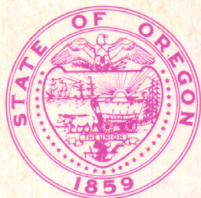
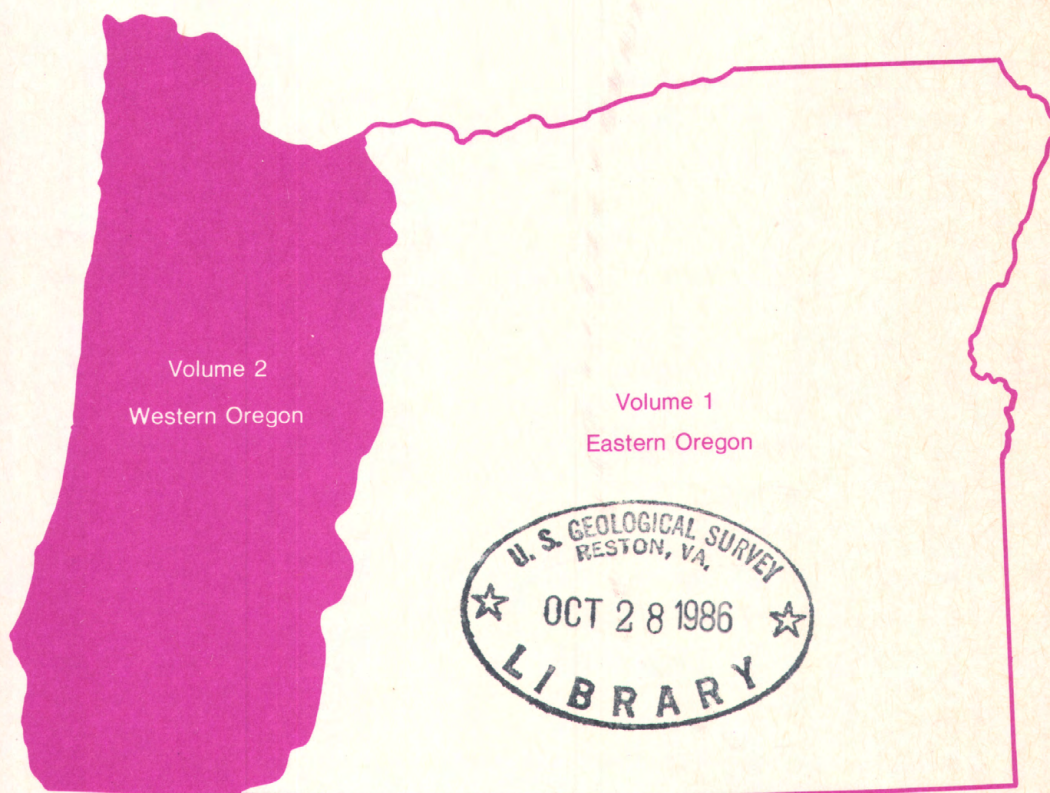


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Water Resources Data Oregon Water Year 1984

Volume 2. Western Oregon



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-84-2
Prepared in cooperation with the Oregon Water Resources
Department and with other agencies

CALENDAR FOR WATER YEAR 1984

1983

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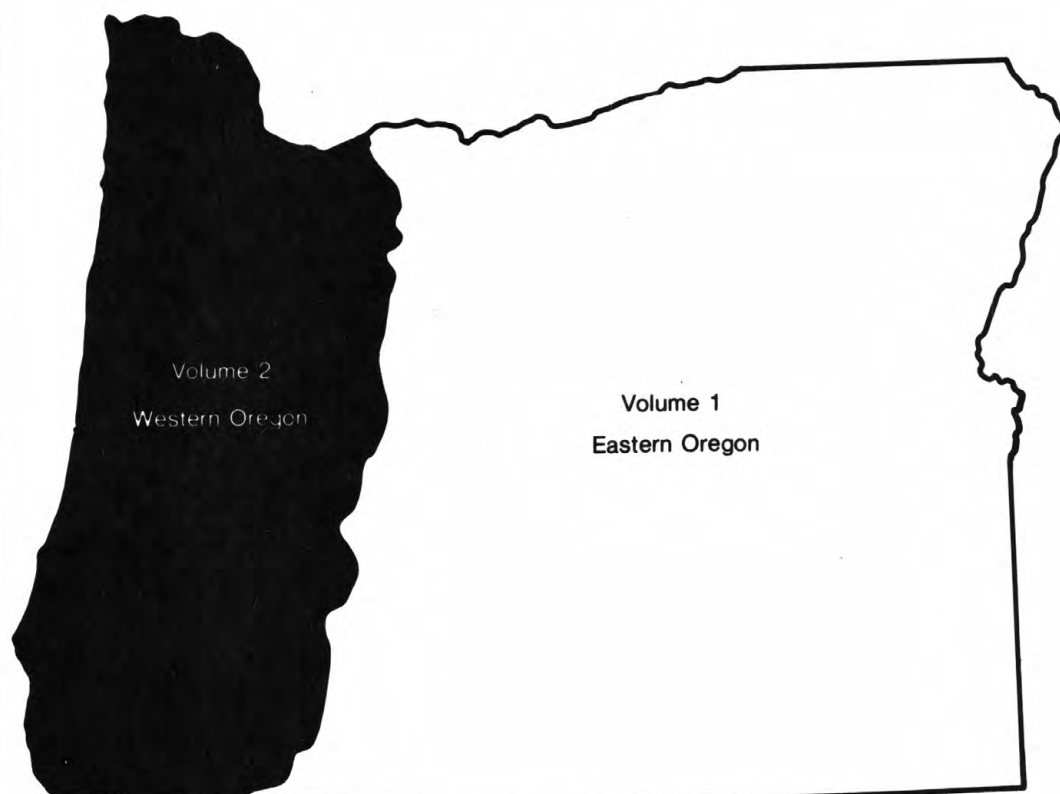
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Water Resources Data Oregon Water Year 1984

Volume 2. Western Oregon

by L.L. Hubbard, M.L. Smith, and L.E. Hubbard



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-84-2
Prepared in cooperation with the Oregon Water Resources
Department and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to
Oregon Office Chief, Water Resources Division
U.S. Geological Survey
847 N.E. 19th Ave., Suite 300
Portland, Oregon 97232

1986

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 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:

Clyde W. Alexander	Joseph B. Gonthier	James L. Moffet
Donald B. Anderson	Janice M. Gordon	Stuart W. McKenzie
Charles J. Bartholet	R. Peder Hansen	Dale C. Nishimoto
Edward Bolke	William A. Hart	Melanie A. North
Daphne G. Clifton	William W. Higbee	Eugene A. Oster
Charles A. Collins	Richard A. Hollway	John K. Page
Milo D. Crumrine	Jon G. House	Frank A. Rinella
David A. Curtiss	Christine G. Janda	Robert E. Sommer, Jr.
Richard M. Edmund	Duane H. King	Roger S. Tippet
Thomas K. Edwards	Richard L. Kraus	Lloyd C. Van Gordon
Wilmer D. Eicher	Carl G. Kroll	David L. Weiss
Bruce J. Fisher	Antonius Laenen	Mary J. Warwick
John Friday	Juliya M. Laenen	Roy E. Wellman
Gregory J. Fuhrer	Elnora Malpass	
Michael A. Gentile	Suzanne J. Miller	

This report was prepared in cooperation with the State of Oregon and with other agencies under the general supervision of Marvin O. Fretwell, Oregon Office Chief, and T. John Conomos, Regional Hydrologist, Western Region.

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15. Supplementary Notes Prepared in cooperation with the State of Oregon and with other agencies.				
16. Abstract (Limit: 200 words) Water Resources Data for the 1984 water year for Oregon consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality in wells and springs. This report, in two volumes, contains discharge records for 259 gaging stations; stage only records for 8 gaging stations; stage and contents for 39 lakes and reservoirs; water quality for 96 stations, water levels for 59 observation wells; and water quality for 5 precipitation stations. Also included are 13 crest-stage, partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Oregon.				
17. Document Analysis a. Descriptors *Oregon, *Hydrologic Data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Sampling sites, Water levels, Water analyses. b. Identifiers/Open-Ended Terms c. COSATI Field/Group				
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WATER RESOURCES DATA FOR OREGON, 1984

INTRODUCTION

Water resources data for the 1984 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 259 gaging stations; stage only records for 8 gaging stations; stage and contents for 39 lakes and reservoirs; water quality for 96 stations; water levels for 59 observation wells; and water quality for 3 precipitation stations. Also included are data for 13 crest-stage, partial-record stations. Locations of these sites, except for the precipitation station and observation wells, are shown on figures 2, 3, 4, and 5. 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-84-1 and OR-84-2." 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, William F. Young, Director.
Oregon Department of Transportation, State Highway Division,
Frank E. Terpin, Location Engineer.
Oregon Department of Fish and Wildlife, Jerry Bauer, Director.
Oregon State University, John V. Byrne, President.
Benton County Emergency Services, Reagan Crowell, Director.
Coos Bay-North Bend Water Board, P. Matson, General Manager.
Eugene Water and Electric Board, Jean Reader, General Manager.
Douglas County, John Youngquist, Coordinator.
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,
D. McClelland, Control Manager.

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 stage and discharge stations and water-quality stations published in this report.

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

HYDROLOGIC CONDITIONS

General Hydrologic Setting

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. 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.

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 inches per year in the lower elevations in the southern part of the area to about 200 inches 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.

Eastern Oregon has more complex hydrologic patterns than western Oregon. Precipitation is less than 10 inches 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 inches of precipitation per year, much of it occurring as snowfall. On large streams, flooding can result from winter rains and (or) seasonal snowmelt; in smaller drainage basins, flooding can result from winter rains, seasonal snowmelt, and convection storms.

Precipitation and temperature

Precipitation data are published by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, for numerous sites in Oregon. These sites are generally situated in valley locations. Data for mountain precipitation, which occurs mainly as snow during the winter, are published by the U.S. Department of Agriculture, Soil Conservation Service, in the report "Water Supply Outlook For Oregon".

Precipitation for the 1984 water year ranged from average to above average across the state with the exception of a small area of the south-central Cascades which was slightly below normal. Only in the months of October and December did the precipitation totals fall below normal. As of April 1st, the 1984 mountain snowpack was above average across the state with the exception of the Mt. Hood area which was reported at 75 percent of normal.

Temperatures for the year ranged from normal in the coastal area to 4°F below normal in the La Grande area. Most stations reported from 1°F to 2°F below normal.

WATER RESOURCES DATA FOR OREGON, 1984

Streamflow

Runoff during the water year ranged from near normal on the north coast to over 300 percent of normal in the Owyhee basin (Table 1). At five of these representative streamflow gages, the 1984 runoff was the highest for the period of record.

Table 1.—Comparison of mean discharge for the 1984 water year with mean discharge for the period of record at long-term stations

Station number	Station name	Drainage area (mi ²)	Length of record (yrs)	Mean discharge 1984 water year (ft ³ /s)	Long-term mean discharge (ft ³ /s)	Percent of average	Maximum annual mean discharge period of record year	ft ³ /s
10396000	Donner und Blitzen River near Frenchglen	a200	54	273	128	213	b1983	245
11502500	Williamson River below Sprague River, near Chiloquin	a3,000	67	1,586	1,057	150	1956	2,187
13181000	Owyhee River near Rome	a8,000	35	3,400	1,019	337	b1952	2,357
13214000	Malheur River near Drewsey	a910	58	474	194	244	b1983	468
13331500	Minam River at Minam	a240	20	572	483	118	1974	713
14048000	John Day River at McDonald Ferry	a7,580	79	4,724	2,097	225	b1983	4,165
14137000	Sandy River near Marmot	262	73	1,455	1,370	106	1974	1,933
14178000	North Santiam River above Boulder Creek, near Detroit	216	58	1,109	1,010	110	1974	1,506
14301000	Nehalem River at Foss	667	45	2,674	2,736	98	1974	4,235
14321000	Umpqua River near Elkton	3,683	79	10,030	7,549	133	b1950	8,229
14325000	South Fork Coquille River at Powers	169	65	925	797	116	1974	1,374

a Approximately.

b Exceeded during 1984 water year.

Extreme flood events during the 1984 water year were limited to the Harney-Malheur Lake area of Harney county in southeastern Oregon. Record high runoff on inflow streams over the three-year period, 1982-84, resulted in extensive flooding of Malheur, Mud, and Harney Lakes. On June 27, the flood water of Malheur-Harney Lake reached a level of 4,102.4 feet, the highest level reached in recorded history (1903-84). The flooded lakes inundated 25 ranches, parts of two state highways, several miles of railroad, many miles of country roads, and much of the Malheur National Wildlife Refuge.

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Peak discharges for representative gages are shown in Table 2.

Table 2.--Comparison of peak discharge for the 1984 water year with peak discharge for the period of record at long-term stations

Station number	Station name	Drainage area (mi ²)	Peak discharge 1984 water year Date	ft ³ /s	Exceedance probability	Peak discharge period of record Date	ft ³ /s
10396000	Donner und Blitzen River near Frenchglen	a200	5-13	1,660	.20	4-26-78	4,270
11502500	Williamson River below Sprague River, near Chiloquin	a3,000	3-18	4,070	.20	12-26-64	16,100
13181000	Owyhee River near Rome	a8,000	4-17	24,900	---	12-24-64	33,500
13214000	Malheur River near Drewsey	a910	3-21	3,310	.20	12-23-64	12,000
13331500	Minam River at Minam	a240	5-30	4,670	.10	6-16-74	6,260
14048000	John Day River at McDonald Ferry	a7,580	4-18	17,900	.20	12-24-64	42,800
14137000	Sandy River near Marmot	262	1-03	12,500	.50	12-22-64	61,400
14178000	North Santiam River above Boulder Creek, near Detroit	216	12-14	5,210	.50	12-22-64	26,700
14301000	Nehalem River at Foss	667	11-18	17,200	.80	1-20-72	46,900
14321000	Umpqua River near Elkton	3,683	2-13	145,000	.20	12-23-64	265,000
14325000	South Fork Coquille River at Powers	169	2-13	17,500	.20	12-22-64	48,900

a Approximately.

NOTE.--Exceedance probability refers to the probability that an event will exceed a specific magnitude in a given time period. A flow of 200 ft³/s with an exceedance probability of 0.5 means that there is a 50 percent chance that the flow will exceed 200 ft³/s in any one year.

WATER RESOURCES DATA FOR OREGON, 1984

No periods of record low flows were observed during the 1984 water year. The minimum streamflows for representative gages are shown in Table 3.

Table 3.—Comparison of minimum daily discharge for the 1984 water year with minimum discharge for the period of record at long-term stations

Station number	Station name	Drainage area (sq.mi.)	Minimum daily discharge		Non-exceedance probability	Instantaneous discharge		Period of record	
			Date	ft ³ /s		Minimum 1984 Date	ft ³ /s	Date	ft ³ /s
10396000	Donner und Blitzen River near Frenchglen	a200	12-22	54	.50	11-22	48	12-09-72	4.2
11502500	Williamson River below Sprague River, near Chiloquin	a3,000	8-28	574	.50	8-29,30	568	10-14-20	320
13181000	Owyhee River near Rome	a8,000	10-01	231	.50	10-01	220	several days	42
13214000	Malheur River near Drewsey	a910	8-21	18	---	8-20,21,29	18	many days	0
13331500	Minam River at Minam	a240	11-30	47	.50	11-30	42	12-06-72	10
14048000	John Day River at McDonald Ferry	a7,580	8-31	402	.50	8-31	402	many days	0
14137000	Sandy River near Marmot	262	10-12,13	301	.50	10-12,13	297	10-27,28-52	195
14178000	North Santiam River above Boulder Creek, near Detroit	216	10-28,29	436	.50	10-28,29,30	436	9-13-09	250
14301000	Nehalem River at Foss	667	9-30	125	.50	9-30	122	8-29,30,31-67	34
14321000	Umpqua River near Elkton	3,683	10-06	1,160	.50	10-01	1,090	7-18-26	640
14325000	South Fork Coquille River at Powers	169	9-30	25	.50	9-30	24	several days	12

a Approximately.

NOTE.—Non-exceedance probability refers to the probability that an event will not exceed a specific magnitude in a given time period. A flow of 12 ft³/s with a non-exceedance probability of 0.50 means there is a 50 percent chance that the flow will be less than 12 ft³/s in any one year.

Quality of Streamflow

Review of stream water-quality records for 14 stations in Oregon indicated that few constituents were outside the range observed for the period of record. Current distributions of approximately 45 constituents (including physical, chemical, and biological measurements) per station were compared to those for the period of record to determine any unusual water-quality conditions. With the possible exception of the constituents for the stations listed in Table 4 whose maximum concentrations were greater than or equal to those for the period of record, no unusual water-quality conditions during the 1984 water year were detected.

Examination of records for the 74 daily mean temperature stations indicated 23 stations with period of record minimum temperatures for December 1983.

WATER RESOURCES DATA FOR OREGON, 1984

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Table 4.--Comparison of minimum and maximum concentrations for selected 1984 water year water-quality constituents to minimum maximum values for the period of record

Station number	Station name	1984			Period of record through 1983		
		Number of samples	Min-imum	Max-imum	Number of samples	Min-imum	Max-imum
Dissolved orthophosphorus as P, in milligrams per liter							
13331500	Minam R at Minam	4	.01	.04	18	<.01	.04
14128910	Columbia R at Warrendale	4	.02	.08	10	.01	.05
14211720	Willamette R at Portland	6	.03	.08	11	<.01	.08
Fecal coliform, in colonies per milliliter							
14372300	Rogue R nr Agness	3	K4	400	68	<1	400
14312260	South Umpqua R nr Roseburg	7	K20	K2375	81	<1	K2300
Fecal streptococci, in colonies per milliliter							
14211720	Willamette R at Portland	5	<1	K2896	66	<1	2600
14372300	Rogue R nr Agness	4	27	K3920	71	<1	3000
13184000	Owyhee R at Owyhee	5	70	K8600	31	50	7800
Dissolved aluminum, in micrograms per liter							
14301000	Nehalem R nr Foss	4	10	50	5	<10	50
14306500	Alsea R nr Tidewater	4	10	70	4	<10	30
14207500	Tualatin R at West Linn	4	10	130	4	10	80
14211720	Willamette R at Portland	4	20	500	4	20	270
Dissolved iron, in micrograms per liter							
14306500	Alsea R nr Tidewater	4	66	120	20	30	120
14307620	Siuslaw R nr Mapleton	4	28	210	23	20	190
14211720	Willamette R at Portland	4	48	370	38	27	300
14301000	Nehalem R nr Foss	4	88	450	43	40	330
Dissolved lithium, in micrograms per liter							
14321000	Umpqua R nr Elkton	4	<4	9	4	5	9
14048000	John Day R at McDonalds Ferry	4	<4	18	4	7	11
14103000	Deschutes R at Moody	4	<4	18	4	8	13
Dissolved nickel, in micrograms per liter							
13331500	Minam R at Minam	2	<1	7	14	<1	3
14312260	South Umpqua R nr Roseburg	2	3	7	20	<1	6
14307620	Siuslaw R nr Mapleton	4	<1	24	16	<1	11
Dissolved strontium, in micrograms per liter							
14307620	Siuslaw R nr Mapleton	4	33	48	4	28	40
14301000	Nehalem R nr Foss	4	24	49	5	25	46
14103000	Deschutes R at Moody	4	43	61	4	41	53
14321000	Umpqua R nr Elkton	4	45	65	4	49	55
Dissolved zinc, in micrograms per liter							
10396000	Donner und Blitzen R nr Frenchglen	4	<3	33	36	<3	30
14307620	Siuslaw R nr Mapleton	4	<3	52	23	<3	38
14312260	South Umpqua R nr Roseburg	2	12	70	22	<3	50

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

Ground-Water Levels

The U.S. Geological Survey, in cooperation with the Oregon Water Resources Department, measures water levels in a network of observation wells. Data from about ten percent of these wells are listed in volumes 1 and 2 of this report. Ground-water levels during the 1984 water year in most of Oregon were generally above average. In Harney County, in the closed basin region of south-central Oregon, ground-water levels in some long-term observation wells reached new record highs as ground-water storage increased in response to the continued above average precipitation. In the Fort Rock-Christmas Valley area in northern Lake County, ground-water pumpage for irrigation has resulted in a net decrease in ground-water storage in the ground-water reservoir and below average ground-water levels in most wells.

Ground-water pumpage for irrigation and other uses from basalt ground-water reservoirs in north-central Oregon declined in the 1984 water year partly in response to above average precipitation, higher pumping costs, and improved water conservation practices. These combined factors resulted in an overall decrease in the rate of ground-water decline.

Ground-water levels in most western Oregon wells ranged from above average to average during most of the water year. Those wells with water levels below average were either heavily pumped or were affected by nearby pumping.

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°C + 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal coliform bacteria are 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°C + 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C + 1.0°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 (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 ($\text{ft}^3/\text{s-day}$) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, or 2,445 cubic meters. It represents a runoff of approximately 0.0372 inch from 1 square mile or 0.3468 millimeter from 1 square kilometer.

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

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 (ft^3/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 (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, $\mu\text{g/l}$) 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 dissolves 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
Genus.....	Hexagenia
Species.....	Hexagenia limbata

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, 1984 is called "1984 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.

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

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

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

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

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

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

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

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gage, general remarks, average discharge, and extremes of published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is 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."

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 lines headed "MAX" and "MIN" give 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 ft³/s, to tenths between 1.0 and 10 ft³/s, to whole numbers between 10 and 1,000 ft³/s, and to three significant figures greater than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

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

Other Data Available

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

For most gaging stations, unpublished, detailed information, on file in the 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.

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. (See "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS.")

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.")

Table 5.--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.

WATER RESOURCES DATA FOR OREGON, 1984

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of Data

The observation-well program in Oregon, begun in 1928, was continued through 1984 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 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 1965-84 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 01S/32E-16CCC is in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.16, T.01 S., R.32 E., and will be labeled as 16CCC. Several areas in Oregon have townships or ranges that are less than six sections wide (1/2 ranges). Wells located in these areas are designated with an X instead of a fraction, for example, 38S/11X-15DDA.

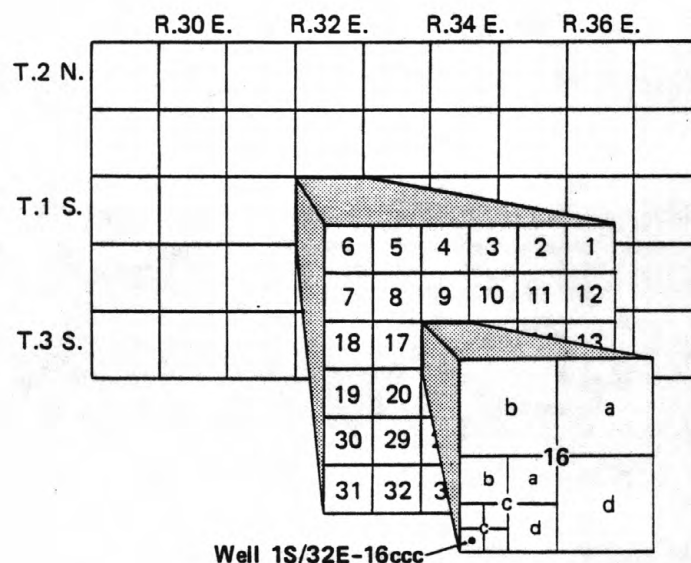


FIGURE 1.--Well-numbering system.

ACCESS TO WATSTORE DATA

The National WATER Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requestor. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's District offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
MS 437 National Center
Reston, Virginia 22092

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Forty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 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. Smoot: 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. 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.

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- 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.
- 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 pages.
- 3-A14. USE OF FLUMES IN MEASURING DISCHARGE, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. COMPUTATION OF WATER-SURFACE PROFILES IN OPEN CHANNELS, by Jacob Davidian. 1984. 48 pages.
- 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.
- 3-C1. FLUVIAL SEDIMENT CONCEPTS, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. FIELD METHODS FOR MEASUREMENT OF FLUVIAL SEDIMENT, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. COMPUTATION OF FLUVIAL-SEDIMENT DISCHARGE, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. SOME STATISTICAL TOOLS IN HYDROLOGY, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. FREQUENCY CURVES, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. LOW-FLOW INVESTIGATIONS, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. STORAGE ANALYSES FOR WATER SUPPLY, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. REGIONAL ANALYSES OF STREAMFLOW CHARACTERISTICS, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. COMPUTATION OF RATE AND VOLUME OF STREAM DEPLETION BY WELLS, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. METHODS FOR DETERMINATION OF INORGANIC SUBSTANCES IN WATER AND FLUVIAL SEDIMENTS, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. DETERMINATION OF MINOR ELEMENTS IN WATER BY EMISSION SPECTROSCOPY, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

- 5-A3. METHODS FOR ANALYSIS OF ORGANIC SUBSTANCES IN WATER, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. METHODS FOR COLLECTION AND ANALYSIS OF AQUATIC BIOLOGICAL AND MICROBIOLOGICAL SAMPLES, edited by P. E. Greeson, T. A. Ehike, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. METHODS FOR DETERMINATION OF RADIOACTIVE SUBSTANCES IN WATER AND FLUVIAL SEDIMENTS, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. QUALITY ASSURANCE PRACTICES FOR THE CHEMICAL AND BIOLOGICAL ANALYSES OF WATER AND FLUVIAL SEDIMENTS, by L. C. Friedman and D. E. Erdmann. 1982. 181 pages.
- 5-C1. LABORATORY THEORY AND METHODS FOR SEDIMENT ANALYSIS, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 7-C1. FINITE-DIFFERENCE MODEL FOR AQUIFER SIMULATION IN TWO DIMENSIONS WITH RESULTS OF NUMERICAL EXPERIMENTS, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. COMPUTER MODEL OF TWO-DIMENSIONAL SOLUTE TRANSPORT AND DISPERSION IN GROUND WATER, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. A MODEL FOR SIMULATION OF FLOW IN SINGULAR AND INTERCONNECTED CHANNELS, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. METHODS OF MEASURING WATER LEVELS IN DEEP WELLS, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. INSTALLATION AND SERVICE MANUAL FOR U.S. GEOLOGICAL SURVEY MANOMETERS, by J. D. Craig. 1983. 57 pages.
- 8-B2. CALIBRATION AND MAINTENANCE OF VERTICAL-AXIS TYPE CURRENT METERS, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

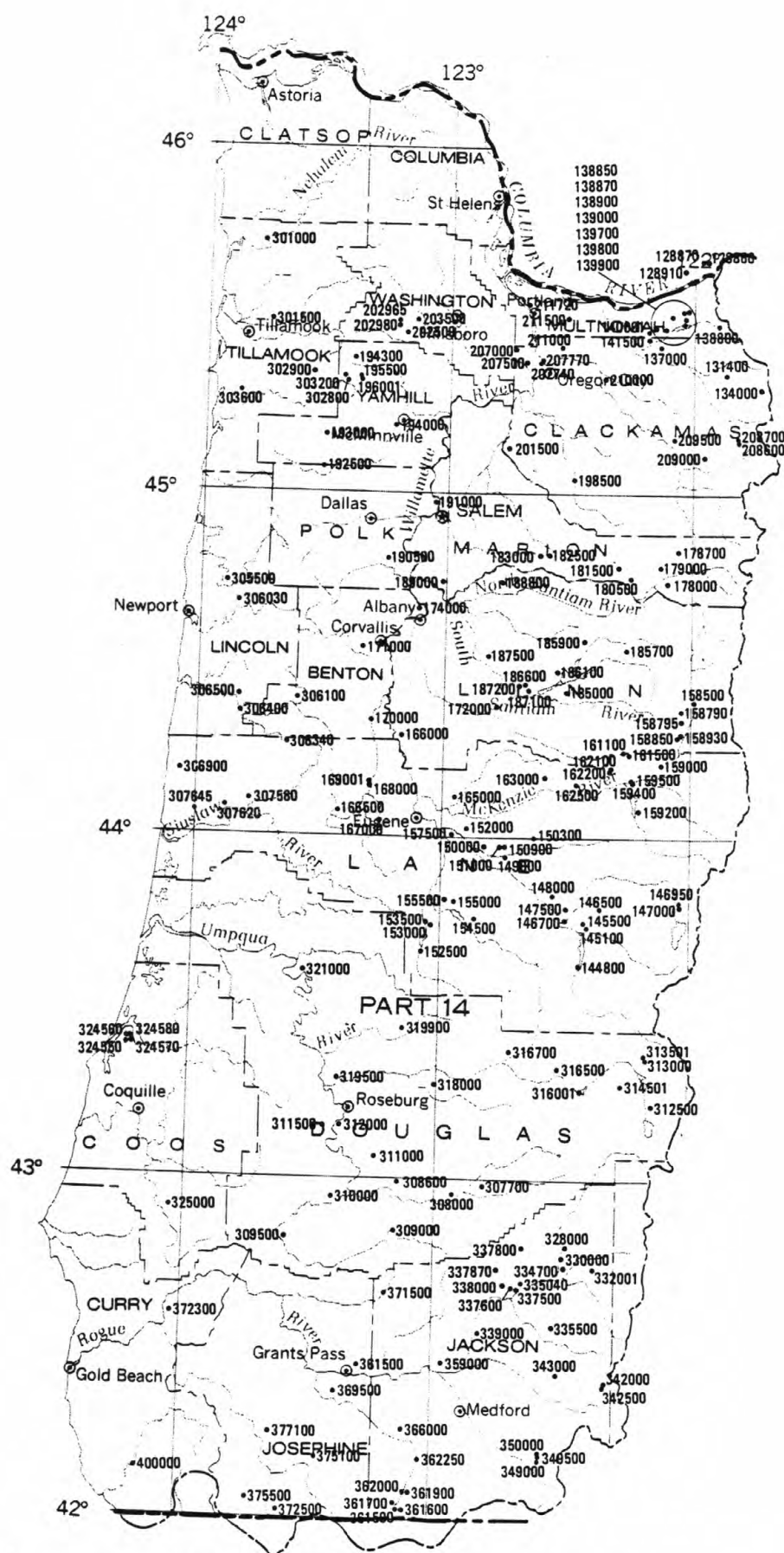


Figure 2. Map of Western Oregon showing location of active gaging stations

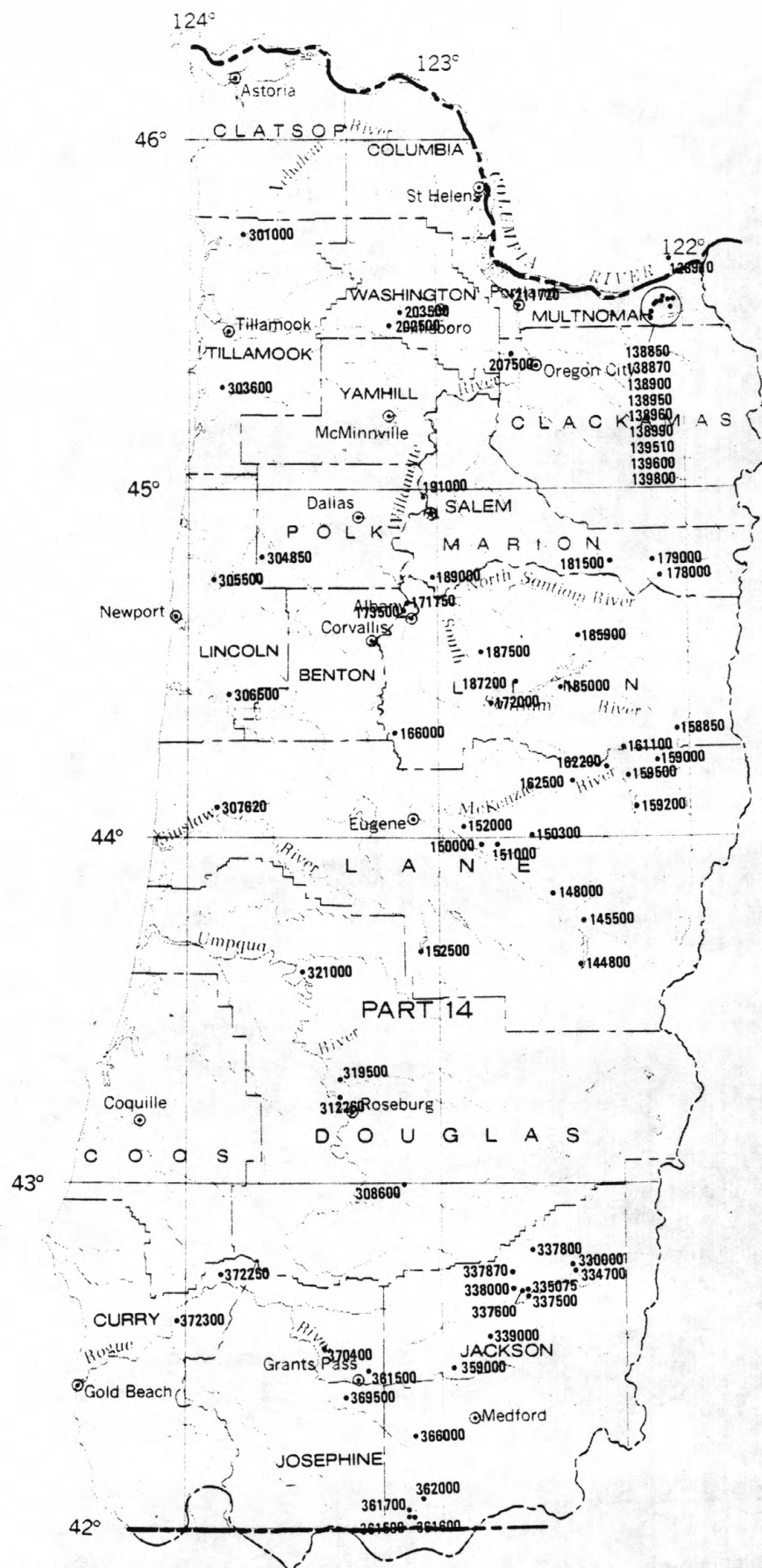


Figure 3. Map of Western Oregon showing sites where water-quality data are obtained



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

COLUMBIA RIVER MAIN STEM

39

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 mi², 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, 77.13 ft Mar. 29, 1984; minimum, 69.65 ft Oct. 25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 77.13 ft Mar. 29; minimum, 70.79 ft July 10.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	76.34	75.56	75.95	75.66	74.56	75.05	75.36	71.80	74.44	75.64	73.95	74.50
2	76.17	75.33	75.85	75.33	74.20	74.69	76.19	72.15	74.49	75.09	74.12	74.63
3	76.42	75.04	75.94	75.09	73.83	74.29	76.05	74.11	75.12	75.81	73.67	74.46
4	76.40	75.62	75.95	75.26	74.00	74.64	76.13	74.17	75.28	76.35	74.50	75.68
5	76.27	75.41	75.88	75.26	74.29	74.63	75.88	72.41	74.69	76.03	74.44	75.17
6	76.31	75.15	75.82	75.38	73.87	74.62	75.56	71.65	73.43	75.82	72.73	74.35
7	76.34	75.46	75.94	75.43	74.42	75.05	75.38	72.65	74.35	76.07	73.16	74.73
8	76.36	75.41	75.86	75.89	74.79	75.37	75.77	72.43	74.31	76.33	72.83	74.46
9	76.55	75.52	76.13	76.18	74.77	75.46	75.41	72.38	74.18	76.37	73.17	75.00
10	76.28	75.04	75.83	76.25	75.14	75.72	76.27	73.13	74.58	76.19	72.65	74.77
11	76.30	75.03	75.63	76.14	74.01	75.05	75.94	74.36	74.96	75.66	73.04	74.18
12	75.96	74.85	75.43	76.10	74.52	75.46	76.20	72.46	74.61	76.04	72.63	74.13
13	75.74	74.24	75.11	76.00	74.26	75.15	76.44	73.91	75.40	75.83	73.49	74.69
14	75.77	74.55	75.20	75.73	74.43	75.15	76.36	73.61	75.01	75.79	74.60	75.16
15	76.01	75.36	75.58	75.67	74.20	74.87	76.14	73.76	75.13	75.58	73.63	74.70
16	75.76	73.24	74.27	75.69	73.73	74.61	75.84	73.64	74.81	75.37	73.46	74.53
17	75.77	74.18	74.78	76.46	74.60	75.62	76.29	74.29	75.11	75.64	73.77	74.76
18	75.75	74.89	75.38	76.41	74.37	75.71	75.67	72.92	74.36	75.92	74.03	75.23
19	75.92	74.49	75.16	76.49	75.32	75.89	76.31	72.41	74.33	75.53	73.13	74.38
20	75.95	74.35	75.08	75.85	73.94	74.92	76.34	73.35	75.06	76.59	73.54	75.27
21	75.84	74.69	75.24	75.37	72.49	73.74	75.90	72.19	74.39	76.40	74.68	75.62
22	76.00	75.04	75.49	74.49	72.26	73.58	76.35	72.67	74.62	76.32	74.79	75.51
23	75.61	74.84	75.29	75.41	72.57	73.94	75.84	72.18	74.38	75.68	73.09	74.62
24	75.52	74.43	75.02	75.25	72.78	73.84	75.00	72.07	73.33	76.06	73.57	75.16
25	75.52	74.42	74.96	75.92	73.75	74.84	74.51	72.19	73.10	75.90	72.99	74.68
26	75.40	74.22	74.82	75.83	73.95	74.99	76.09	74.41	75.02	75.84	72.99	74.37
27	75.89	75.25	75.59	75.49	73.39	74.21	75.98	73.99	74.88	75.70	73.63	74.45
28	75.99	75.12	75.67	74.94	72.48	74.04	75.89	74.08	75.14	75.23	74.16	74.70
29	75.81	74.68	75.29	75.17	71.65	73.73	75.24	72.69	74.17	75.77	75.03	75.40
30	75.93	74.92	75.39	75.74	71.85	73.66	74.88	72.27	73.68	75.74	72.92	74.82
31	75.80	74.89	75.34	---	---	---	75.76	72.99	74.46	75.22	72.42	73.78
MONTH	76.53	73.24	75.45	76.49	71.65	74.75	76.44	71.65	74.54	76.59	72.42	74.77

14128860 COLUMBIA RIVER AT BONNEVILLE DAM, OR--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	75.80	73.41	74.66	75.71	73.08	74.45	75.77	73.86	74.56	76.16	74.55	75.38
2	74.50	72.61	73.64	76.17	73.25	74.73	76.00	74.19	75.00	76.69	74.08	75.39
3	76.03	72.45	74.63	76.14	73.57	74.93	76.59	75.28	75.88	76.33	73.71	74.96
4	76.04	73.57	74.95	75.73	74.41	75.18	75.75	73.99	74.83	75.37	73.82	74.56
5	75.96	74.07	74.98	75.73	73.71	74.85	76.62	74.00	75.65	75.05	74.28	74.69
6	75.65	74.23	74.98	75.50	73.63	74.92	76.62	75.37	76.12	75.56	74.09	74.77
7	76.27	74.46	75.49	75.04	72.38	73.69	75.72	73.50	74.86	75.73	73.76	74.78
8	76.13	73.44	74.72	75.43	73.99	74.74	76.48	73.76	74.83	75.85	73.78	74.84
9	77.02	73.74	75.14	75.49	74.42	74.97	76.33	73.57	75.40	75.36	72.86	74.33
10	76.04	72.63	74.19	76.08	75.45	75.81	76.12	73.75	75.18	75.02	73.33	74.22
11	75.91	71.94	73.87	75.89	74.77	75.24	76.07	74.02	75.07	76.02	73.42	74.71
12	75.85	73.70	74.83	75.95	74.16	75.16	75.39	73.42	74.43	76.12	74.33	75.05
13	75.74	72.23	74.14	75.60	73.98	74.76	76.21	75.16	75.73	75.85	74.06	75.09
14	75.72	73.12	74.22	75.57	74.31	74.84	76.10	74.94	75.64	76.10	73.86	74.84
15	75.46	72.88	74.16	76.18	74.11	75.38	76.33	75.35	75.86	76.31	73.87	74.75
16	75.98	73.04	74.64	76.35	74.72	75.73	75.82	75.32	75.62	75.62	73.88	74.77
17	76.30	73.52	75.07	76.09	75.13	75.64	75.38	74.24	74.70	75.67	74.13	74.80
18	75.77	73.75	74.81	75.98	73.84	75.17	75.67	74.30	74.83	75.45	74.20	74.82
19	75.77	74.01	74.97	76.27	73.87	75.31	75.70	73.40	74.65	75.17	73.77	74.71
20	75.84	73.09	74.68	75.88	74.40	75.10	75.46	74.09	74.94	75.71	74.01	74.77
21	76.31	73.38	75.04	76.15	73.60	74.78	75.28	73.58	74.43	75.36	73.77	74.70
22	76.21	73.67	75.15	76.22	74.87	75.60	74.95	73.75	74.47	75.18	73.43	74.34
23	75.34	73.93	74.81	76.17	74.66	75.70	74.85	73.74	74.45	75.56	73.05	74.22
24	75.15	73.23	74.45	76.29	75.03	75.60	75.78	74.34	75.13	75.21	73.32	74.40
25	75.86	74.40	75.13	76.40	74.63	75.75	75.25	74.10	74.66	74.98	72.68	74.16
26	75.83	73.66	74.48	75.84	73.60	74.81	75.64	74.43	74.91	75.56	74.19	74.77
27	75.99	72.68	74.13	76.43	74.41	75.16	75.47	74.36	74.82	75.68	73.87	74.98
28	75.68	73.92	74.86	75.92	73.60	75.18	76.15	74.80	75.47	75.68	73.79	74.83
29	75.70	73.27	74.69	77.13	74.40	75.66	75.98	74.80	75.31	75.69	74.90	75.17
30	---	---	---	76.59	74.91	75.78	75.85	73.96	74.91	75.53	73.00	74.48
31	---	---	---	75.49	74.03	74.78	---	---	---	75.70	74.19	74.89
MONTH	77.02	71.94	74.67	77.13	72.38	75.14	76.62	73.40	75.08	76.69	72.68	74.75

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	75.50	74.09	74.87	75.50	74.30	74.87	76.21	73.51	74.62	76.01	75.56	75.80
2	75.43	74.59	75.06	75.54	72.96	74.59	76.31	73.72	75.08	76.11	74.59	75.47
3	75.74	74.46	74.99	76.54	74.32	75.39	75.98	73.90	75.18	75.83	74.57	75.21
4	75.69	74.45	74.99	76.46	75.59	76.11	75.10	73.81	74.59	76.05	74.41	75.06
5	75.59	74.30	75.02	76.55	74.37	75.30	75.47	74.47	74.92	76.14	75.46	75.80
6	75.61	74.56	75.16	76.22	75.38	75.94	76.08	74.96	75.50	76.00	75.03	75.52
7	76.03	74.60	75.17	76.50	75.61	76.04	75.91	73.89	74.99	76.01	75.16	75.47
8	75.61	74.74	75.15	75.66	73.65	74.76	75.50	74.12	74.94	75.60	74.96	75.34
9	75.64	74.17	75.17	75.02	72.98	73.89	74.34	72.49	73.60	75.58	74.41	75.00
10	75.60	74.01	74.99	73.07	70.79	71.74	75.89	73.38	74.69	75.54	73.99	74.70
11	75.52	74.73	75.16	73.76	70.90	72.27	76.18	74.68	75.33	75.42	74.19	74.94
12	75.37	74.02	74.38	74.35	72.04	73.24	75.49	74.28	74.91	75.34	74.99	75.16
13	75.20	74.10	74.68	75.35	71.95	73.78	75.89	74.45	75.12	75.48	74.71	75.05
14	75.38	74.32	74.89	76.25	75.07	75.40	76.09	73.96	74.86	75.89	73.91	74.71
15	75.51	73.98	74.64	75.92	74.36	74.90	76.47	74.43	75.22	76.00	75.14	75.53
16	75.53	74.20	74.73	76.26	75.00	75.62	76.03	74.27	75.19	75.96	74.88	75.30
17	74.67	74.13	74.46	75.88	73.59	75.10	75.99	74.47	75.15	75.76	74.30	74.91
18	74.98	74.41	74.68	75.80	72.82	73.99	76.39	74.71	75.56	76.29	74.83	75.35
19	75.05	74.52	74.76	73.95	71.71	72.84	75.88	75.40	75.65	76.05	74.81	75.34
20	75.32	74.09	74.64	76.14	73.60	74.59	75.42	73.89	74.73	75.82	74.18	74.82
21	74.59	73.78	74.21	75.87	74.08	74.94	75.81	74.67	75.13	75.68	74.89	75.40
22	74.56	73.35	73.98	76.30	73.55	74.79	76.26	74.15	75.35	75.66	74.37	74.90
23	74.58	72.66	73.39	76.29	75.36	75.74	76.32	74.56	75.54	75.42	74.62	75.04
24	75.42	73.86	74.51	76.35	74.53	75.37	76.36	73.66	75.03	75.10	74.31	74.75
25	75.46	73.48	74.26	76.43	74.29	75.38	76.02	74.08	75.33	75.02	74.00	74.46
26	74.87	73.13	73.70	76.13	74.09	75.47	76.21	74.28	75.15	75.59	73.99	74.85
27	74.07	72.56	73.18	76.40	73.44	75.11	76.15	74.42	75.18	75.40	74.43	74.92
28	74.18	72.20	73.34	75.44	72.59	74.38	76.38	74.38	75.35	75.76	73.94	74.91
29	74.91	73.14	74.09	76.25	72.74	74.10	75.88	74.75	75.38	75.98	75.19	75.59
30	75.40	73.92	74.83	76.48	73.59	75.04	76.12	74.03	75.35	75.71	74.41	74.81
31	---	---	---	76.12	73.43	74.77	76.18	74.55	75.43	---	---	---
MONTH	76.03	72.20	74.57	76.55	70.79	74.69	76.47	72.49	75.10	76.29	73.91	75.14
YEAR	77.13	70.79	74.89									

COLUMBIA RIVER MAIN STEM

41

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 mi², 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, 27.54 ft June 28; minimum, 8.78 ft Oct. 17.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	11.36	9.69	10.66	11.91	10.97	11.35	20.75	15.53	18.65	14.31	12.95	13.47
2	10.56	9.51	9.91	11.94	11.19	11.47	21.24	15.79	18.66	15.09	13.08	14.24
3	11.60	9.56	10.69	14.48	11.29	12.72	18.52	15.50	17.20	16.36	13.12	14.64
4	13.09	10.40	11.66	13.95	12.13	13.12	17.42	15.00	15.97	19.31	14.82	16.98
5	14.13	10.85	12.84	13.84	13.24	13.57	20.29	16.02	18.78	19.41	18.73	19.09
6	12.92	11.08	11.99	14.24	12.21	13.11	20.28	16.35	18.84	19.43	18.43	18.92
7	11.85	9.79	10.99	14.15	13.15	13.63	18.85	15.67	16.97	18.90	18.61	18.78
8	10.67	9.61	10.09	13.95	12.90	13.55	17.71	16.94	17.24	18.97	18.55	18.70
9	10.18	8.96	9.68	14.04	13.49	13.77	18.08	16.36	17.22	19.52	18.17	19.03
10	12.21	9.29	10.84	14.72	13.16	13.87	17.31	15.28	15.97	20.05	17.42	18.65
11	13.57	10.19	12.21	14.75	13.18	13.57	15.38	14.72	15.03	19.68	18.06	18.94
12	16.23	13.20	14.61	13.36	11.85	12.84	16.69	14.50	15.43	18.14	16.88	17.53
13	15.89	9.95	11.80	13.56	11.68	12.81	17.66	16.77	17.14	17.89	16.72	17.47
14	11.56	9.86	10.41	13.36	12.42	13.10	17.76	16.99	17.43	18.05	17.59	17.82
15	11.76	9.97	10.72	14.04	11.60	13.00	17.45	17.20	17.31	18.32	17.84	18.07
16	12.18	11.71	11.89	14.68	11.44	13.66	18.07	17.15	17.56	19.52	18.17	18.93
17	12.56	8.78	10.77	16.24	14.39	15.16	17.97	17.00	17.67	19.85	18.84	19.36
18	13.47	11.56	12.52	17.10	15.70	16.58	17.86	16.87	17.30	20.07	18.61	19.12
19	13.29	11.93	12.31	19.98	16.73	17.54	21.82	16.79	18.96	23.55	18.13	18.81
20	12.78	11.80	12.09	18.50	16.67	17.26	20.71	17.20	18.28	19.53	18.33	19.34
21	12.99	12.49	12.73	18.95	16.82	18.07	20.93	17.87	20.10	18.41	16.04	16.70
22	12.96	9.72	10.65	19.76	17.86	18.32	20.70	17.38	18.93	16.27	15.84	16.02
23	10.47	9.41	9.92	18.63	16.28	17.89	19.20	17.58	18.64	18.98	15.70	17.26
24	11.36	9.60	10.68	17.82	16.15	16.90	19.53	15.14	17.45	19.80	16.59	18.55
25	12.98	10.62	11.64	17.47	16.01	16.78	17.24	12.18	12.76	19.99	17.94	18.88
26	11.63	9.61	10.55	17.38	16.31	16.87	13.19	12.66	12.88	20.35	19.99	20.21
27	10.33	9.42	9.87	16.56	15.30	15.59	16.27	12.90	15.22	20.51	19.33	19.88
28	11.88	10.24	11.23	16.24	14.96	15.52	16.08	14.43	15.50	19.42	16.90	18.60
29	12.17	11.58	11.82	19.61	15.66	16.83	16.28	15.53	15.86	17.96	16.40	17.16
30	12.19	11.09	11.44	20.97	15.85	18.54	17.15	15.56	16.31	19.47	14.14	17.20
31	11.75	10.81	11.27	---	---	---	16.96	14.18	14.91	19.30	15.94	17.60
MONTH	16.23	8.78	11.31	20.97	10.97	14.90	21.82	12.18	16.97	23.55	12.95	17.93

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	19.96	16.03	18.50	18.31	16.29	16.98	21.51	18.89	20.36	23.83	22.89	23.33
2	20.25	19.13	19.75	18.45	16.05	17.44	19.33	18.44	18.80	23.51	21.62	22.34
3	20.33	16.40	18.42	20.07	16.81	18.06	20.53	19.04	20.02	24.07	22.71	23.59
4	16.41	14.73	15.78	20.49	18.46	19.03	20.56	18.80	19.84	23.14	22.20	22.61
5	16.45	14.55	15.19	19.45	16.16	17.82	20.78	16.82	19.00	22.34	19.91	20.95
6	18.76	16.77	18.27	18.61	15.49	17.21	21.04	16.86	19.64	22.33	19.91	21.23
7	18.79	17.00	18.12	17.91	15.81	17.21	22.29	20.70	21.15	22.29	21.05	21.68
8	18.82	17.33	18.33	18.14	17.64	17.92	21.06	19.32	19.99	22.60	20.41	21.88
9	19.15	18.71	19.00	18.22	16.35	17.48	21.39	18.99	19.86	22.70	18.89	21.45
10	19.28	17.61	18.88	16.42	16.04	16.25	23.23	19.83	21.41	25.12	21.92	23.86
11	19.55	17.67	19.10	18.56	16.00	17.27	23.69	21.27	22.26	25.43	22.98	24.35
12	17.62	17.08	17.32	20.50	18.18	18.76	22.69	20.24	21.42	23.64	22.47	23.06
13	20.87	17.11	18.62	19.95	19.06	19.54	23.34	20.49	22.47	22.51	21.31	22.20
14	21.43	19.47	20.59	19.72	17.43	18.97	23.21	20.79	21.45	24.95	21.11	23.12
15	22.26	19.94	21.25	21.08	18.81	20.24	21.85	20.32	20.64	26.94	25.03	26.06
16	21.61	18.17	20.18	21.38	20.54	21.08	23.38	21.66	22.66	27.22	26.46	26.84
17	20.41	17.72	19.24	21.47	21.29	21.37	24.08	22.17	22.96	27.24	25.69	26.51
18	19.32	19.08	19.20	21.47	20.61	20.95	25.27	22.53	23.83	26.89	24.85	25.88
19	20.18	18.42	19.27	20.72	19.55	20.03	25.65	24.46	24.89	26.21	25.42	25.63
20	19.43	17.51	18.52	19.72	18.82	19.18	24.95	23.26	24.11	25.75	23.25	24.49
21	18.90	17.55	18.12	20.69	16.34	18.86	26.24	24.54	25.64	25.64	23.82	24.82
22	21.02	18.61	19.44	21.89	20.10	20.93	26.07	24.91	25.28	26.30	24.51	25.62
23	21.48	19.48	19.95	22.30	20.39	21.94	25.60	23.74	24.83	26.50	26.14	26.30
24	21.08	19.51	20.05	22.47	21.26	22.07	25.79	23.94	24.89	26.90	26.22	26.63
25	20.37	17.76	18.89	21.87	21.09	21.27	25.23	23.81	24.65	27.17	26.15	26.65
26	17.76	16.04	16.79	21.26	18.28	20.11	25.15	24.36	24.81	27.06	23.80	25.98
27	17.61	15.88	16.88	22.06	17.88	20.42	25.03	24.42	24.70	23.51	22.64	22.97
28	19.62	16.88	18.03	22.40	20.38	21.47	24.72	21.90	22.84	24.75	22.57	23.43
29	19.63	17.81	18.49	22.18	19.77	21.02	21.91	21.56	21.73	25.38	24.17	24.76
30	---	---	---	21.86	19.41	20.63	23.41	21.35	22.17	26.38	24.88	25.66
31	---	---	---	22.21	21.29	21.68	---	---	---	27.03	26.38	26.72
MONTH	22.26	14.55	18.63	22.47	15.49	19.46	26.24	16.82	22.28	27.24	18.89	24.21

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	27.02	26.40	26.82	26.60	25.74	26.28	15.59	14.74	15.08	13.36	12.42	12.72
2	27.04	26.52	26.85	26.39	23.40	24.98	15.15	14.36	14.87	13.56	11.66	12.98
3	26.96	24.79	26.20	23.20	20.08	21.74	15.95	14.48	14.85	12.24	11.16	11.57
4	26.53	24.98	25.93	21.24	19.87	20.30	15.06	11.42	13.07	11.82	11.21	11.47
5	26.71	24.73	26.12	22.58	21.21	21.97	12.16	10.42	11.31	11.94	11.31	11.60
6	25.43	24.45	25.06	22.42	20.40	21.37	13.23	10.49	12.04	13.14	11.38	12.55
7	25.83	24.49	25.13	21.30	18.91	20.59	16.45	12.00	14.93	13.52	12.87	13.20
8	25.83	24.69	25.17	21.73	19.70	21.25	18.87	16.39	17.48	13.66	13.12	13.35
9	25.05	23.82	24.14	20.28	17.56	19.27	18.14	14.75	16.27	13.41	11.49	12.19
10	24.59	23.88	24.24	19.33	15.75	17.61	14.75	12.94	13.64	12.95	11.31	11.76
11	24.47	22.83	23.95	18.26	15.63	16.86	14.86	12.68	14.03	14.46	12.85	13.21
12	25.14	23.91	24.46	18.13	15.86	16.94	14.78	13.25	13.85	15.49	14.35	14.85
13	26.47	23.83	24.75	17.99	15.49	16.73	14.64	13.04	13.87	15.49	11.77	13.93
14	27.09	24.24	25.99	16.74	16.36	16.58	15.48	14.19	14.80	12.01	10.27	11.08
15	25.90	23.69	24.94	16.72	16.31	16.52	15.43	14.02	14.43	13.38	11.48	12.56
16	26.90	25.59	26.32	18.31	15.41	16.80	14.83	14.40	14.62	13.48	12.79	13.13
17	27.09	26.73	26.87	19.49	15.84	17.27	15.45	14.78	15.27	13.47	12.79	13.14
18	27.25	26.68	27.02	19.11	16.86	17.21	15.58	11.66	13.09	14.01	12.96	13.36
19	27.49	26.93	27.05	17.70	15.59	17.03	14.47	11.96	14.22	13.38	12.63	13.04
20	27.30	26.74	27.08	15.61	13.82	14.45	14.71	12.14	13.46	13.27	12.88	13.12
21	27.50	26.70	27.13	15.87	13.87	14.96	13.05	12.24	12.69	13.32	12.38	13.13
22	27.53	26.29	26.92	15.59	12.38	14.01	14.64	12.83	14.38	12.57	11.83	12.19
23	26.80	25.85	26.32	13.40	12.09	12.77	15.96	14.41	14.87	12.61	10.03	11.23
24	26.09	25.70	25.93	13.54	12.15	12.78	15.51	14.59	15.00	13.11	9.76	12.09
25	26.14	25.49	25.85	13.73	12.22	12.95	16.08	14.54	15.22	13.33	12.14	12.75
26	26.84	25.66	26.29	14.33	10.89	13.42	14.58	12.54	13.68	14.03	12.34	13.32
27	27.38	26.76	27.00	16.40	13.46	15.10	16.23	13.45	14.19	14.01	12.70	13.10
28	27.54	26.88	27.18	18.31	15.24	17.26	14.12	13.36	13.72	12.88	11.85	12.23
29	27.42	25.62	26.77	18.16	14.18	15.38	15.09	13.78	14.49	12.96	11.83	12.19
30	26.69	25.74	26.10	16.38	14.16	14.64	15.68	14.79	15.37	12.99	10.73	11.72
31	---	---	---	17.13	14.40	15.79	15.00	11.65	13.18	---	---	---
MONTH	27.54	22.83	25.99	26.60	10.89	17.45	18.87	10.42	14.26	15.49	9.76	12.63
YEAR	27.54	8.78	17.99									

COLUMBIA RIVER MAIN STEM

43

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 mi², 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, 22.06 ft June 29; minimum, 6.19 ft Sept. 24.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.87	7.26	7.58	8.98	7.70	8.35	15.31	12.68	14.24	11.32	10.15	10.59
2	8.04	6.65	7.34	9.24	8.07	8.58	16.03	12.97	14.45	11.41	10.21	10.99
3	8.32	6.85	7.71	11.16	8.38	9.58	14.27	12.56	13.44	13.03	10.45	11.52
4	9.45	7.62	8.50	11.04	9.73	10.31	13.66	11.70	12.50	15.08	12.27	13.37
5	10.22	8.01	9.41	10.83	10.06	10.39	15.52	12.26	13.97	15.34	15.05	15.18
6	9.69	8.63	9.08	11.37	9.58	10.29	15.50	13.35	14.79	15.21	14.77	14.99
7	8.88	7.45	8.20	11.31	10.15	10.63	13.87	12.27	12.88	14.99	14.65	14.77
8	8.49	7.10	7.76	10.82	9.82	10.19	13.79	13.33	13.51	14.85	14.42	14.56
9	8.26	6.72	7.39	10.64	10.06	10.27	13.88	12.75	13.48	14.79	13.92	14.37
10	8.72	6.91	7.85	10.88	9.24	9.95	14.12	12.56	13.10	15.00	13.78	14.39
11	9.52	7.96	8.60	11.09	9.89	10.35	12.57	11.94	12.18	15.11	14.06	14.73
12	11.46	9.37	10.13	10.00	9.08	9.59	12.84	11.45	12.04	14.07	13.07	13.60
13	11.50	7.36	9.04	10.12	8.88	9.54	13.74	12.85	13.35	13.53	12.83	13.21
14	7.72	7.11	7.37	10.12	9.69	9.94	13.88	13.65	13.80	13.57	13.11	13.33
15	7.84	6.87	7.35	10.60	9.29	9.84	13.90	13.66	13.77	13.72	13.16	13.40
16	8.51	7.84	8.19	11.35	9.60	10.51	13.92	13.42	13.68	14.59	13.58	14.20
17	8.36	6.91	7.60	12.81	11.16	11.84	13.87	13.47	13.70	14.88	14.29	14.56
18	9.47	8.08	8.67	13.75	12.49	13.18	13.80	13.38	13.60	15.03	13.84	14.30
19	9.39	8.50	8.91	15.42	13.28	13.89	15.69	13.26	14.59	15.04	13.79	14.20
20	9.21	8.32	8.74	15.14	13.81	14.32	15.42	13.26	14.05	14.81	14.33	14.52
21	9.65	8.81	9.20	15.18	13.72	14.45	16.06	14.21	15.35	14.49	12.44	13.13
22	9.59	7.37	8.25	15.04	14.37	14.69	15.56	13.93	14.64	12.68	12.15	12.42
23	8.15	6.92	7.51	14.58	13.29	14.05	14.79	13.52	13.95	14.53	12.06	13.06
24	8.51	6.98	7.61	14.21	13.16	13.69	13.75	11.11	12.35	15.72	13.42	14.63
25	9.06	7.56	8.31	13.96	13.29	13.61	12.67	8.47	9.39	15.91	14.56	15.22
26	8.80	7.16	7.88	13.98	13.22	13.53	9.77	9.07	9.45	16.36	15.87	16.17
27	8.05	6.74	7.27	13.31	12.21	12.58	11.73	9.52	10.90	16.16	15.49	15.87
28	8.30	7.42	7.90	12.44	11.82	12.19	11.38	10.44	10.92	15.72	13.74	14.97
29	8.67	8.05	8.39	13.54	12.28	12.87	11.80	10.72	11.14	13.70	13.02	13.36
30	8.78	7.81	8.32	15.46	12.21	13.80	13.02	11.65	12.22	14.19	12.14	13.08
31	8.58	7.77	8.24	---	---	---	12.93	11.33	11.90	14.29	12.96	13.46
MONTH	11.50	6.65	8.20	15.46	7.70	11.57	16.06	8.47	13.01	16.36	10.15	13.88

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GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	15.16	12.49	13.90	14.16	12.91	13.37	17.10	15.26	16.43	18.57	17.72	18.26
2	15.52	14.89	15.14	14.16	12.90	13.60	15.25	14.46	14.80	18.47	17.47	17.80
3	15.55	13.04	14.32	14.69	12.91	13.68	15.91	14.84	15.41	19.17	18.06	18.76
4	12.90	10.86	11.67	15.33	14.27	14.64	15.93	14.96	15.50	19.01	17.95	18.28
5	11.69	10.32	11.01	14.73	12.70	13.88	16.07	13.51	15.09	18.18	16.09	17.05
6	13.95	11.82	13.28	13.69	12.03	13.06	15.93	13.29	14.87	17.37	16.01	16.75
7	13.91	12.94	13.35	13.49	12.09	12.98	16.68	15.94	16.36	17.46	16.56	16.98
8	13.83	13.24	13.56	13.71	13.48	13.59	16.45	15.19	15.87	17.64	16.50	17.18
9	14.61	13.73	14.32	13.79	12.61	13.38	16.08	15.00	15.49	17.58	16.03	16.94
10	14.61	14.16	14.42	12.61	12.06	12.33	17.17	15.35	16.73	19.68	17.14	18.48
11	14.78	14.17	14.50	13.71	11.94	12.73	18.46	16.97	17.71	20.26	18.64	19.61
12	14.11	13.15	13.51	14.68	13.73	14.25	18.07	16.58	17.39	18.72	18.24	18.46
13	16.30	13.37	14.45	15.41	14.60	14.94	18.48	16.59	17.73	18.40	17.22	17.87
14	17.16	16.15	16.68	15.34	14.24	14.84	18.51	16.85	17.42	19.54	16.92	18.15
15	18.09	16.19	17.15	16.63	14.76	15.70	16.99	16.40	16.69	21.41	19.54	20.53
16	17.86	15.93	17.07	17.08	16.45	16.70	18.58	16.86	17.95	21.73	21.31	21.55
17	16.55	15.22	15.91	17.28	16.98	17.14	18.88	18.01	18.52	21.77	20.91	21.45
18	15.62	15.38	15.50	17.27	16.69	16.93	19.97	18.02	18.91	21.53	20.00	20.89
19	15.88	14.94	15.39	16.76	15.82	16.26	20.63	19.77	20.10	20.51	20.24	20.41
20	15.25	14.42	14.86	15.94	15.20	15.50	20.08	19.22	19.50	20.42	18.62	19.52
21	14.85	14.04	14.42	16.18	14.33	15.27	20.80	19.29	20.44	20.09	19.04	19.58
22	16.14	14.69	15.18	17.30	16.23	16.66	20.87	20.19	20.41	20.75	19.63	20.09
23	16.47	15.38	15.81	17.88	17.19	17.64	20.41	19.46	19.90	21.08	20.66	20.92
24	16.04	15.38	15.77	18.12	17.22	17.84	20.50	19.41	20.02	21.52	20.98	21.29
25	16.11	14.27	15.28	17.28	16.95	17.07	19.93	19.08	19.60	21.58	21.11	21.38
26	14.25	12.73	13.28	16.97	14.97	16.40	19.95	19.57	19.77	21.83	19.56	21.20
27	13.28	12.41	12.93	17.27	14.56	15.91	19.81	19.52	19.68	19.51	18.21	18.72
28	14.42	12.90	13.79	17.66	16.48	17.12	19.66	17.38	18.37	19.24	17.97	18.51
29	14.67	13.99	14.33	17.69	16.15	16.91	17.37	16.86	17.02	20.01	19.25	19.71
30	---	---	---	17.03	15.63	16.34	17.71	16.66	17.15	20.84	19.82	20.41

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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 microsiemens May 15, 1977; minimum, 95 microsiemens 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, 219 microsiemens Jan. 14; minimum observed, 124 microsiemens June 27.

WATER TEMPERATURES: Maximum recorded, 21.5°C Aug. 9-12, 25-27; minimum, 1.5°C Dec. 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

		DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	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)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT											
20...	1145	120000	178	8.2	15.0	9.7	<1	K910	73	3	20
JAN											
23...	1130	205000	201	8.0	3.5	9.2	K1	84	81	6	22
APR											
25...	1200	348000	166	8.0	9.0	12.2	K10	K6	68	0	18
SEP											
25...	1200	118000	158	8.1	16.5	8.8	K4	760	67	5	19
	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 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											
20...	5.5	7.6	1.5	70	16	3.8	.20	.050	.15	.70	.06
JAN											
23...	6.4	8.5	1.7	76	15	4.9	.20	.040	.44	.30	.12
APR											
25...	5.5	8.2	1.6	69	15	3.6	.20	.020	.35	.50	.25
SEP											
25...	4.8	6.0	1.5	62	13	3.3	.20	.040	<.10	.20	.06
	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, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
20...	.030	.050	8.9	109	110	35300	1.8	7	2270	80	
JAN											
23...	.040	.060	13	117	120	64800	8.0	13	7200	96	
APR											
25...	.030	.070	17	124	110	117000	17	27	25400	90	
SEP											
25...	.010	.020	8.4	95	94	30300	2.3	--	--	--	

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WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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...	<10	1	29	<.5	<1	<1	<3	4	8	2
JAN 23...	30	<1	33	<.5	<1	<1	<3	8	40	3
APR 25...	70	1	23	1.0	<1	1	<3	2	99	<1
SEP 25...	<10	1	34	<.5	<1	<1	<3	3	6	<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...	7	2	<.1	<10	4	<1	1	110	<6	16
JAN 23...	12	2	<.1	<10	2	<1	<1	110	<6	9
APR 25...	7	<1	<.1	<10	<1	<1	<1	100	<6	7
SEP 25...	8	2	<.1	<10	4	<1	<1	99	<6	11

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

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SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	177	208	186	178	184	200	164	147		---	140
2	166	176	204	186	183	186	199	160	144		---	140
3	165	173	205	181	191	187	201	157	141		---	140
4	166	170	204	180	199	186	204	157	140		---	141
5	168	174	201	180	206	186	203	158	140		---	142
6	170	173	199	176	211	185	200	161	141		---	143
7	172	176	202	174	210	184	191	164	142		---	144
8	172	179	204	183	---	192	183	164	142		---	145
9	172	183	202	193	---	196	179	162	139		---	146
10	173	185	195	193	---	194	177	160	134		---	148
11	174	183	189	196	---	190	177	159	130		---	147
12	175	183	184	202	---	187	173	158	127		---	147
13	178	183	178	209	---	186	170	159	126		---	149
14	182	183	176	216	---	183	166	162	126		---	149
15	185	183	176	218	---	182	164	163	128		---	149
16	185	184	176	215	---	181	164	162	129		---	150
17	184	184	179	210	---	178	166	161	130		---	150
18	183	184	183	207	---	179	167	160	132		---	152
19	179	187	185	208	---	183	167	160	132		---	153
20	175	188	184	207	---	185	165	165	133		---	155
21	171	194	187	201	---	187	165	169	133		---	157
22	167	205	194	197	---	190	165	172	133		---	158
23	166	204	199	193	---	194	165	172	131		139	158
24	167	198	199	188	188	196	166	169	129		139	158
25	169	196	196	185	190	195	167	163	127		139	160
26	172	201	195	190	190	193	170	153	126		139	163
27	174	208	195	199	189	194	173	148	---		139	166
28	175	209	194	200	184	198	174	147	---		139	169
29	174	208	187	196	184	201	171	149	---		139	171
30	174	210	185	190	---	200	168	151	---		139	172
31	175	---	186	183	---	198	---	151	---		140	---
MEAN	173	188	192	195	---	189	177	160	---		---	152

COLUMBIA RIVER MAIN STEM

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	16.0	14.0	14.0	8.5	8.5	2.5	2.0	4.0	3.5	4.5	4.5
2	16.5	16.5	14.0	14.0	8.5	8.0	2.0	2.0	4.0	3.5	4.5	4.5
3	16.5	16.5	14.0	13.5	8.5	8.0	2.5	2.0	4.0	4.0	5.0	4.5
4	16.5	16.5	13.5	13.5	8.0	8.0	2.5	2.5	4.0	3.5	5.0	4.5
5	17.0	16.5	13.5	13.0	8.0	8.0	2.5	2.5	4.0	3.5	5.0	4.5
6	17.0	16.5	13.0	13.0	8.0	7.5	2.5	2.5	4.0	3.5	5.0	5.0
7	16.5	16.0	13.0	12.5	7.5	7.0	2.5	2.5	4.0	3.5	5.0	5.0
8	16.0	15.5	13.0	12.5	7.0	7.0	3.0	2.5	---	---	5.5	5.0
9	16.0	15.5	12.5	12.5	7.0	7.0	3.0	2.5	---	---	5.5	5.5
10	16.0	15.5	12.5	12.0	7.0	7.0	3.0	2.5	---	---	5.5	5.5
11	16.0	15.5	12.5	12.5	7.0	7.0	3.0	3.0	---	---	5.5	5.5
12	16.0	15.5	12.5	12.5	7.0	6.5	3.5	3.0	---	---	5.5	5.5
13	15.5	15.5	12.5	12.0	7.0	6.5	3.5	3.0	---	---	5.5	5.5
14	15.5	15.5	12.0	12.0	7.0	7.0	3.5	3.0	---	---	6.0	5.5
15	15.5	15.5	12.0	11.5	7.0	6.5	3.5	3.0	---	---	6.0	6.0
16	15.5	15.0	11.5	11.5	6.5	6.0	3.0	3.0	---	---	6.0	6.0
17	15.0	15.0	11.5	11.5	6.0	6.0	3.0	3.0	---	---	6.0	6.0
18	15.0	14.5	11.5	11.0	6.0	6.0	3.0	2.5	---	---	6.5	6.0
19	15.0	14.5	11.0	11.0	6.0	5.5	3.0	2.5	---	---	6.5	6.5
20	15.0	15.0	11.0	10.5	6.0	5.0	2.5	2.5	---	---	7.0	6.5
21	15.0	14.5	10.5	10.5	5.0	5.0	2.5	2.5	---	---	7.0	6.5
22	15.0	15.0	10.5	10.5	5.0	4.5	3.0	2.5	---	---	7.0	7.0
23	15.0	14.5	10.5	10.0	4.5	3.5	3.5	3.0	---	---	7.0	7.0
24	14.5	14.5	10.0	10.0	3.5	2.5	4.0	3.5	4.5	4.0	7.0	7.0
25	14.5	14.0	10.0	10.0	2.5	2.0	4.0	4.0	4.5	4.0	7.0	7.0
26	14.0	14.0	10.0	10.0	2.5	2.5	4.0	4.0	4.5	4.0	7.5	7.0
27	14.0	14.0	10.0	9.5	3.0	2.5	4.0	3.5	4.5	4.0	7.5	7.0
28	14.0	14.0	9.5	9.5	2.5	2.0	3.5	3.5	4.5	4.5	8.0	7.5
29	14.0	14.0	9.5	9.0	2.0	1.5	4.0	3.5	4.5	4.5	8.0	7.5
30	14.0	14.0	9.0	8.5	2.0	2.0	4.0	3.5	---	---	8.0	7.5
31	14.0	14.0	---	---	2.5	2.0	4.0	3.5	---	---	8.0	8.0
MONTH	17.0	14.0	14.0	8.5	8.5	1.5	4.0	2.0	---	---	8.0	4.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	8.0	10.0	9.5	14.0	13.5	17.0	16.5	21.0	20.5	20.0	20.0
2	8.5	8.0	10.0	9.5	14.0	13.5	17.0	17.0	21.0	20.5	20.5	20.0
3	8.5	8.0	10.0	9.5	14.0	13.5	17.0	17.0	21.0	20.5	20.5	20.0
4	8.5	8.5	10.0	9.5	14.0	13.5	17.5	17.0	20.5	20.5	20.5	20.0
5	8.5	8.5	10.0	10.0	13.5	13.5	18.0	17.5	20.5	20.5	20.0	20.0
6	8.5	8.5	10.5	10.0	13.5	13.5	18.0	17.5	20.5	20.0	20.0	19.5
7	8.5	8.5	10.5	10.0	14.0	13.5	18.0	17.5	20.5	20.5	20.0	19.5
8	9.0	8.5	11.0	10.5	13.5	13.5	18.0	17.5	21.0	20.5	20.0	19.5
9	9.0	8.5	11.0	10.5	14.0	13.5	18.5	18.0	21.5	21.0	20.0	19.5
10	9.0	8.5	11.0	10.5	14.0	14.0	19.0	18.0	21.5	21.5	19.5	19.0
11	9.0	8.5	10.5	10.5	14.0	14.0	18.5	18.5	21.5	21.0	19.5	19.0
12	9.0	8.5	11.0	10.5	14.0	14.0	18.5	18.5	21.5	21.0	19.5	19.0
13	8.5	8.5	11.0	11.0	14.0	14.0	18.5	18.5	21.0	21.0	19.0	18.5
14	9.0	8.5	11.0	11.0	14.5	14.0	19.0	18.5	---	---	18.5	18.5
15	9.0	9.0	11.0	11.0	15.0	14.5	19.5	19.0	---	---	18.5	18.5
16	9.5	9.0	11.5	11.0	15.0	14.5	20.0	19.5	---	---	19.0	18.5
17	9.5	9.0	12.0	11.5	15.0	14.5	20.0	20.0	---	---	19.0	18.5
18	9.5	9.5	12.0	12.0	15.5	15.0	20.0	20.0	---	---	19.0	19.0
19	10.0	9.5	12.0	12.0	16.0	15.5	20.0	19.5	---	---	19.0	19.0
20	10.0	9.5	12.0	12.0	16.0	15.5	19.5	19.5	---	---	19.0	18.5
21	10.0	10.0	12.0	12.0	15.5	15.5	19.5	19.0	---	---	18.5	18.0
22	10.0	10.0	12.0	12.0	15.5	15.5	19.5	19.0	---	---	18.0	17.5
23	10.0	10.0	12.5	12.0	16.0	15.5	20.0	19.5	21.0	21.0	17.5	17.5
24	10.0	9.5	12.5	12.5	16.0	16.0	20.5	20.0	21.0	21.0	17.5	17.0
25	9.5	9.5	12.5	12.0	16.5	16.0	20.5	20.5	21.5	21.0	17.0	17.0
26	9.5	9.5	12.0	12.0	16.5	16.0	20.5	20.5	21.5	21.0	17.0	17.0
27	10.0	9.5	12.5	12.0	16.5	16.0	20.5	20.5	21.5	21.0	17.0	17.0
28	10.0	9.5	13.0	12.5	17.0	16.5	20.5	20.0	21.0	21.0	17.0	16.5
29	10.0	9.5	13.5	13.0	17.0	16.5	20.5	20.0	21.0	21.0	17.0	16.5
30	10.0	9.5	13.5	13.0	17.0	16.5	21.0	20.0	21.0	20.5	17.0	16.5
31	---	---	13.5	13.5	---	---	21.0	20.5	20.5	20.0	---	---
MONTH	10.0	8.0	13.5	9.5	17.0	13.5	21.0	16.5	---	---	20.5	16.5

SANDY RIVER BASIN

49

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 mi².

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 ft³/s Jan. 6, 1983, gage height, 5.35 ft; minimum, 42 ft³/s Oct. 20, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 25, 1980, reached a stage of 6.0 ft, discharge, 863 ft³/s, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 220 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 3	1330	*328	*5.16	Jan. 24	1530	256	4.98
Minimum, 42 ft ³ /s Oct. 20.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	48	50	79	96	97	89	98	94	110	105	72	59		
2	49	50	77	112	94	87	96	104	107	104	71	57		
3	49	59	73	252	93	85	95	101	104	103	70	55		
4	53	68	71	234	93	83	93	97	119	102	70	55		
5	49	59	69	185	93	82	92	95	122	101	69	63		
6	48	80	70	159	94	82	89	94	120	99	68	73		
7	48	67	77	148	91	81	94	94	143	97	67	94		
8	47	61	79	136	89	83	95	97	146	95	67	71		
9	48	59	80	123	89	87	93	94	142	94	67	64		
10	47	65	99	120	86	92	94	92	129	92	68	61		
11	47	62	90	117	90	90	91	110	121	92	67	60		
12	47	62	90	107	136	88	97	105	116	92	67	60		
13	47	61	127	101	157	93	94	111	113	90	65	58		
14	55	65	145	98	124	96	106	111	113	88	64	57		
15	48	69	125	94	115	95	120	106	114	88	64	57		
16	48	74	106	89	106	94	107	101	111	88	63	56		
17	53	75	94	87	99	92	100	99	107	86	63	56		
18	48	75	89	86	96	99	99	98	106	87	64	55		
19	46	78	85	83	95	112	97	102	107	85	63	55		
20	45	81	82	82	99	122	95	105	114	84	61	56		
21	45	75	80	84	97	124	93	99	143	82	61	56		
22	64	70	75	91	92	121	93	105	122	80	61	62		
23	51	76	70	118	92	116	92	118	118	80	61	60		
24	48	110	65	214	92	108	88	105	119	81	59	59		
25	48	89	80	202	89	112	87	113	118	81	58	58		
26	47	80	85	161	86	127	85	125	117	78	58	57		
27	47	108	81	137	85	117	84	116	119	77	59	55		
28	47	99	80	123	84	114	84	119	115	76	58	54		
29	46	88	104	113	83	107	83	130	121	75	57	54		
30	50	84	123	107	---	102	87	127	109	73	57	54		
31	51	---	103	101	---	98	---	117	---	73	60	---		
TOTAL	1514	2199	2753	3960	2836	3078	2821	3284	3565	2728	1979	1791		
MEAN	48.8	73.3	88.8	128	97.8	99.3	94.0	106	119	88.0	63.8	59.7		
MAX	64	110	145	252	157	127	120	130	146	105	72	94		
MIN	45	50	65	82	83	81	83	92	104	73	57	54		
CFSM	3.30	4.95	6.00	8.65	6.61	6.71	6.35	7.16	8.04	5.95	4.31	4.03		
IN.	3.81	5.53	6.92	9.95	7.13	7.74	7.09	8.25	8.96	6.86	4.97	4.50		
AC-FT	3000	4360	5460	7850	5630	6110	5600	6510	7070	5410	3930	3550		
CAL YR 1983	TOTAL	31061	MEAN	85.1	MAX	345	MIN	45	CFSM	5.75	IN.	78.07	AC-FT	61610
WTR YR 1984	TOTAL	32508	MEAN	88.8	MAX	252	MIN	45	CFSM	6.00	IN.	81.71	AC-FT	64480

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 mi².

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.--59 years (water years 1911, 1927-84), 44.5 ft³/s, 75.54 in/yr, 32,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s Dec. 23, 1964, gage height, 4.75 ft, from rating curve extended above 310 ft³/s, on basis of slope-area measurement of peak flow; minimum, 10 ft³/s Nov. 27, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 3	1430	*336	*2.79	Feb. 12	1630	204	2.26
Jan. 24	1600	295	2.65	June 21	1200	171	2.11

Minimum, 17 ft³/s Oct. 20, 21, 27-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	19	22	38	32	54	43	54	57	75	67	37	29		
2	21	24	36	44	51	40	52	67	74	65	37	26		
3	21	32	32	193	49	38	50	58	72	63	35	25		
4	22	42	31	144	49	37	49	50	90	63	34	25		
5	20	30	31	94	49	37	48	48	85	64	34	33		
6	19	51	31	81	52	38	45	48	87	62	32	45		
7	20	33	30	77	50	39	48	48	115	59	31	70		
8	20	29	30	71	48	41	47	52	103	57	32	42		
9	20	30	34	62	48	47	43	53	94	56	33	30		
10	19	35	48	60	45	55	42	51	83	54	32	27		
11	18	29	36	62	48	53	40	77	79	53	32	27		
12	19	26	36	54	112	50	43	73	84	52	32	28		
13	19	25	75	50	94	56	43	76	83	51	30	26		
14	22	30	82	47	68	61	54	77	79	49	30	24		
15	20	39	61	45	61	58	64	71	77	49	30	23		
16	19	49	48	44	55	58	58	66	73	49	30	23		
17	21	51	42	43	50	52	53	65	71	49	31	23		
18	19	44	39	42	48	55	54	66	69	47	31	23		
19	19	42	36	42	47	71	53	72	68	44	29	24		
20	18	43	32	43	50	84	51	75	73	44	28	24		
21	17	35	30	45	50	84	50	67	119	43	28	23		
22	37	30	28	49	45	78	54	76	82	41	28	29		
23	23	32	26	81	44	73	53	87	77	41	28	30		
24	20	66	25	244	44	65	46	73	76	44	27	26		
25	19	43	24	195	41	64	44	84	73	49	26	23		
26	20	36	23	103	39	75	42	94	74	41	26	22		
27	19	69	23	85	38	64	41	81	74	38	27	22		
28	17	56	24	75	39	60	40	85	71	37	25	21		
29	17	44	35	68	38	55	40	95	77	36	24	20		
30	22	39	62	62	---	53	45	91	68	36	26	21		
31	24	---	39	58	---	52	---	80	---	37	29	---		
TOTAL	630	1156	1167	2395	1506	1736	1446	2163	2425	1540	934	834		
MEAN	20.3	38.5	37.6	77.3	51.9	56.0	48.2	69.8	80.8	49.7	30.1	27.8		
MAX	37	69	82	244	112	84	64	95	119	67	37	70		
MIN	17	22	23	32	38	37	40	48	68	36	24	20		
CFSM	2.54	4.81	4.70	9.66	6.49	7.00	6.02	8.72	10.1	6.21	3.76	3.47		
IN.	2.93	5.38	5.43	11.14	7.00	8.07	6.72	10.06	11.28	7.16	4.34	3.88		
AC-FT	1250	2290	2310	4750	2990	3440	2870	4290	4810	3050	1850	1650		
CAL YR 1983	TOTAL	15877	MEAN	43.5	MAX	248	MIN	17	CFSM	5.44	IN.	73.83	AC-FT	31490
WTR YR 1984	TOTAL	17932	MEAN	49.0	MAX	244	MIN	17	CFSM	6.12	IN.	83.38	AC-FT	35570

SANDY RIVER BASIN

51

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 mi².

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.--73 years, 1,370 ft³/s, 71.01 in/yr, 992,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,400 ft³/s Dec. 22, 1964, gage height, 17.05 ft, from rating curve extended above 7,000 ft³/s; minimum, 195 ft³/s Nov. 27, 28, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 3	1600	*12,500	*12.80	Jan. 25	0730	10,100	12.13

Minimum, 297 ft³/s Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	325	432	1440	1670	1440	1470	1800	1410	1470	1120	564	425		
2	324	450	1290	1990	1310	1570	1750	2120	1350	1060	550	388		
3	328	1100	1160	8280	1210	1460	1660	2580	1260	999	524	367		
4	356	2110	1040	7420	1150	1330	1590	2130	1670	967	504	359		
5	343	1270	1040	4550	1110	1210	1560	1950	2090	946	509	423		
6	328	2580	1190	3360	1090	1170	1490	1880	2040	918	482	759		
7	318	1880	1370	2860	1050	1150	1750	1750	3230	844	457	1010		
8	313	1320	1780	2530	1010	1160	2300	1710	3760	809	468	772		
9	311	1080	1690	2100	1000	1240	2150	1630	3380	778	491	581		
10	310	1040	2410	2080	966	1370	2490	1530	2820	756	496	475		
11	304	1000	2210	2380	1070	1460	2170	1860	2280	746	476	446		
12	301	872	1850	2080	3610	1480	2380	1910	1930	728	471	472		
13	301	828	3700	1760	6180	1620	2260	1860	1720	710	432	419		
14	334	923	4790	1510	3860	1910	2170	2030	1560	689	419	385		
15	325	1750	3760	1320	2740	2030	2530	2010	1460	692	412	379		
16	306	1810	2630	1200	2280	1900	2190	1950	1350	707	424	377		
17	331	2160	1980	1090	1860	1840	1860	1730	1240	713	441	375		
18	334	2630	1640	1010	1600	2140	1680	1580	1180	686	446	375		
19	312	2380	1430	959	1440	2870	1600	1570	1120	631	416	376		
20	312	2690	1220	895	1460	3120	1500	1860	1240	606	396	388		
21	304	1970	1070	928	1640	3740	1400	1630	2300	594	394	366		
22	764	1530	980	1200	1470	3430	1370	1600	2030	577	399	444		
23	601	1460	900	2060	1490	2860	1390	2480	1590	583	399	530		
24	448	3200	840	7860	1610	2410	1280	2210	1440	628	381	424		
25	398	2670	860	8460	1600	2350	1220	2070	1320	713	371	385		
26	375	2160	840	5280	1420	3900	1150	2580	1280	650	377	367		
27	358	2720	860	3490	1280	3170	1090	2190	1310	574	402	353		
28	346	2810	810	2660	1240	2790	1050	1960	1210	553	381	339		
29	339	2210	900	2180	1220	2510	1030	1950	1390	539	359	333		
30	378	1750	2240	1850	---	2190	1130	1950	1280	545	372	334		
31	493	---	1570	1620	---	1940	---	1700	---	556	391	---		
TOTAL	11220	52785	51490	88632	50406	64790	50990	59370	53300	22617	13604	13426		
MEAN	362	1760	1661	2859	1738	2090	1700	1915	1777	730	439	448		
MAX	764	3200	4790	8460	6180	3900	2530	2580	3760	1120	564	1010		
MIN	301	432	810	895	966	1150	1030	1410	1120	539	359	333		
CFSM	1.38	6.72	6.34	10.9	6.63	7.98	6.49	7.31	6.78	2.79	1.68	1.71		
IN.	1.59	7.49	7.31	12.58	7.16	9.20	7.24	8.43	7.57	3.21	1.93	1.91		
AC-FT	22250	104700	102100	175800	99980	128500	101100	117800	105700	44860	26980	26630		
CAL YR 1983	TOTAL	507288	MEAN	1390	MAX	16600	MIN	301	CFSM	5.31	IN.	72.03	AC-FT	1006000
WTR YR 1984	TOTAL	532630	MEAN	1455	MAX	8460	MIN	301	CFSM	5.55	IN.	75.63	AC-FT	1056000

SANDY RIVER BASIN

14138700 BULL RUN RIVER NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°27'55", long 121°51'20", in NE1SW1 sec.20, T.1 S., R.8 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, at culvert on Forest Service road S-154.1, upstream from Bull Run Reservoir Number One.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Biological analyses: July 1978 to October 1979.

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1980

DATE	78/07/13		78/09/25		79/10/29	
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.13		1.28		2.14	
EQUITABILITY	.40		.50		.62	
TOTAL COUNT (CELLS/SQ.INCH)*1000	5966.		21235.		4907.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	56		74		55	
	COUNT	PCT	COUNT	PCT	COUNT	PCT
CHRYSOPHYTA YELLOW-BROWN ALGAE						
-BACILLARIOPHYCEAE DIATOMS						
--PENNALES PENNATE DIATOMS	--	---	--	---	104	2.1
---FRAGILARIACEAE						
----DIATOMA HIEMALE MESODON	3996	67.1	14062	66.2	1116	22.8
----DIATOMA VULGARE	133	2.2	994	4.7	104	2.1
----FRAGILARIA VAUCHERIAE	19	0.3	--	---	--	---
----ACHNANTHACEAE						
----ACHNANTHES LANCEOLATA	1761	29.5	5611	26.4	2647	54.0
----ACHNANTHES LINEARIS	19	0.3	142	0.7	52	1.1
----ACHNANTHES MINUTISSIMA	--	---	284	1.3	130	2.6
----COCCONEIS PLANCENTULA ENGLYPTA	--	---	142	0.7	234	4.8
----NAVICULACEAE						
----NAVICULA MINIMA	--	---	--	---	208	4.2
----GOMPHONEMACEAE						
----GOMPHONEMA ANGUSTATUM	19	0.3	--	---	--	---
----NITZSCHIAEAE						
----NITZSCHIA SPP.	--	---	--	---	26	0.5
----NITZSCHIA FRUSTULUM	19	0.3	--	---	182	3.7
----NITZSCHIA FONTICOLA	--	---	--	---	104	2.1

SANDY RIVER BASIN

53

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 mi².

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.--21 years, 60.1 ft³/s, 99.90 in/yr, 43,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,610 ft³/s Dec. 22, 1964, gage height, 8.25 ft, from rating curve extended above 330 ft³/s, on basis of slope-area measurement of peak flow; minimum, 1.5 ft³/s Sept. 5-10, 28, 29, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 3	1230	*847	*4.52	Feb. 12	1800	721	4.13
Jan. 25	0530	775	4.28				

Minimum, 2.3 ft³/s Aug. 25-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	6.7	16	49	107	38	69	50	100	41	25	4.7	4.9		
2	6.3	21	39	105	32	86	47	187	34	22	4.5	3.3		
3	6.3	132	32	612	28	70	43	157	30	20	4.3	2.8		
4	7.7	180	27	400	26	55	41	101	68	18	4.2	2.5		
5	6.9	126	26	196	24	45	41	89	90	17	4.0	6.1		
6	6.5	266	25	129	25	42	40	74	85	16	4.0	15		
7	6.2	130	33	119	24	43	70	66	122	16	3.9	45		
8	5.8	86	73	106	23	48	117	68	124	15	3.6	26		
9	5.9	76	76	73	24	60	88	68	123	14	3.6	16		
10	5.9	67	197	87	23	77	90	65	93	13	3.5	12		
11	5.8	60	125	111	43	84	68	105	68	13	3.3	15		
12	5.5	50	110	77	327	103	101	97	54	12	3.3	19		
13	5.5	49	200	58	418	126	94	83	43	11	3.3	13		
14	7.6	90	180	43	182	163	81	83	36	11	3.0	10		
15	6.4	163	110	35	106	173	109	71	31	9.9	3.0	8.6		
16	5.9	189	75	32	80	133	103	64	28	9.3	3.0	7.7		
17	8.2	236	50	28	57	113	83	53	25	8.8	3.0	6.9		
18	7.2	193	40	25	45	135	71	47	23	8.6	2.8	6.3		
19	6.5	153	35	22	38	194	69	59	21	8.1	2.8	5.9		
20	6.6	150	28	22	44	206	70	93	30	7.6	2.8	5.9		
21	5.8	99	23	22	57	263	63	71	79	7.2	2.5	5.7		
22	50	71	20	68	47	189	60	77	60	6.7	2.5	12		
23	22	92	17	188	50	128	60	149	44	6.3	2.5	13		
24	16	238	15	569	61	102	50	110	35	6.2	2.5	8.1		
25	13	133	14	530	49	95	43	101	29	5.9	2.5	6.8		
26	11	99	14	232	38	174	38	119	30	5.9	2.3	6.2		
27	10	160	14	128	34	121	33	94	31	5.5	2.3	5.8		
28	9.3	133	14	95	35	101	33	76	25	5.5	2.4	5.3		
29	8.8	94	20	69	36	82	35	68	33	5.4	2.3	5.0		
30	13	68	250	56	---	66	44	62	29	5.0	2.3	4.7		
31	17	---	200	46	---	57	---	52	---	4.7	2.7	---		
TOTAL	305.3	3620	2131	4390	2014	3403	1935	2709	1564	339.6	97.4	304.5		
MEAN	9.85	121	68.7	142	69.4	110	64.5	87.4	52.1	11.0	3.14	10.1		
MAX	50	266	250	612	418	263	117	187	124	25	4.7	45		
MIN	5.5	16	14	22	23	42	33	47	21	4.7	2.3	2.5		
CFSM	1.21	14.8	8.41	17.4	8.49	13.5	7.89	10.7	6.38	1.35	.38	1.24		
IN.	1.39	16.48	9.70	19.99	9.17	15.49	8.81	12.33	7.12	1.55	.44	1.39		
AC-FT	606	7180	4230	8710	3990	6750	3840	5370	3100	674	193	604		
CAL YR 1983	TOTAL	21717.0	MEAN	59.5	MAX	932	MIN	4.3	CFSM	7.28	IN.	98.88	AC-FT	43080
WTR YR 1984	TOTAL	22812.8	MEAN	62.3	MAX	612	MIN	2.3	CFSM	7.63	IN.	103.87	AC-FT	45250

SANDY RIVER BASIN

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 mi².

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge records good. Regulation at times since 1915 by Bull Run Lake, usable capacity, 12,270 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--18 years, 426 ft³/s, 120.77 in/yr, 308,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,610 ft³/s Jan. 20, 1972, gage height, 13.22 ft; minimum, 33 ft³/s Sept. 27, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 25	0430	*4,410	*9.74	Feb. 12	1630	4,240	9.59
Minimum, 52 ft ³ /s Sept. 5.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	72	173	382	700	278	439	321	515	321	250	74	80		
2	72	218	328	550	244	573	296	1080	286	221	73	61		
3	73	992	287	2800	224	450	275	1020	261	205	71	55		
4	84	1240	257	1800	212	341	262	655	482	187	70	54		
5	75	778	265	900	199	283	263	598	598	174	70	81		
6	72	1690	286	700	197	269	263	525	603	160	70	148		
7	69	915	326	600	189	267	554	451	700	152	67	453		
8	67	606	680	500	181	273	696	427	700	142	66	313		
9	67	495	648	450	187	303	573	417	800	135	65	200		
10	66	478	1580	550	194	403	673	428	600	128	64	142		
11	64	475	942	700	286	410	522	639	500	124	64	155		
12	63	417	758	550	2120	627	758	588	400	119	64	166		
13	62	415	1600	450	2380	768	620	511	340	114	64	127		
14	74	589	1530	360	1130	981	537	518	280	109	62	104		
15	69	1020	895	320	725	952	598	466	250	104	62	93		
16	65	1100	596	280	564	788	512	441	230	101	60	84		
17	82	1490	453	250	395	665	422	376	210	97	59	78		
18	76	1270	369	220	311	882	383	339	200	94	59	73		
19	70	1020	320	200	261	1280	364	389	190	91	58	70		
20	71	978	265	192	300	1270	372	617	400	89	58	69		
21	67	672	210	215	397	1500	337	477	800	87	57	67		
22	386	503	180	562	324	1040	318	496	501	82	56	109		
23	216	520	145	1640	336	748	323	957	401	81	56	118		
24	156	1400	130	3720	455	565	287	668	316	81	56	86		
25	130	949	120	3180	393	675	265	618	267	80	55	76		
26	116	751	120	1510	311	1240	243	865	272	80	55	71		
27	106	1100	130	846	257	746	223	671	280	78	54	67		
28	100	923	140	607	260	656	213	513	235	77	54	63		
29	94	653	250	464	259	548	240	460	308	77	54	60		
30	120	487	850	381	---	441	282	419	293	75	53	59		
31	194	---	850	322	---	367	---	372	---	73	54	---		
TOTAL	3098	24317	15892	26519	13569	20750	11995	17516	12024	3667	1904	3382		
MEAN	99.9	811	513	855	468	669	400	565	401	118	61.4	113		
MAX	386	1690	1600	3720	2380	1500	758	1080	800	250	74	453		
MIN	62	173	120	192	181	267	213	339	190	73	53	54		
CFSM	2.09	16.9	10.7	17.8	9.77	14.0	8.35	11.8	8.37	2.46	1.28	2.36		
IN.	2.41	18.89	12.34	20.60	10.54	16.11	9.32	13.60	9.34	2.85	1.48	2.63		
AC-FT	6140	48230	31520	52600	26910	41160	23790	34740	23850	7270	3780	6710		
CAL YR 1983	TOTAL	158251	MEAN	434	MAX	4600	MIN	62	CFSM	9.06	IN.	122.90	AC-FT	313900
WTR YR 1984	TOTAL	154633	MEAN	422	MAX	3720	MIN	53	CFSM	8.81	IN.	120.09	AC-FT	306700

SANDY RIVER BASIN

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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 <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 microsiemens July 19, 1979; minimum recorded, 9 microsiemens 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, 28 microsiemens many days in October, August; minimum, 13 microsiemens Jan. 24, Feb. 12.

WATER TEMPERATURES: Maximum, 16.0°C July 16, 17; minimum, 0.0°C Dec. 20, 21.

SEDIMENT CONCENTRATIONS: Maximum daily, 21 mg/l Jan. 24; minimum, 0 mg/l on many days throughout the year.

SEDIMENT DISCHARGE: Maximum daily, 219 tons Jan. 24; minimum, .14 tons Aug. 30.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

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

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.5	6.5	9.5	8.5	3.0	2.5	---	---	4.0	3.5	4.5	4.0
2	8.0	7.5	9.0	8.0	3.5	2.5	---	---	4.0	3.0	4.5	4.0
3	9.0	7.5	9.5	8.5	3.5	3.0	---	---	5.0	3.5	4.5	3.0
4	9.5	8.5	9.0	7.5	3.5	2.5	---	---	4.5	4.0	4.5	3.5
5	8.5	7.5	7.5	6.5	2.5	1.5	---	---	4.0	3.0	5.0	3.5
6	8.5	8.0	8.0	7.0	3.0	1.5	---	---	5.0	4.0	5.5	4.0
7	8.0	6.5	7.0	6.5	3.5	3.0	---	---	4.5	4.0	6.0	4.0
8	8.0	6.5	6.5	5.5	4.0	3.5	---	---	5.5	4.0	6.0	5.0
9	8.5	7.5	7.0	6.0	4.5	4.0	---	---	5.0	4.0	6.5	5.5
10	8.0	7.5	7.5	6.5	4.5	4.0	---	---	4.5	3.5	6.0	5.0
11	8.0	7.5	7.5	7.0	4.5	4.0	---	---	4.0	3.5	5.0	4.5
12	8.5	7.5	7.0	6.5	4.5	4.0	---	---	4.5	3.5	5.0	4.5
13	8.5	8.0	6.5	6.0	5.0	4.5	---	---	4.0	3.0	5.0	4.0
14	8.0	7.5	7.0	6.0	5.0	4.5	---	---	4.0	3.5	5.0	4.5
15	7.5	6.5	7.5	7.0	4.5	4.0	---	---	4.5	3.5	5.5	4.5
16	7.0	6.0	7.5	7.0	4.0	3.0	---	---	4.0	3.5	5.5	5.0
17	7.5	7.0	7.0	6.0	3.0	2.0	---	---	4.0	3.0	5.0	4.0
18	7.5	6.0	6.5	6.0	3.0	2.0	1.0	.5	4.5	3.5	5.0	4.0
19	7.5	6.5	6.5	5.5	3.0	2.0	1.5	1.0	4.5	3.5	5.5	4.5
20	7.5	7.5	6.0	5.0	2.0	.0	1.0	.5	5.0	4.5	6.5	5.0
21	8.5	7.0	5.5	5.0	.0	.0	2.0	1.0	4.5	3.0	5.0	4.5
22	9.0	8.0	5.0	4.5	---	---	2.5	2.0	3.5	3.0	6.0	4.5
23	8.5	7.0	5.5	4.5	---	---	3.5	2.5	4.0	2.5	5.5	5.0
24	7.0	6.0	6.0	5.0	---	---	4.5	3.5	4.0	3.5	5.0	4.0
25	7.5	6.5	5.0	4.5	---	---	4.5	3.5	4.0	3.0	4.5	4.0
26	8.0	7.0	5.5	4.5	---	---	4.5	4.0	4.0	3.0	5.0	4.0
27	8.0	7.5	6.0	5.0	---	---	5.0	4.0	4.5	3.5	5.5	4.5
28	8.0	7.0	6.0	4.5	---	---	5.0	3.5	4.5	4.0	5.5	4.0
29	9.0	7.5	4.5	3.5	---	---	4.5	4.0	4.5	3.5	5.5	4.0
30	9.5	8.5	3.5	2.5	---	---	4.5	4.0	---	---	6.0	3.5
31	9.5	9.0	---	---	---	---	4.0	3.5	---	---	6.0	4.5
MONTH	9.5	6.0	9.5	2.5	---	.0	---	---	5.5	2.5	6.5	3.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.5	5.0	6.0	5.0	9.0	6.0	13.0	9.0	14.0	12.5	12.0	11.0
2	6.0	5.0	6.0	4.5	8.0	7.0	13.5	10.5	14.0	12.5	12.0	10.0
3	5.5	4.5	5.5	4.0	8.0	7.0	13.5	10.0	13.5	12.0	12.0	11.0
4	6.0	5.0	5.0	4.0	8.0	7.5	14.0	10.5	13.5	11.5	12.0	11.0
5	5.5	4.5	5.0	4.0	7.5	7.0	13.0	11.0	13.5	11.5	12.0	10.5
6	5.0	4.0	6.0	4.0	8.0	6.5	13.0	10.0	13.0	11.0	10.5	10.0
7	5.0	3.5	8.0	4.5	---	7.0	13.0	9.5	14.0	11.0	11.5	10.5
8	5.0	3.5	7.0	6.0	---	---	13.0	10.0	15.0	12.5	12.5	11.5
9	4.5	3.5	6.5	5.5	---	---	14.0	10.5	15.5	13.5	12.0	11.0
10	4.0	3.0	6.5	5.5	---	---	13.5	10.0	15.0	13.5	11.0	10.0
11	5.0	3.5	8.0	6.0	---	---	12.0	10.5	14.5	13.0	10.5	10.0
12	4.5	4.0	8.5	6.5	---	---	13.0	10.0	14.0	12.5	11.0	10.0
13	5.5	4.0	9.0	7.0	---	---	14.0	11.0	13.0	11.5	10.5	9.0
14	8.0	4.5	7.5	6.0	---	---	14.0	11.0	13.0	11.0	11.0	9.5
15	6.5	5.5	6.5	5.5	---	---	15.0	11.5	13.0	11.0	---	---
16	6.0	5.0	7.5	5.0	---	---	16.0	13.0	13.5	11.5	---	---
17	6.5	4.5	9.0	6.0	---	---	16.0	13.5	14.0	12.5	---	---
18	6.5	5.0	9.0	6.5	---	---	15.0	13.0	14.0	12.5	---	---
19	6.0	5.0	8.5	7.5	---	---	14.0	11.5	13.0	11.5	---	---
20	6.0	4.5	7.5	6.0	---	---	13.5	11.0	13.0	11.5	---	---
21	6.0	5.0	7.5	5.5	---	---	13.5	11.0	13.0	11.5	---	---
22	7.0	5.5	7.0	5.5	---	---	14.0	11.0	13.0	12.0	---	---
23	6.5	5.0	7.0	6.0	---	---	13.0	11.5	13.0	12.5	---	---
24	5.0	4.0	7.0	5.5	---	---	15.0	11.5	12.5	11.5	---	---
25	4.5	3.0	7.0	5.5	14.0	---	14.5	12.5	13.0	11.0	---	---
26	5.5	4.0	7.5	6.5	12.0	10.5	14.0	11.5	13.0	11.5	---	---
27	6.5	4.0	9.5	5.5	13.5	10.5	14.0	11.5	13.0	11.5	---	---
28	5.5	4.5	11.5	7.0	14.0	11.5	13.5	12.0	12.0	11.0	---	---
29	5.5	4.5	12.0	8.0	12.5	9.5	14.5	12.0	12.0	10.5	---	---
30	5.5	5.0	10.0	7.0	12.0	8.5	15.0	12.0	12.0	11.5	---	---
31	---	---	8.5	6.0	---	---	14.5	13.5	12.0	11.0	---	---
MONTH	8.0	3.0	12.0	4.0	---	---	16.0	9.0	15.5	10.5	---	---

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	.19	2	.93	1	1.0		3.8		.75		3.6
2	1	.19	3	1.8		.89		1.5		.66		4.6
3	1	.20	5	14	1	.77		72		.60		2.4
4	0	.23	2	6.7	1	.69		15		.57		.92
5	0	.20	1	2.1	1	.72		7.3		.54		.76
6	---	.19	2	16	1	.77		3.8		.53		.73
7	---	.19	1	2.5	---	.88		1.6		.51		.72
8	---	.18	3	4.9	---	3.7		1.4		.49		.74
9	1	.18	1	1.3	---	5.2		1.2		.50		.82
10	1	.18	1	1.3	---	18		1.5		.52		1.1
11	1	.17	1	1.3	---	5.1		1.9		1.5		1.1
12	1	.17	1	1.1	---	4.1		1.5	47			1.7
13	1	.17	1	1.1	---	21		1.2	34			2.1
14	3	.60	1	1.6	---	17		.97	9.2			7.9
15	---	.37	1	2.8	---	4.8		.86	3.9			7.7
16	---	.35	1	3.0	---	1.6		.76	3.0			4.3
17	2	.44	2	8.0	---	1.2		.68	1.1			3.6
18	1	.21	1	3.4	---	1.0		.59	.84			7.1
19	0	.19	1	2.8	---	.86		.54	.70			14
20	2	.38	1	2.6	---	.72		.52	1.6			6.9
21	2	.36	1	1.8	---	.57		.58	1.1			12
22	2	2.1	2	2.7	---	.49		4.6	.87			5.6
23	2	1.2	3	4.2	---	.39		29	.91			4.0
24	1	.42	3	13	---	.35		219	1.2			1.5
25	1	.35	2	5.1	---	.32		142	1.1			3.6
26	2	.63	2	4.1	---	.32		12	.84			6.7
27	2	.57	2	5.9	---	.35		4.6	.69			2.0
28	2	.54	1	2.5	---	.38		3.3	.70			1.8
29	3	.76	1	1.8	---	1.4		2.5	1.4			1.5
30	1	.32	1	1.3	---	4.6		1.0				1.2
31	4	2.1	---	---	---	4.6		.87				.99
TOTAL	---	14.33	---	121.63	---	103.77		538.07	117.32			113.68

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		.87		1.4		.87		.68		.20		.22
2		.80		8.7		.77		.60		.20		.16
3		.74		5.5		.70		.55		.19		.15
4		.71		1.8		3.9		.50		.19		.15
5		.71		1.6		3.2		.47		.19		.22
6		.71		1.4		3.3		.43		.19		.80
7		3.0		1.2		3.8		.41		.18		4.9
8		1.9		1.2		3.8		.38		.18		2.5
9		1.5		1.1		4.3		.36		.18		1.1
10		1.8		1.2		3.2		.35		.17		.38
11		1.4		1.7		1.4		.33		.17		.42
12		4.1		1.6		1.1		.32		.17		.45
13		1.7		1.4		.92		.31		.17		.34
14		1.4		1.4		.76		.29		.17		.28
15		1.6		1.3		.68		.28		.17		.25
16		1.4		1.2		.62		.27		.16		.23
17		1.1		1.0		.57		.26		.16		.21
18		1.0		.92		.54		.25		.16		.20
19		.98		1.1		.51		.25		.16		.19
20		1.0		1.7		4.3		.24		.16		.19
21		.91		1.3		8.6		.23		.15		.18
22		.86		1.3		4.1		.22		.15		.29
23		.87		5.2		2.2		.22		.15		.32
24		.77		1.8		.85		.22		.15		.23
25		.72		1.7		.72		.22		.15		.21
26		.66		4.7		1.5		.22		.15		.19
27		.60		1.8		.76		.21		.15		.18
28		.58		1.4		.63		.21		.15		.17
29		.65		1.2		2.5		.21		.15		.16
30		.76		1.1		1.6		.20		.14		.16
31				1.0				.20		.15		
TOTAL		35.80		60.92		62.70		9.89		5.16		15.43

NOTE.--No sediment concentration data collected December 7 through September 30, following destruction of sampling equipment. Sediment loads for this period were estimated from a sediment load and discharge relation.

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

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1976 TO SEPTEMBER 1978

	COMPOSITE (2 SITES)		SITE 1		SITE 2		SITE 3	
DATE	77/07/15		78/07/19		78/07/19		78/07/19	
HABITAT (riffles; cobbles, rocks, bedrock)	2.70		2.49		2.93		2.56	
SPECIES DIVERSITY (BRILLOUIN INDEX)	.54		.50		.54		.62	
EQUITABILITY	380.		2856.		1421.		223.	
TOTAL COUNT (NO./SQ.FOOT)								
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
NEMATODA	--	---	--	---	3	0.2	1	0.5
PLATYHELMINTHES	--	---	--	---	--	---	--	---
-TURRELLARIA	--	---	6	0.2	--	---	3	1.3
ANNELIDA	--	---	--	---	--	---	--	---
-OLIGOCHAETA	1	0.3	364	13.5	225	16.3	74	33.0
ARTHROPODA	--	---	--	---	--	---	--	---
-OSTRACODA	--	---	--	---	--	---	3	1.3
-PODOCOPA	1	0.3	--	---	5	0.4	--	---
-COPEPODA	--	---	8	0.3	--	---	--	---
-HARPACTACOIDA	--	---	1	0.0	--	---	--	---
-INSECTA	--	---	--	---	--	---	--	---
-DIPTERA	--	---	1	0.0	--	---	--	---
---CERATOPOGONIDAE (ADULTS)	--	---	--	---	1	0.1	--	---
---TIPULIDAE	--	---	--	---	--	---	--	---
----ANTOCHA	2	0.5	3	0.1	11	0.8	--	---
----HEXATOMA	--	---	--	---	1	0.1	--	---
---PSYCHODIDAE	--	---	--	---	1	0.1	--	---
---SIMULIIDAE	3	0.8	171	6.0	5	0.4	2	0.9
---STRATIOMYIIDAE	--	---	--	---	1	0.1	--	---
---EMPIDIDAE	--	---	2	0.1	6	0.4	--	---
---CHIRONOMIDAE (LARVAE)	159	41.7	269	10.0	523	37.7	62	27.6
---CHIRONOMIDAE (PUPAE)	8	2.1	19	0.7	34	2.5	2	0.9
---CHIRONOMIDAE (ADULTS)	--	---	8	0.3	--	---	--	---
---TRICHOPTERA	--	---	--	---	--	---	--	---
---HYDROPSYCHIDAE	--	---	--	---	--	---	--	---
---HYDROPSYCHE	3	0.8	2	0.1	--	---	--	---
---CHEUMATOPSYCHE	--	---	10	0.4	--	---	--	---
---PSYCHOMYIIDAE	--	---	3	0.1	--	---	--	---
---RYACOPHILIDAE	--	---	--	---	--	---	--	---
---RHYACOPHILA	1	0.3	--	---	7	0.5	1	0.5
---RHYACOPHILA GRANDIS	--	---	2	0.1	--	---	--	---
---LEPTOCERIDAE	--	---	--	---	17	1.2	--	---
---BRACHYCENTRIDAE	--	---	--	---	--	---	--	---
---BRACHYCENTRUS	1	0.3	--	---	--	---	--	---
---MICRASEMA	--	---	--	---	1	0.1	--	---
---LIMNAPHILIDAE	1	0.3	1	0.0	--	---	--	---
---GLOSSOSOMATIDAE	--	---	--	---	--	---	--	---
---GLOSSASOMA	1	0.3	--	---	--	---	--	---
---PLECOPTERA	--	---	--	---	--	---	--	---
---NEMOURIDAE	--	---	--	---	--	---	--	---
---NEMOURA	5	1.3	27	1.0	24	1.7	1	0.5
---PERLIDAE	--	---	--	---	--	---	--	---
---ACRONEURIA	1	0.3	1	0.0	5	0.4	--	---
---PERLODIDAE	--	---	--	---	--	---	--	---
---ISOPERLA	--	---	--	---	9	0.6	2	0.9
---ARCYNOPTERYX	--	---	13	0.5	--	---	--	---
---ISOGENUS	9	2.3	--	---	--	---	--	---
---CHLOROPERLIDAE	--	---	--	---	--	---	--	---
---HASTAPERLA	14	3.6	12	0.4	25	1.8	12	5.4
---COLEOPTERA	--	---	--	---	--	---	--	---
---ELMIDAE (ADULTS)	1	0.3	1	0.0	3	0.2	1	0.5
---ELMIDAE (LARVAE)	5	1.3	13	0.5	8	0.6	5	2.2
---DYTISCIDAE (ADULTS)	6	1.6	--	---	12	0.9	--	---
---EPHEMEROPTERA	--	---	--	---	--	---	--	---
---TRICORYTHIDAE	1	0.3	--	---	--	---	--	---
---EPHEMERELLIDAE	--	---	--	---	--	---	--	---
---EPHEMERELLA	--	---	1	0.0	--	---	--	---
---DRUNELLA	--	---	2	0.1	2	0.2	--	---
---SERATELLA	2	0.5	14	0.5	8	0.6	--	---
---TIMPANOGA	1	0.3	--	---	1	0.1	--	---
---ATENELLA	--	---	--	---	1	0.1	--	---
---LEPTOPHLEBIIDAE	--	---	--	---	--	---	--	---
---PARALEPTOPHLEBIA	18	4.7	13	0.5	7	0.5	6	2.7
---BAETIDAE	--	---	--	---	--	---	--	---
---BAETIS	95	25.0	1427	53.6	173	12.5	19	8.5
---HEPTAGENIIDAE	--	---	--	---	--	---	--	---
---EPEORUS IRON	--	---	14	0.5	--	---	--	---
---CINYGULA	9	2.4	--	---	25	1.8	--	---
---RHITHROGENA	16	4.2	7	0.3	--	---	--	---
---THYSANOPTERA	--	---	--	---	--	---	--	---
---THRIPIDAE	--	---	--	---	1	0.1	--	---
---ARACHNIDA	--	---	--	---	--	---	--	---
---ACARINA	16	4.2	272	10.1	232	16.8	29	12.9

SANDY RIVER BASIN

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

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1978

DATE	78/07/13		78/09/05	
SPECIES DIVERSITY (BRILLOUIN INDEX)	3.13		2.42	
EQUITABILITY	.74		.63	
TOTAL COUNT (CELLS/SQ. INCH)*1000	2498.		5897.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	58		54	
	COUNT	PCT	COUNT	PCT
CHLOROPHYTA GREEN ALGAE	23	0.9	--	---
-CHLOROPHYCEAE				
--VOLVOCALES				
---CHLAMYDOMONADACEAE				
----CHLAMYDOMONAS-LIKE	23	0.9	36	0.6
---CHLOROCOCCALES				
---CHARACIACEAE				
----CHARACIUM AMBIGUUM	11	0.5	--	---
CHRYSTOPHYTA YELLOW-BROWN ALGAE				
-BACILLARIOPHYCEAE DIATOMS				
--PENNALES PENNATE DIATOMS	34	1.4	71	1.2
---FRAGILARIACEAE				
----DIATOMA HIEMALE MESODON	136	5.5	--	---
----FRAGILARIA VAUCHERIAE	114	4.5	355	6.0
----HANNEA ARCUS	170	6.8	--	---
----SYNEDRA RUMPENS	34	1.4	71	1.2
---ACHNANTHACEAE				
----ACHNANTHES LANCEOLATA	68	2.7	284	4.8
----ACHNANTHES LINEARIS	784	31.2	1385	23.5
----ACHNANTHES MINUTISSIMA	602	24.1	2663	45.7
----COCCONEIS PLANCENTULA ENGLYPTA	34	1.4	604	10.2
---NAVICULACEAE	--	---	36	0.6
---GOMPHONEMACEAE				
----GOMPHONEMA SPP.	193	7.7	--	---
----GOMPHONEMA ANGUSTATUM	68	2.7	36	0.6
----GOMPHONEMA PARVULUM	34	1.4	--	---
----GOMPHONEMA TENELLUM	34	1.4	--	---
---CYMBELLACEAE				
----CYMBELLA AFFINIS	--	---	36	0.6
----CYMBELLA MINUTA	80	3.2	36	0.2
---EPITHEMIACEAE				
----EPITHEMIA TURGIDA	--	---	71	1.2
---NITZSCHACEAE				
----NITZSCHIA FRUSTULUM	11	0.5	--	---
CYANOPHYTA BLUE-GREEN ALGAE				
-MYXOPHYCEAE				
---CHROOCOCCALES				
----CHROOCOCCACEAE				
----ANACYSTIS SPP.	45	1.8	213	3.6

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 mi².

