0	10.5	15.5	11.5	14.0	13.0	15.5	13.0	15.5	13.5
25	11.5	9.0	12.0	10.5	15.5	12.0	16.0	13.5	15.5	13.0	15.5	14.0
26	12.0	9.0	12.0	10.5	13.5	12.5	16.5	13.0	15.5	13.5	15.5	14.0
27	13.0	9.0	12.5	11.0	16.0	12.5	14.5	13.5	15.5	13.5	15.5	13.5
28	13.5	9.5	13.0	11.0	14.0	12.0	15.5	13.5	15.0	13.5	15.5	13.5
29	13.5	9.5	12.5	11.0	15.5	12.5	17.5	12.5	14.5	14.0	15.0	13.5
30	13.0	10.0	11.5	11.0	13.0	12.0	18.0	13.0	14.5	13.5	15.0	13.5
31	---	---	11.0	10.5	---	---	14.5	13.5	14.5	13.5	---	---
MONTH	13.5	6.5	13.5	8.0	16.0	10.0	18.0	11.5	17.5	13.0	15.5	12.5



## 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 north of London, 11.0 mi south of Cottage Grove, and at mile 35.9.

DRAINAGE AREA.--72.1 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 18 to Oct. 17, 1935, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years, 203 ft<sup>3</sup>/s, 38.23 in/yr, 147,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.37 ft, from rating curve extended above 3,200 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 6.8 ft<sup>3</sup>/s Aug. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0200	*4,460	*8.89	Mar. 30	0430	2,520	6.36

Minimum, 22 ft<sup>3</sup>/s Aug. 28, Sept. 22, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	37	180	634	180	173	326	965	269	143	145	40	65		
2	31	97	554	173	156	289	943	226	124	206	38	49		
3	33	85	869	210	142	259	819	196	108	148	36	40		
4	30	69	1170	627	130	233	647	177	94	110	37	35		
5	26	65	841	532	121	241	520	170	84	91	35	33		
6	51	130	984	443	163	351	427	164	78	82	33	31		
7	111	110	643	582	235	405	355	194	73	78	32	29		
8	71	90	442	586	264	455	303	383	69	90	31	29		
9	52	79	331	507	996	453	288	519	65	72	33	31		
10	42	69	259	385	796	732	268	435	123	63	33	28		
11	35	62	210	306	548	531	249	347	110	58	32	27		
12	32	57	211	256	617	489	225	289	95	54	29	26		
13	29	52	386	218	624	639	205	242	83	53	28	26		
14	27	48	634	192	546	867	191	208	76	54	27	24		
15	25	46	784	175	510	839	178	214	71	49	26	24		
16	25	45	1510	163	465	605	166	201	65	46	25	24		
17	34	62	1680	149	1330	464	158	182	67	47	25	24		
18	32	234	1180	155	2900	369	152	163	77	54	24	23		
19	28	402	791	205	1420	302	165	147	77	60	24	25		
20	25	424	644	197	921	260	172	134	70	133	25	23		
21	26	399	855	183	815	242	176	124	64	81	24	23		
22	114	301	867	217	732	236	169	115	60	65	24	23		
23	525	210	658	388	604	276	205	108	60	58	24	28		
24	220	161	506	363	598	252	277	100	58	56	25	27		
25	134	133	415	300	525	309	318	93	53	55	24	26		
26	205	117	388	315	483	337	324	89	52	49	24	24		
27	174	116	358	386	419	449	276	84	51	46	23	24		
28	140	165	303	341	353	429	266	79	48	45	23	24		
29	700	646	258	279	---	560	423	76	50	43	57	23		
30	440	844	226	228	---	1920	333	75	49	39	113	23		
31	300	---	201	195	---	1390	---	112	---	38	64	---		
TOTAL	3754	5498	19792	9436	17586	15509	10163	5915	2297	2268	1038	861		
MEAN	121	183	638	304	628	500	339	191	76.6	73.2	33.5	28.7		
MAX	700	844	1680	627	2900	1920	965	519	143	206	113	65		
MIN	25	45	201	149	121	233	152	75	48	38	23	23		
CFSM	1.68	2.54	8.85	4.22	8.71	6.93	4.70	2.65	1.06	1.02	.46	.40		
IN.	1.94	2.84	10.21	4.87	9.07	8.00	5.24	3.05	1.19	1.17	.54	.44		
AC-FT	7450	10910	39260	18720	34880	30760	20160	11730	4560	4500	2060	1710		
CAL YR 1982	TOTAL	91063	MEAN	249	MAX	2070	MIN	11	CFSM	3.45	IN.	46.98	AC-FT	180600
WTR YR 1983	TOTAL	94117	MEAN	258	MAX	2900	MIN	23	CFSM	3.58	IN.	48.56	AC-FT	186700

## WILLAMETTE RIVER BASIN

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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.

INSTRUMENTATION.--Temperature recorder July 1960 to September 1965 and since June 1967.

## 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, and several days each winter 1976 through 1980.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.5°C Aug. 14; minimum, 3.5°C Dec. 30, 31.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

14152500 COAST FORK WILLAMETTE RIVER AT LONDON, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	10.0	9.5	---	---	13.0	12.5	16.5	15.0	16.0	14.0
2	9.0	8.0	---	---	---	---	12.5	11.5	18.5	14.5	16.5	13.5
3	8.5	8.0	---	---	---	---	14.0	11.0	16.5	15.0	17.0	13.5
4	8.5	7.5	---	---	---	---	15.5	11.5	16.0	14.0	16.5	13.5
5	9.5	7.5	---	---	---	---	14.5	13.0	18.0	14.5	16.0	12.5
6	9.5	7.5	---	---	---	---	14.5	12.5	19.5	14.5	16.0	12.0
7	9.5	8.0	---	---	---	---	13.0	12.0	19.5	15.0	16.0	13.0
8	9.0	8.0	---	---	---	---	13.5	11.5	17.0	16.0	14.0	12.5
9	8.5	7.5	---	---	---	---	15.5	11.5	16.5	14.5	14.5	11.0
10	8.5	6.5	---	---	---	---	16.0	11.5	16.0	14.5	15.5	11.5
11	8.5	7.0	---	---	---	---	17.5	12.5	18.5	14.0	17.0	13.5
12	8.0	7.0	---	---	---	---	16.0	14.0	19.0	14.0	16.5	13.5
13	9.0	6.5	---	---	---	---	16.0	13.5	18.5	14.5	17.5	13.0
14	9.5	7.0	---	---	---	---	15.5	13.5	20.5	15.5	16.0	14.0
15	10.0	7.0	---	---	---	---	16.5	12.5	20.0	16.0	15.5	12.5
16	11.5	7.5	---	---	---	---	15.0	12.5	19.0	15.0	15.5	12.0
17	11.5	8.5	---	---	---	---	15.5	12.5	19.0	14.5	14.5	11.5
18	12.5	10.0	---	---	---	---	16.0	13.0	19.5	15.0	13.0	11.0
19	11.5	10.5	---	---	---	---	15.5	14.0	17.0	14.5	13.5	10.5
20	10.5	9.5	---	---	---	---	16.0	13.0	18.5	15.0	13.0	9.5
21	11.0	10.0	---	---	---	---	16.5	13.0	18.5	14.0	13.5	9.5
22	10.5	9.5	---	---	---	---	18.0	13.5	17.5	14.0	15.0	11.0
23	10.0	9.5	---	---	---	---	16.0	15.0	18.0	15.0	14.0	13.0
24	9.5	8.0	---	---	---	---	15.0	14.0	18.5	14.5	14.5	13.0
25	9.5	8.0	---	---	---	---	15.5	13.5	17.5	14.0	16.0	12.5
26	10.0	8.0	---	---	---	---	17.0	13.5	18.5	14.5	14.5	12.5
27	10.0	8.0	---	---	---	---	15.5	14.5	18.5	14.5	13.5	12.0
28	11.0	9.5	---	---	---	---	15.5	14.5	17.0	14.5	12.0	10.0
29	11.0	9.0	---	---	16.0	---	18.5	13.5	15.5	15.0	11.0	8.5
30	10.5	9.5	---	---	14.5	13.0	20.0	15.0	15.0	14.5	10.5	8.0
31	---	---	---	---	---	---	17.5	15.5	16.0	14.5	---	---
MONTH	12.5	6.5	10.0	9.5	16.0	13.0	20.0	11.0	20.5	14.0	17.5	8.0

## 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 south of Cottage Grove, and at mile 29.7.

DRAINAGE AREA.--104 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake 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 between elevation 719.0 ft, outlet conduit, and 791.0 ft, 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 Dec. 24, 1964, elevation, 794.23 ft; 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, 32,010 acre-ft July 2, elevation, 790.20 ft; minimum, 2,690 acre-ft Dec. 24, elevation, 748.40 ft.

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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	771.17	750.09	754.52	749.94	751.64	765.64	778.60	786.77	790.01	790.07	789.77	788.60
2	770.86	749.90	751.28	749.97	752.65	766.30	777.88	786.72	790.03	790.15	789.75	788.30
3	770.53	749.78	750.89	750.33	753.50	767.00	777.53	786.59	790.03	789.95	789.74	788.20
4	770.18	749.78	754.17	751.94	754.20	767.66	777.90	786.67	790.03	789.86	789.72	788.00
5	769.80	749.75	751.70	751.98	754.81	768.48	778.31	786.97	790.03	789.87	789.68	787.80
6	769.58	750.02	751.22	750.65	755.52	769.30	778.47	787.24	789.81	789.87	789.65	787.60
7	769.52	750.12	751.27	750.38	756.82	769.74	778.71	787.59	789.81	789.90	789.62	787.10
8	769.25	750.10	751.72	750.23	757.58	770.06	779.23	788.37	789.83	789.96	789.59	785.40
9	768.85	749.97	751.24	750.15	759.95	770.41	779.89	788.80	789.83	789.98	789.55	784.20
10	768.40	749.83	750.17	750.04	759.06	771.59	780.44	788.60	789.95	789.98	789.53	783.00
11	767.93	749.96	749.80	750.03	754.28	771.75	780.75	788.58	789.89	789.97	789.50	781.90
12	767.43	750.12	750.16	750.05	755.11	771.71	780.97	788.78	789.89	789.96	789.50	780.90
13	766.93	750.18	751.71	749.98	756.86	772.12	781.21	788.95	789.91	789.95	789.50	779.60
14	766.39	750.21	750.62	750.18	758.19	773.45	781.39	789.20	789.92	789.97	789.40	778.40
15	765.68	750.22	749.55	750.20	759.46	774.12	781.64	789.43	789.93	789.98	789.40	777.55
16	764.81	750.25	758.35	750.10	760.51	773.72	781.93	789.53	789.92	789.98	789.29	777.08
17	763.95	750.41	763.17	749.88	762.96	773.14	782.21	789.57	789.92	790.03	789.24	776.67
18	763.06	751.75	760.77	749.63	775.04	773.25	782.45	789.69	789.94	790.03	789.19	776.26
19	762.12	752.63	756.03	749.86	778.02	773.59	782.75	789.78	789.96	790.02	789.14	775.84
20	761.14	752.77	752.50	750.23	774.96	773.78	783.04	789.84	789.97	790.12	789.10	775.42
21	760.18	752.77	751.65	750.43	770.32	774.14	783.31	789.86	789.95	790.13	789.05	775.00
22	759.75	752.13	751.25	750.66	765.27	774.76	783.60	789.86	789.93	790.12	789.00	774.61
23	761.29	750.85	749.32	752.17	763.27	775.50	783.97	789.85	789.91	790.11	788.83	774.24
24	761.28	749.86	749.00	753.00	763.43	776.03	784.52	789.83	789.88	790.07	788.68	773.87
25	760.68	749.89	749.08	752.60	763.85	776.56	785.12	789.82	789.88	790.06	788.60	773.48
26	759.62	749.88	749.50	752.22	764.40	777.04	785.69	789.80	789.86	790.02	788.40	773.09
27	758.07	749.95	749.89	752.16	764.64	777.64	786.19	789.80	789.85	789.97	788.40	772.70
28	756.32	750.48	749.80	752.07	765.04	777.80	786.71	789.80	789.82	789.92	788.30	772.30
29	754.95	753.23	749.92	751.59	---	778.51	787.05	789.80	789.81	789.87	788.40	771.89
30	753.97	755.62	750.04	750.68	---	781.65	786.88	789.84	789.81	789.80	788.60	771.48
31	753.96	---	749.98	750.39	---	780.14	---	789.94	---	789.77	788.60	---
MEAN	764.12	750.75	751.94	750.77	761.12	773.12	781.94	788.90	789.91	789.98	789.18	779.35
MAX	771.17	755.62	763.17	753.00	778.02	781.65	787.05	789.94	790.03	790.15	789.77	788.60
MIN	753.96	749.75	749.00	749.63	751.64	765.64	777.53	786.59	789.81	789.77	788.30	771.48
(†)	4460	5120	3130	3260	10000	21590	28350	31720	31570	31520	30220	14320
(‡)	-9890	+660	-1990	+130	+6740	+11590	+6760	+3370	-150	-50	-1300	-15900
CAL YR 1982	MEAN 770.54	MAX 785.47	MIN 749.00	AC-FT# -500								
WTR YR 1983	MEAN 772.65	MAX 790.15	MIN 749.00	AC-FT# -30								

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

## WILLAMETTE RIVER BASIN

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 downstream from Cottage Grove Dam, 5.5 mi south of Cottage Grove, and at mile 29.4.

DRAINAGE AREA.--104 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (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 downstream.

REMARKS.--Records excellent. Flow regulated since 1942 by Cottage Grove Lake (see station 14153000). Small diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years, 276 ft<sup>3</sup>/s, 36.04 in/yr, 200,000 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,910 ft<sup>3</sup>/s Dec. 24, 1964, gage height, 11.83 ft; no flow July 5-7, 1945, and for part of Aug. 24, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,110 ft<sup>3</sup>/s Feb. 21, gage height, 8.83 ft; minimum, 44 ft<sup>3</sup>/s Aug. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	339	1030	249	49	301	1990	380	124	47	47	108
2	154	148	1280	231	50	218	1520	315	143	186	47	132
3	153	114	1130	230	50	156	1220	313	143	270	47	143
4	153	88	745	493	51	120	707	162	143	165	47	143
5	153	88	1520	641	51	95	476	71	143	94	47	143
6	153	88	1240	753	51	220	476	72	118	94	49	399
7	153	107	775	746	98	407	375	72	85	76	49	527
8	179	116	494	743	181	496	176	73	74	68	49	523
9	201	116	509	627	632	498	100	347	74	68	49	541
10	200	107	503	519	1740	591	101	614	111	68	49	568
11	198	61	335	416	1410	676	181	448	166	68	49	564
12	198	50	253	363	601	674	194	260	107	68	49	557
13	197	57	303	309	509	675	155	195	79	58	49	566
14	195	57	966	244	448	684	155	162	79	47	49	570
15	258	57	1140	244	394	944	106	145	79	47	49	410
16	298	57	394	244	399	979	72	165	79	47	48	224
17	303	56	1050	242	363	826	72	195	79	47	47	190
18	303	57	2250	240	89	486	72	150	79	67	47	190
19	300	334	2130	223	1460	310	72	121	79	76	47	190
20	297	493	1470	218	2500	310	72	123	79	76	47	190
21	294	491	1190	219	2760	229	72	131	79	76	47	188
22	293	488	1170	220	2530	105	74	134	79	76	47	178
23	300	479	1120	226	1300	76	74	136	79	76	90	173
24	298	354	711	370	746	123	75	132	72	76	108	171
25	348	174	549	466	585	210	76	127	65	76	105	171
26	590	152	457	462	499	260	76	115	65	76	79	171
27	702	143	418	461	502	365	76	108	65	74	44	171
28	674	144	417	461	367	515	77	108	65	75	45	168
29	631	318	332	457	---	589	322	108	65	76	45	168
30	591	596	294	451	---	918	493	108	52	76	45	168
31	574	---	287	232	---	2230	---	108	---	55	77	---
TOTAL	9496	5929	26462	12000	20415	15286	9707	5698	2749	2549	1693	8605
MEAN	306	198	854	387	729	493	324	184	91.6	82.2	54.6	287
MAX	702	596	2250	753	2760	2230	1990	614	166	270	108	570
MIN	153	50	253	218	49	76	72	71	52	47	44	108
AC-FT	18840	11760	52490	23800	40490	30320	19250	11300	5450	5060	3360	17070
MEAN†	146	208	821	389	850	682	437	239	89.1	81.5	33.5	19.7
CFSM†	0.40	2.00	7.89	3.74	8.17	6.56	4.20	2.30	0.86	0.78	0.32	0.19
IN.†	1.61	2.23	9.11	4.32	8.52	7.56	4.69	2.65	0.96	0.90	0.37	0.21
AC-FT†	8950	12360	50500	23930	47230	41910	26010	14670	5300	5010	2060	1170

CAL YR 1982 TOTAL 113325 MEAN 310 MAX 2250 MIN 32 AC-FT 224800 MEAN† 310 CFSM† 2.98 IN.† 40.45 AC-FT† 224300  
WTR YR 1983 TOTAL 120589 MEAN 330 MAX 2760 MIN 44 AC-FT 239200 MEAN† 330 CFSM† 3.17 IN.† 43.13 AC-FT† 239170

† Adjusted for change in contents in Cottage Grove Lake.



## WILLAMETTE RIVER BASIN

131

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 upstream from Pitcher Creek, 1.2 mi northwest of Dorena, and at mile 13.2.

DRAINAGE AREA.--211 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Sept. 16, 1935, to Oct. 17, 1938, nonrecording gage at site 450 ft upstream at datum 1.00 ft higher.

REMARKS.--Records good. Slight regulation caused by upstream logponds. No diversion above station.

AVERAGE DISCHARGE.--48 years, 602 ft<sup>3</sup>/s, 38.74 in/yr, 436,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.19 ft, from rating curve extended above 12,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 10 ft<sup>3</sup>/s Sept. 24, 25, 1951, Oct. 7, 8, 1958.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	0130	*11,700	*11.07	Mar. 30	0530	9,470	10.22
Minimum, 35 ft <sup>3</sup> /s Sept. 22.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	234	521	1600	410	448	719	2510	695	428	381	88	85		
2	170	386	1650	403	394	648	2310	618	380	850	86	77		
3	153	303	3660	588	351	569	1970	541	335	599	81	66		
4	127	253	3830	2370	316	543	1530	491	280	427	80	59		
5	109	226	2660	1900	289	623	1240	475	243	334	75	55		
6	154	357	3490	1800	318	894	1020	484	219	289	72	52		
7	673	371	2050	2670	523	1110	848	522	203	264	67	49		
8	500	315	1330	2260	625	1470	716	888	192	308	67	48		
9	339	268	959	1710	2580	1210	639	1220	176	318	71	49		
10	250	233	733	1210	2300	1570	569	1190	314	279	71	47		
11	194	204	572	917	1980	1270	522	1010	377	244	73	45		
12	156	179	494	753	1740	1220	468	917	325	215	66	43		
13	131	163	671	638	1580	1940	423	774	272	194	62	42		
14	112	149	1310	538	1390	1890	394	657	236	195	59	41		
15	100	137	2290	476	1410	1730	371	746	219	171	55	40		
16	90	134	5020	445	1320	1310	354	957	192	156	52	39		
17	112	272	4430	417	4190	1010	360	826	184	154	50	38		
18	123	1070	2790	399	8240	818	404	680	221	151	48	38		
19	104	1360	1890	485	3640	664	636	580	243	147	48	45		
20	91	1180	1720	485	2180	557	629	514	254	249	48	41		
21	88	949	2490	442	2050	505	708	486	235	192	47	37		
22	122	762	2220	461	2240	490	683	435	207	160	45	36		
23	1330	552	1470	872	1660	582	599	417	194	142	44	47		
24	728	477	1070	885	1350	551	665	409	182	134	44	47		
25	426	463	872	727	1140	660	759	384	160	133	42	42		
26	543	470	821	937	1020	772	928	340	149	121	41	39		
27	496	489	848	1400	919	969	787	300	142	111	40	38		
28	415	673	717	1100	781	934	683	292	133	108	39	38		
29	1650	2190	599	841	---	1220	944	279	128	102	94	37		
30	1350	2580	512	646	---	6390	808	249	127	93	187	36		
31	769	---	450	524	---	3770	---	287	---	87	113	---		
TOTAL	11839	17686	55218	29709	46974	38608	25477	18663	6950	7308	2055	1396		
MEAN	382	590	1781	958	1678	1245	849	602	232	236	66.3	46.5		
MAX	1650	2580	5020	2670	8240	6390	2510	1220	428	850	187	85		
MIN	88	134	450	399	289	490	354	249	127	87	39	36		
CFSM	1.81	2.80	8.44	4.54	7.95	5.90	4.02	2.85	1.10	1.12	.31	.22		
IN.	2.09	3.12	9.74	5.24	8.28	6.81	4.49	3.29	1.23	1.29	.36	.25		
AC-FT	23480	35080	109500	58930	93170	76580	50530	37020	13790	14500	4080	2770		
CAL YR 1982	TOTAL	255441	MEAN	700	MAX	6620	MIN	20	CFSM	3.32	IN.	45.04	AC-FT	506700
WTR YR 1983	TOTAL	261883	MEAN	717	MAX	8240	MIN	36	CFSM	3.40	IN.	46.17	AC-FT	519400

## WILLAMETTE RIVER BASIN

## 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 east of Cottage Grove, and at mile 7.61.

DRAINAGE AREA.--265 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1971, published as Dorena Reservoir near Cottage Grove.

REVISED RECORDS.--WRD OR-78-1: 1969.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (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 between elevations 739.0 ft, sill of outlet gates, and 835.0 ft, crest of spillway. Dead storage, 18 acre-ft below elevation 739.0 ft. 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 Dec. 23, 1964, elevation, 844.03 ft; minimum observed since first filling, 159 acre-ft Dec. 14, 1970, elevation, 743.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 73,720 acre-ft July 2, elevation, 832.91 ft; minimum, 6,910 acre-ft Nov. 16, elevation, 770.14 ft.

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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	808.25	777.43	781.46	770.66	773.99	794.84	821.90	827.00	832.15	832.57	832.10	829.82
2	807.39	774.04	777.74	770.75	775.26	796.33	819.40	826.90	832.33	832.85	832.06	829.47
3	806.47	772.33	780.18	771.35	776.05	797.51	816.60	827.00	832.36	832.40	832.04	829.04
4	805.51	772.03	787.10	777.94	776.65	798.61	815.00	827.10	832.31	832.18	832.04	828.60
5	804.49	771.62	785.11	780.23	777.12	799.91	816.20	827.52	832.29	832.16	832.04	828.15
6	803.61	771.91	785.95	779.83	777.81	801.36	817.20	827.83	832.30	832.17	832.03	826.93
7	803.78	771.89	782.67	781.55	779.34	802.55	817.50	828.24	832.28	832.16	832.00	825.19
8	803.51	771.60	777.38	782.02	781.08	803.60	817.60	829.20	832.25	832.18	831.98	823.45
9	802.78	771.21	773.32	780.68	785.86	803.71	817.70	829.78	832.24	832.22	831.98	821.55
10	801.84	770.88	772.29	777.66	784.78	804.70	817.80	829.77	832.56	832.19	831.97	819.48
11	800.78	770.85	771.96	774.17	782.99	804.94	818.00	829.68	832.73	832.12	831.96	817.36
12	799.62	770.63	771.98	771.44	782.95	804.97	818.40	829.69	832.68	832.00	831.94	815.21
13	798.32	770.32	773.58	770.71	782.87	806.39	818.90	829.59	832.53	831.94	831.93	812.96
14	796.91	770.19	775.31	770.40	783.62	807.45	819.30	829.57	832.34	831.91	831.91	810.64
15	795.44	770.16	777.95	770.22	785.59	807.87	819.80	829.82	832.20	831.88	831.87	808.93
16	793.93	770.20	790.83	770.25	787.09	808.04	820.20	830.32	832.12	831.88	831.83	808.23
17	792.44	770.80	798.16	770.43	796.02	808.14	820.60	830.63	832.15	831.94	831.79	807.81
18	790.93	773.46	798.27	770.71	813.98	808.42	821.10	830.87	832.23	832.04	831.68	807.40
19	789.33	775.66	794.70	771.11	817.51	808.64	821.80	831.15	832.35	832.25	831.52	806.99
20	787.59	777.11	790.08	771.40	814.85	808.66	822.60	831.44	832.46	832.38	831.35	806.57
21	785.81	777.53	786.90	771.40	811.92	808.93	823.00	831.77	832.49	832.31	831.19	806.15
22	784.36	777.14	783.95	771.46	809.54	809.57	823.40	831.88	832.46	832.18	831.03	805.74
23	786.82	775.89	780.34	773.66	805.35	810.25	823.70	831.91	832.42	832.14	830.86	805.33
24	787.16	774.24	777.24	774.71	800.10	810.76	824.00	831.91	832.36	832.17	830.69	804.93
25	786.42	772.39	774.98	774.20	796.75	811.52	824.70	831.93	832.26	832.20	830.52	804.50
26	785.45	771.47	772.38	774.45	795.47	812.48	825.40	831.94	832.24	832.21	830.35	804.07
27	783.80	771.14	770.92	775.59	793.88	813.43	825.90	831.89	832.25	832.21	830.18	803.63
28	781.58	771.84	770.81	775.05	793.52	813.90	826.50	831.83	832.23	832.20	830.04	803.18
29	782.98	777.92	770.76	773.91	---	817.10	827.00	831.74	832.20	832.19	830.04	802.74
30	783.21	782.74	770.78	771.82	---	823.00	827.00	831.63	832.22	832.16	830.12	802.28
31	780.78	---	770.67	772.09	---	823.80	---	831.77	---	832.13	830.01	---
MEAN	794.24	773.22	779.86	773.93	790.78	807.46	820.94	830.11	832.33	832.18	831.39	813.54
MAX	808.25	782.74	798.27	782.02	817.51	823.80	827.00	831.94	832.73	832.85	832.10	829.82
MIN	780.78	770.16	770.67	770.22	773.99	794.84	815.00	826.90	832.12	831.88	830.01	802.28
(+)	13020	14300	7180	7930	22490	58170	63320	71640	72450	72290	68490	30810
(#)	-25210	+1280	-7120	+750	+14560	+35680	+5150	+8320	+810	-160	-3800	-37680
CAL YR 1982	MEAN 806.84	MAX 830.45	MIN 770.16	AC-FT# -11090								
WTR YR 1983	MEAN 806.76	MAX 832.85	MIN 770.16	AC-FT# -7420								

+ Contents, in acre-feet, at 2400, on last day of month.

# Change in contents, in acre-feet.

## WILLAMETTE RIVER BASIN

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## 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 upstream from Mosby Creek, 2.1 mi downstream from Dorena Dam, 3.5 mi east of Cottage Grove, and at mile 5.5.

DRAINAGE AREA.--270 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Jan. 5 to Oct. 12, 1939, nonrecording gage at site 180 ft upstream at datum 1.00 ft higher.

REMARKS.--Records excellent. Flow regulated since October 1949 by Dorena Lake (see station 14155000). No diversion above station.

AVERAGE DISCHARGE.--44 years, 756 ft<sup>3</sup>/s, 38.02 in/yr, 547,700 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 18.20 ft; minimum, 0.20 ft<sup>3</sup>/s Sept. 25 to Oct. 7, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,160 ft<sup>3</sup>/s Mar. 31, gage height, 8.13 ft; minimum, 90 ft<sup>3</sup>/s Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	683	1720	2660	504	105	378	5100	968	182	214	137	288
2	680	1420	3440	473	146	165	5030	851	299	746	136	377
3	675	775	3740	556	212	190	4940	617	374	1140	111	427
4	669	370	1940	866	213	190	3000	505	374	701	98	427
5	664	370	4150	1500	216	193	1170	437	295	404	98	424
6	662	442	4040	2310	219	405	771	354	254	333	97	1080
7	658	518	3960	2590	229	769	884	323	254	333	98	1490
8	706	494	3580	2640	236	1250	866	325	254	333	94	1480
9	754	436	2430	2620	1280	1550	735	1010	203	333	92	1520
10	748	364	1190	2540	3250	1560	735	1510	180	333	92	1600
11	740	275	792	2190	3130	1560	555	1330	297	333	92	1590
12	733	274	671	1600	2190	1560	274	1080	420	333	92	1560
13	765	270	555	950	2000	1570	201	1000	438	277	92	1570
14	780	215	1210	720	1490	1810	172	793	437	249	92	1560
15	769	182	1960	612	1010	2020	172	678	370	208	92	1100
16	758	161	1360	533	1020	1650	172	678	285	167	92	462
17	760	165	2210	465	948	1270	172	683	197	124	92	283
18	755	536	3610	422	157	892	172	572	197	97	145	283
19	759	1030	4280	502	2140	696	173	431	197	98	190	281
20	779	1060	4350	543	4890	695	263	342	197	236	190	279
21	777	1070	4430	553	4800	499	388	284	238	309	190	279
22	765	1070	4040	560	4490	241	455	390	262	308	190	279
23	775	1060	3290	572	4850	278	535	442	262	199	190	279
24	781	1030	2480	813	4890	373	539	470	262	137	190	279
25	829	1000	1810	1020	3380	391	541	419	262	137	190	276
26	1010	759	1740	1020	1960	392	541	387	182	137	190	275
27	1200	628	1420	1320	1930	619	545	388	155	137	190	275
28	1270	633	926	1490	1120	883	551	388	172	137	190	275
29	1290	877	761	1310	---	1000	744	388	172	137	190	275
30	1590	1610	636	1280	---	1660	968	388	172	137	190	275
31	1790	---	582	626	---	4070	---	249	---	137	236	---
TOTAL	26574	20814	74243	35700	52501	30779	31364	18680	7843	8904	4358	20848
MEAN	857	694	2395	1152	1875	993	1045	603	261	287	141	695
MAX	1790	1720	4430	2640	4890	4070	5100	1510	438	1140	236	1600
MIN	658	161	555	422	105	165	172	249	155	97	92	275
AC-FT	52710	41280	147300	70810	104100	61050	62210	37050	15560	17660	8640	41350
MEAN†	447	715	2280	1160	2140	1570	1130	738	275	285	79	62
CFSM†	1.66	2.65	8.44	4.30	7.93	5.81	4.19	2.73	1.02	1.06	0.29	0.23
IN.†	1.91	2.96	9.74	4.97	8.24	6.72	4.68	3.15	1.14	1.22	0.34	0.25
AC-FT†	27500	42560	140180	71560	118660	96730	67360	45370	16370	17500	4840	3670

CAL YR 1982 TOTAL 324256 MEAN 888 MAX 4650 MIN 95 AC-FT 643200 MEAN† 873 CFSM† 3.23 IN.† 43.91 AC-FT† 632110  
WTR YR 1983 TOTAL 332608 MEAN 911 MAX 5100 MIN 92 AC-FT 659700 MEAN† 901 CFSM† 3.34 IN.† 45.31 AC-FT† 652280

† Adjusted for change in contents in Dorena Lake.

## 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 southeast of Goshen, and at mile 6.4.

DRAINAGE AREA.--642 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Aug. 23, 1905, to Feb. 7, 1912, nonrecording gage at site 600 ft 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.--39 years (water years 1906-11, 1951-83), 1,656 ft<sup>3</sup>/s, 1,200,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,500 ft<sup>3</sup>/s Nov. 22, 1909, gage height, 19.5 ft, site and datum then in use, from rating curve extended above 15,000 ft<sup>3</sup>/s; minimum, 36 ft<sup>3</sup>/s Sept. 29, 30, Oct. 11, 12, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,400 ft<sup>3</sup>/s Feb. 18, gage height, 12.78 ft; minimum, 168 ft<sup>3</sup>/s Aug. 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	879	2490	5060	1260	689	1970	9420	1930	569	358	257	502
2	870	1870	5980	1150	621	1420	8780	1640	613	891	248	533
3	869	1320	7140	1290	655	1240	8440	1330	707	1620	238	630
4	861	661	5560	2840	626	1080	6180	1060	681	1240	203	629
5	848	630	8040	3430	601	1070	3240	835	628	707	203	622
6	860	684	8130	4330	676	2040	2390	749	537	585	200	1060
7	967	813	6690	5250	1210	2640	2170	731	487	564	195	2000
8	975	809	5350	5120	1200	3360	1910	922	457	555	193	2010
9	1030	732	4180	4710	4100	3660	1500	1800	435	535	182	2040
10	1000	691	2730	4170	7320	4870	1510	3000	431	516	185	2180
11	980	528	1890	3640	7190	4090	1450	2650	585	506	185	2180
12	964	472	1650	2820	5920	3770	1070	2010	688	493	181	2160
13	964	464	2260	2130	5160	4040	845	1660	659	466	180	2160
14	988	442	3250	1520	4050	5150	759	1450	650	393	179	2180
15	999	375	5270	1380	3130	5350	709	1220	620	374	176	1840
16	1040	364	7930	1210	3110	4480	616	1230	542	318	171	925
17	1060	352	8350	1140	4260	3550	589	1240	412	299	169	554
18	1080	782	9330	1040	10800	2690	572	1120	413	257	171	534
19	1060	2240	8460	1160	5970	1840	572	863	411	267	255	528
20	1060	2660	7590	1220	9200	1690	631	755	417	473	262	521
21	1080	2570	7520	1200	9350	1490	768	653	401	560	270	513
22	1100	2320	7820	1280	8940	1020	796	680	421	515	271	508
23	1940	2070	6370	2140	8190	1010	944	758	436	458	276	501
24	1640	1860	5010	2100	5670	1060	1020	757	437	332	324	502
25	1390	1490	3560	2350	5970	1270	1190	728	406	326	322	502
26	1720	1280	3320	2440	3990	1450	1150	664	381	313	335	497
27	2050	1020	2950	2730	3630	2120	1080	642	297	307	288	494
28	2110	1100	2250	2970	3080	2510	1040	629	319	303	278	491
29	2370	2480	1890	2600	---	2820	1560	603	315	300	323	489
30	2780	5250	1530	2420	---	7470	2110	589	311	289	395	486
31	2780	---	1420	1940	---	9050	---	540	---	277	396	---
TOTAL	40314	40819	158480	74980	125308	91270	65011	35438	14666	15397	7511	30771
MEAN	1300	1361	5112	2419	4475	2944	2167	1143	489	497	242	1026
MAX	2780	5250	9330	5250	10800	9050	9420	3000	707	1620	396	2180
MIN	848	352	1420	1040	601	1010	572	540	297	257	169	486
AC-FT	79960	80960	314300	148700	248500	181000	128900	70290	29090	30540	14900	61030
CAL YR 1982	TOTAL	667480	MEAN	1829	MAX	9330	MIN	133	AC-FT	1324000		
WTR YR 1983	TOTAL	699965	MEAN	1918	MAX	10800	MIN	169	AC-FT	1388000		



## WILLAMETTE RIVER BASIN

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## 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 upstream from outlet and at mile 89.6.

DRAINAGE AREA.--92.4 mi<sup>2</sup>, 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 National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). June 20, 1912, to July 31, 1915, nonrecording gage at site 1.0 mi north at different datum.

REMARKS.--Records good. 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.--39 years, 471 ft<sup>3</sup>/s, 69.22 in/yr, 341,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 8.15 ft; minimum, 137 ft<sup>3</sup>/s Sept. 23, 1977, Nov. 4, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft<sup>3</sup>/s Dec. 4, gage height, 4.62 ft; minimum, 260 ft<sup>3</sup>/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	280	450	479	474	559	890	909	630	568	453	408	312		
2	283	463	499	462	545	870	905	625	549	457	404	310		
3	283	474	794	458	533	845	874	616	526	464	400	307		
4	282	495	1160	485	519	830	850	611	508	473	398	307		
5	280	505	1010	535	507	832	834	612	495	477	393	305		
6	283	519	1120	753	502	854	816	611	483	477	389	304		
7	286	518	973	1110	500	860	798	614	476	476	385	303		
8	285	507	881	1160	499	901	776	619	473	475	382	301		
9	286	498	853	982	506	904	757	606	470	469	377	300		
10	295	490	829	912	497	956	735	591	474	463	373	298		
11	302	477	796	900	499	953	706	579	470	458	368	297		
12	304	463	768	891	509	947	678	575	467	451	362	294		
13	302	451	746	871	556	998	653	573	463	448	359	292		
14	299	442	726	844	577	995	632	574	457	445	355	291		
15	295	434	774	814	576	944	613	602	450	442	351	289		
16	291	433	997	787	592	907	597	631	445	441	347	287		
17	289	445	1030	764	726	879	589	622	444	441	344	285		
18	284	448	884	739	1090	854	591	607	447	438	341	284		
19	281	445	801	725	1010	827	608	602	451	443	337	281		
20	279	443	769	692	894	803	621	606	457	436	335	279		
21	278	440	775	658	889	782	629	624	465	433	332	278		
22	280	436	748	632	1010	768	641	632	469	436	328	278		
23	289	435	708	617	1060	751	645	635	469	441	326	276		
24	287	434	665	597	1050	723	645	649	467	433	323	274		
25	301	432	632	580	1010	701	643	660	464	429	321	272		
26	321	430	606	578	972	679	641	653	461	425	319	271		
27	332	432	574	604	930	674	634	631	455	422	317	270		
28	343	448	545	606	901	660	630	623	449	420	315	268		
29	402	462	519	591	---	704	633	630	446	417	319	265		
30	398	470	501	579	---	962	632	617	444	414	315	264		
31	418	---	489	570	---	976	---	587	---	411	312	---		
TOTAL	9418	13819	23651	21970	20018	26229	20915	19047	14162	13808	10935	8642		
MEAN	304	461	763	709	715	846	697	614	472	445	353	288		
MAX	418	519	1160	1160	1090	998	909	660	568	477	408	312		
MIN	278	430	479	458	497	660	589	573	444	411	312	264		
CFSM	3.29	4.99	8.26	7.67	7.74	9.16	7.54	6.65	5.11	4.82	3.82	3.12		
IN.	3.79	5.56	9.52	8.85	8.06	10.56	8.42	7.67	5.70	5.56	4.40	3.48		
AC-FT	18680	27410	46910	43580	39710	52030	41480	37780	28090	27390	21690	17140		
CAL YR 1982	TOTAL	200882	MEAN	550	MAX	2050	MIN	278	CFSM	5.95	IN.	80.87	AC-FT	398400
WTR YR 1983	TOTAL	202614	MEAN	555	MAX	1160	MIN	264	CFSM	6.01	IN.	81.57	AC-FT	401900



## WILLAMETTE RIVER BASIN

14158790 SMITH RIVER ABOVE SMITH RIVER RESERVOIR, NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°20'05", long 122°02'45", in SW¼SW¼ sec.24, T.14 S., R.6 E., Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 200 ft upstream from Smith River Reservoir, 0.7 mi downstream from Browder Creek, 10 mi north of town of Belknap Springs, and at mile 4.4.

DRAINAGE AREA.--16.2 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR OR 80-2: 1978(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,610.00 ft National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). Prior to Sept. 10, 1964, at datum 1.56 ft higher.

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

AVERAGE DISCHARGE.--23 years, 92.0 ft<sup>3</sup>/s, 77.12 in/yr, 66,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,160 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.9 ft, from floodmark, from rating curve extended above 560 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 2.5 ft<sup>3</sup>/s Sept. 15-18, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0930	*1,000	*7.85	Feb. 17	1900	*1,000	*7.85
Jan. 6	1830	924	7.76	Mar. 29	2330	863	7.69

Minimum, 4.1 ft<sup>3</sup>/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	15	123	150	48	86	136	249	118	100	76	20	11		
2	14	97	126	52	78	129	212	112	84	104	18	10		
3	14	80	538	58	70	122	168	109	72	104	18	8.3		
4	14	70	839	216	64	134	140	112	66	85	16	7.5		
5	13	78	527	296	60	153	124	115	62	71	15	7.1		
6	24	105	478	637	65	184	113	113	59	63	15	6.7		
7	48	90	280	787	63	227	107	122	60	60	14	6.4		
8	62	79	197	546	72	286	99	116	60	59	13	6.8		
9	47	70	151	321	95	275	93	106	56	56	13	7.7		
10	36	63	124	216	93	312	85	99	82	50	12	6.6		
11	29	56	104	165	129	246	78	99	70	46	12	7.5		
12	25	51	98	138	189	260	72	101	60	42	11	6.6		
13	22	47	89	123	205	296	69	102	52	41	11	6.0		
14	19	43	109	112	181	246	66	117	48	40	10	5.7		
15	18	40	342	103	169	200	65	184	46	39	9.7	5.7		
16	17	42	553	101	189	167	69	211	41	36	9.5	5.3		
17	22	125	335	105	569	141	80	174	44	35	9.1	5.3		
18	21	201	220	108	676	123	107	156	66	33	8.8	6.1		
19	19	180	165	119	372	108	130	144	78	39	8.4	6.0		
20	17	137	163	107	269	96	136	155	77	34	8.3	5.1		
21	18	111	181	98	265	92	151	166	65	31	7.8	5.0		
22	41	93	149	90	392	95	148	163	58	30	7.5	4.7		
23	114	80	122	90	349	98	135	172	54	32	7.5	4.7		
24	76	71	102	102	296	95	124	187	51	30	7.1	4.7		
25	61	67	88	97	233	91	114	184	45	29	7.1	4.7		
26	82	64	81	112	193	90	105	160	41	27	7.1	4.4		
27	95	70	71	139	159	94	98	148	39	26	6.8	4.4		
28	113	179	64	124	139	93	104	151	36	25	6.8	4.4		
29	580	260	59	110	---	302	113	147	35	23	14	4.1		
30	289	211	55	99	---	555	114	123	36	22	12	4.1		
31	167	---	51	94	---	332	---	108	---	20	9.5	---		
TOTAL	2132	2983	6611	5513	5720	5778	3468	4274	1743	1408	345.0	182.6		
MEAN	68.8	99.4	213	178	204	186	116	138	58.1	45.4	11.1	6.09		
MAX	580	260	839	787	676	555	249	211	100	104	20	11		
MIN	13	40	51	48	60	90	65	99	35	20	6.8	4.1		
CFSM	4.25	6.14	13.1	11.0	12.6	11.5	7.16	8.52	3.59	2.80	.69	.38		
IN.	4.90	6.85	15.18	12.66	13.13	13.27	7.96	9.81	4.00	3.23	.79	.42		
AC-FT	4230	5920	13110	10940	11350	11460	6880	8480	3460	2790	684	362		
CAL YR 1982	TOTAL	38624.4	MEAN	106	MAX	931	MIN	5.0	CFSM	6.54	IN.	88.69	AC-FT	76610
WTR YR 1983	TOTAL	40157.6	MEAN	110	MAX	839	MIN	4.1	CFSM	6.79	IN.	92.21	AC-FT	79650

## WILLAMETTE RIVER BASIN

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## 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 upstream from Bunchgrass Creek, 8 mi north of town of Belknap Springs, and at mile 2.1.

DRAINAGE AREA.--18.2 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (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 at elevation 2,605.0 ft, top of spillway gates, and usable capacity is 9,900 acre-ft between elevations 2,525.0 ft, minimum power pool, and 2,605.0 ft. Storage of 5,100 acre-ft, below elevation 2,525.0 ft, 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 Dec. 22, 1964, elevation, 2,606.5 ft; minimum, 5,700 acre-ft Apr. 11, 14, 1964, elevation, 2,532.90 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,990 acre-ft Apr. 13, elevation, 2,605.26 ft; minimum, 12,980 acre-ft Feb. 2, elevation, 2,593.00 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,600.55	14,190	-
Oct. 31.....	2,599.48	14,020	-170
Nov. 30.....	2,596.60	14,560	+540
Dec. 31.....	2,594.39	13,200	-1,360
CAL YR 1982.....	-	-	+210
Jan. 31.....	2,595.70	13,410	+210
Feb. 28.....	2,595.65	13,400	-10
Mar. 31.....	2,597.86	13,760	+360
Apr. 30.....	2,602.02	14,440	+680
May 31.....	2,600.89	14,250	-190
June 30.....	2,601.10	14,290	+40
July 31.....	2,601.16	14,300	+10
Aug. 31.....	2,601.92	14,430	+130
Sept. 30.....	2,601.83	14,410	-20
WTR YR 1983.....	-	-	+220

## 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 downstream from Trail Bridge Dam, 0.5 mi upstream from Anderson Creek, 5 mi north of town of Belknap Springs, and at mile 81.5.

DRAINAGE AREA.--184 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,980.00 ft National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). Prior to Oct. 11, 1963, at datum 5.60 ft 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<sup>1</sup>/<sub>4</sub> sec.20, T.14 S., R.7 E., to Smith River Reservoir and returned to river above station.

AVERAGE DISCHARGE.--24 years, 1,034 ft<sup>3</sup>/s, 76.31 in/yr, 749,100 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.45 ft, from rating curve extended above 3,700 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 185 ft<sup>3</sup>/s Feb. 3, 1963; minimum daily, 425 ft<sup>3</sup>/s Nov. 23, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,610 ft<sup>3</sup>/s Mar. 30, gage height, 8.51 ft; minimum, 510 ft<sup>3</sup>/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	771	909	1130	1040	1150	1550	1720	1320	1200	1070	842	726
2	781	1010	1150	1040	1150	1530	1670	1260	1160	1050	817	768
3	756	1060	1870	1030	1140	1480	1570	1240	1120	1030	818	763
4	742	977	2170	1320	1090	1480	1560	1230	1100	1010	842	715
5	775	1020	1970	1440	1030	1490	1510	1210	1100	1010	826	709
6	832	1090	2200	1940	1040	1530	1490	1210	1090	1000	823	733
7	856	1000	1840	2340	1070	1580	1420	1230	1050	988	831	746
8	866	974	1650	2240	1070	1660	1300	1230	1040	950	821	732
9	832	972	1450	1920	1140	1670	1290	1210	1020	949	792	732
10	764	964	1390	1720	1140	1720	1380	1190	1080	954	797	728
11	741	939	1390	1620	1180	1670	1340	1190	1060	966	764	720
12	742	926	1390	1560	1250	1700	1290	1190	1010	916	808	715
13	769	882	1380	1520	1300	1760	1220	1190	977	908	821	715
14	753	881	1400	1480	1300	1740	1320	1170	1000	954	809	716
15	734	879	1610	1450	1290	1680	1310	1260	1010	911	783	715
16	730	908	2060	1440	1310	1620	1270	1280	1000	920	760	711
17	729	1050	1980	1390	1870	1580	1220	1220	971	924	745	704
18	729	1160	1780	1390	2150	1540	1250	1250	1000	928	748	712
19	727	1060	1630	1390	1910	1480	1290	1260	1010	921	804	719
20	725	1010	1560	1350	1760	1400	1270	1260	1040	911	776	719
21	723	1020	1560	1310	1700	1370	1280	1260	994	889	758	707
22	723	962	1520	1300	1870	1330	1280	1260	977	890	765	704
23	793	936	1450	1270	1900	1370	1310	1260	990	907	773	702
24	817	894	1370	1260	1860	1350	1310	1260	1010	908	726	701
25	768	895	1320	1250	1760	1330	1250	1300	960	878	695	685
26	839	933	1300	1240	1680	1280	1230	1310	969	861	740	669
27	916	957	1240	1260	1620	1240	1210	1280	969	888	776	683
28	941	1100	1190	1240	1580	1220	1070	1270	953	865	769	703
29	1430	1180	1150	1210	---	1450	1250	1260	904	846	782	710
30	1150	1170	1070	1190	---	2090	1300	1240	991	848	759	688
31	888	---	1050	1170	---	1900	---	1220	---	863	715	---
TOTAL	25342	29718	47220	44320	40310	47790	40180	38520	30755	28913	24285	21450
MEAN	817	991	1523	1430	1440	1542	1339	1243	1025	933	783	715
MAX	1430	1180	2200	2340	2150	2090	1720	1320	1200	1070	842	768
MIN	723	879	1050	1030	1030	1220	1070	1170	904	846	695	669
AC-FT	50270	58950	93660	87910	79950	94790	79700	76400	61000	57350	48170	42550
MEAN†	815	1000	1501	1433	1439	1547	1351	1239	1026	933	786	715
CFSM†	4.43	5.43	8.16	7.79	7.82	8.41	7.34	6.73	5.58	5.07	4.27	3.89
IN.†	5.11	6.06	9.41	8.98	8.15	9.70	8.19	7.77	6.22	5.85	4.92	4.33
AC-FT†	50100	59490	92300	88120	79940	95150	80380	76210	61040	57360	48300	42530

CAL YR 1982 TOTAL 415925 MEAN 1140 MAX 3870 MIN 660 AC-FT 825000 MEAN† 1140 CFSM† 6.20 IN.† 84.11 AC-FT† 825240  
WTR YR 1983 TOTAL 418803 MEAN 1147 MAX 2340 MIN 669 AC-FT 830700 MEAN† 1148 CFSM† 6.24 IN.† 84.69 AC-FT† 830920

† Adjusted for change in contents in Smith River Reservoir.

## WILLAMETTE RIVER BASIN

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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 November 1976 to September 1980. Water-quality mini-monitor since September 1980.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 67 micromhos Nov. 9, 10, 1977; minimum recorded, 35 micromhos Dec. 15, 1977.

WATER TEMPERATURES: Maximum recorded, 12.0°C Aug. 1, 1977; minimum recorded, 2.5°C Jan. 26, 1979.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 60 micromhos Sept. 25, 26, 28, 29; minimum, 39 micromhos Feb. 18.

WATER TEMPERATURES: Maximum, 10.5°C Aug. 16; minimum, 3.5°C Dec. 27 to Jan. 6, Feb. 9.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
MAR 31...	1515	1880	42	6.7	5.0	12.6	14	3.2
AUG 30...	1120	788	56	--	8.0	11.6	18	4.1

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
MAR 31...	1.4	3.0	.80	18	.8	.60	<.10	.040	<.100
AUG 30...	1.9	4.3	1.1	27	1.1	.70	.20	.040	<.100

## WILLAMETTE RIVER BASIN

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)
MAR 31...	.20	.040	.040	19	--	40	201	2.0
AUG 30...	<.20	.010	.040	22	46	52	98	.60

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAR 31...	<1	15	<1	<10	1	5	9
AUG 30...	<1	7	<1	<10	<1	2	11

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 31...	2	<1	<.1	3	<1	<1	8
AUG 30...	1	<1	<.1	3	<1	<1	10



## WILLAMETTE RIVER BASIN

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14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	53	52	49	46	41	42	45	45	50	52	56
2	56	51	52	49	46	42	41	45	46	49	52	56
3	56	52	50	49	46	42	42	46	46	50	52	56
4	56	53	47	49	46	42	42	46	46	50	52	56
5	56	53	45	48	47	43	42	46	46	50	52	56
6	56	52	44	46	47	42	48	46	47	49	52	56
7	56	53	44	42	47	42	48	47	47	50	52	56
8	56	53	44	42	47	42	49	47	47	50	52	56
9	56	53	45	42	47	42	46	46	47	50	52	56
10	56	53	46	42	47	41	43	46	47	51	53	57
11	56	53	47	42	47	41	43	46	47	50	54	57
12	56	53	47	42	46	41	43	46	48	50	54	57
13	56	53	47	43	46	41	45	46	48	50	54	57
14	56	53	47	43	46	41	44	46	48	50	54	57
15	56	53	46	44	45	41	44	46	49	50	54	57
16	56	53	45	44	46	41	44	46	49	51	54	57
17	56	53	45	45	44	41	45	46	49	51	54	57
18	56	53	44	45	41	41	45	46	49	51	55	57
19	56	52	44	45	41	42	45	46	49	51	55	57
20	56	52	44	44	41	42	45	46	49	51	55	57
21	57	53	44	45	41	43	45	46	49	51	54	57
22	57	53	45	45	41	43	45	46	50	51	54	57
23	56	53	46	45	40	43	45	46	50	50	54	57
24	57	53	47	45	40	43	45	46	51	50	54	58
25	57	53	46	45	40	43	45	46	50	51	54	59
26	56	53	47	45	41	44	45	46	50	51	56	59
27	55	53	46	45	41	44	45	46	50	51	56	59
28	55	53	47	45	41	44	45	46	50	51	56	59
29	54	53	47	46	---	44	46	46	49	51	55	59
30	54	52	48	46	---	41	46	45	50	52	56	59
31	54	---	48	46	---	42	---	45	---	51	56	---
MEAN	56	53	46	45	44	42	45	46	48	50	54	57

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.5	7.0	6.0	6.0	4.5	4.5	3.5	3.5	4.5	4.0	4.5	4.5
2	7.5	7.0	6.0	5.5	4.5	4.0	4.0	3.5	4.0	4.0	4.5	4.5
3	7.5	7.0	6.0	5.5	4.5	4.0	4.0	3.5	4.0	4.0	4.5	4.5
4	7.5	7.0	6.0	5.5	4.5	4.5	4.0	3.5	4.0	4.0	4.5	4.5
5	7.0	7.0	6.0	5.5	5.0	4.5	4.0	3.5	4.0	4.0	4.5	4.5
6	7.5	7.0	5.5	5.5	4.5	4.5	4.0	3.5	4.0	4.0	4.5	4.5
7	7.0	7.0	5.5	5.5	4.5	4.5	4.0	4.0	4.0	4.0	4.5	4.5
8	7.0	6.5	5.5	5.5	4.5	4.5	4.0	4.0	4.0	4.0	4.5	4.5
9	7.5	7.0	5.5	5.0	4.5	4.5	4.0	4.0	4.0	3.5	4.5	4.5
10	7.0	7.0	5.0	5.0	4.5	4.0	4.0	4.0	4.0	4.0	5.0	4.5
11	7.0	6.5	5.0	5.0	4.5	4.0	4.0	4.0	4.0	4.0	5.0	4.5
12	7.0	6.5	5.0	5.0	4.5	4.0	4.0	4.0	4.0	4.0	5.0	4.5
13	7.0	6.5	5.0	5.0	4.5	4.0	4.0	4.0	4.0	4.0	5.0	4.5
14	7.0	6.5	5.0	4.5	4.5	4.0	4.0	4.0	4.0	4.0	5.0	4.5
15	7.0	6.5	5.0	4.5	4.5	4.0	4.0	4.0	4.0	4.0	5.0	4.5
16	7.0	6.5	5.0	5.0	4.5	4.5	4.0	4.0	4.5	4.0	5.0	4.5
17	7.0	6.5	5.0	5.0	4.5	4.0	4.0	4.0	4.0	4.0	5.0	4.5
18	6.5	6.5	5.0	5.0	4.5	4.0	4.0	4.0	4.0	4.0	5.0	4.5
19	6.5	6.5	5.0	5.0	4.5	4.0	4.0	4.0	4.0	4.0	5.0	4.5
20	6.5	6.0	5.0	4.5	4.0	4.0	4.5	4.0	4.0	4.0	5.0	4.5
21	6.5	6.0	4.5	4.5	4.0	4.0	4.0	4.0	4.0	4.0	5.0	4.5
22	6.5	6.0	4.5	4.5	4.0	4.0	4.0	4.0	4.5	4.0	5.0	4.5
23	6.5	6.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.0	5.0	5.0
24	6.5	6.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.5	5.0	5.0
25	6.5	6.0	4.5	4.0	4.0	4.0	4.0	4.0	4.5	4.0	5.0	5.0
26	6.5	6.0	4.5	4.0	4.0	4.0	4.5	4.0	4.5	4.0	5.0	4.5
27	6.5	6.0	4.5	4.5	4.0	3.5	4.5	4.0	4.5	4.0	5.0	4.5
28	6.5	6.0	4.5	4.5	3.5	3.5	4.5	4.0	4.5	4.5	5.0	4.5
29	6.5	6.0	4.5	4.5	3.5	3.5	4.5	4.0	---	---	5.0	5.0
30	6.0	6.0	4.5	4.5	3.5	3.5	4.5	4.0	---	---	5.0	4.5
31	6.0	6.0	---	---	3.5	3.5	4.5	4.0	---	---	5.0	4.5
MONTH	7.5	6.0	6.0	4.0	5.0	3.5	4.5	3.5	4.5	3.5	5.0	4.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.0	5.0	6.0	5.5	8.0	7.5	8.0	7.5	9.0	8.5	8.5	8.0
2	5.0	4.5	6.0	5.5	8.0	7.5	8.0	7.5	9.5	8.5	8.5	8.0
3	5.0	4.5	6.0	5.5	8.0	7.0	8.0	7.5	9.5	8.5	8.5	8.0
4	5.0	4.5	6.0	5.5	8.0	7.5	8.5	7.5	9.5	8.5	8.5	8.0
5	5.0	4.5	6.0	6.0	8.0	7.5	8.5	8.0	10.0	8.5	8.5	8.0
6	5.0	4.5	6.0	6.0	8.5	7.5	8.5	8.0	9.5	8.5	8.5	8.0
7	5.0	4.5	6.0	6.0	8.5	7.5	8.0	8.0	9.5	8.5	8.5	8.0
8	5.0	5.0	6.0	5.5	8.5	8.0	8.0	7.5	9.5	8.5	8.5	8.0
9	5.0	4.5	6.0	5.5	8.5	8.0	8.0	7.5	9.5	8.5	8.5	8.0
10	5.0	4.5	6.0	5.5	8.5	8.0	8.0	7.5	9.5	8.5	8.5	7.5
11	5.0	4.5	6.0	5.5	8.5	8.0	8.5	7.5	9.5	9.0	9.0	8.0
12	5.0	4.5	6.0	5.5	8.5	7.5	8.5	8.0	9.5	8.5	8.5	7.5
13	5.5	4.5	6.5	6.0	8.5	7.5	8.5	8.0	9.5	8.5	8.5	7.5
14	5.0	4.5	6.0	6.0	8.5	8.0	8.5	8.0	9.5	8.5	8.5	8.0
15	5.0	4.5	6.0	6.0	8.5	8.0	8.5	8.0	9.5	8.5	8.5	7.5
16	5.5	4.5	6.0	6.0	8.5	8.0	8.5	7.5	10.5	9.0	9.0	7.5
17	5.5	5.0	6.5	6.0	8.5	8.0	8.5	7.5	10.0	9.5	8.5	7.5
18	5.5	5.0	6.5	6.0	8.0	7.5	8.5	7.5	9.5	8.0	8.5	7.5
19	5.5	5.0	6.5	6.0	8.0	7.5	8.5	8.0	9.0	8.0	8.0	7.5
20	5.5	5.0	6.5	6.0	8.0	7.5	8.5	8.0	9.0	8.0	8.5	8.0
21	5.5	5.5	6.5	6.0	8.0	7.5	8.5	8.0	9.0	8.0	8.0	7.5
22	5.5	5.5	7.0	6.5	8.0	7.5	8.5	8.0	9.0	8.5	8.0	7.5
23	5.5	5.5	7.0	6.5	8.0	7.5	9.0	8.0	9.0	8.5	8.0	7.5
24	5.5	5.5	7.0	6.5	8.0	7.5	9.0	8.5	9.0	8.0	8.0	7.5
25	5.5	5.5	7.5	6.5	8.5	7.5	9.0	8.0	9.0	8.0	8.0	7.5
26	5.5	5.5	7.5	7.0	8.5	7.5	9.0	8.0	9.0	8.0	8.0	7.5
27	5.5	5.5	7.5	7.0	8.5	8.0	9.0	8.0	9.0	8.0	8.0	7.5
28	6.0	5.5	8.0	7.0	8.5	7.5	9.0	8.0	9.0	8.5	8.0	7.0
29	6.0	5.5	8.0	7.5	8.5	8.0	9.0	8.0	9.0	8.0	8.0	7.0
30	6.0	5.5	8.0	7.5	8.0	8.0	9.0	8.0	9.0	8.0	8.0	7.0
31	---	---	8.0	7.5	---	---	9.0	8.5	9.0	8.0	---	---
MONTH	6.0	4.5	8.0	5.5	8.5	7.0	9.0	7.5	10.5	8.0	9.0	7.0

## WILLAMETTE RIVER BASIN

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14158930 BUDWORM CREEK NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°15'29", long 122°03'40", T.15 S., R.6 E., (unsurveyed), Linn County, Hydrologic Unit 17090004, Willamette National Forest, on right bank 0.1 mi upstream from Deer Creek, 4.8 mi north of town of Belknap Springs.

DRAINAGE AREA.--3.00 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1978 to March 1983, discontinued.

GAGE.--Water-stage recorder. Altitude of gage is 2,040 ft, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 688 ft<sup>3</sup>/s Dec. 25, 1980, gage height, 3.78 ft, from rating curve extended above 180 ft<sup>3</sup>/s; maximum gage height, 3.82 ft Jan. 12, 1980; minimum discharge, 0.45 ft<sup>3</sup>/s Oct. 8-10, 1980.

EXTREMES FOR PERIOD OCTOBER TO MARCH.--Peak discharges above base of 150 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 100 ft<sup>3</sup>/s:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	1230	170	2.80	Feb. 17	1900	250	3.15
Dec. 4	0130	357	3.51	Mar. 30	0100	*410	*3.66
Jan. 6	1930	284	3.28				

Minimum, 2.3 ft<sup>3</sup>/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR
1	3.0	14	26	6.7	10	15
2	2.6	11	35	7.5	9.3	14
3	2.7	8.9	183	13	8.4	14
4	3.0	7.6	213	67	7.8	14
5	2.6	8.5	86	70	7.2	16
6	4.8	14	101	170	8.4	22
7	11	12	43	185	9.2	28
8	15	10	25	86	14	39
9	10	9.0	18	46	29	34
10	7.2	7.8	14	28	29	35
11	5.6	6.9	12	21	41	27
12	4.6	6.2	11	18	41	26
13	3.9	5.8	11	16	39	32
14	3.4	5.3	15	14	32	28
15	3.1	5.0	50	13	29	24
16	2.8	5.5	108	13	31	20
17	3.8	18	70	13	123	17
18	3.6	29	37	13	146	15
19	3.1	29	26	14	56	13
20	2.7	21	27	13	37	11
21	2.8	16	37	11	35	11
22	5.1	12	29	11	57	11
23	17	10	20	14	46	12
24	12	9.1	15	18	34	11
25	9.0	9.3	13	16	25	11
26	12	9.9	12	16	20	11
27	20	13	10	17	17	14
28	18	30	9.3	15	15	14
29	115	53	8.4	13	---	89
30	46	40	7.7	12	---	240
31	22	---	7.1	11	---	120
TOTAL	377.4	436.8	1279.5	981.2	956.3	988
MEAN	12.2	14.6	41.3	31.7	34.2	31.9
MAX	115	53	213	185	146	240
MIN	2.6	5.0	7.1	6.7	7.2	11
CFSM	4.07	4.87	13.8	10.6	11.4	10.6
IN.	4.68	5.42	15.87	12.17	11.86	12.25
AC-FT	749	866	2540	1950	1900	1960

CAL YR 1982 TOTAL 5021.81 MEAN 13.8 MAX 213 MIN .68 CFSM 4.60 IN. 62.27 AC-FT 9960

## 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 upstream from Glen Creek, 1.7 mi east of town of McKenzie Bridge, and at mile 69.9.

DRAINAGE AREA.--348 mi<sup>2</sup> at cableway 1.2 mi 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 National Geodetic Vertical Datum of 1929. Prior to June 2, 1932, nonrecording gage at several sites within 2 mi of present site at various datums.

REMARKS.--Water-discharge records good except those for periods of no gage-height record Nov. 5 to Jan. 4, Jan. 29 to Apr. 4, which are fair. Flow regulated since March 1963 by Smith River Reservoir (Carmen-Smith Project) 12 mi upstream (see station 14158795). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--73 years, 1,685 ft<sup>3</sup>/s, 1,221,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 10.36 ft, from rating curve extended above 7,100 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 805 ft<sup>3</sup>/s Oct. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,680 ft<sup>3</sup>/s Jan. 7, gage height, 4.15 ft; minimum, 1,140 ft<sup>3</sup>/s Sept. 26, 27, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1240	1610	2000	1800	1900	2600	3290	2040	1840	1790	1450	1250
2	1260	1670	2200	1800	1900	2600	3160	1970	1780	1800	1430	1300
3	1230	1720	3000	2000	1900	2400	2880	1920	1720	1770	1410	1290
4	1210	1620	3800	2400	1900	2420	2790	1920	1680	1700	1450	1240
5	1240	1800	3400	2810	1800	2440	2660	1880	1680	1680	1430	1220
6	1330	1900	3800	4080	1800	2550	2580	1880	1660	1660	1420	1240
7	1430	1800	3200	5320	1800	2640	2470	1930	1610	1650	1430	1260
8	1470	1700	2800	4610	1800	2850	2260	1960	1600	1600	1430	1240
9	1400	1700	2600	3720	1900	2860	2220	1910	1580	1590	1380	1240
10	1290	1700	2400	3210	2000	2970	2270	1870	1690	1590	1380	1240
11	1250	1600	2400	2910	2000	2780	2230	1870	1650	1600	1340	1230
12	1230	1600	2400	2760	2200	2860	2140	1870	1600	1540	1380	1220
13	1250	1500	2400	2650	2200	2990	2030	1870	1550	1530	1400	1210
14	1230	1500	2400	2580	2200	2940	2110	1860	1590	1590	1380	1220
15	1210	1500	2800	2520	2200	2820	2090	2050	1590	1530	1360	1210
16	1200	1600	3600	2470	2400	2700	2030	2130	1590	1530	1330	1210
17	1220	1800	3400	2410	3200	2620	1970	2010	1570	1540	1310	1200
18	1210	2000	3200	2380	3600	2540	2010	2000	1650	1540	1310	1210
19	1200	1900	3000	2330	3400	2410	2080	1980	1670	1540	1360	1210
20	1190	1800	2800	2330	3000	2300	2040	1980	1710	1530	1330	1210
21	1190	1800	2600	2290	3000	2250	2060	1990	1650	1500	1300	1200
22	1220	1700	2600	2220	3200	2210	2050	1980	1620	1500	1310	1190
23	1430	1600	2400	2160	3400	2240	2050	1980	1620	1510	1320	1190
24	1400	1600	2400	2140	3200	2200	2060	1990	1650	1520	1270	1190
25	1320	1500	2400	2140	3000	2180	1960	2030	1600	1500	1230	1170
26	1430	1600	2200	2150	2800	2130	1920	2020	1600	1470	1260	1150
27	1590	1700	2200	2110	2800	2080	1890	1970	1600	1500	1310	1160
28	1590	1900	2000	2110	2600	2050	1740	1950	1580	1480	1310	1180
29	2860	2100	2000	2000	---	2750	1930	1930	1530	1460	1340	1190
30	2230	2000	1900	2000	---	4480	2010	1900	1610	1460	1310	1170
31	1720	---	1800	2000	---	3690	---	1860	---	1470	1250	---
TOTAL	43270	51520	82100	80410	69100	81550	66980	60500	49070	48670	41920	36440
MEAN	1396	1717	2648	2594	2468	2631	2233	1952	1636	1570	1352	1215
MAX	2860	2100	3800	5320	3600	4480	3290	2130	1840	1800	1450	1300
MIN	1190	1500	1800	1800	1800	2050	1740	1860	1530	1460	1230	1150
AC-FT	85830	102200	162800	159500	137100	161800	132900	120000	97330	96540	83150	72280
CAL YR 1982	TOTAL	712970	MEAN	1953	MAX	8000	MIN	1160	AC-FT	1414000		
WTR YR 1983	TOTAL	711530	MEAN	1949	MAX	5320	MIN	1150	AC-FT	1411000		

## WILLAMETTE RIVER BASIN

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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.--Dual conductivity-temperature recorder since November 1976.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 78 micromhos Jan. 2, 1977; minimum, 22 micromhos Nov. 25, 1977.

WATER TEMPERATURES: Maximum recorded, 13.5°C Aug. 1, 3, 1977; minimum, 3.0°C Dec. 31, 1978, Jan. 1, 1979, Jan. 4, 1982.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 64 micromhos Oct. 21; minimum, 37 micromhos Jan. 7, Feb. 18.

WATER TEMPERATURES: Maximum, 12.0°C Aug. 16; minimum, 3.5°C Dec. 29.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR 31...	1300	3690	43	7.0	5.5	12.6	14	3.2
AUG 30...	1400	1320	56	7.3	8.5	11.4	18	4.1

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
MAR 31...	1.4	2.9	.70	20	.9	.90	<.10	<.060	<.100
AUG 30...	1.9	4.4	1.1	25	1.1	1.4	.20	.030	<.100



WILLAMETTE RIVER BASIN  
14159000 MCKENZIE RIVER AT MCKENZIER BRIDGE, OR--Continued  
WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)
MAR 31...	.20	.030	.030	18	--	40	399	.80
AUG 30...	.20	.010	.030	23	50	52	178	.40

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAR 31...	<1	15	<1	<10	1	4	6
AUG 30...	<1	7	<1	10	1	<1	8

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 31...	2	<1	<.1	2	<1	<1	12
AUG 30...	1	<1	<.1	2	<1	<1	7

## WILLAMETTE RIVER BASIN

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14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	54	50	51	49	46	43	48	49	53	57	57
2	58	54	49	51	49	47	43	49	50	53	57	57
3	58	54	42	50	50	47	44	49	50	53	57	57
4	58	55	40	46	50	47	45	49	50	53	58	57
5	58	54	41	45	51	47	45	48	51	53	57	57
6	58	53	40	41	50	47	45	48	51	53	58	57
7	57	54	44	38	51	46	46	48	51	53	58	57
8	57	54	45	40	50	45	46	48	51	53	57	57
9	57	54	46	42	48	45	47	49	51	53	57	57
10	58	55	47	44	49	45	47	49	51	55	57	57
11	58	55	48	45	48	45	47	49	51	55	57	57
12	58	55	48	45	48	45	48	49	52	55	57	58
13	58	55	48	46	47	44	48	49	52	55	57	57
14	58	55	48	46	47	45	48	49	52	55	57	58
15	58	56	46	46	47	45	48	48	53	55	57	58
16	59	55	43	46	47	45	48	47	54	55	57	57
17	59	54	43	47	43	45	49	48	54	56	57	58
18	59	52	45	47	39	46	49	48	53	55	57	58
19	59	51	45	47	42	46	48	48	53	55	58	58
20	59	52	46	47	43	47	48	48	53	56	58	58
21	59	52	45	48	43	47	48	48	53	56	58	58
22	59	53	46	48	42	47	48	48	53	56	58	58
23	57	53	47	48	43	47	48	48	53	56	57	58
24	58	54	48	48	43	47	48	48	53	56	57	58
25	58	54	48	48	43	47	48	48	53	56	57	58
26	58	54	48	48	44	48	48	48	54	57	57	59
27	56	53	48	48	45	48	49	48	54	57	57	58
28	56	51	49	48	45	48	49	48	54	57	57	59
29	48	49	49	48	---	46	49	48	54	57	56	59
30	50	49	50	49	---	40	48	48	55	57	56	59
31	53	---	50	49	---	42	---	49	---	57	57	---
MEAN	57	53	46	46	46	46	47	48	52	55	57	58

## WILLAMETTE RIVER BASIN

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	6.5	7.0	6.0	5.5	5.0	4.5	4.0	5.0	4.5	5.5	5.0
2	8.0	7.0	6.5	5.5	5.0	4.5	4.5	4.5	5.0	4.5	5.5	5.0
3	8.5	7.5	6.5	6.0	5.5	5.0	5.0	4.5	5.0	4.0	6.0	5.0
4	8.0	7.5	6.5	6.5	5.5	5.5	5.0	4.5	5.0	4.0	5.5	5.5
5	8.5	7.0	6.5	6.0	5.5	5.5	5.0	4.5	5.0	4.5	5.5	5.0
6	7.5	7.0	6.5	6.0	5.5	5.5	5.0	4.5	5.0	4.5	5.5	5.0
7	7.5	7.0	6.0	5.5	5.5	4.5	5.0	4.5	5.0	4.5	5.5	5.0
8	8.0	7.0	6.0	5.5	5.0	4.5	5.0	5.0	5.0	4.5	5.5	5.5
9	8.5	7.0	6.0	5.0	5.0	4.5	5.0	4.5	4.5	4.0	5.5	5.5
10	8.5	7.0	5.5	5.0	5.0	4.5	5.0	4.5	5.0	4.5	6.0	5.5
11	8.0	7.0	5.5	5.0	5.0	4.5	5.0	4.5	5.0	4.5	6.0	5.5
12	8.5	7.0	5.5	5.0	5.0	4.5	5.0	4.5	5.5	5.0	6.0	5.5
13	8.0	6.5	5.5	5.0	5.5	5.0	4.5	4.5	5.0	5.0	6.0	5.5
14	8.0	7.0	5.5	4.5	5.0	4.5	4.5	4.5	5.0	4.5	5.5	5.0
15	8.0	7.0	5.5	4.5	5.0	5.0	5.0	4.5	5.0	4.5	6.0	5.0
16	7.5	7.0	5.5	5.0	5.5	5.0	5.0	4.5	5.5	5.0	5.5	5.0
17	7.0	6.5	6.0	5.5	5.0	5.0	5.0	5.0	5.0	4.5	6.0	5.5
18	7.5	6.5	5.5	5.5	5.0	5.0	5.5	5.0	5.0	4.5	6.0	5.0
19	7.0	6.0	5.5	5.0	5.0	5.0	5.0	5.0	5.0	4.5	6.5	5.0
20	7.0	6.0	5.5	4.5	5.0	5.0	5.0	4.5	5.0	5.0	6.0	5.0
21	7.0	6.5	5.5	4.5	5.0	5.0	5.0	4.5	5.5	5.0	6.0	5.5
22	7.5	7.0	5.0	4.5	5.0	4.5	5.0	4.5	5.5	5.0	6.0	5.5
23	7.5	7.0	5.0	4.0	5.0	4.5	5.0	4.5	5.5	5.0	6.5	5.5
24	7.5	6.5	5.0	4.0	5.0	4.5	5.5	5.0	5.5	5.0	6.0	5.0
25	7.5	6.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0	5.0	6.5	5.5
26	7.0	6.5	5.0	4.5	5.0	4.5	5.5	5.0	5.5	5.0	6.0	5.0
27	7.0	6.5	5.5	5.0	4.5	4.0	5.5	5.0	5.5	5.0	6.0	5.0
28	6.5	6.0	5.5	5.0	4.5	4.0	5.0	4.5	5.5	5.0	6.0	5.0
29	7.0	6.5	5.5	5.0	4.0	3.5	5.5	5.0	---	---	5.5	5.5
30	7.5	6.5	5.5	5.0	4.5	4.0	5.5	5.0	---	---	6.0	5.0
31	7.0	6.5	---	---	4.5	4.0	5.5	5.0	---	---	6.0	5.5
MONTH	8.5	6.0	7.0	4.0	5.5	3.5	5.5	4.0	5.5	4.0	6.5	5.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	5.5	7.0	6.5	8.0	8.0	8.5	8.0	11.5	9.0	9.0	8.5
2	5.5	4.5	7.5	6.5	8.5	8.0	9.0	8.0	11.5	9.0	10.0	8.0
3	6.0	5.0	8.5	6.5	10.0	7.5	10.0	8.0	11.5	9.0	10.5	8.0
4	6.5	5.0	8.0	6.5	10.0	8.0	11.0	8.0	11.5	9.0	10.0	8.5
5	6.5	5.0	7.5	6.5	10.5	7.5	10.5	8.0	11.0	9.0	10.0	8.0
6	6.5	5.0	8.0	6.5	10.5	8.0	9.5	8.0	11.5	9.0	10.0	8.0
7	6.5	5.5	7.0	6.5	11.0	8.0	8.5	8.0	10.5	9.0	10.0	8.0
8	7.0	5.5	7.0	6.0	11.0	8.5	9.5	8.0	10.5	9.0	9.0	8.0
9	6.0	5.0	7.0	6.0	10.5	8.5	9.5	8.0	11.5	9.0	9.5	8.0
10	6.5	5.0	7.0	6.0	9.0	8.0	10.5	7.5	10.0	9.0	8.5	7.5
11	6.0	5.0	8.0	6.0	9.0	8.0	11.0	8.0	10.5	8.5	10.5	8.0
12	6.0	5.0	8.5	6.0	10.5	8.0	10.0	8.0	11.5	8.5	10.0	8.0
13	7.0	5.0	8.5	6.0	10.5	7.5	9.5	8.5	11.0	8.5	10.0	8.0
14	7.0	5.0	7.0	6.5	9.5	8.0	9.5	8.0	11.5	9.0	10.0	8.0
15	7.0	5.0	7.0	6.5	9.5	8.0	9.0	8.0	11.5	9.0	10.0	8.0
16	7.5	5.5	8.0	6.5	9.5	8.0	10.5	7.5	12.0	8.5	10.0	8.0
17	7.5	5.5	8.5	6.0	8.5	8.0	10.0	8.0	11.5	9.0	9.5	8.0
18	8.0	6.0	8.5	6.5	8.5	8.0	10.0	8.0	11.5	8.5	8.5	8.0
19	7.5	6.0	9.0	6.5	9.0	8.0	10.5	8.5	9.5	8.5	9.0	7.5
20	7.5	6.0	9.5	6.5	10.0	7.5	10.5	8.0	11.0	8.5	9.5	7.5
21	7.5	6.0	9.5	7.0	10.0	7.5	11.0	8.0	11.0	8.5	9.5	7.5
22	6.5	6.0	9.5	7.0	9.0	8.0	11.5	8.5	9.5	8.5	9.0	7.5
23	7.0	6.0	9.5	7.0	8.5	8.0	11.0	8.5	10.0	8.5	8.5	8.0
24	7.5	6.0	10.0	7.5	10.0	7.5	10.0	8.5	10.5	8.5	9.5	8.0
25	7.0	6.0	10.0	7.5	10.5	7.5	9.5	8.5	10.0	8.5	9.5	7.5
26	7.0	6.0	10.0	7.5	11.0	8.0	11.0	8.5	10.5	8.5	9.5	7.5
27	7.5	5.5	10.0	7.5	10.5	8.0	9.5	8.5	10.5	8.5	9.0	7.5
28	8.0	6.5	10.5	8.0	9.5	8.0	10.5	8.5	9.5	8.5	---	7.0
29	8.0	6.5	11.0	8.0	10.0	8.0	11.5	8.5	9.0	8.5	8.5	---
30	7.5	6.5	10.0	8.5	8.5	8.0	11.5	8.5	9.0	8.5	8.0	7.0
31	---	---	8.5	8.0	---	---	11.0	9.0	9.0	8.5	---	---
MONTH	8.0	4.5	11.0	6.0	11.0	7.5	11.5	7.5	12.0	8.5	10.5	7.0

## 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 upstream from Tipsoo Creek, 8.0 mi south of Rainbow, 9.0 mi southeast of town of Blue River, and at mile 10.4.

DRAINAGE AREA.--160 mi<sup>2</sup> at cableway 0.2 mi 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 National Geodetic Vertical Datum of 1929 (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.--26 years, 640 ft<sup>3</sup>/s, 54.32 in/yr, 463,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 20.06 ft, from floodmark, from rating curve extended above 7,600 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 171 ft<sup>3</sup>/s Sept. 16, 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 6	0230	3,610	9.04	Feb. 17	2330	*3,880	*9.32
Jan. 7	1100	3,080	8.47	Mar. 29	2230	2,850	8.21

Minimum, 241 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	301	722	783	527	591	836	1490	770	886	509	296	279		
2	287	603	970	524	559	786	1380	779	784	632	290	273		
3	290	519	2590	578	529	756	1200	759	700	572	288	266		
4	281	464	3040	1360	506	806	1080	770	647	508	283	262		
5	272	459	2560	1530	485	810	981	815	610	464	282	260		
6	329	579	3120	2210	501	880	900	793	583	440	279	259		
7	491	513	2100	2960	514	984	843	799	562	428	278	257		
8	566	472	1510	2500	570	1180	792	828	548	431	277	257		
9	465	438	1200	1850	849	1190	755	810	534	408	278	259		
10	401	410	1000	1440	869	1250	711	777	656	388	274	257		
11	361	385	864	1190	1010	1120	671	759	628	373	278	258		
12	333	367	789	1050	1020	1230	633	762	559	362	273	254		
13	312	351	754	951	1000	1500	612	761	505	356	270	252		
14	299	337	823	865	981	1400	585	775	476	367	268	250		
15	288	326	1160	799	1000	1220	570	965	478	351	266	251		
16	281	331	2060	778	1000	1070	570	1030	450	345	265	252		
17	303	456	2010	778	2120	972	600	979	440	351	265	252		
18	296	648	1520	751	3300	884	664	937	489	345	259	256		
19	282	717	1250	774	2150	803	731	902	504	351	264	258		
20	274	675	1160	721	1640	747	757	919	497	342	262	251		
21	276	604	1270	682	1530	717	827	969	456	328	261	249		
22	303	534	1160	668	1770	703	824	987	431	322	260	248		
23	636	479	1010	722	1640	674	793	1040	423	317	264	248		
24	500	444	863	759	1450	657	781	1090	425	320	261	248		
25	435	435	784	718	1250	645	745	1130	397	317	267	246		
26	496	442	756	740	1080	639	718	1080	384	312	273	247		
27	507	479	707	825	956	657	684	1020	376	308	268	247		
28	508	640	657	775	876	659	697	1020	365	305	279	246		
29	1870	938	614	721	---	1350	737	1010	358	301	306	245		
30	1540	957	583	668	---	2340	730	931	356	298	299	244		
31	953	---	553	628	---	1760	---	883	---	292	279	---		
TOTAL	14736	15724	40220	32042	31746	31225	24061	27849	15507	11743	8512	7631		
MEAN	475	524	1297	1034	1134	1007	802	898	517	379	275	254		
MAX	1870	957	3120	2960	3300	2340	1490	1130	886	632	306	279		
MIN	272	326	553	524	485	639	570	759	356	292	259	244		
CFSM	2.97	3.27	8.11	6.46	7.09	6.29	5.01	5.61	3.23	2.37	1.72	1.59		
IN.	3.43	3.66	9.35	7.45	7.38	7.26	5.59	6.47	3.61	2.73	1.98	1.77		
AC-FT	29230	31190	79780	63560	62970	61930	47720	55240	30760	23290	16880	15140		
CAL YR 1982	TOTAL	270890	MEAN	742	MAX	4990	MIN	232	CFSM	4.64	IN.	62.98	AC-FT	537300
WTR YR 1983	TOTAL	260996	MEAN	715	MAX	3300	MIN	244	CFSM	4.47	IN.	60.68	AC-FT	517700

## WILLAMETTE RIVER BASIN

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.

INSTRUMENTATION.--Temperature recorder since November 1957.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 17.0°C July 8, 1968, July 19, 20, 1979; minimum, 0.0°C Dec. 7-11, 1972, Dec. 30, 1978, Jan. 1, 1979, Jan. 4, 1982.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 15.5°C July 30; minimum, 2.0°C Dec. 29.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	6.0	7.0	6.0	5.0	4.5	3.5	2.5	4.5	3.5	6.0	5.0
2	8.0	6.5	6.5	5.0	5.0	4.5	4.5	3.5	4.5	3.5	6.0	4.5
3	9.5	7.5	7.0	5.5	6.0	5.0	4.5	4.0	4.0	3.0	6.0	5.0
4	8.5	7.5	7.5	6.5	6.0	5.5	5.0	4.0	4.0	3.0	6.0	5.5
5	8.5	6.5	7.0	6.5	6.0	5.5	5.0	4.5	4.0	3.0	6.0	5.0
6	8.0	7.0	7.0	5.5	6.0	5.0	5.5	5.0	4.5	4.0	5.5	5.0
7	7.5	6.5	5.5	4.5	5.0	4.0	5.5	5.0	4.5	3.5	5.5	5.0
8	8.5	7.0	5.5	4.5	4.5	4.0	5.5	4.5	4.5	4.0	6.0	5.0
9	8.5	7.0	5.5	4.5	4.5	4.0	4.5	4.5	4.5	3.5	6.0	5.5
10	9.0	7.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5	4.0	6.5	5.5
11	9.0	7.0	4.5	3.5	4.5	4.0	4.5	4.0	5.5	4.5	6.5	5.5
12	9.0	7.0	4.5	4.0	5.0	4.0	4.5	4.0	5.5	5.0	6.0	5.0
13	9.0	7.0	5.0	4.0	5.0	4.5	4.0	3.5	5.5	5.0	6.0	5.0
14	9.0	7.0	4.5	3.5	5.0	4.0	4.0	3.5	5.0	4.5	5.0	4.5
15	9.0	7.0	4.5	3.0	5.5	5.0	4.5	3.5	5.5	4.5	5.5	4.0
16	8.5	7.5	5.0	4.0	5.5	5.5	5.0	4.5	5.5	5.0	5.5	4.0
17	8.0	7.0	6.0	5.0	5.5	4.5	5.5	4.5	5.5	5.0	6.0	5.0
18	7.5	6.0	6.0	5.0	4.5	4.5	5.5	5.0	5.0	4.5	6.0	4.5
19	7.0	5.0	5.5	4.5	5.0	4.5	5.0	4.5	5.5	4.5	6.0	4.0
20	7.5	5.5	5.0	4.0	5.5	5.0	4.5	4.0	5.5	5.0	6.0	4.0
21	8.0	7.0	5.0	4.0	5.0	4.5	4.0	3.5	6.0	5.0	6.0	5.0
22	9.0	7.5	4.5	3.5	5.0	4.5	4.5	3.5	6.0	5.5	5.5	4.5
23	9.0	7.5	4.0	3.5	4.5	4.0	4.5	4.0	6.0	5.5	6.5	4.5
24	8.0	7.0	4.0	3.0	4.0	3.5	5.0	4.0	5.5	5.0	6.0	4.5
25	8.5	7.5	4.5	3.5	4.5	3.5	5.0	4.0	5.5	4.5	5.5	4.0
26	7.5	7.0	5.0	4.0	4.5	4.0	5.5	5.0	5.5	4.5	5.0	4.0
27	7.5	6.5	5.5	4.5	4.5	3.0	5.5	4.5	5.5	4.5	5.5	4.5
28	7.0	6.0	5.5	5.0	3.0	2.5	5.0	4.0	5.5	4.5	6.0	4.5
29	8.0	7.0	5.5	5.0	3.0	2.0	5.5	4.5	---	---	5.5	5.0
30	8.0	7.0	5.5	5.0	3.0	2.5	5.0	4.0	---	---	5.5	4.5
31	7.0	6.5	---	---	3.5	2.5	5.0	4.5	---	---	6.0	4.5
MONTH	9.5	5.0	7.5	3.0	6.0	2.0	5.5	2.5	6.0	3.0	6.5	4.0



## WILLAMETTE RIVER BASIN

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14159200 SOUTH FORK MCKENIZE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.5	4.5	6.5	6.0	8.5	7.5	10.5	9.0	14.5	11.0	---	---
2	5.0	3.5	7.0	5.5	9.0	7.5	10.5	9.0	15.0	10.5	---	---
3	5.5	4.0	9.0	5.5	11.5	7.5	12.5	8.5	15.0	10.0	---	---
4	6.0	4.5	8.0	5.5	12.0	8.5	14.0	9.0	15.0	10.0	---	---
5	6.5	4.0	7.5	6.0	12.5	8.0	14.5	10.0	14.5	10.5	---	---
6	6.5	3.5	7.5	5.0	13.0	8.5	11.5	10.0	15.0	10.0	---	---
7	6.0	4.5	6.5	5.5	13.5	9.0	10.0	9.5	14.0	10.5	---	---
8	6.5	4.5	5.5	4.0	14.0	10.0	11.0	8.5	13.5	10.5	---	---
9	5.0	4.0	6.5	4.0	13.5	9.5	12.0	8.5	15.0	10.5	---	---
10	5.5	3.5	7.0	4.5	10.5	9.0	13.5	8.0	12.5	10.5	---	---
11	5.5	4.0	8.5	5.0	10.5	8.5	14.5	9.0	13.5	10.0	---	---
12	5.5	4.0	9.0	5.0	12.5	8.5	14.0	9.5	14.5	9.0	---	---
13	6.0	4.0	9.0	5.5	13.5	8.0	12.5	10.0	14.5	10.0	---	---
14	7.0	3.5	7.0	6.0	12.0	9.5	13.0	9.5	14.5	10.0	---	---
15	7.5	3.5	6.5	6.0	12.5	9.0	11.0	9.0	14.5	10.0	11.5	8.5
16	8.0	4.0	8.0	5.5	12.5	8.5	13.0	8.0	14.5	9.5	11.5	8.5
17	8.0	4.5	9.0	5.0	11.0	9.5	12.0	9.0	14.0	9.5	11.0	8.5
18	8.0	5.5	9.0	6.5	10.0	8.5	13.5	9.5	14.5	9.5	9.5	8.0
19	7.0	5.5	10.0	5.5	10.0	8.5	13.0	9.5	11.5	10.0	10.0	7.5
20	7.5	5.5	10.5	6.5	12.0	8.5	13.5	9.5	13.0	10.0	10.5	7.0
21	8.0	6.0	10.5	7.0	12.5	7.5	14.5	9.0	13.5	9.0	10.5	7.0
22	6.5	6.0	10.5	6.5	11.0	9.0	15.0	9.5	11.0	9.5	11.0	8.0
23	7.0	5.0	11.0	7.0	10.5	9.0	15.5	10.5	12.0	9.5	10.5	9.0
24	6.5	4.5	11.0	7.5	13.0	8.0	13.0	10.5	13.0	9.0	11.0	8.5
25	6.5	4.5	11.5	8.0	13.5	8.5	11.5	10.0	12.0	9.0	11.0	8.0
26	6.5	4.5	11.0	7.5	14.0	9.5	14.0	9.0	13.0	9.5	11.0	8.5
27	7.5	4.5	11.5	8.0	14.5	9.5	11.5	10.0	---	---	10.0	8.0
28	8.0	5.5	12.5	8.5	12.0	9.5	14.0	10.0	---	---	9.5	6.5
29	8.5	5.5	12.5	9.5	12.5	9.5	15.0	10.0	---	---	9.0	6.0
30	8.0	6.0	11.0	9.5	10.5	9.5	15.5	10.0	---	---	8.5	6.0
31	---	---	9.5	8.5	---	---	14.5	11.0	---	---	---	---
MONTH	8.5	3.5	12.5	4.0	14.5	7.5	15.5	8.0	15.0	9.0	11.5	6.0

## 14159400 COUGAR LAKE NEAR RAINBOW, OR

LOCATION.--Lat 44°07'40", long 122°14'25", in SE1/4 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 south of Rainbow, and at mile 4.5.

DRAINAGE AREA.--207 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year. Prior to October 1971, published as Cougar Reservoir near Rainbow.

GAGE.--Water-stage recorder. Datum gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake 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 at elevation 1,699 ft, maximum pool, and usable capacity is 164,800 acre-feet between elevations 1,516 ft, minimum power pool, and 1,699 ft. Lake 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 June 29, 1977, elevation, 1,695.06 ft; minimum, 33,690 acre-ft Oct. 31 to Nov. 2, 1965, elevation, 1,475.40 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 208,200 acre-ft July 2, 3, elevation, 1,690.39 ft; minimum, 64,660 acre-ft Dec. 30, elevation, 1,533.19 ft.

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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1614.25	1586.60	1555.72	1533.33	1545.65	1611.56	1658.90	1682.57	1688.97	1690.26	1687.20	1654.66
2	1612.80	1586.00	1554.15	1533.33	1546.85	1613.14	1656.79	1683.60	1689.02	1690.39	1686.35	1653.58
3	1611.34	1585.07	1561.20	1533.63	1547.89	1614.57	1653.99	1684.48	1689.08	1690.30	1685.50	1652.54
4	1609.84	1583.99	1571.79	1537.53	1548.86	1616.23	1653.06	1685.43	1689.10	1690.09	1684.63	1651.48
5	1608.26	1582.94	1578.62	1542.05	1549.78	1617.98	1653.98	1686.16	1689.10	1689.97	1683.77	1650.45
6	1606.79	1582.38	1586.77	1548.82	1550.89	1620.02	1655.22	1686.73	1689.10	1689.91	1682.89	1649.36
7	1605.98	1581.48	1587.15	1559.30	1551.97	1622.20	1656.53	1687.38	1689.08	1689.86	1682.00	1648.29
8	1605.40	1580.42	1582.73	1565.77	1553.52	1624.14	1657.70	1688.16	1689.08	1689.84	1681.10	1647.18
9	1604.46	1579.19	1575.78	1566.24	1556.41	1625.65	1658.78	1688.73	1689.14	1689.84	1680.19	1646.07
10	1603.29	1577.84	1567.89	1562.83	1559.22	1627.34	1659.70	1688.81	1689.19	1689.77	1679.28	1644.96
11	1601.96	1576.37	1561.25	1558.22	1562.55	1628.58	1661.11	1688.70	1689.08	1689.71	1678.48	1643.81
12	1600.52	1574.77	1555.05	1552.83	1565.78	1630.01	1662.02	1688.81	1689.01	1689.69	1677.54	1642.69
13	1598.96	1573.10	1550.27	1550.39	1568.94	1632.20	1662.88	1689.06	1689.57	1689.80	1676.60	1641.34
14	1597.36	1571.36	1547.03	1550.22	1572.01	1634.22	1663.67	1689.43	1689.66	1689.91	1675.66	1640.17
15	1595.68	1569.54	1545.17	1549.70	1575.08	1635.70	1664.41	1689.90	1689.86	1689.99	1674.70	1639.05
16	1594.10	1567.73	1550.73	1549.15	1578.01	1636.71	1665.15	1689.85	1689.95	1690.02	1673.75	1637.86
17	1593.18	1566.43	1555.49	1548.58	1585.57	1637.44	1665.97	1689.29	1689.99	1690.04	1672.80	1636.70
18	1591.74	1565.97	1555.40	1547.91	1597.91	1637.89	1667.04	1689.15	1690.07	1690.07	1671.84	1635.53
19	1589.98	1565.87	1553.19	1547.40	1601.59	1638.09	1668.31	1689.25	1690.13	1690.11	1670.89	1634.33
20	1588.15	1565.59	1549.88	1546.60	1599.37	1638.11	1669.63	1689.45	1690.15	1690.12	1669.05	1633.13
21	1586.28	1564.95	1547.01	1545.57	1598.05	1638.75	1670.73	1689.55	1690.01	1690.11	1668.06	1631.92
22	1584.69	1563.92	1545.21	1544.51	1600.59	1640.00	1672.25	1689.53	1689.92	1690.05	1667.08	1630.68
23	1584.27	1562.65	1544.21	1543.84	1603.58	1641.13	1673.63	1689.44	1689.92	1689.99	1666.08	1628.92
24	1583.23	1561.20	1542.50	1543.40	1605.84	1642.24	1674.93	1689.45	1689.93	1689.92	1665.11	1627.66
25	1581.99	1559.65	1540.36	1542.69	1607.41	1643.31	1676.14	1689.54	1689.89	1689.90	1664.12	1626.39
26	1580.97	1558.08	1538.13	1542.11	1608.39	1644.39	1677.23	1689.49	1689.83	1689.90	1663.11	1625.11
27	1579.95	1556.68	1536.78	1541.95	1608.94	1645.55	1678.23	1689.38	1689.77	1689.78	1662.13	1623.83
28	1578.92	1556.01	1535.62	1541.51	1609.99	1646.72	1679.22	1689.33	1689.73	1689.34	1661.31	1622.52
29	1583.16	1556.79	1534.08	1542.20	---	1648.88	1680.33	1689.27	1689.78	1688.86	1660.39	1621.12
30	1585.98	1557.66	1533.23	1543.27	---	1655.49	1681.40	1689.14	1689.90	1688.37	1659.41	1619.80
31	1586.73	---	1533.32	1544.34	---	1659.01	---	1689.05	---	1687.88	1655.72	---
MEAN	1595.17	1570.67	1554.06	1547.07	1577.17	1633.78	1665.96	1688.33	1689.57	1689.80	1673.12	1638.04
MAX	1614.25	1586.60	1587.15	1566.24	1609.99	1659.01	1681.40	1689.90	1690.15	1690.39	1687.20	1654.66
MIN	1578.92	1556.01	1533.23	1533.33	1545.65	1611.56	1653.06	1682.57	1688.97	1687.88	1655.72	1619.80
(+)	103600	81360	64750	72040	123500	171900	197300	206600	207600	205200	168400	132500
(#)	-25100	-22240	-16610	+7290	+51460	+48400	+25400	+9300	+1000	-2400	-36800	-35900

CAL YR 1982 MEAN 1626.88 MAX 1691.90 MIN 1531.55

WTR YR 1983 MEAN 1627.15 MAX 1690.39 MIN 1533.23

+ 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 upstream from Cougar Creek, 0.6 mi downstream from Cougar Dam, 2.1 mi south of Rainbow, and at mile 3.9.

DRAINAGE AREA.--208 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). Oct. 1 to Nov. 4, 1947, nonrecording gage at site 40 ft upstream at datum 0.80 ft higher.

REMARKS.--Water-discharge records good. Flow regulated since 1963 by Cougar Lake (see station 14159400), usable capacity, 165,000 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--36 years, 869 ft<sup>3</sup>/s, 56.74 in/yr, 629,600 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft<sup>3</sup>/s Dec. 11, 1956, gage height, 8.66 ft, from rating curve extended above 8,100 ft<sup>3</sup>/s; maximum gage height, 8.90 ft Dec. 22, 1955 (backwater from debris); minimum discharge, 17 ft<sup>3</sup>/s Nov. 18, 1965; minimum daily, 85 ft<sup>3</sup>/s Apr. 26-28, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 24,500 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 8.8 ft, from floodmarks, at Corps of Engineers gage at site 40 ft upstream at datum 0.80 ft higher; gage height at present site and datum, about 9.3 ft, computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,130 ft<sup>3</sup>/s Dec. 10, gage height, 4.38 ft; minimum, 97 ft<sup>3</sup>/s Feb. 18; minimum daily, 159 ft<sup>3</sup>/s Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	946	980	1760	622	316	384	2190	270	1010	523	700	807
2	950	991	2060	628	315	304	3100	336	831	748	796	806
3	951	1010	1510	630	316	307	3080	407	718	804	795	807
4	952	1010	728	911	307	307	1900	407	678	761	798	804
5	961	1020	1190	885	299	307	818	545	639	644	797	804
6	964	1030	1450	1270	306	302	527	630	630	578	794	794
7	971	1030	2650	1130	305	363	401	626	627	561	795	790
8	972	1040	3600	1440	316	726	387	630	577	534	801	795
9	973	1030	4060	2460	314	915	388	694	555	517	805	796
10	970	1030	4050	3040	312	914	384	936	732	518	802	797
11	969	1050	3330	3060	300	911	346	1030	753	496	748	802
12	972	1060	3000	3060	302	906	285	888	658	419	807	801
13	978	1050	2450	1850	304	908	269	792	597	381	804	797
14	979	1060	2070	1110	295	906	266	797	462	383	804	799
15	988	1060	2060	1120	296	906	266	987	420	383	807	797
16	951	1070	1150	1110	300	895	269	1410	441	394	798	797
17	722	1080	1240	1120	312	895	267	1590	475	405	791	793
18	891	1080	2090	1130	159	892	268	1310	520	406	792	795
19	1000	1080	2340	1130	1190	891	265	1040	574	397	790	795
20	1010	1080	2540	1130	3070	889	262	999	605	409	792	791
21	1020	1090	2550	1140	1730	587	262	1110	617	412	793	791
22	1010	1090	2110	1140	979	294	264	1200	557	414	794	790
23	1020	1090	1630	1120	967	299	267	1280	501	410	797	793
24	1030	1090	1620	1110	957	299	265	1290	513	405	797	793
25	1030	1100	1620	1120	950	299	264	1260	496	378	798	798
26	1010	1100	1620	1110	951	303	270	1290	482	358	804	801
27	992	1110	1280	1110	948	303	266	1240	480	447	802	799
28	1000	1110	1130	1110	667	304	266	1170	437	596	799	798
29	1020	1120	1180	578	---	382	266	1170	387	615	805	797
30	993	1130	929	508	---	445	265	1100	365	617	810	796
31	976	---	619	379	---	909	---	1050	---	616	808	---
TOTAL	30171	31871	61616	39261	17783	18252	18593	29484	17337	15529	24623	23923
MEAN	973	1062	1988	1266	635	589	620	951	578	501	794	797
MAX	1030	1130	4060	3060	3070	915	3100	1590	1010	804	810	807
MIN	722	980	619	379	159	294	262	270	365	358	700	790
AC-FT	59840	63220	122200	77870	35270	36200	36880	58480	34390	30800	48840	47450
MEAN†	565	689	1717	1385	1562	1376	1047	1102	595	462	196	194
CFSM†	2.72	3.31	8.25	6.66	7.51	6.62	5.03	5.30	2.86	2.22	0.94	0.93
IN.†	3.13	3.70	9.52	7.68	7.82	7.63	5.62	6.11	3.19	2.56	1.09	1.04
AC-FT†	34740	40980	105590	85160	86730	84600	62280	67780	35390	28400	12040	11550

CAL YR 1982 TOTAL 356020 MEAN 975 MAX 4520 MIN 288 AC-FT 706200 MEAN† 944 CFSM† 4.54 IN† 61.62 AC-FT† 683370  
WTR YR 1983 TOTAL 328443 MEAN 900 MAX 4060 MIN 159 AC-FT 651500 MEAN† 905 CFSM† 4.35 IN† 59.09 AC-FT† 655300

† Adjusted for change in contents in Cougar Lake.

## WILLAMETTE RIVER BASIN

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1955 to current year.

INSTRUMENTATION.--Temperature recorder since July 1955.

## 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, 13.0°C on many days in October and September; minimum recorded, 4.5°C on many days in January and February.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	12.5	---	---			---	---	5.0	4.5	5.5	5.0
2	13.0	12.5	10.5	---			---	---	5.0	4.5	5.5	5.0
3	13.0	12.5	10.0	10.0			---	4.5	5.0	4.5	5.5	5.0
4	13.0	12.5	10.0	10.0			5.0	4.5	5.0	4.5	5.5	5.0
5	13.0	12.5	10.0	9.5			5.0	4.5	5.0	4.5	5.5	5.0
6	13.0	12.5	10.0	9.5			5.0	5.0	5.0	4.5	5.5	5.0
7	12.5	12.5	9.5	9.5			5.5	5.0	5.0	4.5	5.5	5.0
8	12.5	12.5	9.5	9.5			5.5	5.0	5.0	4.5	5.5	5.5
9	12.5	12.0	9.5	9.0			5.5	5.0	5.0	4.5	5.5	5.5
10	12.5	12.0	9.5	9.5			5.0	5.0	4.5	4.5	5.5	5.5
11	12.5	12.0	9.5	9.0			5.0	5.0	5.0	4.5	5.5	5.5
12	12.5	12.0	---	---			5.0	5.0	5.0	4.5	5.5	5.5
13	12.5	12.0	---	---			5.0	4.5	5.0	4.5	5.5	5.0
14	12.5	12.0	---	---			5.0	4.5	5.0	4.5	5.5	5.0
15	12.5	12.0	---	---			5.0	4.5	5.0	5.0	5.5	5.0
16	12.5	11.5	---	---			5.0	4.5	5.5	5.0	5.5	5.0
17	12.0	11.5	---	---			5.0	4.5	5.5	5.0	5.5	5.0
18	12.0	12.0	---	---			5.0	5.0	6.0	5.0	5.5	5.0
19	12.0	11.5	---	---			5.0	4.5	5.5	5.0	5.5	5.0
20	12.0	11.5	---	---			4.5	4.5	5.0	5.0	5.5	5.0
21	13.0	11.5	---	---			4.5	4.5	5.5	5.0	5.5	5.0
22	12.5	11.5	---	---			5.0	4.5	6.0	5.0	5.5	5.0
23	12.5	11.5	---	---			5.0	4.5	5.5	5.0	5.5	5.0
24	12.0	11.5	---	---			5.0	5.0	5.0	5.0	5.5	5.0
25	12.0	11.5	---	---			5.0	5.0	5.0	5.0	5.0	5.0
26	11.5	11.0	---	---			5.0	5.0	5.0	5.0	5.0	5.0
27	11.5	11.0	---	---			5.0	4.5	5.5	5.0	6.0	5.0
28	11.0	10.5	---	---			5.0	4.5	5.5	5.0	6.0	5.5
29	10.5	10.0	---	---			5.0	4.5	---	---	6.0	5.5
30	10.5	10.0	---	---			5.0	5.0	---	---	6.0	5.5
31	---	---	---	---			5.0	4.5	---	---	6.0	5.5
MONTH	13.0	10.0	10.5	9.0			5.5	4.5	6.0	4.5	6.0	5.0

## WILLAMETTE RIVER BASIN

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14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	5.5	6.0	5.0	6.0	5.5	7.5	6.0	---	---	11.0	10.0
2	6.0	5.5	6.0	5.0	6.0	6.0	7.5	6.5	---	---	11.0	10.5
3	6.0	6.0	6.5	5.5	6.5	6.0	7.5	7.0	---	---	11.5	10.0
4	6.0	5.5	6.5	5.0	6.5	5.5	8.0	6.5	---	---	11.5	10.0
5	6.0	5.0	6.0	5.0	6.5	5.5	7.5	6.5	---	---	11.5	10.5
6	5.5	5.0	6.0	5.5	6.5	5.5	7.5	6.5	---	---	11.5	10.5
7	5.0	5.0	5.5	5.5	6.5	5.5	7.5	6.5	---	---	11.5	10.5
8	5.5	5.0	5.5	5.0	6.5	6.0	7.5	7.0	9.5	8.5	11.5	11.0
9	5.5	5.0	6.0	5.0	6.5	6.0	---	---	9.5	8.5	11.5	11.0
10	5.5	5.0	6.0	5.5	6.5	6.0	---	---	9.5	8.5	11.5	11.0
11	5.5	5.0	6.0	5.5	6.5	5.5	---	---	10.0	8.5	11.5	11.0
12	6.0	5.0	6.0	5.5	6.5	6.0	---	---	10.0	9.0	11.5	11.0
13	6.0	5.0	6.0	5.5	6.5	5.5	---	---	10.0	8.5	12.0	11.0
14	6.0	5.0	6.0	5.5	7.0	5.5	---	---	10.0	8.5	12.0	11.0
15	6.0	5.0	5.5	5.0	7.0	6.0	---	---	10.0	8.5	12.0	11.5
16	6.5	5.0	6.0	5.5	7.0	6.0	---	---	10.0	9.0	12.0	11.5
17	6.5	5.5	6.0	5.5	7.0	6.0	---	---	10.0	8.5	12.5	11.5
18	6.5	5.0	6.0	5.5	7.0	6.0	---	---	10.0	8.5	12.0	11.5
19	6.0	5.5	6.0	5.5	7.0	6.0	---	---	10.0	9.0	12.5	12.0
20	6.0	5.0	6.0	5.5	7.5	6.5	---	---	10.0	8.5	13.0	12.0
21	6.5	5.0	6.0	5.5	7.5	6.5	---	---	10.5	9.0	12.5	12.0
22	5.5	5.5	6.0	5.5	7.0	6.0	---	---	10.5	9.0	12.5	12.0
23	6.0	5.0	6.0	5.5	7.0	6.0	---	---	10.5	9.5	13.0	12.0
24	6.0	5.0	6.0	5.5	7.0	6.5	---	---	10.5	9.5	12.5	12.0
25	6.0	5.5	6.0	5.5	7.5	6.0	---	---	10.5	9.5	13.0	12.5
26	6.5	5.0	6.0	5.5	7.5	6.0	---	---	10.5	8.5	13.0	12.0
27	6.5	5.0	6.0	5.5	7.5	6.5	---	---	11.0	9.5	13.0	12.5
28	6.5	5.0	6.0	5.5	7.5	6.5	---	---	11.0	10.0	13.0	12.5
29	6.5	5.0	6.5	6.0	8.0	6.0	---	---	10.5	10.0	13.0	12.5
30	6.5	5.0	6.5	5.5	7.0	6.5	---	---	10.5	10.0	13.0	12.5
31	---	---	6.0	5.5	---	---	---	---	11.0	10.0	---	---
MONTH	6.5	5.0	6.5	5.0	8.0	5.5	8.0	6.0	11.0	8.5	13.0	10.0



## WILLAMETTE RIVER BASIN

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 downstream from Tidbits Creek, 5.5 mi northeast of town of Blue River, and at mile 8.5.

DRAINAGE AREA.--45.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,386.90 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

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

AVERAGE DISCHARGE.--20 years, 261 ft<sup>3</sup>/s, 77.39 in/yr, 189,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 15.32 ft, from floodmarks, from rating curve extended above 2,800 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 8.2 ft<sup>3</sup>/s Sept. 28, 29, Oct. 2-4, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	1230	2,100	6.98	Jan. 7	0800	2,950	7.83
Dec. 4	0330	3,560	8.33	Feb. 17	1900	3,120	7.98
Dec. 16	0630	2,130	7.05	Mar. 30	0030	*3,770	*8.49

Minimum, 16 ft<sup>3</sup>/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	42	236	543	139	234	301	806	181	104	224	44	38		
2	36	176	770	150	207	278	717	175	97	291	39	36		
3	36	143	2520	235	167	254	560	161	89	228	37	32		
4	33	121	2520	1410	152	248	447	154	83	166	36	29		
5	30	132	1390	1220	139	291	381	150	77	133	35	27		
6	51	253	1700	1950	148	505	335	149	74	113	34	26		
7	125	199	865	2590	176	605	306	173	70	101	33	25		
8	180	194	533	1600	307	851	275	234	68	98	33	24		
9	117	143	378	941	753	766	251	257	65	90	32	25		
10	80	121	296	588	636	765	232	254	102	82	31	23		
11	61	107	243	416	734	571	214	250	92	76	31	25		
12	52	97	224	335	782	553	197	256	80	72	30	24		
13	46	89	238	287	802	696	182	242	72	69	29	22		
14	41	80	340	250	640	642	175	227	66	69	27	22		
15	38	77	1070	224	623	558	173	367	64	66	27	21		
16	36	79	1800	217	631	448	176	458	62	63	26	20		
17	48	260	1350	223	1570	364	194	346	65	64	25	20		
18	48	550	810	224	2250	308	219	284	114	67	25	20		
19	41	550	587	287	1160	264	243	245	155	67	25	22		
20	38	440	605	261	797	234	236	226	143	76	25	19		
21	40	320	770	230	807	216	235	211	114	68	24	19		
22	88	245	602	213	1150	207	227	191	97	63	23	19		
23	418	191	430	272	843	252	207	180	87	59	23	18		
24	212	163	322	316	646	254	194	174	81	57	23	18		
25	135	147	270	291	495	262	175	163	74	56	22	18		
26	165	149	255	316	418	268	166	147	69	54	26	17		
27	273	225	231	368	355	323	152	132	65	53	23	17		
28	240	658	203	334	312	336	153	123	61	52	22	17		
29	1640	974	180	280	---	1260	183	116	59	50	60	17		
30	740	812	164	247	---	2350	175	106	60	47	66	16		
31	354	---	149	251	---	1140	---	107	---	44	41	---		
TOTAL	5484	7931	22358	16665	17934	16370	8186	6439	2509	2818	977	676		
MEAN	177	264	721	538	641	528	273	208	83.6	90.9	31.5	22.5		
MAX	1640	974	2520	2590	2250	2350	806	458	155	291	66	38		
MIN	30	77	149	139	139	207	152	106	59	44	22	16		
CFSM	3.86	5.76	15.7	11.7	14.0	11.5	5.96	4.54	1.83	1.98	.69	.49		
IN.	4.45	6.44	18.16	13.54	14.57	13.30	6.65	5.23	2.04	2.29	.79	.55		
AC-FT	10880	15730	44350	33060	35570	32470	16240	12770	4980	5590	1940	1340		
CAL YR 1982	TOTAL	103874	MEAN	285	MAX	3310	MIN	12	CFSM	6.22	IN.	84.37	AC-FT	206000
WTR YR 1983	TOTAL	108347	MEAN	297	MAX	2590	MIN	16	CFSM	6.48	IN.	88.00	AC-FT	214900

## WILLAMETTE RIVER BASIN

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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.

INSTRUMENTATION.--Temperature recorder since September 1963.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.0°C Aug. 3, 4, 1974, July 20, 1979; minimum, 0.0°C on several days in 1969, 1971-74, 1976, 1979-80, 1982.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 16.5°C May 29; minimum, 1.5°C Dec. 30.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

14161100 BLUE RIVER BELOW TIDBITS CREEK, NEAR BLUE RIVER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	5.5	8.0	7.0	10.5	9.5	11.5	10.0			---	---
2	5.5	4.0	8.5	6.5	11.0	9.5	10.0	9.0			---	---
3	6.5	4.5	10.5	6.5	13.0	9.0	12.5	9.0			---	---
4	7.0	5.0	9.5	6.5	13.5	9.5	14.0	9.5			---	---
5	7.0	4.5	9.0	7.5	13.5	9.5	13.5	11.0			---	---
6	7.0	4.0	9.0	6.5	15.0	10.0	12.0	11.0			---	---
7	7.0	5.0	7.5	6.0	15.5	11.0	11.0	10.5			---	---
8	7.0	4.5	6.0	5.0	16.0	12.5	11.5	9.5			---	---
9	5.5	4.0	7.0	4.5	15.5	12.5	12.0	9.5			---	---
10	5.0	3.5	7.5	5.0	13.5	10.5	14.0	9.5			---	---
11	6.0	4.0	9.0	5.5	11.5	10.0	15.5	11.0			---	---
12	6.5	4.0	10.0	5.5	13.5	10.0	14.0	12.5			---	---
13	7.0	4.0	10.0	6.0	14.5	9.5	13.5	12.0			---	---
14	7.0	3.5	8.0	7.0	13.5	11.5	12.5	11.0			---	---
15	8.0	4.0	7.0	6.5	13.5	11.0	12.0	10.5			---	---
16	9.0	4.5	8.0	6.0	13.5	10.0	13.5	10.5			---	---
17	9.0	5.0	10.0	5.5	12.5	10.5	14.0	11.0			---	---
18	9.5	6.5	10.0	7.5	10.5	9.5	---	---			---	---
19	8.5	6.5	11.5	6.5	10.0	8.5	---	---			---	---
20	9.0	6.5	12.0	7.5	11.0	8.5	---	---			---	---
21	7.5	7.0	12.5	8.0	12.5	8.0	---	---			---	---
22	7.5	7.0	13.0	8.0	11.5	10.0	---	---			---	---
23	8.0	6.0	13.5	9.0	11.5	10.0	---	---			---	---
24	7.5	5.5	13.5	10.0	13.0	9.5	---	---			---	---
25	7.5	5.5	14.5	10.0	14.0	9.5	---	---			---	---
26	8.0	5.5	14.5	10.0	15.5	11.5	---	---			---	---
27	8.5	5.0	15.0	10.5	15.5	12.5	---	---			---	---
28	9.0	7.0	16.0	11.5	14.0	12.0	---	---			---	---
29	10.0	7.0	16.5	12.5	14.0	12.5	---	---			10.0	---
30	9.5	7.0	13.5	12.0	12.5	11.5	---	---			10.0	7.5
31	---	---	12.0	10.5	---	---	---	---			---	---
MONTH	10.0	3.5	16.5	4.5	16.0	8.0	15.5	9.0			10.0	7.5

## WILLAMETTE RIVER BASIN

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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 northeast of town of Blue River, and at mile 0.5.

DRAINAGE AREA.--24.1 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

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

AVERAGE DISCHARGE.--26 years, 127 ft<sup>3</sup>/s, 71.56 in/yr, 92,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 8.88 ft, from rating curve extended above 1,300 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 4.8 ft<sup>3</sup>/s Sept. 16, 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0400	*1,470	*5.64	Feb. 18	0030	1,200	5.29
Jan. 7	0800	1,330	5.47	Mar. 30	0230	1,200	5.30

Minimum, 11 ft<sup>3</sup>/s Oct. 2, Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	13	141	276	81	107	165	400	93	60	79	25	22		
2	12	108	373	85	98	149	351	93	56	108	23	19		
3	15	86	1050	115	91	137	302	86	52	95	22	18		
4	15	74	1160	563	84	133	256	83	47	76	22	16		
5	13	79	772	545	79	139	219	87	44	66	21	16		
6	24	121	804	868	89	189	185	86	42	60	20	16		
7	50	100	474	1220	99	213	163	98	40	55	20	15		
8	62	87	319	771	148	268	145	120	38	54	19	15		
9	47	75	246	491	292	291	135	127	36	50	19	16		
10	35	66	195	339	312	294	126	120	59	47	18	15		
11	28	59	158	264	345	253	117	114	50	44	18	16		
12	23	54	140	245	306	246	107	112	44	43	18	15		
13	19	49	134	221	296	278	99	113	40	41	17	14		
14	17	46	162	156	290	277	93	116	37	41	17	14		
15	16	43	313	139	283	256	89	168	37	38	16	14		
16	15	46	551	133	272	225	87	179	33	36	16	13		
17	21	98	574	130	613	192	90	157	36	39	16	13		
18	21	163	411	127	970	165	99	140	52	46	15	14		
19	17	210	320	146	566	143	110	127	56	44	15	15		
20	15	203	301	132	412	129	110	121	56	44	15	13		
21	17	167	327	122	367	121	114	117	50	39	14	13		
22	28	133	289	119	467	119	112	108	45	36	14	12		
23	114	109	241	144	393	124	106	105	44	33	14	12		
24	71	92	195	162	326	115	100	101	42	33	14	12		
25	55	83	164	149	270	114	93	95	38	32	14	12		
26	71	79	151	157	231	112	87	85	36	30	14	12		
27	103	91	133	157	196	133	81	77	33	29	14	12		
28	104	159	120	142	174	141	82	73	32	28	14	12		
29	639	302	107	131	---	340	93	68	31	27	28	11		
30	340	339	97	122	---	915	88	61	32	26	31	11		
31	203	---	88	118	---	548	---	60	---	25	21	---		
TOTAL	2223	3462	10645	8294	8176	6924	4239	3290	1298	1444	564	428		
MEAN	71.7	115	343	268	292	223	141	106	43.3	46.6	18.2	14.3		
MAX	639	339	1160	1220	970	915	400	179	60	108	31	22		
MIN	12	43	88	81	79	112	81	60	31	25	14	11		
CFSM	2.98	4.77	14.2	11.1	12.1	9.25	5.85	4.40	1.80	1.93	.76	.59		
IN.	3.43	5.34	16.43	12.80	12.62	10.69	6.54	5.08	2.00	2.23	.87	.66		
AC-FT	4410	6870	21110	16450	16220	13730	8410	6530	2570	2860	1120	849		
CAL YR 1982	TOTAL	51586.1	MEAN	141	MAX	1390	MIN	9.1	CFSM	5.85	IN.	79.63	AC-FT	102300
WTR YR 1983	TOTAL	50987	MEAN	140	MAX	1220	MIN	11	CFSM	5.81	IN.	78.70	AC-FT	101100

## WILLAMETTE RIVER BASIN

## 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 north of town of Blue River, and at mile 1.7.

DRAINAGE AREA.--87.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1968 to current year. Prior of October 1971, published as Blue River Reservoir near Blue River.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (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 at elevation 1,357 ft, maximum pool, and usable capacity is 85,550 acre-ft between elevations 1,180 ft, minimum flood control pool, and 1,357 ft, 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 June 12, 13, 1977, elevation, 1,353.02 ft; minimum observed since first filling in 1968, 305 acre-ft Dec. 7, 1973, elevation, 1,125.47 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 83,470 acre-ft May 16, elevation, 1,350.69 ft; minimum, 3,640 acre-ft Nov. 18, elevation, 1,177.45 ft.