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.--9 years, 35.7 ft³/s, 88.79 in/yr, 25,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft³/s Dec. 2, 1977, gage height, 5.64 ft; minimum, 1.9 ft³/s Aug. 17-23, 1977, Sept. 16-18, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 24	1800	*409	*4.39	No other peak greater than base discharge.			
Minimum, 2.9 ft ³ /s Aug. 29-31, Sept. 4, 5.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	4.4	13	33	35	27	45	34	49	23	30	5.3	5.1		
2	4.5	16	28	38	24	52	31	102	21	27	5.1	3.5		
3	4.4	71	25	255	21	46	29	95	19	23	4.9	3.1		
4	5.6	90	22	185	20	37	27	64	41	21	4.9	3.0		
5	4.8	53	23	89	18	31	29	51	49	19	4.7	7.7		
6	4.4	140	28	60	18	29	28	46	48	18	4.7	12		
7	4.2	70	41	54	17	27	64	42	62	16	4.5	38		
8	4.1	44	88	47	16	27	76	40	60	15	4.5	25		
9	4.0	35	75	36	16	28	62	36	67	14	4.4	18		
10	3.9	31	173	54	16	31	71	34	53	13	4.2	13		
11	3.8	30	101	77	22	30	58	52	40	13	4.2	14		
12	3.7	27	70	52	170	49	71	45	32	12	4.0	13		
13	3.7	27	133	38	194	66	64	40	27	11	4.0	10		
14	4.7	41	162	30	96	86	59	40	24	10	3.9	8.2		
15	4.1	78	88	25	66	89	59	36	21	9.7	3.9	7.1		
16	3.8	90	55	21	56	74	48	37	19	9.2	3.7	6.4		
17	5.6	135	39	19	42	60	38	32	18	8.7	3.7	5.8		
18	4.7	113	31	17	33	78	35	28	17	8.2	3.7	5.3		
19	4.2	82	27	16	29	113	32	35	15	7.9	3.6	5.1		
20	4.4	72	24	15	34	115	31	55	26	7.5	3.6	5.1		
21	4.1	50	21	17	41	128	29	40	94	7.2	3.4	4.9		
22	28	38	18	43	34	93	27	41	63	6.9	3.4	9.0		
23	15	41	16	155	35	69	28	79	39	6.7	3.3	8.1		
24	11	126	14	372	50	55	25	54	30	6.5	3.3	5.8		
25	8.8	79	13	283	43	64	22	51	25	6.3	3.1	5.1		
26	7.6	63	12	142	35	114	20	64	25	6.2	3.1	4.7		
27	6.9	110	12	80	30	74	19	53	26	5.9	3.0	4.4		
28	6.4	91	13	58	29	64	19	42	23	5.8	3.0	4.1		
29	5.9	62	18	45	29	56	20	34	38	5.7	3.0	3.9		
30	8.0	43	55	36	---	47	26	31	36	5.5	2.9	3.9		
31	15	---	58	31	---	39	---	27	---	5.4	3.4	---		
TOTAL	203.7	1961	1516	2425	1261	1916	1181	1475	1081	361.3	120.4	262.3		
MEAN	6.57	65.4	48.9	78.2	43.5	61.8	39.4	47.6	36.0	11.7	3.88	8.74		
MAX	28	140	173	372	194	128	76	102	94	30	5.3	38		
MIN	3.7	13	12	15	16	27	19	27	15	5.4	2.9	3.0		
CFSM	1.20	12.0	8.96	14.3	7.97	11.3	7.22	8.72	6.59	2.14	.71	1.60		
IN.	1.39	13.36	10.33	16.52	8.59	13.05	8.05	10.05	7.37	2.46	.82	1.79		
AC-FT	404	3890	3010	4810	2500	3800	2340	2930	2140	717	239	520		
CAL YR 1983	TOTAL	13605.3	MEAN	37.3	MAX	453	MIN	3.7	CFSM	6.83	IN.	92.70	AC-FT	26990
WTR YR 1984	TOTAL	13763.7	MEAN	37.6	MAX	372	MIN	2.9	CFSM	6.89	IN.	93.77	AC-FT	27300

SANDY RIVER BASIN

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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 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 microsiemens Aug. 5, 12, 13, 17-19, 27, Sept. 10, 11, 16-18, 1980; minimum, 9 microsiemens 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, 1983.

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, 28 microsiemens July 31, Aug. 5, 7, 8, 20, Sept. 5; minimum, 12 microsiemens Jan. 24, 25, Feb. 12.

WATER TEMPERATURES: Maximum, 13.0°C Aug. 9; minimum, 0.0°C Dec. 21-25, 29, 30.

SEDIMENT CONCENTRATIONS: Maximum daily, 5 mg/l June 21; minimum, 0 mg/l many days throughout the year.

SEDIMENT DISCHARGE: Maximum daily, 3.0 tons Jan. 24; minimum, 0 tons on many days throughout the year.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

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

SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.5	6.5	8.5	8.0	4.0	4.0	3.5	3.0	4.5	3.5	4.5	4.0
2	7.5	7.0	8.5	8.0	4.0	4.0	4.0	3.5	4.0	3.5	4.0	3.5
3	8.5	7.5	9.0	8.0	4.5	4.0	4.0	2.5	4.5	3.5	4.5	3.5
4	8.5	8.0	8.5	7.5	4.0	3.5	4.5	4.0	4.5	4.0	4.5	3.5
5	8.0	7.5	7.5	7.0	4.0	3.5	5.0	4.0	4.5	3.5	5.0	3.5
6	8.0	7.0	8.0	7.0	4.5	3.0	5.0	4.0	5.0	4.5	5.0	4.0
7	7.0	6.5	7.0	6.5	4.5	4.5	5.0	4.0	5.0	4.0	5.0	4.5
8	8.0	7.0	6.5	6.0	5.0	4.5	4.5	4.0	5.5	4.5	5.5	4.5
9	8.0	7.5	7.0	6.5	5.0	4.5	5.0	4.0	5.0	4.0	5.5	5.0
10	8.0	7.5	7.5	6.5	5.0	4.5	4.5	4.0	4.5	3.5	5.5	5.0
11	8.0	7.5	7.5	6.5	5.0	4.5	4.5	3.5	4.5	3.5	5.0	4.5
12	8.5	7.5	7.0	6.5	5.0	4.5	4.0	3.5	4.5	3.5	5.0	4.0
13	8.0	8.0	6.5	6.0	5.5	4.5	4.0	3.0	4.0	3.0	4.5	4.0
14	8.0	7.0	6.5	6.0	5.0	4.5	3.0	2.0	4.5	3.5	4.5	4.5
15	7.0	6.5	7.5	6.5	5.0	4.5	2.0	1.5	4.5	3.5	---	---
16	7.0	6.0	7.0	7.0	4.5	3.5	2.5	1.5	4.5	3.5	---	---
17	7.0	6.5	7.0	6.5	4.0	3.0	2.0	1.5	4.5	3.5	---	---
18	7.0	6.0	6.5	6.0	4.0	3.0	2.0	1.0	4.5	3.5	---	---
19	7.0	6.5	6.5	6.0	4.0	2.5	2.5	1.5	5.0	3.5	---	---
20	7.5	7.0	6.0	5.5	3.0	.5	2.5	1.5	5.0	4.0	---	---
21	8.0	7.0	6.0	5.5	.5	.0	3.0	2.0	4.5	3.0	---	---
22	8.5	8.0	5.5	5.0	.0	.0	3.0	2.5	4.0	3.0	---	---
23	8.0	6.5	6.0	5.0	.5	.0	3.5	3.0	4.0	3.0	---	---
24	7.0	6.0	6.0	5.5	.0	.0	4.0	3.0	4.0	3.5	---	---
25	7.0	6.5	5.5	5.0	.5	.0	4.5	3.5	4.0	3.5	---	---
26	7.5	7.0	6.0	5.5	2.0	.5	4.5	4.0	4.5	3.5	---	---
27	7.5	7.0	6.0	5.5	2.5	1.5	5.0	4.0	5.0	3.5	---	---
28	7.5	7.0	6.0	5.0	2.0	1.5	5.0	4.0	4.5	4.0	---	---
29	8.5	7.5	5.0	4.5	2.0	.0	5.0	4.0	4.5	3.5	---	---
30	8.5	8.0	4.5	4.0	2.5	.0	4.5	4.0	---	---	---	---
31	8.5	8.5	---	---	3.5	2.0	4.5	3.5	---	---	---	---
MONTH	8.5	6.0	9.0	4.0	5.5	.0	5.0	1.0	5.5	3.0	---	---
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	5.5	4.5	8.0	5.5	10.0	8.0	12.0	11.0	10.5	10.0
2	---	---	5.0	4.5	7.0	6.5	10.5	8.5	12.0	11.0	10.5	9.0
3	---	---	5.0	4.0	7.5	6.5	11.0	8.5	11.5	10.5	11.0	10.0
4	5.5	---	5.0	4.5	7.0	6.5	11.0	9.0	12.0	10.0	11.0	10.0
5	5.0	4.5	5.0	4.0	7.0	6.5	10.0	9.0	11.0	10.5	11.0	9.5
6	5.0	4.0	5.0	4.0	7.0	6.0	10.5	8.5	11.5	10.0	10.5	9.5
7	4.5	3.5	6.5	4.5	6.5	6.0	10.5	9.0	12.0	10.0	10.5	9.5
8	4.5	4.0	6.0	5.5	6.5	6.0	10.5	8.5	13.0	11.0	10.5	10.0
9	4.5	4.0	6.0	5.5	6.5	6.0	11.0	9.0	13.0	11.5	10.5	9.5
10	4.0	3.5	6.0	5.0	6.5	6.5	11.0	8.5	13.0	11.5	10.0	9.0
11	5.0	4.0	6.5	5.5	7.5	6.5	10.0	9.0	12.5	11.0	9.5	9.0
12	4.5	4.5	7.5	6.0	8.5	6.5	10.5	8.5	12.0	11.0	9.5	8.5
13	5.0	4.0	7.5	6.5	9.0	7.0	11.0	9.0	11.5	10.5	9.5	8.5
14	6.0	4.5	6.5	5.5	10.0	7.5	11.5	9.0	11.5	10.0	10.0	8.5
15	5.5	5.0	6.0	5.0	8.5	8.0	12.5	10.0	11.5	10.0	10.0	9.0
16	5.5	5.0	6.0	5.0	8.0	7.0	13.0	11.0	12.0	10.5	10.0	9.0
17	5.5	4.0	7.5	5.5	9.0	7.0	13.0	11.0	12.0	11.0	10.5	9.5
18	5.5	5.0	7.5	6.0	9.5	7.0	12.5	11.0	12.0	11.0	10.5	9.5
19	5.5	4.5	7.0	6.5	10.0	7.5	12.0	10.0	11.5	10.0	11.0	9.5
20	5.0	4.5	6.5	5.5	8.5	7.5	11.5	9.5	11.5	10.0	10.5	9.5
21	5.5	4.5	6.5	5.5	7.5	7.5	11.5	9.5	12.0	10.5	10.0	9.0
22	6.0	5.0	6.0	5.5	---	---	11.5	9.5	12.0	10.5	9.0	7.5
23	5.5	4.5	6.0	5.5	---	---	11.5	10.0	11.5	11.0	8.0	7.5
24	4.5	4.0	6.0	5.5	---	---	12.5	10.5	11.5	10.5	7.5	7.0
25	4.5	3.5	6.5	5.5	---	---	12.0	11.0	11.5	10.0	8.0	7.0
26	5.0	4.0	6.5	6.0	---	---	12.0	10.0	12.0	10.5	9.0	8.0
27	6.0	4.0	7.5	5.5	---	---	12.0	10.0	11.5	11.0	8.5	8.0
28	5.0	4.5	9.0	6.5	10.5	9.0	11.5	10.5	11.0	10.0	8.0	7.5
29	5.0	4.5	9.5	7.5	9.5	8.0	12.0	10.0	11.0	9.5	8.5	7.5
30	5.0	4.5	8.5	6.5	9.5	7.5	12.5	10.5	11.5	10.0	8.5	8.0
31	---	---	7.5	6.0	---	---	12.0	11.5	11.0	10.5	---	---
MONTH	---	---	9.5	4.0	---	---	13.0	8.0	13.0	9.5	11.0	7.0

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)						
	LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)						
OCTOBER			NOVEMBER			DECEMBER			JANUARY			FEBRUARY			MARCH		
1	---	.01	1	.04	0	.09	---	.09	0	.07	1	.12					
2	---	.01	1	.04	1	.08	---	.10	0	.06	0	.14					
3	2	.02	3	.58	1	.07	---	2.8	1	.06	0	.12					
4	1	.02	2	.49	1	.06	2	1.0	1	.05	0	.10					
5	1	.01	2	.29	1	.06	1	.24	0	.05	0	.08					
6	1	.01	2	.76	1	.08	0	.16	1	.05	0	.08					
7	1	.01	2	.38	1	.11	0	.15	1	.05	0	.07					
8	1	.01	1	.12	2	.48	0	.13	0	.04	0	.07					
9	1	.01	1	.09	4	.81	0	.10	0	.04	0	.08					
10	1	.01	2	.17	3	1.4	0	.15	0	.04	0	.08					
11	1	.01	1	.08	0	.27	0	.21	0	.06	0	.08					
12	1	.00	2	.15	0	.19	0	.14	4	1.8	0	.13					
13	1	.00	1	.07	1	.36	0	.10	1	.52	0	.18					
14	1	.01	---	.22	1	.44	0	.08	0	.26	0	.23					
15	1	.01	---	.42	1	.24	0	.07	0	.18	0	.24					
16	1	.01	---	.49	0	.15	0	.06	1	.15	0	.20					
17	1	.02	---	.73	0	.11	0	.05	0	.11	0	.16					
18	1	.01	---	.61	0	.08	0	.05	0	.09	0	.21					
19	1	.01	1	.22	1	.07	0	.04	0	.08	1	.31					
20	0	.01	---	.19	1	.06	0	.04	0	.09	1	.31					
21	1	.01	1	.14	1	.06	0	.05	0	.11	1	.35					
22	1	.08	1	.10	---	.04	1	.12	0	.09	1	.25					
23	1	.04	1	.11	---	.03	4	1.7	0	.09	1	.19					
24	2	.06	2	.68	---	.02	3	3.0	0	.14	0	.15					
25	4	.10	1	.21	---	.02	2	1.5	0	.12	1	.17					
26	4	.08	1	.17	---	.02	1	.38	0	.09	1	.31					
27	2	.04	1	.30	---	.02	1	.22	0	.08	1	.20					
28	1	.02	1	.25	---	.02	0	.16	0	.08	1	.17					
29	2	.03	1	.17	---	.04	1	.12	0	.08	1	.15					
30	2	.04	1	.12	---	.18	0	.10	---	---	0	.13					
31	2	.08	---	---	---	.16	0	.08	---	---	0	.11					
TOTAL	---	0.79	---	8.39	---	5.82	---	13.19	---	4.73	---	5.17					

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)			
APRIL			MAY			JUNE			JULY			AUGUST		SEPTEMBER	
1	1	.09	1	.13	1	.06	1	.08	1	.01	1	.01			
2	1	.08	1	.28	---	.06	1	.07	1	.01	0	.00			
3	1	.08	1	.26	---	.05	1	.06	1	.01	0	.00			
4	1	.07	1	.17	1	.11	1	.06	1	.01	0	.00			
5	1	.08	0	.14	---	.13	1	.05	1	.01	1	.02			
6	1	.08	0	.12	---	.13	1	.05	1	.01	1	.03			
7	1	.17	0	.11	1	.17	1	.04	1	.01	2	.21			
8	1	.21	0	.11	---	.16	1	.04	1	.01	1	.07			
9	---	.17	0	.10	1	.18	1	.04	1	.01	1	.05			
10	1	.19	0	.09	0	.14	1	.04	1	.01	1	.04			
11	0	.16	---	.14	0	.11	1	.04	1	.01	1	.04			
12	1	.19	---	.12	0	.09	1	.03	2	.02	1	.04			
13	---	.17	---	.11	0	.07	1	.03	1	.01	1	.03			
14	---	.16	---	.11	0	.06	1	.03	1	.01	1	.02			
15	1	.16	---	.10	1	.06	1	.03	1	.01	1	.02			
16	1	.13	---	.10	1	.05	1	.02	1	.00	1	.02			
17	1	.10	---	.09	1	.05	1	.02	1	.00	1	.02			
18	0	.09	---	.08	1	.05	1	.02	1	.00	1	.01			
19	0	.09	---	.09	1	.04	2	.04	1	.00	1	.01			
20	1	.08	---	.15	1	.07	1	.02	1	.00	1	.01			
21	1	.08	---	.11	5	1.3	1	.02	1	.00	1	.01			
22	0	.07	2	.22	1	.17	1	.02	1	.00	1	.02			
23	0	.08	3	.64	1	.11	1	.02	1	.00	1	.02			
24	1	.07	1	.15	1	.08	1	.02	1	.00	1	.02			
25	1	.06	1	.14	1	.07	1	.02	1	.00	2	.03			
26	0	.05	1	.17	1	.07	1	.02	1	.00	2	.03			
27	0	.05	1	.14	1	.07	1	.02	1	.00	1	.01			
28	1	.05	1	.11	0	.06	1	.02	1	.00	1	.01			
29	1	.05	1	.09	0	.10	1	.02	1	.00	1	.01			
30	0	.07	1	.08	0	.10	1	.01	1	.00	1	.01			
31	---	---	1	.07	---	---	1	.01	1	.00	---	---			
TOTAL	---	3.18	---	4.52	---	3.97	---	1.01	---	0.16	---	0.82			

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1981

DATE	COMPOSITE (4 SITES)		SITE 1		SITE 2		SITE 3		SITE 1		SITE 2	
	77/07/07		78/07/18		78/07/18		78/07/18		79/07/24		79/07/24	
HABITAT (riffles; rocks, bedrock)												
SPECIES DIVERSITY (BRILLOUIN INDEX)	3.07		2.58		2.42		2.25		2.41		2.53	
EQUITABILITY	.59		.60		.54		.46		.52		.53	
TOTAL COUNT	1893.		90.		280.		450.		109.		258.	
(NO./SQ.FOOT)												
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
PLATYHELMINTHES												
-TURBELLARIA	11	0.6	--	---	2	0.9	2	0.4	--	---	2	0.8
ANNELIDA												
-OLIGOCHAETA	11	0.6	--	---	4	1.9	--	---	--	---	6	2.3
ARTHROPODA												
-OSTRACODA	105	5.6	--	---	8	3.7	34	7.6	9	8.3	63	24.4
-PODOCOPA	--	---	2	2.2	--	---	--	---	--	---	--	---
-COPEPODA	--	---	--	---	--	---	1	0.2	--	---	--	---
-HARPACTACOIDA	--	---	--	---	--	---	--	---	--	---	2	0.8
-INSECTA												
-DIPTERA												
---TIPULIDAE												
---ANTOCHA	14	0.7	--	---	--	---	--	---	1	0.9	2	0.8
---HEXATOMA	1	0.1	--	---	--	---	--	---	--	---	--	---
---DICRANOTA	3	0.2	--	---	--	---	--	---	--	---	2	0.8
---PSYCHODIDAE	--	---	--	---	--	---	--	---	--	---	1	0.4
---SIMULIIDAE	1	0.1	1	1.1	--	---	--	---	--	---	--	---
---STRATIOMYIIDAE	--	---	--	---	2	0.9	--	---	--	---	--	---
---EMPIDIDAE												
---CHELIFERA	5	0.3	--	---	--	---	--	---	--	---	--	---
---HEMERODROMIA	7	0.4	--	---	--	---	--	---	1	0.9	--	---
---CHIRONOMIDAE (LARVAE)	758	40.0	28	31.7	113	52.2	281	62.5	55	50.6	117	45.3
---CHIRONOMIDAE (PUPAE)	4	0.2	2	2.2	3	1.4	14	3.1	2	1.8	6	2.3
---CHIRONOMIDAE (ADULTS)	2	0.1	9	9.9	2	0.9	--	---	--	---	--	---
---DOLICHOPIDAE (ADULTS)	1	0.1	--	---	--	---	--	---	--	---	--	---
---TRICHOPTERA	--	---	1	1.1	3	1.4	--	---	--	---	--	---
---HYDROPSYCHIDAE	--	---	--	---	--	---	--	---	1	0.9	--	---
---LEPIDOSTOMATIDAE												
---LEPISTOMA	3	0.2	--	---	--	---	1	0.2	--	---	--	---
---RYACOPHILIDAE												
---RHYACOPHILA	50	2.6	2	2.2	1	0.5	--	---	--	---	3	1.2
---RHYACOPHILA GRANDIS	--	---	--	---	1	0.5	--	---	--	---	--	---
---PHILOPOTAMIDAE	1	0.1	--	---	--	---	--	---	--	---	--	---
---BRACHYCENTRIDAE												
---MICRASEMA	--	---	1	1.1	--	---	1	0.2	--	---	--	---
---LIMNNEPHILIDAE	10	0.5	--	---	--	---	2	0.4	--	---	--	---
---DICASMOECUS	--	---	--	---	--	---	--	---	1	0.9	--	---
---APATANIA	3	0.2	--	---	--	---	8	1.8	--	---	--	---
---ECCLISOMYIA	--	---	--	---	--	---	1	0.2	6	5.5	--	---
---ECCLISOCOSMOECUS	8	0.4	--	---	--	---	--	---	--	---	--	---
---NEOTHREMA	--	---	--	---	--	---	--	---	--	---	2	0.8
---NEOPHYLAX	6	0.3	--	---	--	---	--	---	5	4.6	11	4.3
---GLOSSOSOMATIDAE												
---GLOSSASOMA	1	0.1	2	2.2	--	---	--	---	--	---	--	---
---PLECOPTERA												
---NEMOURIDAE												
---NEMOURA	2	0.1	2	2.2	--	---	4	0.9	1	0.9	3	1.2
---PERLIDAE												
---ACRONEURIA	5	0.3	--	---	2	0.9	1	0.2	--	---	--	---
---PERLODIDAE	--	---	--	---	--	---	--	---	1	0.9	--	---
---ISOPERLA	--	---	1	1.1	--	---	4	0.9	--	---	2	0.8
---ARCYNOPTERYX	--	---	1	1.1	--	---	2	0.4	--	---	--	---
---ISOGENUS	21	1.1	--	---	2	0.9	--	---	--	---	--	---
---CHLOROPERLIDAE												
---HASTAPERLA	112	5.9	--	---	--	---	13	2.9	--	---	2	0.8
---CAPNIIDAE												
---PERLOMYIA	15	0.8	--	---	--	---	--	---	--	---	--	---
---HEMIPTERA	--	---	--	---	--	---	1	0.2	--	---	--	---
---COLEOPTERA												
---ELMIDAE (LARVAE)	6	0.3	--	---	--	---	--	---	--	---	1	0.4
---DYTISCIDAE (ADULTS)	--	---	--	---	--	---	3	0.7	--	---	--	---
---EPHEMEROPTERA												
---EPHEMERELLIDAE												
---EPHEMERELLA	--	---	--	---	--	---	--	---	2	1.8	--	---
---DRUNELLA	25	1.3	3	3.0	3	1.4	7	1.5	--	---	1	0.4
---SERATELLA	19	1.0	--	---	8	3.7	7	1.6	2	1.8	1	0.4
---LEPTOPHLEBIIDAE												
---PARALEPTOPHLEBIA	77	4.1	1	1.1	3	1.4	15	3.3	1	0.9	11	4.3
---BAETIDAE	--	---	--	---	25	11.6	--	---	--	---	--	---
---BAETIS	363	19.1	26	28.7	--	---	22	5.0	13	11.9	5	1.9
---HEPTAGENIIDAE												
---EPEORUS IRON	31	1.6	--	---	--	---	--	---	--	---	--	---
---CINYMULA	89	4.7	--	---	4	1.9	12	2.7	2	1.8	--	---
---RHITHROGENA	27	1.4	--	---	--	---	--	---	--	---	4	1.6
---ARACHNIDA												
---ACARINA	96	5.1	8	8.8	86	11.9	14	3.1	6	5.6	11	4.2

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1981--Continued

DATE	SITE 3		SITE 4		SITE 1		SITE 2		SITE 3		SITE 1	
	79/07/24		79/07/24		80/08/21		80/08/21		80/08/21		81/08/07	
HABITAT (riffles; rocks, bedrock)												
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.45		2.83		2.04		2.03		1.68		1.61	
EQUITABILITY	.51		.53		.44		.42		.38		.44	
TOTAL COUNT	599.		2767.		236.		746.		531.		334.	
(NO./SQ.FOOT)												
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
NEMATODA	--	---	1	0.0	--	---	--	---	--	---	--	---
PLATYHELMINTHES												
-TURBELLARIA	3	0.5	9	0.3	--	---	2	0.3	--	---	--	---
ANNELIDA												
-OLIGOCHAETA	19	3.1	44	1.6	1	0.4	--	---	--	---	--	---
ARTHROPODA												
-OSTRACODA	127	21.2	190	6.8	10	4.2	37	5.0	--	---	--	---
-COPEPODA	1	0.2	--	---	--	---	--	---	--	---	--	---
-HARPACTACOIDA	32	5.3	16	0.6	--	---	--	---	--	---	--	---
-INSECTA												
-DIPTERA	--	---	1	0.0	--	---	--	---	--	---	--	---
---CULICIDAE												
----CULICETA	--	---	--	---	--	---	--	---	1	0.2	--	---
---TIPULIDAE												
----ANTOCHA	1	0.2	25	0.9	--	---	--	---	2	0.4	--	---
----HEXATOMA	--	---	1	0.0	--	---	--	---	--	---	--	---
----DICRANOTA	--	---	--	---	1	0.4	2	0.3	--	---	--	---
---SIMULIIDAE	--	---	3	0.1	--	---	--	---	1	0.2	--	---
---EMPIDIDAE												
---CLINOCERA	--	---	--	---	1	0.4	1	0.1	--	---	--	---
---HEMERODROMIA	--	---	3	0.1	--	---	--	---	--	---	--	---
---CHIRONOMIDAE (LARVAE)	296	49.4	1177	41.1	150	63.6	454	60.9	225	42.1	204	61.1
---CHIRONOMIDAE (PUPAE)	4	0.7	20	0.7	7	3.0	2	0.3	--	---	--	---
---SCIARIDAE (ADULTS)	--	---	--	---	--	---	--	---	--	---	3	0.9
---PHORIDAE (ADULTS)	--	---	--	---	--	---	--	---	--	---	1	0.3
---TRICHOPTERA	--	---	39	1.4	--	---	--	---	--	---	--	---
---HYDROPSYCHIDAE	--	---	--	---	--	---	--	---	4	0.8	--	---
---LEPIDOSTOMATIDAE												
---LEPISTOMA	1	0.2	--	---	--	---	1	0.1	--	---	--	---
---RYACOPHILIDAE												
---RHYACOPHILA	3	0.5	28	1.0	4	1.7	3	0.4	4	0.8	1	0.3
---RHYACOPHILA GRANDIS	--	---	8	0.3	--	---	--	---	--	---	--	---
---HYDROPTILIDAE	--	---	--	---	--	---	--	---	1	0.2	--	---
---OCHROTRICHIA	--	---	10	0.4	--	---	--	---	4	0.8	--	---
---LEPTOCERIDAE	--	---	87	3.1	--	---	--	---	--	---	--	---
---BRACHYCENTRIDAE												
---MICRASEMA	--	---	17	0.6	--	---	--	---	8	1.5	55	16.5
---LIMNephilidae	--	---	1	0.0	--	---	--	---	12	2.3	--	---
---APATANIA	--	---	69	2.5	1	0.4	11	1.5	--	---	--	---
---ECCLISOMYIA	17	2.8	50	1.8	18	7.6	6	0.8	--	---	--	---
---NEOTHREMMIA	--	---	5	0.2	--	---	--	---	--	---	1	0.8
---NEOPHYLAX	1	0.2	--	---	--	---	--	---	--	---	--	---
---GLOSSOSOMATIDAE												
---GLOSSASOMA	--	---	9	0.3	--	---	--	---	--	---	--	---
---POLYCENTROPODIDAE	--	---	--	---	--	---	1	0.1	--	---	--	---
---PLECOPTERA												
---PELTOPTERIDAE												
---PELTOPTERLA	--	---	1	0.0	--	---	--	---	--	---	--	---
---NEMOURIDAE												
---NEMOURA	2	0.3	18	0.6	--	---	--	---	--	---	--	---
---PERLIDAE												
---HESOPERLA	--	---	13	0.5	--	---	--	---	--	---	--	---
---CALINEURA	--	---	--	---	3	1.3	6	0.8	--	---	--	---
---PERLODIDAE												
---ISOPERLA	3	0.5	5	0.8	--	---	--	---	--	---	--	---
---ARCYNOPTERYX	--	---	2	0.1	--	---	--	---	--	---	--	---
---CHLOROPTERIDAE	1	0.2	--	---	--	---	--	---	--	---	--	---
---ALLOPERLA	--	---	--	---	3	1.3	2	0.3	--	---	--	---
---PARAPERLA	--	---	2	0.1	--	---	--	---	--	---	--	---
---COLEOPTERA												
---ELMIDAE (LARVAE)	3	0.5	2	0.1	--	---	--	---	--	---	--	---
---STENELMIS	--	---	--	---	--	---	--	---	--	---	1	0.3
---CLEPTELMIS	--	---	--	---	--	---	1	0.1	--	---	--	---
---DYTISCIDAE (LARVAE)	4	0.7	4	0.1	--	---	--	---	--	---	--	---
---OREODYTES (LARVAE)	--	---	--	---	1	0.4	68	9.1	--	---	--	---
---DYTISCIDAE (ADULTS)	--	---	--	---	--	---	1	0.1	1	0.2	--	---
---EPHEMEROPTERA	5	0.8	--	---	--	---	--	---	--	---	--	---
---EPHEMERELLIDAE												
---EPHEMERELLA	--	---	--	---	--	---	--	---	2	0.4	--	---
---DRUNELLA	1	0.2	1	0.4	--	---	1	0.1	2	0.4	6	1.8
---DRUNELLA DODDSI	--	---	--	---	3	1.3	2	0.3	--	---	--	---
---SERATELLA	3	0.5	59	2.1	--	---	--	---	--	---	--	---
---LEPTOPHLEBIIDAE												
---PARALEPTOPHLEBIA	15	2.5	48	1.7	2	0.9	4	0.5	--	---	--	---
---BAETIDAE	--	---	682	25.5	--	---	--	---	--	---	--	---
---BAETIS	16	2.6	--	---	14	5.9	37	5.0	248	46.7	56	16.8
---SIPHONURIDAE												
---AMELETUS	--	---	--	---	2	0.9	3	0.4	--	---	--	---
---HEPTAGENIIDAE												
---EPEORUS IRON	--	---	--	---	--	---	--	---	13	2.4	--	---
---CINYGULA	4	0.7	6	0.2	13	5.5	1	0.1	--	---	--	---
---RHITHROGENA	--	---	3	0.1	--	---	--	---	1	0.2	2	0.6
---ARACHNIDA												
---ACARINA	37	6.2	108	3.9	2	0.9	98	13.1	2	0.4	4	1.2
MOLLUSCA												
---GASTROPODA	--	---	--	---	--	---	2	0.3	--	---	--	---

SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1981--Continued

DATE	SITE 2		SITE 3	
	81/08/07		81/08/07	
HABITAT (pools)	sand, bedrock		cobbles	
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.16		1.96	
EQUITABILITY	.49		.56	
TOTAL COUNT (NO./SQ.FOOT)	17.		48.	
	COUNT	PCT	COUNT	PCT
NEMATODA	--	---	1	2.1
PLATYHELMINTHES				
-TURBELLARIA	--	---	1	2.1
ARTHROPODA				
-INSECTA				
--DIPTERA				
---TIPULIDAE				
----DICRANOTA	1	5.9	--	---
---CHIRONOMIDAE (LARVAE)	2	11.8	14	29.2
--TRICHOPTERA				
---RYACOPHILIDAE				
----RHYACOPHILA	--	---	1	2.1
---EPHEMEROPTERA				
----EPHEMERELLIDAE				
----DRUNELLA	--	---	1	2.1
----DRUNELLA DODDSI	--	---	1	2.1
---BAETIDAE				
----BAETIS	11	64.7	19	39.4
---SIPHONURIDAE				
----AMELETUS	--	---	2	4.2
-ARACHNIDA				
--ACARINA	3	17.6	8	16.7

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984

DATE	78/07/11	78/09/12	--- SITE 1 ---		79/08/09	80/07/11	80/08/08	80/09/02
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.84	2.28	2.16	2.16	3.27	2.31		
EQUITABILITY	.73	.72	.62	.60	.85	.69		
TOTAL COUNT (CELLS/SQ. INCH)*1000	6249.	6478.	4328.	645.	870.	1473.		
PERIPHYTON SLIDE EXPOSURE (DAYS)	55	63	71	37	28	25		
(PCT=PERCENT)	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT
CHLOROPHYTA GREEN ALGAE	85 1.4	-- --	-- --	-- --	60 6.9	-- --	-- --	-- --
-CHLOROPHYCEAE								
--ULOTRICHIALES								
---ULOTRICHACEAE								
----ULOTRICH SPP.	-- --	-- --	-- --	84 13.0	-- --	-- --	-- --	-- --
CHRYSOPHYTA YELLOW-BROWN ALGAE								
-BACILLARIOPHYCEAE DIATOMS								
--PENNALES PENNATE DIATOMS	85 1.4	-- --	16 0.4	-- --	-- --	-- --	-- --	-- --
---FRAGILARIACEAE								
----ASTERIONELLA FORMOSA	-- --	-- --	-- --	5 0.8	-- --	-- --	-- --	-- --
----DIATOMA HIEMALE MESODON	937 15.0	-- --	31 0.7	364 56.3	180 20.7	119 8.1		
----FRAGILARIA VAUCHERIAE	-- --	38 0.6	47 1.1	59 9.2	138 15.9	90 6.1		
----HANNEA ARCUS	57 0.9	-- --	124 2.9	15 2.3	54 6.2	30 2.0		
----SYNEDRA RUMPENS	57 0.9	-- --	-- --	5 0.8	12 1.4	-- --		
---ACHNANTHACEAE								
----ACHNANTHES LANCEOLATA	2528 40.4	1970 30.4	1008 23.3	44 6.9	84 9.7	597 40.6		
----ACHNANTHES LINEARIS	369 5.9	303 4.7	31 0.7	-- --	-- --	10 0.7		
----ACHNANTHES MINUTISSIMA	369 5.9	1174 18.1	1954 45.0	34 5.3	162 18.6	438 29.7		
----COCCONEIS PLACENTULA	-- --	-- --	-- --	-- --	36 4.1	109 7.4		
----COCCONEIS PLACENTULA ENGLYPTA	455 7.3	644 9.9	419 9.7	-- --	-- --	-- --		
---NAVICULACEAE								
----NAVICULA SPP.	-- --	-- --	-- --	-- --	12 1.4	-- --		
----NAVICULA CRYPTOCEPHALA	-- --	-- --	16 0.4	-- --	-- --	10 0.7		
---GOMPHONEMACEAE								
----GOMPHONEMA SPP.	767 12.3	152 2.3	-- --	-- --	12 1.4	-- --		
----GOMPHONEMA ANGUSTATUM	170 2.7	2121 32.8	651 15.1	-- --	36 4.1	30 2.0		
----GOMPHONEMA PARVULUM	142 2.3	-- --	-- --	-- --	-- --	-- --		
----GOMPHONEMA SUBCLAVATUM	-- --	-- --	-- --	10 1.5	6 0.7	-- --		
---CYMBELLACEAE								
----CYMBELLA MINUTA	57 0.9	38 0.6	31 0.7	15 2.3	42 4.8	40 2.7		
---NITZSCHIA								
----NITZSCHIA DISSIPATA	57 0.9	-- --	-- --	5 0.8	36 4.1	-- --		
CYANOPHYTA BLUE-GREEN ALGAE	-- --	-- --	-- --	5 0.8	-- --	-- --		
-MYXOPHYCEAE								
--CHROOCOCCALES								
---CHROOCOCCACEAE								
----ANACYSTIS SPP.	114 1.8	38 0.6	-- --	-- --	-- --	-- --		

DATE	80/10/02	80/11/05	--- SITE 1 ---		81/08/12	81/09/11	81/10/14	82/06/24
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.17	2.12	3.14	2.85	2.78	2.85		
EQUITABILITY	.69	.64	.78	.80	.81	.71		
TOTAL COUNT (CELLS/SQ. INCH)*1000	2242.	1314.	324.	1858.	1937.	167.		
PERIPHYTON SLIDE EXPOSURE (DAYS)	30	34	38	30	32	30		
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT
MISCELLANEOUS GREEN ALGAE	-- --	-- --	-- --	-- --	-- --	7 3.9		
CHRYSOPHYTA YELLOW-BROWN ALGAE								
-CHRYSOPHYCEAE								
--CHRYSONOMADALES								
---CHROMULINACEAE								
----KEPHYRION LITTORALE	-- --	-- --	7 2.3	-- --	-- --	-- --		
----KEPHYRION SPIRALE	-- --	-- --	-- --	-- --	-- --	1 0.8		
-BACILLARIOPHYCEAE DIATOMS								
--PENNALES PENNATE DIATOMS								
---FRAGILARIACEAE								
----DIATOMA HIEMALE MESODON	283 12.6	577 43.9	63 19.3	23 1.3	243 12.6	51 30.7		
----FRAGILARIA VAUCHERIAE	13 0.6	19 1.4	7 2.3	279 15.0	61 3.1	4 2.4		
----HANNEA ARCUS	26 1.1	37 2.8	59 18.3	23 1.3	41 2.6	21 12.6		
----MERIDION CIRCULARE	-- --	-- --	-- --	-- --	-- --	4 2.4		
----SYNEDRA RUMPENS	-- --	-- --	9 2.9	12 0.6	30 1.6	7 3.9		
---ACHNANTHACEAE								
----ACHNANTHES LANCEOLATA	670 29.9	62 4.7	46 14.3	93 5.0	132 6.8	25 15.0		
----ACHNANTHES LINEARIS	-- --	-- --	26 8.0	-- --	-- --	1 0.8		
----ACHNANTHES LEWISIANA	-- --	-- --	2 0.6	-- --	-- --	1 0.8		
----ACHNANTHES MINUTISSIMA	825 36.8	403 30.7	43 13.1	488 26.2	700 35.7	7 3.9		
----COCCONEIS PLACENTULA	335 14.9	155 11.8	35 10.9	58 3.1	101 5.2	1 0.8		
---NAVICULACEAE								
----NAVICULA CRYPTOCEPHALA	-- --	-- --	4 1.1	46 2.5	-- --	-- --		
---GOMPHONEMACEAE								
----GOMPHONEMA SPP.	-- --	-- --	2 0.6	-- --	-- --	-- --		
----GOMPHONEMA ANGUSTATUM	-- --	12 0.9	7 2.3	314 16.9	325 16.8	28 16.5		
----GOMPHONEMA PARVULUM	13 0.6	-- --	-- --	-- --	-- --	-- --		
----GOMPHONEMA SUBCLAVATUM	-- --	12 0.9	4 1.1	46 2.5	20 1.0	-- --		
---CYMBELLACEAE								
----CYMBELLA MINUTA	64 2.9	12 0.9	6 1.7	383 20.6	101 5.2	5 3.1		
---NITZSCHIA								
----NITZSCHIA DISSIPATA	13 0.6	25 1.9	-- --	93 5.0	183 9.4	-- --		
----NITZSCHIA PALEACEA	-- --	-- --	2 0.6	-- --	-- --	1 0.8		
CYANOPHYTA BLUE-GREEN ALGAE	-- --	-- --	2 0.6	-- --	-- --	3 1.6		

SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984--Continued

DATE	--- SITE 1 ---								SITE 1 SLIDE 1 83/09/28		SITE 1 SLIDE 2 83/09/28	
	82/07/26	82/08/23	82/09/27	82/10/20								
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.70	2.48	1.82	2.48				2.72		1.51		
EQUITABILITY	.73	.82	.55	.72				.76		.44		
TOTAL COUNT (CELLS/SQ.INCH)*1000	936.	2161.	6484.	271.				375.		446.		
PERIPHYTON SLIDE EXPOSURE (DAYS)	32	28	35	23				22		22		
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT				COUNT PCT		COUNT PCT		
CHRYSTOPHYTA YELLOW-BROWN ALGAE												
--BACILLARIOPHYCEAE DIATOMS												
--PENNIALES PENNATE DIATOMS												
---FRAGILARIACEAE												
----DIATOMA HIEMALE MESODON	42 4.5	105 4.8	23 0.4	94 34.6				121 32.6		5 1.1		
----FRAGILARIA VAUCHERIAE	84 9.0	116 5.4	-- --	3 0.9				63 16.8		5 1.1		
----HANNEA ARCUS	60 6.4	93 4.3	70 1.1	20 7.5				4 1.0		2 0.5		
----SYNEDRA SPP.	-- --	-- --	-- --	1 0.5				-- --		-- --		
----SYNEDRA CYCLOPUM	6 0.6	-- --	-- --	-- --				-- --		-- --		
----SYNEDRA RUMPENS	36 3.8	-- --	23 0.4	23 8.4				14 3.7		-- --		
---ACHNANTHACEAE												
----ACHNANTHES LANCEOLATA	246 26.2	256 11.8	209 3.2	10 3.7				45 12.0		319 71.6		
----ACHNANTHES LEWISIANA	6 0.6	-- --	-- --	-- --				-- --		-- --		
----ACHNANTHES MINUTISSIMA	108 11.5	755 34.9	3928 60.5	81 29.9				27 7.3		24 5.3		
----COCCONEIS PLACENTULA	-- --	-- --	-- --	-- --				4 1.0		12 2.7		
---NAVICULACEAE												
----NAVICULA CRYPTOCEPHALA	6 0.6	-- --	70 1.1	-- --				2 0.5		5 1.1		
---GOMPHONEMACEAE												
----GOMPHONEMA ANGUSTATUM	300 32.1	581 26.9	1371 21.1	13 4.7				65 17.3		55 12.3		
----GOMPHONEMA SUBCLAVATUM	12 1.3	-- --	209 3.2	11 4.2				8 2.1		7 1.6		
---CYMBELLACEAE												
----CYMBELLA MINUTA	12 1.3	209 9.7	349 5.4	11 4.2				10 2.6		12 2.7		
---NITZSCHIAEAE												
----NITZSCHIA DISSIPATA	-- --	46 2.2	232 3.6	4 1.4				12 3.1		-- --		
CYANOPHYTA BLUE-GREEN ALGAE												
--MYXOPHYCEAE												
---CHROOCOCCALES												
----CHROOCOCCACEAE												
----ANACYSTIS SPP.	18 1.9	-- --	-- --	-- --				-- --		-- --		
	SITE 2 SLIDE 1 83/09/28	SITE 2 SLIDE 2 83/09/28	SITE 3 SLIDE 1 83/09/28	SITE 3 SLIDE 2 83/09/28				SITE 1 SLIDE 1 83/10/26		SITE 1 SLIDE 2 83/10/26		
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.37	2.22	2.52	2.28				2.94		2.93		
EQUITABILITY	.69	.64	.68	.66				.82		.82		
TOTAL COUNT (CELLS/SQ.INCH)*1000	1602.	2343.	681.	1134.				1812.		1962.		
PERIPHYTON SLIDE EXPOSURE (DAYS)	22	22	22	22				28		28		
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT				COUNT PCT		COUNT PCT		
CHRYSTOPHYTA YELLOW-BROWN ALGAE												
--BACILLARIOPHYCEAE DIATOMS												
--PENNIALES PENNATE DIATOMS												
---FRAGILARIACEAE												
----DIATOMA HIEMALE MESODON	27 1.7	13 0.5	17 2.5	13 1.1				503 27.7		216 11.0		
----FRAGILARIA VAUCHERIAE	107 6.7	75 3.2	34 5.0	31 2.8				23 1.2		141 7.2		
----HANNEA ARCUS	45 2.8	63 2.7	7 1.0	6 0.6				38 2.1		66 3.3		
----MERIDION CIRCULARE	-- --	-- --	-- --	-- --				-- --		19 1.0		
----SYNEDRA RUMPENS	143 8.9	25 1.1	10 1.5	69 6.1				180 10.0		84 4.3		
---ACHNANTHACEAE												
----ACHNANTHES LANCEOLATA	18 1.1	188 8.0	109 16.0	106 9.4				346 19.1		357 18.2		
----ACHNANTHES MINUTISSIMA	581 36.2	601 25.7	266 39.0	526 46.3				180 10.0		225 11.5		
----COCCONEIS PLACENTULA	54 3.4	88 3.7	7 1.0	13 1.1				23 1.2		9 0.5		
---NAVICULACEAE												
----NAVICULA CRYPTOCEPHALA	-- --	-- --	3 0.5	-- --				8 0.4		-- --		
---GOMPHONEMACEAE												
----GOMPHONEMA ANGUSTATUM	537 33.5	1127 48.1	140 20.5	275 24.3				240 13.3		563 28.6		
----GOMPHONEMA GRACILE	-- --	-- --	10 1.5	-- --				-- --		-- --		
----GOMPHONEMA SUBCLAVATUM	-- --	25 1.1	61 9.0	63 5.5				53 2.9		19 1.0		
---CYMBELLACEAE												
----CYMBELLA MINUTA	72 4.5	113 4.8	14 2.0	19 1.7				90 5.0		56 2.9		
---NITZSCHIAEAE												
----NITZSCHIA SPP.	9 0.6	-- --	-- --	-- --				-- --		-- --		
----NITZSCHIA DISSIPATA	9 0.6	25 1.1	3 0.5	13 1.1				128 7.1		207 10.5		

SANDY RIVER BASIN

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14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984--Continued

DATE	84/08/16	84/09/07
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.46	2.46
EQUITABILITY	.71	.74
TOTAL COUNT (CELLS/SO. INCH) * 1000	2004.	1138.
PERIPHYTON SLIDE EXPOSURE (DAYS)	36	21
	COUNT PCT	COUNT PCT
CHRYSOPHYTA YELLOW-BROWN ALGAE		
-BACILLARIOPHYCEAE DIATOMS		
--PENNALES PENNATE DIATOMS		
---FRAGILARIACEAE		
----DIATOMA HIEMALE MESODON	394 19.6	188 16.5
----FRAGILARIA VAUCHERIAE	27 1.3	99 8.7
----HANNEA ARCUS	-- ---	16 1.4
----SYNEDRA RUMPENS	63 3.1	-- ---
---ACHNANTHACEAE		
----ACHNANTHES LANCEOLATA	805 40.2	511 45.0
----ACHNANTHES MINUTISSIMA	340 17.0	99 8.7
----COCCONEIS PLACENTULA	54 2.7	73 6.4
---NAVICULACEAE		
----NAVICULA CRYPTOCEPHALA	9 0.4	-- ---
---GOMPHONEMACEAE		
----GOMPHONEMA ANGUSTATUM	143 7.1	83 7.3
----GOMPHONEMA SUBCLAVATUM	18 0.9	16 1.4
---CYMBELLACEAE		
----CYMBELLA MINUTA	143 7.1	47 4.1
---NITZSCHIACEAE		
----NITZSCHIA DISSIPATA	9 0.4	5 0.5

SANDY RIVER BASIN

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 mi².

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.--19 years, 77.8 ft³/s, 126.99 in/yr, 56,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft³/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 ft³/s on basis of estimate of peak flow from slope-area survey; minimum, 9.1 ft³/s Oct. 2-14, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 3	0930	unknown	*6.06	Feb. 12	1530	731	5.97
Jan. 25	0400	*777	6.05				

Minimum, 13 ft³/s July 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	17	36	64	109	53	91	66	126	51	45	19	24		
2	18	43	58	111	48	103	62	165	46	41	19	17		
3	18	172	52	400	44	85	59	149	43	38	18	16		
4	20	200	48	345	42	71	54	110	115	36	18	15		
5	18	123	57	191	39	64	56	112	90	35	18	32		
6	17	227	72	127	40	60	56	99	87	33	18	38		
7	16	142	90	118	37	56	120	82	123	35	18	103		
8	16	98	166	98	38	55	129	77	120	29	18	64		
9	16	88	138	81	38	62	118	75	165	28	18	39		
10	16	97	328	135	39	93	129	79	111	27	17	30		
11	16	99	192	138	58	83	109	127	86	27	17	31		
12	15	84	155	94	366	136	148	97	72	26	17	30		
13	15	84	219	76	370	143	120	87	61	25	17	25		
14	19	121	195	62	197	176	120	86	53	25	17	22		
15	17	175	129	52	137	161	115	78	48	24	16	21		
16	16	189	93	48	112	163	88	75	44	23	16	20		
17	21	287	73	42	83	130	78	63	41	23	16	19		
18	18	249	63	38	70	172	77	57	38	22	16	19		
19	16	203	54	37	64	235	74	78	36	21	16	19		
20	19	205	46	34	77	213	73	93	71	21	16	19		
21	17	139	30	43	87	259	65	72	171	21	16	19		
22	105	101	25	120	71	189	60	96	98	21	16	30		
23	40	123	23	334	77	143	64	143	68	20	16	25		
24	29	275	22	582	101	113	55	99	55	20	16	20		
25	25	176	22	476	84	138	53	107	48	20	15	19		
26	24	149	22	239	70	215	49	169	60	20	15	19		
27	22	188	22	142	61	136	44	116	56	19	15	18		
28	21	142	28	104	63	134	44	88	46	19	15	18		
29	21	102	59	83	59	113	52	73	65	19	15	17		
30	34	79	172	70	---	90	68	66	51	19	15	17		
31	38	---	174	61	---	75	---	58	---	19	17	---		
TOTAL	720	4396	2891	4590	2625	3957	2405	3002	2219	801	516	805		
MEAN	23.2	147	93.3	148	90.5	128	80.2	96.8	74.0	25.8	16.6	26.8		
MAX	105	287	328	582	370	259	148	169	171	45	19	103		
MIN	15	36	22	34	37	55	44	57	36	19	15	15		
CFSM	2.79	17.7	11.2	17.8	10.9	15.4	9.64	11.6	8.89	3.10	2.00	3.22		
IN.	3.22	19.66	12.93	20.52	11.74	17.69	10.75	13.42	9.92	3.58	2.31	3.60		
AC-FT	1430	8720	5730	9100	5210	7850	4770	5950	4400	1590	1020	1600		
CAL YR 1983	TOTAL	30676	MEAN	84.0	MAX	1080	MIN	15	CFSM	10.1	IN.	137.16	AC-FT	60850
WTR YR 1984	TOTAL	28927	MEAN	79.0	MAX	582	MIN	15	CFSM	9.50	IN.	129.34	AC-FT	57380

SANDY RIVER BASIN

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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 <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 microsiemens Jan. 13, 1981 (cement spill); minimum, 9 microsiemens 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, 43 microsiemens Oct. 8, Sept. 5; minimum recorded, 11 microsiemens Jan. 25.

WATER TEMPERATURES: Maximum, 13.5°C July 16, 17; minimum, 0.0°C Dec. 21-25.

SEDIMENT CONCENTRATIONS: Maximum daily, 18 mg/l Jan. 24; minimum, 0 mg/l on many days throughout the year.

SEDIMENT DISCHARGE: Maximum daily, 32 tons Feb. 24; minimum, .04 tons on many days throughout the year.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	29	21	19	22	20	21	19	24	27	34	39
2	37	27	22	20	23	19	22	17	25	28	35	41
3	37	21	22	15	24	20	22	18	26	29	35	42
4	37	18	23	15	24	21	23	19	21	30	36	42
5	37	19	22	17	25	22	23	19	20	30	36	39
6	38	17	21	18	25	22	23	19	21	30	36	35
7	38	18	20	18	26	22	20	21	19	31	37	27
8	38	19	18	19	26	23	18	21	19	32	38	27
9	38	20	19	20	26	22	19	22	18	32	38	29
10	38	20	15	18	25	20	18	21	19	33	39	32
11	38	20	16	17	24	19	19	19	21	33	39	32
12	38	20	17	19	16	17	18	20	22	33	39	32
13	38	20	16	20	13	17	19	21	24	33	39	34
14	37	20	17	21	15	16	19	21	25	34	39	35
15	37	18	18	23	17	16	19	21	26	34	40	36
16	38	17	19	23	17	16	20	21	26	34	40	37
17	36	16	20	24	19	17	21	23	27	35	40	37
18	37	16	21	25	20	16	21	24	28	34	40	38
19	38	17	22	26	21	15	21	23	28	34	40	38
20	37	17	23	26	20	16	21	20	26	34	41	38
21	37	18	24	25	19	15	22	22	19	34	41	38
22	27	19	24	19	20	16	23	21	21	34	41	36
23	28	19	26	15	20	17	23	18	24	34	41	36
24	30	16	27	12	19	18	23	20	25	34	41	37
25	31	18	28	13	19	18	24	20	27	34	41	38
26	32	18	28	15	20	16	24	17	26	33	41	38
27	33	18	28	16	21	17	25	19	26	33	41	38
28	33	19	29	18	22	18	25	21	27	33	41	39
29	33	19	26	19	22	18	24	23	25	33	41	39
30	32	20	18	20	---	19	23	23	26	34	42	40
31	29	---	18	21	---	20	---	23	---	35	41	---
MEAN	35	19	22	19	21	18	21	21	24	33	39	36
WTR YR 1984	MEAN	26		MAX	42	MIN	12					

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	8.0	6.5	9.0	8.5	3.5	3.0	3.0	2.5	4.5	3.5	4.5	4.0
2	7.5	7.0	8.5	8.0	3.5	3.5	3.5	3.0	4.5	3.5	4.5	4.0
3	8.5	7.5	9.5	8.5	4.0	3.5	3.5	3.0	5.0	4.0	4.5	3.5
4	8.5	7.5	9.0	8.0	3.5	3.0	4.5	3.5	5.0	4.5	4.5	3.5
5	8.0	7.0	8.0	7.0	3.5	3.0	4.5	4.0	5.0	4.0	5.5	3.5
6	8.0	7.0	8.0	7.0	4.0	3.0	4.5	4.0	5.5	5.0	5.5	4.5
7	7.5	6.5	7.0	6.5	4.5	4.0	4.5	4.0	5.0	4.5	6.0	4.5
8	7.5	7.0	6.5	6.0	4.5	4.0	4.5	4.0	5.5	4.5	6.5	5.0
9	7.5	7.5	7.0	6.5	4.5	4.0	4.5	4.0	5.5	4.5	6.5	5.5
10	8.0	7.0	7.5	6.5	4.5	4.0	4.5	4.0	4.5	3.5	6.0	5.5
11	8.0	7.0	7.5	7.0	4.5	4.0	4.5	4.0	4.0	3.5	5.5	4.5
12	8.0	7.5	7.0	6.5	4.5	4.0	4.0	3.5	4.0	3.5	5.0	4.5
13	8.0	7.5	6.5	6.0	5.0	4.5	4.0	2.5	4.0	3.5	5.5	4.0
14	7.5	7.0	6.5	6.0	5.0	4.5	2.5	1.5	4.0	3.5	5.0	5.0
15	7.5	6.5	7.5	6.5	4.5	4.0	2.0	1.5	4.0	3.5	6.0	4.5
16	7.0	6.0	7.5	7.0	4.0	3.0	2.0	1.5	4.5	3.5	6.0	5.0
17	7.5	7.0	7.0	6.0	3.0	2.5	1.5	1.5	4.0	3.0	5.0	4.0
18	7.0	6.0	6.0	6.0	3.0	2.5	2.0	1.0	4.5	3.5	4.5	4.0
19	7.0	6.5	6.5	5.5	3.0	2.0	2.0	1.5	4.5	4.0	6.0	4.5
20	8.0	7.0	5.5	5.0	2.0	.5	2.0	1.5	5.0	4.0	6.5	5.5
21	8.0	7.0	5.5	5.0	.5	.0	2.5	2.0	4.0	3.0	5.5	4.5
22	9.0	8.0	5.0	5.0	.0	.0	3.0	2.5	3.5	3.0	6.5	4.5
23	8.5	7.0	5.5	5.0	.0	.0	3.5	3.0	4.0	3.5	6.0	5.5
24	8.0	6.5	6.0	5.0	.0	.0	4.5	3.5	4.0	3.5	5.5	4.5
25	8.0	7.0	5.0	4.5	1.0	.0	4.5	3.5	4.0	3.5	5.0	4.5
26	8.0	7.0	5.5	5.0	2.0	1.0	4.5	4.0	4.0	3.5	5.0	4.0
27	8.0	7.5	6.0	5.5	2.5	2.0	5.0	4.5	5.0	3.5	6.0	4.5
28	8.0	7.0	6.0	5.0	2.0	1.5	5.0	4.0	5.0	4.0	6.0	4.5
29	8.5	7.5	5.0	4.0	2.0	1.0	5.0	4.0	4.5	4.0	5.5	4.5
30	9.0	8.5	4.0	3.0	2.0	1.0	5.0	4.0	---	---	6.0	4.5
31	9.0	8.5	---	---	3.0	2.0	4.5	3.5	---	---	6.5	5.0
MONTH	9.0	6.0	9.5	3.0	5.0	.0	5.0	1.0	5.5	3.0	6.5	3.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	6.0	5.5	6.0	5.0	9.0	6.5	11.5	9.0	11.5	10.0	10.5	9.0
2	6.0	5.0	6.0	5.5	8.0	7.5	12.0	10.0	11.5	9.5	10.5	8.5
3	5.5	5.0	6.0	4.5	8.0	7.5	12.5	9.5	11.0	9.5	10.5	9.0
4	5.5	5.0	5.5	5.0	8.0	7.5	12.5	10.0	11.5	9.0	11.0	9.0
5	5.5	5.0	5.0	4.5	8.0	7.0	11.5	10.0	10.0	9.5	10.0	9.5
6	5.0	4.0	5.5	4.5	8.0	7.0	11.5	9.0	11.0	9.0	10.0	9.5
7	4.5	3.5	7.5	5.0	7.5	7.0	11.5	9.0	11.5	9.0	11.0	10.0
8	4.5	3.5	7.5	6.5	7.0	6.5	11.5	9.0	12.5	10.0	11.5	10.5
9	4.5	4.0	7.0	6.5	7.5	6.5	12.0	9.5	13.0	10.5	11.0	10.0
10	4.0	3.0	7.0	6.0	8.0	7.0	11.5	9.0	12.5	10.5	10.5	9.0
11	4.5	3.5	8.0	6.5	9.0	7.5	10.0	9.5	12.0	10.0	9.5	9.0
12	4.0	4.0	9.0	7.0	10.0	7.5	11.0	9.0	10.5	9.5	10.5	9.0
13	5.0	3.5	9.5	8.5	10.0	8.5	11.5	9.5	11.5	9.0	10.0	8.0
14	7.0	4.5	8.5	7.0	11.5	9.0	12.0	9.5	11.0	9.0	10.0	8.5
15	6.0	5.5	7.0	6.0	10.0	8.5	13.0	10.0	11.5	9.0	10.5	9.0
16	6.0	5.5	7.5	6.0	8.5	8.0	13.5	11.0	11.5	9.5	10.5	9.0
17	6.5	5.0	9.0	6.5	10.0	7.5	13.5	11.0	12.0	9.5	10.5	9.0
18	6.5	6.0	8.5	7.0	10.5	8.0	12.0	10.5	11.0	9.5	11.0	9.5
19	6.5	5.5	8.5	8.0	10.5	8.5	12.0	9.5	11.0	9.0	10.5	10.0
20	6.0	5.0	8.0	7.0	9.5	9.0	11.5	9.0	11.0	9.0	10.5	9.0
21	6.0	5.5	7.0	6.0	9.0	8.0	11.5	9.0	11.5	9.5	9.5	8.5
22	7.5	5.5	7.5	6.0	10.5	7.5	12.0	9.5	11.5	9.5	8.5	8.0
23	6.5	5.5	7.0	6.5	12.0	9.0	11.5	9.5	10.5	9.5	8.5	7.5
24	5.5	4.5	7.0	6.0	12.5	9.5	13.0	10.0	11.0	9.0	8.0	7.0
25	5.0	4.0	7.5	6.0	12.5	10.0	11.5	10.0	11.0	9.0	8.5	7.0
26	6.0	4.5	7.5	7.0	11.5	10.5	12.0	9.5	11.5	9.5	9.0	8.0
27	6.5	4.5	9.0	6.0	13.0	10.5	12.0	9.5	10.0	9.5	9.0	7.5
28	5.5	5.0	11.0	7.0	13.0	11.0	11.0	9.5	10.5	8.5	8.5	7.0
29	5.5	5.0	12.0	9.5	11.0	9.5	12.0	9.5	10.5	8.5	8.5	7.0
30	5.5	5.0	10.5	8.0	11.0	9.0	12.5	10.0	10.5	9.0	8.5	7.5
31	---	---	8.5	7.5	---	---	11.5	10.5	9.5	9.0	---	---
MONTH	7.5	3.0	12.0	4.5	13.0	6.5	13.5	9.0	13.0	8.5	11.5	7.0
YEAR	13.5	.0										

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1	.05	0	.10	0	.17	---	.29	1	.14	0	.25
2	1	.05	2	.23	1	.16	---	.30	1	.13	0	.28
3	3	.15	---	2.8	1	.14	---	17	1	.12	0	.23
4	3	.16	0	.54	1	.13	4	3.7	2	.23	0	.19
5	0	.05	0	.33	1	.15	1	.52	1	.11	0	.17
6	0	.05	1	.61	1	.19	1	.34	1	.11	0	.16
7	0	.04	0	.38	1	.24	1	.32	1	.10	0	.15
8	0	.04	0	.26	4	1.8	1	.26	1	.10	1	.15
9	---	.04	0	.24	1	.37	1	.22	1	.10	0	.17
10	---	.04	0	.26	3	2.7	1	.36	0	.11	1	.25
11	---	.04	0	.27	2	1.0	1	.37	1	.16	1	.22
12	---	.04	0	.23	1	.42	0	.25	11	17	1	.37
13	---	.04	0	.23	1	.59	0	.21	4	4.0	2	.77
14	---	.05	1	.33	1	.53	0	.17	2	1.1	2	.95
15	---	.05	1	.47	2	.70	1	.14	1	.37	1	.43
16	---	.04	1	.51	1	.25	1	.13	2	.60	1	.44
17	0	.06	1	.77	1	.20	1	.11	1	.22	1	.35
18	0	.05	1	.67	1	.17	1	.10	1	.19	1	.46
19	0	.04	1	.55	2	.29	1	.10	0	.17	1	.63
20	0	.05	2	1.1	1	.12	1	.09	1	.21	2	1.2
21	0	.05	1	.38	---	.08	1	.12	0	.23	2	1.4
22	2	.57	2	.55	---	.07	2	.65	0	.19	2	1.0
23	0	.11	1	.33	---	.06	13	22	1	.21	1	.39
24	0	.08	2	1.5	---	.06	---	32	0	.27	1	.31
25	0	.07	1	.48	---	.06	---	18	0	.23	1	.37
26	0	.06	0	.40	---	.06	4	2.6	0	.19	1	.58
27	0	.06	1	.51	---	.06	3	1.2	0	.16	1	.37
28	0	.06	1	.38	---	.08	2	.56	0	.17	1	.36
29	0	.06	1	.28	---	.16	1	.22	0	.16	1	.31
30	0	.09	0	.21	---	.46	1	.19	---	---	1	.24
31	0	.10	---	---	---	.47	1	.16	---	---	1	.20
TOTAL	---	2.44	---	15.90	---	11.94	---	102.68	---	27.08	---	13.35

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1	.18	1	.34	0	.14	1	.12	1	.05	0	.06
2	1	.17	1	.45	0	.12	1	.11	1	.05	0	.05
3	0	.16	1	.40	1	.12	1	.10	1	.05	0	.04
4	0	.15	1	.30	2	.62	1	.10	1	.05	0	.04
5	0	.15	1	.30	0	.24	1	.09	1	.05	2	.17
6	0	.15	1	.27	0	.23	1	.09	1	.05	1	.10
7	1	.32	1	.22	2	.66	0	.09	1	.05	1	.28
8	1	.35	1	.21	1	.32	0	.08	1	.05	1	.17
9	1	.32	1	.20	1	.45	---	.08	1	.05	1	.11
10	1	.35	0	.21	1	.30	---	.07	1	.05	1	.08
11	1	.29	0	.34	1	.23	---	.07	1	.05	1	.08
12	2	.80	0	.26	1	.19	1	.07	1	.05	1	.08
13	2	.65	0	.23	1	.16	1	.07	1	.05	1	.07
14	2	.65	0	.23	1	.14	1	.07	1	.05	1	.06
15	2	.62	0	.21	1	.13	1	.06	1	.04	1	.06
16	2	.48	0	.20	1	.12	1	.06	1	.04	1	.05
17	2	.42	0	.17	0	.11	---	.06	1	.04	0	.05
18	2	.42	0	.15	0	.10	---	.06	1	.04	0	.05
19	2	.40	1	.21	0	.10	---	.06	1	.04	0	.05
20	2	.39	1	.25	1	.19	---	.06	1	.04	1	.05
21	2	.35	0	.19	1	.46	---	.06	1	.04	1	.05
22	2	.32	1	.26	0	.26	---	.06	1	.04	---	.08
23	1	.17	1	.39	0	.18	---	.05	1	.04	---	.07
24	2	.30	1	.27	0	.15	---	.05	1	.04	---	.05
25	0	.14	1	.29	0	.13	---	.05	1	.04	0	.05
26	0	.13	2	.91	0	.16	---	.05	1	.04	0	.05
27	0	.12	1	.31	0	.15	---	.05	1	.04	0	.05
28	1	.12	1	.24	0	.12	---	.05	1	.04	0	.05
29	1	.14	1	.20	0	.18	---	.05	1	.04	0	.05
30	1	.18	0	.18	0	.14	---	.05	0	.04	1	.05
31	---	---	0	.16	---	---	1	.05	0	.05	---	---
TOTAL	---	9.39	---	8.55	---	6.60	---	2.14	---	1.39	---	2.25

SANDY RIVER BASIN

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

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1981

DATE	COMPOSITE (4 SITES)		SITE 1		SITE 2		SITE 3		SITE 1		SITE 2	
	77/07/14		78/07/20		78/07/20		78/07/20		80/08/19		80/08/19	
HABITAT (riffle)	cobble, bedrock		gravel, cobble, bedrock		gravel, cobble, bedrock		gravel, cobble, bedrock					
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.15		1.79		1.92		1.38		2.20		2.79	
EQUITABILITY	.23		.35		.31		.29		.49		.56	
TOTAL COUNT (NO./SQ.FOOT)	6093.		430.		2210.		1330.		193.		630.	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
ANNELIDA	--	---	1	0.2	--	---	2	0.2	--	---	--	---
--OLIGOCHAETA	42	0.7	27	6.3	220	9.9	69	5.2	3	1.6	--	---
ARTHROPODA	--	---	--	---	--	---	--	---	--	---	2	0.3
--OSTRACODA	20	0.3	2	0.5	--	---	5	0.4	--	---	--	---
--PODOCOPA	--	---	1	0.2	14	0.6	--	---	--	---	--	---
--COPEPODA	--	---	--	---	2	0.1	1	0.1	--	---	6	1.0
--HARPACTACOIDA	--	---	--	---	--	---	--	---	--	---	--	---
--INSECTA	--	---	--	---	--	---	--	---	--	---	1	0.2
--DIPTERA	--	---	--	---	--	---	--	---	--	---	--	---
---CERATOPOGONIDAE (ADULTS)	--	---	--	---	--	---	--	---	--	---	1	0.2
----DASYHELEA	--	---	--	---	--	---	--	---	--	---	6	1.0
----PALPOMYIA	--	---	--	---	--	---	--	---	--	---	--	---
----TIPULIDAE	--	---	--	---	--	---	--	---	--	---	--	---
----ANTOCHA	37	0.6	3	0.7	2	0.1	5	0.4	--	---	8	1.3
----DICRANOTA	1	0.0	--	---	3	0.1	--	---	4	2.1	--	---
----SIMULIIDAE	8	0.1	--	---	1	0.1	1	0.1	--	---	203	31.9
----STRATIOMYIIDAE	--	---	--	---	--	---	1	0.1	--	---	--	---
----EMPIDIDAE	16	0.3	16	3.7	15	0.7	27	2.0	--	---	--	---
----CLINOCERA	--	---	--	---	--	---	--	---	1	0.5	--	---
----RHAGIONIDAE	--	---	--	---	--	---	--	---	3	1.6	--	---
----ATHERCERIDAE	--	---	--	---	--	---	--	---	--	---	1	0.2
---CHIRONOMIDAE (LARVAE)	5128	84.1	305	71.0	1677	75.8	1057	79.2	108	55.9	197	31.0
---CHIRONOMIDAE (PUAE)	20	0.3	7	1.6	66	3.0	27	2.0	--	---	3	0.5
---CHIRONOMIDAE (ADULTS)	25	0.4	3	0.7	--	---	--	---	--	---	--	---
---TRICHOPTERA	--	---	3	0.7	--	---	--	---	1	0.5	--	---
---HYDROPSYCHIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---HYDROPSYCHE	--	---	--	---	--	---	--	---	--	---	8	1.3
---ARCTOPSYCHE	--	---	--	---	--	---	--	---	1	0.5	--	---
---LEPIDOSTOMATIDAE	--	---	--	---	--	---	--	---	--	---	1	0.2
---RYACOPHILIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---RHYACOPHILA	35	0.6	1	0.2	2	0.1	1	0.1	5	2.6	5	0.8
---LEPTOCERIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---OECETIS	--	---	--	---	15	0.7	7	0.6	--	---	--	---
---PHILOPOTAMIDAE	--	---	--	---	--	---	--	---	1	0.5	--	---
---BRACHYCENTRIDAE	1	0.0	--	---	--	---	--	---	--	---	--	---
---AMIOCENRUS	22	0.4	--	---	1	0.1	--	---	--	---	17	2.7
---LIMNEPHILIDAE	--	---	--	---	--	---	--	---	--	---	1	0.2
---APATANIA	10	0.2	--	---	--	---	--	---	4	2.1	--	---
---PSEUDOSTENOPHYLOX	--	---	--	---	--	---	--	---	--	---	--	---
---GLOSSOSOMATIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---GLOSSASOMA	14	0.2	--	---	--	---	--	---	--	---	1	0.2
---POLYCENTROPIDIDAE	1	0.0	--	---	--	---	--	---	--	---	--	---
---PLECOPTERA	--	---	--	---	--	---	--	---	--	---	--	---
---PELTOPERLIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---PELTOPERLA	5	0.1	1	0.2	--	---	--	---	--	---	--	---
---NEMOURIDAE	--	---	--	---	--	---	--	---	--	---	1	0.2
---NEMOURA	10	0.2	5	1.2	13	0.6	5	0.4	--	---	--	---
---PERLIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---ACRONEURIA	--	---	--	---	2	0.1	--	---	--	---	10	1.6
---CALINEURA	--	---	--	---	--	---	--	---	3	1.6	--	---
---PERLODIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---ISOPERLA	--	---	--	---	2	0.1	--	---	--	---	--	---
---ARCYNOPTERYX	14	0.2	1	0.2	--	---	2	0.2	--	---	--	---
---CHLOROPERLIDAE	--	---	--	---	--	---	--	---	--	---	2	0.3
---ALLOPERLA	--	---	--	---	--	---	--	---	2	1.0	--	---
---HASTAPERLA	19	0.3	1	0.2	18	0.8	--	---	--	---	--	---
---HEMIPTERA	1	0.0	--	---	--	---	--	---	--	---	--	---
---COLEOPTERA	--	---	--	---	--	---	--	---	--	---	--	---
---ELMIDAE (LARVAE)	5	0.1	3	0.7	--	---	1	0.1	--	---	--	---
---DYTISCIDAE (ADULTS)	--	---	1	0.2	2	0.1	--	---	--	---	--	---
---COLLEMBOLA	2	0.0	--	---	--	---	--	---	--	---	--	---
---EPHEMEROPTERA	--	---	--	---	--	---	--	---	--	---	--	---
---EPHEMERELLIDAE	--	---	--	---	--	---	--	---	--	---	7	1.1
---EPHEMERELLA	--	---	--	---	--	---	--	---	--	---	8	1.3
---DRUNELLA	8	0.1	2	0.5	4	0.2	10	0.7	14	7.2	--	---
---DRUNELLA DODDSI	--	---	--	---	--	---	--	---	1	0.5	--	---
---SERATELLA	30	0.5	5	1.2	9	0.4	3	0.2	--	---	7	1.1
---LEPTOPHLEBIIDAE	--	---	--	---	2	0.1	--	---	--	---	--	---
---PARALEPTOPHLEBIA	30	0.5	--	---	15	0.7	--	---	--	---	6	1.0
---BAETIDAE	--	---	18	4.2	--	---	52	3.9	--	---	--	---
---BAETIS	419	6.9	--	---	36	1.6	--	---	--	---	68	10.8
---HEPTAGENIIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---EPEORUS IRON	48	0.8	--	---	--	---	18	1.4	--	---	8	1.3
---CINYGMA	--	---	--	---	--	---	--	---	--	---	1	0.2
---CINYGMULA	27	0.4	3	0.7	14	0.6	7	0.5	15	7.8	--	---
---RHITHROGENA	63	1.0	--	---	15	0.7	1	0.1	1	0.5	8	1.3
---ARACHNIDA	--	---	--	---	--	---	--	---	--	---	--	---
---ACARINA	42	0.7	21	4.9	60	2.7	28	2.1	26	13.5	43	6.8

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

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1981--Continued

	SITE 3		SITE 4		SITE 1		SITE 2		SITE 3		SITE 4	
DATE	80/08/19		80/08/19		81/08/10		81/08/10		81/08/10		81/08/10	
HABITAT	riffle		riffle		riffle, cobbles		pool, cobbles		pool, rocks cobbles		riffle, rocks boulders	
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.16		0.70		1.00		2.10		2.17		1.00	
EQUITABILITY	.24		.12		.18		.44		.44		.18	
TOTAL COUNT (NO./SQ.FOOT)	943.		1536.		1144.		588.		470.		769.	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
ANNELIDA												
-OLIGOCHAETA	17	1.8	25	1.6	--	--	--	--	--	--	--	--
ARTHROPODA												
-OSTRACODA	13	1.4	5	0.3	--	--	--	--	--	--	--	--
-COPEPODA												
--HARPACTACOIDA	--	--	3	0.2	--	--	--	--	--	--	--	--
-INSECTA												
--DIPTERA	--	--	--	--	1	0.1	1	0.2	1	0.2	3	0.4
---CERATOPOGONIDAE (ADULTS)	--	--	--	--	5	0.4	1	0.2	3	0.6	2	0.3
---DASYHELEA	--	--	3	0.2	--	--	--	--	--	--	--	--
---PALPOMYIA	--	--	3	0.2	--	--	--	--	--	--	--	--
---TIPULIDAE	--	--	--	--	1	0.1	--	--	2	0.4	--	--
---ANTOCHA	1	0.1	10	0.6	1	0.1	--	--	1	0.2	--	--
---DICRANOTA	5	0.5	--	--	8	0.7	5	0.9	8	1.7	--	--
---SIMULIIDAE	2	0.2	--	--	--	--	--	--	--	--	--	--
---STRATIOMYIIDAE	--	--	1	0.1	--	--	--	--	--	--	--	--
---EMPIDIDAE												
---CLINOCERA	2	0.2	--	--	3	0.3	2	0.3	3	0.6	2	0.3
---HEMERODROMIA	1	0.1	--	--	--	--	--	--	--	--	--	--
---CHIRONOMIDAE (LARVAE)	780	82.8	1408	91.5	995	87.0	345	58.3	248	51.8	665	86.5
---CHIRONOMIDAE (PUPAE)	15	1.6	17	1.0	21	1.8	88	15.0	100	21.7	3	0.4
---CHIRONOMIDAE (ADULTS)	--	--	--	--	--	--	1	0.2	1	0.2	--	--
---DIXIDAE	--	--	1	0.1	--	--	--	--	--	--	--	--
---SCIARIDAE (ADULTS)	1	0.1	--	--	28	2.4	33	5.6	45	9.8	19	2.5
---MYCETOPHILIDAE (ADULTS)	--	--	--	--	--	--	1	0.2	1	0.2	--	--
---DOLICHOPIIDAE (ADULTS)	--	--	--	--	--	--	--	--	--	--	2	0.3
---PHORIDAE (ADULTS)	--	--	--	--	--	--	--	--	--	--	1	0.1
--TRICHOPTERA	--	--	--	--	--	--	--	--	--	--	1	0.1
---PSYCHOMYIIDAE												
---POLYCENTROPUS	--	--	1	0.1	--	--	--	--	--	--	--	--
---RYACOPHILIDAE												
---RHYACOPHILA	1	0.1	--	--	8	0.7	--	--	3	0.6	9	1.2
---HYDROPTILIDAE												
---HYDROPTILA	--	--	--	--	1	0.1	--	--	--	--	--	--
---BRACHYCENTRIDAE												
---BRACHYCENTRUS	--	--	1	0.1	--	--	--	--	--	--	--	--
---AMIOCENTRUS	--	--	1	0.1	--	--	--	--	--	--	--	--
---LIMNAPHILIDAE												
---APATANIA	21	2.2	2	0.1	--	--	10	1.7	--	--	--	--
---ECCLISOMYIA	--	--	6	0.4	--	--	8	1.4	--	--	--	--
---NEOPHYLAX	--	--	1	0.1	--	--	--	--	--	--	--	--
---GLOSSOSOMATIDAE												
---ANAGAPETUS	--	--	--	--	3	0.3	--	--	--	--	--	--
---POLYCENTROPIDAE	--	--	--	--	1	0.1	--	--	--	--	--	--
---PLECOPTERA	--	--	--	--	5	0.4	--	--	--	--	--	--
---PELTOPERLIDAE												
---YORAPERLA	--	--	--	--	--	--	1	0.2	--	--	1	0.1
---NEMOURIDAE												
---NEMOURA	--	--	--	--	--	--	--	--	--	--	1	0.1
---PERLIDAE												
---ACRONEURIA	--	--	3	0.2	--	--	--	--	--	--	--	--
---CALINEURA	--	--	--	--	4	0.3	1	0.2	--	--	--	--
---PERLODIDAE	--	--	--	--	--	--	--	--	1	0.2	--	--
---ISOPERLA	--	--	1	0.1	--	--	--	--	--	--	--	--
---MEGARCYS	2	0.2	--	--	--	--	--	--	--	--	1	0.1
---CHLOROPERLIDAE	--	--	3	0.2	--	--	--	--	--	--	--	--
---ALLOPERLA	--	--	--	--	--	--	--	--	2	0.4	1	0.1
---PARAPERLA	--	--	--	--	--	--	--	--	--	--	1	0.1
---HEMIPTERA	--	--	--	--	1	0.1	--	--	--	--	--	--
---COLEOPTERA												
---STAPHYLINIDAE	1	0.1	--	--	--	--	1	0.2	--	--	--	--
---ELMIDAE (ADULTS)	--	--	1	0.1	--	--	--	--	--	--	--	--
---ELMIDAE (LARVAE)												
---STENELMIS	--	--	--	--	--	--	--	--	1	0.2	--	--
---DYTISCIDAE (LARVAE)												
---OREODYTES (LARVAE)	--	--	--	--	--	--	48	8.2	--	--	--	--
---DYTISCIDAE (ADULTS)	--	--	6	0.4	--	--	3	0.5	--	--	--	--
---COLLEMBOLA	--	--	1	0.1	--	--	--	--	--	--	--	--
---HYMENOPTERA												
---DIAPRIIDAE	--	--	--	--	1	0.1	--	--	1	0.2	--	--
---ICHNEUMONIDAE	--	--	--	--	1	0.1	1	0.2	--	--	5	0.6
---CECIDOMYIDAE	--	--	--	--	--	--	2	0.3	1	0.2	--	--
---SCELIONIDAE	--	--	--	--	--	--	1	0.2	10	2.6	--	--
---BRACONIDAE (ADULTS)	--	--	--	--	--	--	--	--	2	0.4	2	0.3
---EPHEMEROPTERA												
---EPHEMERELLIDAE												
---EPHEMERELLA	--	--	2	0.1	--	--	--	--	--	--	--	--
---DRUNELLA	4	0.4	--	--	8	0.7	--	--	2	0.4	13	1.7
---DRUNELLA DODDSI	--	--	--	--	1	0.1	--	--	--	--	--	--
---LEPTOPHLEBIIDAE												
---PARALEPTOPHLEBIA	--	--	1	0.1	--	--	11	1.9	--	--	1	0.1
---BAETIDAE												
---BAETIS	45	4.8	12	0.8	24	2.1	--	--	4	0.9	15	2.0
---SIPHONURIDAE	--	--	--	--	--	--	--	--	1	0.2	--	--
---AMELETUS	--	--	--	--	--	--	1	0.2	--	--	--	--
---HEPTAGENIIDAE												
---EPEORUS IRON	--	--	--	--	3	0.3	--	--	--	--	17	2.2
---CINYGMA	--	--	1	0.1	--	--	--	--	--	--	--	--
---CINYGMA	1	0.1	--	--	5	0.4	--	--	1	0.2	--	--
---RHITHROGENA	1	0.1	--	--	--	--	--	--	--	--	--	--
---ARACHNIDA												
---ACARINA	30	3.2	17	1.1	15	1.3	23	3.9	28	6.1	4	0.5

SANDY RIVER BASIN

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

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984

DATE	78/07/11		78/09/05		--- SITE 1 --- 78/10/26		79/08/09		79/10/24		80/07/09	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
SPECIES DIVERSITY (BRILLOUIN INDEX)	0.87		0.88		2.57		2.49		1.47		1.52	
EQUITABILITY	.31		.38		.67		.64		.56		.41	
TOTAL COUNT (CELLS/SQ. INCH)*1000	5321.		11688.		13746.		7711.		6286.		7230.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	54		56		51		72		43		33	
CHLOROPHYTA GREEN ALGAE	26	0.5	--	---	--	---	--	---	--	---	--	---
---CHLOROPHYCEAE												
---CHLOROCOCCALES												
---CHARACIACEAE												
---CHARACIUM AMBIGUUM	258	4.9	--	---	77	0.6	--	---	--	---	--	---
---ULOTRICHALES												
---ULOTRICHACEAE												
---ULOTHRIX SPP.	--	---	--	---	--	---	439	5.7	--	---	4501	62.2
CHRYSTOPHYTA YELLOW-BROWN ALGAE												
---BACILLARIOPHYCEAE DIATOMS												
---CENTRALES CENTRIC DIATOMS												
---COSCINODISCACEAE												
---MELOSIRA DISTANS ALPIGENA	--	---	--	---	154	1.1	--	---	--	---	--	---
---MELOSIRA VARIANS	--	---	--	---	--	---	571	7.4	--	---	--	---
---PENNALES PENNATE DIATOMS												
---FRAGILARIACEAE												
---DIATOMA HIEMALE MESODON	26	0.5	--	---	3302	24.0	1450	18.8	--	---	1070	14.8
---DIATOMA VULGARE	--	---	--	---	--	---	22	0.3	--	---	--	---
---FRAGILARIA VAUCHERIAE	--	---	81	0.7	77	0.6	--	---	--	---	--	---
---HANNEA ARCUS	26	0.5	--	---	4376	31.8	66	0.9	--	---	1463	20.2
---SYNEDRA RUMPENS	--	---	--	---	230	1.7	--	---	--	---	12	0.2
---SYNEDRA ULNA	--	---	--	---	--	---	--	---	--	---	25	0.3
---ACHNANTHACEAE												
---ACHNANTHES LANCEOLATA	4520	84.8	8928	76.5	2918	21.2	3361	43.6	4141	65.8	25	0.3
---ACHNANTHES LINEARIS	52	1.0	--	---	77	0.6	--	---	25	0.4	12	0.2
---ACHNANTHES LEWISIANA	--	---	--	---	--	---	264	3.4	--	---	--	---
---ACHNANTHES MINUTISSIMA	--	---	41	0.3	691	5.0	1120	14.5	998	15.9	49	0.7
---COCCONEIS PLANCENTULA ENGLYPTA	413	7.8	2597	22.2	1382	10.0	110	1.4	823	13.1	--	---
---NAVICULACEAE	--	---	41	0.3	--	---	--	---	--	---	--	---
---NAVICULA MENISCULUS	--	---	--	---	--	---	--	---	--	---	12	0.2
---GOMPHONEMACEAE												
---GOMPHONEMA ANGUSTATUM	--	---	--	---	--	---	22	0.3	--	---	--	---
---CYMBELLACEAE												
---CYMBELLA MINUTA	--	---	--	---	154	1.1	22	0.3	--	---	--	---
---NITZSCHACEAE												
---NITZSCHIA DISSIPATA	--	---	--	---	77	0.6	110	1.4	25	0.4	25	0.3
---NITZSCHIA FRUSTULUM	--	---	--	---	77	0.6	110	1.4	--	---	12	0.2
---NITZSCHIA FONTICOLA	--	---	--	---	--	---	--	---	274	4.4	--	---
---NITZSCHIA LINEARIS	--	---	--	---	--	---	22	0.3	--	---	--	---
---NITZSCHIA PALEACEA	--	---	--	---	154	1.1	22	0.3	--	---	12	0.2
CYANOPHYTA BLUE-GREEN ALGAE												
---HYXOPHYCEAE												
---OSCILLATORIALES												
---OSCILLATORIA												
---OSCILLATORIA SPP.	--	---	--	---	--	---	--	---	--	---	12	0.2

SANDY RIVER BASIN

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

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984--Continued

DATE	--- SITE 1 ---											
	80/08/07		80/09/03		SLIDE 1 80/10/05		SLIDE 2 80/10/05		80/11/06		81/07/13	
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.74		1.77		2.14		2.13		3.12		2.60	
EQUITABILITY	.47		.53		.64		.61		.82		.60	
TOTAL COUNT (CELLS/SQ.INCH)*1000	822.		1307.		2855.		2310.		1662.		214.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	29		27		64		33		31		26	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
CHLOROPHYTA GREEN ALGAE												
---CHLOROPHYCEAE												
---VOLVOCALES												
---CHLAMYDOMONADACEAE												
---CHLAMYDOMONAS-LIKE	6	0.7	--	---	--	---	--	---	--	---	--	---
CRYPTOPHYTA												
---CRYPTOPHYCEAE												
---CRYPTOMONADALES												
---CRYPTOCHRYSIDACEAE												
---RHODOMONAS MINUTA	--	---	--	---	--	---	--	---	--	---	7	3.5
CHRYSTOPHYTA YELLOW-BROWN ALGAE												
---CHRYSTOPHYCEAE												
---CHRYSONOMADALES												
---CHROMULINACEAE												
---KEPHYRION LITTORALE	--	---	--	---	--	---	--	---	--	---	2	0.9
---KEPHYRION SPIRALE	--	---	--	---	--	---	--	---	--	---	4	1.7
---OCHROMONADACEAE												
---DINOBRYON SERTULARIA	--	---	--	---	--	---	--	---	--	---	2	0.9
---BACILLARIOPHYCEAE DIATOMS												
---CENTRALES CENTRIC DIATOMS												
---COSCINODISCAEAE												
---CYCLOTELLA GLOMERATA	--	---	--	---	--	---	--	---	--	---	2	0.9
---MELOSIRA VARIANS	--	---	--	---	--	---	21	0.9	--	---	--	---
---PENNALES PENNATE DIATOMS	--	---	5	0.4	--	---	10	0.5	--	---	--	---
---FRAGILARIACEAE												
---DIATOMA HIEMALE MESODON	12	1.4	--	---	--	---	135	5.9	423	25.5	28	13.1
---FRAGILARIA VAUCHERIAE	--	---	--	---	--	---	31	1.4	31	1.9	2	0.9
---HANNEA ARCUS	36	4.3	698	53.4	75	2.6	364	15.8	314	18.9	93	43.1
---SYNEDRA FASCICULATA	--	---	--	---	--	---	--	---	--	---	7	3.5
---SYNEDRA RADIANIS	--	---	--	---	--	---	--	---	--	---	2	0.9
---SYNEDRA ULNA	--	---	--	---	--	---	--	---	71	4.2	2	0.9
---ACHNANTHACEAE												
---ACHNANTHES LANCEOLATA	571	69.8	402	30.9	1323	46.4	1301	56.0	243	14.6	7	3.5
---ACHNANTHES LEWISIANA	6	0.7	--	---	--	---	--	---	--	---	--	---
---ACHNANTHES MINUTISSIMA	30	3.6	32	2.4	436	15.3	146	6.3	86	5.2	7	3.5
---COCCONEIS PLACENTULA	48	5.8	--	---	706	24.7	--	---	86	5.2	2	0.9
---COCCONEIS PLACENTULA ENGLYPTA	6	0.7	37	2.8	--	---	177	7.7	--	---	--	---
---NAVICULACEAE												
---NAVICULA SPP.	6	0.7	--	---	--	---	--	---	--	---	--	---
---GOMPHONEMACEAE												
---GOMPHONEMA ANGUSTATUM	71	8.7	11	0.8	90	3.2	52	2.3	31	1.9	4	1.7
---GOMPHONEMA SUBCLAVATUM	18	2.2	11	0.8	--	---	--	---	16	0.9	--	---
---CYMBELLACEAE												
---CYMBELLA MEXICANA	--	---	--	---	15	0.5	--	---	--	---	--	---
---CYMBELLA MINUTA	--	---	5	0.4	15	0.5	--	---	39	2.4	--	---
---NITZSCHIAEAE												
---NITZSCHIA SPP.	--	---	--	---	--	---	21	0.9	--	---	--	---
---NITZSCHIA ACICULARIS	--	---	--	---	--	---	--	---	--	---	2	0.9
---NITZSCHIA DISSIPATA	12	1.4	11	0.8	--	---	--	---	71	4.2	2	0.9
---NITZSCHIA FRUSTULUM	--	---	--	---	15	0.5	--	---	24	1.4	--	---
---NITZSCHIA PALEACEA	--	---	95	7.3	60	2.1	52	2.3	196	11.8	--	---
CYANOPHYTA BLUE-GREEN ALGAE												
---MYXOPHYCEAE												
---CHROOCOCCALES												
---CHROOCOCCACEAE												
---CHROOCOCCUS SPP.	--	---	--	---	120	4.2	--	---	31	1.9	39	18.3

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

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984--Continued

DATE	81/08/17		81/09/15		--- SITE 1 --- 81/10/13		82/07/26		82/08/23		82/09/23	
SPECIES DIVERSITY(BRILLOUIN INDEX)	0.81		2.06		1.64		1.76		0.71		1.16	
EQUITABILITY	.34		.55		.50		.52		.19		.34	
TOTAL COUNT (CELLS/SQ.INCH)*1000	1499.		246.		289.		820.		531.		463.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	35		29		28		32		28		31	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
MISCELLANEOUS GREEN ALGAE	--	---	--	---	--	---	16	2.0	4	0.7	--	---
CHRYSOPHYTA YELLOW-BROWN ALGAE												
-CHRYSOPHYCEAE												
--CHRYSONOMADALES												
---CHROMULINACEAE												
---KEPHYRION SPIRALE	--	---	--	---	--	---	4	0.5	--	---	--	---
-BACILLARIOPHYCEAE DIATOMS												
--CENTRALES CENTRIC DIATOMS												
---COSCINODISCACEAE												
---MELOSIRA VARIANS	--	---	29	11.9	8	2.8	28	3.4	--	---	--	---
---PENNALES PENNATE DIATOMS												
---FRAGILARIACEAE												
---DIATOMA HIEMALE MESODON	--	---	21	8.4	19	6.5	36	4.4	--	---	--	---
---FRAGILARIA VAUCHERIAE	--	---	3	1.4	--	---	--	---	--	---	--	---
---HANNEA ARCUS	--	---	15	6.3	12	4.1	4	0.5	2	0.4	2	0.5
---SYNEDRA RUMPENS	--	---	--	---	53	18.4	--	---	--	---	7	1.5
---ACHNANTHACEAE												
----ACHNANTHES LANCEOLATA	1255	83.7	145	58.7	185	64.1	550	67.0	476	89.8	363	78.4
----ACHNANTHES LINEARIS	--	---	--	---	--	---	--	---	--	---	5	1.0
----ACHNANTHES LEWISIANA	--	---	2	0.7	1	0.5	--	---	--	---	--	---
----ACHNANTHES MINUTISSIMA	186	12.4	7	2.8	--	---	85	10.3	19	3.6	26	5.5
----COCCONEIS PLACENTULA	--	---	--	---	5	1.8	--	---	6	1.1	49	10.6
----COCCONEIS PLACENTULA ENGLYPTA	35	2.3	9	3.5	--	---	--	---	--	---	--	---
---NAVICULACEAE												
---NAVICULA CRYPTOCEPHALA	--	---	2	0.7	--	---	--	---	2	0.4	--	---
---GOMPHONEMACEAE												
---GOMPHONEMA ANGUSTATUM	17	1.2	7	2.8	--	---	20	2.5	12	2.2	7	1.5
---GOMPHONEMA SUBCLAVATUM	--	---	--	---	--	---	16	2.0	--	---	--	---
---CYMBELLACEAE												
---AMPHORA PERPUSILLA	6	0.4	--	---	--	---	--	---	--	---	--	---
---CYMBELLA MINUTA	--	---	3	1.4	--	---	--	---	4	0.7	2	0.5
---NITZSCHIAEAE												
----NITZSCHIA DISSIPATA	--	---	--	---	3	0.9	--	---	--	---	--	---
----NITZSCHIA FRUSTULUM	--	---	3	1.4	3	0.9	--	---	--	---	--	---
----NITZSCHIA PALEACEA	--	---	--	---	--	---	61	7.4	6	1.1	2	0.5

DATE	82/10/18	83/07/20	--- SITE 1 --- SLIDE 1 83/08/11		SLIDE 2 83/08/11		SITE 2 SLIDE 1 83/08/11		SITE 2 SLIDE 2 83/08/11	
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.08	2.32	2.42		2.59		2.60		2.17	
EQUITABILITY	.53	.64	.62		.68		.75		.60	
TOTAL COUNT (CELLS/SQ.INCH)*1000	201.	300.	278.		707.		1208.		1561.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	25	24	22		22		22		22	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
CHLOROPHYTA GREEN ALGAE										
--CHLOROPHYCEAE										
--ULOTRICHIALES										
---ULOTRICHACEAE										
----ULOTHRIX SPP.	--	---	9	3.2	36	13.0	149	21.1	265	21.9
CHRYSOPHYTA YELLOW-BROWN ALGAE										
--BACILLARIOPHYCEAE DIATOMS										
--CENTRALES CENTRIC DIATOMS										
---COSCINODISCACEAE										
----MELOSIRA VARIANS	--	---	--	---	6	2.2	--	---	--	---
----STEPHANODISCUS ASTREA MINUTULA	--	---	--	---	--	---	113	16.0	--	---
--PENNALES PENNATE DIATOMS										
---FRAGILARIACEAE										
----DIATOMA HIEMALE MESODON	1	0.7	28	9.5	8	2.7	34	4.8	171	14.1
---FRAGILARIA CONSTRUENS	3	1.3	--	---	--	---	--	---	--	---
---FRAGILARIA VAUCHERIAE	--	---	--	---	3	1.1	--	---	175	14.5
---HANNEA ARCUS	4	2.0	55	18.4	23	8.1	253	35.7	393	32.5
---SYNEDRA RUMPENS	--	---	2	0.5	2	0.5	--	---	--	---
---SYNEDRA ULNA	--	---	--	---	--	---	2	0.3	4	0.4
---ACHNANTHACEAE										
----ACHNANTHES LANCEOLATA	55	27.2	139	46.4	137	49.3	77	10.9	85	7.1
----ACHNANTHES LINEARIS	1	0.7	--	---	--	---	--	---	--	---
----ACHNANTHES LEWISIANA	1	0.7	--	---	2	0.5	--	---	--	---
----ACHNANTHES MINUTISSIMA	36	17.9	25	8.4	9	3.2	19	2.7	26	2.1
----COCCONEIS PLACENTULA	86	42.2	3	1.1	14	4.9	10	1.4	4	0.4
----RHOICOSPHENIA CURVATA	1	0.7	--	---	--	---	--	---	--	---
---NAVICULACEAE										
----NAVICULA CONTENTA BICEPS	--	---	--	---	2	0.5	--	---	--	---
---NEIDIUM SPP.	--	---	--	---	--	---	2	0.3	--	---
---GOMPHONEMACEAE										
----GOMPHONEMA SPP.	--	---	2	0.5	--	---	--	---	--	---
----GOMPHONEMA ANGUSTATUM	3	1.3	27	8.9	33	11.9	24	3.4	34	2.8
----GOMPHONEMA SUBCLAVATUM	--	---	6	2.1	4	1.6	5	0.7	17	1.4
---CYMBELLACEAE										
----CYMBELLA MINUTA	4	2.0	--	---	--	---	5	0.7	--	---
---NITZSCHIAEAE										
----NITZSCHIA SPP.	5	2.6	2	0.5	2	0.5	--	---	--	---
----NITZSCHIA DISSIPATA	1	0.7	--	---	--	---	12	1.7	34	2.8
----NITZSCHIA PALEACEA	--	---	2	0.5	--	---	2	0.3	--	---

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

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984--Continued

DATE	SITE 3 SLIDE 1 83/08/11	SITE 3 SLIDE 2 83/08/11	SLIDE 1 83/09/29	--- SITE 1 --- SLIDE 2 83/09/29	SLIDE 1 83/10/27	SLIDE 2 83/10/27
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.57	2.59	0.86	1.23	2.24	2.37
EQUITABILITY	.62	.70	.42	.53	.55	.63
TOTAL COUNT (CELLS/SQ.INCH)*1000	733.	322.	2145.	2023.	54.	542.
PERIPHYTON SLIDE EXPOSURE (DAYS)	22	22	49	49	29	29
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT
CHLOROPHYTA GREEN ALGAE						
-CHLOROPHYCEAE						
--ULOTRICHALES						
---ULOTRICHACEAE						
----ULOTHRIX SPP.	347 47.5	30 9.2	-- --	-- --	-- --	-- --
CHRYSOPHYTA YELLOW-BROWN ALGAE						
-BACILLARIOPHYCEAE DIATOMS						
--CENTRALES CENTRIC DIATOMS						
---COSCINODISCACEAE						
----MELOSIRA VARIANS	38 5.2	-- --	-- --	-- --	-- --	-- --
---PENNALES PENNATE DIATOMS						
----FRAGILARIACEAE						
-----DIATOMA HIEMALE MESODON	31 4.2	31 9.6	-- --	-- --	15 27.3	16 2.9
-----FRAGILARIA VAUCHERIAE	9 1.3	8 2.6	-- --	-- --	-- --	8 1.4
-----HANNEA ARCUS	114 15.5	136 42.0	-- --	-- --	8 14.4	239 44.3
-----SYNEDRA RUMPENS	-- --	-- --	-- --	-- --	2 3.8	4 0.7
-----SYNEDRA ULNA	2 0.3	-- --	-- --	-- --	-- --	12 2.2
---ACHNANTHACEAE						
----ACHNANTHES LANCEOLATA	31 4.2	44 13.5	1753 81.8	1340 66.3	18 33.8	153 28.3
----ACHNANTHES LINEARIS	2 0.3	-- --	-- --	-- --	-- --	-- --
----ACHNANTHES LEWISIANA	36 4.9	-- --	-- --	-- --	-- --	-- --
----ACHNANTHES MINUTISSIMA	69 9.4	11 3.5	102 4.7	119 5.9	4 6.8	20 3.6
----COCCONEIS PLACENTULA	5 0.6	1 0.4	282 13.1	538 26.6	5 9.1	27 5.1
---NAVICULACEAE						
----NAVICULA CONTENTA BICEPS	2 0.3	-- --	-- --	-- --	-- --	-- --
---GOMPHONEMACEAE						
----GOMPHONEMA SPP.	-- --	3 0.9	-- --	-- --	.4 .8	-- --
----GOMPHONEMA ANGUSTATUM	24 3.2	34 10.5	8 0.4	-- --	-- --	4 0.7
----GOMPHONEMA SUBCLAVATUM	14 1.9	11 3.5	-- --	-- --	-- --	20 3.6
---CYMBELLACEAE						
----CYMBELLA MINUTA	-- --	4 1.3	-- --	-- --	.4 .8	12 2.2
---NITZSCHIAEAE						
----NITZSCHIA SPP.	2 0.3	-- --	-- --	17 0.8	-- --	4 0.7
----NITZSCHIA DISSIPATA	5 0.6	1 0.4	-- --	-- --	.4 .8	23 4.3
----NITZSCHIA FRUSTULUM	-- --	-- --	-- --	-- --	.4 .8	-- --
----NITZSCHIA PALEACEA	2 0.3	8 2.6	-- --	9 0.4	.4 .8	-- --
---MISCELLANEOUS PENNATE DIATOMS	-- --	-- --	-- --	-- --	.4 .8	-- --
DATE	84/08/16	84/09/07				
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.86	2.13				
EQUITABILITY	.50	.57				
TOTAL COUNT (CELLS/SQ.INCH) * 1000	2229.	641.				
PERIPHYTON SLIDE EXPOSURE (DAYS)	35	21				
	COUNT PCT	COUNT PCT				
CHLOROPHYTA GREEN ALGAE						
-CHLOROPHYCEAE						
--ULOTRICHALES						
---ULOTRICHACEAE						
----ULOTHRIX SPP.	-- --	311 48.5				
CHRYSOPHYTA YELLOW-BROWN ALGAE						
-BACILLARIOPHYCEAE DIATOMS						
--CENTRALES CENTRIC DIATOMS						
---COSCINODISCACEAE						
----MELOSIRA VARIANS	125 5.6	-- --				
---PENNALES PENNATE DIATOMS						
----FRAGILARIACEAE						
-----DIATOMA HIEMALE MESODON	-- --	17 2.6				
-----FRAGILARIA VAUCHERIAE	-- --	2 0.4				
-----HANNEA ARCUS	38 1.7	159 24.8				
---ACHNANTHACEAE						
----ACHNANTHES LANCEOLATA	1503 67.4	84 13.2				
----ACHNANTHES LINEARIS	38 1.7	-- --				
----ACHNANTHES LEWISIANA	13 0.6	-- --				
----ACHNANTHES MINUTISSIMA	125 5.6	5 0.8				
----COCCONEIS PLACENTULA	225 10.1	7 1.1				
---NAVICULACEAE						
----NAVICULA CRYPTOCEPHALA	13 0.6	2 0.4				
---GOMPHONEMACEAE						
----GOMPHONEMA ANGUSTATUM	25 1.1	10 1.5				
----GOMPHONEMA SUBCLAVATUM	13 0.6	-- --				
---CYMBELLACEAE						
----CYMBELLA MINUTA	25 1.1	22 3.4				
---NITZSCHIAEAE						
----NITZSCHIA SPP.	-- --	7 1.1				
----NITZSCHIA DISSIPATA	63 2.8	10 1.5				
----NITZSCHIA FRUSTULUM	25 1.1	5 0.8				

14138955 UPPER COUGAR CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°30'06", long 122°04'03", in NE1NE1 sec.9, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, at culvert on Forest Service road S-123, upstream from Bull Run Reservoir Number One.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Biological analyses: October 1978 to September 1984.

REMARKS.--Chemical data available from the City of Portland Water Quality Laboratory.

PERIPHYTON DATA, WATER YEARS OCTOBER 1978 TO SEPTEMBER 1984

DATE	79/08/09		79/10/29		80/07/09		80/08/07		80/09/03		80/11/03	
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.03		1.08		1.20		1.65		1.63		1.92	
EQUITABILITY	.58		.31		.37		.64		.63		.84	
TOTAL COUNT (CELLS/SQ. INCH)*1000	861.		1356.		1402.		689.		1519.		251.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	72		48		33		29		27		31	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
CHLOROPHYTA GREEN ALGAE	--	---	--	---	39	2.8	--	---	--	---	--	---
-CHLOROPHYCEAE												
--VOLVOCALES												
---CHLAMYDOMONADACEAE												
----CHLAMYDOMONAS-LIKE	--	---	--	---	2	1.5	--	---	--	---	--	---
---ULOTRICHALES												
----ULOTRICHACEAE												
-----ULOTHRIX SPP.	--	---	110	8.1	--	---	--	---	--	---	--	---
CHRYSOPHYTA YELLOW-BROWN ALGAE												
-BACILLARIOPHYCEAE DIATOMS												
--PENNALES PENNATE DIATOMS	9	1.1	--	---	4	0.3	--	---	--	---	--	---
---FRAGILARIACEAE												
----DIATOMA HIEMALE MESODON	61	7.1	34	2.5	310	21.8	13	1.9	399	26.3	103	41.0
----DIATOMA VULGARE	21	2.4	--	---	--	---	--	---	--	---	--	---
----HANNEA ARCUS	49	5.7	8	0.6	1004	70.6	231	32.7	818	53.8	36	14.4
----SYNEDRA RUMPENS	5	0.5	4	0.3	13	0.9	--	---	6	0.4	5	2.1
---EUNOTIACEAE												
----EUNOTIA TENELLA	14	1.6	4	0.3	--	---	--	---	--	---	--	---
----EUNOTIA SPP.	--	---	--	---	--	---	6	0.9	--	---	--	---
---ACHNANTHACEAE												
----ACHNANTHES LANCEOLATA	--	---	17	1.2	4	0.3	--	---	--	---	--	---
----ACHNANTHES LINEARIS	33	3.8	17	1.2	--	---	--	---	--	---	--	---
----ACHNANTHES MINUTISSIMA	527	61.2	--	---	22	1.5	331	48.6	232	15.3	67	26.7
---NAVICULACEAE												
----NAVICULA CRYPTOCEPHALA	--	---	--	---	--	---	6	0.9	--	---	--	---
---GOMPHONEMACEAE												
----GOMPHONEMA ANGUSTATUM	98	11.4	38	2.8	--	---	102	15.0	58	3.8	40	15.8
----GOMPHONEMA SUBCLAVATUM	9	1.1	8	0.6	4	0.3	--	---	--	---	--	---
---CYMBELLACEAE												
----CYMBELLA MINUTA	35	4.1	--	---	--	---	--	---	6	0.4	--	---
---NITZSCHACEAE												
----CYLINDROTHECA GRACILIS	--	---	1116	82.4	--	---	--	---	--	---	--	---
DATE	81/08/17		81/09/15		81/10/13		82/06/24		82/07/26		82/09/23	
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.34		2.41		1.54		1.90		2.24		2.77	
EQUITABILITY	.75		.73		.44		.59		.87		.78	
TOTAL COUNT (CELLS/SQ. INCH)*1000	172.		817.		18.		304.		43.		715.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	33		29		28		30		32		30	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
CHLOROPHYTA GREEN ALGAE												
-CHLOROPHYCEAE												
--ULOTRICHALES												
---ULOTRICHACEAE												
-----ULOTHRIX SPP.	12	6.9	52	6.3	--	---	--	---	--	---	--	---
MISCELLANEOUS GREEN ALGAE	--	---	--	---	--	---	15	5.0	9	20.9	11	1.5
CHRYSOPHYTA YELLOW-BROWN ALGAE												
-CHRYSOPHYCEAE												
---CHRYSONOMADALES												
---CHROMULINACEAE												
----KEPHYRION LITTORALE	--	---	5	0.6	--	---	--	---	--	---	--	---
----KEPHYRION SPIRALE	--	---	--	---	--	---	1	0.5	--	---	--	---
-BACILLARIOPHYCEAE DIATOMS												
--PENNALES PENNATE DIATOMS												
---FRAGILARIACEAE												
----DIATOMA HIEMALE MESODON	6	3.5	124	15.2	9	49.8	103	33.6	2	4.6	106	14.8
----FRAGILARIA VAUCHERIAE	--	---	5	0.6	--	---	1	0.5	--	---	--	---
----HANNEA ARCUS	24	13.9	243	29.7	1	5.6	126	41.2	5	11.6	18	2.6
----SYNEDRA RUMPENS	12	6.9	52	6.3	1	5.6	47	15.5	4	9.3	120	16.8
---EUNOTIACEAE												
----EUNOTIA INCISA	--	---	--	---	--	---	--	---	--	---	26	3.6
----EUNOTIA PECTINALIS	--	---	--	---	1	5.6	--	---	--	---	15	2.0
----EUNOTIA PERPUSILLA	--	---	--	---	--	---	--	---	--	---	7	1.0
----EUNOTIA TENELLA	1	0.5	--	---	--	---	--	---	--	---	--	---
---ACHNANTHACEAE												
----ACHNANTHES LANCEOLATA	1	0.5	--	---	--	---	--	---	--	---	4	0.5
----ACHNANTHES LINEARIS	--	---	--	---	--	---	4	1.4	--	---	--	---
----ACHNANTHES LEWISIANA	--	---	5	0.6	--	---	--	---	--	---	--	---
----ACHNANTHES MINUTISSIMA	72	42.0	269	33.1	5	27.8	4	1.4	12	28.1	233	32.7
---GOMPHONEMACEAE												
----GOMPHONEMA ANGUSTATUM	25	14.4	41	5.1	1	5.6	3	0.9	9	20.9	80	11.2
----GOMPHONEMA SUBCLAVATUM	--	---	--	---	--	---	--	---	2	4.6	18	2.6
---CYMBELLACEAE												
----CYMBELLA MINUTA	19	11.4	21	2.5	--	---	--	---	--	---	77	10.7

SANDY RIVER BASIN

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14138955 UPPER COUGAR CREEK NEAR BULL RUN, OR--Continued

PERIPHYTON DATA, WATER YEARS OCTOBER 1978 TO SEPTEMBER 1984--Continued

DATE	82/10/20	83/08/11	SLIDE 1 83/09/29	SLIDE 2 83/09/29
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.37	2.00	2.76	2.39
EQUITABILITY	.44	.71	.84	.76
TOTAL COUNT (CELLS/SQ.INCH)*1000	645.	620.	1192.	736.
PERIPHYTON SLIDE EXPOSURE (DAYS)	27	22	49	49
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT
CHLOROPHYTA GREEN ALGAE				
-CHLOROPHYCEAE				
--ULOTRICHALES				
---ULOTRICHACEAE				
----ULOTHRIX SPP.	--	--	188 15.8	14 2.0
---CHAETOPHORALES				
----CHAETOPHORACEAE				
-----STIGEOCLONIUM SPP.	--	--	--	126 17.2
MISCELLANEOUS GREEN ALGAE	.5 0.8	--	--	--
CHRYSTOPHYTA YELLOW-BROWN ALGAE				
-BACILLARIOPHYCEAE DIATOMS				
--PENNALES PENNATE DIATOMS				
---FRAGILARIACEAE				
----DIATOMA HIEMALE MESODON	484 74.9	213 34.4	247 20.7	87 11.8
----FRAGILARIA VAUCHERIAE	--	--	35 3.0	--
----HANNEA ARCUS	24 3.8	168 27.1	270 22.5	61 8.3
----MERIDION CIRCULARE	--	3 0.5	--	--
----SYNEDRA RUMPENS	51 8.0	174 28.1	23 2.0	4 0.5
---EUNOTIACEAE				
----EUNOTIA INCISA	10 1.5	--	--	--
---ACHNANTHACEAE				
----ACHNANTHES LANCEOLATA	2 0.4	--	--	--
----ACHNANTHES MINUTISSIMA	32 4.9	45 7.2	235 19.7	329 44.5
---GOMPHONEMACEAE				
----GOMPHONEMA ANGUSTATUM	37 5.7	6 0.9	23 2.0	43 5.9
----GOMPHONEMA SUBCLAVATUM	--	11 1.8	18 1.5	36 4.9
---CYMBELLACEAE				
----CYMBELLA MINUTA	--	--	106 8.9	36 4.9
CYANOPHYTA BLUE-GREEN ALGAE				
-MYXOPHYCEAE				
--CHROOCOCCALES				
---CHROOCOCCACEAE				
----CHROOCOCCUS SPP.	--	--	47 3.9	--

DATE	84/08/16
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.95
EQUITABILITY	.61
TOTAL COUNT (CELLS/SQ.INCH) * 1000	680.
PERIPHYTON SLIDE EXPOSURE (DAYS)	35

	COUNT PCT
CHRYSTOPHYTA YELLOW-BROWN ALGAE	
-BACILLARIOPHYCEAE DIATOMS	
--PENNALES PENNATE DIATOMS	
---FRAGILARIACEAE	
----DIATOMA HIEMALE MESODON	239 35.1
----FRAGILARIA VAUCHERIAE	3 0.4
----HANNEA ARCUS	39 5.7
----MERIDION CIRCULARE	3 0.4
----SYNEDRA RUMPENS	18 2.6
---ACHNANTHACEAE	
----ACHNANTHES LINEARIS	6 0.9
----ACHNANTHES MINUTISSIMA	289 42.5
---GOMPHONEMACEAE	
----GOMPHONEMA ANGUSTATUM	9 1.3
---CYMBELLACEAE	
----CYMBELLA MINUTA	75 11.0

SANDY RIVER BASIN

14138960 LOWER COUGAR CREEK NEAR BULL RUN, OR

WATER-QUALITY RECORDS

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 upstream from Bull Run Reservoir Number One, and 9.4 mi northeast of Bull Run.

DRAINAGE AREA.--3.06 mi².

PERIOD OF RECORD.--Benthic invertebrate analyses: July 1979 to August 1981.
Periphyton analyses: July 1978 to current year.

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1978 TO SEPTEMBER 1981

	SITE 1		SITE 2		SITE 3		SITE 1		SITE 2		SITE 3	
DATE	79/07/24		79/07/24		79/07/24		80/08/19		80/08/19		80/08/19	
HABITAT (riffles; cobbles)												
SPECIES DIVERSITY (BRILLOUIN INDEX)	3.37		2.89		3.41		3.10		2.03		1.83	
EQUITABILITY	.66		.63		.67		.65		.36		.42	
TOTAL COUNT	882.		313.		1281.		1338.		407.		212.	
(NO./SQ.FOOT)												
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
NEMATODA	--	---	--	---	--	---	8	0.6	1	0.2	--	---
PLATYHELMINTHES												
-TURBELLARIA	4	0.1	--	---	13	1.0	22	1.6	--	---	--	---
ANNELIDA												
-OLIGOCHAETA	40	4.5	25	8.0	141	10.9	70	5.2	3	0.8	--	---
ARTHROPODA												
-CRUSTACEA												
--AMPHIPODA												
---GAMMARIDAE												
----GAMMARUS	--	---	--	---	--	---	3	0.2	--	---	1	0.5
-OSTRACODA	66	7.5	34	10.9	100	7.8	200	15.0	1	0.2	5	2.3
-BRANCHIOPODA												
--CLADOCERA	--	---	--	---	--	---	--	---	1	0.2	--	---
-COPEPODA	36	4.1	3	1.0	111	8.6	25	1.9	--	---	--	---
-INSECTA												
--DIPTERA	1	0.1	--	---	--	---	--	---	--	---	--	---
---CHAOBORIDAE	--	---	--	---	--	---	--	---	1	0.2	--	---
---CERATOPOGONIDAE (ADULTS)	--	---	--	---	1	0.1	--	---	--	---	--	---
---DASYHELEA	--	---	--	---	--	---	--	---	1	0.2	--	---
---TIPULIDAE												
----ANTOCHA	8	0.9	2	0.6	4	0.3	8	0.6	--	---	1	0.5
----HEXATOMA	1	0.1	1	0.3	--	---	--	---	--	---	--	---
----DICRANOTA	--	---	--	---	3	0.2	--	---	--	---	--	---
----SIMULIIDAE	--	---	--	---	1	0.1	--	---	--	---	--	---
----STRATIOMYIIDAE	--	---	--	---	1	0.1	--	---	--	---	--	---
----PTYCOTERIDAE	--	---	--	---	--	---	--	---	1	0.2	--	---
----EMPIDIDAE	--	---	--	---	1	0.1	--	---	1	0.2	--	---
---CHIRONOMIDAE (LARVAE)	266	30.6	129	41.2	221	17.1	302	23.0	152	37.0	105	49.6
---CHIRONOMIDAE (PUPAE)	10	1.1	8	2.6	6	0.5	3	0.2	3	1.0	2	0.9
---TRICHOPTERA	7	0.8	3	1.0	--	---	--	---	--	---	--	---
---HYDROPSYCHIDAE	4	0.5	--	---	11	0.9	--	---	--	---	--	---
---HYDROPSYCHE	--	---	--	---	--	---	24	1.8	--	---	--	---
---CHEUMATOPSYCHE	--	---	--	---	--	---	--	---	1	0.2	--	---
---PARAPSYCHE	--	---	--	---	1	0.1	--	---	--	---	--	---
---ARCTOPSYCHE	--	---	--	---	--	---	--	---	1	0.2	--	---
---PSYCHOMYIIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---PSYCHOMYIA	--	---	--	---	--	---	--	---	2	0.5	--	---
---RYACOPHILIDAE	--	---	--	---	1	0.1	--	---	--	---	--	---
---RHYACOPHILA	5	0.6	--	---	2	0.2	10	0.7	1	0.2	2	0.9
---HYDROPTILIDAE												
----HYDROPTILA	--	---	1	0.3	--	---	--	---	5	1.2	--	---
---OCHROTRICHIA	4	0.5	3	1.0	--	---	--	---	1	0.2	--	---
---LEPTOCERIDAE												
---OECETIS	54	6.1	24	7.6	40	3.1	--	---	--	---	--	---
---PHILOPOTAMIDAE	--	---	--	---	--	---	--	---	--	---	1	0.5
---BRACHYCENTRIDAE												
---BRACHYCENYTRUS	--	---	--	---	--	---	--	---	1	0.2	--	---
---AMIOCENSTRUS	--	---	--	---	--	---	--	---	--	---	1	0.5
---LIMNAPHILIDAE	16	1.8	8	2.6	17	1.3	23	1.8	--	---	--	---
---GLOSSOSOMATIDAE	3	0.3	--	---	--	---	--	---	--	---	--	---
---GLOSSASOMA	--	---	--	---	--	---	6	0.4	1	0.2	2	0.9
---POLYCENTROPODIDAE	--	---	--	---	--	---	--	---	1	0.2	--	---
---PLECOPTERA	1	0.1	--	---	--	---	--	---	--	---	--	---
---PELTOPERLIDAE												
---PELTOPERLA	1	0.1	--	---	1	0.1	1	0.1	--	---	--	---
---NEMOURIDAE												
---NEMOURA	13	1.5	3	1.0	27	2.1	--	---	--	---	--	---
---PERLIDAE												
---ACRONEURIA	--	---	--	---	3	0.2	73	5.5	--	---	4	1.9
---HESPOPERLA	1	0.1	1	0.3	2	0.2	--	---	--	---	--	---
---PERLODIDAE	--	---	--	---	--	---	1	0.1	--	---	--	---
---ISOPERLA	--	---	1	0.3	--	---	--	---	5	1.2	--	---
---ARCYNOPTERYX	2	0.2	--	---	7	0.5	--	---	--	---	--	---
---ISOGENUS	5	0.6	--	---	11	0.9	--	---	--	---	--	---
---MEGARCYS	1	0.1	--	---	--	---	--	---	--	---	--	---

14138960 LOWER COUGAR CREEK NEAR BULL RUN, OR--Continued

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1978 TO SEPTEMBER 1981--Continued

DATE	SITE 1		SITE 2		SITE 3		SITE 1		SITE 2		SITE 3	
	79/07/24		79/07/24		79/07/24		80/08/19		80/08/19		80/08/19	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
ARTHROPODA												
-INSECTA												
--PLECOPTERA												
---CHLOROPERLIDAE	--	---	--	---	--	---	5	0.4	--	---	--	---
---HASTAPERLA	--	---	--	---	3	0.2	--	---	--	---	--	---
---PARAPERLA	--	---	--	---	--	---	--	---	--	---	1	0.5
---CAPNIIDAE	5	0.6	2	0.6	3	2.4	--	---	--	---	--	---
---LEUCTRIDAE	--	---	--	---	--	---	--	---	1	0.2	--	---
---COLEOPTERA												
---ELMIDAE (ADULTS)	1	0.1	--	---	--	---	1	0.1	--	---	--	---
---DYTISCIDAE (ADULTS)	8	0.9	5	1.6	2	0.2	--	---	--	---	--	---
---COLLEMBOLA												
---ENTOMOBRYIDAE	--	---	--	---	--	---	--	---	1	0.2	--	---
---HYMENOPTERA												
---SCELIONIDAE												
---TIPHYODOTES	--	---	--	---	--	---	--	---	--	---	1	0.5
---EULOPHIDAE	--	---	--	---	--	---	1	0.1	--	---	--	---
---EPHEMEROPTERA												
---EPHEMERELLIDAE												
---EPHEMERELLA	--	---	--	---	--	---	13	1.0	--	---	--	---
---DRUNELLA	2	0.2	--	---	--	---	--	---	--	---	--	---
---SERATELLA	18	2.0	2	0.6	19	1.5	--	---	--	---	--	---
---LEPTOPHLEBIIDAE												
---PARALEPTOPHLEBIA	44	5.0	5	1.6	73	5.7	67	5.0	6	1.5	--	---
---BAETIDAE												
---BAETIS	137	15.6	17	5.4	185	14.3	377	27.7	180	45.1	73	34.4
---CALLEBAETIS	--	---	--	---	--	---	--	---	1	0.2	--	---
---SIPHONURIDAE												
---AMELETUS	--	---	--	---	--	---	--	---	2	0.5	--	---
---HEPTAGENIIDAE	--	---	--	---	6	0.5	--	---	--	---	--	---
---EPEORUS IRON	--	---	--	---	2	0.2	3	0.2	--	---	--	---
---CINYGMA	--	---	--	---	--	---	4	0.3	--	---	--	---
---CINYGMULA	10	1.1	3	1.0	--	---	2	0.1	--	---	--	---
---RHITHROGENA	--	---	--	---	5	0.4	--	---	1	0.2	--	---
---STENONEMA	--	---	--	---	--	---	--	---	--	---	2	0.9
-ARACHNIDA												
-ACARINA	107	12.1	33	10.5	257	18.1	83	6.2	31	7.6	11	5.2
MOLLUSCA												
-GASTROPODA	1	0.1	--	---	--	---	3	0.2	--	---	--	---

DATE	SITE 1		SITE 2		SITE 3	
	81/08/05		81/08/05		81/08/05	
HABITAT	pool; sand cobble		riffle; sand cobble		pool; cobbles	
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.30		2.27		1.73	
EQUITABILITY	.54		.59		.38	
TOTAL COUNT (NO./SQ.FOOT)	325.		192.		460.	
	COUNT	PCT	COUNT	PCT	COUNT	PCT
ANNELIDA						
-OLIGOCHAETA	--	---	1	0.5	--	---
ARTHROPODA						
-OSTRACODA	10	3.1	--	---	10	2.2
-INSECTA						
---DIPTERA						
---TIPULIDAE	--	---	--	---	1	0.2
---HEXATOMA	--	---	--	---	1	0.2
---PEDICIA	11	3.4	--	---	1	0.2
---CHIRONOMIDAE (LARVAE)	180	55.6	87	45.4	264	57.7
---CHIRONOMIDAE (PUPAE)	14	4.3	4	2.1	3	0.6
---SCIARIDAE (ADULTS)	1	0.3	--	---	--	---
---TRICHOPTERA	1	0.3	--	---	--	---
---RYACOPHILIDAE						
---RHYACOPHILA	2	0.6	2	1.0	2	0.4
---PHILOPOTAMIDAE	--	---	--	---	1	0.2
---PLECOPTERA	--	---	--	---	2	0.4
---PELTOPERLIDAE	2	0.6	--	---	--	---
---PELTOPERLA	--	---	1	0.5	--	---
---PERLIDAE						
---CALINEURA	--	---	5	2.6	1	0.2
---PERLODIDAE	--	---	1	0.5	1	0.2
---CHLOROPERLIDAE	--	---	--	---	1	0.2
---ALLOPERLA	1	0.3	--	---	--	---
---COLEOPTERA						
---ELMIDAE (LARVAE)	--	---	--	---	1	0.2
---DYTISCIDAE (LARVAE)						
---OREODYTES (LARVAE)	17	5.2	--	---	11	2.4
---DYTISCIDAE (ADULTS)	5	1.5	--	---	--	---
---EPHEMEROPTERA						
---EPHEMERELLIDAE						
---DRUNELLA	1	0.3	4	2.1	2	0.4
---LEPTOPHLEBIIDAE						
---PARALEPTOPHLEBIA	13	4.0	10	5.2	1	0.2
---BAETIDAE						
---BAETIS	15	4.6	34	17.7	25	5.4
---SIPHONURIDAE						
---AMELETUS	4	1.2	3	1.6	3	0.6
---HEPTAGENIIDAE						
---CINYGMULA	3	0.9	5	2.6	--	---
-ARACHNIDA						
-ACARINA	45	13.8	35	18.2	130	28.3

SANDY RIVER BASIN

14138960 LOWER COUGAR CREEK NEAR BULL RUN, OR--Continued

14138960 PERIPHYTON DATA, WATER YEARS OCTOBER 1978 TO SEPTEMBER 1984

DATE	78/07/13	78/09/05	78/10/26	79/08/09	79/10/29	80/07/09
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.91	2.64	2.42	1.26	1.38	1.81
EQUITABILITY	.77	.71	.65	.33	.46	.57
TOTAL COUNT (CELLS/SQ.INCH)*1000	1087.	9717.	2839.	1678.	2736.	1304.
PERIPHYTON SLIDE EXPOSURE (DAYS)	56	53	51	72	48	33
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT
CHLOROPHYTA GREEN ALGAE	7 0.6	-- --	-- --	-- --	-- --	13 1.0
-CHLOROPHYCEAE						
--VOLVOCALES						
---CHLAMYDOMONADACEAE						
----CHLAMYDOMONAS-LIKE	163 15.0	879 9.0	37 1.3	-- --	-- --	-- --
---ULOTRICHALES						
----ULOTRICHACEAE						
-----ULOTHRIX ZONATA	43 4.0	1758 18.1	74 2.6	-- --	-- --	-- --
-----ULOTHRIX SPP.	121 11.1	-- --	-- --	138 8.2	-- --	-- --
---ZYGNEATALES						
----ZYGNEMATAACEAE						
-----MOUGEOTIA SPP.	-- --	-- --	-- --	-- --	186 6.8	-- --
CHRYSOPHYTA YELLOW-BROWN ALGAE						
-BACILLARIOPHYCEAE DIATOMS						
--PENNALES PENNATE DIATOMS	36 3.3	93 1.0	74 2.6	-- --	15 0.6	-- --
---FRAGILARIACEAE						
----DIATOMA HIEMALE MESODON	7 0.6	-- --	-- --	-- --	-- --	402 30.9
----FRAGILARIA VAUCHERIAE	7 0.6	-- --	-- --	16 1.0	340 12.4	20 1.5
----HANNEA ARCUS	64 5.9	2776 28.4	1365 48.3	28 1.7	-- --	652 50.0
----SYNEDRA ACUS	-- --	-- --	-- --	-- --	-- --	13 1.0
----SYNEDRA RUMPENS	192 17.7	93 1.0	387 13.6	106 6.3	31 1.1	26 2.0
---EUNOTIACEAE						
----EUNOTIA PRAERUPTA	-- --	93 1.0	-- --	-- --	-- --	-- --
----EUNOTIA TENELLA	-- --	-- --	-- --	8 0.5	-- --	-- --
---ACHNANTHACEAE						
----ACHNANTHES LANCEOLATA	14 1.3	509 5.2	184 6.5	-- --	-- --	-- --
----ACHNANTHES LINEARIS	21 1.9	185 1.9	55 1.9	12 0.7	15 0.6	7 0.5
----ACHNANTHES LEWISIANA	-- --	-- --	18 0.6	-- --	77 2.8	-- --
----ACHNANTHES MINUTISSIMA	334 30.9	2730 28.1	480 16.9	1322 78.8	2010 73.4	158 12.1
---COCCONEIS PLACENTULA ENGLYPTA	-- --	93 1.0	18 0.6	-- --	-- --	-- --
---NAVICULACEAE	71 6.5	416 4.3	-- --	-- --	-- --	-- --
---NAVICULA CRYPTOCEPHALA	-- --	-- --	-- --	4 0.2	-- --	-- --
---GOMPHONEMACEAE						
----GOMPHONEMA ANGUSTATUM	-- --	-- --	18 0.6	8 0.5	-- --	13 1.0
----GOMPHONEMA SUBCLAVATUM	-- --	-- --	-- --	4 0.2	62 2.3	-- --
---CYMBELLACEAE						
----CYMBELLA MINUTA	-- --	46 0.5	37 1.3	20 1.2	-- --	-- --
----CYMBELLA SINUATA	-- --	-- --	-- --	8 0.5	-- --	-- --
---NITZSCHIAEAE						
----NITZSCHIA LINEARIS	-- --	-- --	-- --	4 0.2	-- --	-- --
CYANOPHYTA BLUE-GREEN ALGAE						
-MYXOPHYCEAE						
---CHROOCOCCALES						
----CHROOCOCCACEAE						
-----ANACYSTIS SPP.	7 0.6	46 0.5	92 3.2	-- --	-- --	-- --
DATE	80/08/07	80/09/03	80/10/05	80/10/06	80/11/06	81/08/11
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.65	1.90	1.14	2.33	0.96	2.10
EQUITABILITY	.59	.63	.44	.67	.31	.70
TOTAL COUNT (CELLS/SQ.INCH)*1000	988.	1179.	2422.	1068.	1193.	1338.
PERIPHYTON SLIDE EXPOSURE (DAYS)	29	29	33	64	31	34
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT
CHLOROPHYTA GREEN ALGAE						
-CHLOROPHYCEAE						
--VOLVOCALES						
---CHLAMYDOMONADACEAE						
----CHLAMYDOMONAS-LIKE	-- --	23 2.0	1037 42.9	268 25.1	56 4.7	-- --
---ULOTRICHALES						
----ULOTRICHACEAE						
-----ULOTHRIX SPP.	-- --	-- --	-- --	142 13.3	-- --	130 9.7
CHRYSOPHYTA YELLOW-BROWN ALGAE						
-BACILLARIOPHYCEAE DIATOMS						
--PENNALES PENNATE DIATOMS	-- --	-- --	-- --	8 0.8	-- --	-- --
---FRAGILARIACEAE						
----FRAGILARIA PINNATA	-- --	-- --	8 0.3	-- --	-- --	-- --
----FRAGILARIA VAUCHERIAE	-- --	98 8.3	-- --	24 2.3	-- --	-- --
----HANNEA ARCUS	13 1.3	87 7.4	-- --	12 1.1	5 0.4	31 2.3
----SYNEDRA RUMPENS	107 10.8	110 9.3	8 0.3	37 3.4	35 3.0	167 12.5
---EUNOTIACEAE						
----EUNOTIA SPP.	-- --	-- --	8 0.3	-- --	-- --	-- --
---ACHNANTHACEAE						
----ACHNANTHES LINEARIS	-- --	-- --	-- --	-- --	-- --	12 0.9
----ACHNANTHES MINUTISSIMA	566 57.3	734 62.1	1338 55.3	455 42.6	1011 84.8	700 52.4
---GOMPHONEMACEAE						
----GOMPHONEMA SPP.	6 0.6	-- --	-- --	-- --	-- --	-- --
----GOMPHONEMA ANGUSTATUM	252 25.5	75 6.4	-- --	49 4.6	20 1.7	211 15.7
----GOMPHONEMA SUBCLAVATUM	31 3.2	29 2.5	23 0.9	53 4.9	51 4.2	37 2.8
---CYMBELLACEAE						
----CYMBELLA MINUTA	13 1.3	23 2.0	-- --	16 1.5	10 0.8	50 3.7
---NITZSCHIAEAE						
----NITZSCHIA AMPHIBIA	-- --	-- --	-- --	4 0.4	-- --	-- --
CYANOPHYTA BLUE-GREEN ALGAE						
---	-- --	-- --	-- --	-- --	5 0.4	-- --

SANDY RIVER BASIN

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14138960 LOWER COUGAR CREEK NEAR BULL RUN, OR--Continued

PERIPHYTON DATA, WATER YEARS OCTOBER 1978 TO SEPTEMBER 1984--Continued

DATE	81/09/11	81/10/20	82/06/25	82/07/26	82/08/23	82/09/23
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.51	1.71	2.02	0.74	0.97	1.74
EQUITABILITY	.73	.56	.63	.36	.34	.67
TOTAL COUNT (CELLS/SQ.INCH)*1000	560.	297.	190.	1224.	4117.	6219.
PERIPHYTON SLIDE EXPOSURE (DAYS)	31	39	32	31	28	31
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT
CHLOROPHYTA GREEN ALGAE	63 11.2	-- --	-- --	-- --	-- --	-- --
-CHLOROPHYCEAE						
--VOLVOCALES						
---CHLAMYDOMONADACEAE						
----CHLAMYDOMONAS-LIKE	34 6.0	-- --	-- --	-- --	-- --	1818 29.2
---ULOTRICHIALES						
----ULOTRICHACEAE						
-----ULOTHRIX SPP.	-- --	-- --	17 9.2	-- --	-- --	-- --
---ZYGNEMATALES						
----ZYGNEMATAACEAE						
-----SPIROGYRA SPP.	-- --	-- --	5 2.5	-- --	-- --	-- --
CHRYSOPHYTA YELLOW-BROWN ALGAE						
-CHRYSOPHYCEAE						
--CHRYSOMONADALES						
---CHROMULINACEAE						
----KEPHYRIUM SPIRALE	2 0.4	-- --	-- --	-- --	-- --	-- --
-BACILLARIOPHYCEAE DIATOMS						
--PENNALES PENNATE DIATOMS						
---FRAGILARIACEAE						
----DIATOMA HIEMALE MESODON	-- --	-- --	8 4.2	-- --	-- --	-- --
----FRAGILARIA VAUCHERIAE	140 25.0	-- --	-- --	-- --	53 1.3	-- --
----HANNEA ARCUS	19 3.4	15 5.1	71 37.5	-- --	27 0.6	-- --
----SYNEDRA RUMPENS	34 6.0	4 1.3	74 39.2	91 7.4	332 8.1	682 11.0
---ACHNANTHACEAE						
----ACHNANTHES LANCEOLATA	-- --	8 2.6	-- --	-- --	-- --	-- --
----ACHNANTHES LINEARIS	-- --	4 1.3	-- --	-- --	-- --	-- --
----ACHNANTHES LEWISIANA	-- --	-- --	2 0.8	-- --	-- --	-- --
----ACHNANTHES MINUTISSIMA	212 37.7	190 64.1	6 3.3	1052 86.0	3426 83.2	3223 51.9
---GOMPHONEMACEAE						
----GOMPHONEMA ANGUSTATUM	10 1.7	46 15.4	5 2.5	77 6.3	40 1.0	62 1.0
----GOMPHONEMA SUBCLAVATUM	5 0.9	19 6.4	-- --	-- --	212 5.2	351 5.6
---CYMBELLACEAE						
----CYMBELLA MINUTA	31 5.6	11 3.8	2 0.8	4 0.3	27 0.6	83 1.3
CYANOPHYTA BLUE-GREEN ALGAE						
-MYXOPHYCEAE						
--CHROOCOCCALES						
---CHROOCOCCACEAE						
----CHROOCOCCUS SPP.	10 1.7	-- --	-- --	-- --	-- --	-- --
DATE	82/10/18	83/08/11	SLIDE 1 83/09/29	SLIDE 2 83/09/29	SLIDE 1 83/10/27	SLIDE 2 83/10/27
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.47	1.92	1.82	1.36	1.39	1.32
EQUITABILITY	.48	.59	.71	.13	.45	.50
TOTAL COUNT (CELLS/SQ.INCH)*1000	1139.	212.	456.	1139.	20.	256.
PERIPHYTON SLIDE EXPOSURE (DAYS)	25	22	49	49	28	28
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT
CHLOROPHYTA GREEN ALGAE						
-CHLOROPHYCEAE						
--ULOTRICHIALES						
---ULOTRICHACEAE						
----ULOTHRIX SPP.	-- --	13 6.1	202 44.5	63 5.5	-- --	23 9.1
MISCELLANEOUS GREEN ALGAE	4 0.4	-- --	-- --	-- --	-- --	-- --
CHRYSOPHYTA YELLOW-BROWN ALGAE						
-BACILLARIOPHYCEAE DIATOMS						
--PENNALES PENNATE DIATOMS						
---FRAGILARIACEAE						
----DIATOMA HIEMALE MESODON	4 0.4	1 0.7	19 4.1	4 0.3	1 6.6	-- --
----HANNEA ARCUS	275 24.0	112 52.5	7 1.5	-- --	.2 .9	3 1.3
----SYNEDRA RUMPENS	113 9.9	44 20.9	80 17.5	740 65.2	7 35.8	42 16.4
---TABELLARIA FLOCCULOSA	4 0.4	-- --	-- --	-- --	-- --	-- --
---EUNOTIACEAE						
----EUNOTIA SPP.	-- --	-- --	-- --	4 0.3	-- --	-- --
---ACHNANTHACEAE						
----ACHNANTHES LANCEOLATA	-- --	1 0.7	-- --	-- --	-- --	-- --
----ACHNANTHES MINUTISSIMA	711 62.4	26 12.2	141 30.9	295 25.9	10 50.2	179 69.9
---GOMPHONEMACEAE						
----GOMPHONEMA ANGUSTATUM	12 1.1	9 4.1	-- --	7 0.6	.2 .9	3 1.0
----GOMPHONEMA SUBCLAVATUM	16 1.4	3 1.4	-- --	4 0.3	.2 .9	-- --
---CYMBELLACEAE						
----CYMBELLA MINUTA	-- --	3 1.4	7 1.5	22 1.9	1 4.7	6 2.3

SANDY RIVER BASIN

14138960 LOWER COUGAR CREEK NEAR BULL RUN, OR--Continued

PERIPHYTON DATA, WATER YEARS OCTOBER 1978 TO SEPTEMBER 1984--Continued

DATE	84/08/16	84/09/07
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.71	1.57
EQUITABILITY	.55	.52
TOTAL COUNT (CELLS/SQ.INCH) * 1000	234.	1028.
PERIPHYTON SLIDE EXPOSURE (DAYS)	35	21

	COUNT	PCT	COUNT	PCT
CHLOROPHYTA GREEN ALGAE				
-CHLOROPHYCEAE				
--ULOTRICHALES				
---ULOTRICHACEAE				
----ULOTHRIX SPP.	24	10.3	--	---
CHRYSOPHYTA YELLOW-BROWN ALGAE				
-BACILLARIOPHYCEAE DIATOMS				
--PENNALES PENNATE DIATOMS				
---FRAGILARIACEAE				
----DIATOMA HIEMALE MESODON	--	---	10	1.0
----FRAGILARIA VAUCHERIAE	--	---	26	2.5
----HANNEA ARCUS	12	5.1	26	2.5
----SYNEDRA RUMPENS	8	3.2	37	3.6
---EUNOTIACEAE				
----EUNOTIA SPP.	3	1.3	--	---
---ACHNANTHACEAE				
----ACHNANTHES LINEARIS	2	0.6	--	---
----ACHNANTHES MINUTISSIMA	158	67.3	720	70.1
---GOMPHONEMACEAE				
----GOMPHONEMA ANGUSTATUM	24	7.1	136	13.2
----GOMPHONEMA SUBCLAVATUM	--	---	31	3.0
---CYMBELLACEAE				
----CYMBELLA MINUTA	12	5.1	42	4.1

14139000 BULL RUN RESERVOIR NUMBER ONE NEAR BULL RUN, OR

LOCATION.--Lat 45°28'50", long 122°04'50", in NW1SW1 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 mi².

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, 30,690 acre-ft May 23, elevation, 1,045.27 ft; minimum, 17,550 acre-ft Sept. 5, elevation, 1,008.71 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1035.36	1035.44	1034.98	1039.75	1034.94	1034.88	1034.76	1035.56	1043.24	1044.00	1036.05	1011.83
2	1035.55	1035.84	1035.10	1040.44	1034.36	1034.92	1034.45	1035.63	1043.75	1043.83	1035.46	1010.86
3	1033.12	1036.26	1034.92	1040.32	1034.49	1034.18	1034.78	1035.63	1044.04	1043.68	1034.84	1009.84
4	1033.75	1035.78	1035.18	1039.46	1034.44	1034.41	1034.74	1035.58	1044.66	1044.33	1034.20	1008.99
5	1033.05	1036.10	1034.42	1037.15	1034.31	1034.09	1034.18	1035.65	1044.25	1044.33	1033.77	1008.95
6	1032.88	1035.70	1034.58	1036.58	1034.21	1034.20	1034.63	1037.12	1044.27	1044.31	1033.08	1009.49
7	1032.44	1034.62	1034.78	1037.00	1033.87	1034.55	1035.55	1039.70	1044.73	1044.48	1032.74	1012.90
8	1032.58	1034.19	1034.80	1038.48	1034.35	1034.30	1035.19	1042.85	1044.36	1044.45	1031.71	1014.81
9	1032.42	1034.70	1035.80	1037.56	1034.15	1034.50	1035.10	1043.08	1044.67	1044.36	1030.82	1015.68
10	1032.54	1034.66	1035.98	1038.02	1034.03	1035.14	1035.35	1043.29	1044.46	1044.29	1029.79	1016.25
11	1032.04	1034.30	1035.70	1038.10	1033.93	1034.26	1034.79	1043.87	1043.98	1044.45	1028.93	1017.26
12	1031.22	1034.88	1035.48	1037.70	1038.30	1035.17	1035.21	1043.46	1043.26	1044.58	1028.28	1017.61
13	1031.38	1034.50	1035.95	1037.50	1037.26	1035.06	1034.52	1044.55	1044.46	1044.58	1027.79	1017.86
14	1031.24	1034.98	1035.25	1037.30	1035.12	1035.28	1034.60	1044.31	1043.98	1044.54	1026.95	1018.07
15	1031.30	1035.12	1034.70	1037.16	1035.45	1035.41	1034.77	1043.79	1043.99	1044.36	1026.13	1017.75
16	1030.84	1035.76	1034.68	1037.00	1034.51	1035.41	1034.39	1043.39	1043.95	1044.21	1025.29	1017.54
17	1031.00	1036.04	1034.90	1036.98	1035.26	1034.80	1035.12	1043.85	1044.22	1043.62	1024.41	1017.26
18	1031.20	1035.30	1035.10	1036.80	1034.15	1035.47	1034.27	1043.61	1043.89	1043.17	1023.46	1016.98
19	1031.60	1035.38	1035.10	1036.40	1034.95	1035.54	1034.26	1044.15	1043.85	1043.01	1022.68	1016.32
20	1031.76	1035.50	1034.80	1036.52	1034.67	1035.91	1034.55	1044.00	1044.21	1042.33	1022.00	1016.04
21	1030.38	1034.82	1034.78	1036.90	1034.17	1035.73	1034.41	1043.58	1044.94	1042.05	1021.93	1015.45
22	1032.66	1035.05	1035.20	1037.30	1034.75	1035.54	1034.54	1043.34	1044.83	1041.56	1021.56	1016.53
23	1034.20	1035.80	1035.74	1040.00	1034.74	1035.43	1034.57	1044.46	1044.22	1041.24	1020.79	1016.51
24	1034.86	1035.40	1036.18	1041.50	1034.85	1035.03	1034.51	1044.48	1044.26	1040.57	1019.79	1016.29
25	1035.10	1034.84	1036.62	1040.20	1034.39	1035.15	1034.82	1044.52	1043.75	1040.02	1018.77	1016.13
26	1035.36	1035.20	1036.60	1036.64	1034.72	1035.38	1034.64	1044.21	1044.00	1039.44	1017.75	1015.98
27	1035.30	1035.12	1036.62	1034.73	1034.49	1035.24	1034.60	1044.22	1043.60	1038.81	1016.73	1015.63
28	1035.28	1035.30	1036.82	1034.42	1034.40	1034.80	1034.64	1044.14	1043.72	1038.31	1015.71	1015.61
29	1035.70	1035.30	1037.64	1034.10	1034.44	1034.18	1034.65	1043.61	1044.42	1038.09	1014.63	1015.08
30	1035.76	1034.65	1038.40	1033.94	---	1034.95	1034.66	1043.87	1043.93	1037.66	1013.57	1014.52
31	1034.95	---	1039.00	1034.84	---	1034.31	---	1043.65	---	1036.52	1012.58	---
MEAN	1033.12	1035.22	1035.67	1037.44	1034.75	1034.94	1034.71	1042.17	1044.13	1042.43	1025.23	1015.00
MAX	1035.76	1036.26	1039.00	1041.50	1038.30	1035.91	1035.55	1044.55	1044.94	1044.58	1036.05	1018.07
MIN	1030.38	1034.19	1034.42	1033.94	1033.87	1034.09	1034.18	1035.56	1043.24	1036.52	1012.58	1008.95
(+)	26530	26420	28100	26490	26340	26290	26420	29990	30110	27130	18760	19380
(+)	+30	-110	+1680	-1610	-150	-50	+130	+3570	+120	-2980	-8370	+620
CAL YR 1983	MEAN	1039.26	MAX	1045.92	MIN	1030.38	AC-FT†	+1730				
WTR YR 1984	MEAN	1034.59	MAX	1044.94	MIN	1008.95	AC-FT†	-7120				

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

‡ Change in contents, in acre-feet.

SANDY RIVER BASIN

14139600 CAMP CREEK NEAR BULL RUN, OR

WATER-QUALITY RECORDS

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 downstream from falls at confluence with West Branch of Camp Creek, 0.3 mi upstream from Bull Run Reservoir Number Two, and 6.6 mi northeast of Bull Run.

DRAINAGE AREA.--3.27 mi².

PERIOD OF RECORD.--Periphyton analyses: July to September 1978.

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1978

DATE	78/07/19		78/09/12	
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.85		1.32	
EQUITABILITY	.51		.39	
TOTAL COUNT (CELLS/SQ.INCH)*1000	2924.		3548.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	55		65	
	COUNT	PCT	COUNT	PCT
CHLOROPHYTA GREEN ALGAE				
-CHLOROPHYCEAE				
--VOLVOCALES				
----CHLAMYDOMONADACEAE				
----CHLAMYDOMONAS-LIKE	154	5.2	14	0.4
CHRYSOPHYTA YELLOW-BROWN ALGAE				
-BACILLARIOPHYCEAE DIATOMS				
--PENNALES PENNATE DIATOMS	71	2.4	14	0.4
----FRAGILARIACEAE				
----HANNEA ARCUS	59	2.0	14	0.4
----SYNEDRA RUMPENS	24	0.8	227	6.4
----EUNOTIACEAE				
----EUNOTIA PRAERUPTA	438	14.9	241	6.8
----ACHNANTHACEAE				
----ACHNANTHES LANCEOLATA	12	0.4	14	0.4
----ACHNANTHES LINEARIS	118	4.0	85	2.4
----ACHNANTHES MINUTISSIMA	1894	65.1	2741	77.6
----COCCONEIS PLACENTULA ENGLYPTA	12	0.4	--	---
----GOMPHONEMACEAE				
----GOMPHONEMA SPP.	71	2.4	--	---
----GOMPHONEMA ANGUSTATUM	59	2.0	170	4.8
CYANOPHYTA BLUE-GREEN ALGAE				
-MYXOPHYCEAE				
--CHROOCOCCALES				
----CHROOCOCCACEAE				
----ANACYSTIS SPP.	12	0.4	28	0.8

SANDY RIVER BASIN

80

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 mi².

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 good except those for periods of no gage-height record, Feb. 25 to Apr. 5, Apr. 19 to June 7, and those above 200 ft³/s, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--19 years, 68.6 ft³/s, 117.48 in/yr, 49,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,990 ft³/s Dec. 22, 1964, gage height, 7.20 ft, from rating curve extended above 320 ft³/s on basis of slope-area measurement of peak flow; minimum, 6.9 ft³/s Oct. 9-13, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 3	1200	540	3.70	Feb. 12	1830	793	4.20
Jan. 24	1900	*834	*4.37				

Minimum, 9.8 ft³/s Aug. 29-31, Sept. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	12	29	58	50	45	80	64	100	45	53	14	14		
2	12	34	50	55	40	90	58	180	40	45	13	11		
3	12	147	44	307	36	80	54	160	38	39	13	11		
4	15	204	38	141	34	70	54	130	90	35	13	9.9		
5	13	136	41	132	31	58	54	100	100	31	13	18		
6	12	275	44	111	31	52	54	90	110	29	13	34		
7	11	140	85	103	30	50	125	80	135	27	12	87		
8	11	91	150	89	29	47	140	74	120	26	12	51		
9	11	77	132	70	31	52	120	70	136	24	12	32		
10	11	64	289	121	34	58	139	75	94	23	12	24		
11	11	63	166	142	59	57	111	92	73	22	12	25		
12	11	53	133	92	359	90	169	82	59	21	12	27		
13	10	54	218	71	450	120	125	78	50	21	12	21		
14	13	89	230	57	200	140	106	76	44	20	11	18		
15	11	146	143	47	139	160	104	72	39	19	11	16		
16	11	175	94	41	109	130	85	72	36	18	11	15		
17	15	227	69	37	77	115	72	60	34	17	11	14		
18	13	196	56	33	61	150	65	56	32	17	11	13		
19	12	159	47	31	53	230	60	75	30	17	11	13		
20	12	143	41	29	63	220	57	110	48	16	11	13		
21	11	102	36	36	80	250	53	84	150	16	11	12		
22	81	79	32	91	62	180	51	86	97	16	11	23		
23	34	95	30	302	75	150	49	140	68	15	11	22		
24	25	232	28	771	96	120	44	110	54	15	11	16		
25	21	164	26	594	80	110	40	100	45	15	11	14		
26	19	119	25	272	68	200	37	120	47	15	10	13		
27	17	171	26	142	65	140	35	100	52	14	10	12		
28	16	141	27	95	62	120	35	85	39	14	10	11		
29	15	99	47	73	58	96	40	70	78	14	9.9	11		
30	21	74	94	60	---	84	50	58	66	14	9.8	11		
31	33	---	80	51	---	70	---	50	---	14	11	---		
TOTAL	532	3778	2579	4246	2557	3569	2250	2835	2049	682	355.7	611.9		
MEAN	17.2	126	83.2	137	88.2	115	75.0	91.5	68.3	22.0	11.5	20.4		
MAX	81	275	289	771	450	250	169	180	150	53	14	87		
MIN	10	29	25	29	29	47	35	50	30	14	9.8	9.9		
CFSM	2.17	15.9	10.5	17.3	11.1	14.5	9.46	11.5	8.61	2.77	1.45	2.57		
IN.	2.50	17.72	12.10	19.92	12.00	16.74	10.55	13.30	9.61	3.20	1.67	2.87		
AC-FT	1060	7490	5120	8420	5070	7080	4460	5620	4060	1350	706	1210		
CAL YR 1983	TOTAL	25704	MEAN	70.4	MAX	782	MIN	10	CFSM	8.88	IN.	120.58	AC-FT	50980
WTR YR 1984	TOTAL	26044.6	MEAN	71.2	MAX	771	MIN	9.8	CFSM	8.98	IN.	122.18	AC-FT	51660

SANDY RIVER BASIN

14139760 SOUTH FORK BULL RUN ABOVE CEDAR CREEK, NEAR BULL RUN, OR

WATER-QUALITY RECORDS

LOCATION.--Lat 45°26'45", long 122°04'27", in NW1/4 sec.33, T.1 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, Mount Hood National Forest, immediately above confluence with main branch of Cedar Creek, and upstream from Bull Run Reservoir Number Two.

DRAINAGE AREA.--4.6 mi².

PERIOD OF RECORD.--Periphyton analyses: August 1979 to September 1981.

PERIPHYTON DATA, WATER YEARS AUGUST 1979 TO SEPTEMBER 1981

DATE	79/08/09		80/07/11		80/08/08		80/09/02		80/10/06		80/11/05	
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.54		2.33		2.11		1.67		1.92		1.45	
EQUITABILITY	.42		.74		.59		.45		.58		.45	
TOTAL COUNT (CELLS/SQ.INCH)*1000	1291.		1726.		197.		769.		2218.		1556.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	66		30		28		25		34		30	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
CHLOROPHYTA GREEN ALGAE	--	---	--	---	--	---	2	0.3	--	---	--	---
-CHLOROPHYCEAE												
--VOLVOCALES												
---CHLAMYDOMONADACEAE												
----CHLAMYDOMONAS-LIKE	--	---	12	0.7	--	---	--	---	--	---	--	---
--ULOTRICHIALES												
---ULOTRICHACEAE												
----ULOTRIX SPP.	--	---	--	---	13	6.5	29	3.7	15	0.7	--	---
--ZYGNEMATALES												
---ZYGNEMATAACEAE												
----SPIROGYRA SPP.	230	17.8	--	---	--	---	--	---	--	---	--	---
CHRYSOPHYTA YELLOW-BROWN ALGAE												
-BACILLARIOPHYCEAE DIATOMS												
--CENTRALES CENTRIC DIATOMS												
---COSCINODISCACEAE												
----CYCLOTELLA KUTZINGIANA	--	---	--	---	--	---	2	0.3	--	---	--	---
--PENNALES PENNATE DIATOMS	6	0.5	--	---	--	---	--	---	--	---	--	---
---FRAGILARIACEAE												
----DIATOMA HIEMALE MESODON	--	---	274	15.9	1	0.4	--	---	--	---	--	---
----FRAGILARIA VAUCHERIAE	--	---	71	4.1	20	10.3	16	2.1	203	9.2	131	8.4
----HANNEA ARCUS	20	1.6	726	42.0	--	---	--	---	15	0.7	--	---
----MERIDION CIRCULARE	3	0.2	--	---	--	---	--	---	--	---	--	---
----SYNEDRA RUMPENS	9	0.7	119	6.9	3	1.3	4	0.5	45	2.0	16	1.6
----SYNEDRA ULNA	--	---	--	---	--	---	--	---	--	---	8	0.5
---EUNOTIACEAE												
----EUNOTIA PRAERUPTA	12	0.9	--	---	--	---	--	---	--	---	--	---
----EUNOTIA SPP.	--	---	--	---	5	2.6	53	6.9	--	---	--	---
---ACHNANTHACEAE												
----ACHNANTHES LANCEOLATA	9	0.7	--	---	--	---	--	---	--	---	8	0.5
----ACHNANTHES LINEARIS	15	1.1	--	---	11	5.6	16	2.1	8	0.3	16	1.1
----ACHNANTHES LEWISIANA	--	---	--	---	1	0.4	--	---	--	---	--	---
----ACHNANTHES MINUTISSIMA	888	68.8	381	22.1	103	52.6	119	15.4	1037	46.8	1148	73.7
---COCCONEIS PLACENTULA	--	---	--	---	--	---	4	0.5	--	---	--	---
---GOMPHONEMACEAE												
----GOMPHONEMA ANGUSTATUM	26	2.0	36	2.1	4	2.2	--	---	53	2.4	98	6.3
----GOMPHONEMA SUBCLAVATUM	--	---	83	4.8	2	0.9	--	---	75	3.4	41	2.6
---CYMBELLACEAE												
----CYMBELLA MINUTA	67	5.2	24	1.4	34	17.2	10	1.3	15	0.7	90	5.8
---NITZSCHIA												
----NITZSCHIA DISSIPATA	6	0.5	--	---	--	---	2	0.3	--	---	--	---
CYANOPHYTA BLUE-GREEN ALGAE												
-MYXOPHYCEAE												
---CHROOCOCCALES												
----CHROOCOCCACEAE												
----ANACYSTIS SPP.	--	---	--	---	--	---	512	66.5	752	33.9	--	---

SANDY RIVER BASIN

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14139760 SOUTH FORK BULL RUN RIVER ABOVE CEDAR CREEK, NEAR BULL RUN, OR.--Continued

PERIPHYTON DATA, WATER YEARS OCTOBER 1978 TO SEPTEMBER 1981--Continued

DATE	81/08/17		81/09/16	
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.04		2.78	
EQUITABILITY	.45		.64	
TOTAL COUNT (CELLS/SO. INCH)*1000	2159.		197.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	33		30	
	COUNT	PCT	COUNT	PCT
CHLOROPHYTA GREEN ALGAE				
-CHLOROPHYCEAE				
--CHLOROCOCCALES				
---COCYSTACEAE				
----TETRAEDRON SPP.	--	---	1	0.7
--ULOTRICHALES				
---ULOTRICHACEAE				
----ULOTHRIX SPP.	12	6.9	7	3.3
CHRYSTOPHYTA YELLOW-BROWN ALGAE				
-CHRYSTOPHYCEAE				
--CHRYSONOMADALES				
---CHROMULINACEAE				
----KEPHYRION SPP.	--	---	1	0.7
----KEPHYRION SPIRALE	--	---	1	0.7
-BACILLARIOPHYCEAE DIATOMS				
--PENNALES PENNATE DIATOMS				
---FRAGILARIACEAE				
----DIATOMA HIEMALE MESODON	6	3.5	8	4.0
----FRAGILARIA VAUCHERIAE	18	0.8	4	2.0
----HANNEA ARCUS	24	13.9	9	4.7
----SYNEDRA RUMPENS	12	6.9	1	0.7
----SYNEDRA ULNA	--	---	5	2.7
---EUNOTIACEAE				
----EUNOTIA TENELLA	1	0.5	--	---
----EUNOTIA SPP.	--	---	11	5.3
---ACHNANTHACEAE				
----ACHNANTHES LANCEOLATA	1	0.5	4	2.0
----ACHNANTHES LINEARIS	--	---	4	2.0
----ACHNANTHES MINUTISSIMA	72	42.0	73	36.7
----COCCONEIS PLACENTULA	--	---	3	1.3
---GOMPHONEMACEAE				
----GOMPHONEMA ANGUSTATUM	25	14.4	21	10.7
----GOMPHONEMA SUBCLAVATUM	23	1.1	1	0.7
---CYMBELLACEAE				
----CYMBELLA AFFINIS	--	---	1	0.7
----CYMBELLA MINUTA	19	11.4	41	20.7
---NITZSCHIAEAE				
----NITZSCHIA PALEACEA	--	---	1	0.7

SANDY RIVER BASIN

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 mi².

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 fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--10 years, 111 ft³/s, 97.88 in/yr, 80,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,520 ft³/s Dec. 2, 1977, gage height, 8.32 ft, from rating curve extended above 810 ft³/s; minimum, 8.0 ft³/s Oct. 12, 13, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 24	1800	*1,360	*6.59				

Minimum daily, 16 ft³/s Aug. 29-31, Sept. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	21	54	111	174	91	137	115	138	76	90	23	21		
2	21	61	94	162	79	162	107	238	68	80	22	17		
3	21	172	83	637	70	148	98	301	62	72	22	16		
4	23	286	73	453	62	125	92	218	130	66	22	16		
5	22	210	76	268	56	107	95	192	160	60	22	17		
6	22	370	95	192	54	96	98	167	155	55	22	21		
7	20	231	133	165	51	87	176	146	212	50	22	43		
8	19	165	222	150	48	81	245	134	211	47	21	77		
9	18	132	203	123	51	80	213	123	225	44	21	57		
10	18	113	360	172	53	91	247	123	181	41	20	43		
11	17	106	259	236	81	94	210	161	142	38	20	41		
12	17	93	201	174	340	128	257	144	117	36	20	43		
13	17	93	267	134	549	174	225	128	99	34	20	36		
14	19	113	311	109	318	232	186	127	85	32	19	31		
15	19	206	226	92	230	258	178	118	75	32	19	28		
16	17	227	163	79	194	223	149	121	67	30	18	26		
17	22	277	123	70	144	185	129	106	60	29	18	25		
18	23	261	104	62	118	224	116	95	55	29	18	24		
19	20	221	89	57	102	290	109	100	51	29	18	23		
20	20	205	77	52	106	291	108	164	73	27	18	22		
21	20	165	50	60	135	374	97	127	230	27	18	22		
22	90	133	42	134	116	291	90	133	198	27	17	34		
23	70	137	38	410	124	227	95	247	140	25	17	35		
24	52	309	36	1250	164	177	85	183	111	24	17	26		
25	43	246	35	873	151	193	81	164	93	24	17	24		
26	38	204	35	482	129	331	76	189	87	24	17	23		
27	35	254	35	294	112	245	70	148	92	25	17	22		
28	32	238	39	203	109	225	67	126	75	24	17	22		
29	30	183	73	156	104	195	74	108	99	24	16	21		
30	35	140	242	127	---	158	91	98	105	24	16	20		
31	62	---	251	108	---	132	---	89	---	23	16	---		
TOTAL	903	5605	4146	7658	3941	5761	3979	4656	3534	1192	590	876		
MEAN	29.1	187	134	247	136	186	133	150	118	38.5	19.0	29.2		
MAX	90	370	360	1250	549	374	257	301	230	90	23	77		
MIN	17	54	35	52	48	80	67	89	51	23	16	16		
CFSM	1.89	12.1	8.70	16.0	8.83	12.1	8.64	9.74	7.66	2.50	1.23	1.90		
IN.	2.18	13.54	10.02	18.50	9.52	13.92	9.61	11.25	8.54	2.88	1.43	2.12		
AC-FT	1790	11120	8220	15190	7820	11430	7890	9240	7010	2360	1170	1740		
CAL YR 1983	TOTAL	40716	MEAN	112	MAX	1440	MIN	17	CFSM	7.27	IN.	98.35	AC-FT	80760
WTR YR 1984	TOTAL	42841	MEAN	117	MAX	1250	MIN	16	CFSM	7.60	IN.	103.49	AC-FT	84980

SANDY RIVER BASIN

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14139A00 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 <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 microsiemens Sept. 16-19, 1981; minimum, 9 microsiemens 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, 43 microsiemens Sept. 1, 2; minimum, 13 microsiemens Jan. 24.

WATER TEMPERATURES: Maximum, 16.0°C July 17; minimum, 0.0°C Dec. 21-26.

SEDIMENT CONCENTRATIONS: Maximum daily, 20 mg/l Jan. 24; minimum, 0 mg/l on many days throughout the year.

SEDIMENT DISCHARGE: Maximum daily, 66 tons Jan. 24; minimum, .04 tons Aug. 29-31, Sept. 3, 4.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	27	21	18	23	22	22	23	27	25	38	41
2	32	26	22	19	24	20	22	21	27	26	38	41
3	33	24	23	---	24	20	22	20	28	27	39	41
4	33	20	23	---	25	21	23	21	26	28	39	41
5	33	20	23	17	26	22	23	21	23	28	39	41
6	33	19	23	18	26	23	23	21	23	29	39	34
7	33	20	22	19	26	24	21	22	23	29	39	28
8	34	21	20	19	27	24	19	23	22	30	40	27
9	34	22	20	20	27	24	20	23	22	31	40	28
10	35	23	18	19	26	24	20	23	23	32	40	29
11	35	23	19	18	25	23	20	22	24	32	40	30
12	35	24	20	19	19	22	20	22	25	33	40	30
13	35	25	20	20	15	20	20	23	26	34	40	31
14	35	23	19	21	17	19	21	23	27	34	40	32
15	35	21	19	22	18	18	21	23	27	35	40	33
16	35	20	20	23	19	19	21	23	28	35	41	34
17	35	19	21	23	20	19	22	24	29	36	41	34
18	35	19	21	24	21	19	23	25	30	36	41	35
19	35	20	22	25	22	18	23	25	30	36	41	36
20	36	19	23	25	23	18	23	23	30	36	41	36
21	36	20	24	25	21	17	24	23	24	36	42	35
22	30	21	24	21	21	18	24	24	23	37	42	34
23	27	21	25	18	21	19	24	21	25	37	41	32
24	27	19	25	---	20	19	24	22	26	38	41	33
25	28	19	24	---	21	19	25	23	27	37	41	33
26	29	20	25	16	21	17	25	22	28	37	42	34
27	29	19	26	18	22	18	26	23	28	37	42	34
28	30	20	26	19	22	19	26	24	28	37	42	35
29	30	20	24	20	23	19	26	25	25	38	42	35
30	---	21	17	21	---	20	25	25	24	38	41	35
31	---	---	17	22	---	21	---	26	---	38	41	---
MEAN	---	21	22	---	22	20	23	23	26	34	40	34

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.0	7.0	9.0	8.5	4.5	4.0	3.5	3.0	4.5	4.0	5.5	5.0
2	8.5	7.5	9.0	8.5	4.5	4.0	4.0	3.5	4.0	3.5	5.0	4.5
3	9.0	8.0	9.5	9.0	4.5	4.0	4.0	3.0	4.5	3.5	5.0	4.0
4	9.5	9.0	9.0	8.0	4.5	4.0	5.0	---	4.5	4.0	5.0	4.0
5	9.0	8.0	8.0	7.5	4.0	3.5	5.0	4.5	4.5	4.0	5.5	4.0
6	8.5	8.0	8.5	7.5	4.0	3.0	5.0	4.5	5.5	4.5	5.5	4.5
7	8.0	7.0	7.5	7.0	4.5	4.0	5.0	4.5	5.0	4.5	6.0	5.0
8	8.5	7.5	7.0	6.5	5.0	4.5	5.0	4.5	5.5	5.0	6.5	5.5
9	8.5	8.0	7.5	7.0	5.5	5.0	5.0	4.5	5.5	5.0	7.0	6.5
10	8.5	8.0	8.0	7.5	5.5	5.0	5.0	4.5	5.0	4.5	6.5	6.0
11	8.0	7.5	8.0	7.5	5.5	5.5	5.0	4.5	4.5	4.5	6.0	5.5
12	8.5	7.5	7.5	7.5	5.5	5.0	4.5	4.0	5.0	4.5	6.0	5.5
13	8.5	8.0	7.5	7.0	6.0	5.5	4.0	3.5	5.0	4.0	6.0	5.0
14	8.5	8.0	7.0	7.0	6.0	5.5	3.5	2.0	5.0	4.0	6.0	5.5
15	8.0	7.0	8.0	7.0	5.5	5.0	2.0	1.5	5.0	4.5	6.0	5.5
16	7.5	6.5	8.0	8.0	5.0	4.5	2.0	1.5	4.5	4.0	6.0	5.5
17	7.5	7.0	8.0	7.0	4.5	3.5	2.0	1.5	4.5	4.0	5.5	5.0
18	7.5	6.5	7.0	7.0	4.0	3.5	2.0	1.0	5.0	4.0	5.5	5.0
19	7.5	7.0	7.5	6.5	4.0	3.0	2.5	2.0	5.5	4.5	6.0	5.5
20	8.0	7.5	7.0	6.5	3.0	1.0	2.5	1.5	5.5	5.0	7.0	6.0
21	8.5	7.5	6.5	6.0	1.0	.0	3.5	2.5	5.0	3.5	6.0	5.5
22	9.0	8.0	6.0	5.5	.0	.0	3.5	3.0	4.0	3.5	6.5	5.5
23	8.5	7.5	6.5	5.5	.0	.0	4.0	3.5	5.0	4.0	6.5	6.0
24	7.5	6.5	7.0	6.0	.0	.0	4.5	4.0	4.5	4.0	6.0	5.5
25	7.5	7.0	6.0	6.0	.5	.0	5.0	4.5	4.5	4.0	5.5	5.0
26	8.0	7.0	6.5	6.0	1.0	.0	5.0	4.5	5.0	4.0	5.5	5.0
27	7.5	7.5	6.5	6.5	1.5	1.0	5.5	5.0	5.5	4.0	6.0	5.0
28	7.5	7.0	6.5	5.5	1.5	1.0	5.5	4.5	5.5	4.5	6.0	5.0
29	8.5	7.5	5.5	4.5	1.5	.5	5.5	4.5	5.0	4.5	6.0	5.0
30	---	8.5	4.5	4.0	2.0	.5	5.0	4.5	---	---	6.5	4.5
31	9.0	---	---	---	3.0	2.0	4.5	4.0	---	---	6.5	5.5
MONTH	---	---	9.5	4.0	6.0	.0	5.5	---	5.5	3.5	7.0	4.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	6.0	6.5	5.5	9.5	7.0	12.0	9.0	14.0	12.5	12.0	11.5
2	6.0	5.5	6.5	5.5	9.0	8.0	12.0	10.0	14.0	12.5	12.0	10.5
3	6.0	5.0	6.0	5.0	8.5	7.5	12.5	10.0	14.0	13.0	12.0	11.0
4	6.0	5.5	6.0	5.0	8.5	8.0	13.0	10.5	14.0	12.5	12.5	11.0
5	6.0	5.0	5.5	5.0	8.0	7.5	12.5	11.0	13.0	12.5	12.0	11.0
6	5.5	4.5	6.5	5.0	8.0	7.0	12.0	10.0	13.5	12.0	11.0	10.5
7	5.5	4.5	8.0	5.0	7.5	7.0	12.5	10.0	14.0	12.0	11.5	10.5
8	5.0	4.5	7.5	6.5	7.5	7.0	12.5	10.5	15.0	12.5	11.5	11.0
9	5.0	4.5	7.0	6.0	8.0	7.0	13.0	11.0	15.5	13.5	11.5	11.0
10	5.0	3.5	7.0	6.0	8.0	7.0	13.0	10.5	15.5	13.5	11.0	10.5
11	5.5	4.5	7.5	6.5	9.5	7.0	12.0	11.0	15.0	13.5	10.5	10.0
12	5.0	5.0	9.0	7.0	9.5	7.5	12.5	10.5	14.0	13.0	10.5	10.0
13	6.0	4.5	8.5	7.5	10.0	8.5	13.5	11.5	14.0	12.5	10.0	9.5
14	8.0	5.5	7.5	7.0	11.5	9.0	14.0	11.5	13.5	12.0	10.5	9.5
15	6.5	6.0	7.5	6.5	10.5	9.5	15.0	12.5	13.5	12.0	11.0	10.5
16	6.5	6.0	8.0	6.0	9.5	8.5	15.5	13.5	14.0	12.0	11.0	10.5
17	6.5	5.0	9.0	6.5	10.5	8.0	16.0	13.5	14.0	12.5	11.5	10.5
18	7.0	6.0	9.0	7.0	11.0	9.0	15.0	13.5	14.0	13.0	11.5	10.5
19	6.5	5.5	8.5	8.0	11.5	9.5	14.0	12.5	13.5	12.0	12.0	11.0
20	6.5	5.5	8.0	7.0	11.0	9.0	14.0	12.0	13.5	12.0	12.0	11.0
21	6.5	5.5	8.0	6.5	9.5	8.0	13.5	11.5	13.5	12.0	11.0	10.5
22	7.0	6.0	7.0	6.5	10.5	8.0	14.0	12.0	13.5	12.0	10.5	8.5
23	7.0	6.0	7.5	6.5	12.0	8.5	14.0	12.5	13.5	12.5	9.0	8.5
24	6.0	4.5	7.5	6.5	12.0	9.5	15.0	12.5	13.0	12.0	9.0	8.0
25	5.0	4.0	7.0	6.0	12.5	10.0	14.0	13.0	13.0	11.5	9.0	8.0
26	6.0	4.5	8.0	7.0	11.5	10.5	14.0	12.0	13.5	12.0	9.5	9.0
27	6.5	4.5	10.0	6.5	12.0	10.0	14.0	12.5	13.0	12.5	9.5	9.0
28	6.0	5.5	11.0	7.5	13.0	11.0	13.5	12.5	12.5	11.5	9.0	8.5
29	6.0	5.5	12.0	9.0	12.0	9.5	14.5	12.5	12.5	11.0	9.0	8.5
30	6.0	5.5	10.5	8.0	11.5	9.0	15.0	12.5	12.5	11.5	9.5	8.5
31	---	---	9.0	7.5	---	---	14.0	13.5	12.0	12.0	---	---
MONTH	8.0	3.5	12.0	5.0	13.0	7.0	16.0	9.0	15.5	11.0	12.5	8.0

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)	
	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	
OCTOBER												
1	0	.06	1	.15	1	.30	---	.47	1	.25	1	.37
2	0	.06	1	.16	1	.25	---	.87	1	.21	2	.87
3	1	.06	7	4.9	1	.22	---	24	1	.19	2	.80
4	1	.06	3	2.3	1	.20	---	7.3	1	.17	1	.34
5	1	.06	1	.57	1	.21	3	2.2	1	.15	1	.29
6	---	.06	4	4.9	0	.26	2	1.0	1	.15	0	.26
7	---	.05	1	.62	2	.72	2	.89	1	.14	0	.23
8	---	.05	0	.45	2	1.2	2	.81	1	.13	0	.22
9	---	.05	0	.36	2	1.1	1	.33	1	.14	0	.22
10	---	.05	0	.31	3	2.9	2	.90	2	.29	0	.25
11	---	.05	0	.29	2	1.4	1	.64	2	.44	0	.25
12	---	.05	1	.25	1	.54	1	.47	5	7.1	0	.35
13	---	.05	1	.25	1	.72	1	.36	4	6.5	1	.47
14	---	.05	1	.60	2	1.7	1	.29	2	1.7	2	1.3
15	---	.05	1	.56	1	.61	1	.25	2	1.2	0	.70
16	---	.05	1	.61	1	.44	1	.21	2	1.0	0	.60
17	---	.06	1	.75	1	.33	1	.19	2	.78	1	.50
18	---	.06	1	.70	1	.28	1	.17	2	.64	0	.60
19	---	.05	0	.60	1	.24	1	.15	2	.55	0	.78
20	---	.05	0	.55	1	.21	2	.28	2	.57	2	1.6
21	---	.05	0	.45	---	.14	2	.32	1	.36	1	1.0
22	---	1.9	0	.36	---	.11	1	.36	2	.63	1	.79
23	---	.38	0	.37	---	.10	6	11	2	.67	1	.61
24	---	.14	2	1.7	---	.10	20	66	2	.89	1	.48
25	---	.12	2	1.3	---	.09	10	25	2	.82	2	1.0
26	---	.10	2	1.1	---	.09	4	5.2	1	.35	2	2.3
27	1	.09	1	.69	---	.09	2	1.6	1	.30	1	.66
28	1	.09	1	.64	---	.11	2	1.1	1	.29	1	.61
29	1	.08	1	.49	---	.39	1	.42	1	.28	0	.53
30	1	.09	1	.38	---	2.6	1	.34	---	---	0	.43
31	2	.33	---	---	---	1.4	1	.29	---	---	0	.36
TOTAL	---	4.45	---	27.36	---	19.05	---	153.41	---	26.89	---	19.77

DAY	MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)	
	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	
APRIL												
1	0	.31	1	.37	1	.21	1	.24	0	.06	0	.06
2	1	.29	2	1.3	1	.18	1	.22	0	.06	0	.05
3	1	.26	1	.81	1	.17	1	.19	0	.06	0	.04
4	1	.25	1	.59	1	.35	1	.18	0	.06	0	.04
5	1	.26	1	.52	1	.43	1	.16	0	.06	1	.05
6	0	.26	1	.45	1	.42	1	.15	0	.06	1	.06
7	2	.95	1	.39	2	1.1	0	.14	0	.06	3	.35
8	---	.66	1	.36	1	.57	0	.13	0	.06	1	.21
9	1	.58	1	.33	1	.61	0	.12	0	.06	1	.15
10	1	.67	---	.33	1	.49	0	.11	0	.05	1	.12
11	1	.57	---	.43	1	.38	0	.10	0	.05	1	.11
12	1	.69	---	.39	1	.32	0	.10	0	.05	1	.12
13	1	.61	---	.35	1	.27	0	.09	0	.05	0	.10
14	1	.50	---	.34	1	.23	0	.09	0	.05	0	.08
15	1	.48	---	.32	1	.20	0	.09	0	.05	1	.08
16	1	.40	---	.33	1	.18	0	.08	0	.05	1	.07
17	1	.35	---	.29	1	.16	0	.08	0	.05	1	.07
18	1	.31	---	.26	1	.15	0	.08	0	.05	1	.06
19	0	.29	---	.54	1	.14	0	.08	0	.05	1	.06
20	0	.29	---	.89	1	.20	0	.07	0	.05	1	.06
21	1	.26	---	.34	2	1.2	0	.07	0	.05	1	.06
22	1	.24	1	.36	1	.53	0	.07	0	.05	1	.09
23	1	.26	3	2.0	1	.38	0	.07	0	.05	1	.09
24	1	.23	1	.49	1	.30	0	.06	0	.05	1	.07
25	1	.22	1	.44	1	.25	0	.06	0	.05	1	.06
26	1	.21	1	.51	1	.23	0	.06	0	.05	1	.06
27	1	.19	1	.40	1	.25	0	.07	0	.05	0	.06
28	1	.18	0	.34	1	.20	0	.06	0	.05	0	.06
29	1	.20	0	.29	1	.27	0	.06	0	.04	1	.06
30	1	.25	0	.26	2	.57	0	.06	0	.04	1	.05
31	---	---	1	.24	---	---	0	.06	0	.04	---	---
TOTAL	---	11.22	---	15.26	---	10.94	---	3.20	---	1.61	---	2.60

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

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1981

	COMPOSITE (4 SITES)		SITE 1		SITE 2		SITE 3		SITE 4		SITE 1	
DATE	77/07/14		78/07/18		78/07/18		78/07/18		78/07/18		79/07/26	
HABITAT (riffle)	cobble, boulders, bedrock		cobble rocks		gravel cobbles		gravel cobbles		cobble rocks			
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.89		2.75		2.44		2.80		2.40		2.18	
EQUITABILITY	.54		.52		.49		.54		.48		.46	
TOTAL COUNT (NO./SQ.FOOT)	2815.		1821.		728.		1225.		605.		1087.	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
NEMATODA	1	0.0	2	0.1	5	0.7	1	0.1	2	0.3	--	---
PLATYHELMINTHES												
-TURBELLARIA	8	0.3	6	0.3	--	---	--	---	--	---	--	---
ANNELIDA												
-OLIGOCHAETA	125	4.5	35	1.9	13	1.8	29	2.4	12	2.0	5	0.5
ARTHROPODA												
-OSTRACODA	--	---	75	4.1	17	2.3	46	3.8	--	---	--	---
--PODOCOPA	22	0.8	--	---	--	---	--	---	3	0.5	4	0.4
--COPEPODA	129	4.6	--	---	--	---	--	---	--	---	--	---
--CYCLOPOIDA	--	---	1	0.1	--	---	--	---	--	---	--	---
--HARPACTACOIDA	3	0.1	12	0.7	1	0.1	4	0.3	--	---	--	---
-INSECTA												
--DIPTERA	2	0.1	--	---	--	---	--	---	--	---	--	---
---CERATOPOGONIDAE (ADULTS)	--	---	3	0.2	--	---	--	---	--	---	--	---
---TIPULIDAE												
----ANTOCHA	20	0.7	16	0.9	11	1.5	13	1.1	2	0.3	15	1.4
----DICRANOTA	--	---	--	---	--	---	2	0.2	--	---	--	---
----SIMULIIDAE	186	6.7	5	0.3	2	0.3	18	1.5	--	---	84	7.7
---STRATIOMYIIDAE	2	0.1	2	0.1	1	0.1	--	---	--	---	--	---
---EMPIDIDAE	8	0.3	--	---	--	---	2	0.2	--	---	--	---
---CHIRONOMIDAE (LARVAE)	1308	46.7	648	35.3	386	53.1	324	26.4	254	41.7	509	46.9
---CHIRONOMIDAE (PUPAE)	36	1.2	14	0.8	9	1.2	23	1.9	22	3.7	2	0.2
---CHIRONOMIDAE (ADULTS)	6	0.2	2	0.1	11	1.5	6	0.5	--	---	6	0.6
---MUSCIDAE	--	---	5	0.3	--	---	--	---	--	---	--	---
---DIXIDAE	--	---	--	---	--	---	--	---	1	0.2	--	---
---TRICHOPTERA												
---HYDROPSYCHIDAE	8	0.3	--	---	--	---	--	---	--	---	--	---
---CHEUMATOPSYCHE	--	---	--	---	--	---	--	---	1	0.2	4	0.4
---RYACOPHILIDAE												
----RHYACOPHILA	25	0.9	7	0.4	5	0.7	5	0.4	8	1.3	2	0.2
----RHYACOPHILA GRANDIS	--	---	2	0.1	--	---	--	---	--	---	--	---
---HYDROPTILIDAE	--	---	--	---	1	0.1	--	---	--	---	--	---
---STACTOBIELLA	3	0.1	--	---	--	---	--	---	--	---	--	---
---OCHROTRICHIA	--	---	1	0.1	--	---	1	0.1	1	0.2	--	---
---LEPTOCERIDAE	--	---	--	---	--	---	--	---	2	0.3	--	---
---OECETIS	--	---	2	0.1	--	---	5	0.4	--	---	10	0.9
---PHILOPOTAMIDAE	3	0.1	--	---	--	---	1	0.1	--	---	--	---
---BRACHYCENTRIDAE	--	---	--	---	1	0.1	--	---	--	---	--	---
---BRACHYCENYTRUS	--	---	--	---	--	---	--	---	--	---	1	0.1
---AMIOCENSTRUS	12	0.4	--	---	1	0.1	--	---	--	---	--	---
---MICRASEMA	85	3.0	--	---	--	---	--	---	--	---	--	---
---LIMNephilidae	--	---	5	0.3	12	1.6	11	0.9	3	0.5	1	0.1
---APATANIA	14	0.5	--	---	--	---	--	---	--	---	--	---
---NEOPHYLAX	--	---	--	---	--	---	--	---	1	0.2	--	---
---GLOSSOSOMATIDAE	--	---	--	---	--	---	--	---	1	0.2	--	---
---GLOSSASOMA	4	0.1	14	0.8	6	0.8	2	0.2	--	---	--	---
---ANAGAPETUS	--	---	--	---	--	---	--	---	2	0.3	--	---
---PLECOPTERA												
---PTERONARCIDAE												
---PTERNARCYS	--	---	--	---	--	---	--	---	--	---	1	0.1
---PELTOPERLIDAE												
---PELTOPERLA	17	0.6	--	---	--	---	--	---	--	---	--	---
---NEMOURIDAE												
---NEMOURA	23	0.8	11	0.6	6	0.8	2	0.2	1	0.2	1	0.1
---PERLIDAE												
---ACRONEURIA	1	0.0	1	0.1	2	0.3	1	0.1	--	---	--	---
---PERLODIDAE	--	---	1	0.1	--	---	1	0.1	--	---	--	---
---ISOPERLA	25	0.9	4	0.2	5	0.7	8	0.6	5	0.8	--	---
---ARCYNOPTERYX	--	---	12	0.7	--	---	--	---	--	---	--	---
---ISOGENUS	--	---	--	---	--	---	--	---	--	---	1	0.1
---CHLOROPERLIDAE												
---HASTAPERLA	--	---	6	0.3	--	---	6	0.5	--	---	--	---
---PARAPERLA	11	0.4	--	---	--	---	--	---	--	---	--	---
---CAPNIIDAE												
---PERLOMYIA	--	---	--	---	--	---	1	0.1	--	---	--	---
---HEMIPTERA												
---COLEOPTERA												
---ELMIDAE (ADULTS)	4	0.1	4	0.2	1	0.1	4	0.3	1	0.2	--	---
---ELMIDAE (LARVAE)	111	4.0	78	4.3	15	2.1	60	4.9	19	3.1	17	1.5
---DYTISCIDAE (LARVAE)												
---OREODYTES (LARVAE)	1	0.0	--	---	--	---	--	---	--	---	--	---
---DYTISCIDAE (ADULTS)	2	0.1	1	0.1	--	---	1	0.1	2	0.3	--	---
---COLLEMBOLA	--	---	1	0.1	--	---	--	---	--	---	--	---
---EPHEMEROPTERA												
---EPHEMERIDAE	1	0.0	--	---	--	---	--	---	--	---	--	---
---EPHEMERELLIDAE												
---EPHEMERELLA	--	---	--	---	--	---	1	0.1	--	---	1	0.1
---DRUNELLA	6	0.2	3	0.2	2	0.3	1	0.1	--	---	4	0.4
---SERATELLA	22	0.8	7	0.4	5	0.7	7	0.6	1	0.2	6	0.6
---LEPTOPHLEBIIDAE												
---PARALEPTOPHLEBIA	13	0.5	33	1.8	--	---	18	1.5	2	0.3	2	0.2
---BAETIDAE	494	17.6	439	24.0	115	15.9	--	---	170	27.9	331	30.2
---BAETIS	--	---	--	---	--	---	412	33.3	--	---	--	---
---HEPTAGENIIDAE												
---EPEORUS IRON	10	0.4	4	0.2	3	0.4	2	0.2	9	1.5	--	---
---CINYMULA	--	---	14	0.8	6	0.8	--	---	--	---	--	---
---RHITHROGENA	46	1.6	--	---	--	---	--	---	2	0.3	47	4.3
---STENONEMA	--	---	--	---	--	---	4	0.3	--	---	--	---
---THYSANOPTERA												
---THRIPIDAE	1	0.1	--	---	--	---	--	---	--	---	--	---
---ARACHNIDA												
---ACARINA	--	---	345	18.9	86	11.9	203	16.5	77	12.7	32	2.9

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

BENTHIC INVERTEBRATE DATA , WATER YEARS OCTOBER 1977 TO SEPTEMBER 1981--Continued

DATE	SITE 2		SITE 3		SITE 4		SITE 1		SITE 2		SITE 3	
	79/07/26		79/07/26		79/07/26		80/08/21		80/08/21		80/08/21	
HABITAT (riffles; gravel, cobbles, rocks)												
SPECIES DIVERSITY (BRILLOUIN INDEX)	3.15		3.28		3.43		2.66		2.05		2.70	
EQUITABILITY	.64		.63		.64		.56		.46		.56	
TOTAL COUNT	433.		1735.		3956.		602.		278.		725.	
(NO./SQ.FOOT)												
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
NEMATODA	--	---	--	---	13	0.3	--	---	--	---	1	0.1
CNIDARIA	--	---	--	---	--	---	--	---	--	---	--	---
-HYDROZOA	--	---	2	0.1	--	---	--	---	--	---	--	---
PLATYHELMINTHES	--	---	--	---	--	---	--	---	--	---	--	---
-TURBELLARIA	--	---	--	---	8	0.2	1	0.2	--	---	3	0.4
ANNELIDA	--	---	--	---	--	---	--	---	--	---	--	---
-OLIGOCHAETA	11	2.9	166	9.6	269	6.8	8	1.3	16	5.8	7	1.0
ARTHROPODA	--	---	--	---	--	---	--	---	--	---	--	---
-CRUSTACEA	--	---	--	---	--	---	--	---	--	---	--	---
--AMPHIPODA	--	---	--	---	--	---	--	---	--	---	--	---
---GAMMARIDAE	--	---	--	---	--	---	--	---	1	0.4	--	---
-OSTRACODA	11	2.9	--	---	455	11.4	24	4.0	4	1.4	73	10.0
--PODOCOPA	--	---	190	10.9	--	---	--	---	--	---	--	---
-COPEPODA	--	---	--	---	381	9.6	5	0.8	--	---	--	---
--HARPACTACOIDA	1	0.3	135	7.8	--	---	--	---	--	---	--	---
-INSECTA	--	---	--	---	--	---	--	---	--	---	--	---
---DIPTERA	1	0.3	--	---	1	0.0	2	0.3	--	---	--	---
---CULICIDAE	1	0.3	--	---	--	---	--	---	--	---	--	---
---CERATOPOGONIDAE (ADULTS)	1	0.3	1	0.1	--	---	--	---	1	0.4	--	---
---TIPULIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---ANTOCHA	17	4.5	84	4.8	44	1.1	10	1.7	5	1.8	24	3.3
---HEXATOMA	--	---	1	0.1	2	0.1	--	---	--	---	--	---
---DICRANOTA	--	---	--	---	2	0.1	--	---	--	---	--	---
---PSYCHODIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---PSYCHODA	--	---	--	---	--	---	--	---	1	0.4	--	---
---SIMULIIDAE	4	1.1	--	---	97	2.5	4	0.7	--	---	11	1.5
---STRATIOMYIIDAE	--	---	1	0.1	4	0.1	--	---	--	---	--	---
---EMPIDIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---CHELIFERA	--	---	1	0.1	--	---	--	---	--	---	--	---
---CHIRONOMIDAE (LARVAE)	127	33.7	482	27.5	677	17.0	285	47.2	174	62.2	292	40.6
---CHIRONOMIDAE (PUPAE)	2	0.5	17	1.0	12	0.3	--	---	2	0.8	--	---
---CHIRONOMIDAE (ADULTS)	--	---	1	0.1	--	---	--	---	--	---	--	---
---DIXIDAE	5	1.3	--	---	--	---	--	---	--	---	--	---
---TRICHOPTERA	--	---	--	---	26	0.6	--	---	--	---	--	---
---HYDROPSYCHIDAE	--	---	--	---	1	0.0	--	---	--	---	--	---
---HYDROPSYCHE	--	---	--	---	--	---	--	---	--	---	--	---
---CHEUMATOPSYCHE	--	---	1	0.1	--	---	--	---	--	---	--	---
---PARAPSYCHE	--	---	--	---	1	0.0	--	---	--	---	--	---
---ARCTOPSYCHE	--	---	--	---	20	0.5	--	---	--	---	21	2.9
---LEPIDOSTOMATIDAE	--	---	--	---	--	---	--	---	--	---	1	0.1
---LEPISTOMA	1	0.3	1	0.1	--	---	--	---	--	---	--	---
---PSYCHOMYIIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---POLYCENTROPUS	--	---	--	---	--	---	--	---	--	---	1	0.1
---RYACOPHILIDAE	--	---	--	---	1	0.0	--	---	--	---	--	---
---RHYACOPHILA	--	---	14	0.8	25	0.6	7	1.2	4	1.4	1	0.1
---RHYACOPHILA GRANDIS	--	---	2	0.1	3	0.1	--	---	--	---	--	---
---HYDROPTILIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---OCHROTRICHIA	1	0.3	2	0.1	--	---	--	---	--	---	--	---
---LEPTOCERIDAE	17	4.5	--	---	--	---	--	---	--	---	--	---
---OECETIS	--	---	31	1.8	22	0.6	--	---	--	---	--	---
---BRACHYCENTRIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---MICRASEMA	--	---	--	---	1	0.0	--	---	--	---	--	---
---LIMNAPHILIDAE	13	3.4	--	---	--	---	4	0.7	2	0.7	13	1.8
---APATANIA	--	---	8	0.4	12	0.3	--	---	--	---	--	---
---NEOPHYLAX	--	---	8	0.5	--	---	--	---	--	---	--	---
---GLOSSOSOMATIDAE	--	---	11	0.6	24	0.6	12	2.0	--	---	1	0.1
---GLOSSASOMA	--	---	--	---	--	---	2	0.3	--	---	1	0.1
---POLYCENTROPIDAE	--	---	2	0.1	3	0.1	--	---	--	---	--	---
---PLECOPTERA	--	---	--	---	--	---	--	---	--	---	--	---
---NEMOURIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---NEMOURA	1	0.3	5	0.3	20	0.5	--	---	--	---	--	---
---PERLIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---ACRONEURIA	--	---	--	---	4	0.1	2	0.3	--	---	5	0.7
---HESPOPERLA	--	---	4	0.2	6	0.2	--	---	--	---	--	---
---PERLODIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---ISOPERLA	4	1.1	12	0.7	--	---	--	---	1	0.4	--	---
---MEGARCYS	--	---	--	---	16	0.4	--	---	--	---	--	---
---CHLOROPERLIDAE	--	---	--	---	--	---	11	1.8	--	---	2	0.3
---HASTAPERLA	2	0.5	--	---	13	0.3	--	---	--	---	--	---
---CAPNIIDAE	2	0.5	--	---	--	---	--	---	--	---	--	---
---COLEOPTERA	--	---	--	---	--	---	--	---	--	---	--	---
---ELMIDAE (ADULTS)	1	0.3	1	0.1	8	0.2	--	---	--	---	--	---
---ELMIDAE (LARVAE)	19	5.1	93	5.4	144	3.6	110	18.3	21	7.6	23	3.2
---DYTISCIDAE (LARVAE)	--	---	1	0.1	--	---	2	0.3	--	---	1	0.1
---METEROGERIDAE	--	---	--	---	--	---	5	0.8	--	---	2	0.3
---EPHEMEROPTERA	--	---	--	---	--	---	--	---	--	---	--	---
---EPHEMERELLIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---EPHEMERELLA	--	---	--	---	--	---	38	6.3	--	---	5	0.7
---EPHEMERELLA NECUBA PACIFICA	--	---	--	---	--	---	1	0.2	--	---	--	---
---DRUNELLA	1	0.3	5	0.3	8	0.2	--	---	--	---	--	---
---SERATELLA	1	0.3	10	0.6	41	1.0	--	---	8	2.9	--	---
---ATENELLA	--	---	--	---	--	---	--	---	--	---	1	0.1
---LEPTOPHLEBIIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---PARALEPTOPHLEBIA	4	1.1	7	0.4	79	2.0	21	3.5	2	0.7	18	2.5
---BAETIDAE	72	19.1	--	---	970	24.4	--	---	--	---	--	---
---BAETIS	--	---	158	9.1	--	---	10	1.7	21	7.6	175	24.1
---SIPHONURIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---AMELETUS	--	---	--	---	1	0.0	--	---	--	---	--	---
---HEPTAGENIIDAE	--	---	--	---	--	---	--	---	--	---	--	---
---EPEORUS IRON	--	---	4	0.2	--	---	--	---	--	---	4	0.6
---CINYGMULA	1	0.3	8	0.5	15	0.4	1	0.2	2	0.7	--	---
---RHITHROGENA	--	---	--	---	66	1.7	--	---	--	---	1	0.1
---ARACHNIDA	--	---	--	---	--	---	--	---	--	---	--	---
---ACARINA	56	14.5	266	15.3	461	11.6	36	6.0	13	4.8	38	5.2

SANDY RIVER BASIN

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

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1981--Continue

DATE	SITE 1 81/08/07		SITE 2 81/08/07		SITE 3 81/08/07		SITE 4 81/08/07	
HABITAT	riffle cobble		riffle, rocks bedrock		riffle cobble		pool, sand cobble, boulders	
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.20		1.71		2.13		1.82	
EQUITABILITY	.52		.50		.52		.47	
TOTAL COUNT (NO./SQ.FOOT)	468.		614.		153.		116.	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
NEMATODA	2	0.4	--	---	--	---	--	---
ARTHROPODA								
--INSECTA								
---DIPTERA								
----TIPULIDAE								
----ANTOCHA	1	0.2	--	---	1	0.6	1	0.9
----DICRANOTA	--	---	--	---	9	5.9	2	1.7
----SIMULIIDAE	--	---	47	7.6	--	---	--	---
----EMPIDIDAE								
----CLINOCERA	2	0.4	--	---	--	---	--	---
---CHIRONOMIDAE (LARVAE)	124	26.5	50	8.1	25	16.3	20	17.2
---CHIRONOMIDAE (PUPAE)	7	1.5	--	---	--	---	--	---
---SCIARIDAE (ADULTS)	--	---	2	0.3	--	---	--	---
--TRICHOPTERA	3	0.6	--	---	--	---	--	---
---HYDROPSYCHIDAE								
---ARCTOPSYCHE	--	---	--	---	4	2.6	--	---
---RYACOPHILIDAE								
----RHYACOPHILA	11	2.3	8	1.3	1	0.6	--	---
---HIMALOPSYCHE	--	---	--	---	1	0.6	--	---
---HYDROPTILIDAE								
---OCHROTRICHIA	1	0.2	--	---	--	---	--	---
---BRACHYCENTRIDAE								
---MICRASEMA	1	0.2	4	0.6	--	---	--	---
---PLECOPTERA								
---PELTOPERLIDAE								
---YORAPERLA	--	---	2	0.3	--	---	--	---
---PERLIDAE								
----CALINEURA	1	0.2	--	---	--	---	--	---
---PERLODIDAE	--	---	--	---	--	---	2	1.7
---ISOPERLA	--	---	--	---	3	2.0	--	---
---COLEOPTERA								
---ELMIDAE (ADULTS)	--	---	--	---	3	2.0	--	---
---ELMIDAE (LARVAE)	55	11.8	--	---	--	---	--	---
---STENELMIS	3	0.6	--	---	4	2.6	9	7.8
---ZAITZEVIA PARVULA	2	0.4	--	---	--	---	--	---
---CLEPTELMIS	--	---	20	3.3	--	---	--	---
---DYTISCIDAE (LARVAE)								
---OREODYTES (LARVAE)	--	---	--	---	--	---	1	0.9
--EPHEMEROPTERA								
---EPHEMERELLIDAE								
---EPHEMERELLA	--	---	--	---	1	0.6	--	---
---DRUNELLA	1	0.2	5	0.8	--	---	2	1.7
---LEPTOPHLEBIIDAE								
---PARALEPTOPHLEBIA	11	2.3	--	---	--	---	--	---
---BAETIDAE								
---BAETIS	31	6.6	401	65.5	82	53.8	7	6.0
---SIPHONURIDAE								
---AMELETUS	--	---	--	---	--	---	2	1.7
---HEPTAGENIIDAE								
---EPEORUS IRON	--	---	--	---	2	1.3	1	0.9
---RHITHROGENA	--	---	--	---	1	0.6	--	---
--ARACHNIDA								
--ACARINA	212	45.6	75	12.2	16	10.5	69	59.5

SANDY RIVER BASIN

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

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984

DATE	78/07/11	79/08/09	--- SITE 1 ---		80/07/11	80/ 08/08	80/09/02	80/10/02
SPECIES DIVERSITY (BRILLOUIN INDEX)	3.35	1.82			1.47	1.88	2.75	2.31
EQUITABILITY	.78	.78			.36	.53	.74	.70
TOTAL COUNT (CELLS/SQ. INCH)*1000	4036.	3221.			30035.	744.	1781.	2038.
PERIPHYTON SLIDE EXPOSURE (DAYS)	35	71			37	28	25	30
	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT	COUNT PCT
CHLOROPHYTA GREEN ALGAE								
-CHLOROPHYCEAE								
--VOLVOCALES								
---CHLAMYDOMONADACEAE								
----CHLAMYDOMONAS-LIKE	20	0.5	--	---	--	---	--	---
---ULOTRICHALES								
----ULOTRICHACEAE								
----ULOTHRIX SPP.	--	---	--	---	5521	18.4	--	---
CHRYSOPHYTA YELLOW-BROWN ALGAE								
-BACILLARIOPHYCEAE DIATOMS								
--CENTRALES CENTRIC DIATOMS								
---COSCINODISCEAE								
----MELOSIRA DISTANS ALPIGENA	61	1.5	--	---	--	---	--	---
----PENNALES PENNATE DIATOMS	122	3.0	--	---	--	---	--	---
---FRAGILARIACEAE								
----DIATOMA HIEMALE MESODON	609	15.1	35	1.1	21481	71.4	9	0.5
----FRAGILARIA VAUCHERIAE	--	---	--	---	383	1.3	44	2.5
----HANNEA ARCUS	162	4.0	--	---	820	2.7	8	1.0
----MERIDION CIRCULARE	20	0.5	--	---	--	---	26	1.5
----SYNEDRA RUMPENS	--	---	--	---	164	0.5	9	0.5
----SYNEDRA ULNA	--	---	--	---	--	---	61	3.4
----SYNEDRA ULNA CONTRACTA	--	---	--	---	164	0.5	--	---
---ACHNANTHACEAE								
----ACHNANTHES LANCEOLATA	954	22.1	1549	48.1	55	0.2	194	26.0
----ACHNANTHES LINEARIS	223	5.5	563	17.5	355	1.2	39	5.2
----ACHNANTHES LEWISIANA	61	1.5	--	---	109	0.4	349	19.6
----ACHNANTHES MINUTISSIMA	101	2.5	282	8.7	191	0.6	--	---
----COCCONEIS PLACENTULA	--	---	--	---	--	---	122	6.9
----COCCONEIS PLACENTULA ENGLYPTA	690	17.1	792	24.6	--	---	681	38.1
----COCCONEIS PLACENTULA LINEATA	--	---	--	---	82	0.3	--	---
---NAVICULACEAE								
----NAVICULA CRYPTOCEPHALA VENETA	507	12.6	--	---	--	---	--	---
----NAVICULA GREGARIA	20	0.5	--	---	--	---	--	---
---GOMPHONEMACEAE								
----GOMPHONEMA SPP.	61	3.5	--	---	--	---	--	---
----GOMPHONEMA ANGUSTATUM	--	---	--	---	27	0.1	--	---
----GOMPHONEMA PARVULUM	142	3.5	--	---	273	0.9	15	2.1
----GOMPHONEMA SUBCLAVATUM	142	3.5	--	---	--	---	148	8.3
---CYMBELLACEAE								
----CYMBELLA MINUTA	--	---	--	---	137	0.5	4	0.5
---NITZSCHIAEAE								
----NITZSCHIA SPP.	--	---	--	---	27	0.1	--	---
----NITZSCHIA DISSIPATA	81	2.1	--	---	--	---	--	---
----NITZSCHIA FRUSTULUM	--	---	--	---	--	---	8	1.0
----NITZSCHIA LINEARIS	20	0.5	--	---	--	---	--	---
----NITZSCHIA PALEACEA	--	---	--	---	109	0.4	--	---
CYANOPHYTA BLUE-GREEN ALGAE								
-MYXOPHYCEAE								
--CHROOCOCCALES								
---CHROOCOCCACEAE								
----ANACYSTIS SPP.	20	0.5	--	---	--	---	--	---

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

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984--Continued

DATE	80/11/05		81/07/15		81/08/17		81/09/16		82/06/21		82/07/26	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
SPECIES DIVERSITY (BRILLOUIN INDEX)	3.47		3.29		2.04		1.94		3.32		2.82	
EQUITABILITY	.84		.76		.68		.75		.81		.70	
TOTAL COUNT (CELLS/SO.INCH)*1000	1359.		163.		1317.		1222.		285.		638.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	30		30		33		30		32		32	
CHLOROPHYTA GREEN ALGAE	6	0.4	--	---	--	---	--	---	--	---	--	---
-CHLOROPHYCEAE												
--VOLVOCALES												
---CHLAMYDOMONADACEAE												
----CHLAMYDOMONAS-LIKE	--	---	1	0.7	--	---	--	---	--	---	--	---
---ULOTRICHALES												
----ULOTRICHACEAE												
----ULOTHRIX SPP.	117	8.6	--	---	--	---	--	---	--	---	--	---
MISCELLANEOUS GREEN ALGAE	--	---	--	---	--	---	--	---	7	2.6	--	---
CRYPTOPHYTA												
-CRYPTOPHYCEAE												
--CRYPTOMONADALES												
---CRYPTOCHRYSIDACEAE												
----RHODOMONAS MINUTA	--	---	4	2.6	--	---	--	---	--	---	--	---
CHRYSTOPHYTA YELLOW-BROWN ALGAE												
-CHRYSTOPHYCEAE												
--CHRYSSOMONADALES												
---CHROMULINACEAE												
----KEPHYRION SPIRALE	--	---	3	2.0	--	---	--	---	2	0.6	--	---
---OCHROMONADACEAE												
----DINOBRYON SERTULARIA	--	---	3	2.0	--	---	--	---	--	---	--	---
-BACILLARIOPHYCEAE DIATOMS												
--CENTRALES CENTRIC DIATOMS												
---COSCINODISCACEAE												
----CYCLOTELLA STELLIGERA	--	---	1	0.7	--	---	--	---	--	---	--	---
----MELOSIRA DISTANS	--	---	1	0.7	--	---	--	---	--	---	--	---
---PENNALES PENNATE DIATOMS												
----FRAGILARIACEAE												
-----DIATOMA HIEMALE MESODON	--	---	26	15.8	--	---	--	---	59	21.2	5	0.8
-----FRAGILARIA VAUCHERIAE	29	2.2	--	---	--	---	--	---	7	2.6	10	1.6
-----HANNEA ARCUS	152	11.2	31	18.5	--	---	--	---	13	4.5	--	---
-----MERIDION CIRCULARE	--	---	--	---	--	---	--	---	28	9.7	5	0.8
-----SYNEDRA SPP.	--	---	2	1.3	--	---	--	---	--	---	--	---
-----SYNEDRA RUMPENS	6	0.4	19	11.3	15	1.2	--	---	35	12.3	5	0.8
-----SYNEDRA ULNA	53	3.9	13	7.9	8	0.6	--	---	--	---	--	---
---EUNOTIACEAE												
----EUNOTIA SPP.	12	0.9	--	---	--	---	--	---	--	---	--	---
---ACHNANTHACEAE												
-----ACHNANTHES LANCEOLATA	47	3.4	--	---	364	27.6	207	17.0	28	9.7	72	11.3
-----ACHNANTHES LINEARIS	199	14.7	1	0.7	209	15.9	372	30.3	2	0.6	21	3.2
-----ACHNANTHES LEWISIANA	23	1.7	--	---	8	0.6	7	0.6	--	---	10	1.6
-----ACHNANTHES MINUTISSIMA	94	6.9	12	7.3	132	10.0	136	11.1	7	2.6	145	22.6
-----COCCONEIS PLACENTULA	193	14.2	3	2.0	558	42.3	486	39.8	17	5.8	227	35.6
---NAVICULACEAE												
----NAVICULA CRYPTOCEPHALA	--	---	1	0.7	--	---	--	---	4	1.3	--	---
---GOMPHONEMACEAE												
----GOMPHONEIS HERCULEANA	--	---	--	---	--	---	--	---	--	---	5	0.8
----GOMPHONEMA ANGUSTATUM	29	2.2	19	11.3	23	1.8	--	---	48	16.9	41	6.5
----GOMPHONEMA SUBCLAVATUM	--	---	4	2.6	--	---	--	---	6	1.9	15	2.4
---CYMBELLACEAE												
----CYMBELLA MINUTA	59	4.3	14	8.6	--	---	--	---	7	2.6	31	4.8
---NITZSCHACEAE												
----NITZSCHIA SPP.	--	---	--	---	--	---	--	---	2	0.6	--	---
----NITZSCHIA DISSIPATA	35	2.6	2	1.3	--	---	--	---	2	0.6	31	4.8
----NITZSCHIA FRUSTULUM	41	3.0	--	---	--	---	--	---	--	---	--	---
---NITZSCHIA PALEACEA	258	19.0	2	1.3	--	---	14	1.2	11	3.9	5	0.8
CYANOPHYTA BLUE-GREEN ALGAE	6	0.4	--	---	--	---	--	---	--	---	--	---
-MYXOPHYCEAE												
---CHROOCOCCALES												
----CHROOCOCCACEAE												
---ANACYSTIS SPP.	--	---	--	---	--	---	--	---	--	---	10	1.6

SANDY RIVER BASIN

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

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984--Continued

DATE	82/08/23		83/08/12		--- SITE 1 --- SLIDE 1 83/09/28		SLIDE 2 83/09/28		SLIDE 1 83/10/26		SLIDE 2 83/10/26	
	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT	COUNT	PCT
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.66		2.69		2.50		2.47		2.24		2.26	
EQUITABILITY	.80		.69		.76		.74		.57		.51	
TOTAL COUNT (CELLS/SQ.INCH)*1000	1767.		857.		993.		1371.		122.		53.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	30		23		47		47		28		28	
CHRYSTOPHYTA YELLOW-BROWN ALGAE												
--BACILLARIOPHYCEAE DIATOMS												
--PENNALES PENNATE DIATOMS												
---FRAGILARIACEAE												
----DIATOMA HIEMALE MESODON	--	---	217	25.1	113	11.4	63	4.6	--	---	--	---
----FRAGILARIA VAUCHERIAE	13	0.8	3	0.4	--	---	23	1.7	1	0.6	--	---
----HANNEA ARCUS	27	1.5	214	24.9	11	1.1	16	1.1	1	0.6	1	2.7
----SYNEDRA RUMPENS	--	---	36	4.2	5	0.5	--	---	29	24.0	12	23.0
----SYNEDRA ULNA	--	---	204	23.8	--	---	--	---	1	0.6	1	0.9
---EUNOTIACEAE												
----EUNOTIA SPP.	--	---	--	---	--	---	--	---	--	---	1	0.9
---ACHNANTHACEAE												
----ACHNANTHES LANCEOLATA	319	18.0	10	1.1	172	17.3	298	21.7	26	21.4	6	11.5
----ACHNANTHES LINEARIS	372	21.0	3	0.4	91	9.2	274	20.0	3	2.6	1	0.9
----ACHNANTHES LEWISIANA	27	1.5	3	0.4	--	---	8	0.6	1	0.6	--	---
----ACHNANTHES MINUTISSIMA	465	26.3	26	3.0	258	25.9	188	13.7	2	1.9	1	2.7
----COCCONEIS PLACENTULA	239	13.5	74	8.7	290	29.3	446	32.6	47	38.7	22	42.2
---NAVICULACEAE												
----NAVICULA CRYPTOCEPHALA	--	---	6	0.8	5	0.5	--	---	--	---	--	---
---GOMPHONEMACEAE												
----GOMPHONEMA ANGUSTATUM	93	5.3	32	3.8	16	1.6	8	0.6	2	1.9	1	2.7
----GOMPHONEMA SUBCLAVATUM	--	---	13	1.5	--	---	--	---	2	1.3	--	---
---CYMBELLACEAE												
----CYMBELLA MINUTA	13	0.8	--	---	--	---	--	---	4	3.2	1	1.8
---NITZSCHACEAE												
----NITZSCHIA DISSIPATA	--	---	3	0.4	--	---	--	---	--	---	1	0.9
----NITZSCHIA FRUSTULUM	--	---	--	---	--	---	--	---	--	---	1	1.8
----NITZSCHIA PALEACEA	199	11.3	13	1.5	32	3.2	47	3.4	3	2.6	4	8.0

DATE	--- SITE 2 --- SLIDE 1 83/10/26		SLIDE 2 83/10/26	
	COUNT	PCT	COUNT	PCT
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.68		2.65	
EQUITABILITY	.69		.47	
TOTAL COUNT (CELLS/SQ.INCH)*1000	65.		18.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	28		28	
CHRYSTOPHYTA YELLOW-BROWN ALGAE				
--BACILLARIOPHYCEAE DIATOMS				
--PENNALES PENNATE DIATOMS				
---FRAGILARIACEAE				
----DIATOMA HIEMALE MESODON	.4	.7	.4	1.6
----FRAGILARIA VAUCHERIAE	--	---	.4	1.6
----HANNEA ARCUS	1	1.4	--	---
----SYNEDRA RUMPENS	4	6.8	4	21.6
----SYNEDRA ULNA	1	1.4	--	---
---ACHNANTHACEAE				
----ACHNANTHES LANCEOLATA	13	20.3	2	8.2
----ACHNANTHES LINEARIS	5	7.4	2	9.8
----ACHNANTHES LEWISIANA	.4	.7	1	3.3
----ACHNANTHES MINUTISSIMA	6	8.8	3	13.1
----COCCONEIS PLACENTULA	12	18.9	3	13.1
---NAVICULACEAE				
----NAVICULA CRYPTOCEPHALA	--	---	.4	1.6
---GOMPHONEMACEAE				
----GOMPHONEMA SPP.	--	---	.4	1.6
----GOMPHONEMA ANGUSTATUM	3	4.1	2	9.8
----GOMPHONEMA SUBCLAVATUM	1	1.4	--	---
---CYMBELLACEAE				
----CYMBELLA MINUTA	2	2.7	1	4.9
---NITZSCHACEAE				
----NITZSCHIA SPP.	.4	.7	--	---
----NITZSCHIA DISSIPATA	--	---	.4	1.6
----NITZSCHIA FRUSTULUM	--	---	.4	1.6
----NITZSCHIA PALEACEA	16	24.7	1	6.6

SANDY RIVER BASIN

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

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1984--Continued

DATE	84/08/16		84/09/07	
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.11		2.00	
EQUITABILITY	.63		.71	
TOTAL COUNT (CELLS/SO.INCH) * 1000	663.		642.	
PERIPHYTON SLIDE EXPOSURE (DAYS)	36		21	
	COUNT	PCT	COUNT	PCT
CHRYSTOPHYTA YELLOW-BROWN ALGAE				
-BACILLARIOPHYCEAE DIATOMS				
--PENNALES PENNATE DIATOMS				
---FRAGILARIACEAE				
----FRAGILARIA VAUCHERIAE	3	0.5	10	1.6
----SYNEDRA RUMPENS	44	6.7	--	---
----SYNEDRA ULNA	--	---	7	1.1
---EUNOTIACEAE				
----EUNOTIA SPP.	3	0.5	--	---
---ACHNANTHACEAE				
----ACHNANTHES LANCEOLATA	154	23.2	147	22.9
----ACHNANTHES LINEARIS	51	7.7	75	11.7
----ACHNANTHES LEWISIANA	10	1.5	--	---
----ACHNANTHES MINUTISSIMA	48	7.2	79	12.2
----COCCONEIS PLACENTULA	328	49.5	307	47.9
---NAVICULACEAE				
----NAVICULA CRYPTOCEPHALA	14	2.1	--	---
---CYMBELLACEAE				
----CYMBELLA MINUTA	--	---	17	2.7
---NITZSCHIACEAE				
----NITZSCHIA DISSIPATA	7	1.0	--	---

SANDY RIVER BASIN

103

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 mi².

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, 22,210 acre-ft Jan. 3, elevation, 862.74 ft; minimum, 19,560 acre-ft Dec. 27, elevation, 856.72 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	857.35	859.06	859.66	860.84	859.46	859.33	859.67	859.34	859.97	859.72	859.85	859.16
2	857.03	859.94	859.48	861.20	859.38	859.46	859.64	860.37	859.92	859.56	859.85	859.49
3	859.01	860.83	859.68	862.46	859.38	859.74	859.42	860.27	859.83	859.89	859.81	859.72
4	858.48	860.48	859.58	861.55	859.35	859.81	859.87	859.58	859.61	859.96	859.91	859.60
5	859.42	859.70	859.81	861.07	859.23	859.82	859.75	860.11	859.70	859.94	859.70	859.37
6	858.84	860.91	859.17	860.86	858.97	859.60	859.96	859.43	859.52	859.89	859.87	859.13
7	859.29	860.25	859.48	860.83	858.82	859.87	860.22	859.33	859.48	859.92	859.59	859.41
8	858.66	859.29	859.69	860.70	858.03	859.79	859.79	858.50	859.32	859.92	859.67	859.68
9	858.96	859.30	859.59	860.59	858.55	859.71	859.85	859.80	859.72	859.97	859.61	859.81
10	858.39	858.97	860.96	860.94	858.73	859.80	859.72	859.69	859.68	859.91	859.78	859.85
11	858.94	859.63	860.09	860.88	859.23	859.86	859.02	859.81	859.55	859.87	859.82	859.58
12	859.07	858.78	860.49	860.67	861.63	859.98	859.40	859.55	859.87	859.97	859.89	859.78
13	858.50	859.04	860.89	859.78	861.27	859.69	859.39	859.59	859.26	859.97	859.72	859.73
14	858.99	859.32	860.69	859.72	860.38	860.19	859.42	859.49	859.62	859.91	859.72	859.53
15	858.39	860.05	859.85	859.10	859.54	860.16	859.69	859.56	859.62	859.91	859.65	859.68
16	858.96	860.11	858.77	858.14	859.29	860.07	859.35	859.49	859.86	859.69	859.64	859.74
17	858.48	860.86	858.94	858.64	858.82	859.61	859.44	859.67	859.58	859.77	859.62	859.71
18	859.24	860.62	859.31	858.46	859.63	860.36	859.66	859.58	859.71	859.85	859.69	859.63
19	858.67	860.47	859.36	858.50	858.66	860.79	859.55	859.47	859.39	859.67	859.73	859.79
20	858.96	860.08	859.51	858.28	858.89	860.85	859.66	859.41	859.80	859.92	859.54	859.73
21	859.72	859.71	859.35	858.56	859.37	860.86	859.71	859.68	860.33	860.02	858.74	859.92
22	859.82	859.53	858.44	859.08	859.47	860.30	859.67	859.90	859.73	860.03	858.28	859.49
23	859.61	859.53	858.41	861.54	859.35	859.87	859.43	859.86	859.90	859.68	858.10	859.77
24	859.27	860.88	858.45	862.22	859.39	859.30	859.75	859.51	859.58	859.90	858.22	859.85
25	859.77	860.39	856.82	861.72	859.44	859.79	859.41	859.50	859.78	859.74	858.31	859.80
26	859.37	859.67	856.75	861.12	859.46	860.54	859.36	859.67	860.05	860.00	858.40	859.78
27	859.78	860.70	856.76	860.27	859.26	859.52	859.53	859.81	859.82	859.93	858.40	859.90
28	859.84	860.05	857.14	859.46	859.57	859.58	859.67	859.62	860.00	860.00	858.65	859.74
29	859.24	859.43	858.82	859.54	859.80	859.41	859.85	859.48	859.85	859.85	858.66	859.68
30	859.75	859.20	860.70	859.63	---	859.89	859.71	859.61	859.65	859.58	858.66	859.80
31	859.47	---	861.10	859.63	---	859.85	---	859.76	---	859.90	858.75	---
MEAN	859.01	859.89	859.28	860.19	859.39	859.92	859.62	859.63	859.72	859.87	859.28	859.66
MAX	859.84	860.91	861.10	862.46	861.63	860.86	860.22	860.37	860.33	860.03	859.91	859.92
MIN	857.03	858.78	856.75	858.14	858.03	859.30	859.02	858.50	859.26	859.56	858.10	859.13
(†)	20770	20650	21480	20840	20910	20930	20870	20890	20850	20960	20450	20910
(‡)	+670	-120	+830	-640	+70	+20	-60	+20	-40	+110	-510	+460
CAL YR 1983	MEAN 859.88	MAX 863.38	MIN 856.75	AC-FT‡	+960							
WTR YR 1984	MEAN 859.62	MAX 862.46	MIN 856.75	AC-FT‡	+810							

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

‡ Change in contents, in acre-feet.

SANDY RIVER BASIN

14140001 BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'15", long 122°10'40", in 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 mi².

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 above 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 datum.

REMARKS.--Records excellent except those below 10 ft³/s, which are fair. Flow regulated since 1915 by Bull Run Lake, capacity, 12,270 acre-ft, since 1929 by Bull Run Reservoir Number One (see station 14139000), since 1958 by North Fork Reservoir, capacity, 1,030 acre-ft, 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, 146,400 acre-ft of which 14,290 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.--77 years, 780 ft³/s, 98.99 in/yr, 565,100 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 ft³/s Dec. 22, 1964, gage height, 17.21 ft, from rating curve extended above 8,800 ft³/s on basis of computation of peak flow over dam; minimum, 1.1 ft³/s Oct. 4, 1974.

Combined flow, maximum discharge, 25,100 ft³/s Dec. 22, 1964; minimum daily, 63 ft³/s Aug. 13-16, 1926.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 7,250 ft³/s Jan. 3, gage height, 11.08 ft; minimum, 3.9 ft³/s Sept. 27.

Combined flow, maximum discharge, 7,490 ft³/s Jan. 3; minimum daily, 139 ft³/s Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	221	814	1350	624	1060	802	993	631	498	250	215
2	172	405	718	1110	694	1200	835	1610	445	604	257	189
3	160	1050	621	4780	462	1140	698	1960	454	398	217	197
4	173	2340	550	4770	459	800	563	1560	882	244	248	236
5	173	1590	646	2550	443	793	808	1160	1150	377	239	267
6	178	2360	909	1740	454	704	514	1020	1140	365	232	294
7	176	2020	947	1400	435	507	1090	450	1350	276	242	247
8	181	1430	1440	1350	487	696	1770	425	1580	299	282	175
9	174	835	1570	1070	334	622	1410	515	1540	286	310	191
10	167	1050	2330	1130	385	714	1680	890	1380	299	286	191
11	193	860	2310	1730	423	991	1680	1060	1170	251	276	194
12	191	768	1580	1370	1870	975	1580	1240	948	200	246	198
13	188	898	2420	1230	4390	1540	1590	723	628	213	210	193
14	166	796	2700	882	2930	1620	1250	1050	631	246	265	199
15	174	1560	2010	851	1770	1780	1190	994	545	255	302	204
16	175	1800	1480	814	1560	1620	1240	996	469	269	246	202
17	167	2380	995	440	999	1610	754	599	461	313	266	197
18	168	2510	523	512	904	1450	983	731	446	280	270	222
19	197	1820	644	516	807	2240	823	656	448	250	230	244
20	153	1810	545	514	840	2300	707	1190	456	258	239	185
21	163	1580	434	507	1010	2810	722	925	1590	225	283	191
22	175	1120	478	711	729	2270	656	972	1570	236	282	180
23	157	864	485	1660	964	1760	727	1410	1070	286	262	175
24	145	2290	411	6730	1190	1540	549	1350	864	272	255	191
25	139	1990	396	6180	1170	1400	596	1200	665	291	248	187
26	174	1630	385	3880	830	2260	575	1600	534	226	254	183
27	224	1790	351	2390	865	1960	452	1210	782	280	250	179
28	190	1770	319	1600	724	1690	447	1070	458	235	238	206
29	198	1510	207	1110	664	1560	476	1010	607	249	250	225
30	206	1180	700	829	---	877	674	688	858	247	266	206
31	629	---	1860	556	---	1120	---	706	---	302	259	---
TOTAL	5905	44227	31778	56262	29416	43609	27841	31963	25752	9030	7960	6163
MEAN	190	1474	1025	1815	1014	1407	928	1031	858	291	257	205
MAX	629	2510	2700	6730	4390	2810	1770	1960	1590	604	310	294
MIN	139	221	207	440	334	507	447	425	445	200	210	175
AC-FT	11710	87720	63030	111600	58350	86500	55220	63400	51080	17910	15790	12220
MEAN†	202	1470	1066	1778	1013	1406	929	1089	860	245	112	224
CFSM†	1.89	13.7	9.96	16.6	9.47	13.1	8.68	10.2	8.04	2.29	1.05	2.09
IN.†	2.18	15.33	11.49	19.17	10.21	15.16	9.69	11.74	8.97	2.64	1.21	2.33
AC-FT†	12410	87490	65540	109350	58270	86470	55290	66990	51160	15040	6910	13300

CAL YR 1983 TOTAL 312244 MEAN 855 MAX 9830 MIN 139 AC-FT 619300 MEAN† 847 CFSM† 7.92 IN.† 107.46 AC-FT† 613100
WTR YR 1984 TOTAL 319906 MEAN 874 MAX 6730 MIN 139 AC-FT 634500 MEAN† 865 CFSM† 8.08 IN.† 110.11 AC-FT† 628200

† 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 mi².

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. WDR 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.--65 years (water years 1920-84), 147 ft³/s, 89.52 in/yr, 106,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,320 ft³/s Nov. 20, 1921, gage height, 9.18 ft, site and datum then in use, from rating curve extended above 2,200 ft³/s; minimum, 8 ft³/s Aug. 20, Sept. 16, 17, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 3	1530	1,660	5.09	Jan. 24	0600	*1,750	*5.20

Minimum daily, 14 ft³/s Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	23	64	145	238	110	188	158	190	96	108	26	23		
2	24	69	131	242	99	198	152	269	87	100	25	17		
3	24	262	117	1100	91	168	138	345	81	95	24	16		
4	32	423	102	700	85	143	130	241	174	85	23	15		
5	28	283	103	377	80	127	138	218	220	78	23	35		
6	26	567	137	265	78	119	137	208	193	73	23	72		
7	27	304	178	235	74	112	222	198	311	67	21	179		
8	26	202	261	214	71	108	298	196	294	62	21	104		
9	25	164	241	167	73	115	261	173	329	58	21	67		
10	25	140	406	236	71	130	301	165	247	55	20	49		
11	24	124	309	321	95	131	253	225	187	52	20	45		
12	24	107	231	227	454	151	300	196	150	50	19	59		
13	24	102	445	177	689	201	266	163	130	48	19	44		
14	32	126	519	144	359	243	262	172	113	45	19	34		
15	30	277	318	119	246	258	270	172	100	44	18	30		
16	27	282	220	107	206	221	213	172	90	41	18	28		
17	34	306	167	94	160	186	184	143	83	39	17	26		
18	33	284	142	86	137	259	163	126	76	38	18	24		
19	27	251	124	81	123	348	152	126	71	36	17	23		
20	27	258	105	75	136	341	148	214	107	35	17	24		
21	25	197	85	89	172	423	134	157	465	34	17	23		
22	163	159	50	175	142	313	127	158	315	32	16	50		
23	100	180	45	613	151	245	133	302	197	31	16	60		
24	68	484	45	1510	187	204	115	232	149	31	16	38		
25	57	297	46	879	171	249	108	206	123	30	16	31		
26	50	246	48	450	151	469	103	239	113	30	15	28		
27	45	448	50	281	137	302	96	187	127	29	15	25		
28	42	360	62	210	134	280	90	151	100	28	15	23		
29	40	252	160	168	131	245	101	131	145	27	15	21		
30	46	185	467	143	---	209	125	121	133	26	14	21		
31	76	---	381	126	---	177	---	111	---	25	17	---		
TOTAL	1254	7403	5840	9849	4813	6863	5278	5907	5006	1532	581	1234		
MEAN	40.5	247	188	318	166	221	176	191	167	49.4	18.7	41.1		
MAX	163	567	519	1510	689	469	301	345	465	108	26	179		
MIN	23	64	45	75	71	108	90	111	71	25	14	15		
CFSM	1.82	11.1	8.43	14.3	7.44	9.91	7.89	8.57	7.49	2.22	.84	1.84		
IN.	2.09	12.35	9.74	16.43	8.03	11.45	8.80	9.85	8.35	2.56	.97	2.06		
AC-FT	2490	14680	11580	19540	9550	13610	10470	11720	9930	3040	1150	2450		
CAL YR 1983	TOTAL	54106	MEAN	148	MAX	1660	MIN	21	CFSM	6.64	IN.	90.26	AC-FT	107300
WTR YR 1984	TOTAL	55560	MEAN	152	MAX	1510	MIN	14	CFSM	6.82	IN.	92.68	AC-FT	110200

SANDY RIVER BASIN

14142500 SANDY RIVER BELOW BULL RUN RIVER, NEAR BULL RUN, OR

LOCATION.--Lat 45°26'57", long 122°14'38", in SW¼ sec.30, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, on left bank 0.1 mi downstream from Bull Run River, 0.2 mi downstream from Dodge Park, 400 ft below city of Portland water conduit crossing Sandy River, and at mile 18.4.

DRAINAGE AREA.--436 mi².

PERIOD OF RECORD.--April 1910 to September 1914, October 1929 to September 1966, May 1984 to current year. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Elevation of gage is 240 ft, from topographic map. April 1910 to September 1914, staff gage at present site at different datum. October 1929 to September 1966, water-stage recorder at site 0.8 mi downstream at different datum.

REMARKS.--Records excellent. Flow regulated since 1915 by Bull Run Lake, since 1929 by Bull Run Reservoir Number One (see sta 14139000), and since 1961 by Bull Run Reservoir Number Two (see sta 14139900). Some fluctuation caused by Bull Run powerplant of Portland General Electric Company. Portland Water Bureau diverted 143,800 acre-ft from Bull Run River during the 1984 water year, of which 14,290 acre-ft were used for power generation by Portland General Electric Company and returned to Bull Run River.

AVERAGE DISCHARGE.--41 years (water years 1911-14, 1930-66) 2,356 ft³/s, 1,706,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 84400 ft³/s Dec. 22, 1964, gage height, 22.3 ft, site and datum then in use; minimum, 45 ft³/s Sept. 26, 1962, minimum daily, 63 ft³/s Oct. 12, Nov. 9, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum recorded discharge during period May to September, 6,060 ft³/s June 8, gage height, 11.94 ft minimum, 322 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1984
MEAN VALUES

DAY	MAY	JUN	JUL	AUG	SEP
1	2500	2170	1650	601	472
2	5000	1910	1690	601	440
3	6000	1780	1460	563	389
4	4800	2560	1190	531	374
5	3800	3520	1220	537	455
6	3100	3320	1270	529	1050
7	2450	4740	1100	482	1260
8	2370	5710	1030	504	994
9	2270	5340	922	512	696
10	2560	4600	983	533	539
11	3080	3760	899	511	489
12	3410	3060	858	507	553
13	2730	2570	808	473	491
14	3250	2310	799	443	421
15	3180	2090	787	461	412
16	3150	1890	800	445	417
17	2520	1760	804	478	407
18	2460	1690	784	478	408
19	2250	1570	713	454	389
20	3310	1720	678	433	422
21	2730	4270	664	421	391
22	2670	4270	645	421	495
23	4230	2950	655	424	651
24	3940	2540	662	404	479
25	3410	2060	774	404	428
26	4480	1860	765	393	402
27	3720	2210	634	412	382
28	3180	1760	615	397	358
29	3070	2030	580	383	357
30	2720	2280	601	392	350
31	2500	---	583	414	---
TOTAL	100840	84300	27623	14541	15371
MEAN	3253	2810	891	469	512
MAX	6000	5710	1690	601	1260
MIN	2250	1570	580	383	350
AC-FT	200000	167200	54790	28840	30490

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 mi².

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.--26 years, 824 ft³/s, 43.37 in/yr, 597,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,800 ft³/s Dec. 22, 1964, gage height, 16.96 ft, from floodmark, site and datum then in use, from rating curve extended above 5,100 ft³/s on basis of slope-area measurement of peak flow; minimum, 187 ft³/s Sept. 15, 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	0100	3,890	8.33	Dec. 30	0500	4,060	8.64
Dec. 15	0030	9,480	11.28	Feb. 13	1100	*10,800	*11.78

Minimum, 265 ft³/s Oct. 4, 6-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	274	392	902	1700	703	1160	1260	1270	1260	833	426	388		
2	271	394	1010	1360	666	1200	1190	1690	1150	800	421	375		
3	270	440	991	1440	638	1040	1120	2700	1070	776	415	366		
4	267	606	855	1740	628	950	1050	2240	1470	752	409	362		
5	268	474	788	1730	630	880	1070	1770	1850	733	405	368		
6	268	921	1720	1580	633	880	1020	1460	2200	712	401	405		
7	265	770	3290	1460	612	892	1050	1300	3240	689	393	385		
8	265	582	2390	1330	600	924	1660	1300	2600	660	385	378		
9	307	532	1750	1160	632	957	1560	1310	2070	636	381	366		
10	305	521	2190	1140	616	997	2160	1240	1750	616	380	362		
11	297	604	1790	1220	654	1010	1690	1580	1510	605	376	360		
12	284	662	1460	1080	1790	944	1790	1780	1400	592	374	356		
13	278	879	2020	976	8250	1050	1600	1770	1380	575	372	352		
14	282	794	5340	883	3460	1360	1670	1800	1350	559	368	354		
15	281	955	6400	808	2550	1320	1870	1500	1350	548	366	358		
16	275	990	3120	753	2180	1240	1670	1330	1340	541	361	348		
17	275	1840	2170	700	1600	1260	1430	1230	1240	539	359	346		
18	275	1450	1720	661	1310	1150	1350	1210	1170	532	358	342		
19	275	1430	1590	634	1190	1200	1310	1290	1130	515	358	341		
20	274	1710	1360	602	1330	1360	1250	1400	1170	499	354	390		
21	271	1190	1170	631	1510	1650	1160	1330	1160	489	351	363		
22	303	940	1020	716	1320	1440	1090	1250	1040	479	350	353		
23	359	1060	893	736	1170	1280	1060	1830	1010	475	350	374		
24	303	2600	862	950	1180	1180	1000	1610	1050	474	351	365		
25	288	2000	866	1200	1400	1160	937	1420	1080	470	356	354		
26	283	1420	945	1150	1300	2800	892	1500	1070	462	369	349		
27	279	1130	867	999	1200	2450	843	1440	1020	452	366	345		
28	278	1020	797	898	1100	1890	824	1480	1010	447	365	339		
29	275	909	1170	831	1100	1550	801	1800	1000	438	364	339		
30	286	849	3380	779	---	1350	830	1920	901	428	370	339		
31	353	---	2370	740	---	1280	---	1500	---	427	416	---		
TOTAL	8834	30064	57196	32587	41952	39804	38207	48250	42041	17753	11670	10822		
MEAN	285	1002	1845	1051	1447	1284	1274	1556	1401	573	376	361		
MAX	359	2600	6400	1740	8250	2800	2160	2700	3240	833	426	405		
MIN	265	392	788	602	600	880	801	1210	901	427	350	339		
CFSM	1.10	3.88	7.15	4.07	5.61	4.98	4.94	6.03	5.43	2.22	1.46	1.40		
IN.	1.27	4.33	8.25	4.70	6.05	5.74	5.51	6.96	6.06	2.56	1.68	1.56		
AC-FT	17520	59630	113400	64640	83210	78950	75780	95700	83390	35210	23150	21470		
CAL YR 1983	TOTAL	364070	MEAN	997	MAX	6400	MIN	265	CFSM	3.86	IN.	52.49	AC-FT	722100
WTR YR 1984	TOTAL	379180	MEAN	1036	MAX	8250	MIN	265	CFSM	4.02	IN.	54.67	AC-FT	752100

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 recorded, 18.0°C July 29; minimum, 0.0°C Dec. 23, 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	9.5	8.5	6.5	5.5	5.0	4.0	5.5	3.5	6.5	5.5
2	---	---	9.0	8.0	6.5	5.5	6.0	4.5	5.0	3.0	6.5	5.0
3	---	---	10.0	8.0	5.5	5.0	6.5	5.5	6.0	3.5	6.5	4.5
4	---	---	9.0	8.0	5.5	4.5	6.0	5.5	6.5	4.0	7.0	4.0
5	---	---	8.0	6.5	5.0	4.5	6.0	5.0	6.5	4.0	7.5	4.0
6	---	---	8.5	7.0	6.0	4.5	6.0	5.0	7.0	5.0	7.5	4.5
7	---	---	7.5	6.0	6.5	6.0	6.5	5.0	6.0	4.0	8.0	5.0
8	---	---	6.5	5.0	6.5	5.5	6.0	5.0	7.0	5.0	8.0	5.0
9	---	---	8.0	6.5	7.0	6.0	5.5	4.5	5.5	5.0	8.5	6.0
10	---	---	8.5	6.5	6.5	5.5	6.0	5.5	5.5	4.0	7.5	6.0
11	12.0	---	8.5	6.5	5.5	5.0	6.0	5.0	5.5	4.5	7.0	5.0
12	11.5	8.0	7.5	6.0	5.5	5.0	5.5	4.5	6.5	5.0	7.5	5.5
13	10.0	8.5	6.5	6.0	6.5	5.5	4.5	3.0	6.0	5.0	7.5	5.5
14	10.0	8.0	6.5	5.5	7.5	6.0	3.5	2.5	5.5	4.5	7.0	6.0
15	10.0	7.0	8.0	6.0	6.5	5.5	3.5	2.0	5.5	4.5	7.0	5.5
16	9.5	6.0	8.5	7.0	6.5	5.5	3.5	2.0	5.5	4.5	6.0	5.0
17	9.5	7.5	7.5	6.5	7.0	6.0	3.0	1.0	5.5	3.5	7.0	4.5
18	10.0	7.0	7.0	5.5	6.5	6.0	3.5	1.5	6.0	4.0	7.0	5.0
19	10.0	6.5	7.0	6.0	6.5	4.5	4.5	3.0	6.0	4.5	8.5	6.0
20	10.0	7.0	6.0	4.5	4.5	4.0	4.0	2.0	7.0	5.5	8.0	6.0
21	10.5	6.5	6.5	5.5	4.0	2.5	5.0	4.0	6.0	4.5	7.0	5.5
22	9.0	8.0	5.5	4.5	2.5	1.0	6.0	4.5	5.5	4.0	8.0	5.0
23	10.5	7.5	6.5	5.5	1.0	.0	5.0	4.0	6.0	4.5	7.5	6.0
24	9.0	5.5	6.5	5.5	1.5	.0	6.5	5.0	---	---	8.0	5.5
25	9.5	6.0	6.0	5.0	3.5	1.5	6.5	5.5	---	---	6.0	5.0
26	9.5	6.0	6.0	5.0	4.5	3.5	5.5	4.5	---	---	7.0	5.5
27	9.0	6.5	7.0	5.0	4.5	3.5	5.5	4.0	---	---	8.0	5.5
28	10.0	7.0	6.5	5.5	4.0	2.5	5.5	4.0	---	---	7.5	5.5
29	9.0	7.0	5.5	5.0	5.0	4.0	5.5	3.5	6.5	---	8.0	5.0
30	9.5	8.5	5.5	5.0	5.5	5.0	6.0	3.5	---	---	8.0	4.5
31	10.0	8.5	---	---	5.0	4.5	5.5	3.5	---	---	6.5	5.5
MONTH	---	---	10.0	4.5	7.5	.0	6.5	1.0	---	---	8.5	4.0

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	5.0	8.0	6.0	10.5	6.0	---	---			---	---
2	8.5	5.5	9.0	6.0	11.5	7.5	---	---			---	---
3	7.0	5.5	9.0	6.0	11.0	7.0	---	---			---	---
4	7.5	6.0	8.0	6.0	9.0	6.5	---	---			---	---
5	7.0	6.0	9.0	5.0	8.0	7.0	---	---			---	---
6	8.0	5.0	9.5	4.5	8.0	6.5	---	---			---	---
7	7.0	5.5	11.0	5.0	8.5	6.5	---	---			---	---
8	6.5	4.5	9.5	6.5	8.5	6.0	---	---			---	---
9	6.0	5.0	9.0	5.5	8.0	7.0	---	---			---	---
10	6.5	5.0	9.0	6.5	10.5	6.5	---	---			---	---
11	7.0	5.0	9.0	7.0	11.5	7.0	---	---			---	---
12	7.5	5.5	10.0	6.0	11.5	7.0	---	---			---	---
13	9.5	4.5	10.0	6.0	12.5	7.5	---	---			---	---
14	10.5	5.5	8.0	6.0	13.0	8.0	---	---			---	---
15	9.0	6.0	8.0	5.5	13.5	8.5	---	---			---	---
16	7.5	6.0	10.0	5.0	12.5	8.0	---	---			---	---
17	9.0	5.5	10.5	6.5	12.5	7.5	---	---			---	---
18	8.0	5.5	11.0	6.5	13.0	8.0	---	---			---	---
19	7.5	5.0	10.5	7.0	12.5	8.0	---	---			---	---
20	8.5	5.0	10.0	7.0	---	---	---	---			---	---
21	8.0	5.0	9.0	6.5	---	---	---	---			---	---
22	10.5	6.0	8.5	6.0	---	---	---	---			---	---
23	10.0	6.0	9.0	6.0	---	---	---	---			---	---
24	7.0	4.5	9.5	6.5	---	---	---	---			---	---
25	6.5	4.0	8.5	6.5	---	---	---	---			---	---
26	7.0	4.5	10.5	7.0	---	---	---	---			---	---
27	9.5	5.0	12.0	6.0	---	---	17.5	---			12.0	7.5
28	7.5	4.5	13.0	7.0	---	---	16.0	11.5			12.5	7.5
29	7.5	5.5	13.0	7.5	---	---	18.0	11.0			12.5	8.0
30	8.0	6.0	9.5	7.0	---	---	---	11.5			10.5	9.0
31	---	---	10.0	6.0	---	---	---	---			---	---
MONTH	10.5	4.0	13.0	4.5	---	---	---	---			---	---

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 mi².