Capacity table (elevation, in feet, and total contents, in acre-feet)

1,120	136	1,160	1,880	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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1274.52	1252.93	1190.17	1180.00	1198.75	1287.49	1325.49	1343.70	1350.00	1350.45	1343.72	1306.72
2	1274.60	1247.35	1192.25	1180.15	1203.18	1289.17	1323.85	1344.32	1350.00	1350.42	1342.65	1305.40
3	1274.69	1242.28	1231.53	1182.00	1206.80	1290.66	1322.66	1344.86	1349.95	1349.95	1341.57	1304.01
4	1274.76	1236.32	1255.83	1216.32	1209.93	1292.16	1322.96	1345.39	1349.86	1349.82	1340.47	1302.63
5	1274.79	1229.44	1259.47	1230.73	1212.59	1293.91	1323.78	1345.96	1349.83	1349.84	1339.36	1301.20
6	1275.09	1223.93	1265.95	1239.10	1215.63	1296.88	1324.58	1346.51	1349.85	1349.81	1338.24	1299.77
7	1275.99	1216.87	1258.12	1258.81	1219.19	1299.17	1325.39	1347.18	1349.89	1349.77	1337.10	1298.48
8	1277.32	1208.46	1244.56	1264.03	1224.95	1301.00	1326.33	1348.21	1349.91	1349.78	1335.97	1297.49
9	1278.05	1201.44	1227.34	1258.63	1234.81	1301.92	1327.34	1349.12	1349.91	1349.76	1334.81	1296.77
10	1278.50	1196.06	1209.65	1249.37	1238.36	1302.83	1328.20	1349.42	1349.93	1349.75	1333.64	1296.38
11	1278.76	1190.07	1194.11	1236.77	1240.71	1303.29	1329.02	1349.61	1349.79	1349.78	1332.52	1296.14
12	1278.97	1184.95	1182.69	1217.88	1243.69	1304.23	1329.85	1349.90	1349.76	1349.85	1331.35	1295.88
13	1279.10	1182.34	1180.04	1197.06	1247.28	1305.81	1330.60	1350.10	1349.76	1349.94	1330.17	1295.60
14	1279.20	1181.01	1179.07	1185.49	1251.46	1307.22	1331.30	1350.19	1349.78	1350.01	1328.99	1295.33
15	1278.69	1180.49	1190.07	1182.56	1255.95	1308.13	1331.99	1350.50	1349.82	1350.03	1327.81	1294.92
16	1277.67	1181.09	1221.04	1180.07	1260.11	1308.51	1332.70	1350.46	1349.84	1350.00	1326.60	1294.61
17	1276.76	1179.34	1234.42	1179.50	1272.67	1308.76	1333.48	1349.99	1349.93	1349.99	1325.39	1294.31
18	1275.01	1182.96	1231.36	1179.88	1289.13	1309.46	1334.35	1349.76	1350.10	1350.01	1324.17	1294.03
19	1272.75	1185.02	1225.00	1180.21	1292.33	1310.25	1335.28	1349.62	1350.19	1350.06	1322.94	1293.73
20	1270.44	1182.01	1217.51	1180.06	1289.24	1310.87	1336.16	1349.74	1350.15	1350.11	1321.71	1293.41
21	1268.15	1180.32	1208.32	1179.91	1286.00	1311.68	1337.06	1349.90	1350.07	1350.14	1320.46	1293.10
22	1266.27	1180.37	1197.86	1180.05	1285.29	1312.71	1337.90	1349.94	1350.02	1350.15	1319.22	1292.78
23	1267.12	1180.00	1193.30	1181.22	1282.84	1313.91	1338.70	1349.93	1350.02	1350.15	1317.95	1292.47
24	1266.27	1180.82	1191.85	1180.68	1281.78	1315.11	1339.41	1349.88	1350.02	1350.14	1316.67	1292.16
25	1264.42	1180.93	1191.11	1178.22	1282.57	1316.23	1340.08	1349.81	1350.02	1350.13	1315.42	1291.85
26	1262.30	1180.81	1190.61	1179.49	1283.65	1317.22	1340.66	1349.79	1349.98	1349.82	1314.17	1291.53
27	1260.41	1181.62	1189.31	1183.65	1284.27	1318.50	1341.19	1349.85	1349.91	1348.99	1312.82	1291.21
28	1257.95	1184.21	1187.00	1186.47	1285.58	1319.64	1341.78	1349.94	1349.88	1347.97	1311.49	1290.89
29	1265.88	1193.54	1183.43	1188.32	---	1323.58	1342.43	1349.97	1349.89	1346.93	1310.47	1290.56
30	1264.21	1196.00	1180.30	1189.33	---	1330.26	1343.06	1349.98	1349.98	1345.87	1309.33	1290.22
31	1259.17	---	1180.48	1193.21	---	1328.04	---	1349.99	---	1344.79	1308.02	---
MEAN	1271.86	1197.43	1209.15	1199.97	1252.81	1307.70	1332.59	1348.82	1349.93	1349.49	1326.30	1295.79
MAX	1279.20	1252.93	1265.95	1264.03	1292.33	1330.26	1343.06	1350.50	1350.19	1350.45	1343.72	1306.72
MIN	1257.95	1179.34	1179.07	1178.22	1198.75	1287.49	1322.66	1343.70	1349.76	1344.79	1308.02	1290.22
(†)	22460	6350	4030	5900	34480	63570	76430	82800	82790	77990	48490	37080
(‡)	-6360	-16110	-2320	+1870	+28580	+29090	+12860	+6370	-10	-4800	-29500	-11410
CAL YR 1982	MEAN	1285.17	MAX	1351.66	MIN	1179.07						
WTR YR 1983	MEAN	1287.02	MAX	1350.50	MIN	1178.22						

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.



## WILLAMETTE RIVER BASIN

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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 upstream from Simmonds Creek, 0.7 mi north of town of Blue River, 0.8 mi downstream from Blue River Dam, and at mile 0.9.

DRAINAGE AREA.--87.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,056.53 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 25, 1966, nonrecording gage at datum 0.80 ft 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.--17 years, 472 ft<sup>3</sup>/s, 342,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,270 ft<sup>3</sup>/s Feb. 23, 1968, gage height, 8.93 ft; minimum, 0.80 ft<sup>3</sup>/s Oct. 8, 10, 11, 1968; minimum daily, 3.7 ft<sup>3</sup>/s Oct. 8, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,660 ft<sup>3</sup>/s Jan. 6, gage height, 8.13 ft; minimum, 39 ft<sup>3</sup>/s Feb. 7, 8, 19; minimum daily, 45 ft<sup>3</sup>/s Apr. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	1630	1370	286	51	56	2380	46	189	237	493	475
2	49	1310	1360	280	55	56	1910	46	186	530	490	471
3	49	1080	1120	374	56	54	1480	46	186	576	491	470
4	49	1100	803	450	50	51	735	46	178	333	491	467
5	49	1080	2010	783	47	51	418	46	137	232	491	466
6	50	1100	1890	2470	48	53	337	46	109	232	490	464
7	50	1080	3230	1540	50	328	260	46	109	193	487	412
8	51	1020	3510	1980	51	808	152	47	109	173	487	329
9	50	763	3130	2820	297	935	106	127	109	173	487	251
10	50	570	2270	2800	752	939	106	321	224	146	483	163
11	50	544	1530	2820	944	795	81	346	227	105	483	128
12	50	437	1010	2770	791	641	54	310	147	90	483	128
13	50	286	551	2130	669	647	54	310	126	90	480	128
14	50	207	656	1110	463	650	47	365	104	90	479	126
15	187	162	1060	552	292	650	45	553	93	116	479	126
16	298	135	531	503	296	650	46	824	93	128	477	126
17	298	498	934	431	312	559	46	787	93	111	479	126
18	474	690	1890	395	142	324	46	578	143	103	475	126
19	557	854	1840	500	1240	213	46	462	229	103	475	126
20	555	943	1840	473	2330	213	46	325	281	103	474	125
21	551	682	2130	422	2290	126	46	295	229	103	471	125
22	548	473	1820	388	2290	48	46	320	182	103	471	125
23	547	391	1090	480	2090	48	46	332	150	103	467	125
24	547	289	697	608	1360	48	46	332	137	103	467	125
25	614	280	561	612	690	106	46	315	137	102	464	125
26	704	287	526	519	487	152	46	256	137	197	459	125
27	828	337	521	457	487	153	46	203	137	419	472	125
28	905	767	512	426	248	220	46	189	111	495	479	125
29	1380	1020	517	389	---	497	46	189	85	495	479	125
30	1700	1310	446	373	---	1650	46	189	78	495	479	125
31	1660	---	287	216	---	2940	---	189	---	495	475	---
TOTAL	13049	21325	41642	30357	18878	14661	8855	8486	4455	6974	14857	6483
MEAN	421	711	1343	979	674	473	295	274	149	225	479	216
MAX	1700	1630	3510	2820	2330	2940	2380	824	281	576	493	475
MIN	49	135	287	216	47	48	45	46	78	90	459	125
AC-FT	25880	42300	82600	60210	37440	29080	17560	16830	8840	13830	29470	12860
CAL YR 1982	TOTAL	197609	MEAN	541	MAX	3510	MIN	47	AC-FT	392000		
WTR YR 1983	TOTAL	190022	MEAN	521	MAX	3510	MIN	45	AC-FT	376900		

## WILLAMETTE RIVER BASIN

14162200 BLUE RIVER AT BLUE RIVER, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1966 to current year.

INSTRUMENTATION.--Temperature recorder since August 1966.

## 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, 18.5°C Oct. 5; minimum, 2.0°C Dec. 31.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.0	15.5	11.0	---	6.0	5.5	2.5	2.5	6.5	5.5	7.0	6.0
2	16.5	15.5	11.0	10.5	6.0	5.5	3.0	2.5	6.5	5.5	7.0	6.0
3	18.0	15.5	11.0	10.5	6.5	5.5	3.5	2.5	6.0	5.5	6.5	6.0
4	16.5	15.0	10.5	10.0	6.5	6.0	5.0	3.5	5.5	5.0	6.5	6.0
5	18.5	15.5	10.5	10.5	7.0	6.5	5.5	4.5	5.5	5.0	6.5	6.0
6	16.0	15.5	10.5	10.5	7.0	6.5	6.0	5.5	5.0	4.5	6.5	6.0
7	16.5	16.0	10.5	10.0	7.0	6.5	6.0	5.5	5.0	4.5	6.5	6.0
8	17.5	15.0	10.0	9.0	7.0	6.0	6.5	6.0	5.0	5.0	6.5	6.0
9	18.0	14.0	9.0	8.0	6.5	5.5	6.5	6.0	5.0	5.0	6.5	6.0
10	17.0	14.0	8.5	7.5	6.0	5.0	6.5	6.0	5.0	5.0	6.5	6.5
11	---	---	8.5	7.0	5.5	4.5	6.5	5.5	5.0	4.5	6.5	6.5
12	---	---	7.5	7.0	4.5	4.5	6.0	5.5	5.0	5.0	6.5	6.0
13	---	---	7.0	6.0	5.0	4.5	5.5	5.0	5.0	5.0	6.5	6.5
14	---	---	6.5	5.5	5.5	5.0	5.0	4.5	5.0	5.0	6.5	6.5
15	---	---	6.0	5.0	6.0	5.0	5.0	4.5	5.0	5.0	7.0	6.5
16	---	---	5.0	5.0	6.5	6.0	5.0	4.5	5.0	5.0	7.0	6.5
17	---	---	6.0	5.0	6.5	6.5	6.0	5.0	5.5	5.0	7.0	6.5
18	---	---	6.5	6.0	6.5	6.0	6.5	6.0	6.0	5.5	7.0	6.5
19	---	---	6.5	6.0	6.0	5.5	6.5	6.0	5.5	5.0	7.0	6.5
20	---	---	6.0	5.5	6.0	5.5	6.5	6.0	6.0	5.5	7.0	6.5
21	---	---	6.0	5.5	5.5	5.5	6.0	5.5	6.0	5.5	---	6.5
22	---	---	5.5	5.0	6.0	5.5	5.5	4.5	6.0	5.5	---	---
23	---	---	5.0	4.0	5.5	5.0	5.0	4.5	6.0	6.0	---	---
24	---	---	4.5	3.5	5.5	5.0	5.5	5.0	6.0	6.0	---	---
25	---	---	4.0	3.5	5.0	4.5	6.0	5.5	6.5	6.0	---	---
26	---	---	4.0	3.5	4.5	4.5	6.0	5.5	6.0	6.0	---	---
27	---	---	5.0	4.0	4.5	4.0	6.5	6.0	6.0	6.0	---	---
28	---	---	6.0	5.0	4.5	4.0	6.5	6.0	6.5	6.0	---	---
29	---	---	6.5	6.0	4.0	3.0	6.5	6.0	---	---	---	---
30	---	---	6.5	5.5	3.0	2.5	6.0	5.5	---	---	---	---
31	---	---	---	---	2.5	2.0	6.0	5.5	---	---	---	---
MONTH	18.5	14.0	11.0	3.5	7.0	2.0	6.5	2.5	6.5	4.5	7.0	6.0

## WILLAMETTE RIVER BASIN

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14162200 BLUE RIVER AT BLUE RIVER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	6.5	6.5	7.0	7.0	7.5	7.5	8.5	8.0	13.0	13.0
2	---	---	7.0	6.5	7.0	7.0	7.5	7.5	8.5	8.0	13.5	13.0
3	---	---	8.0	6.5	7.5	7.0	7.5	7.5	8.5	8.0	14.0	13.5
4	6.5	---	8.0	6.0	7.5	7.0	8.0	7.5	8.5	8.0	14.0	13.5
5	6.5	6.5	7.5	6.5	8.0	7.0	8.0	7.5	8.5	8.5	14.0	14.0
6	6.5	6.5	7.5	6.5	8.0	7.0	7.5	7.5	9.0	8.5	14.5	14.0
7	6.5	6.5	7.0	6.5	8.0	7.0	7.5	7.5	9.0	8.5	14.5	14.0
8	7.0	6.0	7.0	6.5	8.0	7.0	8.0	7.5	9.0	8.5	14.5	14.5
9	6.5	6.0	7.0	6.5	8.0	7.0	8.0	7.5	9.0	8.5	15.0	14.5
10	7.0	6.0	6.5	6.5	7.0	7.0	8.5	7.0	9.0	8.5	15.0	14.5
11	7.0	6.0	6.5	6.5	7.0	7.0	8.5	7.5	9.0	9.0	15.0	14.5
12	7.0	6.0	7.0	6.5	7.5	7.0	8.0	7.5	9.5	9.0	15.5	14.5
13	7.5	6.0	7.0	6.5	8.0	7.0	8.5	7.5	9.5	9.0	15.5	14.5
14	7.5	6.0	6.5	6.5	8.0	7.0	8.0	7.5	9.5	9.0	15.5	14.5
15	7.5	6.0	6.5	6.5	8.0	7.0	8.0	7.5	10.0	9.5	15.5	14.5
16	7.5	6.0	6.5	6.5	7.5	7.0	8.5	7.5	10.0	9.5	15.5	14.5
17	7.5	6.0	6.5	6.5	7.5	7.0	8.5	7.5	10.0	9.5	15.5	14.5
18	8.0	6.0	7.0	6.5	7.5	7.0	8.5	7.5	10.5	10.0	15.0	15.0
19	7.0	6.0	7.0	6.5	7.5	7.0	9.0	7.5	10.5	10.0	15.5	15.0
20	7.0	6.0	7.0	6.5	7.5	7.0	8.5	7.5	10.5	10.0	15.5	15.0
21	7.5	6.5	7.0	6.5	7.5	7.0	9.0	7.5	11.0	10.5	16.0	15.0
22	6.5	6.0	7.0	6.5	7.5	7.0	9.0	8.0	11.0	10.5	16.0	15.0
23	7.0	6.0	7.0	6.5	7.5	7.0	9.0	8.0	11.0	11.0	15.5	15.5
24	7.5	6.0	7.0	6.5	8.0	7.0	8.5	8.0	11.5	11.0	16.0	15.5
25	7.0	6.0	7.0	6.5	8.0	7.0	8.5	8.0	12.0	11.5	16.0	15.5
26	7.0	6.0	7.0	6.5	8.0	7.0	8.5	8.0	12.0	11.5	16.0	15.5
27	7.5	6.0	7.5	6.5	8.0	7.5	8.0	8.0	12.0	12.0	16.0	15.5
28	7.5	6.5	7.5	7.0	8.0	7.0	8.0	8.0	12.5	12.0	16.0	15.5
29	7.5	6.5	7.5	7.0	8.0	7.5	8.5	8.0	12.5	12.5	16.0	15.5
30	7.0	6.5	7.0	7.0	7.5	7.5	8.5	8.0	13.0	12.5	16.0	15.5
31	---	---	7.0	7.0	---	---	8.5	8.0	13.0	12.5	---	---
MONTH	8.0	6.0	8.0	6.0	8.0	7.0	9.0	7.0	13.0	8.0	16.0	13.0

## 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 downstream from Mason Creek, 5.4 mi east of Vida, and at mile 47.7.

DRAINAGE AREA.--930 mi<sup>2</sup> at cableway 0.4 mi downstream, where all discharge measurement 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 National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). July 1, 1910, to Mar. 31, 1911, nonrecording gage at site 3 mi downstream at different datum. Sept. 1, 1924, to Nov. 16, 1928, nonrecording gage at site 20 ft upstream at datum 0.15 ft lower. Nov. 17, 1928, to Sept. 23, 1968, water-stage recorder at present site on left bank at datum 0.15 ft lower.

REMARKS.--Water-discharge records excellent. 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.--59 years (water years 1925-83), 4,047 ft<sup>3</sup>/s, 2,932,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,400 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 17.70 ft, site and datum then in use, from rating curve extended above 32,000 ft<sup>3</sup>/s; minimum, 1,260 ft<sup>3</sup>/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, from floodmarks, discharge, 62,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,800 ft<sup>3</sup>/s Jan. 7, gage height, 6.37 ft; minimum, 2,500 ft<sup>3</sup>/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2710	5270	6920	3800	3330	4610	10600	3460	4310	3540	3250	3110
2	2700	4940	7690	3800	3250	4330	11100	3500	3990	4480	3340	3120
3	2730	4650	11300	4090	3190	4160	10300	3460	3670	4410	3290	3120
4	2690	4470	11000	7330	3110	4190	8130	3440	3520	3890	3330	3060
5	2670	4500	10800	7540	2990	4280	6120	3560	3400	3540	3290	3020
6	2840	5090	12300	11500	3010	4710	5420	3660	3310	3390	3290	3020
7	3200	4840	12300	13600	3260	5170	4940	3830	3250	3280	3280	2970
8	3370	4600	12200	12100	3390	6560	4430	4180	3210	3190	3290	2880
9	3150	4250	11600	11900	5190	6930	4260	4360	3120	3110	3250	2810
10	2930	3940	10500	11500	5420	7200	4200	4590	3710	3020	3260	2690
11	2820	3830	8890	10800	5750	6690	4070	4620	3730	2950	3150	2640
12	2760	3690	7870	10400	5470	6450	3790	4410	3390	2800	3210	2610
13	2750	3420	6980	8690	5360	6900	3570	4230	3150	2710	3230	2600
14	2730	3290	6870	6440	5190	6930	3550	4250	3000	2830	3220	2600
15	2820	3230	8100	5600	4950	6620	3540	5050	2940	2740	3190	2600
16	2940	3240	9340	5450	4910	6250	3440	6110	2920	2730	3130	2600
17	2710	4040	9630	5300	7270	5870	3360	5970	2960	2770	3110	2590
18	3010	4970	10300	5180	11600	5390	3420	5350	3220	2760	3100	2600
19	3230	5370	9660	5410	9950	5010	3590	4850	3420	2760	3140	2610
20	3210	5410	9490	5230	11700	4800	3540	4570	3560	2770	3130	2600
21	3230	4960	9940	5050	10800	4370	3630	4650	3400	2700	3100	2560
22	3300	4420	9080	4960	10600	3810	3610	4760	3200	2650	3100	2550
23	4280	4110	7440	5290	9250	3840	3540	4870	3090	2670	3110	2550
24	3890	3830	6580	5410	8150	3800	3580	4950	3110	2650	3080	2550
25	3690	3750	6150	5290	6980	3930	3450	4950	3010	2620	3030	2550
26	3980	3780	6010	5190	6320	3890	3420	4910	2950	2600	3060	2540
27	4290	3910	5520	5260	5990	4010	3320	4720	2960	2910	3090	2520
28	4350	4860	5090	5100	5290	4070	3140	4590	2860	3220	3150	2540
29	8300	6240	5010	4550	---	5190	3270	4630	2720	3200	3280	2550
30	7300	6840	4580	4090	---	11900	3370	4500	2690	3190	3290	2530
31	5820	---	3890	3840	---	11100	---	4330	---	3200	3130	---
TOTAL	110400	133740	263030	209690	171670	172960	139700	139310	97770	95280	98900	81290
MEAN	3561	4458	8485	6764	6131	5579	4657	4494	3259	3074	3190	2710
MAX	8300	6840	12300	13600	11700	11900	11100	6110	4310	4480	3340	3120
MIN	2670	3230	3890	3800	2990	3800	3140	3440	2690	2600	3030	2520
AC-FT	219000	265300	521700	415900	340500	343100	277100	276300	193900	189000	196200	161200
CAL YR 1982	TOTAL	1713340	MEAN	4694	MAX	16200	MIN	2400	AC-FT	3398000		
WTR YR 1983	TOTAL	1713740	MEAN	4695	MAX	13600	MIN	2520	AC-FT	3399000		

## 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, 72 micromhos Nov. 20, 1980; minimum recorded, 24 micromhos Nov. 25, 1977.

WATER TEMPERATURES: Maximum, 16.0°C July 6, 7, 28, 1968; minimum recorded, 0.5°C Jan. 1, 1979.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 60 micromhos Oct. 4; minimum, 33 micromhos Jan. 7, Feb. 17, 18.

WATER TEMPERATURES: Maximum, 14.5°C July 22, 23; minimum, 3.5°C Dec. 28 to Jan. 1.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CACO3)
MAR 31...	0900	10800	38	7.2	6.5	12.3	13	3.3	1.1	2.5	.60	15
AUG 30...	1615	3110	47	7.4	11.5	11.3	17	4.0	1.6	3.5	.80	23

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)
MAR 31...	1.1	.80	<.10	.040	<.100	.20	.020	.030	17	36	1040	2.0
AUG 30...	.9	1.1	.10	.080	<.100	.90	.010	.020	20	46	386	.90

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAR 31...	<1	15	<1	<10	1	8	15
AUG 30...	1	7	<1	10	<1	2	11

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 31...	<1	<1	<.1	2	<1	<1	12
AUG 30...	2	<1	<.1	2	<1	<1	8



## WILLAMETTE RIVER BASIN

14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	---	55	51	47	44	38	48	44	50	47	51
2	54	---	54	51	46	45	38	47	45	47	46	51
3	55	---	41	50	47	45	39	47	46	47	46	51
4	56	---	40	44	49	46	40	48	46	48	47	51
5	56	---	39	42	49	46	42	48	46	47	47	51
6	54	---	36	37	49	46	43	47	45	47	47	51
7	54	47	36	34	49	46	44	47	45	48	47	51
8	54	50	35	36	49	43	45	47	44	49	48	51
9	54	51	37	36	46	41	46	47	45	49	48	52
10	52	50	35	35	47	40	47	47	45	49	48	53
11	54	50	37	36	46	42	47	47	44	49	49	52
12	53	51	38	37	46	43	47	47	46	49	48	52
13	53	52	39	39	45	42	47	46	47	50	48	52
14	54	52	40	40	46	43	48	44	48	50	47	52
15	51	53	41	42	47	43	47	44	48	51	48	52
16	51	53	38	44	47	44	47	43	48	51	48	52
17	50	53	38	44	43	43	46	44	48	50	48	52
18	49	50	38	44	35	44	46	44	48	50	48	53
19	49	47	38	43	37	45	46	45	49	49	48	53
20	49	47	39	44	36	45	46	44	49	49	49	53
21	46	50	38	45	36	46	46	43	49	50	49	52
22	45	53	39	45	36	48	46	43	49	49	49	52
23	44	55	41	45	36	48	47	43	48	49	49	53
24	45	56	42	44	38	48	47	42	48	50	49	53
25	44	55	44	44	39	48	48	43	49	50	49	53
26	44	52	44	45	40	49	48	43	49	51	49	53
27	43	51	45	44	42	48	48	42	49	49	49	53
28	44	51	47	42	42	49	47	42	50	48	49	53
29	---	52	48	43	---	47	48	41	50	48	49	53
30	---	56	49	45	---	36	47	43	51	46	49	54
31	---	---	50	45	---	38	---	43	---	46	50	---
MEAN	50	52	41	42	43	45	45	45	47	49	48	52

## WILLAMETTE RIVER BASIN

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14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## 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 downstream from bridge on State Highway 126, at Vida, and at mile 0.2.

DRAINAGE AREA.--47.6 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. 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.--23 years (water years 1952-57, 1967-83), 215 ft<sup>3</sup>/s, 61.34 in/yr, 155,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,140 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.18 ft, from slope-area measurement of peak flow; minimum, 12 ft<sup>3</sup>/s Nov. 26, 27, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0400	2,020	6.37	Feb. 18	0330	*2,170	*6.56
Jan. 7	0430	1,990	6.33	Mar. 30	0400	1,950	6.27

Minimum, 23 ft<sup>3</sup>/s Sept. 30.

REVISIONS.--The peak discharges and annual maximum (\*) for water years 1976, 1978 to 1982 have been revised as shown in the following table. They supersede figures published in the reports for 1976, 1978 to 1982.

## Water Year 1976:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 1	0630	3,420	8.02	Jan. 8	0330	*4,400	*8.92
Jan. 5	0430	2,180	6.58				

## Water Year 1978:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 25	1930	*3,690	*8.28	Dec. 13	1800	2,970	7.53

## Water Year 1979:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	1530	2,020	6.37	Feb. 7	0900	*2,630	*7.14

## Water Year 1980:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 12	2000	*2,960	*7.52	--	--	--	--

## Water Year 1981:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	1900	*2,380	*6.83	Dec. 25	1630	*2,380	*6.83

## Water Year 1982:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 6	0600	*3,390	*7.99	Feb. 14	1030	2,280	6.71
Jan. 24	0900	2,050	6.41				

## WILLAMETTE RIVER BASIN

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14163000 GATE CREEK AT VIDA, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	32	163	584	184	194	296	627	128	91	189	47	43		
2	29	126	791	177	183	272	661	126	86	232	45	39		
3	32	104	1610	211	170	251	625	120	81	186	43	36		
4	29	92	1600	1170	160	249	520	113	75	139	43	34		
5	27	106	1040	837	151	261	439	110	73	114	42	33		
6	38	213	1230	1200	180	484	373	113	69	100	41	32		
7	65	193	762	1790	242	452	329	147	66	92	40	31		
8	99	149	520	1180	328	501	293	248	65	94	40	31		
9	65	120	394	807	801	462	277	323	64	89	40	34		
10	47	103	321	575	646	519	260	282	127	80	40	31		
11	39	90	269	449	650	433	250	231	96	74	40	33		
12	34	82	249	373	700	395	235	202	80	71	38	32		
13	31	76	276	324	600	399	218	177	72	72	37	31		
14	29	71	355	286	550	447	205	162	67	75	35	29		
15	28	67	462	257	460	450	192	258	65	68	34	28		
16	27	68	906	238	496	388	180	308	62	64	34	28		
17	38	146	990	219	947	335	171	240	71	63	33	28		
18	35	292	753	209	1780	296	161	202	110	70	33	28		
19	31	390	601	228	1040	263	152	176	123	70	33	30		
20	28	416	525	227	758	242	144	157	121	70	33	27		
21	30	349	596	211	681	228	140	143	97	61	32	26		
22	77	274	534	207	732	223	131	132	83	57	31	25		
23	325	219	440	271	568	262	136	121	79	55	32	25		
24	158	181	360	279	488	246	146	114	76	54	32	26		
25	98	157	321	249	432	276	136	106	68	55	31	26		
26	106	149	312	247	384	281	144	100	65	54	31	26		
27	155	158	294	247	344	332	130	95	63	51	30	25		
28	143	240	263	248	318	348	124	88	59	53	30	25		
29	779	570	237	229	---	541	134	85	58	50	82	24		
30	408	762	218	208	---	1430	129	83	61	47	77	24		
31	228	---	201	208	---	840	---	93	---	46	48	---		
TOTAL	3290	6126	18014	13545	14983	12402	7660	4983	2373	2595	1227	890		
MEAN	106	204	581	437	535	400	255	161	79.1	83.7	39.6	29.7		
MAX	779	762	1610	1790	1780	1430	661	323	127	232	82	43		
MIN	27	67	201	177	151	223	124	83	58	46	30	24		
CFSM	2.23	4.29	12.2	9.18	11.2	8.40	5.36	3.38	1.66	1.76	.83	.62		
IN.	2.57	4.79	14.08	10.59	11.71	9.69	5.99	3.89	1.85	2.03	.96	.70		
AC-FT	6530	12150	35730	26870	29720	24600	15190	9880	4710	5150	2430	1770		
CAL YR 1982	TOTAL	84033	MEAN	230	MAX	1680	MIN	14	CFSM	4.83	IN.	65.67	AC-FT	166700
WTR YR 1983	TOTAL	88088	MEAN	241	MAX	1790	MIN	24	CFSM	5.06	IN.	68.84	AC-FT	174700

## WILLAMETTE RIVER BASIN

14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR

LOCATION.--Lat 44°05'34", long 122°57'20", in SE¼NW¼ sec.17, T.17 S., R.2 W., Lane County, Hydrologic Unit 17090004, on left bank 50 ft downstream from bridge, 1.3 mi northeast of Springfield, and at mile 1.59.

DRAINAGE AREA.--177 mi<sup>2</sup>.

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 and crest-stage gage. Datum of gage is 442.47 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1935, to Sept. 30, 1952, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of backwater Dec. 6-13, 17-24, Jan. 7-14, Feb. 19-28, which are fair. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--37 years, 538 ft<sup>3</sup>/s, 41.28 in/yr, 389,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 22.60 ft; minimum, 8.2 ft<sup>3</sup>/s Sept. 9, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached at stage of 22.9 ft, from floodmark, probably affected by backwater from McKenzie River, discharge, 9,200 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	1230	4,020	11.41	Feb. 18	1300	*6,780	*15.50
Jan. 7	1100	4,080	12.37	Mar. 30	1130	3,710	10.89

Minimum, 33 ft<sup>3</sup>/s Oct. 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	42	208	1470	574	586	1260	2210	321	281	355	102	105		
2	37	160	1270	553	548	1120	2370	300	241	522	100	94		
3	40	132	2750	644	510	997	2290	281	214	403	95	80		
4	41	114	3530	2060	478	900	1800	267	194	312	95	72		
5	38	117	2740	2000	446	848	1400	258	180	260	90	68		
6	41	214	3040	2340	498	1280	1170	265	172	240	84	64		
7	86	198	1930	4210	809	1410	1010	320	164	217	81	60		
8	71	167	1400	3330	850	1570	869	474	158	231	79	59		
9	60	157	1130	2450	1640	1540	808	599	152	205	78	65		
10	50	133	920	1790	2180	2050	769	594	306	181	78	62		
11	43	120	760	1380	1750	1690	770	521	288	164	84	61		
12	39	112	725	1130	1910	1460	663	459	223	154	78	60		
13	37	103	1020	922	2030	1420	600	408	196	163	72	56		
14	35	98	1160	819	1840	1710	556	376	177	183	70	53		
15	34	92	1440	795	1620	1640	515	431	189	160	67	52		
16	33	91	2820	714	1450	1400	478	460	168	145	64	52		
17	41	140	3200	652	2100	1210	450	416	240	140	61	50		
18	53	534	2720	611	5800	1040	423	375	280	181	60	48		
19	43	752	2000	661	4450	892	400	348	260	175	60	48		
20	38	820	1690	639	3200	784	392	327	224	171	60	47		
21	37	821	1790	577	2790	716	379	306	190	149	60	44		
22	47	593	2120	578	2870	688	354	285	173	132	57	42		
23	198	448	1780	761	2310	791	357	270	169	126	56	41		
24	163	355	1490	745	1980	711	394	250	178	125	58	43		
25	99	292	1280	655	1710	757	348	236	156	128	56	44		
26	139	251	1160	690	1540	746	352	227	147	129	54	44		
27	167	236	1010	706	1360	911	318	214	146	117	53	44		
28	145	364	874	670	1340	973	333	203	137	116	54	43		
29	609	845	772	625	---	1130	403	192	137	114	194	41		
30	661	1850	692	572	---	3160	349	186	136	103	241	41		
31	324	---	625	650	---	2800	---	227	---	99	137	---		
TOTAL	3491	10517	51308	35503	50595	39604	23530	10396	5876	5900	2578	1683		
MEAN	113	351	1655	1145	1807	1278	784	335	196	190	83.2	56.1		
MAX	661	1850	3530	4210	5800	3160	2370	599	306	522	241	105		
MIN	33	91	625	553	446	688	318	186	136	99	53	41		
CFSM	.64	1.98	9.35	6.47	10.2	7.22	4.43	1.89	1.11	1.07	.47	.32		
IN.	.73	2.21	10.78	7.46	10.63	8.32	4.95	2.18	1.23	1.24	.54	.35		
AC-FT	6920	20860	101800	70420	100400	78550	46670	20620	11660	11700	5110	3340		
CAL YR 1982	TOTAL	238144	MEAN	652	MAX	4890	MIN	19	CFSM	3.68	IN.	50.05	AC-FT	472400
WTR YR 1983	TOTAL	240981	MEAN	660	MAX	5800	MIN	33	CFSM	3.73	IN.	50.65	AC-FT	478000



## WILLAMETTE RIVER BASIN

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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 north of intersection of First Street and Kesling Street in Harrisburg and at mile 161.0.

DRAINAGE AREA.--3,420 mi<sup>2</sup>, 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 National Geodetic Vertical Datum of 1929. Oct 1 to Nov. 14, 1944, nonrecording gage at bridge 1,110 ft upstream at different datum. Nov. 15, 1944, to Aug. 15, 1973, at site 1,100 ft upstream at datum 2.00 ft 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.--39 years, 12,270 ft<sup>3</sup>/s, 8,890,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft<sup>3</sup>/s Dec. 29, 1945, gage height, 19.69 ft, from rating curve extended above 115,000 ft<sup>3</sup>/s; minimum, 1,990 ft<sup>3</sup>/s Oct 30, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 20.5 ft was reached in December 1861, and 20.1 ft in February 1890 (information from Corps of Engineers). Flood of Jan. 1, 1943, reached a stage of 19.1 ft from National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 51,200 ft<sup>3</sup>/s Feb. 18, gage height, 12.10 ft; minimum, 4,230 ft<sup>3</sup>/s July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9080	16000	23900	12600	8550	14300	39500	7800	10600	5440	4830	6680
2	9160	14800	24900	11900	7270	11400	39200	7600	10100	8240	4910	6820
3	9420	13600	32400	11900	6890	10400	40700	7360	8540	10600	5110	7020
4	9360	12800	31700	16800	6690	9780	35700	6960	7080	10100	5170	6930
5	9030	12600	34100	21400	6420	9670	25200	6630	6810	8310	5250	6610
6	8860	13200	38100	24500	6350	11900	20200	6690	6520	7360	5420	6680
7	9520	13800	34300	36000	8160	12900	16900	6840	6410	7180	5630	7900
8	10200	13400	35000	33700	8340	17300	13300	7570	6400	6830	5560	8320
9	9940	13100	33800	36400	13100	19200	11400	9210	6500	6650	5420	8190
10	9310	12300	29300	34000	19700	20400	10700	13500	7020	6440	5330	8190
11	9060	11600	26200	31200	21200	19300	10500	13500	8480	6230	5550	8120
12	8920	11300	23900	28600	19600	17000	9450	11900	8340	5700	5620	8090
13	8980	11200	24500	25300	19200	17300	8440	10700	7910	5160	5470	8580
14	9160	10800	21600	18500	17300	19600	7840	10100	7380	5300	5440	8770
15	9130	10400	23300	14900	14400	22000	7320	10300	6210	5480	5360	8740
16	9310	10200	31000	13700	13800	20400	6940	11900	5900	5340	5490	7840
17	9310	10200	27900	13300	14800	18500	6720	13000	5760	5180	5570	7250
18	9260	12300	36400	12800	40200	16600	6590	12800	5960	4950	5550	7080
19	9600	15900	34900	13000	33700	13900	6570	11300	6390	4920	5660	7130
20	9500	17800	33200	13300	39400	12500	6560	10400	6710	5100	5900	7100
21	9190	17700	33200	12900	41900	11800	6680	10200	7040	5130	5870	7040
22	9300	16100	37500	13000	38300	9110	6720	10200	7140	5040	6020	7020
23	11400	14800	32400	14300	35700	8730	6820	10300	6890	4780	6260	7020
24	12100	13900	27200	14800	33000	9130	7050	10300	6100	4550	6330	7040
25	10700	12800	23500	14700	30400	9230	7080	10800	5830	4370	6330	7050
26	10900	12400	22100	14700	25300	9140	7100	11900	5590	4300	6370	6990
27	11800	11900	21100	14600	22600	9870	6890	11700	5470	4580	6200	6930
28	12800	12300	19100	15000	20800	10800	6730	11000	5380	5010	6020	6830
29	14900	15800	18200	13300	---	11500	7160	10200	5280	4920	6590	6950
30	20800	23900	16200	11200	---	25300	7860	10400	5050	4850	6790	6990
31	17800	---	14300	10900	---	33200	---	10400	---	4820	6460	---
TOTAL	327800	408900	865200	573200	573070	462160	399820	313460	204790	182860	177480	221900
MEAN	10570	13630	27910	18490	20470	14910	13330	10110	6826	5899	5725	7397
MAX	20800	23900	38100	36400	41900	33200	40700	13500	10600	10600	6790	8770
MIN	8860	10200	14300	10900	6350	8730	6560	6630	5050	4300	4830	6610
AC-FT	650200	811100	1716000	1137000	1137000	916700	793000	621700	406200	362700	352000	440100
CAL YR 1982	TOTAL	5041700	MEAN	13810	MAX	42600	MIN	4780	AC-FT	10000000		
WTR YR 1983	TOTAL	4710640	MEAN	12910	MAX	41900	MIN	4300	AC-FT	9344000		

## WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

INSTRUMENTATION.--Temperature recorder since October 1970.

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, 19.0°C July 30; minimum, 4.5°C Dec. 30 to Jan. 2.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

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14166000 WILLAMETTE RIVER AT HARRISBURG, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.0	13.0	11.5	11.5	10.5	14.0	13.5	17.0	15.5	16.0	14.5
2	9.0	8.0	11.5	10.5	12.5	10.5	13.5	12.5	17.5	15.5	16.5	14.5
3	9.0	8.0	13.0	10.5	14.0	11.0	15.0	12.5	18.0	16.0	16.5	14.5
4	9.0	8.0	12.5	11.5	15.0	13.0	16.0	13.5	17.0	14.5	16.5	15.0
5	9.5	8.0	12.5	11.0	15.5	13.0	16.0	14.0	17.5	16.0	16.0	14.5
6	10.0	8.0	12.0	10.5	16.5	14.0	14.5	13.5	18.0	15.5	16.0	14.5
7	9.5	8.5	11.0	10.0	17.0	14.5	14.5	13.0	17.5	16.5	16.5	15.0
8	9.5	8.5	10.5	9.5	16.5	15.0	13.5	12.5	17.0	16.0	15.5	14.5
9	10.0	8.5	10.0	9.0	15.5	14.0	15.5	13.0	16.5	15.0	15.5	14.0
10	9.0	7.5	11.0	9.0	15.5	13.5	16.5	14.0	16.5	15.0	15.5	14.5
11	9.5	8.0	11.5	9.5	14.0	12.5	17.5	15.0	16.5	14.5	16.0	15.0
12	9.5	7.5	12.5	10.5	15.0	12.5	17.0	16.0	17.5	15.0	16.0	15.0
13	10.0	8.0	13.0	11.0	16.0	13.5	16.0	14.5	18.0	16.0	17.0	15.5
14	11.0	9.0	12.5	11.0	16.0	13.5	15.5	13.5	18.5	16.5	17.0	15.5
15	11.5	9.5	11.0	10.0	15.5	13.5	15.5	14.0	18.0	16.5	16.0	15.0
16	12.5	10.0	11.5	10.0	15.5	14.0	16.0	14.5	17.5	16.0	16.0	14.5
17	---	10.5	12.0	10.0	15.5	13.5	16.5	14.5	17.5	16.0	15.5	14.0
18	---	---	12.0	10.5	13.5	13.0	16.5	15.5	18.0	16.0	15.0	14.0
19	---	---	13.5	10.5	13.0	12.5	16.5	15.5	17.5	16.0	14.0	12.5
20	12.0	11.5	14.5	11.5	14.5	12.0	17.5	15.0	16.0	15.0	14.5	12.5
21	12.5	11.0	14.5	12.0	15.5	13.0	18.0	16.0	16.5	14.5	15.0	13.0
22	12.0	11.5	14.5	12.0	15.5	14.0	18.5	16.5	17.0	15.0	15.5	14.0
23	11.5	10.5	15.0	12.5	14.0	13.0	18.5	17.0	16.0	15.0	15.5	14.5
24	11.0	9.5	15.0	12.5	15.5	13.0	17.5	16.0	16.0	14.5	15.0	14.0
25	11.0	10.0	14.5	12.5	15.5	14.0	16.0	15.0	16.5	15.0	15.5	14.0
26	12.0	10.0	15.0	12.0	15.5	14.5	17.0	14.5	16.5	15.0	15.5	14.5
27	12.5	10.5	15.0	12.0	16.5	14.0	16.5	16.0	16.5	15.5	15.5	14.5
28	13.0	11.5	15.5	13.0	16.0	15.5	16.0	15.0	16.5	15.0	14.5	13.0
29	13.5	11.5	15.5	13.0	16.0	14.5	17.5	14.5	15.5	15.0	14.0	13.0
30	13.5	12.0	14.5	13.0	15.5	14.0	19.0	16.5	15.0	14.5	14.0	12.5
31	---	---	13.0	11.5	---	---	18.5	17.0	15.5	14.5	---	---
MONTH	13.5	7.5	15.5	9.0	17.0	10.5	19.0	12.5	18.5	14.5	17.0	12.5

## 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 upstream from Southern Pacific Railroad bridge, 0.8 mi downstream from Noti Creek, 1.3 mi southeast of Noti, and at mile 37.4.

DRAINAGE AREA.--89.3 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by National Weather Service). 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.--48 years, 235 ft<sup>3</sup>/s, 35.74 in/yr, 170,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,990 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 20.17 ft; minimum, 0.04 ft<sup>3</sup>/s Aug. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1500	*3,540	*16.24	Feb. 18	1900	3,150	15.65
Minimum, 17 ft <sup>3</sup> /s Aug. 22-23, 26-27.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	28	63	618	261	367	730	1060	180	75	70	29	51		
2	26	65	439	251	340	705	980	169	75	90	29	46		
3	24	47	719	296	313	654	963	162	75	120	27	39		
4	22	37	1250	739	287	578	825	158	70	110	26	35		
5	20	37	813	975	267	523	686	154	70	95	26	32		
6	21	51	749	921	281	616	589	153	65	85	26	30		
7	30	65	527	998	440	747	517	157	65	75	24	28		
8	34	56	377	945	472	808	458	204	60	70	24	26		
9	31	49	312	840	818	764	428	273	60	65	24	27		
10	25	41	263	667	1420	946	420	261	60	60	24	27		
11	23	37	219	546	1090	1020	415	214	85	55	24	26		
12	33	35	208	476	1060	819	399	182	75	48	22	27		
13	23	33	282	420	1240	810	370	168	70	48	21	25		
14	20	32	461	374	955	1040	342	159	65	48	20	24		
15	19	32	1080	342	799	1240	319	159	60	45	20	23		
16	19	32	2730	321	785	972	295	150	60	44	20	23		
17	22	79	2400	298	943	799	275	144	55	43	19	23		
18	24	209	1450	289	2320	666	257	140	55	43	19	23		
19	22	279	973	298	2200	567	242	140	75	42	19	23		
20	20	286	911	283	1270	503	233	130	90	39	19	23		
21	22	291	1030	261	1090	456	228	120	85	37	19	22		
22	57	195	1180	269	1190	422	224	120	75	35	19	21		
23	70	136	1100	354	1190	494	220	110	65	33	19	21		
24	46	102	776	378	1040	552	219	110	70	33	20	21		
25	33	84	619	338	880	501	213	100	70	35	19	22		
26	61	73	526	383	818	446	207	95	65	34	19	22		
27	87	68	444	487	806	446	201	90	60	33	19	22		
28	57	96	387	445	755	492	195	85	60	36	20	22		
29	140	311	344	397	---	532	193	85	55	35	49	20		
30	118	788	308	373	---	1230	190	80	55	31	88	20		
31	69	---	283	386	---	1410	---	75	---	29	64	---		
TOTAL	1246	3709	23778	* 14611	25436	22488	12163	4527	2025	1666	817	794		
MEAN	40.2	124	767	471	908	725	405	146	67.5	53.7	26.4	26.5		
MAX	140	788	2730	998	2320	1410	1060	273	90	120	88	51		
MIN	19	32	208	251	267	422	190	75	55	29	19	20		
CFSM	.45	1.39	8.59	5.27	10.2	8.12	4.54	1.63	.76	.60	.30	.30		
IN.	.52	1.55	9.91	6.09	10.60	9.37	5.07	1.89	.84	.69	.34	.33		
AC-FT	2470	7360	47160	28980	50450	44600	24130	8980	4020	3300	1620	1570		
CAL YR 1982	TOTAL	107932	MEAN	296	MAX	2730	MIN	11	CFSM	3.31	IN.	44.96	AC-FT	214100
WTR YR 1983	TOTAL	113260	MEAN	310	MAX	2730	MIN	19	CFSM	3.47	IN.	47.18	AC-FT	224700

## WILLAMETTE RIVER BASIN

175

14167000 COYOTE CREEK NEAR CROW, OR

LOCATION.--Lat 44°01'19", long 123°15'17", in SW¼NE¼ sec.11, T.18 S., R.5 W., Lane County, Hydrologic Unit 17090003, on right bank 1.0 mi downstream from Spencer Creek, 4.3 mi northeast of Crow, and at mile 3.8.

DRAINAGE AREA.--95.1 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 31, 1940, nonrecording gage near same site at different datums.

REMARKS.--Records good except those for period of backwater Nov. 29 to Feb. 18, which are fair. No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years, 179 ft<sup>3</sup>/s, 25.56 in/yr, 129,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft<sup>3</sup>/s Feb. 10, 1961, gage height, 14.43 ft, from rating curve extended above 4,700 ft<sup>3</sup>/s; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1030	2,640	11.30	Feb. 18	1130	*4,170	*12.25
Minimum, 0.54 ft <sup>3</sup> /s Aug. 23, 24.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2.5	15	488	106	260	562	958	86	44	25	4.1	13		
2	2.0	10	329	110	225	519	996	79	42	46	3.8	9.1		
3	1.9	7.9	502	163	199	482	873	72	39	34	3.8	7.0		
4	1.9	6.4	994	603	175	374	652	67	34	23	3.6	5.4		
5	1.9	5.6	891	736	153	340	454	66	29	16	3.3	4.2		
6	2.3	8.3	842	656	187	542	341	77	28	14	3.0	3.3		
7	14	11	592	646	404	668	279	96	26	13	2.9	3.2		
8	15	12	336	692	431	739	236	187	25	15	2.8	3.0		
9	16	9.8	243	668	798	727	209	311	24	18	2.7	2.7		
10	13	8.0	188	503	1440	1250	222	285	27	16	2.7	2.6		
11	11	7.1	147	358	1070	1070	214	205	35	12	2.5	2.7		
12	10	6.2	159	288	1170	748	173	163	29	9.4	2.4	2.8		
13	8.7	6.0	378	240	1340	706	146	131	25	8.4	1.9	2.7		
14	6.3	5.9	403	198	929	1050	129	110	22	8.1	1.8	2.7		
15	3.8	5.3	653	171	684	1050	114	108	24	7.9	1.9	2.7		
16	1.6	5.2	2250	153	589	798	102	97	24	8.3	1.8	3.7		
17	1.7	7.1	2470	141	933	575	95	82	21	7.7	1.4	3.0		
18	1.9	51	1580	138	3330	399	88	73	20	6.8	1.4	3.1		
19	2.9	108	1020	163	1910	304	83	66	21	6.8	1.0	2.9		
20	3.7	123	750	134	1160	246	89	61	21	7.0	1.1	2.2		
21	3.8	131	790	124	1010	210	82	57	20	6.6	1.1	1.9		
22	4.9	91	1120	167	1000	213	74	54	18	6.1	1.1	3.3		
23	10	62	910	447	928	430	96	45	17	5.6	.69	3.3		
24	19	50	590	433	788	337	91	49	18	5.2	.56	4.9		
25	16	43	383	319	644	305	93	46	17	5.4	.60	2.8		
26	12	37	322	413	610	271	97	46	15	5.4	.79	3.4		
27	14	32	262	463	539	341	81	43	14	5.3	.70	2.8		
28	16	41	204	393	559	361	84	40	14	5.2	.92	2.5		
29	15	206	165	324	---	417	142	37	13	5.2	1.8	2.5		
30	23	591	137	283	---	1240	108	35	13	4.9	7.5	2.2		
31	24	---	120	328	---	1330	---	37	---	4.5	23	---		
TOTAL	279.8	1702.8	20218	10561	23465	18604	7401	2911	719	361.8	88.66	111.6		
MEAN	9.03	56.8	652	341	838	600	247	93.9	24.0	11.7	2.86	3.72		
MAX	24	591	2470	736	3330	1330	996	311	44	46	23	13		
MIN	1.6	5.2	120	106	153	210	74	35	13	4.5	.56	1.9		
CFSM	.09	.60	6.86	3.59	8.81	6.31	2.60	.99	.25	.12	.03	.04		
IN.	.11	.67	7.91	4.13	9.18	7.28	2.90	1.14	.28	.14	.03	.04		
AC-FT	555	3380	40100	20950	46540	36900	14680	5770	1430	718	176	221		
CAL YR 1982	TOTAL	82896.89	MEAN	227	MAX	2470	MIN	.19	CFSM	2.39	IN.	32.43	AC-FT	164400
WTR YR 1983	TOTAL	86423.66	MEAN	237	MAX	3330	MIN	.56	CFSM	2.49	IN.	33.81	AC-FT	171400



## WILLAMETTE RIVER BASIN

## 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 northeast of Elmira, and at mile 25.7.

DRAINAGE AREA.--252 mi<sup>2</sup>, 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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake 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 at elevation 375.1 ft, maximum pool elevation. Usable capacity, 101,100 acre-ft between elevations 340.0 ft, sill of outlet gate, and 373.5 ft, 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 SE $\frac{1}{4}$  sec.29, T.17 S., R.4 W., and discharged into Fern Ridge Lake; drainage area at point of diversion, 21.3 mi<sup>2</sup>.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 124,500 acre-ft Dec. 27, 1955, elevation, 375.83 ft; minimum since first filling in 1942, 163 acre-ft Nov. 11, 1950, elevation, 344.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 102,100 acre-ft May 9, 10, elevation, 373.61 ft; minimum, 6,080 acre-ft Dec. 30, elevation, 352.24 ft.

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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	371.79	360.00	355.14	352.42	356.45	367.07	372.33	373.49	373.52	373.52	373.36	373.08
2	371.80	359.24	354.12	352.60	357.09	367.27	372.04	373.50	373.50	373.49	373.34	373.07
3	371.80	358.53	354.35	352.84	357.62	367.42	371.79	373.49	373.47	373.48	373.33	373.05
4	371.71	357.80	355.19	354.29	358.07	367.54	371.65	373.48	373.48	373.47	373.31	373.04
5	371.46	357.04	355.00	354.77	358.45	367.77	371.76	373.48	373.46	373.47	373.30	373.01
6	371.18	356.23	354.50	354.57	359.04	368.13	371.98	373.48	373.48	373.46	373.28	373.00
7	370.89	355.26	353.96	354.21	359.72	368.48	372.19	373.50	373.48	373.49	373.27	372.98
8	370.57	354.50	353.11	353.90	360.41	368.64	372.38	373.58	373.47	373.53	373.25	372.98
9	370.25	354.12	352.71	353.57	361.44	368.87	372.59	373.61	373.47	373.53	373.23	372.96
10	369.94	353.69	352.56	353.05	362.14	369.20	372.77	373.58	373.48	373.54	373.22	372.94
11	369.61	353.21	352.61	353.07	362.05	369.27	372.95	373.50	373.47	373.54	373.17	372.92
12	369.28	352.92	352.75	353.15	362.50	369.22	373.07	373.48	373.47	373.53	373.18	372.91
13	368.93	352.85	352.64	352.99	362.97	369.30	373.16	373.49	373.47	373.52	373.17	372.89
14	368.58	352.85	352.65	353.11	363.15	369.47	373.25	373.50	373.48	373.52	373.15	372.86
15	368.21	352.85	354.78	353.53	363.34	369.60	373.34	373.50	373.48	373.51	373.12	372.85
16	367.83	352.89	359.63	353.41	363.48	369.64	373.42	373.50	373.48	373.51	373.10	372.83
17	367.46	353.10	363.02	353.26	364.42	369.64	373.49	373.49	373.48	373.51	373.08	372.81
18	367.06	353.51	363.86	353.39	367.15	369.70	373.53	373.50	373.48	373.50	373.06	372.77
19	366.65	353.69	363.53	353.29	368.46	369.85	373.53	373.53	373.49	373.50	373.04	372.71
20	366.22	353.88	362.89	353.02	368.65	370.02	373.52	373.54	373.49	373.49	373.01	372.68
21	365.83	353.93	362.40	352.95	368.61	370.18	373.51	373.52	373.49	373.48	373.00	372.59
22	365.42	353.68	362.03	353.26	368.41	370.43	373.52	373.51	373.48	373.47	372.97	372.50
23	364.99	353.41	361.38	353.30	368.16	370.72	373.54	373.49	373.48	373.45	372.94	372.41
24	364.52	353.12	360.26	353.04	367.68	370.87	373.53	373.48	373.47	373.44	372.91	372.32
25	364.08	352.91	358.63	353.00	367.25	370.98	373.52	373.48	373.47	373.43	372.91	372.23
26	363.59	352.89	356.67	353.49	367.04	371.07	373.50	373.48	373.47	373.42	372.88	372.10
27	363.05	352.99	355.11	354.08	366.96	371.24	373.50	373.49	373.46	373.42	372.86	371.94
28	362.53	353.22	353.45	354.61	366.96	371.38	373.53	373.51	373.44	373.41	372.90	371.73
29	361.97	354.13	352.46	354.88	---	371.69	373.52	373.48	373.45	373.40	372.98	371.48
30	361.39	355.34	352.36	355.12	---	372.24	373.48	373.49	373.47	373.39	373.05	371.27
31	360.73	---	352.44	355.74	---	372.62	---	373.51	---	373.37	373.07	---
MEAN	367.40	354.46	356.33	353.61	363.49	369.66	373.00	373.51	373.48	373.48	373.11	372.63
MAX	371.80	360.00	363.86	355.74	368.65	372.62	373.54	373.61	373.52	373.54	373.36	373.08
MIN	360.73	352.85	352.36	352.42	356.45	367.07	371.65	373.48	373.44	373.37	372.86	371.27
(+)	25010	11130	6360	11910	52140	93080	100900	101200	100800	99860	97110	81690
(#)	-61030	-13880	-4770	+5550	+40230	+40940	+7820	+300	-400	-940	-2750	-15420
CAL YR 1982	MEAN 367.19	MAX 373.67	MIN 352.36	AC-FT# -9590								
WTR YR 1983	MEAN 367.03	MAX 373.61	MIN 352.36	AC-FT# -4350								

## WILLAMETTE RIVER BASIN

177

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 downstream from Fern Ridge Dam, 1.7 mi west of Alvadore, and at mile 25.5.

DRAINAGE AREA.--252 mi<sup>2</sup>, 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 National Geodetic Vertical Datum of 1929 (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 downstream at datum 11.09 ft lower.

REMARKS.--Records good. 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 upstream and point of return, 2.3 mi 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.

COOPERATION.--Gage-height record for Coyote Creek diversion furnished by Corps of Engineers.

AVERAGE DISCHARGE.--44 years, 539 ft<sup>3</sup>/s, 390,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft<sup>3</sup>/s Jan. 1, 1943, gage height, 15.12 ft, site and datum then in use; minimum daily, 2 ft<sup>3</sup>/s Aug. 7, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,920 ft<sup>3</sup>/s Apr. 1; minimum daily, 29 ft<sup>3</sup>/s July 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	1130	1670	457	161	1450	4280	200	122	173	40	53
2	38	1110	2010	456	60	1100	4540	165	164	251	40	53
3	38	985	1710	672	51	1010	3660	263	103	132	40	52
4	348	896	2060	1280	49	800	2390	263	49	65	42	52
5	923	896	2980	2020	51	640	1020	266	49	45	42	52
6	1140	887	2720	2300	52	645	304	291	49	31	43	52
7	1120	891	1980	2480	196	1020	93	291	49	30	43	52
8	1130	651	1460	2430	418	1570	67	294	48	31	44	53
9	1150	314	928	2190	950	1740	53	547	48	31	43	54
10	1130	310	657	1780	2200	2060	50	735	128	31	42	54
11	1110	307	449	1220	3260	2390	50	763	100	31	40	54
12	1120	197	620	892	2770	2390	106	474	49	31	40	54
13	1140	76	1080	889	2490	2390	155	262	49	30	40	54
14	1130	46	1300	653	2220	2420	100	258	49	30	40	54
15	1140	47	1700	418	1770	2450	52	254	49	29	40	54
16	1130	46	370	625	1540	2210	51	255	49	29	40	54
17	1110	104	901	632	1560	1770	51	254	49	30	40	54
18	1110	366	2550	499	612	1130	213	114	49	30	49	54
19	1110	470	3830	636	1680	560	348	52	49	31	54	53
20	1120	488	4010	655	3160	327	351	130	49	30	54	212
21	1120	503	4030	543	3640	253	352	202	49	30	54	360
22	1100	504	4020	511	4030	101	352	205	49	36	54	392
23	1110	411	4010	1020	3980	381	349	208	49	40	55	392
24	1110	344	3970	1140	4260	609	346	122	49	40	54	393
25	1080	260	3890	872	3750	608	364	97	48	40	54	393
26	1100	142	3600	907	2500	607	382	82	48	40	53	498
27	1120	120	2500	922	2000	614	326	51	48	40	53	645
28	1120	223	1820	723	1850	662	289	51	48	40	52	804
29	1140	447	1170	729	---	711	376	51	48	40	53	862
30	1130	933	615	726	---	1410	445	50	49	40	54	852
31	1130	---	452	466	---	2210	---	49	---	40	53	---
TOTAL	30535	14104	65062	31743	51260	38238	21515	7299	1835	1547	1445	6815
MEAN	985	470	2099	1024	1831	1233	717	235	61.2	49.9	46.6	227
MAX	1150	1130	4030	2480	4260	2450	4540	763	164	251	55	862
MIN	38	46	370	418	49	101	50	49	48	29	40	52
AC-FT	60570	27980	129100	62960	101700	75850	42670	14480	3640	3070	2870	13520
CAL YR 1982	TOTAL	254006	MEAN	696	MAX	4030	MIN	30	AC-FT	503800		
WTR YR 1983	TOTAL	271398	MEAN	744	MAX	4540	MIN	29	AC-FT	538300		

## 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 upstream from bridge on State Highway 99W, 0.1 mi downstream from Shafer Creek, and at mile 6.8.

DRAINAGE AREA.--391 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1944, nonrecording gage at various sites ranging from present site to 1.5 mi downstream at different datums.

REMARKS.--Records good. Flow regulated since 1941 by Fern Ridge Lake (see station 14168000). Several small diversions above station.

AVERAGE DISCHARGE.--60 years (water years 1922-25, 1928-83), 777 ft<sup>3</sup>/s, 562,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft<sup>3</sup>/s Jan. 2, 1943, gage height, 17.14 ft, 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 ft<sup>3</sup>/s Sept. 29, Oct. 1, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,260 ft<sup>3</sup>/s Feb. 18, gage height, 8.75 ft; minimum, 22 ft<sup>3</sup>/s July 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	1250	2110	708	630	2700	4770	470	123	124	35	103
2	50	1220	2590	714	382	2080	5680	200	210	298	32	87
3	47	1140	2970	1080	323	1830	4980	372	199	251	33	82
4	162	991	3270	2650	291	1540	3540	369	101	102	33	75
5	790	981	3850	3260	266	1270	1960	363	90	84	32	70
6	1200	982	3870	3360	306	1700	946	399	85	48	33	60
7	1190	979	2830	3770	700	1930	468	417	78	42	34	67
8	1200	893	2060	3590	1060	2590	411	502	74	50	32	69
9	1220	342	1450	3240	2430	2840	361	762	70	61	30	65
10	1200	326	1010	2610	3740	3910	394	1050	98	55	33	57
11	1180	321	768	2030	4420	3450	372	1030	199	46	36	57
12	1180	275	795	1410	4610	3350	346	833	91	35	34	57
13	1210	115	1810	1350	3960	3600	394	401	77	31	34	55
14	1200	68	2350	1180	3350	4730	357	389	66	34	34	53
15	1190	63	3370	740	2860	4100	250	378	72	30	34	60
16	1190	62	4840	842	2580	3360	235	368	70	31	30	60
17	1170	97	3330	1000	3510	2730	225	360	71	35	29	57
18	1180	392	3610	836	5220	2040	282	292	75	34	29	59
19	1180	695	4590	894	3020	1240	527	142	80	33	39	62
20	1200	684	5080	1020	4440	758	527	155	78	33	38	103
21	1220	696	5240	817	4670	677	521	280	69	29	39	301
22	1200	643	5620	833	5610	498	513	280	64	25	39	367
23	1220	561	5110	1440	5560	978	536	273	62	31	38	369
24	1220	418	4690	1700	5130	1240	521	237	62	36	38	375
25	1210	383	4400	1390	5090	1150	509	129	64	35	42	375
26	1200	222	4170	1410	3890	1090	540	155	66	33	41	417
27	1240	176	3400	1710	3000	1220	502	101	58	35	42	603
28	1240	206	2400	1210	3100	1230	428	98	47	39	46	763
29	1290	595	1810	1150	---	1600	507	97	50	35	76	889
30	1280	1610	1090	1160	---	3080	625	89	54	34	104	879
31	1240	---	735	1200	---	3370	---	99	---	35	118	---
TOTAL	32555	17386	95218	50304	84148	67881	32227	11090	2603	1824	1287	6696
MEAN	1050	580	3072	1623	3005	2190	1074	358	86.8	58.8	41.5	223
MAX	1290	1610	5620	3770	5610	4730	5680	1050	210	298	118	889
MIN	47	62	735	708	266	498	225	89	47	25	29	53
AC-FT	64570	34490	188900	99780	166900	134600	63920	22000	5160	3620	2550	13280
CAL YR 1982	TOTAL	370023	MEAN	1014	MAX	5620	MIN	22	AC-FT	733900		
WTR YR 1983	TOTAL	403219	MEAN	1105	MAX	5680	MIN	25	AC-FT	799800		

## 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 downstream from bridge on Bellfountain Road, 0.6 mi downstream from Newton Creek, 2.0 mi southeast of Philomath, and at mile 9.4.

DRAINAGE AREA.--159 mi<sup>2</sup>, including drainage area of Evergreen Creek above Bellfountain Road, 1.4 mi 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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1961, nonrecording gage at bridge 50 ft upstream at same datum.

REMARKS.--Records fair. Records include flow of Evergreen Creek at Bellfountain Road crossing 1.4 mi 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.--43 years, 462 ft<sup>3</sup>/s, 39.46 in/yr, 334,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 20.72 ft; maximum gage height, 20.91 ft Jan. 15, 1974; minimum discharge, 0.60 ft<sup>3</sup>/s Aug. 23, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0230	4,840	19.58	Feb. 18	1500	5,700	20.14
Dec. 16	0230	*10,900	*20.89				

Minimum, 20 ft<sup>3</sup>/s Oct. 15, 16, Sept. 27, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	26	80	1020	497	728	1210	2050	221	138	95	39	47		
2	25	73	908	473	646	1060	1860	211	127	120	39	38		
3	22	62	1650	560	580	998	1610	203	118	110	39	35		
4	22	57	3390	2400	531	872	1330	195	109	96	38	33		
5	22	60	1800	2600	488	821	1100	190	103	87	37	31		
6	22	68	1360	2660	528	968	933	206	97	81	35	29		
7	27	90	1010	2680	804	1580	798	229	91	80	33	27		
8	40	82	782	2810	859	1840	697	382	88	82	33	26		
9	43	76	645	2430	2030	1920	656	605	86	86	33	26		
10	33	74	538	1820	2620	2600	812	555	101	84	32	26		
11	27	64	455	1380	2240	2040	767	463	114	77	32	26		
12	25	66	421	1100	2730	1720	673	395	101	68	31	27		
13	23	58	469	910	2580	1780	604	342	90	67	30	28		
14	22	46	833	779	1960	2500	550	311	82	69	29	27		
15	21	46	2710	683	1600	2400	504	313	83	71	29	24		
16	21	49	7230	611	1680	1810	466	321	84	69	28	24		
17	21	175	4540	554	2330	1430	431	281	80	62	27	23		
18	23	333	2830	530	4740	1140	401	255	77	60	26	23		
19	22	535	2080	510	3490	943	376	236	93	66	26	23		
20	26	526	2380	517	2510	800	352	219	123	64	27	23		
21	28	515	2210	481	2070	703	332	204	102	59	26	22		
22	75	426	2370	495	2070	667	314	192	88	54	26	21		
23	87	339	2210	799	2370	873	364	176	87	51	26	22		
24	60	278	1720	781	1840	783	331	159	87	49	25	21		
25	52	244	1360	724	1550	735	297	150	83	47	25	21		
26	63	224	1150	959	1990	681	277	145	79	46	24	21		
27	76	215	949	1490	1710	710	258	137	77	47	24	20		
28	73	246	793	1330	1410	727	280	128	72	48	24	21		
29	189	357	689	1080	---	1480	260	123	71	48	33	21		
30	208	837	610	942	---	2940	236	118	71	44	51	20		
31	114	---	548	847	---	2710	---	125	---	41	51	---		
TOTAL	1538	6301	51660	36432	50684	43441	19919	7790	2802	2128	978	776		
MEAN	49.6	210	1666	1175	1810	1401	664	251	93.4	68.6	31.5	25.9		
MAX	208	837	7230	2810	4740	2940	2050	605	138	120	51	47		
MIN	21	46	421	473	488	667	236	118	71	41	24	20		
CFSM	.31	1.32	10.5	7.39	11.4	8.81	4.18	1.58	.59	.43	.20	.16		
IN.	.36	1.47	12.09	8.52	11.86	10.16	4.66	1.82	.66	.50	.23	.18		
AC-FT	3050	12500	102500	72260	100500	86170	39510	15450	5560	4220	1940	1540		
CAL YR 1982	TOTAL	205360	MEAN	563	MAX	7230	MIN	15	CFSM	3.54	IN.	48.05	AC-FT	407300
WTR YR 1983	TOTAL	224449	MEAN	615	MAX	7230	MIN	20	CFSM	3.87	IN.	52.51	AC-FT	445200

## WILLAMETTE RIVER BASIN

## 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 upstream from gaging station at Albany, 0.4 mi upstream from Calapooia River, and at mile 119.9.

DRAINAGE AREA.--4,460 mi<sup>2</sup>, approximately.

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

## 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, 20.0°C July 23, 31; minimum recorded, 4.0°C Dec. 30 to Jan. 2.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



## WILLAMETTE RIVER BASIN

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14171750 WILLAMETTE RIVER ABOVE CALAPOOIA RIVER, AT ALBANY, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	13.5	12.5	12.5	12.0	15.5	15.0	19.0	18.0	16.5	15.0
2	8.5	8.0	12.5	11.5	12.0	11.5	15.0	14.0	19.0	17.5	17.0	15.5
3	8.5	8.0	12.5	11.0	13.5	11.5	15.0	13.5	18.5	17.5	17.0	15.5
4	8.5	8.0	13.0	12.0	15.0	13.0	16.5	14.5	19.0	17.0	17.0	16.0
5	9.0	8.5	13.0	12.0	16.0	14.0	16.0	15.5	18.0	17.0	16.5	15.0
6	9.5	9.0	12.0	11.5	17.0	15.0	15.5	14.5	19.0	17.0	16.5	15.0
7	9.5	9.0	12.0	11.0	18.0	16.0	14.5	14.0	19.0	18.0	16.5	15.5
8	9.5	9.0	11.5	10.5	18.0	16.5	14.5	13.5	18.5	17.5	16.0	15.5
9	9.0	8.5	10.5	9.5	17.0	16.0	15.0	13.5	18.5	17.0	15.5	14.5
10	8.5	8.0	11.0	9.5	16.0	15.0	17.0	14.5	18.0	17.0	15.5	15.0
11	8.5	8.0	11.5	10.5	15.5	14.0	18.0	16.0	17.0	16.0	16.0	14.5
12	9.0	8.5	12.5	11.0	15.0	13.5	18.0	17.0	18.0	16.0	16.5	15.5
13	10.0	8.5	13.5	12.0	16.5	14.0	17.5	16.0	19.0	17.0	17.0	15.5
14	10.5	9.0	13.0	12.5	16.0	15.0	16.0	15.0	19.5	18.0	17.5	16.5
15	11.5	10.0	12.5	11.5	15.5	14.0	16.0	14.5	19.5	18.0	17.0	16.0
16	12.0	10.5	11.5	11.0	16.0	15.0	17.0	15.0	19.0	17.5	16.5	15.5
17	12.5	11.0	12.0	11.0	16.0	15.0	17.5	15.5	19.0	17.5	16.0	15.0
18	13.0	11.5	12.5	11.5	15.5	14.0	17.5	16.0	19.0	17.5	15.5	14.5
19	13.5	12.5	13.0	11.5	14.0	13.5	17.5	17.0	18.5	17.5	14.5	13.5
20	13.5	12.5	14.5	12.5	14.5	13.0	18.0	16.5	17.5	16.5	14.0	12.5
21	12.5	12.0	15.0	13.5	15.5	13.5	18.5	16.5	17.5	16.0	14.5	13.0
22	12.5	12.0	15.0	14.0	15.5	14.5	19.5	17.5	17.5	16.0	15.5	14.0
23	12.0	11.0	15.5	14.0	15.0	14.0	20.0	18.5	17.5	16.5	15.5	15.0
24	11.5	10.0	16.0	14.5	15.0	13.5	19.0	18.0	17.0	16.0	15.5	14.5
25	11.5	10.5	15.5	14.5	16.5	14.5	18.0	17.0	17.0	16.0	15.5	14.5
26	12.0	10.5	15.0	13.5	16.5	15.5	18.0	16.5	17.5	16.0	15.5	15.0
27	13.0	11.0	15.5	14.5	17.5	15.5	17.5	16.5	17.5	16.5	15.5	15.0
28	13.5	12.0	16.5	14.5	17.0	16.0	18.0	16.5	17.5	16.0	15.0	14.0
29	14.0	12.5	17.0	15.5	17.5	16.0	18.5	16.0	16.0	15.5	14.0	13.0
30	14.5	13.0	15.5	14.0	16.5	15.5	19.5	17.0	15.5	15.0	13.5	12.5
31	---	---	14.0	12.5	---	---	20.0	18.5	15.5	15.0	---	---
MONTH	14.5	8.0	17.0	9.5	18.0	11.5	20.0	13.5	19.5	15.0	17.5	12.5

## 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 downstream from bridge on State Highway 228, 0.3 mi southwest of Holley, 5.0 mi upstream from Brush Creek, and at mile 45.4.

DRAINAGE AREA.--105 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1963, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. Slight regulation at times during low-water periods by small dam upstream. Diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years, 441 ft<sup>3</sup>/s, 57.04 in/yr, 319,500 acre-ft/yr. The figure published in the 1982 report was in error; the correct figure is 47 years, 440 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.60 ft; maximum gage height, 15.30 ft Dec. 22, 1964 (backwater from debris); minimum discharge observed, 13 ft<sup>3</sup>/s Sept. 8, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0600	3,670	6.06	Feb. 18	0530	*4,600	*6.80
Jan. 7	0200	3,580	5.98	Mar. 29	0430	3,830	6.19

Minimum, 36 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	61	415	1340	279	456	730	1520	244	227	298	87	77		
2	53	320	1360	277	409	654	1490	246	199	471	84	71		
3	57	262	2890	363	367	580	1300	229	176	387	79	63		
4	52	227	3090	1670	335	555	1100	215	155	297	78	59		
5	48	230	1990	1440	307	565	900	208	142	247	75	56		
6	59	399	2220	2100	362	923	793	215	131	218	73	53		
7	134	334	1460	3160	489	995	695	277	123	200	71	52		
8	174	282	1060	2260	648	1120	604	417	116	200	70	51		
9	140	243	812	1580	1360	1060	556	519	111	197	71	55		
10	100	212	641	1180	1700	1250	519	503	247	171	70	51		
11	78	188	518	940	1220	1020	487	446	240	155	71	51		
12	67	170	498	786	1390	931	432	415	185	146	67	51		
13	60	156	587	665	1400	995	390	371	157	147	64	48		
14	54	145	750	567	1230	1160	361	336	143	163	61	46		
15	50	135	1310	496	1070	1060	337	481	138	145	58	45		
16	47	137	2330	445	995	917	317	620	125	132	57	44		
17	64	286	2200	405	1820	799	306	482	122	125	56	43		
18	71	721	1570	384	3930	701	299	391	195	134	55	42		
19	61	892	1230	430	2340	598	293	337	255	142	53	44		
20	53	879	1170	405	1730	525	281	298	255	173	54	42		
21	53	776	1420	365	1510	477	280	270	208	147	52	40		
22	73	602	1360	364	1540	467	266	246	176	129	50	38		
23	565	478	1080	487	1270	566	261	226	167	119	51	39		
24	351	397	835	527	1170	534	284	208	159	114	51	39		
25	222	350	687	487	1040	637	250	194	138	116	49	39		
26	274	333	622	547	938	629	254	180	129	110	49	39		
27	386	352	538	596	837	734	233	167	123	102	47	39		
28	315	768	459	552	784	744	227	155	115	102	48	38		
29	1350	1370	398	493	---	1180	282	147	112	97	125	37		
30	1080	1740	349	458	---	3020	250	139	113	90	159	37		
31	600	---	310	521	---	1970	---	194	---	87	93	---		
TOTAL	6752	13799	37084	25229	32647	28096	15567	9376	4882	5361	2128	1429		
MEAN	218	460	1196	814	1166	906	519	302	163	173	68.6	47.6		
MAX	1350	1740	3090	3160	3930	3020	1520	620	255	471	159	77		
MIN	47	135	310	277	307	467	227	139	111	87	47	37		
CFSM	2.08	4.38	11.4	7.75	11.1	8.63	4.94	2.88	1.55	1.65	.65	.45		
IN.	2.39	4.89	13.14	8.94	11.57	9.95	5.52	3.32	1.73	1.90	.75	.51		
AC-FT	13390	27370	73560	50040	64760	55730	30880	18600	9680	10630	4220	2830		
CAL YR 1982	TOTAL	180580	MEAN	495	MAX	3410	MIN	25	CFSM	4.71	IN.	63.98	AC-FT	358200
WTR YR 1983	TOTAL	182350	MEAN	500	MAX	3930	MIN	37	CFSM	4.76	IN.	64.60	AC-FT	361700

## WILLAMETTE RIVER BASIN

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14172000 CALAPOOIA RIVER AT HOLLEY, OR--Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

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 at times during winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 24.5°C Aug. 14; minimum, 3.0°C Dec. 30, 31.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

14172000 CALAPOOIA RIVER AT HOLLEY, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

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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 downstream from Oak Creek, and at mile 3.0.

DRAINAGE AREA.--372 mi<sup>2</sup>.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1964 to current year.

INSTRUMENTATION.--Temperature recorder since January 1964.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.5°C Aug. 16, 17, 19-21, 1967, Aug. 9, 1978; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.0°C Aug. 14; minimum recorded, 1.5°C Jan. 1.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



## WILLAMETTE RIVER BASIN

14173500 CALAPOOIA RIVER AT ALBANY, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

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## 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 upstream from bridge on U.S. Highway 20 (Ellsworth Street) in Albany, 0.2 mi downstream from Calapooia River, and at mile 119.31.

DRAINAGE AREA.--4,840 mi<sup>2</sup>, 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 National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1906, nonrecording gage at site 0.2 mi upstream at datum 5.00 ft higher. Sept. 27, 1906, to Nov. 12, 1934, nonrecording gage at site 300 ft upstream at datum 5.00 ft higher. Nov. 14, 1934, to Sept. 30, 1962, at datum 5.00 ft 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.--89 years (water years 1894, 1896-83), 14,510 ft<sup>3</sup>/s, 40.71 in/yr, 10,510,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266,000 ft<sup>3</sup>/s Jan. 14, 1881, gage height, 37.8 ft, present datum; minimum, 1,840 ft<sup>3</sup>/s Sept. 1, 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached a stage of 41.0 ft, discharge, 340,000 ft<sup>3</sup>/s, from rating curve extended above 220,000 ft<sup>3</sup>/s. Flood of Feb. 4, 1890, reached a stage of 38.9 ft, discharge, 291,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 70,200 ft<sup>3</sup>/s Feb. 19, gage height, 21.68 ft; minimum observed, 5,240 ft<sup>3</sup>/s July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	9100	18600	30900	17900	15400	31000	51800	10300	12000	6440	5760	7760		
2	9070	17100	32300	16200	12000	23700	55500	9830	12100	8070	5310	7940		
3	9210	15800	36300	16300	10500	19300	56400	9650	11100	11100	5860	7980		
4	9370	14700	47300	24300	9760	17200	54900	9280	9560	12000	6000	8070		
5	9560	13900	47200	38100	9180	15700	45800	8880	8620	11000	6060	7790		
6	9730	14000	49900	39100	8890	18000	32400	8760	8290	9120	6140	7610		
7	10200	15000	51000	45400	11500	22500	25500	8910	7950	8750	6240	8080		
8	11000	15000	46000	53500	14200	25800	20600	9610	7870	8520	6290	9050		
9	11400	14200	42900	52700	19400	30800	17100	11500	7870	8120	6280	9190		
10	10900	13400	39300	50000	34100	35100	15800	15200	8050	7890	6160	9100		
11	10400	12600	34200	44600	39100	36600	15500	17400	9300	7660	6190	9120		
12	10100	12100	30500	39500	37600	31000	14400	16000	10100	7360	6400	9070		
13	9890	11700	31200	35300	38100	29300	12700	14000	9740	5610	6380	9210		
14	10100	11500	33200	29600	34000	34300	11700	12600	9190	6310	6230	9730		
15	10200	10800	35300	22100	28700	41300	10900	12400	8260	5670	6190	9760		
16	10200	10500	49000	19000	25300	38600	10200	13300	7450	6590	6150	9420		
17	10400	10500	59100	18100	26500	31800	9760	14800	7200	6480	6360	8480		
18	10300	11900	56500	17300	44000	27200	9400	15400	7140	6270	6350	8130		
19	10500	15900	55900	17100	66700	22800	9330	14200	7550	6180	6350	8050		
20	10700	19000	53600	18000	61000	18800	9430	12500	8110	6250	6550	8050		
21	10600	20000	52700	17300	58300	17100	9330	12100	8230	6270	6700	8100		
22	10300	19100	53700	16900	60300	14900	9410	12100	8160	6250	6680	8230		
23	11000	17300	56700	18400	59500	13300	9560	12100	7950	6030	7010	8250		
24	13700	15800	50300	21300	55200	14500	9690	12000	7890	5770	7100	8270		
25	12900	14600	41600	20600	50400	14300	9770	12000	7360	5500	7130	8270		
26	12200	13600	36000	20500	46800	14300	9770	13000	7000	5340	7170	8270		
27	12700	13000	33100	23100	40200	14500	9580	13200	6810	5360	7200	8360		
28	14000	12900	29300	22300	35600	16300	9300	12900	6650	5760	6920	8380		
29	14700	15200	26100	20600	---	17500	9360	11800	6520	5940	7360	8510		
30	20600	23100	23400	17400	---	29400	10200	11700	6380	5830	7980	8720		
31	21100	---	20200	16700	---	47400	---	11900	---	5760	7900	---		
TOTAL	356130	442800	1284700	829200	952230	764300	585090	379320	250400	221200	202400	254950		
MEAN	11490	14760	41440	26750	34010	24650	19500	12240	8347	7135	6529	8498		
MAX	21100	23100	59100	53500	66700	47400	56400	17400	12100	12000	7980	9760		
MIN	9070	10500	20200	16200	8890	13300	9300	8760	6380	5340	5310	7610		
CFSM	2.37	3.05	8.56	5.53	7.03	5.09	4.03	2.53	1.72	1.47	1.35	1.76		
IN.	2.74	3.40	9.87	6.37	7.32	5.87	4.50	2.92	1.92	1.70	1.56	1.96		
AC-FT	706400	878300	2548000	1645000	1889000	1516000	1161000	752400	496700	438800	401500	505700		
CAL YR 1982	TOTAL	6467450	MEAN	17720	MAX	61300	MIN	4590	CFSM	3.66	IN.	49.71	AC-FT	12828000
WTR YR 1983	TOTAL	6522720	MEAN	17870	MAX	66700	MIN	5310	CFSM	3.69	IN.	50.13	AC-FT	12938000

## WILLAMETTE RIVER BASIN

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 downstream from Boulder Creek, 3.0 mi southeast of Detroit, and at mile 70.7.

DRAINAGE AREA.--216 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. 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.--57 years, 1,008 ft<sup>3</sup>/s, 63.37 in/yr, 730,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.76 ft, temporary backwater from debris, from rating curve extended above 6,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 250 ft<sup>3</sup>/s Sept. 13, 1909.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0430	5,740	7.38	Feb. 17	2130	5,230	7.15
Dec. 16	0700	3,850	6.50	Mar. 30	0230	4,610	6.86
Jan. 6	2230	*6,350	*7.64				

Minimum, 457 ft<sup>3</sup>/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	498	1080	1360	861	1100	1510	2460	1130	1270	884	655	601		
2	492	938	1450	876	1040	1450	2230	1120	1140	1050	628	565		
3	507	846	3330	944	990	1390	1910	1090	1040	934	617	551		
4	500	795	4810	1940	951	1500	1710	1090	985	858	617	537		
5	492	831	3340	2520	915	1550	1560	1150	944	831	601	528		
6	517	1090	3600	4620	951	1710	1440	1150	920	805	590	521		
7	649	952	2550	5620	962	1890	1360	1210	924	778	600	519		
8	717	878	1990	4470	1010	2240	1280	1200	943	789	605	515		
9	653	819	1670	3130	1330	2330	1230	1120	947	757	603	519		
10	605	773	1440	2400	1330	2610	1180	1060	1130	720	593	513		
11	568	734	1280	1980	1460	2260	1130	1020	1050	705	587	530		
12	542	704	1200	1730	1750	2130	1070	998	955	717	576	519		
13	523	680	1160	1550	1830	2300	1020	989	880	766	567	511		
14	509	657	1230	1410	1720	2250	985	1020	851	830	565	508		
15	499	639	1910	1320	1630	1980	962	1280	846	740	566	501		
16	494	667	3460	1280	1710	1780	957	1310	809	707	565	502		
17	530	1040	2970	1310	3140	1610	979	1230	804	767	560	493		
18	523	1390	2300	1320	4860	1470	1060	1210	889	749	560	506		
19	501	1370	1930	1440	3380	1360	1210	1180	945	872	560	506		
20	489	1220	1830	1330	2650	1270	1200	1200	931	805	555	493		
21	494	1090	1920	1240	2370	1220	1290	1260	849	761	545	483		
22	565	984	1770	1190	2840	1200	1310	1270	812	737	540	483		
23	948	907	1570	1220	2650	1200	1250	1310	800	731	545	479		
24	769	855	1380	1290	2450	1150	1210	1390	798	743	531	479		
25	681	818	1260	1220	2150	1150	1150	1440	762	731	540	470		
26	779	793	1190	1320	1910	1120	1100	1420	750	719	555	470		
27	864	858	1100	1420	1710	1170	1080	1370	739	688	537	470		
28	807	1330	1030	1310	1570	1160	1080	1460	724	679	536	466		
29	2380	1580	972	1230	---	1830	1110	1580	730	668	617	465		
30	1880	1560	933	1160	---	3950	1110	1480	739	661	611	462		
31	1310	---	896	1160	---	3080	---	1350	---	672	570	---		
TOTAL	22285	28878	58831	55811	52359	54820	38623	38087	26906	23854	17897	15165		
MEAN	719	963	1898	1800	1870	1768	1287	1229	897	769	577	506		
MAX	2380	1580	4810	5620	4860	3950	2460	1580	1270	1050	655	601		
MIN	489	639	896	861	915	1120	957	989	724	661	531	462		
CFSM	3.33	4.46	8.79	8.33	8.66	8.19	5.96	5.69	4.15	3.56	2.67	2.34		
IN.	3.84	4.97	10.13	9.61	9.02	9.44	6.65	6.56	4.63	4.11	3.08	2.61		
AC-FT	44200	57280	116700	110700	103900	108700	76610	75550	53370	47310	35500	30080		
CAL YR 1982	TOTAL	413950	MEAN	1134	MAX	7110	MIN	439	CFSM	5.25	IN.	71.29	AC-FT	821100
WTR YR 1983	TOTAL	433516	MEAN	1188	MAX	5620	MIN	462	CFSM	5.50	IN.	74.66	AC-FT	859900

## WILLAMETTE RIVER BASIN

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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.

INSTRUMENTATION.--Temperature recorder since April 1951.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 19.0°C July 8, 18, 19, 1970; minimum, 0.0°C at times during 1954, 1956, 1974, 1978-80, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.5°C July 30 to Aug. 1, Aug. 9; minimum, 2.0°C Dec. 29.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.0	6.5	7.5	6.5	5.5	4.5	4.0	2.5	5.5	4.5	6.5	5.5
2	8.5	7.5	6.5	5.0	5.0	4.5	4.5	4.0	5.5	4.5	7.0	5.5
3	9.5	8.0	7.5	5.5	5.5	5.0	4.5	4.0	5.0	4.0	7.0	5.5
4	8.5	8.0	7.5	7.0	6.0	5.5	4.5	4.0	4.5	3.5	7.0	6.0
5	8.5	7.0	7.0	6.5	6.0	5.5	5.0	4.5	5.0	3.5	6.5	6.0
6	8.5	7.5	7.0	6.0	6.0	5.0	5.0	5.0	5.5	4.5	6.0	5.0
7	8.0	7.0	6.0	5.0	5.0	4.0	5.5	5.0	5.0	4.0	6.0	5.5
8	8.5	7.0	5.5	4.5	4.5	3.5	5.5	4.5	5.0	4.5	6.0	5.5
9	9.0	8.0	5.5	4.5	4.0	3.5	5.0	5.0	5.0	4.5	6.5	6.0
10	9.0	7.0	5.0	3.5	4.5	3.5	5.5	4.5	5.5	4.5	7.0	6.0
11	9.0	7.0	4.5	3.5	4.0	3.5	5.0	4.5	6.0	5.0	7.0	6.0
12	9.0	7.0	4.5	3.5	5.0	4.0	5.0	4.0	6.0	5.5	6.5	5.5
13	9.0	7.0	5.0	4.0	5.0	4.5	4.5	4.0	6.0	5.5	6.5	5.5
14	9.0	7.0	4.5	4.0	5.0	4.5	4.5	4.0	5.5	5.5	5.5	4.5
15	9.0	7.5	4.5	3.5	5.5	5.0	5.0	4.0	6.0	5.0	6.5	5.0
16	9.0	8.0	5.0	4.0	5.5	5.5	5.5	5.0	6.5	6.0	6.0	4.5
17	---	---	6.5	5.0	5.5	4.5	6.0	5.0	6.0	5.0	6.5	5.5
18	7.5	6.5	6.0	5.0	5.0	4.5	6.5	5.5	5.5	5.0	6.5	4.5
19	6.5	5.0	5.5	5.0	5.0	4.5	6.0	5.5	6.0	5.0	7.0	4.5
20	7.5	5.0	5.0	4.5	5.0	4.5	5.5	4.5	6.0	5.5	6.5	4.5
21	8.0	7.0	5.0	4.0	5.0	4.5	5.0	4.0	6.5	5.5	6.5	5.5
22	9.0	8.0	---	---	5.0	4.0	5.0	4.5	6.5	6.0	6.5	5.5
23	9.0	8.0	---	---	4.5	4.5	5.5	5.0	7.0	6.0	6.5	5.5
24	8.5	7.5	---	---	4.5	4.0	6.0	5.5	6.5	6.0	6.5	5.0
25	9.0	7.5	4.5	3.0	4.5	4.0	6.0	5.0	6.0	5.5	6.0	4.5
26	8.5	7.0	4.5	4.0	5.0	4.5	6.5	6.0	6.0	5.5	5.5	4.5
27	7.5	6.5	5.5	4.5	4.5	3.0	6.5	6.0	6.5	5.0	6.0	4.5
28	7.0	6.0	5.5	5.0	3.0	2.5	6.0	5.0	7.0	5.5	6.0	4.5
29	7.5	7.0	5.5	4.5	3.0	2.0	6.5	5.5	---	---	6.0	5.0
30	8.0	7.0	5.5	4.5	3.0	2.5	6.0	5.5	---	---	5.5	4.5
31	7.0	6.5	---	---	3.0	2.5	6.0	4.5	---	---	6.0	4.5
MONTH	9.5	5.0	7.5	3.0	6.0	2.0	6.5	2.5	7.0	3.5	7.0	4.5

## WILLAMETTE RIVER BASIN

14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	5.0	7.0	6.5	9.0	8.0	11.0	9.5	16.5	12.5	12.5	11.0
2	5.0	4.5	8.0	6.0	9.5	8.0	10.5	9.0	16.0	12.0	13.5	10.5
3	6.0	4.5	10.0	6.0	12.5	8.0	13.5	9.0	15.5	11.5	13.5	10.5
4	7.0	5.0	9.5	6.0	12.5	8.0	15.0	9.5	16.0	11.5	13.0	11.0
5	7.0	4.0	8.0	6.5	12.5	8.0	14.5	10.5	15.5	12.0	13.0	9.5
6	7.0	4.0	8.0	6.0	13.5	8.5	12.0	10.5	15.5	11.0	12.5	9.0
7	6.5	5.0	7.0	6.0	14.5	9.5	10.5	9.5	15.0	12.0	13.0	10.5
8	7.0	4.5	6.0	5.0	14.5	10.5	11.0	9.0	14.0	12.5	11.0	9.5
9	5.5	4.0	7.5	4.5	13.5	10.0	11.5	9.0	16.5	12.0	12.0	9.0
10	5.5	4.0	7.0	5.5	11.5	9.5	14.5	9.5	14.0	12.5	10.0	9.0
11	6.5	4.0	9.0	5.5	11.0	8.5	15.5	10.0	14.0	11.0	13.0	10.0
12	6.5	4.0	10.0	5.5	13.0	9.0	12.5	11.0	15.0	10.0	12.5	10.0
13	7.0	4.0	10.5	6.0	14.0	8.5	11.5	10.5	15.5	11.0	13.0	10.0
14	7.5	3.5	8.0	7.0	12.0	10.0	12.0	9.5	16.0	12.0	13.0	10.5
15	8.0	4.0	7.0	5.5	11.5	9.5	11.0	9.5	16.0	11.5	12.5	9.5
16	8.5	4.5	9.0	5.5	12.5	8.5	13.5	9.5	15.0	11.0	12.5	9.5
17	8.5	4.5	9.5	5.5	11.0	10.0	12.5	9.0	15.0	11.0	11.5	9.5
18	9.5	6.0	9.0	7.0	10.0	8.5	14.0	9.5	15.5	11.0	10.0	9.0
19	7.0	5.5	11.0	6.0	9.5	8.5	14.0	10.5	13.0	11.0	10.0	7.5
20	7.5	5.5	12.0	7.0	12.0	8.5	13.5	10.5	14.5	11.5	10.0	6.5
21	8.5	6.0	11.5	7.0	13.0	8.0	15.0	9.5	14.0	10.0	10.5	7.0
22	6.5	6.0	12.0	7.0	11.0	9.5	16.0	11.0	14.0	10.5	11.5	8.0
23	7.0	5.5	12.5	7.5	11.0	9.5	15.5	12.0	14.0	11.5	10.5	9.5
24	7.5	5.0	12.5	8.0	12.5	9.0	13.5	11.5	14.0	10.5	11.5	9.5
25	7.0	5.0	13.0	8.5	13.5	8.5	12.0	11.0	14.0	10.5	11.5	9.0
26	7.0	5.5	12.5	8.0	14.5	10.0	14.5	10.5	14.0	11.0	11.5	9.5
27	8.5	5.5	13.0	8.5	14.5	10.5	12.0	11.0	14.0	11.0	11.0	9.0
28	8.5	6.5	14.0	9.0	12.5	10.0	14.5	10.5	12.5	11.0	9.0	7.0
29	9.0	6.5	13.5	9.5	12.0	10.5	15.5	11.0	12.0	11.0	8.5	6.0
30	9.5	5.5	12.0	9.5	11.0	10.0	16.5	11.5	12.5	11.0	9.0	6.0
31	---	---	9.5	8.5	---	---	16.5	12.5	12.5	11.0	---	---
MONTH	9.5	3.5	14.0	4.5	14.5	8.0	16.5	9.0	16.5	10.0	13.5	6.0



## WILLAMETTE RIVER BASIN

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14178700 EAST HUMBURG CREEK NEAR DETROIT, OR

LOCATION.--Lat 44°47'57", long 122°03'28", in NW¼NE¼ sec.15, T.9 S., R.6 E., Marion County, Hydrologic Unit 17090005, in Willamette National Forest, on left bank 1.6 mi upstream from confluence with Humburg Creek, and 6.3 mi northeast of Detroit.

DRAINAGE AREA.--7.32 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,050 ft, from topographic map.

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

AVERAGE DISCHARGE.--5 years, 39.0 ft<sup>3</sup>/s, 72.35 in/yr, 28,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,310 ft<sup>3</sup>/s Dec. 25, 1980, gage height, 4.42 ft; minimum, 1.8 ft<sup>3</sup>/s Sept. 6-9, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	0400	464	3.72	Feb. 17	2030	536	3.81
Dec. 3	2300	*1,050	*4.27	Feb. 22	0500	285	3.43
Dec. 16	0400	435	3.68	Mar. 29	2330	570	3.85
Jan. 6	1700	770	4.05				

Minimum, 2.5 ft<sup>3</sup>/s Oct. 4-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	3.4	32	64	24	38	55	112	31	17	23	11	9.9		
2	3.1	25	83	23	34	55	89	28	16	30	10	8.1		
3	3.0	21	440	29	30	51	69	27	16	22	9.6	7.1		
4	2.7	18	483	195	27	50	59	27	15	17	9.4	6.4		
5	2.5	26	188	294	24	54	53	27	14	15	9.1	5.7		
6	5.9	47	211	624	27	71	49	26	13	13	8.8	5.4		
7	18	37	113	500	31	94	46	28	13	13	8.6	5.0		
8	20	29	76	317	33	133	41	32	12	12	8.5	5.2		
9	13	24	58	166	51	147	38	33	12	11	8.1	6.0		
10	8.9	20	48	97	58	162	35	33	15	11	8.1	5.9		
11	7.0	17	41	73	99	102	32	33	13	10	8.0	6.4		
12	5.7	16	37	61	152	85	29	33	12	9.9	7.7	5.4		
13	4.9	15	37	54	129	101	27	29	11	12	7.3	4.9		
14	4.4	13	46	47	97	99	27	29	11	13	7.1	4.5		
15	3.8	12	155	43	80	82	28	46	11	11	6.9	4.4		
16	3.8	17	322	40	96	69	30	55	11	14	6.6	4.3		
17	8.6	100	189	41	282	58	34	47	11	23	6.4	4.1		
18	10	122	110	47	317	50	40	39	13	18	6.2	5.0		
19	7.8	90	80	62	170	43	43	36	16	35	6.1	4.4		
20	6.4	63	76	50	114	38	42	34	15	27	5.9	4.0		
21	6.3	45	94	42	128	36	41	33	13	22	5.7	3.9		
22	16	36	77	38	251	36	41	31	12	19	5.6	3.8		
23	38	30	57	43	168	37	39	30	11	18	5.5	3.8		
24	23	25	46	50	117	36	36	28	11	18	5.3	3.8		
25	16	23	40	47	90	33	33	27	11	16	5.3	3.7		
26	29	21	36	58	73	33	30	25	10	15	5.4	3.7		
27	37	33	33	67	62	38	29	23	9.6	14	5.0	3.5		
28	46	112	30	54	56	42	29	21	9.3	13	5.2	3.5		
29	303	106	28	45	---	200	31	21	9.4	12	12	3.4		
30	86	87	26	40	---	342	31	19	9.9	12	9.9	3.4		
31	44	---	25	39	---	194	---	19	---	11	8.5	---		
TOTAL	787.2	1262	3349	3310	2834	2626	1263	950	373.2	509.9	232.8	148.6		
MEAN	25.4	42.1	108	107	101	84.7	42.1	30.6	12.4	16.4	7.51	4.95		
MAX	303	122	483	624	317	342	112	55	17	35	12	9.9		
MIN	2.5	12	25	23	24	33	27	19	9.3	9.9	5.0	3.4		
CFSM	3.47	5.75	14.8	14.6	13.8	11.6	5.75	4.18	1.69	2.24	1.03	.68		
IN.	4.00	6.41	17.02	16.82	14.40	13.35	6.42	4.83	1.90	2.59	1.18	.76		
AC-FT	1560	2500	6640	6570	5620	5210	2510	1880	740	1010	462	295		
CAL YR 1982	TOTAL	18003.5	MEAN	49.3	MAX	660	MIN	1.9	CFSM	6.73	IN.	91.49	AC-FT	35710
WTR YR 1983	TOTAL	17645.7	MEAN	48.3	MAX	624	MIN	2.5	CFSM	6.60	IN.	89.67	AC-FT	35000

## WILLAMETTE RIVER BASIN

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°45'10", long 122°07'40", in SE¼NE¼ sec.36, T.9 S., R.5 E., Marion County, Hydrologic Unit 17090005, in Willamette National Forest, on left bank 600 ft upstream from Canyon Creek, 1.5 mi northeast of Detroit, and at mile 2.0.

DRAINAGE AREA.--106 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1952, at site 0.2 mi downstream at datum 13.46 ft lower.

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

AVERAGE DISCHARGE.--51 years, 579 ft<sup>3</sup>/s, 74.18 in/yr, 419,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.55 ft; minimum, 87 ft<sup>3</sup>/s Sept. 2, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0130	5,550	8.47	Jan. 6	2030	*5,560	*8.48
Minimum, 140 ft <sup>3</sup> /s Sept. 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	174	608	951	349	560	778	1560	497	632	526	301	230		
2	163	482	1100	349	510	747	1350	476	549	735	283	205		
3	174	407	3310	392	466	697	1160	457	506	593	275	190		
4	168	367	3890	1990	430	720	979	462	481	501	261	181		
5	163	412	2110	2560	402	762	850	492	461	474	252	175		
6	158	621	2280	4480	426	958	753	479	461	454	241	170		
7	255	527	1490	4900	467	1120	687	506	490	409	238	167		
8	336	453	1110	3420	527	1380	624	530	541	398	236	167		
9	311	395	889	2090	921	1480	579	526	562	361	229	179		
10	262	353	732	1490	926	1680	545	493	696	339	225	175		
11	227	321	619	1170	1050	1370	518	459	556	345	221	196		
12	205	295	559	962	1400	1200	484	448	451	384	213	177		
13	188	274	538	833	1430	1280	454	439	419	462	207	171		
14	177	256	649	727	1250	1320	435	459	417	526	204	167		
15	166	242	1400	650	1140	1190	422	701	429	378	200	164		
16	163	264	2550	608	1170	1020	420	801	388	349	195	161		
17	205	740	1950	612	2310	873	435	700	391	444	189	158		
18	206	1220	1450	625	3590	762	491	651	463	393	186	166		
19	185	1140	1210	746	2150	667	547	630	488	523	184	165		
20	175	935	1170	668	1590	601	556	651	468	483	181	156		
21	180	761	1300	596	1430	566	585	703	405	438	180	153		
22	251	620	1140	557	2000	551	599	713	379	425	178	152		
23	600	514	929	608	1730	551	576	766	385	421	176	150		
24	426	436	758	686	1480	523	558	830	386	407	175	149		
25	334	386	652	657	1230	514	514	908	359	374	183	147		
26	440	351	586	730	1040	513	473	878	369	341	191	145		
27	508	409	520	811	896	563	455	813	372	327	175	148		
28	490	1070	467	721	813	582	455	943	368	323	174	147		
29	2660	1200	429	640	---	1350	474	1050	384	310	246	145		
30	1400	1160	398	578	---	3020	481	901	390	316	241	144		
31	832	---	371	577	---	2100	---	723	---	320	204	---		
TOTAL	12182	17219	37507	36782	33334	31438	19019	20085	13646	13079	6644	5000		
MEAN	393	574	1210	1187	1191	1014	634	648	455	422	214	167		
MAX	2660	1220	3890	4900	3590	3020	1560	1050	696	735	301	230		
MIN	158	242	371	349	402	513	420	439	359	310	174	144		
CFSM	3.71	5.42	11.4	11.2	11.2	9.57	5.98	6.11	4.29	3.98	2.02	1.58		
IN.	4.28	6.04	13.16	12.91	11.70	11.03	6.67	7.05	4.79	4.59	2.33	1.75		
AC-FT	24160	34150	74400	72960	66120	62360	37720	39840	27070	25940	13180	9920		
CAL YR 1982	TOTAL	251702	MEAN	690	MAX	5710	MIN	144	CFSM	6.51	IN.	88.33	AC-FT	499300
WTR YR 1983	TOTAL	245935	MEAN	674	MAX	4900	MIN	144	CFSM	6.36	IN.	86.31	AC-FT	487800

## WILLAMETTE RIVER BASIN

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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.

INSTRUMENTATION.--Temperature recorder December 1950 to July 1961 and since January 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.0°C July 27, 1973; minimum, 0.0°C on several days in 1972, 1973, 1977-79.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 15.0°C July 30 to Aug. 1, Aug. 3, 9, 14, 15; minimum, 2.5°C Dec. 28 to Jan. 1.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	6.5	7.5	7.5	5.5	5.0	3.5	2.5	6.0	5.5	7.5	6.5
2	8.5	7.5	7.5	6.5	5.5	4.5	4.5	3.5	6.0	5.5	7.5	6.0
3	9.0	8.0	7.0	6.5	5.5	5.0	4.5	3.5	5.5	5.0	8.0	6.5
4	8.5	7.5	7.5	7.0	6.0	5.5	5.5	3.5	5.5	5.0	7.5	7.0
5	8.5	7.5	7.5	7.0	6.5	6.0	5.5	5.5	5.5	5.0	7.5	6.5
6	8.5	7.5	7.0	7.0	6.5	5.5	5.5	5.5	6.0	5.5	6.5	5.5
7	8.0	7.0	7.0	6.5	5.5	4.0	6.0	5.5	6.0	5.5	7.0	6.5
8	8.5	7.5	6.5	6.0	5.0	4.0	6.0	6.0	6.0	5.0	7.0	6.5
9	9.0	8.0	6.0	5.5	4.5	3.5	6.0	6.0	5.5	5.5	7.5	7.0
10	8.5	7.0	6.0	5.5	4.0	3.5	6.0	5.5	6.0	5.5	7.5	6.5
11	8.5	7.0	5.5	5.0	4.0	3.0	6.0	5.5	6.5	6.0	7.5	6.5
12	8.5	7.0	5.0	5.0	5.0	4.0	5.5	5.0	6.5	6.5	7.5	6.0
13	8.5	7.0	5.5	5.0	5.5	4.5	5.5	5.0	7.0	6.5	7.0	6.0
14	8.5	7.5	5.0	4.5	5.0	4.0	5.0	5.0	6.5	6.5	6.0	5.5
15	9.0	7.5	5.0	4.5	6.0	5.0	5.5	5.0	7.0	6.5	7.0	5.5
16	9.0	8.0	5.0	5.0	6.0	6.0	5.5	5.5	7.0	7.0	6.5	5.0
17	9.0	7.5	6.0	5.0	6.0	4.5	6.0	5.5	7.0	7.0	7.0	6.0
18	7.5	6.5	6.0	6.0	5.0	5.0	6.5	6.0	7.0	7.0	7.0	5.0
19	6.5	5.0	6.0	5.5	5.5	5.0	6.5	6.0	7.0	6.5	7.0	5.0
20	7.5	5.0	5.5	5.5	5.5	5.0	6.0	6.0	7.0	6.5	7.0	5.0
21	8.0	7.0	5.5	5.0	5.5	5.0	6.0	5.5	7.5	6.5	7.0	6.0
22	9.0	8.0	5.0	4.5	5.5	5.0	5.5	5.5	7.5	7.0	7.0	6.0
23	9.0	8.0	4.5	4.0	5.0	5.0	6.0	5.5	8.0	7.0	7.0	5.5
24	8.5	8.0	4.0	4.0	5.0	4.5	6.5	6.0	7.5	6.5	7.0	5.5
25	9.0	7.5	4.5	4.0	5.0	4.0	6.5	6.0	7.0	6.5	6.5	5.0
26	8.5	7.0	4.5	4.5	5.5	4.5	6.5	6.5	7.0	6.5	6.0	5.5
27	7.5	7.0	5.0	4.5	4.5	3.5	6.5	6.5	7.0	6.0	6.5	5.5
28	7.0	6.5	5.5	5.0	3.5	2.5	6.5	6.0	7.5	6.5	6.5	5.0
29	7.5	7.0	5.5	5.5	3.0	2.5	6.5	6.0	---	---	6.0	5.5
30	7.5	7.5	5.5	5.5	3.5	2.5	6.5	6.5	---	---	6.0	5.5
31	7.5	7.0	---	---	3.0	2.5	6.5	6.0	---	---	6.0	5.5
MONTH	9.0	5.0	7.5	4.0	6.5	2.5	6.5	2.5	8.0	5.0	8.0	5.0

## WILLAMETTE RIVER BASIN

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	5.5	7.0	6.5	8.0	7.0	9.5	8.5	15.0	11.5	12.5	11.0
2	5.5	5.0	8.0	6.5	9.0	7.5	9.0	8.0	14.5	11.5	13.0	10.5
3	6.0	4.5	9.5	6.5	11.5	7.0	12.0	8.0	15.0	11.0	12.5	10.0
4	7.0	5.0	9.0	6.0	12.0	7.5	13.5	8.5	14.5	10.5	12.5	10.5
5	7.0	4.5	8.0	6.5	12.0	7.0	12.5	9.5	14.0	11.5	12.5	9.5
6	7.5	4.5	8.0	5.5	13.0	7.5	11.0	9.5	14.5	10.5	12.0	9.0
7	7.0	5.5	7.0	6.0	13.5	8.5	10.0	8.5	14.0	11.0	12.5	10.5
8	7.0	5.0	6.5	5.0	13.5	9.0	10.5	8.5	14.0	11.5	11.0	9.5
9	5.5	4.5	7.0	5.0	12.0	8.5	10.0	8.0	15.0	11.0	11.0	9.0
10	5.5	4.0	7.0	5.5	10.5	8.5	13.5	8.5	13.5	12.0	10.0	9.0
11	6.5	4.0	8.5	6.0	10.0	7.5	14.0	9.0	13.5	11.0	12.0	9.5
12	6.0	4.5	9.5	5.5	11.5	8.0	12.0	9.5	14.0	10.0	12.0	9.5
13	7.0	4.5	10.0	6.0	12.5	7.5	10.5	9.5	14.5	10.5	12.5	9.5
14	7.5	4.0	8.0	6.5	11.0	9.0	10.5	8.5	15.0	12.0	12.5	10.5
15	7.5	4.0	7.0	5.5	11.0	8.5	10.0	8.5	15.0	11.5	12.0	9.5
16	8.0	4.5	8.5	5.5	11.5	7.5	12.0	8.5	14.0	10.5	11.5	9.0
17	8.5	5.0	9.5	6.0	10.0	9.0	11.5	8.5	14.0	10.0	11.0	9.5
18	9.0	6.5	9.0	7.0	9.0	8.0	13.0	8.5	14.0	10.5	10.0	9.0
19	7.5	6.0	10.5	6.0	9.0	7.5	13.0	10.0	13.5	11.0	9.5	7.5
20	8.0	6.0	11.5	7.0	10.0	7.5	12.5	9.5	13.5	10.5	10.0	7.5
21	8.0	6.5	11.0	7.0	12.0	7.0	13.5	9.0	13.5	9.5	10.0	7.0
22	7.0	6.5	11.5	7.0	10.5	9.0	14.5	9.5	13.5	10.0	10.5	8.5
23	7.5	6.0	11.5	7.0	9.5	8.5	14.0	10.5	13.5	11.5	10.5	9.5
24	8.0	5.5	11.5	7.0	11.5	8.0	12.0	10.5	13.0	10.0	12.0	9.5
25	7.0	5.5	12.0	7.0	12.5	8.0	11.5	10.0	13.0	10.0	11.0	9.0
26	7.5	5.5	11.5	6.5	13.5	9.0	13.5	9.5	13.5	10.5	11.5	9.5
27	8.5	6.0	12.0	7.5	13.5	9.0	11.5	10.0	13.5	11.0	11.0	9.5
28	8.5	6.5	13.0	8.0	11.5	9.0	13.5	10.0	13.0	11.5	9.5	7.0
29	8.5	6.5	12.5	8.0	11.5	9.5	14.5	10.0	12.5	11.0	8.5	6.0
30	9.5	6.0	10.5	8.5	10.0	9.0	15.0	10.5	12.0	11.0	9.0	6.5
31	---	---	8.5	8.0	---	---	15.0	11.5	12.5	11.0	---	---
MONTH	9.5	4.0	13.0	5.0	13.5	7.0	15.0	8.0	15.0	9.5	13.0	6.0

## 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 west of Detroit, and at mile 60.9.

DRAINAGE AREA.--437 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by concrete, gravity-type dam with six 42-ft by 28-ft control gates. Length of dam is 1,580 ft, built by Corps of Engineers. Storage began in January 1953. Total capacity is 455,100 acre-ft and usable capacity is 340,100 acre-ft between elevations 1,425.0 ft, proposed lower limit of operation, and 1,569.0 ft, 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.--Midnight elevations furnished by Corps of Engineers and reviewed by Geological Survey. Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 457,900 acre-ft July 13, 1972, elevation, 1,569.79 ft; minimum, 115,500 acre-ft Jan. 30, 1969, elevation, 1,425.37 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 443,300 acre-ft June 21, elevation, 1,565.60 ft; minimum, 157,700 acre-ft Jan. 3, elevation, 1,451.92 ft.

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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1528.35	1505.43	1459.29	1455.03	1462.52	1512.60	1549.76	1561.40	1562.97	1564.05	1563.66	1561.25
2	1527.15	1504.57	1459.08	1453.27	1463.69	1513.70	1547.93	1562.00	1563.04	1564.13	1563.62	1561.20
3	1525.96	1503.47	1470.54	1452.04	1464.77	1514.70	1545.81	1562.45	1563.37	1563.86	1563.50	1561.01
4	1524.72	1502.29	1482.22	1459.47	1465.66	1516.02	1544.30	1562.87	1563.80	1563.50	1563.46	1560.57
5	1523.46	1501.25	1485.73	1468.24	1466.41	1517.48	1543.87	1563.39	1564.14	1563.52	1563.49	1559.91
6	1522.33	1500.96	1489.71	1484.12	1467.38	1519.33	1544.02	1563.73	1564.44	1563.54	1563.48	1558.97
7	1521.47	1500.26	1490.49	1499.65	1468.43	1521.62	1545.08	1563.91	1564.54	1563.62	1563.46	1558.09
8	1520.83	1499.27	1489.79	1506.23	1469.89	1521.85	1545.96	1564.20	1564.62	1563.65	1563.49	1557.23
9	1519.95	1497.44	1488.28	1505.70	1472.63	1522.23	1546.88	1564.47	1564.73	1563.56	1563.43	1556.20
10	1518.92	1495.47	1486.14	1501.48	1475.43	1523.14	1547.74	1564.20	1565.18	1563.56	1563.37	1555.13
11	1517.78	1493.36	1483.62	1495.71	1478.41	1523.32	1548.45	1563.54	1564.19	1563.57	1563.34	1554.06
12	1516.56	1491.20	1481.44	1489.22	1482.97	1523.77	1549.09	1563.42	1563.67	1563.65	1563.30	1552.95
13	1515.27	1488.98	1479.19	1483.97	1487.36	1525.22	1549.66	1563.37	1563.86	1563.65	1563.23	1551.55
14	1513.95	1486.58	1477.31	1481.87	1490.32	1526.00	1550.24	1563.37	1564.12	1563.86	1563.17	1550.22
15	1512.58	1484.00	1478.68	1479.37	1492.31	1526.28	1550.72	1564.24	1564.36	1563.93	1563.06	1548.82
16	1511.20	1481.83	1488.77	1476.72	1494.50	1526.74	1551.20	1565.16	1564.49	1563.93	1562.97	1547.41
17	1509.90	1481.13	1495.72	1473.84	1501.13	1527.30	1551.70	1564.55	1564.56	1563.99	1562.84	1546.03
18	1508.56	1481.75	1498.15	1471.05	1512.19	1527.93	1552.38	1563.69	1564.79	1564.01	1562.75	1544.70
19	1507.13	1482.04	1497.03	1468.81	1515.58	1528.62	1553.20	1563.55	1565.16	1563.99	1562.60	1543.30
20	1505.67	1480.62	1495.05	1466.50	1513.09	1529.15	1554.03	1563.71	1565.36	1563.76	1562.45	1541.90
21	1504.24	1478.61	1492.77	1463.89	1510.25	1529.83	1554.93	1563.77	1565.28	1563.40	1562.30	1540.72
22	1503.11	1476.14	1489.33	1463.00	1511.56	1530.88	1555.82	1563.79	1564.84	1563.31	1562.12	1539.53
23	1502.84	1473.23	1484.84	1462.77	1511.26	1531.89	1556.67	1563.65	1564.39	1563.52	1561.97	1538.29
24	1502.05	1470.04	1481.08	1462.59	1510.76	1532.86	1557.37	1563.58	1563.98	1563.73	1561.87	1537.05
25	1501.08	1467.34	1476.80	1462.25	1510.29	1533.88	1558.05	1563.55	1563.67	1563.82	1561.74	1535.72
26	1500.45	1464.47	1472.10	1462.19	1510.36	1534.88	1558.65	1563.42	1563.30	1563.73	1561.61	1534.41
27	1499.65	1461.82	1468.57	1462.46	1510.63	1535.91	1559.18	1563.04	1563.23	1563.61	1561.44	1533.18
28	1498.95	1461.32	1465.51	1462.39	1511.39	1536.99	1559.72	1562.93	1563.40	1563.61	1561.32	1531.85
29	1504.45	1461.66	1462.22	1461.98	---	1540.51	1560.22	1562.98	1563.58	1563.60	1561.39	1530.56
30	1505.95	1461.01	1458.64	1461.37	---	1547.53	1560.79	1563.03	1563.73	1563.60	1561.36	1529.29
31	1505.85	---	1456.89	1461.14	---	1550.47	---	1562.89	---	1563.61	1561.26	---
MEAN	1512.27	1484.58	1480.16	1472.85	1490.40	1527.50	1551.78	1563.48	1564.16	1563.71	1562.68	1547.37
MAX	1528.35	1505.43	1498.15	1506.23	1515.58	1550.47	1560.79	1565.16	1565.36	1564.13	1563.66	1561.25
MIN	1498.95	1461.01	1456.89	1452.04	1462.52	1512.60	1543.87	1561.40	1562.97	1563.31	1561.26	1529.29
(†)	268500	174100	166600	174300	282200	392400	426700	433900	436800	436400	428300	329600
(‡)	-61600	-94400	-7500	+7700	+107900	+110200	+34300	+7200	+2900	-400	-8100	-98700

CAL YR 1982 MEAN 1524.97 MAX 1565.03 MIN 1449.98 AC-FT† -31200

WTR YR 1983 MEAN 1526.93 MAX 1565.36 MIN 1452.04 AC-FT† -500

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.



## 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., Linn County, Hydrologic Unit 17090005, on left bank 0.1 mi downstream from Little Sardine Creek, 0.8 mi downstream from Big Cliff Dam, 2.1 mi east of Niagara, and at mile 57.3.

DRAINAGE AREA.--453 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929 (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. No diversion above station.

AVERAGE DISCHARGE.--55 years (water years 1910-19, 1939-83), 2,342 ft<sup>3</sup>/s, 70.21 in/yr, 1,697,000 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,200 ft<sup>3</sup>/s Nov. 22, 1909, gage height, 16.4 ft, from floodmark, site and datum then in use, from rating curve extended above 35,000 ft<sup>3</sup>/s; minimum, 19 ft<sup>3</sup>/s Aug. 21, 1963; minimum daily, 395 ft<sup>3</sup>/s Mar. 25, 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,200 ft<sup>3</sup>/s Jan. 10, gage height, 8.31 ft; minimum, 698 ft<sup>3</sup>/s Feb. 19; minimum daily, 777 ft<sup>3</sup>/s Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2450	2980	4960	3110	1160	1590	7320	1050	2050	1460	1120	1110
2	2490	2940	4630	3090	1120	1590	8500	1050	1770	2480	1200	1090
3	2450	3030	2170	3090	1080	1570	7900	1170	1220	2680	1330	1210
4	2440	2990	2750	2020	1100	1550	6060	1210	1010	2430	1150	1640
5	2450	2990	4810	1600	1070	1520	3970	1170	991	1710	1060	2030
6	2500	3010	5140	1220	1060	1550	2720	1530	995	1560	1080	2320
7	2500	2970	5170	1110	1050	1630	1170	1950	1460	1520	1080	2340
8	2540	2990	5080	4820	1040	5180	1290	1900	1510	1520	1050	2310
9	2620	3720	5060	8860	1290	5230	1150	1950	1470	1430	1070	2600
10	2540	3690	5050	11300	1060	5270	1020	2450	1520	1410	1070	2660
11	2530	3690	5120	11800	1080	4910	1090	2910	3400	1260	1070	2640
12	2560	3660	4560	11700	1050	3930	1040	2320	2660	1240	1070	2700
13	2540	3650	4560	9160	1020	3450	1060	2090	1440	1640	1020	3030
14	2460	3720	4740	4880	1640	4170	1030	2020	996	1460	1010	3080
15	2520	3830	4930	4960	2200	4120	1070	1820	1000	1450	1050	2970
16	2590	3560	1290	4980	2180	3340	1050	1940	1190	1430	1030	2920
17	2560	3550	978	5030	2280	2670	1060	3870	1320	1420	1040	2860
18	2490	3670	3150	5130	777	2050	1060	4090	1340	1460	1060	2890
19	2610	3980	6130	4920	4370	1810	1100	2580	1430	2010	1050	2880
20	2630	4560	7000	4670	10100	1780	1110	2240	1620	2450	1020	2900
21	2620	4640	7940	4720	9820	1390	1060	2320	1980	2350	1050	2460
22	2630	4640	8620	2990	5880	1000	1090	2390	2350	1690	1060	2450
23	2660	4700	8850	2890	6870	974	1100	2800	2300	1200	1130	2550
24	2640	4660	6960	2800	6280	1040	1070	2850	2310	1110	1060	2560
25	2670	4140	6970	3020	5210	974	1080	2820	2010	1290	1080	2600
26	2670	4110	7070	2950	4060	979	1040	2900	1990	1530	1060	2580
27	3000	4180	5550	3010	3250	963	1070	3150	1500	1690	1110	2560
28	2980	4340	4710	2980	2340	1110	1090	2880	1040	1330	1110	2520
29	2110	4320	4760	2970	---	1180	996	2710	1170	1280	1100	2520
30	3060	4940	4810	2980	---	2060	1070	2560	1130	1150	1160	2440
31	3030	---	3150	2600	---	3740	---	2590	---	1220	1130	---
TOTAL	80540	113850	156668	141360	81437	74320	62436	71280	48172	49860	33680	73420
MEAN	2598	3795	5054	4560	2908	2397	2081	2299	1606	1608	1086	2447
MAX	3060	4940	8850	11800	10100	5270	8500	4090	3400	2680	1330	3080
MIN	2110	2940	978	1110	777	963	996	1050	991	1110	1010	1090
AC-FT	159800	225800	310800	280400	161500	147400	123800	141400	95550	98900	66800	145600
MEAN†	1597	2208	4933	4685	4851	4189	2657	2417	1654	1602	955	788
CFSM†	3.53	4.87	10.89	10.34	10.71	9.25	5.87	5.34	3.65	3.54	2.11	1.74
IN.†	4.07	5.44	12.56	11.93	11.15	10.67	6.55	6.15	4.08	4.08	2.43	1.94
AC-FT†	98200	131400	303300	288100	269400	257600	158100	148600	98450	98500	58700	46900

CAL YR 1982 TOTAL 979830 MEAN 2684 MAX 13600 MIN 892 AC-FT 1943000 MEAN† 2641 CFSM† 5.83 IN.† 79.15 AC-FT† 1911800  
WTR YR 1983 TOTAL 987023 MEAN 2704 MAX 11800 MIN 777 AC-FT 1958000 MEAN† 2704 CFSM† 5.97 IN.† 81.04 AC-FT† 1957500

† Adjusted for change in contents of Detroit Lake.

## WILLAMETTE RIVER BASIN

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14181500 NORTH SANTIAM RIVER AT NIAGARA, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1953 to current year.