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, 351,200 acre-ft June 8, elevation, 1,541.44 ft; minimum, 158,500 acre-ft Jan. 19, elevation, 1,449.99 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1503.62	1478.66	1459.59	1460.54	1457.58	1498.65	1519.22	1533.74	1540.82	1540.69	1540.85	1536.35
2	1502.80	1477.35	1458.67	1460.35	1457.71	1499.57	1519.44	1534.84	1540.83	1540.70	1540.85	1535.76
3	1502.04	1476.13	1457.62	1460.31	1458.22	1500.24	1519.64	1536.52	1540.84	1540.71	1540.84	1535.16
4	1501.26	1475.13	1456.33	1460.56	1458.93	1500.70	1519.67	1537.39	1540.98	1540.71	1540.83	1534.38
5	1500.48	1473.90	1455.25	1460.19	1459.68	1501.09	1519.69	1537.75	1541.00	1540.70	1540.84	1533.55
6	1499.69	1473.48	1456.17	1459.41	1460.40	1501.74	1519.78	1537.80	1541.07	1540.71	1540.84	1532.73
7	1498.93	1472.72	1460.38	1458.43	1461.08	1502.43	1520.19	1537.76	1541.36	1540.73	1540.84	1531.92
8	1498.15	1471.64	1462.61	1457.20	1461.75	1503.15	1521.38	1537.77	1541.37	1540.74	1540.84	1531.06
9	1497.43	1470.50	1462.54	1455.63	1462.52	1503.90	1522.37	1537.89	1541.30	1540.74	1540.85	1530.21
10	1496.70	1469.29	1463.11	1454.13	1463.22	1504.60	1523.83	1538.03	1541.29	1540.73	1540.85	1529.33
11	1495.92	1468.21	1463.08	1453.69	1464.05	1505.29	1524.84	1538.50	1541.27	1540.75	1540.84	1528.45
12	1495.31	1467.26	1462.53	1453.57	1467.10	1505.94	1525.83	1539.05	1540.94	1540.84	1540.84	1527.56
13	1494.81	1466.76	1462.74	1453.17	1481.64	1506.87	1526.58	1539.12	1540.86	1540.93	1540.85	1526.67
14	1494.34	1466.06	1468.91	1452.56	1487.44	1507.94	1527.40	1539.10	1540.73	1540.95	1540.84	1525.77
15	1493.86	1465.57	1475.98	1451.77	1490.40	1508.68	1528.34	1538.98	1540.65	1540.96	1540.86	1524.86
16	1493.40	1465.24	1477.35	1450.90	1492.15	1509.21	1528.82	1538.93	1540.58	1540.97	1540.90	1523.95
17	1492.71	1466.61	1477.00	1450.61	1492.97	1509.68	1528.80	1538.93	1540.56	1540.96	1540.94	1523.03
18	1491.87	1467.18	1475.87	1450.10	1493.34	1510.03	1528.78	1538.99	1540.72	1540.94	1540.96	1522.07
19	1491.05	1467.63	1474.62	1450.00	1493.51	1510.37	1528.75	1539.14	1540.84	1540.91	1540.97	1521.16
20	1490.21	1468.64	1472.90	1450.01	1493.95	1510.92	1528.80	1539.40	1540.97	1540.88	1540.97	1520.30
21	1489.35	1468.48	1470.81	1450.05	1494.74	1511.80	1528.96	1539.59	1540.76	1540.87	1540.89	1519.36
22	1488.56	1467.03	1468.39	1450.26	1495.25	1512.46	1529.04	1540.13	1540.63	1540.87	1540.70	1518.42
23	1487.78	1465.74	1465.90	1450.54	1495.51	1512.91	1529.06	1540.91	1540.58	1540.85	1540.48	1517.50
24	1486.94	1467.24	1463.51	1451.64	1495.96	1513.18	1529.48	1540.97	1540.62	1540.88	1540.23	1516.54
25	1486.06	1467.62	1461.09	1453.23	1496.59	1513.48	1529.97	1540.96	1540.69	1540.88	1539.88	1515.58
26	1485.14	1466.96	1458.79	1454.55	1497.02	1516.50	1530.37	1540.98	1540.75	1540.84	1539.54	1514.60
27	1484.15	1465.74	1456.35	1455.53	1497.09	1518.03	1530.92	1540.96	1540.76	1540.82	1539.18	1513.60
28	1483.04	1464.38	1454.50	1456.23	1497.21	1518.34	1531.52	1540.97	1540.74	1540.82	1538.59	1512.60
29	1481.93	1462.73	1453.90	1456.76	1497.74	1518.25	1532.08	1540.98	1540.73	1540.83	1538.01	1511.57
30	1480.89	1460.99	1458.42	1457.12	---	1518.58	1532.73	1540.86	1540.69	1540.84	1537.44	1510.53
31	1479.74	---	1460.19	1457.40	---	1518.89	---	1540.83	---	1540.83	1536.91	---
MEAN	1492.52	1468.83	1463.71	1454.72	1480.16	1508.82	1526.21	1538.96	1540.86	1540.83	1540.30	1524.15
MAX	1503.62	1478.66	1477.35	1460.56	1497.74	1518.89	1532.73	1540.98	1541.37	1540.97	1540.97	1536.35
MIN	1479.74	1460.99	1453.90	1450.00	1457.58	1498.65	1519.22	1533.74	1540.56	1540.69	1536.91	1510.53
(†)	210500	176600	175200	170600	247000	294600	328500	349600	349200	349600	339200	275200
(‡)	-51000	-33900	-1400	-4600	+76400	+47600	+35900	+21100	-400	+400	-10400	-64000

CAL YR 1983 MEAN 1506.16 MAX 1541.02 MIN 1452.83 AC-FT† +7600
WTR YR 1984 MEAN 1506.73 MAX 1541.37 MIN 1450.00 AC-FT† +13700

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

WILLAMETTE RIVER BASIN

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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 mi².

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.--50 years, 1,161 ft³/s, 40.22 in/yr, 841,100 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft³/s Dec. 28, 1945, gage height, 12.06 ft, site and datum then in use, from rating curve extended above 13,000 ft³/s; minimum observed, 0.70 ft³/s Sept. 8-11, 13, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,170 ft³/s June 7, gage height, 6.75 ft; minimum, 156 ft³/s Jan. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	1600	2550	2560	957	1080	1580	646	1590	995	447	1190
2	1210	1780	2290	2450	954	1030	1580	1220	1490	937	455	1190
3	1210	1790	2300	2340	574	1030	1460	1660	1320	940	462	1200
4	1210	1790	2290	2420	343	1040	1570	1970	1660	929	457	1410
5	1200	1790	2060	2990	325	1040	1580	1980	2390	896	422	1510
6	1200	1790	1820	3020	325	697	1410	1970	2770	782	420	1510
7	1180	1790	1840	3000	320	685	1160	1900	4800	787	424	1510
8	1190	1790	2170	3010	304	686	1100	1780	3910	788	425	1510
9	1190	1790	3020	3020	304	703	1330	1620	3030	784	423	1520
10	1180	1790	3020	2970	305	874	1580	1500	2400	754	423	1520
11	1180	1800	3030	2290	305	850	1570	1500	2120	633	422	1510
12	1030	1810	3020	1820	312	818	1570	1560	2330	524	378	1520
13	895	1820	3020	1820	393	824	1560	2100	1910	549	397	1520
14	876	1830	3240	1820	346	1310	1540	2420	1900	636	390	1520
15	850	1820	3990	1820	1080	1590	1550	2240	1810	649	352	1530
16	851	1820	3940	1810	1720	1600	1800	1880	1770	648	350	1520
17	1060	1760	3950	1270	1710	1600	2050	1670	1570	667	351	1520
18	1210	1820	3980	1400	1700	1600	1960	1490	1190	681	353	1540
19	1210	1820	3960	1020	1700	1590	1970	1490	1230	675	370	1540
20	1210	1840	3990	907	1700	1590	1780	1500	1340	641	409	1550
21	1240	2120	3960	934	1730	1600	1540	1490	1840	572	548	1580
22	1250	2820	3950	953	1700	1600	1530	1060	1540	569	731	1550
23	1250	2800	3680	949	1680	1600	1530	1380	1310	580	729	1550
24	1250	2840	3490	949	1690	1600	1010	2050	1230	494	755	1550
25	1250	2850	3480	953	1710	1600	799	1930	1230	553	900	1570
26	1260	2840	3490	956	1530	1630	796	1940	1240	563	897	1550
27	1350	2830	3460	935	1690	2000	510	1910	1280	535	892	1560
28	1450	2810	2810	935	1690	2440	398	1860	1280	468	1170	1580
29	1450	2810	2410	948	1190	2470	398	2190	1280	451	1180	1570
30	1450	2790	2490	950	---	1580	403	2590	1140	465	1190	1580
31	1600	---	2660	956	---	1570	---	1920	---	481	1190	---
TOTAL	37152	63350	95360	54175	30287	41927	40614	54416	55900	20626	18312	44980
MEAN	1198	2112	3076	1748	1044	1352	1354	1755	1863	665	591	1499
MAX	1600	2850	3990	3020	1730	2470	2050	2590	4800	995	1190	1580
MIN	850	1600	1820	907	304	685	398	646	1140	451	350	1190
AC-FT	73690	125700	189100	107500	60070	83160	80560	107900	110900	40910	36320	89220
MEAN†	369	1543	3053	1673	2373	2127	1924	2098	1857	672	422	424
CFSM†	0.94	3.94	7.79	4.27	6.05	5.43	4.91	5.35	4.74	1.71	1.08	1.08
IN.†	1.09	4.39	8.98	4.92	6.53	6.26	5.48	6.17	5.29	1.98	1.24	1.21
AC-FT†	22690	91800	187700	102900	136500	130800	114500	129000	110500	41310	25920	25220

CAL YR 1983 TOTAL 534717 MEAN 1465 MAX 4560 MIN 81 AC-FT 1061000 MEAN† 1455 CFSM† 3.71 IN.† 50.38 AC-FT† 1053000
WTR YR 1984 TOTAL 557099 MEAN 1522 MAX 4800 MIN 304 AC-FT 1105000 MEAN† 1541 CFSM† 3.93 IN.† 53.54 AC-FT† 1119000

† 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, 15.5°C Oct. 1-11; minimum, 4.0°C Feb. 14.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14146500 SALMON CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°45'45", long 122°22'18", in NE 1/4 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 mi², at measuring cable 0.25 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 Hazel Dell and Salmon Creek near Hazel Dell, 1909.

REVISED RECORDS.--WSP 794: 1934(M). WSP 814: Drainage area. WSP 1124: 1935, 1942(M), 1943, 1946(M). WSP 1248: 1915, 1918. WDR OR-71-1: 1968, 1969(M,P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,462.36 ft above 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 upstream from station. All records given herein are for measuring cable site.

AVERAGE DISCHARGE.--57 years (water years 1914-19, 1934-84), 429 ft³/s, 49.79 in/yr, 310,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s Dec. 22, 1964, gage height, 9.15 ft, from floodmark, site and datum then in use, from rating curve extended above 2,100 ft³/s on basis of slope-area measurement of peak flow; minimum, 63 ft³/s Jan. 8, 1937.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2300	*7,340	*7.83	Mar. 26	1230	1,980	4.07
Feb. 13	1100	3,810	5.53	June 7	1200	1,850	3.94

Minimum, 135 ft³/s Oct. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	143	174	474	774	456	627	774	616	628	430	217	184		
2	140	172	506	665	416	635	734	757	576	425	214	176		
3	140	189	486	846	387	591	684	1100	532	404	211	172		
4	140	218	441	1080	368	547	631	1030	719	384	209	167		
5	140	191	416	993	358	514	623	894	1110	374	209	174		
6	140	334	586	886	347	505	585	788	1170	365	206	207		
7	137	304	1220	788	330	506	579	723	1740	336	203	219		
8	137	249	1160	714	317	520	695	701	1520	332	201	194		
9	154	228	983	622	320	578	700	698	1260	318	198	182		
10	166	216	961	608	312	626	802	669	1090	300	196	175		
11	154	218	855	644	350	642	774	757	937	296	196	170		
12	144	233	749	581	760	592	814	812	826	292	195	169		
13	143	280	975	523	3060	619	793	834	777	283	194	166		
14	144	276	4080	467	1950	698	820	952	734	274	192	163		
15	144	322	4350	417	1400	693	914	851	707	274	190	163		
16	141	311	1990	384	1180	657	861	759	680	266	189	162		
17	140	479	1250	355	951	628	771	703	635	262	187	160		
18	140	492	1010	333	801	626	726	667	530	254	185	160		
19	140	591	924	316	720	737	716	675	566	246	183	157		
20	140	736	792	304	750	841	710	731	591	242	181	170		
21	137	576	668	342	839	966	692	691	648	242	180	167		
22	164	465	574	410	766	893	657	669	584	242	179	165		
23	181	565	494	441	707	833	633	922	542	238	178	186		
24	153	1210	458	1200	701	758	603	843	536	245	176	168		
25	146	1050	443	1440	751	770	570	759	530	239	176	161		
26	141	775	433	1140	679	1640	532	779	530	234	175	159		
27	140	655	392	892	627	1350	504	730	502	229	172	157		
28	140	617	362	738	618	1090	482	731	496	226	172	156		
29	135	547	466	629	592	964	460	824	519	223	170	154		
30	140	501	966	562	---	850	492	853	468	220	170	154		
31	164	---	946	503	---	781	---	729	---	217	206	---		
TOTAL	4508	13174	30410	20597	21813	23277	20331	24247	22683	8912	5910	5117		
MEAN	145	439	981	664	752	751	678	782	756	287	191	171		
MAX	181	1210	4350	1440	3060	1640	914	1100	1740	430	217	219		
MIN	135	172	362	304	312	505	460	616	468	217	170	154		
CFSM	1.24	3.75	8.38	5.68	6.43	6.42	5.79	6.68	6.46	2.45	1.63	1.46		
IN.	1.43	4.19	9.67	6.55	6.94	7.40	6.46	7.71	7.21	2.83	1.88	1.63		
AC-FT	8940	26130	60320	40850	43270	46170	40330	48090	44990	17680	11720	10150		
CAL YR 1983	TOTAL	178361	MEAN	489	MAX	4350	MIN	135	CFSM	4.18	IN.	56.71	AC-FT	353800
WTR YR 1984	TOTAL	200979	MEAN	549	MAX	4350	MIN	135	CFSM	4.69	IN.	63.90	AC-FT	398600

WILLAMETTE RIVER BASIN

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14146700 GRAY CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'48", long 122°30'38", in NE1SE1 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 mi².

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.--6 years, 14.7 ft³/s, 39.45 in/yr, 10,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,230 ft³/s Dec. 6, 1981, gage height, 7.05 ft, from rating curve extended above 160 ft³/s on basis of slope-area measurement of peak flow, result of release of water from bursting logjam; minimum, 0.14 ft³/s Sept. 8, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 140 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2100	*502	*4.13	Mar. 26	0930	231	3.53
Feb. 13	1030	429	*4.13	June 7	1100	152	3.13

Minimum, 0.40 ft³/s Sept. 19, 20, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.51	2.7	19	25	8.5	28	35	22	5.7	2.9	1.0	.88		
2	.49	3.4	22	21	7.7	27	33	34	5.2	2.5	1.0	.68		
3	.49	5.0	20	22	7.2	18	25	72	4.8	2.3	1.0	.57		
4	.48	7.8	14	22	6.7	15	20	49	11	2.1	.99	.48		
5	.50	4.4	12	18	6.4	14	18	31	32	2.0	.99	.52		
6	.55	20	39	15	6.3	14	16	27	44	1.8	.96	.87		
7	.64	13	95	13	5.9	14	16	22	120	1.7	.93	1.1		
8	.66	6.8	64	12	5.6	14	33	18	64	1.7	.90	1.0		
9	.84	5.0	41	10	6.1	14	35	16	40	1.6	.86	.81		
10	1.4	4.6	46	12	6.3	15	57	14	29	1.6	.84	.72		
11	1.4	6.9	43	26	10	13	47	16	21	1.5	.82	.65		
12	1.1	11	37	21	54	11	50	14	16	1.5	.80	.57		
13	.98	22	52	16	271	19	44	12	13	1.4	.80	.53		
14	1.0	16	253	13	76	30	43	14	9.9	1.4	.78	.51		
15	1.1	15	114	11	50	27	35	16	8.7	1.4	.74	.51		
16	.99	13	36	9.2	48	23	23	17	7.5	1.4	.71	.46		
17	.97	38	23	8.3	30	26	18	15	6.6	1.3	.68	.43		
18	.97	30	23	7.7	21	24	16	12	5.9	1.3	.67	.42		
19	.94	35	31	7.3	18	26	19	11	5.3	1.3	.66	.41		
20	.91	37	23	6.9	26	25	27	10	6.1	1.3	.61	.50		
21	.89	24	18	8.5	35	42	25	9.2	9.7	1.2	.58	.51		
22	1.7	17	14	17	28	36	20	9.6	8.8	1.2	.57	.49		
23	3.7	29	11	22	22	26	17	28	7.1	1.2	.55	1.1		
24	2.0	82	9.9	45	37	19	14	21	5.9	1.2	.54	.87		
25	1.5	53	10	42	59	27	12	16	5.2	1.2	.51	.65		
26	1.4	29	17	28	32	154	11	13	4.6	1.1	.49	.55		
27	1.2	25	14	21	25	65	10	10	4.3	1.1	.46	.49		
28	1.2	24	12	16	29	38	9.9	9.2	3.8	1.1	.44	.44		
29	1.1	18	26	13	24	31	9.6	8.0	4.3	1.1	.43	.43		
30	1.2	15	77	11	---	26	12	7.2	3.5	1.1	.42	.42		
31	1.8	---	46	9.5	---	22	---	6.4	---	1.1	.70	---		
TOTAL	34.61	612.6	1261.9	529.4	961.7	883	750.5	579.6	512.9	46.6	22.43	18.57		
MEAN	1.12	20.4	40.7	17.1	33.2	28.5	25.0	18.7	17.1	1.50	.72	.62		
MAX	3.7	82	253	45	271	154	57	72	120	2.9	1.0	1.1		
MIN	.48	2.7	9.9	6.9	5.6	11	9.6	6.4	3.5	1.1	.42	.41		
CFSM	.22	4.03	8.04	3.38	6.56	5.63	4.94	3.70	3.38	.30	.14	.12		
IN.	.25	4.50	9.28	3.89	7.07	6.49	5.52	4.26	3.77	.34	.16	.14		
AC-FT	69	1220	2500	1050	1910	1750	1490	1150	1020	92	44	37		
CAL YR 1983	TOTAL	5662.67	MEAN	15.5	MAX	253	MIN	.44	CFSM	3.06	IN.	41.63	AC-FT	11230
WTR YR 1984	TOTAL	6213.81	MEAN	17.0	MAX	271	MIN	.41	CFSM	3.36	IN.	45.68	AC-FT	12330

WILLAMETTE RIVER BASIN

14146950 WALDO LAKE NEAR OAKRIDGE, OR

LOCATION.--Lat 43°46'05", long 122°03'10", in SE¼ 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 mi².

PERIOD OF RECORD.--October 1969 to September 1984 (discontinued).

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 ft³/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, 772,400 acre-ft July 18, elevation, 5,412.24 ft; minimum observed, 762,900 acre-ft Oct. 4, elevation, 5,410.71 ft.

ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)
Oct. 4	5,410.71	762,900
July 18	5,412.24	772,400

WILLAMETTE RIVER BASIN

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14147500 NORTH FORK OF MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR

LOCATION.--Lat 43°45'25", long 122°30'15", in SW $\frac{1}{4}$ 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 mi², 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 Hazeldehl."

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 good. Slight regulation by Waldo Lake; occasional fluctuations during low-water periods caused by log-ponds above station. No diversions above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--55 years (water years 1910-15, 1936-84), 795 ft³/s, 43.89 in/yr, 576,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft³/s Dec. 22, 1964, gage height, 19.14 ft, from floodmark, from rating curve extended above 7,100 ft³/s on basis of slope-area measurement of peak flow; minimum, 22 ft³/s Aug. 20, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2300	*11,400	*11.47	Mar. 26	1230	4,300	6.73
Feb. 13	1130	9,260	10.17				

Minimum, 152 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	161	228	964	1800	962	1210	1480	1540	962	606	278	209		
2	159	252	981	1510	877	1250	1380	1980	882	577	273	189		
3	159	310	958	1860	814	1150	1260	2280	821	552	267	182		
4	158	336	872	2360	768	1060	1160	1890	1120	531	262	176		
5	158	285	839	2100	739	991	1110	1630	1670	512	258	174		
6	158	577	1210	1840	718	963	1040	1430	2020	475	248	233		
7	155	573	2680	1630	681	960	1000	1290	3140	452	243	255		
8	155	425	2560	1490	652	972	1270	1230	2890	439	239	232		
9	177	377	2040	1300	652	1020	1290	1180	2280	422	236	201		
10	199	355	2220	1270	645	1070	1630	1160	1890	405	235	189		
11	190	351	2000	1410	711	1110	1540	1380	1580	392	235	183		
12	172	379	1720	1260	1990	1040	1640	1360	1380	382	230	178		
13	166	546	2070	1130	7710	1070	1580	1420	1270	371	230	174		
14	168	531	6420	1010	4320	1230	1600	1470	1160	362	230	171		
15	168	692	7560	911	2960	1300	1810	1370	1080	356	225	170		
16	163	651	3970	841	2470	1230	1660	1240	1020	350	225	167		
17	162	965	2730	778	1940	1190	1460	1130	940	345	225	164		
18	164	1060	2160	729	1610	1200	1370	1070	881	340	225	161		
19	161	1140	1970	691	1440	1470	1370	1090	844	335	225	161		
20	159	1490	1650	655	1460	1660	1370	1090	979	330	220	172		
21	157	1140	1410	750	1650	1920	1310	1020	1020	325	220	170		
22	189	926	1210	919	1500	1790	1200	1210	893	320	220	170		
23	269	1090	1200	1000	1360	1630	1140	1380	834	317	220	204		
24	200	2460	1050	2430	1360	1470	1070	1240	808	331	216	181		
25	182	2140	928	2960	1540	1470	1010	1240	780	324	213	170		
26	173	1560	931	2470	1340	3560	953	1250	763	315	209	166		
27	168	1340	841	1930	1210	2880	902	1170	726	304	198	161		
28	164	1280	768	1570	1170	2210	850	1180	702	298	189	158		
29	162	1140	1040	1350	1110	1900	838	1250	711	293	183	155		
30	174	1030	2730	1180	---	1640	1020	1200	646	286	179	154		
31	234	---	2320	1060	---	1460	---	1100	---	280	218	---		
TOTAL	5384	25629	62002	44194	46359	45076	38313	41470	36692	11927	7074	5430		
MEAN	174	854	2000	1426	1599	1454	1277	1338	1223	385	228	181		
MAX	269	2460	7560	2960	7710	3560	1810	2280	3140	606	278	255		
MIN	155	228	768	655	645	960	838	1020	646	280	179	154		
CFSM	.71	3.47	8.13	5.80	6.50	5.91	5.19	5.44	4.97	1.57	.93	.74		
IN.	.81	3.88	9.38	6.68	7.01	6.82	5.79	6.27	5.55	1.80	1.07	.82		
AC-FT	10680	50840	123000	87660	91950	89410	75990	82260	72780	23660	14030	10770		
CAL YR 1983	TOTAL	334610	MEAN	917	MAX	7560	MIN	155	CFSM	3.73	IN.	50.60	AC-FT	663700
WTR YR 1984	TOTAL	369550	MEAN	1010	MAX	7710	MIN	154	CFSM	4.11	IN.	55.88	AC-FT	733000

WILLAMETTE RIVER BASIN

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

LOCATION.--Lat 43°48'05", long 122°33'35", in SW¼ sec.27, T.20 S., R.2 E., Lane County, Hydrologic Unit 17090001, on left bank 0.5 mi 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 mi².

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 Hazel Dell" 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 good. Flow regulated since 1961 by Hills Creek Lake (see sta 14145100); slight regulation at times by logponds above station. No diversion above station.

AVERAGE DISCHARGE.--62 years, 2,792 ft³/s, 2,023,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,800 ft³/s Dec. 28, 1945, gage height, 18.8 ft, from floodmark, site and datum then in use, from rating curve extended above 39,000 ft³/s; minimum, 322 ft³/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 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,800 ft³/s Dec. 15, gage height, 9.04 ft; minimum, 919 ft³/s Aug. 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740	2230	4500	6450	3170	3920	5040	3030	4030	2570	1170	1790
2	1740	2430	4250	5760	2980	3930	4810	4420	3730	2420	1180	1750
3	1740	2530	4230	6020	2520	3690	4400	6240	3420	2360	1170	1740
4	1720	2640	4080	7150	2120	3490	4240	6300	4190	2310	1170	1910
5	1720	2560	3800	7190	2030	3340	4090	5620	6150	2220	1110	2050
6	1710	3100	4270	6760	1980	2950	3790	5200	7030	2050	1110	2170
7	1700	3110	7070	6360	1890	2860	3480	4800	11900	1990	1090	2200
8	1710	2810	6960	6110	1810	2850	4040	4480	10400	1940	1090	2150
9	1750	2700	6720	5740	1830	2960	4350	4270	8170	1890	1080	2100
10	1790	2650	6790	5590	1820	3280	5340	3990	6720	1820	1070	2080
11	1770	2680	6460	5480	1930	3320	5230	4190	5770	1690	1060	2060
12	1620	2750	6050	4630	3870	3140	5200	4400	5550	1540	1010	2060
13	1460	3070	6570	4360	17400	3230	5040	4980	4880	1520	1030	2050
14	1450	3030	16000	4110	10400	4010	4950	5650	4680	1580	1010	2050
15	1420	3210	23000	3900	7560	4480	5180	5380	4460	1560	950	2060
16	1410	3190	13100	3740	7220	4350	5110	4730	4320	1550	931	2050
17	1550	3780	9810	3070	6080	4270	5080	4310	3970	1540	927	2030
18	1720	3970	8480	3080	5390	4300	4780	3960	3440	1540	927	2050
19	1720	4080	8140	2590	4970	4620	4810	3910	3380	1520	949	2050
20	1710	4880	7510	2360	5000	5010	4680	4110	3560	1460	991	2140
21	1740	4420	6950	2510	5520	5660	4380	4000	4370	1380	1090	2110
22	1810	4710	6500	2850	5290	5450	4140	3470	3830	1340	1240	2090
23	1980	4860	6010	3050	4940	5150	4010	4750	3420	1370	1260	2180
24	1850	7350	5600	5800	4970	4840	3430	5190	3290	1300	1280	2130
25	1800	6890	5500	7090	5630	4950	3040	4850	3260	1340	1420	2090
26	1780	5820	5520	6040	4970	9690	2860	4950	3230	1350	1420	2070
27	1850	5340	5330	4940	4730	8370	2500	4760	3190	1340	1410	2070
28	1930	5200	4700	4260	4600	7250	2260	4610	3120	1240	1670	2070
29	1940	4940	4630	3810	3990	6660	2160	5160	3180	1210	1700	2060
30	1960	4730	7900	3550	---	5300	2270	5640	2900	1200	1720	2080
31	2210	---	7650	3390	---	4870	---	4730	---	1210	1830	---
TOTAL	54000	115660	224080	147740	136610	142190	124690	146080	143540	51350	37065	61490
MEAN	1742	3855	7228	4766	4711	4587	4156	4712	4785	1656	1196	2050
MAX	2210	7350	23000	7190	17400	9690	5340	6300	11900	2570	1830	2200
MIN	1410	2230	3800	2360	1810	2850	2160	3030	2900	1200	927	1740
AC-FT	107100	229400	444500	293000	271000	282000	247300	289700	284700	101900	73520	122000
CAL YR 1983	TOTAL	1232860	MEAN	3378	MAX	23000	MIN	1360	AC-FT	2445000		
WTR YR 1984	TOTAL	1384495	MEAN	3783	MAX	23000	MIN	927	AC-FT	2746000		

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, 17.5°C July 30, Aug. 8-10, 17; minimum, 2.5°C Jan. 17.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

WILLAMETTE RIVER BASIN

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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 mi².

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, 455,400 acre-ft June 8, elevation, 928.90 ft; minimum, 117,600 acre-ft Jan. 16, elevation, 824.44 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	177,700	890	302,300	930	460,200

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	894.97	863.44	833.60	831.87	836.75	879.47	904.52	919.13	925.70	925.13	925.81	921.38
2	894.07	862.25	831.56	830.31	836.49	880.40	904.92	920.73	925.65	924.87	925.87	921.12
3	893.10	861.27	830.12	830.12	836.73	881.00	905.13	922.86	925.55	925.08	925.80	920.86
4	892.18	860.27	828.47	831.02	837.20	881.61	905.21	924.23	925.70	925.37	925.76	920.45
5	891.20	859.29	826.86	831.29	837.77	882.15	905.25	925.02	926.31	925.57	925.74	919.96
6	890.40	858.79	826.75	830.70	838.32	882.74	905.12	925.40	927.11	925.68	925.60	919.25
7	889.38	858.13	829.10	829.80	838.79	883.55	905.21	925.10	928.70	925.78	925.50	918.56
8	888.40	857.25	832.60	828.65	839.22	884.24	905.73	925.10	928.40	925.75	925.31	917.83
9	887.50	856.29	833.58	827.09	839.73	885.02	906.35	925.29	927.59	925.77	924.94	917.07
10	886.66	855.09	833.20	825.50	840.27	885.96	907.73	925.67	926.61	925.89	924.78	916.29
11	885.70	854.05	832.42	825.87	840.90	886.94	908.55	925.40	925.50	925.90	924.60	915.34
12	884.75	853.01	831.23	825.38	843.50	887.78	909.36	925.37	924.77	925.83	924.48	914.33
13	883.72	852.33	830.63	825.09	857.66	888.62	910.04	925.62	924.68	925.65	924.34	913.27
14	882.60	851.68	838.60	825.21	864.96	889.70	910.62	926.06	924.65	925.74	924.18	912.21
15	881.40	850.95	850.80	825.08	867.11	890.63	911.27	925.89	924.81	925.78	924.06	911.08
16	880.20	850.28	855.65	824.76	866.61	891.23	911.85	925.44	924.93	925.83	923.89	909.93
17	879.18	850.12	856.43	824.81	865.88	891.93	912.45	925.17	924.86	925.86	923.72	909.06
18	878.22	850.20	855.57	824.90	865.46	892.62	912.93	925.26	924.56	925.89	923.50	908.03
19	877.21	850.24	853.42	824.73	865.44	893.54	913.47	925.58	924.60	925.90	923.37	907.07
20	876.17	851.19	850.95	824.88	866.37	894.56	913.89	925.98	925.22	925.90	923.26	906.15
21	875.15	851.34	847.80	825.15	867.92	895.65	914.13	926.09	926.00	925.83	923.10	905.15
22	874.21	850.25	845.66	825.72	869.58	896.34	914.19	925.82	926.00	925.77	922.93	904.22
23	873.30	848.43	843.80	826.50	870.86	896.64	914.19	925.94	925.92	925.74	922.69	903.26
24	872.30	848.14	841.65	830.27	871.64	897.02	914.42	925.95	926.15	925.74	922.92	902.27
25	871.27	847.45	839.46	835.19	873.81	897.48	914.87	925.79	926.37	925.79	922.61	901.20
26	870.17	845.76	837.34	838.46	875.18	901.01	915.59	925.92	926.36	925.95	922.58	900.12
27	869.18	843.60	835.17	839.24	876.56	902.61	916.25	926.01	926.22	926.02	922.48	899.00
28	867.99	841.20	833.01	839.21	877.85	903.30	916.77	926.24	925.91	926.01	922.34	898.00
29	866.83	838.92	831.57	838.82	878.75	903.65	917.46	926.63	925.80	925.99	922.05	896.80
30	865.64	836.40	832.46	838.13	---	903.31	918.08	926.84	925.49	926.00	921.80	895.72
31	864.47	---	832.73	837.23	---	903.98	---	926.45	---	925.94	921.61	---
MEAN	880.24	851.92	838.14	829.71	856.80	891.45	910.85	925.23	925.87	925.74	923.92	910.17
MAX	894.97	863.44	856.43	839.24	878.75	903.98	918.08	926.84	928.70	926.02	925.87	921.38
MIN	864.47	836.40	826.75	824.73	836.49	879.47	904.52	919.13	924.56	924.87	921.61	895.72
(†)	218600	143900	135500	145900	263700	354000	409900	444900	440800	442700	424500	323000
(‡)	-104700	-74700	-8400	+10400	+117800	+90300	+55900	+35000	-4100	+1900	-18200	-101500
CAL YR 1983	MEAN 889.36	MAX 926.76	MIN 826.75	AC-FT†	+2500							
WTR YR 1984	MEAN 889.23	MAX 928.70	MIN 824.73	AC-FT‡	-300							

† 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 mi².

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 sta 14149000), since 1955 by Dexter Lake (re-regulating), and since 1961 by Hills Creek Lake (see sta 14145100).

AVERAGE DISCHARGE.--38 years, 3,192 ft³/s, 2,313,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,600 ft³/s Jan. 18, 1953, gage height, 12.46 ft, site and datum then in use, from rating curve extended above 33,000 ft³/s; minimum daily, 100 ft³/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, 12,500 ft³/s June 8, gage height, 10.02 ft; minimum, 874 ft³/s Feb. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3270	3900	8120	7870	3310	2530	4290	1370	5520	3470	1430	2210
2	3270	4130	7070	7810	3150	2210	4280	1780	4180	2960	1400	2210
3	3370	4150	6390	6560	2190	2390	4220	2560	3560	2050	1400	2220
4	3290	4110	6020	6460	1630	2400	4220	4420	4090	1710	1400	2520
5	3270	4130	6010	6740	1360	2410	4220	4400	5440	1820	1350	3070
6	3290	4220	4940	7510	1340	1710	4220	4460	5840	1800	1260	3550
7	3310	4260	5750	7750	1330	1680	3660	5740	9200	1900	1310	3590
8	3300	4230	3680	7670	1270	1570	3750	5030	11600	1930	1460	3610
9	3290	4200	6750	7570	1270	1560	3660	4140	10400	1900	1590	3610
10	3280	4180	7970	7550	1270	1600	3620	3550	9340	1890	1470	3560
11	3270	4180	7730	5630	1260	1660	4300	4800	8780	1880	1480	4040
12	3270	4200	7790	5200	1280	1760	4360	4710	7230	1640	1450	3910
13	3310	4300	7800	4710	1050	1800	4020	4670	5730	1700	1430	4150
14	3340	4340	7840	4120	878	2040	4000	5060	4720	1730	1360	4150
15	3210	4330	7140	3880	4510	2760	4130	6040	4410	1490	1320	4150
16	3190	4330	6470	4090	8220	3320	4330	6300	4200	1480	1320	4140
17	3250	4380	8730	3160	7330	3000	4340	5170	4080	1480	1280	3890
18	3300	4420	10100	2890	6030	3000	4340	3930	4020	1530	1250	3970
19	3290	4440	11100	2780	5380	3000	4310	3340	3310	1550	1250	3970
20	3310	4460	11100	2150	3830	3400	4220	3330	2560	1550	1360	3950
21	3300	4600	11100	2180	3170	3970	4220	3790	2860	1760	1510	3950
22	3290	6400	9730	2290	3080	4310	4200	4220	3840	1580	1680	3920
23	3300	7480	8340	2400	3010	5020	4220	4670	3660	1560	1760	4020
24	3370	8590	8320	1710	3960	4030	3110	5510	2990	1420	1550	4040
25	3370	8610	8320	1700	2720	4010	2280	5520	2960	1190	1430	4030
26	3360	8610	8180	2490	2440	4260	1810	4900	3020	1190	1550	4020
27	3570	8520	8190	4210	2550	5640	1370	4800	3460	1190	1600	4030
28	3710	8390	7420	4290	2560	6920	1330	4390	4000	1270	1730	4050
29	3620	8160	6610	4290	2470	6470	1330	4270	3560	1270	2190	4050
30	3610	7890	7770	4290	---	5750	1330	5360	3590	1330	2210	4060
31	3890	---	7900	4290	---	4480	---	5910	---	1390	2220	---
TOTAL	104070	162140	240380	146240	83848	100660	107690	138140	152150	52610	47000	110640
MEAN	3357	5405	7754	4717	2891	3247	3590	4456	5072	1697	1516	3688
MAX	3890	8610	11100	7870	8220	6920	4360	6300	11600	3470	2220	4150
MIN	3190	3900	3680	1700	878	1560	1330	1370	2560	1190	1250	2210
AC-FT	206400	321600	476800	290100	166300	199700	213600	274000	301800	104400	93220	219500
CAL YR 1983	TOTAL	1321230	MEAN	3620	MAX	11100	MIN	1080	AC-FT	2621000		
WTR YR 1984	TOTAL	1445568	MEAN	3950	MAX	11600	MIN	878	AC-FT	2867000		

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. 4-6; minimum, 4.0°C Jan. 1, 2.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	14.5	15.0	14.5	9.0	8.5	4.5	4.0	5.5	5.0	7.0	6.5
2	15.5	14.5	14.5	14.0	9.0	8.5	4.5	4.0	5.5	5.0	7.0	6.0
3	15.5	15.0	14.5	14.0	8.5	8.0	5.5	4.5	6.0	5.0	7.5	6.0
4	16.0	15.0	14.5	14.0	8.5	8.0	5.5	5.5	6.0	5.0	7.5	6.0
5	16.0	15.0	14.0	13.5	9.0	7.5	5.5	5.5	6.0	5.0	7.5	6.0
6	16.0	15.0	14.0	13.5	8.0	8.0	6.0	5.5	6.5	5.5	8.5	6.5
7	15.5	14.5	13.5	13.0	8.5	8.0	6.0	5.5	6.5	5.5	8.0	6.5
8	15.5	14.5	13.5	13.0	8.5	8.0	6.0	5.5	7.0	5.5	8.5	6.5
9	15.5	15.0	13.5	12.5	8.0	7.5	6.0	5.5	6.5	6.0	9.0	7.0
10	15.5	15.0	13.5	13.0	8.0	8.0	6.0	5.5	6.5	6.0	8.0	7.0
11	15.5	15.0	13.5	12.5	8.0	7.5	6.0	5.5	6.5	6.0	8.0	7.0
12	15.5	15.0	13.0	12.5	7.5	7.5	6.0	5.5	6.5	6.0	8.5	7.0
13	15.5	15.0	12.5	12.0	7.5	7.5	6.0	5.5	7.0	6.0	8.5	7.5
14	15.5	15.0	12.5	12.0	7.5	7.5	6.0	5.5	7.0	5.5	8.5	7.5
15	15.5	14.5	12.5	12.0	7.5	7.0	5.5	5.0	6.5	6.0	8.5	7.5
16	15.5	15.0	12.5	12.0	7.5	7.0	5.5	5.0	6.0	6.0	8.0	7.5
17	15.0	14.5	12.5	12.0	7.0	7.0	5.5	5.0	6.0	6.0	8.0	7.0
18	15.5	14.5	12.0	11.5	7.0	7.0	5.0	4.5	6.5	6.0	7.5	7.0
19	15.5	14.5	11.5	11.5	7.0	7.0	5.5	4.5	6.0	6.0	8.0	7.0
20	15.5	14.5	11.5	11.0	7.0	6.5	5.0	4.5	6.5	6.0	8.0	7.5
21	15.5	14.5	11.5	10.5	6.5	6.0	5.5	5.0	6.5	6.0	7.5	6.5
22	15.0	15.0	11.0	10.5	6.5	6.0	5.5	5.0	6.5	6.0	8.5	7.0
23	15.5	14.5	10.5	10.5	6.0	5.5	5.5	5.0	6.5	6.0	7.5	7.0
24	15.0	14.0	10.5	10.5	5.5	5.0	6.0	5.0	6.5	6.0	8.0	7.0
25	15.0	14.0	10.5	10.0	5.0	4.5	6.0	5.5	6.5	6.0	8.0	7.0
26	15.0	14.0	10.0	9.5	5.5	5.0	6.0	5.5	6.5	6.0	7.5	7.0
27	15.0	14.5	10.0	10.0	5.0	5.0	5.5	5.0	7.0	6.0	8.0	7.0
28	15.0	14.0	10.0	9.5	5.0	4.5	5.5	5.0	7.0	6.0	7.5	7.0
29	14.5	14.0	9.5	9.0	5.0	4.5	5.5	5.0	7.0	6.5	7.5	7.0
30	14.5	14.0	9.0	9.0	5.0	4.5	5.5	5.0	---	---	8.0	7.0
31	14.5	14.0	---	---	5.0	4.5	5.5	5.0	---	---	8.0	7.5
MONTH	16.0	14.0	15.0	9.0	9.0	4.5	6.0	4.0	7.0	5.0	9.0	6.0

[illegible]

WILLAMETTE RIVER BASIN

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14150300 FALL CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°58'15", long 122°38'15", in SW 1/4 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 mi².

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.--21 years, 419 ft³/s, 48.22 in/yr, 303,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft³/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 ft³/s Oct. 3, 4, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	unknown	unknown	unknown	Mar. 26	1200	3,940	6.74
Feb. 13	1130	*8,370	*9.88	June 7	1100	3,750	6.60

Minimum, 37 ft³/s Oct. 2-9, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	38	106	441	958	328	670	898	974	248	184	71	59		
2	37	111	478	726	291	664	866	1140	229	172	71	48		
3	37	141	587	774	263	564	714	1790	215	162	69	45		
4	37	258	475	803	243	484	590	1280	612	153	67	43		
5	37	139	518	644	225	429	527	994	1350	146	65	44		
6	37	583	1550	531	218	393	467	881	1700	140	64	68		
7	37	480	2650	470	201	363	460	712	3200	135	62	85		
8	37	248	1760	424	191	340	857	578	2140	129	60	70		
9	42	180	1180	370	195	332	931	489	1440	125	59	53		
10	56	150	1070	401	202	351	1410	427	1150	121	58	48		
11	52	145	950	659	350	346	1440	488	857	117	57	46		
12	43	181	800	559	1570	331	1460	421	660	114	56	44		
13	41	404	850	473	6680	394	1290	384	532	110	55	43		
14	41	397	3400	403	2890	512	1110	469	443	107	54	42		
15	41	470	4200	347	1770	568	940	613	381	104	53	42		
16	39	383	1300	308	1440	524	718	608	335	100	52	41		
17	40	883	1000	277	1020	541	589	503	298	97	51	40		
18	44	1100	750	255	777	645	564	421	271	95	50	40		
19	40	841	850	240	660	939	815	366	248	92	51	39		
20	39	956	616	223	729	1020	932	356	316	88	49	50		
21	38	777	516	328	1140	1780	773	309	613	87	48	46		
22	78	598	436	524	955	1430	613	322	498	86	47	45		
23	111	900	372	628	795	1020	515	663	382	84	47	66		
24	62	1900	353	1430	901	757	452	542	314	85	46	50		
25	50	1450	357	1670	1520	799	429	476	272	82	46	44		
26	45	949	432	1290	1060	3030	414	609	250	81	45	42		
27	43	739	383	906	782	1850	390	486	241	79	44	40		
28	41	657	349	669	705	1210	365	409	216	76	43	39		
29	40	531	685	533	616	1050	343	353	235	75	43	38		
30	50	463	2410	444	---	853	479	317	200	72	42	38		
31	99	---	1460	380	---	711	---	277	---	71	54	---		
TOTAL	1472	17120	33178	18647	28717	24900	22351	18657	19846	3369	1679	1438		
MEAN	47.5	571	1070	602	990	803	745	602	662	109	54.2	47.9		
MAX	111	1900	4200	1670	6680	3030	1460	1790	3200	184	71	85		
MIN	37	106	349	223	191	331	343	277	200	71	42	38		
CFSM	.40	4.84	9.07	5.10	8.39	6.81	6.31	5.10	5.61	.92	.46	.41		
IN.	.46	5.40	10.46	5.88	9.05	7.85	7.05	5.88	6.26	1.06	.53	.45		
AC-FT	2920	33960	65810	36990	56960	49390	44330	37010	39360	6680	3330	2850		
CAL YR 1983	TOTAL	165709	MEAN	454	MAX	4200	MIN	37	CFSM	3.85	IN.	52.24	AC-FT	328700
WTR YR 1984	TOTAL	191374	MEAN	523	MAX	6680	MIN	37	CFSM	4.43	IN.	60.33	AC-FT	379600

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 recorded, 16.5°C Sept. 19; minimum, 0.5°C Dec. 23, 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984												
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	9.5	11.5	11.0	7.0	6.0	6.5	5.5	---	---	8.0	7.0
2	11.0	9.5	11.0	10.5	7.5	7.0	7.5	6.0	---	---	7.0	6.5
3	12.0	10.5	11.5	11.0	7.0	6.5	8.0	7.0	---	---	6.5	5.5
4	12.5	10.5	11.5	10.5	6.5	6.0	8.0	7.5	---	---	6.5	5.0
5	12.5	11.5	10.5	9.0	6.5	6.0	8.0	7.5	---	---	7.0	5.0
6	12.5	11.0	10.0	9.0	7.5	6.0	7.5	7.0	---	---	7.5	5.5
7	11.5	9.5	9.0	8.0	8.5	7.5	8.0	6.5	---	---	8.0	6.5
8	11.0	10.0	8.0	6.5	8.5	7.0	8.0	7.0	---	---	8.0	7.0
9	11.5	10.5	9.0	7.5	8.5	7.5	7.0	6.0	---	---	9.0	7.0
10	12.5	11.5	10.0	9.0	8.5	7.5	8.0	6.5	---	---	9.0	6.5
11	12.5	11.5	9.5	9.0	7.5	7.0	8.0	6.5	---	---	8.0	7.0
12	12.5	11.0	9.0	8.5	7.5	7.0	6.5	5.5	---	---	8.0	7.0
13	11.5	11.0	8.5	8.0	8.0	7.5	5.5	4.5	---	---	8.0	7.0
14	11.5	10.5	8.0	7.5	9.0	8.0	4.5	3.0	---	---	8.5	7.5
15	10.5	9.5	9.5	8.0	8.5	8.0	3.5	3.0	---	---	8.0	7.0
16	9.5	8.0	9.5	9.0	8.0	7.0	3.0	2.5	7.0	6.0	7.5	7.0
17	10.0	9.5	9.0	8.5	7.5	7.5	2.5	1.5	6.5	5.0	7.5	6.5
18	10.0	9.0	8.5	8.0	7.5	7.5	2.0	1.5	6.5	5.5	7.5	6.5
19	10.5	9.0	9.0	8.5	7.5	6.0	---	---	7.5	6.0	8.0	7.0
20	11.0	10.0	8.5	6.0	6.0	4.5	---	---	8.0	7.0	8.0	6.5
21	11.0	9.5	7.5	7.0	4.5	2.5	---	---	7.0	5.5	8.0	7.0
22	11.0	11.0	7.0	6.5	2.5	1.5	---	---	6.0	5.5	8.0	7.0
23	11.0	10.0	8.0	7.0	1.5	.5	---	---	7.0	6.0	8.0	7.0
24	10.0	8.5	8.5	7.5	2.0	.5	---	---	6.5	6.0	8.0	7.0
25	9.0	8.0	7.5	7.5	4.0	2.0	---	---	7.0	6.0	7.5	6.5
26	9.5	8.0	8.0	7.0	4.5	3.5	---	---	7.5	5.5	8.0	7.0
27	9.5	8.5	8.5	7.5	4.5	4.0	---	---	7.5	5.5	8.5	6.5
28	9.5	8.5	8.5	8.0	4.0	3.5	---	---	7.5	6.5	8.0	7.0
29	10.0	9.0	8.0	6.5	5.5	4.0	---	---	7.5	6.5	8.0	6.5
30	11.0	10.0	7.0	6.5	7.0	5.5	---	---	---	---	8.0	5.5
31	11.5	11.0	---	---	6.5	6.0	---	---	---	---	7.5	7.0
MONTH	12.5	8.0	11.5	6.0	9.0	.5	---	---	---	---	9.0	5.0

WILLAMETTE RIVER BASIN

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14150300 FALL CREEK NEAR LOWELL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	7.0	8.5	7.5	12.0	8.5	16.0	12.5	---	---	---	---
2	8.5	6.5	9.0	7.5	11.5	10.0	15.0	13.5	---	---	---	---
3	8.0	6.5	9.0	8.0	11.5	9.5	---	---	---	---	---	---
4	8.0	7.0	8.0	7.0	11.5	9.5	---	---	---	---	---	---
5	8.0	7.5	8.0	6.5	9.5	9.0	---	---	---	---	---	---
6	8.0	6.5	9.0	6.0	9.5	8.5	---	---	---	---	---	---
7	7.5	6.5	10.5	6.5	9.5	9.0	---	---	---	---	---	---
8	7.0	5.5	10.0	8.5	9.5	8.5	---	---	---	---	---	---
9	7.0	6.0	9.0	8.0	9.0	8.5	---	---	---	---	---	---
10	7.0	6.0	9.5	8.0	10.0	8.5	---	---	---	---	---	---
11	8.0	6.0	10.5	8.5	11.0	9.0	---	---	---	---	14.5	14.0
12	8.0	7.0	12.0	9.5	12.5	9.0	---	---	---	---	14.5	12.0
13	9.5	6.5	11.5	10.0	13.0	9.5	---	---	---	---	14.0	11.5
14	10.5	7.5	10.5	8.5	14.0	10.5	---	---	---	---	13.5	12.0
15	9.0	8.0	8.5	7.5	14.5	11.5	---	---	---	---	14.5	12.5
16	8.0	7.5	10.5	7.0	13.0	11.0	---	---	---	---	15.0	12.0
17	8.5	7.0	11.5	8.5	13.5	10.0	---	---	---	---	15.5	12.5
18	8.0	7.5	11.0	8.5	14.0	10.5	---	---	---	---	15.5	13.5
19	7.5	6.5	10.5	10.0	14.0	11.0	---	---	---	---	16.5	14.5
20	8.5	6.5	11.0	9.5	13.0	10.5	---	---	---	---	16.0	14.5
21	9.0	6.5	10.0	9.0	10.5	10.0	---	---	---	---	14.5	12.5
22	10.5	7.5	9.5	8.5	13.0	9.0	---	---	---	---	12.5	11.0
23	9.5	8.0	10.0	8.5	14.5	11.0	---	---	---	---	12.0	11.0
24	8.0	6.5	10.5	8.5	15.5	12.0	---	---	---	---	11.0	9.0
25	6.5	5.5	10.0	8.5	16.0	12.5	---	---	---	---	10.5	8.5
26	7.0	5.5	11.0	9.0	15.0	13.5	---	---	---	---	10.5	8.5
27	8.5	6.0	12.5	8.5	16.0	13.0	---	---	---	---	11.0	9.0
28	7.5	6.0	14.0	10.0	16.0	14.0	---	---	---	---	11.5	9.0
29	8.0	6.5	15.0	11.0	15.0	13.0	---	---	---	---	12.0	10.0
30	8.0	7.0	14.5	10.0	14.5	11.5	---	---	---	---	12.0	11.0
31	---	---	11.5	8.0	---	---	---	---	---	---	---	---
MONTH	10.5	5.5	15.0	6.0	16.0	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 mi².

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, 121,400 acre-ft June 9, elevation, 831.99 ft; minimum, 239 acre-ft Dec. 9, elevation, 683.00 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	835	123,200

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	797.34	756.17	712.91	726.83	742.39	792.50	811.41	825.75	829.89	829.82	829.82	826.66
2	796.12	754.73	713.62	726.10	742.59	793.11	811.80	826.74	829.91	829.85	829.79	826.41
3	794.89	753.05	713.25	727.99	743.38	793.34	811.88	828.00	829.91	829.81	829.77	826.11
4	793.66	751.21	712.86	727.98	744.25	793.41	811.65	827.89	830.03	829.78	829.73	825.71
5	792.49	748.72	713.07	727.85	745.04	793.61	811.79	827.86	830.11	829.75	829.74	825.16
6	791.82	747.83	709.67	727.93	745.77	794.27	812.05	827.90	829.97	829.71	829.69	824.41
7	791.22	746.59	706.51	727.81	746.41	794.88	812.34	828.09	831.00	829.71	829.73	823.61
8	790.64	744.32	690.69	727.95	747.01	795.40	813.52	828.34	831.95	829.69	829.71	822.75
9	790.09	741.67	697.66	728.07	747.62	795.93	814.63	828.69	831.91	829.65	829.76	821.88
10	789.59	738.80	710.85	728.20	748.27	796.51	816.00	828.98	831.54	829.65	829.72	820.89
11	788.91	736.12	716.79	728.11	749.43	797.07	816.40	829.01	830.73	829.63	829.71	819.67
12	787.73	733.77	718.90	728.31	755.63	797.57	816.42	828.87	829.75	829.65	829.69	818.37
13	786.36	732.48	719.59	727.95	778.11	798.24	816.10	828.70	829.67	829.69	829.70	817.07
14	784.95	731.15	734.72	728.12	784.90	799.12	815.91	828.90	829.62	829.70	829.71	815.83
15	783.52	729.30	746.24	727.96	784.39	799.91	815.89	829.54	829.59	829.75	829.74	814.49
16	782.10	727.98	748.60	727.97	782.66	800.44	815.95	829.91	829.59	829.75	829.67	813.15
17	780.65	727.93	746.72	727.94	781.17	800.99	816.66	830.01	829.69	829.76	829.70	811.80
18	779.17	728.05	743.73	728.14	779.97	801.76	817.52	830.02	829.73	829.76	829.69	810.43
19	777.60	728.27	740.57	728.21	778.77	803.04	818.76	829.98	829.76	829.76	829.69	809.04
20	775.95	728.22	736.58	728.49	778.29	804.17	819.82	829.85	829.91	829.74	829.69	807.63
21	774.32	727.92	732.38	729.43	779.62	805.81	820.33	829.77	830.04	829.78	829.62	806.20
22	772.78	728.01	729.93	731.38	781.08	806.05	820.55	829.92	829.84	829.80	829.44	804.78
23	771.34	728.47	728.97	733.51	782.13	805.86	820.81	830.13	829.77	829.87	829.16	803.32
24	769.64	730.21	728.35	738.88	783.08	806.02	821.26	830.01	829.87	829.87	828.87	801.78
25	767.88	729.79	728.17	743.98	786.52	806.56	821.67	830.03	829.83	829.86	828.58	800.19
26	766.05	726.62	728.11	745.23	788.64	811.48	822.14	829.89	829.78	829.88	828.31	799.08
27	764.22	720.64	728.21	744.69	789.87	812.35	822.68	829.87	829.67	829.91	828.05	797.36
28	762.42	713.04	728.11	743.91	790.86	811.76	823.17	829.80	829.58	829.89	827.75	795.92
29	760.73	712.97	730.03	743.19	791.62	810.89	823.70	829.79	829.74	829.94	827.47	794.55
30	759.14	712.97	733.95	742.71	---	810.69	824.49	829.81	829.79	829.86	827.16	793.18
31	757.64	---	731.81	742.48	---	810.83	---	829.86	---	829.81	826.93	---
MEAN	780.03	733.90	724.57	732.17	768.26	801.41	817.24	829.09	830.07	829.78	829.22	812.58
MAX	797.34	756.17	748.60	745.23	791.62	812.35	824.49	830.13	831.95	829.94	829.82	826.66
MIN	757.64	712.97	690.69	726.10	742.39	792.50	811.41	825.75	829.58	829.63	826.93	793.18
(†)	28040	4670	11520	17870	60550	86360	108300	117600	117500	117500	112500	62380
(‡)	-41060	-23370	+6850	+6350	+42680	+25810	+21940	+9300	-100	0	-5000	-50120

CAL YR 1983 MEAN 790.94 MAX 831.37 MIN 690.69 AC-FT# +1480

WTR YR 1984 MEAN 790.73 MAX 831.95 MIN 690.69 AC-FT# -6720

† 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 mi².

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 sta 14150900). No diversion above station.

AVERAGE DISCHARGE.--49 years, 587 ft³/s, 42.86 in/yr, 425,300 acre-ft/yr, adjusted for storage since January 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s Dec. 11, 1956, gage height, 18.80 ft, from rating curve extended above 9,700 ft³/s; minimum, 1.5 ft³/s Oct. 7, 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,440 ft³/s June 7, gage height, 7.94 ft; minimum, 57 ft³/s Aug. 18-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	796	675	640	2540	477	458	1050	380	309	216	100	277
2	793	670	572	1220	345	571	1060	813	309	216	100	277
3	786	786	858	620	128	645	1060	1520	309	216	100	277
4	784	959	725	1050	86	645	1060	2070	778	214	96	356
5	725	1010	671	901	86	468	670	1510	1880	214	81	531
6	443	1050	2460	713	86	168	514	1250	2630	194	81	728
7	375	1050	3970	675	86	144	520	899	3800	169	81	785
8	377	1040	3560	554	86	160	541	653	2360	169	71	781
9	377	1040	1290	480	86	160	722	405	2140	169	66	779
10	377	1040	71	529	86	160	1220	418	1980	156	66	841
11	454	936	226	990	87	160	1850	686	1930	147	66	1040
12	718	845	533	784	101	160	2080	727	1810	122	66	1050
13	795	852	888	771	157	161	2070	683	779	108	66	1050
14	793	842	2220	543	544	162	1700	504	660	107	66	1050
15	788	1010	2370	531	2660	279	1330	309	559	109	64	1040
16	779	808	1610	432	2830	377	958	484	436	109	58	1050
17	776	1050	2090	397	2130	384	301	630	336	109	58	1060
18	774	1400	2090	316	1650	384	218	576	313	109	58	1060
19	796	1070	2080	316	1530	384	223	562	313	106	57	1050
20	803	1450	2090	250	1360	632	515	582	373	98	57	1040
21	796	1210	1880	219	1190	1250	742	504	834	81	110	1040
22	790	847	1240	219	792	1690	742	395	928	81	205	1030
23	785	1030	756	266	699	1490	587	729	601	81	257	1040
24	803	2070	645	384	880	910	301	879	395	79	275	1050
25	802	2110	555	663	420	788	315	663	410	79	277	1050
26	795	2080	674	1300	340	1390	244	938	413	79	277	751
27	786	2280	587	1370	441	2280	113	661	421	79	277	1120
28	747	2250	580	1150	436	2390	113	640	373	78	277	922
29	694	754	641	943	408	2370	113	517	228	78	277	863
30	690	655	2460	756	---	1500	117	400	216	122	277	859
31	685	---	2620	583	---	1050	---	363	---	100	277	---
TOTAL	21682	34869	43652	22465	20207	23770	23049	22350	28823	3994	4244	25847
MEAN	699	1162	1408	725	697	767	768	721	961	129	137	862
MAX	803	2280	3970	2540	2830	2390	2080	2070	3800	216	277	1120
MIN	375	655	71	219	86	144	113	309	216	78	57	277
AC-FT	43010	69160	86580	44560	40080	47150	45720	44330	57170	7920	8420	51270
MEAN†	32	770	1519	828	1439	1187	1137	872	959	129	56	19
CFSM†	.17	4.14	8.17	4.45	7.74	6.38	6.11	4.69	5.16	.69	.30	.10
IN.†	.20	4.62	9.42	5.13	8.35	7.36	6.82	5.41	5.75	.80	.35	.11
AC-FT†	1950	45790	93430	50910	82760	72960	67660	53630	57070	7920	3420	1150

CAL YR 1983 TOTAL 232836 MEAN 638 MAX 3970 MIN 53 AC-FT 461800 MEAN† 640 CFSM† 3.44 IN.† 46.72 AC-FT† 463280
WTR YR 1984 TOTAL 274952 MEAN 751 MAX 3970 MIN 57 AC-FT 545400 MEAN† 744 CFSM† 4.00 IN.† 54.31 AC-FT† 538680

† Adjusted for change in contents in Fall Creek Lake.

WILLAMETTE RIVER BASIN

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, 20.5°C Aug. 17; minimum, 3.0°C Dec. 25, 26.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	13.0	15.0	15.0	7.5	7.0	6.0	5.5	---	---	7.0	6.5
2	13.5	13.0	15.0	15.0	7.0	7.0	6.0	5.5	---	---	7.0	6.5
3	14.0	13.5	15.0	14.5	7.0	7.0	6.5	6.0	---	---	7.0	6.5
4	14.5	14.0	15.0	14.5	7.0	6.5	7.0	6.5	---	---	7.0	6.5
5	14.5	14.0	14.5	14.5	7.0	6.5	7.0	6.5	---	---	7.0	6.5
6	14.5	14.5	14.5	13.5	7.0	6.5	7.0	7.0	---	---	8.5	6.5
7	15.5	14.0	13.5	12.5	8.0	7.0	7.5	7.0	---	---	9.0	7.0
8	15.5	15.0	12.5	12.0	8.5	7.5	7.5	7.0	---	---	9.0	7.0
9	15.5	15.5	12.5	12.0	8.5	7.5	7.5	7.0	---	---	8.5	7.0
10	16.0	15.5	12.5	12.0	9.0	8.5	7.5	7.0	---	---	8.0	7.0
11	16.0	15.5	12.5	12.5	8.5	8.0	7.5	7.0	---	---	9.5	7.0
12	16.5	16.0	12.5	12.5	8.0	7.5	7.5	7.0	---	---	8.5	7.0
13	16.5	16.5	12.5	11.5	7.5	7.5	7.0	6.5	---	---	9.0	8.0
14	16.5	16.5	11.5	11.0	8.0	7.5	7.0	6.5	---	---	8.5	7.5
15	17.0	16.5	11.0	10.5	8.5	8.0	6.5	5.5	---	---	8.5	7.5
16	17.0	16.5	11.0	10.5	8.5	8.5	5.5	5.0	7.0	7.0	8.0	7.0
17	16.5	16.5	10.5	10.5	8.5	8.0	5.5	5.0	7.0	7.0	7.5	7.0
18	16.5	16.5	10.5	10.0	8.0	8.0	5.0	4.5	7.5	7.0	8.0	7.5
19	16.5	16.0	10.5	9.0	8.0	7.5	4.5	4.0	7.5	7.0	8.0	7.5
20	16.5	16.0	9.5	9.0	8.0	7.0	4.0	4.0	7.0	7.0	8.0	7.0
21	16.5	16.0	9.0	8.0	7.0	6.5	4.0	4.0	7.0	7.0	7.5	7.0
22	16.5	16.0	9.0	8.5	6.5	5.5	4.5	4.0	7.0	7.0	7.5	7.0
23	16.5	16.0	8.5	8.0	5.5	5.0	4.5	4.5	7.0	7.0	7.5	7.0
24	16.0	15.5	8.0	8.0	5.0	3.5	5.0	4.5	7.0	6.5	7.5	7.5
25	16.0	15.5	8.5	8.0	3.5	3.0	5.5	5.0	7.0	6.5	7.5	7.5
26	15.5	15.5	8.0	8.0	3.5	3.0	---	---	7.0	7.0	7.5	7.5
27	15.5	15.5	8.0	8.0	3.5	3.5	---	---	7.5	7.0	7.5	7.5
28	15.5	15.5	8.0	8.0	3.5	3.5	---	---	7.0	7.0	8.0	7.5
29	15.5	15.0	8.0	8.0	3.5	3.5	---	---	7.0	7.0	8.0	7.5
30	15.5	15.0	8.0	7.0	4.0	3.5	---	---	---	---	8.0	7.5
31	15.5	15.0	---	---	6.0	4.0	---	---	---	---	8.0	8.0
MONTH	17.0	13.0	15.0	7.0	9.0	3.0	---	---	---	---	9.5	6.5

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR

LOCATION.--Lat 43°59'55", long 122°54'20", in SW1SW4 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 mi².

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.--41 years (water years 1906-11, 1914-16, 1953-84), 4,139 ft³/s, 2,999,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,000 ft³/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 ft³/s; minimum, 366 ft³/s Dec. 5, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,600 ft³/s June 7, gage height, 9.31 ft; minimum, 1,280 ft³/s July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4250	4850	9470	11800	4340	3980	6220	2620	6100	4030	1650	2750
2	4250	5050	8380	10200	4040	3740	6110	3620	4870	3560	1600	2740
3	4320	5160	7920	8040	2840	3890	5980	5530	4250	2570	1600	2740
4	4270	5480	7250	8180	2110	3860	5920	7750	5110	2130	1600	3100
5	4200	5420	7250	8280	1760	3670	5580	6990	7840	2210	1540	3820
6	3930	5780	9220	8850	1710	2530	5350	6580	9630	2180	1420	4540
7	3850	5800	12700	9030	1690	2330	4910	7270	15200	2220	1480	4690
8	3850	5630	9330	8800	1600	2210	5880	6360	16600	2330	1640	4710
9	3850	5560	9680	8550	1630	2170	5900	5260	14600	2260	1750	4700
10	3860	5510	9500	8640	1630	2220	6840	4490	12800	2220	1640	4700
11	3890	5420	9130	7480	1740	2280	7840	5950	12000	2210	1640	5300
12	4160	5350	9260	6650	2750	2400	8020	5960	9970	1970	1620	5250
13	4290	5680	9660	6100	8230	2530	7460	5800	7150	1970	1580	5470
14	4330	5720	12100	5300	4170	2920	6870	5930	5980	2010	1510	5460
15	4200	5820	13600	4950	8830	3780	6440	6620	5420	1790	1470	5460
16	4170	5670	9700	5000	13200	4440	6180	7070	5110	1720	1440	5470
17	4220	6180	12500	4180	11100	4230	5380	6200	4850	1730	1410	5230
18	4280	7120	13700	3700	8800	4280	5270	5000	4690	1810	1360	5300
19	4280	6550	14600	3610	7930	4450	5440	4370	4080	1790	1370	5300
20	4310	7450	14600	2900	6370	5140	5550	4370	3390	1790	1380	5280
21	4310	7000	14200	2900	6150	6920	5730	4640	4230	2010	1690	5280
22	4310	8020	12300	3140	5390	7480	5640	4990	5190	1900	2000	5240
23	4340	9510	9880	3340	4880	7720	5470	5810	4770	1780	2200	5360
24	4390	13000	9720	2760	6220	6030	4170	6790	3850	1570	2030	5390
25	4400	13000	9570	3070	5280	5750	3270	6460	3720	1360	1810	5370
26	4380	12400	9650	4590	4300	7930	2640	6390	3790	1390	1970	5010
27	4560	12200	9560	6100	4190	9730	1940	5980	4250	1370	2010	5450
28	4660	11900	8660	6000	4100	10900	1840	5500	4630	1390	2170	5240
29	4540	9840	8020	5750	3830	10200	1820	5170	4160	1460	2670	5180
30	4540	9230	12200	5540	---	8460	1970	5960	4140	1540	2730	5180
31	4820	---	12300	5330	---	6550	---	6440	---	1600	2760	---
TOTAL	132010	221300	325610	188760	140810	154720	157630	177870	202370	61870	54740	144710
MEAN	4258	7377	10500	6089	4856	4991	5254	5738	6746	1996	1766	4824
MAX	4820	13000	14600	11800	13200	10900	8020	7750	16600	4030	2760	5470
MIN	3850	4850	7250	2760	1600	2170	1820	2620	3390	1360	1360	2740
AC-FT	261800	438900	645800	374400	279300	306900	312700	352800	401400	122700	108600	287000
CAL YR 1983	TOTAL	1773320	MEAN	4858	MAX	14800	MIN	1360	AC-FT	3517000		
WTR YR 1984	TOTAL	1962400	MEAN	5362	MAX	16600	MIN	1360	AC-FT	3892000		

WILLAMETTE RIVER BASIN

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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, 18.5°C July 24, Aug. 17; minimum, 3.5°C Jan. 18.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

WILLAMETTE RIVER BASIN

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14152500 COAST FORK WILLAMETTE RIVER AT LONDON, OR

LOCATION.--Lat 43°38'30", long 123°05'05", in SW 1/4 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 mi².

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.--49 years, 203 ft³/s, 38.23 in/yr, 147,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s Dec. 22, 1964, gage height, 13.37 ft, from rating curve extended above 3,200 ft³/s, on basis of slope-area measurement of peak flow; minimum, 6.8 ft³/s Aug. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2300	2,420	6.24	Feb. 13	1130	*4,050	*8.47
Minimum, 13 ft ³ /s Sept. 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	22	90	221	410	124	371	309	468	91	63	27	22		
2	21	82	245	320	115	368	291	462	89	59	28	19		
3	21	81	238	271	109	312	264	637	86	56	28	18		
4	20	174	206	235	104	271	243	515	148	54	26	17		
5	20	93	234	207	98	240	245	397	301	51	25	17		
6	20	242	604	186	96	216	225	330	480	50	25	22		
7	20	210	1030	172	89	197	270	278	860	48	24	20		
8	20	128	818	161	86	182	860	241	525	46	23	20		
9	21	100	525	146	107	171	774	211	378	45	23	19		
10	28	86	504	179	115	173	1160	189	331	44	22	18		
11	26	133	450	283	170	165	827	195	269	43	22	18		
12	22	197	383	245	572	161	688	173	220	43	22	17		
13	21	508	351	210	3010	220	576	158	186	41	22	16		
14	21	358	1040	183	1180	331	474	154	162	40	21	15		
15	21	228	1580	162	741	324	403	158	142	38	21	16		
16	20	204	729	145	698	371	332	156	128	37	20	15		
17	20	493	487	133	506	421	281	141	116	35	19	14		
18	21	712	390	125	392	365	275	130	108	34	19	14		
19	20	500	381	119	335	324	286	122	101	33	19	14		
20	20	654	340	114	390	356	283	124	110	33	19	14		
21	20	520	293	138	691	622	254	113	131	32	18	14		
22	25	380	248	174	578	499	227	119	109	33	18	14		
23	47	389	214	195	460	379	206	168	96	31	18	18		
24	32	925	205	184	797	304	191	151	87	31	19	16		
25	28	959	236	228	936	276	189	142	80	32	19	15		
26	26	589	369	230	608	786	197	146	76	34	18	14		
27	24	408	317	202	464	805	190	129	76	32	17	14		
28	24	320	273	179	394	546	176	119	70	30	17	14		
29	24	262	362	162	342	440	176	109	81	30	17	14		
30	36	223	854	147	---	364	233	104	69	28	17	13		
31	70	---	568	134	---	342	---	99	---	27	21	---		
TOTAL	781	10248	14695	5979	14307	10902	11105	6638	5706	1233	654	490		
MEAN	25.2	342	474	193	493	352	370	214	190	39.8	21.1	16.3		
MAX	70	959	1580	410	3010	805	1160	637	860	63	28	22		
MIN	20	81	205	114	86	161	176	99	69	27	17	13		
CFSM	.35	4.74	6.57	2.68	6.84	4.88	5.13	2.97	2.64	.55	.29	.23		
IN.	.40	5.29	7.58	3.08	7.38	5.62	5.73	3.42	2.94	.64	.34	.25		
AC-FT	1550	20330	29150	11860	28380	21620	22030	13170	11320	2450	1300	972		
CAL YR 1983	TOTAL	90797	MEAN	249	MAX	2900	MIN	20	CFSM	3.45	IN.	46.85	AC-FT	180100
WTR YR 1984	TOTAL	82738	MEAN	226	MAX	3010	MIN	13	CFSM	3.13	IN.	42.69	AC-FT	164100

WILLAMETTE RIVER BASIN

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, 21.5°C July 24, Aug. 9, 10; minimum, 2.0°C Dec. 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14153000 COTTAGE GROVE LAKE NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°43'00", long 123°02'55", in NE¼ sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, in east abutment of dam on Coast Fork Willamette River 5.8 mi south of Cottage Grove, and at mile 29.7.

DRAINAGE AREA.--104 mi².

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, 32,290 acre-ft June 7, elevation, 790.44 ft; minimum, 2,610 acre-ft Nov. 11, elevation, 748.12 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	771.06	752.29	750.00	749.57	754.92	768.52	778.48	786.39	789.85	790.13	789.40	787.85
2	770.65	752.09	750.21	749.74	754.87	768.54	778.66	786.40	789.86	790.06	789.36	787.79
3	770.23	751.68	750.12	749.34	755.15	768.32	778.59	786.54	789.93	790.02	789.33	787.74
4	769.80	751.14	749.89	749.21	755.46	767.95	778.44	786.53	790.09	789.98	789.30	787.47
5	769.38	749.55	750.15	749.64	755.76	767.97	778.60	786.53	790.20	789.93	789.26	787.17
6	768.93	748.70	753.46	750.14	756.05	768.37	778.82	786.47	790.24	789.88	789.22	786.67
7	768.50	748.43	756.22	750.42	756.29	768.72	779.33	786.46	789.96	789.85	789.18	786.07
8	768.06	748.53	752.30	750.60	756.52	769.11	781.41	786.80	789.51	789.84	789.14	785.45
9	767.66	748.37	749.54	750.62	756.90	769.47	781.98	787.10	789.67	789.83	789.09	784.84
10	767.27	748.13	749.72	750.90	757.31	769.87	782.18	787.29	789.87	789.82	789.04	783.96
11	766.92	748.37	749.77	751.62	758.01	770.24	781.08	787.40	789.99	789.81	788.99	782.81
12	766.36	749.32	750.20	751.85	761.95	770.59	780.13	787.63	790.05	789.80	788.94	781.60
13	765.88	751.14	750.69	751.61	774.53	771.24	780.05	787.81	790.06	789.80	788.90	780.35
14	765.39	750.24	752.80	750.96	775.66	772.03	780.34	788.04	790.00	789.80	788.84	779.15
15	764.71	749.77	753.58	750.51	772.28	772.34	780.45	788.32	789.99	789.79	788.79	778.20
16	763.95	750.20	750.36	750.33	768.69	772.67	780.71	788.57	790.05	789.79	788.74	777.48
17	763.16	750.94	749.17	750.01	766.66	773.11	781.31	788.76	790.10	789.77	788.68	776.98
18	762.38	750.85	749.22	749.88	764.98	773.34	781.88	788.93	790.13	789.75	788.62	776.59
19	761.57	749.20	749.61	750.05	763.69	773.44	782.47	789.09	790.15	789.72	788.56	776.22
20	760.75	749.88	749.70	750.45	763.27	773.98	783.00	789.23	790.21	789.69	788.50	775.84
21	759.91	749.13	749.58	751.13	764.24	775.05	783.45	789.36	790.27	789.66	788.45	775.47
22	759.11	749.38	749.94	752.10	764.50	775.45	783.81	789.55	790.26	789.64	788.39	775.10
23	758.31	750.17	750.29	753.13	763.77	775.53	784.14	789.83	790.20	789.61	788.33	774.71
24	757.45	751.58	750.38	753.77	765.53	775.35	784.42	790.05	790.15	789.58	788.28	774.33
25	756.47	750.12	750.30	754.38	767.79	775.23	784.65	790.09	790.13	789.58	788.22	773.95
26	755.43	749.72	750.02	754.70	768.60	776.70	784.78	790.03	790.16	789.56	788.17	773.56
27	754.45	749.88	749.75	754.87	768.82	776.82	784.96	789.97	790.20	789.54	788.11	773.15
28	753.82	750.02	749.69	755.10	768.76	776.46	785.19	789.94	790.21	789.51	788.04	772.76
29	753.26	750.13	750.34	755.20	768.48	776.60	785.43	789.92	790.26	789.48	787.99	772.36
30	752.79	750.03	751.26	755.20	---	777.23	785.88	789.90	790.24	789.45	787.93	771.95
31	752.48	---	749.37	755.11	---	777.92	---	789.86	---	789.42	787.89	---
MEAN	762.77	749.97	750.57	751.68	763.08	772.52	781.82	788.35	790.07	789.74	788.70	779.59
MAX	771.06	752.29	756.22	755.20	775.66	777.92	785.88	790.09	790.27	790.13	789.40	787.85
MIN	752.48	748.13	749.17	749.21	754.87	767.95	778.44	786.39	789.51	789.42	787.89	771.95
(†)	3930	3150	2960	4910	12210	19570	27290	31630	32060	31130	29440	14670
(‡)	-10390	-780	-190	+1950	+7300	+7360	+7720	+4340	+430	-930	-1690	-14770
CAL YR 1983	MEAN 772.36	MAX 790.15	MIN 748.13	AC-FT† -170								
WTR YR 1984	MEAN 772.42	MAX 790.27	MIN 748.13	AC-FT† +350								

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

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

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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 mi².

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 above 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 good. Flow regulated since 1942 by Cottage Grove Lake (see station 14153000). Small diversions for irrigation above station.

AVERAGE DISCHARGE.--45 years, 277 ft³/s, 36.17 in/yr, 200,700 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,910 ft³/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, 2,690 ft³/s Feb. 15, gage height, 8.29 ft; minimum, 43 ft³/s July 12 through Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	124	324	540	207	510	184	299	106	128	43	43
2	166	123	316	443	163	483	284	491	88	101	43	43
3	166	174	347	441	93	483	404	597	79	81	43	43
4	166	287	325	360	81	481	404	671	116	81	43	147
5	164	345	298	244	74	345	265	668	299	81	43	192
6	163	406	307	203	74	161	207	663	536	75	43	284
7	163	299	763	204	74	142	209	405	1120	63	43	339
8	163	147	1790	204	74	116	338	143	881	56	43	336
9	160	143	1150	204	74	99	809	119	411	52	43	335
10	160	132	631	205	74	99	1430	157	308	52	43	448
11	168	127	570	271	76	99	1610	207	274	52	43	570
12	171	128	446	307	89	101	1370	103	245	47	43	577
13	172	440	398	342	142	101	789	103	234	43	43	571
14	172	612	791	356	1010	156	497	91	234	43	43	543
15	229	380	1750	299	2300	302	483	78	170	43	43	428
16	252	237	1450	231	2210	386	331	79	119	43	43	319
17	249	563	790	229	1380	393	105	79	105	43	43	229
18	246	1000	533	189	996	394	105	79	105	43	43	172
19	243	921	479	139	843	394	106	79	105	43	43	163
20	239	994	468	106	700	344	108	80	106	43	43	163
21	237	856	427	97	709	385	108	81	132	43	43	163
22	234	539	301	99	713	473	108	77	143	43	43	163
23	232	484	257	101	817	473	108	71	142	43	43	162
24	230	1050	291	146	801	472	109	69	127	43	43	160
25	243	1480	319	204	556	472	139	171	99	43	43	160
26	249	849	498	264	562	537	184	223	70	43	43	160
27	212	541	435	255	562	852	153	192	66	43	43	159
28	141	425	381	207	562	882	105	163	72	43	43	158
29	127	356	385	209	558	553	105	141	73	43	43	158
30	126	342	1030	207	---	280	108	131	92	43	43	158
31	125	---	1010	207	---	184	---	131	---	43	43	---
TOTAL	5935	14504	19260	7513	16574	11152	11265	6641	6657	1686	1333	7546
MEAN	191	483	621	242	572	360	376	214	222	54.4	43.0	252
MAX	252	1480	1790	540	2300	882	1610	671	1120	128	43	577
MIN	125	123	257	97	74	99	105	69	66	43	43	43
AC-FT	11770	28770	38200	14900	32870	22120	22340	13170	13200	3340	2640	14970
MEAN†	22.4	470	618	274	698	479	505	285	229	39.2	15.4	3.4
CFSM†	0.22	4.52	5.94	2.63	6.71	4.61	4.86	2.74	2.20	0.38	0.15	0.03
IN.†	0.25	5.04	6.85	3.04	7.24	5.31	5.42	3.16	2.46	0.43	0.17	0.04
AC-FT†	1380	27990	38010	16850	40170	29480	30060	17510	13630	2410	950	200

CAL YR 1983 TOTAL 118401 MEAN 324 MAX 2760 MIN 44 AC-FT 234800 MEAN† 324 CFSM† 3.12 IN.† 42.30 AC-FT† 234630
WTR YR 1984 TOTAL 110066 MEAN 301 MAX 2300 MIN 43 AC-FT 218300 MEAN† 301 CFSM† 2.89 IN.† 39.41 AC-FT† 218650

† Adjusted for change in contents in Cottage Grove Lake.

WILLAMETTE RIVER BASIN

14154500 ROW RIVER ABOVE PITCHER CREEK, NEAR DORENA, OR

LOCATION.--Lat 43°44'10", long 122°52'20", in NE 1/4 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 mi².

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 above 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.--49 years, 605 ft³/s, 38.94 in/yr, 438,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft³/s Dec. 22, 1964, gage height, 18.19 ft, from rating curve extended above 12,000 ft³/s, on basis of slope-area measurement of peak flow; minimum, 10 ft³/s Sept. 24, 25, 1951, Oct. 7, 8, 1958.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	0030	13,700	11.79	Mar. 26	1330	7,020	9.19
Feb. 13	1130	*16,000	*12.58				

Minimum, 29 ft³/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	35	126	798	1260	376	1340	1550	1670	278	178	54	55		
2	34	183	959	1020	331	1420	1420	2000	255	166	56	42		
3	33	211	934	895	298	1030	1160	3070	239	156	56	37		
4	33	385	734	908	277	831	961	2160	523	146	52	34		
5	32	233	647	789	259	736	902	1430	1340	132	50	33		
6	33	730	1650	611	256	750	890	1220	1890	125	50	40		
7	31	702	4100	537	234	722	874	1040	5380	120	48	44		
8	31	385	2850	500	222	683	1870	891	3250	115	45	53		
9	36	288	1670	443	251	644	1900	783	1960	110	44	42		
10	56	264	1810	495	268	640	2830	656	1610	105	43	38		
11	67	380	1510	1010	381	607	2210	735	1170	100	42	36		
12	48	542	1260	889	1680	523	2020	729	875	98	41	35		
13	41	1190	1430	733	11400	686	1770	649	692	95	41	34		
14	49	889	5740	632	4040	1180	1730	655	564	91	41	33		
15	53	762	7530	532	2310	1200	1610	640	475	87	40	33		
16	45	725	2700	475	2030	1040	1150	666	409	84	38	32		
17	41	2040	1580	416	1340	1110	897	595	356	81	37	31		
18	41	1710	1210	326	1010	973	852	518	317	77	37	30		
19	39	1420	1430	300	867	996	1050	483	289	74	37	30		
20	37	2000	1180	279	1130	1080	1140	494	323	71	37	31		
21	36	1360	938	347	1730	1750	1060	426	487	69	36	32		
22	45	983	744	506	1440	1490	881	393	435	69	35	31		
23	121	1220	604	684	1160	1160	756	774	351	66	35	43		
24	78	3680	554	1260	1500	929	667	715	304	65	35	44		
25	57	2590	750	1610	2410	859	614	589	271	63	35	37		
26	49	1550	1310	1290	1530	4930	603	550	249	66	34	34		
27	44	1180	1010	942	1160	3360	592	469	234	63	33	32		
28	42	1230	806	734	1290	1970	588	428	216	61	32	31		
29	40	961	1420	598	1100	1620	549	415	233	59	32	30		
30	45	779	3970	499	---	1340	688	383	199	58	31	29		
31	103	---	2280	429	---	1180	---	321	---	55	41	---		
TOTAL	1475	30698	56108	21949	42280	38779	35784	26547	25174	2905	1268	1086		
MEAN	47.6	1023	1810	708	1458	1251	1193	856	839	93.7	40.9	36.2		
MAX	121	3680	7530	1610	11400	4930	2830	3070	5380	178	56	55		
MIN	31	126	554	279	222	523	549	321	199	55	31	29		
CFSM	.23	4.85	8.58	3.36	6.91	5.93	5.65	4.06	3.98	.44	.19	.17		
IN.	.26	5.41	9.89	3.87	7.45	6.84	6.31	4.68	4.44	.51	.22	.19		
AC-FT	2930	60890	111300	43540	83860	76920	70980	52660	49930	5760	2520	2150		
CAL YR 1983	TOTAL	265421	MEAN	727	MAX	8240	MIN	31	CFSM	3.45	IN.	46.79	AC-FT	526500
WTR YR 1984	TOTAL	284053	MEAN	776	MAX	11400	MIN	29	CFSM	3.68	IN.	50.08	AC-FT	563400

WILLAMETTE RIVER BASIN

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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 mi².

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, 79,570 acre-ft June 7, 8, elevation, 836.04 ft; minimum, 6,690 acre-ft Nov. 22, elevation, 769.70 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	801.82	776.21	771.47	771.40	779.03	797.79	816.41	826.93	832.05	831.69	831.24	829.15
2	801.35	776.16	771.85	770.13	779.16	798.57	816.05	828.07	832.03	831.62	831.20	829.08
3	800.88	776.00	771.30	771.26	779.70	798.42	814.91	829.51	832.07	831.61	831.16	829.00
4	800.41	775.47	770.70	771.58	780.21	797.78	813.93	829.24	832.46	831.67	831.11	828.69
5	799.94	773.45	770.42	770.76	780.65	797.70	814.05	828.01	833.04	831.75	831.06	828.05
6	799.44	774.44	775.04	771.06	781.07	798.54	814.64	826.41	833.37	831.81	831.01	827.44
7	798.94	775.51	784.25	771.28	781.38	799.29	815.47	825.63	836.04	831.86	830.95	826.82
8	798.44	774.22	785.03	771.00	781.62	799.91	818.10	826.13	834.94	831.87	830.89	825.91
9	797.98	772.25	780.71	770.84	782.02	800.43	819.46	826.72	834.28	831.85	830.83	824.76
10	797.54	770.60	776.77	771.66	782.48	800.97	820.81	827.00	834.46	831.82	830.77	823.22
11	797.12	771.13	773.73	772.41	783.30	801.40	820.51	827.32	834.37	831.79	830.70	821.14
12	796.66	771.88	772.32	771.21	788.23	801.67	819.71	827.81	834.28	831.76	830.63	819.01
13	796.18	773.98	771.86	770.50	813.72	802.34	819.67	828.18	833.92	831.71	830.56	816.90
14	795.71	772.36	784.33	770.47	818.74	803.78	819.92	828.74	833.63	831.69	830.49	814.84
15	795.04	770.47	795.45	770.51	817.49	804.55	819.93	829.44	833.62	831.70	830.42	813.04
16	794.02	770.65	794.17	770.37	815.65	804.63	819.73	830.16	833.35	831.70	830.35	811.49
17	792.89	773.46	789.72	770.59	812.47	804.84	819.93	830.77	832.72	831.70	830.27	810.36
18	791.58	772.88	784.59	770.59	808.52	805.07	820.23	831.28	832.14	831.69	830.20	809.72
19	790.28	771.80	779.79	770.56	803.97	805.61	821.16	831.76	831.99	831.67	830.12	809.21
20	788.93	773.57	775.57	770.90	799.78	806.93	822.00	832.05	832.15	831.64	830.05	808.70
21	787.58	771.06	772.26	771.76	798.38	808.57	822.47	832.07	832.46	831.61	829.97	808.18
22	786.31	770.72	771.35	773.54	797.41	809.11	822.62	832.14	832.56	831.59	829.88	807.68
23	785.18	773.20	770.96	775.38	794.64	809.14	822.56	832.41	832.55	831.56	829.80	807.17
24	783.92	781.38	771.38	778.62	793.41	809.20	822.62	832.43	832.45	831.54	829.72	806.67
25	782.32	781.65	773.18	781.72	796.71	809.25	822.78	832.33	832.28	831.51	829.64	806.15
26	780.50	776.66	773.13	782.20	797.55	816.55	823.18	832.24	832.10	831.48	829.56	805.62
27	778.87	773.05	771.17	781.74	797.36	818.90	823.69	832.11	832.05	831.45	829.47	805.08
28	777.94	772.86	771.05	781.10	797.50	818.34	824.17	832.08	832.04	831.42	829.40	804.53
29	777.35	771.07	773.52	780.01	797.23	817.19	824.60	832.12	832.01	831.38	829.31	803.98
30	776.84	770.96	777.58	779.40	---	816.62	825.34	832.11	831.81	831.34	829.23	803.43
31	776.49	---	773.52	779.15	---	816.27	---	832.08	---	831.29	829.19	---
MEAN	791.24	773.64	776.72	773.67	794.46	805.77	820.02	829.85	832.97	831.64	830.30	815.50
MAX	801.82	781.65	795.45	782.20	818.74	818.90	825.34	832.43	836.04	831.87	831.24	829.15
MIN	776.49	770.47	770.42	770.13	779.03	797.70	813.93	825.63	831.81	831.29	829.19	803.43
(+)	10400	7330	8710	12000	25820	47300	60610	72200	71710	70770	67050	32010
(-)	-20410	-3070	+1380	+3290	+13820	+21480	+13310	+11590	-490	-940	-3720	-35040
CAL YR 1983	MEAN 806.27	MAX 832.85	MIN 770.22	AC-FT# +1530								
WTR YR 1984	MEAN 806.33	MAX 836.04	MIN 770.13	AC-FT# +1200								

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

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14155500 ROW RIVER NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'35", long 122°59'25", in NE¼ sec.36, T.20 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank 1.7 mi 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 mi².

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 above 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.--45 years, 761 ft³/s, 38.28 in/yr, 551,300 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s Dec. 28, 1945, gage height, 18.20 ft; minimum, 0.20 ft³/s Sept. 25 to Oct. 7, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,570 ft³/s June 7, gage height, 8.47 ft; minimum, 92 ft³/s Aug. 21, Aug 26 to Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	275	232	881	2670	516	1410	1780	766	365	319	94	92
2	272	228	1130	1540	403	1350	1950	1510	331	262	94	92
3	270	305	1300	1070	229	1350	2190	2540	276	197	94	92
4	268	597	1070	1010	187	1350	1890	3040	317	129	94	282
5	275	792	895	1120	189	987	1030	3030	1080	99	94	579
6	278	686	1190	814	190	506	683	3000	2060	99	94	526
7	276	547	2050	654	190	499	591	2090	4260	99	94	548
8	275	787	3180	686	190	499	881	732	5310	126	94	781
9	275	818	3830	612	190	503	1710	499	3320	153	94	948
10	272	692	3600	510	190	503	2760	564	1970	153	94	1240
11	270	318	2820	1040	192	503	3220	676	1620	153	94	1630
12	270	449	1910	1360	216	507	3340	499	1230	153	94	1590
13	270	881	1860	1090	281	508	2360	463	1220	153	94	1520
14	270	1460	3190	762	1730	628	2010	362	997	123	94	1440
15	353	1360	4390	601	4020	970	2010	190	609	99	94	1210
16	489	799	4140	546	3960	1200	1620	190	750	97	94	1000
17	533	1660	4000	436	3990	1200	974	190	1010	97	94	716
18	588	2300	3790	413	3940	1040	878	190	924	97	94	410
19	576	2080	3570	399	3940	891	684	190	492	97	94	333
20	569	2210	2980	323	3870	903	858	324	338	97	94	333
21	561	2460	2140	290	3280	1120	1010	499	417	97	94	330
22	557	1450	1260	296	2500	1600	1020	463	484	97	94	328
23	547	1110	814	343	2920	1520	1020	690	484	97	94	328
24	540	2080	679	570	2750	1140	806	842	484	96	94	328
25	607	3310	618	859	1600	1140	690	843	484	97	94	325
26	647	3830	1340	1210	1620	1430	491	762	484	97	93	323
27	565	2660	1720	1350	1620	2490	373	695	348	96	94	323
28	341	1610	1220	1100	1560	3060	373	553	279	96	94	321
29	211	1610	1190	1090	1500	3040	374	479	342	96	93	319
30	234	1040	2900	874	---	2230	378	479	417	95	93	319
31	232	---	3990	621	---	1780	---	405	---	94	93	---
TOTAL	11966	40361	69647	26259	47963	37857	39954	27715	32702	3860	2910	18606
MEAN	386	1345	2247	847	1654	1221	1332	894	1090	125	93.9	620
MAX	647	3830	4390	2670	4020	3060	3340	3040	5310	319	94	1630
MIN	211	228	618	290	187	499	373	190	276	94	93	92
AC-FT	23730	80060	138100	52080	95130	75090	79250	54970	64860	7660	5770	36910
MEAN†	54	1290	2270	900	1890	1570	1560	1080	1080	109	33	31
CFSM†	0.20	4.78	8.41	3.33	7.00	5.81	5.78	4.00	4.00	0.40	0.12	0.11
IN.†	0.23	5.35	9.70	3.84	7.55	6.71	6.45	4.61	4.46	0.47	0.14	0.13
AC-FT†	3320	76990	139480	55370	108950	96570	92560	66560	64370	6720	2050	1870

CAL YR 1983 TOTAL 332951 MEAN 912 MAX 5100 MIN 92 AC-FT 660400 MEAN† 914 CFSM† 3.39 IN. 45.96 AC-FT† 661930
WTR YR 1984 TOTAL 359800 MEAN 983 MAX 5310 MIN 92 AC-FT 713700 MEAN† 985 CFSM† 3.65 IN. 49.67 AC-FT† 714900

† Adjusted for change in contents in Dorena Lake.

WILLAMETTE RIVER BASIN

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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 mi².

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 above 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.--40 years (water years 1906-11, 1951-84), 1,662 ft³/s, 1,204,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,500 ft³/s Nov. 22, 1909, gage height, 19.5 ft, site and datum then in use, from rating curve extended above 15,000 ft³/s; minimum, 36 ft³/s Sept. 29, 30, Oct. 11, 12, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,000 ft³/s Feb. 13, gage height, 13.78 ft; minimum, 141 ft³/s Aug. 21-23, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	486	482	2010	5180	1030	2970	2810	1910	636	572	153	152
2	486	506	2230	3160	902	2850	2860	3260	590	486	155	152
3	482	522	2510	2690	621	2660	3250	4870	526	391	154	152
4	480	1080	2260	2180	547	2530	3040	5260	593	316	153	225
5	479	1320	1990	2090	527	2190	2110	4720	1350	264	153	625
6	484	1540	3210	1730	527	1210	1560	4460	3140	252	156	762
7	480	1520	6110	1370	516	1080	1390	3730	5940	234	151	769
8	480	1150	6880	1360	512	1030	4020	1630	7620	231	151	969
9	483	1190	7210	1280	577	972	4700	1210	5310	261	149	1150
10	493	1200	5860	1230	592	976	7150	940	3280	257	150	1400
11	491	685	5160	1990	661	966	7190	1480	2770	255	150	2020
12	496	840	3600	2460	1710	1050	6850	963	1990	253	151	2140
13	491	2220	3270	2190	12900	1310	5020	898	1830	245	153	2050
14	481	3200	4760	1760	6440	1710	3690	846	1670	236	148	2000
15	533	2780	9310	1430	8300	2140	3430	653	1060	192	149	1680
16	694	1750	7600	1190	8060	2590	3070	667	963	185	146	1360
17	768	3770	6160	1040	6810	2770	1780	625	1250	175	145	1060
18	814	5830	5280	924	5870	2570	1680	575	1210	170	145	691
19	824	5020	5060	875	5620	2300	1480	548	858	163	147	550
20	818	5710	4560	779	5510	2290	1570	587	613	160	148	555
21	809	5700	3570	768	6220	3240	1710	775	749	156	142	549
22	813	3900	2570	831	4940	3430	1630	766	817	159	142	547
23	812	3030	1620	922	4700	3190	1560	999	771	162	144	549
24	800	5360	1530	1000	6200	2510	1390	1200	740	158	145	544
25	829	7370	1430	1530	5380	2390	1210	1210	696	159	145	542
26	902	6780	2360	1800	4000	3540	1220	1300	662	165	146	537
27	872	5020	3190	2200	3490	5020	994	1130	588	161	147	534
28	623	3150	2690	1730	3230	5290	880	982	470	158	143	531
29	403	2860	2750	1670	3000	4700	867	806	489	160	142	530
30	433	2360	6040	1530	---	3750	1060	767	591	160	141	527
31	465	---	7340	1170	---	2910	---	724	---	156	146	---
TOTAL	19004	87845	130120	52059	109392	78134	81171	50491	49772	7052	4590	25852
MEAN	613	2928	4197	1679	3772	2520	2706	1629	1659	227	148	862
MAX	902	7370	9310	5180	12900	5290	7190	5260	7620	572	156	2140
MIN	403	482	1430	768	512	966	867	548	470	156	141	152
AC-FT	37690	174200	258100	103300	217000	155000	161000	100100	98720	13990	9100	51280
CAL YR 1983	TOTAL	697321	MEAN	1910	MAX	10800	MIN	169	AC-FT	1383000		
WTR YR 1984	TOTAL	695482	MEAN	1900	MAX	12900	MIN	141	AC-FT	1379000		

WILLAMETTE RIVER BASIN

14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR

LOCATION.--Lat 44°21'40", long 121°59'40", in SE1 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 mi², 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.--40 years, 473 ft³/s, 69.52 in/yr, 342,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft³/s Dec. 23, 1964, gage height, 8.15 ft; minimum, 137 ft³/s Sept. 23, 1977, Nov. 4, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,170 ft³/s Dec. 15, gage height, 4.53 ft; minimum, 234 ft³/s Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	263	237	548	561	601	527	709	597	708	522	402	321		
2	262	240	529	540	587	519	685	655	685	509	399	320		
3	260	244	513	716	570	507	664	709	667	498	397	318		
4	259	248	501	1020	554	497	648	705	679	487	394	316		
5	258	248	494	868	539	493	636	695	730	477	391	316		
6	256	272	484	776	525	489	622	689	756	470	388	316		
7	255	277	484	745	513	486	614	690	811	465	385	317		
8	254	286	493	745	502	485	624	699	831	463	383	312		
9	255	299	500	730	496	499	613	713	787	457	380	309		
10	254	307	547	722	493	540	622	709	770	450	377	309		
11	252	312	570	723	489	579	600	719	754	443	374	308		
12	250	321	556	697	537	602	604	750	743	438	371	307		
13	249	333	577	672	925	629	598	760	743	434	368	305		
14	249	343	783	645	912	692	594	810	742	432	365	303		
15	248	353	1110	614	787	734	622	784	733	430	362	302		
16	247	362	883	585	740	753	644	741	720	429	358	299		
17	247	389	757	557	725	760	643	720	695	429	355	298		
18	246	399	716	529	728	744	646	716	667	427	352	296		
19	244	424	716	506	724	779	652	722	645	426	350	295		
20	244	445	710	490	723	870	648	738	634	425	347	296		
21	243	446	690	485	729	938	639	726	653	422	345	292		
22	245	464	663	481	700	889	635	705	656	422	342	291		
23	242	487	633	472	672	848	639	748	624	420	340	291		
24	241	595	608	519	656	825	639	740	605	418	338	286		
25	241	670	577	715	627	807	631	713	592	418	335	285		
26	240	624	545	728	590	825	617	766	581	415	333	284		
27	239	593	513	649	567	812	603	770	572	414	331	282		
28	238	586	494	613	548	791	591	747	559	412	330	282		
29	237	577	497	603	532	769	582	762	552	409	327	280		
30	239	570	553	604	---	745	575	783	540	406	325	279		
31	239	---	599	606	---	726	---	747	---	405	325	---		
TOTAL	7696	11951	18843	19916	18291	21159	18839	22528	20434	13672	11169	9015		
MEAN	248	398	608	642	631	683	628	727	681	441	360	301		
MAX	263	670	1110	1020	925	938	709	810	831	522	402	321		
MIN	237	237	484	472	489	485	575	597	540	405	325	279		
CFSM	2.68	4.31	6.58	6.95	6.83	7.39	6.80	7.87	7.37	4.77	3.90	3.26		
IN.	3.10	4.81	7.59	8.02	7.36	8.52	7.58	9.07	8.23	5.50	4.50	3.63		
AC-FT	15270	23700	37380	39500	36280	41970	37370	44680	40530	27120	22150	17880		
CAL YR 1983	TOTAL	194216	MEAN	532	MAX	1160	MIN	237	CFSM	5.76	IN.	78.19	AC-FT	385200
WTR YR 1984	TOTAL	193513	MEAN	529	MAX	1110	MIN	237	CFSM	5.73	IN.	77.91	AC-FT	383800

WILLAMETTE RIVER BASIN

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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 mi².

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 fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--24 years, 92.8 ft³/s, 77.79 in/yr, 67,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,160 ft³/s Dec. 22, 1964, gage height, 11.9 ft, from floodmark, from rating curve extended above 560 ft³/s, on basis of slope-area measurement of peak flow; minimum, 2.5 ft³/s Sept. 15-18, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1800	1,000	7.85	Feb. 13	0600	*1,120	*7.97
Jan. 3	1500	813	7.63				

Minimum, 3.8 ft³/s Oct. 5-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	4.1	12	96	183	89	124	122	178	109	49	10	6.7		
2	4.1	18	85	173	83	126	116	309	96	45	9.8	6.3		
3	4.1	42	75	460	89	112	106	302	86	41	9.5	6.1		
4	4.1	65	68	504	88	100	100	159	157	38	9.3	5.9		
5	4.1	47	63	387	86	94	102	193	226	36	9.1	7.1		
6	3.8	132	74	309	86	100	94	164	270	34	8.8	8.8		
7	3.8	96	157	272	84	114	118	148	382	31	8.6	11		
8	3.8	68	192	240	82	134	130	155	296	29	8.4	7.9		
9	5.0	65	192	196	83	183	118	150	247	27	8.4	6.9		
10	5.3	72	334	186	77	220	122	136	201	25	8.2	6.5		
11	4.7	87	240	180	79	223	110	201	165	24	8.1	6.3		
12	4.4	90	182	155	317	231	128	212	143	23	8.0	6.3		
13	4.7	105	291	132	781	262	126	246	130	21	7.8	6.1		
14	6.4	120	525	112	391	306	178	240	123	20	7.7	5.8		
15	5.0	187	530	95	259	299	223	183	119	19	7.5	5.8		
16	4.4	219	309	84	206	268	198	155	108	18	7.4	5.8		
17	5.0	310	217	74	164	234	173	142	94	17	7.2	5.6		
18	4.7	211	171	67	140	204	178	133	84	16	7.1	5.6		
19	4.4	246	144	62	128	259	168	143	79	15	7.1	5.8		
20	4.4	240	118	57	138	328	155	156	90	15	6.9	7.0		
21	4.1	165	97	63	144	309	142	131	132	14	6.8	5.8		
22	13	127	83	88	126	268	140	139	108	13	6.7	7.3		
23	7.6	144	102	106	114	243	140	220	94	13	6.7	11		
24	5.3	338	159	370	112	204	130	176	89	12	6.6	6.8		
25	5.0	249	84	412	95	183	116	171	81	12	6.5	6.2		
26	4.7	172	114	212	86	214	102	220	76	12	6.3	6.0		
27	4.4	150	58	171	83	193	94	185	72	11	6.3	5.8		
28	4.4	144	51	144	84	171	88	178	64	11	6.2	5.6		
29	4.4	127	128	128	83	150	83	199	68	11	6.1	5.6		
30	8.4	115	285	112	---	140	86	179	56	10	6.1	5.4		
31	11	---	237	99	---	126	---	135	---	10	7.3	---		
TOTAL	162.6	4163	5461	5833	4377	6122	3886	5638	4045	672	236.5	198.8		
MEAN	5.25	139	176	188	151	197	130	182	135	21.7	7.63	6.63		
MAX	13	338	530	504	781	328	223	309	382	49	10	11		
MIN	3.8	12	51	57	77	94	83	131	56	10	6.1	5.4		
CFSM	.32	8.58	10.9	11.6	9.32	12.2	8.02	11.2	8.33	1.34	.47	.41		
IN.	.37	9.56	12.54	13.39	10.05	14.06	8.92	12.95	9.29	1.54	.54	.46		
AC-FT	323	8260	10830	11570	8680	12140	7710	11180	8020	1330	469	394		
CAL YR 1983	TOTAL	38218.2	MEAN	105	MAX	787	MIN	3.8	CFSM	6.48	IN.	87.76	AC-FT	75810
WTR YR 1984	TOTAL	40794.9	MEAN	111	MAX	781	MIN	3.8	CFSM	6.85	IN.	93.68	AC-FT	80920

WILLAMETTE RIVER BASIN

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 mi².

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, 14,840 acre-ft July 27, Aug. 19, elevation, 2,604.37 ft; minimum, 12,790 acre-ft Jan. 19, elevation, 2,591.81 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,601.83	14,410	-
Oct. 31.....	2,598.77	13,900	-510
Nov. 30.....	2,601.35	14,330	+430
Dec. 31.....	2,593.65	13,080	-1,250
CAL YR 1983.....	-	-	-120
Jan. 31.....	2,593.99	13,140	+60
Feb. 29.....	2,594.50	13,220	+80
Mar. 31.....	2,593.16	13,010	-210
Apr. 30.....	2,598.71	13,890	+880
May 31.....	2,603.69	14,730	+840
June 30.....	2,601.24	14,310	-420
July 31.....	2,601.95	14,430	+120
Aug. 31.....	2,602.29	14,490	+60
Sept. 30.....	2,602.75	14,570	+80
WTR YR 1984.....	-	-	+160

WILLAMETTE RIVER BASIN

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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 mi².

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 $\frac{1}{4}$ sec.20, T.14 S., R.7 E., to Smith River Reservoir and returned to river above station.

AVERAGE DISCHARGE.--25 years, 1,037 ft³/s, 76.54 in/yr, 751,300 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s Dec. 22, 1964, gage height, 12.45 ft, from rating curve extended above 3,700 ft³/s on basis of slope-area measurement of peak flow; minimum, 185 ft³/s Feb. 3, 1963; minimum daily, 425 ft³/s Nov. 23, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,940 ft³/s Feb. 13, gage height, 8.74 ft; minimum, 628 ft³/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	708	699	1060	1240	1180	1180	1350	1200	1300	1080	899	824
2	695	677	1150	1200	1140	1210	1350	1400	1260	1070	878	797
3	687	761	1120	1620	1100	1150	1300	1380	1240	1060	878	774
4	725	824	1080	1670	1140	1090	1270	1370	1340	1040	885	760
5	752	707	1070	1600	1140	1040	1270	1340	1330	1040	892	787
6	746	913	1110	1560	1110	1070	1250	1300	1410	1010	885	800
7	737	811	1220	1520	1060	1130	1240	1280	1550	1020	856	824
8	739	843	1240	1470	1060	1140	1270	1310	1500	1010	870	800
9	733	840	1210	1400	1020	1180	1200	1310	1480	990	870	781
10	702	834	1430	1400	1010	1210	1260	1290	1400	986	863	785
11	712	857	1370	1390	1060	1230	1220	1350	1370	974	885	770
12	706	855	1260	1340	1260	1310	1240	1350	1320	982	892	759
13	689	910	1340	1310	2320	1330	1220	1370	1300	972	878	756
14	690	888	1900	1250	1790	1370	1230	1430	1300	903	863	756
15	688	995	1940	1210	1640	1390	1290	1330	1300	918	856	761
16	678	1020	1710	1240	1560	1420	1230	1330	1290	944	828	770
17	677	1210	1570	1230	1450	1430	1190	1320	1260	944	779	776
18	678	1060	1490	1140	1390	1430	1250	1260	1250	951	807	770
19	679	1190	1380	1040	1360	1490	1310	1250	1220	951	851	766
20	678	1210	1360	1000	1350	1610	1250	1300	1210	951	845	773
21	672	1040	1300	982	1350	1630	1260	1290	1240	951	814	764
22	677	1070	1240	1080	1350	1600	1220	1310	1240	951	813	749
23	688	1080	1210	1050	1300	1570	1210	1400	1190	951	800	778
24	675	1430	1190	1360	1300	1530	1200	1310	1160	921	800	748
25	672	1310	1130	1560	1290	1500	1200	1330	1160	892	804	750
26	669	1190	1160	1420	1290	1540	1200	1390	1150	885	810	741
27	660	1160	1030	1290	1230	1500	1200	1330	1160	899	843	721
28	658	1190	1060	1270	1170	1480	1200	1340	1110	907	821	723
29	659	1160	1190	1280	1140	1450	1100	1380	1120	907	786	721
30	670	1130	1360	1290	---	1420	1100	1390	1120	907	747	721
31	700	---	1310	1250	---	1370	---	1300	---	899	794	---
TOTAL	21499	29864	40190	40662	37560	42000	37080	41240	38280	29866	26092	23005
MEAN	694	995	1296	1312	1295	1355	1236	1330	1276	963	842	767
MAX	752	1430	1940	1670	2320	1630	1350	1430	1550	1080	899	824
MIN	658	677	1030	982	1010	1040	1100	1200	1110	885	747	721
AC-FT	42640	59240	79720	80650	74500	83310	73550	81800	75930	59240	51750	45630
MEAN†	685	1003	1276	1313	1297	1351	1251	1344	1269	965	843	768
CFSM†	3.72	5.45	6.93	7.14	7.05	7.34	6.80	7.30	6.90	5.24	4.58	4.17
IN.†	4.29	6.08	8.00	8.23	7.60	8.47	7.59	8.42	7.70	6.05	5.28	4.66
AC-FT†	42130	59670	78470	80710	74580	83100	74430	82640	75510	59360	51810	45710

CAL YR 1983 TOTAL 408076 MEAN 1118 MAX 2340 MIN 658 AC-FT 809400 MEAN† 1118 CFSM† 6.08 IN.† 82.49 AC-FT† 809280
WTR YR 1984 TOTAL 407338 MEAN 1113 MAX 2320 MIN 658 AC-FT 808000 MEAN† 1113 CFSM† 6.05 IN.† 82.37 AC-FT† 808160

† Adjusted for change in contents in Smith River Reservoir.

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 microsiemens Nov. 9, 10, 1977; minimum recorded, 35 microsiemens Dec. 15, 1977.

WATER TEMPERATURES: Maximum recorded, 12.0°C Aug. 1, 1977; minimum, 2.0°C Dec. 24, 25, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 61 microsiemens Oct. 20; minimum, 42 microsiemens Feb. 13-16, Mar. 22-30.

WATER TEMPERATURES: Maximum, 10.0°C Aug. 6, 7, 10, 20; minimum, 2.0°C Dec. 24, 25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L 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)	
MAY 02...	0920	1390	46	7.5	5.5	12.3	15	0	3.4	1.6	3.2	.90	
AUG 16...	0945	820	55	7.5	8.5	11.5	17	0	4.0	1.8	4.0	1.2	
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SULFATE DIS- SOLVED (MG/L AS SO4)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
MAY 02...		.70	1.5	<.10	.030	<.20	<.10	<.010	.20	<.10	.020	.030	.40
AUG 16...		.70	1.1	<.10	.030	<.20	<.10	<.010	.20	<.10	.040	.020	1.2
DATE		CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	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)	TUR- BID- ITY (NTU)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	
MAY 02...		.10	19	12	45	.10	<1	<1	11	100	<1	<1	
AUG 16...		.10	21	43	49	.50	<1	<1	11	<100	1	<1	
DATE		CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	
MAY 02...		<10	<10	<1	<1	2	5	6	30	2	2	<1	
AUG 16...		<10	10	1	2	<1	2	24	30	3	2	2	
DATE		MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	
MAY 02...		10	<.1	.1	2	7	<1	<1	<1	<1	15	10	
AUG 16...		<10	.2	<.1	<1	--	<1	<1	<1	<1	15	20	

WILLAMETTE RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	58	52	47	46	45	44	47	45	47	55	58
2	59	58	51	47	46	45	44	46	46	47	55	58
3	59	58	51	46	46	45	44	46	45	48	56	58
4	59	58	51	45	47	45	44	46	45	48	56	59
5	58	58	51	43	47	46	44	46	45	48	56	58
6	58	57	51	43	47	46	44	46	45	48	56	58
7	58	57	51	43	47	46	45	47	44	49	56	59
8	58	57	51	43	47	46	45	47	44	49	56	58
9	58	57	50	44	47	46	46	47	44	49	56	59
10	58	57	49	44	48	46	45	47	44	49	56	58
11	58	56	49	44	48	46	46	47	45	50	57	58
12	58	56	48	44	47	45	46	47	44	50	57	58
13	58	56	48	45	43	45	46	47	44	52	57	59
14	58	56	46	44	43	44	46	46	45	52	57	58
15	58	56	44	45	43	44	46	46	45	53	57	58
16	58	56	44	46	43	44	46	46	44	53	57	59
17	58	55	44	46	43	43	46	46	45	53	57	59
18	58	54	45	46	44	44	46	46	45	53	58	59
19	58	54	46	47	44	43	46	46	45	53	58	59
20	58	52	46	47	44	50	46	46	45	53	58	58
21	58	52	45	48	45	48	46	45	45	54	58	59
22	58	52	46	48	45	43	46	46	45	54	58	59
23	58	53	46	48	45	43	46	45	46	55	58	58
24	58	52	47	47	45	42	46	45	46	55	58	58
25	58	51	48	46	45	42	46	45	46	55	58	58
26	58	52	48	45	44	42	46	45	46	55	59	59
27	58	51	48	44	44	43	46	45	46	55	59	59
28	58	52	48	44	45	43	47	45	47	55	59	59
29	58	51	49	45	45	43	47	46	47	55	58	59
30	58	51	48	45	---	43	47	45	47	55	59	59
31	58	---	48	45	---	43	---	45	---	55	58	---
MEAN	58	55	48	45	45	44	46	46	45	52	57	59
WTR YR 1984	MEAN	50		MAX	59	MIN	42					

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	5.0	5.0	5.5	5.5	7.0	6.5	7.5	6.0	9.5	8.5	9.0	8.0
2	5.5	5.0	5.5	5.5	7.5	6.5	8.0	6.0	9.5	8.5	9.0	8.0
3	5.5	5.0	6.0	5.5	7.0	6.5	8.5	6.5	9.5	8.5	9.0	8.0
4	5.0	5.0	5.5	5.5	7.0	6.5	8.5	6.5	9.5	8.5	9.0	8.0
5	5.0	5.0	5.5	5.5	7.0	7.0	9.5	6.5	9.5	8.5	9.0	8.0
6	5.5	5.0	6.0	5.5	7.0	6.5	9.5	8.5	10.0	9.0	8.5	8.0
7	5.5	5.0	6.0	5.5	7.0	6.5	9.5	8.5	10.0	9.0	8.5	8.0
8	5.0	5.0	6.0	5.5	7.0	6.5	9.5	8.5	9.5	9.0	8.5	8.0
9	5.0	5.0	6.0	5.5	6.5	6.5	9.5	8.5	9.5	9.0	8.5	7.5
10	5.0	5.0	6.0	5.5	7.0	6.5	9.5	8.5	10.0	9.0	8.5	7.5
11	5.0	4.5	6.0	5.5	7.0	6.5	9.5	8.5	9.5	8.5	8.5	7.5
12	5.0	5.0	6.5	6.0	7.0	6.5	9.5	8.5	9.5	8.5	8.5	7.5
13	5.5	5.0	6.5	6.0	7.0	6.5	9.5	9.0	9.5	8.5	8.5	7.5
14	6.0	5.0	6.5	6.0	7.0	6.5	9.5	8.5	9.5	8.0	8.0	7.5
15	5.5	5.0	6.0	6.0	7.5	6.5	9.5	8.5	9.5	8.0	8.0	7.5
16	5.5	5.0	6.5	6.0	7.5	6.5	9.5	8.5	9.0	8.5	8.0	7.5
17	5.5	5.0	6.5	6.0	7.5	6.5	9.5	8.5	9.5	8.5	8.0	7.5
18	5.5	5.0	6.5	6.0	7.5	7.0	9.5	8.5	9.5	8.5	8.0	7.5
19	5.5	5.0	6.5	6.0	8.0	7.0	9.5	8.5	9.5	8.5	8.0	7.5
20	5.5	5.0	6.5	6.0	7.5	7.0	9.5	8.5	10.0	8.5	8.5	8.0
21	5.5	5.0	6.5	6.0	7.5	7.0	9.5	8.5	9.5	9.0	8.0	7.5
22	5.5	5.5	6.5	6.0	8.0	7.0	9.5	8.5	9.5	9.0	8.0	7.0
23	6.0	5.5	6.5	6.5	8.0	7.0	9.5	8.5	9.5	9.0	8.0	7.0
24	5.5	5.5	6.5	6.5	8.0	7.5	9.5	8.5	9.5	8.5	7.5	7.0
25	5.5	5.5	6.5	6.0	8.5	7.5	9.5	8.5	9.5	8.5	7.5	7.0
26	5.5	5.5	6.5	6.0	8.0	7.5	9.5	8.5	9.5	8.5	7.5	7.0
27	6.0	5.5	7.0	6.0	8.5	7.5	9.5	8.5	9.5	8.5	8.0	7.0
28	5.5	5.5	7.5	6.5	8.5	8.0	9.5	8.5	9.5	8.5	7.5	7.0
29	5.5	5.5	7.0	6.5	9.0	8.0	9.5	8.5	9.5	8.5	7.5	7.0
30	5.5	5.5	7.0	6.5	9.0	8.0	9.5	8.5	9.0	8.0	7.5	7.0
31	---	---	7.0	6.5	---	---	9.5	8.5	8.5	8.0	---	---
MONTH	6.0	4.5	7.5	5.5	9.0	6.5	9.5	6.0	10.0	8.0	9.0	7.0
YEAR	10.0	2.0										

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 mi².

PERIOD OF RECORD.--July 1978 to March 1983, October 1983 to current year.

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

REMARKS.--Records fair except those for period of no gage-height record Nov. 2 to Dec. 12, which are poor.

AVERAGE DISCHARGE.--5 years (water years 1979-82, 1984) 14.1 ft³/s, 63.83 in/yr, 10,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 688 ft³/s Dec. 25, 1980, gage height, 3.78 ft, from rating curve
extended above 180 ft³/s; maximum gage height, 3.82 ft Jan. 12, 1980; minimum discharge, 0.45 ft³/s Oct. 8-10, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s and maximum (*), from rating curve extended above 100 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1730	388	3.60	Feb. 13	0530	*541	*3.98
Jan. 3	1630	187	2.88				

Minimum, 0.79 ft³/s Sept. 3-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.83	3.4	20	24	11	20	14	19	10	5.1	1.5	.96		
2	.83	4.4	20	22	10	20	13	39	9.4	4.8	1.4	.87		
3	.83	6.0	20	110	9.5	17	12	56	8.7	4.5	1.4	.83		
4	.83	11	18	90	9.0	15	11	33	16	4.2	1.3	.79		
5	.83	7.0	24	55	8.7	13	9.6	23	35	3.9	1.3	.95		
6	.83	24	40	39	8.3	14	8.2	18	48	3.4	1.2	2.1		
7	.83	20	70	32	8.0	15	9.2	16	82	3.3	1.2	1.3		
8	.83	10	70	27	7.8	17	13	16	48	3.1	1.2	1.2		
9	.95	9.5	48	20	7.5	20	13	15	30	3.0	1.2	1.1		
10	1.1	8.8	80	20	7.2	23	18	14	22	3.0	1.2	1.0		
11	1.1	7.8	60	21	12	22	15	19	17	3.0	1.2	1.0		
12	1.1	10	42	18	147	21	21	22	14	2.8	1.1	1.0		
13	1.1	13	100	15	349	25	19	22	13	2.8	1.1	.98		
14	1.1	17	252	13	71	43	25	22	11	2.7	1.1	.98		
15	1.1	24	139	11	34	44	34	16	10	2.7	1.0	.98		
16	1.1	20	49	9.7	25	34	22	14	9.2	2.6	1.0	.96		
17	1.1	36	30	8.7	19	28	16	13	8.2	2.5	1.0	.93		
18	1.2	44	23	7.9	16	27	15	13	7.5	2.4	.98	.93		
19	1.2	50	20	7.3	14	46	15	13	6.9	2.3	.98	.92		
20	1.2	60	17	6.8	17	54	14	15	7.7	2.1	.97	1.8		
21	1.2	36	16	7.5	21	48	13	13	13	2.0	.93	1.2		
22	3.2	24	15	14	18	39	13	13	12	1.8	.93	1.2		
23	2.5	45	14	17	16	33	12	25	9.8	1.8	.92	1.5		
24	1.8	80	13	94	16	25	10	19	8.7	1.7	.88	1.2		
25	1.5	52	12	78	15	25	9.4	19	7.8	1.7	.88	1.1		
26	1.5	40	10	43	13	58	8.4	29	7.1	1.6	.87	1.0		
27	1.5	32	10	25	13	37	7.5	21	6.8	1.6	.83	.97		
28	1.4	28	8.1	17	14	25	6.8	19	6.2	1.5	.83	.93		
29	1.4	26	19	14	14	20	6.4	19	6.1	1.5	.83	.92		
30	1.9	22	65	13	---	17	7.2	17	5.5	1.5	.83	.88		
31	3.2	---	43	12	---	15	---	12	---	1.5	.88	---		
TOTAL	41.09	770.9	1367.1	891.9	931.0	860	410.7	624	496.6	82.4	32.94	32.48		
MEAN	1.33	25.7	44.1	28.8	32.1	27.7	13.7	20.1	16.6	2.66	1.06	1.08		
MAX	3.2	80	252	110	349	58	34	56	82	5.1	1.5	2.1		
MIN	.83	3.4	8.1	6.8	7.2	13	6.4	12	5.5	1.5	.83	.79		
CFSM	.44	8.57	14.7	9.60	10.7	9.23	4.57	6.70	5.53	.89	.35	.36		
IN.	.51	9.56	16.95	11.06	11.54	10.66	5.09	7.74	6.16	1.02	.41	.40		
AC-FT	82	1530	2710	1770	1850	1710	815	1240	985	163	65	64		
WTR YR 1984	TOTAL	6541.11	MEAN	17.9	MAX	349	MIN	.79	CFSM	5.97	IN.	81.11	AC-FT	12970

WILLAMETTE RIVER BASIN

14158955 MCKENZIE RIVER ABOVE BOULDER CREEK, NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°12'19", long 122°02'21", in SE¼NE¼ sec.2, T.16 S., R.6 E., Lane County, Hydrologic Unit 17090004, on right bank 50 ft downstream from Carpenter-Frissell Road bridge, 0.2 mi upstream from Boulder Creek, 1 mi northeast of Belknap Springs, and at mile 76.2.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April to September 1983 (discontinued).

INSTRUMENTATION.--Temperature recorder April to September 1983.

EXTREMES FOR APRIL TO SEPTEMBER 1983.--

WATER TEMPERATURE.--Maximum, 11.0°C Aug. 16; minimum, 5.5°C May 9.

TEMPERATURE, WATER (DEG. C), WATER YEAR APRIL 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	8.5	8.0	10.0	8.5	8.5	8.0
2	---	---	6.5	6.0	8.0	7.5	8.5	8.0	10.0	8.5	9.0	8.0
3	---	---	7.0	6.0	9.0	7.5	9.0	8.0	10.0	8.5	9.0	8.0
4	---	---	7.0	6.0	9.0	7.5	9.5	7.5	10.0	8.5	9.0	8.0
5	---	---	6.5	6.0	9.0	7.5	9.0	8.0	10.0	8.5	9.0	8.0
6	---	---	7.0	6.0	9.0	7.5	8.5	8.0	10.0	8.5	9.0	8.0
7	---	---	6.5	6.0	9.5	8.0	8.0	8.0	10.0	8.5	9.0	8.0
8	---	---	6.5	6.0	9.5	8.0	8.0	7.5	9.5	8.5	8.5	7.5
9	---	---	6.5	5.5	9.5	8.5	8.5	7.5	10.0	8.5	8.5	7.5
10	---	---	6.5	6.0	8.5	8.0	9.0	7.5	9.5	8.5	8.0	7.5
11	---	---	7.0	6.0	8.5	8.0	9.5	8.0	9.5	8.5	9.5	7.5
12	---	---	7.0	6.0	9.0	8.0	9.0	8.0	10.0	8.5	8.5	7.5
13	---	---	7.5	6.0	9.5	7.5	9.0	8.0	10.0	8.5	9.0	7.5
14	---	---	6.5	6.0	9.0	8.0	8.5	8.0	10.0	8.5	8.5	8.0
15	---	---	6.5	6.0	8.5	8.0	8.0	8.0	10.0	8.5	8.5	7.5
16	---	---	7.0	6.0	9.0	8.0	9.0	7.5	11.0	8.5	9.0	8.0
17	---	---	7.5	6.0	8.0	8.0	9.0	8.0	10.5	9.0	8.5	7.5
18	---	---	7.5	6.5	8.0	8.0	9.0	8.0	10.5	8.0	8.0	7.5
19	---	---	7.5	6.0	8.0	7.5	9.0	8.0	9.0	8.0	8.0	7.0
20	---	---	8.0	6.5	8.5	7.5	9.0	8.0	9.5	8.5	8.5	7.5
21	---	---	8.0	6.5	9.0	7.5	9.5	8.0	9.5	8.5	8.0	7.0
22	---	---	8.0	6.5	8.5	7.5	9.5	8.0	9.0	8.5	8.0	7.0
23	---	---	8.0	7.0	8.0	7.5	10.0	8.5	9.0	8.5	8.0	7.5
24	---	---	8.5	7.0	9.0	7.5	9.0	8.5	9.5	8.5	8.0	7.5
25	---	---	8.5	7.5	9.0	7.5	8.5	8.0	9.0	8.0	8.0	7.5
26	---	---	8.5	7.5	9.5	8.0	9.5	8.0	9.5	8.0	8.0	7.5
27	---	---	9.0	7.5	9.0	8.0	9.0	8.5	9.5	8.5	8.0	7.0
28	6.5	6.0	9.0	7.5	8.5	8.0	9.0	8.5	9.0	8.5	8.0	7.0
29	7.0	6.0	9.5	8.0	8.5	7.5	10.0	8.5	8.5	8.5	7.5	6.5
30	6.5	6.0	9.0	8.0	8.0	7.5	10.0	8.5	9.0	8.0	7.5	7.0
31	---	---	8.0	7.5	---	---	10.0	8.5	8.5	8.0	---	---
MONTH	---	---	9.5	5.5	9.5	7.5	10.0	7.5	11.0	8.0	9.5	6.5

WILLAMETTE RIVER BASIN

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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 mi² 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. 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.--74 years, 1,689 ft³/s, 1,224,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,100 ft³/s Dec. 22, 1964, gage height, 10.36 ft, from rating curve extended above 7,100 ft³/s on basis of slope-area measurement of peak flow; minimum, 805 ft³/s Oct. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,110 ft³/s Feb. 13, gage height, 4.78 ft; minimum, 1,070 ft³/s Oct. 27-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	1160	1800	2180	2040	2140	2340	2120	2090	1820	1510	1350
2	1160	1140	1880	3460	1960	2150	2310	2490	2040	1790	1480	1330
3	1140	1250	1860	3340	1900	2040	2220	2630	2000	1780	1480	1290
4	1170	1390	1780	3040	1920	1950	2150	2500	2260	1760	1480	1280
5	1210	1210	1780	2870	1910	1860	2140	2400	2400	1750	1470	1300
6	1200	1630	1940	2740	1860	1880	2100	2300	2570	1720	1470	1350
7	1190	1450	2390	2590	1800	1950	2090	2220	3060	1720	1440	1370
8	1190	1430	2480	2450	1790	1980	2200	2240	2770	1730	1450	1320
9	1190	1400	2370	2480	1740	2060	2090	2240	2640	1700	1440	1300
10	1160	1390	2960	2430	1730	2150	2270	2170	2470	1700	1440	1300
11	1160	1430	2690	2320	1810	2180	2200	2310	2390	1680	1450	1280
12	1160	1440	2410	2230	2850	2250	2300	2350	2280	1680	1460	1260
13	1140	1540	2920	2130	5790	2330	2270	2350	2220	1680	1440	1250
14	1140	1540	4900	2040	3840	2490	2290	2470	2200	1600	1430	1250
15	1140	1750	4680	2070	3270	2570	2430	2270	2190	1610	1410	1250
16	1130	1770	3490	2010	2980	2550	2300	2210	2150	1610	1390	1250
17	1130	2160	2980	1860	2670	2550	2180	2180	2100	1610	1340	1260
18	1120	1970	2710	1700	2540	2540	2220	2100	2080	1610	1360	1260
19	1120	2150	2480	1600	2420	2710	2310	2080	2040	1600	1400	1260
20	1120	2280	2390	1600	2420	3000	2220	2150	2050	1590	1400	1290
21	1110	1910	2240	1500	2430	3080	2190	2100	2150	1590	1360	1260
22	1140	1850	2060	1800	2370	2980	2150	2130	2110	1590	1360	1240
23	1150	1860	2000	1700	2280	2870	2100	2430	2020	1580	1340	1290
24	1120	2660	1930	2000	2300	2710	2080	2230	1980	1560	1340	1240
25	1110	2420	1930	2600	2290	2660	2050	2240	1950	1510	1340	1230
26	1110	2120	1760	2600	2230	2980	2010	2450	1940	1490	1340	1220
27	1100	2020	1760	2460	2140	2820	1970	2280	1940	1520	1380	1200
28	1090	2060	2240	2340	2060	2700	1950	2290	1880	1520	1360	1200
29	1100	1980	2630	2280	2020	2590	1930	2330	1890	1520	1330	1190
30	1120	1920	2460	2250	---	2490	1920	2320	1870	1520	1270	1190
31	1150	---	2240	2160	---	2410	---	2140	---	1520	1320	---
TOTAL	35440	52280	76140	70830	69360	75620	64980	70720	65730	50660	43480	38060
MEAN	1143	1743	2456	2285	2392	2439	2166	2281	2191	1634	1403	1269
MAX	1210	2660	4900	3460	5790	3080	2430	2630	3060	1820	1510	1370
MIN	1090	1140	1760	1500	1730	1860	1920	2080	1870	1490	1270	1190
AC-FT	70300	103700	151000	140500	137600	150000	128900	140300	130400	100500	86240	75490
CAL YR 1983	TOTAL	698500	MEAN	1914	MAX	5320	MIN	1090	AC-FT	1385000		
WTR YR 1984	TOTAL	713300	MEAN	1949	MAX	5790	MIN	1090	AC-FT	1415000		

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 microsiemens Jan. 2, 1977; minimum, 22 microsiemens Nov. 25, 1977.

WATER TEMPERATURES: Maximum recorded, 13.5°C Aug. 1, 3, 1977; minimum, 1.5°C Dec. 24, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 66 microsiemens Oct. 31; minimum, 35 microsiemens Feb. 13.

WATER TEMPERATURES: Maximum, 11.5°C many days in July and August; minimum, 1.5°C Dec. 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (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)
MAY 02...	1130	2510	46	7.4	6.5	12.1	15	0	3.5	1.5	3.2	.80
AUG 16...	1310	1390	58	7.0	10.0	11.5	17	0	4.0	1.8	4.3	1.2
DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SULFATE DIS- SOLVED (MG/L AS SO4)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
MAY 02...	1.0	.8	<.10	.030	<.20	<.10	<.010	<.20	<.10	.020	.030	.50
AUG 16...	1.0	1.3	<.10	<.010	.20	<.10	<.010	.20	<.10	.040	.030	.70
DATE	TIME	CARBON, ORGANIC DIS- SOLVED TOTAL (MG/L AS C)	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)	TUR- BID- ITY (NTU)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
MAY 02...		.10	19	11	45	.10	<1	<1	11	<100	1	<1
AUG 16...		.10	22	48	52	.50	<1	<1	10	<100	1	1
DATE	TIME	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
MAY 02...		<10	<10	<1	<1	<1	5	5	80	3	4	<1
AUG 16...		<10	<10	1	2	1	9	4	40	4	4	1
DATE	TIME	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	
MAY 02...		<10	.2	<.1	1	<1	<1	<1	<1	19	10	
AUG 16...		<10	.2	<.1	3	<1	<1	<1	<1	6	<10	

WILLANETTE RIVER BASIN

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14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	61	54	48	48	48	49	50	48	51	54	57
2	59	61	53	48	49	48	49	48	48	52	54	57
3	60	60	53	44	49	49	48	47	48	52	54	58
4	60	60	54	42	50	49	48	47	47	52	54	58
5	59	60	54	43	50	50	48	48	45	52	54	58
6	59	57	53	44	50	50	49	48	45	52	54	58
7	60	57	51	44	50	49	48	49	42	52	54	58
8	60	58	50	45	50	49	48	49	44	53	54	59
9	60	58	51	46	50	49	48	49	45	53	54	59
10	60	58	48	46	51	48	47	49	45	53	54	59
11	60	57	49	46	50	47	49	49	47	53	54	59
12	60	57	50	47	46	48	47	48	48	53	54	58
13	60	57	47	47	37	47	48	48	48	53	54	58
14	60	56	42	47	41	46	48	47	48	53	54	59
15	60	55	42	48	43	45	47	47	49	53	54	58
16	60	54	45	49	44	45	47	48	49	53	54	59
17	61	52	48	49	45	45	48	48	49	53	54	58
18	61	52	48	49	46	46	48	48	49	53	55	58
19	61	52	50	50	46	45	48	48	50	53	55	58
20	60	50	50	50	47	44	48	47	50	53	55	57
21	61	52	52	51	46	43	49	48	49	53	55	58
22	60	52	54	50	47	44	50	48	49	54	55	58
23	61	53	54	50	47	45	50	46	50	53	56	58
24	61	49	54	44	47	45	50	47	50	54	56	58
25	61	50	55	43	47	45	50	47	50	54	56	58
26	61	51	54	45	48	44	50	45	51	54	56	57
27	61	52	54	45	48	46	50	46	51	53	56	57
28	61	52	52	46	48	47	51	47	51	54	56	57
29	61	52	51	47	49	48	51	46	50	54	57	57
30	61	53	45	47	---	48	51	46	51	54	57	57
31	61	---	47	48	---	48	---	47	---	54	57	---
MEAN	60	55	50	47	47	47	49	48	48	53	55	58
WTR YR 1984	MEAN	51		MAX	61		MIN	37				

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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14159100 HORSE CREEK NEAR MCKENZIE BRIDGE, OR

LOCATION.--Lat 44°09'45", long 122°09'05", in SW¼ sec.24, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, on left bank, 450 ft upstream from bridge on Horse Creek road, 1.0 mi southeast of McKenzie Bridge, and at mile 3.4.

DRAINAGE AREA.--140 mi².

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: February 1963 to September 1969, June 1983 to September 1984 (discontinued).

INSTRUMENTATION.--Temperature recorder February 1963 to September 1969, June 1983 to September 1984.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE.--Maximum, 17.0°C July 6, 1968; minimum, 1.0°C Jan. 31, Feb. 1, 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE.--

JUNE TO SEPTEMBER 1983.--Maximum, 14.0°C July 30; minimum, 5.5°C Sept. 30.

WATER YEAR 1984.--Maximum, 14.0°C July 16, 17; minimum, 4.5°C Nov. 8.

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

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

WILLAMETTE RIVER BASIN

14159100 HORSE CREEK NEAR MCKENZIE BRIDGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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

WILLAMETTE RIVER BASIN

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14159150 MCKENZIE RIVER ABOVE SOUTH FORK, NEAR RAINBOW, OR

LOCATION.--Lat 44°09'47", long 122°15'39", in SW¼NW¼ sec.19, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, on left bank 0.1 mi downstream from Box Canyon Road bridge, in Delta Park, 1.4 mi west of Rainbow, and at mile 62.1.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 1983 to September 1984 (discontinued).

INSTRUMENTATION.--Temperature recorder April 1983 to September 1984.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE.--

APRIL TO SEPTEMBER 1983.--Maximum, 13.5°C July 30; minimum, 5.5°C Apr. 30.

WATER YEAR 1984.--Maximum, 13.5°C Aug. 8-10; minimum, 5.5°C Nov. 8.

TEMPERATURE, WATER (DEG. C), WATER YEAR APRIL 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	8.5	8.0	9.0	8.5	13.0	9.5	10.0	9.0
2	---	---	8.0	6.5	9.0	8.0	9.5	8.5	13.0	9.5	11.5	8.5
3	---	---	9.5	6.5	11.0	8.0	11.5	8.5	13.0	9.5	11.5	8.5
4	---	---	9.0	6.5	11.5	8.5	12.5	8.5	13.0	9.5	12.0	9.0
5	---	---	8.5	7.0	11.5	8.0	11.5	9.0	12.5	9.5	11.0	8.5
6	---	---	8.5	6.5	12.0	8.5	10.5	9.0	13.0	9.5	11.0	8.0
7	---	---	7.5	6.5	12.5	8.5	9.0	8.5	12.0	9.5	11.0	8.5
8	---	---	7.0	6.0	12.5	9.0	10.0	8.0	12.0	9.5	10.0	8.5
9	---	---	7.5	6.0	11.5	9.0	10.0	8.5	13.0	9.5	10.5	8.0
10	---	---	8.0	6.0	9.5	8.5	12.0	8.0	11.0	10.0	9.0	8.0
11	---	---	9.0	6.0	10.0	8.5	12.5	8.5	12.0	9.5	11.5	8.5
12	---	---	9.5	6.0	11.5	8.5	11.0	9.0	12.5	9.0	11.0	8.0
13	---	---	9.5	6.5	12.0	8.0	10.5	9.0	12.5	9.0	11.5	8.5
14	---	---	7.5	7.0	10.5	8.5	11.0	8.5	13.0	9.5	11.0	8.5
15	---	---	7.5	6.5	11.0	8.5	10.0	8.5	13.0	9.5	11.0	8.0
16	---	---	9.0	6.5	11.0	8.0	11.5	8.0	13.0	9.0	11.0	8.5
17	---	---	9.5	6.5	9.5	8.5	11.5	8.5	13.0	9.5	10.5	8.5
18	---	---	9.5	7.5	9.0	8.0	11.5	8.5	13.0	9.5	8.5	8.0
19	---	---	10.5	6.5	9.5	8.0	12.0	9.0	10.5	9.0	9.5	7.5
20	---	---	10.5	7.0	11.0	8.0	12.0	9.0	12.0	9.0	10.0	7.0
21	---	---	10.5	7.5	11.5	7.5	12.5	8.5	12.0	9.0	10.0	7.5
22	---	---	11.0	7.5	10.0	8.5	13.0	9.0	10.5	9.0	10.0	8.0
23	---	---	10.5	7.5	10.0	8.5	13.0	9.5	11.0	9.0	9.5	8.5
24	---	---	11.5	8.0	11.5	8.0	11.0	9.5	11.5	9.0	10.5	8.0
25	---	---	11.5	8.0	11.5	8.0	10.5	9.0	11.5	8.5	10.5	8.0
26	---	---	11.5	8.0	12.5	8.5	12.0	8.5	12.0	9.0	10.5	8.0
27	---	---	11.5	8.0	12.5	9.0	10.5	9.0	12.0	9.0	9.5	8.0
28	9.0	6.5	12.0	8.5	11.0	8.5	12.5	9.0	10.5	9.5	9.0	7.0
29	9.0	6.5	12.5	9.0	11.0	9.0	13.0	9.0	10.0	9.0	9.0	6.5
30	8.5	5.5	11.0	9.0	9.5	8.5	13.5	9.5	10.0	9.0	8.5	6.5
31	---	---	9.0	8.5	---	---	12.0	10.0	10.0	9.0	---	---
MONTH	---	---	12.5	6.0	12.5	7.5	13.5	8.0	13.0	8.5	12.0	6.5

WILLAMETTE RIVER BASIN

14159150 MCKENZIE RIVER ABOVE SOUTH FORK, NEAR RAINBOW, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 mi² 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.--27 years, 645 ft³/s, 54.74 in/yr, 467,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s Dec. 22, 1964, gage height, 20.06 ft, from floodmark, from rating curve extended above 7,600 ft³/s, on basis of slope-area measurement of peak flow; minimum, 171 ft³/s Sept. 16, 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2030	*6,680	*11.78	June 7	1000	2,660	8.00
Feb. 13	0600	6,260	11.45				

Minimum, 236 ft³/s Oct. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	243	281	607	1190	743	854	924	974	976	547	303	273		
2	242	287	637	1060	692	863	868	1360	899	518	300	267		
3	242	326	628	1710	653	789	816	1550	836	495	298	263		
4	244	347	575	2080	631	731	776	1340	1070	475	296	260		
5	243	300	551	1760	623	694	775	1150	1430	459	295	268		
6	243	581	832	1530	613	692	741	1030	1610	444	293	298		
7	242	469	1720	1390	591	717	750	958	2520	429	291	303		
8	242	370	1550	1270	563	746	870	959	2060	413	288	281		
9	263	343	1240	1090	578	792	851	953	1660	400	287	269		
10	270	333	1420	1040	561	845	1020	905	1430	390	286	264		
11	257	334	1240	1020	595	860	964	1080	1230	379	285	261		
12	249	383	1060	931	1810	817	1120	1150	1140	371	285	258		
13	246	465	1570	853	5150	884	1080	1230	1070	365	283	256		
14	250	471	4230	779	2790	1020	1200	1340	981	357	282	255		
15	248	612	4290	710	1960	1070	1360	1190	939	349	280	254		
16	245	574	2480	663	1580	1030	1210	1030	899	343	279	252		
17	244	866	1710	618	1280	974	1070	981	847	338	278	250		
18	245	785	1380	588	1100	958	1020	943	799	334	276	249		
19	243	831	1220	563	999	1160	997	969	763	329	275	260		
20	241	918	1050	536	1000	1310	947	1040	810	325	274	284		
21	240	721	907	580	1080	1420	899	981	885	322	272	261		
22	282	603	799	677	965	1330	862	966	795	319	271	261		
23	296	726	720	723	898	1260	847	1310	737	317	270	288		
24	261	1560	687	1910	895	1150	807	1190	720	322	269	264		
25	252	1220	664	2060	882	1120	758	1150	704	319	268	257		
26	248	910	640	1630	808	2000	713	1370	687	316	266	252		
27	245	816	595	1310	772	1650	679	1240	667	312	265	249		
28	243	804	553	1110	775	1330	651	1220	634	310	263	247		
29	242	730	816	970	757	1150	622	1330	642	308	262	245		
30	253	669	2020	872	---	1040	661	1330	594	305	262	245		
31	276	---	1530	801	---	959	---	1120	---	303	285	---		
TOTAL	7780	18635	39921	34024	32344	32215	26858	35339	31034	11513	8687	7894		
MEAN	251	621	1288	1098	1115	1039	895	1140	1034	371	280	263		
MAX	296	1560	4290	2080	5150	2000	1360	1550	2520	547	303	303		
MIN	240	281	551	536	561	692	622	905	594	303	262	245		
CFSM	1.57	3.88	8.05	6.86	6.97	6.49	5.59	7.13	6.46	2.32	1.75	1.64		
IN.	1.81	4.33	9.28	7.91	7.52	7.49	6.24	8.22	7.22	2.68	2.02	1.84		
AC-FT	15430	36960	79180	67490	64150	63900	53270	70090	61560	22840	17230	15660		
CAL YR 1983	TOTAL	256652	MEAN	703	MAX	4290	MIN	240	CFSM	4.39	IN.	59.67	AC-FT	509100
WTR YR 1984	TOTAL	286244	MEAN	782	MAX	5150	MIN	240	CFSM	4.89	IN.	66.55	AC-FT	567800

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, Dec. 24, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.0°C July 17; minimum, 0.0°C Dec. 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.0	7.0	8.5	8.0	5.0	4.5	5.0	4.5	4.5	4.0	6.0	5.0
2	9.0	6.5	8.5	7.5	5.5	5.0	5.5	4.5	4.5	3.5	5.5	4.5
3	10.0	7.5	9.0	8.5	5.5	5.0	5.5	5.0	5.0	4.0	5.5	4.5
4	10.0	7.5	8.5	7.5	5.0	4.5	5.5	5.0	6.0	4.5	5.5	4.0
5	10.0	8.0	7.5	7.0	5.0	4.0	6.0	5.0	5.5	4.5	6.0	4.0
6	9.5	7.5	8.0	7.0	5.0	3.5	5.5	5.0	5.5	5.0	6.5	4.0
7	9.0	6.5	7.0	6.5	5.5	5.0	6.0	5.0	5.5	4.5	7.0	5.0
8	8.5	7.0	6.5	5.5	6.0	5.5	5.5	5.0	6.0	5.0	7.0	5.0
9	9.0	8.0	7.5	6.5	6.0	5.5	5.5	5.0	5.5	4.5	7.0	5.5
10	9.5	8.0	8.5	7.0	6.0	5.5	5.5	5.0	5.0	4.0	6.5	5.5
11	9.0	7.5	7.5	7.0	5.5	5.5	5.5	5.0	5.0	4.0	6.0	4.5
12	9.5	7.0	7.0	6.5	5.5	5.5	5.0	4.0	5.5	4.5	6.5	5.0
13	8.5	8.0	6.5	6.5	6.0	5.5	4.5	3.5	5.5	4.5	6.5	5.0
14	8.5	7.5	6.5	6.0	6.0	6.0	3.5	3.0	4.5	4.0	6.0	5.5
15	8.0	6.0	7.5	6.5	6.0	5.0	3.0	2.5	5.0	4.0	6.0	5.0
16	8.0	5.5	7.5	7.0	5.5	5.0	3.0	2.5	5.0	4.5	5.5	5.0
17	8.5	7.5	7.0	6.5	6.0	5.5	2.5	2.0	4.5	4.0	5.5	4.5
18	8.0	6.5	6.5	6.0	6.0	5.5	3.5	2.0	5.0	4.0	6.0	5.0
19	8.5	6.5	6.5	6.0	5.5	4.5	4.0	3.5	5.5	4.0	6.5	5.5
20	8.5	7.0	6.0	5.0	4.5	2.5	4.0	3.0	5.5	5.0	7.0	5.5
21	8.5	6.5	6.0	5.5	2.5	2.0	4.5	4.0	5.0	4.0	5.5	4.5
22	8.5	8.0	5.5	5.0	2.0	1.0	5.0	4.5	4.5	3.5	6.5	5.0
23	8.0	7.0	6.0	5.5	1.0	.5	5.0	4.5	5.0	4.0	6.0	5.5
24	7.5	5.5	6.5	5.5	1.5	.0	5.5	4.5	4.5	4.0	6.0	4.5
25	8.0	6.0	6.0	5.0	3.5	1.5	5.5	5.0	5.0	4.0	5.5	4.5
26	8.0	6.5	6.0	5.5	4.0	3.5	5.0	4.5	5.0	3.5	6.0	4.5
27	8.0	6.5	6.5	5.5	4.0	3.0	5.0	4.5	5.5	4.0	6.5	5.0
28	8.5	6.5	6.5	5.5	4.0	2.5	5.0	4.0	5.5	4.5	6.0	4.5
29	8.5	7.0	6.0	5.0	4.0	4.0	5.0	4.0	5.5	4.5	6.0	4.5
30	8.5	8.0	5.0	4.5	5.0	4.0	5.0	4.0	---	---	6.5	4.0
31	9.0	8.0	---	---	5.0	4.5	5.0	4.0	---	---	6.0	5.5
MONTH	10.0	5.5	9.0	4.5	6.0	.0	6.0	2.0	6.0	3.5	7.0	4.0

WILLAMETTE RIVER BASIN

14159400 COUGAR LAKE NEAR RAINBOW, OR

LOCATION.--Lat 44°07'40", long 122°14'25", in SE¼SE¼ sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, in intake tower near left end of Cougar Dam on South Fork McKenzie River, 2.7 mi south of Rainbow, and at mile 4.5.

DRAINAGE AREA.--207 mi².

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-ft 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, 210,300 acre-ft June 7, elevation, 1,692.08 ft; minimum, 63,960 acre-ft Jan. 16, elevation, 1,532.08 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1623.72	1581.17	1546.13	1545.06	1553.94	1614.30	1649.75	1678.88	1689.79	1689.94	1683.35	1654.39
2	1622.39	1579.24	1543.71	1546.10	1553.44	1615.29	1650.79	1680.87	1690.05	1689.94	1682.43	1653.18
3	1621.00	1577.53	1541.21	1549.09	1553.79	1616.48	1651.97	1683.13	1690.30	1689.98	1681.52	1651.94
4	1619.68	1575.83	1538.34	1550.73	1554.78	1617.65	1653.02	1683.97	1690.47	1689.98	1680.57	1650.70
5	1618.32	1573.91	1536.18	1549.08	1555.70	1618.69	1654.11	1684.18	1690.64	1689.97	1679.63	1649.42
6	1616.98	1573.44	1536.73	1546.27	1556.64	1619.71	1655.08	1684.78	1690.96	1689.95	1679.24	1648.28
7	1615.61	1572.27	1541.89	1542.81	1557.49	1620.81	1656.16	1685.63	1692.08	1689.93	1679.08	1647.20
8	1614.26	1570.63	1544.56	1539.53	1557.83	1622.02	1657.58	1686.42	1691.13	1689.87	1678.91	1645.98
9	1613.00	1568.90	1543.91	1536.66	1558.65	1623.42	1658.53	1687.10	1690.57	1689.92	1678.74	1644.71
10	1611.74	1567.07	1544.12	1534.65	1559.36	1625.03	1660.00	1688.05	1690.35	1690.02	1678.33	1643.40
11	1610.41	1565.21	1543.34	1533.55	1560.19	1626.61	1660.87	1688.56	1690.04	1690.04	1677.36	1642.09
12	1609.06	1563.58	1541.68	1533.21	1566.50	1627.96	1662.12	1688.71	1690.02	1690.05	1676.37	1640.75
13	1607.06	1562.23	1542.49	1533.14	1588.57	1629.51	1663.24	1688.82	1690.03	1690.05	1675.39	1639.40
14	1606.36	1560.90	1550.18	1532.64	1597.84	1631.58	1664.68	1688.86	1689.91	1690.04	1674.34	1638.04
15	1604.97	1560.11	1575.89	1532.24	1602.48	1633.44	1666.55	1688.27	1689.87	1690.03	1673.33	1636.66
16	1603.59	1559.20	1579.47	1532.10	1605.22	1634.44	1668.34	1688.65	1689.87	1690.04	1672.29	1635.26
17	1602.41	1559.63	1575.59	1532.23	1606.86	1635.31	1669.35	1688.16	1689.88	1690.07	1671.25	1633.85
18	1601.75	1559.77	1569.31	1532.10	1607.87	1636.27	1670.54	1688.29	1689.90	1690.04	1670.20	1632.43
19	1601.15	1560.13	1562.24	1532.14	1608.57	1637.99	1671.50	1688.97	1689.99	1690.00	1669.13	1631.03
20	1600.27	1560.87	1554.33	1532.31	1609.46	1640.02	1672.28	1689.80	1690.12	1689.98	1668.06	1630.07
21	1598.82	1560.14	1547.38	1532.44	1610.64	1642.60	1672.92	1690.03	1690.05	1689.97	1666.98	1628.61
22	1597.63	1557.81	1543.99	1534.14	1611.34	1644.21	1673.46	1690.29	1689.94	1690.00	1665.87	1627.21
23	1596.37	1556.15	1541.76	1535.58	1612.08	1644.77	1673.88	1690.71	1690.03	1689.99	1664.78	1625.81
24	1595.15	1557.54	1539.49	1542.15	1612.69	1645.13	1674.23	1690.21	1690.08	1689.79	1663.65	1624.34
25	1594.43	1557.27	1537.11	1548.17	1613.24	1645.91	1674.43	1690.30	1690.09	1689.33	1662.54	1622.83
26	1593.12	1556.23	1534.61	1551.76	1613.47	1649.14	1674.83	1690.66	1690.06	1688.60	1661.39	1621.29
27	1591.17	1554.73	1532.84	1553.65	1613.54	1650.07	1675.58	1690.25	1689.96	1687.75	1660.22	1619.73
28	1589.16	1552.99	1532.27	1554.56	1613.60	1649.84	1676.27	1690.12	1689.96	1686.88	1659.05	1618.15
29	1587.12	1550.98	1533.05	1554.87	1613.62	1649.41	1676.91	1690.05	1690.06	1686.01	1657.88	1616.54
30	1585.16	1548.75	1539.72	1554.84	---	1649.24	1677.72	1689.96	1689.99	1685.12	1656.70	1614.90
31	1583.11	---	1543.36	1554.40	---	1649.27	---	1689.81	---	1684.24	1655.57	---
MEAN	1604.35	1563.47	1546.35	1541.36	1587.22	1633.75	1665.56	1687.82	1690.21	1689.27	1671.10	1635.61
MAX	1623.72	1581.17	1579.47	1554.87	1613.62	1650.07	1677.72	1690.71	1692.08	1690.07	1683.35	1654.39
MIN	1583.11	1548.75	1532.27	1532.10	1553.44	1614.30	1649.75	1678.88	1689.79	1684.24	1655.57	1614.90
(+)	100700	75070	71380	79030	126800	161600	193000	207500	207700	200700	168200	128000
(-)	-36600	-25630	-3690	+7650	+47770	+34800	+31400	+14500	+200	-7000	-32500	-40200

CAL YR 1983 MEAN 1626.68 MAX 1690.39 MIN 1532.27 AC-FT± +6630
WTR YR 1984 MEAN 1626.42 MAX 1692.08 MIN 1532.10 AC-FT± -9300

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

† Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

165

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 mi².

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 above National Geodetic Vertical Datum of 1929 (Federal Highway Administration 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 sta 14159400), usable capacity, 165,000 acre-ft. No diversion upstream from station.

AVERAGE DISCHARGE.--37 years, 873 ft³/s, 57.00 in/yr, 632,500 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s Dec. 11, 1956, gage height, 8.66 ft, from rating curve extended above 8,100 ft³/s; maximum gage height, 8.90 ft Dec. 22, 1955 (backwater from debris); minimum discharge, 17 ft³/s Nov. 18, 1965; minimum daily, 85 ft³/s Apr. 26-28, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/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, 4,090 ft³/s Dec. 17, gage height, 4.36 ft; minimum, 215 ft³/s Feb. 13; minimum daily, 333 ft³/s July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	795	1040	1620	1110	1050	814	936	582	1110	622	811	839
2	773	1040	1620	1110	995	701	580	802	863	544	812	841
3	781	1050	1620	1510	652	508	442	1080	788	530	812	843
4	789	1050	1630	2420	421	429	437	1480	1290	530	818	842
5	797	1060	1410	2890	422	428	440	1490	1790	527	820	843
6	812	1070	1120	2870	411	419	440	1120	2130	502	528	865
7	811	1070	1140	2830	410	409	440	799	3130	488	398	878
8	800	1070	1490	2570	414	410	442	796	3440	488	399	879
9	795	1070	1970	2170	392	411	632	568	2570	390	398	883
10	797	1080	1970	1890	427	413	690	613	2030	372	518	887
11	797	1090	1970	1610	440	414	857	1110	1780	411	812	886
12	797	1100	1960	1230	464	441	676	1410	1410	411	816	891
13	796	1110	1970	1060	367	472	841	1520	1320	411	819	895
14	799	1120	1380	1060	364	475	840	1740	1260	410	821	898
15	798	1110	733	957	784	617	832	1840	1140	383	807	902
16	797	1120	2000	784	973	882	666	1840	1020	360	805	905
17	723	1130	3620	677	969	886	816	1510	988	376	807	908
18	508	1130	4030	667	970	884	708	1050	857	392	809	900
19	488	1120	4020	603	963	881	830	792	790	380	813	908
20	584	1120	3980	533	965	875	829	790	912	362	814	746
21	801	1310	3300	500	965	906	821	1080	1190	333	818	926
22	795	1610	2000	508	962	973	809	1080	980	334	819	919
23	794	1620	1530	508	955	1020	812	1470	789	361	817	925
24	737	1820	1520	800	957	1020	813	1800	791	475	822	928
25	544	1860	1510	1160	962	1020	817	1440	791	591	820	930
26	743	1620	1510	1150	961	1020	664	1610	798	745	826	929
27	1000	1620	1220	1150	957	1020	420	1820	793	803	835	929
28	1010	1620	795	1140	959	1020	420	1600	670	805	835	938
29	1020	1620	871	1140	957	1250	418	1700	685	804	830	939
30	1020	1610	1110	1130	---	1420	419	1670	698	805	833	948
31	1030	---	1130	1130	---	1200	---	1410	---	808	838	---
TOTAL	24531	38060	57749	40867	21488	23638	19787	39612	38803	15753	23530	26750
MEAN	791	1269	1863	1318	741	763	660	1278	1293	508	759	892
MAX	1030	1860	4030	2890	1050	1420	936	1840	3440	808	838	948
MIN	488	1040	733	500	364	409	418	568	670	333	398	746
AC-FT	48660	75490	114500	81060	42620	46890	39250	78570	76970	31250	46670	53060
MEAN†	196	838	1802	1442	1571	1328	1187	1514	1297	394	230	216
CFSMT	.94	4.03	8.66	6.94	7.55	6.39	5.71	7.28	6.23	1.90	1.11	1.04
IN.†	1.09	4.50	9.99	7.99	8.15	7.36	6.37	8.39	6.96	2.18	1.28	1.16
AC-FT†	12060	49860	110810	88710	90390	81690	70650	93070	77170	24250	14170	12860

CAL YR 1983 TOTAL 325125 MEAN 891 MAX 4030 MIN 159 AC-FT 644900 MEAN† 900 CFSMT 4.33 IN.† 58.74 AC-FT† 651460
WTR YR 1984 TOTAL 370568 MEAN 1012 MAX 4030 MIN 333 AC-FT 735000 MEAN† 1000 CFSMT 4.81 IN.† 65.43 AC-FT† 725690

† 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, 13.5°C Oct. 1, 3-5, 7, 11-13; minimum recorded, 4.0°C on many days in December and January.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 mi².

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.--21 years, 262 ft³/s, 77.68 in/yr, 189,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft³/s Dec. 22, 1964, gage height, 15.32 ft, from floodmarks, from rating curve extended above 2,800 ft³/s on basis of slope-area measurement of peak flow; minimum, 8.2 ft³/s Sept. 28, 29, Oct. 2-4, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1830	3,880	8.57	Feb. 13	0730	*5,380	*9.53
Minimum, 13 ft ³ /s Sept. 19, 28-30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	16	43	268	468	190	475	275	679	180	96	30	17		
2	16	62	263	396	168	482	248	913	160	91	29	15		
3	16	166	256	1110	154	384	226	983	145	86	28	15		
4	16	251	223	1140	144	323	206	657	317	82	27	14		
5	16	134	212	784	137	289	199	478	494	80	27	16		
6	16	485	355	588	134	301	184	398	781	76	27	33		
7	15	317	891	478	126	314	219	344	1270	72	26	55		
8	15	189	940	408	120	322	327	316	798	68	24	34		
9	18	157	743	327	121	370	321	290	552	66	23	24		
10	20	153	1400	337	121	415	490	258	425	64	23	20		
11	19	161	863	408	151	393	399	354	337	62	22	18		
12	17	192	574	337	1510	406	574	356	280	59	22	17		
13	16	297	947	281	3890	468	523	343	242	57	21	16		
14	18	362	2490	238	1340	719	605	359	210	56	21	16		
15	18	523	1780	204	771	806	693	310	186	54	20	15		
16	16	447	830	180	634	785	489	290	165	51	20	15		
17	17	808	514	160	443	718	371	259	146	50	19	14		
18	19	679	377	144	347	662	343	239	133	49	19	14		
19	17	768	317	134	311	960	347	231	122	46	18	13		
20	16	838	269	124	366	1010	350	237	142	45	17	19		
21	15	485	228	144	438	999	329	205	242	44	17	16		
22	32	350	194	278	358	829	298	216	224	40	17	17		
23	33	443	165	315	321	636	278	409	176	38	16	25		
24	23	1270	158	1260	365	476	252	324	152	36	16	19		
25	20	828	160	1170	373	454	227	319	136	36	16	16		
26	19	507	158	755	311	1040	205	472	127	35	15	15		
27	18	464	138	482	277	732	188	371	121	34	15	14		
28	17	474	125	355	291	507	176	312	111	33	14	13		
29	16	401	398	291	304	404	169	291	115	32	14	13		
30	25	333	1220	248	---	344	197	259	104	31	14	13		
31	47	---	750	216	---	302	---	212	---	31	17	---		
TOTAL	602	12587	18206	13760	14216	17325	9708	11684	8593	1700	634	561		
MEAN	19.4	420	587	444	490	559	324	377	286	54.8	20.5	18.7		
MAX	47	1270	2490	1260	3890	1040	693	983	1270	96	30	55		
MIN	15	43	125	124	120	289	169	205	104	31	14	13		
CFSM	.42	9.17	12.8	9.69	10.7	12.2	7.07	8.23	6.24	1.20	.45	.41		
IN.	.49	10.22	14.79	11.18	11.55	14.07	7.89	9.49	6.98	1.38	.51	.46		
AC-FT	1190	24970	36110	27290	28200	34360	19260	23180	17040	3370	1260	1110		
CAL YR 1983	TOTAL	103969	MEAN	285	MAX	2590	MIN	15	CFSM	6.22	IN.	84.45	AC-FT	206200
WTR YR 1984	TOTAL	109576	MEAN	299	MAX	3890	MIN	13	CFSM	6.53	IN.	89.00	AC-FT	217300

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, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 19.5°C July 17, 30, Aug. 1, 9, 10; minimum, 0.0°C Dec. 22-24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	8.5	---	---	5.0	4.5	5.0	4.5	---	---	---	---
2	10.5	8.5	---	---	5.5	5.0	5.5	4.5	---	---	---	---
3	11.5	9.0	---	---	5.5	5.0	6.0	5.5	---	---	---	---
4	12.0	10.0	---	---	5.0	4.5	6.0	6.0	---	---	---	---
5	12.5	11.0	---	---	4.5	3.0	6.5	5.5	---	---	---	---
6	12.0	10.5	---	---	5.0	2.5	6.0	5.0	---	---	---	---
7	---	8.5	---	---	5.5	5.0	6.0	5.5	---	---	---	---
8	---	---	---	---	6.0	5.5	6.0	5.0	---	---	---	---
9	---	---	---	---	6.0	6.0	6.0	5.0	---	---	---	---
10	---	---	---	---	6.5	6.0	6.0	5.5	---	---	---	---
11	---	---	---	---	6.0	6.0	6.0	5.0	---	---	---	---
12	---	---	---	---	6.0	5.5	5.0	4.0	---	---	---	---
13	---	---	---	---	6.5	6.0	4.5	3.5	---	---	---	---
14	---	---	---	---	6.5	6.0	3.5	2.0	---	---	---	---
15	---	---	---	---	6.5	5.5	2.5	1.5	---	---	---	---
16	---	---	---	---	6.0	5.5	2.5	1.5	---	---	---	---
17	---	---	---	---	6.0	5.5	2.0	1.5	---	---	---	---
18	---	---	---	---	6.0	5.5	2.5	1.0	---	---	---	---
19	---	---	---	---	6.0	4.5	4.0	2.5	---	---	---	---
20	---	---	---	---	4.5	2.5	3.5	2.0	---	---	---	---
21	---	---	---	---	2.5	1.0	4.0	3.5	---	---	---	---
22	---	---	---	---	1.0	.0	5.0	4.0	---	---	7.0	---
23	---	---	---	---	.0	.0	5.0	4.5	---	---	7.0	5.5
24	---	---	---	---	.5	.0	6.0	5.0	---	---	6.5	5.0
25	---	---	---	---	1.5	.5	6.0	5.5	---	---	5.5	5.0
26	---	---	---	---	3.0	1.5	6.0	5.0	---	---	6.5	5.0
27	---	---	---	---	3.5	2.5	6.0	4.0	---	---	7.0	5.0
28	---	---	---	---	3.0	2.0	5.5	2.5	---	---	6.5	4.5
29	---	---	5.5	---	4.0	3.0	5.5	4.5	---	---	6.5	4.0
30	---	---	5.0	4.0	5.0	4.0	---	4.0	---	---	7.0	5.5
31	---	---	---	---	5.5	4.5	---	---	---	---	7.0	5.5
MONTH	---	---	---	---	6.5	.0	---	---	---	---	---	---

WILLAMETTE RIVER BASIN

14161100 BLUE RIVER BELOW TIDBITS CREEK, NEAR BLUE RIVER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 mi².

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.--27 years, 128 ft³/s, 72.13 in/yr, 92,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft³/s Dec. 22, 1964, gage height, 8.88 ft, from rating curve extended above 1,300 ft³/s, on basis of slope-area measurement of peak flow; minimum, 4.8 ft³/s Sept. 16, 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1830	1,400	5.56	Feb. 13	1000	*2,100	*6.33

Minimum, 10 ft³/s Oct. 8, 27-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	11	22	147	255	121	154	136	183	99	60	23	15		
2	11	27	149	242	108	165	123	261	92	57	22	14		
3	11	62	146	440	98	152	113	357	86	55	21	14		
4	11	80	131	505	93	137	106	283	148	52	21	13		
5	11	55	132	390	88	124	104	224	205	49	21	15		
6	11	173	230	316	87	118	98	182	276	47	21	23		
7	11	130	471	274	80	117	107	157	484	46	20	28		
8	10	83	458	245	77	117	133	148	353	44	19	18		
9	13	75	380	202	77	136	142	139	273	43	19	16		
10	16	69	563	202	76	152	238	126	220	42	19	15		
11	14	65	427	214	93	148	211	181	178	41	18	15		
12	12	72	330	184	558	145	251	183	150	40	18	14		
13	11	98	497	158	1670	165	232	176	131	38	18	14		
14	12	134	1020	137	712	241	234	175	118	37	17	13		
15	12	209	854	122	423	290	258	144	108	35	17	13		
16	11	184	483	110	337	292	222	128	98	34	17	13		
17	12	293	322	98	249	289	183	119	90	33	16	13		
18	13	318	253	91	195	287	181	114	84	32	16	13		
19	11	361	209	84	163	382	184	114	80	30	16	13		
20	11	398	171	78	160	432	176	120	87	29	16	22		
21	11	280	142	89	178	440	163	106	107	29	15	16		
22	24	211	124	134	161	379	150	111	96	28	15	15		
23	20	250	115	146	153	310	139	178	86	27	15	17		
24	14	541	118	384	166	253	129	142	80	27	15	15		
25	12	410	100	479	191	237	118	153	76	26	15	14		
26	11	293	66	356	163	375	108	225	73	25	15	13		
27	10	253	79	268	140	311	101	177	72	25	14	13		
28	10	236	76	232	130	248	95	155	67	24	14	12		
29	10	202	151	180	125	204	91	149	67	24	14	12		
30	14	175	380	153	---	170	97	133	63	23	14	12		
31	21	---	325	134	---	150	---	112	---	23	15	---		
TOTAL	392	5759	9049	6902	6872	7120	4623	5155	4147	1125	536	453		
MEAN	12.6	192	292	223	237	230	154	166	138	36.3	17.3	15.1		
MAX	24	541	1020	505	1670	440	258	357	484	60	23	28		
MIN	10	22	66	78	76	117	91	106	63	23	14	12		
CFSM	.52	7.97	12.1	9.25	9.83	9.54	6.39	6.89	5.73	1.51	.72	.63		
IN.	.61	8.89	13.97	10.65	10.61	10.99	7.14	7.96	6.40	1.74	.83	.70		
AC-FT	778	11420	17950	13690	13630	14120	9170	10220	8230	2230	1060	899		
CAL YR 1983	TOTAL	49857	MEAN	137	MAX	1220	MIN	10	CFSM	5.68	IN.	76.96	AC-FT	98890
WTR YR 1984	TOTAL	52133	MEAN	142	MAX	1670	MIN	10	CFSM	5.89	IN.	80.47	AC-FT	103400

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.

DRAOMAGE AREA.--87.3 mi².

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1971, published as Blue River Reservoir near Blue River.

GAGE.--Water-stage recorder. Datum of gage is 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, 85,080 acre-ft June 7, elevation, 1,352.39 ft; minimum, 3,650 acre-ft Dec. 2, elevation, 1,177.50 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1289.87	1247.67	1178.19	1194.08	1207.02	1291.40	1320.10	1343.92	1349.73	1349.96	1350.12	1313.77
2	1289.54	1244.28	1179.87	1186.85	1207.33	1293.56	1320.75	1345.80	1349.76	1349.94	1349.93	1312.37
3	1289.21	1241.48	1181.46	1194.61	1209.73	1294.93	1321.28	1346.76	1349.81	1349.90	1349.59	1310.97
4	1288.87	1239.51	1180.22	1193.15	1212.66	1295.67	1321.86	1346.28	1350.15	1349.90	1349.15	1309.53
5	1288.53	1235.49	1180.64	1182.52	1215.25	1296.19	1322.58	1346.15	1350.39	1349.96	1348.71	1308.05
6	1288.22	1234.81	1184.49	1180.07	1217.69	1296.99	1323.25	1346.40	1351.25	1350.01	1347.81	1306.74
7	1287.87	1232.06	1198.58	1179.97	1219.79	1298.00	1324.26	1346.93	1352.12	1350.04	1346.65	1305.56
8	1287.53	1225.12	1203.47	1179.81	1221.68	1298.99	1325.81	1347.52	1351.02	1350.06	1345.38	1304.18
9	1287.24	1214.92	1190.11	1179.89	1223.54	1300.30	1327.13	1348.24	1350.67	1350.07	1344.06	1302.70
10	1287.00	1203.53	1191.85	1181.93	1225.43	1301.82	1328.92	1348.63	1350.28	1350.07	1342.79	1301.12
11	1286.69	1195.36	1183.32	1183.67	1228.22	1303.21	1329.56	1348.87	1350.01	1350.06	1341.56	1299.56
12	1286.36	1188.25	1180.69	1180.53	1247.86	1304.09	1330.65	1348.82	1349.97	1350.05	1340.41	1297.95
13	1286.02	1186.26	1188.72	1179.53	1282.31	1304.76	1331.33	1348.75	1349.90	1350.03	1339.25	1296.34
14	1285.72	1185.75	1230.72	1179.55	1290.29	1305.84	1332.21	1348.77	1349.80	1349.99	1338.10	1295.06
15	1285.21	1182.85	1247.65	1180.77	1288.57	1306.42	1333.32	1348.67	1349.78	1350.00	1336.93	1294.27
16	1284.18	1180.29	1245.65	1181.19	1283.43	1306.51	1333.71	1348.69	1349.78	1350.08	1335.76	1293.88
17	1282.82	1183.53	1237.18	1180.41	1280.08	1306.52	1333.69	1348.72	1349.85	1350.13	1334.58	1293.74
18	1281.08	1180.76	1224.16	1180.23	1277.03	1307.12	1333.82	1348.95	1349.96	1350.12	1333.40	1293.64
19	1279.04	1186.85	1205.35	1180.16	1275.19	1309.68	1334.38	1349.45	1350.02	1350.05	1332.21	1293.57
20	1276.83	1191.49	1190.02	1180.64	1274.84	1311.55	1335.11	1349.80	1350.18	1349.97	1331.00	1293.58
21	1274.64	1183.35	1182.09	1182.96	1275.77	1312.51	1335.68	1349.92	1350.39	1349.96	1329.71	1293.51
22	1272.65	1178.92	1180.15	1190.29	1277.11	1312.31	1336.08	1350.20	1350.20	1349.98	1328.49	1293.31
23	1270.54	1184.77	1180.23	1196.53	1278.23	1312.29	1336.57	1350.41	1350.09	1350.03	1327.27	1293.05
24	1268.25	1195.81	1180.14	1216.91	1279.97	1312.39	1337.38	1349.99	1350.12	1349.97	1325.82	1292.74
25	1265.86	1186.44	1180.33	1228.18	1282.68	1313.02	1338.19	1350.22	1350.08	1350.00	1323.99	1292.41
26	1263.42	1179.89	1179.91	1226.64	1284.44	1316.35	1338.87	1350.54	1350.02	1350.03	1322.17	1292.07
27	1260.82	1179.83	1179.80	1221.11	1285.99	1317.12	1339.53	1350.23	1349.91	1350.05	1320.60	1291.74
28	1258.13	1179.69	1179.81	1216.66	1287.72	1317.10	1340.21	1350.09	1349.83	1350.07	1319.24	1291.39
29	1255.40	1180.20	1181.11	1210.35	1289.25	1317.40	1340.85	1350.08	1349.92	1350.09	1317.86	1291.04
30	1252.78	1180.41	1197.99	1206.90	---	1318.31	1341.74	1349.92	1349.95	1350.10	1316.48	1290.71
31	1250.28	---	1199.68	1207.28	---	1319.29	---	1349.77	---	1350.11	1315.13	---
MEAN	1277.76	1200.32	1194.31	1192.37	1256.18	1306.50	1331.63	1348.63	1350.16	1350.03	1334.97	1298.29
MAX	1289.87	1247.67	1247.65	1228.18	1290.29	1319.29	1341.74	1350.54	1352.12	1350.13	1320.60	1313.77
MIN	1250.28	1178.92	1178.19	1179.53	1207.02	1291.40	1320.10	1343.92	1349.73	1349.90	1315.13	1290.71
(†)	19350	4030	6980	8370	36530	56700	75250	82600	82770	82920	53580	37370
(‡)	-17740	-15320	+2950	+1390	+28160	+20170	+18550	+7350	+170	+150	-29340	-16210

CAL YR 1983 MEAN 1286.50 MAX 1350.50 MIN 1178.19 AC-FT† +2950
WTR YR 1984 MEAN 1286.84 MAX 1352.12 MIN 1178.19 AC-FT† +280

† 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 NW1/4 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 mi².

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 sta 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.--18 years, 477 ft³/s, 345,600 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,270 ft³/s Feb. 23, 1968, gage height, 8.93 ft; minimum, 0.80 ft³/s Oct. 8, 10, 11, 1968; minimum daily, 3.7 ft³/s Oct. 8, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,860 ft³/s Feb. 15, gage height, 7.49 ft; minimum, 47 ft³/s Sept. 17; minimum daily, 55 ft³/s Feb. 4-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	510	588	1250	387	225	233	262	345	177	57	493
2	126	640	480	1170	310	226	233	673	280	177	95	493
3	126	697	483	1510	131	288	233	1320	261	177	193	489
4	126	687	506	2170	55	352	189	1370	523	141	228	487
5	126	758	478	2010	55	352	116	928	852	92	228	484
6	126	874	784	1180	55	286	116	631	1120	63	415	482
7	124	863	1120	884	56	243	80	405	2050	60	519	479
8	124	1100	1450	772	56	243	67	322	1980	59	555	476
9	124	1220	2280	617	57	243	174	227	1190	72	580	492
10	124	1100	2340	569	58	246	405	297	968	114	556	499
11	124	765	2040	705	61	248	616	580	756	114	496	498
12	124	673	1220	775	78	394	696	678	548	114	495	499
13	124	564	1450	575	89	582	698	661	499	113	494	495
14	122	606	1250	447	468	828	694	640	448	113	491	392
15	152	985	913	342	1940	1130	693	602	355	81	491	255
16	273	800	1940	322	2620	1290	693	504	322	61	487	149
17	362	1130	2360	334	1750	1290	693	447	254	70	487	77
18	436	1410	2340	287	1430	1080	614	333	217	96	486	61
19	499	1110	2340	264	1060	965	459	216	216	114	483	61
20	510	1290	1560	227	786	1270	399	273	252	108	479	61
21	502	1350	839	208	649	1620	399	315	441	76	479	61
22	502	846	466	219	401	1640	395	315	517	57	475	104
23	499	672	324	267	389	1190	324	686	382	57	473	124
24	502	1730	314	586	389	871	166	779	277	57	550	124
25	506	2150	313	975	223	730	116	536	275	57	673	124
26	502	1290	328	1570	221	874	116	758	274	57	672	124
27	519	857	284	1530	169	1110	95	831	274	57	581	124
28	519	846	255	1120	119	979	62	626	233	57	499	124
29	510	697	616	1100	158	683	62	541	177	57	499	124
30	506	600	1190	751	---	352	62	541	177	57	495	124
31	502	---	1280	391	---	233	---	445	---	57	495	---
TOTAL	9547	28820	34131	25127	14220	22063	9898	17742	16463	2762	14206	8578
MEAN	308	961	1101	811	490	712	330	572	549	89.1	458	286
MAX	519	2150	2360	2170	2620	1640	698	1370	2050	177	673	499
MIN	122	510	255	208	55	225	62	216	177	57	57	61
AC-FT	18940	57160	67700	49840	28210	43760	19630	35190	32650	5480	28180	17010
CAL YR 1983	TOTAL	186504	MEAN	511	MAX	2940	MIN	45	AC-FT	369900		
WTR YR 1984	TOTAL	203557	MEAN	556	MAX	2620	MIN	55	AC-FT	403800		

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, Dec. 23, 24, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 17.0°C Oct. 7, 10, 11; minimum, 0.0°C Dec. 23, 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	15.5	15.0	15.0	5.0	4.5	5.0	5.0	5.5	5.5	5.5	5.5
2	16.0	15.5	15.0	15.0	5.0	4.5	5.0	5.0	5.5	5.0	6.0	5.5
3	16.5	16.0	15.0	14.0	5.5	5.0	6.0	5.0	5.5	5.0	6.0	5.5
4	16.5	16.0	14.0	13.5	5.5	5.5	6.5	6.0	6.0	5.0	6.0	5.5
5	16.5	16.0	13.5	13.0	5.5	5.5	6.5	6.0	6.0	5.0	6.0	5.5
6	16.5	16.0	13.0	12.5	5.5	5.0	6.5	6.0	5.5	5.0	6.0	5.5
7	17.0	16.0	12.5	11.5	5.5	4.5	6.0	5.5	5.5	5.0	6.0	5.5
8	16.5	16.0	11.5	11.0	6.0	5.5	6.5	6.0	5.5	5.0	6.0	5.5
9	16.5	16.5	11.5	11.5	6.5	6.0	6.0	6.0	5.0	5.0	6.0	5.5
10	17.0	16.5	12.0	11.5	6.5	6.0	6.0	5.5	5.5	5.0	6.0	5.5
11	17.0	16.5	11.5	11.5	6.5	6.0	6.0	6.0	5.5	5.0	6.0	5.5
12	16.5	16.0	11.5	11.0	6.5	6.0	6.0	5.5	6.5	5.5	6.0	5.5
13	16.5	16.0	11.0	9.0	6.5	6.0	5.5	4.5	7.0	6.5	6.0	6.0
14	16.5	16.0	9.0	8.5	7.0	6.5	4.5	3.5	6.5	6.0	6.0	6.0
15	16.5	16.0	8.5	8.0	7.0	6.5	3.5	2.5	6.0	6.0	6.0	6.0
16	16.5	16.0	8.5	8.0	7.0	6.5	2.5	2.0	6.0	6.0	6.0	6.0
17	16.5	16.0	8.5	8.0	7.0	6.5	2.5	2.0	6.0	6.0	6.0	6.0
18	16.5	16.0	8.0	7.5	6.5	6.5	2.0	2.0	6.0	6.0	6.0	6.0
19	16.0	16.0	7.5	7.0	6.5	6.0	2.0	2.0	6.0	6.0	6.0	6.0
20	16.0	16.0	7.0	6.5	6.0	5.5	2.5	2.0	6.0	6.0	6.5	6.0
21	16.0	16.0	6.5	6.5	5.5	3.5	3.0	2.5	6.0	5.5	6.5	6.5
22	16.0	16.0	7.0	6.5	3.5	1.5	4.0	3.0	6.0	5.5	6.5	6.5
23	16.0	15.5	6.5	6.0	1.5	.0	4.5	4.0	6.0	5.5	6.5	6.5
24	16.0	15.5	7.0	6.5	.5	.0	5.0	4.5	6.0	5.5	6.5	6.5
25	15.5	15.5	7.0	6.5	.5	.5	6.0	5.0	6.0	5.5	6.5	6.5
26	15.5	15.0	6.5	6.5	.5	.5	6.5	6.0	6.0	5.5	6.5	6.5
27	15.0	15.0	7.0	6.5	1.5	.5	6.5	6.0	6.5	5.5	6.5	6.5
28	15.5	15.0	7.0	7.0	2.0	1.5	6.0	6.0	6.0	5.5	6.5	6.5
29	15.0	15.0	7.0	6.5	2.5	2.0	6.0	6.0	5.5	5.5	6.5	6.5
30	15.0	15.0	6.5	5.0	4.5	2.5	6.0	5.5	---	---	7.0	6.5
31	15.0	15.0	---	---	5.0	4.5	5.5	5.5	---	---	6.5	6.5
MONTH	17.0	15.0	15.0	5.0	7.0	.0	6.5	2.0	7.0	5.0	7.0	5.5

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

WILLAMETTE RIVER BASIN

14162400 MCKENZIE RIVER AT FINN ROCK, OR

LOCATION.--Lat 44°07'45", long 122°22'47", in SE¼SW¼ sec.31, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, on right bank 200 ft upstream from bridge, 0.2 mi southwest of Finn Rock Post Office, and at mile 54.2.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 1983 to September 1984 (discontinued).

INSTRUMENTATION.--Temperature recorder April 1983 to September 1984.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE.--

APRIL TO SEPTEMBER 1983.--Maximum, 13.5°C July 22, 23; minimum, 6.0°C May 8-10, 12.

WATER YEAR 1984.--Maximum, 14.5°C July 15-17; minimum, 5.5°C Apr. 25, 26, 28.

TEMPERATURE, WATER (DEG. C), WATER YEAR APRIL 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	7.0	8.5	8.0	9.0	8.5	12.0	9.5	11.5	10.0
2	---	---	8.5	7.0	9.5	8.0	9.5	8.0	12.5	9.0	12.5	10.0
3	---	---	10.5	7.0	11.5	8.0	11.0	8.0	12.0	9.0	12.5	9.5
4	---	---	9.5	6.5	11.5	8.0	12.5	8.0	12.5	9.0	13.0	10.0
5	---	---	9.0	7.0	12.0	8.0	11.5	9.0	12.0	9.5	12.5	10.0
6	---	---	8.5	6.5	12.0	8.0	10.5	9.0	13.0	9.0	12.5	10.0
7	---	---	8.0	6.5	12.5	8.5	9.5	8.5	12.0	9.5	12.5	10.0
8	---	---	7.0	6.0	12.5	9.0	10.5	8.0	11.5	9.5	11.5	10.0
9	---	---	8.0	6.0	12.0	9.0	11.0	8.0	11.5	9.5	12.0	9.5
10	---	---	8.0	6.0	9.5	8.5	12.5	8.0	11.0	10.0	10.5	9.0
11	---	---	9.0	6.5	10.5	8.0	13.0	8.5	12.0	9.5	12.5	9.5
12	---	---	9.5	6.0	11.5	8.0	11.0	9.0	12.5	9.0	12.5	9.5
13	---	---	9.5	6.5	12.0	8.0	11.0	9.0	12.5	9.0	12.5	9.5
14	---	---	8.0	7.0	11.0	8.5	11.0	8.5	13.0	9.5	12.5	10.0
15	---	---	7.5	7.0	11.5	8.5	10.0	8.5	13.0	9.5	12.5	9.5
16	---	---	8.5	6.5	11.0	8.0	12.0	8.0	13.0	9.5	13.0	10.0
17	---	---	9.0	6.5	9.5	8.5	12.0	8.5	13.0	9.5	12.5	10.0
18	---	---	9.5	7.0	9.5	8.0	11.5	8.5	13.0	9.5	10.5	9.5
19	---	---	10.0	6.5	9.5	8.0	12.0	9.0	11.0	9.5	11.5	9.5
20	---	---	10.5	7.0	11.0	8.0	12.5	9.0	12.5	9.5	12.0	9.0
21	---	---	10.5	7.5	11.5	7.5	13.0	8.5	12.5	9.0	12.0	9.5
22	---	---	10.5	7.5	10.0	8.5	13.5	9.0	11.0	9.5	12.0	9.5
23	---	---	10.5	7.5	10.0	8.0	13.5	9.5	11.5	9.5	11.5	10.0
24	---	---	10.5	7.5	11.5	8.0	11.0	9.5	12.5	9.5	12.5	10.0
25	---	---	11.0	8.0	12.0	8.0	11.0	9.0	13.0	9.5	12.5	10.0
26	---	---	11.0	8.0	12.0	8.5	12.5	8.5	12.5	9.5	12.5	10.0
27	---	---	11.0	8.0	13.0	8.5	10.5	9.0	12.5	9.5	12.0	10.0
28	---	---	11.0	8.5	11.0	8.5	12.0	8.5	11.5	10.0	11.5	9.0
29	10.5	7.0	11.5	8.5	12.0	9.0	12.5	9.0	11.0	10.0	11.0	8.5
30	9.0	7.0	10.0	8.5	9.5	8.5	13.0	9.0	11.0	10.0	11.0	9.0
31	---	---	9.0	8.0	---	---	11.5	9.5	11.0	10.0	---	---
MONTH	---	---	11.5	6.0	13.0	7.5	13.5	8.0	13.0	9.0	13.0	8.5

WILLAMETTE RIVER BASIN

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14162400 MCKENZIE RIVER AT FINN ROCK, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14162500 MCKENZIE RIVER NEAR VIDA, OR

LOCATION.--Lat 44°07'30", long 122°28'10", in NE1/4 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 mi² 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 above 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 good. Flow regulated since 1963 by Smith River Reservoir (see sta 14158795) and Cougar Lake (see sta 14159400), and since 1968 by Blue River Lake (see sta 14162100). No diversion upstream from station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--60 years (water years 1925-84), 4,063 ft³/s, 2,944,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,400 ft³/s Dec. 28, 1945, gage height, 17.70 ft, site and datum then in use, from rating curve extended above 32,000 ft³/s; minimum, 1,260 ft³/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 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,100 ft³/s Feb. 13, gage height, 7.28 ft; minimum, 2,330 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2520	3320	5220	6860	4820	4870	5330	4700	5030	3740	3050	3330
2	2510	3460	5320	6360	4520	4790	4850	6310	4580	3590	3040	3280
3	2490	3800	5430	8500	3910	4410	4440	7960	4330	3530	3130	3240
4	2530	4050	5170	10900	3480	4150	4220	7750	5520	3470	3190	3210
5	2570	3780	5130	10400	3450	3960	4120	6980	7290	3370	3180	3220
6	2580	4950	6350	9180	3370	3850	4040	6150	8570	3330	3110	3410
7	2570	4590	8560	8480	3270	3820	3940	5270	12400	3260	2980	3400
8	2560	4460	8510	7940	3230	3850	4610	5060	11400	3240	2990	3330
9	2590	4540	9040	7100	3180	3980	4650	4700	9190	3100	3020	3280
10	2590	4380	9920	6650	3190	4130	5880	4510	7820	2980	3050	3280
11	2570	4060	9020	6830	3440	4190	6060	5560	7050	3030	3370	3260
12	2550	3990	7610	6150	6010	4390	6160	6110	6120	3010	3410	3240
13	2510	4240	8690	5480	16000	4850	6120	6140	5750	3000	3390	3220
14	2520	4310	13500	5130	9990	5610	6040	6680	5510	2910	3360	3120
15	2550	5170	12700	4750	9530	6200	6200	6520	5250	2840	3350	2970
16	2650	4900	10800	4450	9660	6600	5670	6280	5010	2770	3340	2850
17	2720	6100	11300	4250	7880	6710	5490	5760	4770	2680	3290	2770
18	2560	6450	11100	4070	7050	6620	5300	5050	4550	2800	3290	2740
19	2540	6080	10700	3760	6410	6990	5570	4530	4370	2810	3320	2730
20	2610	6800	9700	3570	6130	7600	5390	4720	4580	2760	3330	2640
21	2920	6200	8120	3560	6390	8770	5200	4870	5440	2680	3280	2770
22	3000	5700	6280	4000	5810	8450	5000	4960	5250	2620	3280	2780
23	3070	5670	5240	4150	5470	7890	4820	6530	4620	2620	3260	2910
24	2930	8840	5150	7100	5630	7060	4530	6680	4400	2720	3330	2840
25	2690	8930	5060	8560	5870	6670	4370	6010	4350	2840	3480	2830
26	2770	6990	5070	8100	5370	9250	4140	7020	4320	2950	3470	2810
27	3130	6200	4560	7250	5020	8800	3690	6870	4330	3050	3430	2790
28	3150	6150	3970	6400	4790	8040	3560	6350	4080	3060	3310	2760
29	3150	5750	4870	6120	4680	7270	3510	6330	4030	3070	3270	2760
30	3200	5510	8780	5640	---	6250	3600	6350	3940	3060	3210	2760
31	3290	---	7780	5090	---	5670	---	5660	---	3040	3290	---
TOTAL	84590	159370	238650	196780	167550	185690	146500	184370	173850	93930	100800	90530
MEAN	2729	5312	7698	6348	5778	5990	4883	5947	5795	3030	3252	3018
MAX	3290	8930	13500	10900	16000	9250	6200	7960	12400	3740	3480	3410
MIN	2490	3320	3970	3560	3180	3820	3510	4510	3940	2620	2980	2640
AC-FT	167800	316100	473400	390300	332300	368300	290600	365700	344800	186300	199900	179600
CAL YR 1983	TOTAL	1689180	MEAN	4628	MAX	13600	MIN	2490	AC-FT	3350000		
WTR YR 1984	TOTAL	1822610	MEAN	4980	MAX	16000	MIN	2490	AC-FT	3615000		

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 June 1961 to November 1976. Dual conductivity-temperature recorder since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 72 microsiemens Nov. 20, 1980; minimum recorded, 24 microsiemens 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 microsiemens Nov. 22, 23; minimum, 26 microsiemens Feb. 13.

WATER TEMPERATURES: Maximum, 15.0°C July 15-17; minimum, 1.0°C Dec. 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)
MAY 02...	1430	6220	42	7.2	8.0	11.9	14	0	3.4	1.4	2.7	.70
AUG 16...	1505	3330	45	7.0	13.0	11.3	15	0	3.6	1.4	3.1	.80
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SULFATE DIS- SOLVED (MG/L AS SO4)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	
MAY 02...		.90	1.2	<.10	.030	.20	<.10	<.010	.30	<.10	.010	.030
AUG 16...		.90	1.4	<.10	<.010	<.20	<.10	<.010	.30	<.10	.010	.020
DATE		CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	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)	TUR- BIN- ITY (NTU)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)
MAY 02...		1.0	.20	17	--	40	1.0	<1	<1	9	<100	<1
AUG 16...		.50	.20	18	38	42	.70	<1	<1	10	100	<1
DATE		CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
MAY 02...		<1	<10	<10	<1	<1	2	5	14	150	5	2
AUG 16...		<1	<10	<10	1	5	1	4	8	50	1	2
DATE		MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY 02...		1	<10	<.1	.1	<1	<1	<1	<1	<1	9	20
AUG 16...		2	<10	.2	.1	3	<1	<1	<1	<1	9	<10

WILLAMETTE RIVER BASIN

14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	57	---	45	44	45	39	39	41	45	47	47
2	53	57	---	45	43	46	39	37	41	45	47	47
3	54	54	48	44	44	48	40	35	42	45	47	46
4	54	54	48	36	46	47	41	34	40	45	47	47
5	54	55	48	36	46	47	41	34	38	46	47	46
6	54	55	47	37	45	48	41	36	37	45	48	48
7	54	56	44	38	45	50	42	37	34	42	48	47
8	55	56	44	39	45	50	41	37	34	43	48	47
9	55	56	43	40	43	47	41	39	35	43	48	46
10	55	57	41	41	42	47	38	39	37	44	48	47
11	55	57	42	41	42	46	39	36	37	44	46	47
12	55	56	44	42	39	45	38	35	39	44	47	41
13	56	55	42	43	28	45	38	35	39	45	48	39
14	56	56	37	44	33	44	38	37	40	44	48	40
15	56	53	37	45	34	44	36	39	40	44	49	41
16	56	52	40	46	33	43	38	41	41	44	48	41
17	56	48	41	45	35	44	38	41	42	44	48	40
18	57	51	41	46	35	44	38	42	42	44	48	41
19	56	55	41	46	36	44	38	42	43	45	49	43
20	55	56	42	47	40	39	37	42	43	46	49	44
21	55	57	45	47	41	40	37	41	42	47	48	46
22	55	59	45	46	41	38	37	40	42	47	47	46
23	55	59	47	46	41	38	37	37	43	47	47	46
24	55	---	47	41	42	39	40	37	43	46	48	45
25	56	---	47	38	42	37	39	38	43	46	47	45
26	56	---	47	39	43	34	40	37	43	46	47	45
27	55	---	47	39	43	33	41	37	42	46	47	45
28	55	---	48	41	43	34	41	37	43	45	48	45
29	56	---	47	40	46	35	42	36	43	46	47	45
30	56	---	43	42	---	37	41	37	44	46	46	46
31	56	---	44	43	---	38	---	39	---	46	47	---
MEAN	55	---	---	42	41	42	39	38	40	45	48	45

WILLAMETTE RIVER BASIN

14163000 GATE CREEK AT VIDA, OR

LOCATION.--Lat 44°08'45", long 122°34'15", in SW 1/4 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1951 to September 1957; annual maximums, water years 1958-65; August 1966 to current year.

REVISED RECORDS.--WDR OR-83-2: 1976(M,P), 1978(M,P), 1979(M,P), 1980(M), 1981(M,P), 1982(M,P).

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.--24 years (water years 1952-57, 1967-84), 216 ft³/s, 61.62 in/yr, 156,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,140 ft³/s Dec. 22, 1964, gage height, 12.18 ft, from slope-area measurement of peak flow; minimum, 12 ft³/s Nov. 26, 27, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1930	2,300	6.73	Feb. 13	1030	*3,330	*7.93

Minimum, 21 ft³/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	23	52	275	375	177	346	332	491	147	115	49	29		
2	23	59	293	317	163	345	296	578	139	108	49	28		
3	23	95	312	406	152	315	267	731	134	102	47	28		
4	23	194	264	419	142	284	245	512	269	98	46	26		
5	23	105	298	326	134	255	229	409	397	94	46	29		
6	23	273	819	272	130	234	212	364	724	90	46	44		
7	23	217	963	241	122	217	226	313	1360	87	42	51		
8	23	136	723	219	118	204	361	274	737	84	39	37		
9	24	105	552	198	126	207	387	242	510	81	37	31		
10	29	89	776	240	132	212	697	221	400	77	36	28		
11	28	90	577	346	209	208	592	239	331	74	36	28		
12	25	101	434	280	972	237	614	213	291	72	35	27		
13	24	196	475	236	2630	271	543	196	253	70	35	26		
14	25	201	1490	208	1160	340	464	191	223	69	36	25		
15	25	230	1260	186	761	382	401	201	201	67	35	25		
16	24	199	673	171	653	424	334	196	184	65	33	25		
17	26	347	464	159	484	512	296	181	170	63	32	24		
18	29	610	363	149	392	575	281	168	159	62	32	23		
19	25	464	304	142	346	688	307	161	149	60	33	24		
20	24	532	258	133	349	642	323	162	170	58	32	27		
21	23	400	224	164	447	936	304	147	291	58	30	25		
22	43	319	197	233	395	746	264	160	245	58	28	26		
23	42	419	177	252	362	543	235	280	192	58	28	31		
24	30	810	168	541	449	419	216	231	166	57	29	27		
25	27	627	168	622	686	425	208	223	150	56	29	25		
26	25	472	185	479	480	990	196	316	144	55	28	24		
27	24	407	162	355	381	673	183	262	140	53	27	23		
28	24	370	149	289	353	510	172	218	129	52	26	23		
29	23	317	270	246	321	455	168	190	137	51	25	22		
30	33	299	780	218	---	389	214	174	122	49	25	22		
31	58	---	533	196	---	341	---	158	---	50	28	---		
TOTAL	844	8735	14586	8618	13226	13325	9567	8402	8664	2193	1079	833		
MEAN	27.2	291	471	278	456	430	319	271	289	70.7	34.8	27.8		
MAX	58	810	1490	622	2630	990	697	731	1360	115	49	51		
MIN	23	52	149	133	118	204	168	147	122	49	25	22		
CFSM	.57	6.11	9.89	5.84	9.58	9.03	6.70	5.69	6.07	1.49	.73	.58		
IN.	.66	6.83	11.40	6.74	10.34	10.41	7.48	6.57	6.77	1.71	.84	.65		
AC-FT	1670	17330	28930	17090	26230	26430	18980	16670	17190	4350	2140	1650		
CAL YR 1983	TOTAL	84823	MEAN	232	MAX	1790	MIN	23	CFSM	4.87	IN.	66.29	AC-FT	168200
WTR YR 1984	TOTAL	90072	MEAN	246	MAX	2630	MIN	22	CFSM	5.17	IN.	70.39	AC-FT	178700

WILLAMETTE RIVER BASIN
14163000 GATE CREEK AT VIDA, OR--Continued

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1983 to September 1984 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 1983 to September 1984.

INSTRUMENTATION.--Temperature recorder April 1983 to September 1984.

EXTREMES FOR CURRENT YEAR.--

APRIL TO SEPTEMBER 1983.--Maximum, 20.0°C Aug. 14; minimum, 8.5°C Sept. 29, 30.

WATER YEAR 1984.--Maximum, 20.0°C July 16, 17; minimum, 8.0°C Oct. 25, Sept. 26.

TEMPERATURE, WATER (DEG. C), WATER YEAR APRIL 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	---	---	---	---	---	---	16.0	15.0	
2	---	---	12.5	11.0	12.5	11.0	---	---	---	---	16.5	14.0	
3	---	---	15.0	11.0	14.5	10.5	---	---	---	---	17.0	14.0	
4	---	---	14.0	11.0	14.5	10.5	---	---	---	---	16.5	14.0	
5	---	---	13.5	11.5	15.5	10.5	---	---	---	---	15.5	13.0	
6	---	---	13.0	11.0	16.5	11.5	---	---	---	---	16.0	13.0	
7	---	---	12.0	11.0	17.5	13.0	---	---	---	---	16.5	14.5	
8	---	---	11.0	9.5	16.5	14.0	---	---	---	---	14.5	13.0	
9	---	---	11.0	9.0	16.5	13.5	---	---	17.0	16.0	14.5	12.0	
10	---	---	11.5	9.0	15.0	11.5	---	---	16.5	15.5	13.5	12.5	
11	---	---	13.5	9.5	13.5	11.0	---	---	17.5	14.5	16.5	13.5	
12	---	---	14.5	9.5	---	---	---	---	18.0	14.0	16.0	13.5	
13	---	---	15.5	10.5	---	---	---	---	19.0	16.0	17.0	14.5	
14	---	---	14.0	12.0	---	---	---	---	20.0	17.0	17.0	15.0	
15	---	---	12.0	10.5	---	---	---	---	19.5	17.0	16.0	13.5	
16	---	---	12.0	10.5	---	---	---	---	18.5	15.5	15.5	13.0	
17	---	---	14.5	9.5	---	---	---	---	18.5	15.0	14.5	12.5	
18	---	---	14.5	11.5	---	---	---	---	18.5	15.5	13.0	11.5	
19	---	---	16.0	10.5	---	---	---	---	17.0	15.5	12.5	10.0	
20	---	---	17.0	11.5	---	---	---	---	18.5	16.0	12.5	9.5	
21	---	---	17.5	12.5	---	---	---	---	17.5	14.0	13.5	10.0	
22	---	---	17.5	12.0	---	---	---	---	17.0	14.0	15.0	11.0	
23	---	---	---	---	---	---	---	---	17.5	15.0	14.5	14.0	
24	---	---	---	---	---	---	---	---	17.0	14.0	15.5	13.5	
25	---	---	---	---	---	---	---	---	17.5	14.5	15.5	13.0	
26	---	---	---	---	---	---	---	---	18.5	15.5	15.5	13.5	
27	---	---	---	---	---	---	---	---	18.5	15.5	14.5	10.5	
28	---	---	---	---	---	---	---	---	17.0	15.9	12.0	9.5	
29	---	---	---	---	---	---	---	---	16.0	15.0	11.0	8.5	
30	13.5	11.0	---	---	---	---	---	---	15.5	14.5	11.0	8.5	
31	---	---	---	---	---	---	---	---	16.0	15.0	---	---	
MONTH	---	---	---	---	---	---	---	---	---	---	17.0	8.5	

WILLAMETTE RIVER BASIN

14163000 GATE CREEK AT VIDA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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14163100 MCKENZIE RIVER AT LEABURG DAM, OR

LOCATION.--Lat 44°08'15", long 122°36'40", in SW¼NE¼ sec.31, T.16 S., R.2 E., Lane County, Hydrologic Unit 17090004, located in Leaburg Dam control building near fishladder, and at mile 38.8.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1983 to September 1984 (discontinued).

INSTRUMENTATION.--Temperature recorder June 1983 to September 1984.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE.--

JUNE TO SEPTEMBER 1983.--Maximum, 15.0°C July 22-24; minimum, 8.5°C June 2, 3.

WATER YEAR 1984.--Maximum, 15.5°C July 15-17; minimum, 6.5°C May 4-7.

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

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

WILLAMETTE RIVER BASIN

14163100 MCKENZIE RIVER AT LEABURG DAM, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

197

14163200 MCKENZIE RIVER ABOVE LEABURG CANAL, AT LEABURG, OR

LOCATION.--Lat 44°05'57", long 122°41'18", in SE¼SE¼ sec.9, T.17 S., R.1 E., Lane County, Hydrologic Unit 17090004, on right bank 50 ft upstream from Power Canal outfall, 1.0 mi southwest of Leaburg, and at mile 33.4.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May to September 1984 (discontinued).

INSTRUMENTATION.--Temperature recorder May to September 1984.

EXTREMES FOR MAY TO SEPTEMBER 1984.--

WATER TEMPERATURE.--Maximum, 17.5°C July 17; minimum, 7.5°C May 24-27, 31.

TEMPERATURE, WATER (DEG. C), WATER YEAR MAY TO SEPTEMBER 1984

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

LOCATION.--Lat 44°06'02", long 122°41'16", in SE1/4 sec.9, T.17 S., R.1 E., Lane County, Hydrologic Unit 17090004, on left bank 150 ft upstream from McKenzie River, and 1.0 mi southwest of Leaburg.

WATER TEMPERATURE: May to September 1984 (discontinued).

INSTRUMENTATION.--Temperature recorder May to September 1984.

WATER TEMPERATURE.--Maximum, 15.5°C July 15-18; minimum, 7.5°C May 31.

[illegible]

WILLAMETTE RIVER BASIN

189

14164000 MCKENZIE RIVER NEAR SPRINGFIELD, OR

LOCATION.—Lat 44°03'20", long 122°49'45", in NW¼NW¼ sec.33, T.17 S., R.1 W., Lane County, Hydrologic Unit 17090004, on left bank 0.5 mi upstream from Hendricks bridge, 8 mi east of Springfield, and at mile 24.5.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: August 1983 to September 1984 (discontinued).

INSTRUMENTATION.—Temperature recorder August 1983 to September 1984.

EXTREMES FOR CURRENT YEAR.—

WATER TEMPERATURE.—

AUGUST TO SEPTEMBER 1983.—Maximum, 17.0°C Sept. 13; minimum, 9.5°C Sept. 30.

WATER YEAR 1984.—Maximum, 19.5°C July 17; minimum, 8.0°C May 27, 31, June 8, 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR AUGUST 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	12.0
2									---	---	15.0	12.0
3									---	---	15.5	12.5
4									---	---	15.5	12.5
5									---	---	15.5	12.5
6									---	---	15.5	12.5
7									---	---	15.5	12.5
8									---	---	14.0	12.0
9									---	---	14.5	11.5
10									13.5	12.0	13.5	11.5
11									14.5	12.0	15.0	11.5
12									15.5	12.5	16.5	12.5
13									16.0	13.0	17.0	13.0
14									16.5	13.0	16.0	13.0
15									16.5	13.5	16.0	12.5
16									16.5	13.0	16.0	12.0
17									16.5	13.0	15.5	12.0
18									16.5	13.5	12.5	10.5
19									15.0	12.5	13.5	10.0
20									14.0	12.0	14.0	10.5
21									15.5	12.0	15.0	10.5
22									14.5	12.5	15.0	11.5
23									13.5	12.0	13.5	12.0
24									15.5	12.0	15.5	11.5
25									15.5	12.5	15.5	12.5
26									15.5	13.0	15.0	12.5
27									15.5	13.0	14.5	11.5
28									14.5	12.5	12.5	10.5
29									13.5	12.5	12.5	10.5
30									13.5	12.5	12.5	9.5
31									14.0	12.0	---	---
MONTH									---	---	17.0	9.5

WILLAMETTE RIVER BASIN

14164000 MCKENZIE RIVER NEAR SPRINGFIELD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

191

14164200 WALTERVILLE CANAL NEAR WALTERVILLE, OR

LOCATION.--Lat 44°04'05", long 122°52'13", in NW¼ sec.25, T.17 S., R.2 W., Lane County, Hydrologic Unit 17090004, on left bank 10 ft upstream from bridge across canal, and 1.2 mi upstream from Camp Creek.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 1983 to September 1984 (discontinued).

INSTRUMENTATION.--Temperature recorder April 1983 to September 1984.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE.--

APRIL TO SEPTEMBER 1983.--Maximum, 14.5°C July 22-24, 30, 31; minimum, 7.0°C May 9.

WATER YEAR 1984.--Maximum, 16.0°C July 17; minimum, 6.5°C Apr. 25, 26.

TEMPERATURE, WATER (DEG. C), WATER YEAR APRIL 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	8.5	9.5	9.0	11.0	10.5	13.0	12.0	13.0	12.0
2	---	---	9.0	8.0	10.0	9.0	10.5	10.0	13.5	12.5	13.0	11.5
3	---	---	10.0	8.5	11.5	9.5	12.0	10.0	13.5	12.0	13.5	12.5
4	---	---	10.5	9.0	12.0	11.0	12.5	11.5	13.0	12.0	13.0	12.5
5	---	---	10.0	9.0	12.5	11.0	13.0	11.5	13.5	13.0	13.0	12.5
6	---	---	9.5	8.5	12.5	12.0	12.0	11.0	13.5	12.5	13.5	12.5
7	---	---	9.0	8.0	13.5	12.0	11.0	10.5	13.5	12.5	13.5	12.5
8	---	---	8.0	7.5	13.5	12.5	11.5	10.0	12.5	11.5	12.5	12.0
9	---	---	8.0	7.0	13.0	12.5	11.5	11.0	12.5	11.5	12.5	11.5
10	---	---	8.5	7.5	13.0	10.0	12.5	11.0	13.0	11.5	12.5	11.0
11	---	---	9.5	8.0	11.0	10.0	13.5	12.5	12.5	11.5	12.5	11.0
12	---	---	10.0	8.5	12.0	10.5	13.5	11.5	13.0	12.0	13.5	12.5
13	---	---	10.5	9.0	12.5	12.0	12.0	11.5	13.5	13.0	14.0	13.0
14	---	---	11.0	8.5	13.0	11.5	12.0	11.5	14.0	13.0	13.5	12.5
15	---	---	8.5	8.0	12.5	11.5	12.0	11.5	14.0	13.5	13.5	12.5
16	---	---	9.0	7.5	12.0	11.5	12.0	11.0	13.5	13.0	13.5	12.5
17	---	---	10.0	8.0	12.0	10.5	13.0	12.0	13.5	13.0	13.0	12.0
18	---	---	10.5	8.5	10.5	10.0	13.0	12.5	14.0	13.0	12.0	10.5
19	---	---	10.5	8.5	10.0	10.0	13.0	12.0	13.5	12.0	11.5	10.0
20	---	---	11.5	9.5	11.0	10.0	13.5	12.0	12.5	11.5	12.0	10.5
21	---	---	11.5	10.0	12.0	10.5	14.0	13.0	13.0	12.0	12.5	11.0
22	---	---	11.5	9.5	12.0	10.5	14.5	13.0	13.0	12.0	12.5	11.5
23	---	---	11.5	10.0	11.0	10.5	14.5	13.5	12.0	11.5	12.5	11.5
24	---	---	12.0	10.0	12.0	10.5	14.5	12.0	13.0	12.0	13.0	11.5
25	---	---	12.0	10.0	12.5	11.5	12.0	11.5	13.0	12.5	13.5	12.5
26	---	---	12.5	10.0	12.5	11.0	13.5	11.0	13.5	12.5	13.0	12.5
27	---	---	12.5	10.5	13.5	11.0	13.5	11.5	13.5	12.5	13.0	11.5
28	---	---	12.5	11.0	13.5	12.0	12.0	11.5	13.0	12.5	11.5	11.0
29	---	---	12.5	11.5	12.5	12.0	13.5	12.0	12.5	12.0	11.0	10.5
30	10.5	9.0	13.0	10.5	12.5	11.0	14.5	13.5	12.5	12.0	11.0	10.0
31	---	---	11.0	9.5	---	---	14.5	12.0	12.5	12.0	---	---
MONTH	---	---	13.0	7.0	13.5	9.0	14.5	10.0	14.0	11.5	14.0	10.0

WILLAMETTE RIVER BASIN

14164200 WALTERVILLE CANAL NEAR WALTERVILLE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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14164400 MCKENZIE RIVER ABOVE HAYDEN BRIDGE, AT SPRINGFIELD, OR

LOCATION.--Lat 44°04'17", long 122°57'48", in SW¼SW¼ sec.20, T.17 S., R.2 W., Lane County, Hydrologic Unit 17090004, located in the Eugene Water and Electric Board filtration intake building, on left bank 40 ft above Hayden bridge, and at mile 14.8.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May to September 1984 (discontinued).

INSTRUMENTATION.--Temperature recorder May to September 1984.

EXTREMES FOR MAY TO SEPTEMBER 1984.--

WATER TEMPERATURE.--Maximum, 18.0°C July 16, 17; minimum, 8.5°C May 27, 31, June 6, 8-10.

TEMPERATURE, WATER (DEG. C), WATER YEAR MAY TO SEPTEMBER 1984												
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1			---	---	11.0	9.5	15.0	12.5	15.0	13.5	---	---
2			---	---	11.0	10.0	16.0	13.0	15.5	13.0	---	---
3			---	---	11.0	10.0	16.0	13.5	16.0	13.5	---	---
4			---	---	10.5	9.5	16.5	13.5	15.5	13.5	---	---
5			---	---	9.5	9.0	16.5	14.0	14.5	13.5	---	---
6			---	---	9.0	8.5	16.0	13.5	15.5	12.5	---	---
7			---	---	9.5	9.0	15.5	13.0	16.0	13.0	---	---
8			---	---	9.5	8.5	16.0	13.0	16.5	14.0	---	---
9			---	---	9.5	8.5	16.0	13.0	17.0	14.5	---	---
10			---	---	10.0	8.5	16.5	13.5	17.0	14.5	---	---
11			---	---	11.0	9.5	15.5	13.5	16.0	14.5	---	---
12			---	---	11.5	10.0	16.0	13.0	15.0	13.5	---	---
13			---	---	12.0	10.0	16.5	13.5	14.5	12.5	---	---
14			---	---	12.5	11.0	16.5	13.5	15.0	12.5	---	---
15			---	---	13.0	12.0	17.5	14.0	15.5	13.0	---	---
16			---	---	12.5	11.5	18.0	14.5	15.5	13.0	---	---
17			---	---	12.5	11.0	18.0	15.0	16.0	13.5	---	---
18			---	---	13.0	11.5	17.0	15.0	15.5	14.0	---	---
19			---	---	13.5	12.0	16.5	14.0	15.0	13.0	---	---
20			---	---	12.0	10.5	16.5	13.5	15.0	12.5	---	---
21			---	---	10.5	9.5	16.0	13.5	15.5	13.0	---	---
22			---	---	12.5	9.0	16.5	13.5	---	---	---	---
23			---	---	14.0	12.0	15.5	14.0	---	---	---	---
24			---	---	14.5	13.0	17.0	13.5	---	---	---	---
25			9.5	9.0	15.0	13.0	16.0	14.0	---	---	12.5	11.5
26			10.5	9.0	13.5	11.5	16.5	13.0	---	---	13.5	11.0
27			11.0	8.5	14.0	11.5	16.5	14.0	---	---	14.0	12.0
28			12.0	10.0	14.5	13.5	16.0	14.0	---	---	14.5	12.0
29			12.5	11.0	14.5	13.0	16.0	13.5	---	---	14.5	12.5
30			12.0	9.5	14.0	11.5	16.5	14.0	---	---	13.5	12.5
31			10.5	8.5	---	---	16.5	14.5	---	---	---	---
MONTH			---	---	15.0	8.5	18.0	12.5	---	---	---	---

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 mi².

WATER-DISCHARGE RECORDS

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. 16-23, which are fair. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--38 years, 542 ft³/s, 41.58 in/yr, 392,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s Dec. 22, 1964, gage height, 22.60 ft; minimum, 8.2 ft³/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 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	0500	3,700	10.86	June 7	1130	3,890	11.20
Feb. 13	1400	*10,800	*20.21				

Minimum, 34 ft³/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	40	101	956	1180	440	988	920	1100	325	302	87	52		
2	40	129	933	1010	408	912	804	1330	303	277	87	46		
3	39	141	893	999	383	804	716	1640	287	256	83	42		
4	39	418	794	1120	361	719	650	1430	467	237	80	39		
5	39	225	1050	1040	344	655	610	1170	545	224	77	39		
6	39	474	1960	875	334	604	557	1020	943	216	81	88		
7	39	475	2740	767	314	560	559	863	3400	206	72	63		
8	39	303	2350	702	303	524	1040	752	2680	198	68	60		
9	39	269	1910	611	340	506	1210	669	1670	191	66	53		
10	39	236	2110	683	350	497	1710	609	1300	182	64	50		
11	41	218	1800	902	470	469	1760	618	1050	175	62	47		
12	41	218	1430	779	1300	494	1660	563	866	172	62	45		
13	40	461	1270	694	8270	572	1490	516	739	164	62	44		
14	40	465	2190	621	6090	668	1260	498	648	157	60	41		
15	41	423	3180	563	2980	746	1100	498	572	149	57	42		
16	41	452	2060	516	2370	779	957	469	512	142	56	40		
17	43	954	1580	479	1760	998	850	425	469	133	54	39		
18	54	1740	1320	452	1440	1110	800	390	432	127	53	37		
19	47	1330	1110	432	1250	1330	783	368	399	123	51	36		
20	44	1640	943	408	1190	1410	725	402	437	119	51	40		
21	44	1430	803	436	1700	2340	648	350	730	117	49	41		
22	62	1120	689	494	1390	2030	598	374	619	116	47	42		
23	83	1190	608	502	1190	1590	552	588	500	113	46	54		
24	55	2060	584	568	1400	1270	516	512	432	118	46	48		
25	48	2060	569	809	2120	1130	495	468	392	109	47	43		
26	45	1570	611	817	1640	1970	476	597	377	113	44	40		
27	43	1250	571	724	1330	1860	447	525	399	103	42	38		
28	43	1070	526	621	1140	1510	413	469	348	100	41	37		
29	43	912	644	568	989	1390	410	419	384	98	41	35		
30	51	915	1740	524	---	1170	568	396	336	92	40	34		
31	120	---	1530	475	---	1030	---	364	---	87	43	---		
TOTAL	1461	24249	41454	21371	43596	32635	25284	20392	22561	4916	1819	1355		
MEAN	47.1	808	1337	689	1503	1053	843	658	752	159	58.7	45.2		
MAX	120	2060	3180	1180	8270	2340	1760	1640	3400	302	87	88		
MIN	39	101	526	408	303	469	410	350	287	87	40	34		
CFSM	.27	4.56	7.55	3.89	8.49	5.95	4.76	3.72	4.25	.90	.33	.26		
IN.	.31	5.10	8.71	4.49	9.16	6.86	5.31	4.29	4.74	1.03	.38	.28		
AC-FT	2900	48100	82220	42390	86470	64730	50150	40450	44750	9750	3610	2690		
CAL YR 1983	TOTAL	242829	MEAN	665	MAX	5800	MIN	39	CFSM	3.76	IN.	51.04	AC-FT	481700
WTR YR 1984	TOTAL	241093	MEAN	659	MAX	8270	MIN	34	CFSM	3.72	IN.	50.67	AC-FT	478200

WILLAMETTE RIVER BASIN

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14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1983 to September 1984 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 1983 to September 1984.

INSTRUMENTATION.--Temperature recorder April 1983 to September 1984.

EXTREMES FOR CURRENT YEAR.--

APRIL TO SEPTEMBER 1983.--Maximum, 23.0°C Aug. 14, 15; minimum, 10.5°C May 2, 3.

WATER YEAR 1984.--Maximum, 23.5°C Aug. 11; minimum, 7.0°C Apr. 26-30, May 3-6.

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

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	12.5	11.5			---	---	19.0	18.0	17.5	16.0
2	---	---	11.5	10.5			---	---	19.5	18.0	18.5	16.0
3	---	---	13.0	10.5			---	---	20.0	18.5	18.5	16.5
4	---	---	13.0	11.0			---	---	20.5	17.0	17.5	16.0
5	---	---	13.0	11.0			---	---	20.5	18.5	17.5	15.0
6	---	---	---	---			---	---	21.5	18.5	17.5	15.0
7	---	---	---	---			---	---	21.0	19.0	18.0	16.0
8	---	---	---	---			14.0	12.5	20.0	18.5	16.5	15.0
9	---	---	---	---			14.5	13.0	19.5	17.0	16.5	14.0
10	---	---	---	---			16.0	13.0	18.5	17.0	15.5	14.5
11	---	---	---	---			18.0	14.5	19.0	16.0	16.5	14.5
12	---	---	---	---			18.0	16.0	20.5	16.0	18.0	15.5
13	---	---	---	---			16.0	15.0	21.5	18.0	19.0	16.5
14	---	---	---	---			15.0	14.0	23.0	19.0	19.0	17.0
15	---	---	---	---			14.5	13.5	23.0	19.5	18.0	16.0
16	---	---	---	---			16.0	14.0	22.0	18.5	17.5	15.5
17	---	---	---	---			17.0	15.0	21.5	18.0	17.0	15.0
18	---	---	---	---			17.0	15.5	21.5	18.0	16.0	14.0
19	---	---	---	---			16.5	15.5	20.0	18.0	14.0	11.5
20	---	---	---	---			17.5	15.0	20.0	17.5	14.5	11.5
21	---	---	---	---			18.5	16.0	19.5	16.0	15.0	12.0
22	---	---	---	---			19.0	16.5	20.0	17.5	16.0	13.5
23	---	---	---	---			19.0	18.0	19.0	17.0	16.0	15.5
24	---	---	---	---			18.0	17.0	20.0	16.0	16.5	14.5
25	---	---	---	---			17.0	15.0	20.0	16.5	17.0	15.0
26	---	---	---	---			17.0	15.0	20.0	16.5	17.0	15.5
27	---	---	---	---			17.0	17.0	21.0	17.5	17.0	15.5
28	---	---	---	---			17.0	16.5	19.5	17.0	15.5	13.5
29	---	---	---	---			19.0	16.0	18.0	15.5	14.5	12.0
30	13.5	11.0	---	---			20.5	18.5	16.5	15.0	13.0	11.0
31	---	---	---	---			20.5	19.5	17.5	15.5	---	---
MONTH	---	---	---	---			---	---	23.0	15.0	19.0	11.0

WILLAMETTE RIVER BASIN

14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	11.0										
2	12.5	11.0										
3	14.0	11.5										
4	15.0	12.5										
5	15.0	14.0										
6	14.5	13.0										
7	13.5	11.5										
8	12.5	11.5										
9	12.5	11.5										
10	13.5	12.0										
11	14.5	13.0										
12	15.0	13.5										
13	14.5	13.5										
14	13.5	12.5										
15	13.0	11.5										
16	12.0	10.5										
17	---	---										
18	---	---										
19	---	---										
20	---	---										
21	---	---										
22	---	---										
23	---	---										
24	---	---										
25	---	---										
26	---	---										
27	---	---										
28	---	---										
29	---	---										
30	---	---										
31	---	---										
MONTH	---	---										
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	10.0	7.5	13.5	10.0	17.0	13.5	21.0	18.0	---	---
2	---	---	10.0	7.5	13.0	11.0	18.0	14.5	20.5	18.0	---	---
3	---	---	10.5	7.0	13.0	10.5	18.5	15.0	21.0	18.0	---	---
4	---	---	9.5	7.0	12.5	11.0	19.0	15.5	21.5	17.5	---	---
5	---	---	9.5	7.0	11.5	10.0	19.5	15.5	19.5	17.5	---	---
6	---	---	10.5	7.0	11.5	8.5	18.5	15.0	20.0	15.5	---	---
7	---	---	12.0	7.5	11.0	9.0	18.0	14.5	21.5	15.5	---	---
8	---	---	12.0	9.5	11.0	9.0	18.0	13.5	22.5	18.0	---	---
9	---	---	10.5	8.0	11.5	9.0	18.5	15.0	23.0	18.0	---	---
10	---	---	11.0	7.5	11.5	8.0	18.5	15.0	23.0	19.0	---	---
11	---	---	12.5	9.0	13.0	8.0	18.0	14.0	23.5	19.0	---	---
12	---	---	13.0	10.5	13.5	9.0	18.0	14.5	22.5	18.5	---	---
13	---	---	13.5	11.5	14.0	11.0	18.5	15.0	21.5	17.0	---	---
14	---	---	12.5	10.5	15.0	11.5	19.0	15.0	22.0	16.5	---	---
15	---	---	11.0	9.0	15.5	12.5	20.5	15.0	22.0	17.5	---	---
16	---	---	12.0	8.5	15.0	12.5	22.0	17.5	22.5	18.0	---	---
17	---	---	13.5	10.5	14.0	11.0	22.0	18.5	23.0	18.0	---	---
18	---	---	13.0	11.0	14.5	11.0	21.5	18.0	23.0	18.0	---	---
19	---	---	12.5	11.5	15.0	12.5	20.5	15.5	22.5	18.0	---	---
20	10.5	8.0	12.5	10.0	15.0	12.5	19.5	15.0	21.5	18.0	---	---
21	10.0	8.0	12.0	9.5	12.0	10.0	19.0	14.5	22.0	17.5	---	---
22	12.0	8.0	11.0	8.5	14.0	10.5	19.5	15.0	---	---	---	---
23	11.5	9.0	12.0	9.5	16.0	12.5	19.0	16.0	---	---	---	---
24	10.0	7.5	12.5	10.0	16.5	14.0	22.0	17.5	---	---	---	---
25	9.0	7.5	12.0	9.5	17.5	14.0	21.0	18.0	---	---	---	---
26	9.0	7.0	12.5	10.5	16.5	13.5	20.5	14.5	---	---	13.5	11.0
27	10.5	7.0	13.5	9.5	16.5	13.5	21.5	16.5	---	---	14.5	12.0
28	10.0	7.0	15.5	12.0	17.5	15.0	20.5	16.5	---	---	14.5	12.5
29	10.0	7.0	16.5	13.5	16.5	14.5	21.5	16.0	---	---	15.0	12.0
30	9.5	7.0	16.5	12.0	16.0	13.0	21.5	18.0	---	---	15.0	13.0
31	---	---	13.0	9.0	---	---	22.0	18.0	---	---	---	---
MONTH	---	---	16.5	7.0	17.5	8.0	22.0	13.5	---	---	---	---

WILLAMETTE RIVER BASIN

197

14165500 MCKENZIE RIVER NEAR COBURG, OR

LOCATION.--Lat 44°06'45", long 123°02'45", in NE¼NE¼ sec.9, T.17 S., R.3 W., Lane County, Hydrologic Unit 17090004, on left bank, at upstream side of Armitage Bridge, 2.0 mi southeast of Coburg, and at mile 7.3.

DRAINAGE AREA.--1,337 mi².

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1963 to September 1974, April 1983 to September 1984 (discontinued).

INSTRUMENTATION.--Temperature recorder October 1963 to September 1974, April 1983 to September 1984.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE.--Maximum, 19.0°C July 16, 17, 1984; minimum, 3.0°C Jan. 8-12, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE.--

APRIL TO SEPTEMBER 1983.--Maximum, 17.5°C July 22, 30; minimum, 7.5°C May 9.

WATER YEAR 1984.--Maximum, 19.0°C July 16, 17; minimum, 7.5°C Apr. 25-27, 29, May 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR APRIL 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	9.5	10.5	10.0	12.5	11.5	15.5	13.0	15.0	12.5
2	---	---	10.0	9.0	11.5	10.0	12.0	11.0	16.0	13.0	15.0	12.5
3	---	---	11.5	9.0	13.5	10.0	13.5	10.5	15.5	13.5	16.0	13.0
4	---	---	11.0	10.0	14.5	11.5	15.0	12.0	15.5	12.5	15.0	13.5
5	---	---	11.5	10.0	15.0	11.5	14.5	12.5	16.0	14.0	15.5	12.5
6	---	---	10.5	9.0	16.0	12.0	14.0	12.0	17.0	13.5	15.5	12.5
7	---	---	10.0	9.0	16.5	12.5	13.0	11.5	16.5	14.0	15.5	13.5
8	---	---	9.0	8.0	15.0	13.5	12.5	11.0	14.5	13.5	14.0	12.5
9	---	---	9.0	7.5	15.5	13.0	14.0	11.5	15.0	12.5	14.5	12.0
10	---	---	9.0	8.0	14.0	11.0	15.5	11.5	14.5	13.0	13.5	12.5
11	---	---	10.5	8.5	13.0	10.5	17.0	13.0	15.0	12.0	14.0	12.0
12	---	---	11.5	9.5	14.5	11.0	15.5	14.0	16.0	13.0	15.5	13.0
13	---	---	12.0	10.0	16.0	12.0	14.0	12.5	16.5	13.5	16.0	13.5
14	---	---	11.0	9.5	14.5	13.0	14.5	12.0	17.0	13.5	15.5	14.0
15	---	---	9.5	9.0	15.0	12.0	14.5	12.0	17.0	14.0	15.5	13.0
16	---	---	10.0	8.5	15.0	12.0	14.5	12.5	16.5	13.5	15.5	13.0
17	---	---	10.5	9.0	13.5	12.0	16.0	12.5	16.5	13.5	15.0	13.0
18	---	---	11.0	10.0	12.0	11.0	15.5	13.5	17.0	13.5	13.5	12.0
19	---	---	12.0	10.0	12.0	10.5	15.5	13.5	15.5	13.5	13.0	10.5
20	---	---	13.5	10.5	13.0	10.5	16.0	13.0	15.0	12.5	13.5	11.0
21	---	---	13.5	11.5	14.5	11.0	17.0	13.5	15.5	12.5	14.0	11.0
22	---	---	13.0	11.0	14.0	12.0	17.5	14.0	15.5	13.0	14.5	12.0
23	---	---	14.0	11.5	13.0	11.5	16.5	15.0	14.5	12.5	13.5	13.0
24	---	---	14.0	12.0	14.5	11.0	15.5	14.5	15.5	12.5	14.5	12.0
25	---	---	13.5	12.0	15.0	12.5	14.5	13.0	15.5	13.0	15.0	13.0
26	---	---	14.0	12.0	14.5	13.0	15.5	12.5	16.0	13.5	14.5	13.0
27	11.5	8.5	14.5	12.0	16.0	12.0	15.0	14.0	15.5	13.5	14.0	13.0
28	12.0	9.5	15.0	12.5	15.0	13.5	15.0	12.5	15.0	13.5	13.0	11.5
29	12.5	9.5	15.0	13.0	15.0	13.0	16.5	12.5	14.0	13.0	12.5	10.5
30	13.0	10.5	13.5	11.5	14.0	13.0	17.5	14.0	14.0	13.0	12.0	10.0
31	---	---	11.5	10.5	---	---	15.5	14.0	14.0	12.5	---	---
MONTH	---	---	15.0	7.5	16.5	10.0	17.5	10.5	17.0	12.0	16.0	10.0

WILLAMETTE RIVER BASIN

14165500 MCKENZIE RIVER NEAR COBURG, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 mi², 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 above 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.--40 years, 12,310 ft³/s, 8,919,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft³/s Dec. 29, 1945, gage height, 19.69 ft, from rating curve extended above 115,000 ft³/s; minimum, 1,990 ft³/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, 64,000 ft³/s Feb. 14, gage height, 13.61 ft; minimum, 4,320 ft³/s July 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6940	9260	19700	28800	11900	13300	16800	9740	13000	9270	4760	6220
2	6910	9560	19000	23800	10900	13000	16000	14700	11800	8610	4780	6180
3	6930	9920	18900	21000	9460	12300	15400	18800	10200	7390	4770	6140
4	7010	11500	17800	24000	7630	11800	14900	23800	10800	6690	4860	6210
5	6920	11600	17300	24300	6860	11100	13800	22000	15900	6290	4840	7120
6	6780	12400	19700	23000	6600	9070	12400	20400	21000	6240	4780	8450
7	6610	14200	33500	21300	6410	7910	11600	19100	32700	6040	4560	8860
8	6600	12500	32400	20700	6180	7670	15200	16100	43200	6070	4550	9150
9	6590	12500	33000	19200	6230	7470	17800	14200	36500	6030	4770	9250
10	6670	12200	31100	18400	6260	7580	21200	11800	28200	5770	4770	9360
11	6630	11600	30500	19000	6510	7750	25100	13500	25600	5690	4860	10200
12	6960	11100	26400	18000	8640	7910	24600	14900	21800	5570	5120	10800
13	7240	12700	24700	16300	40400	8810	23200	14300	18300	5360	5060	10800
14	7300	14400	29800	14600	44800	10300	20300	14500	15900	5340	5010	10800
15	7020	14900	45800	13000	29100	12400	19000	15100	14200	5100	4900	10500
16	7350	14700	36200	12100	35300	14000	18100	15300	13100	4840	4860	10100
17	7840	16100	35300	11200	31000	15000	15400	14500	12600	4710	4840	9530
18	8010	23000	34200	9940	25400	15200	14400	12600	12100	4750	4720	9030
19	7840	22400	34600	9580	23000	15600	14400	11000	11200	4770	4760	8710
20	7700	23000	33300	8630	20600	16600	14400	10700	10000	4750	4780	8710
21	8090	24800	30500	8160	22200	21400	14500	10900	11300	4690	4910	8610
22	8350	21600	26500	8580	19900	23100	14100	11700	13100	4920	5110	8640
23	8790	20300	19700	9650	17400	22100	13500	13000	12200	4580	5450	8890
24	8640	27900	18600	10200	19500	19000	12200	16000	10600	4520	5520	8960
25	8490	35400	17800	14600	21600	16700	10700	15300	9970	4410	5200	8860
26	8370	33000	18200	16200	17800	21500	9850	15500	9770	4450	5490	8520
27	8790	28500	19200	17600	15500	26700	8270	15700	10100	4570	5470	8850
28	8910	25400	17600	16200	14400	27100	7400	14600	10200	4590	5510	8620
29	8650	22800	16300	15300	13300	25700	7180	13200	9740	4660	5750	8610
30	8640	20300	27300	14600	---	22600	7630	13800	9560	4640	6010	8570
31	9100	---	32900	13200	---	18300	---	14100	---	4730	6070	---
TOTAL	236670	539540	817800	501140	504780	468970	449330	460840	484640	170040	156840	263250
MEAN	7635	17980	26380	16170	17410	15130	14980	14870	16150	5485	5059	8775
MAX	9100	35400	45800	28800	44800	27100	25100	23800	43200	9270	6070	10800
MIN	6590	9260	16300	8160	6180	7470	7180	9740	9560	4410	4550	6140
AC-FT	469400	1070000	1622000	994000	1001000	930200	891200	914100	961300	337300	311100	522200
CAL YR 1983	TOTAL	4702750	MEAN	12880	MAX	45800	MIN	4300	AC-FT	9328000		
WTR YR 1984	TOTAL	5053840	MEAN	13810	MAX	45800	MIN	4410	AC-FT	10024000		

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, 20.5°C July 17; minimum, 2.5°C Dec. 24, 25.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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14166000 WILLAMETTE RIVER AT HARRISBURG, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.0	10.5	9.0	13.0	10.5	17.0	14.0	18.5	16.5	16.0	14.0
2	9.5	7.5	10.5	9.0	13.0	11.0	17.0	14.5	17.5	15.5	16.5	14.5
3	9.5	8.5	10.5	9.5	12.5	11.0	18.0	15.5	18.0	16.0	16.5	15.0
4	9.5	8.5	10.0	9.0	12.0	11.0	18.5	16.0	18.0	16.0	16.5	15.0
5	9.5	8.0	9.5	8.5	11.0	10.0	18.5	16.5	17.5	16.0	16.0	15.0
6	10.0	8.0	10.5	8.5	10.5	10.0	17.5	15.5	17.5	15.0	15.0	14.0
7	10.0	8.5	11.5	9.0	11.0	10.0	17.5	15.5	18.0	15.5	15.5	14.0
8	8.5	7.5	11.5	10.0	11.0	10.0	17.5	15.5	19.0	16.5	16.0	14.5
9	8.5	7.0	10.5	9.0	11.0	10.5	18.0	15.5	19.0	17.0	15.5	15.0
10	9.0	6.5	11.0	9.0	11.5	10.0	18.0	16.0	19.0	17.5	15.0	13.5
11	8.5	8.0	12.0	10.0	12.5	10.5	17.5	16.0	18.5	16.5	15.0	13.5
12	9.5	8.0	12.0	10.0	13.0	11.0	17.5	15.0	17.0	16.0	15.0	13.5
13	10.0	8.0	12.0	11.0	13.0	11.5	18.0	15.5	17.0	15.0	15.5	13.5
14	11.5	8.5	11.5	10.0	14.5	12.0	18.0	16.0	---	---	15.0	14.0
15	11.0	9.5	10.5	9.5	15.0	12.5	19.0	16.5	---	---	16.0	14.5
16	9.5	9.0	11.5	9.0	14.5	12.5	20.0	17.5	---	---	16.0	14.0
17	10.0	8.5	12.5	10.0	14.5	12.0	20.5	18.0	---	---	16.5	14.5
18	10.5	9.0	12.5	10.5	15.0	12.5	19.5	17.5	---	---	16.5	14.5
19	10.0	9.0	12.0	11.0	15.5	13.0	18.5	16.5	---	---	16.5	14.5
20	10.0	8.5	12.0	10.0	15.0	13.0	18.5	16.0	---	---	16.0	14.5
21	10.0	8.5	12.0	10.5	13.0	11.5	18.0	15.5	---	---	15.0	13.5
22	11.0	8.5	11.0	10.0	14.0	11.0	18.0	16.0	17.5	---	14.5	13.5
23	11.0	9.5	11.5	9.5	16.0	12.5	18.5	16.5	17.5	16.0	14.0	13.0
24	10.5	9.0	11.5	10.0	16.5	13.5	19.5	16.5	17.0	15.5	14.0	12.5
25	9.5	8.0	11.0	10.5	17.0	14.5	18.5	17.5	17.0	15.0	14.0	12.5
26	10.5	8.0	11.5	10.0	16.5	14.0	18.5	15.5	17.5	15.5	14.5	12.5
27	11.0	8.5	12.5	10.0	15.5	13.0	18.5	16.5	17.5	15.5	14.5	13.0
28	10.5	9.5	14.0	11.0	16.5	14.0	18.5	16.0	17.5	15.5	14.5	13.0
29	10.5	8.5	15.0	12.0	16.0	14.5	18.5	16.0	16.5	15.0	15.0	13.5
30	10.5	9.0	14.5	11.5	15.5	13.5	19.0	16.5	16.5	15.0	15.0	13.5
31	---	---	12.5	10.0	---	---	19.5	17.0	15.5	14.5	---	---
MONTH	11.5	6.5	15.0	8.5	17.0	10.0	20.5	14.0	---	---	16.5	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 mi².