INSTRUMENTATION.--Temperature recorder since January 1953.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 16.5°C July 28, 29, 1958; minimum, 1.0°C Jan. 30 to Feb. 4, 1979.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 13.5°C on many days in October and September; minimum, 4.0°C Jan. 8, 9, Feb. 3-6.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	6.0	---	---	7.0	6.5	8.0	8.0	10.0	9.5	11.0	11.0
2	6.0	6.0	---	---	7.0	7.0	8.5	8.0	10.5	10.0	11.5	11.0
3	6.0	5.5	---	---	7.5	7.0	8.5	7.5	10.5	10.0	11.5	11.0
4	6.0	5.5	---	---	7.5	7.0	9.0	8.5	11.0	10.5	11.5	11.0
5	6.5	6.0	---	---	8.0	7.5	8.5	8.0	10.5	10.0	11.0	11.0
6	6.5	6.5	---	---	8.5	8.0	8.5	8.5	11.0	10.5	11.0	11.0
7	6.5	5.5	---	---	9.0	8.0	8.5	8.5	11.5	10.5	11.5	10.5
8	6.0	5.5	---	---	8.0	7.5	8.5	8.5	10.5	10.0	11.0	11.0
9	6.0	5.5	---	---	8.0	7.5	8.5	8.5	10.5	10.5	11.5	11.0
10	6.0	5.5	---	---	8.0	7.5	9.0	8.5	11.0	10.5	11.5	11.0
11	6.0	5.5	---	---	7.5	7.0	9.5	8.5	11.0	10.5	12.0	11.0
12	6.0	6.0	---	---	7.5	7.0	9.0	9.0	11.5	10.5	12.0	11.5
13	6.0	5.5	---	---	8.0	7.0	9.0	8.5	11.5	10.5	12.0	11.5
14	6.0	6.0	---	---	8.0	7.5	9.0	8.5	11.0	10.5	12.0	11.5
15	6.5	6.0	---	---	8.0	7.5	9.0	9.0	11.0	11.0	12.0	11.5
16	6.5	6.0	---	---	8.5	7.5	9.5	9.0	11.5	10.5	12.5	11.5
17	6.5	6.0	8.5	6.0	8.0	7.5	9.5	9.0	11.5	10.5	12.5	11.5
18	6.5	6.0	8.5	6.5	8.0	7.5	9.0	9.0	11.0	10.5	12.5	12.0
19	6.5	6.5	7.0	6.5	7.5	7.5	---	---	11.0	10.5	12.5	12.0
20	6.5	6.0	7.0	6.5	8.0	7.5	---	---	11.0	10.5	13.0	12.0
21	6.5	6.0	7.0	6.5	8.0	7.5	---	---	11.0	10.5	13.0	12.5
22	---	---	7.0	6.5	8.0	7.5	---	---	11.0	10.5	13.0	12.5
23	---	---	7.0	6.5	8.0	7.5	---	---	11.0	10.5	13.0	12.5
24	---	---	7.0	6.5	8.0	7.5	---	---	11.0	11.0	13.0	12.5
25	---	---	7.0	6.5	8.0	7.5	---	---	11.5	11.0	13.0	12.5
26	---	---	7.0	6.5	8.5	7.5	---	---	11.0	11.0	13.0	13.0
27	---	---	7.0	6.5	8.5	7.5	10.0	9.5	11.5	11.0	13.0	13.0
28	---	---	7.5	7.0	8.5	8.0	10.0	9.5	11.0	11.0	13.5	13.0
29	---	---	7.5	7.0	8.5	8.0	10.5	10.0	11.5	11.0	13.5	13.0
30	---	---	7.0	7.0	8.5	8.0	10.5	10.0	11.5	11.0	13.5	13.0
31	---	---	7.0	6.5	---	---	10.0	10.0	11.5	11.0	---	---
MONTH	6.5	5.5	8.5	6.0	9.0	6.5	10.5	7.5	11.5	9.5	13.5	10.5

## 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 east of Mehama and at mile 2.0.

DRAINAGE AREA.--112 mi<sup>2</sup> at cableway 1.2 mi 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 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 National Geodetic Vertical Datum of 1929. Prior to June 12, 1948, nonrecording gage at about same site and datum.

REMARKS.--Records excellent. No regulation or diversion above station. Records herein are for measuring site.

AVERAGE DISCHARGE.--52 years, 771 ft<sup>3</sup>/s, 93.48 in/yr, 558,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.73 ft, from rating curve extended above 17,000 ft<sup>3</sup>/s; minimum, 13 ft<sup>3</sup>/s Aug. 30, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 19	0830	8,360	9.49	Jan. 6	1930	*12,700	*10.92
Dec. 3	0430	11,300	10.49				

Minimum, 53 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	165	777	1430	372	584	857	2030	444	340	700	218	169		
2	138	617	1860	371	527	805	1820	433	332	1410	203	155		
3	130	504	7460	609	473	723	1530	416	310	1060	190	133		
4	117	437	6210	5960	429	741	1250	391	272	744	179	118		
5	105	639	2550	5360	390	788	1060	378	246	586	168	106		
6	121	1700	3250	10500	418	1230	903	374	229	495	159	97		
7	624	1140	1920	8480	573	1480	804	539	217	436	150	89		
8	916	805	1330	4590	839	2030	712	755	210	406	143	86		
9	644	621	993	2620	1740	2140	651	876	201	419	137	104		
10	420	512	783	1800	1490	2390	610	794	484	364	130	100		
11	312	439	653	1410	1780	1700	576	727	562	325	132	153		
12	249	382	584	1130	1840	1280	528	807	428	304	125	148		
13	207	345	686	925	2010	1150	488	742	346	452	113	123		
14	178	311	973	782	1840	1340	465	683	301	1010	105	107		
15	156	285	2040	677	1450	1230	463	1570	277	723	99	97		
16	141	281	3530	618	1500	1080	479	1960	249	590	95	90		
17	215	1150	2560	604	2740	913	523	1270	233	523	89	84		
18	335	2180	1810	589	4300	804	599	937	299	465	86	86		
19	267	1890	1460	789	2400	700	639	765	718	627	84	105		
20	221	1450	1410	760	1950	625	624	671	927	898	81	85		
21	199	1070	1680	660	1850	586	671	638	618	770	77	76		
22	232	818	1450	599	2970	612	639	580	480	601	74	72		
23	731	659	1110	711	2100	728	595	553	458	502	71	69		
24	548	556	866	932	1730	768	570	544	602	434	71	68		
25	421	496	732	844	1380	875	497	522	511	387	68	66		
26	625	481	667	791	1130	847	465	484	429	349	68	63		
27	919	522	595	917	959	867	428	434	373	317	67	61		
28	852	1180	532	810	911	891	413	421	331	301	65	59		
29	5710	1610	478	677	---	2050	427	418	315	274	209	57		
30	2030	1700	439	617	---	5380	415	380	302	250	289	54		
31	1080	---	404	627	---	2880	---	351	---	231	192	---		
TOTAL	19008	25557	52445	57131	42303	40490	21874	20857	11600	16953	3937	2880		
MEAN	613	852	1692	1843	1511	1306	729	673	387	547	127	96.0		
MAX	5710	2180	7460	10500	4300	5380	2030	1960	927	1410	289	169		
MIN	105	281	404	371	390	586	413	351	201	231	65	54		
CFSM	5.47	7.61	15.1	16.5	13.5	11.7	6.51	6.01	3.46	4.88	1.13	.86		
IN.	6.31	8.49	17.42	18.98	14.05	13.45	7.27	6.93	3.85	5.63	1.31	.96		
AC-FT	37700	50690	104000	113300	83910	80310	43390	41370	23010	33630	7810	5710		
CAL YR 1982	TOTAL	292634	MEAN	802	MAX	9340	MIN	33	CFSM	7.16	IN.	97.20	AC-FT	580400
WTR YR 1983	TOTAL	315035	MEAN	863	MAX	10500	MIN	54	CFSM	7.71	IN.	104.64	AC-FT	624900

## 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 downstream from highway bridge at Mehama, 0.5 mi downstream from Little North Santiam River, and at mile 38.71.

DRAINAGE AREA.--655 mi<sup>2</sup>, at cableway 0.8 mi 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 National Geodetic Vertical Datum of 1929. Prior to June 15, 1933, nonrecording gage at site 100 ft upstream at same datum.

REMARKS.--Records excellent except those for periods of shifting control Dec. 3-22 and Apr. 6 to May 16, which are good. Flow regulated since 1953 by Detroit Lake (see station 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft. No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--67 years (water years 1906, 1911-14, 1922-83), 3,381 ft<sup>3</sup>/s, 2,450,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,600 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 15.37 ft, from rating curve extended above 36,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 17.5 ft Nov. 20, 1921, from graph based on gage readings, and Jan. 6, 1923, from floodmark, at site then in use; minimum discharge, 254 ft<sup>3</sup>/s Aug. 3, 1970; minimum daily, 420 ft<sup>3</sup>/s Sept. 18, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,900 ft<sup>3</sup>/s Jan. 6, gage height, 8.84 ft; minimum, 1,160 ft<sup>3</sup>/s Aug. 20; minimum daily, 1,190 ft<sup>3</sup>/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2710	4140	7420	4030	2440	3240	11500	1640	2780	2430	1510	1420
2	2750	3880	8220	4000	2120	3140	12700	1630	2490	4440	1550	1360
3	2710	3800	12600	4340	2000	2960	11700	1720	1850	4470	1610	1420
4	2710	3700	11800	10900	1940	3050	9280	1770	1500	3670	1480	1770
5	2690	3910	9330	9800	1850	3050	6550	1650	1440	2860	1400	2200
6	2770	5180	10700	16600	1910	3840	4880	2020	1420	2440	1350	2520
7	3310	4520	8450	14900	2180	4180	2830	2780	1770	2260	1340	2560
8	3730	4130	7280	12500	2580	8620	2590	3200	1890	2240	1350	2530
9	3520	4580	6720	14000	4510	9430	2350	3440	1830	2170	1320	2790
10	3140	4530	6370	15200	3860	10100	2160	3800	2370	2070	1320	2940
11	3030	4440	6300	15000	4040	8590	2160	4210	4190	1820	1330	2940
12	2960	4320	5540	14400	4210	6710	2010	3830	3820	1760	1310	3010
13	2900	4270	5690	12000	4380	5790	1940	3280	2240	2350	1260	3320
14	2760	4260	6240	7180	4420	7140	1830	3160	1540	2810	1240	3360
15	2790	4380	8290	6770	4590	6960	1840	4200	1510	2500	1250	3320
16	2830	4150	8140	6710	4590	5900	1820	5040	1610	2330	1240	3240
17	2930	5090	5330	6700	6700	4610	1870	5850	1730	2200	1230	3160
18	2970	6830	5760	6800	8750	3760	1990	6080	1880	2200	1250	3190
19	2980	6850	8500	6950	7960	3290	2070	4190	2520	2960	1260	3200
20	2960	6860	9650	6490	14700	3030	2100	3540	3020	4290	1190	3200
21	2950	6610	11100	6400	14200	2660	2110	3440	3070	3910	1230	2790
22	3020	6220	11800	4590	11800	2140	2070	3430	3180	3060	1210	2680
23	3690	6020	11500	4340	11300	2270	2050	3700	3200	2110	1300	2820
24	3420	5860	9440	4540	10100	2360	1970	3880	3500	1880	1250	2790
25	3310	5160	8950	4660	8410	2670	1840	3780	2990	1940	1260	2840
26	3570	5070	8930	4580	6770	2550	1730	3810	2800	2120	1230	2860
27	4240	5180	7430	4830	5310	2580	1650	3960	2390	2270	1270	2840
28	4180	6220	6160	4620	4470	2710	1670	3730	1650	1870	1290	2750
29	9420	6820	6120	4430	---	4600	1590	3500	1710	1760	1500	2760
30	5800	7630	6090	4340	---	11100	1630	3280	1670	1590	1610	2650
31	4570	---	4360	4170	---	9090	---	3350	---	1600	1440	---
TOTAL	107320	154610	250210	246770	162090	152120	104480	106890	69560	78380	41380	81230
MEAN	3462	5154	8071	7960	5789	4907	3483	3448	2319	2528	1335	2708
MAX	9420	7630	12600	16600	14700	11100	12700	6080	4190	4470	1610	3360
MIN	2690	3700	4360	4000	1850	2140	1590	1630	1420	1590	1190	1360
AC-FT	212900	306700	496300	489500	321500	301700	207200	212000	138000	155500	82080	161100
CAL YR 1982	TOTAL	1474470	MEAN	4040	MAX	15900	MIN	1060	AC-FT	2925000		
WTR YR 1983	TOTAL	1555040	MEAN	4260	MAX	16600	MIN	1190	AC-FT	3084000		



## 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 left bank 100 ft downstream from bridge at Cascadia ranger station, 0.5 mi downstream from Mouse Creek, 0.5 mi upstream from Deer Creek, 1.5 mi southwest of Cascadia, and at mile 48.5.

DRAINAGE AREA.--174 mi<sup>2</sup>, at gaging cable 0.7 mi 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 National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1935, nonrecording gage.

REMARKS.--Water-discharge records excellent. No regulation or diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--48 years, 825 ft<sup>3</sup>/s, 64.39 in/yr, 597,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.68 ft, from rating curve extended above 14,000 ft<sup>3</sup>/s; minimum, 23 ft<sup>3</sup>/s Dec. 1, 2, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	1530	7,030	9.68	Jan. 7	0230	*9,510	*11.16
Dec. 3	0300	8,860	10.80	Feb. 18	0730	8,550	10.62
Dec. 16	0630	6,530	9.38	Mar. 30	0330	8,240	10.44
Jan. 4	1300	8,010	10.30				

Minimum, 78 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	185	1080	2060	456	879	1050	2750	693	490	762	212	178		
2	158	834	2740	454	790	977	2660	674	440	1280	204	196		
3	172	670	7180	609	708	885	2280	634	394	1150	194	161		
4	160	575	6410	5110	638	964	1830	603	351	861	189	146		
5	150	629	5250	4060	575	1040	1500	590	322	703	182	137		
6	187	1370	4210	5980	619	1610	1240	625	300	618	176	129		
7	462	1060	2710	8340	769	1860	1080	768	287	552	168	125		
8	638	834	1770	5250	1060	2370	952	977	271	547	166	117		
9	477	687	1270	3400	2460	2170	881	1200	258	544	166	112		
10	351	584	984	2270	2140	2450	807	1120	530	470	161	112		
11	284	514	794	1660	1990	1930	747	987	505	419	160	112		
12	243	462	715	1330	2340	1640	686	940	405	382	154	112		
13	214	420	794	1120	2490	1760	635	869	340	375	147	106		
14	192	386	996	963	2260	1850	597	838	309	436	141	103		
15	176	360	2360	851	2020	1680	571	1370	297	383	137	99		
16	163	351	5130	803	1880	1410	571	1990	273	350	131	97		
17	201	639	3580	784	3810	1160	593	1470	273	327	127	91		
18	226	1410	2380	763	7280	1000	644	1160	534	331	125	91		
19	191	1600	1800	959	4010	872	750	969	785	404	123	95		
20	170	1470	1760	888	2760	781	764	860	808	458	123	94		
21	163	1240	2210	805	2480	735	816	797	650	393	117	89		
22	266	982	2060	765	2870	742	792	727	547	342	113	86		
23	1310	790	1520	913	2360	822	753	686	512	313	112	86		
24	838	661	1160	1070	2040	814	735	663	501	293	112	86		
25	571	595	964	1010	1670	988	672	628	430	290	110	86		
26	698	588	896	1100	1440	975	656	578	388	279	141	83		
27	986	664	790	1360	1230	1090	605	526	359	256	117	83		
28	931	1620	686	1200	1110	1120	603	500	329	257	112	83		
29	5070	2650	605	1030	---	1980	709	471	315	242	231	80		
30	3040	2700	547	911	---	6050	660	430	322	226	309	79		
31	1580	---	498	962	---	3870	---	456	---	214	194	---		
TOTAL	20453	28425	66829	57176	56678	48645	29539	25799	12525	14457	4854	3254		
MEAN	660	948	2156	1844	2024	1569	985	832	418	466	157	108		
MAX	5070	2700	7180	8340	7280	6050	2750	1990	808	1280	309	196		
MIN	150	351	498	454	575	735	571	430	258	214	110	79		
CFSM	3.79	5.45	12.4	10.6	11.6	9.02	5.66	4.78	2.40	2.68	.90	.62		
IN.	4.37	6.08	14.29	12.22	12.12	10.40	6.32	5.52	2.68	3.09	1.04	.70		
AC-FT	40570	56380	132600	113400	112400	96490	58590	51170	24840	28680	9630	6450		
CAL YR 1982	TOTAL	337209	MEAN	924	MAX	8240	MIN	52	CFSM	5.31	IN.	72.09	AC-FT	668900
WTR YR 1983	TOTAL	368634	MEAN	1010	MAX	8340	MIN	79	CFSM	5.80	IN.	78.81	AC-FT	731200

## 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.

INSTRUMENTATION.--Temperature recorder 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 at times during winter periods.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.0°C Aug. 14; minimum, 2.5°C Dec. 30.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

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14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---			---	---	---	---	17.5	15.5	15.0	14.5
2	---	---			---	---	---	---	18.0	15.5	---	---
3	---	---			14.5	11.0	---	---	18.0	16.5	---	---
4	---	---			14.5	11.5	---	---	17.5	15.0	---	---
5	---	---			15.0	11.5	---	---	17.5	16.0	---	---
6	---	---			15.5	12.5	---	---	18.0	15.5	---	---
7	---	---			17.0	13.5	---	---	18.0	16.5	---	---
8	8.0	6.0			17.0	15.0	---	---	18.0	16.0	14.0	---
9	7.0	6.0			16.0	14.5	---	---	16.5	15.5	13.5	12.5
10	7.0	5.5			15.5	11.5	---	---	16.0	15.5	13.0	12.5
11	7.0	5.5			13.0	11.0	---	---	17.0	14.5	14.5	12.5
12	7.0	5.0			14.5	11.5	---	---	17.5	14.5	16.0	14.0
13	7.5	5.0			15.5	12.0	---	---	18.5	16.0	16.0	14.5
14	8.5	5.5			14.0	12.5	---	---	19.5	17.0	16.0	15.0
15	9.0	6.0			14.0	12.0	---	---	19.0	17.5	15.0	14.0
16	10.0	6.5			14.5	12.5	---	---	18.0	16.5	14.5	13.5
17	10.0	7.0			---	---	---	---	18.0	16.0	14.5	13.0
18	11.0	8.5			---	---	---	---	18.5	16.0	13.0	11.5
19	10.5	8.5			---	---	---	---	17.5	16.5	11.5	10.5
20	9.5	8.0			---	---	---	---	17.5	16.0	11.5	10.0
21	10.0	8.5			---	---	---	---	17.0	15.0	12.5	10.5
22	9.5	8.0			---	---	---	---	16.0	15.0	14.0	11.5
23	---	---			---	---	---	---	16.5	15.5	14.0	13.0
24	---	---			---	---	---	---	16.5	15.0	14.5	13.0
25	---	---			---	---	---	---	17.0	15.0	14.5	13.0
26	---	---			---	---	---	---	17.0	15.5	14.5	13.5
27	---	---			---	---	---	---	17.5	16.0	14.0	12.5
28	---	---			---	---	---	---	17.0	16.0	12.0	10.5
29	---	---			---	---	17.5	14.5	16.0	15.0	11.0	9.0
30	---	---			---	---	18.5	15.5	15.0	14.0	10.5	9.0
31	---	---			---	---	18.5	16.5	15.0	14.5	---	---
MONTH	11.0	5.0			17.0	11.0	18.5	14.5	19.5	14.0	16.0	9.0

## WILLAMETTE RIVER BASIN

14185700 MIDDLE SANTIAM RIVER NEAR UPPER SODA, OR

LOCATION.--Lat 44°30'45", long 122°15'52", In SE¼NE¼ sec.24, T.12 S., R.4 E., Linn County, Hydrologic Unit 17090006, on right bank 0.8 mi upstream from Bear Creek, 7.5 mi north of Upper Soda, and at mile 23.9.

DRAINAGE AREA.--74.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,500 ft, from topographic map.

REMARKS.--Records excellent.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft<sup>3</sup>/s Dec. 25, 1980, gage height, 8.58 ft, from floodmark, from rating curve extended above 3,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 22 ft<sup>3</sup>/s Sept. 16-20, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0200	4,800	6.78	Jan. 6	2400	*4,880	*6.82
Minimum, 37 ft <sup>3</sup> /s Sept. 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	74	618	863	256	401	531	1310	298	230	280	113	87		
2	66	479	1080	268	368	492	1130	295	215	420	109	88		
3	73	396	3140	335	339	461	921	279	201	381	105	76		
4	69	347	3410	1750	314	497	780	271	188	316	103	70		
5	65	412	2010	2130	294	526	680	275	178	274	101	66		
6	93	646	2010	3560	309	646	603	286	170	248	96	62		
7	206	542	1360	3980	314	800	547	328	167	230	93	60		
8	304	467	977	2560	404	1110	493	371	162	224	91	58		
9	227	408	755	1670	690	1110	456	368	155	212	91	59		
10	181	356	612	1160	707	1140	418	362	228	195	89	57		
11	146	317	508	890	887	940	387	357	201	184	89	66		
12	122	289	461	735	1110	823	354	359	176	173	87	60		
13	104	267	449	629	1160	832	329	351	162	175	83	56		
14	93	244	514	550	1060	840	309	354	152	190	80	52		
15	85	229	834	495	955	774	294	522	147	177	77	51		
16	84	240	1590	471	936	687	290	669	139	167	75	49		
17	112	497	1350	471	1890	606	296	572	142	164	72	48		
18	125	772	1030	471	2990	534	336	495	201	159	70	50		
19	96	812	843	550	1890	472	420	441	250	207	68	57		
20	85	711	789	493	1380	428	421	410	266	178	68	49		
21	82	594	867	446	1220	400	436	398	230	165	66	45		
22	135	500	807	420	1570	390	438	374	206	154	65	44		
23	516	431	681	458	1320	399	414	361	198	146	63	44		
24	381	385	566	536	1100	386	386	356	201	152	62	44		
25	285	349	488	505	893	396	356	344	180	150	61	43		
26	348	332	445	536	746	391	338	316	170	143	69	41		
27	459	396	391	617	635	425	315	289	161	137	62	41		
28	463	804	350	556	567	446	306	279	152	135	61	41		
29	2350	1130	318	495	---	962	309	272	147	130	118	39		
30	1400	1060	293	448	---	2560	298	250	151	123	111	38		
31	845	---	274	435	---	1760	---	236	---	116	85	---		
TOTAL	9674	15030	30065	28876	26449	22764	14370	11138	5526	6105	2583	1641		
MEAN	312	501	970	931	945	734	479	359	184	197	83.3	54.7		
MAX	2350	1130	3410	3980	2990	2560	1310	669	266	420	118	88		
MIN	65	229	274	256	294	386	290	236	139	116	61	38		
CFSM	4.18	6.72	13.0	12.5	12.7	9.84	6.42	4.81	2.47	2.64	1.12	.73		
IN.	4.82	7.49	14.99	14.40	13.19	11.35	7.17	5.55	2.76	3.04	1.29	.82		
AC-FT	19190	29810	59630	57280	52460	45150	28500	22090	10960	12110	5120	3250		
CAL YR 1982	TOTAL	187622	MEAN	514	MAX	5400	MIN	36	CFSM	6.89	IN.	93.56	AC-FT	372100
WTR YR 1983	TOTAL	174221	MEAN	477	MAX	3980	MIN	38	CFSM	6.39	IN.	86.88	AC-FT	345600

## WILLAMETTE RIVER BASIN

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14185880 PACKERS GULCH NEAR CASCADIA, OR

LOCATION.--Lat 44°36'00", long 122°23'38", in NE¼NW¼ sec.24, T.11 S., R.3 E., Linn County, Hydrologic Unit 17090006, on right bank 2 ft downstream from bridge, 1.0 mi upstream from mouth, and 14 mi north of Cascadia.

DRAINAGE AREA.--7.45 mi<sup>2</sup>.

PERIOD OF RECORD.--July to September 1983.

GAGE.--Water-stage recorder. Altitude of gage is 1,520 ft, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge for period July to September, 120 ft<sup>3</sup>/s July 2; minimum discharge, 4.6 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	JUL	AUG	SEP
1	80	13	13
2	120	13	12
3	88	12	10
4	66	12	9.4
5	52	11	8.6
6	42	10	7.9
7	37	9.9	7.4
8	32	9.6	7.6
9	28	9.2	7.9
10	25	9.0	7.8
11	23	9.0	8.4
12	21	8.3	7.5
13	34	7.9	6.9
14	44	7.6	6.6
15	38	7.4	6.3
16	33	7.1	6.2
17	29	6.9	6.0
18	25	6.7	7.3
19	35	6.6	6.7
20	56	6.4	6.0
21	45	6.3	5.7
22	38	6.1	5.5
23	32	6.0	5.5
24	28	6.0	5.4
25	25	5.8	5.2
26	22	5.7	5.2
27	20	5.5	5.2
28	19	6.0	5.0
29	17	32	4.8
30	15	31	4.7
31	14	15	---
TOTAL	1183	308.0	211.7
MEAN	38.2	9.94	7.06
MAX	120	32	13
MIN	14	5.5	4.7
CFSM	5.13	1.33	.95
IN.	5.91	1.54	1.06
AC-FT	2350	611	420



## WILLAMETTE RIVER BASIN

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 downstream from Panther Creek, 10 mi north of Cascadia, and at mile 6.6.

DRAINAGE AREA.--99.2 mi<sup>2</sup>.

## 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, 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.--19 years (water years 1964, 1966-83), 682 ft<sup>3</sup>/s, 93.36 in/yr, 494,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 16.38 ft; minimum, 14 ft<sup>3</sup>/s Aug. 19-23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 36,500 ft<sup>3</sup>/s Dec. 22, 1964, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29	0930	6,810	11.06	Jan. 6	2000	9,010	12.09
Dec. 4	0200	*9,340	*12.23	Feb. 17	2030	7,120	11.25
Dec. 16	0430	5,980	10.68	Mar. 29	2330	8,560	11.90

Minimum, 52 ft<sup>3</sup>/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	108	679	1500	326	621	778	1940	336	237	658	144	141		
2	94	514	2150	348	522	730	1660	320	227	1090	136	124		
3	98	409	6790	686	450	644	1280	299	210	795	130	107		
4	88	356	5550	5510	397	691	1040	288	189	542	125	99		
5	80	475	2560	4320	354	795	945	289	175	416	119	95		
6	152	1120	3130	6740	450	1340	806	304	167	348	114	89		
7	474	772	1730	6520	559	1540	650	481	159	305	110	85		
8	646	579	1130	4010	1150	2120	570	766	152	295	107	83		
9	387	454	829	2160	2310	1950	517	707	144	268	104	86		
10	255	375	649	1370	1760	2120	483	628	342	241	101	81		
11	196	321	534	1000	1880	1380	457	565	335	222	101	94		
12	162	281	489	795	2430	1210	428	560	264	210	101	87		
13	138	253	581	658	2330	1390	398	508	222	281	96	79		
14	121	227	1060	559	1860	1570	389	488	199	446	92	75		
15	109	211	3070	493	1510	1300	390	1080	187	337	89	71		
16	102	236	4550	466	1440	1080	408	1370	170	292	86	69		
17	183	1440	3040	458	3800	882	437	868	168	262	83	67		
18	177	2400	1840	509	5250	756	481	654	291	262	82	73		
19	148	1990	1480	626	2630	635	511	540	619	353	79	76		
20	127	1430	1620	555	2090	555	493	477	672	408	76	67		
21	127	1010	2120	477	1970	513	498	442	448	352	75	64		
22	256	738	1570	462	2900	522	468	399	344	294	72	62		
23	1040	574	1160	672	1870	682	434	376	306	256	71	60		
24	598	479	784	784	1390	677	406	360	315	230	71	60		
25	402	421	639	672	1090	751	356	336	273	214	70	59		
26	766	429	572	740	962	735	336	303	241	200	70	57		
27	964	594	505	829	882	853	311	279	219	187	67	57		
28	883	1870	443	710	824	919	325	265	201	182	69	55		
29	5110	2100	393	603	---	3170	370	248	192	169	223	53		
30	1960	2040	360	559	---	5490	341	228	191	159	276	52		
31	984	---	329	630	---	3010	---	248	---	151	162	---		
TOTAL	16935	24777	53157	45247	45681	40788	18128	15012	7859	10425	3301	2327		
MEAN	546	826	1715	1460	1631	1316	604	484	262	336	106	77.6		
MAX	5110	2400	6790	6740	5250	5490	1940	1370	672	1090	276	141		
MIN	80	211	329	326	354	513	311	228	144	151	67	52		
CFSM	5.50	8.33	17.3	14.7	16.4	13.3	6.09	4.88	2.64	3.39	1.07	.78		
IN.	6.35	9.29	19.93	16.97	17.13	15.30	6.80	5.63	2.95	3.91	1.24	.87		
AC-FT	33590	49150	105400	89750	90610	80900	35960	29780	15590	20680	6550	4620		
CAL YR 1982	TOTAL	276932	MEAN	759	MAX	9750	MIN	33	CFSM	7.65	IN.	103.85	AC-FT	549300
WTR YR 1983	TOTAL	283637	MEAN	777	MAX	6790	MIN	52	CFSM	7.83	IN.	106.36	AC-FT	562600

## WILLAMETTE RIVER BASIN

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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.

INSTRUMENTATION.--Temperature recorder 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 many days during winter periods.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 19.5°C July 30; minimum, 3.0°C Dec. 28 to Jan. 1.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	9.0	9.0	8.0	6.5	6.0	4.0	3.0	5.5	4.5	7.0	6.0
2	10.5	10.0	8.0	6.5	6.5	6.0	5.0	4.0	5.5	4.5	7.0	5.5
3	11.0	10.0	8.5	7.0	7.5	6.5	5.0	4.5	5.0	4.0	7.5	6.0
4	11.0	10.0	8.5	8.5	7.5	7.5	6.5	4.5	4.5	3.5	7.0	6.5
5	11.0	9.5	8.5	7.5	7.5	7.0	6.5	6.5	4.5	3.5	6.5	6.0
6	10.5	9.5	8.0	7.0	7.5	6.5	7.0	6.5	5.5	4.5	6.0	5.0
7	9.5	9.0	7.0	6.0	6.5	5.5	7.5	6.5	5.5	4.5	6.5	6.0
8	10.0	9.0	6.5	5.5	6.0	5.0	7.5	6.0	5.5	5.0	6.5	6.0
9	10.5	9.0	6.0	5.5	5.5	5.0	6.5	6.0	5.5	5.5	7.0	6.5
10	10.5	8.5	5.5	4.5	5.5	5.0	6.5	5.5	6.0	5.5	7.0	6.5
11	10.5	9.0	5.0	4.0	5.5	5.0	6.0	5.0	6.5	6.0	7.5	6.0
12	10.5	9.5	5.0	4.0	6.0	5.5	5.5	5.0	6.5	6.0	7.5	6.5
13	10.5	9.0	5.5	5.0	6.0	6.0	5.5	4.5	6.5	6.0	7.0	6.0
14	10.5	9.5	5.0	4.0	6.5	5.5	5.0	4.5	6.0	6.0	6.0	4.5
15	11.0	10.0	4.5	4.0	7.0	6.5	6.0	4.5	6.5	5.5	7.0	5.0
16	11.0	10.5	5.5	4.5	7.0	7.0	6.5	6.0	7.0	6.0	6.5	5.0
17	11.0	9.5	7.5	5.5	7.0	6.0	7.0	6.5	6.5	5.5	7.5	6.0
18	9.5	8.0	7.5	7.0	6.5	6.0	7.0	6.5	6.0	5.5	7.0	5.0
19	8.0	6.5	7.0	6.5	6.5	6.0	6.5	5.5	6.5	5.5	7.5	5.0
20	8.0	6.5	6.5	5.5	6.5	6.0	5.5	5.0	6.5	6.0	7.5	5.0
21	9.5	8.0	6.0	5.5	6.5	6.0	5.0	4.5	7.0	6.0	7.0	6.0
22	10.5	9.5	5.5	5.0	6.0	6.0	5.5	4.5	7.5	6.5	6.5	6.0
23	10.0	9.5	5.0	4.5	6.0	5.0	6.0	5.5	7.5	6.5	7.0	5.5
24	10.0	9.0	5.0	4.0	5.5	4.5	6.5	---	7.0	6.0	6.5	5.5
25	10.0	8.0	5.5	4.5	5.0	4.5	---	---	6.0	5.5	6.5	5.0
26	9.5	8.5	6.0	5.0	5.5	5.0	---	---	6.0	5.5	6.0	5.0
27	8.5	8.0	6.5	6.0	5.0	3.5	6.0	5.5	6.5	5.5	6.0	5.0
28	8.0	7.5	7.0	6.5	3.5	3.0	6.0	5.0	7.0	5.5	6.0	5.5
29	9.0	8.0	7.0	6.0	3.0	3.0	6.5	5.5	---	---	6.5	6.0
30	9.0	8.0	6.5	6.0	3.0	3.0	6.0	5.5	---	---	6.5	5.5
31	8.5	8.0	---	---	3.5	3.0	5.5	5.0	---	---	6.5	5.5
MONTH	11.0	6.5	9.0	4.0	7.5	3.0	7.5	3.0	7.5	3.5	7.5	4.5

## WILLAMETTE RIVER BASIN

14185900 QUARTZVILLE CREEK NEAR CASCADIA,, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## WILLAMETTE RIVER BASIN

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## 14186100 GREEN PETER LAKE NEAR FOSTER, OR

LOCATION.--Lat 44°27'10", long 122°32'40", in NE¼ sec.10, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, in Green Peter Dam on Middle Santiam River, 7.0 mi northeast of Foster, and at mile 5.7.

DRAINAGE AREA.--273 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (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, usable capacity 330,800 acre-ft between elevations 887.0 ft, proposed lower limit of operation, and 1,015.0 ft, 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.--Midnight elevations furnished by Corps of Engineers and reviewed by Geological Survey. Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 420,200 acre-ft June 9, 1981, elevation, 1,012.86 ft; minimum, 116,900 acre-ft Dec. 15, 1972, elevation, 899.20 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 416,800 acre-ft June 21, elevation, 1,011.92 ft; minimum, 162,700 acre-ft Jan. 3, elevation, 923.37 ft.

Capacity table (elevation, in feet, and total contents, in acre-feet)

899	116,600	960	251,100
900	118,300	980	309,700
920	155,700	1,000	374,800
940	199,900	1,013	420,700

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	980.62	970.91	952.39	925.70	932.41	966.83	997.32	1002.02	1010.84	1010.65	1009.76	1004.59
2	979.97	968.63	953.93	924.27	933.17	967.81	996.18	1002.30	1010.89	1011.29	1009.63	1004.41
3	979.32	966.38	964.05	923.76	933.78	968.64	994.28	1002.54	1010.97	1011.54	1009.51	1004.20
4	978.69	964.06	971.37	933.98	934.31	969.58	992.81	1002.75	1011.06	1011.30	1009.43	1003.97
5	977.98	962.13	972.87	940.51	934.74	970.72	992.18	1003.01	1011.13	1011.16	1009.32	1003.72
6	977.48	961.17	974.92	951.64	935.49	972.48	992.09	1003.37	1011.20	1010.79	1009.18	1003.50
7	977.26	959.69	972.88	963.92	936.36	974.06	992.56	1004.02	1011.18	1010.26	1009.07	1003.14
8	977.55	957.96	969.01	969.59	938.21	975.95	992.97	1005.09	1011.13	1010.00	1008.92	1002.81
9	977.32	956.05	964.27	969.35	941.68	976.82	993.64	1006.07	1011.13	1009.87	1008.75	1002.39
10	976.93	954.98	959.08	966.04	943.45	977.96	994.20	1006.91	1011.23	1009.73	1008.61	1001.89
11	976.40	954.09	954.92	961.38	945.35	977.88	994.66	1007.64	1011.20	1009.77	1008.45	1001.40
12	975.85	953.13	950.68	958.47	947.99	978.32	995.05	1008.36	1011.06	1009.91	1008.28	1000.81
13	975.24	952.40	947.83	953.50	950.58	979.07	995.42	1008.98	1010.86	1010.13	1008.10	999.85
14	974.61	951.66	946.36	951.65	952.55	980.24	995.72	1009.64	1010.81	1010.33	1007.92	998.90
15	973.97	950.62	947.23	949.70	953.96	981.05	996.10	1010.95	1010.81	1010.32	1007.73	998.05
16	972.89	949.88	952.29	947.63	955.24	981.50	996.42	1011.53	1010.81	1010.29	1007.53	997.36
17	971.92	950.15	953.91	945.52	959.95	981.70	996.76	1011.40	1010.78	1010.21	1007.28	996.68
18	971.32	952.48	953.92	943.33	968.56	981.82	997.18	1011.36	1010.90	1010.16	1007.09	996.01
19	970.69	953.98	953.29	941.42	970.42	982.14	997.68	1011.17	1011.31	1010.30	1006.85	995.33
20	970.01	955.18	951.83	939.27	969.64	982.33	998.14	1010.86	1011.79	1010.36	1006.60	994.67
21	969.35	955.68	950.39	936.91	968.31	982.85	998.61	1010.82	1011.61	1010.27	1006.34	993.96
22	968.95	955.39	948.34	936.09	968.25	983.47	999.07	1010.84	1011.33	1010.10	1006.10	993.22
23	969.27	954.84	945.68	935.85	966.56	984.25	999.53	1010.81	1011.15	1010.14	1005.84	992.45
24	969.00	953.88	943.10	934.68	965.41	984.81	999.86	1010.78	1011.02	1010.17	1005.57	991.69
25	968.82	952.79	940.28	933.26	964.74	985.61	1000.19	1010.95	1010.86	1010.19	1005.31	990.92
26	969.04	951.69	937.23	932.93	965.22	986.42	1000.51	1011.07	1010.63	1010.19	1005.04	990.15
27	969.40	950.85	934.46	933.08	965.55	987.35	1000.77	1011.09	1010.38	1010.10	1004.77	989.40
28	969.47	951.57	931.82	932.94	966.07	988.34	1001.07	1011.07	1010.12	1010.04	1004.62	988.66
29	975.17	952.59	929.74	932.54	---	991.43	1001.42	1011.01	1009.97	1009.98	1004.80	987.91
30	975.99	952.85	928.36	932.16	---	996.75	1001.73	1010.94	1010.03	1009.92	1004.84	987.15
31	973.81	---	927.09	931.89	---	998.27	---	1010.90	---	1009.82	1004.71	---
MEAN	974.01	955.92	951.08	943.00	952.43	980.53	996.80	1008.40	1010.94	1010.30	1007.29	997.31
MAX	980.62	970.91	974.92	969.59	970.42	998.27	1001.73	1011.53	1011.79	1011.54	1009.76	1004.59
MIN	968.82	949.88	927.09	923.76	932.41	966.83	992.09	1002.02	1009.97	1009.73	1004.62	987.15
(†)	290900	232000	170600	181200	268200	368900	380700	413100	409900	409200	391000	332300
(#)	-22700	-58900	-61400	+10600	+87000	+100700	+11800	+32400	-3200	-700	-18200	-58700
CAL YR 1982	MEAN	981.02	MAX	1011.34	MIN	922.80	AC-FT#	-40200				
WTR YR 1983	MEAN	982.49	MAX	1011.79	MIN	923.76	AC-FT#	+18700				

† 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 above Wiley Creek, 0.5 mi north of Foster, and at mile 37.7.

DRAINAGE AREA.--492 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake 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 and usable capacity 33,210 acre-ft between elevations 609.0 ft, proposed lower limit of operation, and 641.0 ft, top of spillway gates. Lake used for reregulation of water released from Green Peter Lake, flood control, power development, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Midnight elevations furnished by Corps of Engineers and reviewed by Geological Survey. Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 60,090 acre-ft Sept. 17, 1968, elevation, 640.45 ft; minimum, 26,590 acre-ft Nov. 15, 16, 1971, elevation, 607.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 57,080 acre-ft July 6, elevation, 638.00 ft; minimum, 29,390 acre-ft Jan. 22, elevation, 611.11 ft.

Capacity table (elevation, in feet, and total contents, in acre-feet)

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 (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	637.00	620.39	612.99	613.22	613.30	621.28	623.12	614.04	636.88	637.33	637.09	636.90
2	637.20	620.06	613.60	613.40	614.19	621.33	623.29	614.01	636.67	637.22	637.12	636.92
3	637.29	619.55	613.00	613.83	615.00	621.55	623.29	614.11	636.79	637.05	637.18	636.94
4	637.07	619.20	613.05	613.70	615.42	621.90	622.09	614.06	636.83	636.96	637.09	636.96
5	637.05	618.88	613.15	613.37	615.92	622.13	620.81	614.08	636.85	637.02	637.00	636.96
6	637.17	618.40	613.04	613.51	616.26	622.34	619.60	614.30	636.83	637.44	637.03	636.89
7	637.36	617.99	613.27	614.77	616.47	623.84	618.53	614.53	637.00	637.12	636.97	637.16
8	637.58	617.59	613.01	613.23	616.72	622.61	617.15	614.55	636.89	637.05	637.02	637.17
9	637.47	617.11	613.07	613.33	616.45	623.11	615.91	614.50	636.72	636.95	637.04	637.24
10	637.04	616.74	613.02	613.26	616.69	623.32	614.81	614.46	637.54	637.13	637.05	637.11
11	636.26	616.25	613.03	613.26	616.53	623.84	614.42	614.51	637.47	636.96	637.05	637.13
12	635.40	615.68	613.08	613.85	616.96	624.43	614.28	614.52	637.36	636.98	637.03	637.28
13	634.69	614.98	613.07	613.13	615.72	624.43	614.49	614.49	637.13	637.04	637.05	637.23
14	633.80	614.46	613.02	613.18	616.52	624.62	614.52	614.49	636.77	637.08	637.03	637.10
15	632.94	614.02	613.29	613.29	617.41	624.43	614.43	614.75	636.58	637.06	637.00	637.10
16	632.25	613.63	613.06	613.31	617.49	624.86	614.54	620.31	636.66	637.01	637.00	637.24
17	631.45	613.38	612.94	613.22	618.23	625.37	614.54	626.68	636.88	637.10	637.05	637.24
18	629.42	612.60	613.04	613.27	619.77	625.11	614.61	630.92	637.13	637.00	636.99	637.24
19	627.31	613.64	613.13	613.49	618.23	624.78	614.54	634.74	637.24	637.11	637.03	637.24
20	624.91	613.40	613.03	613.32	618.58	625.22	614.45	637.11	637.30	637.13	637.08	637.22
21	624.35	613.24	613.19	613.40	618.79	625.25	614.57	636.90	636.98	637.06	637.11	637.32
22	623.99	613.57	613.14	613.72	618.99	625.80	614.58	636.85	636.90	637.21	637.03	637.22
23	624.03	613.36	613.12	614.07	619.45	626.15	614.53	637.17	636.97	636.97	637.04	637.27
24	623.27	613.58	613.18	613.43	619.76	625.93	614.43	637.31	637.18	637.01	637.05	637.23
25	622.82	613.59	613.05	613.10	620.10	624.45	614.57	636.91	637.28	637.12	637.06	637.18
26	622.34	613.52	613.05	613.35	620.25	622.82	614.26	636.88	637.24	637.10	637.15	637.22
27	621.88	613.69	613.23	613.37	620.41	622.45	614.00	636.85	637.13	637.16	637.19	637.20
28	621.85	615.39	613.15	613.25	620.84	622.62	614.13	636.84	636.95	637.01	637.17	637.23
29	622.97	614.42	613.04	613.00	---	622.98	614.07	636.83	636.96	637.05	637.47	637.30
30	621.10	613.03	613.11	613.32	---	622.70	614.00	636.82	636.99	636.94	637.33	637.30
31	620.69	---	613.56	613.42	---	622.87	---	636.88	---	637.07	637.00	---
MEAN	630.32	615.51	613.12	613.43	617.52	623.69	616.22	624.88	637.00	637.08	637.08	637.16
MAX	637.58	620.39	613.60	614.77	620.84	626.15	623.29	637.31	637.54	637.44	637.47	637.32
MIN	620.69	612.60	612.94	613.00	613.30	621.28	614.00	614.01	636.58	636.94	636.97	636.89
(†)	38240	31090	31570	31440	38380	40390	31960	55730	55860	55960	55870	56230
(‡)	-17930	-7150	+480	-130	+6940	+2010	-8430	+23770	+130	+100	-90	+360
CAL YR 1982	MEAN 625.00	MAX 637.58	MIN 611.34	AC-FT†	+390							
WTR YR 1983	MEAN 625.30	MAX 637.58	MIN 612.60	AC-FT†	+60							

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.



## WILLAMETTE RIVER BASIN

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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 left bank 1.5 mi downstream from Jackson Creek, 1.0 mi southeast of Foster, and at mile 1.4.

DRAINAGE AREA.--62.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 590 ft, from topographic map. Prior to May 2, 1974, at present site at datum 5.00 ft lower.

REMARKS.--Records good except those for period of no gage-height record Oct. 24 to Dec. 22, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--10 years, 242 ft<sup>3</sup>/s, 52.75 in/yr, 175,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,320 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 9.28 ft; minimum, 3.1 ft<sup>3</sup>/s Oct. 19, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	unknown	2,540	7.43	Feb. 18	0900	*2,790	*7.61
Jan. 4	0830	1,890	6.93	Mar. 30	0600	2,680	7.53
Jan. 7	0230	2,130	7.12				

Minimum, 15 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	27	250	780	136	236	414	1130	158	147	232	63	44		
2	25	200	800	137	200	360	1090	155	116	298	59	44		
3	29	150	1750	197	170	311	933	141	99	254	56	38		
4	27	130	1800	1110	151	345	747	131	87	198	55	34		
5	24	133	1200	878	135	347	585	129	79	162	53	32		
6	35	230	1300	1120	179	678	459	150	72	144	50	29		
7	79	195	960	1820	266	746	376	215	67	132	47	27		
8	71	170	700	1400	376	819	314	342	63	136	46	27		
9	48	145	510	996	1070	733	284	457	59	131	47	31		
10	42	125	380	663	939	935	260	402	188	109	47	27		
11	38	110	290	473	705	702	242	337	172	97	48	28		
12	35	100	280	359	919	570	216	283	126	92	45	27		
13	31	92	340	283	897	587	196	236	102	95	43	26		
14	27	84	420	236	724	763	181	209	91	122	38	24		
15	26	79	740	205	591	680	168	297	87	97	36	23		
16	25	75	1340	185	508	528	157	365	78	88	33	23		
17	38	140	1300	166	1090	429	148	297	81	82	26	22		
18	40	380	920	159	2400	360	142	245	128	92	26	21		
19	35	520	720	192	1590	296	138	208	174	117	26	22		
20	33	500	670	186	1140	256	136	180	177	213	27	20		
21	32	450	880	169	987	236	144	159	144	159	30	18		
22	45	340	820	172	963	235	129	142	123	127	29	17		
23	312	265	616	250	755	306	131	126	120	108	24	17		
24	250	230	462	277	753	287	159	112	110	99	23	18		
25	133	205	350	249	652	402	135	102	96	99	22	18		
26	160	190	311	272	581	380	132	95	88	91	22	17		
27	225	200	263	304	517	471	120	88	83	84	21	19		
28	190	350	220	272	471	472	128	81	76	82	21	17		
29	760	620	190	241	---	861	192	74	74	75	70	16		
30	590	980	168	219	---	2140	161	71	76	67	84	15		
31	340	---	151	277	---	1490	---	117	---	62	48	---		
TOTAL	3772	7638	21631	13603	19965	18139	9333	6104	3183	3944	1265	741		
MEAN	122	255	698	439	713	585	311	197	106	127	40.8	24.7		
MAX	760	980	1800	1820	2400	2140	1130	457	188	298	84	44		
MIN	24	75	151	136	135	235	120	71	59	62	21	15		
CFSM	1.96	4.09	11.2	7.05	11.4	9.39	4.99	3.16	1.70	2.04	.65	.40		
IN.	2.25	4.56	12.92	8.12	11.92	10.83	5.57	3.64	1.90	2.36	.76	.44		
AC-FT	7480	15150	42910	26980	39600	35980	18510	12110	6310	7820	2510	1470		
CAL YR 1982	TOTAL	98838.7	MEAN	271	MAX	1930	MIN	8.9	CFSM	4.35	IN.	59.02	AC-FT	196000
WTR YR 1983	TOTAL	109318	MEAN	300	MAX	2400	MIN	15	CFSM	4.82	IN.	65.27	AC-FT	216800

## WILLAMETTE RIVER BASIN

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR

LOCATION.--Lat 44°24'45", long 122°41'15", in SE¼NE¼ sec.28, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, on left bank 0.6 mi downstream from Wiley Creek and at mile 37.0.

DRAINAGE AREA.--557 mi<sup>2</sup>.

## 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 upstream not equivalent owing to inflow between sites.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft, 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.

AVERAGE DISCHARGE.--10 years, 2,991 ft<sup>3</sup>/s, 2,167,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft<sup>3</sup>/s Feb. 26, 1982, gage height, 16.61 ft; minimum, 425 ft<sup>3</sup>/s July 26, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,300 ft<sup>3</sup>/s Dec. 8, gage height, 15.53 ft; minimum, 658 ft<sup>3</sup>/s June 16; minimum daily, 768 ft<sup>3</sup>/s Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	8470	7700	3520	2280	2520	11000	1360	1530	1650	786	914
2	1500	6450	7850	3390	1210	2100	11000	1360	1320	3060	837	912
3	1540	5820	11300	3450	1140	1840	10900	1240	933	3020	808	870
4	1620	5570	12100	7910	1200	1960	9390	1270	840	3000	811	857
5	1550	5610	11500	8220	1070	2080	6860	1230	826	2270	803	857
6	1560	6320	12400	9400	1280	2960	5060	1040	815	2190	803	798
7	1840	5820	13200	11700	1650	3300	3560	1190	823	2760	775	827
8	2010	5440	13100	11000	2020	6000	3230	1720	970	2140	768	959
9	2070	5260	12300	12100	4500	6260	2590	2190	921	1740	785	1090
10	2040	3670	11900	13200	5330	6950	2400	2020	1340	1440	795	1320
11	2150	3110	9280	13100	5080	6600	1960	1710	1710	1180	793	1270
12	2160	3070	8920	8750	5380	4750	1710	1610	1630	876	787	1320
13	2020	2700	7440	11500	5880	4810	1460	1470	1600	851	782	2050
14	2080	2480	6680	5820	5400	5050	1470	1400	1340	1210	780	2120
15	2060	2710	8300	5480	4450	4960	1340	1900	1060	1330	780	1790
16	2580	2470	10200	5450	4530	4200	1330	1920	793	1300	788	1420
17	2700	3170	10500	5460	6720	3800	1380	1100	868	1200	782	1450
18	2760	3710	8650	5380	10800	3730	1380	1030	1120	1310	781	1490
19	2750	3830	7730	5650	11400	2900	1550	1000	1570	1210	796	1480
20	2850	3850	8860	5780	11000	2320	1570	1670	1630	1560	793	1460
21	1880	3830	10300	5540	10900	1820	1530	2520	2350	1600	798	1390
22	1880	3710	10300	3470	10900	1360	1540	2220	2210	1390	796	1520
23	3420	3630	9430	3250	10700	1610	1550	1880	1830	1120	813	1580
24	3380	3580	7810	5300	8820	2220	1570	1800	1540	924	809	1580
25	2380	3560	7490	5170	6690	3030	1350	1730	1500	872	803	1580
26	2540	3560	7250	3900	4280	3040	1470	1410	1550	924	809	1540
27	3020	3580	6390	3860	3960	2630	1350	1490	1570	976	808	1490
28	3280	3900	5910	3820	3270	2330	1230	1450	1560	1030	809	1460
29	8310	7500	4910	3680	---	3840	1500	1410	1210	893	860	1460
30	9210	9490	3700	3270	---	11500	1380	1390	941	877	1160	1460
31	8650	---	3220	3490	---	10500	---	1450	---	799	1060	---
TOTAL	89520	135870	276620	201010	151840	122970	95610	48180	39900	46702	25358	40314
MEAN	2888	4529	8923	6484	5423	3967	3187	1554	1330	1507	818	1344
MAX	9210	9490	13200	13200	11400	11500	11000	2520	2350	3060	1160	2120
MIN	1500	2470	3220	3250	1070	1360	1230	1000	793	799	768	798
AC-FT	177600	269500	548700	398700	301200	243900	189600	95570	79140	92630	50300	79960
CAL YR 1982	TOTAL	1249929	MEAN	3424	MAX	15100	MIN	650	AC-FT	2479000		
WTR YR 1983	TOTAL	1273894	MEAN	3490	MAX	13200	MIN	768	AC-FT	2527000		

## WILLAMETTE RIVER BASIN

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14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1973 to current year.

INSTRUMENTATION.--Temperature recorder since July 1973.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 15.5°C at times in 1975, 1978, 1981; minimum recorded, 2.5°C Dec. 30, 31, 1978, Feb. 1, 1980.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 15.0°C July 30; minimum, 4.5°C Dec. 31, Jan. 1.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	10.5	9.5	9.0	8.0	7.5	5.0	4.5	6.5	5.5	8.0	7.5
2	10.5	10.5	9.0	8.5	8.0	7.5	5.5	5.0	6.5	5.5	8.0	7.0
3	11.0	10.0	9.5	8.5	8.5	8.0	5.5	5.5	6.0	5.0	8.5	7.5
4	10.5	10.0	10.0	9.5	8.5	8.0	7.0	5.5	6.0	5.0	8.0	7.5
5	11.5	10.0	9.5	9.5	8.5	8.0	7.0	6.5	6.0	5.0	8.5	8.0
6	10.5	10.5	9.5	9.0	8.5	7.5	7.5	7.0	6.5	5.5	8.0	7.5
7	10.5	10.0	9.5	9.0	7.5	7.0	8.0	7.5	6.5	5.5	8.5	7.5
8	10.5	10.0	9.5	9.0	7.5	7.0	7.5	7.0	7.0	6.0	8.5	8.0
9	10.5	10.0	9.5	9.0	7.5	7.0	7.0	6.5	6.5	6.0	8.5	8.0
10	10.5	10.0	9.0	8.5	7.0	7.0	6.5	6.0	7.0	6.0	8.5	8.0
11	10.5	10.0	9.0	8.5	7.0	7.0	6.5	6.0	7.5	6.5	9.0	7.5
12	10.5	10.0	9.0	8.5	7.5	7.0	6.5	6.0	7.5	7.0	9.0	8.0
13	10.5	9.5	9.0	8.5	7.5	7.5	6.0	6.0	7.5	7.0	8.5	7.5
14	10.5	10.0	8.5	8.0	7.5	7.0	6.0	5.5	7.0	6.5	8.0	7.0
15	10.5	9.5	8.5	8.0	8.0	7.5	6.0	5.5	7.5	6.5	8.5	7.0
16	11.0	10.5	9.0	8.5	8.0	7.5	6.5	6.0	7.5	7.0	8.0	7.0
17	11.0	9.5	9.5	8.5	7.5	7.0	6.5	6.0	8.0	7.0	8.5	7.5
18	11.0	9.5	9.0	8.0	7.5	7.0	7.0	6.5	7.5	7.0	8.0	6.5
19	10.5	9.5	8.5	8.0	7.0	7.0	7.0	6.5	7.5	7.0	8.0	6.5
20	11.0	10.0	8.0	7.5	7.5	7.0	6.5	6.0	7.5	7.0	8.0	7.0
21	11.0	10.0	8.0	7.5	7.5	7.0	6.0	6.0	7.5	7.0	8.0	7.5
22	11.0	10.0	7.5	6.5	7.0	6.5	6.5	6.0	8.0	7.5	8.5	7.5
23	11.5	10.5	7.0	6.5	7.0	6.5	6.5	6.0	8.0	7.5	8.5	7.0
24	11.0	10.0	7.0	6.5	6.5	6.0	6.5	6.5	7.5	7.5	8.5	7.0
25	11.5	10.0	7.0	6.5	7.0	6.0	6.5	6.0	7.5	7.0	8.0	7.0
26	10.0	9.5	7.5	7.0	7.0	6.5	7.0	6.5	8.0	7.0	8.0	7.0
27	10.5	9.5	8.0	7.5	6.5	6.0	7.0	6.5	8.0	7.0	8.0	7.0
28	10.0	9.5	8.0	8.0	6.0	5.5	6.5	6.0	8.5	7.0	8.0	7.0
29	10.0	9.5	8.0	7.5	5.5	5.0	7.0	6.5	---	---	8.0	7.5
30	9.5	9.0	8.0	7.5	5.5	5.0	6.5	6.0	---	---	8.0	7.5
31	9.5	9.0	---	---	5.0	4.5	7.0	6.0	---	---	8.5	7.5
MONTH	11.5	9.0	10.0	6.5	8.5	4.5	8.0	4.5	8.5	5.0	9.0	6.5

## WILLAMETTE RIVER BASIN

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	7.0	11.0	10.5	11.5	11.0	12.5	11.5	13.5	12.5	13.0	12.5
2	7.5	6.5	11.0	10.0	12.0	11.0	12.5	12.0	14.5	12.5	13.5	12.0
3	7.5	6.5	11.5	10.0	13.0	11.0	13.5	12.0	13.5	12.5	13.0	12.0
4	8.0	6.5	11.5	10.0	13.0	11.0	14.0	12.0	14.0	12.0	13.0	12.0
5	8.5	6.5	12.0	10.0	13.5	11.0	13.0	12.0	14.0	12.0	13.0	11.5
6	8.5	7.0	12.0	10.0	13.5	11.5	13.0	12.0	14.0	12.0	13.0	11.5
7	8.5	7.0	11.0	9.5	14.0	11.5	12.5	11.5	14.0	12.0	13.0	12.0
8	8.5	6.5	9.5	8.5	14.0	12.0	12.5	11.5	13.5	12.5	12.5	12.0
9	7.5	6.5	10.0	8.5	13.5	12.0	12.5	11.0	14.0	12.0	13.0	12.0
10	8.0	6.5	10.5	8.5	13.0	12.0	13.5	11.0	13.5	12.5	13.5	12.0
11	8.5	6.5	11.5	9.5	13.0	11.5	14.0	11.5	14.0	12.5	13.0	12.0
12	8.5	6.5	12.0	10.0	14.0	12.0	12.5	12.0	14.0	12.0	12.5	12.0
13	9.0	6.5	12.5	10.0	14.0	12.0	12.0	12.0	14.5	12.0	12.5	12.0
14	9.5	7.0	11.0	10.5	13.5	12.0	13.0	11.5	14.5	12.5	12.5	11.5
15	10.0	7.0	11.0	9.5	13.5	11.5	13.0	11.5	14.5	12.0	12.0	11.5
16	11.0	7.5	11.5	9.5	13.5	11.5	13.5	11.5	14.0	12.0	11.5	11.0
17	11.0	8.5	12.0	9.0	12.5	12.0	13.5	11.5	14.0	12.0	11.5	11.0
18	11.5	9.0	12.5	10.0	12.5	11.5	13.5	12.0	14.0	12.0	11.5	11.0
19	11.0	10.0	12.0	9.5	12.5	11.5	13.0	12.5	13.0	12.0	12.0	10.5
20	11.0	9.5	12.5	10.0	13.0	11.5	14.0	12.0	13.5	12.0	13.5	10.5
21	11.0	9.5	12.0	11.0	13.5	12.0	14.5	12.0	13.5	11.5	12.0	10.5
22	11.0	9.5	11.5	10.5	12.5	12.0	14.5	12.0	13.5	12.0	11.5	11.0
23	10.5	9.0	12.5	10.5	12.5	12.0	13.5	12.5	13.5	12.0	11.0	10.5
24	11.0	9.0	13.0	11.0	13.5	11.5	12.5	12.0	13.5	12.0	11.0	10.5
25	10.5	9.0	12.5	11.0	13.5	12.0	13.5	12.0	14.0	12.0	11.0	10.5
26	11.0	9.0	13.0	10.5	13.0	12.0	14.0	12.0	14.0	12.0	11.0	10.5
27	11.5	9.5	13.0	11.0	13.5	12.0	13.0	12.0	13.5	12.0	11.5	10.5
28	11.5	10.0	13.5	11.5	13.0	12.0	13.5	12.0	13.0	12.0	11.0	10.5
29	11.5	10.0	13.5	11.5	13.0	12.0	14.5	12.0	13.5	12.5	11.0	10.5
30	11.5	10.0	12.0	11.5	12.5	12.0	15.0	12.0	13.0	13.0	11.0	10.0
31	---	---	12.0	11.0	---	---	13.5	12.5	13.0	12.5	---	---
MONTH	11.5	6.5	13.5	8.5	14.0	11.0	15.0	11.0	14.5	11.5	13.5	10.0

## WILLAMETTE RIVER BASIN

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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 downstream from highway bridge at Waterloo, 2.1 mi upstream from Hamilton Creek, and at mile 23.3.

DRAINAGE AREA.--640 mi<sup>2</sup>.

## 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 1905-07, 1910-11.

REVISED RECORDS.--WSP 1248: 1907, 1924-30, 1932.

GAGE.--Water-stage recorder. Datum of gage is 370.39 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1911, nonrecording gage at site 0.5 mi downstream at datum about 5.0 ft lower. July 1, 1923, to Nov. 12, 1934, nonrecording gage, at present site and datum.

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.

AVERAGE DISCHARGE.--61 years (water years 1906, 1924-83), 2,947 ft<sup>3</sup>/s, 2,135,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 24.50 ft; minimum, 61 ft<sup>3</sup>/s Oct. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,900 ft<sup>3</sup>/s Feb. 18, gage height, 9.03 ft; minimum, 616 ft<sup>3</sup>/s June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1820	8280	8030	3580	2660	2910	11200	1390	1550	1460	741	876
2	1520	6710	7790	3510	1530	2500	11200	1380	1400	3130	786	863
3	1560	5920	11600	3610	1240	2140	11100	1270	929	3080	755	818
4	1630	5660	12600	8640	1350	2190	9790	1280	821	3030	755	789
5	1610	5680	11800	8740	1160	2290	7120	1220	774	2380	744	785
6	1590	6400	12500	10200	1360	3300	5370	1080	752	2170	739	738
7	1840	5990	13200	13000	1900	3560	3920	1160	738	2670	713	734
8	2080	5570	13200	12000	2130	6020	3350	1780	888	2250	695	868
9	2130	5340	12500	12400	4710	6570	2830	2380	888	1810	709	1030
10	2140	4040	12000	13500	5940	7330	2570	2220	1210	1470	727	1240
11	2190	3260	9640	13200	5510	6950	2240	1860	1710	1290	726	1240
12	2230	3140	9030	9140	5680	5350	1830	1700	1600	877	714	1250
13	2110	2900	7980	11500	6290	5110	1600	1580	1560	817	709	1890
14	2140	2570	6880	6590	5860	5620	1580	1460	1370	1120	699	2070
15	2140	2720	8450	5540	4870	5550	1430	1820	1060	1350	694	1810
16	2590	2680	11400	5530	4730	4680	1390	2180	793	1300	701	1410
17	2820	3130	11400	5470	6760	4110	1430	1210	814	1210	700	1400
18	2890	4090	9390	5430	12600	3980	1420	1100	964	1270	693	1470
19	2870	4190	8220	5650	12200	3280	1540	1050	1540	1230	707	1450
20	2950	4160	8960	5810	11600	2530	1650	1490	1620	1600	709	1450
21	2140	4200	10700	5610	11400	2190	1550	2480	2200	1650	714	1360
22	1920	3990	10900	3950	11400	1500	1570	2240	2190	1500	708	1460
23	3370	3850	9900	3360	11100	1830	1590	1830	1900	1250	722	1550
24	3590	3780	8250	5000	9630	2210	1660	1850	1570	1000	722	1550
25	2610	3730	7700	5340	7150	3190	1410	1750	1510	900	715	1560
26	2670	3720	7420	4220	4950	3190	1480	1390	1540	940	715	1520
27	3160	3730	6660	3990	4330	3010	1410	1440	1560	1000	711	1470
28	3380	4020	6000	3940	3870	2500	1200	1410	1550	1050	715	1420
29	7530	6710	5190	3770	---	3630	1560	1400	1320	900	834	1420
30	9430	9980	3940	3430	---	11400	1400	1340	888	846	1090	1420
31	8480	---	3340	3640	---	10800	---	1440	---	773	1090	---
TOTAL	91130	140140	286570	209290	163910	131420	99390	49180	39209	47323	23152	38911
MEAN	2940	4671	9244	6751	5854	4239	3313	1586	1307	1527	747	1297
MAX	9430	9980	13200	13500	12600	11400	11200	2480	2200	3130	1090	2070
MIN	1520	2570	3340	3360	1160	1500	1200	1050	738	773	693	734
AC-FT	180800	278000	568400	415100	325100	260700	197100	97550	77770	93870	45920	77180
CAL YR 1982	TOTAL	1273599	MEAN	3489	MAX	14500	MIN	555	AC-FT	2526000		
WTR YR 1983	TOTAL	1319625	MEAN	3615	MAX	13500	MIN	693	AC-FT	2617000		



## WILLAMETTE RIVER BASIN

14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C Aug. 4, 1966; minimum, 1.5°C Dec. 18-20, 1965, Feb. 1, 2, 1979.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.0°C July 30, Aug. 13, 14; minimum, 5.5°C Dec. 30 to Jan. 2.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	10.0	10.0	9.5	---	---	6.0	5.5	---	---	8.5	8.0
2	11.5	10.5	9.5	9.5	---	---	6.0	5.5	---	---	8.5	7.5
3	12.5	10.5	10.0	9.5	---	---	6.0	6.0	---	---	9.0	8.0
4	12.0	10.5	10.5	10.0	---	---	7.0	6.0	---	---	8.5	8.0
5	13.0	10.0	10.0	10.0	---	---	7.0	6.5	---	---	9.0	8.0
6	12.0	10.5	10.5	10.0	---	---	7.5	7.0	---	---	8.5	8.0
7	11.0	10.5	10.0	10.0	---	---	8.0	7.5	---	---	9.0	8.0
8	11.5	10.5	10.0	10.0	---	---	8.0	7.5	6.5	6.5	8.5	8.0
9	12.5	10.5	---	---	---	---	7.5	7.0	6.5	6.0	8.5	8.0
10	12.5	10.0	---	---	---	---	7.0	6.5	6.5	6.0	9.0	8.0
11	12.5	10.5	---	---	---	---	7.0	6.5	7.0	6.5	9.5	8.0
12	12.5	10.0	---	---	---	---	7.0	6.5	7.5	7.0	9.5	8.5
13	12.0	10.0	---	---	---	---	7.0	6.5	7.5	7.0	9.0	8.0
14	12.5	10.0	---	---	---	---	6.5	6.5	7.0	6.5	8.5	7.5
15	12.5	10.0	---	---	8.5	8.0	6.5	6.0	7.0	6.5	9.0	7.5
16	11.5	10.0	---	---	8.5	8.5	6.5	6.5	7.5	7.0	8.5	7.5
17	11.5	10.5	---	---	8.5	8.0	7.0	6.5	7.5	7.0	9.0	8.0
18	12.0	10.0	---	---	8.0	8.0	7.5	7.0	7.5	7.0	9.0	7.5
19	11.0	9.5	---	---	8.0	7.5	7.0	7.0	7.5	7.0	9.5	7.0
20	11.5	9.5	---	---	8.0	7.5	7.0	6.5	7.5	7.0	9.0	7.5
21	12.0	10.5	---	---	8.0	7.5	6.5	6.5	7.5	7.0	9.0	8.0
22	12.0	10.5	---	---	7.5	7.5	6.5	6.0	7.5	7.5	9.0	8.0
23	12.5	10.0	---	---	7.5	7.0	7.0	6.5	7.5	7.5	9.5	8.0
24	12.0	10.5	---	---	7.5	7.0	7.0	6.5	8.0	7.5	10.0	8.0
25	12.0	10.5	---	---	7.5	7.0	7.0	6.5	7.5	7.5	9.0	8.0
26	11.0	10.0	---	---	7.5	7.5	7.5	7.0	8.0	7.5	8.5	7.5
27	11.0	10.0	---	---	7.5	6.5	7.5	6.5	8.5	7.0	9.5	8.0
28	10.5	10.0	---	---	7.0	6.5	7.0	6.5	8.5	7.5	8.5	7.5
29	10.0	10.0	---	---	6.5	6.0	7.5	6.5	---	---	8.5	8.0
30	10.0	10.0	---	---	6.0	5.5	7.0	6.5	---	---	8.5	8.0
31	10.0	10.0	---	---	6.0	5.5	---	---	---	---	8.5	8.0
MONTH	13.0	9.5	10.5	9.5	8.5	5.5	8.0	5.5	8.5	6.0	10.0	7.0

## WILLAMETTE RIVER BASIN

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14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	8.0	12.5	10.0	11.0	10.5	13.5	11.5	15.5	14.0	15.0	13.0
2	8.0	7.5	12.0	10.5	12.0	10.5	12.5	11.5	17.0	13.5	16.0	12.5
3	8.5	7.5	13.5	10.0	14.5	10.5	14.5	11.5	16.5	14.0	16.0	13.0
4	8.5	7.5	13.5	9.5	14.5	11.5	15.0	11.5	17.0	13.5	15.0	13.0
5	9.0	7.5	12.5	10.0	15.5	11.5	12.5	12.0	16.5	14.5	15.5	12.5
6	10.0	7.5	12.5	10.0	16.0	12.0	13.5	11.5	17.5	14.0	15.5	12.5
7	9.0	7.5	12.5	10.0	17.0	13.0	12.0	11.0	16.5	14.0	15.5	13.5
8	9.5	7.5	11.5	9.5	16.0	12.5	13.0	11.5	15.5	14.5	14.5	12.5
9	8.5	7.5	10.5	9.0	14.5	12.0	14.0	11.5	16.5	13.5	15.5	12.0
10	9.0	7.5	12.0	9.0	14.0	12.0	15.5	11.0	15.5	14.0	14.0	12.0
11	9.5	7.5	12.5	9.5	13.0	10.5	16.0	11.5	17.0	13.5	15.0	12.5
12	9.5	7.0	14.0	9.0	15.0	11.5	15.0	12.5	17.5	14.0	15.0	12.0
13	10.5	7.0	14.5	9.5	15.5	11.0	12.5	11.5	18.0	14.5	15.0	12.5
14	11.0	7.5	12.5	10.5	13.0	12.0	14.0	11.5	18.0	15.0	14.5	12.0
15	11.5	8.0	11.0	10.5	14.5	11.5	15.0	12.0	17.0	14.5	14.0	11.5
16	12.0	8.0	12.5	9.5	15.0	11.5	15.0	12.0	17.0	14.0	14.5	11.5
17	12.0	8.5	13.5	9.5	14.0	12.0	15.5	12.0	17.0	14.0	13.5	11.0
18	13.0	9.5	12.5	10.0	12.5	11.0	16.0	12.0	17.0	14.0	12.5	11.0
19	12.0	10.0	14.0	10.0	12.5	11.0	16.0	13.0	16.0	14.0	13.5	10.5
20	12.0	10.0	14.5	10.5	14.5	11.5	14.5	12.5	16.0	13.5	13.5	10.0
21	12.5	9.5	13.0	9.5	15.0	11.0	16.0	12.5	16.5	13.0	14.5	11.0
22	11.5	10.0	13.5	9.0	12.5	11.5	14.0	13.0	16.5	13.5	14.0	11.5
23	11.5	10.0	14.5	10.0	12.5	11.5	---	---	15.5	13.5	12.0	11.0
24	12.5	9.0	14.5	10.0	15.0	11.0	---	---	16.0	13.0	14.0	11.0
25	11.5	9.0	13.0	10.5	14.5	11.0	---	---	16.0	13.5	13.5	10.5
26	12.5	9.0	14.5	10.0	13.5	12.0	---	---	16.5	14.0	12.5	11.0
27	14.0	9.0	15.0	10.5	15.5	12.0	---	---	16.5	14.0	12.5	11.0
28	13.0	10.0	15.5	11.0	13.5	11.5	---	---	15.0	13.5	12.5	9.5
29	13.5	9.5	15.5	11.5	14.5	12.0	17.5	---	14.5	13.5	12.5	9.5
30	14.5	9.5	13.5	11.0	14.0	12.0	18.0	14.5	14.5	13.5	12.5	9.0
31	---	---	11.0	10.5	---	---	17.0	14.5	14.5	13.0	---	---
MONTH	14.5	7.0	15.5	9.0	17.0	10.5	18.0	11.0	18.0	13.0	16.0	9.0

## 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 upstream from bridge on State Highway 226, 1.6 mi upstream from Mill Creek, 4.2 mi east of Scio, and at mile 14.6.

DRAINAGE AREA.--109 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--21 years, 503 ft<sup>3</sup>/s, 62.67 in/yr, 364,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.44 ft, from rating curve extended above 7,200 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 19.58 ft Jan. 21, 1972, backwater from debris; minimum discharge, 7.8 ft<sup>3</sup>/s Aug. 20, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0300	5,360	9.37	Feb. 18	0730	5,120	9.18
Dec. 16	0330	4,450	8.64	Mar. 30	0730	4,870	8.99
Jan. 7	0100	*7,520	*10.88				

Minimum, 41 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	57	418	988	352	580	805	1760	263	269	675	170	134		
2	50	331	1120	376	510	710	1760	248	227	910	155	125		
3	54	272	3060	590	454	625	1440	236	198	735	144	107		
4	51	245	3530	3850	402	710	1140	218	173	550	136	94		
5	46	314	1890	2840	362	720	934	206	155	446	125	86		
6	78	570	2300	5290	474	1210	785	209	142	380	119	80		
7	209	434	1490	5330	725	1260	685	359	132	338	114	74		
8	218	352	1060	3160	988	1480	590	620	123	331	107	72		
9	168	299	825	1960	2080	1500	565	675	117	302	107	80		
10	125	257	670	1380	1830	1850	560	585	410	260	99	74		
11	99	221	550	1060	1610	1320	575	510	466	230	107	80		
12	83	195	530	856	1600	1080	502	466	352	221	94	72		
13	70	178	625	715	1690	1040	458	402	281	331	86	67		
14	63	160	825	610	1430	1470	430	366	242	426	80	63		
15	57	146	1690	526	1170	1280	402	620	224	331	77	59		
16	54	163	3350	482	1110	1030	383	830	193	287	77	57		
17	99	522	2550	450	2160	862	366	610	180	257	71	56		
18	84	1400	1890	438	4110	750	359	490	260	263	68	56		
19	70	1300	1430	605	2270	640	352	414	376	383	64	62		
20	62	1060	1570	560	1940	555	355	359	446	1150	63	56		
21	62	862	1860	486	1710	510	341	317	352	755	62	49		
22	101	660	1590	466	1840	506	311	284	299	538	59	46		
23	269	522	1300	600	1400	620	314	257	311	434	56	46		
24	203	438	1010	675	1210	580	317	230	410	366	57	49		
25	170	375	830	600	1050	785	287	209	320	331	54	49		
26	398	338	750	640	964	715	272	193	284	293	51	48		
27	373	359	635	735	880	755	248	178	251	263	50	50		
28	373	710	542	630	886	755	257	160	224	251	54	47		
29	1890	975	482	560	---	1870	320	148	221	221	260	45		
30	1000	1350	434	585	---	4040	275	140	221	195	314	43		
31	565	---	387	670	---	2480	---	245	---	178	170	---		
TOTAL	7201	15426	41763	38077	37435	34513	17343	11047	7859	12631	3250	2026		
MEAN	232	514	1347	1228	1337	1113	578	356	262	407	105	67.5		
MAX	1890	1400	3530	5330	4110	4040	1760	830	466	1150	314	134		
MIN	46	146	387	352	362	506	248	140	117	178	50	43		
CFSM	2.13	4.72	12.4	11.3	12.3	10.2	5.30	3.27	2.40	3.73	.96	.62		
IN.	2.46	5.26	14.25	13.00	12.78	11.78	5.92	3.77	2.68	4.31	1.11	.69		
AC-FT	14280	30600	82840	75530	74250	68460	34400	21910	15590	25050	6450	4020		
CAL YR 1982	TOTAL	199104	MEAN	545	MAX	5040	MIN	15	CFSM	5.00	IN.	67.95	AC-FT	394900
WTR YR 1983	TOTAL	228571	MEAN	626	MAX	5330	MIN	43	CFSM	5.74	IN.	78.01	AC-FT	453400

## 14189000 SANTIAM RIVER AT JEFFERSON, OR

LOCATION.--Lat 44°42'55", long 122°00'40", in SE $\frac{1}{4}$  sec.11, T.10 S., R.3 W., Marion County, Hydrologic Unit 17090005, on right bank 350 ft upstream from Southern Pacific railroad bridge at Jefferson, 2.1 mi downstream from confluence of North and South Santiam Rivers, and at mile 9.62.

DRAINAGE AREA.--1,790 mi<sup>2</sup>, 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 National Geodetic Vertical Datum of 1929. Prior to Sept. '22, 1940, nonrecording gages at sites within 350 ft downstream at datum 3.00 ft 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.--53 years (water years 1908-16, 1940-83), 7,821 ft<sup>3</sup>/s, 5,666,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 24.22 ft; minimum observed, 260 ft<sup>3</sup>/s Aug. 15-22, Aug. 24 to Sept. 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 25.0 ft was reached in December 1861, and 23.4 ft in February 1890 (information from Corps of Engineers). On Nov. 21, 1921, the stage reached 19.5 ft at gage on railroad bridge 350 ft downstream, corresponding gage height at present site and datum, 24.4 ft, from curve of relation, discharge, 202,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48,300 ft<sup>3</sup>/s Jan. 7, gage height, 15.05 ft; minimum, 1,640 ft<sup>3</sup>/s Aug. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3920	12500	17900	8950	8050	9910	27300	3930	5130	4030	2440	2490
2	3670	11000	16200	8770	5900	9020	29700	3890	4620	8750	2360	2340
3	3650	9680	29100	9550	4880	7920	28300	3810	3600	9440	2350	2250
4	3650	9150	33000	24400	4700	7710	24400	3750	2830	8170	2330	2380
5	3680	9070	26700	26800	4310	7780	18100	3550	2600	6960	2150	2760
6	3690	11400	28800	36100	4410	10600	14200	3640	2460	5690	2060	3100
7	4360	11000	26500	45000	6640	11600	10600	4290	2540	5530	2030	3210
8	5220	9880	23900	34800	7230	16500	8530	6120	2800	5510	1970	3250
9	5220	9640	22200	31800	13900	19900	7730	7550	2850	4810	1900	3520
10	4850	8970	20800	32300	16300	23100	7380	7840	3550	4250	1950	3850
11	4630	7520	18600	30900	14700	20500	7220	7670	6090	3790	1940	4050
12	4580	7110	16700	26900	14300	16600	6050	7290	6660	3140	1920	4070
13	4530	6840	16900	25900	15600	14400	5450	6210	4720	3430	1860	4610
14	4390	6440	15700	18000	14900	17300	5100	5800	3570	4540	1820	5050
15	4320	6420	19800	14300	13600	17800	4810	6580	3100	4630	1780	5010
16	4520	6630	31200	14000	12600	15200	4620	9700	2800	4240	1760	4430
17	5010	7130	25600	13800	16400	12100	4590	8320	2760	3970	1740	4300
18	5260	11900	21900	13700	35100	10900	4580	8840	3000	3990	1720	4340
19	5140	13000	21700	14500	28000	9420	4630	6910	4200	4640	1740	4380
20	5230	12500	23700	14300	31200	7820	4880	5880	5290	7010	1710	4380
21	4850	12100	26500	13700	30500	7270	4700	6560	5710	7120	1710	4030
22	4360	11100	28100	11500	29900	5490	4640	6440	5880	6060	1700	3850
23	5830	10300	25800	9820	27700	6120	4720	5970	5740	4260	1740	4080
24	6540	9870	22300	11000	25600	6160	4810	6440	5870	3700	1760	4070
25	5720	9230	19500	12100	20500	8240	4350	5950	5260	3360	1710	4120
26	5700	8830	19000	11400	17000	8210	4200	5500	4820	3380	1680	4150
27	6930	8750	17400	11400	13600	8240	4090	5570	4690	3540	1680	4120
28	7020	10200	14200	10800	12900	7640	3820	5470	3690	3430	1760	3950
29	15200	12800	13300	10200	---	10100	4250	5150	3560	3010	2320	3980
30	17800	20600	11800	9780	---	29000	4000	4820	3040	2690	3130	3900
31	13700	---	9810	10400	---	27400	---	5020	---	2520	2920	---
TOTAL	183170	301560	664610	566870	450420	389950	271750	184460	123430	149590	61640	114020
MEAN	5909	10050	21440	18290	16090	12580	9058	5950	4114	4825	1988	3801
MAX	17800	20600	33000	45000	35100	29000	29700	9700	6660	9440	3130	5050
MIN	3650	6420	9810	8770	4310	5490	3820	3550	2460	2520	1680	2250
AC-FT	363300	598100	1318000	1124000	893400	773500	539000	365900	244800	296700	122300	226200
CAL YR 1982	TOTAL	3194780	MEAN	8753	MAX	39800	MIN	1350	AC-FT	6337000		
WTR YR 1983	TOTAL	3461470	MEAN	9483	MAX	45000	MIN	1680	AC-FT	6866000		

## WILLAMETTE RIVER BASIN

14189000 SANTIAM RIVER AT JEFFERSON, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 8, 1971, Aug. 1, 1973, Aug. 9, 1981; minimum, 0.0°C Jan. 1, 1979.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C Aug. 14; minimum, 4.0°C Dec. 30-Jan. 1.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983												
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	12.0	10.5	10.0	7.5	7.0	4.5	4.0	6.0	5.5	8.5	7.5
2	13.5	13.0	10.0	9.0	8.0	7.0	5.5	4.5	6.5	5.0	8.0	7.0
3	13.5	12.0	10.5	9.0	8.5	8.0	5.5	5.0	6.0	5.0	8.5	8.0
4	13.5	12.5	11.0	10.0	8.0	8.0	7.0	5.5	5.5	4.5	8.5	8.0
5	13.5	12.0	10.5	9.5	8.0	7.5	7.0	6.5	5.5	4.5	8.5	8.0
6	13.5	12.5	10.0	9.5	8.0	7.5	7.5	7.0	6.0	5.5	8.0	7.5
7	12.5	11.5	9.5	8.5	7.5	6.5	8.0	7.5	6.5	5.5	8.5	7.5
8	12.5	11.5	9.0	8.0	6.5	6.0	8.0	7.0	6.5	6.0	8.5	7.5
9	13.5	12.0	9.5	8.5	6.5	6.0	7.0	6.0	6.5	6.0	8.0	7.5
10	13.5	12.0	9.0	8.0	6.5	6.0	6.5	6.0	6.5	6.0	8.5	8.0
11	13.5	12.0	9.0	8.0	6.5	6.0	6.0	5.5	7.0	6.5	8.5	7.5
12	13.5	12.0	9.0	8.0	7.0	6.5	5.5	5.5	7.5	7.0	8.5	7.5
13	13.5	12.0	9.0	8.5	7.5	7.0	6.0	5.0	7.5	7.0	9.0	8.0
14	14.0	12.0	8.5	7.0	7.0	7.0	5.5	5.5	7.0	6.5	8.0	7.0
15	13.5	12.5	9.0	8.0	7.5	7.0	5.5	5.0	7.0	6.5	8.5	6.5
16	13.5	12.5	9.5	8.5	8.0	7.5	6.0	5.5	7.5	6.5	7.5	6.5
17	13.0	12.0	10.0	9.5	8.0	7.0	6.5	5.5	8.0	7.0	9.0	7.5
18	12.5	11.0	9.5	8.5	7.0	7.0	6.5	6.0	7.5	7.0	9.0	7.0
19	11.5	10.0	9.0	8.0	7.0	6.5	6.5	6.0	7.5	6.5	9.0	6.5
20	12.5	10.5	8.5	8.0	7.0	6.5	6.0	5.5	7.0	6.5	8.5	7.0
21	12.5	12.0	8.0	7.0	7.0	6.5	5.5	5.0	7.0	6.5	9.0	7.5
22	13.5	12.5	7.5	7.0	6.5	6.5	6.0	5.0	7.5	7.0	8.5	7.5
23	13.0	12.5	7.5	6.5	6.5	6.0	6.5	6.0	7.5	7.5	9.0	7.5
24	12.5	11.5	7.0	6.5	6.0	6.0	7.0	6.0	7.5	7.0	9.5	8.0
25	13.0	12.0	7.0	6.5	6.0	5.5	6.5	6.0	7.0	6.5	9.0	8.0
26	12.0	11.5	7.0	7.0	6.5	6.0	7.0	6.5	7.5	6.5	8.0	7.0
27	11.5	10.5	8.0	7.0	6.0	5.5	7.0	6.5	8.0	6.5	8.5	7.0
28	11.0	10.5	8.5	8.0	5.5	5.0	6.5	5.5	8.5	7.0	8.0	7.5
29	10.5	10.0	8.0	7.5	5.0	4.5	7.0	6.0	---	---	8.5	7.5
30	10.0	9.5	7.5	7.5	5.0	4.0	6.5	6.0	---	---	8.5	7.5
31	10.0	9.5	---	---	4.5	4.0	6.5	6.0	---	---	8.5	7.5
MONTH	14.0	9.5	11.0	6.5	8.5	4.0	8.0	4.0	8.5	4.5	9.5	6.5



## WILLAMETTE RIVER BASIN

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14189000 SANTIAM RIVER AT JEFFERSON, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	10.5	10.5	9.5	14.0	12.5	17.5	15.5	16.5	14.5
2	7.5	7.0	11.5	10.0	11.5	10.0	13.0	11.5	18.5	16.0	17.5	14.5
3	8.0	6.5	13.0	10.0	13.5	10.5	14.0	10.5	19.0	16.5	17.5	14.5
4	8.5	6.5	12.5	10.5	16.0	12.5	15.5	11.5	19.0	15.5	16.5	15.0
5	9.0	6.5	13.0	11.0	17.0	13.0	15.0	12.5	19.0	16.5	15.5	13.5
6	9.5	7.0	11.5	10.0	18.0	14.0	13.0	12.0	20.0	16.0	15.0	13.0
7	9.5	8.0	10.5	9.5	19.0	15.0	12.5	12.0	19.5	17.0	15.0	13.0
8	9.5	7.5	9.5	8.5	17.0	15.5	13.5	11.5	18.5	16.5	14.0	12.5
9	8.5	7.0	10.0	8.0	15.5	14.0	14.5	12.0	19.5	15.5	14.0	11.5
10	8.0	6.5	10.5	8.0	14.0	12.5	16.0	12.5	18.0	16.5	13.5	12.5
11	9.0	7.0	11.5	8.5	12.5	11.5	17.5	14.5	18.0	15.0	14.5	12.5
12	9.0	7.0	12.5	9.0	13.0	10.0	16.5	14.5	19.5	15.5	15.0	12.5
13	10.0	7.0	13.0	10.0	15.5	11.5	14.5	12.5	21.0	16.5	15.0	13.0
14	11.0	8.0	12.0	10.0	15.0	13.5	14.0	12.0	21.5	17.5	15.0	13.0
15	11.5	8.5	10.0	9.0	16.0	12.5	14.0	12.0	20.5	17.0	14.5	12.0
16	12.5	9.5	10.5	8.0	15.5	13.5	15.5	12.5	20.0	16.5	14.0	12.0
17	12.0	10.0	11.0	8.5	14.0	13.0	16.5	13.5	20.0	16.0	14.0	12.0
18	13.5	10.5	11.5	9.5	13.0	11.5	16.0	14.5	20.5	16.5	13.0	12.0
19	12.5	11.0	12.5	9.0	13.0	11.0	15.5	14.5	18.5	16.5	13.5	10.5
20	11.5	10.5	14.0	10.0	14.0	10.5	15.5	13.0	18.5	15.5	13.5	11.0
21	12.0	10.0	13.5	11.0	14.5	11.0	16.0	12.5	19.0	15.5	14.5	11.5
22	10.5	10.0	14.0	10.5	14.0	11.5	16.5	13.5	19.0	15.5	14.5	12.5
23	10.5	9.5	14.5	11.5	12.5	11.0	18.0	15.5	17.0	16.0	14.0	13.0
24	11.5	8.5	14.5	11.0	13.5	10.0	16.0	15.0	18.0	15.0	15.0	12.5
25	11.0	9.5	13.5	11.0	14.0	11.5	15.5	14.0	18.0	14.5	14.5	12.5
26	12.0	9.0	14.5	11.0	13.5	12.5	16.5	14.0	19.0	15.5	14.0	13.0
27	13.0	9.5	14.5	11.0	15.5	12.5	16.0	14.0	18.5	16.5	14.0	12.5
28	13.5	11.5	15.0	11.0	15.5	14.0	16.0	13.5	17.0	15.5	13.0	11.0
29	13.5	11.0	15.5	12.0	15.5	14.0	18.0	14.5	15.5	14.5	12.5	10.5
30	13.5	11.0	14.5	11.0	14.5	13.0	20.0	16.0	15.5	14.5	13.0	10.5
31	---	---	11.0	10.0	---	---	18.5	17.0	15.5	14.5	---	---
MONTH	13.5	6.5	15.5	8.0	19.0	9.5	20.0	10.5	21.5	14.5	17.5	10.5

## 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 upstream from highway bridge at Helmick State Park, 3.0 mi northwest of Suver, 4.7 mi downstream from Little Luckiamute River, and at mile 13.5.

DRAINAGE AREA.--240 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. 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.--49 years, 915 ft<sup>3</sup>/s, 51.77 in/yr, 662,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 34.52 ft; minimum, 0.65 ft<sup>3</sup>/s Aug. 13, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	1800	7,550	27.26	Feb. 18	2330	7,260	27.04
Dec. 16	1830	8,380	27.83	Mar. 30	1930	7,500	27.22
Jan. 7	0330	*9,820	*28.56				

Minimum, 35 ft<sup>3</sup>/s Oct. 5, 6, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	47	320	2340	864	1260	2180	4320	394	248	206	87	101		
2	41	255	1820	807	1130	1960	3430	378	228	371	84	90		
3	38	210	3610	924	1020	1680	3030	365	213	368	82	80		
4	37	183	6400	3460	922	1470	2460	349	201	311	79	76		
5	35	191	5520	6890	844	1350	2020	336	190	265	77	72		
6	36	264	3800	8140	828	1550	1700	356	182	239	76	67		
7	57	292	2660	9230	1250	2030	1460	360	175	217	75	64		
8	85	256	1910	7460	1280	2850	1280	560	166	215	73	62		
9	90	226	1510	5960	2400	3310	1170	960	158	197	71	60		
10	71	199	1250	4250	4130	4610	1230	880	173	180	69	60		
11	57	177	1050	3180	4520	4330	1230	710	227	163	67	81		
12	49	161	948	2460	4290	3260	1080	589	184	155	67	109		
13	44	149	1010	2000	4910	2950	976	526	169	145	65	80		
14	41	140	1200	1680	3820	3410	894	476	152	160	63	72		
15	38	131	2740	1450	2990	3520	825	489	161	180	62	68		
16	38	130	6700	1280	2730	2900	763	560	171	160	56	66		
17	36	643	7060	1150	3340	2330	710	486	152	150	54	64		
18	44	1200	5700	1100	6100	1910	664	443	162	130	55	63		
19	47	1550	4310	1030	6370	1600	620	410	278	170	53	62		
20	44	1550	3810	1010	4590	1380	588	381	276	150	53	62		
21	43	1250	3830	912	3890	1230	554	356	237	140	53	56		
22	98	924	3890	928	4160	1150	520	335	207	135	54	53		
23	202	718	3830	1470	4380	1390	587	315	197	130	52	52		
24	135	582	3010	1590	3780	1390	562	294	202	120	51	52		
25	97	490	2310	1400	3020	1300	502	278	191	116	52	52		
26	99	427	1960	1530	3320	1160	482	268	179	112	51	52		
27	176	399	1640	2050	3270	1140	456	253	172	108	51	52		
28	193	591	1380	1970	2620	1260	440	241	154	103	49	52		
29	500	911	1200	1680	---	2220	456	228	147	98	77	51		
30	620	2150	1060	1490	---	6150	427	218	140	94	136	51		
31	540	---	956	1460	---	6460	---	227	---	90	141	---		
TOTAL	3678	16669	90414	80805	87164	75430	35436	13021	5692	5378	2135	1982		
MEAN	119	556	2917	2607	3113	2433	1181	420	190	173	68.9	66.1		
MAX	620	2150	7060	9230	6370	6460	4320	960	278	371	141	109		
MIN	35	130	948	807	828	1140	427	218	140	90	49	51		
CFSM	.50	2.32	12.2	10.9	13.0	10.1	4.92	1.75	.79	.72	.29	.28		
IN.	.57	2.58	14.01	12.52	13.51	11.69	5.49	2.02	.88	.83	.33	.31		
AC-FT	7300	33060	179300	160300	172900	149600	70290	25830	11290	10670	4230	3930		
CAL YR 1982	TOTAL	374293	MEAN	1025	MAX	9380	MIN	21	CFSM	4.27	IN.	58.02	AC-FT	742400
WTR YR 1983	TOTAL	417804	MEAN	1145	MAX	9230	MIN	35	CFSM	4.77	IN.	64.76	AC-FT	828700

## 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 upstream from Center Street Bridge in Salem and at mile 84.16.

DRAINAGE AREA.--7,280 mi<sup>2</sup>, 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 National Geodetic Vertical Datum of 1929. Oct. 1, 1909, to Dec. 31, 1916, nonrecording gage at site 0.5 mi upstream at datum 8.00 ft higher. Jan. 1, 1923, to Nov. 26, 1934, nonrecording gage at Center Street Bridge at datum 8.00 ft higher. Nov. 27, 1934, to Sept. 30, 1962, water-stage recorder at present site at datum 8.00 ft 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.

AVERAGE DISCHARGE.--67 years, 23,650 ft<sup>3</sup>/s, 44.12 in/yr, 17,130,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348,000 ft<sup>3</sup>/s Jan. 8, 1923, gage height, 38.3 ft, present datum; minimum, 2,470 ft<sup>3</sup>/s Aug. 27, 1940, gage height, 3.55 ft, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 500,000 ft<sup>3</sup>/s Dec. 4, 1861, gage height, about 47 ft present datum, from rating curve extended above 250,000 ft<sup>3</sup>/s in 1916. Floods of Jan. 16, 1881, and Feb. 5, 1890, reached stages of 44.3 ft, discharge, 428,000 ft<sup>3</sup>/s, and 45.1 ft, discharge, 448,000 ft<sup>3</sup>/s, respectively, from floodmarks and information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 107,000 ft<sup>3</sup>/s Feb. 20, gage height, 23.23 ft; minimum, 8,080 ft<sup>3</sup>/s Aug. 17, gage height, 5.63 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	13800	33300	52100	29500	28200	49900	84900	14900	17500	10200	8620	10800		
2	13300	30200	51700	27100	21900	40200	88500	14600	17300	14500	8430	10600		
3	13200	27000	61800	27200	18500	32800	90900	14000	16100	20400	8470	10500		
4	13400	25100	81200	44000	17000	28900	86900	13700	13700	21500	8620	10600		
5	13600	23800	85000	73000	16000	27000	75500	13200	11900	19800	8510	10800		
6	13700	25000	82400	82000	15400	29200	57000	12800	11400	16300	8470	10800		
7	14400	26800	83100	94900	19000	37100	43100	13300	10900	14900	8470	11100		
8	16100	26100	76400	102000	23300	45100	34200	15100	10900	14900	8530	12200		
9	17200	24900	69300	98200	34100	56300	28800	18500	11000	13800	8480	12800		
10	16700	24000	64400	91600	55400	64600	26400	22100	11200	12900	8400	13100		
11	15700	21400	58000	84000	62400	67000	26100	25600	13900	12100	8320	13400		
12	15300	20200	51300	75200	62300	59100	23900	24900	16900	11300	8460	13500		
13	15000	19600	50100	65800	62900	51200	21200	21900	15300	10500	8510	13700		
14	14900	18800	51300	57100	59400	55700	19200	19600	13600	11000	8360	14900		
15	15000	18100	56800	42300	51900	64300	17900	19000	12400	11500	8250	15200		
16	15000	18100	81500	36700	45300	62400	16700	22200	11000	11300	8150	14700		
17	15800	17800	96000	34400	48700	52400	15900	23300	10400	10900	8200	13400		
18	16100	23200	94400	33300	76500	44300	15400	24500	10400	10700	8270	12800		
19	16100	30000	87100	33200	101000	37800	15100	22800	11300	10900	8250	12700		
20	16300	33500	85500	34100	105000	31100	15300	19700	13200	12300	8370	12700		
21	16300	34800	86900	33200	99200	27500	15100	18900	13900	14000	8590	12500		
22	15300	33100	89100	31300	99400	24600	15000	19200	14500	12900	8630	12100		
23	16200	30100	90300	30000	98700	21900	15100	18500	14500	11300	8750	12300		
24	19900	27700	84500	34100	93300	23100	15400	18700	14100	10200	9000	12400		
25	20000	25900	70200	35900	82100	24200	15200	18300	13300	9510	9010	12500		
26	18200	23900	61300	35100	75200	24700	14700	18600	12400	9180	9040	12500		
27	19400	23000	56300	38300	65300	24400	14500	19200	12000	9140	9050	12500		
28	21200	23400	49000	37800	56500	25800	14000	19000	11100	9480	9020	12400		
29	25900	27100	43500	34800	---	29300	14100	17800	10600	9460	9540	12400		
30	38600	41300	39100	31200	---	54900	14600	17000	10200	9080	11100	12600		
31	37600	---	34000	29500	---	79600	---	17100	---	8750	11500	---		
TOTAL	549200	777200	2123600	1536800	1593900	1296400	950600	578000	386900	384700	271370	374500		
MEAN	17720	25910	68500	49570	56930	41820	31690	18650	12900	12410	8754	12480		
MAX	38600	41300	96000	102000	105000	79600	90900	25600	17500	21500	11500	15200		
MIN	13200	17800	34000	27100	15400	21900	14000	12800	10200	8750	8150	10500		
CFSM	2.43	3.56	9.41	6.81	7.82	5.74	4.35	2.56	1.77	1.70	1.20	1.71		
IN.	2.81	3.97	10.85	7.85	8.14	6.62	4.86	2.95	1.98	1.97	1.39	1.91		
AC-FT	1089000	1542000	4212000	3048000	3162000	2571000	1886000	1146000	767400	763100	538300	742800		
CAL YR 1982	TOTAL	10472160	MEAN	28690	MAX	114000	MIN	6570	CFSM	3.94	IN.	53.51	AC-FT	20772000
WTR YR 1983	TOTAL	10823170	MEAN	29650	MAX	105000	MIN	8150	CFSM	4.07	IN.	55.31	AC-FT	21468000

## WILLAMETTE RIVER BASIN

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.

INSTRUMENTATION.--Temperature recorder since February 1951. Specific conductance recorder February 1951 to September 1972 and since October 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 141 micromhos Sept. 17, 1966; minimum daily, 30 micromhos Jan. 29, 1965.

WATER TEMPERATURES: Maximum, 25.5°C July 23, 1959; minimum, 0.0°C on several days in 1956, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 91 micromhos Feb. 7; minimum recorded, 40 micromhos Apr. 2.

WATER TEMPERATURES: Maximum, 21.0°C July 31, Aug. 14, 15; minimum, 3.5°C Dec. 31, Jan. 1.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	49	51	67	71	65	41	71				
2	---	52	52	68	79	71	42	69				
3	---	54	49	68	83	74	44	69				
4	---	56	45	65	86	76	43	69				
5	---	56	48	51	86	76	46	72				
6	---	55	48	49	87	76	51	73				
7	---	55	48	44	86	72	54	72				
8	---	55	49	43	84	66	59	69				
9	---	56	48	46	80	55	64	66				
10	---	56	48	47	61	54	67	66				
11	---	58	50	47	55	54	70	65				
12	---	58	51	48	55	56	72	67				
13	---	59	53	50	56	59	73	70				
14	---	59	57	53	56	59	76	72				
15	---	59	59	58	58	55	76	74				
16	---	59	53	59	61	55	78	69				
17	---	60	51	60	62	58	78	67				
18	---	57	53	60	53	60	76	66				
19	---	58	52	62	46	62	75	69				
20	---	58	53	62	48	67	74	75				
21	---	55	53	63	47	68	74	77				
22	---	56	52	63	48	70	73	77				
23	---	57	53	68	50	76	73	79				
24	58	55	55	68	52	78	73	79				
25	60	56	56	65	54	77	71	80				
26	59	58	56	64	56	73	71	82				
27	59	58	55	67	60	75	71	83				
28	61	58	57	66	61	76	73	86				
29	61	57	59	65	---	75	75	88				
30	52	54	60	67	---	58	74	86				
31	47	---	64	68	---	43	---	85				
MEAN	57	56	53	59	64	66	66	74				

## 14191000 WILLAMETTE RIVER AT SALEM, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	13.0	10.5	10.0	7.5	7.5	4.0	3.5	6.5	6.5	8.5	8.5
2	14.0	13.5	10.5	10.0	7.5	7.0	4.5	4.0	7.0	6.5	8.5	8.5
3	13.5	13.0	10.0	9.5	8.0	7.5	5.0	4.5	6.5	6.0	9.0	8.5
4	13.5	13.0	10.5	10.0	8.5	8.0	6.5	5.0	6.0	5.5	9.0	9.0
5	13.5	13.0	10.5	10.0	8.5	8.0	7.0	6.5	6.0	5.5	9.0	9.0
6	13.5	13.5	10.0	9.5	8.0	8.0	7.5	7.0	6.0	5.5	9.0	9.0
7	13.5	12.5	9.5	9.0	8.0	7.0	8.0	7.5	6.0	5.5	9.0	8.5
8	12.5	12.5	9.0	8.5	7.0	6.5	8.0	7.5	6.5	6.0	9.0	8.5
9	13.5	12.5	9.0	8.5	6.5	6.0	7.5	7.0	6.5	6.0	9.0	8.5
10	14.0	13.0	8.5	8.0	6.0	5.5	7.0	6.5	6.5	6.0	9.0	9.0
11	14.0	13.0	8.0	7.5	5.5	5.5	6.5	6.0	7.0	6.5	9.5	9.0
12	14.0	13.5	8.0	7.5	6.0	5.5	6.0	5.5	8.0	7.0	9.5	9.0
13	14.0	13.5	8.0	8.0	6.5	6.0	5.5	5.5	8.0	8.0	9.5	9.5
14	14.0	13.5	8.0	7.5	7.0	6.5	5.5	5.5	8.0	7.5	9.5	8.5
15	14.0	13.5	8.0	7.5	7.0	6.5	5.5	5.5	7.5	7.0	8.5	8.0
16	14.0	13.5	8.5	8.0	8.0	7.0	5.5	5.5	7.5	7.0	8.5	8.0
17	13.5	13.0	9.0	8.5	8.0	7.5	6.0	5.5	8.0	7.5	9.0	8.0
18	13.0	12.0	9.0	9.0	7.5	7.0	7.0	6.0	8.0	7.5	9.0	8.5
19	12.0	11.5	9.0	8.5	7.0	6.5	7.0	6.5	7.5	7.5	9.0	8.5
20	11.5	11.0	8.5	8.0	7.0	6.5	6.5	6.5	7.5	7.5	9.0	8.5
21	12.0	11.5	8.0	7.5	7.0	7.0	6.5	5.5	8.0	7.5	9.0	8.5
22	13.0	12.0	7.5	6.5	7.0	6.5	6.0	5.5	8.0	8.0	9.0	9.0
23	13.5	13.0	6.5	6.0	6.5	6.0	6.0	6.0	8.5	8.0	9.0	8.5
24	13.0	13.0	6.0	6.0	6.0	6.0	7.0	6.0	8.5	8.5	9.5	9.0
25	13.0	12.5	6.0	5.5	6.0	5.5	7.0	7.0	8.5	8.0	9.5	9.0
26	12.5	12.0	6.0	6.0	6.0	6.0	7.0	7.0	8.0	8.0	9.0	8.5
27	12.0	11.5	6.5	6.0	6.0	5.5	7.5	7.0	8.0	7.5	8.5	8.0
28	11.5	11.0	7.5	6.5	5.5	5.0	7.5	7.0	8.5	8.0	8.5	8.0
29	11.0	10.5	8.0	7.5	5.0	4.0	7.0	6.5	---	---	8.5	8.5
30	10.5	10.0	8.0	7.5	4.0	4.0	7.0	6.5	---	---	9.0	8.5
31	10.5	10.0	---	---	4.0	3.5	7.0	6.5	---	---	9.0	8.5
MONTH	14.0	10.0	10.5	5.5	8.5	3.5	8.0	3.5	8.5	5.5	9.5	8.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	14.0	13.0	13.0	12.5	16.0	15.5	20.5	19.0	17.0	16.0
2	8.5	8.0	13.0	12.0	12.5	12.0	15.5	13.5	20.0	19.0	17.5	16.0
3	8.0	8.0	13.0	11.5	13.5	11.5	14.0	13.0	20.0	18.5	18.0	16.5
4	8.5	8.0	13.0	12.0	15.0	13.0	15.0	13.5	19.5	18.5	18.0	17.0
5	9.0	8.5	13.5	12.5	16.5	14.0	16.0	15.0	20.0	18.5	17.5	16.0
6	9.5	9.0	13.0	12.0	17.5	15.5	15.5	14.0	20.0	18.5	17.5	16.0
7	9.5	9.0	12.5	11.5	18.5	15.5	14.5	13.5	20.5	19.0	17.5	16.5
8	9.5	9.0	11.5	10.5	19.0	17.5	14.0	12.5	20.0	19.0	17.0	16.5
9	9.0	8.5	10.5	10.0	18.5	16.5	15.0	12.5	20.0	18.5	16.5	15.5
10	8.5	8.0	10.5	10.0	16.5	16.0	16.5	14.0	19.5	18.0	16.0	15.5
11	8.5	8.0	11.5	10.5	16.0	15.0	18.5	16.0	19.0	17.5	16.0	15.5
12	9.0	8.0	12.5	11.0	15.0	14.0	18.0	17.5	19.0	17.5	17.0	15.5
13	9.5	8.5	13.5	12.5	16.0	14.0	18.0	17.0	20.0	17.0	17.5	16.5
14	10.5	9.0	13.5	12.5	16.0	15.5	17.0	15.5	21.0	19.0	17.5	16.5
15	11.0	10.0	12.5	11.5	16.0	15.5	15.5	15.0	21.0	19.5	17.5	16.5
16	12.0	10.5	11.5	11.0	16.0	15.0	17.0	15.0	20.5	19.5	17.0	16.0
17	12.0	11.5	12.0	11.0	16.5	15.5	17.5	16.0	20.5	19.0	16.5	15.5
18	13.0	12.0	12.5	11.5	15.5	15.0	18.0	17.0	20.5	19.0	16.0	15.0
19	13.5	12.5	13.0	12.0	15.0	14.5	17.5	17.0	20.0	19.0	15.0	14.5
20	13.5	13.0	14.5	13.0	14.5	14.0	18.0	17.0	19.5	18.5	14.5	13.5
21	13.0	12.5	15.0	14.0	15.5	14.0	17.5	16.5	19.0	18.0	15.0	13.5
22	12.5	12.0	15.5	14.5	15.5	15.0	19.0	17.0	19.0	18.0	16.0	14.5
23	12.0	11.5	16.0	14.5	15.0	14.0	19.5	18.0	18.5	17.5	16.0	15.5
24	11.5	11.0	16.0	15.5	14.5	14.0	19.5	18.5	18.5	17.5	16.5	15.5
25	11.5	11.0	16.0	15.5	16.0	14.0	18.5	17.5	18.5	17.0	16.0	15.5
26	12.0	11.0	15.5	15.0	16.5	15.0	18.5	17.0	19.0	17.5	16.0	15.5
27	13.0	11.5	16.0	15.0	17.0	15.5	18.0	17.0	19.0	18.0	16.0	15.5
28	13.5	12.5	16.5	15.5	17.0	16.0	18.0	16.5	18.5	17.5	15.5	14.5
29	14.0	13.0	17.0	16.0	17.0	16.0	18.5	17.0	17.5	16.5	14.5	14.0
30	14.5	13.0	16.5	15.0	17.0	15.5	20.0	18.0	17.0	15.5	14.5	13.5
31	---	---	15.0	13.0	---	---	21.0	19.0	17.0	15.5	---	---
MONTH	14.5	8.0	17.0	10.0	19.0	11.5	21.0	12.5	21.0	15.5	18.0	13.5



## WILLAMETTE RIVER BASIN

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 southwest of Willamina, 2.8 mi upstream from Willamina Creek, and at mile 45.5.

DRAINAGE AREA.--133 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Slight regulation occasionally at low flows by millpond upstream. No diversion above station.

AVERAGE DISCHARGE.--49 years, 627 ft<sup>3</sup>/s, 64.02 in/yr, 454,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 17.07 ft; minimum, 2.6 ft<sup>3</sup>/s Oct. 11, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	2300	9,220	10.90	Jan. 5	1700	6,530	8.91
Dec. 16	0100	*11,600	*12.55	Mar. 30	0430	6,450	8.85

Minimum, 23 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	38	395	1910	485	834	1220	2060	205	154	264	67	55		
2	32	312	2220	511	725	1030	1730	201	147	380	65	49		
3	29	265	5930	894	637	903	1430	193	139	344	63	44		
4	27	275	5330	5080	568	762	1160	182	123	294	60	39		
5	27	352	2630	5020	512	730	978	180	115	257	57	37		
6	39	492	1940	5860	679	798	835	187	109	230	55	34		
7	101	455	1360	5170	909	1250	725	230	103	216	54	32		
8	101	385	1050	4430	812	1730	637	444	94	208	51	32		
9	84	330	862	2970	2250	2930	601	553	92	179	50	43		
10	63	290	723	2090	2740	3390	673	487	166	162	48	41		
11	51	258	616	1530	2890	2320	638	402	155	148	48	94		
12	44	231	601	1190	3780	1990	563	349	127	138	47	60		
13	39	215	604	963	2980	2140	515	310	114	151	44	47		
14	36	193	1250	807	2110	2760	475	290	105	194	41	41		
15	33	177	4850	693	1720	2370	440	394	145	156	38	38		
16	32	273	7450	610	1860	1830	408	380	128	141	37	35		
17	49	1090	4670	554	3230	1410	382	323	119	130	35	34		
18	58	1050	3340	581	3800	1100	357	295	241	124	35	33		
19	47	1330	2590	596	2800	897	334	272	297	167	34	40		
20	41	1200	3260	660	2470	754	319	254	242	145	34	34		
21	69	947	2720	588	2070	654	300	235	215	125	33	29		
22	475	742	2410	644	2600	645	290	222	183	111	31	27		
23	312	601	1990	1250	3070	823	336	205	181	104	32	26		
24	185	502	1550	1240	2170	700	299	189	177	99	33	27		
25	149	430	1260	1080	1720	700	271	178	183	95	31	26		
26	266	386	1130	1840	2400	610	272	168	157	91	30	26		
27	291	444	918	1960	1800	665	250	157	149	89	30	26		
28	518	951	783	1540	1440	824	238	146	136	96	30	25		
29	1890	1230	681	1250	---	3650	230	138	132	84	80	25		
30	763	2140	602	1160	---	4980	217	134	139	76	84	24		
31	485	---	538	985	---	2940	---	149	---	70	74	---		
TOTAL	6374	17941	67768	54231	55576	49505	17963	8052	4567	5068	1451	1123		
MEAN	206	598	2186	1749	1985	1597	599	260	152	163	46.8	37.4		
MAX	1890	2140	7450	5860	3800	4980	2060	553	297	380	84	94		
MIN	27	177	538	485	512	610	217	134	92	70	30	24		
CFSM	1.55	4.50	16.4	13.2	14.9	12.0	4.50	1.95	1.14	1.23	.35	.28		
IN.	1.78	5.02	18.95	15.17	15.54	13.85	5.02	2.25	1.28	1.42	.41	.31		
AC-FT	12640	35590	134400	107600	110200	98190	35630	15970	9060	10050	2880	2230		
CAL YR 1982	TOTAL	269376	MEAN	738	MAX	7770	MIN	11	CFSM	5.55	IN.	75.34	AC-FT	534300
WTR YR 1983	TOTAL	289619	MEAN	793	MAX	7450	MIN	24	CFSM	5.96	IN.	81.01	AC-FT	574500

## 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 north of Willamina and at mile 6.2.

DRAINAGE AREA.--64.7 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1934 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 315 ft National Geodetic Vertical Datum of 1929 (plane-table survey). Prior to Oct. 1, 1939, water-stage recorder at site on left bank at datum 1.00 ft 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.--49 years, 262 ft<sup>3</sup>/s, 54.99 in/yr, 189,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.54 ft, from rating curve extended above 3,400 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 11.65 ft; minimum, 5.4 ft<sup>3</sup>/s July 15, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1931, reached a stage of about 12 ft, from information by local resident; discharge, 8,200 ft<sup>3</sup>/s, from rating curve extended above 3,400 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 11.65 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	2200	2,650	7.37	Dec. 15	2400	*4,340	*9.15

Minimum, 17 ft<sup>3</sup>/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	20	132	702	242	342	658	959	125	87	121	39	43		
2	19	105	941	242	309	555	847	122	86	150	38	37		
3	18	89	2000	327	282	473	708	117	80	117	37	33		
4	18	94	1700	1350	259	409	595	113	76	95	36	31		
5	18	121	1010	1590	240	393	510	113	72	84	35	30		
6	36	174	729	1960	277	390	443	114	69	77	34	28		
7	61	177	539	1960	323	622	390	131	66	74	33	27		
8	47	148	431	1760	311	859	348	205	63	72	32	28		
9	36	124	363	1260	804	1410	330	252	63	66	32	32		
10	30	107	310	1010	1070	1610	359	216	88	62	32	40		
11	25	94	270	790	1290	1140	337	187	76	58	32	47		
12	23	85	257	644	1510	941	305	167	69	57	31	36		
13	22	79	241	530	1300	871	282	152	63	63	32	31		
14	21	73	468	451	998	1090	262	147	61	61	31	29		
15	20	68	1850	391	820	1090	244	208	69	55	31	28		
16	21	108	2880	345	872	878	228	199	61	54	30	27		
17	29	391	2020	315	1460	703	216	176	61	52	29	27		
18	29	419	1390	303	1550	573	204	162	93	51	29	27		
19	25	573	1110	292	1210	478	193	150	92	95	28	28		
20	23	542	1170	282	1150	413	184	140	81	67	27	25		
21	31	429	1040	262	1030	364	174	132	76	57	27	24		
22	113	333	920	279	1200	343	171	124	67	52	27	23		
23	72	267	782	491	1250	402	187	115	68	50	27	23		
24	48	224	644	476	1000	364	175	108	68	48	28	23		
25	44	192	547	424	844	361	159	103	65	47	26	23		
26	83	171	492	550	1140	328	153	98	62	46	26	23		
27	99	178	416	563	934	355	144	94	59	47	25	24		
28	304	306	364	503	767	398	140	88	56	48	30	23		
29	629	395	322	451	---	1520	137	82	57	44	50	23		
30	240	720	290	422	---	1880	130	85	64	41	62	22		
31	157	---	263	382	---	1260	---	91	---	40	44	---		
TOTAL	2361	6918	26461	20847	24542	23131	9514	4314	2118	2051	1020	865		
MEAN	76.2	231	854	672	877	746	317	139	70.6	66.2	32.9	28.8		
MAX	629	720	2880	1960	1550	1880	959	252	93	150	62	47		
MIN	18	68	241	242	240	328	130	82	56	40	25	22		
CFSM	1.18	3.57	13.2	10.4	13.6	11.5	4.90	2.15	1.09	1.02	.51	.45		
IN.	1.36	3.98	15.21	11.99	14.11	13.30	5.47	2.48	1.22	1.18	.59	.50		
AC-FT	4680	13720	52490	41350	48680	45880	18870	8560	4200	4070	2020	1720		
CAL YR 1982	TOTAL	117142	MEAN	321	MAX	3030	MIN	13	CFSM	4.96	IN.	67.35	AC-FT	232400
WTR YR 1983	TOTAL	124142	MEAN	340	MAX	2880	MIN	18	CFSM	5.26	IN.	71.38	AC-FT	246200

## WILLAMETTE RIVER BASIN

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 northwest of Whiteson, 1.4 mi downstream from Salt Creek, and at mile 16.71.

DRAINAGE AREA.--502 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 82.30 ft National Geodetic Vertical Datum of 1929. 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.--43 years, 1,780 ft<sup>3</sup>/s, 48.15 in/yr, 1,290,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 47.20 ft; minimum, 3.2 ft<sup>3</sup>/s Aug. 24, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 46.9 ft, from Oregon State Highway Department bridge plans.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	2400	15,300	39.56	Feb. 19	0700	14,600	39.09
Dec. 16	1630	*22,600	*42.95	Mar. 31	0330	14,500	39.00
Jan. 7	1200	16,700	40.40				

Minimum, 49 ft<sup>3</sup>/s Aug. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	102	845	5650	1580	2740	4440	10000	612	376	325	130	160		
2	79	687	4860	1480	2390	3810	6950	583	357	603	130	137		
3	62	554	6820	1710	2100	3200	5240	564	347	684	125	119		
4	61	476	12000	5030	1860	2770	4120	542	319	567	120	105		
5	64	522	13200	10700	1670	2470	3320	531	291	483	115	96		
6	65	783	8700	13900	1610	2650	2770	555	272	420	110	94		
7	119	968	5380	16200	2630	3450	2390	547	257	381	100	85		
8	222	839	3310	13400	2600	5130	2130	799	246	380	95	80		
9	195	701	2460	12000	4160	6110	1960	1300	237	353	95	80		
10	153	601	2090	9270	8130	9840	2080	1370	257	314	90	95		
11	119	526	1830	6200	9630	10900	2270	1130	371	279	87	104		
12	95	465	1690	4180	9920	7950	2040	973	309	261	86	168		
13	84	426	1770	3210	12300	6190	1790	850	267	253	89	122		
14	74	394	1860	2710	10300	6670	1620	759	241	296	85	100		
15	65	363	5490	2390	7190	7920	1480	775	251	304	78	88		
16	64	346	16200	2110	5720	6860	1360	1020	296	268	73	82		
17	65	1170	16800	1920	6340	5120	1260	836	250	262	66	80		
18	95	2490	14000	1850	10800	3840	1180	732	267	253	63	78		
19	115	2890	11500	1850	13800	3030	1090	669	501	286	60	79		
20	111	3250	9530	1990	10400	2530	1030	617	474	403	55	83		
21	101	2850	9700	1880	7920	2200	952	570	408	310	52	78		
22	314	2080	8930	1800	6970	2040	890	530	354	268	56	63		
23	793	1590	7620	2940	8250	2360	961	493	326	240	55	61		
24	452	1250	5960	3990	8760	2570	977	448	328	210	53	60		
25	309	1050	4440	3640	6760	2420	877	411	329	190	58	61		
26	332	912	3600	3870	6320	2120	811	389	317	180	59	62		
27	500	855	2990	5400	7160	2040	767	365	293	180	56	58		
28	557	1580	2470	5120	5760	2390	716	345	265	170	62	61		
29	2580	2510	2120	4130	---	3840	690	324	250	160	74	62		
30	2600	4680	1890	3410	---	10400	654	322	253	150	170	57		
31	1220	---	1710	3110	---	13600	---	340	---	140	201	---		
TOTAL	11767	38653	196570	152970	184190	150860	64375	20301	9309	9573	2748	2658		
MEAN	380	1288	6341	4935	6578	4866	2146	655	310	309	88.6	88.6		
MAX	2600	4680	16800	16200	13800	13600	10000	1370	501	684	201	168		
MIN	61	346	1690	1480	1610	2040	654	322	237	140	52	57		
CFSM	.76	2.57	12.6	9.83	13.1	9.69	4.27	1.30	.62	.62	.18	.18		
IN.	.87	2.86	14.57	11.34	13.65	11.18	4.77	1.50	.69	.71	.20	.20		
AC-FT	23340	76670	389900	303400	365300	299200	127700	40270	18460	18990	5450	5270		
CAL YR 1982	TOTAL	785103.9	MEAN	2151	MAX	21600	MIN	6.9	CFSM	4.28	IN.	58.18	AC-FT	1557000
WTR YR 1983	TOTAL	843974	MEAN	2312	MAX	16800	MIN	52	CFSM	4.61	IN.	62.54	AC-FT	1674000

## WILLAMETTE RIVER BASIN

229

14194300 NORTH YAMHILL RIVER NEAR FAIRDALE, OR

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 downstream from small tributary, 1.3 mi upstream from Kutch Creek, 2.1 mi west of Fairdale, 9.5 mi west of Yamhill and at mile 28.4.

DRAINAGE AREA.--9.03 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1958 to March 1966, October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft, from topographic map.

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

AVERAGE DISCHARGE.--23 years (water years 1959-65, 1968-83), 48.5 ft<sup>3</sup>/s, 72.94 in/yr, 35,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 6.88 ft, from rating curve extended above 1,000 ft<sup>3</sup>/s; maximum gage height, 9.7 ft Dec. 23, 1964 (backwater from debris); minimum discharge, 2.3 ft<sup>3</sup>/s Sept. 23-26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft<sup>3</sup>/s and maximum discharge (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	2030	504	4.59	Jan. 5	1230	382	4.20
Dec. 15	2230	*514	*4.62				

Minimum, 3.8 ft<sup>3</sup>/s Oct. 14, 15, Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	4.1	34	137	50	69	96	132	24	16	19	8.9	10		
2	4.3	27	150	51	64	86	120	23	16	20	8.7	9.0		
3	4.1	23	318	63	59	79	106	22	15	18	8.5	8.2		
4	4.0	24	288	143	55	72	92	21	15	16	8.2	7.7		
5	4.0	32	160	270	52	71	81	21	14	15	8.2	7.5		
6	6.9	43	113	300	59	71	72	21	14	14	7.9	7.1		
7	8.4	42	88	274	64	96	66	27	13	14	7.6	6.8		
8	7.2	36	75	279	64	120	60	34	13	14	7.5	7.0		
9	6.4	30	67	202	130	177	57	46	13	13	7.5	7.7		
10	5.4	26	59	152	151	218	59	38	15	12	7.4	13		
11	4.7	23	54	123	158	164	57	33	14	12	7.6	13		
12	4.4	21	51	101	198	138	53	30	13	12	7.2	8.9		
13	4.1	19	49	87	180	133	50	28	13	14	6.8	7.8		
14	3.9	17	72	77	144	155	48	28	12	14	6.5	7.4		
15	3.9	16	208	70	125	141	45	47	14	13	6.4	7.0		
16	4.6	29	354	65	142	119	44	44	12	12	6.3	6.4		
17	7.2	79	291	60	205	100	41	39	12	12	6.3	6.1		
18	6.4	86	215	59	214	86	39	35	16	12	6.3	6.5		
19	5.4	105	168	56	170	77	38	31	18	19	6.3	6.2		
20	5.1	94	163	54	150	70	36	29	16	14	6.3	5.8		
21	13	78	159	52	140	66	33	26	14	13	6.2	5.5		
22	32	64	157	54	159	64	32	24	13	12	6.2	5.5		
23	15	53	134	77	190	71	33	23	14	12	6.5	5.4		
24	10	44	109	81	153	67	31	21	13	11	6.8	5.1		
25	13	38	94	78	130	62	30	20	13	11	6.7	5.1		
26	23	33	85	107	145	61	28	19	13	11	6.5	4.8		
27	24	38	75	125	126	67	26	18	12	11	6.5	4.8		
28	65	66	69	111	108	74	26	16	12	11	7.8	4.6		
29	127	83	63	94	---	204	25	16	12	9.6	11	4.1		
30	62	137	58	83	---	238	24	16	13	9.1	15	3.9		
31	42	---	54	76	---	166	---	17	---	8.8	9.5	---		
TOTAL	530.5	1440	4137	3474	3604	3409	1584	837	413	408.5	235.1	207.9		
MEAN	17.1	48.0	133	112	129	110	52.8	27.0	13.8	13.2	7.58	6.93		
MAX	127	137	354	300	214	238	132	47	18	20	15	13		
MIN	3.9	16	49	50	52	61	24	16	12	8.8	6.2	3.9		
CFSM	1.89	5.32	14.7	12.4	14.3	12.2	5.85	2.99	1.53	1.46	.84	.77		
IN.	2.19	5.93	17.04	14.31	14.85	14.04	6.53	3.45	1.70	1.68	.97	.86		
AC-FT	1050	2860	8210	6890	7150	6760	3140	1660	819	810	466	412		
CAL YR 1982	TOTAL	19566.0	MEAN	53.6	MAX	410	MIN	3.1	CFSM	5.94	IN.	80.60	AC-FT	38810
WTR YR 1983	TOTAL	20280.0	MEAN	55.6	MAX	354	MIN	3.9	CFSM	6.16	IN.	83.55	AC-FT	40230

## WILLAMETTE RIVER BASIN

## 14195500 HASKINS CREEK RESERVOIR NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'43", long 123°21'23", in SW¼NW¼ sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on control tower 250 ft upstream from dam on Haskins Creek, 11 mi northwest of McMinnville, and at mile 5.1.

DRAINAGE AREA.--6.88 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 1738: Drainage area. The maximum contents for water year 1978 published in the report for that year is in error and should not be used, see revision published in the report for water year 1979.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of McMinnville). Prior to February 1981, at datum 20.0 ft lower.

REMARKS.--Reservoir is formed by earthfill dam equipped with five siphon spillways which act as overflow weirs until priming occurs, approximately 815.5 ft elevation. Capacity of reservoir is 733 acre-ft between elevations 741.5 ft, invert of outlet tunnel, and 815.0 ft, crest of siphon spillways. Dead storage negligible. Rated capacity of three siphons is 700 ft<sup>3</sup>/s each and remaining two siphons 350 ft<sup>3</sup>/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.--Elevations and capacity table furnished by city of McMinnville, Water and Light Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 748 acre-ft Nov. 17, 1954, elevation, 815.65 ft, present datum; no contents most of time during winter months.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 733 acre-ft many days during the year, elevation, 815.0 ft, present datum; no contents Jan. 18 to Mar. 7.

## MONTHEND ELEVATIONS AND CONTENTS AT 0800, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	815.0	733	-
Oct. 31.....	815.0	733	0
Nov. 30.....	815.0	733	0
Dec. 31.....	815.0	733	0
CAL YR 1982.....	-	-	+733
Jan. 31.....	-	0	-733
Feb. 28.....	-	0	0
Mar. 31.....	815.0	733	+733
Apr. 30.....	815.0	733	0
May 31.....	815.0	733	0
June 30.....	815.0	733	0
July 31.....	813.5	699	-34
Aug. 31.....	812.0	666	-33
Sept. 30.....	813.5	699	+33
WTR YR 1983.....	-	-	-34



## 14196001 HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'39", long 123°21'06", in SE¼NW¼ sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on right bank 800 ft downstream from Haskins Creek Reservoir, 11 mi northwest of McMinnville, and at mile 5.0.

DRAINAGE AREA.--6.90 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 1738: Drainage area. Maximum discharge for water year 1957, published in WSP 1518, has been found to be unreliable and should not be used.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 707 ft National Geodetic Vertical Datum of 1929 (topographic survey of 1955). Prior to Aug. 5, 1952, water-stage recorder at site 600 ft upstream at different datum.

REMARKS.--Records fair. All records given herein include flow in pipeline which diverts 600 ft above station for municipal supply of McMinnville. Flow regulated by Haskins Creek Reservoir (see station 14195500); during winter months reservoir is empty except when inflow exceeds capacity of outlet tunnel. Water from McGuire Lake (station 14302800) on the Nestucca River is diverted through a tunnel to Haskins Creek Reservoir to augment summer flows.

COOPERATION.--Meter readings for diversion and elevations of Haskins Creek Reservoir furnished by city of McMinnville.

AVERAGE DISCHARGE.--32 years, 32.6 ft<sup>3</sup>/s, 64.16 in/yr, 23,620 acre-ft/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,030 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 5.98 ft, from floodmark, from rating curve extended above 400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; maximum daily, 515 ft<sup>3</sup>/s Jan. 21, 1972; minimum daily, 0.10 ft<sup>3</sup>/s Oct. 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 305 ft<sup>3</sup>/s Dec. 16; minimum daily, 3.9 ft<sup>3</sup>/s Oct. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	16	75	39	48	87	105	17	10	8.2	10	19
2	8.4	12	103	40	45	73	96	16	9.9	9.9	10	9.9
3	8.3	11	186	50	42	66	81	16	10	8.3	9.6	7.2
4	7.8	10	166	101	39	62	75	17	10	8.1	11	6.9
5	5.0	14	105	160	36	58	69	16	9.9	7.6	11	6.5
6	4.5	20	78	208	44	57	59	16	12	8.0	10	6.2
7	5.3	21	57	192	47	31	54	18	15	8.2	9.8	6.8
8	5.6	16	50	192	48	43	48	24	14	7.1	10	7.1
9	5.0	14	44	139	98	62	47	29	7.8	7.3	10	12
10	4.4	12	41	119	111	65	49	25	6.6	6.5	10	19
11	4.8	11	36	121	123	67	45	22	5.8	7.9	9.7	22
12	5.3	9.6	35	117	152	70	43	20	8.0	7.3	9.3	22
13	5.3	9.1	33	114	156	96	40	18	8.8	7.5	9.2	16
14	5.3	8.4	78	110	118	112	38	17	9.6	8.0	11	8.6
15	5.3	7.1	208	104	101	106	35	27	8.8	7.6	12	8.4
16	5.5	14	305	98	111	93	32	25	8.6	7.7	12	8.4
17	5.4	38	255	133	147	85	30	23	8.0	7.9	12	11
18	4.7	42	182	82	159	59	30	21	7.9	7.9	12	17
19	4.7	50	141	43	144	61	28	20	10	7.4	11	16
20	4.3	51	140	40	130	50	26	18	9.1	9.0	10	15
21	3.9	41	132	38	122	49	23	17	9.1	7.6	9.9	11
22	8.0	33	130	41	138	49	24	16	9.3	9.2	9.8	11
23	13	28	106	59	156	55	25	15	8.5	9.0	10	12
24	6.6	24	85	57	139	49	24	14	7.0	8.5	9.1	11
25	8.1	20	80	54	116	46	22	12	7.4	7.3	9.4	9.5
26	19	18	64	77	140	45	21	12	7.6	6.8	9.1	6.6
27	17	23	57	80	114	48	21	12	8.1	6.9	9.4	7.1
28	34	47	52	71	99	55	20	11	10	6.9	7.5	7.0
29	54	58	48	62	---	174	19	11	8.6	8.2	24	7.8
30	30	82	42	57	---	181	17	9.7	6.7	11	40	8.6
31	20	---	41	53	---	126	---	11	---	11	26	---
TOTAL	327.1	760.2	3155	2851	2923	2280	1246	545.7	272.1	249.8	373.8	336.6
MEAN	10.6	25.3	102	92.0	104	73.5	41.5	17.6	9.07	8.06	12.1	11.2
MAX	54	82	305	208	159	181	105	29	15	11	40	22
MIN	3.9	7.1	33	38	36	31	17	9.7	5.8	6.5	7.5	6.2
AC-FT	649	1510	6260	5650	5800	4520	2470	1080	540	495	741	668
MEAN†	9.92	25.4	102	80.0	104	85.4	41.5	17.6	9.11	7.50	5.42	3.58
CFSM†	1.44	3.68	14.8	11.6	15.1	12.4	6.01	2.55	1.32	1.09	0.786	0.519
IN.†	1.66	4.10	17.01	13.37	15.76	14.28	6.71	2.94	1.47	1.25	0.91	0.58
AC-FT†	610	1510	6260	4917	5800	5253	2470	1080	542	461	333	213

CAL YR 1982 TOTAL 14372.8 MEAN 39.4 MAX 305 MIN 3.9 AC-FT 28510 MEAN† 38.5 CFSM† 5.58 IN.† 75.79 AC-FT† 27885  
WTR YR 1983 TOTAL 15320.3 MEAN 42.0 MAX 305 MIN 3.9 AC-FT 30390 MEAN† 40.7 CFSM† 5.90 IN.† 80.07 AC-FT† 29460

† Adjusted for change in contents of Haskins Creek Reservoir and diversion from McGuire Lake.

## WILLAMETTE RIVER BASIN

14198500 MOLALLA RIVER ABOVE PINE CREEK, NEAR WILHOIT, OR

LOCATION.--Lat 45°00'35", long 122°28'45", in NE¼NE¼ sec.31, T.6 S., R.3 E., Clackamas County, Hydrologic Unit 17090009, on right bank 0.5 mi upstream from Pine Creek, 5 mi southeast of Wilhoit, and at mile 32.5.

DRAINAGE AREA.--97.0 mi<sup>2</sup>, at cableway 0.2 mi 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 National Geodetic Vertical Datum of 1929 (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 downstream at datums 8.42 ft and 10.44 ft lower, respectively. Feb. 10, 1961, to July 21, 1966, water-stage recorder at site 0.2 mi downstream at datum 5.99 ft lower.

REMARKS.--Records excellent. No regulation or diversion above station. Records given herein are for measuring site.

AVERAGE DISCHARGE.--48 years, 546 ft<sup>3</sup>/s, 76.44 in/yr, 395,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.3 ft, from floodmark, site and datum then in use, from rating curve extended above 5,200 ft<sup>3</sup>/s; minimum, 18 ft<sup>3</sup>/s Oct. 3, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0030	6,330	9.09	Feb. 17	2100	4,260	7.84
Dec. 16	0300	5,190	8.43	Mar. 30	0030	5,760	8.75
Jan. 6	1930	*7,750	*9.81				

Minimum, 42 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	112	518	1240	298	468	679	1700	319	254	376	146	115		
2	99	417	1290	313	414	619	1460	305	241	691	138	105		
3	94	355	4160	485	365	560	1160	293	222	567	132	92		
4	85	309	4070	2520	328	553	948	276	203	437	125	82		
5	78	375	1940	2970	297	586	816	267	184	359	117	79		
6	121	653	2060	5930	359	858	701	269	171	307	113	71		
7	230	551	1360	5370	443	1150	621	410	160	285	106	67		
8	278	473	971	3520	629	1590	548	598	151	278	103	67		
9	267	397	753	2080	1400	1560	505	639	144	278	102	89		
10	209	338	607	1370	1240	1880	488	608	320	243	96	79		
11	170	287	507	1040	1290	1400	457	591	302	219	103	109		
12	142	265	461	837	1500	1130	428	623	269	203	96	103		
13	123	249	493	688	1500	1100	403	571	233	267	89	89		
14	109	222	755	579	1260	1220	392	532	208	475	83	79		
15	99	203	2410	499	1040	1060	389	999	194	384	80	73		
16	93	226	4200	458	1110	890	392	1270	179	351	78	68		
17	145	1150	2630	438	2660	742	406	913	170	347	74	65		
18	136	1880	1720	428	3760	640	443	703	222	307	72	63		
19	120	1600	1310	535	2210	560	460	571	338	456	70	68		
20	108	1180	1630	487	1690	493	450	489	419	480	69	59		
21	109	853	1890	433	1460	463	461	438	344	424	66	54		
22	213	658	1450	416	1790	463	435	390	295	363	64	52		
23	371	544	1070	581	1420	548	405	357	293	311	63	51		
24	283	459	819	664	1200	555	385	332	321	274	64	52		
25	250	409	672	615	1010	633	355	308	278	249	61	50		
26	446	382	600	674	888	635	346	282	249	228	68	49		
27	544	419	515	802	796	659	337	259	226	208	62	49		
28	541	1090	451	690	730	668	318	241	206	206	61	48		
29	2110	1350	399	598	---	2550	314	225	216	185	141	45		
30	1150	1570	359	574	---	4390	306	212	206	166	176	42		
31	688	---	325	526	---	2460	---	248	---	153	117	---		
TOTAL	9523	19382	43117	37418	33257	33294	16829	14538	7218	10077	2935	2114		
MEAN	307	646	1391	1207	1188	1074	561	469	241	325	94.7	70.5		
MAX	2110	1880	4200	5930	3760	4390	1700	1270	419	691	176	115		
MIN	78	203	325	298	297	463	306	212	144	153	61	42		
CFSM	3.16	6.66	14.3	12.4	12.2	11.1	5.78	4.84	2.48	3.35	.98	.73		
IN.	3.65	7.43	16.54	14.35	12.75	12.77	6.45	5.58	2.77	3.86	1.13	.81		
AC-FT	18890	38440	85520	74220	65970	66040	33380	28840	14320	19990	5820	4190		
CAL YR 1982	TOTAL	214048	MEAN	586	MAX	6470	MIN	28	CFSM	6.04	IN.	82.09	AC-FT	424600
WTR YR 1983	TOTAL	229702	MEAN	629	MAX	5930	MIN	42	CFSM	6.48	IN.	88.09	AC-FT	455600

## WILLAMETTE RIVER BASIN

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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.

DRAINAGE AREA.--58.7 mi<sup>2</sup>.

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 is WSP 1318.

REVISED RECORDS.--WSP 2135: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 155 ft, 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 downstream at different datum. Oct. 1, 1940, to Sept. 30, 1952, nonrecording gage at present site at 151.35 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--29 years (water years 1941-52, 1967-83), 222 ft<sup>3</sup>/s, 51.36 in/yr, 160,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,310 ft<sup>3</sup>/s Jan. 21, 1972, gage height, 15.26 ft, from floodmark; minimum, 0.04 ft<sup>3</sup>/s July 23, 24, Aug. 26, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0300	2,160	10.09	Feb. 18	1000	1,840	9.28
Dec. 16	0530	1,820	9.25	Mar. 30	0830	2,140	9.89
Jan. 6	1930	*3,310	*11.82				

Minimum, 13 ft<sup>3</sup>/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	21	130	400	180	255	367	924	114	118	145	60	45		
2	20	100	340	168	238	332	840	109	97	281	54	44		
3	18	83	1040	228	218	297	673	103	86	263	51	38		
4	17	78	1530	726	200	286	547	95	76	203	47	33		
5	16	94	796	1190	188	273	454	92	70	165	45	30		
6	16	163	792	2690	200	321	382	94	64	147	42	28		
7	19	145	562	2330	305	448	335	138	58	130	40	26		
8	54	120	430	1730	337	592	291	245	54	124	38	25		
9	49	100	346	1160	649	614	273	289	50	122	35	29		
10	40	88	291	799	670	775	302	268	128	103	33	30		
11	33	81	250	607	604	614	294	230	132	88	35	35		
12	30	73	235	499	649	520	265	213	109	79	34	36		
13	27	69	245	418	645	496	238	193	92	94	29	30		
14	24	63	281	358	562	562	218	175	81	163	28	27		
15	23	58	610	310	487	490	198	270	79	142	26	24		
16	22	57	1440	281	478	424	185	346	72	126	24	22		
17	24	120	1110	265	884	370	178	278	67	112	23	21		
18	28	490	852	248	1680	318	170	233	79	105	22	22		
19	25	439	670	291	1130	278	170	203	107	180	21	22		
20	22	391	940	265	880	245	163	173	120	230	20	21		
21	21	255	976	243	733	225	158	151	101	205	20	18		
22	30	205	844	228	820	220	149	136	92	173	18	16		
23	50	198	698	273	670	228	156	120	99	147	18	14		
24	70	175	547	300	583	225	145	109	114	128	18	15		
25	50	147	448	294	517	324	132	99	94	116	18	17		
26	70	130	391	316	490	294	124	90	86	105	17	16		
27	100	130	324	358	445	300	118	83	81	94	18	16		
28	107	235	278	327	403	286	112	76	73	94	20	18		
29	385	332	245	294	---	782	118	70	85	85	51	17		
30	225	466	218	302	---	1850	110	67	85	73	88	15		
31	156	---	198	281	---	1310	---	99	---	66	52	---		
TOTAL	1792	5215	18327	17959	15920	14666	8422	4961	2649	4288	1045	750		
MEAN	57.8	174	591	579	569	473	281	160	88.3	138	33.7	25.0		
MAX	385	490	1530	2690	1680	1850	924	346	132	281	88	45		
MIN	16	57	198	168	188	220	110	67	50	66	17	14		
CFSM	.98	2.96	10.1	9.86	9.69	8.06	4.79	2.73	1.50	2.35	.57	.43		
IN.	1.14	3.30	11.61	11.38	10.09	9.29	5.34	3.14	1.68	2.72	.66	.48		
AC-FT	3550	10340	36350	35620	31580	29090	16710	9840	5250	8510	2070	1490		
CAL YR 1982	TOTAL	84660.32	MEAN	232	MAX	2500	MIN	.62	CFSM	3.95	IN.	53.65	AC-FT	167900
WTR YR 1983	TOTAL	95994	MEAN	263	MAX	2690	MIN	14	CFSM	4.48	IN.	60.83	AC-FT	190400

## WILLAMETTE RIVER BASIN

14202500 TUALATIN RIVER NEAR GASTON, OR

LOCATION.--Lat 45°26'11", long 123°10'07", in SE¼SW¼ sec.34, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on right bank 1.5 mi west of Gaston, and at mile 63.9.

DRAINAGE AREA.--48.5 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to September 1956, October 1972 to September 1976, October 1978 to current year. October 1976 to September 1978 in reports of Oregon Water Resources Department. Prior to October 1973 published as "at Gaston."

GAGE.--Water-stage recorder. Altitude of gage is 170 ft, by barometer. Prior to May 20, 1942, water-stage recorder at site 1.5 mi downstream at datum 164.18 ft National Geodetic Vertical Datum of 1929. May 20, 1942, to Sept. 30, 1956, nonrecording gage at present site at different datum.

REMARKS.--Water-discharge records good except those for November to March, which are poor. Slight diurnal fluctuation caused by logponds upstream. Small diversions for irrigation above station. In 1949 city of Hillsboro began diverting about 5 ft<sup>3</sup>/s for municipal supply. Some water is diverted from Roaring Creek upstream for Forest Grove municipal supply.

AVERAGE DISCHARGE.--25 years (water years 1941-56, 1973-76, 1979-83), 199 ft<sup>3</sup>/s, 55.72 in/yr, 144,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft<sup>3</sup>/s Dec. 21, 1955, gage height, 13.18 ft, site and datum then in use; minimum, 0.20 ft<sup>3</sup>/s Sept. 22, 23, 1951, Aug. 14, 15, Sept. 25, Oct. 8, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	2300	2,190	15.70	Dec. 16	0130	*2,650	*17.00
Minimum, 15 ft <sup>3</sup> /s Oct. 16, Aug. 15, 16, 18.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	20	120	700	220	330	450	636	95	48	65	25	32		
2	19	75	721	220	300	400	615	90	44	77	24	30		
3	19	62	1420	300	260	360	528	85	48	63	21	29		
4	19	75	1340	600	240	330	449	80	46	51	22	27		
5	19	95	740	942	230	330	378	76	44	45	21	26		
6	21	140	600	1170	260	330	325	75	43	41	20	24		
7	30	140	520	1250	280	500	292	81	41	35	19	24		
8	29	110	460	1100	350	850	267	96	40	33	19	23		
9	27	95	410	900	550	1140	257	122	39	32	19	23		
10	23	78	370	700	740	1540	284	108	51	30	18	37		
11	21	70	340	550	800	894	270	95	49	30	18	51		
12	20	62	320	450	860	649	254	86	45	30	18	38		
13	19	57	330	400	920	592	239	78	41	32	18	32		
14	18	52	380	350	720	818	227	74	39	34	17	26		
15	17	48	1170	310	620	735	212	93	46	32	16	26		
16	16	60	1880	300	660	530	200	92	42	31	16	25		
17	18	380	1530	290	760	430	192	83	41	31	16	25		
18	19	440	1000	270	900	360	181	77	46	32	16	25		
19	19	480	900	260	930	300	171	70	49	52	19	27		
20	17	420	880	250	830	270	163	65	46	47	20	24		
21	21	360	850	240	720	250	152	61	51	35	20	22		
22	91	300	800	240	660	255	143	58	43	32	20	22		
23	63	240	660	330	780	276	149	53	43	30	20	21		
24	39	200	550	390	705	255	142	50	43	29	20	21		
25	33	180	450	420	630	232	131	48	44	29	20	22		
26	67	160	390	460	777	223	126	47	40	29	20	22		
27	85	200	350	500	593	231	119	45	39	28	20	22		
28	156	300	310	500	500	254	112	44	37	30	21	21		
29	729	450	280	450	---	983	106	42	38	27	32	21		
30	450	660	260	410	---	1200	100	41	39	26	39	21		
31	250	---	240	370	---	798	---	49	---	28	35	---		
TOTAL	2394	6109	21151	15142	16905	16765	7420	2259	1305	1146	649	789		
MEAN	77.2	204	682	488	604	541	247	72.9	43.5	37.0	20.9	26.3		
MAX	729	660	1880	1250	930	1540	636	122	51	77	39	51		
MIN	16	48	240	220	230	223	100	41	37	26	16	21		
CFSM	1.59	4.21	14.1	10.1	12.5	11.2	5.09	1.50	.90	.76	.43	.54		
IN.	1.84	4.69	16.22	11.61	12.97	12.86	5.69	1.73	1.00	.88	.50	.61		
AC-FT	4750	12120	41950	30030	33530	33250	14720	4480	2590	2270	1290	1560		
CAL YR 1982	TOTAL	88814	MEAN	243	MAX	2100	MIN	15	CFSM	5.01	IN.	68.12	AC-FT	176200
WTR YR 1983	TOTAL	92034	MEAN	252	MAX	1880	MIN	16	CFSM	5.20	IN.	70.59	AC-FT	182500

NOTE.--No gage-height record Oct. 30 to Dec. 2, Dec. 18 to Feb. 23.

## WILLAMETTE RIVER BASIN

235

14202500 TUALATIN RIVER NEAR GASTON, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1978 to current year.

INSTRUMENTATION.--Temperature recorder since Dec. 5, 1978.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C Aug. 11, 1981; minimum, 0.0°C on many days during winter periods.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 22.0°C July 30, 31; minimum, 3.0°C Nov. 11, 14, 15, 25, Dec. 30 to Jan. 1.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



## WILLAMETTE RIVER BASIN

14202500 TUALATIN RIVER NEAR GASTON, OR--Continued

TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1			---	---	14.0	12.5	16.5	13.5	21.5	18.5		
2			---	---	16.5	12.5	15.5	12.5	20.5	18.0		
3			---	---	16.0	12.5	17.0	13.0	21.5	18.0		
4			---	---	15.5	11.5	19.0	12.5	21.0	17.5		
5			---	---	17.5	12.0	18.0	15.5	---	17.0		
6			---	---	18.5	13.0	16.5	14.5	---	---		
7			---	---	20.0	14.5	16.0	13.5	---	---		
8			---	---	20.0	16.0	15.0	12.5	---	---		
9			---	---	19.0	15.0	15.5	12.0	---	---		
10			---	---	16.0	13.5	19.0	13.0	---	---		
11			---	---	15.5	12.5	20.0	15.5	---	---		
12			---	---	16.0	13.0	20.0	17.5	---	---		
13			---	---	19.0	13.0	19.5	16.0	---	---		
14			---	---	18.0	15.0	17.5	15.0	---	---		
15			---	---	16.5	14.0	16.5	14.5	---	---		
16			---	---	15.5	13.5	19.0	14.5	---	---		
17			---	---	16.0	13.5	19.0	15.5	---	---		
18			---	---	15.5	13.5	19.5	15.5	---	---		
19			---	---	16.0	13.0	19.5	17.0	---	---		
20			---	---	16.0	13.0	18.0	15.0	---	---		
21			---	---	17.5	12.0	20.0	14.5	---	---		
22			---	---	17.0	14.5	21.5	16.5	---	---		
23			19.5	---	15.5	12.5	21.0	17.5	---	---		
24			20.0	14.5	15.0	12.5	20.5	17.5	---	---		
25			19.5	15.0	16.0	12.0	19.0	16.0	---	---		
26			19.5	14.5	17.0	14.0	18.5	15.5	---	---		
27			19.5	14.5	19.0	14.5	18.5	16.0	---	---		
28			21.5	16.0	18.5	15.0	18.5	16.0	---	---		
29			21.5	17.5	17.0	15.0	20.5	15.5	---	---		
30			20.0	15.0	16.5	14.5	22.0	17.5	---	---		
31			15.0	13.5	---	---	22.0	19.0	---	---		
MONTH			21.5	13.5	20.0	11.5	22.0	12.0	21.5	17.0		

## WILLAMETTE RIVER BASIN

237

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 northwest of Gaston, and at mile 4.9.

DRAINAGE AREA.--38.7 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (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, maximum water-surface elevation, is 63,360 acre-ft, of which 56,160 acre-ft is active storage above elevation 239.3 ft, proposed minimum pool. Reservoir is used for irrigation, flood control, and recreation. Figures given herein represent active storage.

COOPERATION.--Monthend elevations and contents furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 53,660 acre-ft Apr. 30, 1975, elevation, 303.52 ft; minimum observed since first filling, 808 acre-ft Oct. 31, 1975, elevation, 237.21 ft.

EXTREMES FOR CURRENT YEAR.--Maximum monthend contents, 53,650 acre-ft Apr. 30, elevation, 303.51 ft; minimum monthend, 24,660 acre-ft Nov. 30, elevation, 274.13 ft.

## MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	282.87	32,450	-
Oct. 31.....	275.48	25,820	-6,630
Nov. 30.....	274.13	24,660	-1,160
Dec. 31.....	282.36	31,970	+7,310
CAL YR 1982.....	-	-	-820
Jan. 31.....	282.32	31,940	-30
Feb. 28.....	300.10	49,850	+17,910
Mar. 31.....	303.27	53,380	+3,530
Apr. 30.....	303.51	53,650	+270
May 31.....	303.01	53,080	-570
June 30.....	301.20	51,060	-2,020
July 31.....	299.38	49,060	-2,000
Aug. 31.....	292.70	42,030	-7,030
Sept. 30.....	283.06	32,620	-9,410
WTR YR 1983.....	-	-	+170

## WILLAMETTE RIVER BASIN

14202980 SCOGGINS CREEK BELOW HENRY HAGG LAKE, NEAR GASTON, OR

LOCATION.--Lat 45°28'10", long 123°11'56", in SE¼NE¼ sec.20, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 600 ft downstream from Scoggins Dam, 800 ft upstream from small left bank tributary, 3.7 mi northwest of Gaston, and at mile 4.8.

DRAINAGE AREA.--38.8 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 187.48 ft National Geodetic Vertical Datum of 1929.

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.

AVERAGE DISCHARGE.--8 years, 110 ft<sup>3</sup>/s, 79,700 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft<sup>3</sup>/s Dec. 16, 1977, gage height, 13.50 ft; minimum, 1.4 ft<sup>3</sup>/s Nov. 16, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 675 ft<sup>3</sup>/s Mar. 14, gage height, 10.05 ft; minimum, 20 ft<sup>3</sup>/s Oct. 1, 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	196	175	333	80	365	630	38	69	37	97	103
2	102	195	219	332	72	363	636	60	69	37	93	117
3	89	195	247	334	59	361	626	69	69	37	96	125
4	41	153	248	339	51	359	445	69	69	37	102	125
5	102	131	274	346	51	283	236	69	69	37	104	125
6	131	131	325	360	52	212	184	69	68	37	104	137
7	151	130	344	362	52	196	184	74	68	37	104	145
8	151	130	341	360	52	199	160	94	68	37	104	145
9	150	130	338	355	52	206	131	94	68	37	104	145
10	150	130	336	378	53	258	124	73	68	37	103	145
11	149	130	332	497	53	343	124	54	68	45	104	145
12	149	94	331	583	56	378	124	48	68	50	103	144
13	149	75	329	589	55	458	111	48	68	50	103	153
14	136	75	333	555	56	613	104	48	68	50	103	153
15	122	75	361	462	56	661	104	55	68	50	103	153
16	151	75	384	374	110	648	91	58	67	49	107	156
17	151	75	389	335	235	638	84	50	67	49	122	157
18	150	76	370	330	285	544	83	46	47	49	127	157
19	150	76	361	330	280	397	84	46	35	49	127	168
20	150	95	372	328	302	354	84	46	56	49	127	175
21	150	112	368	327	349	259	68	46	48	49	127	176
22	150	133	366	327	371	184	60	46	37	56	127	175
23	150	148	424	329	380	174	60	46	37	68	127	175
24	149	148	541	259	373	148	60	46	37	67	127	176
25	149	148	550	204	369	118	60	50	37	67	127	176
26	149	147	491	207	375	98	59	52	37	67	127	175
27	149	148	409	208	371	91	46	63	37	67	127	175
28	180	150	351	207	367	91	41	69	37	67	127	174
29	200	152	338	197	---	227	35	70	37	83	116	174
30	198	154	337	170	---	345	32	70	37	101	100	175
31	197	---	336	119	---	533	---	70	---	101	103	---
TOTAL	4393	3807	10920	10436	5017	10104	4870	1836	1678	1653	3472	4624
MEAN	142	127	352	337	179	326	162	59.2	55.9	53.3	112	154
MAX	200	196	550	589	380	661	636	94	69	101	127	176
MIN	41	75	175	119	51	91	32	38	35	37	93	103
AC-FT	8710	7550	21660	20700	9950	20040	9660	3640	3330	3280	6890	9170
CAL YR 1982	TOTAL	60218	MEAN	165	MAX	824	MIN	23	AC-FT	119400		
WTR YR 1983	TOTAL	62810	MEAN	172	MAX	661	MIN	32	AC-FT	124600		

## WILLAMETTE RIVER BASIN

239

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 upstream from highway bridge, 1.0 mi south of Dilley, 1.2 mi downstream from Scoggins Creek, and at mile 58.81.

DRAINAGE AREA.--125 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. Prior to June 16, 1950, nonrecording gage at several sites within 200 ft of present site at datum 4.00 ft higher. June 16, 1950, to Aug. 10, 1966, water-stage recorder at present site at datum 4.00 ft 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 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.--44 years, 404 ft<sup>3</sup>/s, 292,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.34 ft, from rating curve extended above 6,000 ft<sup>3</sup>/s; minimum, 0.08 ft<sup>3</sup>/s Sept. 3, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,080 ft<sup>3</sup>/s Dec. 16, gage height, 17.86 ft; minimum, 40 ft<sup>3</sup>/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	324	984	770	601	1150	1540	145	120	100	119	137
2	128	294	940	750	526	1070	1510	154	116	122	107	144
3	128	276	1290	900	455	1010	1410	167	117	108	107	158
4	52	247	1840	1200	380	946	1250	162	116	92	112	153
5	122	209	1380	1500	348	881	1030	159	114	86	118	151
6	156	297	1170	1770	361	809	868	161	110	82	116	157
7	216	298	1060	1930	429	840	795	166	102	80	118	172
8	214	263	963	1710	430	1000	725	215	100	88	119	170
9	212	233	880	1480	894	1250	631	244	99	89	116	172
10	210	216	830	1250	1340	1750	657	229	115	81	111	181
11	207	204	782	1170	1500	1610	659	177	118	75	113	215
12	205	171	749	1140	1600	1430	617	151	112	79	110	198
13	201	129	741	1100	1790	1360	569	139	109	85	110	195
14	197	124	797	1110	1390	1530	507	131	104	91	109	197
15	138	120	1270	984	1170	1590	464	147	112	87	111	193
16	189	138	2850	893	1200	1450	416	164	108	84	111	199
17	202	396	2660	838	1600	1310	369	149	105	80	125	204
18	206	456	1890	814	2080	1190	344	133	99	82	132	208
19	201	627	1480	800	1900	1050	325	125	87	100	135	237
20	197	613	1500	776	1700	937	309	118	92	109	138	253
21	201	555	1460	750	1600	852	283	111	105	91	140	248
22	278	451	1400	744	1550	733	243	107	77	83	138	239
23	263	416	1280	835	1840	700	249	102	76	95	137	234
24	218	372	1200	913	1680	658	238	99	82	94	139	236
25	206	338	1130	869	1440	563	221	99	82	93	138	237
26	243	316	1070	925	1510	487	214	108	76	85	140	231
27	276	323	991	1020	1440	461	193	104	76	87	139	238
28	291	518	901	974	1260	486	174	114	73	95	139	235
29	759	719	853	890	---	902	161	122	74	96	154	241
30	600	918	825	827	---	1940	150	121	76	120	137	235
31	375	---	797	740	---	1710	---	120	---	121	144	---
TOTAL	7138	10561	37963	32372	34014	33655	17121	4443	2952	2860	3882	6068
MEAN	230	352	1225	1044	1215	1086	571	143	98.4	92.3	125	202
MAX	759	918	2850	1930	2080	1940	1540	244	120	122	154	253
MIN	47	120	741	740	348	461	150	99	73	75	107	137
AC-FT	14160	20950	75300	64210	67470	66750	33960	8810	5860	5670	7700	12040
CAL YR 1982	TOTAL	180191	MEAN	494	MAX	3050	MIN	46	AC-FT	357400		
WTR YR 1983	TOTAL	193029	MEAN	529	MAX	2850	MIN	47	AC-FT	382900		

## WILLAMETTE RIVER BASIN

14203500 TUALATIN RIVER NEAR DILLEY, OR--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Sediment analyses: October 1981 to current year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
07...	1000	218	20	12
21...	1000	197	10	5.3
NOV				
04...	1200	271	15	11
17...	1230	447	108	130
DEC				
08...	1400	956	26	67
22...	0930	1410	42	160
29...	1000	854	23	53
JAN				
17...	1200	836	29	65
27...	1430	1020	76	209
FEB				
09...	1200	895	275	665
11...	0930	1540	90	374
24...	1400	1640	38	168
MAR				
14...	1330	1560	50	211
25...	1200	572	22	34
28...	0930	482	26	34
APR				
08...	1000	743	37	74
20...	0900	305	19	16
MAY				
04...	1130	162	14	6.1
13...	1200	139	12	4.5
JUN				
01...	1230	120	10	3.2
30...	1430	75	12	2.4
JUL				
15...	0800	87	16	3.8
AUG				
09...	1330	116	9	2.8
15...	0800	113	16	4.9
22...	1330	140	11	4.2
SEP				
27...	1100	240	33	21



WILLAMETTE RIVER BASIN

241

14207000 OSWEGO CANAL NEAR LAKE OSWEGO, OR

LOCATION.--Lat 45°23'18", long 122°43'11", in NW¼NW¼ sec.20, T.2 S., R.1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 0.4 mi downstream from point of diversion on Tualatin River, 1.0 mi upstream from Lake Oswego, and 3.5 mi southwest of town of Lake 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 National Geodetic Vertical Datum of 1929. Prior to Nov. 15, 1928, nonrecording gage 800 ft upstream at different datum. Nov. 15, 1928, to June 29, 1939, nonrecording gage 900 ft downstream at datum about 1.0 ft 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 downstream. Water used for recreational facilities and development of power below Lake Oswego and returned to Willamette River at that point.

AVERAGE DISCHARGE.--55 years, 69.1 ft³/s, 50,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6,000 ft³/s Dec. 23, 1933; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	61	118	121	102	128	105	38	48	67	44	74
2	55	46	121	108	141	123	109	37	51	76	48	73
3	54	40	122	33	140	118	112	30	50	87	76	72
4	57	38	125	2.6	121	134	113	22	48	87	80	71
5	59	36	122	3.0	103	173	112	25	48	81	83	71
6	54	36	124	5.1	84	135	111	25	48	74	83	71
7	47	36	127	3.5	68	91	107	26	51	60	82	71
8	48	38	129	2.8	72	48	101	26	51	61	86	71
9	50	41	129	2.2	97	51	95	27	48	71	86	67
10	51	41	124	2.5	102	57	91	28	51	68	84	57
11	49	44	117	2.9	96	55	85	28	53	68	82	55
12	49	42	109	3.4	75	54	80	27	57	64	81	62
13	48	40	112	3.9	50	59	92	25	59	60	81	72
14	47	38	113	4.2	50	60	100	24	57	60	79	72
15	46	36	114	4.3	52	90	90	24	54	60	61	71
16	45	35	129	4.6	114	109	82	38	62	58	54	69
17	43	37	124	4.7	207	104	76	57	68	57	44	67
18	45	54	128	6.2	217	86	72	56	68	54	38	66
19	46	75	138	20	221	71	67	44	71	66	57	67
20	46	76	158	38	226	99	65	38	78	87	63	66
21	46	80	165	29	228	132	59	36	77	91	45	67
22	48	73	166	18	208	125	56	35	71	83	40	68
23	42	63	161	5.8	138	117	53	33	69	67	39	68
24	47	50	151	30	136	109	51	33	66	59	45	68
25	46	45	145	67	136	111	50	32	66	49	62	68
26	44	41	137	72	137	105	46	33	67	48	70	69
27	45	38	138	78	134	100	44	43	66	45	77	69
28	48	41	136	77	131	100	42	43	63	44	83	67
29	65	55	128	76	---	107	40	44	60	46	79	66
30	82	99	135	76	---	104	38	45	60	46	74	67
31	86	---	135	75	---	105	---	46	---	46	75	---
TOTAL	1596	1475	4080	979.7	3586	3060	2344	1068	1786	1990	2081	2042
MEAN	51.5	49.2	132	31.6	128	98.7	78.1	34.5	59.5	64.2	67.1	68.1
MAX	86	99	166	121	228	173	113	57	78	91	86	74
MIN	42	35	109	2.2	50	48	38	22	48	44	38	55
AC-FT	3170	2930	8090	1940	7110	6070	4650	2120	3540	3950	4130	4050
CAL YR 1982	TOTAL	25383.9	MEAN	69.5	MAX	217	MIN	5.0	AC-FT	50350		
WTR YR 1983	TOTAL	26087.7	MEAN	71.5	MAX	228	MIN	2.2	AC-FT	51740		

## 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 upstream from bridge on State Highway 212, 0.4 mi west of West Linn city limits, and at mile 1.8.

DRAINAGE AREA.--706 mi<sup>2</sup>.

## 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). WDR OR-77-1: 1971-73, 1975, 1976(M).

GAGE.--Water-stage recorder. Datum of gage is 85.61 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 12, 1941, nonrecording gage at datum 1.02 ft 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 and average discharge only include flow in Oswego Canal. Oswego Canal diverts at point 5.0 mi 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.--55 years, 1,545 ft<sup>3</sup>/s, 29.72 in/yr, 1,119,000 acre-ft/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,300 ft<sup>3</sup>/s Dec. 23, 1933, gage height, 17.72 ft; minimum daily, 0.20 ft<sup>3</sup>/s July 30 to Aug. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,700 ft<sup>3</sup>/s Dec. 21, gage height, 12.55 ft; minimum, 59 ft<sup>3</sup>/s Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	1340	2850	3780	3590	7820	4950	788	337	279	211	442
2	157	951	3020	3180	3220	7320	5500	772	357	341	161	370
3	143	753	3830	2990	2830	6730	5790	723	355	419	111	326
4	155	656	4910	3350	2420	6110	5960	684	340	421	120	300
5	167	614	4750	4150	2040	5470	5940	685	325	375	125	282
6	220	598	4940	5500	1890	4940	5750	674	297	324	122	268
7	263	627	5190	6050	2050	4640	5390	695	271	241	118	255
8	265	665	5360	6370	2180	4500	4870	734	267	236	133	255
9	285	647	5260	6780	3140	4710	4340	776	254	299	141	333
10	289	566	4920	7220	4610	5700	3880	811	265	282	128	318
11	281	517	4440	7470	5210	5770	3460	807	284	280	118	293
12	273	484	3920	7420	5660	5900	3090	742	306	257	115	315
13	264	453	3400	7110	6160	6280	2780	669	320	229	112	318
14	258	404	3020	6620	6420	6720	2460	615	307	231	147	307
15	252	366	3400	6060	6800	6770	2160	586	289	229	197	297
16	239	352	5710	5480	7110	6740	1930	589	270	218	163	282
17	217	410	6330	4870	7650	6660	1740	619	264	213	181	272
18	213	806	7000	4330	8410	6500	1590	609	260	197	118	262
19	227	1590	8200	3860	8830	6240	1460	567	275	254	72	265
20	244	1920	10100	3320	9220	5830	1400	536	313	405	95	265
21	259	2080	11200	2930	9310	5300	1290	504	328	455	193	262
22	367	1960	11400	2620	9240	4740	1200	472	313	408	162	260
23	463	1690	10800	2540	9190	4180	1120	451	296	326	161	260
24	546	1400	9840	2870	9040	3570	1100	431	277	282	118	260
25	522	1170	8900	3130	8940	3150	1060	406	275	243	85	260
26	493	1010	8070	3470	9060	2690	994	347	280	234	98	260
27	503	912	7320	4070	8750	2250	943	326	279	213	111	265
28	539	1000	6600	4130	8300	2030	895	324	263	208	129	262
29	943	1520	5900	4070	---	2410	850	323	246	217	229	256
30	1550	2540	5180	3970	---	3210	809	317	238	222	448	262
31	1790	---	4460	3860	---	4150	---	322	---	225	513	---
TOTAL	12567	30001	190220	143570	171270	159030	84701	17904	8751	8763	4935	8632
MEAN	405	1000	6136	4631	6117	5130	2823	578	292	283	159	288
MAX	1790	2540	11400	7470	9310	7820	5960	811	357	455	513	442
MIN	143	352	2850	2540	1890	2030	809	317	238	197	72	255
AC-FT	24930	59510	377300	284800	339700	315400	168000	35510	17360	17380	9790	17120
MEAN†	457	1049	6268	4663	6245	5228	2901	612	351	347	226	356
CFSM†	.647	1.49	8.88	6.60	8.85	7.41	4.11	.867	.497	.492	.320	.504
IN.†	.75	1.66	10.24	7.62	9.21	8.54	4.59	1.00	.56	.57	.37	.56
AC-FT†	28100	62440	385390	286740	346810	321470	172650	37630	20900	21330	13920	21170

CAL YR 1982 TOTAL 765287 MEAN 2097 MAX 11700 MIN 47 AC-FT 1518000 MEAN† 2166 CFSM† 3.07 IN.† 41.66 AC-FT† 1568330  
WTR YR 1983 TOTAL 840344 MEAN 2302 MAX 11400 MIN 72 AC-FT 1667000 MEAN† 2374 CFSM† 3.36 IN.† 45.66 AC-FT† 1718740

† Adjusted for diversion of Oswego Canal.

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 September 1981.

WATER TEMPERATURES: October 1975 to September 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 18...	1300	213	157	7.3	13.0	8.0	--	--	46	12	3.8
JAN 21...	1100	2940	97	6.9	6.0	10.8	78	400	33	8.5	2.9
APR 19...	1430	1450	107	7.2	13.0	9.3	42	110	35	9.0	3.1
AUG 09...	1000	137	187	7.8	20.5	7.6	300	400	61	16	5.2

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
OCT 18...	12	2.4	46	11	10	.20	.270	1.70	1.4	.80
JAN 21...	5.1	1.1	33	7.0	4.8	<.10	.140	1.30	4.1	.21
APR 19...	5.9	1.1	39	6.1	5.2	<.10	.360	1.00	1.3	.46
AUG 09...	14	2.9	60	15	11	.20	.140	1.60	1.1	.37

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, DIS- SOLVED (MG/L)	SEDI- MENT, DIS- SOLVED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 18...	.260	.420	22	104	100	60	5.0	6	3.5	96
JAN 21...	.100	.160	20	67	70	532	15	17	135	93
APR 19...	.160	.210	20	76	75	298	5.8	10	39	95
AUG 09...	.180	.220	25	121	130	45	8.1	12	4.4	95

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 18...	30	2	19	<1	<1	<1	<3	5	100	3
JAN 21...	80	<1	17	<1	<1	<1	<3	4	130	1
APR 19...	70	1	21	<1	<1	<1	<3	7	250	1
AUG 09...	10	1	24	<1	<1	<1	<3	5	34	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 18...	5	62	.1	<10	4	<1	<1	53	<6	10
JAN 21...	14	35	.2	<10	5	<1	<1	51	<6	20
APR 19...	9	47	<.1	<10	4	<1	<1	99	<6	25
AUG 09...	<4	22	<.1	<10	1	<1	<1	74	<6	12

## WILLAMETTE RIVER BASIN

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 above Willamette Falls, 0.6 mi downstream from Tualatin River, and at mile 26.8.

DRAINAGE AREA.--10,000 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 64.79 ft Dec. 17, 1977; minimum recorded, 52.65 ft Feb. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 62.36 ft Jan. 8; minimum, 53.53 ft Aug. 1.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55.76	57.32	58.56	56.81	56.84	59.03	60.83	54.70	54.83	53.87	53.81	54.29
2	55.70	57.05	58.61	56.51	56.41	58.37	60.92	54.77	54.85	54.13	54.05	53.82
3	55.65	56.80	59.18	56.50	55.88	57.71	60.93	54.78	54.78	54.98	54.01	53.71
4	55.65	56.61	60.32	57.24	55.53	57.20	60.82	54.71	54.53	55.40	54.01	53.68
5	55.67	56.46	60.77	59.44	55.33	56.88	60.47	54.65	54.23	55.31	54.02	53.69
6	55.70	56.45	60.74	60.94	55.17	56.76	59.67	54.57	54.05	54.97	54.02	53.68
7	55.74	56.66	60.59	61.85	55.42	57.25	58.44	54.59	54.03	54.66	53.99	53.63
8	55.89	56.69	60.29	62.23	56.05	58.05	57.58	---	54.05	54.51	54.00	53.69
9	56.07	56.58	59.71	62.21	56.90	58.81	56.99	---	53.98	54.46	54.00	53.84
10	56.10	56.56	59.27	61.79	58.59	59.68	56.65	---	53.95	54.32	53.96	53.92
11	56.01	56.34	58.83	61.23	59.52	60.05	56.62	---	54.18	54.32	53.91	53.97
12	55.94	56.15	58.34	60.58	59.77	59.84	56.46	---	54.64	54.05	53.89	54.02
13	55.90	56.07	58.04	59.88	59.93	59.21	56.15	---	54.76	53.89	53.93	54.05
14	55.90	56.00	58.09	59.31	59.82	59.06	55.83	---	54.51	53.88	53.91	54.12
15	55.88	55.92	58.63	58.41	59.36	59.47	55.59	---	54.29	54.02	53.89	54.19
16	55.85	55.88	60.33	57.66	58.80	59.63	55.40	---	54.12	54.08	53.86	54.15
17	55.88	55.92	61.57	57.31	58.79	59.20	55.26	---	53.94	54.01	53.88	54.04
18	55.95	56.37	61.93	57.11	60.06	58.46	55.12	---	53.83	53.94	53.91	53.89
19	55.99	57.07	61.61	57.01	61.35	57.88	55.00	---	53.89	53.98	53.89	53.84
20	55.98	57.43	61.42	57.08	61.89	57.33	54.99	55.50	54.20	54.14	53.88	53.84
21	56.02	57.53	61.41	56.97	61.93	56.89	54.98	55.24	54.41	54.44	53.93	53.86
22	56.02	57.43	61.41	56.83	61.78	56.64	54.90	55.21	54.46	54.43	53.95	53.82
23	56.04	57.18	61.36	56.74	61.81	56.31	54.89	55.16	54.50	54.24	53.94	53.80
24	56.29	56.93	61.19	57.08	61.69	56.28	54.92	55.07	54.46	53.94	53.99	53.86
25	56.48	56.72	60.63	57.33	61.29	56.33	54.89	55.05	54.41	53.82	54.03	53.86
26	56.33	56.54	59.83	57.35	60.79	56.38	54.82	55.00	54.29	53.73	54.01	53.87
27	56.32	56.42	59.21	57.66	60.36	56.32	54.77	55.04	54.19	53.65	54.02	53.86
28	56.50	56.45	58.62	57.79	59.65	56.37	54.70	55.04	54.11	53.66	54.02	53.81
29	56.84	56.83	58.09	57.55	---	56.76	54.63	54.98	53.95	53.70	54.09	53.79
30	57.56	57.70	57.69	57.22	---	58.74	54.65	54.79	53.92	53.68	54.32	53.81
31	57.65	---	57.29	56.94	---	60.26	---	54.75	---	53.59	54.50	---
MEAN	56.11	56.67	59.79	58.41	58.95	57.97	56.60	---	54.28	54.19	53.99	53.88

## WILLAMETTE RIVER BASIN

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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 below Willamette Falls, 1.4 mi upstream from Clackamas River, and at mile 26.2.

DRAINAGE AREA.--10,000 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Oregon State Highway Division bench mark).

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 32.18 ft Feb. 21, 1982; minimum, 1.86 ft July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 27.06 ft Jan. 7; minimum, 4.21 ft Aug. 28.

## GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.19	4.59	5.79	11.61	10.61	11.16	15.47	13.84	14.61	12.07	10.85	11.38
2	7.22	4.55	5.77	11.52	10.27	10.72	15.96	14.81	15.24	11.57	10.23	10.76
3	7.05	4.27	5.57	11.02	9.23	9.99	19.54	15.76	17.47	11.36	9.88	10.63
4	7.31	4.30	5.63	10.60	8.74	9.51	21.32	19.53	20.85	15.85	10.79	12.92
5	7.72	4.57	5.87	10.50	8.46	9.14	21.22	20.82	21.02	21.06	15.91	18.49
6	8.43	4.94	6.39	10.30	8.76	9.38	20.93	20.50	20.71	26.26	21.16	23.68
7	8.32	5.47	6.53	10.02	8.82	9.32	20.55	19.72	20.07	27.06	26.27	26.77
8	8.11	5.63	6.48	9.90	8.71	9.20	19.83	18.81	19.39	27.01	26.12	26.69
9	7.56	5.79	6.49	9.74	8.66	9.16	18.84	17.33	18.02	26.12	24.60	25.31
10	7.35	5.19	5.93	9.67	7.86	8.78	17.34	16.26	16.89	24.68	22.86	23.73
11	7.01	4.93	5.86	9.15	7.79	8.45	16.25	14.89	15.69	22.81	21.33	22.14
12	7.44	5.24	6.20	9.28	7.35	8.12	14.84	13.90	14.48	21.25	19.30	20.30
13	7.41	5.18	6.22	9.30	7.37	8.08	14.23	13.50	13.83	19.35	18.21	18.73
14	8.07	5.38	6.54	9.05	6.92	7.75	14.57	13.44	13.95	18.34	17.40	17.96
15	8.34	5.65	6.85	9.40	6.80	7.76	16.96	14.19	15.39	17.40	15.00	16.10
16	8.25	5.60	6.83	9.98	6.85	8.07	21.95	16.99	20.10	15.00	13.48	14.10
17	8.39	5.60	6.80	10.49	7.54	8.80	23.82	21.99	22.98	13.48	12.83	13.10
18	8.55	5.85	6.92	11.34	8.66	9.73	23.82	23.31	23.51	13.30	12.56	12.95
19	8.46	6.27	7.07	11.82	10.14	10.89	23.38	22.20	22.72	13.38	12.76	13.10
20	8.40	6.09	6.93	11.91	11.23	11.51	22.51	22.05	22.26	13.26	12.75	13.00
21	8.10	6.19	6.89	11.69	11.08	11.34	22.51	22.20	22.34	12.94	12.30	12.60
22	8.14	5.87	6.92	11.32	10.62	10.88	22.44	22.15	22.31	12.56	11.52	12.10
23	7.48	5.70	6.56	10.84	9.87	10.23	22.24	21.46	21.82	12.03	11.23	11.60
24	7.48	5.62	6.45	10.00	9.21	9.56	21.47	20.47	21.00	13.03	11.45	12.20
25	7.47	6.20	6.85	9.45	8.49	9.02	20.46	18.48	19.48	13.70	12.53	13.15
26	7.94	6.10	6.98	9.15	7.94	8.49	18.46	16.48	17.50	14.38	12.82	13.55
27	7.77	6.28	7.04	9.67	7.89	8.58	16.51	15.27	15.99	15.60	13.73	14.50
28	8.34	6.93	7.55	10.60	8.17	9.14	15.38	14.20	14.97	15.55	14.65	14.90
29	11.38	7.65	9.85	11.70	9.02	10.30	14.47	13.30	13.98	14.87	13.82	14.40
30	12.53	10.87	11.78	14.09	10.66	12.42	13.78	12.49	13.18	13.82	12.60	13.30
31	12.41	11.57	12.01	---	---	---	12.98	11.61	12.32	12.92	11.75	12.25
MONTH	12.53	4.27	6.95	14.09	6.80	9.52	23.82	11.61	18.20	27.06	9.88	16.01



## 14207770 WILLAMETTE RIVER BELOW FALLS. AT OREGON CITY, OR--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12.90	11.77	12.38	20.05	19.19	19.60	24.02	23.71	23.86	12.11	11.31	11.71
2	12.58	11.16	11.80	19.16	18.24	18.60	23.99	23.80	23.89	11.52	10.81	11.21
3	11.83	10.81	11.24	18.24	17.28	17.71	23.93	23.12	23.67	11.23	10.85	11.03
4	11.55	10.62	11.00	17.23	16.54	16.84	23.11	21.83	22.52	11.19	10.63	10.96
5	11.18	9.57	10.55	16.74	16.15	16.51	21.87	20.20	21.10	11.11	10.50	10.89
6	9.60	8.41	8.95	16.14	15.44	15.72	20.20	18.30	19.30	10.88	10.30	10.56
7	10.44	8.60	9.62	16.87	15.56	16.00	18.30	16.10	17.30	11.20	10.48	10.90
8	11.63	9.97	10.98	18.74	16.94	18.07	16.00	13.77	14.80	12.02	11.24	11.79
9	14.46	11.30	12.81	20.86	18.72	19.69	13.73	12.01	13.01	12.45	11.73	12.24
10	17.72	14.51	16.41	22.46	20.86	21.85	12.44	11.92	12.18	13.12	12.21	12.74
11	19.26	17.78	18.67	22.50	22.26	22.36	12.81	12.15	12.55	14.11	13.07	13.78
12	19.74	18.94	19.32	22.29	21.42	21.91	12.75	11.94	12.40	14.52	13.08	13.82
13	19.66	19.28	19.48	21.38	20.47	20.79	12.38	11.74	12.09	13.29	12.34	12.76
14	19.25	18.60	18.97	20.97	20.45	20.67	12.43	11.48	11.95	12.93	12.06	12.44
15	18.61	17.40	17.94	21.71	20.94	21.37	11.91	10.77	11.26	12.49	11.50	11.96
16	17.27	16.64	16.92	21.80	21.51	21.66	11.23	9.93	10.49	12.49	11.82	12.17
17	18.92	16.40	17.26	21.41	20.40	20.93	10.94	9.67	10.16	12.14	11.33	11.76
18	22.72	18.99	20.99	20.34	19.37	19.82	10.71	9.50	9.96	11.50	10.95	11.28
19	24.00	22.83	23.51	19.37	18.33	18.86	10.54	9.68	9.99	11.60	10.65	11.24
20	24.69	23.94	24.38	18.31	17.08	17.70	10.17	9.01	9.66	11.04	10.46	10.80
21	24.72	24.44	24.56	17.05	15.95	16.47	9.48	7.96	8.84	10.91	9.87	10.47
22	24.85	24.52	24.68	15.95	15.00	15.53	8.78	7.76	8.32	10.56	9.50	10.02
23	25.06	24.74	24.91	14.99	14.36	14.71	9.96	7.85	9.28	11.18	10.11	10.73
24	24.90	24.35	24.72	14.74	14.30	14.52	11.11	9.66	10.56	11.84	10.48	11.39
25	24.43	23.21	23.94	14.60	14.24	14.41	11.74	10.71	11.36	12.30	11.54	11.98
26	23.20	22.37	22.77	14.46	13.53	14.12	13.14	11.43	12.52	13.13	12.13	12.70
27	22.37	21.15	21.82	13.80	13.20	13.51	13.71	12.97	13.23	14.21	13.13	13.79
28	21.07	20.06	20.50	14.21	13.20	13.76	13.80	12.69	13.19	14.96	14.20	14.64
29	---	---	---	17.27	13.92	15.15	13.17	12.23	12.59	15.08	14.71	14.91
30	---	---	---	22.29	17.44	20.58	12.60	11.66	12.06	15.02	14.80	14.93
31	---	---	---	23.69	22.32	23.12	---	---	---	15.21	14.94	15.

## WILLAMETTE RIVER BASIN

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## 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 upstream from dam on Oak Grove Fork, 0.4 mi upstream from Anvil Creek, 14 mi south of Government Camp, and at mile 15.8.

DRAINAGE AREA.--53.8 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1956 to current year. Prior to October 1957, published as Timothy Meadows Reservoir.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (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 at elevation 3,190 ft, normal maximum operating level. Usable capacity increased in 1966 water year to 64,450 acre-ft between elevations 3,125.0 ft, invert of outlet pipe, and 3,192.0 ft, top of radial gates. Storage of 4,060 acre-ft below elevation 3,125.0 ft 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 Oct. 3, 1967, elevation, 3,192.2 ft; minimum observed, 16,010 acre-ft Feb. 24, 1957, elevation, 3,144.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 65,700 acre-ft Sept. 9, elevation, 3,189.99 ft; minimum observed, 53,530 acre-ft Dec. 2, elevation, 3,180.69 ft.

## MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	3,189.61	65,180	-
Oct. 31.....	3,184.22	58,020	-7,160
Nov. 30.....	3,180.70	53,540	-4,480
Dec. 31.....	3,184.21	58,000	+4,460
CAL YR 1982.....	-	-	-2,450
Jan. 31.....	3,187.37	62,150	+4,150
Feb. 28.....	3,189.26	64,700	+2,550
Mar. 31.....	3,189.29	64,740	+40
Apr. 30.....	3,189.52	65,050	+310
May 31.....	3,188.80	64,070	-980
June 30.....	3,189.78	65,410	+1,340
July 31.....	3,189.89	65,560	+150
Aug. 31.....	3,189.95	65,640	+80
Sept.30.....	3,183.49	57,080	-8,560
WTR YR 1983.....	-	-	-8,100

## WILLAMETTE RIVER BASIN

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 upstream from Anvil Creek, 0.3 mi downstream from Timothy Lake, 14 mi south of Government Camp, and at mile 15.5.

DRAINAGE AREA.--54.4 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder and artificial control. Datum of gage is 3,041.83 ft National Geodetic Vertical Datum of 1929 (Portland General Electric Co. bench mark).

REMARKS.--Records excellent. Flow regulated since 1956 by Timothy Lake (see station 14208600). No diversion above station.

AVERAGE DISCHARGE.--27 years, 132 ft<sup>3</sup>/s, 32.95 in/yr, 95,630 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft<sup>3</sup>/s Dec. 24, 1964, gage height, 3.93 ft, from rating curve extended above 290 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 3.7 ft<sup>3</sup>/s Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 440 ft<sup>3</sup>/s Mar. 14, gage height, 2.79 ft; minimum, 37 ft<sup>3</sup>/s June 7-9, 13, 14, 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	113	127	254	247	387	404	176	223	100	83	92
2	93	179	174	251	247	391	374	176	161	152	83	100
3	93	296	48	241	247	392	314	184	86	137	84	87
4	94	301	51	51	247	392	332	180	85	92	85	71
5	94	281	48	49	247	392	406	180	85	87	85	64
6	95	228	48	57	240	393	404	177	85	87	85	64
7	95	274	46	62	221	394	403	172	54	89	83	67
8	151	283	46	60	227	201	402	172	37	89	83	71
9	229	294	45	53	215	49	402	180	38	94	83	107
10	240	302	83	50	209	51	401	185	38	103	83	111
11	244	311	120	48	178	236	259	206	38	102	84	99
12	305	201	137	46	155	403	85	210	38	102	84	87
13	292	67	150	46	133	403	115	212	37	103	77	131
14	283	79	165	128	148	420	197	210	64	104	71	305
15	309	82	44	257	156	350	148	131	92	104	71	332
16	308	88	48	226	135	258	187	154	150	104	71	330
17	312	85	46	143	79	276	185	182	108	104	71	336
18	350	43	44	243	48	320	135	181	93	103	72	325
19	350	43	44	250	46	290	43	192	93	103	77	337
20	352	43	44	250	46	251	42	186	185	115	76	335
21	347	43	44	250	46	246	142	185	263	126	78	337
22	332	43	44	249	48	273	151	192	260	124	83	336
23	334	80	100	249	47	273	147	191	52	91	83	335
24	344	222	152	249	47	335	133	190	58	80	83	337
25	209	300	170	249	212	397	153	190	38	133	83	339
26	110	309	179	249	348	396	167	194	38	97	98	338
27	108	293	205	249	348	395	177	197	123	73	100	338
28	109	239	214	249	348	392	176	204	132	81	99	341
29	66	221	225	248	---	296	171	208	104	104	99	340
30	55	121	239	249	---	51	153	215	124	102	108	339
31	83	---	241	248	---	125	---	219	---	87	91	---
TOTAL	6479	5464	3371	5503	4915	9428	6808	5831	2982	3172	2596	6831
MEAN	209	182	109	178	176	304	227	188	99.4	102	83.7	228
MAX	352	311	241	257	348	420	406	219	263	152	108	341
MIN	55	43	44	46	46	49	42	131	37	73	71	64
AC-FT	12850	10840	6690	10920	9750	18700	13500	11570	5910	6290	5150	13550
MEAN†	92.5	107	181	245	221	305	232	172	122	105	85.1	83.9
CFSM†	1.70	1.97	3.33	4.50	4.06	5.61	4.26	3.16	2.24	1.93	1.56	1.54
IN.†	1.96	2.19	3.84	5.20	4.24	6.46	4.76	3.65	2.50	2.22	1.80	1.72
AC-FT†	5690	6360	11150	15070	12300	18740	13810	10590	7250	6440	5230	4990

CAL YR 1982 TOTAL 59108 MEAN 162 MAX 701 MIN 38 AC-FT 117200 MEAN† 160 CFSM† 2.94 IN.† 39.85 AC-FT† 115600  
WTR YR 1983 TOTAL 63380 MEAN 174 MAX 420 MIN 37 AC-FT 125700 MEAN† 162 CFSM† 2.98 IN.† 40.54 AC-FT† 117600

† Adjusted for change in contents in Timothy Lake.

## WILLAMETTE RIVER BASIN

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## 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 upstream from Spring Creek, 0.7 mi upstream from Kink Creek, 1.0 mi upstream from Portland General Electric Co. diversion dam, 24 mi southeast of Estacada, and at mile 6.1.

DRAINAGE AREA.--126 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. May 21, 1909, to Nov. 17, 1911, nonrecording gage and Mar. 26, 1912, to Sept. 30, 1923, water-stage recorder, at various sites 0.7 mi downstream, below Kink Creek, at different datum.

REMARKS.--Records excellent. Flow regulated since 1956 by Timothy Lake (see station 14208600). No diversion above station.

AVERAGE DISCHARGE.--74 years, 501 ft<sup>3</sup>/s, 363,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft<sup>3</sup>/s Jan. 7, 1923, gage height, 5.45 ft, site and datum then in use, from rating curve extended above 2,300 ft<sup>3</sup>/s on basis of peak discharge for other stations in Clackamas River basin; minimum, 208 ft<sup>3</sup>/s Aug. 28-31, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,750 ft<sup>3</sup>/s Jan. 6, gage height, 3.97 ft; minimum, 269 ft<sup>3</sup>/s Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	423	435	566	615	934	1070	557	565	380	332	355
2	318	449	576	564	603	926	1010	562	511	448	330	348
3	317	567	744	557	595	917	900	566	412	424	329	336
4	317	569	896	566	587	920	867	563	398	364	331	318
5	316	579	702	696	580	923	927	566	392	352	328	307
6	320	557	763	1310	579	961	906	561	387	350	326	307
7	339	570	617	1520	555	1010	887	566	357	350	325	308
8	390	570	549	1300	558	889	867	565	327	351	324	312
9	461	568	505	996	571	738	854	567	325	349	328	349
10	466	571	501	860	565	856	842	557	366	356	327	357
11	465	580	519	755	560	925	720	567	342	353	331	353
12	510	495	525	678	569	1110	498	564	334	352	329	332
13	516	323	527	621	552	1130	497	563	325	363	322	361
14	499	332	569	636	563	1090	590	569	340	369	316	548
15	519	330	527	756	561	991	526	566	371	363	315	601
16	520	339	823	712	576	848	560	553	417	360	314	596
17	532	410	722	603	713	830	561	569	391	362	313	599
18	565	420	613	695	962	844	535	561	379	357	313	590
19	567	396	562	711	796	792	432	569	401	369	317	599
20	569	375	542	680	704	731	437	563	484	366	317	595
21	567	355	543	663	672	712	536	565	558	376	317	598
22	564	339	512	654	763	734	564	566	560	372	322	596
23	565	349	526	656	738	725	566	571	360	344	322	598
24	568	486	552	667	745	756	558	567	337	325	322	600
25	459	574	553	647	827	822	560	569	311	377	330	601
26	348	579	554	675	970	813	560	568	307	350	340	598
27	363	570	561	679	929	812	566	566	374	327	340	599
28	364	569	561	660	891	799	564	567	402	329	339	601
29	655	567	563	648	---	871	560	568	372	352	365	603
30	460	489	565	635	---	934	551	566	397	352	369	600
31	401	---	562	628	---	846	---	568	---	338	348	---
TOTAL	14140	14300	18269	22994	18899	27189	20071	17515	11802	11180	10181	14465
MEAN	456	477	589	742	675	877	669	565	393	361	328	482
MAX	655	580	896	1520	970	1130	1070	571	565	448	369	603
MIN	316	323	435	557	552	712	432	553	307	325	313	307
AC-FT	28050	28360	36240	45610	37490	53930	39810	34740	23410	22180	20190	28690
CAL YR 1982	TOTAL	189821	MEAN	520	MAX	2420	MIN	265	AC-FT	376500		
WTR YR 1983	TOTAL	201005	MEAN	551	MAX	1520	MIN	307	AC-FT	398700		



## WILLAMETTE RIVER BASIN

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 upstream from Three Lynx Creek, 0.25 mi downstream from powerplant, 17 mi southeast of Estacada, and at mile 47.8.

DRAINAGE AREA.--479 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (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 higher.

REMARKS.--Records excellent. Minor regulation since May 1956 by Timothy Lake (see station 14208600).

AVERAGE DISCHARGE.--66 years, 1,995 ft<sup>3</sup>/s, 56.56 in/yr, 1,445,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 21.7 ft, from floodmark, from rating curve extended above 34,100 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 15.06 ft; minimum recorded, 292 ft<sup>3</sup>/s Sept. 25, 1980; minimum daily, 427 ft<sup>3</sup>/s Oct. 5, 1958.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0330	16,900	10.16	Jan. 6	2230	*19,600	*11.07
Dec. 6	0630	8,110	6.64	Feb. 17	2300	13,300	8.81
Dec. 16	0930	12,100	8.35	Mar. 30	0300	13,000	8.71

Minimum, 419 ft<sup>3</sup>/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	777	1840	2920	1720	2370	3530	5800	2200	2080	1280	939	953
2	780	1710	3090	1710	2230	3440	5120	2170	1870	1590	923	879
3	756	1640	8540	1890	2120	3290	4340	2120	1620	1680	890	835
4	744	1540	12600	4290	2010	3300	3820	2100	1580	1360	901	799
5	730	1590	6580	7120	1930	3380	3550	2140	1440	1280	890	766
6	767	2260	7170	15100	1960	3850	3270	2140	1510	1200	871	760
7	1020	2060	5020	15900	2050	4330	3080	2210	1380	1170	867	750
8	1260	1850	3770	11500	2030	5230	2890	2280	1380	1160	864	746
9	1250	1690	3090	7300	2690	5880	2770	2210	1330	1140	845	819
10	1130	1570	2640	5500	2950	6840	2670	2120	1630	1090	858	819
11	1060	1490	2370	4500	3450	5680	2500	2040	1540	1070	845	845
12	1010	1340	2220	3800	4060	5170	2130	2050	1410	1040	844	791
13	1010	1110	2200	3300	4530	5270	1980	2040	1300	1070	825	893
14	993	1050	2350	3020	4050	5180	2010	2080	1270	1220	799	989
15	993	1030	4800	2940	3690	4520	1910	2580	1280	1180	801	1010
16	996	1040	10400	2780	4100	3880	1940	2900	1240	1170	787	1040
17	1110	2340	7610	2590	7690	3490	1960	2650	1180	1370	792	1030
18	1170	3990	5370	2580	11100	3220	2060	2510	1310	1280	773	1030
19	1100	3610	4330	2910	7160	2930	2150	2430	1500	1450	790	1040
20	1070	2760	3950	2720	5560	2700	2230	2420	1740	1400	773	1020
21	1080	2360	4290	2550	4980	2570	2460	2500	1680	1320	778	1010
22	1200	2010	3930	2450	6540	2570	2530	2470	1580	1250	777	1010
23	1780	1660	3310	2570	6080	2580	2480	2510	1270	1200	773	1010
24	1560	1610	2870	2800	5460	2520	2430	2600	1260	1140	777	1010
25	1290	1700	2570	2740	4800	2590	2310	2640	1180	1170	781	1010
26	1230	1610	2410	2960	4450	2510	2190	2580	1200	1120	856	1000
27	1690	1600	2220	3420	3950	2580	2130	2460	1170	1040	808	997
28	1530	2610	2060	3150	3620	2560	2100	2480	1160	1020	794	996
29	5090	3260	1940	2850	---	4730	2150	2540	1160	1030	927	990
30	3600	3470	1860	2640	---	11100	2110	2400	1150	995	1060	989
31	2320	---	1790	2530	---	7350	---	2210	---	964	889	---
TOTAL	42096	59400	130270	133830	117610	128770	81070	72780	42400	37449	26097	27836
MEAN	1358	1980	4202	4317	4200	4154	2702	2348	1413	1208	842	928
MAX	5090	3990	12600	15900	11100	11100	5800	2900	2080	1680	1060	1040
MIN	730	1030	1790	1710	1930	2510	1910	2040	1150	964	773	746
CFSM	2.84	4.13	8.77	9.01	8.77	8.67	5.64	4.90	2.95	2.52	1.76	1.94
IN.	3.27	4.61	10.12	10.39	9.13	10.00	6.30	5.65	3.29	2.91	2.03	2.16
AC-FT	83500	117800	258400	265500	233300	255400	160800	144400	84100	74280	51760	55210

CAL YR 1982	TOTAL	861020	MEAN	2359	MAX	19200	MIN	664	CFSM	4.92	IN.	66.87	AC-FT	1708000
WTR YR 1983	TOTAL	899608	MEAN	2465	MAX	15900	MIN	730	CFSM	5.15	IN.	69.87	AC-FT	1784000



## 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 downstream from River Mill Dam, 1.5 mi northwest of Estacada, and at mile 23.1.

DRAINAGE AREA.--671 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1908 to current year. Monthly discharge only April 1908, published in WSP 1318. Published as "near Cazadero" 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 National Geodetic Vertical Datum of 1929 (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 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.--75 years, 2,756 ft<sup>3</sup>/s, 55.78 in/yr, 1,997,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.36 ft; minimum, 50 ft<sup>3</sup>/s Mar. 10, 1961, from rating curve extended below 260 ft<sup>3</sup>/s; minimum daily, 285 ft<sup>3</sup>/s Oct. 4, 5, 1958, caused by filling of North Fork dam forebay.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0600	23,200	9.28	Feb. 18	0800	18,500	8.20
Dec. 16	1030	17,500	7.94	Mar. 30	0530	18,800	8.26
Jan. 6	2300	*33,600	*11.26				

Minimum recorded, 605 ft<sup>3</sup>/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1100	2800	3820	2310	2990	4480	8400	2720	2780	2000	1240	1210		
2	1030	2530	3800	2230	2500	4620	7370	2710	2530	3000	1190	1100		
3	1070	2330	12800	2910	2710	4330	6220	2710	2130	3100	1200	1030		
4	1010	2110	17400	5770	2560	4030	5360	2590	2020	2500	1220	1020		
5	956	2350	9360	10900	2340	4060	4860	2650	1850	2200	1160	958		
6	1020	3490	10600	24800	2540	4270	4370	2720	1890	2000	1180	951		
7	1350	3330	7560	26100	3100	5170	4000	2770	1770	1900	1110	943		
8	1790	2770	5630	17600	2790	6650	3900	3010	1740	1800	1110	935		
9	1810	2440	4450	11300	3840	7620	3640	3120	1700	1700	1090	994		
10	1650	2210	3440	8030	4230	9240	3450	3000	2240	1600	1120	1040		
11	1550	2090	3220	6360	4730	7720	3310	2820	2240	1500	1120	1150		
12	1450	1960	2960	5420	5540	6740	2900	2780	2070	1450	1100	1030		
13	1260	1600	3030	4550	6080	6730	2640	2850	1800	1600	1060	1050		
14	1260	1480	3740	4030	5680	6760	2590	2800	1680	2300	1040	1180		
15	1110	1420	4950	3860	4760	6110	2470	3620	1760	2300	1020	1160		
16	1090	1710	14800	4090	4860	5240	2600	4220	1690	2200	1030	1200		
17	1390	2860	10700	3540	9370	4520	2590	3760	1580	2300	1010	1170		
18	1440	4660	7520	3470	16900	4250	2590	3480	1730	2200	994	1210		
19	1450	4970	6010	3700	11000	3830	2790	3290	2160	2700	1000	1220		
20	1350	4070	5680	3420	7940	3380	2930	3180	2770	2800	1000	1200		
21	1290	3490	6110	3120	6840	3240	3200	3220	2490	2600	988	1210		
22	1470	2730	5770	3140	8720	3220	3250	3090	2270	2200	960	1140		
23	2110	2240	5060	3400	8320	3000	3180	3110	1980	2000	943	1180		
24	1970	2120	4390	3770	7550	3050	3190	3170	1920	1800	966	1180		
25	1720	2630	3490	3840	6510	3380	2960	3170	1740	1700	976	1110		
26	1530	2230	3290	3850	6090	3210	2890	3140	1690	1700	1070	1140		
27	2630	2080	2620	4290	5350	3360	2740	2950	1640	1500	1000	1130		
28	2590	3030	2530	4300	4940	3310	2680	2980	1590	1600	977	1140		
29	7710	4070	2560	3910	---	4910	2680	3010	1730	1440	1220	1130		
30	5840	4530	2490	3420	---	16000	2720	2890	1670	1380	1420	1110		
31	3600	---	2370	3220	---	11100	---	2810	---	1310	1110	---		
TOTAL	58596	82330	182150	194650	160780	167530	108470	94340	58850	62380	33624	33221		
MEAN	1890	2744	5876	6279	5742	5404	3616	3043	1962	2012	1085	1107		
MAX	7710	4970	17400	26100	16900	16000	8400	4220	2780	3100	1420	1220		
MIN	956	1420	2370	2230	2340	3000	2470	2590	1580	1310	943	935		
CFSM	2.82	4.09	8.76	9.36	8.56	8.05	5.39	4.54	2.92	3.00	1.62	1.65		
IN.	3.25	4.56	10.10	10.79	8.91	9.29	6.01	5.23	3.26	3.46	1.86	1.84		
AC-FT	116200	163300	361300	386100	318900	332300	215200	187100	116700	123700	66690	65890		
CAL YR 1982	TOTAL	1193596	MEAN	3270	MAX	28500	MIN	764	CFSM	4.87	IN.	66.17	AC-FT	2367000
WTR YR 1983	TOTAL	1236921	MEAN	3389	MAX	26100	MIN	935	CFSM	5.05	IN.	68.57	AC-FT	2453000

## WILLAMETTE RIVER BASIN

## 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 upstream from Johnson Creek, 2.1 mi southeast of Clackamas, and at mile 4.8.

DRAINAGE AREA.--930 mi<sup>2</sup> at gage, 936 mi<sup>2</sup> at Gladstone Bridge 3.6 mi downstream, where high-flow discharge measurements are made.

PERIOD OF RECORD.--September 1911 to April 1912 (published as "at Park Place"), October 1962 to September 1983 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 50.68 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 15, 1911, to Apr. 22, 1912, nonrecording gage at site 3.6 mi downstream at different datum. Oct. 1, 1962, to Sept. 10, 1969, water-stage recorder at site 300 ft downstream at present datum.

REMARKS.--Records excellent. 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.--21 years, 3,667 ft<sup>3</sup>/s, 53.55 in/yr, 2,657,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 27.0 ft, from floodmarks; minimum, 336 ft<sup>3</sup>/s Sept. 1, 11, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0800	27,100	11.77	Feb. 18	1000	24,300	11.09
Dec. 16	1030	20,900	10.20	Mar. 30	0800	24,400	11.10
Jan. 7	0130	*42,700	*15.22				

Minimum, 870 ft<sup>3</sup>/s Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1320	3530	4910	2850	3720	6020	11400	3000	3180	2490	1470	1410		
2	1180	3110	5100	2680	3260	5920	10100	3010	2930	3690	1460	1290		
3	1230	2850	15800	3350	3200	5680	8500	2960	2470	3750	1370	1220		
4	1150	2530	21200	7400	3080	5100	7310	2860	2230	2990	1390	1150		
5	1100	2700	12200	13500	2820	5110	6560	2850	2150	2610	1350	1100		
6	1080	4420	13600	31300	3050	5340	5860	2990	2120	2370	1330	1070		
7	1450	4330	10300	35500	4080	6350	5270	3070	2030	2220	1260	1050		
8	1930	3480	7720	24000	3860	8480	4990	3570	1950	2100	1350	1030		
9	2140	3020	6080	15900	5920	10100	4770	3810	1900	2060	1240	1150		
10	1880	2700	4770	11200	6490	12500	4510	3780	2540	1910	1250	1160		
11	1670	2480	4140	8760	6690	10400	4430	3550	2710	1750	1310	1360		
12	1720	2320	3770	7280	7390	8830	3840	3340	2540	1680	1240	1210		
13	1420	1960	3960	6200	7830	8390	3530	3390	2250	1900	1190	1150		
14	1410	1780	4650	5380	7400	8550	3340	3290	2060	2820	1180	1340		
15	1300	1660	6340	4900	6500	7720	2990	4090	2050	2820	1110	1280		
16	1110	1790	17800	5160	6290	6640	3090	5300	1960	2560	1140	1330		
17	1550	2920	14300	4640	10300	5850	3110	4770	1860	2750	1110	1300		
18	1640	5790	10500	4160	22500	5340	3100	4270	2020	2650	1110	1300		
19	1630	6620	8460	5170	15900	4880	3230	3930	2500	3290	1060	1350		
20	1490	5590	9250	4450	11300	4190	3420	3730	3400	3420	1130	1320		
21	1440	5010	9170	4140	9580	3930	3720	3660	3100	2980	1080	1330		
22	1580	3750	8620	3990	11600	3910	3770	3520	2750	2620	1050	1260		
23	2160	3020	7400	4370	11100	3670	3700	3460	2530	2390	1060	1270		
24	2160	2720	6470	4850	10200	3510	3720	3520	2470	2140	1020	1280		
25	1940	3080	5210	5120	8870	4210	3390	3470	2230	2070	1080	1220		
26	1640	2800	4660	5030	8450	4000	3300	3440	2100	1990	1140	1260		
27	2520	2830	3870	5740	7270	4190	3100	3220	2020	1790	1120	1270		
28	2950	2830	3230	5540	6680	4290	3000	3190	1900	1860	1070	1230		
29	9590	3950	3350	5150	---	6500	2990	3220	2190	1770	1330	1230		
30	8300	5740	3130	4360	---	21000	3000	3080	2140	1660	1810	1200		
31	4940	---	2950	4190	---	15400	---	3030	---	1570	1310	---		
TOTAL	68620	101310	242910	256260	215330	216000	137040	108370	70280	74670	38120	37120		
MEAN	2214	3377	7836	8266	7690	6968	4568	3496	2343	2409	1230	1237		
MAX	9590	6620	21200	35500	22500	21000	11400	5300	3400	3750	1810	1410		
MIN	1080	1660	2950	2680	2820	3510	2990	2850	1860	1570	1020	1030		
CFSM	2.38	3.63	8.43	8.89	8.27	7.49	4.91	3.76	2.52	2.59	1.32	1.33		
IN.	2.74	4.05	9.72	10.25	8.61	8.64	5.48	4.33	2.81	2.99	1.52	1.48		
AC-FT	136100	200900	481800	508300	427100	428400	271800	215000	139400	148100	75610	73630		
CAL YR 1982	TOTAL	1505341	MEAN	4124	MAX	35000	MIN	857	CFSM	4.43	IN.	60.21	AC-FT	2986000
WTR YR 1983	TOTAL	1566030	MEAN	4290	MAX	35500	MIN	1020	CFSM	4.61	IN.	62.64	AC-FT	3106000

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LOCATION.--Lat 45°28'40", long 122°30'24", in lot 2, SW $\frac{1}{4}$  sec.13, T.1 S., R.2 E., Multnomah County, Hydrologic Unit 17090012, on right bank 0.3 mi southwest of Sycamore station, 2.5 mi east of city limits of Portland, and at mile 10.2.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	1200	528	7.78	Feb. 9	2030	552	8.00
Dec. 16	0230	935	10.57	Feb. 18	1200	544	7.93
Dec. 20	0700	917	10.48	Mar. 9	2400	695	9.11
Jan. 6	1700	*1,290	*11.98	Mar. 30	unknown	901	10.39

Minimum, 1.2 ft<sup>3</sup>/s Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	27	103	28	63	99	135	11	6.9	67	5.3	9.8
2	4.1	20	249	33	51	82	110	9.1	6.6	101	4.7	6.0
3	3.8	16	528	134	42	67	94	8.8	6.0	70	4.5	4.1
4	3.7	22	429	413	35	54	82	8.2	5.3	43	4.3	3.1
5	3.6	56	222	390	30	57	70	7.9	5.0	29	3.9	2.8
6	11	61	226	942	84	58	62	9.7	4.7	22	3.7	2.6
7	12	45	118	630	121	162	50	16	4.6	17	3.2	2.2
8	11	33	83	447	183	246	43	22	4.4	29	3.1	2.1
9	6.3	25	63	276	453	411	48	34	4.5	21	3.1	2.8
10	4.9	19	48	166	338	473	76	32	37	13	3.0	3.7
11	4.2	15	38	111	280	214	69	21	19	10	3.8	2.7
12	3.9	12	57	82	227	150	52	17	16	9.8	3.2	2.2
13	3.6	10	65	63	159	165	44	14	9.2	37	2.8	1.9
14	3.5	9.1	143	51	129	133	36	12	8.0	54	2.6	1.7
15	3.8	8.3	359	44	135	94	30	21	7.6	52	2.9	1.6
16	3.6	11	639	41	157	75	26	18	6.4	37	2.3	1.5
17	6.2	36	436	41	411	61	24	14	6.2	27	2.2	1.5
18	5.1	228	307	67	544	49	21	12	7.2	22	2.1	1.5
19	4.1	164	215	141	345	41	20	10	24	82	2.1	1.7
20	3.8	117	652	65	225	34	19	9.4	22	42	3.6	1.7
21	5.3	95	418	68	233	33	22	8.5	11	27	2.1	1.6
22	9.8	59	301	63	334	40	18	7.8	11	21	2.0	1.7
23	6.7	43	203	64	274	43	21	7.2	22	16	3.9	1.6
24	4.8	33	133	138	263	26	21	6.4	61	14	1.9	1.6
25	4.4	26	100	110	197	32	15	6.2	24	15	2.1	1.6
26	13	21	85	182	246	29	13	5.4	18	12	2.1	1.7
27	7.0	23	63	228	161	37	12	4.9	14	10	2.0	1.6
28	29	49	51	120	122	80	12	4.7	11	9.0	2.7	1.6
29	306	100	42	87	---	220	11	4.5	35	7.5	30	1.6
30	73	163	37	80	---	580	9.9	4.5	43	6.4	31	1.6
31	38	---	31	92	---	200	---	5.9	---	5.9	6.2	---
TOTAL	603.0	1546.4	6444	5397	5842	4045	1265.9	373.1	460.6	928.6	152.4	73.4
MEAN	19.5	51.5	208	174	209	130	42.2	12.0	15.4	30.0	4.92	2.45
MAX	306	228	652	942	544	580	135	34	61	101	31	9.8
MIN	3.5	8.3	31	28	30	26	9.9	4.5	4.4	5.9	1.9	1.5
CFSM	.74	1.94	7.85	6.57	7.89	4.91	1.59	.45	.58	1.13	.19	.09
IN.	.85	2.17	9.05	7.58	8.20	5.68	1.78	.52	.65	1.30	.21	.10
AC-FT	1200	3070	12780	10700	11590	8020	2510	740	914	1840	302	146
CAL YR 1982	TOTAL	24873.5	MEAN	68.1	MAX	1240	MIN	1.1	CFSM	2.57	IN.	34.92

## WILLAMETTE RIVER BASIN

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.

DRAINAGE AREA.--11,100 mi<sup>2</sup>, 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 National Weather Service.

GAGE.--Acoustic velocity meter (AVM) with water-stage and velocity-index recorder. Datum of gage is 1.55 ft National Geodetic Vertical Datum of 1929 (levels by National Weather Service).

REMARKS.--Water-discharge records fair above 50,000 ft<sup>3</sup>/s, poor below. Flow regulated by many reservoirs upstream (see elsewhere in this report). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--11 years, 33,750 ft<sup>3</sup>/s, 24,450,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 283,000 ft<sup>3</sup>/s Jan. 18, 1974; maximum gage height, 23.84 ft Jan. 18, 1974; minimum daily discharge, 4,200 ft<sup>3</sup>/s July 10, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 7, 1894, and June 1, 1948, reached stages of 33.0 ft and 30.0 ft, respectively, from information by National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 170,000 ft<sup>3</sup>/s Jan. 8; maximum gage height, 16.0 ft Jan. 8; minimum daily discharge, 10,000 ft<sup>3</sup>/s Aug. 16, 17, 19, 20, 22, 24, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16000	45000	66000	45000	45000	88000	125000	21000	22000	13000	11000	14000
2	15000	41000	69000	40000	41000	76000	126000	21000	22000	16000	11000	14000
3	15000	37000	83000	39000	35000	66000	126000	20000	20000	22000	11000	14000
4	15000	33000	126000	50000	31000	56000	124000	19000	18000	24000	11000	14000
5	15000	30000	124000	94000	31000	52000	115000	19000	16000	24000	12000	13000
6	16000	33000	122000	128000	27000	51000	97000	19000	15000	21000	11000	12000
7	17000	36000	117000	166000	27000	61000	77000	19000	14000	19000	11000	12000
8	19000	36000	109000	167000	35000	74000	63000	22000	14000	19000	11000	14000
9	20000	35000	98000	160000	47000	90000	52000	27000	14000	19000	11000	15000
10	20000	33000	88000	147000	78000	110000	43000	30000	15000	18000	11000	13000
11	18000	31000	80000	133000	96000	108000	42000	33000	18000	14000	11000	13000
12	18000	28000	70000	119000	102000	105000	38000	35000	21000	13000	11000	15000
13	19000	27000	64000	103000	105000	93000	34000	32000	19000	13000	11000	14000
14	19000	26000	64000	92000	101000	89000	32000	29000	17000	15000	11000	15000
15	19000	25000	74000	77000	93000	96000	30000	28000	18000	15000	11000	16000
16	18000	21000	114000	64000	82000	98000	27000	32000	15000	15000	10000	16000
17	19000	25000	140000	53000	85000	91000	24000	32000	14000	16000	10000	16000
18	20000	33000	146000	49000	110000	77000	23000	32000	14000	15000	11000	14000
19	20000	43000	139000	49000	139000	67000	23000	30000	15000	16000	10000	14000
20	20000	49000	134000	49000	146000	59000	24000	30000	18000	18000	10000	13000
21	20000	50000	134000	49000	147000	51000	23000	25000	18000	19000	11000	14000
22	20000	47000	134000	46000	145000	47000	23000	24000	19000	17000	10000	13000
23	21000	43000	131000	45000	145000	42000	23000	23000	18000	15000	11000	13000
24	22000	39000	125000	48000	142000	41000	24000	23000	19000	14000	10000	14000
25	24000	35000	112000	53000	134000	42000	23000	23000	19000	12000	11000	14000
26	23000	33000	96000	53000	123000	43000	22000	23000	16000	12000	11000	14000
27	23000	31000	84000	56000	115000	41000	21000	24000	14000	11000	10000	14000
28	25000	32000	74000	66000	99000	41000	21000	24000	14000	12000	10000	14000
29	37000	37000	66000	58000	---	48000	20000	22000	14000	12000	11000	13000
30	50000	49000	56000	52000	---	92000	21000	22000	13000	11000	12000	14000
31	51000	---	51000	47000	---	118000	---	22000	---	12000	13000	---
TOTAL	674000	1063000	3090000	2397000	2506000	2213000	1466000	785000	503000	492000	337000	418000
MEAN	21740	35430	99680	77320	89500	71390	48870	25320	16770	15870	10870	13930
MAX	51000	50000	146000	167000	147000	118000	126000	35000	22000	24000	13000	16000
MIN	15000	21000	51000	39000	27000	41000	20000	19000	13000	11000	10000	12000
AC-FT	1337000	2108000	6129000	4754000	4971000	4389000	2908000	1557000	997700	975900	668400	829100
CAL YR 1982	TOTAL	15232000	MEAN	41730	MAX	196000	MIN	8000	AC-FT	30213000		
WTR YR 1983	TOTAL	15944000	MEAN	43680	MAX	167000	MIN	10000	AC-FT	31625000		



## WILLAMETTE RIVER BASIN

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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 September 1981.

WATER TEMPERATURES: November 1975 to September 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 14...	1030	19000	66	7.6	14.0	9.8	--	--	22	5.7	1.8
DEC 09...	1130	98000	--	7.2	6.5	13.4	120	280	20	4.9	1.8
JAN 26...	1030	53000	70	7.4	7.0	12.2	310	2600	25	6.2	2.3
APR 20...	1145	24000	85	7.7	13.0	10.0	260	150	29	7.3	2.6
JUN 21...	1030	18000	78	7.1	17.0	9.1	190	71	26	6.5	2.3
AUG 10...	1025	11000	85	7.8	21.0	8.2	K16	†2500	28	7.0	2.5

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT 14...	4.5	.90	25	6.0	3.1	<.10	.100	.160	.90	.25
DEC 09...	3.4	.80	23	8.0	2.8	<.10	.070	.620	1.0	.06
JAN 26...	4.2	.80	24	7.0	3.4	<.10	.140	.710	1.1	.09
APR 20...	4.9	.90	30	5.2	4.0	<.10	.160	.630	.90	.12
JUN 21...	5.0	.80	31	5.5	3.8	<.10	.150	.280	.40	--
AUG 10...	6.1	1.0	36	5.9	4.7	<.10	.130	.230	--	.12

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 14...	.070	.070	16	51	53	2620	1.9	8	410	95
DEC 09...	.040	.100	15	49	51	13000	8.0	36	9530	86
JAN 26...	.060	.090	16	58	55	8300	15	18	2580	9
APR 20...	.050	.080	17	59	60	.16	4.1	8	.02	98
JUN 21...	.070	.080	16	--	59	.16	3.6	10	.03	93
AUG 10...	.070	--	17	57	66	.15	4.1	10	.03	98



## WILLAMETTE RIVER BASIN

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 14...	20	1	13	1	<1	<1	<3	<1	35	<1
DEC 09...	270	1	16	1	<1	<1	<3	6	300	1
APR 20...	40	<1	12	<1	<1	<1	<3	5	99	<1
AUG 10...	20	1	10	<1	<1	<1	<3	4	41	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 14...	<4	12	.1	<10	<1	<1	1	35	<6	<3
DEC 09...	6	22	<.1	<10	3	<1	<1	33	<6	13
APR 20...	7	20	<.1	<10	3	<1	<1	45	<6	14
AUG 10...	<4	2	<.1	<10	2	<1	<1	42	<6	5

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
DEC 09...	<1.1	1.5	1.4	1.3	.8	.8	.10	<.01
APR 20...	<.9	<.4	1.0	.9	.7	.7	.04	.10

K - Results based on colony count outside acceptable range (non-ideal colony count).

## 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 upstream from Cook Creek, 2.2 mi northeast of Foss, and at mile 13.5.

DRAINAGE AREA.--667 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 32.60 ft National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to Nov. 11, 1939, nonrecording gage.

REMARKS.--Water-discharge records good. No regulation. Several small diversions for irrigation and domestic use above station.

AVERAGE DISCHARGE.--44 years, 2,737 ft<sup>3</sup>/s, 55.72 in/yr, 1,983,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,900 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 23.11 ft; minimum, 34 ft<sup>3</sup>/s Aug. 29-31, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 19,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	2200	*33,400	*19.11	Jan. 7	0930	21,700	14.99
Dec. 16	0700	24,400	16.01				

Minimum, 163 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230	2690	12000	2080	3290	4390	8630	819	624	640	463	274
2	218	2020	11000	1970	2820	3910	7710	797	629	858	436	273
3	210	1590	22400	2360	2460	3510	7770	768	634	1000	413	259
4	194	1540	24800	7130	2170	3050	6730	742	611	888	389	242
5	180	1680	17900	15700	1920	2750	5460	717	582	793	365	224
6	236	2100	11100	19700	1860	2620	4440	706	549	720	346	207
7	502	2320	7410	21000	2320	3050	3700	764	518	669	326	191
8	569	2150	5440	19300	2400	4840	3120	886	489	668	309	183
9	557	1790	4280	16300	3830	8330	2730	1220	465	634	296	198
10	481	1510	3480	12400	7460	10100	2620	1390	542	614	285	328
11	394	1310	2910	9060	10600	9370	2610	1240	664	582	278	617
12	337	1180	2620	6960	11400	7620	2410	1060	605	543	275	514
13	294	1090	2470	5490	12300	6810	2170	967	574	731	264	442
14	263	982	3950	4370	10900	7390	1980	914	533	1030	253	400
15	243	904	10600	3580	8470	8320	1790	1170	493	950	240	362
16	234	1250	23500	3090	7670	7600	1620	1350	486	875	227	330
17	250	5230	22700	2730	9460	5950	1500	1280	483	793	217	304
18	277	5860	18900	2490	10700	4640	1410	1140	607	709	208	282
19	271	6080	16000	2340	9500	3690	1320	1050	900	843	201	268
20	256	6490	13200	2280	8580	3030	1260	979	986	1030	195	254
21	301	6270	11900	2130	7690	2600	1190	917	862	1080	189	238
22	1470	5110	11200	1990	7910	2300	1130	869	761	924	185	223
23	1390	3960	10100	2250	9200	2230	1120	819	709	806	181	211
24	1170	3100	8350	2790	9370	2120	1140	772	718	720	179	200
25	854	2520	6540	3100	7780	1930	1100	729	756	673	179	189
26	977	2130	5380	4640	6760	1730	1050	690	718	634	177	183
27	1270	2060	4370	6580	6000	1860	984	665	671	603	173	179
28	2270	4340	3620	7100	5160	2280	926	633	623	583	174	176
29	10500	6420	3070	5950	---	8380	891	595	572	553	197	172
30	6970	9360	2660	4810	---	12800	853	565	560	521	234	166
31	3900	---	2340	3900	---	12300	---	601	---	491	250	---
TOTAL	37268	95036	306190	205570	189980	161500	81364	27814	18924	23158	8104	8089
MEAN	1202	3168	9877	6631	6785	5210	2712	897	631	747	261	270
MAX	10500	9360	24800	21000	12300	12800	8630	1390	986	1080	463	617
MIN	180	904	2340	1970	1860	1730	853	565	465	491	173	166
CFSM	1.80	4.75	14.8	9.94	10.2	7.81	4.07	1.34	.95	1.12	.39	.40
IN.	2.08	5.30	17.08	11.47	10.60	9.01	4.54	1.55	1.06	1.29	.45	.45
AC-FT	73920	188500	607300	407700	376800	320300	161400	55170	37540	45930	16070	16040
CAL YR 1982	TOTAL	1278712	MEAN	3503	MAX	29300	MIN	82	CFSM	5.25	IN.	71.32
WTR YR 1983	TOTAL	1162997	MEAN	3186	MAX	24800	MIN	166	CFSM	4.78	IN.	64.86
										AC-FT	2536000	
										AC-FT	2307000	

## PACIFIC SLOPE BASINS IN OREGON

## 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.--

SPECIFIC CONDUCTANCE: August 1980 to September 1981.

WATER TEMPERATURES: December 1974 to September 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 20...	1200	251	79	7.8	9.5	11.5	K11	44	24	6.7	1.7
JAN 31...	1300	3880	52	7.2	6.5	13.4	K12	57	13	3.6	.90
APR 21...	1200	1180	60	7.6	11.5	11.0	K2	--	16	4.6	1.1
AUG 12...	1015	275	71	7.9	17.0	9.6	K13	370	23	6.5	1.6

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT 20...	6.9	1.0	25	7.0	6.8	<.10	.140	.220	1.1	.09
JAN 31...	4.1	.60	15	<5.0	3.9	<.10	<.060	.540	.40	--
APR 21...	4.9	.70	20	4.2	4.3	<.10	.160	.330	.60	.12
AUG 12...	6.0	.80	26	4.4	5.1	<.10	.080	.220	.60	.06

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 20...	.040	.050	15	61	61	41	1.0	1	.68	93
JAN 31...	.010	.030	14	46	--	482	4.3	11	115	84
APR 21...	<.010	.070	15	41	47	131	1.7	--	--	87
AUG 12...	.030	.030	15	--	55	41	1.3	1	.74	80

## NEHALEM RIVER BASIN

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14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 20...	20	1	12	<1	1	<1	<3	9	270	4
JAN 31...	50	<1	8	<1	<1	<1	<3	6	94	<1
APR 21...	30	1	12	<1	<1	<1	<3	10	120	<1
AUG 12...	<10	1	11	1	2	<1	<3	2	200	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 20...	8	5	<.1	<10	<1	<1	<1	46	<6	16
JAN 31...	<4	2	<.1	<10	<1	<1	<1	25	<6	45
APR 21...	7	3	<.1	<10	3	1	<1	31	<6	22
AUG 12...	<4	<1	<.1	<10	1	<1	<1	43	<6	15

K - Results based on colony count outside acceptable range (non-ideal colony count).

## WILSON RIVER BASIN

14301500 WILSON RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°29'05", long 123°41'20", in SW¼ sec.8, T.1 S., R.8 W., Tillamook County, Hydrologic Unit 17100203, on right bank 0.2 mi upstream from Negro Jack Creek, 8.0 mi east of Tillamook, and at mile 11.4.

DRAINAGE AREA.--161 mi<sup>2</sup>, at cableway, 2.0 mi 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 National Geodetic Vertical Datum of 1929. Dec. 18, 1914, to Nov. 4, 1916, nonrecording gage at site 2.8 mi downstream at different datum. July 30, 1931, to Sept. 30, 1938, nonrecording gage at site 2.82 mi downstream at datum 28.83 ft lower. Oct. 1, 1938, to Oct. 17, 1968, water-stage recorder at site 2.1 mi downstream at datum 29.76 ft lower.

REMARKS.--Records good. No regulation. Small diversions for domestic use above station.

AVERAGE DISCHARGE.--53 years (water years 1915, 1932-83), 1,205 ft<sup>3</sup>/s, 101.64 in/yr, 873,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 16.91 ft; maximum gage height, 20.26 ft Dec. 22, 1964 (site and datum then in use); minimum discharge, 32 ft<sup>3</sup>/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, from floodmark, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	2230	*18,700	*14.24	Jan. 5	1500	13,900	12.94
Dec. 16	0230	12,800	12.62	Mar. 29	1900	12,700	12.38

Minimum, 91 ft<sup>3</sup>/s Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	110	1040	3940	741	1050	1480	3250	404	309	540	259	178		
2	105	801	3540	770	955	1320	2810	397	295	1080	249	177		
3	101	681	11000	1160	858	1160	2450	383	283	1050	242	166		
4	96	686	9700	5410	781	1040	2070	366	270	834	233	151		
5	93	837	4300	10700	714	978	1760	353	258	686	225	143		
6	136	1150	2760	9910	788	1050	1510	353	249	597	216	134		
7	250	1120	1970	9340	1020	1480	1310	405	240	530	208	130		
8	257	953	1570	7930	961	2740	1160	519	232	492	202	130		
9	249	784	1320	5170	2020	4440	1080	851	226	446	197	132		
10	211	660	1120	3880	3200	4050	1110	846	396	407	187	352		
11	177	545	975	3120	4520	2950	1060	713	434	376	180	458		
12	154	503	899	2350	4050	2290	994	624	363	377	180	307		
13	135	461	882	1850	4120	2140	946	551	320	579	171	246		
14	124	414	1520	1530	3240	2830	902	527	295	685	165	214		
15	118	381	5380	1300	2670	2780	852	753	317	608	158	194		
16	118	773	9790	1140	2830	2180	797	820	291	544	155	179		
17	135	3540	6530	1020	4690	1740	748	716	300	492	152	169		
18	136	2680	5080	964	4770	1440	698	638	470	451	148	171		
19	124	2610	4170	937	3310	1220	650	571	616	560	144	171		
20	116	2530	3610	922	3090	1050	615	527	576	555	141	156		
21	149	2010	3250	856	2820	939	576	486	505	498	137	146		
22	887	1550	3110	877	3600	864	545	451	446	457	134	139		
23	786	1220	2570	1310	3690	945	551	420	427	420	134	138		
24	448	995	2020	1490	2830	880	544	397	452	390	134	135		
25	354	845	1680	1400	2240	823	508	372	449	372	131	130		
26	509	743	1550	1720	2160	782	510	356	412	351	130	127		
27	789	809	1330	2100	1930	909	487	336	386	341	127	127		
28	1720	2480	1160	1940	1680	1240	466	322	362	339	137	125		
29	6960	2880	1030	1630	---	7640	442	303	358	310	185	124		
30	2380	3660	915	1410	---	8580	424	298	364	287	181	121		
31	1380	---	821	1210	---	4710	---	321	---	271	174	---		
TOTAL	19307	40341	99492	86087	70587	68670	31825	15379	10901	15925	5416	5270		
MEAN	623	1345	3209	2777	2521	2215	1061	496	363	514	175	176		
MAX	6960	3660	11000	10700	4770	8580	3250	851	616	1080	259	458		
MIN	93	381	821	741	714	782	424	298	226	271	127	121		
CFSM	3.87	8.35	19.9	17.2	15.7	13.8	6.59	3.08	2.25	3.19	1.09	1.09		
IN.	4.46	9.32	22.99	19.89	16.31	15.87	7.35	3.55	2.52	3.68	1.25	1.22		
AC-FT	38300	80020	197300	170800	140000	136200	63120	30500	21620	31590	10740	10450		
CAL YR 1982	TOTAL	477388	MEAN	1308	MAX	14200	MIN	60	CFSM	8.12	IN.	110.30	AC-FT	946900
WTR YR 1983	TOTAL	469200	MEAN	1285	MAX	11000	MIN	93	CFSM	7.98	IN.	108.41	AC-FT	930700



NESTUCCA RIVER BASIN

261

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 upstream from Walker Creek, and 5.0 mi southwest of Fairdale.

DRAINAGE AREA.--2.85 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam with ungated spillway. Capacity of reservoir is 3,840 acre-ft between elevations 1,810.0 ft and 1,865.5 ft. 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 Mar. 12 1972, Feb. 19, Mar. 28, 1974, elevation, 1,865.8 ft; no contents most of time during winter months.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,770 acre-ft Feb. 12 to Aug. 9, elevation, 1,865.0 ft; reservoir empty Dec. 8-16.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1,854.0	2,410	-
Oct. 31.....	1,850.5	2,060	-350
Nov. 30.....	1,820.0	235	-1,825
Dec. 31.....	1,832.0	700	+465
CAL YR 1982.....	-	-	+700
Jan. 31.....	1,859.3	3,010	+2,310
Feb. 28.....	1,865.0	3,770	+760
Mar. 31.....	1,865.0	3,770	0
Apr. 30.....	1,865.0	3,770	0
May 31.....	1,865.0	3,770	0
June 30.....	1,865.0	3,770	0
July 31.....	1,865.0	3,770	0
Aug. 31.....	1,862.5	3,420	-350
Sept. 30.....	1,859.0	2,970	-450
WTR YR 1983.....	-	-	+560

## NESTUCCA RIVER BASIN

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 upstream from former Meadow Lake, 0.4 mi downstream from Walker Creek, 5.3 mi southwest of Fairdale, and at mile 49.3.

DRAINAGE AREA.--6.18 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 1,778.99 ft National Geodetic Vertical Datum of 1929 (levels by city of McMinnville).

REMARKS.--Records good. Flow regulated since March 1969 by McGuire Lake about 1 mi above station (see station 14302800); during winter months lake is empty except when inflow exceeds capacity of outlet tunnel.

AVERAGE DISCHARGE.--23 years (water years 1961-83), 32.8 ft<sup>3</sup>/s, 72.08 in/yr, 23,760 acre-ft/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 876 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 10.43 ft; minimum, 0.76 ft<sup>3</sup>/s Aug. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 435 ft<sup>3</sup>/s Dec. 15, gage height, 6.49 ft; minimum, 2.0 ft<sup>3</sup>/s Sept. 29, 30; minimum daily, 2.1 ft<sup>3</sup>/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	42	123	13	21	81	131	12	10	15	4.0	4.2
2	3.1	39	164	15	19	66	110	12	9.9	17	3.8	3.6
3	3.0	36	252	27	17	54	86	12	9.3	13	3.6	3.2
4	5.6	57	219	104	15	47	67	12	8.8	11	3.5	3.1
5	9.9	79	152	120	15	49	54	12	8.5	9.7	3.5	3.0
6	13	82	121	137	23	53	46	13	8.2	8.8	3.0	2.8
7	14	81	96	124	24	85	40	19	7.9	8.6	2.9	2.8
8	12	77	64	122	27	130	35	29	7.3	8.3	2.9	2.7
9	11	74	37	78	81	199	33	35	7.3	7.7	2.9	2.8
10	11	71	31	58	90	215	36	27	12	7.3	2.8	5.9
11	10	69	28	41	91	153	34	23	11	6.8	2.9	4.9
12	10	66	29	32	143	130	30	20	9.5	6.7	2.7	3.4
13	10	64	27	26	160	124	28	17	8.4	8.2	2.6	3.0
14	9.9	62	100	22	133	141	26	17	8.3	7.8	2.5	2.8
15	9.9	60	247	19	110	127	25	31	9.2	6.7	2.5	2.6
16	10	71	345	17	123	98	23	27	8.0	6.2	2.5	2.5
17	11	99	281	16	183	74	22	22	8.1	6.2	2.7	2.5
18	11	100	209	17	194	57	21	20	9.9	6.1	2.5	3.0
19	11	109	174	16	154	47	20	18	13	13	2.4	2.8
20	10	102	174	15	148	40	20	16	11	9.2	2.4	2.4
21	15	87	173	14	140	36	19	15	9.7	7.8	2.4	2.4
22	25	77	162	19	167	39	19	15	8.5	6.6	2.4	2.3
23	16	71	93	39	182	56	20	14	8.4	5.9	2.5	2.3
24	14	65	37	37	144	48	20	13	8.4	5.4	2.7	2.3
25	26	59	29	31	119	43	18	12	8.0	5.3	2.4	2.3
26	42	54	27	49	140	41	18	11	7.8	5.2	2.4	2.3
27	42	58	22	47	121	48	12	11	7.4	5.5	2.4	2.3
28	60	76	19	36	97	62	9.9	10	7.1	5.4	2.8	2.2
29	81	90	17	30	---	244	11	9.6	7.0	4.8	4.2	2.1
30	54	119	16	29	---	285	12	9.1	8.1	4.4	6.7	2.1
31	45	---	14	25	---	184	---	10	---	4.1	3.9	---
TOTAL	608.5	2196	3482	1375	2881	3056	1045.9	523.7	266.0	243.7	93.4	86.6
MEAN	19.6	73.2	112	44.4	103	98.6	34.9	16.9	8.87	7.86	3.01	2.89
MAX	81	119	345	137	194	285	131	35	13	17	6.7	5.9
MIN	3.0	36	14	13	15	36	9.9	9.1	7.0	4.1	2.4	2.1
AC-FT	1210	4360	6910	2730	5710	6060	2070	1040	528	483	185	172
MEAN†	14.6	42.6	120	82.0	116	98.6	34.9	16.9	8.87	7.86	3.42	3.60
CFSM†	2.36	6.89	19.4	13.3	18.8	16.0	5.65	2.73	1.44	1.27	.553	.583
IN.†	2.73	7.69	22.38	15.30	19.64	18.40	6.30	3.15	1.60	1.47	.64	.66
AC-FT†	899	2535	7375	5040	6470	6060	2070	1040	528	483	210	214

CAL YR 1982 TOTAL 14752.2 MEAN 40.4 MAX 345 MIN 1.5 AC-FT 29260 MEAN† 43.3 CFSM† 7.01 IN.† 95.04 AC-FT† 31318  
WTR YR 1983 TOTAL 15857.8 MEAN 43.4 MAX 345 MIN 2.1 AC-FT 31450 MEAN† 45.5 CFSM† 7.36 IN.† 99.89 AC-FT† 32916

† Adjusted for storage and diversion by McGuire Lake.

NESTUCCA RIVER BASIN

263

14303200 TUCCA CREEK NEAR BLAINE, OR

LOCATION.--Lat 45°19'28", long 123°32'43", in SE¼NW¼ sec.9, T.3 S., R.7 W., Tillamook County, Hydrologic Unit 17100203, on right bank at road bridge, 80 ft upstream from mouth, and 8 mi northeast of Blaine.

DRAINAGE AREA.--3.09 mi<sup>2</sup>.

PERIOD OF RECORD.--July to September 1983.

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft, from topographic map.

REMARKS.--Records fair July, poor August and September.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period July to September, 13 ft<sup>3</sup>/s July 2, gage height, 1.23 ft; minimum daily, 1.6 ft<sup>3</sup>/s Sept. 23-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	JUL	AUG	SEP
1	10	5.0	3.3
2	12	4.6	2.8
3	12	4.4	2.4
4	12	4.2	2.2
5	11	4.1	2.2
6	10	3.9	2.2
7	10	3.5	2.3
8	9.5	3.2	2.6
9	9.0	3.2	3.2
10	8.6	3.0	2.7
11	7.6	2.7	2.4
12	7.6	2.7	2.1
13	9.5	2.6	2.0
14	9.0	2.5	1.8
15	8.1	2.4	1.8
16	7.6	2.4	1.8
17	7.2	2.3	1.8
18	7.2	2.3	2.0
19	10	2.3	1.8
20	8.6	2.3	1.7
21	8.1	2.3	1.7
22	7.6	2.3	1.7
23	7.6	2.3	1.6
24	7.2	2.3	1.6
25	7.2	2.3	1.6
26	6.7	2.3	1.6
27	6.7	2.4	1.6
28	6.7	2.6	1.6
29	5.8	3.7	1.6
30	5.6	5.0	1.6
31	5.2	4.0	---
TOTAL	260.9	95.1	61.3
MEAN	8.42	3.07	2.04
MAX	12	5.0	3.3
MIN	5.2	2.3	1.6
CFSM	2.72	.99	.66
IN.	3.14	1.14	.74
AC-FT	517	189	122

## 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 upstream from Saling Creek, 1.2 mi southwest of Beaver, and at mile 13.5.

DRAINAGE AREA.--180 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 43 ft, from river profile map.

REMARKS.--Water-discharge records good. No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--19 years, 1,101 ft<sup>3</sup>/s, 83.06 in/yr, 797,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft<sup>3</sup>/s Jan. 11, 1972, gage height, 22.0 ft, from floodmark; minimum, 32 ft<sup>3</sup>/s Sept. 14, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1962, reached a stage of 23.4 ft, discharge, 32,500 ft<sup>3</sup>/s caused by failure of Meadow Lake Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	2200	*12,400	*13.92	Jan. 7	1000	10,100	12.32
Dec. 16	0230	9,810	12.05				

Minimum, 94 ft<sup>3</sup>/s Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	129	1010	3050	888	1280	1980	3230	440	395	647	323	204		
2	121	831	3850	879	1160	1700	2750	432	419	901	314	194		
3	119	726	9780	1180	1070	1500	2460	417	386	831	303	174		
4	110	752	9010	5970	985	1310	2110	399	354	724	292	164		
5	102	804	5320	7240	912	1220	1820	388	334	646	283	158		
6	185	1010	3650	8800	1020	1210	1590	391	318	596	271	151		
7	353	1070	2650	9600	1160	1500	1400	466	307	560	263	145		
8	342	1000	2140	7940	1110	2010	1240	650	294	534	255	145		
9	305	904	1810	5700	2390	3240	1160	872	291	492	250	165		
10	248	812	1560	4280	3270	4070	1280	792	434	456	242	250		
11	211	735	1370	3310	3760	3310	1200	700	467	428	243	371		
12	184	673	1290	2610	3990	2790	1090	639	413	432	234	249		
13	165	630	1140	2130	3930	2570	1010	588	368	655	223	205		
14	150	580	1570	1790	3280	2800	941	574	346	747	212	185		
15	140	543	4220	1550	2700	2730	879	844	414	645	206	173		
16	150	733	8570	1370	2760	2350	819	881	371	582	199	164		
17	214	1750	6960	1240	3440	1980	767	766	365	533	196	158		
18	199	1790	5220	1160	4100	1670	721	702	505	497	192	159		
19	167	2190	3920	1120	3560	1430	683	646	696	672	186	161		
20	152	2200	3750	1160	3210	1250	655	603	661	586	181	144		
21	210	1910	3460	1060	2780	1120	620	565	580	530	175	134		
22	692	1610	3260	1050	3320	1070	597	530	522	497	170	131		
23	562	1380	2880	1420	3910	1220	640	497	515	470	169	130		
24	427	1210	2330	1490	3280	1070	630	475	526	444	169	127		
25	394	1080	1990	1410	2680	1110	568	450	513	427	165	125		
26	580	978	1810	1720	3040	1040	570	427	469	410	159	125		
27	700	965	1540	2030	2690	1150	523	410	445	406	154	125		
28	944	1450	1350	1950	2290	1340	491	391	422	400	168	122		
29	3140	1740	1190	1740	---	4530	473	375	416	371	256	119		
30	1730	2710	1070	1630	---	6520	455	367	442	351	250	116		
31	1160	---	969	1430	---	4460	---	418	---	334	232	---		
TOTAL	14285	35776	102679	86847	73077	67250	33372	17095	12988	16804	6935	4973		
MEAN	461	1193	3312	2802	2610	2169	1112	551	433	542	224	166		
MAX	3140	2710	9780	9600	4100	6520	3230	881	696	901	323	371		
MIN	102	543	969	879	912	1040	455	367	291	334	154	116		
CFSM	2.56	6.63	18.4	15.6	14.5	12.0	6.18	3.06	2.41	3.01	1.24	.92		
IN.	2.95	7.39	21.22	17.95	15.10	13.90	6.90	3.53	2.68	3.47	1.43	1.03		
AC-FT	28330	70960	203700	172300	144900	133400	66190	33910	25760	33330	13760	9860		
CAL YR 1982	TOTAL	447013	MEAN	1225	MAX	11100	MIN	39	CFSM	6.81	IN.	92.38	AC-FT	886700
WTR YR 1983	TOTAL	472081	MEAN	1293	MAX	9780	MIN	102	CFSM	7.18	IN.	97.56	AC-FT	936400

NESTUCCA RIVER BASIN

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14303600 NESTUCCA RIVER NEAR BEAVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1964 to current year.

INSTRUMENTATION.--Graphic temperature recorder October 1964 to Sept. 7, 1977. Digital temperature recorder since Sept. 7, 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.0°C July 1-3, 1967, Aug. 9, 10, 1981; minimum, 0.5°C Jan. 28-30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 19.5°C Aug. 13, 14; minimum recorded, 5.0°C Nov. 23-25, Feb. 4.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



## NESTUCCA RIVER BASIN

14303600 NESTUCCA RIVER NEAR BEAVER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.0	12.0	11.0	13.0	11.5	13.0	12.0	18.0	15.5	17.0	15.5
2	8.0	7.5	12.0	10.0	13.0	11.5	13.5	11.5	16.5	15.0	17.5	15.0
3	9.0	7.0	11.5	10.5	14.0	11.5	13.0	11.5	18.0	14.5	17.5	15.0
4	9.5	6.5	11.0	9.5	13.5	12.0	14.0	11.5	17.0	14.0	17.0	15.5
5	10.0	7.0	11.5	9.5	16.0	11.5	14.0	13.0	17.0	14.0	17.5	14.5
6	10.0	7.5	11.0	10.0	18.0	13.5	13.5	12.0	18.5	14.0	16.5	14.0
7	9.5	8.5	11.0	10.0	18.5	14.0	13.0	11.5	18.0	15.5	17.0	14.0
8	9.0	7.0	10.0	8.5	16.5	15.0	13.5	11.0	17.0	16.0	14.5	13.0
9	8.0	7.0	9.0	7.5	15.0	14.0	13.5	11.5	18.0	15.5	15.5	12.5
10	7.0	6.0	11.0	8.5	14.0	13.0	16.0	12.0	17.5	16.0	14.0	13.0
11	8.5	6.5	12.5	9.0	14.0	12.0	17.5	14.0	18.5	15.0	15.5	13.0
12	9.0	6.0	13.5	10.0	14.5	12.5	16.0	15.0	18.5	14.5	16.0	13.0
13	9.5	6.5	13.0	11.0	17.0	12.0	15.0	13.0	19.5	15.5	16.5	14.0
14	10.0	7.0	12.5	11.0	15.5	14.0	14.0	12.0	19.5	16.0	16.5	14.5
15	11.0	7.5	11.0	9.5	14.0	13.0	13.0	12.0	19.0	15.5	16.5	14.0
16	11.5	8.0	10.0	9.0	14.0	12.0	14.5	12.0	18.5	15.0	15.0	13.5
17	11.5	9.0	11.5	9.0	14.0	13.0	13.5	12.5	18.0	15.0	14.5	12.0
18	13.0	10.0	13.0	10.5	13.5	12.0	15.0	12.5	19.0	15.0	14.0	12.5
19	11.5	10.5	13.5	10.0	13.5	11.5	14.5	13.5	18.5	15.5	13.0	10.0
20	11.5	10.0	14.5	11.5	14.0	11.5	15.0	13.0	18.0	14.5	13.5	10.5
21	12.0	10.0	15.0	12.0	14.5	11.0	16.5	13.0	19.0	15.0	14.5	11.0
22	10.5	10.0	15.5	11.5	13.5	12.5	15.5	14.5	18.0	15.0	13.5	11.5
23	10.5	9.5	16.5	12.5	13.0	11.5	16.5	13.5	17.0	16.0	15.0	12.0
24	11.0	9.0	15.5	13.5	12.5	11.5	15.5	13.5	17.5	14.5	16.5	14.0
25	10.0	8.5	17.5	14.0	14.0	11.0	15.0	13.5	17.5	14.0	16.0	13.5
26	11.5	9.0	17.5	14.0	13.5	12.5	16.5	13.5	18.0	15.0	14.0	13.0
27	13.0	9.5	17.5	13.5	15.0	12.5	15.0	14.0	18.5	15.5	14.0	12.0
28	13.5	11.0	18.0	14.5	14.0	13.0	16.0	13.5	16.5	14.5	13.0	10.5
29	13.0	11.0	16.5	15.0	14.5	12.5	17.0	13.0	16.0	14.0	11.5	9.5
30	11.5	10.5	15.5	13.5	13.5	12.5	18.5	14.5	15.5	14.5	11.5	8.5
31	---	---	13.5	12.0	---	---	17.5	15.5	17.5	14.5	---	---
MONTH	13.5	6.0	18.0	7.5	18.5	11.0	18.5	11.0	19.5	14.0	17.5	8.5

## SILETZ RIVER BASIN

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14304850 BIG ROCK CREEK NEAR VALSETZ, OR

LOCATION.--Lat 44°46'41", long 123°41'34", in NE¼NW¼ sec.20, T.9 S., R.8 W., Polk County, Hydrologic Unit 17100204, on left bank about 0.2 mi downstream from bridge and 4.7 mi southwest of Valsetz.

DRAINAGE AREA.--6.90 mi<sup>2</sup>.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1979 to current year.