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.--49 years, 235 ft³/s, 35.74 in/yr, 170,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,990 ft³/s Dec. 22, 1955, gage height, 20.17 ft; minimum, 0.04 ft³/s Aug. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	1600	*4,230	*17.32	No other peak greater than base discharge.			
Minimum, 14 ft ³ /s Sept. 19.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	18	39	282	533	191	403	339	279	112	75	27	22		
2	18	47	249	454	180	363	326	366	111	72	29	22		
3	19	70	226	467	171	340	311	390	110	69	29	22		
4	19	114	197	483	165	318	297	345	148	65	28	19		
5	19	79	278	428	161	293	289	299	159	62	26	20		
6	19	103	692	380	159	276	283	261	186	59	27	36		
7	19	103	1140	311	154	266	275	233	230	55	25	35		
8	18	73	1040	294	154	257	283	216	190	54	22	30		
9	18	78	785	271	179	248	299	202	165	53	21	33		
10	19	103	653	289	293	242	324	193	152	51	20	52		
11	20	185	571	347	300	240	397	202	140	51	21	27		
12	20	169	452	309	653	263	454	194	132	49	23	22		
13	19	340	434	286	3330	314	478	177	126	47	24	20		
14	20	352	483	265	2410	457	405	168	119	52	23	19		
15	36	236	658	244	1130	516	344	165	110	49	23	18		
16	54	205	564	226	897	551	307	160	104	44	20	15		
17	25	517	448	203	697	606	283	152	103	39	19	17		
18	22	720	374	200	575	646	275	145	96	36	19	17		
19	23	494	328	195	504	583	266	143	96	35	19	15		
20	24	651	289	192	449	525	247	146	95	33	19	19		
21	25	659	265	214	439	564	232	135	101	32	19	21		
22	23	386	240	230	427	657	217	143	99	33	19	25		
23	31	345	217	238	393	585	207	178	90	32	19	22		
24	25	675	212	244	544	513	200	153	84	32	20	21		
25	24	805	209	280	1010	459	189	143	82	35	20	20		
26	23	570	200	283	717	444	188	162	81	41	19	20		
27	22	394	195	259	559	440	186	153	92	37	20	19		
28	21	308	183	240	484	409	179	139	87	35	18	20		
29	22	261	219	226	429	387	180	129	86	33	19	19		
30	25	251	746	214	---	368	192	118	85	32	18	17		
31	47	---	716	203	---	353	---	115	---	30	19	---		
TOTAL	737	9332	13545	9008	17754	12886	8452	6004	3571	1422	674	684		
MEAN	23.8	311	437	291	612	416	282	194	119	45.9	21.7	22.8		
MAX	54	805	1140	533	3330	657	478	390	230	75	29	52		
MIN	18	39	183	192	154	240	179	115	81	30	18	15		
CFSM	.27	3.48	4.89	3.26	6.85	4.66	3.16	2.17	1.33	.51	.24	.26		
IN.	.31	3.89	5.64	3.75	7.40	5.37	3.52	2.50	1.49	.59	.28	.28		
AC-FT	1460	18510	26870	17870	35220	25560	16760	11910	7080	2820	1340	1360		
CAL YR 1983	TOTAL	108141	MEAN	296	MAX	2320	MIN	18	CFSM	3.31	IN.	45.05	AC-FT	214500
WTR YR 1984	TOTAL	84069	MEAN	230	MAX	3330	MIN	15	CFSM	2.58	IN.	35.02	AC-FT	166800

WILLAMETTE RIVER BASIN

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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 mi².

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. No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years, 179 ft³/s, 25.56 in/yr, 129,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s Feb. 10, 1961, gage height, 14.43 ft, from rating curve extended above 4,700 ft³/s; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2400	1,700	10.45	Feb. 13	1200	*7,040	*13.44
Minimum, 0.43 ft ³ /s Aug. 27, 28.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2.2	16	245	671	85	256	177	287	33	16	2.8	.80		
2	2.1	25	222	448	77	228	151	305	32	14	2.7	.74		
3	2.1	24	204	411	72	189	129	449	30	13	2.7	.71		
4	2.1	47	165	344	69	159	117	360	43	12	2.6	.71		
5	2.1	41	283	281	66	139	114	267	52	11	2.5	.70		
6	1.8	42	838	235	74	126	103	211	62	11	2.3	.89		
7	2.0	56	1380	203	68	117	102	166	112	9.2	1.5	1.0		
8	1.8	40	1120	175	65	105	428	139	85	9.1	1.7	.95		
9	1.6	27	763	153	87	96	485	124	65	8.8	1.6	.93		
10	1.5	26	658	179	137	99	677	113	66	8.2	1.6	.99		
11	1.5	38	526	257	157	100	694	113	56	7.6	1.4	.98		
12	2.9	42	394	206	404	122	640	98	48	7.3	1.3	.85		
13	3.5	129	358	182	4690	229	461	82	43	7.5	1.3	.72		
14	3.0	185	440	162	2190	323	334	76	40	7.1	.86	.72		
15	2.9	118	614	141	1160	342	265	94	37	6.8	.98	.70		
16	2.7	97	537	123	852	349	221	87	32	6.2	1.6	.64		
17	2.7	332	399	107	561	472	189	71	28	5.6	1.2	.92		
18	2.8	635	308	97	399	416	171	62	25	4.6	1.1	1.1		
19	3.9	565	289	94	337	407	156	59	23	4.1	1.1	.93		
20	3.1	616	240	95	330	383	134	59	23	3.5	1.0	.82		
21	2.7	644	204	127	522	573	111	56	29	3.6	1.0	.69		
22	2.9	413	165	143	410	560	103	58	32	3.4	1.0	.70		
23	3.2	343	131	147	326	410	88	102	26	3.0	1.0	.69		
24	3.4	607	147	127	624	302	80	71	22	3.0	.76	.66		
25	4.2	741	155	141	1110	266	78	59	19	3.0	.66	.64		
26	3.8	622	122	134	790	379	76	60	18	3.3	.58	.65		
27	3.6	357	122	117	479	350	73	65	19	3.6	.47	.65		
28	3.2	259	123	109	352	258	65	52	19	3.7	.67	.72		
29	3.2	201	188	105	278	227	79	44	18	3.3	1.0	.75		
30	3.1	205	847	99	---	189	139	40	18	3.1	1.0	.70		
31	5.1	---	931	92	---	180	---	36	---	3.0	.93	---		
TOTAL	86.7	7493	13118	5905	16771	8351	6640	3865	1155	208.6	42.91	23.65		
MEAN	2.80	250	423	190	578	269	221	125	38.5	6.73	1.38	.79		
MAX	5.1	741	1380	671	4690	573	694	449	112	16	2.8	1.1		
MIN	1.5	16	122	92	65	96	65	36	18	3.0	.47	.64		
CFSM	.03	2.63	4.45	2.00	6.08	2.83	2.32	1.31	.40	.07	.01	.01		
IN.	.03	2.93	5.13	2.31	6.56	3.27	2.60	1.51	.45	.08	.02	.01		
AC-FT	172	14860	26020	11710	33270	16560	13170	7670	2290	414	85	47		
CAL YR 1983	TOTAL	84920.76	MEAN	233	MAX	3330	MIN	.56	CFSM	2.45	IN.	33.22	AC-FT	168400
WTR YR 1984	TOTAL	63659.86	MEAN	174	MAX	4690	MIN	.47	CFSM	1.83	IN.	24.90	AC-FT	126300

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 mi², 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 mi².

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, 101,800 acre-ft May 1, elevation, 373.58 ft; minimum, 6,750 acre-ft Dec. 17, elevation, 352.71 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	371.04	362.08	353.48	353.23	358.15	366.97	371.46	373.47	373.46	373.50	373.00	372.32
2	370.81	361.61	353.32	353.07	358.35	367.15	371.58	373.38	373.46	373.50	372.98	372.31
3	370.60	361.16	353.20	353.20	358.54	367.29	371.67	373.39	373.50	373.49	372.96	372.29
4	370.35	360.62	353.06	352.96	358.71	367.39	371.77	373.41	373.50	373.48	372.94	372.26
5	370.12	360.01	353.58	353.00	358.87	367.50	371.87	373.43	373.45	373.47	372.92	372.27
6	369.85	359.47	355.23	353.04	359.05	367.64	371.95	373.41	373.48	373.44	372.90	372.28
7	369.63	358.81	356.30	353.08	359.20	367.77	372.09	373.41	373.47	373.43	372.88	372.26
8	369.37	358.04	355.99	353.08	359.35	367.89	372.40	373.43	373.47	373.42	372.86	372.25
9	369.11	357.25	354.87	352.94	359.64	368.00	372.62	373.46	373.49	373.41	372.84	372.23
10	368.86	356.45	353.82	353.28	360.03	368.13	372.87	373.49	373.50	373.40	372.82	372.23
11	368.62	355.64	353.46	353.18	360.41	368.29	373.01	373.49	373.51	373.38	372.78	372.21
12	368.37	355.02	353.13	353.04	361.71	368.43	373.07	373.48	373.52	373.36	372.76	372.18
13	368.10	354.79	353.37	352.96	366.27	368.77	373.09	373.46	373.53	373.34	372.74	372.18
14	367.83	354.57	353.81	353.04	368.29	369.09	373.12	373.47	373.54	373.34	372.72	372.17
15	367.56	353.61	353.51	353.17	368.53	369.38	373.10	373.51	373.55	373.32	372.71	372.15
16	367.28	353.35	352.97	353.17	368.23	369.59	373.13	373.51	373.54	373.31	372.68	372.14
17	366.99	353.75	352.79	353.08	367.79	369.90	373.26	373.49	373.54	373.29	372.66	372.13
18	366.72	353.43	352.77	353.08	367.22	370.03	373.37	373.49	373.55	373.27	372.63	372.11
19	366.43	353.18	352.77	353.07	366.54	370.08	373.44	373.50	373.55	373.24	372.60	372.11
20	366.14	354.07	352.86	353.34	365.88	370.16	373.48	373.51	373.55	373.20	372.59	372.10
21	365.84	353.96	353.00	353.97	365.50	370.43	373.52	373.50	373.53	373.17	372.57	372.08
22	365.55	353.44	353.00	354.65	365.37	370.60	373.49	373.54	373.51	373.17	372.55	372.08
23	365.24	353.62	352.98	355.19	365.27	370.68	373.47	373.52	373.50	373.14	372.53	372.06
24	364.93	353.95	353.09	355.62	365.66	370.68	373.48	373.47	373.49	373.15	372.51	372.05
25	364.60	354.25	353.20	356.09	366.27	370.68	373.50	373.50	373.49	373.13	372.49	372.03
26	364.25	353.75	353.17	356.50	366.52	370.76	373.52	373.48	373.50	373.11	372.48	372.02
27	363.90	353.09	353.07	356.85	366.56	370.83	373.50	373.48	373.52	373.09	372.44	371.99
28	363.54	353.08	353.10	357.16	366.63	370.93	373.50	373.47	373.51	373.08	372.41	371.98
29	363.18	353.12	353.48	357.45	366.78	371.05	373.51	373.47	373.52	373.06	372.40	371.98
30	362.86	353.48	354.00	357.69	---	371.18	373.52	373.45	373.51	373.04	372.37	371.96
31	362.48	---	353.70	357.93	---	371.32	---	373.44	---	373.03	372.35	---
MEAN	367.10	355.76	353.55	354.23	363.63	369.31	372.91	373.47	373.51	373.28	372.68	372.15
MAX	371.04	362.08	356.30	357.93	368.53	371.32	373.52	373.54	373.55	373.50	373.00	372.32
MIN	362.48	353.08	352.77	352.94	358.15	366.97	371.46	373.38	373.45	373.03	372.35	371.96
(+)	31270	7920	8270	16850	51130	82100	101300	100500	101200	96750	90720	87380
(+)	-50420	-23350	+350	+8580	+34280	+30970	+19200	-800	+700	-4450	-6030	-3340
CAL YR 1983	MEAN 366.87		MAX 373.61	MIN 352.42	AC-FT# +1910							
WTR YR 1984	MEAN 366.80		MAX 373.55	MIN 352.77	AC-FT# +5690							

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

+ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

205

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 mi², 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.--45 years, 538 ft³/s, 389,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s Jan. 1, 1943, gage height, 15.12 ft, site and datum then in use; minimum daily, 2 ft³/s Aug. 7, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,580 ft³/s Dec. 8, Feb. 15; minimum daily, 25 ft³/s Mar. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	844	846	831	2010	63	319	46	1180	51	50	48	53
2	836	946	784	1460	62	258	46	1280	51	50	51	53
3	789	999	691	1270	61	254	46	1040	50	50	48	41
4	861	1070	592	1250	61	255	46	798	357	49	46	40
5	855	1100	597	935	62	180	46	575	434	49	46	50
6	850	1100	1410	790	62	63	46	575	421	39	46	48
7	843	1080	2490	667	62	64	46	448	430	33	46	38
8	856	1090	3330	605	58	64	48	288	278	31	46	32
9	864	1080	3390	605	56	47	338	232	169	31	46	28
10	857	1090	2710	604	53	26	857	235	132	31	46	28
11	783	1010	1700	873	50	26	1160	375	131	31	46	32
12	834	894	1340	758	55	25	1420	379	133	37	47	35
13	838	877	934	634	86	29	1090	344	77	41	47	35
14	826	872	1160	490	883	27	815	257	51	41	47	35
15	839	1070	1840	424	2980	329	815	216	51	41	47	35
16	859	688	1730	425	3490	600	487	254	52	41	40	35
17	850	1020	1210	425	3080	608	49	268	51	41	35	34
18	785	1950	924	357	3010	918	49	190	52	47	35	37
19	802	1710	822	370	3040	1230	212	151	52	49	35	40
20	786	1440	641	227	2880	1060	221	151	115	45	35	40
21	790	1780	529	117	2260	903	230	218	239	43	35	40
22	787	1550	492	120	1340	911	493	270	192	43	35	40
23	771	1040	351	120	1190	917	326	370	129	42	35	38
24	757	1590	314	120	936	924	238	402	78	42	35	37
25	782	1940	359	123	958	920	239	254	50	42	35	37
26	783	1950	441	123	1240	916	239	177	49	42	35	33
27	761	1420	482	109	1190	682	312	180	49	42	40	30
28	767	815	419	99	819	398	327	183	49	42	59	30
29	769	610	455	100	495	251	344	184	49	42	65	30
30	763	615	1770	100	---	109	498	117	50	42	64	30
31	775	---	2420	79	---	46	---	65	---	42	58	---
TOTAL	25162	35242	37158	16389	30582	13359	11129	11656	4072	1291	1379	1114
MEAN	812	1175	1199	529	1055	431	371	376	136	41.6	44.5	37.1
MAX	864	1950	3390	2010	3490	1230	1420	1280	434	50	65	53
MIN	757	610	314	79	50	25	46	65	49	31	35	28
AC-FT	49910	69900	73700	32510	60660	26500	22070	23120	8080	2560	2740	2210
CAL YR 1983	TOTAL	259259	MEAN	710	MAX	4540	MIN	29	AC-FT	514200		
WTR YR 1984	TOTAL	188533	MEAN	515	MAX	3490	MIN	25	AC-FT	374000		

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 mi².

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 above 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 upstream from station.

AVERAGE DISCHARGE.--61 years (water years 1922-25, 1928-84), 777 ft³/s, 562,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/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 ft³/s Sept. 29, Oct. 1, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,000 ft³/s Feb. 13, gage height, 8.64 ft; minimum, 14 ft³/s Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	872	868	1420	3070	203	718	277	1390	125	84	19	30
2	861	971	1300	2260	191	561	257	1980	123	73	27	34
3	803	1070	1040	2070	186	522	231	1600	125	65	29	36
4	888	1140	921	1850	183	480	219	1330	295	68	29	22
5	885	1190	1050	1520	178	447	219	882	629	65	36	25
6	874	1210	2240	1200	176	262	218	847	529	51	33	41
7	868	1190	3810	1070	178	242	214	732	711	35	28	43
8	879	1170	4530	904	176	232	567	524	468	36	27	37
9	894	1190	4340	874	198	217	629	390	327	34	26	31
10	889	1170	4010	993	366	188	1850	388	232	31	25	26
11	822	1190	2640	1360	343	192	1840	481	224	28	25	26
12	858	1020	2050	1240	1010	244	2270	599	215	26	33	31
13	878	1120	1670	951	5160	509	1850	502	195	27	31	28
14	866	1210	1870	812	2730	702	1280	444	130	27	27	28
15	866	1200	2710	641	3950	722	1210	354	119	30	36	28
16	899	1150	2620	628	4630	1250	1060	381	115	30	35	27
17	895	1300	2010	614	4030	1470	306	404	113	22	27	25
18	833	2760	1400	552	3710	1510	278	354	104	20	28	23
19	844	2620	1280	484	3780	1950	303	261	96	30	29	25
20	828	2330	1070	490	3650	1760	547	260	111	33	29	28
21	824	2470	849	304	3470	1930	262	286	248	26	27	29
22	833	2350	726	368	2040	1660	682	367	316	31	25	34
23	815	1550	748	362	1720	1470	581	496	184	30	22	35
24	799	2450	750	332	2140	1380	391	554	152	21	20	32
25	808	2930	749	359	2120	1340	384	457	87	24	19	33
26	829	2720	746	357	2010	1530	377	288	85	25	20	35
27	807	2170	713	316	1830	1310	423	281	101	24	19	29
28	799	1340	651	277	1440	819	473	275	93	24	19	25
29	807	966	669	270	952	533	496	270	89	28	39	26
30	816	989	2510	260	---	427	637	240	86	26	36	26
31	811	---	3700	246	---	269	---	154	---	20	35	---
TOTAL	26250	47004	56792	27034	52750	26846	20331	17771	6427	1094	860	898
MEAN	847	1567	1832	872	1819	866	678	573	214	35.3	27.7	29.9
MAX	899	2930	4530	3070	5160	1950	2270	1980	711	84	39	43
MIN	799	868	651	246	176	188	214	154	85	20	19	22
AC-FT	52070	93230	112600	53620	104600	53250	40330	35250	12750	2170	1710	1780
CAL YR 1983	TOTAL	388106	MEAN	1063	MAX	5680	MIN	25	AC-FT	769800		
WTR YR 1984	TOTAL	284057	MEAN	776	MAX	5160	MIN	19	AC-FT	563400		

WILLAMETTE RIVER BASIN

207

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 mi², 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 poor. 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.--44 years, 463 ft³/s, 39.54 in/yr, 335,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s Dec. 22, 1964, gage height, 20.72 ft; maximum gage height, 20.91 ft Jan. 15, 1974; minimum discharge, 0.60 ft³/s Aug. 23, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 3,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	1200	*6,240	*20.36	No other peak greater than base discharge.			
Minimum, 19 ft ³ /s Sept. 29, 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	20	41	701	1720	635	832	491	488	237	163	46	22		
2	20	44	620	1490	548	734	453	611	224	149	43	23		
3	21	84	602	1780	480	643	420	826	216	138	41	23		
4	20	344	544	1950	423	571	395	773	271	131	41	22		
5	20	224	673	1540	381	520	383	664	304	126	40	22		
6	20	184	1180	1230	348	470	373	580	413	121	40	33		
7	20	200	1630	1050	312	426	416	497	720	115	38	39		
8	21	152	2050	909	304	395	666	444	627	110	36	45		
9	21	160	1990	806	399	371	651	405	539	107	34	41		
10	20	171	2000	849	828	355	965	373	511	105	32	33		
11	20	354	2120	1270	887	349	945	368	446	102	30	30		
12	20	416	1730	1110	1160	399	1190	371	389	100	30	27		
13	21	652	1680	932	4840	558	1060	340	344	95	32	25		
14	21	898	2080	804	3380	906	890	319	298	92	31	25		
15	22	722	2550	691	2250	1030	752	316	262	90	29	23		
16	22	792	1940	604	1890	1000	630	301	243	84	27	22		
17	20	1240	1420	528	1400	1210	550	279	231	79	25	21		
18	21	1530	1080	468	1150	1130	508	262	224	74	25	20		
19	22	1500	874	420	1000	1000	459	253	209	71	25	20		
20	22	1650	744	365	897	867	436	259	199	68	26	23		
21	22	1630	622	389	901	1010	406	244	234	64	24	23		
22	23	1290	525	564	830	1030	374	250	231	63	23	22		
23	28	1150	453	692	779	929	350	321	203	59	22	23		
24	32	1610	422	1190	1610	810	336	279	184	56	22	22		
25	27	2040	414	1880	2120	731	327	283	177	63	22	22		
26	25	1640	372	1830	1630	820	310	392	175	70	23	22		
27	24	1170	357	1460	1270	757	286	383	179	64	23	21		
28	24	937	309	1190	1070	694	272	354	175	58	22	20		
29	23	748	528	1020	908	642	269	316	184	54	21	19		
30	24	714	1870	850	---	573	305	283	188	56	21	19		
31	35	---	2130	739	---	529	---	258	---	50	21	---		
TOTAL	701	24287	36210	32320	34630	22291	15868	12092	8837	2777	915	752		
MEAN	22.6	810	1168	1043	1194	719	529	390	295	89.6	29.5	25.1		
MAX	35	2040	2550	1950	4840	1210	1190	826	720	163	46	45		
MIN	20	41	309	365	304	349	269	244	175	50	21	19		
CFSM	.14	5.09	7.35	6.56	7.51	4.52	3.33	2.45	1.86	.56	.19	.16		
IN.	.16	5.68	8.47	7.56	8.10	5.22	3.71	2.83	2.07	.65	.21	.18		
AC-FT	1390	48170	71820	64110	68690	44210	31470	23980	17530	5510	1810	1490		
CAL YR 1983	TOTAL	226148	MEAN	620	MAX	4740	MIN	20	CFSM	3.90	IN.	52.91	AC-FT	448600
WTR YR 1984	TOTAL	191680	MEAN	524	MAX	4840	MIN	19	CFSM	3.30	IN.	44.85	AC-FT	380200

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 mi², 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, 22.5°C July 17; minimum recorded, 2.0°C Dec. 24, 25.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14172000 CALAPOOIA RIVER AT HOLLEY, OR

LOCATION.--Lat 44°21'05", long 122°47'10", in SE 1/4 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 mi².

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.--49 years, 442 ft³/s, 57.17 in/yr, 320,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/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 ft³/s Sept. 8, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 3,400 ft³/s and maximum (?):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	0900	*7,580	*9.34	No other peak greater than base discharge.			
Minimum, 34 ft ³ /s Oct. 8, 9, Sept. 28-30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	35	81	660	850	334	751	723	965	274	230	68	45		
2	35	109	700	748	303	763	630	1320	252	210	68	41		
3	35	157	700	911	279	660	556	1460	236	190	65	39		
4	36	461	550	928	261	575	501	1110	444	180	64	37		
5	36	257	600	755	243	513	467	926	583	170	63	43		
6	35	597	1100	638	233	479	425	820	972	160	63	70		
7	35	555	1540	562	218	450	461	713	2190	155	61	60		
8	35	337	1560	516	209	427	829	630	1410	150	58	70		
9	34	263	1250	444	231	453	781	556	1100	140	56	52		
10	37	229	1680	512	239	471	1140	494	923	130	55	46		
11	40	246	1320	676	329	467	1020	516	764	123	53	43		
12	37	269	1010	576	1320	536	1090	485	638	120	53	42		
13	35	498	985	498	5770	639	999	435	541	115	53	40		
14	36	490	2030	434	2520	784	942	432	467	110	52	39		
15	38	537	2120	382	1540	868	927	445	406	110	50	38		
16	36	550	1330	346	1260	909	776	412	358	105	49	37		
17	37	1030	985	315	985	975	655	366	322	105	47	36		
18	41	1290	805	290	833	984	621	332	292	96	46	35		
19	38	1130	699	275	735	1190	633	312	267	93	46	36		
20	36	1390	595	257	765	1220	616	330	331	90	45	38		
21	35	1100	514	280	951	1460	569	284	682	87	44	39		
22	47	700	440	396	822	1240	513	298	591	86	43	39		
23	72	750	382	435	746	1030	472	548	430	85	43	47		
24	48	1300	355	848	971	853	431	459	352	84	43	49		
25	41	1200	368	1050	1210	808	413	435	305	81	42	42		
26	38	1100	452	890	936	1590	391	677	287	81	41	39		
27	36	950	394	695	784	1270	363	547	287	77	40	37		
28	36	950	350	565	737	1030	338	449	248	75	39	35		
29	35	800	548	480	681	936	328	385	274	74	39	34		
30	42	740	1500	418	---	822	421	349	250	71	38	34		
31	90	---	1130	371	---	729	---	308	---	69	41	---		
TOTAL	1247	20066	28652	17341	26445	25882	19031	17798	16476	3652	1568	1282		
MEAN	40.2	669	924	559	912	835	634	574	549	118	50.6	42.7		
MAX	90	1390	2120	1050	5770	1590	1140	1460	2190	230	68	70		
MIN	34	81	350	257	209	427	328	284	236	69	38	34		
CFSM	.38	6.37	8.80	5.32	8.69	7.95	6.04	5.47	5.23	1.12	.48	.41		
IN.	.44	7.11	10.15	6.14	9.37	9.17	6.74	6.31	5.84	1.29	.56	.45		
AC-FT	2470	39800	56830	34400	52450	51340	37750	35300	32680	7240	3110	2540		
CAL YR 1983	TOTAL	174680	MEAN	479	MAX	3930	MIN	34	CFSM	4.56	IN.	61.89	AC-FT	346500
WTR YR 1984	TOTAL	179440	MEAN	490	MAX	5770	MIN	34	CFSM	4.67	IN.	63.57	AC-FT	355900

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, 25.5°C Aug. 9, 10; minimum, 0.5°C Dec. 23, 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14172000 CALAPOOIA RIVER AT HOLLEY, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 mi².

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, 25.5°C Aug. 9, 10; minimum recorded, 0.0°C Dec. 23-26.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	13.0	12.5	12.0	6.0	5.5	5.0	4.5	5.5	5.0	9.0	7.5
2	14.5	13.5	12.5	12.0	6.5	5.5	5.5	5.0	6.0	5.0	10.0	8.0
3	16.0	13.5	13.0	12.5	7.0	6.5	8.5	5.5	5.5	5.0	---	---
4	16.0	14.5	13.0	12.5	7.0	6.5	9.5	8.5	5.5	4.5	---	---
5	15.5	13.5	12.5	11.0	6.5	6.0	9.0	9.0	6.0	4.5	---	---
6	15.5	14.0	11.0	10.5	6.5	6.5	9.0	9.0	7.0	5.5	---	---
7	14.5	13.0	10.5	9.5	6.5	6.5	9.0	8.5	7.5	6.5	---	---
8	14.0	13.0	9.5	8.5	7.0	6.5	8.5	8.0	8.5	7.5	---	---
9	13.5	13.0	8.5	8.0	7.5	7.0	8.0	7.5	8.5	7.5	---	---
10	15.0	13.0	9.5	8.0	8.5	7.5	7.5	7.5	8.0	7.5	---	---
11	15.0	13.0	10.0	9.5	8.5	7.5	7.5	7.5	8.0	7.5	---	---
12	14.5	13.0	10.0	10.0	7.5	7.0	7.5	7.0	9.0	7.5	---	---
13	13.5	13.0	10.0	9.0	8.0	7.0	7.0	5.5	9.5	9.0	---	---
14	14.0	12.5	9.0	8.5	8.5	8.0	5.5	4.0	9.0	7.0	---	---
15	14.0	12.5	9.0	8.5	8.5	8.0	4.0	3.0	7.0	7.0	---	---
16	12.5	11.5	10.0	9.0	8.0	7.0	3.0	2.5	7.0	7.0	---	---
17	13.5	12.0	10.0	9.5	7.0	6.5	2.5	2.0	7.0	6.5	---	---
18	12.5	11.5	9.5	8.5	6.5	6.0	2.0	1.5	7.5	7.0	---	---
19	12.0	11.5	9.0	8.5	6.0	6.0	2.5	2.0	8.0	7.5	---	---
20	13.0	11.5	9.0	8.0	6.0	5.0	3.0	2.5	8.5	8.0	---	---
21	12.5	12.0	8.0	7.5	5.0	3.0	3.5	3.0	8.0	7.0	---	---
22	13.0	12.5	7.5	7.5	3.0	1.0	5.5	3.5	7.0	6.5	---	---
23	13.5	12.0	8.0	7.5	1.0	.0	7.0	5.5	7.0	7.0	---	---
24	12.5	11.5	9.0	8.0	.0	.0	8.0	7.0	7.0	6.5	---	---
25	12.0	10.5	9.0	8.0	.0	.0	8.5	8.0	7.0	6.5	---	---
26	12.0	10.5	8.0	7.5	1.0	.0	8.5	7.5	8.0	7.0	---	---
27	11.5	10.5	8.5	7.5	3.0	1.0	7.5	6.5	9.0	8.0	---	---
28	11.0	11.0	9.0	8.5	3.0	3.0	6.5	6.0	9.5	8.5	---	---
29	11.0	10.5	9.0	8.0	3.0	2.5	6.5	6.0	9.5	7.5	---	---
30	12.0	11.0	8.0	6.0	2.5	2.0	6.5	6.0	---	---	---	---
31	12.0	11.5	---	---	4.5	2.5	6.0	5.5	---	---	---	---
MONTH	16.0	10.5	13.0	6.0	8.5	.0	9.5	1.5	9.5	4.5	---	---

WILLAMETTE RIVER BASIN

14173500 CALAPOOIA RIVER AT ALBANY, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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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.

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.--90 years (water years 1894, 1896-84). 14.550 ft³/s. 40.82 in/yr. 10,540,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 266,000 ft³/s Jan. 14, 1881, gage height, 37.8 ft, present datum; minimum, 1,840 ft³/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 ft³/s, from rating curve extended above 220,000 ft³/s. Flood of Feb. 4, 1890, reached a stage of 38.9 ft, discharge, 291,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 74,000 ft³/s Feb. 15, gage height, 22.43 ft; minimum, 5,010 ft³/s Aug. 8, 9.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8690	10300	27200	45500	15400	18800	21400	12200	14900	10600	5300	6490
2	8670	10500	26000	38000	13900	18600	20000	17900	13900	10200	5340	6530
3	8650	11000	23800	33000	12900	17800	18900	22400	12200	9290	5300	6490
4	8670	12000	22600	31600	10900	16700	18200	28200	11700	8170	5350	6430
5	8680	13700	21400	32100	9500	15700	17400	28400	14900	7570	5380	6860
6	8630	13400	23700	29900	8900	14400	15900	25400	20200	7370	5400	7980
7	8410	15800	35000	27600	8580	12400	14900	23300	28000	7130	5230	8920
8	8320	15500	46900	25700	8300	11600	17200	20900	40900	6990	5050	9180
9	8330	14500	47100	24200	8230	11200	23900	17700	46300	6960	5140	9390
10	8370	14300	45800	23200	9410	11100	26100	15600	39900	6800	5270	9520
11	8400	14100	44200	26100	9850	11200	33200	14500	31400	6560	5200	9770
12	8330	13500	38900	25300	12200	11500	34500	16800	27200	6520	5480	10800
13	8610	14100	33400	22500	32100	12900	33700	16600	22800	6250	5570	10700
14	8760	17400	34500	19900	65900	16000	28900	16300	18900	6150	5470	10900
15	8700	18100	45600	17700	67800	17700	25200	16700	16900	6050	5390	10900
16	8680	18400	55600	16200	53100	19200	23500	17000	15300	5780	5340	10500
17	8970	18800	48100	15300	51300	21800	20800	16900	14200	5530	5300	10100
18	9220	26900	42800	13800	43900	22700	18100	15300	13600	5440	5230	9490
19	9130	32800	40300	13000	37100	23400	17400	13500	13000	5440	5170	9130
20	9080	31000	39300	12300	33600	24600	17500	12400	11800	5420	5200	9020
21	9140	34000	36900	11300	33600	27400	17200	12500	11900	5370	5250	8920
22	9470	31000	32900	11700	33300	33300	17000	13000	14500	5500	5350	8950
23	9660	27400	26800	13100	27500	31600	16600	14000	14600	5360	5620	9040
24	9730	30400	22000	14000	27500	28500	15500	16800	13000	5240	5810	9220
25	9590	40600	21100	17900	35200	24000	13800	17700	11600	5130	5730	9170
26	9450	44600	20800	20900	32100	24500	12700	17400	11100	5050	5690	9110
27	9440	40100	21800	21100	26100	33200	11600	18000	11100	5140	5830	8830
28	9900	33700	21800	20900	22100	34800	10300	17100	11300	5180	5830	8960
29	9800	29300	20400	19000	20300	33700	9880	15800	11300	5230	5880	8930
30	9600	26100	27800	18000	---	30600	10000	15100	10900	5270	6260	8850
31	9790	---	44800	16800	---	25400	---	15500	---	5260	6330	---
TOTAL	278870	673300	1039300	677600	770570	656300	581280	540900	549300	1		

1417R000 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 mi².

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.--58 years, 1,010 ft³/s, 63.50 in/yr, 731,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft³/s Dec. 22, 1964, gage height, 13.76 ft, temporary backwater from debris, from rating curve extended above 6,600 ft³/s on basis of slope-area measurement of peak flow; minimum, 250 ft³/s Sept. 13, 1909.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2000	*5,210	*7.20	Feb. 13	0730	5,190	7.19
Jan. 3	1800	4,110	6.69				

Minimum, 436 ft³/s Oct. 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	459	495	995	1550	1110	1190	1250	1180	1350	956	550	482
2	458	521	943	1450	1040	1210	1190	1830	1250	913	535	475
3	455	620	892	2930	995	1130	1140	1900	1170	899	524	470
4	454	781	839	3350	971	1070	1100	1680	1430	885	517	466
5	458	647	837	2700	967	1030	1090	1550	1750	858	520	489
6	459	1110	850	2260	956	1020	1060	1430	1860	851	512	563
7	455	927	1030	2010	940	1020	1080	1360	2170	812	503	576
8	451	747	1270	1860	918	1050	1210	1350	1980	767	504	536
9	461	709	1260	1630	931	1230	1150	1340	1820	755	511	511
10	461	741	1830	1580	911	1410	1280	1280	1660	743	511	486
11	457	820	1640	1520	929	1460	1210	1480	1490	731	510	478
12	453	784	1440	1390	2070	1510	1370	1600	1410	719	506	472
13	453	834	2440	1280	4420	1600	1310	1610	1350	695	494	467
14	461	897	3880	1170	2900	1850	1350	1780	1280	672	489	461
15	457	1200	3680	1080	2220	1880	1540	1560	1270	683	485	461
16	448	1260	2490	1020	1880	1830	1470	1410	1250	683	488	460
17	453	1680	1910	962	1600	1740	1370	1310	1180	678	492	460
18	453	1570	1600	914	1420	1620	1330	1270	1130	666	492	460
19	448	1680	1410	883	1320	1720	1290	1290	1090	639	485	465
20	448	1870	1250	845	1320	1960	1220	1430	1180	611	478	484
21	444	1430	1100	873	1370	2200	1150	1320	1440	606	475	474
22	502	1190	996	999	1260	2020	1120	1320	1280	596	480	488
23	483	1160	936	1030	1200	1870	1130	1800	1200	601	479	527
24	457	2160	956	2010	1230	1700	1090	1570	1200	601	475	481
25	448	1860	915	2710	1180	1590	1050	1590	1170	617	471	469
26	444	1490	834	2270	1100	1730	990	2120	1140	596	471	462
27	440	1350	798	1810	1060	1610	943	1820	1160	570	477	456
28	436	1290	776	1560	1030	1510	917	1700	1140	560	479	452
29	436	1170	1230	1400	1020	1400	891	1810	1170	545	472	448
30	466	1090	2410	1280	---	1310	915	1820	1040	550	473	453
31	514	---	1930	1180	---	1270	---	1540	---	550	492	---
TOTAL	14172	34083	45367	49506	40268	46740	35206	48050	41010	21608	15350	14432
MEAN	457	1136	1463	1597	1389	1508	1174	1550	1367	697	495	481
MAX	514	2160	3880	3350	4420	2200	1540	2120	2170	956	550	576
MIN	436	495	776	845	911	1020	891	1180	1040	545	471	448
CFSM	2.12	5.26	6.77	7.39	6.43	6.98	5.44	7.18	6.33	3.23	2.29	2.23
IN.	2.44	5.87	7.81	8.53	6.94	8.05	6.06	8.28	7.06	3.72	2.64	2.49
AC-FT	28110	67600	89990	98200	79870	92710	69830	95310	81340	42860	30450	28630
CAL YR 1983	TOTAL	417144	MEAN	1143	MAX	5620	MIN	436	CFSM	5.29	IN.	71.84
WTR YR 1984	TOTAL	405792	MEAN	1109	MAX	4420	MIN	436	CFSM	5.13	IN.	69.89
											AC-FT	827400
											AC-FT	804900

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 on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.5°C Aug. 9, 10; minimum, 0.5°C Dec. 21-25.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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14178700 EAST HUMBURG CREEK NEAR DETROIT, OR

LOCATION.--Lat 44°47'57", long 122°03'28", in NW¼ 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 mi².

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.--6 years, 40.2 ft³/s, 74.58 in/yr, 29,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,310 ft³/s Dec. 25, 1980, gage height, 4.42 ft; minimum, 1.8 ft³/s Sept. 6-9, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	0330	285	3.40	Jan. 3	1700	305	3.44
Dec. 14	1730	305	3.44	Feb. 12	1600	*553	*3.80
Dec. 30	0100	290	3.41				

Minimum, 2.5 ft³/s Sept. 4, 17, 18, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	3.4	7.9	42	68	37	85	52	66	35	16	5.8	3.1		
2	3.4	12	37	62	33	80	48	126	32	15	5.4	2.9		
3	3.4	36	33	237	31	64	44	110	29	14	5.1	2.8		
4	3.4	56	29	225	32	55	41	82	49	14	5.0	2.7		
5	3.4	33	28	142	32	51	40	66	58	14	4.9	4.6		
6	3.3	104	28	106	31	57	37	61	65	13	4.9	7.7		
7	3.4	61	46	88	29	61	41	58	73	13	4.6	8.9		
8	3.4	42	84	75	28	64	53	57	61	12	4.4	5.3		
9	3.4	37	72	61	29	73	52	54	57	12	4.3	3.9		
10	3.3	41	175	62	28	81	63	49	52	11	4.2	3.5		
11	3.4	50	100	61	35	79	57	84	46	11	4.1	3.3		
12	3.3	48	80	55	290	81	70	80	40	11	4.1	3.3		
13	3.3	56	267	49	273	87	69	69	36	9.9	4.0	3.0		
14	3.5	93	274	42	119	115	89	64	32	9.6	3.9	2.9		
15	3.4	142	187	37	81	120	98	55	28	9.4	3.8	2.9		
16	3.3	140	100	33	73	113	70	50	27	9.2	3.7	2.8		
17	3.4	186	70	31	58	108	58	47	24	8.9	3.6	2.7		
18	3.3	135	55	31	50	93	53	45	23	8.6	3.6	2.7		
19	3.3	146	46	28	46	112	51	46	21	8.0	3.4	2.8		
20	3.3	161	39	24	55	122	49	48	22	7.8	3.4	2.9		
21	3.3	88	37	23	63	128	47	42	36	7.7	3.3	2.8		
22	8.8	62	34	45	52	121	46	47	32	7.4	3.3	4.6		
23	5.3	74	32	56	47	97	46	80	26	7.3	3.3	4.9		
24	3.7	251	30	148	52	77	42	61	23	7.1	3.2	3.2		
25	3.4	134	29	196	48	67	37	61	21	6.8	3.2	2.9		
26	3.3	81	28	120	42	77	34	77	20	6.6	3.1	2.8		
27	3.3	78	26	79	40	71	32	63	20	6.3	3.0	2.6		
28	3.3	78	25	61	45	63	31	56	18	6.2	3.0	2.6		
29	3.1	62	100	52	48	58	29	52	18	6.0	2.9	2.5		
30	4.9	50	196	47	---	54	32	47	17	5.8	2.9	2.5		
31	8.5	---	107	42	---	53	---	40	---	5.9	3.2	---		
TOTAL	118.2	2544.9	2436	2386	1827	2567	1511	1943	1041	300.5	120.6	106.1		
MEAN	3.81	84.8	78.6	77.0	63.0	82.8	50.4	62.7	34.7	9.69	3.89	3.54		
MAX	8.8	251	274	237	290	128	98	126	73	16	5.8	8.9		
MIN	3.1	7.9	25	23	28	51	29	40	17	5.8	2.9	2.5		
CFSM	.52	11.6	10.7	10.5	8.61	11.3	6.89	8.57	4.74	1.32	.53	.48		
IN.	.60	12.93	12.38	12.13	9.28	13.05	7.68	9.87	5.29	1.53	.61	.54		
AC-FT	234	5050	4830	4730	3620	5090	3000	3850	2060	596	239	210		
CAL. YR 1983	TOTAL	17346.6	MEAN	47.5	MAX	624	MIN	3.1	CFSM	6.49	IN.	88.15	AC-FT	34410
WTR YR 1984	TOTAL	16901.3	MEAN	46.2	MAX	290	MIN	2.5	CFSM	6.31	IN.	85.89	AC-FT	33520

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 mi².

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.--52 years, 580 ft³/s, 74.31 in/yr, 420,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s Dec. 22, 1964, gage height, 14.55 ft; minimum, 87 ft³/s Sept. 2, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,850 ft³/s Jan. 3, gage height, 7.22 ft, no peak above base of 4,000 ft³/s; minimum, 132 ft³/s Oct. 19-22, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	144	192	571	938	564	736	618	586	625	462	239	159		
2	144	226	520	868	514	785	571	1050	568	478	234	154		
3	143	382	474	2750	478	694	531	1090	531	465	230	151		
4	142	606	436	2740	465	617	501	886	816	453	222	148		
5	142	410	429	1970	458	564	492	761	1090	444	217	163		
6	140	1080	449	1550	447	556	464	681	1060	438	215	230		
7	139	789	635	1320	429	570	483	622	1190	383	212	244		
8	138	544	1010	1140	410	589	583	608	1010	363	210	201		
9	138	457	913	947	420	669	572	606	909	352	205	179		
10	140	476	1510	911	414	790	749	564	815	348	202	167		
11	137	601	1200	892	453	799	704	738	718	348	199	162		
12	136	573	956	808	1700	810	846	837	665	346	193	161		
13	135	647	1900	705	3100	871	816	838	661	337	188	154		
14	140	883	2490	619	1890	1130	821	954	650	326	182	149		
15	138	1220	2160	550	1380	1230	981	742	661	330	180	147		
16	135	1230	1490	503	1160	1210	866	624	659	342	177	144		
17	138	1610	1120	460	920	1170	732	565	591	339	177	142		
18	139	1510	897	428	764	1080	671	548	547	323	177	140		
19	135	1480	752	403	680	1220	632	597	537	297	174	140		
20	134	1620	638	377	709	1450	585	708	603	284	168	147		
21	132	1140	543	390	803	1570	542	599	814	284	166	146		
22	211	853	470	541	712	1430	515	617	692	274	166	163		
23	184	852	424	633	662	1230	509	1030	646	289	163	183		
24	155	1890	416	1510	727	1030	479	808	682	299	160	159		
25	145	1450	405	2170	739	923	451	803	657	307	160	153		
26	140	1070	383	1650	641	1110	422	1250	649	278	158	149		
27	136	937	361	1210	568	992	395	1030	753	262	158	148		
28	134	888	326	957	548	872	377	952	654	255	155	144		
29	132	763	575	805	550	772	361	1070	664	240	153	142		
30	157	660	1700	699	---	689	377	1040	516	241	152	140		
31	204	---	1270	623	---	652	---	764	---	245	159	---		
TOTAL	4507	27039	27423	32067	23305	28810	17646	24568	21633	10432	5751	4809		
MEAN	145	901	885	1034	804	929	588	793	721	337	186	160		
MAX	211	1890	2490	2750	3100	1570	981	1250	1190	478	239	244		
MIN	132	192	326	377	410	556	361	548	516	240	152	140		
CFSM	1.37	8.50	8.35	9.75	7.58	8.76	5.55	7.48	6.80	3.18	1.75	1.51		
IN.	1.58	9.49	9.62	11.25	8.18	10.11	6.19	8.62	7.59	3.66	2.02	1.69		
AC-FT	8940	53630	54390	63600	46230	57140	35000	48730	42910	20690	11410	9540		
CAL YR 1983	TOTAL	237996	MEAN	652	MAX	4900	MIN	132	CFSM	6.15	IN.	83.52	AC-FT	472100
WTR YR 1984	TOTAL	227990	MEAN	623	MAX	3100	MIN	132	CFSM	5.88	IN.	80.01	AC-FT	452200

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WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

INSTRUMENTATION.--Temperature recorder December 1950 to July 1961 and since January 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

EXTREMES FOR CURRENT YEAR.—

WATER TEMPERATURES: Maximum recorded, 15.0°C July 16, 17, 29, 30; minimum recorded, 0.5°C Dec. 22.

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

WILLAMETTE RIVER BASIN

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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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 mi².

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, 446,000 acre-ft May 29, elevation, 1,566.38 ft; minimum, 153,100 acre-ft Dec. 28, elevation, 1,449.28 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1528.01	1484.21	1469.12	1452.91	1468.90	1510.52	1538.90	1559.17	1564.54	1562.70	1563.20	1558.51
2	1526.73	1482.51	1466.13	1451.60	1468.57	1512.29	1539.86	1561.20	1564.21	1562.76	1563.23	1558.08
3	1525.43	1481.33	1462.84	1458.30	1468.78	1513.64	1540.60	1562.66	1563.85	1563.02	1563.14	1557.64
4	1524.17	1480.46	1459.29	1463.15	1469.37	1514.92	1541.28	1563.08	1563.96	1563.26	1563.05	1556.89
5	1522.89	1479.14	1455.60	1465.16	1470.26	1516.05	1542.02	1563.19	1563.92	1563.47	1562.95	1556.16
6	1521.61	1479.80	1451.72	1465.64	1471.14	1517.15	1542.79	1563.17	1564.07	1563.65	1562.90	1555.48
7	1520.31	1479.42	1449.85	1465.34	1471.91	1518.19	1543.71	1563.24	1564.75	1563.60	1562.85	1554.93
8	1518.98	1478.31	1451.08	1464.56	1472.79	1519.28	1544.87	1563.25	1565.04	1563.53	1562.76	1554.06
9	1517.64	1477.07	1451.83	1463.01	1473.59	1520.69	1545.97	1563.35	1565.02	1563.41	1562.69	1553.17
10	1516.30	1475.77	1455.37	1461.50	1474.39	1522.36	1547.25	1563.22	1564.73	1563.31	1562.62	1552.21
11	1514.94	1474.91	1457.33	1459.77	1475.34	1524.08	1547.84	1562.92	1564.02	1563.27	1562.53	1551.09
12	1513.50	1473.96	1456.83	1457.66	1480.94	1525.76	1548.69	1563.26	1563.17	1563.35	1562.45	1549.78
13	1512.05	1473.42	1459.40	1455.76	1493.60	1527.02	1549.01	1563.61	1563.06	1563.41	1562.29	1548.44
14	1510.65	1473.42	1466.46	1455.15	1499.80	1528.52	1549.39	1564.08	1563.02	1563.36	1562.18	1547.04
15	1509.19	1474.35	1472.07	1454.40	1501.69	1529.74	1550.06	1563.80	1563.12	1563.33	1562.07	1545.64
16	1507.71	1475.42	1473.13	1453.78	1501.69	1530.18	1550.95	1563.28	1563.21	1563.29	1561.96	1544.15
17	1506.23	1478.16	1472.00	1453.48	1500.98	1530.40	1551.58	1562.63	1563.20	1563.27	1561.83	1542.66
18	1504.72	1480.50	1469.97	1452.67	1501.04	1530.41	1552.15	1562.51	1563.10	1563.25	1561.73	1541.12
19	1503.33	1480.99	1467.41	1452.41	1500.86	1530.75	1552.63	1562.82	1563.23	1563.23	1561.61	1539.60
20	1501.92	1481.84	1464.54	1452.53	1500.78	1531.57	1553.03	1563.36	1563.41	1563.23	1561.48	1538.05
21	1500.57	1481.06	1461.44	1452.81	1501.02	1532.80	1553.42	1563.43	1563.95	1563.25	1561.34	1536.49
22	1499.45	1479.42	1458.03	1453.73	1501.42	1533.60	1553.73	1563.33	1563.48	1563.21	1561.19	1535.08
23	1498.21	1477.75	1456.68	1454.90	1502.16	1533.92	1554.18	1563.83	1563.29	1563.25	1561.07	1533.63
24	1496.75	1479.42	1455.21	1460.20	1503.18	1534.24	1554.94	1563.84	1563.27	1563.31	1560.93	1532.05
25	1495.35	1479.84	1453.86	1466.51	1504.49	1534.91	1555.60	1563.65	1563.18	1563.38	1560.80	1530.44
26	1493.92	1478.91	1452.25	1470.10	1505.62	1536.02	1556.12	1564.66	1563.35	1563.41	1560.64	1529.15
27	1492.42	1477.58	1450.60	1470.07	1506.62	1536.30	1556.59	1565.38	1563.35	1563.38	1560.48	1527.93
28	1490.77	1476.09	1449.55	1469.36	1507.75	1536.40	1557.08	1565.78	1562.95	1563.34	1560.21	1526.82
29	1489.10	1474.12	1450.92	1468.75	1508.86	1536.58	1557.58	1566.37	1562.92	1563.29	1559.77	1525.56
30	1487.47	1471.86	1455.11	1469.04	---	1537.12	1558.08	1566.13	1562.79	1563.23	1559.33	1524.33
31	1485.85	---	1454.79	1469.07	---	1537.94	---	1565.49	---	1563.21	1558.94	---
MEAN	1507.62	1478.03	1459.05	1460.11	1489.92	1527.20	1549.66	1563.54	1563.64	1563.29	1561.75	1543.54
MAX	1528.01	1484.21	1473.13	1470.10	1508.86	1537.94	1558.08	1566.37	1565.04	1563.65	1563.23	1558.51
MIN	1485.85	1471.86	1449.55	1451.60	1468.57	1510.52	1538.90	1559.17	1562.79	1562.70	1558.94	1524.33
(+)	223100	194700	162800	189300	275900	354200	417400	442900	433600	435000	420300	315900
(+)	-106500	-28400	-31900	+26500	+86600	+78300	+63200	+25500	-9300	+1400	-14700	-104400
CAL YR 1983	MEAN	1524.20	MAX	1565.36	MIN	1449.55	AC-FT†	-3800				
WTR YR 1984	MEAN	1522.33	MAX	1566.37	MIN	1449.55	AC-FT†	-13700				

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

† Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR

LOCATION.--Lat 44°45'10", long 122°17'50", in NE¼ 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 mi².

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 above National Geodetic Vertical Datum of 1929 (Federal Highway Administration 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 sta 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft. No diversion upstream from station.

AVERAGE DISCHARGE.--56 years (water years 1910-19, 1939-84), 2,345 ft³/s, 70.30 in/yr, 1,699,000 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,200 ft³/s Nov. 22, 1909, gage height, 16.4 ft, from floodmark, site and datum then in use, from rating curve extended above 35,000 ft³/s; minimum, 19 ft³/s Aug. 21, 1963; minimum daily, 395 ft³/s Mar. 25, 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,190 ft³/s Jan. 3, gage height, 6.32 ft; minimum, 623 ft³/s Mar. 11; minimum daily, 940 ft³/s Mar. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2390	2580	4730	5090	2460	1000	1340	1210	4190	2000	1050	1500
2	2450	2790	4790	4540	2450	977	1150	1760	2920	1670	1040	1520
3	2480	2900	4830	4030	1710	1080	1310	2710	2930	1280	1040	1390
4	2410	3070	4880	5110	1460	986	1320	3400	3210	1220	1050	1990
5	2360	3010	4970	4980	1060	940	1100	3490	4280	1210	1030	2080
6	2400	3150	5090	4900	1040	949	1070	3360	4330	1310	1010	2120
7	2390	2990	4050	4850	1050	995	998	2900	4520	1580	1010	2140
8	2410	3070	2940	4860	1050	984	1170	2930	4380	1540	1020	2290
9	2400	3020	2940	4850	1030	1040	1050	2820	4300	1530	1010	2250
10	2400	3010	3110	4900	1020	1160	1470	2960	4230	1520	1010	2350
11	2390	3080	2950	4960	1050	1210	2230	3900	4390	1470	998	2660
12	2520	3040	4040	4950	1190	1320	2270	3070	4270	1100	1000	2810
13	2490	3110	5200	4370	1270	2140	3040	2970	3040	1160	1010	2790
14	2370	3070	5010	3090	1020	2840	2830	3100	2580	1320	1010	2970
15	2480	3060	4200	2980	3090	3190	2910	3920	2340	1310	1010	2830
16	2460	3120	4800	2600	4560	4210	2120	3960	2260	1320	1000	2970
17	2410	3100	5280	2350	4400	4180	2060	3850	2250	1250	1010	2960
18	2510	3070	5340	2360	3080	4170	2060	2900	2270	1220	1010	2990
19	2380	4730	5310	1970	3000	4250	2060	2040	1800	1150	1010	3000
20	2360	4800	5140	1570	3020	4240	2080	2160	2320	1070	1010	3010
21	2270	4680	4890	1580	3010	4300	1920	2550	2430	1110	1010	2990
22	2240	4640	4880	1650	2430	4220	1880	3110	3740	1090	1010	2890
23	2360	4680	2950	1730	1860	4150	1700	3470	2780	1040	999	2970
24	2230	4920	2950	2390	1910	3630	1080	3430	2430	1030	996	2980
25	2260	4720	2970	3010	1410	2860	1100	3930	2510	1040	994	2940
26	2310	4680	2970	3060	1300	3310	1140	3300	1950	1060	997	2520
27	2370	4710	3020	4400	1270	3750	994	3010	2350	1040	988	2380
28	2400	4730	2310	4250	1010	3490	1050	3010	2820	1030	1250	2120
29	2440	4730	1830	3680	979	3060	1030	2460	2440	1040	1480	2290
30	2540	4720	3440	2530	---	2210	1020	4290	2150	1060	1410	2310
31	2610	---	5170	2470	---	1690	---	4140	---	1030	1540	---
TOTAL	74490	110980	126980	110060	55189	78531	48552	96110	92410	38800	33012	75010
MEAN	2403	3699	4096	3550	1903	2533	1618	3100	3080	1252	1065	2500
MAX	2610	4920	5340	5110	4560	4300	3040	4290	4520	2000	1540	3010
MIN	2230	2580	1830	1570	979	940	994	1210	1800	1030	988	1390
AC-FT	147800	220100	251900	218300	109500	155800	96300	190600	183300	76960	65480	148800
MEAN†	672	3222	3578	3981	3409	3807	2680	3515	2924	1274	826	746
CFSM†	1.48	7.11	7.90	8.79	7.53	8.40	5.92	7.76	6.45	2.81	1.82	1.65
IN.†	1.71	7.94	9.11	10.14	8.12	9.69	6.60	8.95	7.20	3.24	2.10	1.84
AC-FT†	41300	191700	220000	244800	196100	234100	159500	216100	174000	78360	50780	44400

CAL YR 1983 TOTAL 948415 MEAN 2598 MAX 11800 MIN 777 AC-FT 1881000 MEAN† 2593 CFSM† 5.72 IN.† 77.72 AC-FT† 1877200
WTR YR 1984 TOTAL 940124 MEAN 2569 MAX 5340 MIN 940 AC-FT 1865000 MEAN† 2550 CFSM† 5.63 IN.† 76.65 AC-FT† 1851300

† Adjusted for change in contents of Detroit Lake.

WILLAMETTE RIVER BASIN

725

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, 14.0°C on several days in October; minimum, 3.0°C Dec. 28-Jan. 3, Jan. 21, 22.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

227

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.

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.

REMARKS.--Records excellent. No regulation or diversion above station. Records herein are for measuring site.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 36,000 ft³/s Dec. 22, 1964, gage height, 16.73 ft, from rating curve extended above 17,000 ft³/s; minimum, 13 ft³/s Aug. 30, 1961.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	0930	*9,390	*9.86	No other peak greater than base discharge.			
Minimum, 37 ft ³ /s Sept. 5.							

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	249	711	1300	538	1040	778	1290	574	533	79	44
2	52	331	662	1070	480	1230	730	2290	507	458	75	42
3	52	1040	654	3600	435	1000	661	2200	462	403	73	40
4	52	1900	585	2810	403	796	612	1530	1130	359	70	38
5	52	1060	639	1860	384	679	604	1270	2140	327	68	42
6	50	2320	817	1410	370	657	596	1140	2100	300	68	105
7	48	1650	1160	1160	353	658	756	995	2610	275	64	219
8	48	1030	1800	1070	336	651	1360	931	2130	255	61	173
9	47	768	1370	836	344	719	1120	873	1670	238	58	106
10	47	692	2620	893	361	809	1360	772	1440	222	57	82
11	47	765	1790	1130	512	821	1200	1290	1100	209	56	70
12	46	772	1240	932	3640	823	1390	1380	882	199	55	72
13	45	877	2680	766	6850	970	1330	1080	776	187	55	62
14	46	1170	4040	646	2750	1310	1280	1220	671	177	53	55
15	48	2000	2880	561	1730	1330	1470	1150	605	167	51	53
16	46	1660	1690	501	1330	1190	1120	1120	543	157	49	49
17	49	2250	1180	450	1010	1100	871	904	479	147	48	48
18	52	2500	903	408	813	1130	774	772	431	138	48	46
19	48	2060	749	376	702	1730	782	735	394	131	47	45
20	51	2420	631	347	742	1940	835	1010	496	125	46	45
21	52	1570	538	391	1030	2330	786	782	2240	120	45	45
22	292	1130	469	907	856	2080	707	751	1550	113	44	56
23	301	1210	405	1160	794	1620	663	1830	998	108	43	138
24	175	3160	384	2860	982	1310	599	1340	767	106	43	101
25	131	2180	432	3820	1160	1170	552	1150	636	100	42	76
26	109	1480	419	2380	905	2160	503	2040	573	99	41	65
27	96	1320	362	1510	754	1640	470	1460	590	93	40	59
28	86	1340	326	1090	729	1290	449	1090	507	90	40	53
29	79	1070	1050	853	749	1120	462	990	634	87	39	50
30	93	864	3260	709	---	937	551	887	657	83	38	48
31	325	---	2030	609	---	821	---	695	---	80	41	---
TOTAL	2718	42838	38476	38415	32042	37061	25371	36967	30292	6086	1637	2127
MEAN	87.7	1428	1241	1239	1105	1196	846	1192	1010	196	52.8	70.9
MAX	325	3160	4040	3820	6850	2330	1470	2290	2610	533	79	219
MIN	45	249	326	347	336	651	449	695	394	80	38	38
CFSM	.78	12.8	11.1	11.1	9.87	10.7	7.55	10.6	9.02	1.75	.47	.63
IN.	.90	14.23	12.78	12.76	10.64	12.31	8.43	12.28	10.06	2.02	.54	.71

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 mi², 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 good. Flow regulated since 1953 by Detroit Lake (see sta 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.--68 years (water years 1906, 1911-14, 1922-84), 3,390 ft³/s, 2,456,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,600 ft³/s Dec. 28, 1945, gage height, 15.37 ft, from rating curve extended above 36,000 ft³/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 ft³/s Aug. 3, 1970; minimum daily, 420 ft³/s Sept. 18, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,000 ft³/s Feb. 13, gage height, 8.36 ft; minimum, 1,010 ft³/s Aug. 27; minimum daily, 1,060 ft³/s Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2590	3080	6040	7460	3340	2740	2890	3230	5520	2950	1150	1550
2	2680	3320	6060	6630	3240	2990	2550	5390	4150	2510	1160	1590
3	2690	4380	6090	9320	2500	2740	2510	6470	3900	1940	1150	1460
4	2650	5620	6040	9780	2100	2450	2540	6330	4950	1790	1140	1950
5	2550	4490	6290	8080	1700	2170	2280	6000	7780	1720	1140	2160
6	2620	6350	6790	7290	1580	2120	2210	5690	8050	1780	1120	2310
7	2590	5330	6210	6890	1550	2140	2310	4970	9670	1960	1120	2410
8	2600	4590	5770	6740	1530	2110	3510	4740	8760	1970	1120	2520
9	2600	4180	5050	6410	1550	2250	3090	4570	7760	2040	1110	2420
10	2600	4070	6960	6630	1550	2470	3910	4430	7190	2000	1110	2490
11	2580	4240	5640	7080	1740	2620	4420	6120	6710	2010	1100	2790
12	2720	4240	5740	6740	5970	2650	4800	5470	6400	1480	1090	2940
13	2690	4510	9140	5990	12900	3790	5410	4840	4840	1540	1100	2970
14	2560	4830	12000	4340	6180	5040	5160	5170	4000	1650	1100	3130
15	2670	5780	9080	3960	5950	5460	5440	5940	3620	1650	1090	3010
16	2690	5520	7950	3550	7550	6600	4260	6100	3340	1640	1090	3120
17	2630	6590	7530	3110	6760	6490	3720	5700	3250	1560	1090	3130
18	2720	6980	7260	2990	5090	6520	3560	4550	3160	1510	1090	3170
19	2630	7910	6920	2650	4600	7420	3560	3480	2670	1450	1080	3160
20	2560	8740	6600	2160	4700	7770	3690	3810	3320	1340	1090	3180
21	2480	7280	6060	2220	5210	8620	3420	3800	5930	1350	1080	3200
22	2770	6580	5930	2880	4350	8010	3190	4550	6350	1310	1080	3080
23	2870	6720	3980	3340	3620	7150	3070	6430	4750	1250	1080	3290
24	2550	9760	3580	6330	3930	6150	2240	5770	3920	1220	1070	3240
25	2570	8220	3700	8640	3760	5140	2090	6200	3750	1210	1070	3170
26	2580	7110	3730	6710	3100	7120	2110	6960	3080	1220	1070	2750
27	2560	6860	3700	6710	2820	6910	1880	5530	3330	1190	1060	2580
28	2710	6890	2930	6240	2470	6150	1870	4950	3790	1180	1270	2210
29	2650	6530	3370	5340	2360	5310	1870	4150	3710	1160	1480	2400
30	2790	6280	7940	3780	---	4170	2010	6040	3230	1180	1470	2410
31	3150	---	8690	3480	---	3370	---	5680	---	1160	1580	---
TOTAL	82300	176980	192770	173470	113700	146640	95570	163060	150880	49920	35550	79790
MEAN	2655	5899	6218	5596	3921	4730	3186	5260	5029	1610	1147	2660
MAX	3150	9760	12000	9780	12900	8620	5440	6960	9670	2950	1580	3290
MIN	2480	3080	2930	2160	1530	2110	1870	3230	2670	1160	1060	1460
AC-FT	163200	351000	382400	344100	225500	290900	189600	323400	299300	99020	70510	158300
CAL YR 1983	TOTAL	1494950	MEAN	4096	MAX	16600	MIN	1190	AC-FT	2965000		
WTR YR 1984	TOTAL	1460630	MEAN	3991	MAX	12900	MIN	1060	AC-FT	2897000		

WILLAMETTE RIVER BASIN

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14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR

LOCATION.--Lat 44°23'35", long 122°30'35", in SE 1/4 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 mi², at cableway 0.7 mi upstream, where all discharge measurements are made.

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.--49 years, 829 ft³/s, 64.70 in/yr, 600,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft³/s Dec. 22, 1964, gage height, 19.68 ft, from rating curve extended above 14,000 ft³/s; minimum, 23 ft³/s Dec. 1, 2, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2100	10,300	11.58	Feb. 13	1000	*18,000	*15.09
Minimum, 65 ft ³ /s Sept. 29, 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	78	156	1150	1620	714	1150	1140	1620	694	430	126	80		
2	76	192	1220	1480	640	1220	1050	3150	624	393	126	77		
3	76	303	1210	3330	579	1050	957	3820	568	361	121	73		
4	75	1000	973	3220	539	927	885	2510	1130	336	116	69		
5	75	592	915	2180	510	831	857	1910	1950	315	112	75		
6	75	1300	1640	1640	492	810	810	1660	2780	297	112	133		
7	73	1230	2620	1380	465	798	836	1420	4900	282	107	182		
8	73	761	2680	1230	442	798	1360	1240	3260	265	104	152		
9	73	589	2080	1000	450	967	1360	1110	2510	257	101	112		
10	73	552	3060	1060	441	1160	1900	986	2070	245	98	96		
11	75	654	2240	1380	524	1180	1740	1190	1560	234	98	87		
12	75	647	1610	1150	2670	1290	1800	1220	1240	227	94	83		
13	74	922	1940	955	11700	1440	1630	1140	1020	219	94	79		
14	74	936	6170	811	4430	1730	1650	1340	874	208	93	76		
15	76	1340	5500	705	2720	1830	1820	1180	760	202	89	73		
16	76	1250	2830	635	2120	1770	1450	1170	669	193	86	71		
17	75	2040	1880	576	1580	1730	1190	1040	596	183	86	70		
18	75	2040	1460	531	1260	1870	1140	926	540	175	85	67		
19	73	2090	1230	507	1100	2720	1170	871	494	170	83	67		
20	72	2530	1030	473	1220	2830	1140	918	616	163	82	67		
21	72	1770	854	590	1690	3240	1070	795	1300	160	80	69		
22	114	1280	745	1040	1450	2640	976	815	1140	160	77	71		
23	145	1400	673	1230	1290	2080	921	1670	849	157	77	129		
24	105	3220	672	4040	1500	1650	854	1350	698	151	76	105		
25	92	2690	648	4180	1890	1620	799	1280	604	143	76	85		
26	85	1850	672	2910	1410	3800	750	1920	560	145	71	78		
27	79	1600	592	1950	1140	2690	710	1500	563	141	71	73		
28	77	1570	544	1460	1070	2020	669	1230	485	139	71	68		
29	75	1350	1030	1150	998	1760	637	1090	552	137	70	65		
30	82	1260	3160	952	---	1460	736	976	482	132	69	65		
31	175	---	2360	811	---	1240	---	806	---	126	73	---		
TOTAL	2593	39114	55388	46176	47034	52301	34007	43853	36088	6746	2824	2597		
MEAN	83.6	1304	1787	1490	1622	1687	1134	1415	1203	218	91.1	86.6		
MAX	175	3220	6170	4180	11700	3800	1900	3820	4900	430	126	182		
MIN	72	156	544	473	441	798	637	795	482	126	69	65		
CFSM	.48	7.49	10.3	8.56	9.32	9.70	6.52	8.13	6.91	1.25	.52	.50		
IN.	.55	8.36	11.84	9.87	10.06	11.18	7.27	9.38	7.72	1.44	.60	.56		
AC-FT	5140	77580	109900	91590	93290	103700	67450	86980	71580	13380	5600	5150		
CAL YR 1983	TOTAL	350022	MEAN	959	MAX	8340	MIN	72	CFSM	5.51	IN.	74.83	AC-FT	694300
WTR YR 1984	TOTAL	368721	MEAN	1007	MAX	11700	MIN	65	CFSM	5.79	IN.	78.83	AC-FT	731400

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, 21.5°C Aug. 10; minimum, 0.0°C Dec. 23, 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	9.0	11.5	11.0	6.0	5.0	5.5	4.5	5.5	4.5		
2	11.5	10.0	11.0	10.5	6.5	6.0	6.5	5.0	5.0	4.0		
3	12.0	10.5	12.0	11.0	6.0	5.5	7.0	6.5	5.5	4.0		
4	12.5	11.0	11.0	10.0	6.0	5.5	7.5	7.0	6.5	5.0		
5	13.0	12.0	10.0	8.5	6.0	5.0	7.0	6.5	6.0	5.0		
6	12.5	11.0	10.0	8.5	6.5	5.5	7.0	6.5	7.0	6.0		
7	11.0	9.5	8.5	7.5	7.0	6.5	7.0	6.0	6.5	5.0		
8	10.5	9.5	7.5	6.5	7.0	6.5	7.0	6.0	7.5	6.0		
9	11.5	10.0	8.5	7.5	7.5	6.5	6.5	5.5	7.0	6.0		
10	12.5	11.0	9.5	8.5	7.5	6.5	7.0	6.5	6.0	5.0		
11	12.0	11.0	9.5	8.5	7.0	6.5	7.0	6.5	6.0	5.0		
12	12.0	10.5	8.5	8.0	6.5	6.0	6.5	4.5	7.0	5.5		
13	12.0	11.0	8.0	7.5	7.0	6.5	5.0	4.0	7.0	5.5		
14	11.5	10.5	8.0	7.5	7.5	7.0	4.0	2.5	6.0	5.5		
15	10.5	9.0	9.0	8.0	7.0	6.0	3.0	2.0	6.5	5.5		
16	10.0	9.0	9.0	8.5	6.5	6.0	2.5	2.0	6.0	5.0		
17	10.5	9.0	8.5	7.5	6.5	6.0	2.5	1.5	5.5	4.0		
18	10.0	9.5	8.0	7.5	6.5	6.0	3.0	1.5	6.5	4.5		
19	10.0	9.0	8.0	7.5	6.5	4.5	4.0	3.0	6.5	5.0		
20	11.0	10.0	7.5	6.5	4.5	3.0	4.0	3.0	7.0	6.0		
21	11.0	10.0	7.5	6.5	3.0	1.5	5.0	4.0	6.5	4.5		
22	11.5	10.5	6.5	6.0	1.5	.5	6.0	5.0	5.5	4.0		
23	11.0	10.0	7.5	6.5	1.0	.0	6.0	5.5	6.0	5.0		
24	10.0	8.5	8.0	7.0	.5	.0	7.0	6.0	6.0	5.0		
25	9.0	8.0	7.0	6.5	3.0	.5	7.0	6.5	6.0	5.0		
26	9.5	8.0	7.5	6.5	3.5	3.0	6.5	5.5	---	---		
27	9.5	8.5	7.5	6.5	3.5	3.0	6.5	5.5	---	---		
28	9.5	8.5	7.5	7.0	3.5	2.5	6.0	5.0	---	---		
29	10.0	9.0	7.0	5.5	5.0	3.5	5.5	4.5	---	---		
30	11.0	10.0	5.5	5.0	6.0	4.5	5.5	4.5	---	---		
31	11.5	11.0	---	---	5.5	5.0	5.5	4.5	---	---		
MONTH	13.0	8.0	12.0	5.0	7.5	.0	7.5	1.5	---	---		

WILLAMETTE RIVER BASIN

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14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---			14.5	10.5	16.0	12.0	19.5	17.5	18.0	15.5
2	---	---			14.5	12.5	16.5	13.0	18.0	17.0	18.5	15.5
3	---	---			14.0	12.0	16.5	13.0	19.0	17.5	19.0	16.0
4	7.5	6.5			15.0	13.5	17.5	14.0	19.0	17.0	18.5	15.5
5	7.5	6.5			14.5	13.0	17.5	14.5	17.5	17.0	17.0	15.5
6	7.5	5.5			15.5	13.5	16.5	14.0	18.5	16.0	15.5	14.5
7	7.0	6.0			15.0	14.5	16.0	13.0	19.5	16.5	15.5	14.5
8	6.0	5.5			15.5	14.5	16.5	13.5	20.5	17.5	16.5	15.0
9	6.5	5.0			15.0	14.0	17.0	14.0	21.0	18.5	17.0	16.0
10	6.0	5.0			16.5	14.5	17.0	14.0	21.5	19.0	16.0	14.5
11	7.0	5.0			17.0	15.5	16.0	14.5	21.0	19.0	15.5	14.0
12	---	---			16.5	13.5	17.0	14.0	19.0	17.5	15.0	13.0
13	---	---			17.5	15.0	17.0	14.0	18.5	16.0	15.0	12.5
14	---	---			19.0	15.5	17.5	14.5	19.0	16.0	15.0	13.0
15	---	---			19.0	16.5	19.0	15.5	19.0	16.5	16.0	13.5
16	---	---			17.5	15.5	20.0	17.0	19.5	17.0	16.5	14.0
17	---	---			18.0	11.5	20.0	17.5	20.5	18.0	17.0	14.0
18	---	---			19.0	11.5	19.0	17.0	20.5	18.0	17.0	14.5
19	---	---			18.0	15.5	18.5	15.5	19.5	17.0	17.5	15.5
20	---	---			17.0	15.0	17.5	15.0	19.5	16.0	17.0	15.5
21	---	---			16.5	13.0	17.5	15.0	19.5	16.5	15.5	13.5
22	---	---			19.0	15.5	18.0	15.0	19.5	16.5	13.5	12.5
23	---	---			18.0	12.5	18.0	16.5	19.5	17.0	12.5	11.5
24	---	---			15.5	11.5	19.5	16.5	19.0	16.5	11.5	10.5
25	---	---			16.0	12.0	19.5	17.0	19.0	16.0	12.0	10.0
26	---	---			15.0	12.5	19.5	16.5	20.0	16.5	12.0	10.0
27	---	---			16.5	12.5	19.5	17.0	19.5	17.0	12.5	10.0
28	---	---			16.5	13.5	18.5	17.5	20.0	17.5	13.0	10.5
29	---	---			15.5	13.0	20.0	17.5	19.0	16.5	13.5	11.0
30	---	---			15.0	11.0	20.5	18.0	18.0	17.0	13.0	11.5
31	---	---			---	---	20.5	19.0	17.0	16.0	---	---
MONTH	---	---			19.0	10.5	20.5	12.0	21.5	16.0	19.0	10.0

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 mi².

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 ft³/s Dec. 25, 1980, gage height, 8.58 ft, from floodmark, from rating curve extended above 3,600 ft³/s on basis of slope-area measurement of peak flow; minimum, 22 ft³/s Sept. 16-20, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1900	4,210	6.49	Feb. 13	0800	*5,950	*7.37
Minimum, 31 ft ³ /s Sept. 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	37	86	538	903	465	581	545	598	451	230	76	41		
2	37	103	506	813	424	621	504	1190	410	215	74	38		
3	37	183	470	2050	390	566	471	1430	369	203	71	36		
4	36	383	429	2090	367	513	441	1120	540	193	68	35		
5	36	263	411	1490	350	472	429	922	794	181	66	41		
6	36	632	446	1170	340	460	410	812	976	172	65	81		
7	35	515	680	1000	322	461	437	737	1490	163	63	95		
8	35	359	896	889	306	472	538	690	1300	157	60	69		
9	35	310	850	745	306	569	530	647	1070	148	58	53		
10	37	307	1380	749	297	687	656	590	893	142	56	46		
11	37	336	1130	769	363	692	613	766	745	138	55	43		
12	35	322	919	669	1730	722	734	780	653	132	54	41		
13	34	371	1650	584	4370	758	708	748	594	128	53	39		
14	39	462	2980	517	2080	880	747	811	540	124	52	37		
15	39	767	2600	461	1340	910	879	682	487	121	51	36		
16	36	651	1540	423	1030	896	794	601	444	116	49	35		
17	36	816	1070	379	812	861	683	538	402	113	48	34		
18	40	837	839	343	681	867	632	506	360	109	47	33		
19	36	1050	700	320	601	1100	619	498	329	105	46	33		
20	35	1210	590	295	620	1290	585	537	350	102	45	34		
21	33	844	505	331	685	1410	541	477	501	100	43	35		
22	74	641	443	501	606	1350	509	483	455	95	42	37		
23	73	705	392	552	561	1140	496	770	401	92	42	68		
24	51	1510	356	1420	570	952	465	645	359	91	41	46		
25	44	1280	363	1860	563	857	437	687	325	87	40	40		
26	41	946	348	1450	509	1190	403	984	306	86	40	37		
27	38	827	305	1050	473	1040	374	804	310	83	38	35		
28	37	792	279	818	460	884	343	702	274	81	38	33		
29	36	698	709	677	459	759	326	667	279	79	37	32		
30	56	626	1630	582	---	662	343	609	250	77	36	31		
31	98	---	1240	516	---	588	---	517	---	74	38	---		
TOTAL	1309	18832	27194	26416	22080	25210	16192	22548	16657	3937	1592	1294		
MEAN	42.2	628	877	852	761	813	540	727	555	127	51.4	43.1		
MAX	98	1510	2980	2090	4370	1410	879	1430	1490	230	76	95		
MIN	33	86	279	295	297	460	326	477	250	74	36	31		
CFSM	.57	8.42	11.8	11.4	10.2	10.9	7.24	9.75	7.44	1.70	.69	.58		
IN.	.65	9.39	13.56	13.17	11.01	12.57	8.07	11.24	8.31	1.96	.79	.65		
AC-FT	2600	37350	53940	52400	43800	50000	32120	44720	33040	7810	3160	2570		
CAL YR 1983	TOTAL	166787	MEAN	457	MAX	3980	MIN	33	CFSM	6.13	IN.	83.17	AC-FT	330800
WTR YR 1984	TOTAL	183261	MEAN	501	MAX	4370	MIN	31	CFSM	6.72	IN.	91.38	AC-FT	363500

WILLAMETTE RIVER BASIN

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141858R0 PACKERS GULCH NEAR CASCADIA, OR

LOCATION.--Lat 44°36'00", long 122°23'38", in NE1/4 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 mi².

PERIOD OF RECORD.--July 1983 to current year.

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 PERIOD OF RECORD.--Maximum discharge, 1,470 ft³/s Feb. 13, 1984, gage height, 4.14 ft, from rating curve extended above 200 ft³/s; minimum, 3.3 ft³/s Sept. 29, 30, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 540 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	0730	a*1,470	*4.14				

Minimum, 3.3 ft³/s Sept. 29, 30.

a From rating curve extended above 200 ft³/s.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	14	60	104	36	91	52	154	35	25	6.4	4.1
2	4.8	23	59	89	32	100	46	208	32	23	6.3	3.9
3	4.8	60	58	197	28	87	43	189	29	21	6.1	3.7
4	4.8	82	52	170	26	70	39	128	89	20	5.9	3.6
5	4.8	50	52	120	24	59	38	98	117	19	5.9	5.6
6	4.6	139	57	89	23	57	36	85	181	17	5.7	6.0
7	4.5	103	115	73	21	55	60	72	259	16	5.5	9.1
8	4.4	67	161	60	20	54	90	62	192	15	5.4	5.8
9	4.4	52	151	51	21	56	86	56	132	14	5.3	4.9
10	4.5	47	284	66	23	61	116	49	97	14	5.2	4.5
11	4.4	63	175	82	41	56	98	77	75	13	5.1	4.4
12	4.2	67	120	66	421	69	134	71	61	13	5.1	4.3
13	4.4	101	199	55	959	83	121	64	50	12	5.0	4.1
14	5.0	170	295	47	247	135	121	64	43	11	4.9	3.9
15	4.5	184	236	41	150	146	122	56	38	11	4.8	3.9
16	4.3	158	139	36	120	160	92	49	34	10	4.7	3.7
17	5.1	232	95	32	88	140	71	44	31	9.7	4.6	3.7
18	4.8	254	72	29	71	151	63	41	28	9.5	4.6	3.6
19	4.4	200	58	27	64	193	65	41	25	9.0	4.5	3.6
20	4.5	212	48	24	74	192	75	43	31	8.7	4.4	3.7
21	4.3	140	41	30	87	199	68	36	67	8.5	4.3	3.6
22	25	98	35	70	72	171	59	51	52	8.1	4.3	4.3
23	14	157	31	72	74	132	53	102	41	7.8	4.3	4.9
24	9.3	323	29	139	97	102	47	72	36	7.6	4.2	4.2
25	7.8	201	32	220	94	99	43	86	32	7.5	4.2	3.9
26	6.9	131	32	148	72	159	40	120	32	7.3	4.0	3.7
27	6.3	114	27	99	60	128	37	91	33	7.0	4.0	3.6
28	5.8	108	24	73	63	100	34	71	28	6.9	3.9	3.5
29	5.6	92	137	57	63	85	33	57	30	6.6	3.8	3.4
30	9.6	76	275	48	---	70	40	47	27	6.5	3.8	3.3
31	14	---	157	41	---	59	---	40	---	6.4	4.1	---
TOTAL	200.7	3718	3306	2455	3171	3319	2022	2424	1957	371.1	150.3	128.5
MEAN	6.47	124	107	79.2	109	107	67.4	78.2	65.2	12.0	4.85	4.28
MAX	25	323	295	220	959	199	134	208	259	25	6.4	9.1
MIN	4.2	14	24	24	20	54	33	36	25	6.4	3.8	3.3
CFSM	.87	16.6	14.4	10.6	14.6	14.4	9.05	10.5	8.75	1.61	.65	.57
IN.	1.00	18.57	16.51	12.26	15.83	16.57	10.10	12.10	9.77	1.85	.75	.64
AC-FT	398	7370	6560	4870	6290	6580	4010	4810	3880	736	298	255

WTR YR 1984 TOTAL 23222.6 MEAN 63.4 MAX 959 MIN 3.3 CFSM 8.51 IN. 115.96 AC-FT 46060

WILLAMETTE RIVER BASIN

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR

LOCATION.--Lat 44°32'25", long 122°26'05", in NW 1/4 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 mi².

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 except for flows below 100 ft³/s, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--20 years (water years 1964, 1966-84), 687 ft³/s, 94.05 in/yr, 497,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s Jan. 20, 1972, gage height, 16.38 ft; minimum, 14 ft³/s Aug. 19-23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 36,500 ft³/s Dec. 22, 1964, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0500	4,520	9.73	Dec. 30	0200	5,520	10.34
Dec. 14	1900	5,810	10.51	Feb. 13	0800	*11,000	*12.89

Minimum, 38 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	51	170	668	1270	449	1180	632	1780	426	326	81	49		
2	50	268	657	1080	397	1250	579	2700	381	289	79	45		
3	51	636	671	3140	358	978	527	2730	346	261	77	43		
4	50	1240	575	2580	335	765	485	1620	1040	242	74	41		
5	50	538	621	1650	320	650	472	1220	1620	224	72	47		
6	50	1840	741	1220	309	638	461	1080	2230	210	72	97		
7	48	1180	1490	1020	289	642	698	933	3020	198	69	147		
8	47	670	2260	908	275	646	1210	843	2190	187	67	100		
9	47	620	1740	721	291	723	1040	757	1500	178	65	69		
10	48	550	3700	893	308	841	1530	663	1150	170	64	58		
11	48	650	2020	1210	495	815	1140	1060	871	161	62	54		
12	47	800	1330	915	4170	987	1530	1020	725	155	61	52		
13	46	1100	2980	711	7920	1250	1320	857	636	148	60	49		
14	50	1400	4440	579	2900	1840	1340	871	544	141	59	46		
15	51	1900	3280	490	1700	1810	1400	751	474	136	58	45		
16	47	1700	1710	426	1440	1900	1020	676	415	130	57	44		
17	52	2620	1130	378	1010	1600	796	593	368	124	55	43		
18	54	2590	851	341	786	1650	744	539	333	118	54	42		
19	49	2260	698	318	691	2230	787	527	304	114	53	41		
20	49	2480	576	290	842	2240	879	606	391	109	52	43		
21	47	1400	483	356	1090	2530	810	491	1220	106	51	42		
22	161	946	414	950	833	2210	696	547	873	103	50	48		
23	138	1320	353	1050	777	1630	629	1470	592	99	49	84		
24	87	3650	340	3130	1090	1200	556	953	473	97	48	60		
25	73	2250	367	3660	1140	1100	500	1000	401	94	48	50		
26	66	1410	424	2190	816	2700	457	1770	383	92	46	46		
27	61	1320	344	1330	681	2000	430	1150	433	89	45	43		
28	58	1280	306	934	693	1500	398	861	355	87	44	41		
29	56	1020	1530	735	726	1100	373	731	423	85	44	40		
30	82	832	3960	600	---	820	433	618	379	82	43	39		
31	194	---	2130	513	---	698	---	499	---	82	46	---		
TOTAL	2008	40640	42789	35588	33131	42123	23872	31916	24496	4637	1805	1648		
MEAN	64.8	1355	1380	1148	1142	1359	796	1030	817	150	58.2	54.9		
MAX	194	3650	4440	3660	7920	2700	1530	2730	3020	326	81	147		
MIN	46	170	306	290	275	638	373	491	304	82	43	39		
CFSM	.65	13.7	13.9	11.6	11.5	13.7	8.02	10.4	8.24	1.51	.59	.55		
IN.	.75	15.24	16.05	13.35	12.42	15.80	8.95	11.97	9.19	1.74	.68	.62		
AC-FT	3980	80610	84870	70590	65720	83550	47350	63310	48590	9200	3580	3270		
CAL YR 1983	TOTAL	274205	MEAN	751	MAX	6740	MIN	46	CFSM	7.57	IN.	102.83	AC-FT	543900
WTR YR 1984	TOTAL	284653	MEAN	778	MAX	7920	MIN	39	CFSM	7.84	IN.	106.74	AC-FT	564600

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, 21.0°C Aug. 9, 10; minimum, 0.5°C Dec. 22-25.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

237

14186100 GREEN PETER LAKE NEAR FOSTER, OR

LOCATION.--Lat 44°27'10", long 122°32'40", in NE¼SE¼ sec.10, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, in Green Peter Dam on Middle Santiam River, 7.0 mi northeast of Foster, and at mile 5.7.

DRAINAGE AREA.--273 mi².

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, 416,500 acre-ft June 7, elevation, 1,011.84 ft; minimum, 159,900 acre-ft Jan. 16, elevation, 922.00 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	986.33	962.41	955.18	929.58	937.60	969.59	989.10	1003.52	1009.71	1009.11	1007.64	1000.84
2	985.61	961.50	952.92	928.65	937.26	970.81	989.45	1006.06	1009.80	1009.15	1007.48	1000.58
3	984.84	960.79	950.71	931.84	937.41	971.36	989.70	1007.93	1009.90	1009.30	1007.33	1000.31
4	984.06	960.75	948.48	933.31	937.78	971.91	989.86	1008.32	1010.31	1009.44	1007.12	999.88
5	983.30	959.23	946.37	933.10	938.07	972.26	990.33	1008.32	1010.15	1009.58	1006.96	999.52
6	982.51	959.83	944.60	932.00	938.39	972.89	990.77	1008.31	1010.56	1009.67	1006.79	999.17
7	981.71	959.60	943.76	930.47	938.62	973.56	991.61	1008.36	1011.82	1009.73	1006.63	998.95
8	980.85	959.02	943.95	928.69	938.86	974.21	992.87	1008.90	1010.56	1009.77	1006.46	998.60
9	980.01	958.24	943.39	926.46	939.14	974.99	994.02	1009.43	1010.15	1009.82	1006.28	998.19
10	979.15	957.40	945.30	924.71	939.45	976.11	995.32	1008.98	1009.83	1009.84	1006.09	997.77
11	978.29	956.61	945.23	924.30	940.15	977.05	996.25	1008.46	1010.00	1009.81	1005.86	997.18
12	977.50	955.92	943.40	923.27	946.63	978.11	997.53	1008.54	1010.13	1009.85	1005.63	996.47
13	976.79	955.61	942.95	923.00	960.89	979.28	997.92	1008.54	1010.14	1009.81	1005.43	995.71
14	976.08	956.09	947.85	922.75	966.15	980.60	998.31	1008.54	1010.03	1009.72	1005.23	994.96
15	975.35	957.00	951.66	922.30	967.71	981.06	998.71	1008.59	1009.79	1009.63	1005.03	994.20
16	974.63	957.50	950.32	922.41	957.25	981.00	999.15	1008.49	1009.73	1009.62	1004.84	993.47
17	973.93	959.46	947.79	922.36	966.15	980.70	999.82	1008.76	1009.60	1009.57	1004.64	992.68
18	973.20	959.46	945.73	922.38	964.67	981.19	999.60	1008.95	1009.47	1009.53	1004.40	991.90
19	972.46	959.94	943.82	922.36	964.39	982.56	999.74	1009.33	1009.53	1009.46	1004.15	991.13
20	971.70	960.79	941.61	922.27	964.15	983.89	1000.11	1009.77	1009.99	1009.38	1003.95	990.38
21	970.95	960.31	939.22	922.73	964.50	985.28	1000.48	1009.97	1010.92	1009.21	1003.73	989.60
22	970.45	959.22	936.56	924.12	964.15	986.18	1000.75	1009.87	1011.01	1009.05	1003.53	988.82
23	969.83	958.76	933.70	925.73	963.97	986.36	1001.08	1009.98	1010.90	1009.97	1003.32	988.11
24	969.12	960.95	931.45	931.37	964.26	986.21	1001.65	1009.64	1010.64	1008.85	1003.09	987.33
25	968.39	961.72	929.16	938.18	965.27	986.39	1001.40	1010.06	1010.29	1008.72	1002.83	986.49
26	967.65	961.34	926.89	940.04	966.11	988.03	1000.42	1010.57	1010.22	1008.58	1002.54	985.83
27	966.84	960.76	924.87	939.38	966.75	988.26	1000.30	1010.14	1009.95	1008.44	1002.27	985.25
28	965.91	960.06	923.93	938.71	967.55	988.13	1000.72	1009.97	1009.50	1008.26	1001.94	984.60
29	964.90	958.98	925.94	938.34	968.32	987.99	1001.08	1010.00	1009.31	1008.08	1001.64	983.86
30	964.00	957.46	930.60	938.26	---	988.18	1001.67	1009.99	1009.18	1007.94	1001.34	983.11
31	963.23	---	930.82	938.00	---	988.68	---	1009.79	---	1007.79	1001.09	---
MEAN	974.82	959.22	940.91	929.07	954.19	980.41	996.99	1008.91	1010.10	1009.25	1004.69	993.16
MAX	986.33	962.41	955.18	940.04	968.32	988.68	1001.67	1010.57	1011.82	1009.97	1007.64	1000.84
MIN	963.23	955.61	923.93	922.27	937.26	969.59	989.10	1003.52	1009.18	1007.79	1001.09	983.11
(+)	260100	244200	178800	195200	274700	337200	380500	409100	406900	401900	378500	319400
(-)	-72200	-15900	-65400	+16400	+79500	+62500	+43300	+28600	-2200	-5000	-23400	-59100

CAL YR 1983 MEAN 981.97 MAX 1011.79 MIN 923.76 AC-FT: +8200
WTR YR 1984 MEAN 980.18 MAX 1011.82 MIN 922.27 AC-FT: -12900

+ 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 mi².

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, 57,200 acre-ft Oct. 7, elevation, 638.10 ft; minimum, 29,670 acre-ft Jan. 11, elevation, 611.42 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	637.45	620.15	613.26	613.53	614.48	621.17	628.44	631.02	636.99	637.19	637.11	637.07
2	637.24	619.58	613.27	614.17	613.80	620.99	628.92	632.26	636.99	637.12	637.11	636.93
3	637.22	619.69	613.19	613.55	614.03	621.12	629.01	632.83	637.02	637.05	637.11	636.81
4	637.26	620.10	613.15	613.44	614.01	621.17	629.26	632.43	637.07	636.96	637.09	636.95
5	637.26	618.60	613.11	613.53	614.21	621.61	629.26	633.04	637.18	636.89	636.90	637.26
6	637.33	618.07	613.47	613.52	614.66	621.79	629.40	633.36	637.28	636.93	636.90	637.43
7	637.36	617.67	613.25	613.58	614.88	622.01	629.71	633.74	637.06	637.01	636.90	637.60
8	637.38	616.85	613.16	613.50	615.36	622.33	629.89	634.74	636.87	637.01	636.91	637.48
9	637.26	616.65	613.26	613.61	615.49	622.46	630.24	635.85	637.07	636.95	636.93	637.28
10	637.00	616.24	613.23	613.69	615.71	622.43	630.98	635.85	636.91	636.92	636.96	637.04
11	636.53	615.63	613.30	613.38	616.14	622.51	631.27	635.50	636.97	637.00	636.96	637.00
12	635.83	614.96	613.18	613.48	619.12	622.60	631.55	635.68	637.36	636.90	636.96	637.00
13	635.02	615.00	613.13	613.48	631.20	622.69	631.24	635.69	637.48	637.05	636.96	637.02
14	634.36	614.85	614.80	613.83	620.35	623.18	631.65	635.88	637.32	637.14	637.01	637.00
15	633.49	615.44	613.05	613.76	618.13	623.78	631.77	634.84	637.03	637.06	637.05	637.00
16	632.51	615.45	613.04	613.22	618.35	624.27	631.14	633.51	636.90	637.06	637.08	637.00
17	631.52	615.26	613.02	613.86	618.32	624.62	631.98	632.30	637.02	637.09	637.13	637.00
18	630.52	614.45	613.08	613.74	618.34	625.05	632.08	633.60	637.09	637.11	637.08	637.01
19	629.57	614.39	613.08	613.32	618.87	625.41	630.14	634.71	637.12	637.14	637.06	637.06
20	628.60	614.18	613.10	613.82	619.22	625.42	629.49	635.47	637.17	637.16	637.08	637.05
21	627.58	614.21	613.14	613.72	619.33	625.62	629.86	635.60	637.42	637.22	637.10	637.09
22	626.91	613.46	613.22	614.36	620.50	625.67	629.86	636.70	636.99	637.05	637.08	637.32
23	626.14	613.41	613.60	614.41	619.62	625.92	629.60	637.11	637.01	637.00	637.10	637.38
24	625.22	613.57	613.88	615.55	619.33	626.03	629.54	637.06	636.98	637.07	637.16	637.38
25	624.24	613.22	613.87	613.43	620.26	626.10	627.91	637.18	637.11	637.10	637.19	637.38
26	623.33	613.38	613.78	613.67	619.89	626.36	627.52	636.98	636.96	637.10	637.21	637.28
27	622.68	613.31	613.78	614.10	620.27	627.04	627.39	636.93	637.07	637.10	637.38	637.35
28	622.39	613.25	613.75	614.05	620.90	627.45	627.86	636.98	636.98	637.08	637.44	637.09
29	621.73	613.20	614.19	614.17	620.89	627.65	628.32	637.01	636.95	637.08	637.36	636.96
30	621.13	613.26	613.43	614.04	---	627.98	628.93	636.95	637.19	637.08	637.28	636.87
31	620.74	---	613.52	614.40	---	628.18	---	636.97	---	637.08	637.21	---
MEAN	631.06	615.58	613.40	613.80	618.13	624.21	629.81	635.09	637.09	637.05	637.09	637.14
MAX	637.45	620.15	614.80	615.55	631.20	628.18	632.08	637.18	637.48	637.22	637.44	637.60
MIN	620.74	613.20	613.02	613.22	613.80	620.99	627.39	631.02	636.87	636.89	636.90	636.81
(+)	38280	31300	31530	32330	38430	45890	46690	55840	56100	55970	56120	55720
(-)	-17950	-6980	+230	+800	+6100	+7460	+800	+9150	+260	-130	+150	-400
CAL YR 1983	MEAN 625.39	MAX 637.54	MIN 613.00	AC-FT: -24700								
WTR YR 1984	MEAN 627.48	MAX 637.60	MIN 613.02	AC-FT: -510								

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

+ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

259

141A7100 WILEY CREEK AT FOSTER, OR

LOCATION.--Lat 44°23'55", Long 122°39'35", in SW1/4 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 mi².

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 590 ft, from topographic map. Prior to May 2, 1974, at present site at datum 5.00 ft lower.

REMARKS.--Records fair except those for periods of indefinite stage-discharge relation Apr. 8-10, May 1-7, 23, 26, and June 4 to Sept. 30, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--11 years, 246 ft³/s, 53.62 in/yr, 178,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,320 ft³/s Jan. 15, 1974, gage height, 9.28 ft; minimum, 3.1 ft³/s Oct. 19, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2030	2,000	7.19	June 7	0330	a2,200	8.26
Feb. 13	0645	*4,090	*8.42				

Minimum, 14 ft³/s Oct. 1-3.

a Estimated.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	14	64	484	476	170	333	610	500	154	114	36	22		
2	14	76	430	420	153	342	491	760	136	105	36	20		
3	14	123	379	542	141	281	401	1000	124	99	33	19		
4	16	360	322	490	131	238	340	750	210	95	31	19		
5	16	170	342	396	120	207	304	680	300	90	31	22		
6	16	469	685	329	117	185	282	570	590	87	32	37		
7	16	360	909	291	107	169	331	500	1400	80	30	31		
8	15	223	943	263	101	158	610	447	990	70	29	34		
9	15	172	711	227	118	170	500	376	790	67	28	26		
10	19	147	924	276	123	188	800	325	650	65	27	22		
11	18	167	684	389	176	180	720	302	580	63	27	21		
12	16	196	496	329	817	227	700	237	460	61	26	20		
13	16	344	454	278	2410	269	640	214	379	59	26	20		
14	18	317	1170	236	1280	363	570	211	305	57	25	19		
15	19	283	1430	210	796	425	500	219	254	55	25	19		
16	16	304	781	186	633	449	450	228	218	53	25	18		
17	20	714	536	167	443	485	380	200	180	50	24	17		
18	23	850	407	154	342	496	370	178	142	47	23	17		
19	19	730	340	145	290	658	383	164	131	46	23	18		
20	18	870	288	135	312	628	363	183	185	45	22	19		
21	18	585	241	151	503	873	320	150	416	45	22	19		
22	35	417	208	201	418	645	279	171	320	44	22	20		
23	42	444	178	214	356	483	261	350	233	41	21	21		
24	32	885	180	398	485	361	245	321	189	42	21	23		
25	28	776	200	549	701	328	221	331	162	41	21	20		
26	26	552	261	486	463	1140	218	460	153	40	21	19		
27	26	456	225	369	341	1090	208	386	156	37	20	18		
28	26	426	200	299	303	786	194	299	132	37	20	17		
29	25	375	325	251	275	721	188	240	159	37	20	16		
30	33	477	899	219	---	561	289	212	130	36	20	16		
31	73	---	685	193	---	464	---	179	---	35	21	---		
TOTAL	702	12332	16317	9269	12625	13903	12168	11143	10228	1843	788	629		
MEAN	22.6	411	526	299	435	448	406	359	341	59.5	25.4	21.0		
MAX	73	885	1430	549	2410	1140	800	1000	1400	114	36	37		
MIN	14	64	178	135	101	158	188	150	124	35	20	16		
CFSM	.36	6.60	8.44	4.80	6.98	7.19	6.52	5.76	5.47	.96	.41	.34		
IN.	.42	7.36	9.74	5.53	7.54	8.30	7.27	6.65	6.11	1.10	.47	.38		
AC-FT	1390	24460	32360	18390	25040	27580	24140	22100	20290	3660	1560	1250		
CAL YR 1983	TOTAL	105628	MEAN	289	MAX	2400	MIN	14	CFSM	4.64	IN.	63.07	AC-FT	209500
WTR YR 1984	TOTAL	101947	MEAN	279	MAX	2410	MIN	14	CFSM	4.48	IN.	60.87	AC-FT	202200

WILLAMETTE RIVER BASIN

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR

LOCATION.--Lat 44°24'45", long 122°41'15", in SE¼ 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 mi².

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.--11 years, 3,034 ft³/s, 2,198,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft³/s Feb. 26, 1982, gage height, 16.61 ft; minimum, 425 ft³/s July 26, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,400 ft³/s Feb. 14, gage height, 15.96 ft; minimum, 595 ft³/s Aug. 23; minimum daily, 633 ft³/s Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	2280	7220	7040	2900	2350	2970	1740	2370	1710	707	805
2	1550	2580	7110	5940	2880	2720	2670	4990	1850	1470	706	797
3	1510	2840	6950	7810	1740	2890	2650	7750	1690	1070	703	786
4	1470	3750	6320	8870	1380	2420	2460	7330	3520	1050	786	923
5	1470	4770	6280	7500	1250	2080	1980	5880	6620	920	792	873
6	1450	5700	7160	6900	1090	1820	1790	5190	8610	915	701	1020
7	1470	4970	8910	6520	1150	1570	1700	4350	13200	862	684	1030
8	1580	3970	8960	6380	988	1500	2720	2520	13200	878	674	1190
9	1660	3450	7880	6010	1200	1790	2570	2140	8490	896	674	1190
10	1770	3350	9160	6110	1160	2040	3970	4130	7010	851	663	1190
11	1870	3760	8100	5650	1190	2110	3970	5490	4550	847	748	1360
12	1870	3790	8030	5170	2720	2240	3970	3880	3540	782	750	1500
13	1840	3910	9280	3850	11400	2750	5090	3810	3370	786	659	1540
14	1760	3990	11800	3050	13300	3600	4730	3940	3330	857	649	1570
15	1890	3970	12800	3070	7760	4970	5040	4210	3210	949	645	1560
16	1940	4150	11000	2340	7780	6150	4410	4340	2530	764	643	1550
17	1970	6150	10100	1750	7070	6220	2200	3240	2280	716	636	1550
18	1980	7170	7970	1950	6520	5360	4190	1620	2130	707	745	1550
19	1930	7150	6610	1960	4200	6450	4600	1370	1560	700	744	1550
20	1940	8000	6300	1480	4270	7190	3690	1600	1610	698	642	1560
21	1960	6820	5920	1710	5280	8560	2610	1930	3200	881	638	1550
22	1890	6440	5830	1920	4720	7670	2750	2360	4060	928	641	1540
23	1950	6260	5530	2400	4830	6750	2500	4980	3140	736	638	1630
24	1950	8560	4640	4830	5040	5900	1820	4830	2960	710	634	1640
25	1960	8410	4850	6350	4210	5430	3890	3650	2680	720	728	1640
26	1910	6920	4910	6740	3530	8460	4290	5680	2400	755	733	1440
27	1850	6600	4210	6990	2720	7540	2700	5810	2570	736	633	1190
28	1790	6550	2700	5650	2120	6520	1110	4260	2720	805	789	1430
29	2100	6250	2550	4380	2290	5620	1100	3320	2540	809	802	1520
30	2120	6650	7710	3360	---	4140	1270	3240	1940	710	796	1510
31	2170	---	7940	2930	---	3180	---	2940	---	706	797	---
TOTAL	56030	159160	224730	146610	116688	137990	91410	122520	122880	26924	21780	40184
MEAN	1807	5305	7249	4729	4024	4451	3047	3952	4096	869	703	1339
MAX	2170	8560	12800	8870	13300	8560	5090	7750	13200	1710	802	1640
MIN	1450	2280	2550	1480	988	1500	1100	1370	1560	698	633	786
AC-FT	111100	315700	445800	290800	231500	273700	181300	243000	243700	53400	43200	79700
CAL YR 1983	TOTAL	1211804	MEAN	3320	MAX	13200	MIN	768	AC-FT	2404000		
WTR YR 1984	TOTAL	1266906	MEAN	3461	MAX	13300	MIN	633	AC-FT	2513000		

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 recorded, 15.0°C July 30-31, Aug. 2, 10, Sept. 14; minimum, 3.5°C Jan. 13-15.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR

LOCATION.--Lat 44°29'55", long 122°49'20", in SW1/4 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 mi².

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.--62 years (water years 1906, 1924-84), 2,957 ft³/s, 2,142,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,200 ft³/s Dec. 22, 1964, gage height, 24.50 ft; minimum, 61 ft³/s Oct. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,600 ft³/s Feb. 13, gage height, 9.83 ft; minimum, 516 ft³/s Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	2220	7530	7410	3090	2620	3310	2200	2570	1790	660	767
2	1480	2510	7250	6440	3050	2980	2950	4980	2030	1630	655	748
3	1500	2770	7100	7710	2090	3110	2920	8030	1820	1170	650	731
4	1430	3660	6390	9380	1590	2790	2690	7790	3170	1110	722	852
5	1430	4450	6390	7840	1420	2310	2360	6290	6750	984	753	860
6	1420	5850	7230	7170	1250	2100	1950	5620	8580	963	671	988
7	1420	5190	9230	6760	1280	1770	1890	4730	14000	882	634	1010
8	1510	4080	9610	6600	1150	1670	3150	2980	13700	884	609	1150
9	1600	3570	8320	6170	1310	1940	3050	2360	9010	924	607	1170
10	1720	3300	9510	6310	1340	2130	4330	3800	7400	867	601	1170
11	1810	3760	8490	6090	1380	2320	4430	5610	4970	848	671	1310
12	1820	3800	8250	5450	2820	2360	4390	4250	3810	804	697	1470
13	1810	4020	9540	4380	13300	2980	5270	3860	3550	766	620	1520
14	1720	4150	12500	3330	14000	3770	5060	4070	3460	836	589	1570
15	1820	4080	13200	3310	8850	4960	5270	4250	3350	956	571	1560
16	1880	4220	11300	2770	8440	6410	4870	4440	2710	802	576	1540
17	1920	6100	10200	1880	7500	6450	2330	3670	2380	685	566	1540
18	1930	7450	8010	2100	6910	5670	4290	1810	2230	679	659	1540
19	1890	7230	6840	2110	4870	6710	4780	1510	1750	662	692	1550
20	1890	8360	6480	1740	4530	7440	4150	1670	1680	656	605	1560
21	1910	7110	6080	1840	6010	9210	2830	1930	3400	815	566	1560
22	1880	6620	5920	2080	5310	8150	2900	2410	4310	936	572	1550
23	1910	6400	5610	2510	5210	7170	2750	4760	3440	765	564	1620
24	1900	8640	4810	4480	5770	6250	2020	5290	3110	668	567	1640
25	1890	8920	5020	6980	4830	5630	3670	3810	2840	684	644	1640
26	1860	7190	5090	6700	4140	8810	4390	5780	2590	715	675	1500
27	1820	6720	4730	7290	3220	8110	3260	6010	2640	705	589	1180
28	1740	6670	3280	5960	2520	6940	1250	4680	2880	755	699	1360
29	1980	6360	2650	4820	2590	6070	1220	3500	2680	790	744	1520
30	2070	6710	7340	3650	---	4640	1480	3400	2190	695	750	1510
31	2120	---	8570	3130	---	3590	---	3110	---	658	744	---
TOTAL	54510	162110	232470	154390	129770	147060	99210	128600	129000	27084	19922	39686
MEAN	1758	5404	7499	4980	4475	4744	3307	4148	4300	874	643	1323
MAX	2120	8920	13200	9380	14000	9210	5270	8030	14000	1790	753	1640
MIN	1420	2220	2650	1740	1150	1670	1220	1510	1680	656	564	731
AC-FT	108100	321500	461100	306200	257400	291700	196800	255100	255900	53720	39520	78720
CAL YR 1983	TOTAL	1250875	MEAN	3427	MAX	13500	MIN	693	AC-FT	2481000		
WTR YR 1984	TOTAL	1323812	MEAN	3617	MAX	14000	MIN	564	AC-FT	2626000		

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, 19.0°C July 24; minimum, 3.0°C Jan. 17.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

WILLAMETTE RIVER BASIN

14188800 THOMAS CREEK NEAR SCIO, OR

LOCATION.--Lat 44°42'42", long 122°45'55", in SE1/4 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 mi².

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WDR OR-71-1: 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.--22 years, 506 ft³/s, 63.04 in/yr, 366,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s Dec. 22, 1964, gage height, 18.44 ft, from rating curve extended above 7,200 ft³/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 ft³/s Aug. 20, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	0800	*8,410	*11.42	No other peak greater than base discharge.			
Minimum, 21 ft ³ /s Sept. 16, 29.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	163	670	970	376	780	750	1110	345	269	56	32
2	43	215	625	856	341	845	680	1620	299	242	54	29
3	43	486	625	1330	311	720	600	1630	422	215	51	27
4	43	916	542	1140	290	610	560	1150	1030	195	50	24
5	44	518	765	892	269	530	540	1020	1090	183	49	33
6	43	1010	916	735	254	486	520	928	2110	170	51	86
7	41	900	1070	645	236	450	700	795	2180	160	46	54
8	41	600	1440	580	233	422	1350	705	1520	150	42	57
9	40	486	1200	498	269	434	1250	615	1280	142	40	44
10	42	450	2080	725	299	438	1600	546	976	132	40	38
11	42	546	1440	1010	454	458	1450	675	785	126	38	36
12	40	605	1060	790	2130	550	1550	610	645	125	40	39
13	39	964	1260	660	5760	670	1500	530	542	117	41	34
14	45	1250	2220	555	2320	910	1300	555	466	112	38	31
15	44	1150	2050	478	1530	976	1200	565	406	107	37	29
16	40	1290	1310	422	1170	1000	730	514	359	99	35	29
17	45	2030	976	376	898	946	635	454	320	92	34	28
18	49	2270	785	345	755	928	605	402	290	86	33	26
19	43	1760	670	320	675	1100	585	380	266	83	32	24
20	46	1890	570	296	760	1100	615	486	482	81	31	28
21	43	1260	486	366	1080	1650	555	383	1050	78	28	28
22	206	958	422	590	856	1340	502	454	670	75	28	30
23	140	1110	359	605	795	1080	462	928	502	71	28	46
24	89	1840	338	1010	1130	940	418	720	410	71	28	43
25	74	1420	366	1500	1320	860	394	785	352	67	29	35
26	63	1040	430	1130	964	1600	376	1110	345	68	29	31
27	59	892	387	835	790	1500	352	825	338	63	27	28
28	57	845	338	675	725	1300	327	655	290	60	27	25
29	54	760	725	560	665	1150	311	534	387	60	25	23
30	56	740	1930	486	---	1000	406	470	308	57	26	23
31	170	---	1390	426	---	850	---	406	---	56	28	---
TOTAL	1867	30364	29445	21806	27655	27623	22823	22560	20465	3612	1141	1040
MEAN	60.2	1012	950	703	954	891	761	728	682	117	36.8	34.7
MAX	206	2270	2220	1500	5760	1650	1600	1630	2180	269	56	86
MIN	39	163	338	296	233	422	311	380	266	56	25	23
CFSM	.55	9.28	8.72	6.45	8.75	8.17	6.98	6.68	6.26	1.07	.34	.32
IN.	.64	10.36	10.05	7.44	9.44	9.43	7.79	7.70	6.98	1.23	.39	.35
AC-FT	3700	60230	58400	43250	54850	54790	45270	44750	40590	7160	2260	2060
CAL YR 1983	TOTAL	225857	MEAN	619	MAX	5330	MIN	39	CFSM	5.68	IN.	77.08
WTR YR 1984	TOTAL	210401	MEAN	575	MAX	5760	MIN	23	CFSM	5.28	IN.	71.81
											AC-FT	448000
											AC-FT	417300

14189000 SANTIAM RIVER AT JEFFERSON, OR

LOCATION.--Lat 44°42'55", long 122°00'40", in SE¼ 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 mi², 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.--54 years (water years 1908-16, 1940-84), 7,847 ft³/s, 5,685,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft³/s Dec. 22, 1964, gage height, 24.22 ft; minimum observed, 260 ft³/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 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47,400 ft³/s Feb. 13, gage height, 14.91 ft; minimum, 1,200 ft³/s Aug. 17, 18, 22, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3860	5560	17000	18800	7980	7380	8580	7550	9200	5600	1480	1970
2	3920	6080	16000	16900	7650	8420	7660	13200	7640	5030	1450	1970
3	4000	7390	15900	18900	6410	8060	7180	18000	6490	3870	1430	1910
4	3910	10800	14800	24100	4940	7450	6780	17900	7790	3370	1440	2100
5	3790	10000	15600	19600	4250	6300	6430	15500	15900	3100	1510	2610
6	3830	13900	17100	17400	3800	5840	5590	14400	18400	2930	1500	3010
7	3840	13900	19500	16000	3630	5290	5580	12300	28300	2940	1420	3120
8	3910	10900	20600	15500	3520	5030	10300	10100	28600	2960	1360	3410
9	3960	9610	17600	14500	3590	5230	10300	8910	22000	2890	1320	3400
10	4060	8740	21000	15000	3780	5610	11900	9110	18300	2790	1310	3390
11	4230	9400	19500	17100	4010	6220	12700	12600	14800	2820	1300	3670
12	4270	9570	16700	15100	8470	6220	12800	12100	12700	2270	1390	4030
13	4370	10800	20900	13500	36300	8110	13600	10100	10600	2190	1380	4270
14	4170	12100	28300	10300	31500	10300	13100	10500	9160	2200	1310	4330
15	4280	12900	31600	9230	20800	12100	13300	11200	8440	2350	1270	4330
16	4360	12700	24600	8550	20700	14800	12100	11800	7390	2280	1260	4330
17	4450	16500	21700	6500	17400	15200	8610	11100	6650	2050	1240	4380
18	4450	20700	18700	6380	15200	14300	9250	8010	6290	1940	1260	4360
19	4500	19400	16300	6160	12500	16500	10000	6330	5380	1870	1370	4400
20	4240	22600	15500	5350	11400	17800	10000	6500	5130	1770	1350	4470
21	4290	19200	14600	5180	15400	22500	8120	6380	10600	1720	1250	4520
22	4410	16600	13500	6350	13600	20800	7570	7640	13000	1900	1240	4400
23	5120	16300	11700	7730	11900	18000	7420	12000	10600	1820	1230	4650
24	4490	23000	9730	11500	13600	15600	5850	13300	8440	1640	1240	4720
25	4440	22800	9870	20300	13600	13400	6280	11500	7700	1620	1260	4660
26	4370	18500	10400	17300	11200	19000	7690	15600	6770	1620	1330	4360
27	4330	16800	10300	17100	9220	20000	7030	14100	6650	1590	1300	3720
28	4350	16800	8610	15200	7820	16700	4220	12100	7360	1540	1320	3450
29	4360	16000	7790	13000	7160	14900	4000	9480	7430	1600	1630	3690
30	4760	16000	19000	9940	---	12200	4630	10200	6700	1580	1760	3730
31	5340	---	22500	8500	---	9830	---	10000	---	1540	1820	---
TOTAL	132660	425550	526900	406970	331330	369090	258570	349510	334410	75390	42730	111360
MEAN	4279	14190	17000	13130	11430	11910	8619	11270	11150	2432	1378	3712
MAX	5340	23000	31600	24100	36300	22500	13600	18000	28600	5600	1820	4720
MIN	3790	5560	7790	5180	3520	5030	4000	6330	5130	1540	1230	1910
AC-FT	263100	844100	1045000	807200	657200	732100	512900	693300	663300	149500	84750	220900
CAL YR 1983	TOTAL	3397240	MEAN	9308	MAX	45000	MIN	1680	AC-FT	6738000		
WTR YR 1984	TOTAL	3364470	MEAN	9193	MAX	36300	MIN	1230	AC-FT	6673000		

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, Dec. 24, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.5°C Aug. 9; minimum, 0.0°C Dec. 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	11.0	11.5	11.0	5.5	5.0	3.5	2.5	4.0	3.0	7.0	6.0
2	12.5	11.5	11.0	10.5	6.0	5.5	4.0	3.0	3.5	2.5	6.5	6.0
3	14.0	12.0	11.5	11.0	5.5	5.5	5.0	4.0	4.0	2.5	6.0	5.0
4	14.0	12.5	11.0	10.0	5.5	5.0	5.0	4.5	4.5	3.0	6.5	5.0
5	13.5	12.0	10.0	8.5	5.5	5.0	4.5	4.5	4.5	3.0	7.0	5.0
6	13.5	11.5	9.5	9.0	5.5	5.0	4.5	4.5	6.0	4.5	7.5	5.5
7	12.5	10.5	9.0	8.0	5.5	5.5	4.5	4.0	5.5	5.0	7.5	6.5
8	13.0	11.5	8.5	7.5	5.5	5.5	4.0	3.5	6.5	5.0	8.5	6.5
9	12.5	12.0	9.5	8.5	6.0	5.5	4.0	4.0	6.0	5.0	9.0	7.5
10	13.0	12.0	9.5	9.0	6.0	5.5	4.0	3.5	5.5	4.5	8.5	7.5
11	13.0	11.5	9.5	9.0	5.5	5.5	4.5	4.0	6.0	5.0	7.5	6.5
12	12.5	11.5	9.0	8.5	5.5	5.0	4.0	3.5	6.0	5.5	7.5	6.0
13	12.5	11.5	8.5	7.5	5.5	5.5	3.5	3.0	6.0	5.5	7.0	6.0
14	13.0	11.5	8.0	7.5	5.5	5.5	3.0	2.0	5.5	5.0	7.0	6.0
15	12.5	11.0	8.5	8.0	5.5	5.0	2.0	1.5	6.0	5.0	7.0	6.0
16	12.0	10.5	8.5	8.5	5.5	5.0	2.0	1.0	5.0	4.5	6.5	6.0
17	12.5	11.5	8.5	7.5	5.0	4.5	1.5	1.0	5.0	4.0	6.5	5.5
18	12.0	11.0	7.5	7.0	4.5	4.5	1.5	1.0	5.5	4.0	6.0	5.5
19	12.0	11.0	7.5	7.5	4.5	4.0	2.5	1.5	5.0	4.5	6.5	5.5
20	13.0	11.5	7.5	6.5	4.0	3.0	2.0	1.5	5.5	5.0	6.5	6.0
21	12.5	11.5	7.0	6.5	3.0	2.0	3.0	2.0	5.5	5.0	6.5	6.0
22	12.5	12.0	7.0	6.5	2.0	1.5	4.5	3.0	5.0	4.0	7.0	5.5
23	12.0	10.5	7.0	6.5	1.5	.5	4.0	3.5	5.0	4.5	7.5	6.5
24	11.0	10.0	7.0	6.5	.5	.0	5.0	4.0	5.0	5.0	7.0	6.0
25	11.5	10.0	6.5	6.0	2.0	.5	5.0	5.0	5.5	4.5	6.5	6.0
26	11.5	10.0	6.5	6.0	2.5	2.0	5.0	4.0	5.0	4.5	7.0	6.0
27	11.5	11.0	7.0	6.5	3.0	2.5	5.0	4.0	6.0	5.0	7.5	6.0
28	11.0	11.0	7.0	6.5	2.5	1.5	4.0	3.5	7.0	6.0	7.0	6.5
29	11.0	10.5	6.5	5.5	2.0	2.0	4.0	3.5	6.5	5.5	7.0	5.5
30	12.0	11.0	5.5	5.0	3.5	2.0	4.0	3.0	---	---	7.5	5.5
31	12.0	11.5	---	---	3.5	3.0	4.0	3.0	---	---	9.5	6.5
MONTH	14.0	10.0	11.5	5.0	6.0	.0	5.0	1.0	7.0	2.5	9.0	5.0

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

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 mi².