INSTRUMENTATION.--Temperature recorder since Feb. 27, 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.0°C Aug. 9, 10, 1981; minimum, 0.0°C Jan. 28-30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 17.0°C July 30, Aug. 13, 14; minimum, 3.5°C Dec. 30, 31.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## SILETZ RIVER BASIN

14304850 BIG ROCK CREEK NEAR VALSETZ, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	7.5	10.5	9.5	12.0	10.5	11.5	11.0	16.0	13.5	14.5	13.0
2	8.5	7.0	10.0	9.0	12.0	10.5	11.5	10.5	15.0	13.0	14.5	12.5
3	9.0	6.5	10.5	8.0	12.5	9.5	---	10.0	15.5	13.0	15.5	12.0
4	9.5	6.0	10.0	8.0	13.5	10.0	---	---	15.0	12.0	15.0	13.5
5	10.0	6.5	10.5	8.0	14.0	10.0	---	---	15.0	12.5	14.0	11.0
6	10.5	6.0	9.5	8.5	15.5	11.0	12.0	---	16.5	12.0	14.0	10.5
7	10.0	7.0	9.0	8.0	16.0	12.0	11.0	10.0	16.0	13.5	13.0	10.0
8	8.0	5.5	8.0	7.0	15.0	13.0	12.0	10.0	15.5	14.5	11.5	9.5
9	7.0	6.0	9.0	7.0	13.5	12.5	12.0	9.0	15.5	13.0	12.5	10.0
10	7.5	5.0	10.0	6.5	12.5	11.5	14.0	9.5	15.0	14.0	12.0	11.0
11	8.5	5.5	11.0	7.0	12.5	11.0	15.0	11.5	15.0	13.0	14.0	11.5
12	8.0	4.5	12.0	7.5	13.0	11.0	13.5	12.5	16.5	12.0	14.0	11.0
13	9.0	5.0	12.0	9.0	15.5	10.5	13.0	12.0	17.0	12.5	14.0	11.5
14	10.0	5.5	10.5	9.0	13.5	12.5	13.0	11.0	17.0	14.5	13.5	11.0
15	10.5	6.0	9.5	8.0	13.5	11.5	13.0	10.5	16.5	13.5	13.5	10.0
16	11.5	6.5	10.0	7.5	13.5	11.0	13.0	11.0	16.0	13.0	13.0	10.5
17	11.5	7.0	11.0	7.5	13.0	12.0	13.0	11.0	16.5	13.0	11.5	9.0
18	12.0	8.5	12.0	9.0	12.0	11.0	14.5	11.5	16.5	13.5	10.5	9.5
19	11.0	9.0	12.5	8.0	11.5	10.5	13.5	12.5	16.0	13.5	10.0	7.5
20	10.5	9.0	13.5	9.5	12.0	10.0	14.5	12.5	15.5	13.0	10.5	8.0
21	10.5	8.5	13.5	10.0	13.5	9.5	16.0	11.5	15.5	12.5	11.5	9.0
22	9.5	8.5	13.5	9.0	12.0	11.0	15.5	13.0	15.0	13.0	12.0	9.5
23	9.5	8.0	14.5	10.0	11.5	10.5	15.5	13.0	14.5	12.0	12.0	10.5
24	10.0	7.5	14.5	11.5	11.5	10.0	14.5	13.0	15.0	12.5	13.0	10.5
25	9.0	7.0	14.5	11.5	13.0	9.5	14.5	13.0	14.5	11.5	12.5	9.5
26	10.5	7.5	15.0	11.5	13.0	11.5	14.0	12.0	15.0	12.5	12.5	10.5
27	11.5	7.0	15.5	11.0	14.5	11.0	13.5	12.5	15.0	12.5	11.5	9.5
28	12.5	9.0	16.0	12.5	13.5	11.5	14.5	12.5	14.0	12.5	9.5	7.0
29	11.0	9.0	14.5	12.5	13.5	11.5	16.0	11.5	13.5	12.5	8.5	5.5
30	11.5	8.0	12.5	11.5	13.0	11.5	17.0	13.0	14.0	12.5	9.0	6.5
31	---	---	12.0	11.0	---	---	16.0	14.0	15.5	13.0	---	---
MONTH	12.5	4.5	16.0	6.5	16.0	9.5	17.0	9.0	17.0	11.5	15.5	5.5

## 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 downstream from Baker Creek, 1.5 mi east of Siletz, and at mile 42.6.

DRAINAGE AREA.--202 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. Oct. 1, 1905, to Sept 30, 1938, nonrecording gage at various sites within 2.5 mi downstream at different datums.

REMARKS.--Records excellent. Slight regulation from logponds. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--64 years (water years 1906-11, 1926-83), 1,565 ft<sup>3</sup>/s, 105.21 in/yr, 1,134,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1905-12, 1924-38).--Maximum discharge, 34,600 ft<sup>3</sup>/s Nov. 22, 1909, gage height, 24.6 ft, site and datum then in use; minimum observed, 51 ft<sup>3</sup>/s Dec. 6, 7, 1929.

EXTREMES FOR PERIOD OF RECORD (1938-83).--Maximum discharge, 32,200 ft<sup>3</sup>/s Jan. 28, 1965, gage height, 27.32 ft, present site and datum; minimum, 48 ft<sup>3</sup>/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, at site 2.5 mi downstream at different datum, from floodmark, discharge, 40,800 ft<sup>3</sup>/s, from rating curve extended above 17,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 14,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0030	17,800	17.09	Jan. 4	1230	*18,300	*17.45
Dec. 16	0200	17,400	16.84	Mar. 29	2330	14,200	14.77

Minimum, 113 ft<sup>3</sup>/s Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	153	1210	4680	1010	1800	2520	4730	558	464	982	323	215		
2	137	945	5510	1020	1580	2140	3840	543	444	1330	302	205		
3	127	799	13200	1590	1400	1890	3190	523	422	1250	291	192		
4	120	829	12200	14200	1250	1630	2650	500	394	1060	276	180		
5	115	951	6330	12600	1130	1580	2210	483	376	901	267	171		
6	165	1200	4910	16100	1350	1910	1880	481	361	795	255	163		
7	280	1130	3660	15100	1730	2820	1620	600	348	672	245	157		
8	331	991	2830	11000	1620	4130	1410	1070	333	640	236	154		
9	339	861	2260	7060	3700	6360	1340	1460	330	578	229	164		
10	268	758	1850	5140	5450	7840	1370	1380	544	524	222	183		
11	226	678	1550	3940	6090	5290	1310	1210	478	485	219	380		
12	199	617	1440	3060	6830	4100	1180	1050	426	476	214	258		
13	180	571	1410	2450	6430	3790	1090	927	384	549	204	220		
14	164	527	2220	2020	4760	4830	1030	868	362	662	196	202		
15	154	494	7400	1710	3790	4390	959	1130	475	551	191	190		
16	149	1360	12700	1480	3530	3490	903	1230	430	503	185	181		
17	186	4020	8110	1340	5490	2760	851	1080	405	475	182	173		
18	184	3430	6370	1260	7190	2220	805	958	634	456	179	171		
19	167	3820	5000	1340	5790	1830	764	862	1070	496	173	185		
20	161	3350	4930	1440	4880	1550	732	786	1040	486	171	163		
21	210	2630	4560	1310	4530	1360	695	721	856	440	168	153		
22	802	2070	3800	1380	6800	1380	666	673	716	411	163	150		
23	734	1660	3200	2210	6810	1780	699	622	708	391	159	148		
24	504	1380	2800	2260	4880	1610	677	585	711	371	159	146		
25	428	1170	2400	2010	3690	1550	640	554	664	360	156	143		
26	579	1030	2170	2570	4070	1420	678	525	607	351	155	141		
27	690	1020	1830	3090	3620	1460	619	496	567	350	148	140		
28	1230	1730	1580	2830	2980	2120	619	471	527	417	163	135		
29	5450	2470	1390	2400	---	7630	649	451	499	439	353	132		
30	2500	5170	1240	2300	---	11800	586	443	501	386	314	129		
31	1530	---	1110	2040	---	6990	---	476	---	350	269	---		
TOTAL	18462	48871	134640	129260	113170	106170	40392	23716	16076	18137	6767	5324		
MEAN	596	1629	4343	4170	4042	3425	1346	765	536	585	218	177		
MAX	5450	5170	13200	16100	7190	11800	4730	1460	1070	1330	353	380		
MIN	115	494	1110	1010	1130	1360	586	443	330	350	148	129		
CFSM	2.95	8.06	21.5	20.6	20.0	17.0	6.66	3.79	2.65	2.90	1.08	.88		
IN.	3.40	9.00	24.80	23.80	20.84	19.55	7.44	4.37	2.96	3.34	1.25	.98		
AC-FT	36620	96940	267100	256400	224500	210600	80120	47040	31890	35970	13420	10560		
CAL YR 1982	TOTAL	598883	MEAN	1641	MAX	16400	MIN	66	CFSM	8.12	IN.	110.29	AC-FT	1188000
WTR YR 1983	TOTAL	660985	MEAN	1811	MAX	16100	MIN	115	CFSM	8.97	IN.	121.73	AC-FT	1311000

## SILETZ RIVER BASIN

14305500 SILETZ RIVER AT SILETZ, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1979 to current year.

INSTRUMENTATION.--Temperature recorder since Feb. 28, 1979.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 10, 1981; minimum, 0.0°C Jan. 28-30, 1980.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.0°C Aug. 13, 14; minimum recorded, 4.5°C Dec. 30 to Jan. 1.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



## SILETZ RIVER BASIN

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14305500 SILETZ RIVER AT SILETZ, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	* MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	---	12.0	11.5	14.0	12.5	13.0	12.5	19.0	17.0	17.5	15.5
2	8.5	7.5	12.0	11.0	14.0	13.0	13.5	12.0	18.0	17.0	17.5	15.5
3	---	7.0	12.0	10.5	15.5	12.5	13.5	12.0	19.0	16.5	18.5	15.5
4	9.0	6.5	11.5	11.0	16.0	13.5	15.0	12.0	18.0	16.5	18.0	17.0
5	9.5	---	11.5	10.5	17.0	13.0	15.0	---	18.0	16.0	18.0	15.5
6	10.0	7.5	11.5	10.5	18.5	15.0	14.0	13.0	19.0	16.0	18.0	15.5
7	10.0	8.5	11.0	10.0	19.5	16.0	13.0	12.0	19.5	17.0	17.0	15.5
8	---	---	10.0	9.0	18.0	17.0	13.0	12.0	19.0	18.0	16.5	14.5
9	---	---	9.0	8.0	17.0	15.5	13.5	12.0	19.5	17.0	16.0	14.5
10	7.5	6.5	10.5	---	15.5	13.5	15.5	12.5	18.5	17.5	15.5	15.0
11	8.0	6.5	11.5	9.5	14.0	13.0	17.5	15.0	19.0	17.0	16.0	14.5
12	8.0	6.5	13.0	10.5	15.5	13.0	17.0	15.5	19.5	16.5	17.0	14.0
13	9.0	7.0	13.0	12.0	17.5	13.5	15.5	14.5	21.0	17.5	17.5	15.5
14	10.0	7.5	13.0	11.0	16.5	15.5	15.0	13.0	21.0	18.5	18.0	15.5
15	10.5	8.5	11.0	10.0	16.0	14.5	15.5	13.0	20.5	18.0	17.5	15.5
16	11.5	9.0	11.0	9.5	15.5	14.0	15.5	13.5	20.0	17.5	17.5	15.0
17	11.5	9.5	11.5	9.5	15.5	14.5	15.0	13.5	20.0	17.5	16.0	14.0
18	12.5	10.5	13.0	11.0	14.5	13.0	16.0	14.0	20.5	17.5	14.5	13.5
19	12.0	11.5	13.5	11.5	13.0	12.0	15.5	15.0	19.5	18.0	13.5	11.5
20	11.5	11.0	15.5	12.5	13.0	12.0	16.5	14.5	19.5	17.0	14.0	11.5
21	12.0	10.5	15.5	13.0	14.5	11.5	17.5	14.5	20.0	17.0	14.5	12.0
22	11.5	10.5	16.0	13.0	14.0	13.0	18.0	16.5	19.5	17.5	15.0	13.0
23	10.5	10.0	17.0	14.0	13.0	12.5	18.0	16.5	18.5	17.0	15.5	14.5
24	11.5	9.5	16.0	15.0	12.5	12.0	18.5	16.5	18.5	16.5	17.0	14.5
25	11.0	10.0	17.0	15.0	14.5	12.0	17.5	16.5	18.5	16.0	17.0	14.5
26	11.5	9.5	18.0	15.5	14.5	13.5	17.5	16.0	19.0	16.5	15.5	15.0
27	12.5	10.0	18.0	15.5	16.0	13.0	17.0	15.5	19.0	17.0	15.5	14.0
28	---	11.5	18.5	16.0	15.0	14.5	16.5	15.0	18.0	16.5	14.0	12.5
29	---	12.0	17.5	16.0	15.5	14.0	18.0	15.0	16.5	15.5	13.0	11.5
30	12.5	11.5	16.0	14.5	15.0	---	19.5	17.0	15.5	15.0	12.0	10.5
31	---	---	14.5	13.0	---	---	19.0	18.0	17.0	15.0	---	---
MONTH	12.5	6.5	18.5	8.0	19.5	11.5	19.5	12.0	21.0	15.0	18.5	10.5

## YAQUINA RIVER BASIN

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 below Thornton Creek and 1.1 mi west of Chitwood.

DRAINAGE AREA.--71.0 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 28.43 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--11 years, 258 ft<sup>3</sup>/s, 49.35 in/yr, 186,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,150 ft<sup>3</sup>/s Nov. 16, 1973, gage height, 14.43 ft; minimum, 2.8 ft<sup>3</sup>/s Sept. 27, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	0800	3,170	10.03	Jan. 4	1630	*3,680	*10.91

Minimum, 9.4 ft<sup>3</sup>/s Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	15	90	840	233	374	547	983	96	79	97	34	29		
2	12	74	905	217	332	470	861	93	70	136	33	26		
3	11	64	2130	237	298	421	829	88	65	127	32	24		
4	11	65	2200	2570	269	368	721	84	61	109	31	22		
5	10	70	1230	2160	244	347	587	82	58	95	30	21		
6	15	103	1030	2660	258	375	477	84	56	86	30	20		
7	37	102	844	2650	345	543	394	96	54	83	29	20		
8	53	94	651	2110	364	769	335	173	52	85	29	19		
9	33	83	503	1550	824	1020	316	296	51	80	28	20		
10	23	72	400	1050	1510	1600	319	292	81	71	27	23		
11	19	64	326	787	1050	1150	306	247	66	66	27	31		
12	16	60	294	621	1180	878	287	206	57	64	26	29		
13	14	56	295	494	1270	767	270	176	52	69	25	23		
14	13	52	422	405	1030	959	250	157	49	72	24	21		
15	12	50	989	344	824	1010	227	167	54	63	23	20		
16	12	54	2640	303	694	853	204	156	48	59	23	19		
17	17	158	1810	272	977	674	188	140	47	56	22	19		
18	18	330	1490	252	1840	529	173	131	66	56	22	19		
19	17	486	1070	259	1600	427	160	122	122	58	22	19		
20	14	452	922	280	1080	356	151	114	120	56	21	19		
21	19	407	886	271	872	313	139	106	94	50	21	17		
22	44	319	978	283	933	293	130	100	79	47	20	17		
23	50	252	986	443	951	325	136	95	80	45	20	17		
24	31	198	816	473	834	332	127	89	76	42	20	18		
25	28	163	681	428	697	356	116	86	68	42	19	17		
26	51	140	562	488	792	347	113	82	62	42	19	17		
27	60	131	449	799	790	354	105	78	59	42	19	17		
28	66	186	374	808	652	379	124	74	55	44	21	17		
29	266	322	325	647	---	648	112	71	54	40	36	17		
30	167	805	289	516	---	1780	102	70	58	37	48	16		
31	106	---	260	435	---	1310	---	80	---	35	41	---		
TOTAL	1260	5502	27597	25045	22884	20500	9242	3931	1993	2054	822	613		
MEAN	40.6	183	890	808	817	661	308	127	66.4	66.3	26.5	20.4		
MAX	266	805	2640	2660	1840	1780	983	296	122	136	48	31		
MIN	10	50	260	217	244	293	102	70	47	35	19	16		
CFSM	.57	2.58	12.5	11.4	11.5	9.31	4.34	1.79	.94	.93	.37	.29		
IN.	.66	2.88	14.46	13.12	11.99	10.74	4.84	2.06	1.04	1.08	.43	.32		
AC-FT	2500	10910	54740	49680	45390	40660	18330	7800	3950	4070	1630	1220		
CAL YR 1982	TOTAL	114081.0	MEAN	313	MAX	3280	MIN	5.3	CFSM	4.41	IN.	59.77	AC-FT	226300
WTR YR 1983	TOTAL	121443	MEAN	333	MAX	2660	MIN	10	CFSM	4.69	IN.	63.63	AC-FT	240900

## 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 upstream from bridge on Lobster Valley Road, 0.7 mi upstream from confluence with South Fork, and at mile 49.4.

DRAINAGE AREA.--63.0 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 272.31 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Some diversions by pumping above station.

AVERAGE DISCHARGE.--26 years, 284 ft<sup>3</sup>/s, 61.22 in/yr, 205,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.57 ft, from rating curve extended above 2,900 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 11.80 ft; minimum, 8.3 ft<sup>3</sup>/s June 8, Sept. 19, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0030	3,890	7.50	Feb. 18	0830	2,810	6.10
Dec. 16	0100	*5,670	*9.59	Mar. 30	0030	2,840	6.14
Jan. 4	1000	2,170	5.25				

Minimum, 18 ft<sup>3</sup>/s Oct. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	25	104	814	257	392	634	1090	151	115	75	47	43		
2	22	83	820	253	353	559	906	146	110	158	46	38		
3	22	71	1830	344	317	498	825	141	103	150	45	34		
4	21	70	2370	1690	287	436	718	137	96	120	44	33		
5	20	71	1050	1370	261	436	603	135	92	100	43	31		
6	28	88	852	1740	309	637	513	138	88	90	42	29		
7	44	82	635	1670	412	1040	443	174	86	82	41	28		
8	51	77	491	1510	441	1150	390	313	84	84	39	28		
9	37	73	395	1160	1160	1100	382	491	82	79	39	28		
10	30	65	321	876	1290	1340	417	464	119	74	39	28		
11	26	60	266	707	1010	1020	399	360	96	68	39	31		
12	24	55	253	585	1390	837	370	293	86	66	38	29		
13	22	51	269	483	1220	885	350	255	81	66	37	27		
14	23	49	605	415	910	1460	325	230	80	66	35	27		
15	21	47	2070	369	760	1430	300	248	83	64	33	25		
16	22	64	3600	334	832	1000	285	255	78	62	32	25		
17	28	424	2160	307	1400	761	270	230	77	62	32	26		
18	27	553	1460	289	2510	604	250	210	82	62	32	28		
19	25	618	1050	287	1550	495	240	195	93	60	31	30		
20	23	525	1060	285	1090	427	230	180	89	58	32	27		
21	36	435	1110	265	955	382	215	168	82	56	30	25		
22	180	317	1100	291	1080	384	205	158	81	55	29	24		
23	119	238	978	466	1300	523	195	148	86	54	30	24		
24	67	191	798	434	982	462	185	141	83	54	31	25		
25	61	157	664	384	801	424	180	135	77	53	30	24		
26	116	135	560	495	996	392	173	130	76	52	30	24		
27	104	132	469	778	894	456	167	125	73	52	29	24		
28	133	255	402	670	728	533	182	116	71	53	32	23		
29	484	534	354	544	---	1210	167	111	70	51	68	22		
30	251	940	315	483	---	2410	157	109	68	50	79	22		
31	145	---	284	435	---	1520	---	120	---	48	56	---		
TOTAL	2237	6564	29405	20176	25630	25445	11132	6207	2587	2224	1210	832		
MEAN	72.2	219	949	651	915	821	371	200	86.2	71.7	39.0	27.7		
MAX	484	940	3600	1740	2510	2410	1090	491	119	158	79	43		
MIN	20	47	253	253	261	382	157	109	68	48	29	22		
CFSM	1.15	3.48	15.1	10.3	14.5	13.0	5.89	3.17	1.37	1.14	.62	.44		
IN.	1.32	3.88	17.36	11.91	15.13	15.02	6.57	3.67	1.53	1.31	.71	.49		
AC-FT	4440	13020	58320	40020	50840	50470	22080	12310	5130	4410	2400	1650		
CAL YR 1982	TOTAL	128691	MEAN	353	MAX	3990	MIN	17	CFSM	5.60	IN.	75.99	AC-FT	255300
WTR YR 1983	TOTAL	133649	MEAN	366	MAX	3690	MIN	20	CFSM	5.81	IN.	78.92	AC-FT	265100

NOTE.--No gage-height record July 8 to Aug. 5.

## ALSEA RIVER BASIN

14306340 EAST FORK LOBSTER CREEK NEAR ALSEA, OR

LOCATION.--Lat 44°14'53", long 123°38'07", in NE¼SE¼ sec.22, T.15 S., R.8 W., Benton County, Hydrologic Unit 17100205, on left bank 500 ft upstream from mouth, and 9 mi south of Alsea.

DRAINAGE AREA.--5.70 mi<sup>2</sup>.

PERIOD OF RECORD.--July to September 1983.

GAGE.--Water-stage recorder. Altitude of gage is 680 ft, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge during period July to September, 43 ft<sup>3</sup>/s July 2; minimum daily, 1.0 ft<sup>3</sup>/s Sept. 26-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	JUL	AUG	SEP
1	19	3.8	2.5
2	43	3.6	2.0
3	35	3.4	1.8
4	23	3.4	1.7
5	18	3.0	1.7
6	15	2.7	1.6
7	13	2.6	1.5
8	12	2.6	1.5
9	10	2.6	1.7
10	8.8	2.4	2.0
11	8.0	2.4	2.5
12	7.7	2.4	2.0
13	7.7	2.3	1.8
14	8.1	2.0	1.7
15	7.7	2.0	1.5
16	7.1	1.9	1.4
17	7.1	1.8	1.4
18	6.8	1.8	1.3
19	6.5	1.8	1.3
20	5.9	1.8	1.2
21	5.6	1.6	1.2
22	5.4	1.6	1.2
23	5.1	1.6	1.1
24	5.1	1.5	1.1
25	4.9	1.5	1.1
26	4.6	1.5	1.0
27	4.4	1.6	1.0
28	4.4	2.0	1.0
29	4.2	4.0	1.0
30	4.0	4.8	1.0
31	3.8	2.9	---
TOTAL	320.9	74.9	44.8
MEAN	10.4	2.42	1.49
MAX	43	4.8	2.5
MIN	3.8	1.5	1.0
CFSM	1.82	.42	.26
IN.	2.09	.49	.29
AC-FT	637	149	89

## 14306400 FIVE RIVERS NEAR FISHER, OR

LOCATION.--Lat 44°20'15", long 123°49'35", W-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 downstream from Lobster Creek, 3.2 mi north of Fisher, and at mile 3.3.

DRAINAGE AREA.--114 mi<sup>2</sup>.

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 from topographic map.

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

AVERAGE DISCHARGE.--21 years, 563 ft<sup>3</sup>/s, 67.07 in/yr, 407,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft<sup>3</sup>/s Jan. 21, 1972, gage height, 21.08 ft; minimum, 16 ft<sup>3</sup>/s Oct. 1, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 22.3 ft, from floodmarks, discharge, 19,000 ft<sup>3</sup>/s from rating curve extended above 10,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height <sup>+</sup> (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height <sup>+</sup> (ft)
Dec. 4	0300	6,450	12.95	Feb. 18	1200	5,350	11.81
Dec. 16	0130	*14,700	*19.53	Mar. 30	0030	7,140	13.63

Minimum daily, 33 ft<sup>3</sup>/s Oct. 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	42	211	1660	494	841	1120	2210	249	162	220	66	84		
2	37	168	1550	489	738	994	1830	238	158	322	69	72		
3	35	144	2940	547	656	882	1600	226	147	306	67	65		
4	34	150	4620	2320	589	770	1330	216	138	221	66	60		
5	36	152	2230	1980	535	765	1110	214	133	179	66	57		
6	45	195	1790	2440	639	1220	945	216	129	157	65	55		
7	66	211	1380	2750	870	2050	808	326	125	152	63	53		
8	64	197	1090	2450	883	2230	705	592	121	150	63	51		
9	56	183	889	1920	2060	2410	681	796	120	136	63	52		
10	48	159	737	1460	2490	2950	722	721	200	125	62	53		
11	42	145	623	1170	1900	2130	663	548	155	117	60	56		
12	38	134	591	977	2900	1760	595	448	134	111	60	54		
13	35	125	645	823	2470	1920	542	387	122	111	59	52		
14	33	118	1480	707	1810	2730	496	353	118	112	58	50		
15	33	113	5710	626	1500	2380	457	355	127	107	57	48		
16	33	162	8950	565	1540	1760	422	328	115	105	56	47		
17	37	1100	4680	516	2910	1370	394	299	118	104	56	47		
18	40	1230	3120	514	4840	1110	370	278	131	102	56	48		
19	37	1320	2200	566	3070	923	350	262	159	101	56	52		
20	36	1090	2180	608	2100	782	336	247	143	99	56	47		
21	80	964	2280	559	1810	687	319	234	131	97	54	44		
22	345	716	2250	602	2420	734	308	222	121	94	52	44		
23	219	551	1930	971	2560	951	312	212	144	94	52	44		
24	128	441	1510	941	1910	860	296	201	138	88	51	44		
25	122	371	1250	821	1520	811	281	192	123	90	51	43		
26	254	326	1070	1230	1800	755	274	183	115	89	51	42		
27	238	323	903	1970	1540	903	255	175	114	88	50	42		
28	199	607	771	1510	1270	1120	281	166	114	88	51	41		
29	862	1300	673	1190	---	3300	308	159	114	81	95	41		
30	478	2110	601	1050	---	6110	265	157	117	76	165	40		
31	286	---	543	953	---	3330	---	163	---	77	105	---		
TOTAL	4038	15016	62846	35719	50171	51817	19465	9363	3986	3999	2001	1528		
MEAN	130	501	2027	1152	1792	1672	649	302	133	129	64.5	50.9		
MAX	862	2110	8950	2750	4840	6110	2210	796	200	322	165	84		
MIN	33	113	543	489	535	687	255	157	114	76	50	40		
CFSM	1.14	4.39	17.8	10.1	15.7	14.7	5.69	2.65	1.17	1.13	.57	.45		
IN.	1.32	4.90	20.51	11.66	16.37	16.91	6.35	3.06	1.30	1.30	.65	.50		
AC-FT	8010	29780	124700	70850	99510	102800	38610	18570	7910	7930	3970	3030		
CAL YR 1982	TOTAL	246680	MEAN	676	MAX	8950	MIN	24	CFSM	5.93	IN.	80.50	AC-FT	489300
WTR YR 1983	TOTAL	259949	MEAN	712	MAX	8950	MIN	33	CFSM	6.25	IN.	84.83	AC-FT	515600



## ALSEA RIVER BASIN

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 downstream from Grass Creek, 2.5 mi upstream from Scott Creek, 3.8 mi southeast of Tidewater, and at mile 21.0.

DRAINAGE AREA.--334 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 48.16 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 16, 1939, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--44 years, 1,532 ft<sup>3</sup>/s, 62.29 in/yr, 1,110,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 27.44 ft; minimum, 45 ft<sup>3</sup>/s Sept. 26, 27, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on or about Feb. 3, 1890, reached a stage of 29.5 ft, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0500	15,000	15.74	Feb. 18	1400	14,300	15.36
Dec. 16	0330	*28,200	*22.23	Mar. 30	0900	15,300	15.94

Minimum, 92 ft<sup>3</sup>/s Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	130	569	4440	1470	2200	3400	6150	738	530	561	205	242		
2	113	447	4000	1410	2000	3100	5120	715	506	893	200	204		
3	103	372	7880	1520	1800	2700	4510	682	476	816	196	182		
4	101	359	11700	7510	1600	2400	3820	653	444	617	191	167		
5	99	375	6060	6560	1500	2300	3190	642	426	508	189	158		
6	119	474	4940	7750	1900	4000	2720	654	408	452	188	150		
7	207	535	3720	8210	2300	5800	2360	860	391	429	182	142		
8	207	487	2890	7430	2410	6380	2080	1510	375	451	177	139		
9	182	459	2370	6020	5280	6260	1990	2250	370	407	176	136		
10	149	395	2000	4570	7360	7930	2110	2120	550	365	173	139		
11	128	353	1710	3630	5480	6090	2040	1630	511	338	169	157		
12	114	322	1580	3010	7500	4920	1830	1340	424	322	166	150		
13	105	300	1730	2610	7140	5100	1670	1160	383	328	162	138		
14	99	279	3260	2200	5240	7630	1530	1050	362	339	158	133		
15	97	265	10800	2000	4240	7750	1410	1080	393	321	152	129		
16	95	309	21100	1800	4330	5600	1310	1070	359	301	149	125		
17	110	1940	12400	1600	6880	4240	1230	974	348	293	146	122		
18	123	2710	8770	1600	12800	3360	1160	906	385	301	144	124		
19	115	3170	6350	1700	9080	2770	1100	844	482	295	142	135		
20	105	2690	6120	1700	6260	2370	1040	794	479	280	141	128		
21	129	2430	6400	1600	5160	2100	995	746	425	265	139	117		
22	720	1810	6410	1700	6090	2090	955	706	376	255	137	113		
23	705	1390	5710	2600	6990	2700	1000	669	419	250	134	111		
24	372	1120	4550	2500	5470	2550	941	636	431	242	133	113		
25	284	954	3710	2300	4360	2320	886	608	375	241	133	114		
26	530	832	3140	3200	5400	2140	854	586	349	240	131	112		
27	612	794	2630	4900	4600	2420	801	559	332	235	129	111		
28	495	1310	2270	3800	4000	2930	846	533	315	243	130	109		
29	1840	2800	1990	3000	---	6160	875	510	310	234	221	106		
30	1310	5110	1790	2700	---	14100	782	497	319	220	427	104		
31	785	---	1620	2400	---	8910	---	517	---	209	343	---		
TOTAL	10283	35360	164040	105000	139370	142520	57305	28239	12253	11251	5463	4110		
MEAN	332	1179	5292	3387	4978	4597	1910	911	408	363	176	137		
MAX	1840	5110	21100	8210	12800	14100	6150	2250	550	893	427	242		
MIN	95	265	1580	1410	1500	2090	782	497	310	209	129	104		
CFSM	.99	3.53	15.8	10.1	14.9	13.8	5.72	2.73	1.22	1.09	.53	.41		
IN.	1.15	3.94	18.27	11.69	15.52	15.87	6.38	3.15	1.36	1.25	.61	.46		
AC-FT	20400	70140	325400	208300	276400	282700	113700	56010	24300	22320	10840	8150		
CAL YR 1982	TOTAL	677758	MEAN	1857	MAX	21100	MIN	70	CFSM	5.56	IN.	75.49	AC-FT	1344000
WTR YR 1983	TOTAL	715194	MEAN	1959	MAX	21100	MIN	95	CFSM	5.87	IN.	79.66	AC-FT	1419000

14306500 ALSEA RIVER NEAR TIDEWATER, OR--Continued  
(National stream-quality accounting network station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1979 to September 1981.

WATER TEMPERATURES: October 1979 to September 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
21...	0900	108	72	7.4	10.5	10.8	K15	120	23	5.9	2.1
FEB											
01...	1045	E2200	51	7.4	7.0	11.2	K16	120	13	3.4	1.1
APR											
22...	0945	950	59	7.5	11.0	11.0	K17	180	16	4.1	1.5
AUG											
13...	0905	162	67	8.1	19.5	8.5	26	420	22	5.6	2.0

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT										
21...	5.8	.90	30	<5.0	5.0	<.10	.120	.100	1.7	.03
FEB										
01...	4.1	.70	18	<5.0	4.0	<.10	<.060	.560	.50	.03
APR										
22...	4.5	.70	20	2.0	4.0	<.10	.130	.280	5.3	.12
AUG										
13...	5.6	.80	27	2.5	4.3	<.10	.080	<.100	.40	.03

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, DIS- SUS- PENDED (MG/L)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
21...	.010	.020	14	53	--	15	1.1	8	2.3	73
FEB										
01...	.020	.010	13	32	--	--	1.8	7	--	57
APR										
22...	<.010	.060	14	34	43	87	.80	6	15	35
AUG										
13...	.050	.060	14	44	51	19	1.4	2	.87	79

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT										
21...	20	1	15	<1	<1	<1	<3	5	97	1
FEB										
01...	30	<1	11	<1	<1	<1	<3	5	41	<1
APR										
22...	10	<1	11	<1	<1	<1	<3	5	46	<1
AUG										
13...	<10	1	13	<1	2	<1	<3	2	71	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT										
21...	5	6	.1	<10	5	<1	<1	52	<6	10
FEB										
01...	4	2	<.1	<10	1	<1	<1	33	<6	19
APR										
22...	7	4	<.1	<10	3	<1	<1	37	<6	14
AUG										
13...	<4	4	<.1	<10	3	<1	<1	46	<6	10

E - Estimated value, based on values reported by Denver Central Laboratory.

K - Results based on colony count outside acceptable range (non-ideal colony count).

## 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 downstream from Frying Pan Creek, 2.5 mi east of Roosevelt Beach.

DRAINAGE AREA.--11.9 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Altitude of gage is 141 ft, by barometer.

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

AVERAGE DISCHARGE.--11 years, 94.9 ft<sup>3</sup>/s, 108.30 in/yr, 68,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft<sup>3</sup>/s Nov. 30, 1975, gage height, 6.90 ft; minimum, 3.8 ft<sup>3</sup>/s Oct. 15, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	2200	824	5.76	Jan. 4	0700	890	5.81
Dec. 15	2200	*975	*5.92	Jan. 7	0500	912	5.84

Minimum, 6.8 ft<sup>3</sup>/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	7.8	60	291	74	141	179	283	34	26	91	18	18		
2	7.5	49	408	76	125	149	243	33	25	93	18	16		
3	7.3	42	647	141	110	128	215	31	23	84	17	14		
4	7.7	60	605	781	99	111	186	30	22	72	17	13		
5	7.2	65	464	668	89	125	159	30	21	63	16	12		
6	27	68	446	727	120	145	137	33	20	56	16	12		
7	17	60	336	848	110	261	119	62	19	51	15	11		
8	16	64	255	673	127	294	104	73	19	48	15	12		
9	14	58	200	450	226	458	103	74	21	44	15	12		
10	12	52	163	319	272	499	103	68	51	40	14	14		
11	11	47	135	234	240	360	89	61	27	38	14	16		
12	9.5	43	141	188	342	303	80	56	24	38	14	13		
13	9.0	41	152	156	332	291	75	52	21	47	13	11		
14	8.5	38	271	135	277	312	70	52	23	41	13	11		
15	8.4	35	598	121	233	283	65	53	25	36	12	11		
16	9.4	66	719	108	209	233	60	49	21	33	12	11		
17	12	202	487	100	301	190	57	44	27	31	12	10		
18	9.5	238	361	106	445	156	53	42	32	30	11	12		
19	8.8	227	282	126	368	129	51	39	33	29	11	11		
20	8.4	195	260	119	320	112	49	38	28	27	11	11		
21	23	167	262	111	324	100	46	37	26	26	11	10		
22	48	141	245	126	499	115	44	35	24	25	11	9.8		
23	28	120	220	141	457	111	45	33	35	24	11	9.8		
24	21	103	186	156	352	99	44	31	28	23	11	9.9		
25	36	90	164	155	291	112	42	30	26	23	10	9.8		
26	53	79	146	237	297	105	42	29	25	22	10	9.8		
27	45	83	125	299	253	119	38	28	24	23	9.8	9.7		
28	71	128	111	264	213	145	39	27	23	23	18	9.4		
29	187	176	99	226	---	368	38	26	23	20	34	9.1		
30	116	259	89	192	---	479	35	26	34	19	35	9.0		
31	77	---	80	164	---	357	---	26	---	19	21	---		
TOTAL	923.0	3056	8948	8221	7172	6828	2714	1282	776	1239	465.8	347.3		
MEAN	29.8	102	289	265	256	220	90.5	41.4	25.9	40.0	15.0	11.6		
MAX	187	259	719	848	499	499	283	74	51	93	35	18		
MIN	7.2	35	80	74	89	99	35	26	19	19	9.8	9.0		
CFSM	2.50	8.57	24.3	22.3	21.5	18.5	7.61	3.48	2.18	3.36	1.26	.97		
IN.	2.89	9.55	27.97	25.70	22.42	21.34	8.48	4.01	2.43	3.87	1.46	1.09		
AC-FT	1830	6060	17750	16310	14230	13540	5380	2540	1540	2460	924	689		
CAL YR 1982	TOTAL	39849.7	MEAN	109	MAX	1000	MIN	4.8	CFSM	9.16	IN.	124.57	AC-FT	79040
WTR YR 1983	TOTAL	41972.1	MEAN	115	MAX	848	MIN	7.2	CFSM	9.66	IN.	131.21	AC-FT	83250

## 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 upstream from Indian Creek, 1.5 mi southwest of Deadwood, and at mile 2.6.

DRAINAGE AREA.--174 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 178.86 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Flow slightly regulated by natural storage in Triangle Lake. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--16 years, 740 ft<sup>3</sup>/s, 57.75 in/yr, 536,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft<sup>3</sup>/s Dec. 25, 1980, gage height, 15.86 ft; minimum, 12 ft<sup>3</sup>/s Aug. 14, 15, 17, 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0300	6,310	7.77	Feb. 18	1000	7,410	8.54
Dec. 16	0230	*11,900	*11.38	Mar. 30	0130	6,550	7.94
Jan. 7	0400	4,450	6.41				

Minimum, 38 ft<sup>3</sup>/s Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	56	298	2230	663	1150	1640	2990	331	200	348	83	130		
2	49	234	2120	650	1010	1500	2590	322	193	520	79	108		
3	46	189	3540	764	889	1350	2360	306	186	497	77	93		
4	43	172	4790	3320	786	1190	1960	294	176	375	75	83		
5	40	182	3070	2890	709	1200	1620	291	169	306	71	75		
6	51	283	2890	3590	786	2510	1350	294	160	264	71	71		
7	87	310	2090	4170	1090	2770	1160	357	154	246	69	66		
8	91	272	1550	3790	1250	2690	996	779	148	226	67	64		
9	77	234	1200	3070	2740	2580	957	1050	148	207	66	62		
10	64	200	973	2360	3560	3140	988	957	238	189	64	60		
11	56	176	808	1830	2860	2650	949	757	207	172	62	64		
12	51	157	772	1490	3470	2380	860	611	182	163	60	62		
13	46	148	912	1240	3290	2520	772	514	163	163	59	59		
14	43	133	1880	1060	2640	3530	702	454	157	163	57	56		
15	40	127	5170	927	2190	3330	637	438	166	151	56	54		
16	40	151	8910	822	2120	2610	586	408	154	145	54	54		
17	48	912	6150	743	3670	2040	543	375	151	136	52	52		
18	49	1390	4250	716	6660	1640	509	348	230	130	51	52		
19	45	1540	3070	772	4770	1350	475	327	257	127	49	54		
20	42	1430	2910	808	3480	1150	454	306	234	121	49	51		
21	54	1330	3120	750	3110	1010	428	291	207	116	51	48		
22	234	988	3350	764	3800	1010	418	279	186	111	49	49		
23	238	723	2930	996	3610	1510	433	264	200	108	49	49		
24	157	549	2270	1070	2890	1440	408	250	203	103	48	49		
25	133	444	1820	957	2340	1260	389	238	182	103	48	49		
26	268	379	1530	1160	2210	1110	375	230	166	98	46	49		
27	318	361	1270	1880	2040	1210	352	218	160	93	46	49		
28	268	630	1070	1640	1790	1430	379	207	151	100	49	48		
29	1090	1600	927	1340	---	2840	394	200	148	96	139	46		
30	637	2500	822	1230	---	5420	357	196	154	89	203	46		
31	408	---	736	1240	---	3820	---	196	---	85	151	---		
TOTAL	4869	18042	79130	48702	70910	65830	27391	12088	5430	5751	2150	1852		
MEAN	157	601	2553	1571	2533	2124	913	390	181	186	69.4	61.7		
MAX	1090	2500	8910	4170	6660	5420	2990	1050	257	520	203	130		
MIN	40	127	736	650	709	1010	352	196	148	85	46	46		
CFSM	.90	3.45	14.7	9.03	14.6	12.2	5.25	2.24	1.04	1.07	.40	.35		
IN.	1.04	3.86	16.92	10.41	15.16	14.07	5.86	2.58	1.16	1.23	.46	.40		
AC-FT	9660	35790	157000	96600	140600	130600	54330	23980	10770	11410	4260	3670		
CAL YR 1982	TOTAL	325455	MEAN	892	MAX	8910	MIN	21	CFSM	5.13	IN.	69.58	AC-FT	645500
WTR YR 1983	TOTAL	342145	MEAN	937	MAX	8910	MIN	40	CFSM	5.39	IN.	73.15	AC-FT	678600

## SIUSLAW RIVER BASIN

14307620 SIUSLAW RIVER NEAR MAPLETON, OR  
(National stream-quality accounting network station)

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 above Shoemaker Creek, 2.5 mi northwest of Mapleton, and at mile 23.7.

DRAINAGE AREA.--588 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 41 ft, from topographic map.

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

AVERAGE DISCHARGE.--16 years, 2,203 ft<sup>3</sup>/s, 50.88 in/yr, 1,596,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,400 ft<sup>3</sup>/s Jan. 21, 1972, gage height, 28.45 ft; minimum, 45 ft<sup>3</sup>/s Aug. 18, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 reached a stage of about 28 ft, from information by local residents (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0530	18,200	16.21	Feb. 18	1200	23,100	18.60
Dec. 16	0400	*33,300	*22.75	Mar. 30	0400	18,800	16.53

Minimum, 135 ft<sup>3</sup>/s Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	194	855	7000	1980	3360	5040	9160	1310	718	1150	315	498		
2	170	668	6310	1910	2980	4660	8020	1230	701	1720	308	420		
3	159	554	10800	2170	2620	4200	7510	1160	658	1600	297	350		
4	152	511	15200	11100	2330	3710	6250	1100	643	1230	290	304		
5	148	524	9350	10100	2130	3530	5200	1070	616	1000	285	270		
6	168	743	8660	10100	2260	5900	4270	1070	594	881	277	248		
7	280	826	6330	12100	3500	7240	3650	1240	574	816	271	241		
8	301	764	4530	11100	4030	7720	3180	2200	557	781	264	239		
9	269	688	3450	8940	7300	7430	2990	3500	552	743	258	236		
10	231	600	2790	6670	11100	9830	3020	3340	775	691	258	237		
11	204	536	2290	5190	8680	8480	2930	2600	734	606	253	239		
12	180	485	2160	4180	9820	7080	2730	2060	655	519	249	236		
13	164	445	2960	3540	10500	7320	2450	1760	656	525	241	224		
14	152	409	5460	3050	8380	10100	2220	1570	692	524	235	215		
15	145	386	14600	2660	6610	10100	2050	1490	726	492	230	217		
16	139	414	27200	2390	6210	7840	1900	1420	696	468	223	217		
17	157	2130	18500	2200	10300	6060	1780	1310	682	453	218	200		
18	164	3540	13300	2120	21000	4880	1690	1180	902	440	214	197		
19	153	4280	9340	2300	15700	3990	1600	1120	1090	430	206	200		
20	144	3890	8130	2540	10900	3410	1540	1050	999	417	202	198		
21	171	3640	8750	2340	12000	3050	1470	997	866	399	202	190		
22	551	2720	10000	2310	11600	2990	1410	953	779	386	202	182		
23	753	2030	8590	3170	10400	4350	1450	912	805	373	199	179		
24	510	1580	6370	3800	8200	4500	1400	868	823	366	198	179		
25	441	1290	5180	3370	6640	3790	1350	834	754	362	197	179		
26	782	1110	4330	3680	6260	3420	1320	806	707	360	191	180		
27	944	1030	3640	5800	6050	3660	1260	775	669	352	189	183		
28	785	1460	3120	5290	5450	4480	1320	741	619	366	192	180		
29	2490	3670	2700	4190	---	7600	1480	711	602	357	402	179		
30	1790	7680	2380	3760	---	16800	1410	700	590	337	707	177		
31	1150	---	2160	3650	---	12200	---	700	---	319	612	---		
TOTAL	14041	49458	235580	147700	216310	195360	88010	41777	21434	19463	8385	6994		
MEAN	453	1649	7599	4765	7725	6302	2934	1348	714	628	270	233		
MAX	2490	7680	27200	12100	21000	16800	9160	3500	1090	1720	707	498		
MIN	139	386	2160	1910	2130	2990	1260	700	552	319	189	177		
CFSM	.77	2.80	12.9	8.10	13.1	10.7	4.99	2.29	1.21	1.07	.46	.40		
IN.	.89	3.13	14.90	9.34	13.68	12.36	5.57	2.64	1.36	1.23	.53	.44		
AC-FT	27850	98100	467300	293000	429100	387500	174600	82860	42510	38600	16630	13870		
CAL YR 1982	TOTAL	968901	MEAN	2655	MAX	27200	MIN	77	CFSM	4.52	IN.	61.30	AC-FT	1922000
WTR YR 1983	TOTAL	1044512	MEAN	2862	MAX	27200	MIN	139	CFSM	4.87	IN.	66.08	AC-FT	2072000



14307620 SIUSLAW RIVER NEAR MAPLETON, OR--continued  
(National stream-quality accounting network station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1967 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1978 to September 1981.

WATER TEMPERATURES: November 1967 to September 1975. October 1977 to September 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI KF AGAR (COLS. PER CAC03)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 18...	1100	3400	49	7.3	8.5	11.3	72	840	12	3.0	1.1
MAR 07...	1330	6800	38	7.2	9.5	11.6	27	98	9	2.4	.78
MAY 16...	1130	1370	42	7.3	12.0	11.5	K17	100	11	2.8	.96
AUG 31...	1200	576	49	7.5	17.0	10.1	K300	K4300	13	3.1	1.1

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
NOV 18...	3.9	.80	11	6.0	4.2	<.10	<.060	.860	.50	.06
MAR 07...	3.4	.60	11	2.6	3.0	<.10	.070	.290	.60	.06
MAY 16...	3.7	.80	12	2.4	3.1	<.10	.060	.130	.60	.09
AUG 31...	4.1	1.1	18	3.8	4.1	.20	.100	.220	.20	--

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. DIS- SIEVE DIAM. % FINER THAN .062 MM
NOV 18...	.010	.030	10	40	36	367	5.0	16	147	60
MAR 07...	.020	.040	11	36	31	661	4.1	41	753	34
MAY 16...	.050	.050	11	30	32	111	1.7	3	11	81
AUG 31...	<.010	.020	11	--	40	62	2.4	5	7.8	68

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 18...	60	<1	19	<1	<1	<1	<3	2	98	<1
MAR 07...	80	<1	18	<1	<1	<1	<3	9	67	<1
MAY 16...	40	<1	20	<1	<1	<1	<3	9	78	2
AUG 31...	30	<1	23	<1	<1	<1	<3	5	140	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 18...	5	4	<.1	<10	7	<1	<1	36	<6	13
MAR 07...	<4	4	<.1	<10	<1	<1	<1	28	<6	15
MAY 16...	5	4	<.1	<10	<1	<1	<1	34	<6	38
AUG 31...	9	3	.3	<10	3	<1	<1	40	<6	11

K - Results based on colony count outside acceptable range (non-ideal colony count).

## 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 downstream from county road bridge, 0.3 mi upstream from Condon Creek, 2.7 mi southwest of Minerva, and at mile 13.09.

DRAINAGE AREA.--41.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 40 ft, from topographic map.

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

AVERAGE DISCHARGE.--16 years, 296 ft<sup>3</sup>/s, 97.57 in/yr, 214,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,400 ft<sup>3</sup>/s Dec. 25, 1980, gage height, 24.36 ft; minimum, 11 ft<sup>3</sup>/s Sept. 9-11, 17, 18, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	0530	2,520	18.85	Feb. 18	1300	2,160	17.35
Dec. 16	0300	3,690	21.01	Feb. 22	1130	1,960	16.35
Jan. 4	1130	*4,020	*21.45	Mar. 30	0230	1,810	15.58

Minimum, 18 ft<sup>3</sup>/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	23	128	939	232	485	520	829	127	78	357	38	61		
2	21	103	1180	237	415	450	764	122	73	470	36	50		
3	21	88	2330	302	359	392	705	115	70	390	35	43		
4	21	98	2230	3130	318	343	596	111	66	271	34	41		
5	21	117	1490	2380	285	355	502	108	63	215	33	36		
6	46	187	1570	2290	349	700	432	104	61	185	31	35		
7	59	162	1040	3030	408	1030	378	170	60	171	30	34		
8	53	146	734	2480	441	1140	334	332	57	160	29	33		
9	46	135	561	1700	811	1320	338	358	58	147	28	34		
10	37	117	439	1110	1060	1570	336	302	154	137	27	34		
11	31	105	355	803	834	1120	308	244	96	130	26	47		
12	27	95	355	626	1120	925	279	202	81	130	25	38		
13	25	88	480	502	1100	933	260	172	73	135	25	36		
14	23	82	871	417	914	1350	243	162	73	132	24	34		
15	22	77	1870	359	758	1190	229	174	82	116	23	30		
16	22	98	3040	321	697	880	215	161	73	99	22	30		
17	38	497	2040	289	1170	681	205	147	78	96	21	30		
18	31	615	1370	292	2030	541	195	138	115	87	21	34		
19	27	673	972	382	1550	443	185	130	175	78	21	38		
20	25	633	891	414	1150	373	176	123	133	69	21	31		
21	38	571	955	355	1160	332	164	118	108	64	21	28		
22	157	415	907	366	1890	369	160	112	98	61	22	29		
23	106	313	804	499	1690	455	156	107	124	60	22	29		
24	68	245	647	515	1190	400	161	103	119	57	22	29		
25	68	203	549	466	901	407	156	100	105	56	22	29		
26	161	177	488	740	855	377	144	93	99	52	20	29		
27	149	169	408	1150	709	412	133	89	92	50	20	30		
28	140	260	366	912	592	484	137	84	87	55	22	29		
29	536	528	314	697	---	976	149	82	87	52	90	29		
30	314	838	278	629	---	1630	136	80	103	47	131	28		
31	177	---	252	570	---	1090	---	80	---	40	79	---		
TOTAL	2533	7963	30725	28195	25241	23188	9005	4550	2741	4169	1021	1038		
MEAN	81.7	265	991	910	901	748	300	147	91.4	134	32.9	34.6		
MAX	536	838	3040	3130	2030	1630	829	358	175	470	131	61		
MIN	21	77	252	232	285	332	133	80	57	40	20	28		
CFSM	1.98	6.43	24.1	22.1	21.9	18.2	7.28	3.57	2.22	3.25	.80	.84		
IN.	2.29	7.19	27.74	25.46	22.79	20.94	8.13	4.11	2.47	3.76	.92	.94		
AC-FT	5020	15790	60940	55920	50070	45990	17860	9020	5440	8270	2030	2060		
CAL YR 1982	TOTAL	128643	MEAN	352	MAX	3940	MIN	14	CFSM	8.54	IN.	116.15	AC-FT	255200
WTR YR 1983	TOTAL	140369	MEAN	385	MAX	3130	MIN	20	CFSM	9.34	IN.	126.74	AC-FT	278400

## UMPQUA RIVER BASIN

283

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 upstream from Chapman Creek, 0.8 mi downstream from Beaver Creek, 6.5 mi northeast of Tiller, and at mile 3.0. Records include flow of Chapman Creek.

DRAINAGE AREA.--152 mi<sup>2</sup>, at cableway 0.6 mi 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 National Geodetic Vertical Datum of 1929 (levels by Douglas County Water Resources Department).

REMARKS.--Records excellent except those for period of no gage-height record, July 11 to Aug. 16, which are good. No regulation or diversion above station.

AVERAGE DISCHARGE.--28 years, 317 ft<sup>3</sup>/s, 28.32 in/yr, 229,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.0 ft, from floodmark, from rating curve extended above 5,100 ft<sup>3</sup>/s and basin runoff comparison; minimum, 11 ft<sup>3</sup>/s Jan. 6, 1977, Nov. 13, 1978, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	0530	5,890	9.19	Feb. 17	2230	*7,730	*10.65
Jan. 26	2330	3,230	6.85	Mar. 30	0630	4,570	8.10

Minimum, 24 ft<sup>3</sup>/s Oct. 19-21, Sept. 22, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	35	154	457	257	413	602	1770	612	396	189	44	48		
2	30	121	955	246	355	598	1390	546	346	197	43	43		
3	28	99	1340	274	311	527	1170	483	309	158	42	40		
4	28	84	1310	639	277	497	936	453	288	132	41	37		
5	26	75	1700	611	249	504	768	555	271	117	40	37		
6	34	98	1680	598	253	470	647	599	262	110	39	35		
7	92	106	963	1040	316	466	563	547	259	107	38	34		
8	65	92	653	941	300	495	503	569	254	113	37	34		
9	49	81	489	749	1160	517	473	712	235	102	37	32		
10	40	73	385	597	1330	650	428	705	287	95	36	31		
11	35	67	317	486	1140	596	390	630	267	86	36	30		
12	32	62	288	419	1450	613	350	578	229	81	35	30		
13	29	58	427	374	1230	1130	317	521	203	76	34	29		
14	28	55	534	337	1030	1070	291	494	189	73	33	29		
15	27	52	1550	314	1080	907	269	549	176	68	32	27		
16	25	53	4600	307	963	758	258	531	164	66	31	27		
17	25	68	3310	297	3390	626	271	495	157	65	31	26		
18	27	472	1420	316	5510	521	303	482	160	66	31	26		
19	25	449	1010	429	2440	438	340	478	146	64	30	28		
20	24	370	893	383	1630	379	359	492	131	84	31	26		
21	24	357	1210	342	1770	350	412	522	121	68	30	25		
22	41	330	1110	321	1420	355	415	528	114	61	30	25		
23	119	238	804	345	1180	346	395	571	110	56	62	26		
24	76	194	607	471	1050	352	394	608	104	55	52	29		
25	57	168	494	483	904	484	389	621	98	54	39	27		
26	113	166	502	1560	810	487	430	572	94	54	37	25		
27	116	176	514	2250	683	634	398	535	91	52	35	25		
28	90	268	435	1210	584	597	390	540	88	50	46	25		
29	526	482	368	832	---	682	592	532	86	48	47	25		
30	411	486	322	624	---	3560	516	459	87	47	80	24		
31	223	---	287	497	---	2530	---	412	---	45	60	---		
TOTAL	2500	5554	30934	18549	33228	22741	16127	16931	5722	2639	1239	905		
MEAN	80.6	185	998	598	1187	734	538	546	191	85.1	40.0	30.2		
MAX	526	486	4600	2250	5510	3560	1770	712	396	197	80	48		
MIN	24	52	287	246	249	346	258	412	86	45	30	24		
CFSM	.53	1.22	6.57	3.93	7.81	4.83	3.54	3.59	1.26	.56	.26	.20		
IN.	.61	1.36	7.57	4.54	8.13	5.57	3.95	4.14	1.40	.65	.30	.22		
AC-FT	4960	11020	61360	36790	65910	45110	31990	33580	11350	5230	2460	1800		
CAL YR 1982	TOTAL	123578	MEAN	339	MAX	4600	MIN	19	CFSM	2.23	IN.	30.24	AC-FT	245100
WTR YR 1983	TOTAL	157069	MEAN	430	MAX	5510	MIN	24	CFSM	2.83	IN.	38.44	AC-FT	311500

## 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, Umpqua National Forest, on left bank 0.3 mi upstream from bridge on State Highway 227 at Tiller, 0.3 mi upstream from Elk Creek, and at mile 187.31.

DRAINAGE AREA.--449 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 1, 1939, nonrecording gage at site 0.2 mi downstream at different datum.

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

AVERAGE DISCHARGE.--45 years, 1,041 ft<sup>3</sup>/s, 31.49 in/yr, 754,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 25.72 ft; minimum observed, 20 ft<sup>3</sup>/s Sept. 3, 4, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 3	a0030	unknown	unknown	Feb. 17	2300	*26,200	*16.80
Dec. 16	2330	16,100	13.19	Mar. 30	a0900	17,500	13.75

Minimum, 67 ft<sup>3</sup>/s Sept. 28-30.

a Approximately

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	134	624	2200	871	1100	1700	5590	1380	895	578	139	158		
2	119	471	2800	818	950	1590	4840	1250	776	886	136	137		
3	107	383	6650	1010	850	1410	4050	1120	689	581	133	124		
4	101	318	6530	3650	802	1310	3190	1050	636	460	130	116		
5	95	276	5950	3030	728	1290	2550	1220	595	397	128	112		
6	89	295	6310	2370	716	1230	2090	1370	572	359	124	107		
7	273	319	3670	4660	980	1270	1770	1290	567	333	120	103		
8	250	282	2390	4030	912	1590	1570	1380	571	352	117	100		
9	172	261	1760	2920	3590	1660	1450	1840	549	329	116	99		
10	138	233	1380	2230	4550	1970	1300	1900	617	294	115	94		
11	119	214	1120	1780	4740	1840	1200	1690	642	273	115	94		
12	106	198	989	1520	4630	1860	1050	1540	546	256	113	89		
13	98	186	1570	1330	3980	3300	950	1370	487	240	109	88		
14	90	175	2360	1280	3550	3430	879	1310	456	231	107	86		
15	87	165	4300	1180	3810	3080	813	1380	432	218	103	85		
16	82	160	11900	1100	3500	2520	766	1370	407	208	100	83		
17	79	200	11300	1050	11300	2040	766	1250	389	205	98	80		
18	82	520	5120	1000	18000	1700	812	1170	412	208	96	78		
19	81	2100	3700	1400	8020	1420	908	1130	391	200	94	80		
20	75	1800	3240	1500	5340	1220	946	1120	360	261	95	81		
21	74	1400	3940	1300	5900	1100	992	1180	332	214	96	75		
22	89	1270	3550	1040	5160	1080	1000	1170	313	192	94	72		
23	480	935	2670	1250	4110	1070	972	1220	303	179	132	74		
24	390	786	2010	1560	3510	1060	1040	1310	291	173	161	77		
25	240	687	1640	1530	2940	1400	1000	1340	273	171	119	77		
26	440	676	1650	2940	2570	1490	1110	1280	264	170	110	74		
27	590	671	1820	4600	2170	1800	1050	1170	256	162	103	70		
28	380	810	1540	3040	1830	1770	984	1170	246	156	115	69		
29	1920	1500	1290	2220	---	2110	1400	1160	245	152	148	67		
30	1920	2400	1110	1700	---	11600	1290	1050	240	148	269	67		
31	951	---	975	1290	---	7830	---	913	---	142	213	---		
TOTAL	9851	20315	107434	61199	110238	69740	48328	40093	13752	8728	3848	2716		
MEAN	318	677	3466	1974	3937	2250	1611	1293	458	282	124	90.5		
MAX	1920	2400	11900	4660	18000	11600	5590	1900	895	886	269	158		
MIN	74	160	975	818	716	1060	766	913	240	142	94	67		
CFSM	.71	1.51	7.72	4.40	8.77	5.01	3.59	2.88	1.02	.63	.28	.20		
IN.	.82	1.68	8.90	5.07	9.13	5.78	4.00	3.32	1.14	.72	.32	.23		
AC-FT	19540	40290	213100	121400	218700	138300	95860	79520	27280	17310	7630	5390		
CAL YR 1982	TOTAL	431582	MEAN	1182	MAX	11900	MIN	52	CFSM	2.63	IN.	35.76	AC-FT	856000
WTR YR 1983	TOTAL	496242	MEAN	1360	MAX	18000	MIN	67	CFSM	3.03	IN.	41.11	AC-FT	984300

UMPQUA RIVER BASIN

285

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 upstream from Days Creek, 0.4 mi southeast of community of Days Creek, and at mile 170.2.

DRAINAGE AREA.--641 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 738.55 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records excellent. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--8 years, 1,142 ft<sup>3</sup>/s, 24.19 in/yr, 827,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,300 ft<sup>3</sup>/s Dec. 6, 1981, gage height, 22.39 ft; minimum, 31 ft<sup>3</sup>/s Sept. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2330	20,700	15.64	Mar. 30	0930	19,600	15.24
Feb. 18	0100	*35,900	*20.56				

Minimum, 78 ft<sup>3</sup>/s Sept. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	160	725	2370	1150	1560	2300	7030	1660	1030	464	155	198		
2	124	521	3550	1060	1360	2170	5840	1530	907	1040	155	166		
3	108	410	7440	1210	1200	1910	5200	1380	809	671	150	147		
4	103	342	7410	3580	1070	1760	4190	1290	734	514	145	134		
5	95	297	6420	3510	966	1700	3320	1460	684	429	145	126		
6	92	296	7160	2720	920	1600	2730	1650	653	388	142	120		
7	280	346	4260	4590	1300	1670	2320	1550	644	359	134	114		
8	270	310	2790	4520	1200	1970	2030	1620	644	379	128	112		
9	200	285	2080	3380	4800	2080	1840	2210	616	363	126	109		
10	150	259	1630	2620	6420	2560	1710	2350	697	325	127	106		
11	130	239	1330	2130	5830	2400	1540	2080	740	298	128	103		
12	115	223	1140	1820	5700	2390	1390	1880	625	277	126	99		
13	110	211	1780	1600	4950	4320	1260	1660	552	260	121	99		
14	101	200	2570	1420	4250	4420	1150	1550	510	246	117	97		
15	97	191	5490	1290	4510	3860	1060	1600	481	237	112	94		
16	93	187	14800	1240	4270	3170	993	1610	453	228	107	92		
17	90	217	15200	1190	13000	2610	974	1470	435	223	102	89		
18	90	1300	6630	1160	25000	2200	1020	1360	460	227	100	88		
19	91	2400	4630	1580	10600	1840	1180	1310	439	256	98	88		
20	85	2000	4020	1630	6700	1580	1180	1280	403	294	99	93		
21	85	1680	5110	1450	7220	1430	1240	1330	374	259	100	86		
22	94	1610	4830	1320	6150	1390	1240	1320	353	223	96	80		
23	522	1180	3670	1560	4930	1360	1210	1360	339	207	108	82		
24	550	935	2830	1910	4370	1340	1350	1440	326	200	188	88		
25	287	797	2280	1950	3700	1860	1350	1480	309	200	142	92		
26	337	753	2190	3870	3480	1970	1450	1440	297	199	122	87		
27	604	746	2410	6350	2940	2280	1360	1310	289	188	114	81		
28	422	1070	2060	4160	2490	2330	1270	1290	277	180	111	78		
29	2000	2090	1720	2990	---	2350	1640	1280	276	173	155	79		
30	2540	2670	1480	2280	---	14000	1560	1190	272	169	269	79		
31	1190	---	1300	1860	---	10000	---	1030	---	160	282	---		
TOTAL	11215	24490	132580	73100	140886	88820	61627	46970	15628	9636	4204	3106		
MEAN	362	816	4277	2358	5032	2865	2054	1515	521	311	136	104		
MAX	2540	2670	15200	6350	25000	14000	7030	2350	1030	1040	282	198		
MIN	85	187	1140	1060	920	1340	974	1030	272	160	96	78		
CFSM	.56	1.27	6.67	3.68	7.85	4.47	3.20	2.36	.81	.49	.21	.16		
IN.	.65	1.42	7.69	4.24	8.18	5.15	3.58	2.73	.91	.56	.24	.18		
AC-FT	22240	48580	263000	145000	279400	176200	122200	93160	31000	19110	8340	6160		
CAL YR 1982	TOTAL	517143	MEAN	1417	MAX	15200	MIN	46	CFSM	2.21	IN.	30.01	AC-FT	1026000
WTR YR 1983	TOTAL	612262	MEAN	1677	MAX	25000	MIN	78	CFSM	2.62	IN.	35.53	AC-FT	1214000



## UMPQUA RIVER BASIN

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 September 1982.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 13...	1230	112	116	7.2	14.0	43	12	3.2	6.4
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 13...	.80	8.0	6.9	<.10	.760	.020	14	78	24

## UMPQUA RIVER BASIN

287

14309000 COW CREEK NEAR AZALEA, OR

LOCATION.--Lat 42°49'30", long 123°10'40", in N-1/2 sec.4, T.32 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.8 mi upstream from Whitehorse Creek, 4.5 mi northeast of Azalea, and at mile 58.2.

DRAINAGE AREA.--78.0 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (Douglas County Road Department bench mark). Prior to July 19, 1949, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--53 years (water years 1930-31, 1933-83), 112 ft<sup>3</sup>/s, 19.50 in/yr, 81,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 16.40 ft, from high-water mark in well; minimum, 1.1 ft<sup>3</sup>/s Aug. 12, 1981, but may have been less during period of no gage-height record Sept. 4-30, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2000	6,700	13.68	Feb. 17	1600	*7,940	a*14.78
Jan. 26	2230	2,400	9.12	Mar. 30	0530	2,520	9.34
Feb. 9	2000	1,420	6.75				

Minimum, 12 ft<sup>3</sup>/s Oct. 2, 3, 15, Sept. 21, 22.

a From inside high-water mark

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	14	31	175	130	219	371	683	137	72	51	22	26		
2	13	27	179	127	194	332	523	125	68	55	22	23		
3	12	24	258	143	171	306	466	115	60	39	21	21		
4	13	22	349	178	152	285	411	111	51	33	21	19		
5	13	22	343	190	140	270	352	141	48	30	21	19		
6	16	24	277	187	152	248	314	137	45	30	20	18		
7	25	24	178	220	177	336	282	124	44	29	19	18		
8	19	22	132	228	164	330	254	133	44	38	18	18		
9	16	20	106	197	959	297	240	149	42	35	19	17		
10	15	20	88	169	762	502	222	163	52	31	20	16		
11	15	19	72	151	526	378	208	145	54	31	21	16		
12	15	19	68	140	814	420	188	133	45	29	18	15		
13	14	19	92	129	573	874	172	122	42	28	18	15		
14	14	18	100	121	443	735	159	112	39	28	17	15		
15	15	18	1490	116	446	525	145	110	38	27	16	15		
16	15	19	3340	118	471	423	135	102	36	26	16	15		
17	16	23	1860	113	3000	362	130	93	36	27	15	14		
18	18	265	689	149	3720	324	133	86	42	27	15	14		
19	17	183	468	241	1230	274	176	82	39	28	15	15		
20	17	115	583	197	822	242	142	78	37	35	16	14		
21	18	87	879	169	723	221	142	75	35	28	15	13		
22	28	87	640	160	560	213	133	75	33	26	15	13		
23	104	64	427	236	472	208	137	75	33	25	18	18		
24	48	51	315	277	497	201	153	73	32	26	21	18		
25	28	44	258	255	444	244	165	71	31	28	18	16		
26	38	40	239	1420	510	225	162	68	30	26	17	14		
27	35	39	231	1230	443	345	141	66	29	25	16	14		
28	27	51	196	599	388	287	136	63	28	24	16	15		
29	51	107	172	413	---	347	140	60	29	24	23	15		
30	71	203	154	312	---	1590	129	58	29	23	44	14		
31	42	---	141	257	---	1020	---	62	---	22	35	---		
TOTAL	802	1707	14499	8572	19172	12735	6773	3144	1243	934	608	493		
MEAN	25.9	56.9	468	277	685	411	226	101	41.4	30.1	19.6	16.4		
MAX	104	265	3340	1420	3720	1590	683	163	72	55	44	26		
MIN	12	18	68	113	140	201	129	58	28	22	15	13		
CFSM	.33	.73	6.00	3.55	8.78	5.27	2.90	1.29	.53	.39	.25	.21		
IN.	.38	.81	6.91	4.09	9.14	6.07	3.23	1.50	.59	.45	.29	.24		
AC-FT	1590	3390	28760	17000	38030	25260	13430	6240	2470	1850	1210	978		
CAL YR 1982	TOTAL	51643.7	MEAN	141	MAX	3340	MIN	5.5	CFSM	1.81	IN.	24.63	AC-FT	102400
WTR YR 1983	TOTAL	70682	MEAN	194	MAX	3720	MIN	12	CFSM	2.49	IN.	33.71	AC-FT	140200

## UMPQUA RIVER BASIN

14309500 WEST FORK COW CREEK NEAR GLENDALE, OR

LOCATION.--Lat 42°48'15", long 123°36'35", in SW¼NE¼ sec.11, T.32 S., R.8 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.6 mi downstream from Bear Creek, 11 mi northwest of Glendale, and at mile 0.8.

DRAINAGE AREA.--86.9 mi<sup>2</sup>.

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. Datum of gage is 1,018.48 ft National Geodetic Vertical Datum of 1929. Prior to June 8, 1964, at site 0.6 mi upstream at different datum.

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

AVERAGE DISCHARGE.--28 years, 278 ft<sup>3</sup>/s, 43.44 in/yr, 201,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.59 ft, from floodmark, from rating curve extended above 2,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 3.7 ft<sup>3</sup>/s Aug. 17, 19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	0430	6,850	11.55	Feb. 13	0500	2,870	7.44
Dec. 21	1630	2,500	7.05	Feb. 18	0200	*10,900	*15.43
Jan. 26	2300	6,300	10.99	Mar. 30	0430	6,390	11.08
Feb. 9	2400	3,100	7.68				

Minimum, 8.6 ft<sup>3</sup>/s Aug. 17, 18, 26, Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	20	165	1090	223	449	721	1480	132	67	60	18	38		
2	16	126	900	209	377	596	1140	122	64	71	18	27		
3	15	101	887	236	319	490	1060	115	59	51	17	23		
4	15	84	1470	404	273	397	868	110	55	41	17	21		
5	15	73	1160	402	237	364	701	108	53	36	18	19		
6	21	70	989	333	285	573	564	103	51	34	17	18		
7	53	72	638	289	479	701	461	112	49	33	15	16		
8	34	67	448	260	505	726	388	228	47	34	14	16		
9	25	63	339	229	2040	745	347	412	45	32	14	15		
10	20	57	268	206	2130	1730	318	413	54	29	16	14		
11	17	52	213	186	1200	941	298	350	57	28	15	14		
12	15	48	198	172	2200	1200	271	292	49	25	14	14		
13	15	46	267	158	2440	1770	247	241	45	25	13	13		
14	14	43	603	144	1380	1580	228	201	42	25	13	12		
15	14	42	3760	137	969	1190	213	183	42	25	12	12		
16	13	40	4830	138	912	828	196	161	40	24	10	12		
17	12	84	3290	129	3150	629	185	143	39	25	9.7	11		
18	12	737	1860	388	7180	671	174	131	43	26	9.1	10		
19	12	1080	1230	953	2240	531	168	120	41	29	9.0	11		
20	12	898	1550	704	1260	443	175	110	40	27	9.0	10		
21	15	740	2230	504	1110	398	160	104	38	24	9.0	9.0		
22	175	618	1730	459	1310	369	149	97	35	23	9.0	9.0		
23	943	429	1050	831	1010	552	169	92	35	22	9.3	12		
24	278	299	759	1780	773	597	176	85	35	23	10	14		
25	290	225	590	1000	653	632	196	79	33	23	9.9	12		
26	995	184	484	3880	1120	625	187	76	32	22	9.4	11		
27	470	166	441	3490	1140	703	174	71	31	20	9.0	9.9		
28	236	237	398	1380	859	606	163	67	30	20	9.0	10		
29	367	940	343	891	---	1360	157	64	31	20	16	9.9		
30	394	1290	295	697	---	4000	142	61	30	20	71	9.3		
31	241	---	255	550	---	2290	---	67	---	19	56	---		
TOTAL	4774	9076	34565	21362	38000	28958	11155	4650	1312	916	495.4	432.1		
MEAN	154	303	1115	689	1357	934	372	150	43.7	29.5	16.0	14.4		
MAX	995	1290	4830	3880	7180	4000	1480	413	67	71	71	38		
MIN	12	40	198	129	237	364	142	61	30	19	9.0	9.0		
CFSM	1.77	3.49	12.8	7.93	15.6	10.7	4.28	1.73	.50	.34	.18	.17		
IN.	2.04	3.89	14.80	9.14	16.27	12.40	4.78	1.99	.56	.39	.21	.18		
AC-FT	9470	18000	68560	42370	75370	57440	22130	9220	2600	1820	983	857		
CAL YR 1982	TOTAL	137546.2	MEAN	377	MAX	4830	MIN	6.3	CFSM	4.34	IN.	58.88	AC-FT	272800
WTR YR 1983	TOTAL	155695.5	MEAN	427	MAX	7180	MIN	9.0	CFSM	4.91	IN.	66.65	AC-FT	308800

## 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 upstream from Council Creek, 3.8 mi southwest of Riddle, and at mile 6.7.

DRAINAGE AREA.--456 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--29 years, 908 ft<sup>3</sup>/s, 657,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,400 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 28.17 ft; minimum, 7.4 ft<sup>3</sup>/s Aug. 17-19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 29, 1950, reached a stage of about 28.5 ft, present site and datum, from slope-area measurement, discharge, 41,100 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	0630	23,200	20.12	Feb. 18	0500	*35,500	*26.79
Jan. 26	2400	20,700	18.63	Mar. 30	0900	15,300	15.35
Feb. 10	0430	11,200	12.32				

Minimum, 50 ft<sup>3</sup>/s Aug. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	476	2810	898	1640	2850	5710	653	329	169	84	219
2	79	357	2510	819	1380	2420	4090	621	331	257	84	163
3	71	290	2330	830	1200	2050	3700	577	305	222	81	130
4	69	245	3440	1050	1050	1740	3130	548	280	183	80	112
5	67	212	3130	1200	941	1550	2580	573	261	159	80	100
6	72	194	3010	1100	929	1640	2150	581	245	150	78	92
7	126	192	1970	1030	1510	1990	1790	557	233	147	75	86
8	118	185	1360	1000	1530	2370	1530	663	230	146	70	82
9	101	179	1050	932	5760	2170	1360	974	217	161	68	79
10	87	165	882	833	9010	4630	1260	1030	223	157	70	78
11	75	153	707	750	5000	3400	1160	950	266	140	72	77
12	70	142	619	693	6440	3680	1060	850	248	128	70	74
13	67	135	697	648	7460	6240	965	758	220	121	69	71
14	64	130	837	602	4720	6190	896	676	205	113	67	68
15	62	125	7960	569	3500	4670	837	633	198	108	66	67
16	60	122	19200	573	3470	3340	784	588	190	106	61	66
17	59	152	15600	555	8420	2570	742	540	181	113	57	64
18	57	1330	7090	837	27900	2370	718	499	186	115	55	63
19	58	3040	4180	2450	10100	1950	787	468	190	147	55	63
20	59	2390	4360	2060	5230	1660	793	443	184	177	54	63
21	63	1810	7500	1600	4310	1530	736	422	177	140	52	59
22	159	1550	7530	1410	4130	1430	700	402	167	123	52	58
23	2070	1170	4350	2440	3450	1710	722	382	162	110	52	65
24	966	845	3140	4640	2900	1880	749	365	160	106	55	72
25	470	646	2410	3330	2600	1920	792	344	153	109	56	71
26	1580	528	1970	11900	4800	1870	788	328	146	108	58	68
27	1060	463	1750	14100	4680	2190	746	315	143	102	58	64
28	595	508	1560	5860	3430	2090	719	299	140	97	54	63
29	674	1410	1340	3620	---	2460	735	283	138	96	65	62
30	989	2820	1160	2600	---	12200	686	269	137	94	255	63
31	683	---	1020	2000	---	8410	---	291	---	88	311	---
TOTAL	10825	21964	117472	72929	137490	97170	43415	16882	6245	4192	2464	2462
MEAN	349	732	3789	2353	4910	3135	1447	545	208	135	79.5	82.1
MAX	2070	3040	19200	14100	27900	12200	5710	1030	331	257	311	219
MIN	57	122	619	555	929	1430	686	269	137	88	52	58
AC-FT	21470	43570	233000	144700	272700	192700	86110	33490	12390	8310	4890	4880
CAL YR 1982	TOTAL	448583	MEAN	1229	MAX	19200	MIN	25	AC-FT	889800		
WTR YR 1983	TOTAL	533510	MEAN	1462	MAX	27900	MIN	52	AC-FT	1058000		

## 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 left bank 300 ft downstream from Bilger Creek, 1.5 mi northeast of town of Myrtle Creek, and at mile 2.2.

DRAINAGE AREA.--54.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 1738: 1957. WRD OR-79: 1978.

GAGE.--Water-stage recorder. Datum of gage is 642.81 ft National Geodetic Vertical Datum of 1929 (levels by City Engineer of Myrtle Creek). Oct. 1, 1955, to Aug. 31, 1977, at site 340 ft downstream on right bank. Oct. 1, 1955, to Sept. 30, 1975, at datum 1.63 ft lower and Oct. 1, 1975, to Aug. 31, 1977, at datum 1.33 ft lower.

REMARKS.--Records fair. No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years, 73.6 ft<sup>3</sup>/s, 53,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft<sup>3</sup>/s Dec. 6, 1981, gage height, 10.08 ft, from floodmark, from rating curve extended above 1,300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; maximum gage height, 11.58 ft Dec. 26, 1955 (backwater from debris), site and datum then in use; no flow at times in July 1973 and August 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft<sup>3</sup>/s and maximum (\*) from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 17	2130	1,140	5.78	Feb. 18	0330	*3,630	*9.99

Minimum, 4.3 ft<sup>3</sup>/s Aug. 18, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	41	197	82	87	170	396	97	42	31	9.3	16
2	10	33	236	78	78	144	335	82	34	29	9.0	13
3	9.6	28	255	85	72	126	314	68	29	23	8.2	11
4	8.8	25	268	120	66	108	265	63	27	18	8.4	9.9
5	8.0	23	253	122	64	94	215	65	26	17	8.8	9.9
6	11	23	218	101	87	88	168	64	25	17	7.9	9.4
7	20	24	165	94	96	99	132	64	23	18	7.7	9.2
8	15	24	127	95	88	121	111	101	22	25	7.1	9.1
9	12	23	103	92	337	127	103	187	20	20	7.4	8.7
10	10	21	87	82	495	216	92	183	26	18	8.5	8.4
11	9.4	21	74	77	339	188	82	149	26	16	7.9	8.1
12	8.9	20	66	72	298	196	73	123	23	14	6.5	8.1
13	8.7	20	159	66	257	231	72	101	20	13	6.6	8.3
14	8.5	19	183	62	235	289	70	78	19	14	7.1	7.8
15	8.2	18	231	58	241	298	65	69	18	13	6.3	7.5
16	8.1	18	604	56	220	244	61	60	17	12	5.7	7.6
17	8.8	21	966	54	765	190	57	53	17	12	5.5	7.1
18	9.8	53	700	58	2060	154	54	49	19	12	5.0	7.0
19	9.1	150	345	64	572	125	79	45	18	13	5.2	8.0
20	9.1	173	260	76	411	105	73	44	17	20	5.8	6.8
21	10	158	274	72	439	98	70	42	17	15	5.5	6.3
22	14	140	304	90	349	88	64	40	16	12	5.5	6.9
23	92	102	293	102	273	85	73	39	16	11	7.9	7.4
24	46	60	245	120	281	82	117	37	14	13	7.8	7.8
25	26	44	197	109	250	120	116	36	13	14	6.7	7.0
26	27	36	176	172	274	129	130	34	12	11	6.6	6.6
27	26	35	172	236	238	131	115	31	11	10	5.7	6.9
28	24	34	148	196	199	117	107	30	11	10	5.3	6.9
29	81	65	123	160	---	124	124	28	14	9.2	16	6.9
30	93	154	100	121	---	552	108	28	15	8.4	38	6.9
31	58	---	87	93	---	502	---	42	---	8.2	22	---
TOTAL	701.0	1606	7616	3065	9171	5341	3841	2132	607	476.8	270.9	250.5
MEAN	22.6	53.5	246	98.9	328	172	128	68.8	20.2	15.4	8.74	8.35
MAX	93	173	966	236	2060	552	396	187	42	31	38	16
MIN	8.0	18	66	54	64	82	54	28	11	8.2	5.0	6.3
AC-FT	1390	3190	15110	6080	18190	10590	7620	4230	1200	946	537	497
CAL YR 1982	TOTAL	27966.27	MEAN	76.6	MAX	966	MIN	.72	AC-FT	55470		
WTR YR 1983	TOTAL	35078.2	MEAN	96.1	MAX	2060	MIN	5.0	AC-FT	69580		



## UMPQUA RIVER BASIN

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14311500 LOOKINGGLASS CREEK AT BROCKWAY, OR

LOCATION.--Lat 43°07'50", long 123°27'50", in SE¼SE¼ sec.13, T.28 S., R.7 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.7 mi northwest of Brockway and at mile 2.85.

DRAINAGE AREA.--158 mi<sup>2</sup>.

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, from topographic map. Prior to Oct. 5, 1967, water-stage recorder at site 2.3 mi downstream at different datum.

REMARKS.--Records good except those for Feb. 18 to July 27, which are fair. Some regulation by Ben Irving Reservoir 17 mi upstream on Berry Creek, capacity, 11,200 acre-ft since January 1980. Many diversions by pumping for irrigation above station. Discharge not adjusted for storage or release from Ben Irving Reservoir as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--24 years (water years 1956-79), 282 ft<sup>3</sup>/s, 204,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft<sup>3</sup>/s Dec. 26, 1955, gage height, 24.93 ft, site and datum then in use, from rating curve extended above 7,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; maximum gage height, 25.28 ft Dec. 23, 1964 (backwater from South Umpqua River, site and datum then in use); no flow at times each year prior to January 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft<sup>3</sup>/s Feb. 18, gage height, 17.93 ft; minimum, 5.1 ft<sup>3</sup>/s Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	79	1170	248	412	778	1740	197	47	31	15	31
2	13	62	945	233	354	649	1450	174	45	52	14	26
3	12	52	934	273	309	536	1380	156	43	41	14	23
4	11	46	1240	951	275	466	1100	139	39	34	14	22
5	11	41	1030	734	250	426	926	131	36	29	14	20
6	11	38	890	540	278	468	613	123	33	29	14	20
7	9.2	39	631	485	473	688	458	122	31	27	13	19
8	8.5	39	431	476	448	730	355	196	29	28	12	18
9	11	41	332	465	1910	630	293	435	26	29	11	18
10	8.1	43	274	391	2670	1280	296	371	27	26	11	16
11	6.0	40	235	322	1480	1010	267	292	32	21	12	15
12	7.5	37	214	286	2310	1220	243	243	30	18	11	15
13	18	36	233	249	2160	1850	210	207	25	17	11	15
14	19	34	309	223	1570	2130	186	178	24	16	11	14
15	19	33	1350	206	1270	1980	168	160	23	16	11	15
16	19	32	4530	210	1010	1310	138	140	20	16	9.0	15
17	19	36	4070	192	2830	931	127	123	18	17	10	15
18	19	228	2840	255	9670	764	122	109	18	20	9.6	14
19	18	734	1750	511	2840	580	180	98	19	18	9.6	14
20	18	760	1490	521	1650	460	201	88	20	20	10	14
21	19	684	2050	453	1700	472	197	81	17	18	10	14
22	26	572	1900	422	1420	410	175	75	15	16	9.2	14
23	176	401	1550	1130	1040	436	177	69	15	16	8.8	15
24	129	245	1210	1200	848	473	178	64	13	16	9.2	16
25	67	194	917	917	656	512	243	59	11	16	10	16
26	82	161	733	2580	1250	510	239	56	11	17	9.5	16
27	100	142	593	2780	1230	581	220	52	11	16	9.4	16
28	74	141	460	1540	914	536	208	49	8.4	15	11	16
29	146	427	388	928	---	788	279	44	7.7	15	18	16
30	175	856	316	657	---	3780	220	42	10	15	34	16
31	111	---	278	507	---	2540	---	44	---	15	39	---
TOTAL	1376.3	6273	35293	20885	43227	29924	12589	4317	704.1	680	404.3	514
MEAN	44.4	209	1138	674	1544	965	420	139	23.5	21.9	13.0	17.1
MAX	176	856	4530	2780	9670	3780	1740	435	47	52	39	31
MIN	6.0	32	214	192	250	410	122	42	7.7	15	8.8	14
AC-FT	2730	12440	70000	41430	85740	59350	24970	8560	1400	1350	802	1020
CAL YR 1982	TOTAL 131018.78		MEAN		359	MAX	4530	MIN	.10	AC-FT	259900	
WTR YR 1983	TOTAL 156186.7		MEAN		428	MAX	9670	MIN	6.0	AC-FT	309800	

## 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 upstream from Winston Bridge on State Highway 99, 2.5 mi northeast of Brockway, 4.2 mi downstream from Lookingglass Creek, and at mile 132.8.

DRAINAGE AREA.--1,670 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to June 24, 1949, nonrecording gage at several sites within 400 ft of present site at various datums. June 24, 1949, to Oct. 1, 1970, at datum 461.84 ft National Geodetic Vertical Datum of 1929 (State Highway Department bench mark).

REMARKS.--Records good except those for periods of no gage-height record Dec. 16, Apr. 22 to May 3, May 23 to June 27, which are fair. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--49 years (water years 1907-11, 1924-26, 1943-83), 2,901 ft<sup>3</sup>/s, 23.59 in/yr, 2,102,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 34.28 ft; minimum, 16 ft<sup>3</sup>/s Aug. 23, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 21, 1927, reached a stage of about 31.2 ft, present site and datum, discharge (revised), 89,500 ft<sup>3</sup>/s. Discharge for flood of February 1890, which reached a stage 1.9 ft 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.--Peak discharges above base of 20,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 17	0600	48,000	21.32	Feb. 10	0630	27,900	15.79
Dec. 22	0200	21,700	14.18	Feb. 18	1130	*85,200	*30.32
Jan. 27	0600	35,600	17.89	Mar. 30	1530	42,100	19.69

Minimum, 168 ft<sup>3</sup>/s Aug. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	399	1670	7130	2840	4770	7730	20000	2800	1600	577	295	662		
2	304	1230	6680	2570	4140	6730	15100	2600	1500	1250	286	500		
3	257	975	12100	2620	3640	5680	14800	2600	1300	1220	278	405		
4	233	815	12700	4900	3230	4910	13000	2400	1200	936	272	355		
5	218	708	11400	6380	2910	4420	10800	2440	1100	775	271	322		
6	219	645	12800	5000	2770	4170	8740	2720	1100	699	269	303		
7	243	658	8350	5770	3930	4410	7330	2620	1000	658	258	285		
8	466	678	5570	6680	4060	5310	6310	2700	1000	680	247	273		
9	449	637	4160	5440	12400	5710	5680	4080	1000	699	235	264		
10	354	593	3280	4400	24100	8750	5380	4590	1100	668	233	256		
11	297	549	2690	3670	16100	8560	4940	4130	1200	596	240	247		
12	263	501	2290	3170	16800	7450	4470	3640	1100	532	241	242		
13	246	466	2810	2840	18200	12400	3660	3220	1000	489	232	235		
14	235	443	3920	2540	13600	14900	2880	2860	900	460	224	226		
15	221	423	11400	2320	11600	13500	2400	2710	850	435	220	222		
16	211	407	40000	2260	11000	10400	2360	2740	800	421	204	217		
17	205	418	43000	2180	18600	8090	2170	2530	750	410	187	216		
18	200	1270	23400	2190	72100	6650	2130	2320	700	413	182	209		
19	198	6620	13700	4280	33300	5300	2320	2170	750	417	172	208		
20	199	5920	11500	4720	18400	4290	2450	2060	700	546	182	209		
21	201	4840	16500	4030	16600	3890	2560	2000	650	573	180	208		
22	235	4320	18700	3570	14400	3770	2400	1950	600	456	175	202		
23	1820	3370	12700	5160	11800	3730	2400	2000	600	403	177	203		
24	2480	2480	9570	8110	10400	3950	2400	2200	550	378	192	218		
25	1170	2020	7170	7410	9130	4540	2600	2200	550	379	279	226		
26	1430	1700	5960	16800	12200	4510	2800	2400	500	378	242	225		
27	2070	1590	5700	30400	12400	5070	2800	2200	500	364	220	218		
28	1430	1630	5020	15900	9330	5520	2600	2000	479	344	206	210		
29	1620	3010	4320	10200	---	5550	2600	1900	480	331	231	207		
30	4630	6780	3660	7320	---	30100	3000	1800	474	321	429	205		
31	2570	---	3200	5730	---	28100	---	1700	---	309	803	---		
TOTAL	25073	57366	331380	191400	391910	248090	163080	80280	26033	17117	7862	7978		
MEAN	809	1912	10690	6174	14000	8003	5436	2590	868	552	254	266		
MAX	4630	6780	43000	30400	72100	30100	20000	4590	1600	1250	803	662		
MIN	198	407	2290	2180	2770	3730	2130	1700	474	309	172	202		
CFSM	.48	1.14	6.40	3.70	8.38	4.79	3.26	1.55	.52	.33	.15	.16		
IN.	.56	1.28	7.38	4.26	8.73	5.53	3.63	1.79	.58	.38	.18	.18		
AC-FT	49730	113800	657300	379600	777400	492100	323500	159200	51640	33950	15590	15820		
CAL YR 1982	TOTAL	1294474	MEAN	3547	MAX	43000	MIN	61	CFSM	2.12	IN.	28.83	AC-FT	2568000
WTR YR 1983	TOTAL	1547569	MEAN	4240	MAX	72100	MIN	172	CFSM	2.54	IN.	34.47	AC-FT	3070000

UMPQUA RIVER BASIN

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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 west of Roseburg, and at mile 117.7.

DRAINAGE AREA.--1,798 mi<sup>2</sup>.

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.

INSTRUMENTATION.--Water-quality monitor since October 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 423 micromhos Sept. 18, 1971; minimum, 37 micromhos Feb. 18, 1983.

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, 0.4 mg/l Aug. 10, 1978.

WATER TEMPERATURES: Maximum, 35.0°C July 16, 1976; minimum, 0.0°C Dec. 14, 16, 1972, Jan. 9, 1974.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 186 micromhos Oct. 1; minimum, 37 micromhos Feb. 18.

pH: Maximum recorded, 8.9 units Sept. 21, 22; minimum, 6.9 units Nov. 19.

DISSOLVED OXYGEN: Maximum recorded, 14.1 mg/l Feb. 5; minimum recorded, 6.5 mg/l Sept. 7.

WATER TEMPERATURES: Maximum recorded, 26.0°C July 30; minimum recorded, 3.5°C Dec. 31, Jan. 15.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 25...	1030	1270	120	7.4	13.5	10.0	340	960	46	11
NOV 17...	1130	430	142	7.4	8.0	11.3	K850	760	55	13
DEC 21...	0920	15000	75	7.5	7.5	11.8	K1100	K1300	30	6.7
JAN 19...	1415	4800	102	7.6	7.0	12.2	K800	K3300	39	8.5
FEB 15...	1015	11600	77	7.4	7.5	11.8	K1100	K1500	31	6.8
MAR 08...	1300	5610	91	7.1	9.5	11.4	K980	2000	38	8.1
APR 13...	0930	3300	93	7.6	8.0	12.0	36	75	40	8.7
MAY 17...	0930	2520	93	7.7	13.5	11.0	67	81	38	8.6
JUN 22...	1030	430	120	8.1	21.0	9.9	22	120	44	10
JUL 12...	1000	500	125	8.0	23.0	9.7	350	K1700	57	13
SEP 08...	0830	273	155	7.8	19.5	8.6	120	K5400	58	13

## UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LITY FIELD (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 25...	4.4	--	7.3	.150	1.1	.09	.310	69	237
NOV 17...	5.5	--	8.4	<.100	1.1	.28	.110	87	101
DEC 21...	3.3	31	2.4	.130	.80	--	.130	58	2350
JAN 19...	4.2	39	3.8	.120	<.10	.03	.070	--	1010
FEB 15...	3.5	33	2.1	<.100	.40	.06	.070	50	1570
MAR 08...	4.2	36	2.6	<.100	.70	.12	.080	65	985
APR 13...	4.4	44	2.9	<.100	.70	.06	.040	56	499
MAY 17...	3.9	43	2.6	<.100	.30	.03	.030	63	429
JUN 22...	4.7	54	5.0	<.100	.50	.15	.070	--	--
JUL 12...	5.9	54	5.5	<.100	.60	.25	.070	85	115
SEP 08...	6.1	63	9.5	.110	.40	.37	.140	87	64

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JAN 19...	50	1	18	<1	<1	<10	1	2	50
SEP 08...	<10	1	<100	<10	<1	<10	1	4	40

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JAN 19...	<1	15	7	<.1	<1	1	<1	<1	3
SEP 08...	2	10	10	.1	<1	3	<1	<1	10

DATE	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)
NOV 17...	<.010	<.1	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
JAN 19...	<.010	<.1	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
APR 13...	<.010	<.1	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
SEP 08...	<.010	<.1	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010

DATE	LINDANE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PCB, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)
NOV 17...	<.010	<.01	<.01	<.1	<.1	<.01	<.01	<.01	<.01
JAN 19...	<.010	<.01	<.01	<.1	<.1	<.01	<.01	<.01	<.01
APR 13...	<.010	<.01	<.01	<.1	<.1	<.01	<.01	<.01	<.01
SEP 08...	<.010	<.01	<.01	<.1	<.1	<.01	<.01	<.01	<.01

K - Results based on colony count outside acceptable range (non-ideal colony count).

UMPQUA RIVER BASIN

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14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	94	83	---	92	84	90	94	---	131	154	166
2	169	101	86	---	94	87	91	94	---	135	---	165
3	168	106	77	---	96	89	92	94	---	126	---	162
4	166	111	73	---	97	92	93	95	---	113	---	163
5	165	115	70	---	99	96	91	97	---	107	---	158
6	163	119	71	---	100	98	93	96	107	109	---	156
7	161	123	71	86	102	97	96	93	109	114	---	157
8	165	126	77	76	95	93	98	96	110	117	---	---
9	163	128	82	79	89	---	99	98	110	121	---	---
10	165	128	85	84	70	91	99	91	111	122	---	157
11	167	130	88	88	74	85	100	90	111	126	---	159
12	164	133	91	91	73	89	100	92	109	127	---	162
13	163	134	97	93	67	88	98	93	108	130	---	163
14	162	135	95	97	---	83	100	93	109	132	---	164
15	161	138	82	99	---	85	101	95	110	135	---	166
16	161	140	60	101	74	87	101	95	113	138	---	167
17	162	142	61	102	74	86	102	95	115	140	---	168
18	164	144	74	106	41	89	102	97	117	139	---	168
19	166	115	80	100	57	92	105	98	117	141	---	169
20	168	90	81	91	75	96	105	98	118	142	---	170
21	171	90	76	92	76	98	103	98	120	142	---	171
22	171	93	73	96	77	100	99	97	118	142	---	172
23	163	94	80	99	79	101	98	95	116	143	---	173
24	137	97	84	90	83	98	98	93	119	142	---	174
25	119	99	87	82	83	96	96	91	120	143	---	174
26	123	102	91	85	84	91	95	87	122	149	---	175
27	114	104	93	68	81	90	94	86	125	147	---	176
28	100	106	92	78	83	86	94	---	127	148	---	175
29	111	109	93	83	---	89	99	---	128	150	---	175
30	105	88	95	86	---	69	96	---	130	152	164	176
31	87	---	---	90	---	86	---	---	---	153	169	---
MEAN	152	114	82	90	81	90	98	94	116	134	162	167



## UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.3	7.5	7.4	7.3	7.5	7.3	---	---	7.6	7.5	7.4	7.4
2	8.5	7.4	7.5	7.4	7.5	7.4	---	---	7.7	7.6	7.4	7.4
3	8.4	7.4	7.5	7.3	7.6	7.2	---	---	7.7	7.6	7.4	7.4
4	8.3	7.3	7.5	7.3	7.2	7.1	---	---	7.7	7.7	7.4	7.2
5	8.4	7.4	7.6	7.3	7.3	7.1	---	---	7.8	7.7	7.3	7.2
6	8.1	7.4	7.7	7.4	7.3	7.2	---	---	7.8	7.7	7.3	7.2
7	8.1	7.4	7.7	7.4	7.3	7.2	7.7	7.5	7.8	7.7	7.2	7.1
8	8.3	7.4	7.8	7.5	7.5	7.3	7.6	7.5	7.7	7.6	7.1	7.1
9	8.4	7.5	7.6	7.3	7.6	7.4	7.5	7.5	7.7	7.4	---	---
10	8.4	7.5	7.7	7.3	7.7	7.6	7.5	7.5	7.5	7.4	7.2	7.0
11	8.4	7.5	7.8	7.5	7.7	7.7	7.6	7.5	7.4	7.4	7.2	7.0
12	8.4	7.4	7.8	7.4	7.9	7.7	7.7	7.6	7.5	7.4	7.2	7.0
13	8.4	7.4	7.8	7.4	7.8	7.8	7.6	7.5	7.4	7.3	7.1	7.0
14	8.4	7.4	7.9	7.4	7.8	7.7	7.6	7.5	---	---	7.1	7.0
15	8.3	7.3	7.9	7.3	7.8	7.5	7.7	7.6	---	---	7.1	7.0
16	8.3	7.4	7.9	7.3	7.6	7.4	7.7	7.6	7.7	7.6	7.1	7.1
17	8.2	7.4	7.8	7.2	7.5	7.4	7.7	7.6	7.9	7.6	7.2	7.1
18	8.2	7.4	7.4	7.2	7.5	7.4	7.7	7.6	7.8	7.6	7.2	7.1
19	8.3	7.4	7.4	6.9	7.6	7.5	7.7	7.5	7.8	7.5	7.2	7.1
20	8.3	7.5	7.0	7.0	7.6	7.5	7.5	7.4	7.6	7.5	7.3	7.2
21	7.8	7.5	7.1	7.0	7.5	7.3	7.5	7.4	7.5	7.4	7.3	7.2
22	7.8	7.3	7.1	7.1	7.5	7.4	7.5	7.4	7.5	7.4	7.3	7.3
23	7.6	7.3	7.2	7.1	7.5	7.4	7.6	7.5	7.5	7.4	7.4	7.3
24	7.5	7.3	7.3	7.2	7.6	7.5	7.5	7.4	7.5	7.4	7.4	7.3
25	7.4	7.2	7.4	7.3	7.6	7.5	7.6	7.4	7.4	7.3	7.3	7.3
26	7.6	7.3	7.4	7.3	7.6	7.6	7.5	7.3	7.3	7.3	7.3	7.3
27	7.6	7.5	7.5	7.4	7.6	7.6	7.5	7.2	7.3	7.3	7.4	7.3
28	7.5	7.4	7.6	7.5	7.6	7.5	7.3	7.2	7.4	7.3	7.4	7.3
29	7.5	7.4	7.5	7.4	7.7	7.6	7.5	7.3	---	---	7.4	7.2
30	7.6	7.3	7.5	7.3	7.7	7.6	7.5	7.4	---	---	7.6	7.2
31	7.4	7.3	---	---	---	---	7.5	7.3	---	---	7.2	7.1
MONTH	8.5	7.2	7.9	6.9	7.9	7.1	7.7	7.2	7.9	7.3	7.6	7.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.2	7.0	7.7	7.6	---	---	8.3	7.6	8.5	7.4	8.1	7.6
2	7.2	7.1	7.7	7.6	---	---	8.2	7.6	---	---	8.3	7.6
3	7.2	7.1	7.7	7.6	---	---	8.0	7.6	---	---	8.5	7.6
4	7.2	7.1	7.8	7.6	---	---	8.1	7.6	---	---	8.3	7.5
5	7.3	7.2	7.8	7.7	---	---	8.1	7.6	---	---	8.6	7.5
6	7.3	7.2	7.8	7.6	7.8	7.6	8.2	7.6	---	---	8.7	7.5
7	7.3	7.2	7.7	7.6	7.9	7.6	8.1	7.6	---	---	8.8	7.5
8	7.3	7.2	7.6	7.5	7.8	7.6	8.2	7.5	---	---	---	---
9	7.4	7.3	7.6	7.4	7.8	7.6	8.2	7.5	---	---	---	---
10	7.4	7.3	7.5	7.4	7.7	7.5	8.4	7.6	---	---	8.8	7.7
11	7.4	7.4	7.5	7.4	7.8	7.6	8.5	7.6	---	---	8.8	7.7
12	7.5	7.4	7.5	7.5	7.8	7.6	8.6	7.5	---	---	8.7	7.7
13	7.5	7.4	7.6	7.4	7.8	7.6	8.4	7.5	---	---	8.8	7.7
14	7.6	7.1	7.6	7.5	7.8	7.7	8.4	7.5	---	---	8.7	7.7
15	7.6	7.5	7.7	7.5	7.9	7.6	8.4	7.4	---	---	8.6	7.6
16	7.6	7.6	7.8	7.6	8.0	7.7	8.2	7.3	---	---	8.7	7.7
17	7.6	7.6	7.8	7.4	7.9	7.6	8.2	7.3	---	---	8.8	7.7
18	7.7	7.6	7.8	7.5	8.0	7.6	8.5	7.5	---	---	8.6	7.7
19	7.6	7.6	7.9	7.5	8.1	7.6	8.5	7.5	---	---	8.8	7.8
20	7.6	7.5	7.9	7.5	8.1	7.8	8.3	7.4	---	---	8.8	7.8
21	7.7	7.5	8.0	7.5	8.2	7.8	8.4	7.5	---	---	8.9	7.8
22	7.7	7.6	8.0	7.6	8.2	7.6	8.5	7.5	---	---	8.9	7.8
23	7.7	7.6	8.0	7.6	8.1	7.5	8.4	7.5	---	---	8.7	7.8
24	7.7	7.6	8.1	7.5	8.3	7.6	8.1	7.4	---	---	8.8	7.7
25	7.7	7.6	8.1	7.5	8.4	7.6	8.2	7.4	---	---	8.8	7.7
26	7.7	7.6	8.1	7.5	8.4	7.5	8.5	7.5	---	---	8.8	7.7
27	7.6	7.6	8.2	7.5	8.5	7.6	8.6	7.5	---	---	8.7	7.7
28	7.7	7.6	---	---	8.4	7.6	8.6	7.5	---	---	8.7	7.7
29	7.7	7.6	---	---	8.4	7.5	8.6	7.5	---	---	8.8	7.8
30	7.6	7.6	---	---	8.6	7.6	8.6	7.5	---	---	8.8	7.8
31	---	---	---	---	---	---	8.6	7.4	8.0	7.5	---	---
MONTH	7.7	7.0	8.2	7.4	8.6	7.5	8.6	7.3	8.5	7.4	8.9	7.5

## 14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	10.6	8.6	9.8	11.5	10.9	11.2	11.8	10.9	11.4	---	---	---
2	10.6	8.2	9.4	11.4	10.8	11.1	12.1	11.8	11.9	---	---	---
3	10.4	8.1	9.2	11.2	10.6	10.9	11.9	11.4	11.6	---	---	---
4	10.2	8.0	9.1	11.1	10.4	10.8	11.4	11.0	11.2	---	---	---
5	10.4	8.0	9.2	11.1	10.3	10.7	11.3	10.9	11.1	---	---	---
6	9.6	7.5	8.4	11.0	10.2	10.6	11.4	11.0	11.2	---	---	---
7	10.4	7.9	8.9	11.1	10.1	10.6	11.8	11.4	11.6	13.0	12.7	12.9
8	10.9	8.5	9.4	11.2	10.2	10.7	12.0	11.7	11.8	12.7	12.2	12.4
9	10.5	8.7	9.6	11.3	10.5	10.9	12.3	11.9	12.1	12.7	12.4	12.6
10	10.3	8.6	9.5	11.0	10.7	10.8	12.7	11.3	11.6	13.0	12.7	12.8
11	10.5	8.3	9.2	12.1	10.8	11.4	12.9	12.7	12.8	13.2	13.0	13.1
12	10.7	8.3	9.4	12.4	11.3	11.8	13.0	12.7	12.9	13.2	13.0	13.1
13	10.5	8.1	9.1	12.5	11.7	12.0	12.8	11.5	12.7	13.3	13.1	13.2
14	10.3	8.0	8.9	12.7	11.6	12.1	12.5	12.2	12.3	13.4	13.2	13.2
15	10.2	7.7	8.8	12.9	11.6	12.1	12.3	11.7	12.0	13.3	12.8	13.2
16	10.3	7.8	8.8	12.3	11.1	11.8	11.9	11.1	11.5	13.0	12.8	12.9
17	9.8	7.7	8.6	11.2	10.3	10.8	12.7	11.3	12.0	12.8	12.3	12.6
18	10.3	8.1	9.0	10.8	10.2	10.4	12.7	12.0	12.4	12.3	11.8	12.1
19	11.0	8.6	9.7	11.2	10.8	11.0	12.3	11.7	12.0	12.3	11.7	12.0
20	11.2	8.9	9.8	11.4	11.1	11.2	12.2	11.9	12.0	12.7	12.3	12.6
21	10.9	8.7	9.6	11.6	11.4	11.5	12.3	12.1	12.1	12.8	12.7	12.8
22	10.3	8.1	9.2	11.6	11.3	11.5	12.5	12.0	12.2	12.9	12.5	12.8
23	9.8	9.0	9.4	11.6	11.4	11.5	12.6	11.9	12.2	12.6	11.8	12.4
24	10.0	9.4	9.7	12.0	11.6	11.8	12.9	12.5	12.8	12.2	11.9	12.2
25	10.3	9.7	10.0	12.4	11.9	12.1	12.9	12.7	12.8	12.4	12.0	12.3
26	10.6	9.9	10.3	12.2	11.8	12.0	12.9	12.5	12.7	12.3	11.4	11.8
27	11.0	10.2	10.6	11.9	11.6	11.8	12.9	12.5	12.7	12.2	11.7	12.0
28	11.4	10.9	11.2	11.6	11.1	11.2	13.3	12.5	13.0	12.3	12.0	12.1
29	11.0	10.5	10.8	11.3	11.0	11.2	13.5	13.2	13.3	12.4	12.2	12.2
30	10.7	10.3	10.5	11.1	10.7	10.9	13.8	13.4	13.6	12.8	12.4	12.5
31	11.1	10.5	10.8	---	---	---	---	---	---	13.0	12.8	12.9
MONTH	11.4	7.5	9.6	12.9	10.1	11.3	13.8	10.9	12.2	13.4	11.4	12.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	13.3	13.0	13.1	10.9	10.6	10.7	11.0	10.7	10.8	11.4	10.6	11.1
2	13.4	13.3	13.3	10.9	10.3	10.6	11.0	10.8	10.9	12.1	11.2	11.6
3	13.4	13.2	13.3	10.6	10.3	10.4	11.0	10.9	11.0	12.0	11.2	11.7
4	13.8	13.4	13.6	10.7	10.4	10.6	11.1	10.9	11.0	11.2	10.2	10.7
5	14.1	13.8	13.9	10.8	10.7	10.7	11.1	10.9	11.0	11.0	10.3	10.6
6	13.8	13.2	13.6	10.9	10.7	10.8	11.1	10.9	11.0	11.3	10.3	10.8
7	13.8	13.2	13.6	11.1	10.9	11.0	11.0	10.8	10.9	11.8	10.7	11.3
8	13.7	13.3	13.5	11.2	11.1	11.2	11.0	10.9	11.0	12.2	11.3	11.7
9	13.3	12.9	13.1	---	---	---	11.2	11.0	11.1	12.3	11.4	12.0
10	13.4	13.1	13.3	11.1	10.8	11.0	11.5	11.2	11.4	12.5	11.9	12.2
11	13.2	12.1	12.6	11.4	10.7	11.1	11.7	11.4	11.5	12.4	11.4	12.0
12	12.1	11.7	11.9	11.0	10.7	10.9	11.8	11.6	11.7	11.8	10.3	11.3
13	12.2	12.0	12.1	11.1	10.7	10.9	12.0	11.2	11.5	10.7	9.7	10.3
14	---	---	---	11.8	11.0	11.4	11.6	10.9	11.3	10.4	9.8	10.1
15	---	---	---	12.0	11.5	11.8	11.2	10.7	11.0	10.6	9.8	10.2
16	11.5	11.2	11.4	11.8	11.1	11.6	11.1	10.5	10.8	11.0	9.9	10.5
17	11.3	10.7	11.0	11.9	11.3	11.7	10.8	10.3	10.6	11.0	10.0	10.4
18	11.3	10.7	11.0	11.7	11.3	11.4	10.7	10.2	10.4	11.0	9.5	10.3
19	12.0	10.7	11.4	11.7	10.9	11.1	10.3	9.8	10.1	10.8	9.3	10.1
20	11.5	10.8	11.2	11.7	11.2	11.5	10.1	9.8	9.9	10.4	8.8	9.6
21	11.2	10.9	11.1	11.6	11.1	11.4	10.5	9.9	10.2	9.8	8.2	8.9
22	11.0	10.5	10.8	11.5	11.2	11.4	10.7	10.1	10.4	9.3	7.9	8.5
23	10.7	10.4	10.6	11.5	11.2	11.4	11.2	10.5	10.9	9.3	7.5	8.4
24	10.6	10.1	10.3	11.5	11.0	11.3	11.4	10.9	11.2	9.3	7.7	8.4
25	10.5	10.2	10.3	11.6	11.3	11.5	11.7	11.1	11.4	9.3	7.4	8.2
26	10.9	10.5	10.7	11.6	11.4	11.5	11.7	11.1	11.4	9.4	7.4	8.4
27	11.1	10.8	10.9	11.8	11.4	11.6	11.5	11.1	11.3	9.5	7.5	8.4
28	11.0	10.8	10.9	11.6	11.5	11.5	11.6	10.9	11.3	---	---	---
29	---	---	---	11.6	11.0	11.3	11.3	10.6	11.0	---	---	---
30	---	---	---	11.8	10.9	11.2	11.0	10.5	10.8	---	---	---
31	---	---	---	11.2	10.9	11.0	---	---	---	---	---	---
MONTH	14.1	10.1	12.0	12.0	10.3	11.2	12.0	9.8	11.0	12.5	7.4	10.3

## UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1				---	---	---	11.5	6.8	8.9	9.0	7.4	8.0
2				---	---	---	---	---	---	9.3	7.4	8.1
3				---	---	---	---	---	---	9.6	7.1	8.1
4				---	---	---	---	---	---	8.8	6.8	7.7
5				---	---	---	---	---	---	10.4	6.7	8.1
6				---	---	---	---	---	---	10.3	6.6	8.2
7				---	---	---	---	---	---	11.3	6.5	8.4
8				---	---	---	---	---	---	---	---	---
9				---	---	---	---	---	---	---	---	---
10				---	---	---	---	---	---	10.5	8.1	9.2
11				---	---	---	---	---	---	11.0	8.0	9.3
12				---	---	---	---	---	---	10.8	8.1	9.2
13				---	---	---	---	---	---	11.2	8.0	9.4
14				---	---	---	---	---	---	11.0	7.9	9.2
15				---	---	---	---	---	---	11.2	7.9	9.3
16				---	---	---	---	---	---	11.4	8.1	9.5
17				---	---	---	---	---	---	11.7	8.2	9.7
18				---	---	---	---	---	---	10.8	8.1	9.4
19				---	---	---	---	---	---	11.5	8.4	9.9
20				---	---	---	---	---	---	11.4	8.6	9.8
21				---	---	---	---	---	---	11.1	8.2	9.5
22				---	---	---	---	---	---	11.3	8.1	9.5
23				---	---	---	---	---	---	10.9	7.9	9.2
24				---	---	---	---	---	---	11.1	7.8	9.1
25				---	---	---	---	---	---	11.2	8.0	9.3
26				11.3	8.0	9.4	---	---	---	11.2	7.8	9.3
27				11.5	7.9	9.4	---	---	---	11.0	7.7	9.1
28				11.7	7.7	9.4	---	---	---	11.5	8.1	9.5
29				12.1	7.6	9.5	---	---	---	11.9	8.4	9.9
30				12.0	7.2	9.4	---	---	---	12.1	8.6	10.1
31				11.4	6.8	8.7	8.6	6.7	7.7	---	---	---
MONTH				12.1	6.8	9.3	11.5	6.7	8.3	12.1	6.5	9.1

## UMPQUA RIVER BASIN

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14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	15.0	10.5	10.0	7.5	7.0	---	---	7.0	6.5	8.5	8.0
2	17.0	15.0	10.5	10.0	7.5	7.0	---	---	7.0	6.5	9.0	8.5
3	17.0	15.5	10.5	9.5	8.0	7.0	---	---	7.0	6.0	9.5	9.0
4	16.5	15.0	10.5	10.5	9.0	8.0	---	---	6.0	5.5	10.0	9.0
5	17.0	15.0	10.5	10.0	9.0	8.5	---	---	6.0	5.0	10.0	9.5
6	16.5	15.5	11.0	10.0	9.0	8.5	---	---	6.0	5.5	10.0	9.5
7	16.0	15.0	10.5	9.5	8.5	7.0	8.0	7.0	6.0	5.5	9.5	9.0
8	16.0	14.5	10.0	9.0	7.0	6.0	8.0	7.5	6.0	5.5	9.5	9.0
9	16.5	15.0	9.5	8.5	6.0	5.0	7.5	6.5	6.5	6.0	---	---
10	16.5	15.0	9.0	7.5	5.0	5.0	6.5	5.0	7.0	6.5	10.5	10.0
11	17.0	15.0	8.0	7.5	5.0	5.0	5.0	4.5	8.0	7.0	10.5	9.5
12	17.0	14.5	8.0	7.0	5.5	5.0	4.5	4.0	8.5	8.0	10.5	10.0
13	17.5	15.0	7.5	7.0	6.0	5.5	4.5	4.0	8.0	8.0	10.5	10.0
14	17.5	15.5	7.5	6.5	7.0	6.0	4.0	4.0	---	---	10.0	8.5
15	18.0	16.0	7.5	6.5	8.0	6.5	4.0	3.5	---	---	9.0	8.0
16	17.5	16.0	8.0	6.5	8.5	8.0	4.5	4.0	8.0	7.5	8.5	8.0
17	17.0	16.0	9.0	7.5	8.5	7.5	5.5	4.5	8.0	7.5	9.0	8.0
18	16.0	15.0	9.0	8.0	7.5	7.0	7.0	5.5	8.0	7.5	10.0	9.0
19	15.0	14.0	8.5	8.0	7.5	7.5	7.0	7.0	8.0	7.0	10.0	9.0
20	14.5	13.5	8.0	7.5	7.5	7.0	7.0	6.5	8.0	7.5	10.0	9.0
21	14.5	14.0	7.5	7.5	7.5	7.0	6.5	6.0	8.5	8.0	10.0	9.0
22	14.5	14.0	7.5	7.0	7.0	7.0	6.0	5.5	8.5	8.5	10.0	9.0
23	15.5	14.5	7.0	6.5	7.0	6.5	7.0	6.0	9.0	8.5	10.0	9.0
24	14.5	13.5	6.5	6.5	6.5	6.0	7.5	7.0	9.5	9.0	9.5	8.5
25	13.5	13.0	6.5	6.5	6.0	5.5	7.5	7.5	9.0	8.0	9.5	8.5
26	13.5	12.5	6.5	6.0	6.5	6.0	8.0	7.5	8.0	7.5	9.0	8.0
27	13.0	11.5	6.5	6.0	7.0	6.5	8.5	8.0	8.0	7.5	8.5	7.5
28	11.5	11.0	7.5	6.5	6.5	5.0	8.0	7.5	8.0	8.0	8.5	8.0
29	11.5	11.0	8.0	7.5	5.0	4.0	7.5	7.0	---	---	9.5	8.5
30	11.0	10.5	8.0	7.5	4.0	3.5	7.5	7.0	---	---	9.5	9.0
31	11.0	10.5	---	---	---	---	7.5	6.5	---	---	9.5	9.0
MONTH	18.0	10.5	11.0	6.0	9.0	3.5	8.5	3.5	9.5	5.0	10.5	7.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	13.0	12.0	---	---	21.0	19.5	24.0	22.0	21.0	20.0
2	9.0	8.5	12.5	11.5	---	---	20.0	19.0	---	---	21.5	20.0
3	8.5	8.0	14.0	11.5	---	---	20.5	18.0	---	---	22.0	19.5
4	9.0	8.0	14.0	13.0	---	---	21.5	19.5	---	---	21.5	20.0
5	9.5	8.0	13.5	13.0	---	---	21.5	20.0	---	---	21.5	19.0
6	10.0	9.0	13.0	12.0	20.5	17.5	21.5	20.0	---	---	22.0	19.0
7	10.0	9.5	12.5	11.5	22.0	19.5	20.0	19.5	---	---	22.0	19.5
8	10.5	9.5	11.5	11.0	22.0	21.0	20.5	19.0	---	---	---	---
9	10.0	9.0	11.0	9.5	22.0	20.5	20.5	18.5	---	---	---	---
10	9.5	8.5	10.5	9.0	22.0	20.5	21.5	19.5	---	---	21.5	18.0
11	9.5	8.5	12.0	9.5	20.5	19.5	23.5	20.5	---	---	22.0	19.5
12	9.5	8.0	14.0	11.0	20.0	18.5	24.5	22.0	---	---	21.5	20.0
13	9.0	8.0	14.5	12.5	21.0	19.0	24.5	22.5	---	---	22.5	19.5
14	11.5	9.0	14.0	13.5	21.0	20.0	23.5	22.0	---	---	21.5	20.0
15	12.0	10.0	14.0	13.5	20.5	20.0	22.5	21.0	---	---	21.0	19.5
16	12.5	11.0	14.5	13.5	21.5	20.5	22.5	20.5	---	---	21.0	18.5
17	13.0	11.5	15.5	13.0	21.5	19.5	22.5	20.5	---	---	21.0	18.5
18	13.5	12.0	16.5	14.5	20.5	19.0	22.5	20.5	---	---	19.0	17.5
19	14.0	13.0	17.0	15.5	19.0	18.5	23.0	20.5	---	---	19.0	16.5
20	14.0	13.5	18.0	16.0	19.5	18.0	23.0	20.5	---	---	19.0	16.0
21	14.0	13.0	19.0	17.0	20.0	18.0	24.0	21.0	---	---	19.0	15.5
22	13.5	13.0	19.5	17.5	20.5	19.0	25.0	22.0	---	---	20.0	17.0
23	13.0	11.5	20.0	18.5	20.0	18.5	23.5	22.5	---	---	19.5	18.5
24	11.5	11.0	21.0	19.5	21.5	18.5	22.5	21.0	---	---	20.0	18.0
25	11.5	10.0	21.0	19.5	22.0	19.5	22.0	20.0	---	---	20.5	18.0
26	12.5	10.5	21.0	19.0	22.5	20.0	23.0	20.0	---	---	20.0	18.0
27	12.5	11.0	21.5	19.5	23.0	20.5	23.0	21.0	---	---	19.5	17.5
28	12.5	11.0	---	---	22.5	21.0	23.5	21.5	---	---	18.0	16.5
29	13.5	11.5	---	---	22.5	20.5	24.5	21.0	---	---	17.5	15.0
30	13.5	12.5	---	---	21.5	20.0	26.0	22.0	---	---	17.0	14.0
31	---	---	---	---	---	---	24.5	23.0	21.0	20.0	---	---
MONTH	14.0	8.0	21.5	9.0	23.0	17.5	26.0	18.0	24.0	20.0	22.5	14.0

## UMPQUA RIVER BASIN

## 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 downstream from outlet of Diamond Lake, 1.6 mi northwest of town of Diamond Lake, and at mile 10.7.

DRAINAGE AREA.--54.9 mi<sup>2</sup>.

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 October 1977, February 1978 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, from river-profile map. Prior to May 26, 1931, nonrecording gage at site 300 ft downstream at different datum. May 26, 1931, to Oct. 6, 1933, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow regulated by gates and fish racks at lake outlet. No diversion above station.

AVERAGE DISCHARGE.--37 years (water years 1927-29, 1931-53, 1972-77, 1979-83), 56.8 ft<sup>3</sup>/s, 41,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 336 ft<sup>3</sup>/s Jan. 1, 1943, gage height, 2.8 ft, from rating curve extended above 120 ft<sup>3</sup>/s; no flow Aug. 25-27, 1931, Sept. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 186 ft<sup>3</sup>/s Oct. 29, result of regulation at lake outlet, gage height, 1.82 ft; maximum gage height, 2.25 ft Nov. 22 (backwater from ice or debris); minimum discharge, 21 ft<sup>3</sup>/s May 14, result of regulation at lake outlet.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	150	88	87	70	87	109	75	158	84	54	38
2	40	142	93	86	69	85	110	75	173	87	53	37
3	40	138	97	87	68	83	108	74	170	85	51	37
4	40	136	99	89	66	83	105	73	165	83	51	37
5	40	134	100	87	66	82	102	76	160	81	44	37
6	44	129	103	86	66	83	98	76	154	79	37	38
7	46	126	100	88	68	83	95	77	142	78	39	37
8	47	122	97	87	68	84	92	79	142	78	39	36
9	46	118	94	85	76	83	91	64	141	77	38	36
10	45	113	91	83	80	84	90	31	147	76	37	36
11	41	108	88	81	80	83	87	32	144	75	37	36
12	41	104	86	79	81	85	86	34	140	74	36	36
13	44	103	86	77	81	90	84	36	137	73	35	36
14	52	100	91	75	81	93	82	31	133	70	35	36
15	48	98	99	74	83	94	80	24	120	68	35	35
16	47	100	114	73	82	91	78	27	111	66	35	35
17	46	107	125	72	89	89	77	29	107	65	34	35
18	51	115	126	70	99	86	76	33	105	65	34	35
19	48	116	124	72	98	85	75	37	102	64	34	34
20	45	114	122	70	95	83	75	41	98	63	33	33
21	56	115	123	70	97	81	75	46	95	62	33	31
22	64	105	121	70	99	82	75	51	94	61	33	32
23	77	99	118	72	97	84	75	57	90	60	37	34
24	82	93	115	72	96	83	75	61	87	60	38	35
25	83	90	110	71	95	83	75	66	86	59	38	35
26	79	88	106	73	94	83	73	70	82	58	38	35
27	77	87	103	76	92	85	73	74	80	57	38	35
28	83	86	99	75	90	85	73	109	79	56	38	35
29	139	89	96	73	---	91	73	142	77	55	40	35
30	172	90	92	73	---	107	73	140	77	55	41	34
31	159	---	90	72	---	111	---	144	---	54	40	---
TOTAL	1963	3315	3196	2405	2326	2691	2540	1984	3596	2128	1205	1061
MEAN	63.3	111	103	77.6	83.1	86.8	84.7	64.0	120	68.6	38.9	35.4
MAX	172	150	126	89	99	111	110	144	173	87	54	38
MIN	40	86	86	70	66	81	73	24	77	54	33	31
AC-FT	3890	6580	6340	4770	4610	5340	5040	3940	7130	4220	2390	2100
CAL YR 1982	TOTAL	26654.0	MEAN	73.0	MAX	172	MIN	8.8	AC-FT	52870		
WTR YR 1983	TOTAL	28410	MEAN	77.8	MAX	173	MIN	24	AC-FT	56350		



UMPQUA RIVER BASIN

301

14313000 LEMOLO LAKE NEAR TOKETEE 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 downstream from Lake Creek, 13.0 mi east of town of Toketee Falls, and at mile 93.01.

DRAINAGE AREA.--170 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (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 between elevations 4,097.0 ft and 4,148.5 ft. Dead storage below 4,097.0 ft, 1,040 acre-ft. 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 Dec. 24, 1964, elevation, 4,149.5 ft; minimum observed, 11 acre-ft Mar. 5, 1955, elevation, 4,055.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 13,290 acre-ft May 31, elevation, 4,147.85 ft; minimum observed, 1,690 acre-ft Feb. 10, elevation, 4,104.25 ft.

MONTHEND ELEVATION AND CONTENTS AT 0900, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	4,142.1	11,010	-
Oct. 31.....	4,126.6	6,000	-5,010
Nov. 30.....	4,120.9	4,480	-1,520
Dec. 31.....	4,130.2	7,050	+2,570
CAL YR 1982.....	-	-	-3,770
Jan. 31.....	4,118.4	3,880	-3,170
Feb. 28.....	4,137.2	9,280	+5,400
Mar. 31.....	4,135.7	8,780	-500
Apr. 30.....	4,129.3	6,780	-2,000
May 31.....	4,147.8	13,270	+6,490
June 30.....	4,147.2	13,010	-260
July 31.....	4,147.2	13,010	0
Aug. 31.....	4,145.9	12,480	-530
Sept. 30.....	4,145.0	12,120	-360
WTR YR 1983.....	-	-	+1,110

## UMPQUA RIVER BASIN

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, Umpqua National Forest, on right bank 0.4 mi downstream from Lemolo Lake, 13 mi east of town of Toketee Falls, and at mile 92.6.

DRAINAGE AREA.--170 mi<sup>2</sup>.

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, from river-profile map. Prior to July 15, 1954, at site 1 mi upstream at datum about 65 ft higher. July 15, 1954, to Sept. 25, 1955, at site 400 ft upstream at datum 14.11 ft higher.

REMARKS.--Records excellent. 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 above station for power generation with return flow 4.3 mi downstream.

COOPERATION.--Records of daily power plant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--55 years, 423 ft<sup>3</sup>/s, 33.79 in/yr, 306,500 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 4,600 ft<sup>3</sup>/s Dec. 25, 1964, from rating curve extended above 450 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow, gage height, 9.20 ft, from floodmark; minimum, 6.4 ft<sup>3</sup>/s July 17, 1954.

Combined flow, maximum discharge, 4,680 ft<sup>3</sup>/s Dec. 25, 1964, from river rating curve extended above 450 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily, 9.7 ft<sup>3</sup>/s May 13, 1955.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 751 ft<sup>3</sup>/s June 1, gage height, 6.80 ft; minimum, 20 ft<sup>3</sup>/s Sept. 22-24, 28-30.

Combined flow, maximum daily discharge, 1,240 ft<sup>3</sup>/s June 1; minimum daily, 122 ft<sup>3</sup>/s Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	503	518	489	569	397	389	579	500	1240	546	470	321
2	515	516	463	576	534	402	580	502	1040	726	470	320
3	517	522	135	574	539	372	579	502	878	743	469	350
4	519	520	126	542	562	418	577	428	847	695	469	486
5	519	526	128	512	567	531	579	348	844	644	467	481
6	514	524	133	335	565	557	578	351	752	628	467	482
7	510	525	140	344	459	559	578	354	626	576	465	484
8	508	529	277	318	526	557	575	350	582	541	465	419
9	505	538	394	322	510	547	577	428	584	557	467	450
10	568	482	488	484	383	525	573	486	664	556	463	319
11	575	531	490	486	329	522	575	486	714	509	465	357
12	394	539	507	491	332	507	577	486	711	470	463	487
13	516	537	508	500	329	360	575	487	710	473	421	483
14	517	539	517	513	524	337	403	484	708	407	339	481
15	514	539	346	516	504	426	448	485	708	483	465	447
16	518	497	204	412	507	526	578	310	705	523	465	316
17	519	457	297	305	315	570	577	172	705	528	462	320
18	523	456	329	534	122	570	576	173	704	502	463	320
19	522	457	440	530	126	571	462	175	703	465	421	420
20	522	328	516	532	134	570	446	371	700	461	288	486
21	402	332	543	530	137	575	527	545	609	464	332	483
22	522	422	552	543	143	578	486	565	541	469	472	446
23	477	416	581	545	127	575	498	663	541	469	471	321
24	522	475	574	544	127	575	468	730	540	469	471	320
25	514	330	577	539	150	575	481	813	537	471	469	321
26	473	311	579	356	449	578	488	871	539	470	454	357
27	516	312	578	317	409	581	496	886	540	471	469	483
28	525	331	577	452	483	580	496	881	539	469	470	481
29	231	329	569	513	---	582	496	877	540	471	480	480
30	502	360	566	528	---	579	499	885	541	469	488	446
31	535	---	575	539	---	576	---	1110	---	469	466	---
TOTAL	15517	13698	13198	14801	10289	16170	15927	16704	20592	16194	13966	12367
MEAN	501	457	426	477	367	522	531	539	686	522	451	412
MAX	575	539	581	576	567	582	580	1110	1240	743	488	487
MIN	231	311	126	305	122	337	403	172	537	407	288	316
AC-FT	30780	27170	26180	29360	20410	32070	31590	33130	40840	32120	27700	24530
MEAN†	419	431	468	426	465	513	497	644	682	522	442	406
CFSM†	2.46	2.54	2.75	2.51	2.74	3.02	2.92	3.79	4.01	3.07	2.60	2.39
IN.†	2.84	2.83	3.17	2.89	2.85	3.48	3.26	4.37	4.48	3.54	3.00	2.67
AC-FT†	25770	25650	28750	26190	25810	31570	29590	39620	40580	32120	27170	24170

CAL YR 1982 TOTAL 187327 MEAN 513 MAX 912 MIN 126 AC-FT 371600 MEAN† 508 CFSM† 2.99 IN.† 40.58 AC-FT† 367830  
WTR YR 1983 TOTAL 179423 MEAN 492 MAX 1240 MIN 122 AC-FT 355900 MEAN† 493 CFSM† 2.90 IN.† 39.38 AC-FT† 357010

† 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, Umpqua National Forest, on right bank 900 ft downstream from Clearwater No. 1 diversion dam, 0.4 mi upstream from Trap Creek, 8.7 mi east of town of Toketee Falls, and at mile 7.8.

DRAINAGE AREA.--41.6 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.). Prior to Dec. 1, 1953, at two sites about 0.4 mi 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 above station for generation of power and returns water to Clearwater River 2.5 mi below station.

COOPERATION.--Records of daily power plant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--55 years, 173 ft<sup>3</sup>/s, 56.47 in/yr, 125,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 843 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 7.19 ft; maximum gage height, 7.87 ft Dec. 23, 1964, log jam; minimum discharge, 0.08 ft<sup>3</sup>/s Sept. 21, 1977, result of beavers plugging release gate at diversion dam 900 ft upstream.

Combined flow, maximum discharge, 1,020 ft<sup>3</sup>/s Dec. 23, 1964; minimum daily, 91 ft<sup>3</sup>/s Nov. 4-6, 1931.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 333 ft<sup>3</sup>/s May 25, 28, 29, gage height, 5.16 ft; minimum, 2.5 ft<sup>3</sup>/s Aug. 1, 2.

Combined flow, maximum discharge, 352 ft<sup>3</sup>/s Feb. 17; minimum daily, 164 ft<sup>3</sup>/s Oct. 28.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	166	180	174	191	190	251	249	235	286	254	199	187		
2	172	167	181	192	209	239	246	228	263	267	198	188		
3	175	179	194	193	202	239	258	232	280	237	192	184		
4	165	178	197	208	201	250	246	242	260	219	189	174		
5	173	174	212	194	202	238	232	259	258	229	190	174		
6	170	180	227	194	216	240	255	246	251	230	189	191		
7	176	170	199	201	193	239	219	245	236	226	191	180		
8	176	172	195	208	206	230	226	249	258	220	190	166		
9	171	171	214	205	207	237	230	243	270	225	201	182		
10	166	171	192	196	205	255	240	227	262	212	190	185		
11	166	172	182	196	207	257	227	233	253	210	172	185		
12	166	172	187	195	202	260	219	228	240	218	181	172		
13	172	171	188	194	210	289	227	221	223	217	212	172		
14	175	172	207	200	205	278	230	232	241	219	172	176		
15	167	172	192	203	224	263	199	229	245	219	173	177		
16	167	171	239	198	203	268	223	241	231	211	211	177		
17	166	183	224	199	275	244	218	233	235	206	165	178		
18	167	200	208	193	325	242	221	231	242	188	184	178		
19	168	176	213	195	284	238	239	260	240	207	186	178		
20	168	168	212	218	272	245	222	265	220	207	186	178		
21	166	176	208	193	288	234	226	256	223	204	185	178		
22	169	181	206	196	283	228	240	270	233	207	174	178		
23	189	176	204	196	296	244	242	285	218	206	187	178		
24	184	169	201	198	279	239	235	304	213	205	206	178		
25	169	177	201	195	277	227	239	317	240	206	174	169		
26	173	177	201	216	267	224	237	320	225	204	182	173		
27	186	177	200	235	261	225	233	312	212	192	191	178		
28	164	178	196	218	248	222	235	319	220	191	180	179		
29	199	187	186	212	---	231	233	324	231	195	190	178		
30	188	178	190	208	---	275	236	310	213	200	181	179		
31	197	---	193	219	---	261	---	297	---	193	174	---		
TOTAL	5376	5275	6223	6259	6637	7612	6982	8093	7222	6624	5795	5350		
MEAN	173	176	201	202	237	246	233	261	241	214	187	178		
MAX	199	200	239	235	325	289	258	324	286	267	212	191		
MIN	164	167	174	191	190	222	199	221	212	188	165	166		
CFSM	4.16	4.23	4.83	4.86	5.70	5.91	5.60	6.27	5.79	5.14	4.50	4.28		
IN.	4.81	4.72	5.56	5.60	5.94	6.81	6.24	7.24	6.46	5.92	5.18	4.78		
AC-FT	10660	10460	12340	12410	13160	15100	13850	16050	14320	13140	11490	10610		
CAL YR 1982	TOTAL	71346	MEAN	195	MAX	345	MIN	147	CFSM	4.69	IN.	63.80	AC-FT	141500
WTR YR 1983	TOTAL	77448	MEAN	212	MAX	325	MIN	164	CFSM	5.10	IN.	69.26	AC-FT	153600

## 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, Umpqua National Forest, 0.2 mi upstream from Camas Creek, 0.7 mi east of Big Camas ranger station, 3.2 mi south of town of Toketee Falls, and at mile 4.7.

DRAINAGE AREA.--68.8 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (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 upstream at datum 13.72 ft higher. Aug. 11 to Nov. 3, 1951, nonrecording gage at site 200 ft downstream at different datum. Nov. 4, 1951, to Sept. 30, 1956, water-stage recorder at present site at datum 1.92 ft 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 above station for power generation at Fish Creek powerplant; diversion discharged to North Umpqua River 600 ft downstream from Toketee powerplant.

COOPERATION.--Records of daily powerplant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--36 years, 237 ft<sup>3</sup>/s, 46.78 in/yr, 171,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 12,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.9 ft, from floodmark; minimum, 2.3 ft<sup>3</sup>/s Sept. 25, 1957.

Combined flow, maximum discharge, 12,100 ft<sup>3</sup>/s Dec. 22, 1964; minimum daily, 19 ft<sup>3</sup>/s July 30, 1979, result of powerplant manipulation.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 2,280 ft<sup>3</sup>/s Feb. 17, gage height, 7.02 ft; minimum, 10 ft<sup>3</sup>/s Oct. 19-21.

Combined flow, peak discharges above base of 900 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 6	0130	1,410	-	Feb. 21	2400	981	-
Dec. 16	2000	1,190	-	Mar. 30	0730	1,390	-
Jan. 26	2230	1,190	-	May 25	2000	979	-
Feb. 17	1830	*2,430	-				

Minimum daily, 50 ft<sup>3</sup>/s Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	74	187	228	168	312	366	629	335	633	452	136	95		
2	63	155	238	165	278	341	583	326	523	437	133	92		
3	64	144	500	180	260	324	490	322	482	351	130	87		
4	64	127	818	254	224	326	425	327	458	319	127	85		
5	51	115	847	274	223	323	388	397	440	304	123	82		
6	76	144	1050	323	216	305	347	356	441	289	119	80		
7	99	119	608	499	197	317	329	346	473	280	118	79		
8	78	109	466	492	202	351	315	337	494	292	116	78		
9	71	103	376	420	256	382	298	317	466	264	114	77		
10	67	93	324	349	259	480	277	291	532	243	112	76		
11	66	99	277	316	336	445	258	288	478	230	111	74		
12	59	89	257	289	433	471	238	286	411	222	108	73		
13	57	88	246	270	437	732	229	296	392	222	106	71		
14	51	87	239	250	401	640	213	315	382	212	104	70		
15	58	76	353	242	417	526	204	346	363	218	102	69		
16	50	83	939	242	440	467	203	344	360	186	100	67		
17	57	157	799	241	1240	415	208	359	359	196	99	67		
18	52	227	520	264	1840	375	250	380	373	194	97	67		
19	55	205	432	310	1030	334	250	414	344	193	96	68		
20	52	166	401	265	741	302	288	462	321	178	96	65		
21	52	161	422	246	758	290	340	536	298	169	94	64		
22	74	134	391	242	921	290	371	566	297	173	96	64		
23	165	130	342	240	826	275	368	676	282	162	124	65		
24	107	124	294	290	703	252	348	790	272	160	103	65		
25	86	114	272	280	590	255	307	866	253	159	102	63		
26	142	115	245	555	503	235	286	819	256	159	98	62		
27	121	134	231	899	436	243	276	795	261	147	95	61		
28	109	204	207	594	394	231	267	848	248	146	98	61		
29	474	316	197	478	---	352	268	863	245	148	114	60		
30	357	274	190	392	---	1200	307	764	246	143	122	74		
31	258	---	161	344	---	810	---	678	---	121	100	---		
TOTAL	3209	4279	12870	10373	14873	12655	9560	15045	11383	6969	3393	2161		
MEAN	104	143	415	335	531	408	319	485	379	225	109	72.0		
MAX	474	316	1050	899	1840	1200	629	866	633	452	136	95		
MIN	50	76	161	165	197	231	203	286	245	121	94	60		
CFSM	1.51	2.08	6.03	4.87	7.72	5.93	4.64	7.05	5.51	3.27	1.58	1.05		
IN.	1.74	2.31	6.96	5.61	8.04	6.84	5.17	8.13	6.15	3.77	1.83	1.17		
AC-FT	6370	8490	25530	20570	29500	25100	18960	29840	22580	13820	6730	4290		
CAL YR 1982	TOTAL	100710	MEAN	276	MAX	2230	MIN	50	CFSM	4.01	IN.	54.45	AC-FT	199800
WTR YR 1983	TOTAL	106770	MEAN	293	MAX	1840	MIN	50	CFSM	4.26	IN.	57.73	AC-FT	211800

## UMPQUA RIVER BASIN

305

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 upstream from Copeland Creek, 4.7 mi west of town of Toketee Falls, and at mile 67.2.

DRAINAGE AREA.--475 mi<sup>2</sup>.

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, 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.--34 years, 1,510 ft<sup>3</sup>/s, 1,094,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.1 ft, from floodmark, from rating curve extended above 7,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 370 ft<sup>3</sup>/s Sept. 30, 1981; minimum daily, 565 ft<sup>3</sup>/s Sept. 13, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,870 ft<sup>3</sup>/s Feb. 17, gage height, 10.77 ft; minimum, 779 ft<sup>3</sup>/s Sept. 16, 19; minimum daily, 797 ft<sup>3</sup>/s Sept. 17.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	1380	1670	1420	1540	1940	3360	1830	3060	1780	1120	922
2	1070	1310	1510	1440	1690	1890	3220	1820	2720	2080	1120	859
3	1080	1290	2840	1580	1650	1870	2900	1720	2380	1840	1120	809
4	1080	1250	3680	1950	1530	1780	2600	1820	2290	1700	1070	1010
5	1070	1220	3400	2050	1520	1900	2410	1830	2200	1660	1020	1030
6	1060	1230	3940	2030	1520	1950	2270	1780	2190	1580	1020	1030
7	1150	1220	2880	2790	1470	1970	2210	1710	2120	1560	1050	1020
8	1120	1190	2170	2820	1410	2060	2130	1740	1990	1450	1090	945
9	1090	1150	1960	2370	1950	2130	2050	1790	1970	1440	1100	1020
10	1080	1120	1880	2120	1850	2330	1950	1810	2140	1400	1080	840
11	1030	1070	1690	1960	2010	2300	1810	1710	2160	1390	1030	819
12	977	1140	1620	1850	2250	2320	1780	1770	2020	1300	1040	948
13	970	1180	1620	1730	2300	2860	1670	1820	1860	1300	1040	1010
14	1040	1160	1660	1710	2320	2780	1440	1820	1920	1210	884	986
15	1060	1120	2070	1700	2410	2560	1530	1840	1870	1260	1070	981
16	1060	1100	3580	1580	2440	2450	1650	1740	1820	1230	1030	799
17	1010	1180	3620	1350	4210	2330	1660	1580	1760	1310	1020	797
18	1070	1480	2800	1660	6590	2190	1680	1510	1850	1270	1020	830
19	1050	1480	2330	1810	4300	2010	1620	1700	1850	1180	1020	946
20	963	1280	2320	1770	3270	1890	1660	1820	1750	1230	870	990
21	970	1190	2480	1590	3240	1860	1850	2340	1670	1190	881	977
22	995	1200	2410	1570	3550	1920	1930	2350	1480	1170	948	925
23	1430	1120	2250	1680	3290	1850	1870	2530	1500	1160	1040	800
24	1220	1190	1900	1780	2930	1780	1830	3010	1460	1170	1080	830
25	1130	1070	1810	1730	2690	1800	1630	3220	1450	1180	1090	825
26	1280	1070	1810	1850	2510	1790	1730	3280	1440	1170	1080	826
27	1330	1100	1730	2980	2370	1790	1730	3150	1430	1140	1050	937
28	1200	1300	1610	2400	2170	1740	1680	3230	1380	1150	1060	963
29	2260	1820	1600	2240	---	2000	1620	3270	1360	1110	1040	955
30	1980	1720	1520	1970	---	4900	1690	3110	1450	1120	1080	952
31	1620	---	1480	1880	---	3980	---	2960	---	1120	1090	---
TOTAL	36515	37330	69840	59360	70980	68920	59160	67610	56540	41850	32253	27581
MEAN	1178	1244	2253	1915	2535	2223	1972	2181	1885	1350	1040	919
MAX	2260	1820	3940	2980	6590	4900	3360	3280	3060	2080	1120	1030
MIN	963	1070	1480	1350	1410	1740	1440	1510	1360	1110	870	797
AC-FT	72430	74040	138500	117700	140800	136700	117300	134100	112100	83010	63970	54710
CAL YR 1982	TOTAL	623129	MEAN	1707	MAX	6770	MIN	799	AC-FT	1236000		
WTR YR 1983	TOTAL	627939	MEAN	1720	MAX	6590	MIN	797	AC-FT	1246000		



## UMPQUA RIVER BASIN

14316700 STEAMBOAT CREEK NEAR GLIDE, OR

LOCATION.--Lat 43°21'00", long 122°43'40", in N-1/2 sec.32, T.25-1/2 S., R.1 E., Douglas County, Hydrologic Unit 17100301, in Umpqua National Forest, on right bank in Canton Creek Forest Service Park, 200 ft downstream from Canton Creek, 19 mi northeast of Glide, and at mile 0.5.

DRAINAGE AREA.--227 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by Bureau of Public Roads). Oct. 7, 1955, to June 13, 1956, nonrecording gage at site 100 ft upstream at same datum.

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

AVERAGE DISCHARGE.--27 years, 742 ft<sup>3</sup>/s, 44.39 in/yr, 537,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 25.6 ft, from floodmark, from rating curve extended above 13,000 ft<sup>3</sup>/s on basis of slope-area measurement at 17.96 ft; minimum, 30 ft<sup>3</sup>/s Sept. 15-17, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0630	8,710	9.59	Mar. 30	0430	13,700	12.14
Feb. 17	2030	*14,000	*12.27				

Minimum, 49 ft<sup>3</sup>/s Sept. 22, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	156	541	1810	526	601	934	2870	623	410	388	91	115		
2	120	389	2200	534	531	849	2800	581	350	710	91	95		
3	111	302	5720	1230	473	764	2390	530	306	463	86	83		
4	97	248	6960	4810	425	713	1890	510	277	329	85	75		
5	89	217	4190	3200	386	745	1530	567	254	264	83	71		
6	119	289	4700	2990	423	1110	1240	597	242	231	79	68		
7	363	298	2380	4540	626	1530	1050	618	240	215	77	65		
8	320	266	1530	3550	868	2150	906	1040	237	238	76	64		
9	230	239	1120	2530	3360	1740	813	1390	222	213	75	62		
10	174	214	871	1700	3030	1870	722	1340	301	186	75	61		
11	141	193	700	1270	3340	1530	664	1160	310	171	76	60		
12	119	178	628	1050	3000	1520	610	1090	254	160	72	59		
13	105	167	763	920	2640	2510	561	929	221	151	70	58		
14	95	156	1550	789	2340	2440	524	792	206	150	68	56		
15	88	147	3120	713	2380	2220	495	814	197	140	65	55		
16	83	152	5730	674	2260	1700	478	862	181	133	64	55		
17	89	661	5730	639	6590	1290	493	760	175	137	62	53		
18	91	1560	2970	621	8960	1050	553	660	206	136	61	53		
19	82	1910	2300	783	4130	859	624	604	211	141	61	57		
20	77	1630	2360	740	2640	726	618	579	193	190	62	53		
21	80	1160	3410	660	2910	647	632	581	177	145	60	50		
22	102	891	2770	657	3650	616	609	543	166	129	60	50		
23	1240	647	1790	1320	2480	696	566	548	159	120	64	78		
24	661	543	1260	1370	1890	729	591	566	153	117	65	66		
25	348	503	1000	1090	1520	805	564	558	145	119	61	58		
26	579	567	910	1230	1310	902	599	509	139	114	59	54		
27	677	712	969	1770	1190	1100	581	455	136	107	57	52		
28	494	1130	860	1420	1030	1100	553	455	131	104	59	50		
29	2930	2980	737	1100	---	1780	655	440	130	100	153	49		
30	1750	2990	642	848	---	8970	624	389	129	96	291	49		
31	844	---	573	700	---	4080	---	365	---	93	161	---		
TOTAL	12454	21880	72253	45974	64983	49675	27805	21455	6458	5990	2569	1874		
MEAN	402	729	2331	1483	2321	1602	927	692	215	193	82.9	62.5		
MAX	2930	2990	6960	4810	8960	8970	2870	1390	410	710	291	115		
MIN	77	147	573	526	386	616	478	365	129	93	57	49		
CFSM	1.77	3.21	10.3	6.53	10.2	7.06	4.08	3.05	.95	.85	.37	.28		
IN.	2.04	3.59	11.84	7.53	10.65	8.14	4.56	3.52	1.06	.98	.42	.31		
AC-FT	24700	43400	143300	91190	128900	98530	55150	42560	12810	11880	5100	3720		
CAL YR 1982	TOTAL	332956	MEAN	912	MAX	11700	MIN	38	CFSM	4.02	IN.	54.56	AC-FT	660400
WTR YR 1983	TOTAL	333370	MEAN	913	MAX	8970	MIN	49	CFSM	4.02	IN.	54.63	AC-FT	661200

## 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 southeast of Peel, 0.9 mi downstream from Cavitt Creek, and at mile 6.3.

DRAINAGE AREA.--177 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 828.33 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for period of no gage-height record Dec. 15 to Jan. 27, which are fair. No regulation. Small diversions for rural domestic use and irrigation above station.

AVERAGE DISCHARGE.--29 years, 471 ft<sup>3</sup>/s, 36.14 in/yr, 341,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft<sup>3</sup>/s Dec. 11, 1956, gage height, 19.63 ft, from rating curve extended above 5,900 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 16.55 ft; minimum, 14 ft<sup>3</sup>/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, from floodmark, discharge, 22,700 ft<sup>3</sup>/s, from rating curve extended above 5,900 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 16.55 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	a2400	6,070	b10.19	Mar. 30	0530	8,190	12.16
Feb. 18	0030	*10,100	*13.71				

Minimum, 32 ft<sup>3</sup>/s Sept. 22, 23, 27, 30.

a Approximate time.

b From peak-stage indicator.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	73	344	1230	340	411	690	2240	587	223	278	66	97		
2	57	253	1690	320	354	607	2060	504	206	460	65	76		
3	52	198	2820	420	309	534	1760	436	190	323	61	64		
4	47	162	3350	1350	274	498	1410	394	169	237	60	57		
5	41	137	2390	1150	247	501	1130	446	154	191	60	53		
6	57	168	2120	940	291	554	911	469	143	167	57	49		
7	206	181	1360	1700	462	717	752	484	135	151	54	47		
8	170	164	930	1500	429	983	636	835	127	158	52	45		
9	112	150	708	1150	1960	910	583	1130	119	137	53	44		
10	84	133	551	900	2220	1230	525	1030	189	120	54	42		
11	68	120	440	700	1850	987	489	873	207	110	54	41		
12	58	109	418	580	1760	1020	446	759	168	101	50	40		
13	51	100	866	520	1520	1620	407	634	145	95	48	39		
14	46	92	1300	450	1390	1690	376	535	131	95	46	38		
15	42	86	2000	400	1500	1530	347	557	123	89	43	38		
16	39	87	4500	380	1380	1200	324	533	113	83	42	37		
17	43	153	4200	360	4390	925	316	472	110	82	40	36		
18	46	761	1900	350	6940	749	318	415	139	84	40	36		
19	40	1160	1400	450	3110	616	389	372	138	96	39	40		
20	37	1090	1300	500	2100	518	394	338	125	205	40	37		
21	37	879	1500	450	2280	471	449	316	113	136	39	34		
22	56	696	1350	400	1970	469	425	293	104	108	38	32		
23	802	505	1050	480	1470	482	430	277	100	95	51	35		
24	394	418	800	600	1360	494	616	264	98	92	48	37		
25	226	365	640	600	1150	792	574	250	90	93	42	35		
26	371	346	640	1100	1100	832	705	232	86	86	40	33		
27	338	356	700	1700	938	930	597	214	84	79	38	33		
28	255	536	600	1200	779	804	534	202	81	76	37	34		
29	1190	1320	500	827	---	1290	808	192	82	72	89	33		
30	997	1530	440	618	---	5660	683	179	82	69	196	33		
31	526	---	370	494	---	3190	---	192	---	65	115	---		
TOTAL	6561	12599	44063	22929	43944	33493	21634	14414	3974	4233	1757	1295		
MEAN	212	420	1421	740	1569	1080	721	465	132	137	56.7	43.2		
MAX	1190	1530	4500	1700	6940	5660	2240	1130	223	460	196	97		
MIN	37	86	370	320	247	469	316	179	81	65	37	32		
CFSM	1.20	2.37	8.03	4.18	8.86	6.10	4.07	2.63	.75	.77	.32	.24		
IN.	1.38	2.65	9.26	4.82	9.24	7.04	4.55	3.03	.84	.89	.37	.27		
AC-FT	13010	24990	87400	45480	87160	56430	42910	28590	7880	8400	3490	2570		
CAL YR 1982	TOTAL	181239	MEAN	497	MAX	4500	MIN	16	CFSM	2.81	IN.	38.09	AC-FT	359500
WTR YR 1983	TOTAL	210896	MEAN	578	MAX	6940	MIN	32	CFSM	3.27	IN.	44.32	AC-FT	418300

## UMPQUA RIVER BASIN

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 downstream from county bridge, 3.0 mi west of Winchester, and at mile 1.8.

DRAINAGE AREA.--1,344 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929 (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 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.--40 years, 3,758 ft<sup>3</sup>/s, 37.97 in/yr, 2,723,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 34.2 ft, from floodmark; minimum, 374 ft<sup>3</sup>/s Sept. 18, 1983; minimum daily, 578 ft<sup>3</sup>/s Sept. 14, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 29, 1950, reached a stage of 23.2 ft, from floodmark, at site 4.8 mi upstream at different datum, discharge, 88,000 ft<sup>3</sup>/s. Flood of Nov. 23, 1953, reached a stage of 28.4 ft, from floodmarks, present site and datum, discharge, 93,300 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	1230	25,500	11.60	Feb. 18	0430	*61,300	*20.89
Dec. 17	0630	29,700	12.75	Mar. 30	1000	41,300	15.79

Minimum, 374 ft<sup>3</sup>/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1530	3510	8910	3450	4120	5860	14700	4290	4380	2250	1450	1600		
2	1410	2740	7650	3310	3680	5240	13700	4090	4110	4430	1450	1320		
3	1380	2400	17800	4290	3600	4890	12700	3800	3600	3680	1440	1230		
4	1360	2150	21600	13400	3310	4520	10300	3620	3330	3070	1430	1160		
5	1330	2000	15900	12500	3090	4580	8360	3750	3170	2660	1380	1450		
6	1330	2000	17800	9810	3120	5140	7050	3920	3030	2490	1340	1390		
7	1710	2230	11700	12600	4280	6130	6170	3810	2980	2300	1310	1320		
8	2120	2140	8010	12600	3990	7820	5530	4740	2910	2330	1340	1310		
9	1770	2030	6010	10400	11400	7730	5110	6880	2750	2210	1380	1230		
10	1580	1930	5150	7640	14200	9200	4900	6710	2860	2100	1390	1300		
11	1460	1790	4400	6270	12300	8090	4470	5840	3440	1990	1380	1110		
12	1350	1700	3860	5350	12100	7740	4140	5360	3080	1920	1320	1080		
13	1270	1730	5530	4830	11200	11000	3890	4970	2820	1870	1320	1210		
14	1230	1710	6750	4360	10300	12200	3560	4530	2610	1920	1300	1260		
15	1290	1650	9900	4070	10600	11300	3320	4420	2660	1560	1130	1240		
16	1300	1600	22800	3930	10200	9110	3270	4520	2550	1700	1330	1230		
17	1290	1730	28300	3510	18900	7420	3340	4110	2460	1700	1270	1020		
18	1270	4340	17900	3510	53500	6320	3390	3710	2530	1770	1270	837		
19	1310	7700	12100	4370	22200	5460	3680	3580	2650	1740	1270	1080		
20	1270	7380	10400	4670	14000	4840	3720	3540	2570	1960	1270	1210		
21	1200	5940	12500	4280	13800	4480	3730	3860	2410	1930	1120	1240		
22	1290	4910	12500	4030	14600	4470	3930	4010	2250	1720	1120	1220		
23	3680	3870	10200	5780	12100	4640	3880	4010	2050	1660	1210	1180		
24	4130	3200	7630	6420	10700	4530	4270	4370	2050	1620	1330	1090		
25	2430	2970	6140	5890	8870	5280	3940	4670	1990	1620	1360	1090		
26	2630	2700	5660	6350	8220	5600	4240	4820	1960	1630	1350	1080		
27	3310	2850	5610	9410	7210	6000	4170	4560	1930	1580	1320	1070		
28	2810	3730	5130	8270	6340	5960	3950	4480	1900	1540	1300	1330		
29	6940	7250	4560	6620	---	6430	4520	4550	1850	1520	1430	1190		
30	8920	12100	4130	5450	---	30100	4350	4400	1810	1460	1990	1050		
31	4970	---	3760	4760	---	20700	---	4080	---	1460	1900	---		
TOTAL	70870	103980	320290	202130	311930	242780	166280	138000	80690	63390	42200	36127		
MEAN	2286	3466	10330	6520	11140	7832	5543	4452	2690	2045	1361	1204		
MAX	8920	12100	28300	13400	53500	30100	14700	6880	4380	4430	1990	1600		
MIN	1200	1600	3760	3310	3090	4470	3270	3540	1810	1460	1120	837		
CFSM	1.70	2.58	7.69	4.85	8.29	5.83	4.12	3.31	2.00	1.52	1.01	.90		
IN.	1.96	2.88	8.87	5.59	8.63	6.72	4.60	3.82	2.23	1.75	1.17	.00		
AC-FT	140600	206200	635300	400900	618700	481600	329800	273700	160000	125700	83700	71660		
CAL YR 1982	TOTAL	1648967	MEAN	4518	MAX	28300	MIN	825	CFSM	3.36	IN.	45.64	AC-FT	3271000
WTR YR 1983	TOTAL	1778667	MEAN	4873	MAX	53500	MIN	837	CFSM	3.63	IN.	49.23	AC-FT	3528000

UMPQUA RIVER BASIN

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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.

INSTRUMENTATION.--Temperature recorder since 1971.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.5°C Aug. 10, 1972, Aug. 8, 9, 1978, Aug. 9, 10, 1981; minimum, 0.0°C at times in 1971-72, 1974, 1977, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.5°C Aug. 7, 15; minimum, 2.5°C Dec. 30 to Jan. 1.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## UMPQUA RIVER BASIN

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



## UMPQUA RIVER BASIN

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## 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 upstream from county road bridge, 0.9 mi northeast of Nonpareil, and at mile 26.7.

DRAINAGE AREA.--88.6 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 699.22 ft National Geodetic Vertical Datum of 1929 (Douglas County Survey bench mark).

REMARKS.--Records good except those for period of backwater Oct. 1 to Nov. 29, which are fair. No regulation. Only minor diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--7 years, 203 ft<sup>3</sup>/s, 31.11 in/yr, 147,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,640 ft<sup>3</sup>/s Dec. 6, 1981, gage height, 11.16 ft; minimum, 5.3 ft<sup>3</sup>/s Aug. 17-19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,700 ft<sup>3</sup>/s and maximum discharge, 4,940 ft<sup>3</sup>/s Feb. 18, gage height, 9.25 ft; minimum, 9.2 ft<sup>3</sup>/s Oct. 6, 15-17.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	23	150	866	190	206	368	1090	307	147	163	36	56		
2	16	114	774	177	186	323	1060	257	139	234	37	44		
3	15	90	1140	209	168	285	953	222	125	173	34	35		
4	12	77	1270	648	152	256	735	198	111	131	34	32		
5	10	73	952	584	141	263	567	192	102	109	34	28		
6	20	113	957	478	164	322	444	188	95	97	32	26		
7	57	123	709	646	267	386	359	213	90	86	30	25		
8	44	113	504	720	262	432	302	382	87	92	28	23		
9	30	105	378	662	967	429	284	600	84	78	29	23		
10	22	89	299	502	982	779	270	526	140	68	30	23		
11	17	78	243	387	683	585	257	422	135	61	30	21		
12	14	71	237	316	692	561	234	350	115	56	26	20		
13	11	65	529	265	737	701	214	290	102	54	25	20		
14	10	60	676	230	678	897	199	247	94	55	25	20		
15	9.3	56	883	205	612	898	184	259	89	50	23	19		
16	9.2	54	1670	189	524	661	171	250	81	45	23	19		
17	13	64	1890	172	1410	494	160	227	81	45	21	19		
18	16	273	1400	170	3230	387	154	204	94	62	20	18		
19	13	489	904	242	1420	316	172	183	96	51	21	20		
20	11	537	754	288	957	271	194	166	87	81	21	18		
21	12	477	898	261	886	255	197	150	76	62	20	17		
22	56	363	869	257	780	254	187	140	70	52	19	16		
23	444	257	698	406	631	279	235	129	69	48	20	19		
24	220	192	551	428	719	267	344	120	66	48	20	21		
25	133	153	433	366	630	387	377	112	59	51	19	20		
26	183	130	395	405	583	444	401	106	55	47	18	18		
27	151	124	366	439	493	554	336	100	53	43	17	18		
28	125	167	314	390	407	496	309	95	48	41	17	18		
29	308	674	271	329	---	577	425	91	52	40	40	17		
30	323	991	238	271	---	2010	366	86	52	37	94	17		
31	212	---	212	234	---	1530	---	114	---	34	58	---		
TOTAL	2539.5	6322	22280	11066	19567	16667	11180	6926	2694	2294	901	690		
MEAN	81.9	211	719	357	699	538	373	223	89.8	74.0	29.1	23.0		
MAX	444	991	1890	720	3230	2010	1090	600	147	234	94	56		
MIN	9.2	54	212	170	141	254	154	86	48	34	17	16		
CFSM	.92	2.38	8.12	4.03	7.89	6.07	4.21	2.52	1.01	.84	.33	.26		
IN.	1.07	2.65	9.35	4.65	8.22	7.00	4.69	2.91	1.13	.96	.38	.29		
AC-FT	5040	12540	44190	21950	38810	33060	22180	13740	5340	4550	1790	1370		
CAL YR 1982	TOTAL	92807.8	MEAN	254	MAX	1890	MIN	8.9	CFSM	2.87	IN.	38.97	AC-FT	184100
WTR YR 1983	TOTAL	103126.5	MEAN	283	MAX	3230	MIN	9.2	CFSM	3.19	IN.	43.30	AC-FT	204600

## 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 south of Elkton, 8.3 mi upstream from Elk Creek, and at mile 56.9.

DRAINAGE AREA.--3,683 mi<sup>2</sup>.

## 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 and crest-stage gage. Datum of gage is 90.42 ft National Geodetic Vertical Datum of 1929. Prior to June 29, 1972, at site 2,400 ft downstream at same datum. See WSP 1931 or 2135 for history of changes prior to June 29, 1972.

REMARKS.--Water-discharge records good. Regulation by powerplants on North Umpqua River ordinarily does not affect discharge at this station. Diversions for irrigation above station.

AVERAGE DISCHARGE.--78 years, 7,517 ft<sup>3</sup>/s, 27.72 in/yr, 5,446,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 265,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 51.95 ft, from floodmarks; minimum observed, 640 ft<sup>3</sup>/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.--Peak discharges above base of 52,000 ft<sup>3</sup>/s and maximum (\*)

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 17	1600	93,800	27.28	Mar. 30	2030	92,200	26.98
Feb. 18	1800	*156,000	*37.53				

Minimum, 958 ft<sup>3</sup>/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2160	5000	19900	7640	10600	16900	46400	8320	5930	2460	1840	2790		
2	2000	5000	17500	6920	9170	15300	34600	8030	6210	3570	1820	2440		
3	1810	4000	26800	6890	8360	13300	32300	7460	5710	5900	1780	1990		
4	1700	3400	35700	13600	7540	11900	26500	6790	5060	4940	1770	1770		
5	1630	3000	34200	24100	6770	11000	21600	6530	4720	4090	1760	1600		
6	1600	2800	32400	17900	6390	11400	17700	6900	4490	3540	1710	1760		
7	1610	2800	26300	17100	6380	12700	14700	7180	4310	3320	1640	1730		
8	2010	3000	17500	22500	6380	15000	12800	7580	4120	3160	1620	1620		
9	2460	2950	12800	19800	6380	16300	11400	11300	3960	3160	1610	1580		
10	2230	2780	10400	15400	25300	20500	10800	13800	3860	3000	1630	1570		
11	1980	2630	8850	12500	34300	23100	10100	12500	4290	2820	1660	1510		
12	1810	2400	7490	10700	10700	19400	9170	10900	4740	2680	1630	1380		
13	1670	2260	8300	9470	34700	24900	8400	9920	4220	2520	1590	1300		
14	1570	2260	12100	8470	28800	34800	7660	8920	3850	2470	1580	1370		
15	1500	2190	18500	7630	24600	33900	6930	8120	3630	2360	1570	1410		
16	1510	2120	65000	7180	23500	25800	6520	8090	3720	2080	1430	1410		
17	1550	2140	89600	6840	24600	20200	6310	7770	3410	2140	1520	1390		
18	1500	2870	64400	6230	129000	16300	6170	7010	3310	2150	1510	1270		
19	1500	10300	34100	7430	97300	13800	6390	6420	3430	2230	1490	1070		
20	1520	15600	25200	10700	43600	11800	7180	6230	3470	2200	1490	1240		
21	1510	13400	28900	10200	36700	10500	7070	6020	3380	2560	1470	1330		
22	1490	11300	38100	9300	35700	10100	7110	6360	3150	2570	1370	1390		
23	1730	9500	29100	11500	30300	10200	7170	6290	2960	2260	1330	1390		
24	7350	7320	23400	15600	25600	10400	7530	6310	2730	2110	1400	1360		
25	5690	5980	17600	17000	22600	10900	8200	6720	2700	2060	1500	1290		
26	3700	5260	14500	16400	22300	12400	7990	6940	2610	2060	1550	1280		
27	4520	4800	13200	43600	24700	13200	8300	6900	2560	2060	1630	1280		
28	5370	4990	12400	31900	20200	14600	7810	6460	2480	2000	1590	1260		
29	4970	7390	10900	20800	---	13800	8070	6400	2430	1950	1630	1400		
30	13300	20000	9620	15600	---	55800	8880	6350	2360	1920	1920	1430		
31	9920	---	8530	12500	---	67300	---	6080	---	1870	2600	---		
TOTAL	94870	169440	773290	443400	783270	597500	381760	240600	113800	84210	50640	45610		
MEAN	3060	5648	24940	14300	27970	19270	12730	7761	3793	2716	1634	1520		
MAX	13300	20000	89600	43600	129000	67300	46400	13800	6210	5900	2600	2790		
MIN	1490	2120	7490	6230	6380	10100	6170	6020	2360	1870	1330	1070		
CFSM	.83	1.53	6.77	3.88	7.59	5.23	3.46	2.11	1.03	.74	.44	.41		
IN.	.96	1.71	7.81	4.48	7.91	6.04	3.86	2.43	1.15	.85	.51	.46		
AC-FT	188200	336100	1534000	879500	1554000	1185000	757200	477200	225700	167000	100400	90470		
CAL YR 1982	TOTAL	3386920	MEAN	9279	MAX	89600	MIN	1050	CFSM	2.52	IN.	34.21	AC-FT	6718000
WTR YR 1983	TOTAL	3778390	MEAN	10350	MAX	129000	MIN	1070	CFSM	2.81	IN.	38.16	AC-FT	7494000

UMPQUA RIVER BASIN

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14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued  
(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: April 1971 to current year.

INSTRUMENTATION.--Temperature recorder since April 1971.

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, 24.5°C Aug. 17-19; minimum, 3.5°C Dec. 31 to Jan. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 17...	1430	2200	81	7.7	7.0	12.4	K14	120	28	7.0	2.6
JAN 18...	1000	6200	86	7.4	6.0	12.4	83	580	28	6.7	2.7
MAR 08...	0930	14400	76	7.5	9.0	11.9	240	720	30	6.9	3.0
MAY 18...	1445	6940	74	7.4	15.0	10.7	K5	K5	29	7.1	2.6
JUL 13...	1200	2550	77	7.6	21.0	8.9	K3	92	27	6.7	2.6
SEP 01...	1700	2990	81	7.6	19.5	9.7	K19	39	27	6.3	2.6

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
NOV 17...	4.5	.80	--	<5.0	3.4	<.10	<.060	<.100	.40	.09
JAN 18...	3.9	.60	28	<5.0	2.7	<.10	<.060	<.100	.50	.03
MAR 08...	3.8	.60	33	4.5	2.3	<.10	.080	<.100	.30	.09
MAY 18...	3.8	.60	33	3.2	2.0	<.10	<.060	<.100	1.0	.03
JUL 13...	4.2	.80	33	2.7	2.6	<.10	.080	<.100	.30	.06
SEP 01...	5.1	1.1	35	3.2	3.5	.20	.050	<.100	.40	.12

## UMPQUA RIVER BASIN

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 17...	.040	.040	18	58	--	345	1.9	2	12	98
JAN 18...	.010	.030	17	63	--	1050	4.8	6	100	89
MAR 08...	.030	.050	17	60	58	2330	20	27	1050	83
MAY 18...	.020	.030	18	53	57	993	3.4	5	94	82
JUL 13...	.020	.030	16	51	56	351	1.1	2	14	82
SEP 01...	<.010	.040	19	51	62	412	1.9	3	24	80

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 17...	30	1	15	<1	<1	<1	<3	<1	45	2
MAR 08...	110	1	15	<1	<1	<1	<3	7	61	<1
MAY 18...	60	<1	16	<1	<1	<1	<3	5	39	<1
SEP 01...	20	1	21	<1	<1	<1	<3	2	22	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 17...	6	5	<.1	<10	<1	<1	<1	52	<6	18
MAR 08...	5	4	<.1	<10	1	<1	<1	49	<6	8
MAY 18...	5	3	<.1	<10	1	<1	<1	50	<6	6
SEP 01...	9	3	.1	<10	2	<1	<1	55	<6	16

K - Results based on colony count outside acceptable range (non-ideal colony count).

## UMPQUA RIVER BASIN

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14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	8.0	8.0	3.5	3.5	7.0	7.0	8.5	8.5
2	15.0	14.5	10.5	9.5	8.0	7.5	4.0	3.5	7.0	6.5	9.0	8.5
3	14.5	14.0	10.0	9.5	8.0	7.5	4.5	4.0	7.0	6.5	9.5	9.0
4	15.0	14.0	10.0	9.5	9.0	8.0	6.5	4.5	6.5	6.0	9.5	9.5
5	15.5	14.5	9.5	9.5	9.0	9.0	7.0	6.5	6.0	6.0	10.0	9.5
6	15.5	14.5	9.5	9.0	9.0	9.0	7.5	7.0	6.0	6.0	10.0	9.5
7	14.5	13.5	9.0	9.0	9.0	8.0	7.5	7.5	6.0	5.5	10.0	9.5
8	14.0	13.5	9.0	8.5	8.0	6.5	8.0	7.5	6.0	6.0	9.5	9.0
9	14.5	13.5	8.5	8.5	6.5	5.5	8.0	7.0	6.5	6.0	9.5	9.5
10	14.5	13.5	8.5	7.5	5.5	5.5	7.0	6.0	6.5	6.5	10.0	9.5
11	15.0	13.5	7.5	7.0	5.5	5.0	6.0	5.5	7.5	6.5	10.5	10.0
12	15.5	14.0	7.0	7.0	5.5	5.0	5.5	5.0	8.5	7.5	10.5	10.0
13	15.5	14.5	7.0	6.5	6.0	5.5	5.0	5.0	8.5	8.5	10.5	10.0
14	15.5	14.5	6.5	6.0	7.0	6.0	5.0	4.5	8.5	8.0	10.0	9.0
15	15.5	15.0	6.0	6.0	7.5	7.0	4.5	4.5	8.0	7.5	9.0	8.5
16	15.0	14.5	6.5	6.0	8.5	7.5	5.0	4.5	8.0	7.5	9.0	8.5
17	15.0	14.5	7.0	6.5	8.5	8.0	5.5	5.0	8.0	8.0	9.0	8.5
18	14.5	14.0	7.0	7.0	8.0	7.5	6.0	5.5	8.5	8.0	10.0	8.5
19	14.0	13.0	7.5	7.0	7.5	7.5	6.5	6.0	8.0	7.5	10.5	9.5
20	13.0	12.5	7.5	7.5	7.5	7.5	7.0	6.5	8.0	7.5	10.0	9.5
21	12.5	12.5	7.5	7.5	7.5	7.5	6.5	6.5	8.5	8.0	10.0	9.5
22	13.0	12.5	7.5	7.0	7.5	7.0	6.5	6.0	8.5	8.5	10.0	9.5
23	13.5	12.5	7.0	6.5	7.0	7.0	6.5	6.0	9.0	8.5	10.0	9.0
24	13.0	12.5	6.5	6.5	7.0	6.0	7.0	6.5	9.5	9.0	10.0	9.0
25	13.0	12.5	6.5	6.0	6.0	6.0	7.5	7.0	9.0	8.5	10.0	9.0
26	13.0	12.5	6.0	5.5	6.0	6.0	7.5	7.5	8.5	8.0	9.5	9.0
27	12.5	12.0	6.0	5.5	6.5	6.0	8.5	7.5	8.5	8.0	9.0	8.5
28	12.0	11.0	6.5	6.0	6.5	5.5	8.0	7.5	8.5	8.0	9.0	8.0
29	11.0	11.0	7.5	6.5	5.5	4.5	7.5	7.0	---	---	9.0	8.5
30	11.0	9.5	8.0	7.5	4.5	4.0	7.0	7.0	---	---	9.5	9.0
31	10.5	10.0	---	---	4.0	3.5	7.0	7.0	---	---	9.5	9.0
MONTH	15.5	9.5	10.5	5.5	9.0	3.5	8.5	3.5	9.5	5.5	10.5	8.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	13.0	12.5	16.5	15.5	19.0	18.0	22.5	21.5	19.5	19.0
2	8.5	8.5	12.5	12.0	15.5	14.5	18.5	18.0	23.5	21.5	20.0	18.5
3	8.5	8.0	13.0	11.5	16.0	14.0	18.5	17.5	23.0	22.5	21.0	19.0
4	8.5	8.0	13.0	12.5	17.0	15.0	19.5	17.0	22.5	21.5	21.0	20.0
5	9.5	8.5	13.5	12.5	18.0	16.0	19.5	18.5	22.0	21.0	21.0	19.5
6	10.0	8.5	13.0	12.5	19.5	17.0	19.0	18.5	23.0	21.0	21.0	19.5
7	10.0	9.5	12.5	12.0	20.5	18.0	18.5	18.0	23.5	22.0	21.0	20.0
8	10.5	9.0	12.0	11.0	20.5	19.0	18.5	17.5	23.5	22.5	20.5	19.0
9	10.0	9.5	11.0	10.5	20.5	19.0	19.5	17.5	23.0	22.0	19.5	18.5
10	9.5	9.0	10.5	9.5	20.0	19.0	20.5	18.0	22.0	21.0	19.5	18.5
11	9.5	8.5	11.5	9.5	19.5	18.5	21.5	19.0	22.0	20.5	21.0	19.0
12	9.5	8.5	13.0	10.5	19.5	17.5	21.0	20.0	23.0	20.5	20.5	19.5
13	10.0	9.0	14.0	12.0	20.0	17.5	21.0	20.5	23.0	21.5	20.5	19.5
14	10.5	9.5	13.5	13.0	19.5	18.5	21.0	20.0	23.5	22.0	20.5	19.5
15	11.5	10.5	13.5	13.0	20.0	18.0	21.0	20.0	24.0	22.0	20.5	19.0
16	12.5	11.0	14.0	13.0	20.0	18.5	21.0	20.0	24.0	22.5	20.0	19.0
17	13.0	11.5	14.5	13.0	19.5	18.5	21.0	20.0	24.5	22.5	20.0	18.5
18	14.0	12.5	15.0	14.0	18.5	17.5	20.5	20.0	24.5	23.0	19.5	18.0
19	14.0	13.0	16.5	14.5	18.0	17.0	20.5	20.0	24.5	23.0	18.0	16.5
20	14.0	13.5	17.5	15.5	17.5	16.5	21.5	19.5	23.5	22.5	17.5	16.0
21	14.0	13.5	18.5	17.0	19.0	16.5	22.5	20.5	23.5	22.0	18.0	16.0
22	13.5	12.5	19.0	17.5	18.5	17.5	22.5	21.0	23.5	22.0	18.5	17.0
23	12.5	12.0	19.0	18.0	18.0	17.0	22.0	21.5	23.0	22.0	18.5	18.0
24	12.0	11.5	19.5	18.0	19.5	17.0	21.5	20.0	23.0	21.5	18.0	17.5
25	11.5	11.0	19.5	18.5	20.0	18.5	20.5	19.5	23.0	21.5	18.5	17.5
26	12.0	10.5	19.5	18.5	20.5	19.0	21.5	19.5	22.5	21.5	18.5	17.5
27	12.0	11.5	19.5	18.5	21.0	19.5	21.0	20.0	22.0	21.0	18.0	17.0
28	12.5	12.0	20.5	19.0	20.5	19.5	21.0	20.0	22.0	20.5	17.0	16.0
29	13.0	12.0	19.5	18.5	20.0	19.5	22.5	20.0	21.0	20.0	16.5	15.0
30	13.0	12.5	18.5	18.5	19.5	19.0	23.5	21.0	20.0	19.5	16.0	15.0
31	---	---	18.5	16.5	---	---	23.5	22.0	20.0	19.0	---	---
MONTH	14.0	8.0	20.5	9.5	21.0	14.0	23.5	17.0	24.5	19.0	21.0	15.0



## COOS RIVER BASIN

## 14324580 PONY CREEK AT COOS BAY, OR

LOCATION.--Lat 43°22'50", long 124°14'25", in NE¼NE¼ sec.28, T.25 S., R.13 W., Coos County, Hydrologic Unit 17100304, on right bank, 10 ft upstream from outlet to Lower Pony Creek Dam, and at mile 2.2. Prior to Oct. 1, 1982, at site 260 ft downstream.

DRAINAGE AREA.--3.90 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (Coos Bay-North Bend Water Board bench mark). Prior to Oct. 1, 1982, at site 260 ft downstream at datum 12.23 ft higher.

REMARKS.--Records good. 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 14323570). Approximately 4.6 ft<sup>3</sup>/s is diverted to the Coos Bay-North Bend water treatment plant, maximum capacity, 10.8 ft<sup>3</sup>/s.

AVERAGE DISCHARGE.--8 years, 10.8 ft<sup>3</sup>/s, 37.61 in/yr, 7,820 acre-ft/yr, adjusted for Coos Bay-North Bend diversion and change in contents of Upper and Lower Pony Creek Reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft<sup>3</sup>/s Dec. 6, 1981, gage height, 6.19 ft, former site and datum; minimum, 0.01 ft<sup>3</sup>/s Feb. 11-20, Apr. 27, 29, May 12, 13, June 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 123 ft<sup>3</sup>/s Feb. 18, gage height, 31.15 ft; minimum, 0.02 ft<sup>3</sup>/s on many days during year.

MONTHLY DISCHARGE OF PONY CREEK, PONY CREEK DIVERSION AND MONTHLY CHANGE IN CONTENTS  
OF RESERVOIRS NEAR COOS BAY, OR, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	14324580 Pony Creek at Coos Bay (acre-feet)	14324570 Diversion from Lower Pony Cr. Reservoir to City of Coos Bay (acre-feet)	14324560 Lower Pony Creek Reservoir Change in Contents (acre-feet)	14324550 Upper Pony Creek Reservoir Change in Contents (acre-feet)	Pony Creek adjusted for diversion and change in contents (acre-feet)	(inches)
October.....	128	295	+36	-224	235	1.13
November.....	69	281	-6	+311	655	3.15
December.....	1,220	367	+1	+367	1,960	9.43
CAL YR 1982.....	7,200	3,980	-12	-172	11,000	52.89
January.....	1,210	329	+6	+110	1,660	7.98
February.....	2,170	293	+2	+2	2,470	11.88
March.....	1,390	344	0	+315	2,050	9.86
April.....	729	319	-8	-10	1,030	4.95
May.....	240	368	-6	-9	593	2.85
June.....	5.4	380	-22	-49	314	1.51
July.....	21	402	+28	-152	299	1.44
August.....	29	490	-4	-256	259	1.25
September.....	11	392	-5	-244	154	0.74
WTR YR 1983.....	7,230	4,260	+20	+161	11,670	56.12

## COOS RIVER BASIN

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14324580 PONY CREEK AT COOS BAY, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	16	3.6	5.1	18	27	29	5.0	.10	.02	2.9	.03
2	.02	11	1.0	6.7	15	25	31	4.4	.10	.02	1.2	.02
3	.02	.02	1.9	6.4	16	15	31	4.8	.02	.02	1.1	.02
4	.02	.02	2.9	8.7	12	6.2	28	2.3	.02	.02	1.0	.02
5	.02	.02	1.9	4.8	12	9.4	22	2.1	.02	.03	.62	.02
6	.02	.02	1.8	4.6	15	13	21	1.8	.02	.02	.13	.02
7	.02	.02	.04	8.8	17	11	17	8.3	.02	.02	.17	.02
8	.02	.02	.02	14	22	8.0	16	16	.02	.02	.60	.02
9	.02	.02	.02	15	35	20	17	15	.02	.02	.09	.02
10	.02	.02	.02	13	37	23	18	10	.02	.02	.02	.02
11	.02	.02	.02	11	29	35	16	8.8	.02	.02	.02	.02
12	.02	.02	.02	7.8	53	39	14	7.1	.02	.02	.02	.02
13	.02	.02	.02	8.8	65	45	15	6.2	.02	.02	.02	.02
14	.02	.02	.02	5.6	49	43	14	4.5	.02	.02	.02	.02
15	.02	.02	13	6.5	39	34	8.4	6.4	.02	.02	.02	.02
16	.02	.02	93	9.6	34	32	.37	4.2	.02	.02	.02	1.4
17	.02	.02	72	8.4	42	28	.76	1.0	.02	.02	.02	.62
18	.02	2.0	48	10	107	26	.68	2.5	.02	.02	.02	.37
19	.02	.55	39	29	73	22	3.8	2.2	.07	.02	.02	.91
20	.02	.90	49	32	51	22	4.4	1.4	1.8	.02	.02	.03
21	.02	.38	60	22	56	21	5.3	2.4	.13	.02	.02	1.6
22	.02	.02	44	24	64	22	4.5	1.4	.02	.02	.16	.16
23	.02	.02	38	34	54	20	7.5	1.9	.02	.02	.03	.02
24	.02	.02	37	38	45	13	8.1	.09	.02	.02	.02	.02
25	.02	.02	35	28	37	13	7.8	1.0	.02	.02	.02	.02
26	.66	.02	36	57	36	11	6.4	.19	.02	.02	.02	.02
27	3.6	.03	23	67	33	15	5.3	.09	.02	.03	.02	.02
28	11	.04	4.2	41	29	14	5.0	.02	.02	2.2	.02	.02
29	14	.41	3.6	30	---	17	6.5	.02	.02	1.6	1.7	.02
30	18	3.3	4.9	30	---	34	3.8	.02	.02	2.8	4.0	.02
31	17	---	4.1	25	---	36	---	.12	---	3.5	.75	---
TOTAL	64.76	35.01	617.08	611.8	1095	699.6	367.61	121.25	2.70	10.66	14.79	5.56
MEAN	2.09	1.17	19.9	19.7	39.1	22.6	12.3	3.91	.09	.34	.48	.19
MAX	18	16	93	67	107	45	31	16	1.8	3.5	4.0	1.6
MIN	.02	.02	.02	4.6	12	6.2	.37	.02	.02	.02	.02	.02
AC-FT	128	69	1220	1210	2170	1390	729	240	5.4	21	29	11
CAL YR 1982	TOTAL	3630.13	MEAN	9.95	MAX	108	MIN	.02	AC-FT	7200		
WTR YR 1983	TOTAL	3645.82	MEAN	9.99	MAX	107	MIN	.02	AC-FT	7230		

## 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 downstream from highway bridge at Powers, 0.9 mi upstream from Woodward Creek, and at mile 64.5.

DRAINAGE AREA.--169 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1938, nonrecording gage at various sites within 1 mi of present site at different datums.

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

AVERAGE DISCHARGE.--64 years (water years 1917-26, 1930-83), 795 ft<sup>3</sup>/s, 63.88 in/yr, 576,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 26.51 ft, from floodmarks, from rating curve extended above 19,000 ft<sup>3</sup>/s on basis of contracted-opening measurement at gage height 18.14 ft and slope-area measurement of peak flow; minimum, 12 ft<sup>3</sup>/s Sept. 22-25, 27-30, 1939, Oct. 5, 1961, Oct. 16-20, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	0330	19,000	14.45	Feb. 18	0400	*22,700	*16.09
Jan. 26	2330	11,700	11.08	Mar. 30	0330	13,700	12.10

Minimum, 36 ft<sup>3</sup>/s Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	94	716	3420	558	1200	1660	3650	400	245	337	81	238		
2	71	528	2390	529	972	1360	2810	365	206	512	78	164		
3	63	410	2580	618	794	1140	2430	339	188	359	77	130		
4	55	341	5030	1070	672	999	1970	314	168	266	77	111		
5	49	304	3410	974	583	1170	1540	295	153	222	76	99		
6	111	304	3040	824	790	2320	1220	285	141	195	72	90		
7	235	288	1950	806	1350	2430	984	471	134	181	70	85		
8	150	284	1370	778	1690	2200	818	1160	125	181	67	80		
9	112	273	1020	731	5840	2440	762	1360	118	173	65	77		
10	90	246	805	643	5550	5100	727	1220	145	155	67	73		
11	74	222	657	574	3340	2780	680	1040	164	144	65	71		
12	64	201	637	520	5660	2890	610	909	135	137	62	69		
13	56	187	885	468	6190	4220	556	764	119	133	60	66		
14	51	174	2980	428	3650	4140	513	646	111	139	60	62		
15	47	162	9980	402	2650	3070	475	595	116	128	59	59		
16	43	155	12300	397	2550	2110	439	534	109	120	57	57		
17	44	705	7490	368	8070	1550	409	469	101	123	56	54		
18	43	2200	5000	724	15400	1310	382	418	110	132	55	52		
19	40	2930	3630	2650	5350	1070	362	377	114	129	55	53		
20	37	2460	4120	2030	3110	900	361	342	106	119	54	50		
21	56	2090	5830	1370	3460	845	395	310	98	108	53	47		
22	597	1680	4400	1400	4370	930	386	284	92	102	54	45		
23	1400	1230	2940	2700	3300	1670	597	261	93	100	54	54		
24	758	927	2160	4930	2490	1640	686	240	93	101	55	53		
25	775	737	1620	2920	2050	2030	623	221	86	100	54	49		
26	2270	615	1280	8070	2850	1850	568	206	81	96	54	46		
27	1320	575	1070	7690	2540	1900	509	191	78	92	53	45		
28	766	928	902	3390	1980	1760	486	177	75	92	51	44		
29	2350	3120	774	2250	---	4400	494	164	75	92	93	42		
30	1780	4030	686	1930	---	9430	436	156	74	87	545	42		
31	1090	---	616	1490	---	5800	---	231	---	83	427	---		
TOTAL	14691	29022	94972	54232	98451	77114	26878	14744	3653	4938	2806	2207		
MEAN	474	967	3064	1749	3516	2488	896	476	122	159	90.5	73.6		
MAX	2350	4030	12300	8070	15400	9430	3650	1360	245	512	545	238		
MIN	37	155	616	368	583	845	361	156	74	83	51	42		
CFSM	2.80	5.72	18.1	10.3	20.8	14.7	5.30	2.82	.72	.94	.54	.44		
IN.	3.23	6.39	20.91	11.94	21.67	16.97	5.92	3.25	.80	1.09	.62	.49		
AC-FT	29140	57570	188400	107600	195300	153000	53310	29240	7250	9790	5570	4380		
CAL YR 1982	TOTAL	403838	MEAN	1106	MAX	12300	MIN	22	CFSM	6.54	IN.	88.89	AC-FT	801000
WTR YR 1983	TOTAL	423708	MEAN	1161	MAX	15400	MIN	37	CFSM	6.87	IN.	93.27	AC-FT	840400

## 14328000 ROGUE RIVER ABOVE PROSPECT, OR

LOCATION.--Lat 42°46'30", long 122°29'55", in SE¼NE¼ sec.19, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, Rogue River National Forest, on left bank 1.4 mi upstream from Pacific Power and Light Co. diversion dam, 1.8 mi northwest of Prospect, and at mile 173.4.

DRAINAGE AREA.--312 mi<sup>2</sup>.

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, 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 excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--63 years (water years 1909-11, 1924-83), 824 ft<sup>3</sup>/s, 35.87 in/yr, 597,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.55 ft, from floodmark, from rating curve extended above 9,000 ft<sup>3</sup>/s on basis of slope-area measurement at 16,600 ft<sup>3</sup>/s; minimum observed, 200 ft<sup>3</sup>/s Nov. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 5	2400	3,770	4.61	Mar. 30	0900	4,290	4.94
Dec. 16	2100	3,460	4.40	May 26	0230	2,890	3.99
Feb. 17	2230	*4,430	*5.02				

Minimum, 459 ft<sup>3</sup>/s Oct. 16-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	494	676	834	741	1030	1330	2100	1380	1930	1270	665	596		
2	484	618	860	741	977	1320	1950	1340	1680	1300	657	580		
3	483	586	1450	762	923	1270	1670	1340	1580	1070	649	571		
4	477	566	2090	835	874	1270	1490	1420	1540	1010	643	565		
5	475	554	2510	909	838	1360	1350	1630	1500	990	634	558		
6	500	583	3130	973	837	1310	1250	1560	1500	981	625	552		
7	597	558	1990	1690	826	1290	1190	1500	1530	951	620	551		
8	541	542	1530	1660	805	1420	1160	1470	1570	962	620	551		
9	518	528	1280	1430	1030	1460	1130	1350	1530	903	614	544		
10	502	518	1110	1210	998	1710	1080	1240	1660	860	608	539		
11	492	510	1030	1090	1080	1680	1030	1200	1580	840	604	538		
12	481	507	990	1030	1470	1710	983	1200	1410	838	597	538		
13	472	500	1000	996	1560	2320	942	1250	1320	838	593	533		
14	467	492	985	962	1420	2180	904	1350	1300	834	590	531		
15	465	486	1230	945	1370	1820	888	1460	1250	802	583	531		
16	463	492	2860	950	1380	1620	906	1470	1190	793	580	526		
17	464	610	2330	971	2330	1470	970	1490	1180	794	577	525		
18	464	938	1600	1020	3870	1340	1030	1570	1190	785	573	525		
19	459	856	1370	1200	2640	1210	1100	1680	1110	768	569	533		
20	459	735	1280	1070	2060	1130	1180	1810	1060	764	577	521		
21	471	681	1460	1010	2140	1090	1330	2020	1030	739	571	519		
22	504	636	1380	974	2260	1100	1450	2080	1010	730	574	519		
23	626	604	1170	951	2220	1070	1410	2260	1000	728	706	526		
24	538	590	1040	1020	2060	1050	1380	2510	975	721	641	558		
25	506	580	979	1010	1860	1040	1240	2660	945	716	590	526		
26	623	574	954	1310	1650	1010	1160	2630	948	710	592	519		
27	598	588	906	2150	1510	1030	1120	2520	941	698	578	519		
28	555	718	838	1650	1390	1000	1110	2560	928	690	577	514		
29	1440	1050	805	1410	---	1180	1170	2590	923	679	602	513		
30	1150	994	791	1200	---	3690	1250	2420	908	676	711	513		
31	786	---	763	1090	---	2750	---	2120	---	671	624	---		
TOTAL	17554	18870	42545	34960	43408	46230	36923	55080	38218	26111	18944	16134		
MEAN	566	629	1372	1128	1550	1491	1231	1777	1274	842	611	538		
MAX	1440	1050	3130	2150	3870	3690	2100	2660	1930	1300	711	596		
MIN	459	486	763	741	805	1000	888	1200	908	671	569	513		
CFSM	1.81	2.02	4.40	3.62	4.97	4.78	3.95	5.70	4.08	2.70	1.96	1.72		
IN.	2.09	2.25	5.07	4.17	5.18	5.51	4.40	6.57	4.56	3.11	2.26	1.92		
AC-FT	34820	37430	84390	69340	86100	91700	73240	109300	75810	51790	37580	32000		
CAL YR 1982	TOTAL	372371	MEAN	1020	MAX	4530	MIN	459	CFSM	3.27	IN.	44.40	AC-FT	738600
WTR YR 1983	TOTAL	394977	MEAN	1082	MAX	3870	MIN	459	CFSM	3.47	IN.	47.09	AC-FT	783400

## ROGUE RIVER BASIN

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 downstream from Prospect No. 1 powerplant, 1.4 mi downstream from Mill Creek, 2.0 mi southwest of Prospect, 2.1 mi upstream from South Fork Rogue River, and at mile 169.4.

DRAINAGE AREA.--379 mi<sup>2</sup>.

## 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. Datum of gage is 1,964.56 ft National Geodetic Vertical Datum of 1929 (Pacific Power and Light Co. bench mark). Prior to September 1927 nonrecording gage at site 1,000 ft upstream, above powerplants, at different datum, also concurrent nonrecording gage on headrace to obtain equivalent combined flow.

REMARKS.--Water-discharge records good. Fluctuations caused by powerplant 600 ft above station. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--32 years, 1,265 ft<sup>3</sup>/s, 916,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft<sup>3</sup>/s Jan. 18, 1971, gage height, 7.62 ft, from high-water mark; minimum, 205 ft<sup>3</sup>/s Sept. 17, 22, 24, 1980, caused by regulation of diversion gates upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 12.4 ft Dec. 22, 1964, from floodmarks, discharge, 25,000 ft<sup>3</sup>/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, 5,520 ft<sup>3</sup>/s Feb. 17, gage height, 5.28 ft; minimum, 376 ft<sup>3</sup>/s Nov. 2, caused by regulation of diversion gates upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	1190	1420	1420	1750	2130	3040	2190	2770	2020	1360	1240
2	1070	1150	1430	1430	1690	2120	2860	2160	2460	2020	1360	1210
3	1070	1090	2010	1460	1630	2080	2600	2170	2360	1830	1350	1200
4	1100	1160	2710	1570	1580	2070	2380	2230	2300	1740	1330	1190
5	1060	1090	3110	1620	1530	2130	2240	2410	2250	1730	1320	1190
6	1120	1140	3770	1680	1580	2080	2150	2400	2250	1750	1310	1110
7	1220	1110	2590	2380	1550	2080	2110	2320	2290	1730	1300	1120
8	1160	1080	2100	2320	1570	2180	2090	2300	2330	1740	1300	1110
9	1130	1090	1860	2070	1820	2210	2050	2180	2280	1670	1290	1190
10	1090	1090	1740	1890	1780	2500	2000	2060	2440	1620	1290	1180
11	1070	1070	1630	1790	1890	2480	1950	2020	2360	1590	1280	1180
12	1040	1070	1570	1710	2300	2510	1880	2010	2160	1580	1260	1170
13	1030	1070	1560	1660	2370	3080	1860	2040	2090	1580	1260	1160
14	967	1040	1650	1610	2210	2960	1800	2130	2090	1580	1260	1080
15	1040	1040	1870	1590	2180	2620	1800	2230	2050	1550	1260	1090
16	1030	1070	3470	1610	2180	2440	1820	2240	2010	1530	1250	1140
17	1020	1210	3050	1630	3100	2260	1870	2270	2000	1530	1240	1130
18	1020	1580	2270	1690	5010	2130	1930	2360	1990	1530	1240	1130
19	1030	1500	2030	1880	3440	2030	2000	2500	1920	1530	1240	1080
20	914	1340	1950	1760	2870	1980	2050	2620	1870	1510	1250	1120
21	817	1290	2110	1680	2950	1940	2150	2790	1850	1490	1230	1110
22	888	1240	2050	1630	3050	1970	2270	2860	1820	1480	1230	1080
23	1140	1190	1890	1620	3020	1940	2220	3030	1810	1470	1400	1150
24	1060	1190	1740	1720	2900	1920	2210	3240	1750	1460	1320	1180
25	1030	1180	1650	1700	2680	1920	2090	3350	1730	1450	1260	1130
26	1050	1170	1630	1970	2500	1870	2050	3340	1740	1430	1260	1110
27	958	1180	1580	2770	2320	1910	2010	3250	1720	1420	1240	1060
28	909	1320	1510	2330	2210	1880	2000	3290	1710	1410	1230	1060
29	1860	1710	1480	2090	---	2020	2050	3310	1700	1390	1260	1050
30	1700	1610	1490	1940	---	4710	2100	3250	1680	1380	1410	1060
31	1290	---	1460	1830	---	3660	---	3030	---	1370	1280	---
TOTAL	33953	36260	62380	56050	65660	71810	63630	79580	61780	49110	39870	34010
MEAN	1095	1209	2012	1808	2345	2316	2121	2567	2059	1584	1286	1134
MAX	1860	1710	3770	2770	5010	4710	3040	3350	2770	2020	1410	1240
MIN	817	1040	1420	1420	1530	1870	1800	2010	1680	1370	1230	1050
AC-FT	67350	71920	123700	111200	130200	142400	126200	157800	122500	97410	79080	67460
CAL YR 1982	TOTAL	610391	MEAN	1672	MAX	5630	MIN	817	AC-FT	1211000		
WTR YR 1983	TOTAL	654093	MEAN	1792	MAX	5010	MIN	817	AC-FT	1297000		



14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to September 1981.

pH: November 1976 to September 1981.

WATER TEMPERATURES: October 1968 to current year.

DISSOLVED OXYGEN: October 1979 to September 1981.

SUSPENDED SEDIMENT DISCHARGE: November 1976 to September 1981 (October to April only, 1980 water year, November to April only, 1981 water year).

INSTRUMENTATION.--Water-quality monitor since November 1976.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 73 micromhos Sept. 22, 1980; minimum recorded, 28 micromhos Jan. 13, 1980, may have been lower during period of missing record Jan. 14-17, 1980.

pH: Maximum recorded, 8.3 units Aug. 10, 1981, may have been higher during period of no record in July and August 1981; minimum, 7.0 units Nov. 30, 1976.

WATER TEMPERATURES: Maximum, 20.5°C July 20, 1979 (result of regulation); minimum, 0.0°C Jan. 1, 2, 4, 5, 1970, Mar. 1, 1971, Jan. 26, 29-31, Feb. 2, 1979, and Jan. 29, 30, 1980.

DISSOLVED OXYGEN: Maximum, 13.6 mg/l Dec. 8, 1980, Feb. 21, 1981; minimum, 7.2 mg/l June 21, 1980, result of regulation.

SEDIMENT CONCENTRATIONS: Maximum daily mean (water years 1977-79), 1,270 mg/l (estimated) Jan. 11, 1979; minimum, 0 mg/l on many days each year. Maximum daily mean (period October 1979 to April 1981), 716 mg/l Oct. 25, 1979; minimum daily mean, 0 mg/l on several days in October and December 1979, Nov. 15-21, 28, Dec. 1, 1980, Jan. 19, 1981.

SEDIMENT DISCHARGE: Maximum daily (water years 1977-79), 17,790 tons Dec. 15, 1977; minimum daily, 0 tons on many days each year. Maximum daily (period October 1979 to April 1981), 5,570 tons Jan. 13, 1980; minimum daily, 0 tons on several days in October and December 1979, Nov. 15-21, 28, Dec. 1, 1980, Jan. 19, 1981.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 14.5°C July 31, Aug. 1; minimum, 1.5°C Dec. 29-31, Feb. 9-10.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.5	5.5	5.5	4.5	4.0	3.5	2.5	2.0	4.5	3.5	6.0	5.0
2	7.5	5.5	5.5	4.0	4.0	3.0	3.5	2.5	4.0	3.5	5.5	5.0
3	8.5	7.0	5.5	4.0	4.5	3.5	4.0	3.5	4.0	3.0	6.0	5.0
4	8.0	7.0	6.5	5.0	5.0	4.5	3.5	3.0	3.5	2.5	6.0	5.5
5	7.5	6.0	6.5	5.5	---	5.0	4.0	3.5	4.0	3.0	6.0	5.5
6	7.0	6.5	6.5	5.5	---	---	4.5	4.0	4.0	3.5	5.5	5.0
7	7.0	6.0	5.5	4.0	---	---	4.5	4.5	3.5	2.5	5.5	5.0
8	8.0	6.0	4.5	3.5	---	---	4.5	4.0	4.0	3.5	5.5	5.5
9	8.0	6.5	4.0	3.0	---	---	4.0	3.5	4.0	1.5	6.0	5.5
10	8.5	6.5	4.0	3.0	---	---	3.5	3.0	3.0	1.5	6.0	5.5
11	8.5	6.5	3.5	3.0	---	---	3.5	2.5	4.5	3.0	6.0	5.5
12	9.0	7.0	4.0	3.0	---	---	3.5	2.5	5.0	4.0	6.0	5.5
13	9.0	7.0	4.0	3.0	---	---	3.5	2.5	4.5	4.0	5.5	5.0
14	8.5	7.5	3.5	2.5	---	---	3.5	3.0	4.0	4.0	5.0	4.0
15	8.5	7.5	3.5	2.5	---	---	3.5	3.0	4.5	4.0	5.5	4.0
16	8.5	7.0	3.5	3.0	---	---	4.5	3.5	5.0	4.5	5.0	4.5
17	8.5	7.0	4.5	3.5	---	---	5.0	4.5	5.0	4.5	5.5	5.0
18	7.0	6.0	5.0	4.0	---	---	5.0	4.5	---	---	5.5	5.0
19	6.5	5.0	4.0	3.5	---	---	4.5	4.0	---	---	6.0	4.5
20	6.0	5.0	3.5	3.0	4.5	4.0	4.0	3.5	---	---	5.5	5.0
21	7.5	6.0	3.0	3.0	4.5	4.0	3.5	3.0	---	---	6.0	5.0
22	8.5	7.5	3.5	3.0	4.0	3.5	4.0	3.5	---	---	5.5	4.5
23	9.5	8.0	4.0	3.0	3.5	3.0	4.0	3.5	---	---	5.0	4.5
24	9.0	7.5	3.5	2.5	3.0	2.5	5.0	4.0	5.5	5.0	5.0	4.5
25	9.0	7.5	3.5	2.5	3.0	2.0	4.5	4.0	5.0	4.5	5.0	4.5
26	9.0	7.5	3.5	3.0	4.0	3.0	4.5	4.5	5.0	4.0	4.5	4.5
27	8.0	6.5	4.5	3.5	4.0	2.5	7.0	4.5	5.0	5.0	4.5	4.0
28	7.0	6.0	5.0	4.5	2.5	2.0	4.5	3.5	5.0	4.5	5.0	4.5
29	8.0	6.5	5.0	4.5	2.0	1.5	5.0	4.0	---	---	5.5	5.0
30	9.5	6.5	4.5	4.0	2.0	1.5	4.0	4.0	---	---	5.5	5.0
31	6.5	5.5	---	---	2.5	1.5	5.0	4.0	---	---	5.0	4.5
MONTH	9.5	5.0	6.5	2.5	5.0	1.5	7.0	2.0	5.5	1.5	6.0	4.0

## ROGUE RIVER BASIN

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.5	5.0	7.0	6.5	8.0	7.0	9.5	8.5	14.5	12.0	10.5	8.5
2	5.0	4.0	7.0	6.0	8.0	7.0	9.5	8.5	14.0	11.5	11.0	8.5
3	5.0	4.0	8.0	6.0	9.5	7.5	10.5	8.0	13.5	11.0	11.0	8.5
4	5.5	4.0	7.5	7.0	9.5	8.5	12.0	9.5	13.5	11.0	11.5	9.0
5	6.0	4.5	7.5	6.0	10.0	8.5	13.0	10.5	13.5	11.0	11.0	9.0
6	6.0	4.5	6.5	5.0	10.5	9.0	12.0	10.5	13.5	10.5	11.5	9.0
7	6.5	5.0	6.5	6.0	11.0	9.5	10.5	8.5	13.0	11.5	11.5	9.0
8	6.5	5.0	6.0	4.0	11.0	10.0	9.5	8.5	14.0	11.5	10.5	9.0
9	6.0	5.0	5.5	4.0	10.0	9.0	10.5	8.5	14.0	11.5	9.5	7.5
10	5.0	4.0	6.5	5.0	10.0	8.0	11.5	8.5	13.0	11.5	9.5	7.0
11	5.5	4.0	7.5	5.5	8.5	7.5	12.5	10.0	13.0	11.0	11.0	8.5
12	5.5	4.0	8.0	6.5	9.5	7.5	13.0	10.5	13.0	10.5	11.5	9.0
13	5.5	4.0	8.5	7.0	10.5	9.0	13.5	11.0	12.0	10.5	12.0	9.5
14	6.0	4.0	7.0	6.5	10.0	9.0	12.5	11.0	13.0	10.5	12.0	9.5
15	6.5	4.5	7.5	6.5	10.5	8.5	11.0	9.5	13.5	11.0	11.5	9.0
16	7.5	5.0	8.0	6.0	10.5	9.5	11.5	9.0	13.5	11.0	11.0	8.5
17	6.5	6.0	8.5	7.0	11.0	9.5	11.0	9.5	13.5	11.0	10.5	8.5
18	7.5	6.0	9.0	8.0	9.5	8.5	11.0	9.0	13.5	11.0	9.0	8.0
19	7.0	6.5	9.0	7.5	9.0	8.0	12.0	10.0	12.0	10.5	9.0	7.0
20	7.0	6.0	9.5	8.0	9.5	8.0	12.0	9.5	---	10.0	9.0	7.0
21	7.5	6.5	9.5	7.5	10.5	8.0	12.5	9.5	---	---	9.0	7.0
22	7.5	6.0	9.5	7.5	10.5	9.5	13.5	10.5	---	---	9.5	8.0
23	6.0	5.5	9.5	8.0	10.0	8.5	13.5	11.0	---	---	9.5	9.0
24	5.5	4.5	10.0	8.0	10.0	7.5	13.0	11.0	---	---	10.5	8.5
25	5.5	5.0	10.0	8.0	11.5	9.0	12.0	10.5	---	---	10.5	8.5
26	6.5	5.0	10.0	7.5	12.0	10.0	12.0	9.5	---	---	10.5	8.5
27	6.5	5.5	10.5	8.5	12.0	10.0	11.5	10.0	---	---	10.0	8.5
28	7.0	6.0	10.5	8.5	11.5	10.0	12.5	10.0	---	---	9.0	7.5
29	7.5	6.0	10.5	9.0	11.0	9.5	13.5	10.5	---	---	8.5	6.5
30	7.0	6.5	10.5	8.5	10.0	9.0	14.0	11.0	---	---	8.0	6.5
31	---	---	9.0	8.0	---	---	14.5	12.0	10.0	---	---	---
MONTH	7.5	4.0	10.5	4.0	12.0	7.0	14.5	8.0	14.5	10.0	12.0	6.5

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 downstream from South Fork dam and intake of South Fork power canal, 0.31 mi downstream from Imnaha Creek, 5.6 mi southeast of Prospect, and at mile 10.2.

DRAINAGE AREA.--83.8 mi<sup>2</sup>. Area at site above Imnaha Creek used October 1931 to September 1949, 61.3 mi<sup>2</sup>, and Imnaha Creek near Prospect, 22.2 mi<sup>2</sup>.

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, from topographic map. Prior to Sept. 10, 1965, at site 1,000 ft 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 above station and returns water to Rogue River above South Fork Rogue River; practically no storage above diversion dam.

AVERAGE DISCHARGE.--59 years (water years 1925-83), 178 ft<sup>3</sup>/s, 129,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 7,010 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.1 ft, from floodmark, from rating curve extended above 410 ft<sup>3</sup>/s on basis of measurement of flow over dam of 3,180 ft<sup>3</sup>/s; no flow Jan. 31, 1950, Sept. 29, 30, 1967 (entire flow diverted to canal).

Combined flow, maximum discharge, 7,010 ft<sup>3</sup>/s Dec. 22, 1964 (no flow in canal); minimum daily, about 38 ft<sup>3</sup>/s Aug. 1-31, 1931.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 805 ft<sup>3</sup>/s Mar. 30, gage height, 4.16 ft; minimum, 1.2 ft<sup>3</sup>/s Oct. 20, 25.

Combined flow, maximum discharge, 951 ft<sup>3</sup>/s Mar. 30; minimum daily, 40 ft<sup>3</sup>/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	113	115	143	182	317	552	248	540	267	138	116
2	91	102	112	149	181	315	527	244	462	378	136	114
3	89	100	172	149	177	298	464	245	420	272	137	115
4	92	97	199	155	162	286	423	258	421	231	134	116
5	89	85	281	167	163	286	394	328	407	213	135	115
6	88	83	455	167	161	269	360	294	401	200	128	109
7	114	103	269	196	155	260	341	285	414	198	132	111
8	104	93	236	212	157	271	323	281	408	210	130	104
9	95	89	212	210	173	272	315	262	403	197	132	112
10	96	87	181	196	171	338	292	244	436	186	129	105
11	90	83	168	193	191	327	275	246	446	182	132	104
12	88	81	155	183	209	317	257	247	378	178	129	110
13	87	82	165	180	217	404	240	252	345	170	121	102
14	82	85	148	173	220	380	241	260	336	169	130	104
15	83	78	192	170	252	333	226	292	323	166	123	95
16	84	72	340	174	248	313	225	277	314	164	124	105
17	80	82	409	178	351	294	223	285	311	166	126	98
18	84	132	309	183	532	275	229	305	320	164	123	111
19	79	109	277	195	452	261	223	331	285	163	127	98
20	79	88	261	185	414	246	231	367	266	162	116	104
21	82	87	259	178	447	237	253	424	245	155	117	103
22	81	94	238	179	487	237	267	452	237	153	116	102
23	98	74	223	178	482	228	252	487	232	153	149	109
24	75	88	206	184	464	222	243	530	213	150	135	110
25	84	90	196	180	433	215	237	573	214	150	120	103
26	85	88	194	196	392	210	233	600	213	142	120	97
27	98	90	185	222	360	209	227	609	211	149	119	108
28	93	99	174	210	333	208	218	628	194	145	115	94
29	164	123	170	205	---	262	224	646	198	143	126	96
30	205	117	161	197	---	826	233	600	195	136	153	92
31	136	---	157	189	---	643	---	538	---	136	127	---
TOTAL	2935	2794	6819	5676	8166	9559	8748	11638	9788	5648	3979	3162
MEAN	94.7	93.1	220	183	292	308	292	375	326	182	128	105
MAX	205	132	455	222	532	826	552	646	540	378	153	116
MIN	40	72	112	143	155	208	218	244	194	136	115	92
AC-FT	5820	5540	13530	11260	16200	18960	17350	23080	19410	11200	7890	6270
CAL YR 1982	TOTAL	78971	MEAN	216	MAX	1370	MIN	40	AC-FT	156600		
WTR YR 1983	TOTAL	78912	MEAN	216	MAX	826	MIN	40	AC-FT	156500		

## 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 upstream from unnamed tributary, 0.6 mi upstream from Smith Creek, 1.2 mi downstream from Beaver Creek, 2.8 mi southwest of Prospect, and at mile 2.4.

DRAINAGE AREA.--246 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,030 ft, from topographic map.

REMARKS.--Water-discharge records excellent. Some regulation by South Fork canal dam upstream. Power diversions above station from South Fork Rogue River, Middle Fork Rogue River, and Red Blanked 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.--15 years, 391 ft<sup>3</sup>/s, 283,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,880 ft<sup>3</sup>/s Mar. 3, 1972, gage height, 12.71 ft, from floodmark; minimum, 54 ft<sup>3</sup>/s Aug. 16-19, 1977; minimum daily, 54 ft<sup>3</sup>/s Sept. 24-30, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 20.1 ft, Dec. 22, 1964, from floodmarks at gage, discharge, 28,500 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,080 ft<sup>3</sup>/s Mar. 20, gage height, 8.60 ft; minimum, 113 ft<sup>3</sup>/s Nov. 15, 196.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	290	232	292	399	844	1730	532	1120	763	240	205
2	168	258	308	286	385	784	1590	511	960	990	234	200
3	168	256	506	303	365	738	1360	498	875	713	229	198
4	143	246	572	388	347	713	1180	546	887	614	226	196
5	133	191	839	386	332	696	1060	801	875	554	224	195
6	159	181	1300	397	341	650	955	665	883	503	220	252
7	175	181	812	611	346	618	876	653	907	481	220	244
8	139	174	630	673	336	632	821	669	925	507	218	242
9	141	150	550	617	507	620	778	658	931	444	209	171
10	151	125	439	571	578	736	725	674	1000	415	208	169
11	155	120	390	522	680	724	666	658	984	401	207	169
12	158	121	372	495	802	736	626	672	848	397	205	168
13	161	123	421	464	804	984	607	655	772	394	204	170
14	220	131	296	440	775	974	603	623	753	381	199	238
15	130	127	531	425	872	869	537	687	733	360	191	232
16	140	117	1280	429	837	814	515	662	730	347	192	172
17	159	138	1510	431	1250	764	521	645	724	343	188	175
18	155	181	1000	436	2050	712	544	677	743	324	180	178
19	136	173	871	489	1560	657	544	728	655	301	181	236
20	267	157	805	443	1320	619	545	782	612	303	184	181
21	366	161	805	426	1300	591	556	894	572	281	183	178
22	314	155	726	422	1340	573	583	944	540	268	199	219
23	218	154	642	429	1290	552	565	1020	539	267	258	180
24	198	132	546	450	1240	529	563	1160	523	266	216	184
25	196	128	500	428	1140	513	529	1280	494	266	196	180
26	339	128	492	489	1040	489	507	1330	503	262	190	183
27	400	133	453	571	944	517	482	1330	511	254	186	230
28	399	146	408	502	867	499	459	1380	498	249	186	225
29	628	222	370	485	---	611	460	1470	486	245	205	220
30	527	252	324	452	---	2490	492	1420	468	243	269	218
31	344	---	306	424	---	2110	---	1200	---	241	215	---
TOTAL	7154	5051	19236	14176	24047	24358	21979	26424	22051	12377	6462	6008
MEAN	231	168	621	457	859	786	733	852	735	399	208	200
MAX	628	290	1510	673	2050	2490	1730	1470	1120	990	269	252
MIN	130	117	232	286	332	489	459	498	468	241	180	168
AC-FT	14190	10020	38150	28120	47700	48310	43600	52410	43740	24550	12820	11920
CAL YR 1982	TOTAL	182924	MEAN	501	MAX	4360	MIN	117	AC-FT	362800		
WTR YR 1983	TOTAL	189323	MEAN	519	MAX	2490	MIN	117	AC-FT	375500		

ROGUE RIVER BASIN

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14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1968 to current year.

SEDIMENT RECORDS: October 1976 to April 1981 (October to April only 1980 water year, November to April only 1981 water year).

INSTRUMENTATION.--Water temperature recorder since October 1968.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.0°C July 18, 19, 1979; minimum, 0.0°C on several days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 654 mg/l Nov. 26, 1977; minimum daily, 0 mg/l on several days each year.

SEDIMENT DISCHARGE: Maximum daily, 6,180 tons Nov. 26, 1977; minimum daily, 0 tons on several days each year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 17.5°C July 31; minimum, 1.5°C Dec. 29, 30.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



## ROGUE RIVER BASIN

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	5.0	8.5	6.5	7.0	6.5	10.0	8.5	17.0	12.0	12.5	9.5
2	5.5	4.5	9.5	5.5	8.0	6.5	10.0	7.5	16.5	12.0	13.0	8.5
3	6.0	4.0	10.5	5.5	11.5	6.5	12.5	7.0	16.5	11.5	13.5	9.0
4	7.0	4.0	9.0	6.5	11.0	7.0	14.0	8.5	16.5	11.5	13.5	9.5
5	7.5	4.0	8.0	6.0	11.5	6.5	14.5	9.5	15.5	11.0	13.5	10.0
6	8.0	4.0	7.5	5.0	12.0	7.0	13.0	10.5	16.5	11.0	12.5	9.5
7	8.5	4.5	7.5	6.0	12.0	7.5	11.0	9.0	15.5	12.5	12.0	9.5
8	8.0	4.5	6.5	5.0	12.0	8.0	11.0	8.5	17.0	13.0	11.5	9.5
9	6.5	5.5	6.5	4.0	11.0	7.0	12.5	8.0	17.0	12.0	11.0	7.5
10	6.0	4.5	8.0	4.5	9.5	7.5	13.5	8.0	15.5	12.0	12.0	7.5
11	7.0	4.0	9.5	4.5	9.5	7.0	15.0	9.5	15.5	11.5	13.5	9.5
12	6.5	3.5	10.0	5.5	11.0	6.0	15.5	10.0	16.0	10.5	14.0	10.0
13	7.0	3.5	9.5	6.0	12.5	7.0	16.0	11.0	14.0	11.5	14.5	10.5
14	7.0	3.5	8.0	6.0	10.5	8.0	14.5	11.0	16.0	11.0	13.0	10.0
15	8.5	4.0	9.0	6.5	12.0	8.0	13.5	8.5	16.5	11.5	12.0	9.5
16	9.5	4.5	10.5	6.0	12.0	8.0	13.5	8.5	16.5	12.0	13.0	9.0
17	8.5	5.5	11.0	6.0	11.5	9.0	13.5	9.5	16.0	12.0	12.0	9.0
18	9.0	6.0	11.5	7.5	10.0	7.5	14.0	9.5	16.0	11.5	11.0	8.5
19	9.0	6.5	11.5	6.5	11.0	7.5	13.5	10.0	14.5	12.0	10.0	7.0
20	9.0	6.5	12.0	7.0	11.5	7.0	14.5	10.0	14.5	11.5	11.0	7.0
21	10.0	7.0	11.5	7.0	12.0	7.0	15.5	9.5	15.0	11.0	11.0	7.0
22	8.5	7.0	11.5	6.5	12.0	8.0	16.0	11.0	14.0	12.0	11.0	9.5
23	7.5	6.0	12.0	7.0	11.0	8.5	16.0	11.0	12.5	11.5	11.5	10.5
24	7.0	4.5	11.5	6.5	12.0	7.0	15.5	11.0	14.5	10.5	12.5	10.0
25	7.5	5.0	11.5	7.0	13.0	8.0	13.5	11.5	14.0	10.5	12.5	9.0
26	8.5	5.0	11.0	6.0	14.0	9.5	14.5	9.5	14.5	11.0	12.5	9.5
27	7.5	5.0	11.5	6.5	14.0	9.0	14.0	10.0	14.0	10.5	11.0	9.5
28	8.5	5.5	11.0	6.5	12.5	9.0	15.5	10.5	13.5	10.5	10.0	7.5
29	10.0	5.5	11.0	7.5	13.0	9.5	16.5	11.0	12.5	11.5	9.5	6.5
30	8.0	6.5	9.0	7.0	10.5	9.0	17.0	12.0	12.5	10.5	9.5	7.5
31	---	---	8.0	7.0	---	---	17.5	12.5	11.5	10.0	---	---
MONTH	10.0	3.5	12.0	4.0	14.0	6.0	17.5	7.0	17.0	10.0	14.5	6.5

ROGUE RIVER BASIN

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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 northeast of McLeod and at mile 157.2.

DRAINAGE AREA.--674 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Nov. 28, 1977, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam completed in October 1976. Storage began in February 1977. Total capacity, 465,000 acre-ft between elevations 1,551.0 ft and 1,872.0 ft, maximum pool elevation. Elevation of gated spillway crest, 1,823.0 ft. Usable storage, 315,000 acre-ft between elevation 1,751.0 ft and 1,872.0 ft. 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 PERIOD OF RECORD.--Maximum contents, 465,100 acre-ft May 21, 1979, May 25, 1981, elevation, 1,872.02 ft; minimum since first filling, 100,800 acre-ft Oct. 29, 1977, elevation, 1,720.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 462,200 acre-ft June 11, elevation, 1,871.18 ft; minimum, 284,500 acre-ft Dec. 31, elevation, 1,811.80 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

1,720.0	100,100	1,850.0	393,100
1,750.0	148,200	1,872.0	465,000
1,800.0	254,600		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1834.09	1824.29	1811.91	1811.86	1825.53	1848.95	1864.95	1865.78	1869.40	1871.04	1866.67	1848.67
2	1833.69	1824.00	1812.17	1811.89	1826.30	1849.37	1863.17	1866.33	1869.49	1871.06	1866.32	1847.93
3	1833.31	1823.55	1812.40	1811.96	1827.01	1849.70	1861.39	1866.86	1869.67	1870.97	1865.97	1847.21
4	1832.91	1823.00	1812.64	1812.19	1827.66	1850.33	1860.51	1867.49	1869.82	1870.91	1865.60	1846.47
5	1832.49	1822.44	1813.30	1812.36	1828.27	1850.77	1860.43	1868.28	1869.96	1870.86	1865.23	1845.73
6	1832.20	1821.92	1814.88	1812.70	1828.99	1851.32	1860.52	1868.62	1870.13	1870.82	1864.86	1844.96
7	1831.93	1821.36	1815.06	1813.76	1829.66	1851.87	1860.65	1868.71	1870.42	1870.92	1864.49	1844.23
8	1831.60	1820.80	1814.65	1814.78	1830.29	1852.49	1860.74	1868.84	1870.71	1871.03	1864.11	1843.50
9	1831.20	1820.20	1814.20	1815.57	1831.68	1853.11	1860.85	1868.88	1870.95	1871.05	1863.60	1842.76
10	1830.80	1819.57	1813.76	1816.13	1832.94	1853.90	1860.87	1868.83	1871.17	1871.05	1862.98	1842.05
11	1830.41	1818.97	1813.23	1816.55	1834.24	1854.54	1860.87	1868.71	1871.04	1871.03	1862.34	1841.31
12	1830.01	1818.36	1812.64	1816.89	1835.92	1855.23	1860.96	1868.68	1870.84	1870.99	1861.69	1840.57
13	1829.59	1817.75	1812.30	1817.21	1837.60	1856.56	1861.05	1868.67	1870.84	1870.95	1861.04	1839.83
14	1829.20	1817.15	1812.31	1817.59	1838.81	1857.54	1861.13	1868.71	1870.86	1870.87	1860.39	1839.07
15	1828.76	1816.52	1813.35	1817.96	1839.71	1857.81	1861.18	1868.84	1870.95	1870.73	1859.73	1838.41
16	1828.31	1815.89	1817.49	1818.33	1840.62	1857.87	1861.25	1868.88	1871.02	1870.55	1859.09	1837.98
17	1827.87	1815.41	1820.39	1818.73	1843.20	1857.79	1861.34	1868.91	1871.05	1870.38	1858.41	1837.65
18	1827.42	1815.31	1820.32	1819.19	1847.65	1857.88	1861.49	1868.93	1871.06	1870.22	1857.74	1837.28
19	1826.98	1815.13	1819.55	1819.83	1848.30	1858.18	1861.68	1868.96	1870.96	1870.05	1857.05	1836.93
20	1826.53	1814.78	1818.59	1820.29	1847.64	1858.40	1861.90	1868.97	1870.90	1869.87	1856.37	1836.56
21	1826.10	1814.44	1817.83	1820.65	1846.92	1858.70	1862.19	1869.04	1870.83	1869.65	1855.66	1836.19
22	1825.72	1813.96	1816.87	1821.02	1846.30	1859.24	1862.53	1869.08	1870.78	1869.41	1855.01	1835.86
23	1825.42	1813.46	1815.70	1821.36	1845.57	1859.58	1862.89	1869.24	1870.82	1869.17	1854.50	1835.55
24	1825.04	1813.02	1814.97	1821.84	1845.53	1859.73	1863.19	1869.41	1870.84	1868.94	1853.86	1835.23
25	1824.66	1812.69	1814.64	1822.28	1846.40	1859.89	1863.45	1869.54	1870.84	1868.69	1853.23	1834.87
26	1824.37	1812.36	1814.29	1822.84	1847.27	1860.04	1863.66	1869.58	1870.83	1868.43	1852.57	1834.51
27	1824.04	1812.07	1813.86	1823.78	1847.94	1860.25	1863.91	1869.54	1870.81	1868.16	1851.87	1834.12
28	1823.70	1811.89	1813.30	1824.24	1848.46	1860.37	1864.25	1869.55	1870.80	1867.89	1851.17	1833.75
29	1824.25	1812.05	1812.69	1824.35	---	1860.87	1864.68	1869.56	1870.82	1867.59	1850.55	1833.38
30	1824.61	1811.95	1812.05	1824.32	---	1865.45	1865.21	1869.48	1870.83	1867.30	1850.03	1833.01
31	1824.52	---	1811.83	1824.69	---	1866.19	---	1869.43	---	1867.00	1849.37	---
MEAN	1828.44	1817.14	1814.62	1818.29	1838.44	1856.58	1862.10	1868.72	1870.65	1869.92	1858.76	1839.52
MAX	1834.09	1824.29	1820.39	1824.69	1848.46	1866.19	1865.21	1869.58	1871.17	1871.06	1866.67	1848.67
MIN	1823.70	1811.89	1811.83	1811.86	1825.53	1848.95	1860.43	1865.78	1869.40	1867.00	1849.37	1833.01
(†)	318500	284900	284600	319000	388300	445300	442000	446200	461000	448000	391100	342400
(‡)	-28100	-33600	-300	+34400	+69300	+57000	-3300	+14200	+4800	-13000	-56900	-48700

WTR YR 1983 MEAN 1845.30 MAX 1871.17 MIN 1811.83 AC-FT# -4200

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.

## ROGUE RIVER BASIN

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 upstream from Big Butte Creek, 0.1 southwest of McLeod, and at mile 155.6.

DRAINAGE AREA.--690 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--May 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 15.0°C June 22, July 3, 1981; minimum, 0.5°C Jan. 9, 1977; minimum since full operation of Lost Creek Lake, 3.5°C Feb. 1-9, 15, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 14.0°C June 26; minimum, 4.5°C several days in January and February.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.0	9.0	8.0	7.5	7.5	7.0	5.5	5.0	5.5	4.5	5.5	5.0
2	10.0	9.5	8.0	7.5	7.0	7.0	5.5	5.0	5.0	4.5	5.0	5.0
3	10.0	9.0	8.5	7.5	7.5	7.0	5.5	5.0	5.0	4.5	5.0	5.0
4	9.5	7.5	8.5	8.0	7.5	7.0	5.5	5.5	5.5	4.5	5.5	5.0
5	8.0	7.5	8.5	8.0	7.5	7.5	5.5	5.0	5.5	4.5	5.5	5.0
6	8.0	7.5	8.5	8.0	7.5	7.0	5.5	5.0	5.0	4.5	5.5	5.0
7	8.0	7.5	8.5	8.0	7.0	7.0	5.5	5.0	5.0	4.5	5.5	5.0
8	8.5	7.5	8.5	8.0	7.0	6.5	5.5	5.0	5.0	5.0	5.5	5.0
9	8.5	8.0	8.5	8.0	7.0	6.5	5.5	5.0	---	---	5.5	5.0
10	8.5	7.5	8.5	8.0	7.0	6.5	5.5	5.0	---	---	5.5	5.0
11	8.5	7.5	8.0	8.0	7.0	6.5	5.5	5.0	---	---	5.5	5.0
12	8.0	7.0	8.0	8.0	6.5	6.5	5.5	5.0	5.5	5.0	5.5	5.5
13	8.0	7.0	8.0	8.0	6.5	6.5	5.5	5.0	5.5	5.0	5.5	5.0
14	7.5	7.0	8.0	7.5	6.5	6.5	5.5	5.0	5.0	5.0	5.5	5.0
15	8.0	7.5	8.0	7.5	7.0	6.5	5.0	5.0	5.0	5.0	6.0	5.5
16	8.0	7.5	8.0	7.5	7.0	6.0	5.0	5.0	5.0	5.0	5.5	5.0
17	7.5	7.5	8.0	8.0	6.5	6.0	5.5	5.0	5.5	5.0	5.5	5.0
18	7.5	6.5	8.0	7.5	6.5	6.0	5.5	5.0	5.5	5.0	6.0	5.5
19	7.0	6.5	8.0	7.5	6.5	6.0	5.0	5.0	5.0	5.0	6.0	5.5
20	7.0	6.5	8.0	7.5	---	---	5.0	5.0	5.5	5.0	5.5	5.0
21	7.5	6.5	8.0	7.5	---	---	5.0	4.5	5.5	5.0	6.0	5.5
22	8.0	7.0	8.0	7.5	---	---	5.5	5.0	5.5	5.0	5.5	5.0
23	7.5	7.0	8.0	7.5	---	---	5.0	4.5	5.5	5.5	5.5	5.5
24	8.0	7.0	8.0	7.5	---	---	5.0	5.0	5.5	5.5	5.5	5.5
25	8.0	7.0	7.5	7.0	---	---	5.0	5.0	5.5	5.0	5.5	5.0
26	8.0	7.0	7.5	7.0	---	---	5.0	4.5	5.5	5.0	5.5	5.5
27	8.0	7.0	7.5	7.5	---	---	5.0	4.5	5.5	5.0	6.0	5.5
28	8.0	7.5	7.5	7.5	---	---	5.0	5.0	5.5	5.0	5.5	5.0
29	7.5	7.5	7.5	7.0	---	---	5.0	4.5	---	---	5.5	5.5
30	8.0	7.5	7.5	7.0	5.5	5.5	5.0	4.5	---	---	6.0	5.5
31	8.0	7.5	---	---	5.5	5.0	5.5	5.0	---	---	6.5	5.5
MONTH	10.0	6.5	8.5	7.0	7.5	5.0	5.5	4.5	5.5	4.5	6.5	5.0

ROGUE RIVER BASIN

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1433507500 ROGUE RIVER AT MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	6.0	8.0	7.5	---	---	11.0	10.0	11.5	9.5	10.5	10.0
2	6.0	5.5	10.0	7.5	---	---	12.0	10.5	10.5	9.5	10.5	10.0
3	6.0	5.5	10.0	9.0	---	---	12.0	11.0	10.5	9.5	10.5	10.0
4	6.5	5.5	10.0	9.0	---	---	12.0	11.0	10.5	9.5	11.0	10.0
5	6.0	5.5	10.0	8.5	---	---	11.5	10.5	10.5	9.5	11.0	10.0
6	6.0	5.5	10.0	8.0	---	---	12.0	10.5	10.5	9.5	11.0	10.0
7	6.0	5.5	8.5	7.5	---	---	11.5	10.5	10.5	10.0	11.0	10.0
8	6.0	5.5	8.5	7.5	---	---	11.5	10.5	10.5	10.0	11.0	10.0
9	6.0	5.5	8.0	7.5	---	---	11.5	10.5	10.5	10.0	11.0	10.0
10	6.0	5.0	8.5	7.5	---	---	12.0	10.5	10.5	10.0	10.5	10.0
11	6.0	5.5	9.0	7.5	---	---	12.0	11.0	11.0	10.0	10.5	10.0
12	6.0	5.0	9.0	8.0	---	---	11.5	10.5	11.0	10.0	11.0	10.0
13	6.0	5.0	9.5	8.5	---	---	12.0	10.5	11.0	10.0	11.0	10.0
14	6.0	5.5	9.0	8.5	---	---	11.5	10.5	11.0	10.5	11.0	10.5
15	6.0	5.5	9.0	8.0	12.0	10.5	11.5	10.5	11.5	10.0	11.0	10.0
16	6.0	5.5	9.0	7.5	12.0	11.0	11.5	10.5	11.5	10.5	11.0	10.0
17	6.0	5.5	9.5	8.5	13.0	10.0	11.5	10.5	11.5	9.0	11.0	10.0
18	---	---	10.0	8.5	12.5	10.5	11.5	10.5	10.5	9.0	10.5	10.0
19	---	---	9.5	8.0	12.5	10.5	11.5	10.5	10.0	9.5	11.5	10.0
20	---	---	10.0	8.5	12.0	11.0	12.0	10.5	10.5	9.5	11.0	10.0
21	---	---	10.0	8.5	12.0	11.0	12.0	10.0	10.5	9.5	11.0	10.0
22	---	---	10.0	9.0	12.5	11.0	11.5	10.0	---	---	11.0	10.5
23	---	---	10.0	9.5	12.0	11.0	11.5	10.5	---	---	11.0	10.5
24	---	---	10.5	9.0	12.5	11.5	11.5	11.0	---	---	11.0	10.5
25	---	---	10.0	8.5	13.0	11.0	11.5	11.0	---	---	11.0	10.0
26	---	---	9.5	8.5	14.0	11.0	12.0	11.0	---	---	10.0	8.5
27	---	---	9.5	9.0	12.5	11.0	12.0	11.0	---	---	10.0	9.0
28	---	---	9.5	9.0	11.5	10.5	12.0	11.0	---	---	10.0	9.0
29	---	---	---	---	11.5	10.5	12.0	11.0	---	---	10.0	8.5
30	8.0	7.0	---	---	11.0	10.5	12.5	11.0	---	---	10.0	9.0
31	---	---	---	---	---	---	12.5	11.0	---	---	---	---
MONTH	8.0	5.0	10.5	7.5	14.0	10.0	12.5	10.0	11.5	9.0	11.5	8.5

## 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 downstream from Ginger Creek, 0.6 mi east of town of Butte Falls, and at mile 14.0.

DRAINAGE AREA.--138 mi<sup>2</sup>.

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, from river-profile map. Sept. 21, 1910, to Sept. 30, 1922, nonrecording gage at site 300 ft upstream at different datums.

REMARKS.--Records good except those for July to September, which are fair. Flow slightly regulated since 1952 by Willow Creek Reservoir, capacity, 7,320 acre-ft. Diversions for irrigation above station and for municipal water supply for Medford (since 1927) and Butte Falls.

AVERAGE DISCHARGE.--64 years (water years 1911, 1918-22, 1926-83), 155 ft<sup>3</sup>/s, 112,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 7.65 ft, from rating curve extended above 1,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 29 ft<sup>3</sup>/s Sept. 26, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2030	610	2.45	Mar. 31	1200	*829	*2.77
Feb. 17	2130	745	2.65				

Minimum, 46 ft<sup>3</sup>/s Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	56	79	92	125	236	661	191	179	123	94	95
2	47	54	113	105	120	222	628	179	161	133	94	93
3	47	52	113	130	115	212	553	170	148	118	96	92
4	49	52	101	140	110	203	476	188	140	113	96	92
5	49	52	118	145	108	194	415	268	135	110	94	92
6	54	57	133	140	110	182	370	247	128	110	94	92
7	56	56	113	130	120	176	339	236	125	113	94	91
8	54	54	94	120	113	173	309	254	125	118	92	91
9	50	52	85	115	197	167	289	257	123	110	92	90
10	50	52	81	110	257	185	275	254	135	108	92	90
11	49	50	75	100	282	191	257	247	148	108	92	90
12	50	50	75	95	289	188	240	240	135	105	92	89
13	50	50	87	90	289	233	226	229	123	105	92	89
14	49	50	81	90	293	243	212	222	120	103	90	88
15	49	50	133	90	352	233	203	222	118	103	87	88
16	49	52	370	90	325	222	191	209	115	103	90	88
17	50	57	415	90	450	209	185	197	113	105	90	87
18	49	72	254	90	628	203	182	191	115	103	90	87
19	49	75	240	90	520	191	176	185	115	103	92	87
20	49	72	209	90	445	182	173	182	113	103	92	86
21	49	74	203	90	420	176	173	179	118	101	92	88
22	49	70	185	94	395	173	176	176	113	98	98	100
23	54	59	167	100	366	167	176	176	110	98	110	90
24	50	57	143	115	361	170	179	176	110	98	95	86
25	50	56	128	138	330	179	179	176	108	101	90	86
26	57	56	133	145	293	164	185	173	105	101	88	86
27	52	57	125	158	271	173	173	170	105	101	88	85
28	54	59	100	158	250	167	164	164	108	101	86	85
29	90	79	95	150	---	215	164	161	108	98	86	85
30	75	83	92	143	---	710	179	155	108	96	120	85
31	59	---	92	135	---	773	---	153	---	96	100	---
TOTAL	1637	1765	4432	3568	7934	7112	8108	6227	3707	3286	2898	2673
MEAN	52.8	58.8	143	115	283	229	270	201	124	106	93.5	89.1
MAX	90	83	415	158	628	773	661	268	179	133	120	100
MIN	47	50	75	90	108	164	164	153	105	96	86	85
AC-FT	3250	3500	8790	7080	15740	14110	16080	12350	7350	6520	5750	5300
CAL YR 1982	TOTAL	56945	MEAN	156	MAX	1250	MIN	47	AC-FT	113000		
WTR YR 1983	TOTAL	53347	MEAN	146	MAX	773	MIN	47	AC-FT	105800		

NOTE.--No gage-height record Aug. 24 to Sept. 29.



## 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 upstream from county road bridge, 0.9 mi south of McLeod, and at mile 0.64.

DRAINAGE AREA.--245 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. Oct. 9, 1945, to Sept. 30, 1957, nonrecording gage at site 260 ft downstream at datum 0.53 ft higher.

REMARKS.--Water-discharge records good. Slight regulation by fish hatchery 600 ft 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.--28 years, 284 ft<sup>3</sup>/s, 205,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 12.75 ft, site and datum then in use, from rating curve extended above 3,300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 6.4 ft<sup>3</sup>/s June 23, 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 18.6 ft, present site, from floodmark by local resident, discharge, 16,800 ft<sup>3</sup>/s, from rating curve, at former site, extended above 9,000 ft<sup>3</sup>/s and field estimate of overflow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2100	3,780	9.13	Feb. 17	2130	4,400	9.76
Feb. 9	2230	2,050	6.97	Mar. 30	0600	*4,500	*9.85

Minimum, 61 ft<sup>3</sup>/s Aug. 18.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	163	250	173	213	519	1800	329	219	126	81	87
2	147	156	424	170	200	459	1650	281	208	139	80	83
3	147	152	335	193	188	426	1390	260	189	125	81	78
4	148	128	283	249	176	406	1120	259	190	114	81	77
5	146	76	337	233	168	394	952	596	164	109	79	76
6	162	77	377	226	214	353	809	489	156	108	79	75
7	181	83	252	249	325	339	726	433	148	113	78	75
8	164	79	191	257	246	328	633	546	143	128	76	76
9	157	73	163	249	1070	316	559	565	136	118	74	77
10	154	72	142	220	1130	376	522	494	165	111	73	79
11	150	71	126	208	897	376	472	452	187	108	74	73
12	150	70	122	196	954	442	434	423	163	106	71	72
13	149	69	177	182	913	624	395	400	147	104	70	93
14	147	69	207	171	900	728	367	383	138	103	69	70
15	150	69	964	165	1050	560	340	378	131	101	66	69
16	150	70	2130	168	900	534	318	346	126	101	65	72
17	153	77	2020	173	2040	519	301	317	123	102	66	73
18	152	138	860	165	2350	494	297	296	124	101	64	73
19	150	156	787	205	1480	462	293	281	120	102	65	77
20	150	138	656	195	1180	427	281	265	116	105	69	74
21	153	151	695	180	1110	410	277	256	122	101	66	71
22	153	143	577	181	1010	418	277	250	118	98	70	70
23	163	100	524	204	904	405	277	242	113	97	115	81
24	159	87	391	273	909	408	305	234	114	94	91	82
25	159	82	324	249	796	464	293	229	113	94	75	75
26	174	79	330	325	702	427	299	224	109	93	76	73
27	164	79	311	338	626	614	272	217	107	92	74	78
28	164	87	261	307	545	482	257	211	110	91	75	75
29	267	168	245	281	---	882	254	217	109	87	82	71
30	242	293	200	251	---	3430	286	195	110	85	124	80
31	180	---	187	231	---	2580	---	190	---	83	100	---
TOTAL	5034	3255	14848	6867	23196	19602	16456	10258	4218	3239	2409	2285
MEAN	162	109	479	222	828	632	549	331	141	104	77.7	76.2
MAX	267	293	2130	338	2350	3430	1800	596	219	139	124	93
MIN	146	69	122	165	168	316	254	190	107	83	64	69
AC-FT	9980	6460	29450	13620	46010	38880	32640	20350	8370	6420	4780	4530
CAL YR 1982	TOTAL	120246	MEAN	329	MAX	3620	MIN	50	AC-FT	238500		
WTR YR 1983	TOTAL	111667	MEAN	306	MAX	3430	MIN	64	AC-FT	221500		

## ROGUE RIVER BASIN

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1970 to current year.

INSTRUMENTATION.--Temperature recorder since August 1970.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.0°C at times in 1973, 1977, 1979-81; minimum, 0.0°C at times in 1971, 1972, 1977-80.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.0°C July 13, 31, Aug. 8; minimum, 1.5°C Dec. 29 to Jan. 1.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

ROGUE RIVER BASIN

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14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## ROGUE RIVER BASIN

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 downstream from Big Butte Creek, 1.6 mi southwest of McLeod, and at mile 154.0.

DRAINAGE AREA.--938 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,489.08 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Diversions for irrigation above station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--18 years, 2,137 ft<sup>3</sup>/s, 1,548,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft<sup>3</sup>/s Mar. 3, 1972, gage height, 12.24 ft; minimum, 468 ft<sup>3</sup>/s Feb. 18, 1977, result of closure of Lost Creek Dam, minimum prior to that time, 604 ft<sup>3</sup>/s Sept. 5, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1928, 20.35 ft Dec. 22, 1964, from floodmarks, discharge, 74,300 ft<sup>3</sup>/s, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft<sup>3</sup>/s Apr. 1, gage height, 6.66 ft; minimum, 1,230 ft<sup>3</sup>/s Feb. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1870	1910	2100	1950	1280	3000	9470	2190	4350	2560	2240	2610
2	1870	1910	2240	1940	1280	2940	9910	2110	3600	3290	2240	2610
3	1870	2070	2810	1980	1270	2910	8990	2100	3230	2820	2230	2600
4	1870	2150	3580	2080	1250	2730	6660	2100	3230	2580	2230	2600
5	1880	2110	3810	2160	1250	2410	4800	2770	3200	2540	2210	2600
6	1890	2100	3850	1990	1290	2380	4100	3200	3100	2320	2210	2600
7	1930	2110	3700	2070	1420	2340	3790	3470	2980	2140	2200	2530
8	1920	2110	3620	2120	1330	2340	3640	3590	3020	2160	2530	2500
9	1910	2100	3280	2080	2330	2330	3450	3630	3070	2150	2630	2490
10	1890	2110	2970	2060	2340	2590	3420	3540	3490	2130	2630	2490
11	1890	2110	2940	2000	2010	2800	3230	3470	3940	2130	2620	2500
12	1890	2110	2930	1980	2070	2860	2940	3290	3620	2120	2620	2520
13	1880	2110	2710	1890	2000	3090	2810	3230	3110	2120	2620	2530
14	1870	2110	2270	1810	2510	3700	2700	3210	2990	2170	2620	2500
15	1870	2090	2800	1750	3270	4050	2630	3250	2830	2220	2630	2340
16	1890	2080	2810	1750	2880	4000	2600	3340	2810	2220	2640	1990
17	1890	2080	3960	1760	3970	3980	2580	3370	2860	2220	2590	1830
18	1880	2160	4910	1750	3970	3390	2580	3430	2930	2230	2590	1830
19	1880	2180	5350	1820	6520	2890	2590	3660	2900	2220	2590	1840
20	1890	2160	5200	1870	7270	2850	2580	3750	2720	2220	2590	1840
21	1880	2180	5240	1870	7210	2600	2630	4040	2680	2220	2590	1830
22	1880	2170	5090	1870	7060	2280	2660	4180	2480	2220	2640	1850
23	1890	2110	5030	1890	6930	2490	2650	4280	2340	2210	2680	1840
24	1890	2010	3900	1940	5650	2830	2700	4620	2340	2210	2630	1860
25	1890	1850	3150	1920	3760	2870	2680	5000	2360	2200	2560	1870
26	1920	1840	3120	2210	3190	2840	2600	5220	2350	2210	2570	1860
27	1910	1840	3090	2750	3110	3060	2440	5210	2340	2200	2590	1870
28	1920	1840	3040	2790	3030	2910	2200	5210	2270	2200	2590	1840
29	1980	1990	3030	2900	---	3390	2100	5340	2240	2200	2600	1830
30	1970	2480	3010	2880	---	5160	2140	5270	2240	2200	2640	1840
31	1930	---	2310	2080	---	8540	---	4630	---	2230	2610	---
TOTAL	58790	62180	107850	63910	91450	98550	110270	115700	87620	70860	78160	65840
MEAN	1896	2073	3479	2062	3266	3179	3676	3732	2921	2286	2521	2195
MAX	1980	2480	5350	2900	7270	8540	9910	5340	4350	3290	2680	2610
MIN	1870	1840	2100	1750	1250	2280	2100	2100	2240	2120	2200	1830
AC-FT	116600	123300	213900	126800	181400	195500	218700	229500	173800	140600	155000	130600
CAL YR 1982	TOTAL	965720	MEAN	2646	MAX	9980	MIN	1010	AC-FT	1916000		
WTR YR 1983	TOTAL	1011180	MEAN	2770	MAX	9910	MIN	1250	AC-FT	2006000		

ROGUE RIVER BASIN

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14337600 ROGUE RIVER NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1970 to current year.