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 excellent. Some diurnal fluctuation during periods of low flow caused by millpond above station. A few small diversions for irrigation above station.

AVERAGE DISCHARGE.--50 years, 916 ft³/s, 51.83 in/yr, 663,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s Dec. 22, 1964, gage height, 34.52 ft; minimum, 0.65 ft³/s Aug. 13, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 14	0100	*7,580	*27.28	No other peak greater than base discharge.			
Minimum, 38 ft ³ /s Sept. 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	51	108	1360	3680	938	1440	890	772	514	274	77	44		
2	49	100	1180	2740	847	1300	822	1410	471	255	75	50		
3	49	417	1090	2860	781	1170	761	1510	441	240	73	51		
4	49	1730	979	3450	721	1050	718	1370	510	221	73	46		
5	49	916	1190	2780	669	959	681	1200	632	208	72	43		
6	49	957	2200	2170	625	882	635	1060	692	206	71	64		
7	49	917	2680	1800	586	815	635	925	1150	200	68	89		
8	48	705	3380	1550	560	758	1190	844	1010	192	64	113		
9	48	623	3610	1330	597	709	1060	786	883	187	63	78		
10	48	628	3260	1330	939	680	1740	737	820	178	59	65		
11	48	887	3280	1970	1250	659	2000	786	723	170	56	59		
12	48	1110	2920	1600	2280	762	2320	891	653	164	56	56		
13	48	1540	3310	1390	5500	999	2360	799	589	162	61	55		
14	48	2080	3860	1230	6670	1480	1910	739	540	156	58	52		
15	48	2270	4230	1090	4380	1760	1560	700	494	147	55	47		
16	48	2090	3470	988	3250	1750	1310	649	456	141	55	46		
17	48	2940	2580	901	2430	2060	1140	594	428	127	52	46		
18	49	3650	1990	826	1980	2020	1040	548	401	119	52	44		
19	54	3290	1650	771	1700	1980	938	515	374	114	52	42		
20	53	3700	1430	722	1550	1820	883	542	360	112	53	43		
21	53	3310	1220	747	1530	1930	819	488	411	110	50	43		
22	55	2380	1050	889	1400	2090	757	467	396	108	48	42		
23	114	2040	921	1060	1340	1850	701	640	342	104	46	44		
24	81	3320	863	1870	2090	1580	653	593	316	97	46	47		
25	67	4160	840	2570	3480	1380	625	556	295	94	46	46		
26	61	3460	794	2450	2880	1460	597	865	280	107	47	44		
27	60	2600	775	1920	2160	1340	553	902	302	96	47	43		
28	58	2150	705	1580	1770	1230	517	786	279	88	45	42		
29	57	1760	871	1350	1510	1150	498	681	285	89	43	39		
30	58	1500	3350	1180	---	1030	545	602	315	89	42	39		
31	96	---	4400	1050	---	951	---	549	---	79	42	---		
TOTAL	1741	57338	65438	51844	56413	41044	30858	24506	15362	4634	1747	1562		
MEAN	56.2	1911	2111	1672	1945	1324	1029	791	512	149	56.4	52.1		
MAX	114	4160	4400	3680	6670	2090	2360	1510	1150	274	77	113		
MIN	48	100	705	722	560	659	498	467	279	79	42	39		
CFSM	.23	7.96	8.80	6.97	8.10	5.52	4.29	3.30	2.13	.62	.23	.22		
IN.	.27	8.89	10.14	8.04	8.74	6.36	4.78	3.80	2.38	.72	.27	.24		
AC-FT	3450	113700	129800	102800	111900	81410	61210	48610	30470	9190	3470	3100		
CAL YR 1983	TOTAL	431560	MEAN	1182	MAX	9230	MIN	48	CFSM	4.92	IN.	66.89	AC-FT	856000
WTR YR 1984	TOTAL	352487	MEAN	963	MAX	6670	MIN	39	CFSM	4.01	IN.	54.64	AC-FT	699200

WILLAMETTE RIVER BASIN

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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 mi², 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.--68 years, 23,730 ft³/s, 44.27 in/yr, 17,190,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348,000 ft³/s Jan. 8, 1923, gage height, 38.3 ft, present datum; minimum, 2,470 ft³/s Aug. 27, 1940, gage height, 3.55 ft, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 500,000 ft³/s Dec. 4, 1861, gage height, about 47 ft present datum, from rating curve extended above 250,000 ft³/s in 1916. Floods of Jan. 16, 1881, and Feb. 5, 1890, reached stages of 44.3 ft, discharge, 428,000 ft³/s, and 45.1 ft, discharge, 448,000 ft³/s, respectively, from floodmarks and information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 106,000 ft³/s Feb. 15, gage height, 23.16 ft; minimum, 6,520 ft³/s Aug. 9, 21 gage height, 5.03 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	12600	15700	47700	74300	25600	29700	33500	18100	25800	17100	6940	8200		
2	12500	16100	46200	65200	23500	29800	30400	27900	23500	16100	6920	8370		
3	12600	17600	43400	57800	21700	29000	28200	39800	20300	14600	6900	8350		
4	12500	22100	41100	62100	18200	27000	26900	47100	19300	12700	6870	8180		
5	12600	25000	40100	59700	15700	24600	25700	47900	27700	11600	7020	8870		
6	12500	26200	44600	54400	14100	22700	23500	43800	37400	10900	7080	10100		
7	12300	30900	55100	49600	13400	19900	22000	39300	55000	10700	6930	11400		
8	12200	28900	70100	46000	13000	18300	26600	34800	68000	10500	6670	12000		
9	12200	25600	73400	43200	12600	17600	35800	29500	72000	10400	6560	12500		
10	12300	24300	72200	41300	13900	17600	40000	26300	62000	10200	6680	12500		
11	12500	24500	72800	47500	15400	18100	48700	26700	54000	9810	6660	12700		
12	12500	25000	65200	46400	19500	18600	52300	30400	44800	9590	6820	13800		
13	12800	26100	60900	41700	56000	20800	52600	28500	37800	9050	7090	14500		
14	12900	31800	66000	35400	95500	26900	48900	27600	31600	8770	6940	14600		
15	12900	35200	79100	30500	104000	32000	43100	28200	27800	8820	6820	14800		
16	12900	35300	84800	27600	88300	35900	39900	29600	24800	8620	6720	14400		
17	13400	40000	80300	24600	76800	40500	34800	29400	22400	8120	6670	14100		
18	13600	52000	68900	22500	68300	41800	29500	26100	21200	7770	6600	13600		
19	13600	58600	61900	21000	57100	42900	29300	21900	19900	7640	6620	13100		
20	13300	60700	59000	19600	50400	46000	29300	19600	18000	7550	6680	13000		
21	13500	60500	55800	17900	51700	51100	27600	19600	20600	7360	6570	12900		
22	13700	55600	51100	18600	53300	57900	26100	20400	28000	7460	6590	12900		
23	14600	50000	44700	21700	45600	55600	25400	26300	27700	7610	6740	13000		
24	14500	56200	35600	24800	44800	50300	23600	30600	23400	7210	7000	13300		
25	14100	68300	33400	37500	55600	43000	21000	29700	20600	6990	7080	13300		
26	13900	70400	32800	43600	53400	42900	21300	33800	19000	6910	6960	13100		
27	13700	64800	33600	42200	43100	54200	20200	32900	18100	6950	7140	12200		
28	14100	57400	33200	40800	36300	55300	16500	29900	18900	6930	7070	12000		
29	14200	51600	30600	36200	32000	52700	14900	25700	19100	6990	7290	11900		
30	14400	46600	45700	31600	---	48000	14900	25700	18600	7080	7700	12000		
31	14800	---	69900	28200	---	40400	---	26900	---	6970	7940	---		
TOTAL	410200	1203000	1699200	1213500	1218800	1111100	912500	924000	927300	289000	214270	365670		
MEAN	13230	40100	54810	39150	42030	35840	30420	29810	30910	9323	6912	12190		
MAX	14800	70400	84800	74300	104000	57900	52600	47900	72000	17100	7940	14800		
MIN	12200	15700	30600	17900	12600	17600	14900	18100	18000	6910	6560	8180		
CFSM	1.82	5.51	7.53	5.38	5.77	4.92	4.18	4.09	4.25	1.28	.95	1.67		
IN.	2.10	6.15	8.68	6.20	6.23	5.68	4.66	4.72	4.74	1.48	1.09	1.87		
AC-FT	813600	2386000	3370000	2407000	2417000	2204000	1810000	1833000	1839000	573200	425000	725300		
CAL YR 1983	TOTAL	10685570	MEAN	29280	MAX	105000	MIN	8150	CFSM	4.02	IN.	54.60	AC-FT	21195000
WTR YR 1984	TOTAL	10488540	MEAN	28660	MAX	104000	MIN	6560	CFSM	3.94	IN.	53.60	AC-FT	20804000

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 September 1983.

WATER TEMPERATURES: February 1951 to current year.

INSTRUMENTATION.--Temperature recorder since February 1951. Specific conductance recorder February 1951 to September 1972 and from October 1976 to September 1983.

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.--

WATER TEMPERATURES: Maximum recorded, 15.5°C Oct. 4, June 18, 19; minimum, 2.0°C Dec. 24, 25.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

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14121000 WILLAMETTE RIVER AT SALEM, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 mi².

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 good. Slight regulation occasionally at low flows by millpond upstream. No diversion above station.

AVERAGE DISCHARGE.--50 years, 627 ft³/s, 64.02 in/yr, 454,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,600 ft³/s Dec. 22, 1964, gage height, 17.07 ft; minimum, 2.6 ft³/s Oct. 11, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	1000	*4,650	*7.39				
Minimum, 18 ft ³ /s Aug. 30, 31, Sept. 5.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	23	79	731	1560	539	880	538	792	345	159	46	23		
2	23	161	629	1510	480	779	495	1160	318	148	44	27		
3	24	1180	555	2170	430	681	459	1200	301	140	42	22		
4	25	1170	497	2110	387	606	427	973	425	130	41	20		
5	25	641	885	1650	351	545	395	939	418	123	41	21		
6	24	975	1770	1390	325	493	372	806	488	120	45	74		
7	23	753	1830	1150	300	449	531	702	489	115	40	109		
8	23	580	2570	1020	314	411	682	653	467	110	37	79		
9	24	641	2270	1000	434	394	679	597	497	104	35	54		
10	24	911	2560	1090	851	377	1160	538	457	100	33	44		
11	23	1120	2610	900	948	377	1160	608	413	97	32	39		
12	23	1300	2430	800	2540	594	1940	579	393	94	33	41		
13	23	2350	2960	700	3710	786	1480	538	377	90	33	40		
14	25	2610	2500	600	2490	937	1160	532	319	87	32	34		
15	25	2360	1910	550	1860	1180	945	507	272	82	29	30		
16	24	2320	1490	500	1610	1210	796	471	255	76	27	28		
17	26	3380	1180	440	1230	1610	685	436	237	69	27	27		
18	39	3030	960	400	1040	1500	648	413	220	67	27	25		
19	32	3050	824	370	887	1360	577	410	206	65	26	25		
20	29	3460	704	350	834	1160	559	427	216	65	24	24		
21	31	2390	599	350	864	1210	502	374	279	62	24	23		
22	136	1710	480	450	783	1140	462	373	223	61	23	26		
23	86	1440	410	560	881	1000	442	458	193	58	24	32		
24	51	3570	350	1800	2260	909	420	411	175	55	24	32		
25	42	3110	300	2330	2480	862	429	491	164	67	24	31		
26	37	2160	260	1810	1760	976	402	704	159	76	23	27		
27	35	1740	235	1360	1340	853	364	639	168	59	22	24		
28	33	1340	216	1060	1130	815	337	583	152	57	22	22		
29	32	1070	966	870	928	740	349	528	221	55	21	21		
30	50	880	2210	729	---	657	444	483	191	51	19	21		
31	104	---	2040	623	---	593	---	387	---	48	19	---		
TOTAL	1144	51481	39931	32202	33986	26084	19839	18712	9038	2690	939	1045		
MEAN	36.9	1716	1288	1039	1172	841	661	604	301	86.8	30.3	34.8		
MAX	136	3570	2960	2330	3710	1610	1940	1200	497	159	46	109		
MIN	23	79	216	350	300	377	337	373	152	48	19	20		
CFSM	.28	12.9	9.68	7.81	8.81	6.32	4.97	4.54	2.26	.65	.23	.26		
IN.	.32	14.40	11.17	9.01	9.51	7.30	5.55	5.23	2.53	.75	.26	.29		
AC-FT	2270	102100	79200	63870	67410	51740	39350	37120	17930	5340	1860	2070		
CAL YR 1983	TOTAL	290092	MEAN	795	MAX	5860	MIN	23	CFSM	5.98	IN.	81.14	AC-FT	575400
WTR YR 1984	TOTAL	237091	MEAN	648	MAX	3710	MIN	19	CFSM	4.87	IN.	66.31	AC-FT	470300

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 mi².

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.--50 years, 263 ft³/s, 55.20 in/yr, 190,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s Dec. 22, 1964, gage height, 13.54 ft, from rating curve extended above 3,400 ft³/s on basis of slope-area measurement at gage height 11.65 ft; minimum, 5.4 ft³/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 ft³/s, from rating curve extended above 3,400 ft³/s on basis of slope-area measurement at gage height 11.65 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	2100	*1,820	*6.29				
Minimum, 17 ft ³ /s Sept. 5, 28-30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	21	44	369	461	282	464	252	369	163	76	31	22		
2	21	70	325	494	257	412	237	421	152	70	30	21		
3	22	371	286	816	239	367	225	416	149	67	30	20		
4	21	300	259	761	222	331	213	360	202	63	29	18		
5	21	205	353	623	207	301	202	359	175	60	30	23		
6	21	341	537	515	195	276	190	319	199	58	30	44		
7	20	223	565	450	185	254	278	287	190	57	28	66		
8	20	173	788	389	182	239	306	271	180	55	27	37		
9	20	193	761	345	228	232	294	257	184	53	26	30		
10	20	226	871	393	382	220	446	241	174	52	25	26		
11	20	335	978	379	428	216	455	268	166	51	25	25		
12	20	419	1080	340	1050	293	638	249	157	51	25	26		
13	20	678	1260	314	1440	330	549	237	147	50	25	24		
14	20	898	986	288	1010	382	464	226	139	48	25	22		
15	20	891	759	267	789	407	396	212	132	46	24	21		
16	20	831	613	249	678	466	343	199	125	43	24	21		
17	24	1310	499	235	551	610	306	186	118	41	24	21		
18	23	1190	421	221	493	597	285	175	111	40	23	20		
19	21	1280	368	209	442	562	258	177	105	40	23	20		
20	22	1480	321	201	417	507	252	170	112	39	22	20		
21	21	1030	281	203	408	523	232	158	124	39	22	21		
22	66	747	247	238	386	493	215	183	103	38	22	24		
23	37	673	227	365	420	446	206	201	94	36	22	25		
24	28	1490	215	879	825	403	194	182	87	36	22	23		
25	26	1180	200	858	908	396	189	220	83	37	22	22		
26	24	887	190	697	737	401	178	273	83	38	21	20		
27	24	802	180	565	609	360	170	246	83	36	20	20		
28	23	644	172	471	530	346	163	219	79	35	22	18		
29	23	529	318	404	479	313	173	197	110	34	20	17		
30	36	440	533	352	---	291	232	183	85	33	19	18		
31	43	---	539	312	---	271	---	174	---	32	20	---		
TOTAL	768	19880	15501	13294	14979	11709	8541	7635	4011	1454	758	735		
MEAN	24.8	663	500	429	517	378	285	246	134	46.9	24.5	24.5		
MAX	66	1490	1260	879	1440	610	638	421	202	76	31	66		
MIN	20	44	172	201	182	216	163	158	79	32	19	17		
CFSM	.38	10.2	7.73	6.63	7.99	5.84	4.40	3.80	2.07	.72	.38	.38		
IN.	.44	11.43	8.91	7.64	8.61	6.73	4.91	4.39	2.31	.84	.44	.42		
AC-FT	1520	39430	30750	26370	29710	23220	16940	15140	7960	2880	1500	1460		
CAL YR 1983	TOTAL	124551	MEAN	341	MAX	1960	MIN	20	CFSM	5.27	IN.	71.61	AC-FT	247000
WTR YR 1984	TOTAL	99265	MEAN	271	MAX	1490	MIN	17	CFSM	4.19	IN.	57.07	AC-FT	196900

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 mi².

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 above 500 ft³/s, fair below. Slight regulation during low-water periods by logpond upstream. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years, 1,780 ft³/s, 48.15 in/yr, 1,290,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft³/s Dec. 23, 1964, gage height, 47.20 ft; minimum, 3.2 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 14	1130	*11,300	*34.89				

Minimum, 29 ft³/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	54	216	2320	5790	1600	2780	1560	1310	736	397	105	33		
2	52	217	1930	4770	1410	2500	1400	2730	677	358	103	43		
3	54	735	1690	5380	1270	2200	1270	2970	626	323	101	52		
4	67	3100	1470	6450	1150	1910	1180	2580	716	304	90	51		
5	65	1780	1670	5550	1060	1690	1110	2240	866	290	92	50		
6	62	1740	4330	4330	972	1520	1020	2110	818	268	100	63		
7	62	1780	5370	3420	900	1370	984	1760	972	250	90	154		
8	57	1340	6710	2880	865	1240	2070	1540	900	242	76	212		
9	54	1060	7870	2410	942	1160	1910	1410	868	242	66	144		
10	57	1360	7490	2250	2120	1090	2890	1300	893	232	59	112		
11	58	2220	7750	3030	2660	1040	3670	1280	805	222	56	97		
12	57	2370	7310	2630	3780	1330	4530	1430	754	205	62	92		
13	75	3380	7290	2270	8040	2100	4990	1280	700	212	69	92		
14	73	5120	7390	1960	10900	3020	3980	1210	655	206	66	89		
15	61	5710	6550	1700	8640	3440	3050	1150	606	169	63	79		
16	58	5340	5260	1510	6130	3770	2440	1050	563	162	61	72		
17	56	6210	4080	1350	4670	4580	2030	960	537	158	58	68		
18	58	8050	3180	1220	3670	4940	1800	877	516	151	59	65		
19	79	8140	2600	1130	3090	4550	1630	826	486	138	57	61		
20	74	8520	2230	1050	2830	3930	1470	846	470	137	57	60		
21	72	8680	1870	1030	2840	3720	1360	776	534	137	50	61		
22	81	6390	1560	1100	2710	3830	1220	744	574	131	46	66		
23	257	4520	1300	1460	2500	3330	1130	978	487	128	43	67		
24	169	5380	1200	3910	3790	2840	1050	928	443	114	48	80		
25	156	8280	1100	5440	7080	2480	1010	873	412	117	49	82		
26	135	8010	1000	5330	6890	2670	977	1320	389	123	53	74		
27	125	5970	1000	4180	4970	2570	905	1330	396	129	50	72		
28	110	4580	1000	3220	3730	2340	833	1150	384	125	45	69		
29	102	3520	1100	2610	3070	2160	807	990	381	112	42	61		
30	97	2840	4950	2180	---	1900	929	864	474	116	36	51		
31	126	---	6310	1860	---	1710	---	790	---	111	39	---		
TOTAL	2663	126558	116880	93400	104279	79710	55205	41602	18638	6009	1991	2372		
MEAN	85.9	4219	3770	3013	3596	2571	1840	1342	621	194	64.2	79.1		
MAX	257	8680	7870	6450	10900	4940	4990	2970	972	397	105	212		
MIN	52	216	1000	1030	865	1040	807	744	381	111	36	33		
CFSM	.17	8.40	7.51	6.00	7.16	5.12	3.67	2.67	1.24	.39	.13	.16		
IN.	.20	9.38	8.66	6.92	7.73	5.91	4.09	3.08	1.38	.45	.15	.18		
AC-FT	5280	251000	231800	185300	206800	158100	109500	82520	36970	11920	3950	4700		
CAL YR 1983	TOTAL	843085	MEAN	2310	MAX	16200	MIN	52	CFSM	4.60	IN.	62.48	AC-FT	1672000
WTR YR 1984	TOTAL	649307	MEAN	1774	MAX	10900	MIN	33	CFSM	3.53	IN.	48.12	AC-FT	1288000

WILLAMETTE RIVER BASIN

257

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 mi².

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.--24 years (water years 1959-65, 1968-84), 48.4 ft³/s, 72.79 in/yr, 35,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft³/s Dec. 22, 1964, gage height, 6.88 ft, from rating curve extended above 1,000 ft³/s; maximum gage height, 9.7 ft Dec. 23, 1964 (backwater from debris); minimum discharge, 2.3 ft³/s Sept. 23-26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	2200	*250	*3.66				
Minimum, 3.5 ft ³ /s Oct. 12, 13.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	3.8	7.1	66	72	50	75	48	61	32	17	8.3	5.9		
2	3.9	20	60	78	45	71	44	79	30	16	8.2	5.5		
3	3.9	72	53	146	41	67	41	80	30	16	8.0	5.0		
4	4.0	56	48	144	38	62	39	73	38	15	7.9	4.8		
5	3.9	41	61	111	36	57	37	73	33	15	7.9	7.0		
6	3.8	57	71	90	33	52	34	66	37	14	8.2	12		
7	3.8	42	82	79	31	47	57	60	36	14	7.7	16		
8	3.8	33	115	70	31	43	60	57	36	14	7.3	8.6		
9	3.8	36	114	63	41	41	65	55	38	13	7.1	7.1		
10	3.8	49	132	65	60	39	83	52	37	13	6.9	6.4		
11	3.8	70	147	61	64	38	90	55	35	13	6.9	5.8		
12	3.7	81	136	56	152	51	135	53	33	13	7.0	6.1		
13	3.7	128	143	52	186	61	120	50	31	12	7.1	5.6		
14	3.9	161	137	47	145	67	97	47	28	12	6.8	5.1		
15	3.8	143	114	43	124	78	81	43	26	11	6.6	4.9		
16	3.7	154	96	40	107	90	71	40	25	11	6.5	4.8		
17	4.6	220	82	38	91	117	64	37	23	10	6.4	4.7		
18	4.1	211	72	36	82	117	61	35	22	10	6.4	4.7		
19	4.1	187	65	34	77	106	54	36	21	10	6.2	4.5		
20	4.2	208	59	32	74	94	51	35	23	10	6.0	4.6		
21	4.3	152	54	32	74	104	46	32	24	9.9	5.8	4.6		
22	8.3	111	46	40	71	101	42	38	21	9.7	5.7	5.7		
23	4.8	96	43	64	77	91	40	41	19	9.5	5.6	5.2		
24	4.3	179	42	147	111	81	38	39	18	9.3	5.7	4.7		
25	4.1	194	38	150	108	78	38	47	18	9.4	5.5	4.4		
26	3.9	148	36	124	93	74	36	60	18	9.9	5.2	4.3		
27	3.7	124	33	98	83	68	33	56	18	9.5	5.1	4.2		
28	3.8	102	31	82	79	66	32	50	17	9.3	5.4	3.9		
29	3.9	87	52	71	76	61	33	43	23	9.1	5.1	3.8		
30	7.7	76	75	64	---	57	42	39	19	8.9	4.9	3.9		
31	6.5	---	78	57	---	52	---	36	---	8.6	5.1	---		
TOTAL	133.4	3245.1	2381	2286	2280	2206	1712	1568	809	362.1	202.5	173.8		
MEAN	4.30	108	76.8	73.7	78.6	71.2	57.1	50.6	27.0	11.7	6.53	5.79		
MAX	8.3	220	147	150	186	117	135	80	38	17	8.3	16		
MIN	3.7	7.1	31	32	31	38	32	32	17	8.6	4.9	3.8		
CFSM	.48	12.0	8.50	8.16	8.70	7.88	6.32	5.60	2.99	1.30	.72	.64		
IN.	.55	13.37	9.81	9.42	9.39	9.09	7.05	6.46	3.33	1.49	.83	.72		
AC-FT	265	6440	4720	4530	4520	4380	3400	3110	1600	718	402	345		
CAL YR 1983	TOTAL	19931.8	MEAN	54.6	MAX	300	MIN	3.7	CFSM	6.05	IN.	82.11	AC-FT	39530
WTR YR 1984	TOTAL	17358.9	MEAN	47.4	MAX	220	MIN	3.7	CFSM	5.25	IN.	71.51	AC-FT	34430

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 mi².

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

REVISED RECORDS.--WSP 1738: Drainage area. WDR OR-79-1: 1978 (maximum contents).

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 ft³/s each and remaining two siphons 350 ft³/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. 15 to Mar. 9.

MONTHEND ELEVATIONS AND CONTENTS AT 0800, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	813.5	699	-
Oct. 31.....	813.5	699	0
Nov. 30.....	815.0	733	+34
Dec. 31.....	815.0	733	0
CAL YR 1983.....	-	-	0
Jan. 31.....	755.0	0	-733
Feb. 29.....	755.0	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.....	815.0	733	0
Aug. 31.....	815.0	733	0
Sept.30.....	815.0	733	0
WTR YR 1984.....	-	-	+34

WILLAMETTE RIVER BASIN

259

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 mi².

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 good. 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.--33 years, 32.6 ft³/s, 64.16 in/yr, 23,620 acre-ft/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,030 ft³/s Dec. 23, 1964, gage height, 5.98 ft, from floodmark, from rating curve extended above 400 ft³/s on basis of slope-area measurement of peak flow; maximum daily, 515 ft³/s Jan. 21, 1972; minimum daily, 0.10 ft³/s Oct. 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 176 ft³/s Nov. 17; minimum daily, 4.4 ft³/s Mar. 14, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	5.9	47	48	35	61	34	46	20	12	16	13
2	9.7	5.6	44	52	32	57	32	49	19	12	15	16
3	9.6	39	40	88	30	53	30	45	18	11	16	13
4	11	36	35	80	28	49	29	41	26	11	15	13
5	13	28	46	74	27	45	27	45	21	11	17	14
6	13	37	51	92	25	41	26	41	24	9.2	17	16
7	13	27	62	116	24	39	42	38	22	8.7	16	18
8	12	22	72	112	23	35	42	36	22	8.8	17	15
9	12	31	83	105	35	18	48	34	22	9.5	16	15
10	12	33	88	98	47	5.0	60	32	21	12	15	14
11	13	50	93	91	50	5.0	61	33	20	10	14	12
12	14	55	91	82	103	4.9	83	31	18	8.4	14	13
13	9.4	87	81	71	128	5.2	69	29	18	10	16	16
14	6.0	99	78	55	106	4.4	61	28	17	11	16	14
15	6.3	95	66	34	94	5.4	58	26	16	13	17	9.9
16	6.2	120	60	32	84	4.4	51	24	15	13	16	13
17	6.3	176	56	31	72	5.6	45	23	15	11	14	14
18	4.8	142	52	29	66	58	45	22	14	15	15	13
19	8.8	129	47	27	61	61	40	22	15	14	15	11
20	10	126	47	25	56	62	37	22	13	12	16	12
21	8.5	97	29	26	55	68	34	20	14	11	16	13
22	6.9	71	37	33	54	59	31	24	13	16	16	14
23	5.1	73	35	41	60	61	30	27	13	22	15	13
24	5.1	116	35	79	96	57	28	24	13	22	13	13
25	4.9	110	35	79	91	53	28	28	14	17	14	13
26	6.6	88	35	71	77	53	26	33	10	16	16	12
27	6.3	82	34	62	69	48	24	29	11	18	12	12
28	5.8	70	36	54	66	45	23	27	11	17	15	13
29	5.3	57	36	49	63	42	24	25	15	16	16	12
30	5.0	54	34	43	---	39	29	22	12	18	15	12
31	5.5	---	47	39	---	37	---	21	---	17	8.9	---
TOTAL	265.1	2161.5	1632	1918	1757	1180.9	1197	947	502	412.6	469.9	401.9
MEAN	8.55	72.0	52.6	61.9	60.6	38.1	39.9	30.5	16.7	13.3	15.2	13.4
MAX	14	176	93	116	128	68	83	49	26	22	17	18
MIN	4.8	5.6	29	25	23	4.4	23	20	10	8.4	8.9	9.9
AC-FT	526	4290	3240	3800	3490	2340	2370	1880	996	818	932	797
MEAN†	2.91	70.1	52.7	49.9	60.7	49.9	39.8	30.6	16.7	7.87	4.52	4.13
CFSM†	4.22	10.2	7.64	7.23	8.80	7.23	5.77	4.43	2.42	1.14	.655	.599
IN.†	.49	11.33	8.80	8.35	9.49	8.35	6.44	5.11	2.71	1.32	.76	.67
AC-FT†	179	4170	3240	3070	3490	3070	2370	1880	996	484	278	246

CAL YR 1983 TOTAL 15136.6 MEAN 41.5 MAX 208 MIN 4.8 AC-FT 30020 MEAN† 39.6 CFSM† 5.74 IN.† 77.87 AC-FT† 28650
WTR YR 1984 TOTAL 12844.9 MEAN 35.1 MAX 176 MIN 4.4 AC-FT 25480 MEAN† 32.3 CFSM† 4.68 IN.† 63.80 AC-FT† 23473

† Adjusted for change in contents of Haskins Creek Reservoir and diversion from McGuire Lake.

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.

PERIOD OF RECORD.--October 1935 to current year.

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.

AVERAGE DISCHARGE.--49 years, 547 ft³/s, 76.58 in/yr, 396,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft³/s Dec. 22, 1964, gage height, 16.3 ft, from floodmark, site and datum then in use, from rating curve extended above 5,200 ft³/s; minimum, 18 ft³/s Oct. 3, 1965.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	1100	*5,270	*8.50	No other peak greater than base discharge.			
Minimum, 35 ft ³ /s Sept. 5.							

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	176	548	1130	378	773	650	942	418	310	75	48
2	41	244	505	926	341	808	608	1910	372	279	73	44
3	42	1080	462	2040	314	682	558	1750	338	253	71	40
4	44	1900	416	1810	290	575	519	1220	598	231	68	37
5	44	878	465	1250	272	507	513	939	753	215	67	48
6	42	1690	594	948	259	482	491	806	920	201	68	106
7	40	1140	841	804	243	470	749	724	1570	187	64	105
8	39	736	1420	713	238	461	1170	683	1350	175	61	88
9	39	571	1250	597	261	488	996	648	1160	166	58	67
10	39	524	2520	635	267	519	1210	576	1010	158	57	58
11	39	615	1720	702	352	533	1000	830	793	151	55	53
12	38	627	1170	616	1880	730	1250	823	642	147	54	56
13	38	804	1480	535	4000	874	1200	709	543	139	56	51
14	44	1240	2110	462	2000	1230	1130	718	467	133	54	46
15	44	1550	2020	404	1240	1320	1190	783	409	126	52	42
16	39	1720	1280	367	933	1280	940	863	363	120	50	40
17	41	2860	905	331	729	1110	754	758	326	114	49	38
18	45	2650	716	304	605	1050	702	648	297	109	48	37
19	40	2010	596	287	527	1250	681	603	273	105	47	36
20	49	2300	500	266	539	1300	651	660	340	101	47	36
21	48	1460	418	286	620	1500	596	554	1230	98	45	40
22	181	1000	367	460	541	1310	547	583	1010	94	44	48
23	162	884	310	526	518	1050	513	1090	682	91	44	76
24	104	2200	300	1350	721	865	471	919	526	91	43	68
25	84	1660	335	2020	880	765	435	867	434	87	42	52
26	73	1130	346	1390	697	1190	405	1130	385	88	41	48
27	65	977	292	948	579	1060	386	919	361	85	39	43
28	60	947	262	702	559	912	371	754	316	83	40	39
29	57	787	872	573	556	808	365	656	389	80	38	37
30	70	653	2430	487	---	714	395	576	354	77	37	36
31	238	---	1820	427	---	668	---	484	---	75	41	---
TOTAL	1971	37013	29270	24296	21339	27284	21446	26125	18629	4369	1628	1563
MEAN	63.6	1234	944	784	736	880	715	843	621	141	52.5	52.1
MAX	238	2860	2520	2040	4000	1500	1250	1910	1570	310	75	106
MIN	38	176	262	266	238	461	365	484	273	75	37	36
CFSM	.66	12.7	9.73	8.08	7.59	9.07	7.37	8.69	6.40	1.45	.54	.54
IN.	.76	14.19	11.23	9.32	8.18	10.46	8.22	10.02	7.14	1.68	.62	.60
AC-FT	3910	73420	58060	48190	42330	54120						

WILLAMETTE RIVER BASIN

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14201500 BUTTE CREEK AT MONITOR, OR

LOCATION:--Lat 45°06'06", long 122°44'42", in SE 1/4 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 mi².

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.--30 years (water years 1941-52, 1967-84), 223 ft³/s, 51.59 in/yr, 161,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,310 ft³/s Jan. 21, 1972, gage height, 15.26 ft, from floodmark; minimum, 0.04 ft³/s July 23, 24, Aug. 26, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,350 ft³/s Nov. 18, gage height, 8.45 ft, no peak above base of 1,500 ft³/s; minimum, 2.0 ft³/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	14	58	238	508	175	308	302	268	165	136	16	6.9		
2	14	73	225	433	156	318	273	583	147	124	14	6.5		
3	14	260	220	583	140	291	245	628	134	110	16	9.3		
4	15	614	198	547	130	260	225	490	223	99	16	39		
5	16	316	258	442	120	238	218	415	260	90	14	27		
6	15	520	424	364	112	218	200	352	346	81	13	28		
7	14	430	457	316	107	203	263	300	656	72	12	21		
8	13	297	574	283	101	188	541	270	577	69	13	19		
9	13	243	550	245	116	185	487	250	496	63	13	18		
10	13	213	810	278	124	188	635	230	406	60	9.3	17		
11	13	213	663	300	134	190	580	270	335	55	8.0	16		
12	13	205	514	263	433	223	601	276	283	55	11	17		
13	13	291	496	240	1200	270	586	238	245	52	11	15		
14	13	430	656	218	908	352	520	230	215	50	11	14		
15	13	493	701	190	642	394	475	253	188	46	9.3	13		
16	13	580	538	170	544	412	388	283	163	41	9.3	13		
17	18	980	424	153	409	394	329	258	142	38	9.3	11		
18	16	1040	346	138	343	361	302	228	128	33	6.5	9.9		
19	14	785	294	132	297	379	283	208	118	31	8.0	9.9		
20	14	876	255	122	300	388	260	243	145	29	6.0	11		
21	14	649	220	124	400	565	230	200	508	27	4.3	11		
22	66	499	190	173	337	538	210	203	439	26	5.1	12		
23	45	433	160	178	305	460	198	364	324	25	5.6	24		
24	35	673	145	268	412	379	180	335	253	27	6.5	23		
25	27	621	165	502	508	332	170	324	210	25	6.9	20		
26	23	487	168	469	418	562	156	403	183	21	9.3	18		
27	22	403	149	373	346	547	140	343	183	21	8.0	14		
28	21	352	132	305	308	505	132	291	149	23	5.1	11		
29	20	308	245	263	276	472	132	253	195	24	6.0	9.3		
30	21	268	813	230	---	394	145	223	165	19	8.6	9.3		
31	64	---	729	200	---	340	---	195	---	18	9.9	---		
TOTAL	639	13610	11957	9010	9801	10854	9406	9407	7981	1590	301.0	473.1		
MEAN	20.6	454	386	291	338	350	314	303	266	51.3	9.71	15.8		
MAX	66	1040	813	583	1200	565	635	628	656	136	16	39		
MIN	13	58	132	122	101	185	132	195	118	18	4.3	6.5		
CFSM	.35	7.73	6.58	4.96	5.76	5.96	5.35	5.16	4.53	.87	.17	.27		
IN.	.40	8.63	7.58	5.71	6.21	6.88	5.96	5.96	5.06	1.01	.19	.30		
AC-FT	1270	27000	23720	17870	19440	21530	18660	18660	15830	3150	597	938		
CAL YR 1983	TOTAL	96866	MEAN	265	MAX	2690	MIN	13	CFSM	4.51	IN.	61.39	AC-FT	192100
WTR YR 1984	TOTAL	85029.1	MEAN	232	MAX	1200	MIN	4.3	CFSM	3.95	IN.	53.89	AC-FT	168700

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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to September 1956, October 1972 to September 1976, October 1978 to September 1984 (discontinued). 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. Slight diurnal fluctuation caused by logponds upstream. Small diversions for irrigation above station. In 1949 city of Hillsboro began diverting about 5 ft³/s for municipal supply. Some water is diverted from Roaring Creek upstream for Forest Grove municipal supply.

AVERAGE DISCHARGE.--26 years (water years 1941-56, 1973-76, 1979-84), 198 ft³/s, 55.44 in/yr, 143,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft³/s Dec. 21, 1955, gage height, 13.18 ft, site and datum then in use; minimum, 0.20 ft³/s Sept. 22, 23, 1951, Aug. 14, 15, Sept. 25, Oct. 8, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2100	*1,110	*11.37				
Minimum, 19 ft ³ /s Oct. 11-13, 15, Sept. 19.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	29	244	322	178	300	170	217	106	49	29	24
2	20	42	220	326	164	276	160	302	98	45	29	24
3	20	178	200	709	154	255	150	291	92	44	29	23
4	21	196	182	694	143	233	140	244	136	40	28	22
5	21	116	223	501	134	213	130	238	121	37	28	22
6	21	196	263	398	128	197	120	223	124	37	29	38
7	20	130	312	344	120	184	210	201	120	36	27	45
8	20	95	546	299	117	171	220	187	114	35	26	34
9	20	97	537	269	158	163	250	175	110	33	25	30
10	20	130	651	275	271	160	300	168	103	32	25	27
11	20	222	639	278	303	155	350	177	97	31	24	27
12	20	235	559	256	659	196	520	181	97	34	24	27
13	20	373	708	234	862	259	420	171	89	32	25	26
14	20	558	614	215	625	293	340	164	78	31	26	25
15	20	513	466	196	517	312	290	151	72	29	25	24
16	20	487	379	184	446	331	257	141	62	27	24	23
17	21	864	320	171	371	443	235	131	60	29	25	24
18	22	874	280	160	334	436	220	122	59	29	25	22
19	21	683	255	149	305	425	200	117	59	28	25	22
20	21	812	229	142	300	382	186	121	68	36	25	22
21	21	551	204	140	297	390	171	110	76	35	24	22
22	30	396	180	171	279	385	162	127	64	35	23	24
23	27	349	160	201	290	342	153	177	56	34	23	27
24	23	874	155	402	596	300	143	162	51	34	24	25
25	21	866	145	472	609	276	139	157	49	33	25	23
26	21	576	140	391	448	250	133	197	48	35	24	24
27	21	483	130	311	370	240	127	188	51	32	23	23
28	21	394	127	266	329	230	119	162	46	33	24	22
29	21	328	212	238	302	220	117	138	72	32	25	21
30	25	279	419	213	---	200	150	123	57	32	24	21
31	31	---	391	195	---	180	---	115	---	30	23	---
TOTAL	670	11926	10090	9122	9809	8397	6282	5378	2435	1059	785	763
MEAN	21.6	398	325	294	338	271	209	173	81.2	34.2	25.3	25.4
MAX	31	874	708	709	862	443	520	302	136	49	29	45
MIN	20	29	127	140	117	155	117	110	46	27	23	21
CFSM	.45	8.21	6.70	6.06	6.97	5.59	4.31	3.57	1.67	.71	.52	.52
IN.	.51	9.15	7.74	7.00	7.52	6.44	4.82	4.12	1.87	.81	.60	.59
AC-FT	1330	23660	20010	18090	19460	16660	12460	10670	4830	2100	1560	1510
CAL YR 1983	TOTAL	85066	MEAN	233	MAX	1540	MIN	16	CFSM	4.80	IN.	65.25
WTR YR 1984	TOTAL	66716	MEAN	182	MAX	874	MIN	20	CFSM	3.75	IN.	51.17
											AC-FT	168700
											AC-FT	132300

WILLAMETTE RIVER BASIN

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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, 22.5°C Aug. 9, 10; minimum, 0.5°C Dec. 21-26.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

14202500 TUALATIN RIVER NEAR GASTON, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

WILLAMETTE RIVER BASIN

265

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 mi².

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, 53,560 acre-ft Apr. 30, elevation, 303.43 ft; minimum monthend, 23,120 acre-ft Oct. 31, elevation, 272.30 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	283.06	32,620	-
Oct. 31.....	272.30	23,120	-9,500
Nov. 30.....	279.70	29,540	+6,420
Dec. 31.....	273.65	24,250	-5,290
CAL YR 1983.....	-	-	-7,720
Jan. 31.....	281.04	30,760	+6,510
Feb. 29.....	292.45	41,780	+11,020
Mar. 31.....	300.05	49,800	+8,020
Apr. 30.....	303.43	53,560	+3,760
May 31.....	303.41	53,540	-20
June 30.....	302.09	52,050	-1,490
July 31.....	295.98	45,420	-6,630
Aug. 31.....	286.92	36,290	-9,130
Sept. 30.....	280.00	29,810	-6,480
WTR YR 1984.....	-	-	-2,810

WILLAMETTE RIVER BASIN

14202980 SCOGGINS CREEK BELOW HENRY HAGG LAKE, NEAR GASTON, OR

LOCATION.--Lat 45°28'10", long 123°11'56", in SE¼ 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 mi².

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 good. 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.--9 years, 111 ft³/s, 80,420 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft³/s Dec. 16, 1977, gage height, 13.50 ft; minimum, 1.4 ft³/s Nov. 16, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 375 ft³/s Dec. 12, gage height, 7.72 ft; minimum, 6.3 ft³/s May 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	105	364	158	66	58	60	155	76	67	163	108
2	174	105	363	158	66	58	60	221	76	67	162	108
3	174	106	359	160	66	58	60	224	76	67	162	108
4	179	105	356	103	66	58	60	211	91	67	162	108
5	182	105	356	93	66	58	60	224	96	67	161	108
6	182	105	357	124	66	58	60	226	96	80	161	108
7	181	105	359	132	66	60	60	102	88	92	161	108
8	181	105	363	132	65	58	60	35	72	92	160	108
9	180	105	364	132	66	58	60	35	68	92	160	107
10	180	105	314	133	66	58	60	35	68	98	160	107
11	179	106	197	133	67	58	61	138	68	108	160	107
12	178	106	302	91	67	58	61	224	68	108	160	107
13	178	108	261	65	69	59	61	83	69	108	160	107
14	178	109	195	65	68	59	119	37	69	108	160	107
15	177	115	297	65	69	59	156	51	69	107	159	107
16	177	122	361	65	69	59	155	50	69	107	157	107
17	176	144	359	64	69	59	155	51	69	122	157	107
18	176	147	356	64	69	59	155	53	69	136	137	107
19	132	148	354	64	69	60	154	53	69	136	136	107
20	106	147	352	64	69	60	102	53	68	136	136	107
21	106	175	349	64	69	60	49	52	68	136	136	107
22	106	291	348	64	69	60	49	62	68	136	136	107
23	106	359	248	64	61	60	37	76	67	136	108	107
24	106	272	187	65	59	60	20	77	67	136	93	107
25	106	200	188	65	58	60	20	77	67	136	109	107
26	106	280	188	65	58	60	20	77	67	136	109	107
27	105	358	188	65	58	60	20	75	67	136	109	107
28	105	362	167	65	58	60	21	75	67	136	109	107
29	105	369	156	65	58	60	21	76	67	135	109	106
30	105	366	157	66	---	60	44	76	67	151	108	106
31	105	---	157	66	---	60	---	76	---	162	108	---
TOTAL	4606	5335	8922	2779	1892	1832	2080	3060	2166	3501	4368	3216
MEAN	149	178	288	89.6	65.2	59.1	69.3	98.7	72.2	113	141	107
MAX	182	369	364	160	69	60	156	226	96	162	163	108
MIN	105	105	156	64	58	58	20	35	67	67	93	106
AC-FT	9140	10580	17700	5510	3750	3630	4130	6070	4300	6940	8660	6380
CAL YR 1983	TOTAL	62553	MEAN	171	MAX	661	MIN	32	AC-FT	124100		
WTR YR 1984	TOTAL	43757	MEAN	120	MAX	369	MIN	20	AC-FT	86790		

WILLAMETTE RIVER BASIN

267

14203500 TUALATIN RIVER NEAR DILLEY, OR

LOCATION:--Lat 45°28'30", long 123°07'23", in NE1/4 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 mi².

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.--45 years, 403 ft³/s, 292,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 ft³/s Dec. 22, 1964, gage height, 19.34 ft, from rating curve extended above 6,000 ft³/s; minimum, 0.08 ft³/s Sept. 3, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft³/s Nov. 25, gage height, 17.27 ft; minimum, 97 ft³/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214	118	795	724	299	577	317	378	215	139	196	124
2	209	137	741	699	285	519	300	669	204	132	198	125
3	210	186	698	864	271	463	284	698	197	128	197	126
4	214	189	653	1100	255	412	273	624	256	124	197	126
5	228	207	663	952	242	374	259	612	266	120	198	130
6	226	270	724	851	233	334	249	595	264	122	200	152
7	225	272	767	781	224	311	281	480	256	137	198	163
8	225	249	993	674	218	296	399	302	230	136	193	158
9	224	250	1090	592	248	282	404	275	218	134	190	147
10	224	260	1170	577	356	272	607	261	210	130	191	140
11	223	380	1130	592	442	267	656	315	200	141	188	136
12	224	410	1070	521	612	297	827	458	192	140	189	136
13	219	500	1180	439	724	367	874	388	192	144	191	134
14	206	800	1090	391	1050	446	787	232	173	143	191	130
15	212	770	1000	349	952	502	734	243	165	140	189	126
16	213	740	971	314	868	557	650	231	153	135	187	124
17	212	1180	890	290	775	719	573	215	150	137	181	122
18	215	1280	843	273	700	790	538	204	146	162	163	118
19	173	1170	798	260	630	785	493	199	147	165	163	110
20	103	1200	748	248	600	738	436	204	150	167	160	113
21	103	1050	699	242	589	729	306	191	170	169	156	116
22	111	928	660	266	561	726	283	208	168	171	154	120
23	120	908	520	290	556	661	265	295	155	170	140	128
24	116	1200	480	516	767	574	230	280	147	167	102	129
25	113	1310	400	635	1050	518	217	272	141	167	132	130
26	112	1160	370	641	925	508	209	326	137	175	131	127
27	112	1090	360	538	813	460	200	307	139	170	128	121
28	112	1010	330	466	708	435	188	282	133	171	130	120
29	112	963	340	412	620	404	184	259	159	173	126	123
30	112	854	650	372	---	367	225	237	153	179	123	124
31	117	---	750	330	---	341	---	225	---	194	121	---
TOTAL	5439	21041	23573	16199	16573	15031	12248	10465	5486	4682	5203	3878
MEAN	175	701	760	523	571	485	408	338	183	151	168	129
MAX	228	1310	1180	1100	1050	790	874	698	266	194	200	163
MIN	103	118	330	242	218	267	184	191	133	120	102	110
AC-FT	10790	41730	46760	32130	32870	29810	24290	20760	10880	9290	10320	7690
CAL YR 1983	TOTAL	187420	MEAN	513	MAX	2080	MIN	73	AC-FT	371700		
WTR YR 1984	TOTAL	139818	MEAN	382	MAX	1310	MIN	102	AC-FT	277300		

WILLAMETTE RIVER BASIN

14207000 OSWEGO CANAL NEAR LAKE OSWEGO, OR

LOCATION.--Lat 45°23'18", long 122°43'11", in NW¼ 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.--56 years, 69.4 ft³/s, 50,280 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 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	71	125	145	78	133	86	67	55	95	98	81
2	58	61	118	143	71	128	82	85	51	90	98	93
3	58	71	108	149	67	119	77	100	49	84	98	100
4	57	78	97	18	62	108	74	100	56	79	97	100
5	55	73	88	65	59	97	71	95	64	76	98	101
6	48	58	83	129	55	88	69	90	67	74	100	105
7	46	51	85	117	53	82	71	87	64	70	100	99
8	44	48	100	77	50	76	90	83	59	68	100	92
9	43	43	109	134	52	71	108	77	57	67	98	91
10	43	41	118	131	55	69	117	71	55	67	97	89
11	43	48	123	127	68	67	122	69	53	65	97	88
12	42	57	126	121	87	69	130	68	50	64	96	88
13	42	67	129	111	124	74	130	70	48	63	97	88
14	42	95	131	101	139	89	131	71	46	63	99	86
15	40	120	130	91	142	103	131	67	44	61	98	85
16	40	130	128	83	143	107	128	64	42	60	98	84
17	42	135	125	76	143	113	122	61	39	58	98	83
18	44	132	121	71	144	118	114	57	38	46	97	81
19	42	136	115	66	141	124	105	55	37	39	97	80
20	42	141	108	62	139	126	98	54	49	62	97	78
21	40	142	100	59	138	131	90	52	106	76	31	78
22	44	119	95	58	133	130	82	55	117	86	2.1	80
23	46	117	91	62	129	130	76	64	111	93	2.8	82
24	35	146	78	75	132	127	72	69	101	94	23	79
25	15	144	65	94	138	123	67	70	95	92	54	62
26	20	140	60	107	138	120	63	73	90	91	48	54
27	46	140	62	110	138	113	61	76	88	89	46	49
28	66	139	58	107	139	107	58	73	86	94	46	47
29	64	136	65	101	136	100	55	69	91	97	47	45
30	66	131	117	92	---	95	56	65	95	98	60	45
31	69	---	145	84	---	91	---	60	---	98	70	---
TOTAL	1441	3010	3203	2966	3093	3228	2736	2217	2003	2359	2387.9	2413
MEAN	46.5	100	103	95.7	107	104	91.2	71.5	66.8	76.1	77.0	80.4
MAX	69	146	145	149	144	133	131	100	117	98	100	105
MIN	15	41	58	18	50	67	55	52	37	39	2.1	45
AC-FT	2860	5970	6350	5880	6130	6400	5430	4400	3970	4680	4740	4790
CAL YR 1983	TOTAL	26590.7	MEAN	72.9	MAX	228	MIN	2.2	AC-FT	52740		
WTR YR 1984	TOTAL	31056.9	MEAN	84.9	MAX	149	MIN	2.1	AC-FT	61600		

WILLAMETTE RIVER BASIN

259

14207500 TUALATIN RIVER AT WEST LINN, OR
(National stream quality accounting network station)

LOCATION.--Lat 45°21'03", long 122°40'30", in SW 1/4 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 mi².

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 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.--56 years, 1,547 ft³/s, 29.76 in/yr, 1,121,000 acre-ft/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,300 ft³/s Dec. 23, 1933, gage height, 17.72 ft; minimum daily, 0.20 ft³/s July 30 to Aug. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,890 ft³/s Nov. 24, gage height, 9.17 ft; minimum, 46 ft³/s Aug. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	258	316	4440	3360	1720	3510	1690	1090	882	598	143	52
2	255	369	3990	3300	1530	3230	1550	1640	810	520	136	59
3	257	668	3510	3480	1390	2900	1420	2090	753	460	130	91
4	258	1360	3020	3720	1270	2550	1320	2100	892	416	130	109
5	272	1550	2660	3710	1190	2180	1260	1950	1070	387	137	116
6	288	1360	2510	3640	1110	1910	1190	1800	1160	365	147	195
7	278	1150	2560	3640	1050	1730	1230	1710	1060	342	153	248
8	274	1080	3110	3570	994	1550	1790	1570	969	327	142	268
9	272	962	3550	3330	1020	1410	2330	1370	921	318	134	252
10	271	903	3960	3200	1110	1330	2630	1230	870	311	126	225
11	271	1090	4290	3110	1440	1280	2810	1170	832	298	121	202
12	275	1350	4460	2880	1960	1330	3050	1140	775	284	116	194
13	276	1630	4680	2650	3200	1480	3120	1220	726	276	124	191
14	273	2310	4740	2350	3870	1870	3130	1230	691	269	136	185
15	267	2870	4700	2050	4020	2300	3070	1120	644	259	133	174
16	264	3210	4610	1810	4100	2440	2950	1050	593	248	129	164
17	284	3830	4450	1620	4100	2640	2750	964	552	239	125	161
18	296	4320	4210	1470	4070	2810	2500	897	522	289	123	157
19	293	4500	3890	1350	3950	2980	2210	850	503	158	117	151
20	294	4780	3500	1260	3810	3070	1980	836	461	72	114	143
21	275	4860	3080	1170	3770	3250	1750	823	872	87	129	136
22	311	4980	2660	1160	3540	3240	1510	854	1230	99	173	142
23	336	5080	2200	1240	3340	3200	1340	1060	1030	136	273	171
24	482	5660	1800	1560	3410	3080	1220	1210	761	156	276	283
25	366	5530	1500	2120	3710	2920	1120	1220	616	143	192	303
26	202	5420	1390	2510	3750	2800	1040	1310	542	148	147	240
27	70	5380	1410	2610	3750	2590	978	1390	510	155	138	211
28	130	5330	1330	2540	3740	2400	915	1330	486	150	139	197
29	200	5160	1470	2360	3640	2180	863	1200	526	139	96	186
30	193	4850	2640	2130	---	1990	890	1080	591	143	47	179
31	210	---	3380	1910	---	1820	---	967	---	148	50	---
TOTAL	8251	91858	99700	76810	79554	73970	55606	39471	22850	7940	4276	5385
MEAN	266	3062	3216	2478	2743	2386	1854	1273	762	256	138	180
MAX	482	5660	4740	3720	4100	3510	3130	2100	1230	598	276	303
MIN	70	316	1330	1160	994	1280	863	823	461	72	47	52
AC-FT	16370	182200	197800	152400	157800	146700	110300	78290	45320	15750	8480	10680
MEAN†	313	3162	3320	2574	2850	2490	1945	1345	828	332	215	260
CFSM†	.443	4.48	4.70	3.65	4.04	3.53	2.75	1.90	1.17	.470	.305	.368
IN.†	.51	5.00	5.42	4.20	4.35	4.07	3.07	2.20	1.31	.54	.35	.41
AC-FT†	19230	198170	204150	158280	163930	153100	115730	82690	49290	20430	13220	15470

CAL YR 1983 TOTAL 807365 MEAN 2212 MAX 9310 MIN 70 AC-FT 1601000 MEAN† 2284 CFSM† 3.24 IN.† 43.93 AC-FT† 1653740
WTR YR 1984 TOTAL 565671 MEAN 1546 MAX 5660 MIN 47 AC-FT 1122000 MEAN† 1630 CFSM† 2.31 IN.† 31.44 AC-FT† 1183600

† Adjusted for diversion of Oswego Canal.

WILLAMETTE RIVER BASIN

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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	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)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	
OCT 28...	1100	80	147	7.3	11.5	8.8	K10	K5	50	22	13	
JAN 25...	1000	2100	112	7.4	6.0	12.2	190	K710	40	0	10	
APR 11...	1100	2860	92	7.4	9.0	9.4	K430	1200	38	0	9.7	
AUG 06...	1330	146	189	7.6	21.5	8.4	980	310	55	1	14	
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 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 28...	4.2	9.1	2.1	28	9.4	7.9	<.10	.260	1.3	1.2	.55	
JAN 25...	3.6	6.7	1.4	39	7.3	6.2	<.10	.320	1.4	.70	.52	
APR 11...	3.3	5.8	1.3	38	7.1	4.8	<.10	.240	1.5	.80	.21	
AUG 06...	4.9	13	3.5	54	16	26	.10	.090	1.6	.50	.67	
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, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
OCT 28...		.230	.300	22	97	86	21	4.0	7	1.5	90	
JAN 25...		.160	.240	21	77	81	437	16	18	102	96	
APR 11...		.090	.210	19	77	75	595	23	32	247	87	
AUG 06...		.260	.230	24	120	130	47	3.2	--	--	--	

WILLAMETTE RIVER BASIN

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14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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)	CORALT, 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 28...	20	1	17	<.5	<1	<1	<3	4	170	2
JAN 25...	80	<1	18	<.5	<1	<1	<3	5	180	1
APR 11...	130	<1	20	<.5	<1	<1	<3	3	200	<1
AUG 06...	10	<1	28	1.0	<1	3	<3	7	9	<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 ZH)
OCT 28...	<4	60	<.1	<10	2	<1	<1	57	<6	14
JAN 25...	5	38	<.1	<10	2	<1	<1	58	<6	10
APR 11...	<4	30	<.1	<10	<1	<1	<1	57	<6	37
AUG 06...	<4	24	<.1	<10	5	<1	<1	71	<6	13

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

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 mi², approximately.

PERIOD OF RECORD.--October 1976 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, 64.79 ft Dec. 17, 1977; minimum recorded, 52.65 ft Feb. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 61.23 ft Feb. 16; minimum, 52.76 ft Aug. 10.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.83	54.41	58.11	59.71	56.19	56.89	57.08	55.06	55.91	55.04	53.14	53.17
2	53.81	54.62	58.05	59.59	55.95	56.77	56.68	56.05	55.74	54.84	53.13	53.24
3	53.83	54.84	57.85	59.25	55.74	56.70	56.42	57.15	55.45	54.74	53.12	53.28
4	53.84	55.60	57.64	59.24	55.45	56.50	56.25	57.70	55.28	54.43	53.14	53.27
5	53.83	56.09	57.49	59.22	55.09	56.27	56.11	57.86	55.64	54.23	53.16	53.29
6	53.82	56.08	57.75	58.82	54.83	56.01	55.97	57.68	56.54	54.08	53.20	53.51
7	53.81	56.41	58.39	58.37	54.67	55.76	55.78	57.39	57.34	54.01	53.20	53.76
8	53.79	56.47	59.28	58.00	54.58	55.46	56.14	57.03	58.32	53.96	53.13	53.94
9	53.78	56.14	59.94	57.72	54.55	55.31	56.91	56.62	58.83	54.28	52.97	54.04
10	53.79	56.13	60.11	57.49	54.65	55.24	57.42	56.26	58.85	54.52	52.79	54.02
11	53.82	56.31	60.18	57.70	55.05	55.23	57.94	56.10	58.33	54.45	52.82	54.02
12	53.86	56.44	60.01	57.89	55.49	55.34	58.37	56.35	57.62	54.41	52.79	54.09
13	53.84	56.52	59.68	57.62	57.58	55.56	58.54	56.40	57.11	54.35	52.88	54.24
14	53.89	57.01	59.60	57.20	60.00	56.13	58.43	56.22	56.62	54.29	53.00	54.26
15	53.89	57.57	59.99	56.72	60.97	56.82	57.99	56.21	56.19	54.27	53.08	54.24
16	53.91	57.71	60.24	56.37	61.12	57.09	57.62	56.31	55.89	54.26	53.06	54.23
17	53.93	58.00	60.17	56.09	60.44	57.45	57.27	56.33	55.61	54.20	53.03	54.20
18	53.98	58.68	59.71	55.80	59.79	57.73	56.76	56.17	55.42	54.12	53.01	54.15
19	54.01	59.21	59.07	55.58	59.10	57.77	56.54	55.76	55.28	54.07	52.96	54.06
20	54.07	59.46	58.63	55.43	58.44	57.92	56.45	55.44	55.11	54.02	53.00	54.02
21	54.00	59.49	58.35	55.24	58.22	58.13	56.36	55.35	55.29	54.04	53.01	54.03
22	54.07	59.29	58.02	55.19	58.35	58.56	56.15	55.33	56.08	54.00	52.99	54.00
23	54.16	58.83	57.62	55.46	58.13	58.69	56.02	55.69	56.29	54.04	53.01	54.00
24	54.27	58.92	57.04	55.99	57.84	58.37	55.90	56.24	55.94	54.03	53.01	54.06
25	54.20	59.57	56.66	56.98	58.53	57.92	55.64	56.45	55.55	53.97	53.06	54.10
26	54.13	59.90	56.57	57.86	58.85	57.61	55.53	56.57	55.26	53.95	53.09	54.09
27	54.05	59.78	56.56	57.78	58.36	58.08	55.48	56.82	55.10	53.94	53.11	54.02
28	54.04	59.33	56.59	57.58	57.66	58.40	55.23	56.71	55.08	53.95	53.04	53.91
29	54.11	58.82	56.51	57.27	57.19	58.30	54.85	56.41	55.17	53.94	52.97	53.89
30	54.13	58.37	57.42	56.89	---	58.06	54.79	56.01	55.19	53.73	52.94	53.89
31	54.19	---	59.01	56.49	---	57.63	---	55.97	---	53.21	53.11	---
MEAN	53.96	57.53	58.46	57.31	57.34	57.02	56.55	56.38	56.20	54.17	53.03	53.90

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 mi², 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, 22.76 ft Feb. 16; minimum, 2.95 ft Aug. 6.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	6.92	4.05	5.20	7.96	5.08	6.46	14.77	13.96	14.40	18.03	17.27	17.68
2	7.10	4.12	5.40	8.44	5.63	6.87	14.70	13.92	14.32	17.64	16.99	17.36
3	7.02	4.13	5.56	9.78	5.99	7.84	14.22	13.34	13.81	17.68	16.60	17.06
4	7.57	4.59	6.02	11.17	8.21	9.46	13.40	12.52	12.95	18.09	17.42	17.68
5	8.25	5.09	6.44	11.09	9.40	10.03	13.43	12.14	12.68	18.04	17.60	17.87
6	8.23	5.05	6.46	11.68	9.20	10.12	14.83	13.15	13.92	17.49	16.43	16.90
7	8.02	4.83	6.20	11.49	10.05	10.62	15.67	14.24	14.76	16.35	15.34	15.76
8	7.74	4.60	6.03	10.86	9.91	10.39	17.95	15.66	16.80	15.27	14.48	14.80
9	7.55	4.38	5.79	10.26	9.28	9.73	18.92	17.94	18.43	14.48	13.90	14.11
10	7.52	4.39	5.65	10.00	8.77	9.18	19.04	18.61	18.83	13.97	13.37	13.62
11	7.43	4.45	5.61	9.80	8.85	9.38	18.99	18.71	18.85	14.35	13.58	13.99
12	7.51	4.93	5.90	9.71	8.80	9.32	18.73	17.78	18.16	14.37	13.67	14.12
13	7.04	5.01	5.79	10.10	8.74	9.40	17.88	17.44	17.63	13.69	12.92	13.35
14	6.00	4.00	4.92	11.20	10.23	10.71	18.29	17.51	17.83	12.87	11.88	12.53
15	5.73	3.76	4.74	12.69	11.27	12.03	19.18	18.38	18.84	11.95	11.15	11.66
16	5.91	3.87	4.94	13.17	12.14	12.62	19.69	19.14	19.44	11.91	10.93	11.30
17	6.40	3.90	5.10	14.77	12.86	13.86	19.58	18.96	19.39	11.85	10.85	11.19
18	6.89	4.38	5.47	16.60	14.69	15.85	18.97	17.46	18.31	11.49	10.39	10.86
19	7.19	4.85	5.86	17.67	16.56	17.05	17.36	16.45	16.97	11.28	10.16	10.65
20	7.56	4.89	6.00	18.29	17.65	18.02	16.41	15.70	16.01	11.25	9.96	10.48
21	7.84	5.04	6.19	18.03	17.60	17.81	15.98	15.49	15.67	10.64	9.11	9.92
22	7.87	5.06	6.30	17.75	16.95	17.30	15.63	14.57	14.95	10.14	8.37	9.23
23	7.69	4.96	6.07	16.93	15.68	16.15	14.59	13.49	13.94	10.43	8.61	9.44
24	7.71	4.85	5.96	17.76	15.98	16.59	13.42	11.61	12.25	12.43	10.22	11.21
25	8.07	4.91	6.08	18.42	17.56	17.90	11.68	10.26	10.83	14.65	12.47	13.54
26	7.54	5.00	6.00	18.42	18.17	18.30	10.89	9.86	10.31	15.70	14.74	15.31
27	7.17	4.50	5.59	18.34	17.28	17.77	11.22	9.85	10.47	15.19	14.40	14.82
28	7.08	4.33	5.43	17.32	15.90	16.63	11.09	10.18	10.57	14.42	13.43	14.08
29	6.97	4.66	5.64	15.98	14.99	15.53	11.12	10.06	10.63	13.38	12.29	12.91
30	7.12	4.75	5.86	15.00	14.34	14.71	14.80	11.04	13.03	12.33	11.32	12.03
31	7.37	4.89	6.08	---	---	---	17.33	14.89	16.46	11.87	10.92	11.30
MONTH	8.25	3.76	5.75	18.42	5.08	12.92	19.69	9.85	15.21	18.09	8.37	13.44

14207770 WILLAMETTE RIVER BELOW FALLS. AT OREGON CITY. OR--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	11.30	10.33	10.73	12.60	11.77	12.20	14.35	12.93	13.76	12.33	10.63	11.71
2	11.20	10.44	10.78	12.23	11.52	11.88	12.84	11.82	12.33	13.70	12.34	13.01
3	10.89	10.14	10.51	12.07	11.37	11.68	12.14	11.43	11.77	15.69	13.72	14.86
4	10.08	8.78	9.37	11.99	11.25	11.57	12.27	11.24	11.70	15.91	15.62	15.75
5	8.77	7.67	8.28	11.49	10.57	11.07	11.96	10.90	11.42	15.85	15.14	15.57
6	8.85	7.39	8.21	10.51	9.83	10.19	10.93	10.39	10.64	15.09	14.47	14.75
7	9.12	8.05	8.51	10.21	9.23	9.72	11.79	10.60	11.13	14.54	13.88	14.19
8	9.12	7.82	8.42	10.01	8.99	9.41	12.39	11.80	12.08	13.91	13.26	13.58
9	9.21	8.01	8.59	9.80	8.77	9.17	13.30	12.42	12.92	13.46	12.25	12.95
10	9.55	8.28	8.82	9.31	8.20	8.71	14.76	13.37	14.27	13.06	12.41	12.77
11	9.86	8.69	9.24	9.17	8.21	8.62	16.15	14.81	15.70	14.21	13.12	13.82
12	10.67	9.17	9.96	10.36	8.77	9.60	17.05	16.07	16.65	14.13	13.67	13.86
13	18.08	10.88	14.65	11.09	9.52	10.50	17.30	16.65	17.02	14.20	13.07	13.66
14	21.20	18.18	20.00	12.24	10.64	11.52	17.42	16.34	17.00	13.59	12.92	13.25
15	22.57	21.10	21.93	13.76	11.86	12.89	16.34	15.22	15.82	14.91	13.48	14.33
16	22.76	21.55	22.36	14.60	13.30	13.98	15.58	14.98	15.32	15.63	14.89	15.44
17	21.46	19.63	20.51	15.55	14.20	14.93	15.63	14.73	15.18	15.95	15.42	15.66
18	19.58	18.33	18.89	15.67	15.12	15.40	14.78	14.17	14.49	15.53	14.65	15.18
19	18.26	16.67	17.45	15.74	15.08	15.38	15.28	14.58	14.88	14.60	13.97	14.28
20	16.55	15.43	15.89	15.70	15.07	15.35	14.82	14.13	14.52	14.09	12.88	13.56
21	15.55	14.94	15.24	16.06	15.28	15.61	14.58	14.12	14.40	13.36	12.69	13.06
22	15.75	15.20	15.46	17.05	16.06	16.63	14.51	14.01	14.33	13.50	12.87	13.11
23	15.59	14.78	15.28	17.48	16.98	17.19	14.10	13.60	13.83	14.59	13.53	14.15
24	15.09	14.37	14.73	17.02	16.14	16.66	13.89	13.18	13.66	15.31	14.64	15.05
25	16.50	15.16	16.04	16.14	14.86	15.48	13.30	12.77	13.04	15.62	15.35	15.53
26	16.48	15.67	16.20	15.13	14.75	14.93	13.19	12.80	12.97	16.11	15.54	15.90
27	15.61	13.97	14.94	15.80	14.74	15.23	13.13	12.69	12.95	15.61	14.39	15.06
28	13.94	13.03	13.58	16.42	15.84	16.26	12.93	11.34	12.28	14.54	13.95	14.24
29	13.12	12.42	12.81	16.44	15.67	16.14	11.44	10.44	10.94	14.46	13.93	14.26
30	---	---	---	15.74	14.95	15.39	11.05	10.30	10.71	14.47	14.09	14.32
31	---	---	---	15.10	14.43	14.83	---	---	---	15.08	14.34	14.83
MONTH	22.76	7.39	13.70	17.48	8.20	13.17	17.42	10.30	13.59	16.11	10.63	14.25

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.39	14.98	15.13	14.28	13.90	14.05	7.85	4.85	6.24	7.15	3.85	5.18
2	15.19	14.78	14.96	14.12	12.88	13.67	7.66	4.40	5.80	6.93	3.91	4.99
3	14.86	14.10	14.58	12.82	11.04	11.94	7.50	4.14	5.47	6.43	3.56	4.57
4	14.26	13.74	13.93	10.96	9.26	10.03	6.79	3.59	5.07	6.31	3.18	4.41
5	14.99	14.23	14.51	10.50	9.58	9.92	6.73	3.14	4.40	6.32	3.16	4.72
6	15.38	14.82	15.03	10.50	9.32	9.87	6.20	2.95	4.16	6.86	3.80	5.23
7	16.97	15.47	16.10	10.31	8.74	9.34	6.49	3.52	4.82	7.22	4.40	5.71
8	18.29	17.08	17.76	10.08	9.15	9.49	7.50	4.97	6.05	7.64	4.85	6.08
9	18.72	18.34	18.56	10.15	8.12	9.02	8.00	5.22	6.40	7.71	4.70	5.93
10	18.75	18.01	18.41	9.22	7.07	8.15	7.73	4.21	5.66	7.21	4.37	5.65
11	18.07	16.56	17.40	8.84	6.66	7.43	7.37	3.90	5.41	7.42	4.59	5.87
12	16.64	15.79	16.23	8.65	6.52	7.30	7.50	4.09	5.49	7.77	5.04	6.24
13	15.80	14.97	15.36	8.55	6.43	7.22	7.08	3.85	5.25	7.65	5.67	6.47
14	15.62	15.03	15.35	8.28	6.15	7.00	7.12	4.11	5.46	7.07	4.64	5.73
15	14.98	14.04	14.35	8.06	6.06	6.88	7.01	4.12	5.47	7.68	4.73	5.90
16	14.42	14.08	14.23	7.82	6.06	6.83	7.18	3.99	5.32	7.54	5.20	6.01
17	14.58	14.35	14.46	7.80	6.39	7.05	7.03	4.17	5.32	7.36	5.11	5.85
18	14.62	14.38	14.48	7.51	6.12	6.88	6.40	3.66	5.01	6.86	4.93	5.62
19	14.50	14.26	14.39	7.21	5.72	6.49	6.49	3.55	4.49	6.68	4.70	5.35
20	14.40	14.22	14.32	6.94	4.60	5.74	6.17	3.58	4.53	6.67	4.46	5.42
21	15.20	14.40	14.72	6.95	4.48	5.15	6.21	3.13	4.22	7.04	4.54	5.63
22	15.60	15.23	15.45	6.90	4.35	5.35	6.31	3.48	4.65	7.42	4.65	5.85
23	15.62	15.03	15.33	6.78	4.03	4.88	7.03	3.93	5.18	7.58	4.61	5.84
24	15.09	14.19	14.64	7.02	4.18	5.13	7.63	4.42	5.72	7.39	4.44	5.77
25	14.35	13.74	13.99	7.33	4.09	5.36	7.98	4.67	6.07	7.87	4.84	6.17
26	13.99	13.50	13.78	7.71	4.21	5.71	8.30	4.35	6.03	8.35	5.00	6.41
27	14.42	13.87	14.24	8.12	4.90	6.25	8.15	4.50	6.10	8.22	5.11	6.42
28	14.79	14.34	14.62	8.74	5.63	6.91	8.17	4.53	6.13	7.78	4.72	6.00
29	14.99	14.55	14.79	8.90	5.34	6.70	8.07	4.57	6.02	7.83	4.54	5.79
30	14.64	14.08	14.37	8.17	4.81	6.14	8.35	4.84	6.18	7.26	4.66	5.73
31	---	---	---	8.06	4.95	6.25	7.51	4.31	5.87	---	---	---
MONTH	18.75	13.50	15.18	14.28	4.03	7.68	8.35	2.95	5.42	8.35	3.16	5.68

YEAR	22.76	2.95	11.31									
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WILLAMETTE RIVER BASIN

275

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 mi².

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, 65,600 acre-ft Aug. 19, 22, 23, elevation, 3,189.92 ft; minimum observed, 51,530 acre-ft Mar. 14, elevation, 3,179.08 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	3,183.49	57,080	-
Oct. 31.....	3,183.22	56,730	-350
Nov. 30.....	3,182.43	55,730	-1,000
Dec. 31.....	3,181.71	54,810	-920
CAL YR 1983.....	-	-	-3,190
Jan. 31.....	3,185.04	59,080	+4,270
Feb. 29.....	3,184.15	57,920	-1,160
Mar. 31.....	3,184.70	58,640	+720
Apr. 30.....	3,187.00	61,660	+3,020
May 31.....	3,189.21	64,630	+2,970
June 30.....	3,189.79	65,420	+790
July 31.....	3,189.89	65,560	+140
Aug. 31.....	3,189.11	64,490	-1,070
Sept. 30.....	3,183.57	57,180	-7,310
WTR YR 1984.....	-	-	+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 mi².

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.--28 years, 132 ft³/s, 32.95 in/yr, 95,630 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s Dec. 24, 1964, gage height, 3.93 ft, from rating curve extended above 290 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.7 ft³/s Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 414 ft³/s Apr. 19, gage height, 2.70 ft; minimum, 17 ft³/s Dec. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	306	181	173	93	375	64	152	168	115	90	140
2	340	297	199	125	116	374	78	68	153	109	90	138
3	167	277	209	44	133	374	99	44	156	109	90	132
4	35	131	232	44	142	281	103	70	157	109	90	142
5	35	116	225	43	156	181	107	117	156	109	84	132
6	35	44	225	42	164	316	124	123	157	107	81	124
7	36	162	230	42	142	384	119	129	156	93	81	99
8	36	308	209	42	140	387	108	135	152	85	81	135
9	36	311	209	53	177	385	126	134	148	85	81	139
10	36	295	61	63	184	383	95	133	157	94	81	147
11	36	295	44	70	187	383	121	110	162	97	81	131
12	36	300	140	98	133	383	89	106	137	97	81	136
13	37	288	66	122	46	383	99	99	104	94	81	181
14	37	262	47	143	45	213	91	79	109	85	81	233
15	37	125	46	161	44	46	82	165	163	84	81	240
16	36	39	46	170	48	46	170	194	153	84	81	240
17	66	42	46	171	124	57	317	161	132	87	81	240
18	102	43	46	169	218	79	366	177	128	89	81	240
19	99	43	120	174	218	55	389	177	129	89	80	242
20	92	43	178	188	106	48	409	184	132	89	79	240
21	81	43	172	192	169	49	382	183	118	89	80	245
22	95	43	174	184	304	48	82	177	170	90	81	225
23	104	160	174	158	325	48	123	187	137	89	111	189
24	81	64	174	49	376	47	43	187	132	89	137	240
25	77	44	174	51	383	111	42	187	129	90	137	240
26	77	44	174	48	383	57	133	187	129	91	146	246
27	77	45	174	47	383	47	173	187	130	91	148	244
28	77	44	177	46	379	47	177	187	133	91	158	244
29	77	108	173	45	376	46	186	187	131	90	145	247
30	77	140	62	44	---	46	176	187	118	89	141	247
31	146	---	88	61	---	46	---	187	---	90	141	---
TOTAL	2644	4462	4475	3062	5694	5725	4673	4600	4236	2899	3081	5818
MEAN	85.3	149	144	98.8	196	185	156	148	141	93.5	99.4	194
MAX	341	311	232	192	383	387	409	194	170	115	158	247
MIN	35	39	44	42	44	46	42	44	104	84	79	99
AC-FT	5240	8850	8880	6070	11290	11360	9270	9120	8400	5750	6110	11540
MEAN†	79.5	132	129	168	176	196	207	197	154	95.8	82.0	71.1
CFSM†	1.46	2.43	2.37	3.09	3.24	3.60	3.81	3.62	2.83	1.76	1.51	1.31
IN.†	1.69	2.71	2.74	3.56	3.49	4.16	4.24	4.17	3.17	2.03	1.74	1.46
AC-FT†	4890	7850	7960	10340	10130	12080	12290	12090	9190	5890	5040	4230

CAL YR 1983 TOTAL 59647 MEAN 163 MAX 420 MIN 35 AC-FT 118300 MEAN† 159 CFSM† 2.92 IN.† 39.69 AC-FT† 115110
WTR YR 1984 TOTAL 51369 MEAN 140 MAX 409 MIN 35 AC-FT 101900 MEAN† 141 CFSM† 2.59 IN.† 35.16 AC-FT† 102000

† Adjusted for change in contents in Timothy Lake.

WILLAMETTE RIVER BASIN

277

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 mi².

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.--75 years, 502 ft³/s, 363,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s Jan. 7, 1923, gage height, 5.45 ft, site and datum then in use, from rating curve extended above 2,300 ft³/s on basis of peak discharge for other stations in Clackamas River basin; minimum, 208 ft³/s Aug. 28-31, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,240 ft³/s Jan. 25, gage height, 3.41 ft; minimum, 247 ft³/s Oct. 6-17.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	601	543	529	534	572	856	558	597	638	435	340	382
2	600	541	533	525	571	849	555	572	600	421	339	383
3	447	552	526	694	573	833	562	535	590	414	338	371
4	252	454	534	854	571	734	561	525	645	409	338	384
5	252	376	528	727	576	550	561	585	626	406	331	393
6	250	368	524	660	577	705	561	573	634	402	325	379
7	249	401	533	623	552	806	575	569	669	384	324	387
8	251	545	525	593	525	807	560	578	665	369	324	385
9	251	534	534	566	583	822	573	577	641	365	323	386
10	250	525	471	575	576	852	558	570	619	372	323	389
11	247	528	406	572	586	860	564	587	607	374	322	379
12	247	526	454	568	733	880	572	583	578	373	320	376
13	249	526	503	571	815	900	558	583	516	367	319	421
14	255	518	584	574	678	794	559	576	513	351	319	500
15	250	436	579	570	611	555	562	667	561	347	319	510
16	247	365	502	571	570	552	644	708	549	346	318	514
17	274	447	453	575	592	550	830	631	509	349	317	514
18	323	454	422	574	707	577	919	647	497	348	317	513
19	319	457	455	572	689	590	935	657	489	350	317	515
20	313	493	560	575	578	635	956	679	508	348	315	518
21	300	410	570	578	605	714	914	658	594	348	314	521
22	336	368	581	576	784	678	545	666	604	349	314	525
23	328	467	581	615	796	653	558	732	524	348	340	450
24	301	557	581	950	876	620	461	692	504	347	383	514
25	293	480	581	1120	873	685	445	705	487	347	385	514
26	290	428	581	914	849	751	537	726	482	347	391	521
27	289	520	581	766	841	661	577	693	478	345	389	515
28	288	511	581	686	837	644	578	693	470	343	406	515
29	288	515	581	630	832	603	579	712	476	341	393	517
30	294	523	568	586	---	574	581	716	449	341	382	519
31	347	---	534	567	---	556	---	684	---	341	386	---
TOTAL	9481	14368	16475	20061	19528	21846	18498	19676	16722	11327	10571	13710
MEAN	306	479	531	647	673	705	617	635	557	365	341	457
MAX	601	557	584	1120	876	900	956	732	669	435	406	525
MIN	247	365	406	525	525	550	445	525	449	341	314	371
AC-FT	18810	28500	32680	39790	38730	43330	36690	39030	33170	22470	20970	27190
CAL YR 1983	TOTAL	194620	MEAN	533	MAX	1520	MIN	247	AC-FT	386000		
WTR YR 1984	TOTAL	192263	MEAN	525	MAX	1120	MIN	247	AC-FT	381400		

WILLAMETTE RIVER BASIN

14209500 CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OR

LOCATION.--Lat 45°07'30", long 122°04'20", in NE 1/4 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 mi².

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.--67 years, 1,998 ft³/s, 36.64 in/yr, 1,443,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft³/s Dec. 22, 1964, gage height, 21.7 ft, from floodmark, from rating curve extended above 34,100 ft³/s on basis of slope-area measurement at gage height 15.06 ft; minimum recorded, 292 ft³/s Sept. 25, 1980; minimum daily, 427 ft³/s Oct. 5, 1958.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 3	1800	8,590	6.92	Feb. 13	1130	*10,500	*7.78
Minimum, 349 ft ³ /s Oct. 12.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	989	1040	2300	2920	2160	2810	2520	2230	2520	1500	841	798
2	989	1130	2130	2670	2040	3010	2410	3630	2320	1470	826	786
3	833	1710	2000	5750	1950	2830	2300	3760	2200	1420	825	775
4	620	2630	1870	7240	1890	2550	2220	3200	2570	1320	821	770
5	632	1810	1850	5650	1870	2230	2180	2950	2910	1250	808	794
6	637	3030	1950	4660	1850	2300	2120	2730	2960	1220	799	983
7	632	2710	2110	4090	1810	2390	2170	2570	3380	1180	799	971
8	633	2180	3140	3770	1740	2450	2650	2530	3280	1150	773	893
9	663	1910	3020	3260	1830	2680	2540	2530	3020	1120	778	845
10	587	1960	4850	3060	1820	3000	2970	2480	2800	1100	777	917
11	707	2260	4110	3090	1860	3190	2820	2820	2550	1080	772	833
12	478	2240	3340	2830	4350	3310	3140	3190	2380	1070	761	824
13	632	2390	4890	2610	9370	3560	3050	3080	2210	1060	766	890
14	635	2660	6500	2390	6170	4210	2900	3280	2170	1020	764	914
15	644	3600	6380	2210	4460	4160	3180	3000	2200	1000	749	909
16	629	3960	4460	2080	3720	4020	3100	2840	2140	979	758	905
17	632	5760	3420	1970	3140	3820	3040	2570	1920	968	750	901
18	699	5470	2860	1870	2910	3500	3010	2480	1820	955	738	892
19	704	4620	2550	1810	2670	3680	2930	2540	1760	946	738	895
20	699	5340	2330	1730	2540	4050	2820	2900	1830	931	739	905
21	690	3720	2060	1730	2600	4650	2660	2640	2620	915	729	911
22	841	2870	1890	1920	2660	4250	2310	2560	2520	918	731	959
23	370	2610	1720	2090	2570	3840	2200	3630	2120	911	752	993
24	746	5930	1640	4190	2820	3470	1980	3260	1970	908	796	910
25	706	4970	1700	6100	2920	3230	1970	3070	1860	887	800	922
26	697	3600	1640	4800	2680	3870	1970	3800	1770	880	790	908
27	688	3330	1680	3800	2520	3550	1940	3380	1740	877	789	902
28	683	3280	1600	3180	2460	3290	1870	3150	1650	866	796	892
29	680	2860	1750	2790	2440	2990	1830	3310	1690	858	795	886
30	718	2560	4470	2510	---	2730	1850	3330	1600	846	780	888
31	904	---	3660	2310	---	2600	---	2860	---	848	789	---
TOTAL	21997	94140	89870	101080	83820	102220	74650	92300	68480	32453	24129	26461
MEAN	710	3138	2899	3261	2890	3297	2488	2977	2283	1047	778	882
MAX	989	5930	6500	7240	9370	4650	3180	3800	3380	1500	841	983
MIN	478	1040	1600	1730	1740	2230	1830	2230	1600	846	729	770
CFSM	1.48	6.55	6.05	6.81	6.03	6.88	5.19	6.22	4.77	2.19	1.62	1.84
IN.	1.71	7.31	6.98	7.35	6.51	7.94	5.80	7.17	5.32	2.52	1.87	2.06
AC-FT	43630	186700	178300	200500	166300	202800	148100	183100	135800	64370	47860	52490

CAL YR 1983	TOTAL	873849	MEAN	2394	MAX	15900	MIN	478	CFSM	5.00	IN.	67.86	AC-FT	1733000
WTR YR 1984	TOTAL	811600	MEAN	2217	MAX	9370	MIN	478	CFSM	4.00	IN.	63.07	AC-FT	1610000

WILLAMETTE RIVER BASIN

279

14210000 CLACKAMAS RIVER AT ESTACADA, OR

LOCATION.--Lat 45°18'00", long 122°21'10", in NE 1/4 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 mi².

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.--76 years, 2,762 ft³/s, 55.90 in/yr, 2,001,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,900 ft³/s Dec. 22, 1964, gage height, 18.36 ft; minimum, 50 ft³/s Mar. 10, 1961, from rating curve extended below 260 ft³/s; minimum daily, 285 ft³/s Oct. 4, 5, 1958, caused by filling of North Fork dam forebay.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 15,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	1200	*18,500	*8.18	No other peak greater than base discharge.			
Minimum, 698 ft ³ /s Oct. 28.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1120	1220	2940	4400	2970	3930	3820	3140	3400	2260	1160	1060		
2	1110	1370	2880	4030	2750	3710	3700	5200	3100	2110	1080	991		
3	1080	2670	2750	9180	2600	4030	3410	6090	2930	2050	1100	967		
4	775	4460	2600	11200	2500	3350	3290	5170	3500	1950	1100	960		
5	791	3060	2420	8370	2440	3060	3190	4580	4270	1790	1090	1050		
6	804	4020	3220	6760	2410	3060	3150	4260	4180	1740	1090	1410		
7	803	3780	3250	5810	2350	3090	3440	3920	5930	1700	1020	1440		
8	798	3040	4430	5330	2280	3180	4480	3800	6240	1700	1020	1270		
9	797	2540	4830	4600	2350	3440	4290	3710	5500	1620	1040	1080		
10	814	2450	6350	4320	2320	3840	4850	3610	5040	1470	1050	1060		
11	863	2870	6290	4450	3080	4380	4780	3870	4310	1520	995	1060		
12	831	2870	5050	4370	4440	4400	4910	4520	3720	1500	1030	1100		
13	755	2910	5920	3860	15200	4670	4890	4250	3340	1470	996	1410		
14	760	3190	8870	3400	10000	5200	4450	4610	3170	1410	1020	1080		
15	808	4630	9410	2960	6900	5740	4840	4420	3020	1360	995	1310		
16	815	5170	6620	2850	5690	5330	4590	4400	2960	1370	1010	1120		
17	778	7360	5090	2620	4670	5410	4310	3890	2660	1300	983	1000		
18	891	7960	4170	2460	4340	4860	4090	3610	2490	1290	994	1060		
19	855	6470	3120	2390	4150	5430	3950	3560	2380	1240	969	1090		
20	873	7680	3120	2250	3510	5890	3790	4080	2490	1250	931	1110		
21	864	5500	2960	2280	3690	6600	3570	3700	4650	1220	950	1000		
22	1210	4220	2420	2480	3600	6580	3150	3610	4620	1240	957	1460		
23	1240	4010	2180	2860	3540	5930	3110	5330	3450	1200	961	1380		
24	994	7300	2480	6940	3890	5270	2770	4990	3050	1210	1010	1020		
25	907	7190	2630	10200	4370	4680	2790	4420	2840	1190	1030	1010		
26	917	5480	2420	8370	3920	6490	2670	5590	2570	1180	996	1060		
27	891	4810	2250	6010	3530	6210	2610	4970	2490	1170	1000	1040		
28	846	5350	2170	4920	3290	5540	2630	4450	2340	1150	972	1080		
29	877	4460	2550	4310	2980	4880	2550	4480	2560	1180	1000	1090		
30	882	4050	5980	3600	---	4390	2630	4600	2450	1130	972	1050		
31	1150	---	6110	3100	---	3920	---	3920	---	1110	991	---		
TOTAL	27899	132090	127480	150680	119760	146490	110700	134750	105650	45080	31512	33818		
MEAN	900	4403	4112	4861	4130	4725	3690	4347	3522	1454	1017	1127		
MAX	1240	7960	9410	11200	15200	6600	4910	6090	6240	2260	1160	1460		
MIN	755	1220	2170	2250	2280	3060	2550	3140	2340	1110	931	960		
CFSM	1.34	6.56	6.13	7.24	6.15	7.04	5.50	6.48	5.25	2.17	1.52	1.68		
IN.	1.55	7.32	7.07	8.35	6.64	8.12	6.14	7.47	5.86	2.50	1.75	1.87		
AC-FT	55340	262000	252900	298900	237500	290600	219600	267300	209600	89420	62500	67080		
CAL YR 1983	TOTAL	1201314	MEAN	3291	MAX	26100	MIN	755	CFSM	4.90	IN.	66.60	AC-FT	2383000
WTR YR 1984	TOTAL	1165909	MEAN	3186	MAX	15200	MIN	755	CFSM	4.75	IN.	64.64	AC-FT	2313000

WILLAMETTE RIVER BASIN

14211500 JOHNSON CREEK AT SYCAMORE, OR

LOCATION.--Lat 45°28'40", long 122°30'24", in lot 2, SW¼ sec.13, T.1 S., R.2 E., Multnomah County, Hydrologic Unit 17090012, on right bank 0.3 mi southwest of Sycamore station, 2.5 mi east of city limits of Portland, and at mile 10.2.

DRAINAGE AREA.--26.5 mi².

PERIOD OF RECORD.--July 1940 to current year.

REVISED RECORDS.--WSP 1318: 1941(M). WDR OR-75-1: 1974.

GAGE.--Water-stage recorder and V-notch weir. Datum of gage is 228.47 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by recreational ponds upstream. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years, 55.2 ft³/s, 28.29 in/yr, 39,990 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,620 ft³/s Dec. 22, 1964, gage height, 14.68 ft; minimum, 0.08 ft³/s Aug. 21, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	0330	*659	*8.87	Apr. 7	2200	507	7.58
Dec. 29	2330	548	7.96	June 21	1330	514	7.65
Feb. 13	1300	509	7.60				

Minimum, 0.78 ft³/s Aug. 26, 30 .

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1.5	5.0	44	156	33	68	58	76	23	18	4.5	2.8		
2	1.5	6.0	49	191	28	61	54	73	20	16	2.5	1.6		
3	1.5	11	52	373	26	53	46	107	18	13	2.0	1.2		
4	1.6	25	43	270	23	46	42	74	106	12	2.6	1.1		
5	1.5	15	76	161	22	41	60	68	68	11	2.0	14		
6	1.2	20	243	117	21	37	63	61	76	9.1	1.9	13		
7	1.2	35	226	84	20	32	158	50	92	8.3	1.8	7.2		
8	1.1	53	295	64	20	28	345	44	84	7.7	5.5	3.1		
9	1.1	49	205	52	29	26	305	39	102	7.3	1.6	2.3		
10	1.1	68	284	135	22	30	352	35	75	6.1	1.5	2.1		
11	1.1	65	205	138	43	29	212	50	58	5.7	1.6	2.1		
12	1.1	68	179	97	157	46	245	40	45	5.4	1.5	2.7		
13	1.1	81	171	74	428	64	171	32	35	5.0	1.5	2.0		
14	1.5	103	265	57	242	66	112	34	28	4.7	1.5	1.8		
15	1.0	104	145	44	167	75	83	42	23	8.8	1.6	1.6		
16	1.6	204	100	37	131	88	66	57	19	3.8	1.6	1.9		
17	13	362	71	31	89	84	54	40	17	9.1	1.6	1.7		
18	5.5	231	56	26	73	104	52	31	15	5.0	1.4	1.7		
19	3.5	185	50	23	69	130	44	32	12	3.4	1.5	2.1		
20	3.1	142	39	21	97	135	38	34	77	3.3	1.2	2.9		
21	3.1	91	30	21	171	194	32	25	389	3.9	1.1	2.0		
22	53	82	26	29	113	119	29	68	194	2.9	1.0	11		
23	12	153	25	64	112	99	29	136	92	5.6	1.2	5.0		
24	6.7	430	24	124	199	76	25	93	55	7.5	1.2	2.7		
25	5.3	188	25	172	176	81	25	111	37	2.8	1.5	2.2		
26	4.8	121	28	129	111	197	21	139	32	2.7	1.5	2.1		
27	4.3	91	31	93	84	120	19	90	29	5.1	1.2	2.0		
28	4.1	83	24	72	69	127	17	63	23	2.5	1.1	1.9		
29	4.1	70	143	60	57	116	16	45	36	3.7	1.0	2.0		
30	4.5	56	411	47	---	85	32	34	24	4.2	.96	5.3		
31	6.0	---	296	39	---	71	---	27	---	7.8	1.1	---		
TOTAL	153.7	3197.0	3861	3001	2832	2528	2805	1850	1904	211.4	53.76	105.1		
MEAN	4.96	107	125	96.8	97.7	81.5	93.5	59.7	63.5	6.82	1.73	3.50		
MAX	53	430	411	373	428	197	352	139	389	18	5.5	14		
MIN	1.0	5.0	24	21	20	26	16	25	12	2.5	.96	1.1		
CFSM	.19	4.04	4.72	3.65	3.69	3.08	3.53	2.25	2.40	.26	.07	.13		
IN.	.22	4.49	5.42	4.21	3.98	3.55	3.94	2.60	2.67	.30	.08	.15		
AC-FT	305	6340	7660	5950	5620	5010	5560	3670	3780	419	107	208		
CAL YR 1983	TOTAL	25749.7	MEAN	70.5	MAX	942	MIN	1.0	CFSM	2.66	IN.	36.15	AC-FT	51070
WTR YR 1984	TOTAL	22501.96	MEAN	61.5	MAX	430	MIN	.96	CFSM	2.32	IN.	31.59	AC-FT	44630

WILLAMETTE RIVER BASIN

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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 mi², 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 ft³/s, poor below. Daily discharge determined by flow routing for period of no record, June 15 to Sept. 30. Flow regulated by many reservoirs upstream (see elsewhere in this report). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--12 years, 34,250 ft³/s, 24,810,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 283,000 ft³/s Jan. 18, 1974; maximum gage height, 23.84 ft Jan. 18, 1974; minimum daily discharge, 4,200 ft³/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, 138,000 ft³/s Feb. 15; maximum gage height, 13.1 ft May 17; minimum daily discharge, 8,000 ft³/s Aug. 8-12, 15-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14000	19000	65000	99000	41000	48000	46000	25000	36000	22000	9000	10000
2	14000	20000	63000	87000	39000	47000	42000	37000	34000	21000	9000	10000
3	14000	23000	60000	90000	37000	46000	38000	51000	32000	19000	9000	10000
4	14000	34000	56000	99000	34000	44000	37000	60000	30000	17000	9000	10000
5	14000	39000	50000	90000	29000	40000	35000	61000	34000	15000	9000	10000
6	14000	38000	59000	80000	26000	36000	32000	57000	44000	14000	9000	12000
7	14000	43000	69000	72000	25000	34000	32000	53000	56000	14000	9000	14000
8	14000	43000	85000	66000	24000	30000	41000	47000	70000	14000	8000	15000
9	14000	38000	98000	61000	23000	29000	51000	43000	78000	14000	8000	15000
10	14000	35000	106000	58000	24000	29000	58000	37000	78000	13000	8000	14000
11	14000	35000	107000	64000	28000	29000	61000	37000	69000	13000	8000	15000
12	14000	36000	101000	61000	34000	30000	68000	41000	57000	12000	8000	16000
13	14000	40000	94000	55000	72000	33000	70000	41000	50000	12000	9000	17000
14	14000	52000	104000	47000	114000	40000	69000	39000	44000	12000	9000	16000
15	14000	60000	105000	40000	131000	48000	62000	38000	34000	11000	8000	17000
16	14000	61000	109000	37000	117000	53000	56000	40000	31000	11000	8000	16000
17	15000	65000	107000	33000	101000	58000	52000	41000	28000	10000	8000	16000
18	15000	80000	99000	30000	90000	63000	44000	39000	27000	10000	8000	15000
19	15000	89000	86000	28000	77000	67000	42000	34000	25000	10000	8000	15000
20	15000	97000	80000	26000	69000	69000	41000	33000	23000	10000	8000	15000
21	15000	95000	74000	24000	70000	75000	40000	30000	31000	9000	8000	14000
22	16000	90000	63000	26000	71000	76000	38000	31000	39000	9000	8000	15000
23	17000	81000	55000	30000	62000	79000	36000	35000	36000	9000	9000	15000
24	17000	90000	45000	44000	65000	74000	35000	40000	30000	9000	9000	15000
25	16000	98000	42000	65000	84000	66000	31000	43000	27000	9000	9000	15000
26	16000	102000	41000	69000	80000	64000	30000	46000	24000	9000	9000	15000
27	15000	98000	42000	62000	66000	69000	30000	49000	23000	9000	9000	14000
28	16000	90000	41000	57000	56000	74000	28000	45000	24000	9000	9000	14000
29	16000	80000	40000	50000	50000	74000	24000	41000	24000	9000	9000	14000
30	16000	72000	71000	43000	---	68000	23000	37000	24000	9000	9000	14000
31	17000	---	99000	38000	---	53000	---	36000	---	9000	9000	---
TOTAL	461000	1843000	2316000	1731000	1739000	1645000	1292000	1287000	1162000	373000	266000	423000
MEAN	14870	61430	74710	55840	59970	53060	43070	41520	38730	12030	8581	14100
MAX	17000	102000	109000	99000	131000	79000	70000	61000	78000	22000	9000	17000
MIN	14000	19000	40000	24000	23000	29000	23000	25000	23000	9000	8000	10000
AC-FT	914400	3656000	4594000	3433000	3449000	3263000	2563000	2553000	2305000	739800	527600	839000
CAL YR 1983	TOTAL	15737000	MEAN	43120	MAX	167000	MIN	10000	AC-FT	31214000		
WTR YR 1984	TOTAL	14538000	MEAN	39720	MAX	131000	MIN	8000	AC-FT	28836000		

WILLAMETTE RIVER BASIN

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 1983 TO SEPTEMBER 1984

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	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)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 19...	1225	15000	78	7.4	13.5	9.8	--	--	26	0	6.6
DEC 20...	1145	80000	55	7.6	6.0	13.3	K1300	1100	23	2	5.9
FEB 22...	1130	71000	66	7.5	7.5	12.7	450	K2900	25	0	6.6
APR 24...	1100	35000	64	7.5	10.5	11.5	160	230	23	0	5.9
JUN 19...	1115	25000	64	7.7	16.0	9.9	K18	<1	22	0	5.8
SEP 26...	1100	15000	71	7.5	15.0	9.3	510	38	23	0	6.2

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)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT 19...	2.3	5.0	1.0	--	4.8	4.1	<.10	.200	.22	.60	.25
DEC 20...	1.9	3.4	.70	21	6.1	2.7	<.10	.030	.46	<.20	.18
FEB 22...	2.0	3.4	.70	25	5.4	3.0	<.10	.070	.64	.40	.15
APR 24...	2.1	3.9	.60	25	4.1	2.9	.10	.030	.35	<.20	.12
JUN 19...	1.9	3.8	.60	25	3.5	2.7	<.10	.120	.22	.30	.09
SEP 26...	1.9	4.8	1.0	26	3.9	3.6	<.10	.060	.20	<.20	.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 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
OCT 19...	.090	.080	16	60	58	2430	3.5	9	364	88
DEC 20...	.040	.070	16	49	50	10600	11	23	4968	93
FEB 22...	.050	.100	16	52	52	9970	25	29	5560	98
APR 24...	.020	.050	16	58	51	5480	6.7	8	756	95
JUN 19...	.040	.040	16	45	50	3040	3.2	8	540	--
SEP 26...	.050	.080	17	57	54	1390	7.0	--	--	--

WILLAMETTE RIVER BASIN

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14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 19...	20	<1	9	<.5	<1	<1	<3	4	53	2
DEC 20...	500	<1	14	1.0	<1	1	<3	6	370	<1
APR 24...	50	<1	9	.5	<1	1	<3	2	95	2
SEP 26...	20	<1	14	<.5	<1	<1	<3	2	48	<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 19...	<4	11	<.1	<10	1	<1	<1	39	<6	9
DEC 20...	6	26	<.1	<10	1	<1	1	37	<6	18
APR 24...	<4	13	<.1	<10	<1	<1	<1	37	<6	26
SEP 26...	<4	9	<.1	<10	1	<1	<1	36	<6	6
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 20...	<1.0	<.8	2.1	1.8	<.8	<.7	.03	.04		
APR 24...	<.9	<.4	.6	.5	<.4	<.4	.04	.24		

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

COWLITZ RIVER BASIN

14245150 COWLITZ RIVER AT LONGVIEW, WA

LOCATION.--Lat 46°06'13", long 122°53'30", in NE¼SE¼ sec.11, T.7 N., R.2 W., Cowlitz County, Hydrologic Unit 17080005, near left bank on downstream side of railroad bridge, 0.3 mi downstream from Coweman River, 3.2 mi southeast of Longview City Hall, and at mile 1.0.

DRAINAGE AREA.--2,480 mi², at mouth, 1.0 mi downstream.

PERIOD OF RECORD.--May to September 1984 (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is Columbia River Datum.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR CURRENT PERIOD.--Maximum gage height May to September, 11.02 ft June 29; minimum, 4.01 ft Sept. 3, 4, 20, 21.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR MAY TO SEPTEMBER 1984												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1										---	---	---
2										---	---	---
3										---	---	---
4										---	---	---
5										---	---	---
6										---	---	---
7										---	---	---
8										---	---	---
9										---	---	---
10										---	---	---
11										---	---	---
12										---	---	---
13										---	---	---
14										---	---	---
15										---	---	---
16										---	---	---
17										---	---	---
18										---	8.47	---
19										9.93	8.14	8.99
20										9.57	7.93	8.71
21										8.83	7.64	8.24
22										9.01	7.74	8.17
23										9.35	8.51	8.79
24										9.52	8.71	9.02
25										9.94	9.04	9.37
26										10.59	9.51	9.90
27										10.31	8.85	9.42
28										9.74	8.54	9.00
29										9.80	8.47	9.02
30										10.08	8.60	9.27
31										10.36	8.98	9.57
MONTH										---	---	---

COWLITZ RIVER BASIN

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14245150 COWLITZ RIVER AT LONGVIEW, WA--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR MAY TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.59	9.09	9.71	10.50	8.63	9.42	6.98	5.11	5.79	6.16	4.21	4.91
2	10.58	9.07	9.69	10.02	8.20	8.99	6.57	4.79	5.44	5.91	4.06	4.54
3	10.46	8.89	9.56	9.32	7.82	8.48	6.41	4.68	5.17	5.45	4.01	4.38
4	10.21	8.74	9.45	8.40	7.27	7.83	6.10	4.62	5.02	5.55	4.01	4.32
5	10.13	8.88	9.49	8.46	7.16	7.56	5.74	4.53	4.79	5.75	4.16	4.59
6	9.97	8.61	9.35	8.40	7.03	7.48	5.80	4.51	4.77	6.06	4.33	4.83
7	9.95	8.61	9.19	8.31	7.07	7.38	5.88	4.61	4.96	6.20	4.43	4.99
8	10.07	8.81	9.28	8.30	6.96	7.39	6.30	4.51	5.08	6.49	4.34	5.10
9	10.41	8.79	9.41	8.51	7.09	7.44	6.86	4.50	5.27	6.43	4.20	4.91
10	10.37	8.66	9.30	8.19	6.34	6.90	6.78	4.45	5.19	5.99	4.13	4.75
11	10.47	8.52	9.27	7.75	6.07	6.52	6.50	4.19	5.00	6.14	4.10	4.86
12	10.36	8.38	9.19	7.59	6.03	6.44	6.51	4.18	4.92	6.24	4.33	5.01
13	10.33	8.27	9.11	7.48	5.96	6.37	6.19	4.19	4.82	6.22	4.29	4.97
14	10.21	8.46	9.24	7.25	5.90	6.26	6.16	4.23	4.91	5.78	4.22	4.68
15	10.16	8.28	9.10	7.10	5.84	6.18	6.04	4.28	4.94	6.15	4.21	4.78
16	9.85	8.51	9.09	6.93	5.79	6.14	6.12	4.39	4.95	6.03	4.04	4.65
17	9.80	8.63	9.17	6.80	5.75	6.12	5.99	4.39	4.90	5.90	4.04	4.55
18	9.67	8.70	9.18	6.59	5.74	6.03	5.74	4.47	4.80	5.41	4.16	4.49
19	9.45	8.49	9.00	6.41	5.67	5.88	5.53	4.23	4.61	5.45	4.14	4.44
20	9.59	8.53	8.97	6.21	5.58	5.75	5.44	4.11	4.42	5.82	4.01	4.43
21	9.96	9.00	9.36	6.23	5.46	5.63	5.50	4.16	4.53	5.84	4.01	4.53
22	9.99	9.20	9.47	6.24	5.39	5.56	6.01	4.43	4.70	6.21	4.21	4.82
23	10.05	9.09	9.42	6.31	5.35	5.52	6.09	4.28	4.83	6.40	4.33	5.00
24	9.91	8.88	9.25	6.34	5.32	5.54	6.54	4.45	5.08	6.17	4.23	4.87
25	9.81	8.79	9.20	6.68	5.30	5.64	6.99	4.28	5.22	6.55	4.35	5.21
26	10.00	8.73	9.26	6.88	5.31	5.73	7.19	4.16	5.24	7.00	4.72	5.45
27	10.24	8.88	9.47	7.23	5.32	5.88	7.28	4.20	5.33	7.02	4.74	5.46
28	10.63	9.01	9.71	7.66	5.34	6.07	7.17	4.44	5.45	6.66	4.70	5.26
29	11.02	9.33	10.00	7.83	5.35	6.08	6.91	4.51	5.38	6.78	4.68	5.24
30	10.78	9.12	9.78	7.22	5.36	5.87	7.15	4.39	5.38	6.37	4.71	5.17
31	---	---	---	7.07	5.33	5.91	6.78	4.46	5.26	---	---	---
MONTH	11.02	8.27	9.36	10.50	5.30	6.58	7.28	4.11	5.04	7.02	4.01	4.84

COLUMBIA RIVER MAIN STEM

14245300 COLUMBIA RIVER AT LONGVIEW, WA

LOCATION.--Lat 46°06'22", long 122°57'14", in SE¼NE¼ sec.8, T.7 N., R.2 W., Cowlitz County, Hydrologic Unit 17080003, on right bank, at the Port of Longview, 2,000 ft upstream from Longview Bridge, 2.1 mi downstream from Cowlitz River and at mile 66.2.

DRAINAGE AREA.--256,700 mi², approximately.

PERIOD OF RECORD.--November 1983 to September 1984 (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is Columbia River Datum, 0.34 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR CURRENT PERIOD.--Maximum gage height November 1983 to September 1984, 10.66 ft Feb. 16; minimum recorded gage height, 1.22 ft Sept. 19, 20, but may have been less during period of no gage-height record Aug. 6, 7, 21, 22 and Sept. 4, 5, 24.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR NOVEMBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1				---	---	---	8.52	4.77	6.32	7.88	3.43	5.52
2				---	---	---	8.97	5.01	6.61	8.05	3.63	5.60
3				---	---	---	9.21	4.64	6.65	8.49	3.67	6.14
4				---	---	---	8.53	3.78	6.15	8.64	4.52	6.60
5				---	---	---	8.84	3.78	6.26	8.75	5.05	7.00
6				---	---	---	8.81	4.66	6.75	8.24	5.40	6.80
7				---	---	---	8.08	4.86	6.30	7.79	5.05	6.54
8				---	---	---	8.49	4.68	6.78	7.35	4.69	6.10
9				---	---	---	8.25	4.99	6.82	7.15	4.43	5.85
10				---	---	---	7.84	5.49	6.76	7.50	4.54	5.88
11				---	---	---	7.52	4.98	6.28	7.21	4.45	5.60
12				---	---	---	6.93	4.45	5.80	7.03	4.19	5.24
13				---	---	---	7.68	4.70	6.02	6.83	3.83	5.00
14				---	---	---	7.85	5.04	6.19	7.08	3.60	5.07
15				---	---	---	7.93	5.14	6.19	7.22	3.56	5.12
16				---	---	---	8.04	5.10	6.26	8.03	3.90	5.62
17				---	---	---	8.28	5.01	6.41	8.39	4.12	5.93
18				---	---	---	8.66	4.77	6.51	8.71	4.13	6.10
19				---	---	---	9.13	5.07	6.74	8.76	4.11	6.19
20				---	---	---	8.77	4.73	6.66	8.68	3.94	6.16
21				---	---	---	8.92	4.67	6.76	8.20	4.30	6.08
22				---	---	---	8.63	5.16	6.64	8.22	3.52	5.82
23				9.37	---	---	7.65	4.70	6.11	7.67	3.46	5.58
24				10.27	5.49	8.01	6.44	4.10	5.17	8.17	4.49	6.20
25				8.55	6.02	7.26	6.11	3.22	4.64	8.58	5.34	6.62
26				7.90	5.24	6.62	6.76	2.38	4.53	8.28	5.56	6.56
27				7.57	4.91	6.17	7.11	2.52	4.58	8.08	5.04	6.33
28				7.45	4.21	5.65	6.71	2.78	4.34	7.78	4.47	6.01
29				7.45	3.98	5.56	7.15	2.98	4.66	7.36	3.64	5.43
30				8.14	4.17	5.91	8.22	3.94	5.65	7.40	3.43	5.29
31				---	---	---	8.16	3.76	5.77	7.95	3.73	5.58
MONTH				---	---	---	9.21	2.38	6.04	8.76	3.43	5.92

COLUMBIA RIVER MAIN STEM

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14245300 COLUMBIA RIVER AT LONGVIEW, WA--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR NOVEMBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	7.62	3.61	5.46	7.89	3.83	5.97	8.13	5.13	6.69	8.53	5.36	7.08
2	7.45	3.59	5.47	7.69	3.77	5.69	7.74	4.41	6.00	9.30	6.01	7.43
3	7.35	3.65	5.44	7.17	3.70	5.32	7.59	4.39	5.87	9.09	6.11	7.51
4	6.76	3.17	4.88	6.96	3.66	5.36	7.80	4.45	5.90	9.19	6.31	7.64
5	6.58	2.84	4.67	6.87	3.79	5.29	7.71	4.52	5.88	8.90	5.91	7.27
6	6.35	2.60	4.58	6.86	3.38	5.00	7.23	3.64	5.28	7.94	5.20	6.53
7	6.61	3.07	4.83	6.94	3.28	4.85	7.49	4.46	5.86	7.49	5.06	6.30
8	7.00	3.37	4.99	6.85	3.43	4.80	7.77	4.86	6.18	7.37	5.01	6.29
9	7.22	3.79	5.38	6.82	3.32	4.72	7.25	4.65	5.99	7.49	4.98	6.33
10	7.65	4.00	5.38	6.48	2.89	4.43	7.93	5.45	6.64	8.37	5.37	6.42
11	7.30	4.04	5.34	6.15	2.77	4.38	8.23	5.91	7.09	8.98	6.48	7.64
12	8.19	4.27	5.91	7.51	3.80	5.43	9.14	6.26	7.67	9.30	6.19	7.54
13	8.80	5.19	6.56	7.55	4.22	5.73	8.73	6.24	7.41	9.54	6.20	7.57
14	9.41	6.27	7.56	8.51	4.55	6.34	9.31	6.43	7.89	9.51	5.83	7.46
15	10.24	6.95	8.33	9.21	5.29	6.86	9.68	6.00	7.73	9.68	6.47	7.98
16	10.66	6.74	8.72	9.63	5.91	7.48	9.51	6.04	7.65	10.11	7.26	8.54
17	10.06	6.23	8.08	10.03	6.27	8.05	9.84	6.43	7.97	10.23	7.50	8.70
18	9.61	6.06	7.66	9.70	6.24	7.91	9.99	6.45	8.08	9.81	7.23	8.40
19	9.11	5.75	7.41	9.72	6.13	7.74	10.13	7.02	8.35	9.36	6.85	8.10
20	9.22	5.55	7.28	9.71	5.88	7.55	9.43	6.55	7.83	8.88	6.45	7.66
21	9.21	5.39	6.92	9.68	5.79	7.33	8.56	6.34	7.38	8.03	6.04	7.10
22	8.55	5.14	6.53	8.82	5.76	7.02	8.34	6.47	7.41	8.13	6.12	7.03
23	8.50	5.40	6.63	8.76	6.17	7.23	7.79	5.99	7.03	8.51	6.78	7.48
24	8.45	5.54	6.80	8.19	6.01	7.03	7.55	6.11	6.93	8.87	7.07	7.71
25	8.07	5.05	6.56	7.78	5.68	6.77	7.61	5.70	6.66	9.55	7.52	8.09
26	7.06	4.02	5.64	7.60	5.40	6.64	7.58	5.80	6.67	9.73	7.78	8.53
27	7.23	3.94	5.55	7.06	4.77	5.94	7.83	5.82	6.74	9.25	6.61	7.69
28	7.72	4.17	5.83	7.77	5.43	6.53	8.01	5.50	6.76	8.64	6.10	7.21
29	7.85	4.38	6.00	7.81	5.36	6.68	7.76	4.84	6.15	8.84	6.32	7.52
30	---	---	---	7.75	5.22	6.50	7.78	4.72	6.18	9.35	6.62	7.92
31	---	---	---	8.24	5.68	6.87	---	---	---	9.49	7.00	8.18
MONTH	10.66	2.60	6.22	10.03	2.77	6.24	10.13	3.64	6.86	10.23	4.98	7.51
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	9.74	7.26	8.40	9.74	6.89	8.17	6.72	2.08	4.37	6.15	1.79	3.65
2	9.75	7.31	8.41	9.44	6.74	7.97	6.44	1.79	4.00	5.87	1.57	3.36
3	9.59	7.18	8.30	8.54	5.59	7.09	6.26	1.66	3.68	5.35	1.39	3.14
4	9.42	6.90	8.18	7.43	4.26	5.98	5.94	1.63	3.42	5.46	---	---
5	9.22	7.12	8.22	7.66	4.33	5.73	5.50	1.36	3.04	5.80	---	---
6	9.18	6.92	8.12	7.67	4.26	5.67	5.52	---	---	5.99	1.23	3.50
7	9.16	6.95	7.96	7.57	4.00	5.36	5.62	---	---	6.10	1.52	3.77
8	9.40	7.21	8.02	7.54	4.10	5.41	6.11	1.66	3.83	6.42	1.81	4.00
9	9.67	7.31	8.25	7.80	4.01	5.38	6.78	2.20	4.27	6.39	1.63	3.82
10	9.68	7.13	8.14	7.48	3.18	4.99	6.72	1.74	3.97	5.94	1.29	3.58
11	9.84	6.98	8.16	7.34	2.66	4.69	6.44	1.39	3.78	6.10	1.65	3.82
12	9.79	6.76	8.08	7.21	2.52	4.63	6.48	1.71	3.92	6.14	1.89	3.96
13	9.77	6.62	8.01	7.10	2.41	4.58	6.14	1.33	3.67	6.15	2.06	3.92
14	9.61	6.96	8.17	6.79	2.28	4.38	6.04	1.59	3.79	5.72	1.48	3.39
15	9.51	6.50	7.89	6.62	2.16	4.26	5.91	1.72	3.83	6.13	1.47	3.63
16	8.98	6.49	7.68	6.42	2.18	4.27	5.97	1.70	3.73	6.01	1.97	3.71
17	8.86	6.77	7.80	6.25	2.51	4.40	5.83	1.80	3.64	5.85	1.87	3.55
18	8.69	6.93	7.83	5.91	2.49	4.25	5.48	1.83	3.42	5.28	1.62	3.27
19	8.58	6.95	7.81	5.62	2.24	3.88	5.32	1.47	2.96	5.32	1.22	3.05
20	8.63	7.00	7.79	5.29	1.78	3.44	5.19	1.51	2.94	5.76	1.22	3.25
21	8.70	7.28	7.90	5.43	1.60	3.05	5.30	---	---	5.75	1.27	3.40
22	8.89	7.35	7.90	5.55	1.98	3.20	5.93	---	---	6.17	1.45	3.63
23	8.91	7.41	7.93	5.74	1.66	3.23	5.95	1.39	3.52	6.38	1.37	3.62
24	8.93	7.11	7.74	5.93	1.46	3.34	6.48	1.70	3.92	6.16	---	---
25	8.81	6.73	7.61	6.27	1.61	3.71	6.95	1.82	4.16	6.44	1.51	3.91
26	9.06	6.69	7.74	6.53	1.67	3.90	7.19	1.95	4.37	6.95	1.75	4.17
27	9.38	6.94	8.11	7.00	1.84	4.27	7.31	2.12	4.52	6.96	1.91	4.14
28	9.93	7.34	8.54	7.49	2.42	4.74	7.16	1.94	4.45	6.60	1.78	3.84
29	10.38	7.61	8.81	7.69	2.43	4.71	6.88	1.81	4.31	6.74	1.48	3.80
30	10.04	7.17	8.45	6.99	1.81	4.23	7.12	2.16	4.42	6.23	1.77	3.82
31	---	---	---	6.83	1.96	4.33	6.73	2.16	4.27	---	---	---
MONTH	10.38	6.49	8.07	9.74	1.46	4.75	---	---	---	---	---	---

PACIFIC SLOPE BASINS IN OREGON

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR
(National stream quality accounting network station)

LOCATION.--Lat 45°42'15", long 123°45'15", in NW¼ sec.35, T.3 N., R.9 W., Tillamook County, Hydrologic Unit 17100202, on right bank 0.2 mi upstream from Cook Creek, 2.2 mi northeast of Foss, and at mile 13.5.