INSTRUMENTATION.--Temperature recorder since August 1970.

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. Maximum since full operation of Lost Creek Lake, 15.0°C July 1, 1980; minimum, 3.0°C Feb. 2, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 12.5°C June 24-27, July 30 to Aug. 1; minimum recorded, 4.5°C Feb. 4, 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.0	9.5	8.0	8.0	7.0	6.5	---	---	5.5	5.0	5.5	5.5
2	10.0	9.5	8.0	7.5	7.0	6.5	---	---	5.0	5.0	5.5	5.5
3	10.0	9.5	8.0	7.5	7.0	6.5	---	---	5.0	5.0	5.5	5.5
4	9.5	8.5	8.5	8.0	7.5	7.0	---	---	5.0	4.5	5.5	5.5
5	8.5	8.0	8.5	8.0	7.5	7.0	---	---	5.0	5.0	5.5	5.5
6	8.0	8.0	8.5	8.5	7.0	7.0	---	---	5.0	5.0	5.5	5.5
7	8.5	8.0	8.5	8.0	7.0	6.5	---	---	5.0	5.0	5.5	5.5
8	8.5	8.0	8.5	8.0	6.5	6.5	---	---	5.5	5.0	5.5	5.5
9	8.5	8.0	8.0	8.0	6.5	6.5	---	---	5.5	5.0	6.0	5.5
10	8.5	8.0	8.0	8.0	6.5	6.5	---	---	5.0	4.5	6.0	5.5
11	8.5	8.0	8.0	8.0	6.5	6.5	---	---	5.5	5.0	6.0	5.5
12	8.0	7.5	8.0	8.0	6.5	6.5	---	---	6.0	5.5	6.0	5.5
13	8.0	7.5	8.0	8.0	6.5	6.5	---	---	6.0	6.0	6.0	6.0
14	8.0	7.5	8.0	7.5	6.5	6.0	5.0	5.0	6.0	5.5	6.0	5.5
15	8.0	7.5	8.0	7.5	6.0	6.0	5.0	5.0	5.5	5.5	6.0	5.5
16	8.0	7.5	8.0	7.5	6.5	6.0	5.0	5.0	5.5	5.5	5.5	5.5
17	8.0	8.0	8.0	8.0	6.5	6.0	5.5	5.0	6.0	5.5	5.5	5.5
18	8.0	7.0	8.0	7.5	6.0	6.0	5.5	5.5	6.5	6.0	6.0	5.5
19	7.0	7.0	7.5	7.5	6.0	6.0	5.5	5.5	6.0	5.5	6.0	5.5
20	9.0	7.0	7.5	7.5	6.0	6.0	5.5	5.0	5.5	5.5	6.0	5.5
21	7.5	7.0	7.5	7.5	6.0	6.0	5.0	5.0	5.5	5.5	6.0	5.5
22	7.5	7.5	7.5	7.5	6.0	6.0	5.5	5.0	5.5	5.5	6.0	5.5
23	7.5	7.5	7.5	7.5	6.0	6.0	5.5	5.0	5.5	5.5	6.0	5.5
24	8.0	7.5	7.5	7.0	6.0	6.0	5.5	5.5	6.0	5.5	6.0	5.5
25	8.0	7.5	7.5	7.0	6.0	5.5	5.5	5.0	6.0	5.5	6.0	5.5
26	7.5	7.5	7.0	7.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
27	8.0	7.5	7.0	7.0	5.5	5.5	5.5	5.0	5.5	5.5	6.0	5.5
28	7.5	7.5	7.0	7.0	5.5	5.0	5.5	5.0	5.5	5.5	6.0	5.5
29	8.0	7.5	7.0	7.0	---	---	5.5	5.0	---	---	6.5	5.5
30	8.0	8.0	7.0	7.0	---	---	5.0	5.0	---	---	7.5	6.5
31	8.0	8.0	---	---	---	---	5.5	5.0	---	---	7.0	6.5
MONTH	10.0	7.0	8.5	7.0	7.5	5.0	5.5	5.0	6.5	4.5	7.5	5.5



## ROGUE RIVER BASIN

14337600 ROGUE RIVER NEAR MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	6.0	8.0	7.5	9.0	9.0	11.0	11.0	12.5	11.0		
2	6.0	6.0	9.0	7.5	9.5	9.0	11.5	10.5	11.0	10.5		
3	6.0	5.5	10.0	9.0	10.0	9.0	12.0	11.5	10.5	10.0		
4	6.0	6.0	10.0	9.5	10.5	9.5	12.0	11.5	11.0	10.5		
5	6.5	6.0	9.5	9.5	11.0	10.0	12.0	11.5	10.5	10.5		
6	6.0	6.0	9.5	8.5	11.5	10.5	11.5	11.5	11.0	10.5		
7	6.5	6.0	8.5	8.5	12.0	11.0	11.5	11.5	11.0	10.5		
8	6.5	6.0	8.5	8.0	12.0	11.5	11.5	11.0	11.0	10.5		
9	6.0	6.0	8.0	8.0	12.0	11.5	11.5	11.0	11.0	10.5		
10	6.0	6.0	8.5	8.0	11.5	11.0	12.0	11.0	11.0	10.5		
11	6.0	5.5	8.5	8.0	11.0	10.0	12.0	11.5	11.0	10.5		
12	6.0	5.5	9.0	8.5	11.0	10.5	12.0	11.5	11.0	10.5		
13	6.0	5.5	9.0	8.5	11.5	11.0	11.5	11.0	11.0	10.5		
14	6.0	5.5	9.5	9.0	11.0	11.0	11.5	11.0	11.5	10.5		
15	6.0	5.5	9.0	8.5	12.0	10.5	11.5	11.0	11.5	11.0		
16	6.5	6.0	9.0	8.5	12.0	11.5	11.5	11.0	11.5	11.0		
17	6.5	6.0	9.5	8.5	12.0	11.0	11.5	11.0	11.5	11.0		
18	6.5	6.0	9.5	9.0	12.0	11.0	11.5	11.0	11.0	10.0		
19	6.5	6.0	9.5	9.0	12.0	11.5	11.5	11.0	10.0	10.0		
20	7.0	6.0	9.5	9.0	12.0	11.5	12.0	11.5	10.5	10.0		
21	7.5	6.5	10.0	9.5	12.0	11.5	12.0	11.5	10.5	10.0		
22	7.5	7.5	10.0	9.5	12.0	11.5	12.0	11.0	10.5	10.0		
23	7.5	7.0	10.0	9.5	12.0	11.5	12.0	11.5	10.5	10.0		
24	7.5	7.0	10.0	9.5	12.5	11.5	12.0	11.5	10.5	10.0		
25	7.5	7.0	9.5	9.5	12.5	12.0	11.5	11.5	10.5	10.5		
26	8.0	7.5	9.5	9.0	12.5	12.0	12.0	11.5	10.5	10.0		
27	8.0	7.5	9.5	9.0	12.5	12.0	12.0	11.5	10.5	10.5		
28	8.0	7.5	9.5	9.0	12.0	11.5	12.0	11.5	10.5	10.5		
29	8.0	7.5	9.5	9.0	11.5	11.0	12.0	11.5	10.5	10.0		
30	8.0	7.5	9.5	9.0	11.5	11.0	12.5	11.5	---	---		
31	---	---	9.0	9.0	---	---	12.5	12.0	---	---		
MONTH	8.0	5.5	10.0	7.5	12.5	9.0	12.5	10.5	12.5	10.0		

## 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 downstream from Sugarpine Creek, 6.5 mi northwest of town of Cascade Gorge, and at mile 10.7.

DRAINAGE AREA.--78.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,813.83 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water-discharge records good. No regulation. Many diversions above station for irrigation.

AVERAGE DISCHARGE.--10 years, 154 ft<sup>3</sup>/s, 26.54 in/yr, 111,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 8.9 ft, from floodmark; minimum daily, 0.72 ft<sup>3</sup>/s Aug. 24, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2000	3,010	6.84	Mar. 30	0400	3,670	7.29
Feb. 17	2030	*4,210	*7.63				

Minimum, 3.4 ft<sup>3</sup>/s Aug. 15, 16.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	11	33	239	120	199	329	895	217	82	50	8.1	13		
2	9.8	26	487	180	168	324	681	191	75	41	7.8	11		
3	9.3	21	728	280	141	298	565	168	69	34	7.8	9.5		
4	9.1	19	613	380	122	269	457	156	63	29	7.1	8.8		
5	8.8	17	905	350	108	259	363	210	58	26	6.8	8.1		
6	14	18	770	500	129	235	330	213	54	24	6.8	7.9		
7	21	17	405	600	169	240	300	191	52	25	6.5	7.6		
8	17	17	268	540	177	260	265	220	50	25	6.2	7.2		
9	14	16	200	420	698	255	239	269	47	23	6.5	6.9		
10	12	15	150	310	722	301	210	269	58	20	6.2	6.5		
11	11	14	117	250	877	275	181	246	53	19	6.5	6.5		
12	9.9	14	104	225	1140	296	159	226	46	17	6.2	6.2		
13	9.3	13	159	200	847	519	141	201	42	16	5.7	6.0		
14	8.8	13	241	183	647	585	125	183	39	16	5.2	5.9		
15	8.7	13	1190	165	663	499	114	180	37	15	4.4	5.9		
16	8.3	13	2390	162	565	378	108	167	35	15	4.3	5.6		
17	8.3	23	1500	156	2110	331	109	157	34	15	4.4	5.5		
18	8.5	153	740	166	2560	288	116	150	34	15	4.1	5.5		
19	8.7	167	640	244	1180	240	129	149	33	20	5.4	6.1		
20	8.3	126	700	219	741	201	129	152	31	20	5.7	5.4		
21	8.9	104	900	190	688	178	133	156	29	16	4.4	5.1		
22	11	93	700	171	585	182	131	152	27	15	5.0	5.0		
23	23	67	450	203	489	179	122	151	27	13	18	6.0		
24	18	56	290	283	418	190	120	150	27	12	12	7.3		
25	15	48	260	285	392	302	115	146	25	12	8.4	6.5		
26	26	46	280	581	418	316	131	131	24	11	7.5	6.0		
27	25	54	290	732	352	421	121	118	23	11	6.9	5.5		
28	21	101	200	524	328	395	122	109	23	11	6.9	5.4		
29	124	278	170	388	---	613	181	102	23	10	11	5.3		
30	92	346	150	293	---	2620	176	92	23	9.2	27	5.3		
31	49	---	130	239	---	1340	---	87	---	7.8	17	---		
TOTAL	628.7	1941	16366	9539	17633	13118	6968	5309	1243	593.0	245.8	202.5		
MEAN	20.3	64.7	528	308	630	423	232	171	41.4	19.1	7.93	6.75		
MAX	124	346	2390	732	2560	2620	895	269	82	50	27	13		
MIN	8.3	13	104	120	108	178	108	87	23	7.8	4.1	5.0		
CFSM	.26	.82	6.70	3.91	7.99	5.37	2.94	2.17	.53	.24	.10	.09		
IN.	.30	.92	7.73	4.50	8.32	6.19	3.29	2.51	.59	.28	.12	.10		
AC-FT	1250	3850	32460	18920	34980	26020	13820	10530	2470	1180	488	402		
CAL YR 1982	TOTAL	67710.6	MEAN	186	MAX	2390	MIN	2.4	CFSM	2.36	IN.	31.96	AC-FT	134300
WTR YR 1983	TOTAL	73787.0	MEAN	202	MAX	2620	MIN	4.1	CFSM	2.56	IN.	34.83	AC-FT	146400

## 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 1977 to current year.

INSTRUMENTATION.--Temperature recorder August 1973 to October 1976 and since August 1977.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.5°C July 29, 30, 1973, Aug. 9-11, 1981; minimum, 0.0°C Nov. 20-22, 1977, many days during November 1978 through February 1979, Jan. 28-30, 1980, Nov. 14, 15, 1982.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.5°C July 31; minimum, 0.0°C Nov. 14, 15.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	7.5	8.0	5.0	6.5	5.5	4.0	2.0	6.5	4.0	8.5	6.5
2	12.5	7.5	7.5	4.0	6.0	4.0	5.0	3.5	6.0	4.0	8.0	6.0
3	14.0	10.5	8.5	4.5	7.0	6.0	5.0	4.5	5.5	3.5	8.0	6.5
4	13.0	9.5	10.0	7.5	7.5	6.5	6.0	4.0	5.0	2.5	8.5	7.0
5	12.5	7.0	10.0	7.0	7.5	7.0	6.5	5.5	6.0	3.0	8.5	6.5
6	9.5	8.5	9.0	6.0	7.5	6.0	6.5	5.5	5.5	4.5	7.5	6.5
7	10.5	8.5	7.0	4.0	6.0	4.5	7.0	6.0	5.0	3.5	7.5	6.5
8	13.0	8.5	6.0	3.5	5.0	4.0	6.5	5.0	6.0	4.5	8.0	7.0
9	13.0	7.5	5.0	2.0	5.0	4.0	5.5	4.5	5.5	3.5	9.0	7.5
10	13.0	7.5	4.5	1.5	5.0	3.5	5.0	4.0	5.5	4.5	9.0	7.0
11	13.5	8.0	4.0	1.0	5.0	3.5	5.0	4.0	7.0	5.5	9.0	7.0
12	14.0	8.5	5.0	2.0	5.5	4.0	5.0	4.0	7.0	6.0	8.5	7.0
13	13.5	8.5	4.0	1.0	6.0	4.5	5.0	3.5	7.0	6.0	8.0	6.5
14	13.0	9.0	3.5	.0	6.0	5.5	5.0	3.5	6.0	5.5	7.0	5.5
15	13.5	9.5	3.0	.0	7.0	4.5	5.5	3.5	7.0	6.0	8.0	5.5
16	13.0	9.0	3.5	1.5	7.0	6.5	6.0	5.5	7.0	6.0	7.5	5.5
17	12.0	8.0	5.5	3.5	6.5	6.0	7.0	5.5	7.0	6.0	8.0	6.0
18	10.0	5.5	6.5	5.5	6.5	6.0	7.0	6.0	6.5	6.0	8.0	5.5
19	10.0	5.0	6.0	5.5	6.5	5.5	6.5	5.0	7.0	6.0	9.0	4.5
20	10.0	5.5	6.0	5.5	6.5	5.5	5.5	4.0	7.0	6.5	8.0	5.5
21	11.0	8.5	5.5	4.5	6.5	6.0	5.5	4.0	7.5	6.5	8.5	6.5
22	12.5	10.0	6.5	4.5	6.0	5.5	6.0	4.0	8.0	7.0	7.5	6.0
23	13.5	10.5	5.5	3.5	5.5	5.0	6.0	4.5	8.0	7.0	7.5	5.5
24	12.0	8.0	5.0	3.0	5.0	4.0	7.0	5.5	7.5	6.5	7.0	5.5
25	12.0	9.5	5.5	2.5	5.0	3.5	6.5	5.0	6.5	6.0	7.0	4.5
26	10.0	9.0	4.5	3.0	6.0	4.5	7.0	6.0	7.0	5.5	7.0	5.0
27	10.0	7.5	6.0	4.5	5.5	4.0	7.0	6.0	7.5	6.0	7.0	5.0
28	7.5	6.0	7.0	5.5	4.0	3.0	6.5	5.5	7.0	5.5	7.5	6.0
29	9.0	7.5	6.5	6.0	3.5	2.5	6.5	5.0	---	---	7.5	6.5
30	10.5	7.5	6.5	5.5	3.5	2.0	6.0	4.5	---	---	7.5	7.0
31	9.5	6.5	---	---	3.5	2.0	6.5	5.0	---	---	7.5	5.5
MONTH	14.0	5.0	10.0	.0	7.5	2.0	7.0	2.0	8.0	2.5	9.0	4.5

ROGUE RIVER BASIN

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14337800 ELK CREEK NEAR CASCADE GORGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## ROGUE RIVER BASIN

14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR

LOCATION.--Lat 42°42'40", long 122°44'55", in SW¼ sec.7, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on Bureau of Land Management land, on left bank 300 ft upstream from Spot Creek and 5.3 mi northeast of Trail.

DRAINAGE AREA.--14.2 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to September 1976, October 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,773.24 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

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

AVERAGE DISCHARGE.--9 years, 24.6 ft<sup>3</sup>/s, 23.53 in/yr, 17,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 5.30 ft, from rating curve extended above 600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 0.26 ft<sup>3</sup>/s Sept. 16, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1930	556	3.30	Mar. 30	0300	747	3.86
Feb. 17	2130	*789	*3.97				

Minimum, 2.3 ft<sup>3</sup>/s Oct. 13-15, Aug. 17-19, 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	3.2	5.8	31	16	22	52	132	24	9.3	8.7	3.2	3.9		
2	2.8	4.5	50	15	19	50	101	23	9.6	6.9	3.2	3.5		
3	2.7	4.0	112	17	16	42	77	19	9.0	5.9	3.1	3.3		
4	2.5	3.7	136	38	14	36	68	18	7.6	5.3	3.1	3.2		
5	2.5	3.6	108	54	13	32	63	21	7.0	5.0	3.0	3.2		
6	4.5	3.4	94	52	17	28	52	21	6.6	4.8	2.9	3.2		
7	5.1	3.6	45	68	24	28	42	20	6.5	4.8	2.9	3.2		
8	3.8	3.6	24	61	24	27	34	24	6.2	5.3	2.9	3.3		
9	3.3	3.6	16	42	133	27	30	30	5.9	5.1	2.9	3.3		
10	2.8	3.4	12	30	139	33	27	32	8.3	4.6	3.0	3.1		
11	2.7	3.3	9.3	23	138	32	24	29	7.1	4.5	3.0	3.0		
12	2.5	3.3	8.5	20	166	41	22	25	6.3	4.3	2.8	2.9		
13	2.4	3.3	11	17	126	96	19	20	6.0	4.3	2.8	2.9		
14	2.3	3.1	20	15	97	108	18	18	5.9	4.2	2.7	2.9		
15	2.3	3.1	182	14	99	92	17	16	5.6	4.2	2.6	2.9		
16	2.4	3.1	407	13	90	69	16	15	5.4	4.2	2.6	2.8		
17	2.4	5.6	303	13	378	57	15	14	5.4	4.3	2.5	2.8		
18	2.6	40	115	15	463	43	16	13	5.6	4.3	2.5	2.9		
19	2.7	33	85	29	165	31	17	12	5.5	8.3	2.6	3.0		
20	2.5	21	102	28	108	26	15	11	5.3	9.4	2.7	2.8		
21	2.7	16	129	24	105	23	14	9.8	5.1	5.4	2.5	2.7		
22	3.6	14	111	21	82	23	13	9.4	5.0	4.6	2.7	2.8		
23	6.6	10	70	28	66	22	14	9.0	5.0	4.2	4.4	3.7		
24	4.5	9.2	43	48	61	24	16	8.3	4.8	4.2	3.3	3.7		
25	4.1	8.0	32	50	62	33	17	8.0	4.8	4.1	2.8	3.3		
26	6.5	7.5	29	101	70	43	19	7.6	4.8	4.4	2.7	3.1		
27	5.1	7.9	30	106	62	75	19	7.3	4.7	4.0	2.9	3.2		
28	4.8	13	29	82	53	73	18	7.1	4.7	3.7	2.8	3.3		
29	18	44	25	60	---	108	16	7.0	4.7	3.5	4.2	3.2		
30	16	55	21	38	---	469	17	6.7	5.0	3.4	6.6	3.3		
31	8.9	---	18	27	---	193	---	7.7	---	3.2	4.5	---		
TOTAL	138.8	342.6	2407.8	1165	2812	2036	968	492.9	182.7	153.1	96.4	94.4		
MEAN	4.48	11.4	77.7	37.6	100	65.7	32.3	15.9	6.09	4.94	3.11	3.15		
MAX	18	55	407	106	463	469	132	32	9.6	9.4	6.6	3.9		
MIN	2.3	3.1	8.5	13	13	22	13	6.7	4.7	3.2	2.5	2.7		
CFSM	.32	.80	5.47	2.65	7.04	4.63	2.27	1.12	.43	.35	.22	.22		
IN.	.36	.90	6.31	3.05	7.37	5.33	2.54	1.29	.48	.40	.25	.25		
AC-FT	275	680	4780	2310	5580	4040	1920	978	362	304	191	187		
CAL YR 1982	TOTAL	9548.7	MEAN	26.2	MAX	407	MIN	1.6	CFSM	1.85	IN.	25.01	AC-FT	18940
WTR YR 1983	TOTAL	10889.7	MEAN	29.8	MAX	469	MIN	2.3	CFSM	2.10	IN.	28.53	AC-FT	21600



ROGUE RIVER BASIN

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14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1977 to current year.

INSTRUMENTATION.--Temperature recorder since August 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 8, 1978; minimum, 0.0°C Nov. 20-22, 1977, many days during November 1978 to February 1979, and Jan. 28-31, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.5°C July 31; minimum, 1.0°C Nov. 14, 15.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## ROGUE RIVER BASIN

14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.0	9.0	7.0	11.5	10.5	13.0	11.5	19.5	14.0	15.0	11.0
2	7.0	5.5	9.5	6.0	11.5	10.0	13.5	11.0	18.5	14.0	15.0	10.0
3	7.0	5.0	11.5	6.0	15.0	9.0	16.0	9.5	18.5	13.5	15.5	10.5
4	7.5	4.5	11.0	6.5	15.0	9.5	18.0	11.0	18.5	13.0	15.5	11.0
5	8.5	4.5	9.0	7.0	16.0	9.5	19.0	12.5	18.0	12.5	15.5	11.0
6	9.0	4.5	9.0	5.5	17.0	10.5	16.5	13.0	19.0	12.5	15.5	11.0
7	9.5	5.5	7.5	6.0	18.0	11.5	14.0	11.5	19.5	14.5	14.5	11.0
8	9.0	5.0	7.0	5.5	17.5	13.5	12.5	10.5	20.0	15.5	13.0	10.5
9	7.0	5.0	6.5	5.0	16.5	11.5	15.5	9.5	19.0	13.5	12.5	8.0
10	6.5	4.5	8.5	4.5	14.0	11.0	16.5	9.5	16.5	14.0	13.5	8.5
11	7.0	4.0	10.0	4.5	13.0	10.0	18.0	11.5	17.5	12.5	15.0	10.5
12	8.0	3.5	10.0	6.0	15.5	9.0	19.0	13.0	18.0	12.0	16.0	11.0
13	8.0	3.0	12.0	7.0	16.5	9.5	19.5	13.5	17.0	13.0	16.5	12.0
14	9.0	3.5	9.5	8.0	15.5	12.0	17.0	12.5	18.5	13.0	16.0	11.5
15	10.0	4.0	10.5	7.5	16.5	11.0	16.5	11.0	18.0	14.0	15.5	11.0
16	11.5	5.0	11.5	6.5	16.5	11.0	16.0	10.0	19.0	13.5	15.0	11.0
17	10.0	6.0	12.5	6.5	15.5	11.5	14.5	11.5	19.0	13.5	14.0	10.5
18	11.5	6.5	13.5	8.5	13.5	10.5	16.5	11.0	19.0	13.5	12.0	9.5
19	10.5	7.5	14.0	8.0	13.0	9.5	16.5	11.0	16.5	14.5	12.0	8.0
20	10.5	7.5	15.5	9.0	14.5	9.5	16.0	11.0	18.0	14.0	12.0	7.5
21	11.5	8.0	15.5	9.5	16.0	9.0	17.5	11.0	18.0	13.0	12.5	8.0
22	9.5	8.0	16.5	10.0	16.5	11.0	18.5	12.5	16.0	14.0	13.0	10.0
23	8.5	6.0	17.5	11.0	14.0	11.0	18.5	13.0	14.5	13.5	12.5	12.0
24	8.0	5.0	18.0	12.0	16.0	9.5	17.5	13.5	16.5	11.5	14.5	11.0
25	8.0	5.5	18.5	12.5	16.0	10.5	15.5	12.5	17.0	12.5	14.5	10.5
26	10.0	5.0	18.0	12.0	17.0	11.5	16.5	11.0	17.0	12.5	14.5	11.0
27	8.0	5.0	19.0	12.5	17.0	11.5	16.0	12.0	16.5	12.5	13.5	10.0
28	9.5	5.5	19.0	13.5	16.0	12.0	18.0	13.0	16.0	12.0	11.5	8.0
29	10.0	5.5	19.0	14.5	15.5	12.5	19.0	12.5	14.5	13.0	11.0	7.5
30	8.0	7.0	16.0	13.0	13.5	12.0	20.0	14.0	13.5	12.5	11.0	8.0
31	---	---	13.5	11.5	---	---	20.5	15.0	13.0	12.0	---	---
MONTH	11.5	3.0	19.0	4.5	18.0	9.0	20.5	9.5	20.0	11.5	16.5	7.5

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 northeast of Trail and at mile 0.4.

DRAINAGE AREA.--133 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Prior to July 5, 1946, nonrecording gage at various sites within 1.0 mi 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 upstream at datum 12.14 ft higher.

REMARKS.--Water-discharge records good. No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--38 years, 232 ft<sup>3</sup>/s, 168,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.84 ft, from rating curve extended above 4,700 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 0.40 ft<sup>3</sup>/s Aug. 16, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2230	5,500	9.54	Mar. 30	0530	5,740	9.83
Feb. 17	2000	*6,820	*10.60				

Minimum, 6.7 ft<sup>3</sup>/s Sept. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	56	363	195	291	502	1450	293	137	71	14	23
2	19	43	623	180	251	491	1110	275	128	72	13	18
3	16	35	1110	200	221	441	907	246	117	51	14	17
4	15	29	968	508	196	407	756	230	105	41	14	16
5	16	26	1180	562	176	385	616	280	96	36	11	15
6	19	24	1160	511	187	352	507	302	90	34	13	14
7	38	25	578	918	282	348	432	276	82	31	13	13
8	31	23	363	848	273	368	381	302	78	37	11	13
9	24	22	263	655	1270	363	347	370	73	35	11	12
10	20	21	206	503	1470	419	314	377	86	29	11	12
11	17	20	165	416	1510	403	281	345	90	26	11	11
12	15	19	142	363	1680	433	254	314	74	25	9.5	11
13	13	18	202	280	1330	883	231	281	67	24	9.1	9.7
14	12	17	310	247	992	1060	213	260	60	21	9.3	9.2
15	11	17	1760	227	1030	896	197	252	57	20	8.7	9.1
16	11	16	3770	219	896	683	186	236	52	20	7.8	8.9
17	10	27	3190	211	3130	534	184	222	51	21	7.3	8.3
18	10	216	1290	215	4240	435	191	213	52	22	8.2	7.4
19	11	285	938	331	1840	364	204	207	50	21	9.1	7.8
20	11	216	990	314	1170	315	201	207	45	43	9.8	8.1
21	11	177	1360	279	1050	283	200	210	43	28	9.1	8.0
22	14	167	1120	255	906	281	198	204	36	23	9.0	8.2
23	32	117	744	298	768	281	191	202	39	20	19	10
24	34	94	515	418	676	288	197	196	38	19	22	11
25	26	81	399	438	640	452	190	188	35	19	15	12
26	37	75	378	851	715	487	210	180	31	18	13	10
27	43	79	412	1120	611	789	204	168	30	18	12	8.5
28	35	132	356	825	510	743	196	160	30	18	10	9.0
29	132	339	300	599	---	869	240	153	30	17	13	9.8
30	163	536	255	440	---	4200	239	140	30	16	42	9.5
31	85	---	221	348	---	2060	---	135	---	15	33	---
TOTAL	955	2952	25631	13774	28311	20815	11027	7424	1932	891	411.9	339.5
MEAN	30.8	98.4	827	444	1011	671	368	239	64.4	28.7	13.3	11.3
MAX	163	536	3770	1120	4240	4200	1450	377	137	72	42	23
MIN	10	16	142	180	176	281	184	135	30	15	7.3	7.4
AC-FT	1890	5860	50840	27320	56150	41290	21870	14730	3830	1770	817	673
CAL YR 1982	TOTAL	101451.8	MEAN	278	MAX	3770	MIN	2.4	AC-FT	201200		
WTR YR 1983	TOTAL	114463.4	MEAN	314	MAX	4240	MIN	7.3	AC-FT	227000		

## 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.

INSTRUMENTATION.--Enviro-Lab temperature unit since June 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.5°C July 17, 1979; minimum, 0.0°C at times in 1976-78, 1980, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.0°C July 31; minimum recorded, 1.5°C Nov. 14, probably lower during period of no record.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	10.5	9.0	6.0			---	---	6.0	3.5	9.0	---
2	15.0	10.5	8.0	4.5			---	---	5.5	3.5	8.0	6.0
3	15.5	13.0	9.0	5.5			---	---	5.5	3.0	8.5	6.5
4	14.5	12.5	10.5	8.0			---	---	4.5	2.0	8.5	7.0
5	14.5	9.5	10.5	8.0			---	---	5.5	2.5	9.0	6.0
6	12.5	10.5	10.5	8.0			---	---	6.5	4.5	7.0	6.0
7	12.5	10.0	8.5	6.5			---	---	5.5	4.0	7.5	6.5
8	14.5	10.5	9.0	5.5			---	---	---	---	8.0	6.5
9	15.0	10.5	6.0	3.5			---	---	---	---	8.5	7.0
10	15.0	10.5	5.5	3.0			---	---	---	---	9.0	7.0
11	15.5	11.0	5.0	2.5			---	---	---	---	9.5	7.0
12	16.0	11.5	5.0	3.0			---	---	---	---	8.5	7.0
13	15.5	11.5	4.5	2.0			4.5	---	---	---	8.5	6.5
14	15.0	12.0	4.0	1.5			4.0	2.5	---	---	7.0	5.5
15	15.5	12.0	---	---			4.5	2.5	---	---	8.5	6.0
16	15.5	11.5	---	---			5.5	4.5	---	---	7.5	5.5
17	15.0	11.5	---	---			6.5	5.0	---	---	8.5	6.0
18	12.5	8.0	---	---			6.5	6.0	---	---	8.5	6.0
19	12.0	7.5	---	---			6.0	5.0	---	---	9.0	5.0
20	11.5	8.0	---	---			5.5	3.5	---	---	7.5	6.0
21	12.0	10.5	---	---			4.5	3.5	---	---	8.5	6.5
22	14.0	11.5	---	---			5.5	4.0	---	---	8.0	6.5
23	15.0	12.5	---	---			5.5	4.5	---	---	7.5	6.0
24	13.5	10.5	---	---			7.0	5.0	---	---	7.5	6.0
25	13.5	11.5	---	---			6.0	4.5	---	---	7.5	6.0
26	12.0	10.5	---	---			7.0	6.0	---	---	7.0	5.0
27	11.5	9.5	---	---			7.5	6.0	---	---	7.5	5.5
28	9.5	8.5	---	---			6.5	5.0	---	---	7.5	6.0
29	9.0	8.5	---	---			7.0	5.5	---	---	7.5	6.5
30	11.5	9.0	---	---			6.0	4.5	---	---	8.0	7.0
31	10.0	7.5	---	---			6.5	5.0	---	---	8.0	6.0
MONTH	16.0	7.5	10.5	1.5			7.5	2.5	6.5	2.0	9.5	5.0

ROGUE RIVER BASIN

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14338000 ELK CREEK NEAR TRAIL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	8.0	13.5	11.5	---	---	27.5	20.5	20.0	15.0
2	7.0	6.0	11.5	7.0	13.5	11.0	---	---	27.0	21.0	21.0	15.0
3	8.0	5.0	13.0	7.5	17.0	10.0	---	---	26.5	20.0	22.0	16.0
4	8.5	5.0	13.5	8.5	17.5	12.0	---	---	26.5	19.5	22.5	16.5
5	9.0	5.0	11.0	8.5	18.5	12.5	---	---	26.0	19.5	22.5	16.5
6	9.5	5.5	11.0	7.0	19.5	13.5	---	---	27.5	19.5	22.5	17.0
7	10.0	6.5	9.5	8.0	20.5	15.0	---	---	27.0	21.5	21.5	16.5
8	9.0	6.0	8.5	7.0	21.0	17.0	---	---	28.0	22.0	19.5	15.5
9	8.0	6.5	8.5	6.0	19.5	15.0	---	---	27.5	20.5	19.0	13.0
10	8.0	6.0	10.5	5.0	18.0	14.5	---	---	25.0	20.5	20.0	13.5
11	8.0	5.0	11.5	6.0	16.0	12.5	---	---	25.5	19.0	22.0	15.5
12	8.5	5.0	12.5	7.5	18.0	12.0	26.0	---	26.5	18.5	23.0	16.5
13	8.5	5.0	14.0	8.5	---	---	26.5	20.0	23.5	20.0	24.0	18.0
14	9.0	5.0	11.5	9.0	---	---	24.5	18.5	27.0	19.5	23.0	17.0
15	10.5	6.0	13.0	9.0	---	---	23.5	17.0	27.5	21.0	23.0	16.5
16	12.0	6.0	14.0	8.5	---	---	23.0	16.0	27.5	20.5	22.5	16.5
17	10.0	7.5	14.0	8.5	---	---	23.0	18.0	27.5	20.5	21.5	15.5
18	12.5	8.0	15.5	10.5	---	---	23.0	17.0	27.0	20.0	17.5	14.5
19	11.5	9.5	15.5	10.0	---	---	23.0	17.5	23.5	20.5	18.0	12.5
20	11.5	8.5	16.5	11.0	---	---	23.0	16.0	26.0	19.5	18.5	11.5
21	13.5	9.5	16.5	11.0	---	---	24.5	17.0	25.5	19.5	18.0	12.5
22	11.5	9.5	17.0	11.5	---	---	26.0	18.5	22.5	20.0	17.5	14.0
23	9.5	8.0	18.0	12.5	---	---	26.5	19.5	20.5	19.0	17.0	16.0
24	9.0	6.5	18.5	13.0	---	---	25.5	20.0	23.5	17.5	20.5	15.5
25	9.5	6.5	19.0	13.5	---	---	22.0	19.0	24.0	18.5	21.0	16.0
26	11.5	6.5	18.5	13.0	---	---	24.0	16.5	24.0	18.5	21.0	16.0
27	9.5	6.5	19.5	13.0	---	---	23.0	18.0	23.0	18.0	19.5	16.0
28	11.5	7.5	19.0	14.0	---	---	26.0	19.0	22.5	18.5	18.0	13.0
29	12.5	7.5	20.0	15.5	---	---	27.0	19.0	20.5	18.5	16.5	11.5
30	10.5	8.0	18.0	15.0	---	---	28.5	20.5	18.5	17.5	16.0	12.0
31	---	---	15.5	13.0	---	---	29.0	22.0	17.5	16.0	---	---
MONTH	13.5	5.0	20.0	5.0	21.0	10.0	29.0	16.0	28.0	16.0	24.0	11.5



## 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 upstream from Dodge Bridge, 0.7 mi downstream from Reese Creek, 4.3 mi northwest of Eagle Point, and at mile 138.61.

DRAINAGE AREA.--1,215 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1938, nonrecording gage, Dec. 21, 1938, to Aug. 15, 1968, water-stage recorder, at datum 2.27 ft higher, Aug. 16, 1968, to Sept. 30, 1976, water-stage recorder, at datum 1.00 ft 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 low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--45 years, 2,611 ft<sup>3</sup>/s, 1,892,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.78 ft, datum then in use, from rating curve extended above 23,000 ft<sup>3</sup>/s; minimum, 567 ft<sup>3</sup>/s Feb. 18, 1977, result of closure of Lost Creek dam, minimum prior to that time, 611 ft<sup>3</sup>/s Aug. 6, 14, 29, Sept. 9, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,900 ft<sup>3</sup>/s Feb. 17, gage height, 9.75 ft; minimum, 1,350 ft<sup>3</sup>/s Feb. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1900	1970	2740	2080	1610	3850	11900	2610	4330	2460	2180	2630
2	1900	1940	3170	2030	1540	3740	11800	2460	3720	3290	2180	2620
3	1890	2040	4370	2130	1490	3620	10600	2380	3270	2920	2200	2600
4	1890	2180	5130	2550	1420	3440	8110	2350	3260	2570	2200	2600
5	1900	2130	5600	2840	1390	3000	5750	3060	3210	2530	2190	2590
6	1910	2120	5740	2570	1410	2890	4890	3500	3140	2380	2170	2590
7	1970	2120	4540	3050	1890	2850	4330	3740	2970	2150	2160	2550
8	1950	2120	4080	3120	1640	2870	4100	3880	3000	2170	2160	2520
9	1930	2110	3680	2850	5300	2840	3880	4020	3050	2150	2260	2500
10	1910	2110	3200	2610	5770	3170	3780	3930	3350	2130	2580	2490
11	1910	2100	3120	2450	4470	3420	3620	3820	3880	2130	2560	2500
12	1900	2070	3070	2340	4690	3660	3310	3630	3670	2110	2560	2500
13	1890	2060	3020	2200	4100	4890	3110	3520	3140	2100	2560	2520
14	1880	2050	2610	1990	3920	5810	2980	3470	3000	2120	2550	2500
15	1880	2050	6940	1890	5060	5600	2870	3480	2820	2190	2540	2390
16	1900	2100	11700	1880	4220	5070	2810	3540	2790	2190	2530	2030
17	1900	2110	11700	1880	7220	4770	2780	3540	2810	2190	2540	1830
18	1900	2420	7110	1880	14000	4160	2800	3570	2910	2200	2530	1830
19	1880	2660	6870	2170	9560	3460	2840	3710	2900	2200	2530	1830
20	1900	2480	6820	2200	9230	3310	2800	3810	2710	2230	2540	1830
21	1900	2420	7540	2100	9110	3060	2850	4010	2650	2210	2550	1830
22	1900	2440	6940	2070	8650	2720	2850	4170	2520	2190	2580	1840
23	1930	2280	6210	2270	8100	2790	2840	4240	2330	2190	2650	1880
24	1930	2170	4860	2530	7180	3190	2920	4550	2320	2170	2620	1860
25	1920	1940	3670	2490	5000	3470	2900	4940	2330	2180	2560	1870
26	1940	1900	3600	3690	4460	3480	2860	5160	2320	2160	2530	1860
27	1940	1880	3610	4350	4090	4440	2690	5150	2310	2160	2550	1870
28	1940	1950	3460	3980	3840	3980	2460	5130	2250	2160	2560	1860
29	2120	2300	3340	3670	---	4880	2380	5230	2220	2160	2590	1830
30	2220	3340	3210	3410	---	15500	2420	5230	2210	2160	2700	1840
31	2030	---	2640	2760	---	12100	---	4610	---	2160	2670	---
TOTAL	59860	65560	154290	80030	140360	136030	126230	120440	87390	70310	76280	65990
MEAN	1931	2185	4977	2582	5013	4388	4208	3885	2913	2268	2461	2200
MAX	2220	3340	11700	4350	14000	15500	11900	5230	4330	3290	2700	2630
MIN	1880	1880	2610	1880	1390	2720	2380	2350	2210	2100	2160	1830
AC-FT	118700	130000	306000	158700	278400	269800	250400	238900	173300	139500	151300	130900
CAL YR 1982	TOTAL	1162000	MEAN	3184	MAX	14300	MIN	1290	AC-FT	2305000		
WTR YR 1983	TOTAL	1182770	MEAN	3240	MAX	15500	MIN	1390	AC-FT	2346000		

ROGUE RIVER BASIN

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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.

INSTRUMENTATION.--Temperature recorder since August 1973.

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. Maximum since full operation of Lost Creek Lake, 19.5°C July 3, 1981; minimum, 1.5°C Feb. 2, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 17.0°C July 31; minimum, 3.0°C Feb. 4.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	8.0	9.0	6.5	6.5	6.0	4.5	3.5	5.5	4.0	7.5	5.5
2	11.5	8.0	8.5	6.0	6.0	5.5	5.0	4.0	5.0	3.5	6.5	5.5
3	11.5	9.0	9.0	6.5	7.0	5.5	5.0	4.5	5.5	3.5	7.0	5.5
4	10.5	8.0	9.0	8.0	7.5	7.0	5.5	5.0	5.0	3.0	7.0	6.0
5	10.0	6.5	9.0	7.5	7.5	7.0	5.5	5.0	6.0	3.5	7.5	6.0
6	8.0	7.5	8.5	7.5	7.5	6.5	5.5	5.0	5.0	4.5	6.5	5.5
7	9.5	7.0	8.5	7.0	6.5	5.5	6.5	5.5	5.0	4.5	7.0	5.5
8	10.5	7.5	8.5	7.0	6.5	5.5	6.0	4.5	5.5	4.5	7.0	6.0
9	10.5	7.0	8.0	6.5	6.5	5.5	5.0	4.0	5.5	4.0	7.0	6.0
10	10.0	7.0	8.0	6.0	6.5	5.0	4.5	3.5	5.5	4.0	8.0	6.5
11	10.5	7.0	8.0	6.5	6.5	5.0	4.5	3.5	6.5	5.0	8.0	6.0
12	10.0	7.0	8.0	6.5	6.0	5.5	4.5	3.5	7.0	6.0	7.5	6.0
13	10.0	7.0	8.0	6.0	6.5	5.5	5.0	3.5	7.0	6.0	8.0	7.0
14	9.0	7.0	8.0	6.0	6.0	6.0	4.5	3.5	6.0	5.5	7.0	6.0
15	9.5	7.0	8.0	6.0	6.0	5.5	4.5	3.5	6.5	5.5	7.5	5.5
16	9.5	7.0	7.5	6.5	6.5	6.0	5.0	4.5	6.0	5.5	6.0	5.5
17	9.5	7.0	8.0	7.5	6.5	5.5	6.0	5.0	7.0	5.5	7.5	5.5
18	9.0	6.0	8.0	7.0	6.0	5.5	6.0	5.0	7.0	6.0	7.5	5.5
19	8.0	5.5	7.5	7.0	6.0	5.5	5.5	5.0	6.0	5.5	8.0	5.0
20	8.0	6.0	7.5	7.0	6.0	5.5	5.5	4.0	6.0	5.5	7.0	5.5
21	8.0	6.5	7.0	7.0	6.0	5.5	5.0	4.0	6.0	5.5	7.0	6.0
22	8.5	7.0	7.5	6.5	5.5	5.5	5.5	4.5	6.5	5.5	7.0	5.5
23	9.5	7.5	7.5	6.0	---	5.0	5.5	4.5	6.5	6.0	7.0	5.5
24	9.0	7.0	7.5	6.0	---	---	6.0	5.0	7.0	5.5	7.0	5.5
25	8.5	7.0	7.0	5.5	---	---	5.5	4.5	6.0	5.5	7.5	5.5
26	8.0	7.0	6.5	5.5	---	---	6.0	5.5	6.5	5.0	6.0	5.0
27	8.5	7.0	7.5	6.5	---	---	6.5	5.5	6.5	5.5	7.0	5.5
28	7.5	6.5	7.5	6.5	5.0	---	5.5	5.0	6.0	5.0	7.0	5.5
29	8.0	7.5	7.0	6.5	4.5	3.5	5.5	5.0	---	---	7.5	6.0
30	9.0	7.5	6.5	6.0	5.0	4.0	5.0	4.0	---	---	8.5	7.5
31	9.0	7.0	---	---	5.0	4.0	6.0	4.5	---	---	7.5	6.5
MONTH	11.5	5.5	9.0	5.5	7.5	3.5	6.5	3.5	7.0	3.0	8.5	5.0

## ROGUE RIVER BASIN

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.0	10.0	7.5	10.0	8.5	13.5	11.0	16.0	11.5	13.0	10.0
2	6.5	6.0	11.0	7.5	10.5	8.5	13.5	10.0	14.5	10.0	13.5	10.0
3	7.0	5.5	13.5	8.5	13.0	8.5	15.5	11.0	14.5	10.0	14.0	9.5
4	7.5	5.5	12.5	9.0	13.0	9.0	16.0	11.0	15.0	10.0	14.0	10.0
5	7.5	5.5	11.0	9.0	14.5	9.5	16.0	11.0	14.5	9.5	14.0	10.0
6	8.0	5.5	11.0	8.5	15.0	10.0	15.0	11.5	15.0	10.0	14.0	10.0
7	8.5	6.0	9.5	8.0	15.5	11.0	13.5	11.0	14.5	10.5	13.0	10.0
8	8.0	6.0	9.0	7.5	15.5	11.5	13.5	10.5	15.0	10.5	12.5	10.0
9	7.5	6.0	9.0	7.5	15.5	10.5	15.0	10.5	15.5	10.0	13.5	9.5
10	7.5	5.5	9.5	7.0	12.5	10.5	16.0	10.5	13.5	10.0	13.5	9.5
11	7.5	5.5	11.0	7.5	12.0	10.0	16.5	11.0	14.5	10.0	13.5	10.0
12	8.0	5.0	11.5	8.5	14.0	10.0	16.5	11.5	14.5	10.0	14.0	9.5
13	8.5	5.0	12.0	8.5	15.0	10.5	16.5	11.0	13.0	10.5	14.0	10.5
14	9.0	5.0	10.0	8.5	14.0	10.5	15.0	11.0	15.0	10.5	14.0	10.0
15	9.0	5.0	11.0	8.5	14.5	10.0	15.5	10.5	15.0	10.5	14.0	10.0
16	9.5	5.5	11.5	8.0	15.5	11.5	15.5	10.0	15.0	10.5	14.5	10.0
17	8.0	6.0	12.5	8.5	14.5	10.5	14.5	11.0	15.0	10.5	14.0	9.5
18	9.5	6.0	12.0	9.0	14.0	10.5	15.0	10.5	14.0	9.5	12.5	9.5
19	9.0	6.5	12.5	8.5	14.0	11.0	15.0	10.5	11.5	9.5	13.5	9.0
20	8.5	6.5	13.0	9.0	14.5	11.0	15.5	11.0	14.0	9.5	13.5	9.0
21	10.0	7.0	13.0	9.0	15.5	11.0	16.0	11.0	14.0	9.5	13.0	9.0
22	8.5	7.5	13.0	9.0	15.5	11.5	16.0	10.5	12.5	9.5	12.5	10.0
23	8.5	6.5	13.0	9.5	14.0	11.0	16.0	11.0	11.5	10.0	11.5	10.5
24	8.5	6.5	13.0	10.0	16.0	11.0	15.0	11.0	14.0	10.0	14.0	10.5
25	9.0	7.0	12.5	9.5	16.0	11.5	14.5	11.0	13.5	10.0	14.0	10.0
26	10.5	7.0	12.0	8.5	16.0	12.0	16.0	10.5	14.0	9.5	13.5	10.0
27	9.0	7.0	12.0	9.0	16.5	11.5	15.0	11.0	13.0	10.0	12.0	9.0
28	10.0	7.0	12.0	9.0	14.5	11.0	16.5	11.5	13.5	10.0	12.0	8.0
29	11.5	7.5	12.0	9.5	15.0	11.0	16.5	11.5	12.0	10.5	12.0	8.0
30	8.5	8.0	11.0	9.0	12.5	11.0	16.5	11.5	11.5	10.5	11.5	8.5
31	---	---	10.0	9.0	---	---	17.0	12.0	11.5	10.5	---	---
MONTH	11.5	5.0	13.5	7.0	16.5	8.5	17.0	10.0	16.0	9.5	14.5	8.0

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 downstream from Fish Lake dam, 14 mi east of Lakecreek, and at mile 15.2.

 DRAINAGE AREA.--20.8 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Oct. 1, 1914, to July 31, 1915, nonrecording gage at site 0.5 mi 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 upstream at different datums.

REMARKS.--Records excellent. 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 above Fish Lake; diversion began August 1923. No diversion from creek above station.

 AVERAGE DISCHARGE.--67 years (water years 1917-83), 35.6 ft<sup>3</sup>/s, 25,790 acre-ft/yr.

 EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 940 ft<sup>3</sup>/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, 76 ft<sup>3</sup>/s Aug. 6-8, gage height, 1.51 ft; minimum recorded, 19 ft<sup>3</sup>/s Nov. 25-27.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	21	20	21	20	21	28	34	43	48	63	38
2	20	21	21	21	20	21	28	34	43	51	61	29
3	20	21	21	21	20	21	28	35	43	50	58	29
4	21	21	21	21	20	21	28	35	43	46	56	28
5	21	21	21	21	20	21	28	36	43	46	60	28
6	21	22	21	21	20	21	28	36	43	45	67	28
7	21	21	21	21	20	23	28	36	43	45	76	27
8	21	21	21	21	20	23	29	38	43	45	76	27
9	21	21	21	21	20	23	29	38	43	43	74	27
10	21	21	21	21	20	24	29	38	46	43	74	27
11	21	20	21	21	20	24	29	38	53	43	74	27
12	21	20	21	21	20	24	29	38	54	46	72	27
13	21	20	21	20	20	25	29	38	58	50	72	27
14	21	20	21	20	20	25	29	39	56	54	72	34
15	21	20	21	20	20	25	29	39	56	54	70	42
16	21	20	23	20	20	25	29	39	54	54	70	42
17	21	20	23	20	20	26	29	39	54	54	70	42
18	21	21	21	20	20	26	29	39	58	54	70	42
19	21	22	21	20	20	26	29	40	54	54	70	42
20	21	22	21	20	20	26	30	40	53	54	69	42
21	21	22	21	20	20	26	32	40	50	54	69	42
22	21	22	21	20	20	26	32	42	50	54	69	42
23	21	21	23	20	21	26	32	42	48	54	69	42
24	21	20	21	20	21	26	33	42	50	54	67	26
25	21	19	21	20	21	26	33	42	53	54	67	26
26	21	19	21	21	21	26	33	42	51	54	67	26
27	21	20	21	21	21	27	33	42	50	56	67	26
28	22	20	21	20	21	26	33	43	48	54	67	26
29	22	20	21	20	---	27	34	43	46	54	60	26
30	22	20	21	20	---	29	34	43	46	67	45	26
31	22	---	21	20	---	28	---	45	---	69	45	---
TOTAL	652	619	656	634	566	764	903	1215	1475	1603	2066	963
MEAN	21.0	20.6	21.2	20.5	20.2	24.6	30.1	39.2	49.2	51.7	66.6	32.1
MAX	22	22	23	21	21	29	34	45	58	69	76	42
MIN	20	19	20	20	20	21	28	34	43	43	45	26
AC-FT	1290	1230	1300	1260	1120	1520	1790	2410	2930	3180	4100	1910
(†)	a5730	a6010	a6230	a6240	a6400	a6860	a7200	a7840	a8060	a8060	a6840	a6900
CAL YR 1982	TOTAL	11599	MEAN	31.8	MAX	76	MIN	14	AC-FT	23010		
WTR YR 1983	TOTAL	12116	MEAN	33.2	MAX	76	MIN	19	AC-FT	24030		

 NOTE.--No gage-height record Oct. 13 to Nov. 23.  
† Monthend contents, in acre-feet, of Fish Lake.  
a Interpolated.

## ROGUE RIVER BASIN

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 upstream from Wasson Canyon, 4.9 mi east of Lakecreek, and at mile 4.8.

DRAINAGE AREA.--43.8 mi<sup>2</sup>.

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 upstream not equivalent owing to diversion 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, from topographic map. Sept. 10, 1911, to Mar. 31, 1913, and July 1 to Sept. 30, 1917, nonrecording gage at site 1,000 ft downstream at different datums. May 26, 1922, to Dec. 31, 1964, water-stage recorder at site 1,000 ft downstream at datum 2,125.01 ft above mean sea level.

REMARKS.--Records excellent. 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.--61 years (water years 1912, 1923-64, 1966-83), 71.1 ft<sup>3</sup>/s, 51,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 6.06 ft, present site and datum; minimum, 11 ft<sup>3</sup>/s Oct. 29 to Nov. 8, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 253 ft<sup>3</sup>/s Mar. 31, gage height, 3.77 ft; minimum, 41 ft<sup>3</sup>/s Oct. 1-6, 9-25, 27, 28, Nov. 13-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	42	52	56	53	65	158	89	80	76	82	62
2	41	42	62	58	52	63	163	82	77	79	79	52
3	41	42	59	63	51	62	143	80	76	73	76	51
4	41	42	58	66	48	63	121	87	73	71	75	51
5	41	42	63	65	48	62	111	112	73	70	75	49
6	46	46	63	65	49	59	103	102	71	68	82	49
7	44	43	54	65	52	59	100	96	71	68	91	48
8	42	43	51	63	51	59	94	109	71	70	91	48
9	42	42	48	61	77	59	92	112	71	68	91	48
10	41	42	47	58	92	65	85	109	77	68	91	48
11	42	42	46	56	73	66	82	102	85	68	91	48
12	42	42	48	54	71	63	79	98	82	71	89	48
13	41	41	56	52	72	71	77	94	85	73	89	48
14	41	41	52	51	82	79	76	92	82	76	89	52
15	41	41	56	51	91	79	73	92	82	76	89	61
16	41	42	141	53	76	76	72	91	80	76	87	61
17	42	42	133	52	94	75	72	87	80	76	85	61
18	41	46	80	52	109	73	72	85	82	77	85	62
19	41	49	82	56	89	71	71	83	80	76	85	61
20	41	47	72	54	82	70	72	82	77	76	85	59
21	41	47	72	54	82	72	76	82	76	76	87	61
22	41	46	70	54	77	72	75	80	73	76	91	59
23	42	43	67	54	73	71	75	80	73	76	91	66
24	41	42	63	61	82	82	79	79	73	76	85	48
25	42	42	62	57	73	91	79	77	75	76	83	47
26	43	42	65	62	70	82	83	77	73	76	83	47
27	42	42	65	70	67	82	79	76	73	75	83	47
28	42	43	59	62	65	79	76	76	72	75	83	47
29	51	48	57	59	---	91	76	75	72	75	82	47
30	46	47	57	56	---	193	87	75	71	80	70	47
31	43	---	56	54	---	209	---	79	---	85	66	---
TOTAL	1308	1301	2016	1794	2001	2463	2701	2740	2286	2302	2611	1583
MEAN	42.2	43.4	65.0	57.9	71.5	79.5	90.0	88.4	76.2	74.3	84.2	52.8
MAX	51	49	141	70	109	209	163	112	85	85	91	66
MIN	41	41	46	51	48	59	71	75	71	68	66	47
AC-FT	2590	2580	4000	3560	3970	4890	5360	5430	4530	4570	5180	3140
CAL YR 1982	TOTAL	25723	MEAN	70.5	MAX	600	MIN	29	AC-FT	51020		
WTR YR 1983	TOTAL	25106	MEAN	68.8	MAX	209	MIN	41	AC-FT	49800		



## 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 downstream from Emigrant Dam, 6 mi southeast of Ashland, and at mile 29.2.

DRAINAGE AREA.--64.3 mi<sup>2</sup>.

PERIOD OF RECORD.--January to June 1920, October 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 National Geodetic Vertical Datum of 1929 (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 higher. Feb. 25, 1959, to May 7, 1961, water-stage recorder at site 1.0 mi 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.--43 years (water years 1925, 1927-30, 1934-35, 1941-47, 1954-83), 32.8 ft<sup>3</sup>/s, 23,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,260 ft<sup>3</sup>/s Feb. 20, 1927, by computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,390 ft<sup>3</sup>/s Apr. 2, gage height, 5.34 ft; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	.10	.10	.50	.70	1.2	1360	217	2.5	17	33	28
2	.40	.10	.10	.50	.70	1.2	758	219	2.5	17	33	23
3	.40	.10	.10	.50	.70	1.2	360	219	2.5	17	33	23
4	.40	.10	.10	.50	.70	1.2	52	219	2.5	18	33	23
5	.10	.10	.10	.50	.70	1.2	240	219	2.5	19	33	23
6	.20	.10	.10	.50	.70	1.2	320	263	2.5	19	33	23
7	.10	.10	.10	.50	.70	1.2	323	278	2.0	19	33	23
8	.10	.10	.10	.50	.70	1.2	293	278	1.6	19	33	23
9	.10	.10	.10	.50	1.6	1.2	265	258	1.2	19	37	23
10	.10	.10	.10	.50	1.6	1.2	265	228	.90	19	45	23
11	.20	.10	.10	.50	.90	1.2	250	133	.90	19	45	23
12	.20	.10	.10	.50	1.2	1.2	162	109	.90	19	45	23
13	.20	.10	.10	.50	.90	1.6	48	110	.90	18	44	20
14	.20	.10	.10	.50	1.2	162	1.2	155	.90	18	44	18
15	.20	.10	72	.70	1.2	409	1.6	168	.70	18	44	18
16	.20	.10	393	.70	.90	380	1.6	168	.90	18	44	18
17	.20	.10	390	.70	1.2	305	1.6	60	.70	20	44	18
18	.10	.10	388	.70	155	240	25	1.2	.70	21	44	18
19	.10	.10	388	.70	295	157	139	1.2	.70	21	44	18
20	.10	.10	388	.70	295	157	224	1.2	.70	21	44	18
21	.10	.10	409	.70	293	157	213	1.6	5.6	21	44	17
22	.10	.10	451	.70	293	157	213	1.6	17	29	43	17
23	.20	.10	448	.70	293	166	213	1.6	17	34	43	14
24	.10	.10	442	.70	293	172	215	2.0	17	34	43	12
25	.10	.10	373	.70	368	107	215	2.0	17	34	43	12
26	.10	.10	71	109	415	368	215	2.0	17	34	43	6.2
27	.10	.10	.50	293	415	190	215	2.0	17	34	43	.40
28	.10	.10	.50	360	141	85	215	2.5	17	34	43	.40
29	.10	.10	.50	360	---	155	217	2.5	17	34	40	.40
30	.10	.10	.50	360	---	666	215	2.5	17	34	37	.70
31	.10	---	.50	120	---	1380	---	2.5	---	33	34	---
TOTAL	15.80	3.00	4216.90	1616.70	3272.30	5429.0	7236.0	3327.4	187.30	731	1244	507.10
MEAN	.51	.10	136	52.2	117	175	241	107	6.24	23.6	40.1	16.9
MAX	11	.10	451	360	415	1380	1360	278	17	34	45	28
MIN	.10	.10	.10	.50	.70	1.2	1.2	1.2	.70	17	33	.40
AC-FT	31	6.0	8360	3210	6490	10770	14350	6600	372	1450	2470	1010
(†)	a13220	a16380	19290	24910	31110	39080	38360	38290	35430	a28630	20660	16540
(‡)	56	0	0	0	0	206	2750	5210	8130	8790	9260	8230
CAL YR 1982	TOTAL	21733.70	MEAN	59.5	MAX	472	MIN	.10	AC-FT	43110		
WTR YR 1983	TOTAL	27786.50	MEAN	76.1	MAX	1380	MIN	.10	AC-FT	55110		

† Monthend contents, in acre-feet, of Emigrant Lake.

‡ Diversion, in acre-feet, by East Lateral.

a Interpolated.

## 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 downstream from Gold Ray Dam, 1.0 mi downstream from Bear Creek, 5.6 mi northwest of Central Point, and at mile 125.8.

DRAINAGE AREA.--2,053 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1914, nonrecording gage and Sept. 19, 1914, to Sept. 30, 1956, water-stage recorder, at site 300 ft upstream at same datum.

REMARKS.--Water-discharge records excellent. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Slight regulation by Fish Lake (published with station 14342500) and Emigrant Lake (published with station 14350000). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--78 years, 2,978 ft<sup>3</sup>/s, 2,158,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 131,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 23.43 ft, from rating curve extended above 63,000 ft<sup>3</sup>/s on basis of slope-area measurement of 113,000 ft<sup>3</sup>/s; minimum not determined; minimum daily, 616 ft<sup>3</sup>/s Sept. 6, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 32 ft, discharge not determined, and flood in February 1890 reached a stage of about 27.5 ft, discharge not determined, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 50,700 ft<sup>3</sup>/s Feb. 18, gage height, 14.42 ft; minimum, 1,910 ft<sup>3</sup>/s Feb. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2120	2160	3360	2700	2430	4920	16200	4410	5030	2560	2310	3090
2	2080	2110	3780	2640	2270	4760	15400	3860	4440	3480	2280	3030
3	2030	2170	5210	2780	2150	4540	13500	3650	3770	3230	2310	2970
4	2020	2340	5580	3220	2040	4390	10100	3560	3690	2740	2310	2940
5	2020	2320	5830	3650	1980	3920	7220	4910	3580	2650	2280	2920
6	2070	2360	6350	3330	1990	3730	6380	5470	3520	2520	2240	2920
7	2170	2380	5090	3710	2990	3640	5780	5340	3280	2260	2240	2840
8	2130	2350	4550	3890	2450	3630	5500	5520	3270	2350	2240	2790
9	2080	2340	4160	3590	7440	3590	5150	5840	3260	2320	2310	2750
10	2050	2320	3580	3270	12700	4070	5030	5550	3620	2270	2610	2730
11	2030	2320	3470	3050	6680	4390	4860	5210	4440	2250	2610	2700
12	2030	2290	3400	2900	6660	4670	4400	4830	4180	2190	2600	2700
13	2010	2280	3470	2770	6040	6270	4010	4600	3550	2180	2610	2680
14	2000	2280	2940	2550	5480	7760	3750	4520	3320	2170	2640	2640
15	1990	2260	7400	2430	7950	7470	3600	4550	3140	2280	2650	2600
16	2000	2310	16900	2420	6120	6680	3510	4570	3040	2290	2600	2280
17	2010	2360	26000	2460	14600	6040	3480	4500	3010	2320	2590	2030
18	2010	2780	10400	2460	29200	5470	3480	4390	3120	2370	2560	2050
19	1980	3230	9370	2820	12900	4490	3610	4480	3130	2340	2600	2100
20	2000	2950	8700	2910	11400	4270	3720	4630	3000	2420	2640	2070
21	2000	2810	9670	2750	11300	4030	3900	4760	2840	2380	2620	2040
22	2010	2840	9200	2680	10700	3680	4000	4960	2730	2340	2790	2070
23	2070	2600	8550	2920	9690	3610	3980	5010	2490	2320	3250	2790
24	2060	2480	6860	3410	9360	4060	4180	5170	2480	2320	3110	2420
25	2050	2210	5230	3340	6770	4470	4130	5550	2460	2350	2940	2260
26	2080	2150	5060	4900	6150	4540	4170	5780	2460	2320	2860	2200
27	2090	2140	4830	6620	5620	5840	3920	5790	2440	2320	2870	2170
28	2080	2200	4350	5850	5180	5060	3630	5710	2370	2310	2910	2170
29	2400	2570	4080	5180	---	5490	3530	5790	2340	2290	3040	2140
30	2600	3950	3910	4740	---	28200	3770	5810	2330	2270	3580	2140
31	2260	---	3420	4100	---	19700	---	5280	---	2270	3310	---
TOTAL	64530	73860	204700	106040	210240	187380	167890	154000	96330	74680	82510	75230
MEAN	2082	2462	6603	3421	7509	6045	5596	4968	3211	2409	2662	2508
MAX	2600	3950	26000	6620	29200	28200	16200	5840	5030	3480	3580	3090
MIN	1980	2110	2940	2420	1980	3590	3480	3560	2330	2170	2240	2030
AC-FT	128000	146500	406000	210300	417000	371700	333000	305500	191100	148100	163700	149200
CAL YR 1982	TOTAL	1390980	MEAN	3811	MAX	26000	MIN	1530	AC-FT	2759000		
WTR YR 1983	TOTAL	1497390	MEAN	4102	MAX	29200	MIN	1980	AC-FT	2970000		

ROGUE RIVER BASIN

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14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 22.0°C July 25, 26, 1976; minimum, 0.0°C Jan. 7, 1974. Maximum since full operation of Lost Creek Lake, 20.5°C July 3, 4, 1981; minimum, 1.0°C Dec. 30, 1978, Jan. 30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.5°C July 31; minimum, 3.0°C Dec. 29 to Jan. 1, Jan. 11-15.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## ROGUE RIVER BASIN

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	6.5	11.0	8.5	10.5	9.5	14.5	12.0	18.0	14.0	14.0	11.5
2	7.5	6.5	12.0	8.5	11.5	9.5	15.0	11.0	17.5	12.5	15.0	11.0
3	7.5	6.0	13.5	9.5	14.5	9.5	16.5	11.5	16.0	12.5	15.0	11.5
4	8.5	5.5	13.0	10.5	14.5	10.5	17.5	13.0	16.5	12.5	15.5	11.5
5	8.5	6.0	12.0	10.0	15.5	11.0	17.0	13.0	16.0	12.5	15.5	12.0
6	9.0	6.0	11.5	9.0	16.0	11.5	16.5	13.0	16.5	12.5	15.5	12.0
7	9.5	6.5	10.0	8.5	17.0	12.5	15.0	12.5	16.5	13.0	14.5	11.5
8	9.0	7.0	9.5	8.0	17.0	13.0	14.0	12.0	16.5	13.0	14.0	11.5
9	8.5	7.0	9.5	7.5	16.5	12.5	16.0	11.5	16.5	13.0	14.0	10.5
10	8.5	5.5	10.5	7.0	15.5	12.0	17.0	12.0	16.0	12.0	14.0	10.5
11	8.0	6.0	12.0	8.0	13.5	11.0	17.5	13.5	16.0	12.0	14.5	11.5
12	8.5	5.5	12.5	9.0	15.5	10.5	18.0	14.0	16.0	11.5	15.0	11.5
13	9.5	5.5	13.5	9.5	16.5	11.0	17.5	13.5	15.5	12.0	15.5	12.0
14	9.5	6.0	12.0	10.0	15.5	12.0	17.0	13.5	16.0	12.0	15.0	11.5
15	10.0	6.5	12.5	9.5	16.0	11.5	16.0	12.0	16.5	13.0	15.0	11.5
16	10.5	6.5	13.0	9.0	16.5	12.5	16.0	12.0	16.5	12.5	15.0	12.0
17	9.5	7.5	13.5	9.5	16.0	13.0	16.0	12.5	16.5	12.5	14.5	12.0
18	10.5	7.5	14.0	10.0	15.0	11.5	15.5	12.0	16.0	12.0	14.5	11.5
19	10.5	8.0	14.0	10.0	15.0	12.0	15.0	12.5	15.0	11.5	13.5	10.5
20	11.0	8.0	14.5	10.5	15.0	12.0	16.5	12.5	15.0	11.5	14.0	11.0
21	12.0	8.5	14.5	10.5	16.5	12.0	17.5	13.0	15.5	11.5	13.5	11.0
22	10.5	9.0	15.0	10.5	16.5	12.5	17.5	13.0	15.0	12.0	13.0	11.5
23	9.0	8.0	15.0	11.0	16.0	12.5	17.5	13.5	14.0	12.0	13.5	12.5
24	9.0	6.5	15.5	11.0	16.5	12.0	17.5	13.5	15.5	12.0	15.0	12.5
25	9.5	7.5	15.0	11.0	17.0	12.5	16.0	13.5	15.0	12.0	15.0	12.5
26	10.5	7.5	14.5	10.5	17.0	13.0	17.0	12.5	15.5	12.0	15.0	12.0
27	10.5	8.0	14.5	10.5	17.5	14.0	16.5	13.0	15.0	12.0	14.0	11.5
28	10.5	8.0	14.0	10.5	17.5	13.0	17.5	14.0	14.5	11.5	12.5	9.5
29	12.5	8.5	14.0	11.0	16.0	13.0	18.0	14.0	14.0	12.0	12.0	9.5
30	12.0	9.0	12.5	10.5	15.5	12.5	18.0	14.0	13.5	12.5	12.0	10.0
31	---	---	11.5	10.0	---	---	18.5	14.5	13.0	12.0	---	---
MONTH	12.5	5.5	15.5	7.0	17.5	9.5	18.5	11.0	18.0	11.5	15.5	9.5

## 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 upstream from bridge on State Highway 99 at Grants Pass, and at mile 101.8. Prior to Sept. 3, 1983, at site 300 ft upstream.

DRAINAGE AREA.--2,459 mi<sup>2</sup>.

## 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 884.28 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 8, 1957, at site 300 ft upstream at datum 4.00 ft higher and Aug. 8, 1957 to Sept. 2, 1983 at site 300 ft upstream at datum 1.00 ft higher.

REMARKS.--Water-discharge records good. 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 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 above station.

AVERAGE DISCHARGE.--45 years, 3,509 ft<sup>3</sup>/s, 2,542,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 152,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 35.15 ft, present datum, from rating curve extended above 93,000 ft<sup>3</sup>/s; minimum, 195 ft<sup>3</sup>/s Jan. 30, 1961; minimum daily, 606 ft<sup>3</sup>/s Sept. 10, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 43 ft, present datum (information furnished by Corps of Engineers). Flood in February 1890 reached a stage of about 36 ft, present datum, and that of Feb. 21, 1927, about 32 ft, present datum, according to local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73,300 ft<sup>3</sup>/s Feb. 18, gage height, 22.88 ft, present datum; minimum, 1,360 ft<sup>3</sup>/s Oct. 29; minimum daily, 1,990 ft<sup>3</sup>/s Oct. 5, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2140	2220	4230	3300	3470	6550	20300	5100	5290	2550	2220	3240
2	2110	2120	3970	3220	3110	6300	18500	4500	4840	3440	2220	3170
3	2040	2110	6460	3370	2890	5910	16600	4190	3910	3520	2240	3130
4	2000	2380	6750	3750	2670	5650	13400	4030	3840	2870	2240	3100
5	1990	2350	6860	4400	2540	5120	9520	5050	3710	2760	2220	3080
6	2060	2390	7850	4020	2600	4820	8330	6030	3630	2660	2200	3060
7	2250	2410	6070	4260	3940	4790	7340	5910	3370	2300	2190	2980
8	2230	2380	5220	4660	3370	4760	6940	5940	3340	2360	2200	2930
9	2160	2360	4780	4290	10800	4670	6430	6600	3350	2390	2150	2920
10	2120	2330	3980	3900	20300	5490	6230	6190	3510	2310	2540	2870
11	2090	2330	3810	3630	10800	5760	6030	5810	4530	2270	2650	2840
12	2070	2280	3710	3440	10300	6280	5450	5360	4390	2200	2620	2810
13	2060	2260	3820	3310	9540	10200	4920	5040	3710	2080	2650	2810
14	2060	2250	3320	3040	7770	12600	4720	4890	3470	2100	2690	2770
15	2060	2220	9400	2860	11000	11300	4370	4910	3260	2220	2690	2750
16	2110	2280	24900	2840	8900	9540	4260	4950	3140	2250	2640	2480
17	2160	2410	37400	2890	19500	8330	4180	4790	3030	2280	2600	2150
18	2140	3140	15100	2960	50400	7580	4160	4720	3180	2340	2610	2130
19	2110	4070	12200	3590	19800	6090	4330	4670	3190	2290	2590	2160
20	2100	3580	11800	3680	16000	5670	4400	4930	3110	2370	2650	2120
21	2130	3270	13600	3470	15200	5390	4500	4950	2900	2360	2650	2130
22	2080	3310	13100	3380	14200	4910	4620	5240	2830	2280	2750	2130
23	2150	2990	11400	3990	12700	4700	4580	5250	2530	2240	3180	2730
24	2170	2810	9280	4610	12300	5200	4630	5360	2540	2270	3190	2740
25	2780	2430	6780	4710	9360	5570	4560	5780	2510	2300	3040	2420
26	2100	2310	6320	9120	8690	5670	4820	6040	2520	2270	2920	2340
27	2120	2290	6060	11100	7750	7520	4610	6100	2500	2250	2930	2310
28	1990	2350	5360	8790	7050	6760	4290	5990	2430	2260	2960	2350
29	2280	2780	4960	7140	---	6670	4140	6050	2380	2240	3060	2300
30	3030	4640	4680	6230	---	37200	4130	6090	2360	2210	3590	2310
31	2420	---	4320	5620	---	24700	---	5630	---	2210	3570	---
TOTAL	67310	79050	267490	139570	306950	251700	205290	166090	99260	74450	82650	79260
MEAN	2171	2635	8629	4502	10960	8119	6843	5358	3309	2402	2666	2642
MAX	3030	4640	37400	11100	50400	37200	20300	6600	5290	3520	3590	3240
MIN	1990	2110	3320	2840	2540	4670	4130	4030	2360	2080	2150	2120
AC-FT	133500	156800	530600	276800	608800	499200	407200	329400	196900	147700	163900	157200
CAL YR 1982	TOTAL	1659660	MEAN	4547	MAX	37400	MIN	1430	AC-FT	3292000		
WTR YR 1983	TOTAL	1819070	MEAN	4984	MAX	50400	MIN	1990	AC-FT	3608000		



## ROGUE RIVER BASIN

14361500 ROGUE RIVER AT GRANTS PASS, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C June 7, 1977; minimum, 0.5°C on several days in 1974, 1977, 1978, 1980. Maximum since full operation of Lost Creek Lake, 21.5°C July 4, 5, 1981.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 19.5°C July 13, July 30 to Aug. 1; minimum, 3.0°C Jan. 13-15.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

ROGUE RIVER BASIN

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14361500 ROGUE RIVER AT GRANTS PASS, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	7.0	10.0	9.5	11.0	10.5	15.0	13.5	19.5	17.5	14.0	---
2	7.5	6.5	11.0	10.0	10.5	10.5	15.0	13.5	19.0	17.0	15.0	13.0
3	7.5	6.0	12.5	10.5	12.5	10.5	15.5	13.5	18.0	15.5	15.5	13.5
4	8.0	6.0	13.5	12.0	14.5	12.5	18.0	15.0	17.5	15.0	16.0	13.5
5	8.5	7.0	12.5	11.0	14.5	13.0	18.5	16.0	17.5	15.5	16.0	13.5
6	8.5	7.5	11.0	10.0	16.0	13.5	18.0	16.0	17.5	15.0	16.0	13.5
7	9.0	8.0	11.0	9.5	17.0	14.5	16.5	15.0	18.0	15.5	15.0	13.5
8	9.0	8.0	10.0	9.0	18.0	15.5	16.0	14.0	17.5	15.5	14.5	13.0
9	9.0	8.0	9.0	8.5	17.0	15.5	15.5	13.5	18.0	16.0	14.5	12.5
10	8.0	7.0	9.5	8.5	16.0	13.5	17.0	14.0	17.5	15.5	14.5	12.5
11	8.0	7.5	10.5	9.5	14.0	13.0	18.5	15.0	16.5	14.0	15.5	12.5
12	7.5	7.0	11.0	10.5	13.5	13.0	19.0	16.5	17.0	14.5	15.5	13.5
13	8.0	7.5	12.0	11.0	15.5	13.5	19.5	17.5	17.0	14.5	16.5	13.5
14	8.5	8.0	13.0	11.0	17.0	14.5	19.0	17.0	16.5	14.0	16.0	14.0
15	9.5	8.0	11.5	11.0	16.0	14.0	18.0	15.5	18.0	15.0	15.5	13.5
16	10.0	8.5	11.5	11.0	16.5	14.0	17.0	14.5	18.0	15.5	15.5	13.5
17	10.0	8.5	12.5	11.5	16.5	15.0	17.0	15.0	18.0	15.0	15.0	13.5
18	10.0	8.5	13.5	12.0	16.0	14.0	16.5	15.0	18.0	15.0	15.0	13.5
19	10.5	10.0	13.0	12.5	15.5	14.0	16.0	14.0	16.5	14.5	14.0	12.0
20	10.5	10.0	13.5	13.0	15.5	14.0	16.5	14.5	15.0	13.0	13.5	12.0
21	11.0	10.0	14.0	13.0	16.0	14.0	18.0	15.0	16.5	14.0	13.5	12.5
22	11.5	9.5	14.0	13.0	17.0	14.5	18.5	16.0	16.5	14.0	14.0	12.5
23	9.5	8.5	14.5	13.5	17.0	15.0	18.5	16.5	15.0	13.5	14.0	13.0
24	8.5	8.0	15.0	14.0	16.5	14.5	18.5	16.5	15.0	14.0	15.0	13.0
25	9.0	8.5	15.0	13.5	17.5	14.5	18.0	15.5	16.5	14.5	16.0	14.0
26	9.5	9.0	14.5	12.5	17.5	15.0	16.5	15.0	16.5	14.5	15.5	14.0
27	10.0	9.0	14.0	12.5	18.0	16.0	17.5	15.0	16.0	14.5	15.5	14.0
28	9.5	8.5	14.5	13.0	18.0	16.5	18.0	15.5	15.5	14.0	14.0	12.0
29	11.0	9.5	14.0	13.0	17.0	15.0	19.0	16.5	15.5	14.0	12.5	11.0
30	11.5	10.0	14.0	12.5	16.5	15.0	19.5	17.0	---	13.5	12.5	11.0
31	---	---	12.5	11.0	---	---	19.5	17.5	---	---	---	---
MONTH	11.5	6.0	15.0	8.5	18.0	10.5	19.5	13.5	19.5	13.0	16.5	11.0

## ROGUE RIVER BASIN

14361590 MIDDLE FORK APPLEGATE RIVER NEAR COPPER, OR

LOCATION.--Lat 42°00'23", long 123°09'23", in W-1/2 sec.17, T.48 N., R.11 W., Mt. Diablo Meridian, Siskiyou County, CA, Rogue River National Forest, Hydrologic Unit 17100309, on left bank 0.2 mi upstream from Elliot Creek, 1.6 mi southwest of former town of Copper, and at mile 51.6.

DRAINAGE AREA.--50.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,001.74 ft National Geodetic Vertical datum of 1929 (Corps of Engineers bench mark).

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,880 ft<sup>3</sup>/s Dec. 19, 1981, gage height, 9.74 ft; minimum, 8.3 ft<sup>3</sup>/s Sept. 14-26, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 15	2130	753	4.91	Mar. 10	0430	1,150	5.56
Dec. 16	2000	2,470	7.12	Mar. 13	0600	1,830	6.44
Jan. 26	2000	2,120	6.76	Mar. 30	0730	2,970	7.59
Feb. 12	0830	959	5.27	May 24	2030	1,150	5.56
Feb. 18	0500	*4,170	*8.57				

Minimum, 13 ft<sup>3</sup>/s Oct. 4-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	15	67	175	140	291	441	812	262	547	246	45	47		
2	15	53	164	139	259	426	641	272	443	204	43	39		
3	14	45	341	141	232	409	548	302	432	160	42	34		
4	14	40	637	143	211	384	464	360	436	147	39	31		
5	13	37	624	178	194	375	404	420	422	143	37	30		
6	18	35	583	252	202	357	360	346	459	134	36	28		
7	22	33	360	310	195	455	332	309	486	121	34	28		
8	18	31	262	337	214	475	318	285	506	115	33	27		
9	17	30	212	293	414	541	306	254	445	104	32	26		
10	16	29	181	251	479	905	281	233	443	98	31	25		
11	15	27	155	224	483	643	260	222	360	96	31	25		
12	15	26	148	210	842	792	240	227	301	97	30	24		
13	15	26	134	200	712	1510	223	257	289	99	29	23		
14	14	25	137	192	558	982	212	296	302	95	29	23		
15	14	24	510	190	569	686	205	324	294	85	28	22		
16	14	25	1880	202	566	608	208	338	279	79	28	21		
17	14	130	1160	204	1780	521	224	365	282	76	27	21		
18	14	356	603	335	2840	448	238	438	245	71	26	21		
19	14	201	490	347	1290	386	298	533	212	68	25	21		
20	14	135	492	276	786	355	344	614	203	63	25	20		
21	17	107	603	242	699	330	368	657	195	62	27	20		
22	36	93	502	235	793	318	429	673	190	60	27	19		
23	62	86	367	242	786	297	453	818	185	60	29	26		
24	30	81	285	411	657	294	368	965	170	57	34	25		
25	29	76	244	368	596	277	308	881	166	56	31	22		
26	57	74	218	1200	517	271	271	825	168	53	26	21		
27	37	97	199	1260	464	281	251	829	171	51	25	21		
28	30	224	182	669	421	268	241	885	170	48	24	20		
29	348	337	169	516	---	480	238	985	163	46	35	20		
30	203	245	158	400	---	2450	254	714	150	45	104	20		
31	97	---	148	334	---	1310	---	625	---	46	72	---		
TOTAL	1251	2795	12323	10441	18050	18275	10099	15514	9114	2885	1084	750		
MEAN	40.4	93.2	398	337	645	590	337	500	304	93.1	35.0	25.0		
MAX	348	356	1880	1260	2840	2450	812	985	547	246	104	47		
MIN	13	24	134	139	194	268	205	222	150	45	24	19		
CFSM	.80	1.84	7.85	6.65	12.7	11.6	6.65	9.86	6.00	1.84	.69	.49		
IN.	.92	2.05	9.04	7.66	13.24	13.41	7.41	11.38	6.69	2.12	.80	.55		
AC-FT	2480	5540	24440	20710	35800	36250	20030	30770	18080	5720	2150	1490		
CAL YR 1982	TOTAL	84411	MEAN	231	MAX	2440	MIN	13	CFSM	4.56	IN.	61.93	AC-FT	167400
WTR YR 1983	TOTAL	102581	MEAN	281	MAX	2840	MIN	13	CFSM	5.54	IN.	75.27	AC-FT	203500

ROGUE RIVER BASIN

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14361590 MIDDLE FORK APPLEGATE RIVER NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1979 to current year.

INSTRUMENTATION.--Temperature recorder since August 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 8, 10-12, 1981; minimum recorded, 1.5°C Jan. 29, 30, Dec. 8, 12-14, 1980, Mar. 31, Nov. 14-16, 1982, but may have been lower during period of missing record in February 1982.

EXTREMES CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.0°C July 31; minimum, 1.5°C Nov. 14-16.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## ROGUE RIVER BASIN

14361590 MIDDLE FORK APPLGATE RIVER NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	5.5	6.0	5.5	11.0	9.0	19.5	15.0	14.0	11.5
2	5.5	4.5	8.5	5.0	7.0	5.5	10.5	8.0	19.5	15.5	15.0	10.5
3	5.0	4.5	8.5	5.0	9.5	6.0	12.5	8.0	19.0	15.0	15.0	11.0
4	6.0	4.5	7.0	5.5	9.0	5.5	14.0	9.0	19.0	14.5	15.5	11.0
5	6.5	4.0	6.0	4.5	9.5	5.5	15.0	10.5	18.0	13.5	16.0	12.0
6	7.0	4.0	6.0	4.5	10.0	6.0	13.5	10.5	19.0	14.0	---	11.5
7	6.5	5.0	6.5	5.0	10.5	6.5	12.5	10.0	18.5	14.5	---	---
8	6.5	5.5	5.0	4.0	10.0	7.0	11.0	8.5	19.5	15.5	14.0	11.5
9	6.0	5.5	4.5	3.0	10.0	6.0	13.0	8.5	19.5	15.0	14.0	10.5
10	5.5	4.5	6.5	3.5	8.0	7.0	13.5	8.5	18.5	15.5	14.0	10.0
11	5.0	4.5	8.0	3.5	8.0	6.0	15.0	9.5	19.0	15.0	15.0	11.0
12	5.0	4.5	8.5	5.0	9.5	6.0	16.5	11.0	19.0	14.0	15.5	11.5
13	5.5	4.0	9.0	5.5	10.5	6.5	17.5	12.0	17.0	14.5	16.5	12.5
14	6.0	3.5	7.0	5.5	10.5	8.0	15.5	12.0	18.5	14.0	15.5	12.5
15	7.0	4.0	7.0	5.0	10.5	7.5	15.0	11.0	19.5	15.0	15.5	12.0
16	8.0	4.5	8.5	5.0	11.5	7.5	14.5	9.5	19.5	15.0	15.5	12.0
17	7.0	5.0	8.5	4.5	10.5	8.0	13.5	11.0	19.5	15.0	15.0	11.5
18	8.0	5.0	8.5	5.5	9.0	6.5	13.5	10.5	19.5	15.0	13.5	11.0
19	7.0	6.0	8.5	4.5	10.5	7.0	13.5	10.0	17.0	15.5	13.5	10.0
20	7.0	5.5	9.0	5.0	10.5	7.5	15.0	9.5	18.0	15.0	12.5	9.0
21	8.0	5.5	8.5	4.5	11.0	6.5	16.5	10.5	18.0	14.5	12.5	9.0
22	6.0	4.5	9.0	4.5	12.0	7.5	17.0	11.5	17.0	15.0	12.5	11.0
23	5.0	4.0	9.0	5.0	10.0	7.5	17.0	12.5	16.5	14.5	12.5	11.5
24	5.0	3.5	9.0	5.0	11.5	7.5	17.0	12.5	18.0	14.0	15.0	12.0
25	5.5	3.5	9.0	5.0	12.0	7.5	16.5	13.0	16.5	13.0	14.5	11.5
26	6.0	3.5	9.0	5.0	11.5	8.5	16.5	11.5	17.0	13.5	14.0	11.5
27	6.0	4.5	9.5	5.0	13.5	9.5	16.5	12.0	17.5	13.5	12.5	11.5
28	6.5	4.0	8.5	5.5	12.0	9.5	18.0	12.5	16.0	13.5	13.0	10.5
29	7.5	4.5	9.0	6.0	13.0	10.0	18.5	13.0	15.0	14.0	11.5	9.0
30	6.0	5.5	8.5	5.0	10.5	8.5	19.5	14.0	14.0	13.0	12.0	9.5
31	---	---	6.5	6.0	---	---	20.0	15.0	13.5	12.5	---	---
MONTH	8.0	3.5	9.5	3.0	13.5	5.5	20.0	8.0	19.5	12.5	16.5	9.0



ROGUE RIVER BASIN

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14361600 ELLIOTT CREEK NEAR COPPER, OR

LOCATION.--Lat 42°00'16", long 123°09'00", in W-1/2 sec.17, T.48 N., R.11 W., Mt. Diablo Meridian, Siskiyou County, CA, Hydrologic Unit 17100309, Rogue River National Forest, on left bank 0.3 mi upstream from Middle Fork Applegate River and 1.5 mi south of former town of Copper.

DRAINAGE AREA.--51.8 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,023.56 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Minor fluctuation from small power generator 0.2 mi upstream. No diversion.

AVERAGE DISCHARGE.--6 years, 119 ft<sup>3</sup>/s, 31.20 in/yr, 86,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,980 ft<sup>3</sup>/s Dec. 19, 1981, gage height, 7.13 ft; minimum, 3.9 ft<sup>3</sup>/s Sept. 10, 1980; minimum daily, 7.1 ft<sup>3</sup>/s Sept. 14-16, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1700	1,900	5.29	Feb. 18	0600	*2,150	*5.56
Dec. 21	1500	504	3.10	Mar. 13	0700	825	3.78
Jan. 26	2030	1,370	4.64	Mar. 30	0630	1,670	5.02
Feb. 12	0700	731	3.60	May 29	1830	1,220	4.43

Minimum, 18 ft<sup>3</sup>/s Oct. 13, 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	23	55	63	87	163	280	541	181	690	248	67	60		
2	22	47	58	84	149	260	460	182	544	218	64	52		
3	21	42	83	86	137	251	382	195	505	193	62	47		
4	21	37	153	84	127	245	334	207	486	188	60	44		
5	21	34	142	94	119	231	304	208	465	186	58	42		
6	27	31	154	114	123	219	276	190	478	177	56	39		
7	34	29	100	125	120	242	258	183	499	167	53	37		
8	30	28	81	127	121	231	247	179	552	160	52	37		
9	27	27	73	116	230	234	237	170	497	146	50	36		
10	25	26	66	106	309	355	218	162	508	138	49	36		
11	22	25	62	97	258	308	207	158	429	132	49	35		
12	20	24	62	95	560	386	193	162	374	131	47	33		
13	19	23	58	90	386	698	183	171	354	130	45	32		
14	19	21	59	88	287	518	173	182	355	125	47	32		
15	19	21	372	87	320	413	165	191	338	116	44	31		
16	19	21	1290	89	317	364	164	196	331	111	43	30		
17	19	79	716	91	874	326	169	217	334	108	42	29		
18	19	147	285	131	1490	299	170	259	302	105	40	29		
19	19	75	231	135	718	269	190	313	280	99	39	29		
20	18	55	253	114	508	251	204	370	270	95	39	28		
21	21	45	405	106	443	236	250	440	256	91	43	26		
22	41	42	301	105	415	229	256	492	249	88	47	26		
23	70	39	213	106	398	216	255	630	236	85	63	36		
24	29	37	165	177	355	217	219	766	220	84	47	37		
25	28	36	146	154	326	206	199	808	216	83	47	31		
26	39	35	135	760	301	201	187	810	212	81	43	29		
27	27	41	125	696	282	215	179	866	213	77	40	28		
28	25	75	114	341	260	199	173	902	213	74	37	29		
29	119	106	105	258	---	328	170	1030	206	71	49	28		
30	90	79	98	211	---	1320	184	838	194	70	137	27		
31	65	---	92	182	---	749	---	769	---	68	97	---		
TOTAL	998	1382	6260	5136	10096	10496	7147	12427	10806	3845	1656	1035		
MEAN	32.2	46.1	202	166	361	339	238	401	360	124	53.4	34.5		
MAX	119	147	1290	760	1490	1320	541	1030	690	248	137	60		
MIN	18	21	58	84	119	199	164	158	194	68	37	26		
CFSM	.62	.89	3.90	3.20	6.97	6.54	4.59	7.74	6.95	2.39	1.03	.67		
IN.	.72	.99	4.50	3.69	7.25	7.54	5.13	8.92	7.76	2.76	1.19	.74		
AC-FT	1980	2740	12420	10190	20030	20820	14180	24650	21430	7630	3280	2050		
CAL YR 1982	TOTAL	56265	MEAN	154	MAX	1310	MIN	18	CFSM	2.97	IN.	40.41	AC-FT	111600
WTR YR 1983	TOTAL	71284	MEAN	195	MAX	1490	MIN	18	CFSM	3.76	IN.	51.19	AC-FT	141400

## ROGUE RIVER BASIN

14361600 ELLIOTT CREEK NEAR COPPER, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1977 to current year.

INSTRUMENTATION.--Temperature recorder since October 1977.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.0°C Aug. 7, 8, 1978, Aug. 8, 10-12, 1981; minimum, 0.0°C Nov. 20, 21, 1977, many days November 1978 to February 1979, Jan. 28-30, 1980.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 19.5°C July 31; minimum, 1.0°C Nov. 15.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

ROGUE RIVER BASIN

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14361600 ELLIOT CREEK NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## ROGUE RIVER BASIN

14361700 CARBERRY CREEK NEAR COPPER, OR

LOCATION.--Lat 42°01'34", long 123°10'10", in SW¼SW¼ sec.3, T.41 S., R.4 W., Jackson County, Hydrologic Unit 17100309, Rogue River National Forest, on right bank, 1.2 mi west of former town of Copper and at mile 0.9.

DRAINAGE AREA.--68.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,990.01 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good below 700 ft<sup>3</sup>/s, fair above. No regulation. Diversion for irrigation of up to 8 ft<sup>3</sup>/s from Sturgis Fork into Thompson Creek above station.

AVERAGE DISCHARGE.--5 years, 173 ft<sup>3</sup>/s, 34.10 in/yr, 125,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,680 ft<sup>3</sup>/s Feb. 18, 1983, gage height, 8.02 ft; maximum gage height, 8.10 ft Dec. 19, 1981; minimum discharge, 5.9 ft<sup>3</sup>/s Sept. 14-16, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 4.2 ft<sup>3</sup>/s was measured Sept. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1930	2,140	5.52	Mar. 10	0400	1,080	3.68
Jan. 26	1900	3,000	6.57	Mar. 13	0800	1,340	4.11
Feb. 12	0930	1,110	3.96	Mar. 30	1030	2,020	5.08
Feb. 18	0530	*4,680	*8.02	May 29	unknown	unknown	unknown

Minimum, 18 ft<sup>3</sup>/s Oct. 16-20, Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	21	55	97	115	371	667	948	282	580	198	44	41		
2	21	47	85	112	313	612	887	288	460	173	42	36		
3	21	42	126	111	277	585	756	309	440	137	41	32		
4	20	38	297	111	247	545	685	355	450	125	40	30		
5	20	36	290	126	231	532	646	392	430	121	38	28		
6	26	37	303	154	227	506	587	339	450	115	37	26		
7	34	35	181	189	222	549	551	309	480	108	36	25		
8	24	34	135	209	235	558	509	299	500	105	34	25		
9	22	34	110	190	492	649	476	262	480	98	34	25		
10	21	32	92	166	596	927	437	243	445	92	34	23		
11	21	31	81	149	580	797	399	231	352	87	34	23		
12	20	30	78	142	992	858	357	231	294	85	33	22		
13	19	30	73	137	779	1130	323	246	277	83	32	23		
14	19	29	74	132	632	930	296	274	284	80	43	24		
15	20	28	469	132	607	741	280	296	272	77	33	26		
16	19	28	1670	141	595	651	277	308	258	75	31	25		
17	18	71	1060	142	1410	611	285	330	259	71	30	23		
18	18	257	495	248	3330	568	287	379	231	65	29	23		
19	19	125	423	269	1590	507	348	448	204	63	28	23		
20	18	78	448	207	1100	455	384	540	190	61	28	23		
21	23	62	525	182	873	418	401	605	180	58	27	22		
22	67	53	504	181	927	399	448	611	174	55	27	22		
23	76	50	372	203	943	377	491	672	169	54	33	31		
24	41	48	266	472	900	375	418	785	154	53	32	30		
25	39	45	224	393	873	352	363	776	148	53	34	25		
26	74	44	197	1600	770	347	316	751	149	51	32	23		
27	48	52	175	1640	735	363	289	750	148	49	27	22		
28	39	87	153	912	706	346	282	800	147	48	24	22		
29	229	174	140	662	---	480	278	900	142	47	31	22		
30	133	135	132	550	---	1620	288	750	132	45	66	22		
31	72	---	124	454	---	1190	---	650	---	44	57	---		
TOTAL	1262	1847	9399	10431	21553	19645	13292	14411	8879	2576	1091	767		
MEAN	40.7	61.6	303	336	770	634	443	465	296	83.1	35.2	25.6		
MAX	229	257	1670	1640	3330	1620	948	900	580	198	66	41		
MIN	18	28	73	111	222	346	277	231	132	44	24	22		
CFSM	.59	.89	4.40	4.88	11.2	9.20	6.43	6.75	4.30	1.21	.51	.37		
IN.	.68	.00	5.07	5.63	11.64	10.61	7.18	7.78	4.79	1.39	.59	.41		
AC-FT	2500	3660	18640	20690	42750	38970	26360	28580	17610	5110	2160	1520		
CAL YR 1982	TOTAL	83145	MEAN	228	MAX	1850	MIN	15	CFSM	3.31	IN.	44.89	AC-FT	164900
WTR YR 1983	TOTAL	105153	MEAN	288	MAX	3330	MIN	18	CFSM	4.18	IN.	56.77	AC-FT	208600

ROGUE RIVER BASIN

365

14361700 CARBERRY CREEK NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1977 to current year.

INSTRUMENTATION.--Temperature recorder since October 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.5°C Aug. 8-12, 1981; minimum, 0.0°C Nov. 20, 21, 1977, many days during November 1978 through February 1979, Jan. 29, 30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.5°C July 30 to Aug. 2, Aug. 8, 9, 17; minimum, 1.5°C Nov. 14, 15, Dec. 29-31.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



## ROGUE RIVER BASIN

14361700 CARBERRY CREEK NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	5.5	9.0	6.0	7.0	6.0	13.0	10.0	20.5	15.5	15.0	12.5
2	6.5	4.5	9.5	6.0	8.5	6.5	11.5	9.5	20.5	16.0	16.0	11.5
3	6.0	4.5	10.5	6.0	11.0	6.5	14.0	9.0	20.0	15.5	16.5	12.0
4	7.0	4.5	8.5	6.0	11.0	6.0	15.5	10.0	20.0	15.0	16.5	12.0
5	7.5	4.5	7.5	6.0	11.5	6.0	16.5	11.5	19.0	14.0	16.5	13.0
6	8.0	4.5	7.5	5.0	12.0	7.0	14.5	12.0	20.0	14.5	17.0	13.0
7	8.0	5.0	8.5	5.5	11.5	7.5	12.5	11.0	20.0	15.5	15.5	12.5
8	8.0	5.5	6.5	5.0	11.5	8.0	11.5	9.5	20.5	16.0	14.5	13.0
9	7.0	5.0	6.0	4.0	11.5	7.0	14.0	9.5	20.5	15.5	15.0	11.5
10	6.0	4.0	7.5	4.5	9.5	7.5	15.0	9.0	18.5	16.0	15.5	11.0
11	6.5	4.5	9.5	4.0	9.0	6.5	16.5	10.5	19.5	15.0	16.0	12.0
12	6.5	4.0	9.5	5.5	11.5	6.5	17.5	12.5	19.5	14.0	16.5	13.0
13	7.0	3.5	10.5	6.0	12.5	7.0	18.0	13.0	17.5	15.0	17.0	14.0
14	7.0	3.5	8.5	6.5	11.5	9.0	16.5	13.5	19.0	14.5	16.5	13.5
15	8.5	4.0	9.0	6.5	12.5	8.5	16.0	12.0	20.0	15.0	16.5	13.0
16	9.5	4.5	10.0	6.0	13.0	8.0	15.5	10.5	20.0	15.5	16.0	13.0
17	8.0	5.5	10.5	5.5	12.0	9.0	15.0	11.5	20.5	15.5	15.5	12.0
18	9.5	5.5	10.5	6.5	10.5	7.5	14.0	10.5	20.0	15.5	14.5	12.0
19	9.0	6.5	10.5	5.5	11.5	8.0	14.5	10.5	17.5	16.0	13.5	11.0
20	8.0	6.0	11.0	6.0	11.5	8.5	16.0	10.0	18.5	15.0	13.0	9.5
21	9.5	6.5	10.5	5.5	12.5	7.0	17.0	11.0	19.0	14.5	12.5	10.0
22	7.5	6.0	11.0	5.5	12.5	8.5	18.0	12.5	17.5	15.5	13.0	11.5
23	6.0	5.0	11.0	6.0	12.0	8.5	18.0	13.5	17.0	15.0	13.0	12.5
24	6.0	4.0	10.5	6.0	13.0	8.5	18.5	14.0	18.5	15.0	15.5	12.5
25	7.0	4.0	10.5	6.0	13.5	8.5	16.5	14.0	18.5	14.5	15.0	12.0
26	7.0	4.5	11.0	6.0	13.5	9.5	17.5	12.0	18.0	14.0	14.5	12.5
27	7.0	5.0	11.0	6.0	14.5	10.5	17.0	13.0	18.0	14.5	13.5	12.0
28	7.5	4.5	10.0	6.5	13.5	10.5	19.0	13.5	16.5	13.5	13.0	11.0
29	9.0	5.0	10.5	7.0	14.0	11.0	19.5	14.0	15.5	14.5	12.0	9.5
30	7.0	6.0	9.5	6.0	11.5	9.5	20.5	14.5	14.5	14.0	12.5	10.0
31	---	---	7.5	6.5	---	---	20.5	16.0	14.5	13.5	---	---
MONTH	9.5	3.5	11.0	4.0	14.5	6.0	20.5	9.0	20.5	13.5	17.0	9.5

## 14361900 APPLEGATE LAKE NEAR COPPER, OR

LOCATION.--Lat 42°03'25", long 123°06'30", in SE¼ sec.25, T.40 S., R.4 W., Jackson County, Hydrologic Unit 17100309, in outlet structure of Applegate Dam on Applegate River, 2.5 miles northeast of former town of Copper, 13 mi south of Ruch and at mile 46.3.

DRAINAGE AREA.--223 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam completed in October 1980. Storage began Dec. 2, 1980. Total capacity, 82,200 acre-ft between elevations 1,763.0 ft and 1,987.0 ft, maximum pool elevation. Elevation of gated spillway crest, 1,943.7 ft. Usable contents, 75,200 acre-ft between elevations 1,854.0 ft and 1,987.0 ft. Water is used for flood control, recreation, pollution abatement, irrigation, and other purposes.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 82,210 acre-ft May 6, 1982, elevation, 1,987.01 ft; minimum since first filling, 11,770 acre-ft Nov. 11, 1981, elevation, 1,873.12 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 82,040 acre-ft May 23, elevation, 1,986.83 ft; minimum, 16,100 acre-ft Nov. 27, elevation, 1,886.50 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

1,860.0	8,330	1,920.0	30,960	1,987.0	82,200
1,880.0	13,890	1,940.0	43,090		
1,900.0	21,380	1,960.0	58,020		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1952.57	1918.63	1887.29	1887.67	1895.18	1924.29	1966.70	1984.63	1985.82	1986.18	1985.56	1979.44
2	1951.59	1917.01	1887.58	1887.70	1897.29	1926.14	1962.77	1985.08	1985.84	1986.03	1985.46	1979.22
3	1950.59	1915.27	1888.63	1887.74	1899.53	1927.76	1960.70	1985.65	1985.97	1986.00	1985.33	1978.98
4	1949.58	1913.45	1890.86	1887.75	1901.39	1929.34	1960.00	1986.27	1986.03	1985.98	1985.20	1978.74
5	1948.56	1911.61	1892.52	1888.02	1902.96	1931.83	1960.69	1986.65	1986.07	1985.97	1985.06	1978.48
6	1947.61	1909.72	1893.98	1888.44	1904.63	1934.31	1961.69	1986.58	1986.21	1986.03	1984.90	1978.22
7	1946.58	1907.68	1893.32	1889.03	1906.13	1937.25	1962.66	1986.55	1986.60	1986.18	1984.74	1977.83
8	1945.43	1905.66	1891.80	1889.32	1907.68	1939.41	1964.21	1986.54	1986.66	1986.30	1984.57	1977.30
9	1944.26	1903.60	1890.18	1889.18	1910.99	1941.47	1966.27	1986.50	1986.43	1986.38	1984.36	1976.65
10	1943.06	1901.48	1889.18	1888.96	1910.79	1945.60	1968.14	1986.52	1986.54	1986.50	1984.12	1975.85
11	1941.84	1899.33	1889.12	1888.93	1909.11	1947.23	1969.81	1986.57	1986.13	1986.62	1983.88	1975.00
12	1940.60	1897.14	1889.18	1888.90	1912.74	1949.42	1971.32	1986.58	1985.93	1986.70	1983.63	1974.12
13	1939.36	1894.83	1889.08	1888.90	1914.30	1953.57	1972.57	1986.62	1986.01	1986.75	1983.38	1973.22
14	1938.11	1892.40	1889.25	1888.78	1913.63	1954.32	1973.60	1986.65	1986.10	1986.77	1983.15	1972.28
15	1936.84	1889.88	1891.58	1888.82	1913.44	1954.28	1974.55	1986.64	1986.14	1986.75	1982.89	1971.33
16	1935.54	1887.68	1905.44	1889.01	1912.81	1954.19	1975.50	1986.65	1986.09	1986.71	1982.62	1970.35
17	1934.24	1887.31	1912.77	1888.99	1921.02	1953.77	1976.50	1986.63	1986.05	1986.64	1982.34	1969.37
18	1932.92	1889.40	1912.39	1889.85	1936.26	1954.02	1977.53	1986.74	1985.93	1986.56	1982.05	1968.38
19	1931.62	1888.85	1910.51	1889.60	1934.08	1954.50	1978.67	1986.69	1985.89	1986.49	1981.76	1967.37
20	1930.30	1888.75	1909.09	1889.22	1927.81	1954.71	1979.70	1986.50	1985.90	1986.46	1981.47	1966.35
21	1929.04	1888.32	1908.67	1888.93	1924.48	1955.11	1980.72	1986.44	1985.91	1986.44	1981.21	1965.34
22	1928.02	1887.69	1905.40	1888.98	1920.62	1956.05	1981.70	1986.60	1985.87	1986.41	1980.96	1964.34
23	1927.18	1887.28	1900.22	1888.85	1917.28	1957.02	1982.48	1986.82	1985.84	1986.37	1980.75	1963.44
24	1925.92	1887.12	1895.01	1890.78	1917.48	1957.95	1982.85	1986.54	1985.82	1986.32	1980.54	1962.48
25	1924.65	1886.88	1889.67	1889.76	1920.74	1958.68	1983.01	1985.96	1985.83	1986.27	1980.29	1961.48
26	1923.58	1886.65	1887.38	1899.42	1921.12	1959.43	1983.04	1986.14	1985.87	1986.19	1980.03	1960.47
27	1922.26	1886.60	1887.42	1906.38	1921.06	1960.23	1983.10	1986.21	1985.92	1986.11	1979.74	1959.45
28	1920.86	1887.14	1887.41	1905.48	1922.10	1960.90	1983.41	1986.16	1985.97	1986.01	1979.43	1958.42
29	1921.72	1887.47	1887.66	1901.97	---	1963.00	1983.74	1986.16	1986.02	1985.90	1979.27	1957.39
30	1921.39	1887.30	1887.69	1896.90	---	1973.80	1984.20	1985.79	1986.01	1985.79	1979.57	1956.34
31	1920.13	---	1887.70	1894.07	---	1971.71	---	1985.83	---	1985.65	1979.59	---
MEAN	1935.68	1896.40	1894.45	1891.17	1914.17	1949.72	1973.73	1986.32	1986.05	1986.31	1982.51	1969.92
MAX	1952.57	1918.63	1912.77	1906.38	1936.26	1973.80	1984.20	1986.82	1986.66	1986.77	1985.56	1979.44
MIN	1920.13	1886.60	1887.29	1887.67	1895.18	1924.29	1960.00	1984.63	1985.82	1985.65	1979.27	1956.34
(+)	31030	16380	16530	18940	32090	67930	79470	81050	81230	80880	75090	55100
(#)	-21890	-14650	+150	+2410	+13150	+35840	+11540	+1580	+180	-350	-5790	-19990
CAL YR 1982	MEAN	1948.73	MAX	1986.99	MIN	1886.60	AC-FT#	-2620				
WTR YR 1983	MEAN	1947.37	MAX	1986.82	MIN	1886.60	AC-FT#	+2180				

† Contents, in acre-feet, at 2400, on last day of month.

# Change in contents, in acre-feet.

## ROGUE RIVER BASIN

## 14362000 APPLEGATE RIVER NEAR COPPER, OR

LOCATION.--Lat 42°03'50", long 123°06'37", in SW¼NW¼ sec.30, T.40 S., R.3 W., Jackson County, Hydrologic Unit 17100309, U.S. Corps of Engineers land, on left bank 0.1 mi downstream from Brushy Gulch, 0.6 mi downstream from Applegate Dam, 3.1 mi northeast of former town of Copper, and at mile 45.7.

DRAINAGE AREA.--225 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WDR OR-78-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,747.51 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977, at site 0.6 mi upstream at datum 12.15 ft higher.

REMARKS.--Water-discharge records good. Flow regulated since December 1980 by Applegate Lake (see station 14361900). Some storage during winter in Squaw Lakes Reservoir, capacity, 1,100 acre-ft on Squaw Creek above station. Diversions above station from Carberry Creek for irrigation in Thompson Creek basin.

AVERAGE DISCHARGE.--45 years, 456 ft<sup>3</sup>/s, 330,400 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 25.38 ft, site and datum then in use, from high-water mark in well, from rating curve extended above 12,000 ft<sup>3</sup>/s on basis of four slope-area measurements of peak flows made in 1950, 1955, 1964, and 1974; minimum, 1.5 ft<sup>3</sup>/s Dec. 20, 1980, result of regulation at Applegate dam, 0.6 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,640 ft<sup>3</sup>/s Feb. 22, gage height, 8.50 ft; minimum, 191 ft<sup>3</sup>/s Apr. 8-10; minimum daily, 191 ft<sup>3</sup>/s Apr. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	455	582	408	417	740	773	4430	606	1840	680	215	233
2	455	578	311	391	432	778	3590	607	1510	742	213	235
3	459	584	420	391	305	784	2580	608	1400	563	213	236
4	462	588	770	391	308	725	1820	683	1400	525	213	230
5	459	583	827	413	309	391	1120	910	1360	509	211	228
6	458	585	835	519	312	309	850	983	1370	442	210	228
7	484	592	836	582	315	312	758	898	1340	368	210	279
8	503	588	830	681	316	543	466	867	1570	364	210	344
9	501	583	755	683	565	743	191	794	1570	347	228	404
10	503	579	584	627	1630	910	194	716	1400	308	238	475
11	507	576	357	539	1860	1260	194	671	1440	294	236	495
12	505	575	330	515	1860	1440	195	707	1170	318	236	493
13	505	579	333	487	1880	2010	244	739	970	321	236	504
14	502	579	302	487	1890	2410	296	827	970	320	236	514
15	498	575	1060	458	1820	2180	298	906	977	322	236	514
16	498	508	2120	459	1850	1900	298	928	976	323	236	519
17	495	397	1540	495	2180	1800	298	1010	977	323	236	519
18	499	498	1800	613	3260	1370	300	1100	917	314	236	518
19	489	624	1790	851	4320	1130	365	1400	787	290	236	516
20	487	354	1770	724	4350	1130	493	1700	725	261	236	519
21	496	347	2000	645	3190	981	586	1850	694	240	236	513
22	503	346	2250	585	3250	736	728	1820	694	238	236	511
23	502	291	2210	634	3150	655	872	2130	674	238	236	509
24	504	225	1930	780	2000	656	881	2680	625	238	234	506
25	504	225	1770	1190	968	659	863	2790	591	238	233	506
26	502	225	1110	1870	1520	660	852	2380	577	238	233	504
27	509	225	603	2310	1510	661	768	2470	580	237	233	504
28	508	348	554	2320	1080	663	638	2640	570	236	232	501
29	508	652	468	2310	---	666	605	2870	558	236	230	500
30	551	577	469	2270	---	1110	605	2510	546	236	231	499
31	584	---	439	1630	---	4230	---	2100	---	236	233	---
TOTAL	15395	14568	31781	27267	47170	34575	26378	43900	30778	10545	7088	13056
MEAN	497	486	1025	880	1685	1115	879	1416	1026	340	229	435
MAX	584	652	2250	2320	4350	4230	4430	2870	1840	742	238	519
MIN	455	225	302	391	305	309	191	606	546	236	210	228
AC-FT	30540	28900	63040	54080	93560	68580	52320	87080	61050	20920	14060	25900
MEAN†	141	239	1028	919	1921	1698	1073	1442	1029	335	134	99
AC-FT†	8650	14250	63190	56490	106710	104420	63860	88660	61230	20570	8270	5910

CAL YR 1982 TOTAL 245401 MEAN 672 MAX 4280 MIN 107 AC-FT 486800 MEAN† 669 AC-FT† 484180  
WTR YR 1983 TOTAL 302501 MEAN 829 MAX 4430 MIN 191 AC-FT 600000 MEAN† 832 AC-FT† 602180

† Adjusted for change in contents of Applegate Lake.

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: September 1980 to current year.

pH: September 1980 to current year.

WATER TEMPERATURES: January 1977 to current year.

DISSOLVED OXYGEN: September 1980 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1980.

REMARKS.--Storage began in Applegate Lake Dec. 2, 1980. Dam site is approximately 0.5 mi (0.8 km) upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 188 micromhos Sept. 13, 1980; minimum, 61 micromhos Dec. 3, 1980, Dec. 20, 1981, June 19, 20, 1983.

pH: Maximum, 9.0 units Sept. 4, 1980; minimum, 7.3 units Oct. 11, 27-30, 1982.

WATER TEMPERATURES: Maximum, 26.5°C Aug. 7, 1978; minimum, 0.0°C on many days during winter periods prior to filling of Applegate Lake.

DISSOLVED OXYGEN: Maximum, 15.1 mg/l Dec. 15, 1981; minimum, 4.9 mg/l Sept. 28-30, 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 146 micromhos Oct. 11; minimum, 61 micromhos June 19, 20.

pH: Maximum, 8.3 units June 25-27, July 10; minimum, 7.3 units Oct. 11, 27-30.

WATER TEMPERATURES: Maximum, 16.0°C Sept. 20-22, 25-29; minimum, 4.0°C Dec. 31 to Jan. 10, Jan. 14-20.

DISSOLVED OXYGEN: Maximum, 14.5 mg/l Jan. 24, 25; minimum, 8.2 mg/l Sept. 1.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
FEB 09...	1030	117	7.8	5.0	--	1	1	<100	1	<10
AUG 26...	1230	73	7.8	11.5	10.9	<1	2	<100	1	<10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
FEB 09...	1	10	400	6	30	<.1	.2	<1	<1	30
AUG 26...	<1	6	160	6	10	<.1	.1	<1	<1	40

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 08...	510	0	.00	APR 21...	596	5	8.0
25...	506	1	1.4	MAY 09...	742	1	2.0
NOV 10...	575	4	6.2	25...	2840	4	31
29...	717	6	12	JUN 10...	1390	27	101
DEC 27...	571	6	9.3	24...	614	3	5.0
JAN 10...	615	3	5.0	JUL 11...	294	1	.79
24...	737	2	4.0	25...	238	1	.64
FEB 09...	321	5	4.3	AUG 08...	210	4	2.3
23...	2440	20	132	26...	233	--	--
MAR 09...	747	8	16	26...	--	4	2.5
25...	662	7	13	SEP 12...	494	16	21
APR 07...	764	10	21	28...	507	1	1.4

## ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	113	96	119	105	94	90	107	82	66	67	80
2	104	118	99	116	116	97	89	107	76	65	68	80
3	104	122	102	113	120	99	89	107	73	66	68	81
4	106	127	105	111	121	102	90	107	72	67	69	80
5	107	131	99	113	124	103	93	107	71	68	68	81
6	108	134	89	108	123	104	95	108	71	67	68	81
7	109	136	87	109	122	101	97	109	71	67	68	82
8	108	139	83	106	116	100	99	107	69	68	69	83
9	108	141	87	108	114	100	101	108	69	69	67	84
10	108	143	93	111	107	100	102	108	68	70	67	85
11	109	143	96	115	105	102	102	109	68	69	67	85
12	109	141	98	115	106	102	102	108	67	69	68	85
13	109	140	98	115	108	100	103	107	67	68	70	86
14	109	140	99	114	109	93	103	107	67	68	69	87
15	109	138	100	114	112	84	105	106	65	67	70	90
16	110	138	98	112	109	82	105	106	66	68	70	89
17	109	137	85	109	104	83	106	106	65	68	70	90
18	109	133	86	106	101	86	108	106	64	68	70	91
19	111	106	88	106	84	87	108	106	63	68	70	92
20	110	102	91	107	88	88	103	106	63	68	71	93
21	106	107	90	107	93	89	103	105	64	68	70	94
22	103	110	90	106	95	91	106	106	65	67	72	95
23	105	114	92	104	95	91	108	105	65	67	73	95
24	108	117	97	102	94	93	107	104	65	67	73	95
25	111	120	101	100	96	94	107	101	65	67	72	97
26	113	120	110	100	96	95	107	98	67	66	72	97
27	105	121	118	98	95	95	107	96	65	67	72	98
28	102	121	119	93	94	97	106	94	64	67	72	98
29	103	116	122	90	---	98	104	92	64	67	73	98
30	111	102	120	90	---	99	105	88	65	67	74	98
31	110	---	121	94	---	94	---	85	---	67	77	---
MEAN	108	126	99	107	105	95	102	104	68	67	70	89



14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.5	7.5	7.7	7.7	7.9	7.8	7.8	7.8	7.9	7.8	7.9	7.9
2	7.5	7.5	7.8	7.7	7.9	7.9	7.8	7.8	8.0	7.8	7.9	7.9
3	7.5	7.4	7.8	7.7	7.9	7.8	7.8	7.8	8.0	7.9	7.9	7.9
4	7.6	7.5	7.8	7.7	7.8	7.8	7.8	7.8	8.0	8.0	7.9	7.9
5	7.6	7.5	7.8	7.7	7.8	7.8	7.8	7.8	8.0	8.0	8.0	7.9
6	7.6	7.5	7.8	7.7	7.8	7.8	7.8	7.8	8.0	8.0	8.0	7.9
7	7.6	7.5	7.8	7.7	7.8	7.8	7.8	7.8	8.0	8.0	7.9	7.9
8	7.6	7.5	7.8	7.8	7.8	7.8	7.8	7.8	8.0	7.9	7.9	7.9
9	7.6	7.5	7.8	7.8	7.8	7.8	7.8	7.8	8.0	7.9	7.9	7.9
10	7.6	7.5	7.8	7.8	7.8	7.8	7.9	7.8	7.9	7.9	7.9	7.9
11	7.6	7.3	7.8	7.8	7.9	7.8	7.9	7.9	7.9	7.9	7.9	7.9
12	7.6	7.5	7.8	7.8	7.9	7.8	7.9	7.9	7.9	7.9	7.9	7.9
13	7.6	7.5	7.8	7.8	7.8	7.8	7.9	7.9	7.9	7.9	7.9	7.9
14	7.6	7.5	7.8	7.8	7.9	7.8	7.9	7.9	7.9	7.9	7.9	7.9
15	7.6	7.5	7.8	7.8	7.8	7.8	7.9	7.9	7.9	7.9	7.9	7.9
16	7.6	7.5	7.8	7.8	7.8	7.7	7.9	7.9	7.9	7.9	7.9	7.9
17	7.6	7.5	7.8	7.8	7.8	7.7	7.9	7.9	7.9	7.9	7.9	7.9
18	7.6	7.5	7.8	7.7	7.8	7.7	7.9	7.9	7.9	7.9	7.9	7.9
19	7.6	7.6	7.8	7.8	7.7	7.7	7.9	7.9	7.9	7.9	7.9	7.9
20	7.6	7.5	7.9	7.8	7.8	7.7	7.9	7.9	7.9	7.9	7.9	7.9
21	7.5	7.4	7.9	7.8	7.8	7.7	7.9	7.9	7.9	7.9	7.9	7.9
22	7.5	7.4	7.9	7.8	7.7	7.7	7.9	7.9	7.9	7.9	7.9	7.9
23	7.5	7.4	7.9	7.8	7.8	7.7	7.9	7.9	7.9	7.8	7.9	7.9
24	7.5	7.4	7.9	7.8	7.8	7.8	7.9	7.8	7.9	7.8	7.9	7.9
25	7.5	7.5	7.9	7.8	7.8	7.8	7.9	7.9	7.9	7.8	7.9	7.9
26	7.6	7.5	7.9	7.8	7.8	7.7	7.9	7.9	7.9	7.9	8.0	7.9
27	7.5	7.3	7.9	7.8	7.8	7.8	7.9	7.9	7.9	7.9	8.0	7.9
28	7.3	7.3	7.9	7.8	7.8	7.8	7.9	7.9	7.9	7.9	8.0	7.9
29	7.3	7.3	7.8	7.8	7.8	7.8	7.9	7.9	---	---	8.0	7.9
30	7.7	7.3	7.8	7.8	7.8	7.8	7.9	7.8	---	---	8.0	7.9
31	7.8	7.7	---	---	7.8	7.8	7.8	7.8	---	---	7.9	7.9
MONTH	7.8	7.3	7.9	7.7	7.9	7.7	7.9	7.8	8.0	7.8	8.0	7.9
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.9	7.9	8.0	7.9	7.9	7.8	8.1	7.7	7.9	7.6	7.9	7.6
2	7.9	7.9	8.0	7.9	8.1	7.8	8.1	7.7	7.9	7.6	7.9	7.6
3	7.9	7.9	8.0	7.9	7.9	7.8	8.1	7.7	7.9	7.6	7.9	7.6
4	7.9	7.9	8.0	7.9	7.9	7.8	8.1	7.7	7.9	7.6	7.9	7.6
5	7.9	7.9	8.0	7.9	7.9	7.7	8.1	7.7	7.9	7.7	7.9	7.6
6	7.9	7.9	8.0	7.9	7.9	7.7	8.2	7.7	7.9	7.6	7.9	7.6
7	7.9	7.8	8.0	7.9	7.9	7.7	8.2	7.7	7.9	7.6	7.8	7.6
8	8.0	7.9	7.9	7.9	7.8	7.7	8.2	7.7	7.9	7.6	7.8	7.6
9	8.0	7.9	7.9	7.8	7.8	7.7	8.2	7.7	7.9	7.7	7.8	7.6
10	8.0	7.9	8.0	7.9	7.8	7.7	8.3	7.7	7.9	7.7	7.7	7.6
11	8.0	7.9	8.1	8.0	7.8	7.7	8.2	7.7	7.9	7.7	7.7	7.6
12	8.0	7.9	8.0	8.0	7.9	7.7	8.2	7.7	7.9	7.7	7.7	7.6
13	8.0	7.9	8.0	8.0	7.9	7.7	8.2	7.7	7.9	7.7	7.7	7.6
14	8.0	7.9	8.0	7.9	8.0	7.7	8.2	7.7	7.9	7.7	7.7	7.6
15	8.0	7.9	8.0	7.9	7.9	7.7	8.2	7.7	7.9	7.6	7.7	7.6
16	8.0	7.9	8.0	7.9	7.9	7.7	8.2	7.7	7.8	7.6	7.7	7.6
17	8.0	7.9	8.0	7.9	7.9	7.7	8.2	7.7	7.9	7.6	7.8	7.6
18	8.0	8.0	8.0	7.9	8.0	7.7	8.2	7.7	7.9	7.6	7.8	7.6
19	8.0	7.9	8.0	7.9	8.1	7.7	8.2	7.7	7.8	7.6	7.8	7.7
20	8.0	7.9	7.9	7.8	8.1	7.8	8.2	7.6	7.9	7.6	7.8	7.7
21	8.0	7.9	7.9	7.8	8.2	7.8	8.2	7.7	7.9	7.7	7.8	7.7
22	8.0	7.9	8.0	7.9	8.2	7.8	8.2	7.6	7.9	7.6	7.8	7.7
23	8.0	8.0	7.9	7.8	8.1	7.8	8.2	7.6	7.9	7.6	7.8	7.7
24	8.0	8.0	7.9	7.8	8.2	7.8	8.1	7.6	7.9	7.6	7.8	7.6
25	8.0	7.9	7.9	7.8	8.3	7.8	8.0	7.6	7.9	7.6	7.8	7.7
26	8.1	7.9	7.9	7.9	8.3	7.8	8.0	7.6	7.8	7.6	7.8	7.7
27	8.0	7.9	7.9	7.8	8.3	7.8	8.0	7.6	7.9	7.6	7.7	7.7
28	8.1	7.9	7.9	7.8	8.2	7.8	8.0	7.6	7.9	7.6	7.8	7.6
29	8.0	7.9	7.9	7.8	8.2	7.8	7.9	7.6	7.9	7.6	7.8	7.7
30	8.0	7.9	7.9	7.8	8.2	7.8	7.9	7.6	7.8	7.6	7.8	7.7
31	---	---	7.8	7.8	---	---	7.9	7.6	7.9	7.6	---	---
MONTH	8.1	7.8	8.1	7.8	8.3	7.7	8.3	7.6	7.9	7.6	7.9	7.6

## ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	12.0	12.0	11.5	7.0	6.5	4.0	4.0	6.0	5.5	6.0	6.0
2	12.5	12.0	12.0	11.5	6.5	6.0	4.5	4.0	6.0	5.5	6.0	6.0
3	12.5	12.0	12.0	11.5	6.5	6.5	4.5	4.0	5.5	5.5	6.0	6.0
4	12.5	12.5	11.5	11.5	7.0	6.5	4.0	4.0	5.5	5.5	6.0	6.0
5	12.5	12.5	12.0	11.5	7.0	6.5	4.0	4.0	5.5	5.0	6.5	6.0
6	13.0	12.5	12.0	11.5	6.5	6.5	4.5	4.0	5.0	5.0	6.5	6.0
7	12.5	12.5	12.0	11.5	7.0	6.5	4.0	4.0	5.5	5.0	6.5	6.0
8	12.5	12.5	12.0	11.5	6.5	6.0	4.0	4.0	5.5	5.0	6.5	6.0
9	12.5	12.5	11.5	11.5	6.0	5.5	4.0	4.0	5.5	5.0	6.5	6.0
10	12.5	12.5	11.5	11.0	5.5	5.5	4.5	4.0	5.5	5.5	6.5	6.0
11	13.0	12.5	11.0	11.0	5.5	5.0	4.5	4.5	5.5	5.0	6.5	6.5
12	13.0	12.5	11.0	10.5	5.5	5.0	4.5	4.5	5.5	5.0	6.5	6.5
13	12.5	12.5	10.5	10.5	5.5	5.0	4.5	4.5	5.5	5.0	7.0	6.5
14	12.5	12.5	10.5	10.0	5.5	5.0	4.5	4.0	5.5	5.5	6.5	6.5
15	13.0	12.5	10.0	10.0	6.5	5.5	4.5	4.0	5.5	5.5	6.5	6.0
16	13.0	12.5	10.0	9.5	6.0	5.5	4.5	4.0	6.0	5.5	6.0	6.0
17	13.0	12.5	9.5	9.0	6.0	6.0	4.5	4.0	6.0	5.5	6.0	6.0
18	13.0	11.5	9.5	9.0	6.0	6.0	4.0	4.0	6.0	6.0	6.0	6.0
19	13.0	12.5	9.0	7.5	6.0	6.0	4.5	4.0	6.0	6.0	6.0	6.0
20	13.0	12.5	7.5	7.5	6.0	5.5	4.5	4.0	6.0	6.0	6.0	6.0
21	12.5	11.5	7.5	7.5	6.0	5.5	4.5	4.5	6.0	6.0	6.0	6.0
22	12.0	11.5	7.5	7.5	5.5	5.5	4.5	4.5	6.5	6.0	6.5	6.0
23	12.5	12.0	8.0	7.5	5.5	5.5	5.0	4.5	6.5	6.5	6.0	6.0
24	12.5	12.0	8.0	7.5	5.5	5.0	5.0	4.5	6.5	6.5	6.5	6.0
25	13.0	12.5	8.0	7.5	5.0	5.0	5.0	4.5	6.5	6.5	6.5	6.0
26	13.0	12.5	7.5	7.5	5.0	4.5	5.0	4.5	6.5	6.5	6.0	6.0
27	12.5	9.0	7.5	7.0	5.0	4.5	5.0	5.0	6.5	6.0	6.5	6.0
28	9.5	9.0	7.5	7.5	4.5	4.5	5.5	5.0	6.0	6.0	6.0	6.0
29	10.5	9.5	7.5	7.5	4.5	4.5	5.5	5.5	---	---	6.0	6.0
30	11.5	10.5	7.5	7.0	4.5	4.5	5.5	5.5	---	---	6.5	6.0
31	11.5	11.5	---	---	4.5	4.0	5.5	5.5	---	---	6.5	6.0
MONTH	13.0	9.0	12.0	7.0	7.0	4.0	5.5	4.0	6.5	5.0	7.0	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	7.5	7.5	9.0	8.5	11.5	10.5	11.0	10.5	13.5	13.0
2	6.5	6.5	8.0	7.5	10.0	9.0	11.0	10.5	11.0	10.5	13.5	13.0
3	6.5	6.5	8.0	7.5	9.5	9.0	11.0	10.5	11.0	10.5	14.0	13.0
4	6.5	6.0	8.0	7.5	9.5	9.0	11.0	10.5	11.0	10.5	14.0	13.0
5	6.5	6.0	8.0	7.5	10.0	9.5	11.0	10.5	11.0	10.5	14.0	13.5
6	6.5	6.0	8.0	7.5	10.0	9.5	11.0	10.0	11.5	10.5	14.0	13.5
7	6.5	6.0	8.5	8.0	10.5	9.5	10.5	10.0	11.0	10.5	14.0	13.5
8	7.0	6.0	8.0	7.5	10.0	9.5	10.5	10.0	11.5	10.5	14.5	13.5
9	6.5	6.0	8.0	7.5	10.0	9.5	10.5	10.0	11.0	10.5	14.5	14.0
10	6.5	6.0	8.5	8.0	10.5	9.5	11.0	10.0	11.0	10.5	15.0	14.0
11	6.5	6.0	9.5	8.5	10.0	9.5	11.0	10.0	11.0	10.5	15.0	14.0
12	7.0	6.0	9.5	9.0	10.5	10.0	10.5	9.5	11.0	10.5	15.0	14.5
13	7.0	6.0	9.5	9.0	11.0	10.0	10.5	9.5	11.0	10.5	15.0	14.5
14	6.5	6.0	9.5	9.0	11.5	10.0	10.5	9.5	11.5	10.5	15.0	14.5
15	7.0	6.0	9.0	8.0	10.5	10.0	10.5	10.0	11.5	10.5	15.5	15.0
16	7.0	6.0	9.0	8.5	11.0	10.0	10.5	10.0	11.5	11.0	15.5	15.0
17	6.5	6.0	9.5	8.5	11.5	10.5	10.5	10.0	11.5	11.0	15.5	15.0
18	7.0	6.0	9.5	8.5	11.5	10.5	10.5	10.0	11.5	11.0	15.5	15.0
19	6.5	6.5	9.0	8.5	11.5	11.0	10.5	10.0	11.5	11.0	15.5	15.5
20	7.0	6.5	9.0	8.0	11.5	11.0	11.0	10.0	11.5	11.0	16.0	15.5
21	7.5	6.5	9.0	8.5	12.5	11.0	10.5	10.0	12.0	11.0	16.0	15.5
22	8.0	7.0	9.0	8.5	13.0	11.5	11.0	10.0	12.0	11.5	16.0	15.5
23	8.5	7.5	9.0	8.0	12.0	11.5	11.0	10.5	12.0	11.5	15.5	15.5
24	8.0	8.0	8.5	8.0	12.5	11.5	11.0	10.5	12.5	11.0	15.5	15.5
25	8.5	7.5	8.5	8.0	12.5	11.5	11.0	10.5	11.5	11.0	16.0	15.5
26	8.5	7.5	8.5	8.0	12.5	11.5	11.0	10.5	12.0	11.0	16.0	15.5
27	8.0	7.5	8.5	8.0	12.5	11.0	11.0	10.5	12.0	11.0	16.0	15.5
28	8.5	7.5	8.5	8.0	11.5	10.5	11.0	10.5	12.0	11.0	16.0	15.5
29	8.0	7.0	8.5	8.0	11.0	10.5	11.0	10.5	12.0	11.0	16.0	15.5
30	7.5	7.5	8.5	8.0	11.0	10.5	11.0	10.5	12.0	11.5	15.5	15.5
31	---	---	9.0	8.5	---	---	11.0	10.5	13.5	11.5	---	---
MONTH	8.5	6.0	9.5	7.5	13.0	8.5	11.5	9.5	13.5	10.5	16.0	13.0

## 14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	10.8	10.1	10.5	11.1	10.8	10.9	12.7	12.1	12.3	13.7	13.1	13.4
2	10.8	10.2	10.5	11.1	10.7	10.8	12.5	11.9	12.3	13.8	13.0	13.4
3	10.9	10.1	10.5	11.1	10.7	10.9	12.8	12.2	12.5	13.7	13.2	13.5
4	11.0	10.2	10.6	11.2	10.8	11.0	12.8	11.9	12.3	13.7	13.1	13.4
5	10.9	10.3	10.6	11.2	10.8	11.0	12.6	11.9	12.3	13.7	13.0	13.4
6	10.7	10.2	10.5	11.2	10.8	11.0	13.0	12.3	12.6	13.2	12.4	12.9
7	11.0	10.5	10.8	11.3	10.9	11.1	13.1	11.9	12.3	13.8	12.7	13.0
8	11.3	10.7	10.9	11.3	10.8	11.1	12.4	11.8	12.2	13.5	12.8	13.1
9	12.0	10.2	11.1	11.4	10.9	11.1	12.6	12.1	12.3	13.5	12.9	13.3
10	11.4	10.3	10.9	11.6	10.8	11.1	12.5	11.9	12.2	13.9	13.0	13.5
11	11.4	10.6	10.9	12.1	11.2	11.6	12.5	11.9	12.2	14.0	13.1	13.6
12	11.3	10.7	11.0	11.9	11.4	11.7	12.5	12.1	12.2	13.6	13.1	13.4
13	11.3	10.7	11.0	12.0	11.3	11.6	12.7	11.7	12.2	13.9	13.1	13.5
14	11.4	10.6	10.9	11.9	11.3	11.7	12.6	12.2	12.4	13.8	13.4	13.6
15	11.2	10.4	10.7	12.1	11.8	11.9	13.1	12.1	12.6	13.8	13.3	13.5
16	10.9	10.3	10.5	12.4	11.7	12.1	12.9	12.0	12.4	13.7	13.2	13.5
17	11.0	10.3	10.6	12.2	11.7	12.0	12.7	12.2	12.4	13.8	13.3	13.5
18	11.4	10.3	10.8	12.2	11.5	11.8	12.8	12.5	12.7	13.8	13.3	13.5
19	11.4	10.3	10.8	12.8	12.1	12.5	13.0	12.3	12.7	13.8	13.4	13.6
20	11.0	10.3	10.7	13.1	12.6	12.8	13.0	12.4	12.7	13.7	13.3	13.5
21	11.4	10.3	10.8	13.0	12.3	12.7	13.3	12.6	12.9	13.6	13.2	13.4
22	11.3	10.5	10.9	12.9	12.3	12.5	13.5	12.6	13.0	13.5	13.1	13.3
23	11.0	10.5	10.8	12.7	12.1	12.5	13.9	12.9	13.4	13.6	13.0	13.4
24	11.0	10.2	10.6	12.6	12.1	12.4	14.1	13.5	13.8	14.5	13.1	13.6
25	10.4	10.0	10.2	12.7	12.2	12.5	14.0	13.1	13.5	14.5	13.3	14.1
26	10.9	10.0	10.4	12.8	11.3	12.1	13.6	12.7	13.2	14.3	13.2	13.8
27	12.1	10.2	11.3	12.2	11.4	11.7	14.0	13.0	13.4	14.0	13.0	13.5
28	11.7	10.8	11.4	11.9	11.4	11.7	13.9	13.3	13.5	13.6	12.9	13.1
29	11.1	10.6	10.9	12.6	11.9	12.3	13.6	13.0	13.4	13.2	12.6	12.9
30	11.0	10.5	10.7	12.8	11.9	12.4	13.7	13.1	13.4	13.1	12.7	12.9
31	11.0	10.6	10.8	---	---	---	13.7	12.9	13.3	13.1	12.3	12.7
MONTH	12.1	10.0	10.8	13.1	10.7	11.8	14.1	11.7	12.7	14.5	12.3	13.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	13.0	12.2	12.5	12.9	12.4	12.6	12.5	11.2	11.9	12.8	12.2	12.5
2	12.3	11.9	12.2	12.8	12.4	12.6	12.3	11.5	11.8	12.7	12.3	12.5
3	12.4	11.9	12.1	12.7	12.4	12.6	12.4	11.2	11.8	12.5	12.1	12.3
4	12.5	12.0	12.2	13.0	12.2	12.6	12.4	11.4	11.9	12.4	11.7	12.1
5	12.4	11.9	12.2	12.6	12.2	12.4	12.5	11.4	12.0	12.6	11.8	12.2
6	12.4	12.0	12.2	12.6	12.2	12.3	12.5	11.3	11.9	12.8	12.2	12.5
7	12.4	12.0	12.2	12.7	12.2	12.4	13.3	11.7	12.6	12.7	12.1	12.4
8	12.4	12.0	12.1	13.0	12.3	12.6	13.3	12.3	12.7	12.7	12.3	12.5
9	13.2	11.9	12.3	13.5	12.6	13.0	12.6	12.3	12.5	13.3	12.4	12.8
10	13.8	12.6	13.1	13.5	13.0	13.3	12.8	12.4	12.5	13.2	12.0	12.8
11	13.3	12.5	13.0	13.3	12.8	13.1	12.6	12.2	12.4	12.3	11.9	12.1
12	13.3	12.8	13.0	13.3	12.6	13.0	12.7	12.3	12.5	12.1	11.8	12.0
13	13.5	13.1	13.3	13.3	12.8	13.0	12.8	12.4	12.6	12.4	11.8	12.0
14	13.7	13.3	13.5	13.5	12.9	13.2	12.9	12.6	12.8	12.3	11.9	12.1
15	13.9	13.3	13.6	13.4	13.0	13.2	12.9	12.5	12.8	12.7	12.2	12.5
16	14.1	13.3	13.7	13.3	13.0	13.2	12.9	12.5	12.7	12.8	12.5	12.6
17	13.9	13.3	13.7	13.4	12.9	13.2	12.8	12.3	12.6	12.7	12.2	12.5
18	13.7	12.9	13.4	13.3	13.0	13.1	12.7	12.3	12.5	12.8	12.2	12.5
19	---	---	---	13.3	12.9	13.1	12.7	12.2	12.5	12.7	12.3	12.5
20	---	---	---	13.2	12.9	13.1	12.8	12.5	12.6	13.0	12.2	12.6
21	---	---	---	13.2	12.7	12.9	13.2	12.5	12.9	13.0	12.6	12.8
22	---	---	---	13.0	12.4	12.7	13.1	12.2	12.6	12.9	12.4	12.6
23	---	---	---	12.8	12.3	12.6	12.6	12.2	12.4	12.8	12.5	12.6
24	13.7	12.6	13.3	12.9	12.2	12.5	12.9	12.3	12.6	12.8	12.6	12.7
25	13.2	12.2	12.7	13.4	12.7	13.0	12.8	12.3	12.6	13.6	12.5	13.0
26	13.1	12.6	12.8	13.5	12.6	13.1	12.8	11.4	12.4	13.6	12.6	13.1
27	13.1	12.6	12.8	13.3	12.7	13.0	12.7	12.3	12.5	13.1	12.4	12.8
28	13.2	12.4	12.7	13.5	12.9	13.2	12.7	11.3	12.2	13.0	12.5	12.8
29	---	---	---	13.5	13.0	13.2	12.6	12.3	12.4	13.2	12.5	12.9
30	---	---	---	14.3	13.1	13.7	12.5	12.2	12.4	13.4	12.8	13.0
31	---	---	---	14.1	11.5	12.6	---	---	---	13.1	12.6	12.9
MONTH	14.1	11.9	12.8	14.3	11.5	12.9	13.3	11.2	12.4	13.6	11.7	12.6

## ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	13.2	12.7	12.9	11.8	10.9	11.3	11.3	10.5	10.9	10.4	8.2	9.8
2	13.1	11.4	12.7	11.7	11.1	11.4	11.4	10.4	10.8	9.4	8.3	8.9
3	13.0	12.4	12.8	12.1	11.0	11.5	11.6	10.4	10.9	9.7	8.7	9.2
4	13.0	12.4	12.7	11.9	11.0	11.4	11.5	10.5	11.1	9.8	9.0	9.4
5	12.9	12.3	12.5	11.9	10.9	11.3	11.7	10.6	11.2	10.1	9.1	9.5
6	12.7	12.1	12.4	11.9	10.8	11.3	11.6	10.1	10.9	10.2	9.0	9.6
7	12.6	12.3	12.4	11.9	10.8	11.2	11.1	10.0	10.6	10.0	9.0	9.5
8	12.8	12.4	12.6	11.8	10.9	11.3	11.2	9.8	10.4	9.9	8.8	9.6
9	12.7	11.9	12.4	11.9	10.7	11.3	11.0	10.1	10.7	10.0	9.2	9.6
10	13.1	12.0	12.4	11.6	10.6	11.1	11.3	10.0	10.8	10.2	9.3	9.8
11	13.0	11.9	12.3	11.7	10.6	11.2	10.9	10.2	10.6	10.5	9.5	10.0
12	12.3	11.6	12.0	12.2	10.9	11.5	10.9	10.2	10.5	10.7	10.1	10.3
13	12.2	11.4	11.8	12.1	11.0	11.4	10.8	10.3	10.5	10.1	9.4	9.8
14	12.2	11.3	11.7	11.8	11.0	11.5	11.0	10.2	10.6	10.4	9.5	10.0
15	12.4	11.6	12.0	12.2	10.8	11.3	10.9	10.3	10.5	10.1	9.6	9.8
16	12.2	11.4	11.9	11.8	10.7	11.2	10.9	9.9	10.4	10.3	9.4	9.7
17	12.1	11.4	11.7	11.4	10.4	10.9	10.9	9.9	10.3	10.2	9.6	9.9
18	12.3	11.3	11.8	11.3	10.4	10.9	10.8	9.9	10.4	10.9	8.7	10.0
19	11.9	11.2	11.5	11.6	10.5	11.0	10.8	10.1	10.5	10.5	9.1	10.1
20	12.0	11.1	11.6	11.4	10.3	11.0	10.9	9.9	10.6	10.4	9.3	10.1
21	11.7	10.9	11.4	11.9	10.5	11.2	10.9	10.2	10.5	10.3	8.7	9.8
22	11.5	10.7	11.1	11.7	10.5	11.1	10.8	10.0	10.4	10.2	9.3	9.8
23	11.7	10.8	11.2	11.9	10.9	11.3	10.7	9.8	10.3	10.0	9.3	9.6
24	12.4	11.1	11.7	11.8	10.9	11.3	10.4	9.5	10.0	9.9	9.4	9.6
25	11.7	10.7	11.3	11.5	10.4	10.9	10.7	9.9	10.2	10.0	9.5	9.8
26	11.6	10.6	11.1	11.5	10.2	10.9	11.2	10.0	10.4	10.4	9.9	10.1
27	11.8	10.5	11.1	11.3	10.5	10.9	10.9	10.1	10.5	10.5	10.0	10.3
28	11.9	10.9	11.3	11.1	10.2	10.7	11.3	10.3	10.8	11.2	10.2	10.6
29	12.1	10.9	11.4	11.3	10.3	10.8	11.0	10.3	10.7	10.8	10.1	10.5
30	11.8	10.7	11.3	11.1	10.4	10.7	11.2	10.2	10.7	10.9	10.0	10.4
31	---	---	---	11.0	10.5	10.8	11.2	9.8	10.5	---	---	---
MONTH	13.2	10.5	11.9	12.2	10.2	11.2	11.7	9.5	10.6	11.2	8.2	9.8

ROGUE RIVER BASIN

375

14362250 STAR GULCH NEAR RUCH, OR

LOCATION.--Lat 42°09'15", long 123°04'27", in NE¼NE¼ sec.29, T.39 S., R.3 W., Jackson County, Hydrologic Unit 17100309, Bureau of Land Management land, on left bank 1.0 mi downstream from Benson Gulch, 6.0 mi southwest of Ruch, and at mile 1.1.

DRAINAGE AREA.--16.0 mi<sup>2</sup>.

PERIOD OF RECORD.--July to September 1983.

GAGE.--Water-stage recorder. Datum of gage is 1,667.04 ft National Geodetic Vertical Datum of 1929.

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

EXTREMES FOR PERIOD JULY TO SEPTEMBER 1983.--Maximum discharge, 4.7 ft<sup>3</sup>/s July 1, gage height, 1.43 ft; minimum, 1.5 ft<sup>3</sup>/s Aug. 21, Sept. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	JUL	AUG	SEP
1	4.5	2.3	2.6
2	4.2	2.3	2.3
3	3.9	2.3	2.2
4	3.7	2.3	2.1
5	3.7	2.2	2.1
6	3.6	2.1	2.0
7	3.6	2.0	2.0
8	3.5	2.0	2.1
9	3.5	2.0	2.0
10	3.4	2.1	1.9
11	3.4	2.1	1.9
12	3.2	2.0	1.9
13	3.0	2.0	1.8
14	3.0	2.5	1.8
15	3.0	2.0	1.8
16	3.0	1.9	1.8
17	3.1	1.9	1.7
18	3.1	1.8	1.7
19	3.1	1.9	1.7
20	3.1	1.9	1.6
21	2.9	1.7	1.6
22	2.7	1.9	1.7
23	2.7	2.6	3.1
24	2.7	2.3	2.3
25	2.7	2.1	2.1
26	2.6	2.0	2.0
27	2.6	1.9	2.0
28	2.5	1.9	2.1
29	2.5	2.1	2.0
30	2.4	3.4	2.0
31	2.3	3.4	---
TOTAL	97.2	66.9	59.9
MEAN	3.14	2.16	2.00
MAX	4.5	3.4	3.1
MIN	2.3	1.7	1.6
AC-FT	193	133	119



## ROGUE 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 downstream from Keeler Creek, 1.8 mi southeast of Applegate, and at mile 26.7.

DRAINAGE AREA.--483 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. Prior to Dec. 23, 1938, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Flow regulated since December 1980 by Applegate Lake (see station 14361900). 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.--45 years, 563 ft<sup>3</sup>/s, 407,900 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 20.41 ft, from rating curve extended above 18,000 ft<sup>3</sup>/s on basis of slope-area measurements of flow at gage heights 18.00 ft and 19.57 ft; minimum, 4.6 ft<sup>3</sup>/s Sept. 22-25, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 20, 1927, reached a stage of 18.7 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,530 ft<sup>3</sup>/s Feb. 18, gage height, 9.51 ft; minimum, 188 ft<sup>3</sup>/s Aug. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447	623	513	630	1130	1170	5840	867	2340	678	210	264
2	450	617	382	620	784	1140	4820	863	1890	862	204	260
3	456	618	430	620	572	1130	3390	859	1700	646	203	254
4	457	619	826	620	545	1140	2580	940	1670	597	201	245
5	455	615	923	620	526	784	1690	1170	1640	572	199	237
6	466	622	931	660	528	639	1370	1220	1640	536	197	231
7	496	631	921	750	533	633	1210	1130	1570	442	194	256
8	516	626	908	911	484	753	992	1110	1910	438	192	318
9	511	617	848	902	885	1020	613	1010	1850	413	209	369
10	506	610	687	855	3400	1220	583	922	1730	372	217	437
11	504	605	440	749	3000	1560	566	885	1730	346	216	476
12	502	599	357	710	3200	1800	539	931	1490	348	214	474
13	500	601	388	669	3070	2500	543	940	1210	346	222	471
14	491	608	343	663	2860	3200	590	1010	1190	342	217	479
15	489	605	1000	638	2830	3020	576	1090	1170	334	212	481
16	490	558	3740	618	2830	2590	564	1100	1160	326	213	488
17	499	456	3100	657	3110	2430	560	1170	1160	329	206	489
18	510	563	2530	743	7230	1960	557	1260	1110	328	205	494
19	498	772	2330	1080	6340	1580	609	1560	964	306	207	496
20	493	442	2250	955	5650	1530	724	1840	895	285	207	491
21	499	402	2480	850	4450	1400	880	2090	835	252	212	487
22	524	391	2890	785	3770	1130	974	2080	820	243	229	491
23	534	364	2820	830	4090	999	1130	2390	797	240	249	530
24	522	275	2480	1040	2680	1010	1120	3080	733	240	235	507
25	524	272	2170	1400	1560	1000	1100	3280	689	241	231	501
26	530	273	1500	2500	1940	987	1070	2880	664	241	227	505
27	529	273	950	3500	1910	1050	1010	2940	661	237	221	508
28	531	344	850	3400	1570	1030	878	3120	648	235	220	505
29	560	738	800	3100	---	1050	826	3420	632	234	233	509
30	602	691	750	2800	---	2270	864	3120	618	234	298	504
31	637	---	680	1800	---	5760	---	2590	---	226	280	---
TOTAL	15728	16030	42217	36675	71477	49485	38768	52867	37116	11469	6780	12757
MEAN	507	534	1362	1183	2553	1596	1292	1705	1237	370	219	425
MAX	637	772	3740	3500	7230	5760	5840	3420	2340	862	298	530
MIN	447	272	343	618	484	633	539	859	618	226	192	231
AC-FT	31200	31800	83740	72740	141800	98150	76900	104900	73620	22750	13450	25300
CAL YR 1982	TOTAL	315541	MEAN	864	MAX	6060	MIN	199	AC-FT	625900		
WTR YR 1983	TOTAL	391369	MEAN	1072	MAX	7230	MIN	192	AC-FT	776300		

ROGUE RIVER BASIN

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14366000 APPLGATE RIVER NEAR APPLGATE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.0°C July 29, 30, Aug. 3, 4, 1974; minimum, 0.0°C on several days 1975-80. Maximum since full operation of Applegate Lake, 21.0°C July 30, 31, 1983; minimum recorded, 1.5°C Feb. 5, 6, 11, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.0°C July 30, 31; minimum, 3.0°C Dec. 29 to Jan. 1, Jan. 11-15.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## ROGUE RIVER BASIN

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	8.0	9.0	8.5	14.5	11.5	20.0	14.5	---	---
2	8.0	7.0	12.5	8.0	10.5	9.0	14.5	11.0	20.0	15.0	---	---
3	8.0	7.0	13.0	7.5	13.0	9.0	17.0	10.5	19.5	15.0	---	---
4	9.0	6.5	11.0	8.0	13.0	9.0	18.0	11.0	20.0	14.5	---	---
5	9.5	6.0	10.0	8.0	13.5	9.0	18.0	12.0	19.0	14.0	---	---
6	10.0	6.0	11.0	7.5	14.0	9.0	16.5	12.0	20.5	14.0	---	---
7	10.5	6.5	10.5	8.0	14.5	10.0	15.0	11.5	20.0	15.0	---	---
8	10.0	7.0	10.5	8.0	13.5	10.0	14.5	10.5	20.0	15.0	17.0	---
9	9.5	7.5	10.0	7.0	13.0	9.5	16.5	10.5	20.0	14.5	17.0	12.5
10	9.0	6.0	11.0	7.0	11.0	10.0	17.5	10.5	19.5	14.5	17.5	12.5
11	10.0	6.5	13.5	7.5	12.5	9.5	19.0	12.0	19.5	14.0	18.5	13.5
12	10.0	6.0	13.0	8.0	14.0	9.5	19.5	13.0	19.5	13.5	18.5	14.0
13	10.5	5.5	14.0	9.0	15.0	9.5	19.0	13.0	19.0	14.0	19.0	14.5
14	10.0	5.5	12.0	9.0	14.0	10.5	17.5	13.0	19.5	13.5	18.5	14.5
15	11.0	6.0	12.0	9.0	14.5	11.0	17.0	11.5	20.0	14.5	18.5	14.0
16	12.5	6.5	13.0	8.0	15.0	10.0	17.0	10.5	20.0	14.5	18.5	14.0
17	9.5	7.0	13.5	8.0	14.0	11.0	16.5	12.0	20.0	14.0	18.0	14.0
18	12.0	7.0	13.5	9.0	13.5	10.5	15.5	11.0	20.0	14.0	17.5	13.5
19	11.0	8.5	13.0	8.5	15.5	10.5	15.5	11.0	19.5	14.0	17.5	13.0
20	11.0	8.0	12.5	8.5	15.0	11.0	18.0	11.0	19.0	13.5	18.0	13.0
21	12.0	8.0	12.5	8.5	16.0	10.0	19.0	12.5	18.5	14.0	17.0	13.5
22	10.0	8.0	12.5	8.5	16.0	11.0	19.5	13.5	18.0	14.0	17.0	14.5
23	9.0	8.0	12.0	8.5	15.5	11.5	20.0	14.0	17.5	13.5	16.0	15.5
24	9.5	7.5	11.5	8.5	16.5	11.0	18.5	14.0	19.0	14.0	18.5	15.5
25	10.0	7.5	11.0	8.0	17.0	11.0	18.5	13.5	18.5	13.5	18.5	15.0
26	11.0	7.5	11.5	8.5	17.5	11.5	18.5	12.5	18.0	13.5	18.5	15.0
27	10.0	7.5	11.5	8.5	17.5	12.5	18.0	13.0	18.0	14.0	16.0	15.0
28	11.0	7.5	11.0	8.5	15.5	11.5	20.0	13.5	---	---	17.0	13.5
29	12.5	8.0	11.0	9.0	16.5	12.0	20.0	14.0	---	---	16.5	13.0
30	9.0	7.5	11.0	8.0	13.0	10.5	21.0	14.5	---	---	17.0	13.5
31	---	---	9.5	9.0	---	---	21.0	15.5	---	---	---	---
MONTH	12.5	5.5	14.0	7.0	17.5	8.5	21.0	10.5	20.5	13.5	19.0	12.5

14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR

LOCATION.--Lat 45°21'15", long 123°24'20", in SE¼NE¼ sec.16, T.37 S., R.6 W., Josephine County, Hydrologic Unit 17100309, on left bank 0.3 mi downstream from Jackson Creek, 3.6 mi southeast of Wilderville, and at mile 7.6.

DRAINAGE AREA.--698 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to September 1955, September 1978 to current year.

REVISED RECORDS.--WSP 1318: 1943. WSP 1738: 1951, 1953, drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 947.18 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Sept. 1, 1978, nonrecording gage at site 1,100 ft upstream at datum 2.36 ft higher.

REMARKS.--Water-discharge records good. Flow regulated since December 1980 by Applegate Lake (see station 14361900). Many diversions for irrigation above station. Wilderville ditch diverts up to 16 ft<sup>3</sup>/s 0.3 mi upstream and at the mouth of Jackson Creek.

AVERAGE DISCHARGE.--22 years, 770 ft<sup>3</sup>/s, 557,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,500 ft<sup>3</sup>/s Jan. 18, 1953, gage height, 18.3 ft, from floodmark, site and datum then in use, from rating curve extended above 12,000 ft<sup>3</sup>/s as explained below; minimum, 0.78 ft<sup>3</sup>/s Aug. 22-24, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 20.3 ft, from floodmark, former site and datum, discharge, 66,500 ft<sup>3</sup>/s, from rating curve extended above 12,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

Flood of February 1927 reached a stage of 22 ft at former site, from local resident. Floods of Dec. 22, 1964, and Jan. 15, 1974, are known to have exceeded the December 1955 flood.

No flow was observed at present site during the late summer of 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,800 ft<sup>3</sup>/s Feb. 18, gage height, 12.81 ft; minimum, 183 ft<sup>3</sup>/s Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	501	699	915	859	1930	1970	8200	1170	2530	639	231	370
2	498	680	689	844	1460	1830	7080	1150	2120	923	218	355
3	501	670	670	844	1070	1740	4990	1130	1890	732	214	340
4	502	672	1100	844	971	1680	4070	1160	1830	633	215	327
5	501	664	1270	844	905	1390	2800	1370	1790	599	206	314
6	515	671	1310	976	1000	1090	2320	1580	1770	579	201	305
7	546	679	1240	993	1360	1080	2030	1460	1690	479	200	300
8	565	672	1180	1210	1160	1100	1850	1450	1950	458	199	363
9	557	662	1110	1190	2940	1480	1300	1410	1960	443	186	414
10	552	652	949	1140	6700	1930	1180	1270	1880	411	200	474
11	552	644	675	993	4610	2140	1110	1160	1880	373	208	522
12	542	637	512	919	5040	2550	1040	1160	1730	350	213	526
13	540	632	549	866	4890	4250	972	1180	1360	366	213	521
14	528	643	516	836	4190	5930	1020	1260	1300	354	226	519
15	528	642	2340	815	4190	5050	975	1340	1280	351	225	523
16	528	628	8300	785	4000	3920	939	1350	1250	343	221	529
17	537	560	7720	827	6150	3510	918	1420	1240	349	228	524
18	537	974	4290	1000	16200	2980	905	1500	1220	344	216	523
19	539	1390	3730	1710	9660	2380	935	1720	1040	327	217	526
20	527	843	3890	1500	7870	2250	1050	1960	960	308	220	518
21	530	658	4710	1300	6680	2140	1250	2260	885	281	215	512
22	568	599	4830	1220	4860	1850	1290	2240	857	259	235	533
23	601	553	4040	1520	5860	1720	1550	2410	836	244	266	589
24	581	442	3310	2010	3950	1760	1540	3070	766	245	270	604
25	595	404	2790	2390	2820	1720	1510	3390	712	249	261	582
26	633	391	2360	6940	2900	1670	1460	3070	670	246	259	570
27	602	386	1520	8740	2850	1930	1400	2990	671	245	255	577
28	589	406	1310	5140	2530	1790	1240	3200	662	248	258	571
29	757	859	1120	4240	---	2150	1140	3470	648	247	268	570
30	769	1160	1020	3720	---	8130	1150	3380	626	244	343	567
31	737	---	949	3190	---	9060	---	2730	---	236	411	---
TOTAL	17558	20172	70914	60405	118746	84170	59214	59410	40003	12105	7298	14468
MEAN	566	672	2288	1949	4241	2715	1974	1916	1333	390	235	482
MAX	769	1390	8300	8740	16200	9060	8200	3470	2530	923	411	604
MIN	498	386	512	785	905	1080	905	1130	626	236	186	300
AC-FT	34830	40010	140700	119800	235500	167000	117500	117800	79350	24010	14480	28700
CAL YR 1982	TOTAL	452180	MEAN	1239	MAX	8300	MIN	196	AC-FT	896900		
WTR YR 1983	TOTAL	564463	MEAN	1546	MAX	16200	MIN	186	AC-FT	1120000		

## ROGUE RIVER BASIN

14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: September 1978 to current year.

INSTRUMENTATION.--Temperature recorder since September 1978.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.0°C July 20, 1979; minimum recorded, 0.5°C Dec. 30, 31, 1978, Jan. 29, 30, 1980.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 24.0°C July 31, Aug. 15; minimum recorded, 4.5°C Dec. 9, 10.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



ROGUE RIVER BASIN

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14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## ROGUE RIVER BASIN

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 upstream from Jumpoff Joe Creek, 3.7 mi southwest of Merlin, and at mile 86.8.

DRAINAGE AREA.--3,271 mi<sup>2</sup>.

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1974 to current year.

INSTRUMENTATION.--Temperature recorder since February 1974.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 3-5, 1977; minimum, 0.0°C Jan. 9, 1977, Dec. 30, 1978, to Jan. 1, 1979, Jan. 30, 1980.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C July 31; minimum, 3.0°C Dec. 30 to Jan. 1.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

## ROGUE RIVER BASIN

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14370400 ROGUE RIVER NEAR MERLIN, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.0	11.5	10.0	12.0	10.5	16.0	15.5	21.0	19.0	15.5	14.0
2	8.0	8.0	13.0	10.5	12.0	10.5	16.0	14.5	21.0	18.5	16.0	13.5
3	8.0	7.5	14.0	11.0	14.0	10.5	17.0	14.5	20.0	18.0	17.0	14.5
4	8.5	7.5	14.5	12.0	15.0	12.5	18.0	15.5	19.5	17.0	17.0	14.5
5	9.0	8.5	13.0	11.5	15.5	12.5	18.5	17.0	19.0	17.0	17.0	15.0
6	9.0	9.0	11.5	10.5	16.5	13.5	18.5	17.5	19.5	17.0	17.0	15.0
7	10.0	8.5	11.5	10.0	17.0	14.0	17.5	16.5	19.0	17.0	16.0	15.0
8	10.0	9.0	11.5	10.0	17.0	15.0	16.5	16.0	20.0	17.5	15.5	14.0
9	10.0	9.0	10.5	9.5	17.0	14.5	16.5	15.0	---	17.0	16.0	13.5
10	9.5	8.5	10.5	9.5	15.5	14.0	17.5	15.5	---	---	15.5	13.5
11	9.5	8.5	12.0	9.5	14.5	13.0	18.5	16.5	---	---	16.5	14.0
12	9.0	8.0	13.5	10.5	15.0	12.5	20.0	18.0	18.5	---	17.0	15.0
13	10.0	8.0	14.0	11.5	17.0	13.0	21.0	18.5	17.5	16.0	17.0	15.5
14	10.5	8.5	14.0	12.0	16.5	14.0	20.0	18.5	18.0	16.0	17.0	15.5
15	11.0	8.5	13.0	11.0	17.0	14.0	19.5	17.5	19.0	16.0	17.0	15.0
16	11.5	9.0	14.0	11.5	17.0	14.5	18.0	16.5	19.0	17.0	16.5	15.0
17	11.0	9.5	14.5	11.5	17.0	15.0	18.0	16.5	18.5	17.0	16.5	15.0
18	11.5	9.0	15.0	12.5	16.0	14.5	17.5	16.5	19.0	17.0	15.5	14.5
19	12.5	10.5	15.0	12.5	16.0	13.5	17.0	15.5	18.5	16.5	15.5	14.0
20	12.0	10.5	15.0	13.0	16.5	14.0	18.5	15.5	17.0	15.0	15.0	13.0
21	12.5	10.5	15.0	13.0	17.0	13.5	19.0	16.0	17.5	14.5	15.0	13.5
22	12.0	10.5	15.0	13.0	17.0	14.5	20.0	17.0	17.0	15.5	15.0	13.5
23	10.5	9.5	15.5	13.0	16.5	15.0	20.5	18.0	16.5	15.0	14.5	14.0
24	10.0	9.0	15.0	13.5	17.5	15.0	20.0	18.0	17.0	14.5	16.5	14.0
25	10.0	9.0	14.5	13.0	17.5	16.0	19.0	17.5	17.5	15.0	17.0	14.5
26	11.0	9.5	14.5	13.0	18.0	16.5	19.5	16.5	17.5	15.5	17.0	15.5
27	10.5	10.0	14.0	13.0	18.5	17.0	18.5	16.5	17.5	15.5	16.0	14.5
28	10.5	9.5	14.0	12.5	18.5	17.5	20.0	17.0	16.5	15.5	15.0	13.5
29	12.5	10.0	14.5	12.5	18.0	17.0	21.0	17.5	15.5	14.5	14.0	12.5
30	12.0	11.0	13.0	12.5	17.5	16.0	21.0	18.5	15.5	14.5	14.0	12.5
31	---	---	12.5	11.0	---	---	21.5	19.0	15.5	14.0	---	---
MONTH	12.5	7.5	15.5	9.5	18.5	10.5	21.5	14.5	21.0	14.0	17.0	12.5

## ROGUE RIVER BASIN

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., Jackson County, Hydrologic Unit 17100310, on right bank 0.5 mi downstream from Pease Bridge, 0.5 mi upstream from Boulder Creek, 5.4 mi east of Placer, and at mile 27.1.

DRAINAGE AREA.--22.1 mi<sup>2</sup> at measuring site 0.5 mi 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 National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Aug. 4, 1955, at sites 0.5 mi upstream at datum 29.9 ft higher.

REMARKS.--Records good above 25 ft<sup>3</sup>/s, poor below. No regulation. One small diversion above station. Prior to 1945, Columbia upper ditch diverted water about 2 mi above station, bypassing station. Records herein are for measuring site.

AVERAGE DISCHARGE.--38 years (water years 1946-83), 59.8 ft<sup>3</sup>/s, 36.75 in/yr, 43,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.20 ft, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 9.66 ft; minimum, 0.12 ft<sup>3</sup>/s July 15, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	0330	2,960	7.81	Feb. 17	1500	*3,950	*8.89
Jan. 26	1930	1,180	5.22	Mar. 30	0500	1,810	6.28

Minimum, 0.93 ft<sup>3</sup>/s Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2.6	17	134	33	85	131	251	42	23	14	2.6	6.8		
2	2.4	11	140	34	71	118	195	38	20	12	2.5	5.0		
3	2.2	7.9	252	40	59	110	158	34	19	9.0	2.4	4.0		
4	2.2	6.3	429	85	49	101	133	34	17	7.3	2.4	3.1		
5	2.2	5.3	320	120	41	96	113	37	15	6.4	2.3	2.9		
6	3.1	6.4	246	127	47	92	96	34	14	6.0	2.0	2.5		
7	5.8	5.7	151	171	52	166	83	32	13	6.0	1.8	2.3		
8	3.7	5.4	103	163	65	177	73	38	13	6.5	1.6	2.4		
9	2.9	4.8	75	121	244	164	68	45	12	6.3	1.6	2.2		
10	2.6	4.3	58	89	185	289	60	49	13	5.9	1.8	2.1		
11	2.4	3.8	44	69	207	189	51	51	14	5.7	2.0	1.9		
12	2.2	3.5	40	58	516	245	43	47	12	5.2	1.7	1.8		
13	2.1	3.3	41	50	355	584	38	40	11	4.6	1.5	1.7		
14	2.0	3.1	53	42	238	362	34	37	10	3.9	1.5	1.6		
15	2.0	3.0	648	39	242	236	32	39	10	3.7	1.3	1.5		
16	2.0	3.0	2030	42	264	181	31	39	9.5	3.5	1.3	1.5		
17	2.1	13	793	44	1640	144	32	37	9.5	3.4	1.2	1.4		
18	2.2	263	288	96	1660	118	35	33	11	3.1	1.1	1.4		
19	2.3	173	203	148	448	97	53	33	10	3.3	1.1	1.7		
20	2.4	112	241	107	266	82	46	35	9.5	3.6	1.2	1.6		
21	2.7	79	377	84	255	72	54	34	9.0	3.0	1.3	1.4		
22	5.7	66	260	77	216	72	49	32	8.5	2.6	1.4	1.4		
23	64	52	162	109	188	75	49	31	8.0	2.5	1.6	2.1		
24	19	42	109	172	163	78	46	29	7.6	2.5	2.0	2.1		
25	11	35	84	168	147	87	49	27	7.4	2.6	1.7	1.8		
26	25	31	74	728	158	96	53	25	7.2	2.5	1.6	1.4		
27	20	35	68	614	152	141	48	23	7.2	2.4	1.4	1.4		
28	13	77	59	274	136	129	44	21	7.0	2.3	1.4	1.5		
29	124	170	51	182	---	231	48	19	7.1	2.1	3.6	1.4		
30	70	193	43	132	---	1070	44	19	6.8	1.9	15	1.4		
31	30	---	38	103	---	377	---	20	---	2.4	12	---		
TOTAL	435.8	1434.8	7614	4321	8149	6110	2109	1054	341.3	146.2	77.9	65.3		
MEAN	14.1	47.8	246	139	291	197	70.3	34.0	11.4	4.72	2.51	2.18		
MAX	124	263	2030	728	1660	1070	251	51	23	14	15	6.8		
MIN	2.0	3.0	38	33	41	72	31	19	6.8	1.9	1.1	1.4		
CFSM	.64	2.16	11.1	6.29	13.2	8.91	3.18	1.54	.52	.21	.11	.10		
IN.	.73	2.42	12.82	7.27	13.72	10.28	3.55	1.77	.57	.25	.13	.11		
AC-FT	864	2850	15100	8570	16160	12120	4180	2090	677	290	155	130		
CAL YR 1982	TOTAL	27663.16	MEAN	75.8	MAX	2030	MIN	.96	CFSM	3.43	IN.	46.56	AC-FT	54870
WTR YR 1983	TOTAL	31858.3	MEAN	87.3	MAX	2030	MIN	1.1	CFSM	3.95	IN.	53.63	AC-FT	63190

ROGUE RIVER BASIN

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14372250 ROGUE RIVER AT MARIAL, OR

LOCATION.--Lat 42°42'50", long 123°53'10", in NW¼SE¼ sec.9, T.33 S., R.10 W., Curry County, Hydrologic Unit 17100310, on right bank 0.2 mi downstream from Mule Creek and at mile 48.2.

DRAINAGE AREA.--3,812 mi<sup>2</sup>.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1974 to current year.

INSTRUMENTATION.--Temperature recorder since June 1974.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 27.5°C Aug. 5, 1977; minimum, 1.0°C Jan. 1, 2, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.5°C July 31; minimum, 3.5°C Dec. 31.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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



## ROGUE RIVER BASIN

14372250 ROGUE RIVER AT MARIAL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

ROGUE RIVER BASIN

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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 upstream from Shasta Costa Creek, 1.5 mi north of Agness, 2.6 mi upstream from Illinois River, and at mile 29.7.

DRAINAGE AREA.--3,939 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 113.81 ft National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Public Roads).

REMARKS.--Water-discharge records good except those for Dec. 19 to Mar. 9, which are fair. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040), since December 1980 by Applegate Lake (see station 14361900), slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation and mining.

AVERAGE DISCHARGE.--23 years, 6,309 ft<sup>3</sup>/s, 4,571,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290,000 ft<sup>3</sup>/s Dec. 23, 1964, from slope-area measurement; maximum gage height, 68.03 ft Dec. 23, 1964, from floodmark (backwater from Illinois River); minimum discharge, 608 ft<sup>3</sup>/s July 9, 10, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 190,000 ft<sup>3</sup>/s Feb. 18, gage height, 33.94 ft; minimum, 2,320 ft<sup>3</sup>/s Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2800	4180	10600	5000	20000	14800	40400	6900	8430	3580	2520	4090
2	2780	3780	8730	5000	17000	13400	33300	7040	7890	4020	2540	3730
3	2730	3550	10700	5500	16000	11700	29400	6450	6660	4900	2520	3580
4	2670	3520	14900	6150	16000	10700	24700	6180	6040	4380	2530	3480
5	2650	3610	14100	6720	18000	9940	19200	6350	5890	3770	2520	3440
6	2750	3560	13800	6680	20000	9710	15900	8260	5710	3590	2480	3400
7	3020	3560	11600	6450	24000	10400	13600	8410	5540	3350	2460	3370
8	2980	3550	9400	7070	28000	11200	12200	8830	5350	3050	2460	3300
9	2920	3500	8260	6850	34000	11700	11000	9730	5540	3120	2430	3310
10	2830	3420	7200	6280	44000	19100	10100	9400	5570	3070	2450	3330
11	2780	3370	6270	5750	28000	17300	9530	8870	6080	2970	2790	3350
12	2750	3340	5860	5310	26400	17200	8870	8320	6640	2870	2830	3380
13	2730	3280	5930	5000	30400	25500	8070	7740	6020	2740	2790	3370
14	2710	3260	7130	4800	23400	32100	7600	7430	5170	2630	2810	3320
15	2680	3250	22300	4600	21700	29600	7160	7330	4920	2640	2880	3300
16	2660	3250	62700	4400	22500	23300	6810	7340	4690	2730	2860	3230
17	2680	3840	75900	5000	31500	19600	6580	7210	4560	2810	2810	2920
18	2680	6720	37700	6000	148000	18000	6450	7080	4500	2880	2810	2680
19	2680	10800	22200	10700	56500	14600	6520	6950	4590	2880	2770	2710
20	2660	9690	20600	10200	35100	12600	6670	7370	4460	2820	2760	2750
21	2750	7730	27600	8860	30900	11800	6800	7700	4250	2850	2830	2670
22	3460	6860	27200	8420	29100	10900	7020	8040	4030	2740	2810	2670
23	5960	6020	20800	10800	26800	11600	7340	8140	3910	2610	3070	2740
24	4180	5130	16800	15900	22800	12000	7420	8600	3610	2580	3540	3620
25	3860	4490	12600	14600	19300	12300	7300	9380	3560	2610	3360	3210
26	6230	3960	10600	33600	20700	11900	7380	9780	3490	2630	3260	3020
27	4830	3800	9060	52200	20400	14100	7330	9520	3460	2600	3170	2930
28	3960	4050	7830	31400	17400	14700	6970	9570	3440	2600	3150	2910
29	6270	5810	6940	25400	---	15200	6690	9670	3360	2580	3300	2930
30	6670	9580	6280	24000	---	50800	6430	10000	3270	2540	4050	2880
31	5110	---	5840	22000	---	52500	---	9310	---	2520	4660	---
TOTAL	108420	144460	527430	370640	847900	550250	354740	252900	150630	93660	90220	95620
MEAN	3497	4815	17010	11960	30280	17750	11820	8158	5021	3021	2910	3187
MAX	6670	10800	75900	52200	148000	52500	40400	10000	8430	4900	4660	4090
MIN	2650	3250	5840	4400	16000	9710	6430	6180	3270	2520	2430	2670
AC-FT	215100	286500	1046000	735200	1682000	1091000	703600	501600	298800	185800	179000	189700
CAL YR 1982	TOTAL	2993460	MEAN	8201	MAX	75900	MIN	1760	AC-FT	5938000		
WTR YR 1983	TOTAL	3586870	MEAN	9827	MAX	148000	MIN	2430	AC-FT	7115000		

## ROGUE RIVER BASIN

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued  
(National stream quality accounting network station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1960 to current year.

INSTRUMENTATION.--Temperature recorder since October 1960.

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, Jan. 1-3, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 23.5°C July 31 to Aug. 3; minimum, 4.0°C Dec. 30 to Jan. 1.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 16...	1500	3000	103	8.0	7.0	12.5	K18	170	39	9.2	3.9
JAN 19...	0920	10500	99	7.7	7.0	12.3	K200	K2400	39	8.9	4.1
MAR 09...	1000	12600	96	7.3	9.5	11.6	33	340	40	9.2	4.2
MAY 18...	0900	7600	96	7.8	14.0	10.3	K13	67	40	9.7	3.8
JUL 12...	1630	3000	93	7.8	21.0	9.6	K100	1500	36	8.6	3.5
SEP 01...	0900	4400	100	7.2	15.5	9.9	--	K1300	39	9.3	3.7

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
NOV 16...	4.4	1.1	--	<5.0	3.5	<.10	<.060	<.100	.50	.18
JAN 19...	3.7	.80	38	5.0	2.3	<.10	<.060	.120	.60	.06
MAR 09...	3.7	.80	44	4.1	1.9	<.10	.090	.120	.40	.06
MAY 18...	3.9	.90	48	3.3	1.6	<.10	<.060	<.100	.40	.06
JUL 12...	4.2	.90	44	2.9	1.9	<.10	.120	.100	.40	.28
SEP 01...	4.9	1.3	46	4.0	2.5	.20	.080	.160	.50	.34

ROGUE RIVER BASIN

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14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 16...	.050	.060	23	71	--	575	1.5	2	16	72
JAN 19...	.060	.110	18	74	66	2100	26	53	1500	66
MAR 09...	.060	.040	19	71	70	2420	12	29	987	64
MAY 18...	.030	.040	20	68	72	1400	2.2	6	123	87
JUL 12...	.070	.100	20	--	69	557	2.3	5	41	86
SEP 01...	.070	.140	22	68	76	808	5.6	12	143	88

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 16...	10	1	16	<1	<1	<1	<3	1	26	1
MAR 09...	70	<1	16	<1	<1	<1	<3	5	59	<1
MAY 18...	40	1	18	<1	<1	<1	<3	4	27	<1
SEP 01...	40	<1	24	<1	<1	<1	<3	5	50	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 16...	7	4	<.1	<10	<1	<1	<1	63	<6	150
MAR 09...	6	3	.1	<10	<1	<1	<1	56	<6	17
MAY 18...	8	3	<.1	<10	1	<1	<1	63	<6	6
SEP 01...	10	2	.1	<10	12	<1	<1	73	<6	21

K - Results based on colony count outside acceptable range (non-ideal colony count).

## ROGUE RIVER BASIN

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

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



## 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 downstream from Dunn Creek (California-Oregon State line), 3.4 mi south of Takilma, and at mile 71.2.

DRAINAGE AREA.--42.3 mi<sup>2</sup>.

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, from topographic map. Prior to Oct. 31, 1946, nonrecording gage at sites 0.6 mi 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 downstream at datum 1,746.6 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--42 years (water years 1942-83), 180 ft<sup>3</sup>/s, 57.79 in/yr, 130,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.90 ft, present site and datum, from floodmark, from rating curve extended above 4,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 4.6 ft<sup>3</sup>/s Nov. 3, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1800	3,960	8.40	Feb. 18	0430	4,450	8.81
Jan. 26	1600	*6,630	*10.37	Mar. 30	0730	3,160	7.67

Minimum, 10 ft<sup>3</sup>/s Oct. 2-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	11	100	289	142	257	404	768	203	235	176	28	41		
2	10	73	283	149	222	370	667	201	196	148	27	32		
3	10	59	496	192	194	316	509	200	188	97	26	27		
4	11	50	802	221	174	294	399	195	183	81	26	25		
5	10	44	686	255	157	285	331	210	178	76	26	23		
6	27	46	657	279	200	265	289	205	192	70	24	22		
7	30	41	388	280	293	339	264	200	208	65	24	21		
8	18	40	274	272	283	379	251	200	210	63	23	21		
9	16	37	220	239	784	527	242	205	188	58	23	20		
10	14	35	180	206	1190	1140	219	200	188	55	23	20		
11	14	33	149	179	778	640	198	205	158	53	22	19		
12	13	31	153	165	1050	657	179	216	131	54	22	19		
13	13	29	160	154	963	1350	163	226	124	53	21	19		
14	13	28	198	144	628	922	152	235	134	51	20	18		
15	12	27	1380	140	672	641	145	232	129	47	19	18		
16	12	29	3050	147	622	459	149	223	119	44	19	17		
17	12	259	1620	146	1520	355	168	221	126	43	19	17		
18	13	986	715	347	2690	303	180	243	109	42	18	17		
19	12	562	594	458	1050	269	222	279	93	45	18	17		
20	12	360	739	314	744	252	244	339	88	42	18	16		
21	17	254	857	252	854	243	249	362	85	39	18	15		
22	70	199	605	240	985	251	257	346	83	37	18	16		
23	66	167	415	305	860	271	322	388	83	36	18	20		
24	37	149	312	763	612	309	290	422	75	35	18	19		
25	56	131	259	618	518	291	239	385	72	35	18	18		
26	118	122	234	4050	464	259	210	348	73	33	18	17		
27	63	171	217	2030	436	282	196	349	73	32	17	16		
28	46	257	198	872	385	246	194	371	73	31	17	17		
29	682	458	181	557	---	534	194	385	71	30	23	16		
30	323	388	167	410	---	2360	199	307	67	29	70	16		
31	161	---	154	317	---	1270	---	278	---	28	60	---		
TOTAL	1922	5165	16632	14843	19585	16483	8089	8379	3932	1728	741	599		
MEAN	62.0	172	537	479	699	532	270	270	131	55.7	23.9	20.0		
MAX	682	986	3050	4050	2690	2360	768	422	235	176	70	41		
MIN	10	27	149	140	157	243	145	195	67	28	17	15		
CFSM	1.47	4.07	12.7	11.3	16.5	12.6	6.38	6.38	3.10	1.32	.57	.47		
IN.	1.69	4.54	14.63	13.05	17.22	14.50	7.11	7.37	3.46	1.52	.65	.53		
AC-FT	3810	10240	32990	29440	38850	32690	16040	16620	7800	3430	1470	1190		
CAL YR 1982	TOTAL	80314.2	MEAN	220	MAX	3050	MIN	9.4	CFSM	5.20	IN.	70.63	AC-FT	159300
WTR YR 1983	TOTAL	98098	MEAN	269	MAX	4050	MIN	10	CFSM	6.36	IN.	86.27	AC-FT	194600

## ROGUE RIVER BASIN

## 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 downstream from Little Grayback Creek, 2.0 mi downstream from Grayback Creek, 3.7 mi northeast of Holland, and at mile 9.3.

DRAINAGE AREA.--83.9 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 1,713.92 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

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.--18 years, 248 ft<sup>3</sup>/s, 40.14 in/yr, 179,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,550 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 8.20 ft; minimum, 12 ft<sup>3</sup>/s Oct. 20, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1940, 10.8 ft on Dec. 22, 1964, from floodmark, discharge, 19,300 ft<sup>3</sup>/s, from estimate based on slope-area measurement of peak flow at site 0.7 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1930	4,010	6.02	Mar. 13	1100	1,590	4.45
Jan. 26	1630	*8,070	*7.82	Mar. 30	1000	3,560	5.83
Feb. 18	0600	6,240	7.12				

Minimum, 29 ft<sup>3</sup>/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	32	83	282	176	464	692	1380	362	499	280	81	75		
2	30	71	273	179	412	636	1130	359	436	237	78	68		
3	30	63	379	203	366	585	954	357	411	194	77	61		
4	31	58	595	212	329	556	831	374	392	184	75	58		
5	31	55	617	242	298	537	693	392	380	176	72	57		
6	61	65	650	260	305	509	612	367	400	167	69	55		
7	65	58	459	278	318	539	555	362	427	162	68	54		
8	47	56	353	289	335	535	515	385	447	154	66	53		
9	43	56	289	268	610	614	483	383	409	144	66	53		
10	40	53	245	236	1040	1120	442	376	402	135	66	50		
11	38	51	208	207	807	899	409	373	347	132	65	49		
12	37	49	202	190	1140	923	379	367	312	129	62	51		
13	35	49	191	175	1040	1430	356	369	300	127	62	49		
14	35	46	194	162	842	1400	336	372	306	123	64	47		
15	35	46	1250	161	849	1170	321	366	291	116	60	47		
16	34	47	3160	170	774	983	315	358	282	113	58	44		
17	35	120	2220	163	1640	877	319	355	285	111	57	44		
18	35	522	1090	389	4470	775	322	375	260	109	55	46		
19	34	360	878	496	2080	668	353	407	237	109	55	46		
20	34	272	869	401	1360	617	368	472	226	106	55	42		
21	44	206	1020	336	1200	584	379	529	220	101	54	42		
22	121	174	855	314	1170	572	403	546	214	98	54	42		
23	106	156	623	356	1150	569	477	637	208	96	58	58		
24	55	140	469	780	1030	585	443	735	195	95	56	54		
25	68	128	391	708	947	568	406	729	191	94	54	49		
26	123	124	344	4540	887	547	380	693	189	91	56	45		
27	75	151	306	3260	835	556	362	697	187	89	52	43		
28	56	214	271	1410	741	521	360	741	187	87	51	44		
29	424	356	242	909	---	701	361	801	182	86	64	44		
30	224	336	215	693	---	2810	365	649	180	83	116	43		
31	110	---	195	541	---	2010	---	574	---	81	95	---		
TOTAL	2168	4165	19335	18704	27439	26088	15009	14862	9002	4009	2021	1513		
MEAN	69.9	139	624	603	980	842	500	479	300	129	65.2	50.4		
MAX	424	522	3160	4540	4470	2810	1380	801	499	280	116	75		
MIN	30	46	191	161	298	509	315	355	180	81	51	42		
CFSM	.83	1.66	7.44	7.19	11.7	10.0	5.96	5.71	3.58	1.54	.78	.60		
IN.	.96	1.85	8.57	8.29	12.17	11.57	6.65	6.59	3.99	1.78	.90	.67		
AC-FT	4300	8260	38350	37100	54430	51750	29770	29480	17860	7950	4010	3000		
CAL YR 1982	TOTAL	131694	MEAN	361	MAX	3160	MIN	29	CFSM	4.30	IN.	58.39	AC-FT	261200
WTR YR 1983	TOTAL	144315	MEAN	395	MAX	4540	MIN	30	CFSM	4.71	IN.	63.99	AC-FT	286200

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 downstream from Rock Creek, 3.0 mi southwest of O'Brien, and at mile 12.8.

 DRAINAGE AREA.--42.4 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1954 to current year.

REVISED RECORDS.--WDR OR-80-2: 1979.

GAGE.--Water-stage recorder. Datum of gage is 1,516.14 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage height record Oct. 12 to Nov. 23, which are fair. Three small diversions from Elk Creek for irrigation above station.

 AVERAGE DISCHARGE.--29 years, 220 ft<sup>3</sup>/s, 70.46 in/yr, 159,400 acre-ft/yr.

 EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.05 ft, from rating curve extended above 6,200 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 14.79 ft; minimum, 1.5 ft<sup>3</sup>/s Sept. 2-4, 1974.

 EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1900	4,040	9.77	Feb. 18	0500	4,060	9.79
Jan. 26	1830	3,590	9.38	Mar. 30	0230	*4,840	*10.40
Feb. 9	2330	3,360	9.17				

 Minimum daily, 6.6 ft<sup>3</sup>/s Oct. 17-19.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	7.7	85	561	149	400	443	1040	135	44	107	14	41		
2	7.6	70	560	151	330	387	929	121	42	96	13	30		
3	7.6	55	803	206	275	330	759	116	41	55	12	24		
4	7.6	48	1180	290	236	287	556	115	39	44	12	21		
5	7.6	44	857	259	207	270	427	112	36	37	12	18		
6	17	40	787	216	443	277	346	119	35	34	10	17		
7	18	42	441	200	747	525	289	161	34	32	11	16		
8	12	38	296	185	570	642	248	409	34	34	10	16		
9	9.6	36	222	164	1980	613	226	407	31	32	9.5	16		
10	9.1	32	175	145	2110	1230	206	313	38	27	11	15		
11	8.7	30	141	129	1090	630	187	268	36	25	10	14		
12	8.0	28	159	118	1320	806	168	227	33	23	8.9	14		
13	7.8	26	215	107	1530	1680	152	192	30	21	9.5	14		
14	7.4	24	470	98	896	1400	139	160	29	20	9.7	13		
15	7.0	23	2430	91	818	942	128	139	29	19	8.7	13		
16	6.8	23	3240	86	780	618	119	121	27	19	7.7	13		
17	6.6	100	2130	82	2200	452	111	109	26	19	7.7	12		
18	6.6	420	1080	380	2880	367	105	98	29	20	7.7	12		
19	6.6	600	852	855	1220	305	102	88	26	23	7.7	12		
20	7.4	550	1490	492	954	265	96	80	25	21	8.3	11		
21	9.0	450	1590	338	1340	239	89	74	24	19	7.9	11		
22	150	350	1060	465	1390	307	97	68	23	18	7.2	12		
23	450	250	637	771	837	517	190	63	24	17	7.9	14		
24	170	190	449	1230	600	607	204	59	23	17	8.2	14		
25	180	147	353	783	586	549	214	56	21	18	8.3	13		
26	500	121	295	2660	659	495	211	53	20	17	7.8	12		
27	250	161	267	2240	603	679	186	50	21	16	7.7	12		
28	170	286	246	969	500	517	171	46	20	16	7.5	11		
29	220	722	217	718	---	1770	164	42	20	16	26	11		
30	240	807	191	659	---	3390	151	43	20	15	100	11		
31	120	---	167	507	---	1870	---	44	---	14	67	---		
TOTAL	2635.7	5798	23561	15743	27501	23409	8010	4088	880	891	455.9	463		
MEAN	85.0	193	760	508	982	755	267	132	29.3	28.7	14.7	15.4		
MAX	500	807	3240	2660	2880	3390	1040	409	44	107	100	41		
MIN	6.6	23	141	82	207	239	89	42	20	14	7.2	11		
CFSM	2.00	4.55	17.9	12.0	23.2	17.8	6.30	3.11	.69	.68	.35	.36		
IN.	2.31	5.09	20.67	13.81	24.13	20.54	7.03	3.59	.77	.78	.40	.41		
AC-FT	5230	11500	46730	31230	54550	46430	15890	8110	1750	1770	904	918		
CAL YR 1982	TOTAL	105878.1	MEAN	290	MAX	3650	MIN	4.9	CFSM	6.84	IN.	92.89	AC-FT	210000
WTR YR 1983	TOTAL	113435.6	MEAN	311	MAX	3390	MIN	6.6	CFSM	7.33	IN.	99.52	AC-FT	225000

## 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 upstream from Josephine Creek, 2.5 mi northwest of Kerby, and at mile 50.3.

DRAINAGE AREA.--380 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,98.8 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 28, 1965, water-stage recorder, and Jan. 28 to Sept. 30, 1965, nonrecording gage 700 ft downstream at datum 2.99 ft lower.

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

AVERAGE DISCHARGE.--22 years, 1,347 ft<sup>3</sup>/s, 48.14 in/yr, 975,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 45.28 ft, from floodmark, site and datum then in use, from rating curve extended above 30,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 14 ft<sup>3</sup>/s Aug. 11, 13, 14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2200	23,600	24.31	Feb. 18	0730	26,200	25.59
Jan. 26	2230	*28,300	*26.62	Mar. 13	1300	11,500	16.94
Feb. 10	0330	15,800	19.86	Mar. 30	0800	23,600	24.31

Minimum, 54 ft<sup>3</sup>/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	91	716	2920	1160	2870	3550	7150	1290	1130	498	128	341		
2	90	537	2460	1120	2440	3220	6420	1230	971	777	126	265		
3	89	441	3700	1400	2120	2830	5280	1180	897	566	113	220		
4	89	374	5800	1780	1870	2680	4060	1170	843	476	111	197		
5	91	333	4210	1790	1670	2530	3290	1190	787	422	109	184		
6	103	310	4370	1640	2180	2530	2750	1160	791	379	111	174		
7	144	296	2810	1640	4040	3410	2380	1210	832	347	105	163		
8	132	278	2060	1610	3220	3910	2130	1800	852	346	99	147		
9	115	268	1630	1480	7700	3730	1960	1930	829	342	95	135		
10	108	251	1340	1310	11900	7640	1810	1670	792	313	90	126		
11	102	237	1120	1140	6940	4780	1630	1580	758	296	88	122		
12	98	227	1050	1030	7530	5420	1490	1500	667	273	86	117		
13	96	219	1240	953	8750	9810	1380	1420	628	266	84	102		
14	88	212	2040	884	5900	8740	1290	1360	620	256	83	102		
15	87	205	12100	840	5540	6570	1210	1290	614	236	79	101		
16	85	202	18700	840	5440	4720	1150	1220	589	223	75	98		
17	83	1470	15600	808	11700	3720	1140	1170	581	220	72	96		
18	83	5560	6820	1860	19000	3220	1130	1160	565	199	70	95		
19	83	4800	5540	4880	10000	2760	1190	1210	527	206	67	94		
20	85	3400	7350	3100	6500	2490	1240	1290	488	208	66	91		
21	97	2580	8990	2370	7500	2320	1240	1430	457	197	63	87		
22	156	2120	6470	2400	8100	2430	1240	1410	438	188	62	88		
23	568	1560	4420	3780	6250	3140	1650	1490	425	181	65	99		
24	381	1230	3270	6350	4800	3870	1720	1640	390	179	67	119		
25	259	1010	2590	4530	4370	3560	1610	1660	359	166	58	121		
26	882	871	2190	17700	4720	3020	1520	1510	355	164	62	113		
27	703	979	1950	16700	4410	4100	1410	1490	352	164	62	112		
28	437	1750	1750	7490	3760	3330	1350	1520	351	163	59	111		
29	3500	3310	1570	5320	---	6360	1380	1610	350	155	86	108		
30	2450	4030	1410	4450	---	19100	1330	1450	342	153	288	100		
31	1140	---	1270	3480	---	11400	---	1250	---	134	492	---		
TOTAL	12515	39776	138740	105835	171220	150890	64530	43490	18580	8693	3221	4028		
MEAN	404	1326	4475	3414	6115	4867	2151	1403	619	280	104	134		
MAX	3500	5560	18700	17700	19000	19100	7150	1930	1130	777	492	341		
MIN	83	202	1050	808	1670	2320	1130	1160	342	134	58	87		
CFSM	1.06	3.49	11.8	8.98	16.1	12.8	5.66	3.69	1.63	.74	.27	.35		
IN.	1.23	3.89	13.58	10.36	16.76	14.77	6.32	4.26	1.82	.85	.32	.39		
AC-FT	24820	78900	275200	209900	339600	299300	128000	86260	36850	17240	6390	7990		
CAL YR 1982	TOTAL	681289	MEAN	1867	MAX	18700	MIN	42	CFSM	4.91	IN.	66.69	AC-FT	1351000
WTR YR 1983	TOTAL	761518	MEAN	2086	MAX	19100	MIN	58	CFSM	5.49	IN.	74.55	AC-FT	1510000



## CHETCO RIVER BASIN

395

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 upstream from bridge, 0.5 mi upstream from Elk Creek, 6.8 mi northeast of Brookings, and at mile 10.7.

DRAINAGE AREA.--271 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 50 ft, from topographic map.

REMARKS.--Records good except those for November, February, and March, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 2,390 ft<sup>3</sup>/s, 119.76 in/yr, 1,732,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,800 ft<sup>3</sup>/s Jan. 16, 1971, gage height, 27.45 ft; minimum, 45 ft<sup>3</sup>/s Oct. 21-23, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 32.25 ft, from high-water mark on bridge pier, discharge, 85,400 ft<sup>3</sup>/s, from rating curve extended above 45,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 4	0630	20,800	13.61	Feb. 10	0100	26,100	15.56
Dec. 15	1830	36,700	18.88	Feb. 18	a0300	42,100	20.40
Jan. 26	2400	23,000	14.45	Mar. 30	0330	*46,300	*21.58

Minimum, 68 ft<sup>3</sup>/s Oct. 20.

a Approximate.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	82	1800	7980	1090	4270	4500	10800	1780	516	1570	193	985		
2	76	900	6960	1070	3190	4000	8840	1620	497	2010	189	667		
3	73	700	10300	1360	2440	3800	6990	1490	472	1150	183	516		
4	72	550	17300	2620	1950	3600	5510	1380	449	777	178	431		
5	73	450	12700	2360	1610	3400	4440	1360	428	603	181	374		
6	117	400	11500	1920	2460	3600	3700	1670	412	511	178	333		
7	206	360	7220	2380	5080	4500	3150	2600	395	461	173	309		
8	143	340	4780	2390	5830	5200	2750	3850	379	440	167	287		
9	104	320	3490	2090	17200	5000	2490	3590	369	414	162	270		
10	90	300	2690	1770	19600	9000	2290	2890	433	376	163	257		
11	83	290	2180	1510	12100	6500	2060	2520	421	350	158	247		
12	80	280	2070	1310	14000	7500	1870	2260	369	331	155	237		
13	76	270	2280	1150	15800	13000	1720	2020	350	317	150	226		
14	73	260	6450	1020	10600	11500	1600	1810	338	303	148	218		
15	71	250	24100	914	9030	8240	1500	1650	348	287	143	209		
16	71	240	30500	842	8840	5560	1420	1490	327	278	139	202		
17	73	5600	21200	805	25200	4230	1360	1360	312	271	137	194		
18	72	11000	13100	1950	30000	3290	1320	1240	335	275	134	188		
19	70	8900	10700	5840	15000	2540	1300	1150	323	284	131	186		
20	69	7180	11500	3800	9000	2100	1290	1070	303	267	132	178		
21	144	6140	15400	2810	10000	1900	1230	999	289	253	130	173		
22	2950	5060	12300	3290	11000	2600	1300	919	281	243	129	173		
23	9840	4160	7960	6970	8000	4150	2430	851	285	235	130	183		
24	3030	3230	5190	10900	6500	5090	2380	795	284	230	130	192		
25	2620	2490	3770	7310	6000	4710	2370	747	269	230	130	178		
26	5640	2050	2900	15700	6500	3740	2330	703	259	222	128	169		
27	3820	2370	2350	18900	5500	4890	2160	653	258	214	125	166		
28	2480	5750	1960	10700	5000	5020	2080	616	248	210	121	158		
29	11700	8730	1660	7560	---	16300	2090	591	249	206	702	154		
30	8340	11300	1420	6740	---	35000	1940	569	250	201	2990	151		
31	4500	---	1240	5560	---	16700	---	539	---	195	1690	---		
TOTAL	56838	91670	265150	134631	271700	211160	86710	46782	10448	13714	9599	8211		
MEAN	1833	3056	8553	4343	9704	6812	2890	1509	348	442	310	274		
MAX	11700	11300	30500	18900	30000	35000	10800	3850	516	2010	2990	985		
MIN	69	240	1240	805	1610	1900	1230	539	248	195	121	151		
CFSM	6.76	11.3	31.6	16.0	35.8	25.1	10.7	5.57	1.28	1.63	1.14	1.01		
IN.	7.80	12.58	36.40	18.48	37.30	28.99	11.90	6.42	1.43	1.88	1.32	1.13		
AC-FT	112700	181800	525900	267000	538900	418800	172000	92790	20720	27200	19040	16290		
CAL YR 1982	TOTAL	1158836	MEAN	3175	MAX	30500	MIN	62	CFSM	11.7	IN.	159.07	AC-FT	2299000
WTR YR 1983	TOTAL	1206613	MEAN	3306	MAX	35000	MIN	69	CFSM	12.2	IN.	165.63	AC-FT	2393000



## ANALYSES OF WETFALL SAMPLES COLLECTED AT ATMOSPHERIC DEPOSITION SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

452650122091801 - PRECIPITATION AT BULL RUN-WEEKLY COMPOSITES

DATE	PRECIP- ITATION TOTAL INCHES/ WEEK	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH (UNITS)	PH LAB (UNITS)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUL							
13-20	.30	13.8	18.0	4.74	4.80	.08	.086
27-31	.09	32.8	29.6	4.25	4.88	.43	.119
AUG							
01-03	.09	32.8	29.6	4.35	4.88	.43	.119
03-10	.40	17.2	12.4	4.45	4.83	.12	.025
10-17	1.25	6.8	9.9	4.93	5.26	.03	.011
17-24	.00	--	67.2	--	4.22	.88	.312
31-31	.05	--	36.9	--	4.47	.56	.159
SEP							
01-07	.05	--	36.9	--	4.47	.56	.159
07-14	2.41	6.4	5.4	4.90	5.11	.01	.019
14-21	2.90	5.1	4.0	4.92	5.12	.03	.007
21-28	1.40	19.7	16.3	4.54	4.80	.10	.143
28-30	.89	21.6	20.7	4.97	5.11	.14	.277
OCT							
01-05	.89	21.6	20.7	4.97	5.11	.14	.277

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
JUL							
13-20	.595	.046	1.54	1.08	.24	.75	<.001
27-31	.169	.223	2.62	.43	.61	2.89	<.001
AUG							
01-03	.169	.223	2.62	.43	.61	2.89	<.001
03-10	.061	.034	1.06	.11	.20	1.16	<.001
10-17	.044	.050	.99	.08	.16	.57	<.001
17-24	.520	.104	5.98	<.52	1.04	6.24	<.078
31-31	.502	.162	3.43	.54	.49	5.84	<.001
SEP							
01-07	.502	.162	3.43	.54	.49	5.84	<.001
07-14	.145	.017	.59	.23	.08	.27	<.001
14-21	.013	.008	.39	<.02	.05	.29	<.001
21-28	1.052	.056	1.08	1.79	.17	.82	<.001
28-30	2.220	.098	1.08	4.03	.17	.51	<.001
OCT							
01-05	2.220	.098	1.08	4.03	.17	.51	<.001

## 452650122091801 - PRECIPITATION AT BULL RUN-WEEKLY COMPOSITES

## WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	PRECIP- ITATION TOTAL INCHES/ WEEK	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH (UNITS)	PH LAB (UNITS)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT							
05-12	1.39	9.5	9.4	5.04	5.19	.04	.088
12-19	.90	14.8	12.8	4.76	4.97	.06	.120
19-26	.75	5.2	3.3	4.97	5.38	.04	.017
26-31	3.57	4.6	5.7	5.26	5.45	.02	.033
NOV							
01-02	3.57	4.6	5.7	5.26	5.45	.02	.033
02-09	1.64	9.9	10.8	4.93	5.18	.07	.087
09-16	.27	16.3	13.8	4.49	4.85	.08	.057
DEC							
07-14	1.42	6.8	5.4	4.92	5.20	.11	.042
14-21	4.00	6.5	6.0	5.26	5.50	.03	.064
21-28	1.20	8.9	8.1	4.92	5.27	.04	.067
28-31	1.90	4.1	3.5	5.24	5.41	.03	.028
JAN							
01-04	1.90	4.1	3.5	5.24	5.41	.03	.028
04-11	6.52	4.4	3.5	5.27	5.55	.03	.030
11-18	.35	35.6	23.8	4.13	4.63	.38	.097
25-31	1.02	5.3	3.9	5.05	5.33	.04	.030
FEB							
01-01	1.02	5.3	3.9	5.05	5.33	.04	.030
01-08	1.55	3.7	2.4	5.24	5.63	.05	.026
08-15	2.45	3.8	3.5	5.21	5.45	.02	.022
15-22	4.76	4.1	3.2	5.12	5.42	.02	.014
22-28	1.85	5.9	4.8	4.98	5.09	.03	.018
MAR							
01-01	1.85	5.9	4.8	4.98	5.09	.03	.018
01-08	1.91	5.8	4.5	5.14	5.39	.06	.044
08-15	2.46	3.9	2.9	5.22	5.52	.05	.030
15-22	.35	7.8	5.5	4.90	5.36	.06	.018
22-29	2.40	6.8	5.1	4.96	5.31	.06	.034
29-31	4.19	7.6	7.6	5.18	5.47	.09	.079
APR							
01-05	4.19	7.6	7.6	5.18	5.47	.09	.079
05-12	1.17	8.5	6.7	4.83	5.02	.06	.040
12-19	.00	--	2.9	--	6.43	.09	.026
19-26	.89	10.7	12.1	4.97	5.43	.34	.044
26-30	.23	9.8	8.6	4.93	5.08	.19	.056
MAY							
01-03	.23	9.8	8.6	4.93	5.08	.19	.056
03-10	2.90	6.1	4.8	5.00	5.19	.05	.021
10-17	.95	8.8	7.9	4.92	5.27	.07	.066
17-24	.09	19.6	11.6	4.41	5.41	.55	.209
24-31	.60	19.0	15.8	4.49	4.75	.30	.054
JUN							
07-14	1.96	4.2	3.3	5.12	5.32	.05	.015
14-21	1.22	7.1	6.1	5.01	5.21	.06	.058
21-28	1.07	4.9	4.0	5.04	5.25	.05	.019
28-30	1.67	5.7	4.8	4.93	5.29	.04	.025
JUL							
01-05	1.67	5.7	4.8	4.93	5.29	.04	.025
05-12	.82	7.4	6.4	4.86	4.99	.04	.018
12-19	3.31	8.1	7.3	4.86	4.96	.05	.027
19-26	.15	15.9	14.6	4.53	4.66	.22	.073
26-31	.63	6.7	6.2	4.82	4.93	.06	.016
AUG							
01-02	.63	6.7	6.2	4.82	4.93	.06	.016
09-16	.28	25.7	26.8	4.29	4.44	.20	.090
16-23	.00	--	5.3	--	5.32	.08	.024
23-30	1.87	3.9	5.0	5.06	5.31	.03	.004
30-31	.78	6.1	5.6	4.88	4.96	.04	.018
SEP							
01-06	.78	6.1	5.6	4.88	4.96	.04	.018
06-13	.77	4.6	4.0	5.00	5.23	.04	.018
13-20	.17	20.7	14.8	4.54	5.20	.30	.175
20-27	.07	24.7	18.9	4.33	4.75	.55	.123
27-30	.43	12.3	8.8	4.56	5.00	.09	.039
OCT							
01-04	.43	12.3	8.8	4.56	5.00	.09	.039

## ANALYSES OF WETFALL SAMPLES COLLECTED AT ATMOSPHERIC DEPOSITION SITES--Continued

452650122091801 - PRECIPITATION AT BULL RUN-WEEKLY COMPOSITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
OCT							
05-12	.740	.041	.65	1.31	.08	.29	<.001
12-19	.930	.052	.92	1.72	.19	.54	<.001
19-26	.084	.022	.25	.15	.04	.35	<.001
26-31	.300	.014	.21	.56	<.02	.09	<.001
NOV							
01-02	.300	.014	.21	.56	<.02	.09	<.001
02-09	.673	.034	.47	1.25	.06	.34	<.001
09-16	.382	.046	.97	.62	.20	1.37	<.001
DEC							
07-14	.275	.025	.50	.54	.07	.37	<.001
14-21	.556	.022	.24	1.07	<.02	.07	<.001
21-28	.543	.028	.42	1.03	.07	.35	<.001
28-31	.166	.015	.32	.29	<.02	.23	<.001
JAN							
01-04	.166	.015	.32	.29	<.02	.23	<.001
04-11	.220	.012	.21	.40	<.02	.08	<.001
11-18	.406	.276	1.76	.56	.43	3.57	.016
25-31	.177	.016	.33	.32	.05	.28	<.001
FEB							
01-01	.177	.016	.33	.32	.05	.28	<.001
01-08	.101	.007	<.10	.17	<.02	.14	<.001
08-15	.142	.015	<.10	.25	<.02	.09	<.001
15-22	.109	.007	.27	.19	<.02	.11	<.001
22-28	.100	.023	.33	.18	.07	.39	<.001
MAR							
01-01	.100	.023	.33	.18	.07	.39	<.001
01-08	.310	.025	<.10	.56	.08	.23	<.001
08-15	.124	.012	.25	.21	<.02	<.02	<.001
15-22	.070	.020	.42	.07	.30	.83	<.001
22-29	.222	.017	<.10	.36	.06	.39	<.001
29-31	.572	.028	.45	1.07	.04	.20	<.001
APR							
01-05	.572	.028	.45	1.07	.04	.20	<.001
05-12	.231	.029	.49	.36	.15	.50	<.001
12-19	.067	.048	<.10	.15	.03	.09	<.001
19-26	.180	.041	1.17	.18	.33	1.10	<.001
MAY							
01-03	.053	.025	.88	.25	.30	1.04	<.001
03-10	.134	.012	.78	.19	.07	.31	<.001
10-17	.510	.028	.78	.82	.07	.29	<.001
17-24	.321	.026	2.17	.49	<.02	.80	<.001
24-31	.233	.089	1.67	.23	.12	1.11	<.001
JUN							
07-14	.083	.012	.34	.12	<.02	.16	<.001
14-21	.346	.023	.69	.58	.06	.27	<.001
21-28	.074	.014	.40	.09	.03	.29	<.001
28-30	.132	.016	.51	.21	.04	.34	<.001
JUL							
01-05	.132	.016	.51	.21	.04	.34	<.001
05-12	.075	.018	.65	.07	.12	.48	<.001
12-19	.169	.024	.63	.27	.10	.53	<.001
19-26	.163	.073	1.29	.20	.28	1.82	<.001
26-31	.044	.028	.61	.09	.04	.33	<.001
AUG							
01-02	.044	.028	.61	.09	.04	.33	<.001
09-16	.491	.074	2.42	.79	.27	1.39	<.001
16-23	.120	.071	<.10	.25	<.02	.05	<.001
23-30	.038	.015	<.10	.11	<.02	.17	<.001
30-31	.102	.022	.43	.19	.05	.45	<.001
SEP							
01-06	.102	.022	.43	.19	.05	.45	<.001
06-13	.092	.014	.41	.17	<.02	.19	<.001
13-20	1.180	.177	1.63	1.73	.15	1.03	<.001
20-27	.316	.179	1.73	.49	.32	2.83	<.001
27-30	.258	.037	.72	.34	.17	.93	<.001
OCT							
01-04	.258	.037	.72	.34	.17	.93	<.001

## COLUMBIA RIVER BASIN

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## 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 the district office, 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 upstream from Willamette River, and at mile 106.5. Drainage area, 241,000 mi<sup>2</sup>, 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.
- 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 east of Saint Helens and at mile 86.0. Drainage area, 253,900 mi<sup>2</sup>, 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 south of Longview, 2.0 mi downstream from Cowlitz River, and at mile 66.0. Drainage area, 256,700 mi<sup>2</sup>, 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 northwest of Astoria, and at mile 0. Drainage area, 258,000 mi<sup>2</sup>, approximately. Records available, monthly discharge October 1927 to current year.

MONTHLY AND ANNUAL MEAN DISCHARGE IN CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
14144700 COLUMBIA RIVER AT VANCOUVER, WA												
131,600	160,000	177,600	219,600	260,100	372,400	284,700	331,100	311,500	219,000	173,900	128,600	232,000
14222870 COLUMBIA RIVER AT SAINT HELENS, OR												
157,200	203,400	290,900	311,700	361,900	456,500	341,200	360,200	331,400	239,200	186,900	147,800	283,200
14245300 COLUMBIA RIVER AT LONGVIEW, WA												
165,100	218,100	317,400	338,800	379,000	474,500	353,100	367,800	340,200	248,900	191,500	153,300	296,500
14280000 COLUMBIA RIVER AT MOUTH, NEAR ASTORIA, OR												
166,900	226,500	336,600	357,100	388,000	487,900	369,900	365,000	354,100	253,700	195,600	157,200	304,900

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Crest-stage partial-record stations

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage 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 <sup>2</sup> )	Period of record	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
SANDY RIVER BASIN							
14138950	DEER CREEK NEAR BULL RUN, OR	Lat 45°29'31", long 122°03'27", in SE¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 300 ft upstream from Bull Run Reservoir Number One, and 9.6 miles northeast of Bull Run.	1.62	1978-83	1- 6-83	4.26	320
14138960	COUGAR CREEK NEAR BULL RUN, OR	Lat 45°29'28", long 122°03'40", in SW¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 300 ft upstream from Bull Run Reservoir Number One, and 9.4 miles northeast of Bull Run.	3.06	1978-83	1- 6-83	4.30	430
14138990	BEAR CREEK NEAR BULL RUN, OR	Lat 45°29'18", long 122°04'58", in NW¼NW¼ sec.16, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 400 ft upstream from Bull Run Reservoir Number One, and 8.3 miles northeast of Bull Run.	1.68	1978-83	1- 6-83	3.20	134
14139510	FIVEMILE CREEK NEAR BULL RUN, OR	Lat 45°28'57", long 122°05'25", in SW¼NE¼ sec.17, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 800 ft upstream from Bull Run Reservoir Number Two, and 7.9 miles northeast of Bull Run.	.79	1978-83	1- 6-83	2.00	54
14139600	CAMP CREEK NEAR BULL RUN, OR	Lat 45°27'41", long 122°06'13", in SW¼SW¼ sec.20, T.1 S., R.6 E., Multnomah County, 15 ft downstream from falls at confluence with West Branch of Camp Creek, 0.3 mile upstream from Bull Run Reservoir Number Two, and 6.6 miles northeast of Bull Run.	3.27	1978-83	1- 6-83	3.27	352
WILLAMETTE RIVER BASIN							
14144870	MIDDLE FORK WILLAMETTE RIVER TRIBUTARY NEAR OAKRIDGE, OR (Station discontinued)	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	1960-83	10-29-82	15.55	18
14192800	SOUTH YAMHILL RIVER TRIBUTARY NEAR WILLAMINA, OR (Station discontinued)	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 2.5 miles south of Willamina.	1.81	1954-83	12-17-82	12.05	210
14207920	POOP CREEK NEAR BIG BOTTOM, OR (Station discontinued)	Lat 44°58'35", long 121°50'35", in SW¼ sec.9 (unsurveyed), T.7 S., R.8 E., Clackamas County, in Mt. Hood National Forest, at mouth, and 3 miles southeast of Big Bottom.	1.74	1966-83	1- 6-83	12.08	11
CLATSKANIE RIVER BASIN							
14247020	FALL CREEK NEAR CLATSKANIE, OR	Lat 46°05'47", long 123°14'56", in NW¼ 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	1972-83	12- 4-82	-	a114



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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## Annual maximum discharge at crest-stage partial-record stations--Continued

						Annual maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
BIG CREEK BASIN							
14248510	LITTLE CREEK NEAR KNAPPA, OR	Lat 46°08'44", long 123°36'16", in SW¼ sec.30, T.8 N., R.7 W., Clatsop County, at culvert on Hillcrest Road, 3 miles south of Knappa.	1.53	1972-83	12- 4-82	11.70	98
SALMON RIVER BASIN							
14303700	ALDER BROOK NEAR ROSE LODGE, OR (Station discontinued)	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	1954-83	12-16-82	12.25	110
UMPQUA RIVER BASIN							
14312100	PARROTT CREEK AT ROSEBURG, OR (Station discontinued)	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	1952-83	2-17-83	15.78	328
BRUSH CREEK BASIN							
14327400	DRY RUN CREEK NEAR PORT ORFORD, OR (Station discontinued)	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 southeast of Port Orford.	.86	1954-83	12-20-81 2-18-83	17.92 15.31	b195 75
ROGUE RIVER BASIN							
14338005	ROGUE RIVER TRIBUTARY NEAR TRAIL, OR	Lat 42°39'35", long 122°46'45", in E-1/2 sec.35, T.33 S., R.1 W., Jackson County, at culvert on State Highway 62, 1.7 miles northeast of Trail.	.64	1980-83	2-17-83	16.88	48
14362050	KINNEY CREEK NEAR MCKEE BRIDGE, OR (Station discontinued)	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	1965-83	2-17-83	10.85	115

a Estimated.

b Not previously published.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

## Discharge measurements at miscellaneous sites during water year 1983

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Date	Measurements Discharge (ft <sup>3</sup> /s)
Part 14 SANDY RIVER BASIN						
Deer Creek	Bull Run River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.1 S., R.6 E.	1.62	1979-82	4-12-83 6-14-83	6.25 7.20
Cougar Creek	.....do.....	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.1 S., R.6 E.	3.06	1979-82	3-16-83	23.7
Bear Creek	.....do.....	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.1 S., R.6 E.	1.68	1979-82	3-16-83 8- 5-83 8- 5-83	10.0 1.94 1.96
Fivemile Creek	.....do.....	SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.1 S., R.6 E.	.79	1979-82	3-16-83 8- 5-83	6.30 .97
Camp Creek	.....do.....	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.20, T.1 S., R.6 E.	3.27	1979-82	3-16-83 7-21-83	28.7 18.1
Part 14 ROGUE RIVER BASIN						
Dutton Creek	Castle Creek	Lat 42°53'40", long 122°10'00".	-	1967-68, 1977-82	10- 6-82 7- 8-83 8-18-83	*.58 3.98 *1.43
Castle Creek	Rogue River	Lat 42°54'45", long 122°17'00".	-	1967-68, 1977-82	10- 6-82 7- 8-83 8-18-83	*1.00 13.9 *3.69
Castle Creek Tributary	Castle Creek	Lat 42°53'30", long 122°10'00".	-	1967-68, 1977-78, 1980-82	10- 6-82 7- 8-83 8-18-83	0 1.28 *.12
.....Do.....	.....do.....	Lat 42°53'25", long 122°09'45".	-	1967-68, 1977-82	10- 6-82 7- 8-83 8-18-83	0 .07 0

\* Base flow.

## GROUND-WATER LEVELS

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## CLACKAMAS COUNTY

451905122475801. Local number 3S/1W-10CCD.

LOCATION.--Lat 45°19'05", long 122°47'58", Hydrologic Unit 17090007.

Owner: Pamouskis.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in, reported depth 115 ft.

DATUM.--Altitude of land surface datum is 245 ft. Measuring point: Top of casing extension, 1.45 ft above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.42 ft below datum, May 12, 1956; lowest measured, 93.60 ft below datum, Oct. 1, 1982.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	93.60	OCT 13	92.95	MAR 8	87.37	-	-

## CLATSOP COUNTY

460733123560301. Local number 8N/10W-33CCC.

LOCATION.--Lat 46°07'33", long 123°56'03", Hydrologic Unit 17080006. Formerly Hydrologic Unit 17100201

Owner: U.S. Geological Survey.

AQUIFER.--Dune sand.

WELL CHARACTERISTICS.--Drilled observation well, diam 6 in, cased to 73 ft, screened 73 to 88 ft.

DATUM.--Land surface datum is 34.13 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.8 ft above datum.

REMARKS.--Continuous water-level recorder installed Aug. 4, 1977.

PERIOD OF RECORD.--1967-68, 1977 to current year.

EXTREMES FOR THE PERIOD OF RECORD.--Highest water level measured, 10.40 ft below datum, Feb. 28, 1982; lowest measured, 16.29 ft below datum, Oct. 20, 1967.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	13.79	JAN 5	12.22	APR 5	12.16	JUL 5	13.47
OCT 10	13.83	JAN 10	11.44	APR 10	12.26	JUL 10	13.49
OCT 15	13.89	JAN 15	11.33	APR 15	12.40	JUL 15	13.42
OCT 20	13.93	JAN 20	11.30	APR 20	12.54	JUL 20	13.43
OCT 25	13.85	JAN 25	11.34	APR 25	12.69	JUL 25	13.44
OCT 31	13.52	JAN 31	11.40	APR 30	12.81	JUL 31	13.47
NOV 5	13.51	FEB 5	11.54	MAY 5	12.93	AUG 5	13.52
NOV 10	13.49	FEB 10	11.59	MAY 10	13.01	AUG 10	13.57
NOV 15	13.52	FEB 15	11.59	MAY 15	13.10	AUG 15	13.66
NOV 20	13.32	FEB 20	11.68	MAY 20	13.22	AUG 20	13.74
NOV 25	13.31	FEB 25	11.64	MAY 25	13.34	AUG 25	13.80
NOV 30	13.23	FEB 28	11.71	MAY 31	13.48	AUG 31	13.84
DEC 5	12.86	MAR 5	11.68	JUN 5	13.53	SEP 5	13.88
DEC 10	12.87	MAR 10	11.87	JUN 10	13.54	SEP 10	13.91
DEC 15	12.69	MAR 15	11.98	JUN 15	13.54	SEP 15	13.94
DEC 20	12.49	MAR 20	12.07	JUN 20	13.52	SEP 20	13.98
DEC 25	12.46	MAR 25	12.16	JUN 25	-	SEP 25	14.02
DEC 31	12.49	MAR 31	12.07	JUN 30	13.49	SEP 30	14.08

## COOS COUNTY

433006124141501. Local number 24S/13W-10CAB.

LOCATION.--Lat 43°30'06", long 124°14'15", Hydrologic Unit 17100304.

Owner: Coos Bay - North Bend Water Board.

AQUIFER.--Dune sand.

WELL CHARACTERISTICS.--Drilled observation well, diam 2 in, depth 121 ft, cased to 119 ft, screened 119 to 121 ft.

DATUM.--Land surface datum is 35.26 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.20 ft above datum.

REMARKS.--Locally known as well 200A.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.20 ft below datum, Feb. 6, 1969; lowest measured, 12.70 ft below datum, Sept. 14, 1983.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	11.40	JAN 19	9.80	APR 27	10.50	JUL 20	11.60
NOV 30	10.10	FEB 9	10.60	MAY 25	11.00	AUG 17	12.40
DEC 22	10.90	MAR 23	9.90	JUN 8	11.30	SEP 14	12.70

## GROUND-WATER LEVELS

## 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, depth 59 ft, cased to 45 ft, perforated 30-45 ft.

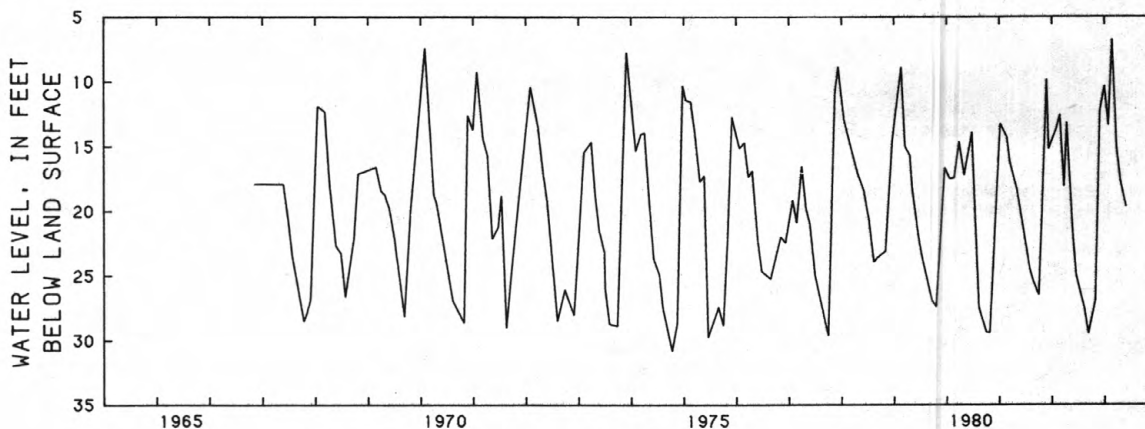
DATUM.--Altitude of land surface datum is about 110 ft. Measuring point: Top of casing, 0.9 ft above datum.

PERIOD OF RECORD.--1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.78 ft below datum, Feb. 23, 1983; lowest measured, 30.52 ft below datum, Sept. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	26.91	JAN 26	13.39	APR 19	17.71	AUG 17	(P)
NOV 30	12.30	FEB 23	6.78	MAY 26	19.62		-
DEC 30	10.36	MAR 23	15.03	JUL 12	P/		-



41S/13W-9DCB

## DOUGLAS COUNTY

432035123200001. Formerly 432051123195601. Local number 26S/5W-6ABA.

LOCATION.--Lat 43°20'35", long 123°20'00", Hydrologic Unit 17100301. Formerly lat 43°20'51", long 123°19'56".

Owner: Stanley Mohr.

AQUIFER.--Sandstone and siltstone.

WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in, depth 225 ft, cased to 20 ft.

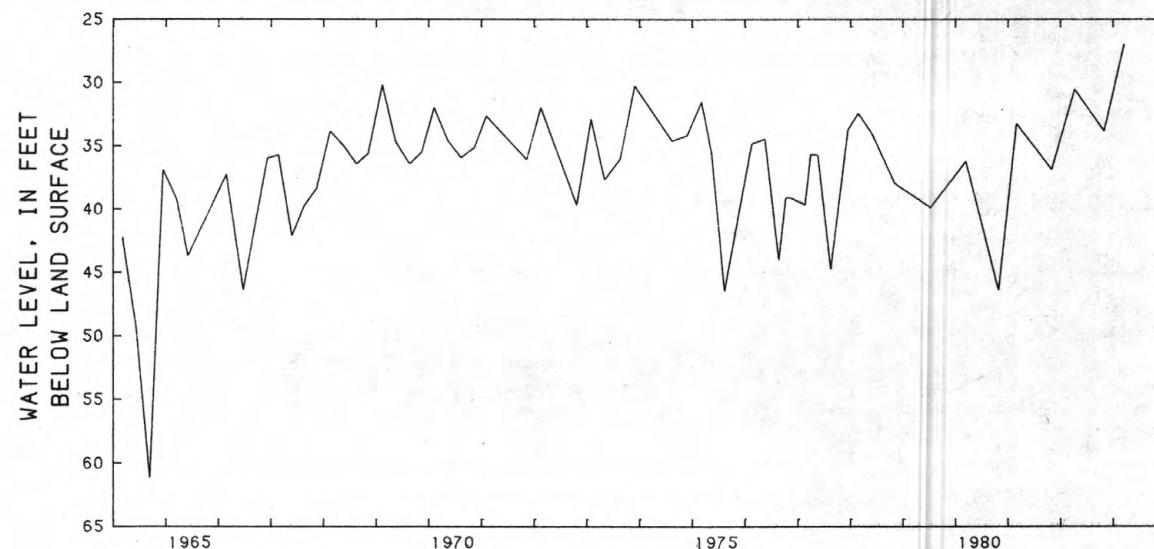
DATUM.--Altitude of land surface datum is 560 ft. Measuring point: Hole in casing seal, 0.7 ft above datum.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.01 ft below datum, Mar. 16, 1983; lowest measured, R/61.19 ft below datum, Sept. 10, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	33.83	MAR 16	27.01		-		-



26S/5W-6ABA

## GROUND-WATER LEVELS

405

## 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, depth 110 ft, cased to 106 ft, perforated 2-100 ft.

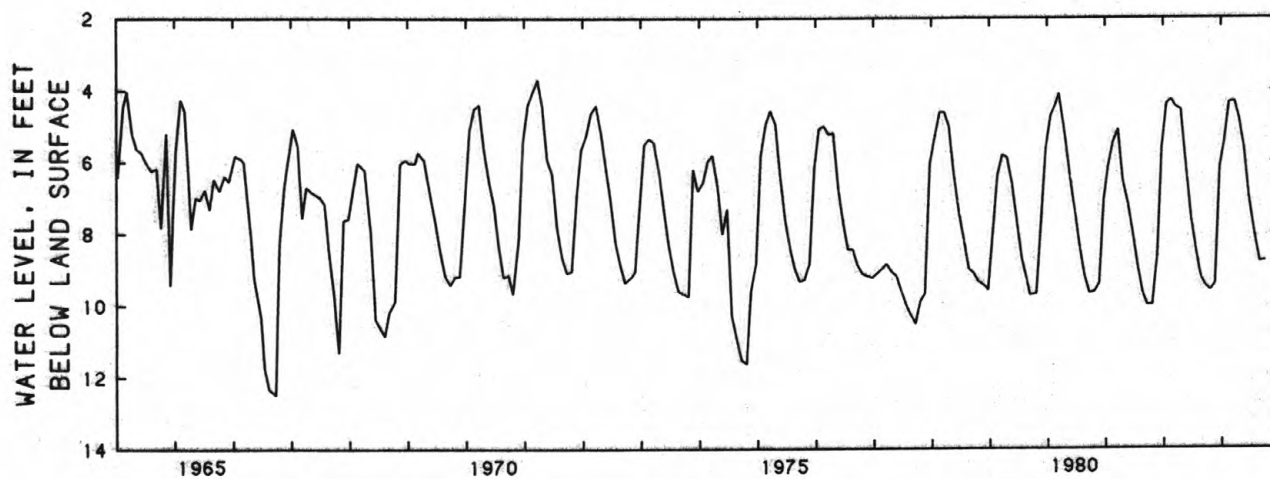
DATUM.--Altitude of land surface datum is 1,235 ft. Measuring point: Top of casing, 2.00 ft above datum.

PERIOD OF RECORD.--1953-54, 1956, 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.27 ft below datum, Mar. 5, 1962; lowest measured, 12.47 ft below datum, Sept. 23, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	9.59	JAN 18	5.48	APR 19	4.78	JUL 21	7.95
NOV 19	9.42	FEB 18	4.36	MAY 20	5.62	AUG 24	8.79
DEC 20	6.15	MAR 23	4.32	JUN 20	7.03	SEP 26	8.77



36S/2W-23CCA



## GROUND-WATER LEVELS

## LANE COUNTY

440000124054001. Formerly 440000124054004. Local number 18S/12W-14CDD4.

LOCATION.--Lat 44°00'00", long 124°05'40", Hydrologic Unit 17100206. Formerly lat 44°00'01".

Owner: U.S. Geological Survey.

AQUIFER.--Sand.

WELL CHARACTERISTICS.--Drilled observation well, diam 6 in, depth 59 ft, cased to 59 ft, screened 44-58 ft.

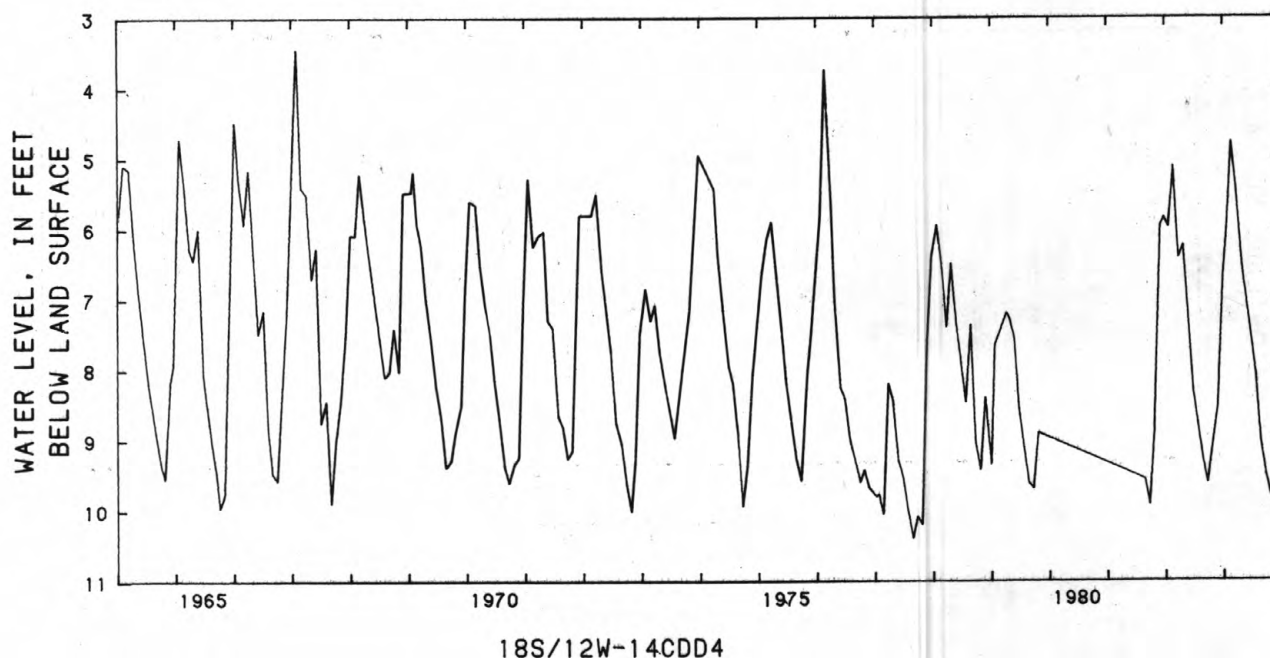
DATUM.--Altitude of land surface datum is 70 ft. Measuring point: Top of casing at datum.

PERIOD OF RECORD.--1960-79, 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.60 ft below datum, June 4, 1973; lowest measured, 10.40 ft below datum, Aug. 24, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	9.50	JAN 21	6.02	APR 26	6.53	-	-
NOV 25	8.52	FEB 22	4.78	JUL 21	8.09	-	-
DEC 28	6.71	MAR 20	5.42	AUG 20	9.02	-	-



## LINN COUNTY

442140123052601. Formerly 442140123052501. Local number 14S/3W-7DCC.

LOCATION.--Lat 44°21'40", long 123°05'26", Hydrologic Unit 17090003. Formerly long 123°05'25".

Owner: H.H. Kirk

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 8 in, depth 123 ft, cased to 110 ft, perforated 35-110 ft.

DATUM.--Altitude of land surface datum is 289 ft. Measuring point: Top of casing, 0.55 ft above datum.

PERIOD OF RECORD.--1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.74 ft below datum, Feb. 26, 1982; lowest measured, 13.30 ft below datum, Oct. 11, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	11.38	JAN 24	3.02	APR 20	2.71	JUL 19	6.61
NOV 23	10.68	FEB 23	2.18	MAY 24	4.24	AUG 22	7.85
DEC 21	4.02	MAR 23	2.40	JUN 21	5.86	SEP 16	8.41

## GROUND-WATER LEVELS

407

## MARION COUNTY

450620122530501. Local number 5S/2W-25CBD.

LOCATION.--Lat 45°06'20", long 122°53'05", Hydrologic Unit 17090009. Formerly long 122°52'58".

Owner: Agricultural Research Corp. (Sam H. Brown).

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 18 to 6 in, depth 252 ft, casing perforated 117-147 ft, 215-245 ft.

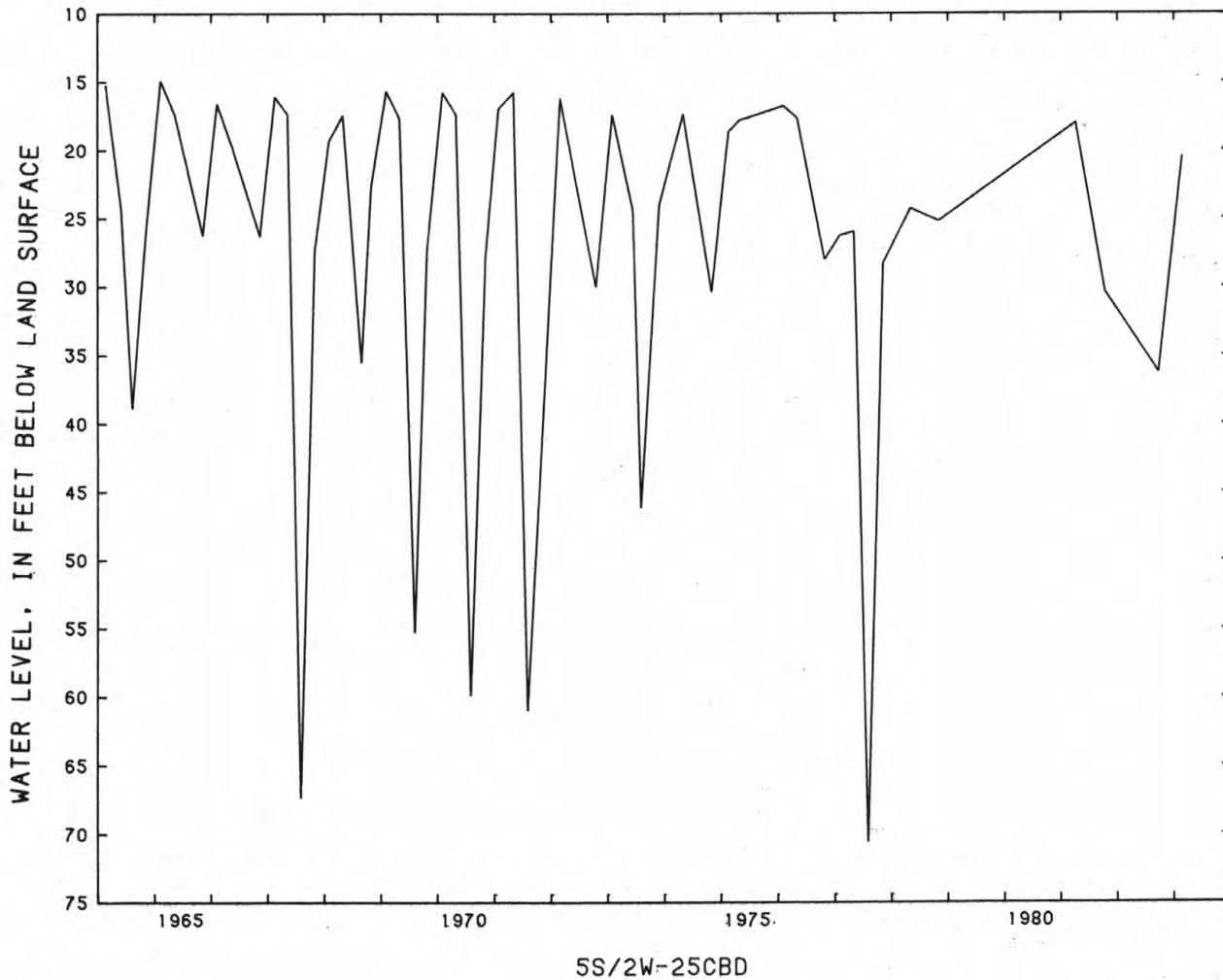
DATUM.--Land surface datum is 180.31 ft National Geodetic Vertical Datum of 1929. Measuring point: Top edge of seal around pump column, 0.65 ft below datum.

PERIOD OF RECORD.--1929-30, 1935-36, 1938-79, 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.74 ft below datum, Mar. 11, 1948; lowest measured, R/ 70.60 ft below datum, Aug. 3, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 24	20.52	-	-	-	-	-	-



R/ Recently pumped.

## GROUND-WATER LEVELS

## TILLAMOOK COUNTY

452300123481501. Local number 2S/9W-21BCC.

LOCATION.--Lat 45°23'04", long 123°48'05", Hydrologic Unit 17100203. Formerly lat 45°23'03", long 123°48'08".

Owner: Vern Darby.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in, depth 128 ft.

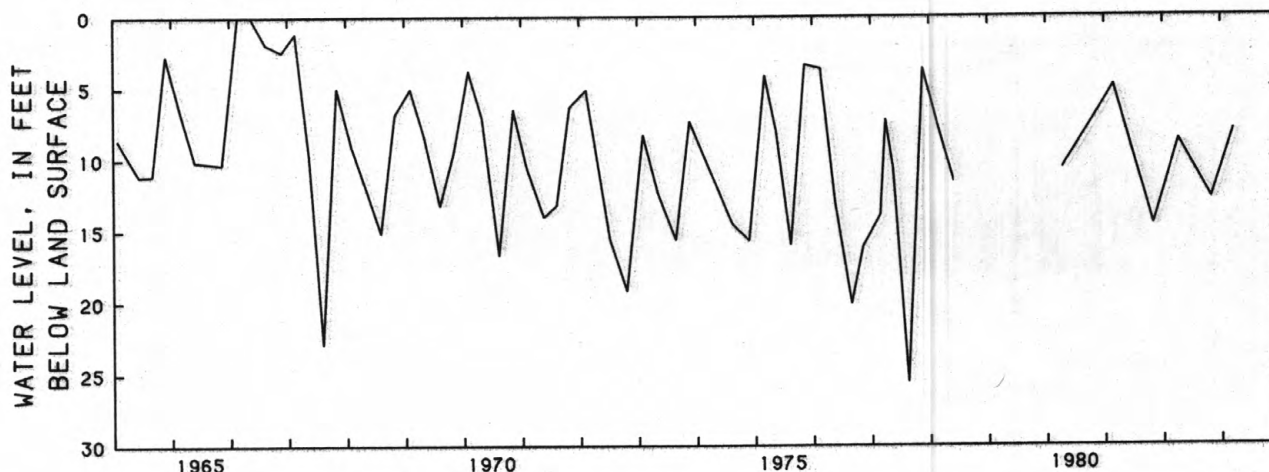
DATUM.--Altitude of land surface datum is about 130 ft. Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing, Feb. 21, 1966; lowest measured, 25.56 ft below datum, Aug. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	12.76	MAR 17	R/ 8.01	-	-	-	-



2S/9W-21BCC

## WASHINGTON COUNTY

453514122575801. Local number 1N/2W-8BCA.

LOCATION.--Lat 45°35'14", long 122°57'58", Hydrologic Unit 17090010.

Owner: Van Raden Farms.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in, reported depth 60 ft, cased to 60 ft, perforated 28-60 ft.

DATUM.--Altitude of land surface datum is 205 ft. Measuring point: Top of casing, 0.40 ft above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.03 ft above datum, Dec. 20, 1955; lowest measured, 26.91 ft below datum, July 15, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	19.84	MAR 8	1.89	-	-	-	-

453117122593602. Formerly 453117122593402. Local number 1N/3W-36DDC.

LOCATION.--Lat 45°31'17", long 122°59'36", Hydrologic Unit 17090010. Formerly long 122°59'34".

Owner: Terminal Ice Co.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused well, diam 12 in, reported depth 171 ft.

DATUM.--Altitude of land surface datum is 180 ft. 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 below datum, Jan. 28, 1970; lowest measured, 22.16 ft below datum, Sept. 22, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	15.69	-	-	-	-	-	-

R/ Recently pumped.

## GROUND-WATER LEVELS

409

## 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, reported depth 486 ft, cased to 250 ft.

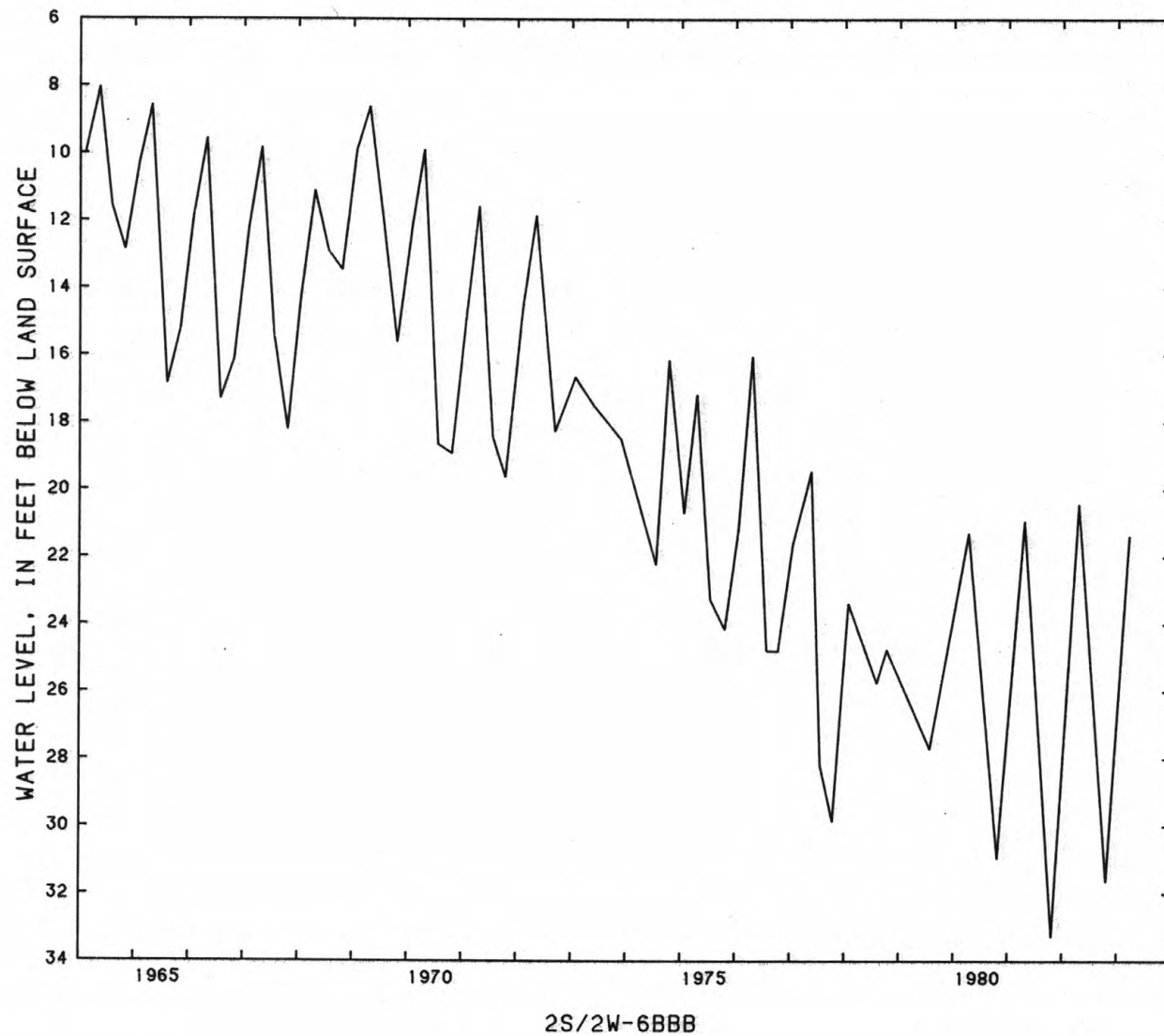
DATUM.--Altitude of land surface datum is 190 ft. Measuring point: Hole in south side of pumpbase, 0.60 ft above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.56 ft below datum, Feb. 23, 1951; lowest measured, <sup>I</sup>/33.28 ft below datum, Oct. 21, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	31.64	MAR 21	21.39	-	-	-	-

<sup>I</sup>/ Nearby well recently pumped.

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## FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	$2.54 \times 10^1$	millimeters (mm)
	$2.54 \times 10^{-2}$	meters (m)
feet (ft)	$3.048 \times 10^{-1}$	meters (m)
miles (mi)	$1.609 \times 10^0$	kilometers (km)
<i>Area</i>		
acres	$4.047 \times 10^3$	square meters (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometers (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometers (km <sup>2</sup> )
square miles (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometers (km <sup>2</sup> )
<i>Volume</i>		
gallons (gal)	$3.785 \times 10^0$	liters (L)
	$3.785 \times 10^0$	cubic decimeters (dm <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic meters (m <sup>3</sup> )
million gallons	$3.785 \times 10^3$	cubic meters (m <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
cubic feet (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeters (dm <sup>3</sup> )
	$2.832 \times 10^{-2}$	cubic meters (m <sup>3</sup> )
cfs-days	$2.447 \times 10^3$	cubic meters (m <sup>3</sup> )
	$2.447 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
acre-feet (acre-ft)	$1.233 \times 10^3$	cubic meters (m <sup>3</sup> )
	$1.233 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
	$1.233 \times 10^{-6}$	cubic kilometers (km <sup>3</sup> )
<i>Flow</i>		
cubic feet per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liters per second (L/s)
	$2.832 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$2.832 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
gallons per minute (gal/min)	$6.309 \times 10^{-2}$	liters per second (L/s)
	$6.309 \times 10^{-2}$	cubic decimeters per second (dm <sup>3</sup> /s)
	$6.309 \times 10^{-5}$	cubic meters per second (m <sup>3</sup> /s)
million gallons per day	$4.381 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$4.381 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
<i>Mass</i>		
tons (short)	$9.072 \times 10^{-1}$	megagrams (Mg) or metric tons



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