DRAINAGE AREA.--667 mi².

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 excellent. No regulation. Several small diversions for irrigation and domestic use above station.

AVERAGE DISCHARGE.--45 years, 2,736 ft³/s, 55.70 in/yr, 1,982,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,900 ft³/s Jan. 20, 1972, gage height, 23.11 ft; minimum, 34 ft³/s Aug. 29-31, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 19,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 18	0200	*17,200	*12.87				
Minimum, 122 ft ³ /s Sept. 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	158	301	3900	5140	2750	3620	2420	1860	1550	1250	260	150		
2	156	635	3280	4870	2360	3420	2210	3350	1410	1080	250	154		
3	154	5590	2850	7650	2110	3090	1990	3870	1310	965	240	139		
4	158	5690	2480	9410	1880	2770	1790	3390	1370	873	231	132		
5	158	3770	2600	8220	1640	2500	1640	3190	1480	809	231	162		
6	158	4970	2830	6530	1520	2260	1540	3130	1410	755	235	245		
7	154	4290	2890	5300	1410	2040	1810	2820	1380	702	231	364		
8	150	3550	4140	4410	1370	1820	2400	2570	1360	656	217	370		
9	147	3110	5580	3720	1530	1660	2670	2460	1440	626	212	323		
10	146	3770	6390	3420	3330	1580	3890	2290	1410	597	199	270		
11	144	5150	6260	3460	4890	1500	5230	2320	1310	569	186	231		
12	143	5470	6120	3230	9660	1980	6940	2330	1220	548	186	221		
13	139	7340	7160	2910	12200	2440	7530	2180	1120	534	186	203		
14	142	11100	7130	2650	10700	2750	6370	2160	1050	507	186	186		
15	143	13400	6340	2380	8950	3000	5010	2250	982	487	182	170		
16	143	13300	5280	2130	7770	3000	3980	2150	915	455	178	158		
17	151	16300	4330	1910	6390	3670	3250	1990	865	430	170	150		
18	154	16500	3590	1710	5200	4790	2780	1780	817	406	166	139		
19	154	14700	3050	1580	4350	4970	2450	1700	770	388	162	132		
20	154	15600	2630	1480	3930	4810	2200	1730	825	370	154	132		
21	156	12600	2270	1420	4090	5140	1950	1640	1140	358	150	132		
22	231	9200	1910	1580	4310	5560	1750	1640	1260	352	146	146		
23	295	6930	1480	2770	4410	5110	1640	2200	1120	335	143	178		
24	261	10700	1350	10200	5780	4490	1570	2450	965	323	143	170		
25	232	13800	1560	12800	6710	3980	1510	2340	882	307	139	170		
26	225	11900	1570	11500	6400	3980	1460	2830	825	301	139	170		
27	213	9250	1480	8570	5310	3820	1380	2950	801	301	132	154		
28	204	7400	1350	6370	4580	3540	1300	2630	778	301	139	139		
29	195	5930	2280	4940	3940	3310	1260	2290	1360	296	135	128		
30	206	4790	5490	3980	---	2970	1420	1990	1430	285	135	125		
31	282	---	5740	3270	---	2670	---	1720	---	270	132	---		
TOTAL	5506	247036	115310	149510	139470	102240	83340	74200	34555	16436	5595	5543		
MEAN	178	8235	3720	4823	4809	3298	2778	2394	1152	530	180	185		
MAX	295	16500	7160	12800	12200	5560	7530	3870	1550	1250	260	370		
MIN	139	301	1350	1420	1370	1500	1260	1640	770	270	132	125		
CFSM	.27	12.3	5.58	7.23	7.21	4.94	4.16	3.59	1.73	.79	.27	.28		
IN.	.31	13.78	6.43	8.34	7.78	5.70	4.65	4.14	1.93	.92	.31	.31		
AC-FT	10920	490000	228700	296600	276600	202800	165300	147200	68540	32600	11100	10990		
CAL YR 1983	TOTAL	1092355	MEAN	2993	MAX	21000	MIN	139	CFSM	4.49	IN.	60.92	AC-FT	2167000
WTR YR 1984	TOTAL	978741	MEAN	2674	MAX	16500	MIN	125	CFSM	4.01	IN.	54.59	AC-FT	1941000

PACIFIC SLOPE BASINS IN OREGON

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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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	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)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	
OCT 26...	1115	230	88	8.0	10.0	11.6	20	37	27	0	7.5	
JAN 24...	1645	10200	41	7.2	7.0	--	120	280	13	0	3.4	
APR 10...	1130	3150	55	7.4	7.5	11.9	60	170	15	0	4.1	
AUG 07...	1315	230	77	7.9	19.5	11.2	K26	360	23	0	6.4	
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 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 + DIS- ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT 26...	2.0	6.8	1.1	29	7.2	6.7	<.10	.110	.20	.80	.06	
JAN 24...	.97	4.3	.70	16	5.0	4.2	<.10	.010	.75	.50	.06	
APR 10...	1.1	4.2	.60	16	4.7	3.8	<.10	<.010	.42	.30	.03	
AUG 07...	1.7	6.1	.80	25	5.1	5.4	<.10	<.010	.17	<.20	.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, CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
OCT 26...		.040	.060	16	76	65	47	.80	3	1.9	79	
JAN 24...		.020	.100	12	33	40	909	28	123	3390	75	
APR 10...		<.010	.010	14	44	42	374	4.7	11	94	74	
AUG 07...		.030	.010	15	48	56	30	1.5	--	--	--	

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 26...	10	<1	10	<.5	<1	<1	<3	8	450	2
JAN 24...	50	2	8	<.5	1	<1	<3	6	120	<1
APR 10...	50	<1	10	.8	<1	<1	<3	4	88	<1
AUG 07...	20	<1	12	<.5	<1	3	<3	3	250	3
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 26...	<4	4	<.1	<10	4	<1	<1	49	<6	9
JAN 24...	5	6	<.1	<10	2	<1	<1	24	<6	8
APR 10...	<4	2	<.1	<10	<1	<1	<1	29	<6	16
AUG 07...	<4	1	<.1	<10	5	<1	<1	43	<6	19

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

14301500 WILSON RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°29'05", long 123°41'20", in SW¼SE¼ sec.8, T.1 S., R.8 W., Tillamook County, Hydrologic Unit 17100203, on right bank 0.2 mi upstream from Negro Jack Creek, 8.0 mi east of Tillamook, and at mile 11.4.

DRAINAGE AREA.--161 mi², 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.--54 years (water years 1915, 1932-84), 1,203 ft³/s, 101.47 in/yr, 871,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft³/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 ft³/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 discharge above base of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 12	1700	*8,450	*10.87				
Minimum, 74 ft ³ /s Aug. 26.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	118	170	1300	2290	942	1360	916	1360	769	387	140	114		
2	118	506	1130	2020	837	1340	831	2540	692	359	136	107		
3	117	3270	1010	3840	756	1230	775	2260	640	334	134	99		
4	115	2660	916	3860	685	1100	716	1770	778	314	134	94		
5	111	1670	1080	2780	627	986	664	1600	763	294	131	112		
6	108	2700	1160	2100	591	892	617	1450	756	281	136	186		
7	107	1850	1280	1730	548	814	964	1280	740	268	131	328		
8	107	1380	2300	1460	538	748	1290	1190	727	259	127	227		
9	104	1290	2400	1270	603	713	1240	1150	787	249	124	177		
10	104	1370	2820	1280	1080	695	1810	1120	760	241	119	148		
11	103	1740	2720	1270	1620	661	1810	1270	708	232	116	139		
12	103	1930	2620	1160	5450	1110	2660	1400	653	230	118	143		
13	102	2990	3590	1050	5120	1410	2500	1300	596	222	121	129		
14	102	4480	3110	947	3320	1590	1930	1210	551	214	118	118		
15	102	5390	2340	848	2600	1660	1610	1120	507	206	115	111		
16	99	5010	1840	775	2140	1570	1360	1040	475	195	112	108		
17	105	6640	1510	711	1750	1990	1150	940	449	189	111	106		
18	103	5940	1280	656	1510	2400	1050	851	425	181	110	103		
19	100	4810	1110	611	1350	2500	959	857	404	176	108	101		
20	102	6030	968	573	1360	2240	945	878	419	174	106	99		
21	104	3630	845	569	1480	2500	876	790	475	170	103	99		
22	210	2470	747	775	1410	2550	816	909	419	169	103	115		
23	168	2000	676	1410	1540	2080	783	1370	382	162	101	120		
24	135	4900	649	4130	2300	1730	737	1330	362	160	100	118		
25	121	5090	631	4590	2410	1610	730	1290	341	156	100	109		
26	115	3420	611	3290	2020	1650	708	1720	352	156	98	106		
27	110	2910	560	2320	1670	1500	683	1590	348	155	95	101		
28	107	2330	510	1780	1510	1400	636	1330	333	152	97	98		
29	105	1880	1310	1460	1380	1250	631	1130	505	147	98	94		
30	131	1560	3810	1240	---	1120	858	983	432	144	95	93		
31	179	---	3300	1070	---	1020	---	866	---	142	97	---		
TOTAL	3615	92016	50133	53865	49147	45419	33255	39894	16548	6718	3534	3802		
MEAN	117	3067	1617	1738	1695	1465	1109	1287	552	217	114	127		
MAX	210	6640	3810	4590	5450	2550	2660	2540	787	387	140	328		
MIN	99	170	510	569	538	661	617	790	333	142	95	93		
CFSM	.73	19.0	10.0	10.8	10.5	9.10	6.89	7.99	3.43	1.35	.71	.79		
IN.	.84	21.26	11.58	12.45	11.36	10.49	7.68	9.22	3.82	1.55	.82	.88		
AC-FT	7170	182500	99440	106800	97480	90090	65960	79130	32820	13330	7010	7540		
CAL YR 1983	TOTAL	455824	MEAN	1249	MAX	10700	MIN	99	CFSM	7.76	IN.	105.32	AC-FT	904100
WTR YR 1984	TOTAL	397946	MEAN	1087	MAX	6640	MIN	93	CFSM	6.75	IN.	91.95	AC-FT	789300

NESTUCCA RIVER BASIN

14302800 MCGUIRE LAKE NEAR FAIRDALE, OR

LOCATION.--Lat 45°18'30", long 123°24'30", in NW¼SE¼ sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, on control tower in reservoir on Nestucca River, 0.3 mi upstream from Walker Creek, and 5.0 mi southwest of Fairdale.

DRAINAGE AREA.--2.85 mi².

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 Mar. 3 to July 18, elevation, 1,865.0 ft; reservoir empty Dec. 12.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1,859.0	2,970	-
Oct. 31.....	1,851.5	2,160	-810
Nov. 30.....	1,830.0	.600	-1,560
Dec. 31.....	1,832.5	730	+130
CAL YR 1983.....	-	-	+30
Jan. 31.....	1,850.3	2,040	+1,310
Feb. 29.....	1,864.1	3,640	+1,600
Mar. 31.....	1,865.0	3,770	+130
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.....	1,862.8	3,460	-310
Aug. 31.....	1,857.8	2,830	-630
Sept. 30.....	1,853.3	2,340	-490
WTR YR 1984.....	-	-	-630

NESTUCCA RIVER BASIN

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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 mi².

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 sta 14302800); during winter months lake is empty except when inflow exceeds capacity of outlet tunnel.

AVERAGE DISCHARGE.--24 years (water years 1961-84), 32.9 ft³/s, 72.29 in/yr, 23,840 acre-ft/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 876 ft³/s Dec. 22, 1964, gage height, 10.43 ft; minimum, 0.76 ft³/s Aug. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 249 ft³/s Nov. 17, gage height, 4.59 ft; minimum, 1.3 ft³/s Aug. 18, 20-22; minimum daily, 1.4 ft³/s Aug. 20, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	39	82	23	14	34	29	59	17	9.4	2.5	2.4
2	2.1	74	77	28	12	31	28	69	15	8.4	2.5	2.3
3	2.1	141	70	74	12	35	26	61	15	7.9	2.5	2.3
4	2.0	122	66	58	12	39	26	50	27	7.2	2.5	2.2
5	2.0	114	72	39	11	38	25	50	22	6.6	2.5	2.9
6	2.2	123	88	29	9.5	36	23	41	26	6.2	2.5	5.0
7	2.0	121	107	25	9.1	33	45	35	24	5.8	2.4	6.4
8	2.0	125	118	21	9.9	30	46	33	22	5.7	2.4	3.6
9	2.0	112	114	18	19	31	56	32	22	5.5	2.3	3.1
10	2.0	92	133	25	27	30	76	29	21	5.4	2.2	2.8
11	2.1	110	135	21	33	30	78	32	19	5.3	2.2	2.7
12	1.9	118	127	19	83	44	133	28	18	5.4	2.3	2.8
13	2.0	156	126	17	98	52	100	26	17	5.2	2.3	2.6
14	2.0	175	80	15	65	64	73	25	16	4.9	2.2	2.4
15	2.0	166	41	14	52	79	56	23	15	4.7	2.2	2.4
16	2.0	182	32	13	42	94	44	21	13	4.4	2.2	2.4
17	2.5	230	26	12	33	116	37	20	13	4.2	1.9	2.4
18	2.2	193	22	12	30	105	39	19	12	3.9	1.5	2.4
19	2.2	182	20	11	27	89	32	20	11	3.1	1.5	2.4
20	2.2	178	17	10	26	73	30	19	13	3.1	1.4	2.4
21	5.7	141	15	12	26	76	28	18	15	3.1	1.5	2.4
22	12	119	14	17	25	65	25	23	13	3.2	1.4	2.8
23	9.5	112	13	26	33	57	25	25	11	3.1	1.5	2.8
24	26	170	12	52	48	49	22	22	11	2.9	1.7	2.6
25	38	157	11	56	46	51	22	26	9.6	2.8	2.3	2.4
26	37	129	12	41	37	49	20	31	10	3.0	2.3	2.4
27	37	122	11	32	31	41	19	27	9.8	3.0	2.2	2.3
28	36	106	9.8	25	32	40	18	23	9.5	3.0	2.3	2.3
29	36	97	22	21	32	35	20	21	15	2.7	2.2	2.2
30	40	89	31	18	---	32	30	19	11	2.7	2.2	2.3
31	38	---	26	15	---	30	---	18	---	2.6	2.2	---
TOTAL	356.8	3995	1729.8	799	934.5	1608	1231	945	472.9	144.4	65.8	82.4
MEAN	11.5	133	55.8	25.8	32.2	51.9	41.0	30.5	15.8	4.66	2.12	2.75
MAX	40	230	135	74	98	116	133	69	27	9.4	2.5	6.4
MIN	1.9	39	9.8	10	9.1	30	18	18	9.5	2.6	1.4	2.2
AC-FT	708	7920	3430	1580	1850	3190	2440	1870	938	286	131	163
MEAN†	3.98	109	57.9	47.0	60.0	54.0	41.0	30.4	15.8	5.04	2.52	3.76
CFSM†	0.644	17.6	9.37	7.61	9.71	8.74	6.63	4.92	2.56	1.816	1.408	1.608
IN.†	0.74	19.77	10.80	8.77	10.47	10.07	7.40	5.67	2.85	.94	.47	.68
AC-FT†	245	6515	3560	2890	3450	3320	2440	1870	938	310	155	224

CAL YR 1983 TOTAL 15652.9 MEAN 42.9 MAX 285 MIN 1.9 AC-FT 31050 MEAN† 44.8 CFSM† 7.25 IN.† 98.45 AC-FT† 32449
WTR YR 1984 TOTAL 12364.6 MEAN 33.8 MAX 230 MIN 1.4 AC-FT 24530 MEAN† 35.7 CFSM† 5.78 IN.† 78.70 AC-FT† 25941

† Adjusted for storage and diversion by McGuire Lake.

NESTUCCA RIVER BASIN

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 mi².

PERIOD OF RECORD.--July 1983 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft, from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 128 ft³/s Nov. 17, 1983, gage height, 2.76 ft; minimum, 1.3 ft³/s Oct. 20-21, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 180 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	2400	*128	*2.76				
Minimum, 1.3 ft ³ /s Oct. 20, 21.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.3	23	22	17	23	16	17	14	7.0	2.8	2.1
2	1.7	8.3	20	23	15	21	15	26	12	6.7	2.8	1.9
3	1.8	27	17	44	14	19	14	30	11	6.4	2.7	1.9
4	1.8	25	15	63	12	17	12	29	14	6.2	2.7	1.8
5	1.7	20	19	47	11	16	11	28	13	5.9	2.7	2.5
6	1.7	22	24	34	11	16	11	25	14	5.7	2.7	3.7
7	1.7	21	29	28	9.7	15	17	23	14	5.5	2.6	5.7
8	1.7	18	40	23	9.4	13	17	21	15	5.3	2.5	3.1
9	1.6	17	44	20	11	12	20	20	16	5.1	2.5	2.5
10	1.6	18	48	20	15	11	26	19	16	4.9	2.4	2.2
11	1.6	24	55	20	17	11	30	19	16	4.8	2.4	2.1
12	1.6	30	54	19	80	14	47	19	15	4.8	2.4	2.1
13	1.5	54	51	18	105	14	51	18	14	4.7	2.4	1.9
14	1.6	90	47	17	75	16	38	18	13	4.5	2.3	1.8
15	1.6	78	38	15	51	19	30	17	12	4.3	2.3	1.8
16	1.5	78	31	14	37	22	24	16	11	4.2	2.2	1.8
17	1.7	112	25	13	30	30	20	15	10	4.0	2.2	1.7
18	1.7	119	22	12	26	37	18	14	9.0	3.9	2.2	1.7
19	1.6	97	19	11	23	37	16	14	8.6	3.9	2.2	1.7
20	1.4	96	16	11	22	34	15	13	9.1	3.9	2.1	1.6
21	1.4	72	14	11	23	39	14	12	9.3	3.8	2.1	1.7
22	3.4	46	13	13	22	45	13	13	8.0	3.7	2.1	2.2
23	2.2	34	13	17	24	39	12	14	7.3	3.6	2.1	2.0
24	2.0	55	13	66	35	32	11	13	6.9	3.5	2.1	1.9
25	2.0	74	12	96	50	29	11	15	6.6	3.5	2.0	1.8
26	1.9	58	9.5	82	42	27	11	20	6.7	3.4	1.9	1.6
27	1.9	50	8.9	52	35	25	10	21	6.3	3.2	2.0	1.6
28	1.9	41	8.2	36	28	24	9.8	20	6.2	3.2	2.0	1.6
29	1.9	34	12	28	25	22	10	18	9.8	3.1	1.9	1.6
30	3.1	27	19	24	---	20	13	17	7.8	3.0	1.9	1.6
31	2.8	---	22	20	---	18	---	15	---	3.0	2.0	---
TOTAL	57.2	1448.6	781.6	919	875.1	717	562.8	579	331.6	138.7	71.2	63.2
MEAN	1.85	48.3	25.2	29.6	30.2	23.1	18.8	18.7	11.1	4.47	2.30	2.11
MAX	3.4	119	55	96	105	45	51	30	16	7.0	2.8	5.7
MIN	1.4	3.3	8.2	11	9.4	11	9.8	12	6.2	3.0	1.9	1.6
CFSM	.60	15.6	8.16	9.58	9.77	7.48	6.08	6.05	3.59	1.45	.74	.68
IN.	.69	17.44	9.41	11.06	10.54	8.63	6.78	6.97	3.99	1.67	.86	.76
AC-FT	113	2870	1550	1820	1740	1420	1120	1150	658	275	141	125

WTR YR 1984 TOTAL 6545.0 MEAN 17.9 MAX 119 MIN 1.4 CFSM 5.79 IN. 78.79 AC-FT 12980

NESTUCCA RIVER BASIN

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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 mi².

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.--20 years, 1,098 ft³/s, 82.84 in/yr, 795,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft³/s Jan. 11, 1972, gage height, 22.0 ft, from floodmark; minimum, 32 ft³/s Sept. 14, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1962, reached a stage of 23.4 ft, discharge, 32,500 ft³/s caused by failure of Meadow Lake Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	2130	*5,410	*8.40				
Minimum, 95 ft ³ /s Oct. 16, 17.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	112	233	1500	1620	1090	1530	1090	1380	786	533	163	123		
2	112	389	1290	1600	977	1410	997	1980	725	493	158	113		
3	112	1960	1130	2420	879	1290	929	1960	680	462	152	103		
4	112	1760	1030	2690	800	1180	855	1740	942	434	150	99		
5	111	1210	1280	2210	741	1080	797	1670	954	411	151	130		
6	109	1400	1540	1800	699	984	756	1490	988	392	153	251		
7	106	1220	1670	1540	643	903	1040	1310	975	364	146	452		
8	104	1070	2150	1310	646	839	1240	1230	961	348	142	289		
9	103	1070	2260	1140	717	807	1220	1140	1090	331	139	223		
10	102	1090	2630	1170	1110	771	1680	1070	1020	317	138	181		
11	100	1330	2830	1170	1200	740	1720	1230	940	293	136	161		
12	99	1610	2860	1050	3340	960	2520	1230	872	285	136	160		
13	98	2570	3080	970	4400	1090	2460	1180	810	273	135	147		
14	102	4010	2730	893	3380	1230	2060	1140	752	266	132	135		
15	100	3740	2220	819	2670	1390	1740	1110	699	256	125	131		
16	97	3660	1860	761	2250	1530	1500	1030	655	244	124	125		
17	131	5150	1570	706	1890	1820	1290	949	586	235	123	122		
18	126	4900	1340	660	1680	1910	1180	880	549	228	121	118		
19	110	4450	1190	620	1490	1870	1070	874	516	220	117	115		
20	107	4740	1030	587	1490	1770	1050	858	559	213	114	113		
21	114	3750	903	596	1540	1860	946	769	785	208	112	114		
22	338	2750	796	726	1460	1880	869	843	608	201	112	132		
23	223	2250	729	1030	1600	1770	846	980	536	196	111	146		
24	164	3730	679	3870	2570	1630	796	907	495	192	110	149		
25	158	4100	688	4740	3020	1600	774	1040	466	213	110	128		
26	163	3400	684	3540	2520	1790	731	1460	473	199	104	120		
27	155	2700	635	2540	2070	1660	694	1380	463	184	103	114		
28	150	2100	573	1990	1830	1610	664	1220	436	178	109	109		
29	148	1900	1310	1650	1620	1470	720	1070	721	175	103	106		
30	205	1700	2350	1410	---	1310	950	955	608	172	99	107		
31	250	---	1940	1230	---	1180	---	869	---	166	102	---		
TOTAL	4221	75942	48477	49058	50322	42864	35184	36944	21650	8682	3930	4516		
MEAN	136	2531	1564	1583	1735	1383	1173	1192	722	280	127	151		
MAX	338	5150	3080	4740	4400	1910	2520	1980	1090	533	163	452		
MIN	97	233	573	587	643	740	664	769	436	166	99	99		
CFSM	.76	14.1	8.69	8.79	9.64	7.68	6.52	6.62	4.01	1.56	.71	.84		
IN.	.87	15.69	10.02	10.14	10.40	8.86	7.27	7.64	4.47	1.79	.81	.93		
AC-FT	8370	150600	96150	97310	99810	85020	69790	73280	42940	17220	7800	8960		
CAL YR 1983	TOTAL	447981	MEAN	1227	MAX	9600	MIN	97	CFSM	6.82	IN.	92.58	AC-FT	888600
WTR YR 1984	TOTAL	381790	MEAN	1043	MAX	5150	MIN	97	CFSM	5.79	IN.	78.90	AC-FT	757300

NESTUCCA RIVER BASIN

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, Dec. 22-25, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 20.0°C July 16, 17, 20, 30; minimum, 0.5°C Dec. 22-25.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

NESTUCCA RIVER BASIN

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14303600 NESTUCCA RIVER NEAR BEAVER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

SILETZ RIVER BASIN

14304850 BIG ROCK CREEK NEAR VALSETZ, OR

LOCATION.--Lat 44°46'41", long 123°41'34", in NE1/4 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 Valseltz.

DRAINAGE AREA.--6.90 mi².

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, Dec. 24, 25, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.0°C July 16, 17, 24, Aug. 9; minimum, 0.0°C Dec. 24, 25.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	7.0	10.0	10.0	7.0	6.5	7.0	6.0	6.5	6.0	8.5	8.0
2	---	10.0	11.0	10.0	7.5	7.0	7.0	6.0	6.5	5.0	8.0	7.5
3	---	10.0	11.5	10.0	7.0	6.5	8.5	7.0	7.0	5.5	7.5	6.5
4	---	11.5	10.5	9.0	6.5	6.0	9.0	8.5	---	6.0	7.5	6.5
5	---	8.5	9.5	8.5	7.0	6.5	9.0	8.5	---	---	8.0	6.5
6	---	8.5	9.5	9.0	7.5	7.0	9.0	8.5	8.0	7.0	8.5	6.5
7	---	7.0	9.0	8.5	8.0	7.5	8.5	8.0	8.0	6.5	8.5	7.5
8	---	7.0	8.5	7.5	8.5	8.0	8.0	7.0	8.5	7.5	9.0	7.5
9	---	9.0	9.5	8.5	9.0	8.0	7.5	7.0	8.5	7.0	9.5	9.0
10	---	7.5	10.0	9.0	8.5	8.5	8.0	7.5	7.0	6.5	9.5	8.5
11	---	8.0	9.5	9.0	8.5	8.0	8.0	7.5	7.5	6.5	---	8.0
12	---	8.0	9.5	9.0	9.0	8.0	7.5	6.0	8.5	7.5	---	---
13	---	8.5	9.0	8.5	9.0	9.0	6.5	5.5	8.0	7.5	---	---
14	10.5	8.5	9.5	8.5	9.0	9.0	5.5	---	7.5	7.0	---	---
15	9.0	7.0	9.5	9.0	9.0	7.5	---	---	8.0	7.0	---	---
16	8.0	5.5	9.5	9.0	7.5	7.0	---	---	7.5	7.0	---	---
17	9.5	8.0	9.5	9.0	7.0	6.5	---	---	7.0	6.0	---	---
18	9.0	6.5	9.0	9.0	7.0	6.5	---	3.0	8.0	7.0	---	---
19	9.0	7.5	9.0	8.5	6.5	6.0	4.0	3.0	8.0	7.5	---	---
20	10.5	9.0	9.0	8.5	6.0	4.5	4.0	3.5	8.0	7.5	---	---
21	10.5	9.5	8.5	8.0	4.5	---	4.5	3.5	7.5	6.5	---	---
22	11.5	10.0	8.5	8.0	---	2.0	6.0	4.5	6.5	6.0	---	---
23	10.0	7.5	9.0	8.0	2.0	1.0	7.0	6.0	7.5	6.5	---	---
24	9.0	6.5	9.5	9.0	1.0	.0	8.5	7.0	7.0	6.5	---	---
25	9.0	6.5	9.0	8.0	2.0	.0	8.0	7.5	8.0	7.0	---	---
26	9.0	6.5	9.0	8.0	3.5	1.5	8.0	7.0	7.5	6.5	---	---
27	9.5	8.0	9.5	8.5	4.0	3.5	8.5	7.5	8.0	7.0	---	---
28	9.5	6.5	9.0	8.0	4.0	3.5	8.0	7.0	8.5	7.5	---	---
29	9.5	7.5	8.0	7.0	4.0	4.0	7.5	6.5	8.0	7.0	---	---
30	10.5	9.5	7.0	6.5	6.0	4.0	7.0	6.5	---	---	---	---
31	11.0	9.5	---	---	6.5	6.0	6.5	5.5	---	---	---	---
MONTH	---	5.5	11.5	6.5	---	.0	---	---	---	---	---	---

SILETZ RIVER BASIN

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14304850 BIG ROCK CREEK NEAR VALSETZ, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

SILETZ RIVER BASIN

14305500 SILETZ RIVER AT SILETZ, OR

LOCATION.--Lat 44°42'55", long 123°53'10", in NW¼SW¼ sec.11, T.10 S., R.10 W., Lincoln County, Hydrologic Unit 17100204, on right bank, 1.8 mi downstream from Baker Creek, 1.5 mi east of Siletz, and at mile 42.6.

DRAINAGE AREA.--202 mi².

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 above 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 upstream from station for irrigation.

AVERAGE DISCHARGE.--65 years (water years 1906-11, 1926-84), 1,566 ft³/s, 105.28 in/yr, 1,135,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1905-12, 1924-38).--Maximum discharge, 34,600 ft³/s Nov. 22, 1909, gage height, 24.6 ft, site and datum then in use; minimum observed, 51 ft³/s Dec. 6, 7, 1929.

EXTREMES FOR PERIOD OF RECORD (1938-84).--Maximum discharge, 32,200 ft³/s Jan. 28, 1965, gage height, 27.32 ft, present site and datum; minimum, 48 ft³/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 ft³/s, from rating curve extended above 17,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 14,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 12	1800	*11,300	*12.91				
Minimum, 89 ft ³ /s Aug. 27.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	126	293	2010	3830	1330	1880	1380	2380	997	548	194	132		
2	125	480	1740	3110	1170	1760	1240	3750	893	511	185	128		
3	127	4310	1580	4570	1050	1580	1140	3640	818	480	182	112		
4	126	4660	1450	4580	948	1420	1040	2930	1340	453	179	105		
5	124	2590	1890	3460	869	1280	954	2510	1480	428	176	120		
6	121	3280	3000	2730	817	1160	881	2080	1770	410	181	239		
7	118	2690	3360	2290	751	1050	1220	1770	1990	391	170	432		
8	116	2100	4940	1920	779	967	1710	1660	1820	374	163	287		
9	115	1970	4610	1650	896	916	1630	1470	1750	360	159	216		
10	115	1860	4930	1900	1440	896	2860	1350	1570	349	152	177		
11	114	2240	5150	2130	1790	850	2810	1650	1400	334	147	159		
12	114	2540	4500	1880	6740	1220	3970	1900	1250	322	145	150		
13	113	3810	6080	1670	9440	1500	3590	1730	1110	310	145	141		
14	122	4990	5840	1480	6240	2030	2810	1590	999	302	142	131		
15	117	5270	5030	1320	4200	2550	2200	1460	898	291	139	125		
16	112	4950	3790	1200	3300	2860	1800	1310	817	280	135	121		
17	142	6980	2890	1070	2640	3240	1590	1180	752	269	135	118		
18	155	6410	2300	978	2240	3260	1450	1060	692	262	135	116		
19	124	5870	1920	905	1950	3460	1330	1020	645	253	130	112		
20	125	6600	1630	840	1890	3350	1330	1060	666	248	125	111		
21	123	5000	1400	896	2090	3540	1230	909	872	240	123	108		
22	528	3780	1210	1230	1940	3680	1120	973	694	235	121	115		
23	321	3400	1060	1860	2120	3090	1070	1280	616	226	120	125		
24	228	6830	985	7600	3870	2520	1000	1210	566	223	120	116		
25	201	6140	1010	7170	5120	2320	998	1330	530	262	120	109		
26	184	4410	1110	4970	3720	2740	932	2200	547	256	115	104		
27	171	4240	1050	3470	2810	2500	871	2100	573	226	111	101		
28	163	3640	917	2640	2320	2260	814	1740	508	216	113	97		
29	158	2950	2860	2120	1960	1990	834	1470	660	210	111	92		
30	206	2450	7460	1770	---	1730	1060	1270	618	204	106	91		
31	326	---	5370	1520	---	1540	---	1120	---	198	109	---		
TOTAL	5060	116733	93072	78759	76430	65139	46864	53102	29841	9671	4388	4290		
MEAN	163	3891	3002	2541	2636	2101	1562	1713	995	312	142	143		
MAX	528	6980	7460	7600	9440	3680	3970	3750	1990	548	194	432		
MIN	112	293	917	840	751	850	814	909	508	198	106	91		
CFSM	.81	19.3	14.9	12.6	13.0	10.4	7.73	8.48	4.93	1.54	.70	.71		
IN.	.93	21.50	17.14	14.50	14.08	12.00	8.63	9.78	5.50	1.78	.81	.79		
AC-FT	10040	231500	184600	156200	151600	129200	92950	105300	59190	19180	8700	8510		
CAL YR 1983	TOTAL	673877	MEAN	1846	MAX	16100	MIN	112	CFSM	9.14	IN.	124.10	AC-FT	1337000
WTR YR 1984	TOTAL	583349	MEAN	1594	MAX.	9440	MIN	91	CFSM	7.89	IN.	107.43	AC-FT	1157000

SILETZ RIVER BASIN

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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, 21.5°C Aug. 9, 10; minimum recorded, 0.5°C Dec. 23, 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

SILETZ RIVER BASIN

14305500 SILETZ RIVER AT SILETZ, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1					---	---	17.0	13.5	20.5	18.0	19.5	17.0
2					---	---	18.0	15.5	20.0	18.0	19.0	15.5
3					---	---	18.5	16.0	20.0	17.5	19.5	16.5
4					---	---	19.5	17.0	20.5	17.5	19.0	16.5
5					---	---	18.5	17.0	19.0	17.5	18.0	16.5
6					10.5	10.0	17.0	15.0	19.5	16.5	16.5	15.0
7					11.0	10.5	17.5	15.0	20.0	16.5	15.5	15.0
8					10.5	10.5	17.5	15.5	20.5	18.0	16.0	14.5
9					12.0	10.5	18.0	15.0	21.5	19.0	17.0	15.5
10					12.5	10.0	18.0	15.5	21.5	18.5	17.0	14.5
11					12.5	10.5	18.0	15.5	20.0	18.5	16.0	15.0
12					13.5	11.0	18.0	15.0	20.0	18.0	17.0	14.0
13					13.5	12.0	19.0	15.5	20.0	17.0	17.0	14.0
14					15.0	13.0	19.5	16.0	20.0	16.5	16.0	14.5
15					15.0	13.0	20.5	16.5	20.0	16.5	17.5	15.0
16					14.0	12.5	21.0	17.5	20.0	18.0	18.5	16.0
17					14.5	12.0	21.0	18.0	19.5	18.0	19.5	17.0
18					15.0	12.5	20.0	17.5	20.0	17.5	20.0	18.0
19					15.5	13.0	19.5	16.5	20.5	17.0	19.0	18.0
20					14.5	13.5	19.0	16.0	20.0	17.0	18.5	17.5
21					13.5	12.0	18.5	15.5	20.5	17.5	18.0	16.0
22					15.0	11.5	20.0	15.5	19.5	18.0	16.5	15.0
23					16.0	13.5	19.5	17.0	19.5	17.5	15.5	14.0
24					17.0	14.5	21.0	17.5	18.0	16.5	15.0	12.5
25					17.5	15.0	20.0	18.0	19.5	16.5	14.5	12.5
26					17.0	15.0	19.0	16.0	20.0	17.0	15.5	13.0
27					15.5	14.0	19.0	16.5	19.0	17.5	15.5	13.0
28					16.0	15.0	19.5	17.0	19.5	16.5	15.0	12.5
29					15.5	14.0	20.0	16.5	19.5	15.5	15.0	12.5
30					15.5	12.5	20.0	17.5	19.0	17.0	14.5	13.5
31					---	---	20.5	18.0	18.0	17.5	---	---
MONTH					---	---	21.0	13.5	21.5	15.5	20.0	12.5

YAQUINA RIVER BASIN

303

14306030 YAQUINA RIVER NEAR CHITWOOD, OR

LOCATION.--Lat 44°39'29", long 123°50'15", in NE1SW1 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 mi².

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.--12 years, 263 ft³/s, 50.30 in/yr, 190,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,150 ft³/s Nov. 16, 1973, gage height, 14.43 ft; minimum, 2.8 ft³/s Sept. 27, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	1530	*2,760	*9.35				
Minimum, 12 ft ³ /s Sept. 28-30.							

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	17	40	535	903	301	374	303	329	207	99	35	20		
2	17	49	381	695	264	333	275	618	184	93	33	20		
3	18	383	341	840	239	302	254	888	164	87	31	17		
4	18	519	312	1050	214	281	232	738	235	83	31	15		
5	18	247	374	799	194	261	215	580	279	78	31	20		
6	17	267	803	621	178	242	195	466	384	75	31	41		
7	17	265	934	500	164	221	214	397	634	71	29	53		
8	17	217	1060	408	158	203	296	349	520	68	28	41		
9	17	195	1050	345	163	188	315	310	441	67	27	28		
10	17	177	915	400	268	182	518	285	386	65	26	22		
11	17	301	972	653	294	172	584	315	339	62	23	21		
12	16	389	870	567	869	186	695	338	301	61	23	21		
13	17	776	870	464	2380	215	735	329	268	59	23	19		
14	19	914	1180	387	1670	372	594	304	239	57	22	17		
15	19	720	1510	331	1040	491	469	285	209	54	21	15		
16	18	603	1020	291	804	488	381	261	187	51	21	15		
17	26	859	730	261	651	561	329	245	169	50	21	15		
18	26	1240	551	235	541	572	293	210	153	48	20	15		
19	22	1070	438	214	456	528	277	201	140	49	20	14		
20	20	1450	365	194	412	504	269	201	146	47	19	15		
21	22	1190	307	196	464	544	239	178	172	46	19	14		
22	49	864	263	223	469	631	220	181	139	45	18	16		
23	40	725	232	297	453	598	207	229	123	43	19	18		
24	27	1420	210	1320	623	498	193	223	114	43	18	16		
25	23	1430	204	1560	1080	441	193	253	107	47	18	15		
26	21	1000	204	1130	860	538	181	435	107	49	18	14		
27	20	813	201	847	652	555	170	455	109	42	17	14		
28	20	696	178	625	515	500	164	384	97	40	16	13		
29	20	578	387	501	418	435	167	318	119	39	16	12		
30	28	507	1450	411	---	376	190	266	111	38	15	12		
31	41	---	1400	346	---	337	---	239	---	36	16	---		
TOTAL	684	19904	20247	17614	16794	12129	9367	10810	6783	1792	705	588		
MEAN	22.1	663	653	568	579	391	312	349	226	57.8	22.7	19.6		
MAX	49	1450	1510	1560	2380	631	735	888	634	99	35	53		
MIN	16	40	178	194	158	172	164	178	97	36	15	12		
CFSM	.31	9.34	9.20	8.00	8.15	5.51	4.39	4.92	3.18	.81	.32	.28		
IN.	.36	10.43	10.61	9.23	8.80	6.35	4.91	5.66	3.55	.94	.37	.31		
AC-FT	1360	39480	40160	34940	33310	24060	18580	21440	13450	3550	1400	1170		
CAL YR 1983	TOTAL	127919	MEAN	350	MAX	2660	MIN	16	CFSM	4.93	IN.	67.02	AC-FT	253700
WTR YR 1984	TOTAL	117417	MEAN	321	MAX	2380	MIN	12	CFSM	4.52	IN.	61.52	AC-FT	232900

ALSEA RIVER BASIN

14306100 NORTH FORK ALSEA RIVER AT ALSEA, OR

LOCATION.--Lat 44°22'45", long 123°35'40", in SE¼ sec.1, T.14 S., R.8 W., Benton County, Hydrologic Unit 17100205, on left bank at Alsea, 0.2 mi 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 mi².

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.--27 years, 284 ft³/s, 61.22 in/yr, 205,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s Dec. 22, 1964, gage height, 14.57 ft, from rating curve extended above 2,900 ft³/s on basis of slope-area measurement at gage height 11.80 ft; minimum, 8.3 ft³/s June 8, Sept. 19, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 29	2330	2,100	5.16	Feb. 13	0830	*3,830	*7.43

Minimum, 20 ft³/s Oct. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	22	42	400	683	246	391	281	449	164	98	41	29		
2	22	50	359	555	224	355	261	546	155	93	40	28		
3	23	255	322	626	207	321	244	672	149	89	38	25		
4	22	280	290	585	192	296	232	525	232	85	37	24		
5	23	128	416	487	179	275	222	459	228	82	37	29		
6	23	205	641	414	169	256	206	396	384	80	37	42		
7	22	181	759	363	157	237	256	349	502	77	35	41		
8	22	125	897	317	157	221	397	313	403	76	33	34		
9	22	161	822	284	211	209	417	284	352	73	32	30		
10	23	175	894	374	412	203	584	260	311	71	32	29		
11	22	368	1000	427	458	198	601	283	277	69	32	28		
12	22	377	796	371	1270	249	778	272	250	66	32	27		
13	22	668	765	329	2940	339	678	253	226	64	32	27		
14	23	747	896	293	1400	728	527	241	206	62	31	25		
15	24	546	930	262	906	736	430	226	189	60	31	24		
16	23	641	719	238	787	725	366	210	175	58	30	24		
17	23	953	558	219	635	831	321	195	163	55	30	24		
18	24	914	454	204	526	745	296	184	155	54	29	24		
19	23	853	392	191	454	645	277	181	146	52	29	24		
20	24	1010	341	183	410	570	268	180	147	51	28	27		
21	23	787	295	199	418	649	246	163	159	51	28	25		
22	33	584	261	270	388	649	229	185	139	50	28	26		
23	30	544	234	312	393	552	214	223	128	47	28	27		
24	25	1200	231	700	942	461	203	202	120	46	28	25		
25	23	1080	224	750	1180	435	201	222	114	52	28	24		
26	22	786	225	629	810	498	189	308	115	49	27	24		
27	22	597	214	501	609	464	177	287	113	46	26	24		
28	22	473	195	413	497	416	168	246	105	45	27	24		
29	22	392	671	353	421	374	173	215	123	43	25	23		
30	39	417	1500	309	---	336	189	194	108	43	24	24		
31	50	---	972	275	---	306	---	177	---	41	27	---		
TOTAL	765	15539	17673	12116	17598	13670	9631	8900	6038	1928	962	811		
MEAN	24.7	518	570	391	607	441	321	287	201	62.2	31.0	27.0		
MAX	50	1200	1500	750	2940	831	778	672	502	98	41	42		
MIN	22	42	195	183	157	198	168	163	105	41	24	23		
CFSM	39	8.22	9.05	6.21	9.63	7.00	5.10	4.56	3.19	.99	.49	.43		
IN.	.45	9.18	10.44	7.15	10.39	8.07	5.69	5.26	3.57	1.14	.57	.48		
AC-FT	1520	30820	35050	24030	34910	27110	19100	17650	11980	3820	1910	1610		
CAL YR 1983	TOTAL	129420	MEAN	355	MAX	2510	MIN	22	CFSM	5.63	IN.	76.42	AC-FT	256700
WTR YR 1984	TOTAL	105631	MEAN	289	MAX	2940	MIN	27	CFSM	4.59	IN.	62.37	AC-FT	209500

ALSEA RIVER BASIN

305

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 mi².

PERIOD OF RECORD.--July.1983 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 680 ft, from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 563 ft³/s Feb. 13, 1984, gage height, 3.46 ft; minimum, 0.77 ft³/s Aug. 27-31, Sept. 4, 5, 29, 30, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 29	2130	348	3.18	Feb. 13	0800	*563	*3.46

Minimum, 0.77 ft³/s Aug. 27-31, Sept. 4, 5, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	2.2	42	65	20	29	22	58	15	6.9	2.1	1.3
2	1.0	2.8	34	51	18	30	20	85	14	6.4	2.1	1.3
3	1.0	32	29	46	17	28	18	76	13	6.0	2.1	.99
4	1.0	33	26	45	16	25	17	55	17	5.4	2.0	.90
5	.95	17	39	38	15	22	16	42	21	5.1	1.9	1.7
6	.92	24	103	32	14	20	16	34	50	5.0	1.7	3.7
7	1.0	21	108	28	13	18	21	28	65	4.8	1.7	3.1
8	1.0	13	119	25	13	17	46	24	46	4.6	1.6	2.6
9	1.0	20	87	23	17	16	48	23	36	4.6	1.4	2.0
10	1.0	25	93	24	34	15	77	20	32	4.4	1.4	1.7
11	.95	60	82	29	42	14	64	23	27	4.2	1.3	1.6
12	.95	44	65	26	179	20	71	26	24	4.2	1.3	1.5
13	.95	99	87	23	380	34	60	24	21	4.2	1.3	1.5
14	.95	113	120	21	140	71	44	22	18	3.9	1.3	1.4
15	1.0	69	118	19	88	69	34	20	17	3.7	1.3	1.2
16	1.0	94	74	17	78	75	27	19	16	3.5	1.2	1.1
17	1.1	152	51	17	59	85	24	18	14	3.4	1.1	1.1
18	1.1	141	38	16	45	69	21	16	13	3.2	1.1	1.1
19	1.1	121	31	15	35	65	19	15	13	3.2	1.0	1.2
20	1.1	158	26	14	30	60	19	16	12	3.2	1.0	1.7
21	1.1	104	23	16	34	67	19	15	13	3.0	1.0	1.7
22	1.6	70	20	25	35	67	17	15	11	2.9	1.0	1.5
23	1.5	75	20	29	31	52	16	21	9.8	2.7	1.0	1.9
24	1.2	196	19	95	105	39	16	20	9.1	2.7	1.0	1.9
25	1.1	142	18	85	131	33	16	19	8.2	3.1	1.0	1.6
26	1.1	87	19	69	77	56	16	27	7.7	3.3	.99	1.4
27	1.0	60	19	52	53	52	15	27	7.7	2.8	.78	1.1
28	1.0	44	19	39	40	39	15	22	7.6	2.8	.77	.92
29	1.0	35	95	31	31	34	14	19	8.5	2.6	.77	.79
30	1.4	40	173	26	---	28	14	17	7.5	2.4	.77	.77
31	2.4	---	100	22	---	25	---	16	---	2.2	.98	---
TOTAL	34.47	2094.0	1897	1063	1790	1274	842	862	574.1	120.4	39.96	46.27
MEAN	1.11	69.8	61.2	34.3	61.7	41.1	28.1	27.8	19.1	3.88	1.29	1.54
MAX	2.4	196	173	95	380	85	77	85	65	6.9	2.1	3.7
MIN	.92	2.2	18	14	13	14	14	15	7.5	2.2	.77	.77
CFSM	.19	12.2	10.7	6.02	10.8	7.21	4.93	4.88	3.35	.68	.23	.27
IN.	.22	13.67	12.38	6.94	11.68	8.31	5.50	5.63	3.75	.79	.26	.30
AC-FT	68	4150	3760	2110	3550	2530	1670	1710	1140	239	79	92

WTR YR 1984 TOTAL 10637.20 MEAN 29.1 MAX 380 MIN .77 CFSM 5.11 IN. 69.42 AC-FT 21100

ALSEA RIVER BASIN

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 Sluistaw 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 mi².

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 excellent. No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years, 564 ft³/s, 67.19 in/yr, 408,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s Jan. 21, 1972, gage height, 21.08 ft; minimum, 16 ft³/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 ft³/s from rating curve extended above 10,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	0100	5,990	12.48	Feb. 13	1030	*7,440	*13.92

Minimum daily, 33 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	41	87	813	1630	440	760	523	971	258	148	64	44		
2	42	117	712	1310	404	728	479	1310	243	141	63	41		
3	42	711	636	1170	378	657	450	1250	233	135	61	38		
4	42	771	588	1020	354	596	424	1000	321	130	58	36		
5	42	362	836	886	335	542	401	836	323	125	58	42		
6	43	566	1430	776	325	495	374	697	512	122	59	77		
7	38	477	1750	702	302	456	468	609	664	118	56	76		
8	38	326	1960	625	307	423	716	557	542	115	54	57		
9	38	332	1680	566	396	397	748	505	477	112	53	49		
10	39	435	1780	652	754	384	1110	463	421	109	51	44		
11	40	992	1910	730	834	376	1020	502	376	106	50	41		
12	38	937	1590	657	2530	469	1310	490	343	102	50	40		
13	39	1710	1720	591	5980	632	1150	450	318	99	50	38		
14	41	1920	1930	535	2960	1400	924	427	294	96	48	38		
15	42	1380	1990	485	1880	1380	762	404	272	93	47	38		
16	41	1570	1500	447	1610	1410	654	378	254	90	46	37		
17	44	2760	1180	415	1290	1480	578	346	241	88	46	36		
18	47	2490	976	390	1060	1260	546	325	228	85	45	35		
19	44	2020	833	371	911	1100	528	318	216	83	44	34		
20	44	2490	728	355	835	992	524	320	223	81	42	40		
21	45	2020	635	374	843	1080	475	288	233	80	41	40		
22	65	1470	558	438	776	1100	440	308	207	78	41	40		
23	63	1310	498	481	747	956	415	370	191	76	42	45		
24	50	2780	486	1210	1780	811	393	329	179	80	41	41		
25	45	2370	508	1140	2290	765	397	340	171	92	41	38		
26	43	1670	524	949	1530	1000	368	435	171	84	40	37		
27	42	1260	520	782	1170	930	344	409	172	76	38	36		
28	41	1000	478	668	974	800	325	360	160	74	38	34		
29	41	826	1630	591	822	706	323	322	185	72	37	34		
30	76	850	4100	531	---	630	337	295	157	69	37	33		
31	99	---	2410	482	---	573	---	275	---	67	42	---		
TOTAL	1435	38009	38889	21959	34817	25288	17506	15889	8585	3026	1483	1259		
MEAN	46.3	1267	1254	708	1201	816	584	513	286	97.6	47.8	42.0		
MAX	99	2780	4100	1630	5980	1480	1310	1310	664	148	64	77		
MIN	38	87	478	355	302	376	323	275	157	67	37	33		
CFSM	.41	11.1	11.0	6.21	10.5	7.16	5.12	4.50	2.51	.86	.42	.37		
IN.	.47	12.40	12.69	7.17	11.36	8.25	5.71	5.18	2.80	.99	.48	.41		
AC-FT	2850	75390	77140	43560	69060	50160	34720	31520	17030	6000	2940	2500		
CAL YR 1983	TOTAL	256382	MEAN	702	MAX	6110	MIN	38	CFSM	6.16	IN.	83.66	AC-FT	508500
WTR YR 1984	TOTAL	208145	MEAN	569	MAX	5980	MIN	33	CFSM	4.99	IN.	67.92	AC-FT	412900

ALSEA RIVER BASIN

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14306500 ALSEA RIVER NEAR TIDEWATER, OR

LOCATION.--Lat 44°23'10", long 123°49'50", in NW¼ 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 mi².

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 excellent. No regulation. Diversion for irrigation above station.

AVERAGE DISCHARGE.--45 years, 1,533 ft³/s, 62.33 in/yr, 1,111,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft³/s Dec. 22, 1964, gage height, 27.44 ft; minimum, 45 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	--	13,000	unknown	Feb. 13	1200	*18,000	*17.40
Minimum, 97 ft ³ /s Sept. 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	104	232	2320	5000	1400	2210	1570	1750	801	491	205	138		
2	104	276	2040	4000	1290	2060	1450	3380	756	465	204	135		
3	105	1260	1840	3400	1200	1870	1350	3380	725	446	200	127		
4	106	1960	1670	3070	1120	1700	1270	2950	991	427	194	118		
5	107	942	2200	2660	1060	1560	1230	2450	1140	408	190	126		
6	106	1180	3490	2320	1020	1440	1140	2120	1500	397	193	208		
7	107	1190	4440	2080	958	1330	1210	1790	2250	384	189	253		
8	103	843	5220	1860	945	1240	1980	1630	1840	368	181	200		
9	103	785	4580	1680	1110	1170	2060	1490	1590	359	175	163		
10	104	998	4700	1850	2030	1130	2820	1370	1410	349	169	146		
11	104	2170	5230	2220	2180	1080	2940	1460	1260	338	165	136		
12	104	2100	4250	1970	5370	1290	3520	1420	1140	331	164	130		
13	103	3570	4310	1780	14800	1590	3420	1310	1050	321	166	126		
14	106	4510	4960	1610	8390	3480	2740	1240	982	312	163	123		
15	109	3250	5650	1460	5300	3720	2270	1180	903	302	157	119		
16	107	3230	4200	1350	4510	3730	1960	1100	840	292	155	116		
17	111	5890	3500	1250	3630	4110	1730	1030	793	279	151	114		
18	116	5930	2800	1180	3000	3630	1610	973	747	270	150	112		
19	113	4680	2400	1120	2590	3190	1520	942	710	265	145	110		
20	111	5970	2050	1070	2370	2860	1500	953	708	259	140	117		
21	113	5060	1810	1130	2430	3090	1380	869	765	254	137	125		
22	145	3670	1590	1300	2270	3240	1280	908	690	250	134	125		
23	174	3120	1400	1520	2160	2830	1210	1120	630	245	136	131		
24	142	6630	1300	3760	4440	2420	1140	1020	591	238	133	126		
25	122	6640	1350	3810	6730	2230	1140	1010	562	297	135	117		
26	114	4690	1400	3160	4530	2760	1100	1360	556	271	132	111		
27	109	3520	1400	2580	3410	2620	1030	1300	572	241	127	108		
28	106	2800	1290	2190	2810	2310	969	1140	527	231	125	105		
29	105	2320	2000	1920	2390	2090	960	1020	583	228	123	100		
30	149	2280	10000	1710	---	1880	998	922	538	221	118	98		
31	264	---	8000	1550	---	1720	---	858	---	211	128	---		
TOTAL	3676	91696	103390	67560	95443	71580	50497	45445	28150	9750	4884	3963		
MEAN	119	3057	3335	2179	3291	2309	1683	1466	938	315	158	132		
MAX	264	6640	10000	5000	14800	4110	3520	3380	2250	491	205	253		
MIN	103	232	1290	1070	945	1080	960	858	527	211	118	98		
CFSM	.36	9.15	9.99	6.52	9.85	6.91	5.04	4.39	2.81	.94	.47	.40		
IN.	.41	10.21	11.52	7.52	10.63	7.97	5.62	5.06	3.14	1.09	.54	.44		
AC-FT	7290	181900	205100	134000	189300	142000	100200	90140	55840	19340	9690	7860		
CAL YR 1983	TOTAL	704273	MEAN	1930	MAX	14100	MIN	103	CFSM	5.78	IN.	78.44	AC-FT	1397000
WTR YR 1984	TOTAL	576034	MEAN	1574	MAX	14800	MIN	98	CFSM	4.71	IN.	64.16	AC-FT	1143000

ALSEA RIVER BASIN

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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	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)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 27...	0930	110	73	7.9	11.5	11.2	--	--	24	0	6.0
JAN 24...	0900	3470	47	7.3	9.0	10.0	K75	K770	14	0	3.6
APR 09...	1200	1950	58	7.8	8.0	11.5	K20	130	16	0	4.0
AUG 08...	0930	183	67	7.8	20.0	9.1	K10	150	21	0	5.1
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 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 27...	2.1	5.4	1.0	28	3.9	4.8	<.10	.080	<.10	.40	.09
JAN 24...	1.2	4.2	.80	16	3.7	3.8	<.10	.010	.61	.50	.09
APR 09...	1.4	4.2	.70	20	2.7	3.6	<.10	<.010	.43	.20	.03
AUG 08...	1.9	5.4	.80	25	2.9	4.0	<.10	.030	.21	.30	.06

ALSEA RIVER BASIN

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14306500 ALSEA RIVER NEAR TIDEWATER, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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
OCT 27...	.040	.040	14	56	54	17	1.0	--	--	--
JAN 24...	.030	.080	12	33	39	309	16	85	796	54
APR 09...	<.010	.010	13	43	42	226	3.1	12	63	41
AUG 08...	.020	.010	14	40	49	20	1.1	--	--	--
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 27...	10	<1	14	<1.0	<1	<1	<3	2	120	1
JAN 24...	70	<1	12	<.5	<1	<1	<3	3	86	<1
APR 09...	50	<1	11	<.5	<1	<1	<3	2	66	2
AUG 08...	20	<1	18	<.5	<1	2	<3	2	74	2
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 27...	<4	5	<.1	<10	1	<1	<1	50	<6	6
JAN 24...	<4	4	<.1	<10	<1	<1	<1	34	<6	9
APR 09...	<4	2	<.1	<10	<1	<1	<1	35	<6	19
AUG 08...	<4	5	<.1	<10	5	<1	<1	46	<6	5

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

BIG CREEK BASIN

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 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 141 ft, by barometer.

REMARKS.--Records good except those for Apr. 28 to July 31, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--12 years, 96.2 ft³/s, 109.78 in/yr, 69,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft³/s Nov. 30, 1975, gage height, 6.90 ft; minimum, 3.8 ft³/s Oct. 15, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	0800	*959	*5.90	No other peak greater than base discharge.			
Minimum, 6.7 ft ³ /s Oct. 16, 17.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	21	138	273	101	132	117	90	70	38	13	11
2	8.7	31	125	226	91	125	103	140	64	34	13	9.4
3	8.7	261	114	215	83	105	95	180	70	30	13	9.0
4	8.7	194	118	187	76	98	85	160	120	28	12	9.0
5	8.7	119	146	166	70	90	79	140	220	26	13	19
6	8.1	175	253	147	68	82	72	120	300	25	13	15
7	8.0	136	326	135	62	76	110	100	340	24	12	42
8	8.0	106	338	118	75	71	113	90	240	23	12	17
9	7.7	107	310	106	95	68	115	85	150	22	11	13
10	7.7	114	328	124	111	69	123	80	130	21	11	12
11	7.7	176	313	116	117	69	133	85	110	22	11	11
12	7.4	209	328	106	567	77	166	90	100	22	11	11
13	7.5	272	351	100	853	111	156	85	90	19	11	11
14	7.5	297	469	94	498	194	140	83	80	18	11	10
15	7.1	282	483	87	337	221	123	80	75	17	11	11
16	6.7	299	352	81	261	255	106	76	70	17	11	11
17	9.9	388	257	74	207	253	94	74	65	16	11	11
18	8.1	354	199	69	174	232	93	72	60	16	11	9.6
19	7.7	317	164	65	153	239	96	75	55	16	11	9.5
20	9.0	312	137	63	165	244	81	75	55	16	10	13
21	8.8	293	117	76	163	250	71	70	55	16	9.9	10
22	37	261	103	110	146	233	66	90	50	15	9.8	11
23	15	337	92	120	175	206	64	100	46	15	9.8	12
24	12	473	88	381	265	175	61	95	44	15	9.8	9.8
25	11	395	112	383	273	202	62	100	40	17	9.8	9.4
26	10	304	105	301	234	281	55	150	50	16	9.4	9.4
27	9.4	249	99	233	193	247	53	130	46	16	9.4	9.3
28	9.4	199	94	187	163	215	56	110	44	15	9.4	8.8
29	9.1	164	347	154	145	180	50	100	48	14	9.0	8.7
30	37	167	553	132	---	154	60	90	42	14	9.0	8.9
31	23	---	379	115	---	132	---	80	---	13	12	---
TOTAL	343.3	7012	7338	4744	5921	5086	2798	3095	2929	616	339.3	361.8
MEAN	11.1	234	237	153	204	164	93.3	99.8	97.6	19.9	10.9	12.1
MAX	37	473	553	383	853	281	166	180	340	38	13	42
MIN	6.7	21	88	63	62	68	50	70	40	13	9.0	8.7
CFSM	.93	19.7	19.9	12.9	17.1	13.8	7.84	8.39	8.20	1.67	.92	1.02
IN.	1.07	21.92	22.94	14.83	18.51	15.90	8.75	9.68	9.16	1.93	1.06	1.13
AC-FT	681	13910	14550	9410	11740	10090	5550	6140	5810	1220	673	718

CAL YR 1983	TOTAL	43738.4	MEAN	120	MAX	848	MIN	6.7	CFSM	10.1	IN.	136.73	AC-FT	86760
WTR YR 1984	TOTAL	40583.4	MEAN	111	MAX	853	MIN	6.7	CFSM	9.33	IN.	126.87	AC-FT	80500

NOTE.--No gage-height record Apr. 28 to July 31.

SIUSLAW RIVER BASIN

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14307580 LAKE CREEK NEAR DEADWOOD, O.

LOCATION.--Lat 44°04'58", long 123°47'05", in NW1/4 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 mi².

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 good. Flow slightly regulated by natural storage in Triangle Lake. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--17 years, 740 ft³/s, 57.75 in/yr, 536,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft³/s Dec. 25, 1980, gage height, 15.86 ft; minimum, 12 ft³/s Aug. 14, 15, 17, 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	0230	5,300	7.01	Feb. 13	0830	*9,700	*10.03
Minimum, 42 ft ³ /s Oct. 7-9, Sept. 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	43	105	973	2230	580	1100	750	1300	357	169	73	51		
2	43	139	875	1740	532	1010	682	1800	331	163	71	49		
3	45	291	772	1630	497	912	630	1700	318	154	69	46		
4	45	459	709	1490	465	822	598	1400	465	145	69	45		
5	46	283	1120	1300	438	743	567	1100	561	139	69	51		
6	45	398	2680	1130	423	682	526	900	867	136	69	93		
7	43	389	2960	996	403	624	617	800	1090	127	67	83		
8	42	302	2970	882	398	580	996	700	882	121	66	75		
9	42	352	2490	793	492	543	1020	640	743	119	64	66		
10	45	413	2400	882	897	526	1430	580	630	116	60	62		
11	45	867	2200	1060	1030	514	1510	650	537	113	59	59		
12	45	779	1850	965	3790	663	1610	643	481	108	59	56		
13	45	1510	2000	860	8130	973	1460	598	428	108	60	54		
14	45	1640	2610	764	4640	1930	1210	555	389	103	59	51		
15	45	1290	2780	682	3130	1890	1000	520	352	100	56	51		
16	43	1180	2180	617	2440	2160	800	481	322	96	56	48		
17	48	2170	1700	573	1900	2330	700	444	298	93	54	47		
18	52	2470	1370	526	1540	2030	682	413	283	89	52	46		
19	49	2170	1150	497	1300	1800	682	403	264	87	52	46		
20	46	3110	996	475	1180	1650	669	413	261	85	51	47		
21	46	2490	875	514	1270	1990	620	375	268	83	51	48		
22	62	1760	757	617	1220	1990	560	408	246	81	51	49		
23	71	1590	669	689	1140	1630	520	537	226	79	49	51		
24	57	3070	637	965	2290	1340	497	486	211	79	49	51		
25	52	2860	624	1300	3100	1210	486	486	200	91	49	49		
26	51	2180	643	1260	2280	1550	475	709	196	87	48	48		
27	49	1620	617	1060	1730	1430	460	669	200	81	46	48		
28	48	1250	573	904	1390	1220	450	555	189	81	46	45		
29	48	996	1460	793	1180	1060	440	475	203	79	45	45		
30	73	949	4220	709	---	934	600	423	182	75	45	43		
31	113	---	3100	637	---	837	---	384	---	73	46	---		
TOTAL	1572	39082	50960	29540	49805	38673	23247	21547	11980	3260	1760	1603		
MEAN	50.7	1303	1644	953	1717	1248	775	695	399	105	56.8	53.4		
MAX	113	3110	4220	2230	8130	2330	1610	1800	1090	169	73	93		
MIN	42	105	573	475	398	514	440	375	182	73	45	43		
CFSM	.29	7.49	9.45	5.48	9.87	7.17	4.45	3.99	2.29	.60	.33	.31		
IN.	.34	8.36	10.89	6.32	10.65	8.27	4.97	4.61	2.56	.70	.38	.34		
AC-FT	3120	77520	101100	58590	98790	76710	46110	42740	23760	6470	3490	3180		
CAL YR 1983	TOTAL	331718	MEAN	909	MAX	6660	MIN	42	CFSM	5.22	IN.	70.92	AC-FT	658000
WTR YR 1984	TOTAL	273029	MEAN	746	MAX	8130	MIN	42	CFSM	4.29	IN.	58.37	AC-FT	541600

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 SW1/4 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 mi².

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.--17 years, 2,205 ft³/s, 50.92 in/yr, 1,598,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,400 ft³/s Jan. 21, 1972, gage height, 28.45 ft; minimum, 45 ft³/s Aug. 18, 19, 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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	1230	*32,200	*22.35	No other peak greater than base discharge.			
Minimum, 155 ft ³ /s Sept. 29, 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	173	364	2560	6190	1730	3220	2240	3200	1100	640	281	184		
2	173	449	2300	4770	1590	2960	2070	5470	1040	607	273	189		
3	173	882	2080	4480	1510	2660	1930	5490	989	579	273	179		
4	173	1560	1960	4370	1420	2390	1830	4420	1380	556	270	173		
5	173	1070	2830	3870	1380	2190	1760	3520	1740	533	262	184		
6	173	1310	7990	3350	1370	2050	1650	2860	2350	513	261	282		
7	171	1450	10700	3000	1290	1900	1750	2420	3050	492	259	303		
8	167	1120	9420	2620	1280	1790	2850	2160	2440	479	251	277		
9	167	1110	7220	2320	1470	1700	3290	1970	2050	463	241	236		
10	169	1280	6650	2470	2420	1660	4570	1820	1790	451	235	220		
11	176	2440	6140	3060	3030	1620	5500	1930	1600	439	229	211		
12	179	2340	5190	2900	9350	1870	5450	1910	1450	431	225	221		
13	177	4180	5420	2570	27900	2520	4770	1770	1330	423	225	197		
14	180	4800	7120	2270	17200	5190	3800	1670	1230	413	224	189		
15	186	3660	8630	2070	10000	5410	3170	1590	1140	404	219	186		
16	180	3200	6690	1910	7070	6300	2680	1510	1060	390	215	179		
17	185	5910	5020	1780	5620	6670	2330	1410	1000	375	210	176		
18	193	7710	3890	1650	4500	5980	2170	1330	951	362	208	174		
19	187	6150	3330	1610	3860	5350	2100	1280	902	353	204	168		
20	182	7970	2970	1550	3490	4880	2030	1310	871	347	198	176		
21	183	7380	2610	1620	3710	5520	1870	1200	917	338	195	179		
22	228	5030	2280	1850	3630	5990	1740	1250	872	331	192	177		
23	270	4150	2050	2110	3480	4960	1640	1600	821	323	192	182		
24	225	8420	1970	2730	5790	3920	1560	1490	775	317	192	182		
25	208	8650	1950	3260	9540	3470	1550	1440	732	343	190	174		
26	196	6520	1980	3140	6990	4410	1480	1870	716	349	186	170		
27	192	4650	1890	2700	5090	4180	1420	1810	751	327	182	169		
28	190	3470	1780	2350	4070	3570	1340	1590	709	316	179	165		
29	186	2800	3690	2130	3450	3130	1310	1400	724	308	177	158		
30	230	2560	12300	1960	---	2730	1390	1270	684	301	173	155		
31	396	---	8950	1830	---	2450	---	1190	---	293	174	---		
TOTAL	6041	112585	149560	84490	153230	112640	73240	65150	37164	12796	6795	5815		
MEAN	195	3753	4825	2725	5284	3634	2441	2102	1239	413	219	194		
MAX	396	8650	12300	6190	27900	6670	5500	5490	3050	640	281	303		
MIN	167	364	1780	1550	1280	1620	1310	1190	684	293	173	155		
CFSM	.33	6.38	8.21	4.63	8.99	6.18	4.15	3.57	2.11	.70	.37	.33		
IN.	.38	7.12	9.46	5.35	9.69	7.13	4.63	4.12	2.35	.81	.43	.37		
AC-FT	11980	223300	296700	167600	303900	223400	145300	129200	73710	25380	13480	11530		
CAL YR 1983	TOTAL	1013619	MEAN	2777	MAX	21000	MIN	167	CFSM	4.72	IN.	64.13	AC-FT	2011000
WTR YR 1984	TOTAL	819506	MEAN	2239	MAX	27900	MIN	155	CFSM	3.81	IN.	51.85	AC-FT	1625000

SIUSLAW RIVER BASIN

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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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	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)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	
OCT 25...	1200	200	55	7.4	11.0	11.3	K8	35	15	0	3.8	
JAN 10...	1000	2290	42	6.9	8.0	12.0	--	21	11	0	2.7	
MAY 07...	1300	2300	41	7.5	11.5	11.6	K3	K10	10	0	2.7	
SEP 04...	0910	160	52	7.0	18.0	8.9	K8	200	14	0	3.3	
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)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT 25...	1.4	4.5	1.2	21	3.8	4.9	<.10	.030	<.10	.70	--	
JAN 10...	.95	3.6	.80	15	2.6	3.7	<.10	.020	.33	.20	.06	
MAY 07...	.90	3.5	.60	14	2.2	3.1	<.10	<.010	.20	.20	.06	
SEP 04...	1.3	4.6	1.3	19	2.7	4.6	<.10	.030	<.10	.30	.09	
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, CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
OCT 25...	.010	.020	12	38	45	21	1.7	3	1.6	74		
JAN 10...	.010	.010	12	33	36	204	2.9	5	31	62		
MAY 07...	.010	.020	11	41	33	255	3.9	7	43	67		
SEP 04...	.020	.010	11	30	41	13	1.5	--	--	--		

SIUSLAW RIVER BASIN

14307620 SIUSLAW RIVER NEAR MAPLETON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 25...	20	<1	16	<.5	<1	<1	<3	2	210	4
JAN 10...	30	<1	18	<.5	<1	<1	<3	2	100	11
MAY 07...	30	<1	17	<.5	<1	2	<3	<1	28	<1
SEP 04...	20	<1	21	2.0	<1	<1	<3	1	110	<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 25...	<4	5	<.1	<10	24	<1	<1	48	<6	11
JAN 10...	<4	4	<.1	<10	7	<1	<1	33	<6	52
MAY 07...	5	3	<.1	<10	<1	<1	<1	33	<6	9
SEP 04...	<4	7	.2	<10	2	2	<1	45	<6	<3

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

SIUSLAW RIVER BASIN

315

14307645 NORTH FORK SIUSLAW RIVER NEAR MINERVA, OR

LOCATION.--Lat 44°02'50", long 124°00'10", in NW1SW1 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 mi².

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 40 ft, from topographic map.

REMARKS.--Records good. No regulation. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--17 years, 300 ft³/s, 98.88 in/yr, 217,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,400 ft³/s Dec. 25, 1980, gage height, 24.36 ft; minimum, 11 ft³/s Sept. 9-11, 17, 18, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	0330	1,910	16.54	Dec. 30	0300	2,560	18.93
Dec. 14	2300	1,980	16.92	Feb. 13	1030	*4,290	*21.30

Minimum, 12 ft³/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	28	115	413	827	272	500	369	836	197	116	53	27		
2	30	130	362	614	243	450	324	1020	183	105	50	24		
3	33	524	330	715	218	400	288	1040	174	94	47	23		
4	32	583	342	663	198	350	261	739	422	85	44	21		
5	31	260	500	539	184	320	240	558	568	83	42	28		
6	25	387	1160	457	182	290	220	438	964	84	40	53		
7	24	319	1320	405	161	270	285	369	1070	75	38	107		
8	25	222	1230	351	172	250	399	333	685	71	37	47		
9	25	216	986	311	216	240	370	308	522	69	36	34		
10	25	243	1090	374	366	230	516	277	417	66	34	28		
11	25	373	1030	390	375	230	488	339	347	66	33	26		
12	24	418	860	342	1690	289	550	345	304	68	32	24		
13	24	727	938	310	3900	423	482	319	269	58	31	24		
14	24	747	1500	283	2300	835	401	311	239	57	30	23		
15	24	626	1870	259	1300	760	347	286	217	54	30	22		
16	24	646	1300	210	1000	824	305	259	199	52	29	18		
17	33	985	800	190	800	868	275	234	182	50	28	15		
18	33	1070	550	175	650	782	264	215	171	51	27	16		
19	28	855	446	193	580	911	274	229	159	53	26	16		
20	31	1020	374	188	520	944	250	229	160	53	26	13		
21	29	985	294	227	550	1020	231	203	161	55	25	21		
22	83	758	240	378	550	895	218	240	146	55	25	19		
23	56	980	196	422	510	736	206	310	139	53	25	23		
24	42	1830	176	1340	1050	601	200	259	131	52	26	20		
25	37	1350	225	1160	1300	624	208	292	126	60	25	20		
26	34	923	277	829	1000	1080	194	456	155	55	24	21		
27	32	725	257	610	800	836	180	398	150	68	24	19		
28	34	567	223	490	600	673	171	321	129	66	24	16		
29	51	463	907	413	550	559	165	274	151	60	24	17		
30	110	451	2290	357	---	477	197	242	129	60	24	19		
31	133	---	1450	310	---	422	---	218	---	57	28	---		
TOTAL	1189	19498	23936	14332	22237	18089	8878	11897	8866	2051	987	784		
MEAN	38.4	650	772	462	767	584	296	384	296	66.2	31.8	26.1		
MAX	133	1830	2290	1340	3900	1080	550	1040	1070	116	53	107		
MIN	24	115	176	175	161	230	165	203	126	50	24	13		
CFSM	.93	15.8	18.7	11.2	18.6	14.2	7.18	9.32	7.18	1.61	.77	.63		
IN.	1.07	17.60	21.61	12.94	20.08	16.33	8.02	10.74	8.01	1.85	.89	.71		
AC-FT	2360	38670	47480	28430	44110	35880	17610	23600	17590	4070	1960	1560		
CAL YR 1983	TOTAL	143771	MEAN	394	MAX	3130	MIN	20	CFSM	9.56	IN.	129.81	AC-FT	285200
WTR YR 1984	TOTAL	132744	MEAN	363	MAX	3900	MIN	13	CFSM	8.81	IN.	119.86	AC-FT	263300

UMPOUA RIVER BASIN

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 mi², 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. No regulation or diversion above station.

AVERAGE DISCHARGE.--29 years, 321 ft³/s, 28.68 in/yr, 232,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft³/s Dec. 22, 1964, gage height, 18.0 ft, from floodmark, from rating curve extended above 5,100 ft³/s and basin runoff comparison; minimum, 11 ft³/s Jan. 6, 1977, Nov. 13, 1978, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	0230	2,570	6.18	Feb. 13	1200	5,320	8.74
Dec. 15	0400	*10,400	*12.31	Mar. 26	1330	3,410	7.02

Minimum, 21 ft³/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	23	94	683	742	282	663	733	803	285	127	44	40		
2	23	91	994	617	255	751	717	817	262	119	44	32		
3	22	77	902	579	233	620	629	934	242	111	44	30		
4	22	142	649	617	219	528	604	833	392	106	44	28		
5	22	96	546	616	209	475	670	684	450	101	43	28		
6	22	195	1000	568	201	462	636	569	618	97	40	32		
7	22	196	2170	517	189	461	575	492	1210	92	39	30		
8	22	124	1590	465	179	455	890	458	1100	88	37	30		
9	25	99	1160	401	184	449	888	439	790	85	37	29		
10	32	100	1290	381	178	439	1010	411	633	82	36	27		
11	30	195	1100	427	214	426	952	534	523	78	35	26		
12	26	251	967	384	483	388	870	525	450	74	34	26		
13	24	429	2940	345	3430	523	842	505	396	73	34	26		
14	24	307	5790	310	1820	626	813	524	363	71	33	26		
15	24	275	7220	282	1190	594	802	473	339	68	32	27		
16	24	326	2800	255	1020	645	700	427	315	65	31	26		
17	23	771	1700	232	783	718	599	392	285	63	31	25		
18	23	614	1220	213	636	617	553	370	260	60	30	24		
19	23	757	1400	200	586	618	580	370	240	57	30	24		
20	22	891	1160	186	780	679	602	388	240	55	30	39		
21	22	606	891	236	1190	747	567	363	249	54	29	36		
22	26	440	693	381	929	655	520	333	212	54	29	28		
23	49	813	547	461	745	580	485	434	193	51	28	30		
24	35	1700	571	609	759	515	451	390	183	50	29	29		
25	28	1250	901	718	876	549	414	358	174	51	28	27		
26	26	795	1010	656	691	2720	381	348	166	51	28	26		
27	24	580	806	541	601	1900	351	335	156	48	27	25		
28	24	498	675	458	626	1200	325	345	149	47	26	25		
29	23	412	793	392	603	900	312	382	147	47	26	25		
30	27	368	1060	348	---	730	432	385	136	46	27	25		
31	49	---	924	312	---	676	---	326	---	44	50	---		
TOTAL	811	13492	46152	13449	20091	22309	18903	14947	11158	2215	1055	851		
MEAN	26.2	450	1489	434	693	720	630	482	372	71.5	34.0	28.4		
MAX	49	1700	7220	742	3430	2720	1010	934	1210	127	50	40		
MIN	22	77	546	186	178	388	312	326	136	44	26	24		
CFSM	.17	2.96	9.80	2.86	4.56	4.74	4.14	3.17	2.45	.47	.22	.19		
IN.	.20	3.30	11.30	3.29	4.92	5.46	4.63	3.66	2.73	.54	.26	.21		
AC-FT	1610	26760	91540	26680	39850	44250	37490	29650	22130	4390	2090	1690		
CAL YR 1983	TOTAL	178536	MEAN	489	MAX	7220	MIN	22	CFSM	3.22	IN.	43.69	AC-FT	354100
WTR YR 1984	TOTAL	165433	MEAN	452	MAX	7220	MIN	22	CFSM	2.97	IN.	40.49	AC-FT	328100

UMPQUA RIVER BASIN

317

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 mi².

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.--46 years, 1,050 ft³/s, 31.76 in/yr, 760,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,200 ft³/s Dec. 22, 1964, gage height, 25.72 ft; minimum observed, 20 ft³/s Sept. 3, 4, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1500	7,430	8.94	Feb. 13	1130	23,400	15.88
Dec. 7	0100	11,000	10.95	Mar. 26	1330	11,200	11.04
Dec. 15	0130	*28,300	*17.45				

Minimum, 62 ft³/s Oct. 3-9, Sept. 29, 30.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	66	183	1900	2900	914	2500	2090	2870	692	381	132	112		
2	66	271	2890	2240	819	2910	2040	3010	635	357	132	88		
3	63	244	2750	1980	752	2230	1780	3540	591	337	132	80		
4	63	368	1950	2040	697	1820	1640	2960	925	320	126	76		
5	62	301	1660	2000	666	1590	1710	2250	1340	305	123	73		
6	62	610	3900	1840	645	1520	1640	1810	1880	291	119	79		
7	62	722	8550	1680	605	1480	1500	1520	4820	276	114	93		
8	62	429	5740	1510	576	1440	3230	1340	3370	265	111	91		
9	64	325	3850	1300	583	1400	3300	1260	2300	255	108	83		
10	82	291	4710	1200	595	1330	3920	1160	1780	245	106	76		
11	85	429	3970	1460	710	1290	3540	1470	1420	236	104	72		
12	76	495	3490	1330	2250	1180	2990	1570	1190	227	102	71		
13	70	1120	9410	1170	16100	1360	2760	1430	1080	221	100	70		
14	66	1000	20400	1030	7310	1810	2540	1400	963	213	100	68		
15	66	967	18800	921	4740	1720	2420	1270	884	203	97	70		
16	67	970	7660	825	4460	2030	2060	1130	819	196	95	73		
17	67	2020	4950	746	3090	2450	1750	1000	757	190	93	68		
18	66	1990	3650	687	2350	2220	1580	932	687	182	90	66		
19	66	2380	4140	640	2080	2340	1680	896	645	174	91	65		
20	64	3290	3340	596	2680	2600	1750	914	635	169	87	85		
21	64	2080	2590	773	4120	2750	1660	890	661	164	85	100		
22	67	1520	2010	1560	3230	2490	1480	808	601	163	83	75		
23	119	2770	1630	1950	2500	2110	1340	1060	540	159	83	71		
24	105	6650	1660	2400	2600	1800	1230	982	513	156	83	73		
25	81	4680	2500	2740	3170	1820	1140	890	505	157	83	72		
26	73	2810	3900	2440	2540	8920	1040	848	491	155	81	68		
27	70	1970	3000	1930	2110	6190	950	819	471	149	78	66		
28	68	1710	2210	1570	2240	3820	878	791	448	146	74	65		
29	67	1400	2820	1330	2140	2820	832	866	439	144	73	63		
30	68	1200	5000	1160	---	2240	1120	920	416	140	71	62		
31	109	---	4040	1010	---	2010	---	808	---	135	93	---		
TOTAL	2236	45195	149070	46958	77272	74190	57590	43414	32498	6711	3049	2274		
MEAN	72.1	1507	4809	1515	2665	2393	1920	1400	1083	216	98.4	75.8		
MAX	119	6650	20400	2900	16100	8920	3920	3540	4820	381	132	112		
MIN	62	183	1630	596	576	1180	832	791	416	135	71	62		
CFSM	.16	3.36	10.7	3.37	5.94	5.33	4.28	3.12	2.41	.48	.22	.17		
IN.	.19	3.74	12.35	3.89	6.40	6.15	4.77	3.60	2.69	.56	.25	.19		
AC-FT	4440	89640	295700	93140	153300	147200	114200	86110	64460	13310	6050	4510		
CAL YR 1983	TOTAL	555143	MEAN	1521	MAX	20400	MIN	62	CFSM	3.39	IN.	45.99	AC-FT	1101000
WTR YR 1984	TOTAL	540457	MEAN	1477	MAX	20400	MIN	62	CFSM	3.29	IN.	44.78	AC-FT	1072000

UMPOUA RIVER BASIN

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR

LOCATION.--Lat 42°58'05", long 123°09'60", in NW 1/4 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 mi².

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 except those for period of no gage-height record, April 7-13, April 20 to May 30, Aug. 20 to Sept. 14, which are fair. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--9 years, 1,215 ft³/s, 25.74 in/yr, 880,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,300 ft³/s Dec. 6, 1981, gage height, 22.39 ft; minimum, 31 ft³/s Sept. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	0400	12,700	12.34	Feb. 13	1400	30,100	18.82
Dec. 15	0400	*32,300	*19.50	Mar. 26	1500	13,200	12.57

Minimum, 67 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	78	196	2180	3630	1130	3140	2840	3500	827	425	138	120		
2	75	302	3230	2820	1020	3550	2740	3900	747	398	139	94		
3	71	268	3320	2430	935	2770	2380	4500	700	374	139	86		
4	69	340	2430	2430	874	2310	2180	3800	944	353	137	82		
5	69	403	2030	2370	832	2030	2220	3000	1520	335	132	80		
6	69	463	3740	2190	803	1910	2140	2300	1900	318	127	88		
7	69	968	10200	2010	756	1850	1920	2000	4980	305	121	100		
8	69	527	7240	1820	720	1790	4000	1700	3870	292	117	92		
9	70	377	4640	1600	729	1720	4300	1600	2650	280	114	88		
10	87	342	5340	1470	746	1630	5000	1500	2090	265	111	84		
11	106	485	4970	1700	830	1580	4500	1800	1680	254	108	80		
12	98	547	4650	1610	1940	1470	4000	2000	1410	243	105	78		
13	85	1480	10300	1430	20300	1710	3400	1850	1250	238	102	78		
14	79	1380	21600	1280	10100	2310	3140	1750	1130	231	101	76		
15	78	1140	23300	1150	5990	2200	2980	1550	1030	222	100	79		
16	79	1170	9980	1030	5770	2560	2560	1450	961	213	98	83		
17	77	2380	6200	940	4100	3150	2200	1300	888	203	95	78		
18	75	2450	4490	868	3040	2770	1950	1200	820	194	92	72		
19	74	2540	4960	813	2640	2760	2050	1150	764	186	91	69		
20	73	4080	4210	759	3400	3040	2200	1100	730	179	92	77		
21	71	2720	3310	869	5530	3140	2100	1000	801	175	89	118		
22	76	1950	2590	1630	4300	2880	1900	950	716	175	85	96		
23	113	2560	2120	2240	3310	2490	1700	1200	645	171	84	82		
24	157	7680	2120	2620	3790	2170	1550	1100	607	165	84	84		
25	111	5840	3510	3090	4740	2080	1450	1000	588	166	83	82		
26	95	3500	4690	2820	3540	10200	1300	980	564	169	85	78		
27	87	2430	3720	2270	2890	7670	1200	960	534	162	81	74		
28	82	2070	2900	1870	2940	4720	1100	980	502	156	78	71		
29	80	1720	3370	1600	2750	3510	1050	1050	491	153	76	69		
30	82	1440	5780	1410	---	2830	1400	1100	468	150	74	68		
31	107	---	5020	1260	---	2630	---	954	---	144	94	---		
TOTAL	2611	53748	178140	56029	100445	90570	73450	54224	36807	7294	3172	2506		
MEAN	84.2	1792	5746	1807	3464	2922	2448	1749	1227	235	102	83.5		
MAX	157	7680	23300	3630	20300	10200	5000	4500	4980	425	139	120		
MIN	69	196	2030	759	720	1470	1050	950	468	144	74	68		
CFSM	.13	2.80	8.96	2.82	5.40	4.56	3.82	2.73	1.91	.37	.16	.13		
IN.	.15	3.12	10.34	3.25	5.83	5.26	4.26	3.15	2.14	.42	.18	.15		
AC-FT	5180	106600	353300	111100	199200	179600	145700	107600	73010	14470	6290	4970		
CAL YR 1983	TOTAL	678476	MEAN	1859	MAX	25000	MIN	69	CFSM	2.90	IN.	39.37	AC-FT	1346000
WTR YR 1984	TOTAL	658996	MEAN	1801	MAX	23300	MIN	68	CFSM	2.81	IN.	38.24	AC-FT	1307000

UMPQUA RIVER BASIN

319

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 mi².

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 excellent. Slight regulation resulting from construction of Galesville Dam 2 mi upstream. Diversions for irrigation above station.

AVERAGE DISCHARGE.--54 years (water years 1930-31, 1933-84), 113 ft³/s, 19.67 in/yr, 81,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s Jan. 15, 1974, gage height, 16.40 ft, from high-water mark in well; minimum, 1.1 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1000	2,690	9.68	Feb. 13	1200	*3,650	*11.12
Minimum, 9.7 ft ³ /s Aug. 28, Sept. 4.							

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	14	31	181	307	70	376	305	213	50	35	17	21		
2	13	38	184	260	67	401	291	225	49	33	20	16		
3	13	36	177	229	65	321	257	210	50	33	20	16		
4	13	55	147	206	63	276	249	192	58	31	19	13		
5	13	36	138	188	61	246	242	171	61	30	17	14		
6	13	71	410	173	60	225	218	156	73	29	17	16		
7	13	67	827	158	59	213	201	139	101	29	16	16		
8	13	41	600	144	58	202	402	128	87	29	16	15		
9	13	35	414	133	68	188	399	119	76	28	15	15		
10	15	60	453	129	66	176	614	112	79	27	15	14		
11	15	140	444	129	73	168	486	123	69	27	15	14		
12	14	133	432	119	176	160	396	109	63	26	15	13		
13	13	330	929	113	2080	303	339	99	59	26	15	13		
14	13	194	1660	106	745	389	303	96	56	25	14	14		
15	13	117	1480	99	544	341	269	99	52	25	14	15		
16	13	201	796	94	514	434	244	92	50	23	14	14		
17	13	529	535	89	371	464	221	84	47	23	15	13		
18	13	242	399	84	308	349	214	79	45	21	14	12		
19	13	224	390	81	274	303	207	76	44	21	13	12		
20	13	355	336	77	299	282	198	73	44	20	13	18		
21	13	250	287	79	458	257	175	71	49	21	12	23		
22	15	182	240	83	377	224	161	69	44	23	12	16		
23	24	206	207	84	321	203	149	71	40	20	12	16		
24	19	746	263	92	423	185	145	65	38	19	13	14		
25	16	432	429	98	528	194	154	63	36	20	14	14		
26	15	268	423	97	393	454	152	61	35	21	13	14		
27	13	195	337	90	342	415	143	58	34	20	12	13		
28	13	156	283	84	341	324	133	56	33	20	11	13		
29	13	133	278	81	316	278	126	54	34	20	12	13		
30	16	121	526	77	---	243	168	53	34	19	13	13		
31	23	---	381	74	---	267	---	52	---	17	20	---		
TOTAL	446	5624	14586	3857	9520	8861	7561	3268	1590	761	458	443		
MEAN	14.4	187	471	124	328	286	252	105	53.0	24.5	14.8	14.8		
MAX	24	746	1660	307	2080	464	614	225	101	35	20	23		
MIN	13	31	138	74	58	160	126	52	33	17	11	12		
CFSM	.18	2.40	6.04	1.59	4.21	3.67	3.23	1.35	.68	.31	.19	.19		
IN.	.21	2.68	6.96	1.84	4.54	4.23	3.61	1.56	.76	.36	.22	.21		
AC-FT	885	11160	28930	7650	18880	17580	15000	6480	3150	1510	908	879		
CAL YR 1983	TOTAL	74330	MEAN	204	MAX	3720	MIN	13	CFSM	2.62	IN.	35.45	AC-FT	147400
WTR YR 1984	TOTAL	56975	MEAN	156	MAX	2080	MIN	11	CFSM	2.00	IN.	27.17	AC-FT	113000

UMPOUA 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 mi².

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.--29 years, 279 ft³/s, 43.60 in/yr, 202,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s Dec. 22, 1964, gage height, 18.59 ft, from floodmark, from rating curve extended above 2,600 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.7 ft³/s Aug. 17, 19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0330	3,190	7.78	Dec. 15	0030	2,670	7.23
Nov. 24	1300	2,600	7.16	Dec. 30	0330	3,000	7.58
Dec. 6	1930	2,710	7.27	Feb. 13	0530	*7,500	*12.20

Minimum, 5.7 ft³/s Sept. 16, 17, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	9.0	30	324	709	106	468	255	290	53	34	12	9.0		
2	9.0	39	342	527	98	448	224	349	51	33	14	8.5		
3	9.0	32	348	417	93	368	202	280	52	31	14	7.7		
4	9.0	116	310	339	88	310	191	240	57	30	13	7.1		
5	9.0	56	373	286	84	272	178	213	61	29	12	6.7		
6	9.0	170	1700	249	79	243	162	185	75	28	12	8.2		
7	9.0	133	1920	223	76	219	168	163	130	27	11	8.7		
8	9.0	82	1560	201	74	200	629	146	126	27	11	8.3		
9	9.0	101	1150	179	171	181	609	134	101	26	10	7.7		
10	9.1	910	1390	181	228	170	1070	125	92	26	9.8	7.4		
11	10	994	1050	188	253	160	847	131	81	25	9.5	7.4		
12	9.6	865	953	175	730	160	614	114	74	24	9.7	7.2		
13	9.4	1610	1270	166	5560	595	476	105	68	24	9.3	6.6		
14	9.4	1020	2120	157	1740	1380	386	101	65	23	9.6	6.5		
15	9.4	547	2010	146	1110	1070	318	104	60	21	9.3	6.7		
16	9.4	588	1160	134	1340	1500	267	98	56	20	8.8	6.3		
17	9.4	2080	790	126	884	1470	232	93	54	19	8.6	5.9		
18	9.4	1500	602	120	651	1200	214	86	51	18	8.3	6.0		
19	9.4	917	491	115	527	905	196	82	50	17	8.3	6.3		
20	9.4	1170	412	108	513	726	191	79	49	17	8.1	7.6		
21	9.4	929	351	115	701	714	171	77	56	16	7.8	7.7		
22	10	676	293	121	639	664	159	75	50	16	7.7	7.0		
23	14	687	256	125	525	527	148	76	46	16	7.4	7.1		
24	13	1890	333	130	912	419	144	70	43	16	7.4	7.4		
25	11	1500	756	154	1640	364	145	67	41	15	7.6	7.3		
26	9.8	1010	1000	170	912	755	148	66	40	15	7.6	6.9		
27	9.0	681	686	158	640	742	152	62	40	15	7.4	6.8		
28	9.0	511	502	146	528	531	144	59	38	15	7.1	6.3		
29	9.0	402	575	136	452	417	136	57	37	15	6.9	5.9		
30	14	328	2050	127	---	340	146	56	36	14	6.9	6.0		
31	35	---	1040	116	---	293	---	55	---	13	7.3	---		
TOTAL	328.1	21574	28117	6244	21354	17811	8922	3838	1833	665	289.4	214.2		
MEAN	10.6	719	907	201	736	575	297	124	61.1	21.5	9.34	7.14		
MAX	35	2080	2120	709	5560	1500	1070	349	130	34	14	9.0		
MIN	9.0	30	256	108	74	160	136	55	36	13	6.9	5.9		
CFSM	.12	8.27	10.4	2.31	8.47	6.62	3.42	1.43	.70	.25	.11	.08		
IN.	.14	9.24	12.04	2.67	9.14	7.62	3.82	1.64	.78	.28	.12	.09		
AC-FT	651	42790	55770	12380	42360	35330	17700	7610	3640	1320	574	425		
CAL YR 1983	TOTAL	157299.6	MEAN	431	MAX	7180	MIN	9.0	CFSM	4.96	IN.	67.34	AC-FT	312000
WTR YR 1984	TOTAL	111189.7	MEAN	304	MAX	5560	MIN	5.9	CFSM	3.50	IN.	47.60	AC-FT	220500

UMPQUA RIVER BASIN

321

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 mi².

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.--30 years, 912 ft³/s, 660,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,400 ft³/s Jan. 15, 1974, gage height, 28.17 ft; minimum, 7.4 ft³/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 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	1300	*23,400	*20.33	No other peak greater than base discharge.			
Minimum, 33 ft ³ /s Aug. 30.							

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	127	1040	2540	445	1830	1120	741	223	128	51	41
2	61	154	1060	1980	416	1890	1060	991	217	122	52	45
3	59	141	1060	1620	396	1570	981	873	219	117	55	46
4	57	261	985	1360	382	1320	931	806	232	111	54	42
5	57	246	989	1190	372	1170	906	732	255	105	52	39
6	56	313	3190	1060	358	1050	851	662	280	102	51	39
7	55	461	6000	968	344	968	803	601	335	99	50	42
8	55	334	5310	884	336	892	1870	552	382	97	48	42
9	57	265	3590	797	504	828	2230	517	328	95	46	41
10	60	1260	4490	762	844	777	3010	487	318	93	45	39
11	64	2730	3860	751	797	740	3150	505	298	90	43	37
12	63	1700	4120	705	1290	730	2320	480	270	87	42	37
13	61	4040	4370	670	18000	1210	1800	438	253	87	42	36
14	58	3040	7000	643	7660	3580	1470	415	239	84	42	36
15	57	1590	7130	607	4210	2760	1260	423	223	81	42	36
16	55	1390	4560	566	5260	3720	1100	414	209	78	42	37
17	57	4930	3210	532	3450	4720	976	390	199	75	40	37
18	57	3990	2450	511	2500	3630	902	368	188	71	39	35
19	57	2660	2080	491	2010	2720	856	349	181	67	38	34
20	57	3560	1830	473	1810	2230	802	336	177	64	37	35
21	56	3080	1610	479	2370	2000	725	325	188	62	37	37
22	59	2130	1360	485	2390	1770	677	318	188	63	36	36
23	71	1890	1180	498	2020	1510	634	324	175	64	36	39
24	76	5240	1260	488	2740	1280	608	305	164	63	36	42
25	75	5280	2460	531	5380	1150	611	287	154	60	36	40
26	70	3370	3610	583	3530	1770	629	281	146	58	36	40
27	66	2250	2740	563	2560	2280	611	269	139	58	37	39
28	62	1670	2110	535	2240	1800	584	257	135	57	36	39
29	61	1320	1870	512	1970	1480	555	245	131	57	34	39
30	67	1110	5140	494	---	1250	580	233	130	57	33	38
31	122	---	3590	471	---	1150	---	231	---	56	36	---
TOTAL	1951	60532	95254	24749	76584	55775	34612	14155	6576	2508	1304	1165
MEAN	62.9	2018	3073	798	2641	1799	1154	457	219	80.9	42.1	38.8
MAX	122	5280	7130	2540	18000	4720	3150	991	382	128	55	46
MIN	55	127	985	471	336	730	555	231	130	56	33	34
AC-FT	3870	120100	188900	49090	151900	110600	68650	28080	13040	4970	2590	2310
CAL YR 1983	TOTAL	540986	MEAN	1482	MAX	27900	MIN	52	AC-FT	1073000		
WTR YR 1984	TOTAL	375165	MEAN	1025	MAX	18000	MIN	33	AC-FT	744100		

UMPQUA RIVER BASIN

14511000 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 mi².

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 1738: 1957. WDR OR-79-1: 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.--29 years, 73.8 ft³/s, 53,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft³/s Dec. 6, 1981, gage height, 10.08 ft, from floodmark, from rating curve extended above 1,300 ft³/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 ft³/s and maximum (*) from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2300	1,310	6.18	Feb. 13	1130	*2,790	*8.83

Minimum, 2.6 ft³/s Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	19	65	217	48	116	167	78	23	17	6.3	7.3
2	6.0	22	79	175	44	91	155	90	23	16	7.5	6.1
3	5.7	19	93	139	43	77	136	115	23	15	7.0	5.5
4	5.4	23	83	108	42	67	121	114	32	15	5.8	4.6
5	5.9	20	146	86	40	61	98	90	31	15	6.0	4.9
6	6.1	30	555	73	39	56	71	75	37	14	6.2	6.7
7	6.5	39	767	65	39	51	74	71	100	14	5.5	7.3
8	6.4	26	437	59	39	48	227	69	70	14	5.5	7.0
9	7.0	20	319	55	40	46	244	55	56	14	5.0	5.5
10	7.7	19	281	56	41	45	259	50	51	13	4.5	5.9
11	7.7	30	313	60	49	45	259	54	43	13	4.8	5.7
12	7.3	35	330	60	89	43	222	46	39	13	4.7	5.3
13	7.3	110	311	57	1630	49	185	43	37	13	5.3	5.0
14	7.7	68	563	56	638	51	150	44	38	12	4.4	5.0
15	7.4	42	583	54	357	48	119	47	36	12	4.3	6.4
16	7.3	34	363	52	324	64	79	42	33	11	4.2	5.7
17	7.6	71	253	49	252	151	58	39	32	10	4.4	5.1
18	7.3	101	205	46	191	133	56	36	32	10	4.1	4.4
19	7.7	91	196	44	143	106	51	34	28	10	4.2	4.7
20	7.7	244	185	42	123	90	44	33	26	9.8	4.4	5.8
21	7.1	191	160	45	278	88	38	31	32	9.7	4.5	5.8
22	9.0	147	128	47	302	80	35	31	27	11	4.3	5.4
23	15	175	101	50	238	73	34	38	24	9.8	4.7	6.1
24	12	345	105	51	288	63	33	32	22	9.0	4.9	6.1
25	10	316	142	53	398	70	33	31	21	8.6	4.5	6.1
26	9.7	221	209	54	304	233	34	30	20	8.7	3.8	6.2
27	9.1	135	209	53	220	234	35	28	20	8.1	3.5	5.8
28	9.7	94	195	52	177	196	35	27	19	7.4	3.5	5.7
29	9.7	70	212	52	138	167	35	25	20	7.4	4.0	5.1
30	13	61	366	52	---	147	43	25	19	6.9	4.6	4.8
31	22	---	270	51	---	168	---	24	---	6.6	6.7	---
TOTAL	264.3	2818	8224	2113	6554	2957	3130	1547	1014	354.0	153.1	171.0
MEAN	8.53	93.9	265	68.2	226	95.4	104	49.9	33.8	11.4	4.94	5.70
MAX	22	345	767	217	1630	234	259	115	100	17	7.5	7.3
MIN	5.4	19	65	42	39	43	33	24	19	6.6	3.5	4.4
AC-FT	524	5590	16310	4190	13000	5870	6210	3070	2010	702	304	339

CAL YR 1983	TOTAL	36461.5	MEAN	99.9	MAX	2060	MIN	5.0	AC-FT	72320
WTR YR 1984	TOTAL	29299.4	MEAN	80.1	MAX	1630	MIN	3.5	AC-FT	58120

UMPQUA RIVER BASIN

525

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 mi².--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. Oct. 5, 1967, to Oct. 5, 1976, water-stage recorder, at datum 1.00 ft lower.

REMARKS.--Records good except those for November, 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 ft³/s, 204,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s Dec. 26, 1955, gage height, 24.93 ft, site and datum then in use, from rating curve extended above 7,200 ft³/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, 8,460 ft³/s Feb. 13, gage height, 13.67 ft; minimum, 0.65 ft³/s Aug. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	88	597	810	94	430	276	205	32	11	16	3.6
2	16	88	436	585	86	351	237	227	32	9.8	11	3.6
3	15	89	378	457	81	295	206	246	32	9.6	8.1	3.6
4	15	96	342	369	76	258	201	229	38	9.5	7.1	3.6
5	15	97	530	308	73	224	197	208	43	8.5	4.6	2.8
6	15	101	2580	264	72	201	177	181	45	7.7	4.0	3.5
7	18	117	3060	231	68	181	204	160	56	6.5	3.1	5.9
8	20	107	1890	203	65	161	1120	141	55	6.7	3.2	8.0
9	20	102	1250	178	115	156	1140	126	47	6.5	3.6	8.5
10	21	122	1280	187	248	144	1460	113	47	7.0	2.9	8.0
11	17	358	1160	184	333	134	1170	118	41	6.8	3.2	3.9
12	13	271	1150	160	727	130	856	103	38	6.5	6.6	9.6
13	11	836	1210	148	6940	277	621	92	34	8.0	6.6	11
14	12	673	2170	137	2910	814	478	84	32	8.4	4.8	9.7
15	12	339	2080	128	1880	719	378	80	30	9.6	6.2	9.8
16	13	280	1280	118	1930	1150	318	77	26	10	5.9	9.7
17	13	1050	873	106	1310	1910	269	70	25	9.5	4.4	9.0
18	13	1280	649	99	888	1290	242	63	23	9.9	3.5	9.4
19	44	960	559	98	658	922	211	59	22	16	3.7	11
20	50	1850	480	93	552	646	193	57	20	9.2	1.7	9.8
21	51	1110	427	117	719	636	164	53	22	5.8	2.3	9.9
22	52	744	354	125	681	565	152	52	22	6.3	4.1	12
23	54	775	297	131	580	457	136	60	20	2.6	4.3	11
24	54	1980	291	131	1480	377	126	52	17	6.9	4.2	9.5
25	86	2170	300	132	2460	328	124	47	16	14	4.8	9.7
26	87	1290	475	135	1380	569	117	46	16	15	5.0	9.2
27	86	868	547	129	859	616	106	43	13	20	2.4	5.8
28	86	640	551	123	647	497	98	40	13	27	.97	5.2
29	86	576	797	118	492	406	93	38	13	31	1.8	5.6
30	87	617	2450	109	---	334	115	35	12	29	2.4	4.7
31	88	---	1310	101	---	319	---	34	---	33	4.3	---
TOTAL	1186	19674	31753	6214	28404	15497	11185	3139	882	367.3	146.77	226.6
MEAN	38.3	656	1024	200	979	500	373	101	29.4	11.8	4.73	7.55
MAX	88	2170	3060	810	6940	1910	1460	246	56	33	16	12
MIN	11	88	291	93	65	130	93	34	12	2.6	.97	2.8
AC-FT	2350	39020	62980	12330	56340	30740	22190	6230	1750	729	291	449
CAL YR 1983	TOTAL	165857.4	MEAN	454	MAX	9670	MIN	7.7	AC-FT	329000		
WTR YR 1984	TOTAL	118674.67	MEAN	324	MAX	6940	MIN	.97	AC-FT	235400		

UMPQUA RIVER BASIN

14312000 SOUTH UMPQUA RIVER NEAR BROCKWAY, OR

LOCATION.--Lat 43°08'00", long 123°23'50", in SW 1/4 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 mi².

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. WDR OR 72-1: 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. Regulation from Ben Irving Reservoir, since January 1980, on Berry Creek during summer months. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--50 years (water years 1907-11, 1924-26, 1943-84), 2,918 ft³/s, 23.73 in/yr, 2,114,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft³/s Dec. 23, 1964, gage height, 34.28 ft; minimum, 16 ft³/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 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2200	23,600	14.66	Dec. 15	1000	43,500	20.05
Dec. 7	0830	27,200	15.61	Feb. 13	1830	*64,800	*25.74

Minimum, 104 ft³/s Aug. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	208	381	3960	9120	1980	5980	5120	3640	1280	631	206	141		
2	207	482	5070	6830	1820	6890	4990	5680	1160	584	201	174		
3	204	618	5570	5570	1680	5760	4490	5350	1100	541	204	176		
4	197	602	4620	4990	1570	4810	4070	5500	1120	514	210	156		
5	192	864	4280	4630	1500	4210	4000	4450	1860	487	202	138		
6	189	757	9360	4240	1440	3800	3890	3730	2170	456	197	133		
7	190	1510	24100	3830	1390	3550	3560	3180	4690	441	192	135		
8	197	1300	19300	3490	1330	3340	7190	2790	5180	423	178	148		
9	199	927	12100	3090	1400	3170	9990	2580	3670	410	164	158		
10	201	867	13100	2850	2090	2980	10700	2400	2930	389	159	148		
11	212	4150	12300	2920	2200	2870	11700	2430	2420	372	154	140		
12	227	2730	13500	2950	3340	2760	8800	2820	2040	362	155	135		
13	217	6520	16300	2700	45800	3010	7310	2590	1790	354	151	135		
14	207	6930	31600	2480	31000	7240	6130	2440	1650	346	147	135		
15	199	3780	38500	2270	16200	6520	5510	2430	1460	337	145	135		
16	196	3050	21400	2070	17100	7830	4820	2230	1360	325	146	142		
17	196	8380	13500	1910	12100	11900	4240	2020	1250	303	133	142		
18	196	9450	9600	1800	8670	9740	3750	1850	1150	288	128	142		
19	213	7100	8780	1700	6770	7570	3660	1740	1070	278	120	132		
20	232	11100	8000	1600	6440	6940	3680	1710	1030	268	113	133		
21	231	9310	6660	1600	10500	6570	3480	1680	1070	259	119	127		
22	235	6060	5440	2070	10400	6100	3190	1590	1080	261	110	162		
23	257	5420	4550	3130	8090	5280	2900	1660	951	260	108	172		
24	288	15900	4280	3170	9420	4590	2700	1830	862	250	141	153		
25	348	18300	6350	4080	17200	4040	2630	1620	823	234	182	153		
26	316	11000	10600	4110	12200	11600	2620	1530	779	242	142	152		
27	296	7060	9200	3490	8630	14200	2460	1460	748	241	141	146		
28	286	5300	7170	2980	7320	8920	2280	1400	702	234	160	136		
29	281	4400	7070	2630	6570	6650	2110	1390	679	230	142	132		
30	287	3780	15300	2380	---	5390	2270	1440	674	227	136	130		
31	310	---	13200	2160	---	4950	---	1430	---	214	138	---		
TOTAL	7214	158028	364760	102840	256150	189160	144240	78590	48748	10761	4824	4341		
MEAN	233	5268	11770	3317	8833	6102	4808	2535	1625	347	156	145		
MAX	348	18300	38500	9120	45800	14200	11700	5680	5180	631	210	176		
MIN	189	381	3960	1600	1330	2760	2110	1390	674	214	108	127		
CFSM	.14	3.15	7.05	1.99	5.29	3.65	2.88	1.52	.97	.21	.09	.09		
IN.	.16	3.52	8.13	2.29	5.71	4.21	3.21	1.75	1.09	.24	.11	.10		
AC-FT	14310	313400	723500	204000	508100	375200	286100	155900	96690	21340	9570	8610		
CAL YR 1983	TOTAL	1663752	MEAN	4558	MAX	72100	MIN	172	CFSM	2.73	IN.	37.06	AC-FT	3300000
WTR YR 1984	TOTAL	1369656	MEAN	3742	MAX	45800	MIN	108	CFSM	2.24	IN.	30.51	AC-FT	2717000

UMPQUA RIVER BASIN

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14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

LOCATION.--Lat 43°13'20", long 123°24'45", in NW¼ 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 mi².

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.

REMARKS.--Records of discharge are given for gaging station 14312000, South Umpqua River near Brockway. Daily records for periods August and September are rated fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 423 microsiemens Sept. 18, 1971; minimum, 37 microsiemens 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, 192 microsiemens Sept. 19; minimum, 48 microsiemens Feb. 13.

pH: Maximum, 9.1 units Aug. 14, 16; minimum, 7.0 units Aug. 28 to Sept. 1.

DISSOLVED OXYGEN: Maximum, 15.8 mg/l Aug. 15; minimum, 3.7 mg/l Aug. 31.

WATER TEMPERATURES: Maximum, 28.5°C July 17; minimum, 0.5°C Dec. 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	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)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT 27...	1000	296	170	7.7	13.0	10.0	K27	--	68	--
NOV 21...	1145	9310	81	7.6	8.0	11.7	K1700	K2100	32	0
DEC 20...	1000	8000	79	7.4	7.5	11.2	K700	K780	31	0
JAN 11...	1530	2920	102	7.3	8.0	11.8	--	K2500	40	0
FEB 15...	1000	16200	72	7.6	7.0	12.5	K950	K2000	32	0
21...	1040	10500	92	7.6	6.5	12.4	--	--	36	0
MAR 13...	0930	3010	98	7.8	9.5	11.3	290	700	41	0
APR 18...	1000	3750	91	7.8	10.5	11.0	K250	140	37	0
MAY 08...	1630	2790	88	7.8	13.0	10.8	K910	K330	36	0
JUN 13...	0930	1790	86	7.8	16.0	10.0	61	28	33	0
JUL 11...	1520	372	130	8.7	25.5	10.4	K27	K290	47	0
AUG 14...	1230	147	162	8.8	23.5	11.8	K20	K720	58	0
SEP 05...	1440	138	181	8.7	23.0	11.3	24	K1800	68	5

UMPOUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	
OCT 27...	16	6.8	10	.11	.10	.180	1.0	1.1	.040	105	
NOV 21...	7.1	3.5	2.1	.13	.20	.080	.90	1.1	.100	63	
DEC 20...	7.0	3.2	2.1	.12	.50	<.010	.40	.90	.050	61	
JAN 11...	8.9	4.3	3.5	.11	<.10	.080	<.20	--	.050	66	
FEB 15...	7.5	3.3	2.0	.10	<.10	.060	.40	--	.180	52	
21...	8.0	4.0	3.0	<.10	<.10	.050	<.20	--	.030	57	
MAR 13...	9.2	4.3	2.5	<.10	<.10	.060	.30	--	.020	66	
APR 18...	8.6	3.8	2.3	<.10	<.10	.050	.20	--	.040	64	
MAY 08...	8.6	3.6	2.5	<.10	<.10	.060	.40	--	.040	68	
JUN 13...	8.4	2.9	2.4	<.10	<.10	.030	.40	--	.040	57	
JUL 11...	11	4.7	6.2	<.10	<.10	.140	.50	--	.090	79	
AUG 14...	13	6.1	11	.12	<.10	.080	.50	--	.190	84	
SEP 05...	15	7.4	12	.14	.10	.180	.70	.80	.240	93	
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 11...	50	1	15	<.5	<1	<10	1	2	66		
AUG 14...	20	<1	<100	<10	1	<10	1	2	10		
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 11...	<1	<4	8	.1	6	7	<1	<1	12		
AUG 14...	1	<10	<10	.6	<1	3	<1	<1	70		
DATE	PER- THANE TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE 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)	TOX- APHENE, TOTAL (UG/L)
OCT 27...	<.1	<.010	<.010	<.1	<.010	<.010	<.010	<.010	<.010	<.010	<1
APR 18...	<.1	<.010	<.010	<.1	<.010	<.010	<.010	<.010	<.010	<.010	<1
AUG 14...	<.1	<.010	<.010	<.1	<.010	<.010	<.010	<.010	<.010	<.010	<1
DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	MIREX, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	
OCT 27...	<.010	<.010	<.01	<.1	<.10	<.01	<.01	<.01	<.01	<.01	
APR 18...	<.010	<.010	<.01	<.1	<.10	<.01	<.01	<.01	<.01	<.01	
AUG 14...	<.010	<.010	<.01	<.1	<.10	.26	<.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 ROSERURG, OR--Continued

 SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177	166	95	81	92	86	86	102	98	108	158	175
2	177	171	91	85	92	80	87	81	98	111	157	175
3	177	173	83	90	93	81	87	76	100	113	158	177
4	178	173	80	90	94	84	89	73	102	117	158	177
5	179	169	88	91	103	89	---	73	101	119	157	179
6	180	161	92	93	102	91	---	77	90	119	163	---
7	182	152	75	92	105	93	---	82	78	118	162	---
8	184	135	73	93	108	94	---	86	62	120	166	---
9	183	120	77	95	106	95	---	88	66	122	170	---
10	184	115	78	98	105	97	---	91	71	124	174	---
11	184	107	75	99	102	96	78	95	76	125	169	178
12	184	85	79	97	100	95	81	94	82	125	167	173
13	184	95	83	95	66	100	83	89	88	128	164	174
14	184	80	71	94	59	94	88	88	92	128	165	173
15	182	82	67	96	72	85	90	88	96	131	167	175
16	184	87	77	93	72	86	89	88	97	136	168	177
17	186	---	78	94	74	80	91	93	97	140	170	181
18	---	---	83	95	78	81	93	100	98	140	168	184
19	---	85	85	101	---	81	94	102	99	---	167	187
20	---	88	81	99	---	84	92	104	99	141	167	184
21	---	80	84	104	---	85	90	103	98	138	169	178
22	---	85	86	107	78	82	92	103	97	141	171	171
23	---	90	85	96	79	84	95	105	99	143	174	167
24	---	84	86	88	82	86	95	96	102	---	172	161
25	---	74	85	81	75	89	95	96	108	---	---	161
26	---	80	80	77	77	81	92	93	110	150	---	164
27	---	91	80	76	81	68	94	94	112	151	174	163
28	175	94	83	85	84	72	95	99	---	150	176	162
29	170	92	88	90	84	75	98	105	109	152	178	162
30	164	89	85	91	---	80	102	103	108	155	176	162
31	162	---	79	90	---	84	---	101	---	158	175	---
MEAN	---	---	82	92	---	86	---	93	---	---	---	---

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.9	7.8	8.2	7.7	7.8	7.8	7.4	7.3	7.9	7.8	7.8	7.6
2	9.0	7.8	8.2	7.7	7.8	7.8	7.4	7.4	7.9	7.8	7.8	7.7
3	8.9	7.9	8.2	7.8	7.8	7.7	7.4	7.4	7.9	7.8	7.7	7.6
4	8.9	7.8	8.2	7.9	7.7	7.7	7.5	7.4	7.9	7.8	8.0	7.6
5	8.8	7.8	8.1	7.9	7.7	7.7	7.5	7.4	7.9	7.8	8.1	7.7
6	9.0	7.8	8.1	7.9	7.7	7.5	7.5	7.4	8.1	7.9	8.1	7.8
7	8.9	7.8	8.1	7.5	7.5	7.4	7.5	7.4	8.0	7.8	8.1	7.8
8	8.8	7.8	8.1	7.9	7.5	7.4	7.5	7.4	7.8	7.4	8.1	7.7
9	8.8	7.8	8.1	7.9	7.5	7.5	7.5	7.5	7.4	7.4	8.2	7.8
10	8.7	7.7	8.0	7.8	7.5	7.5	7.5	7.5	7.5	7.4	8.3	7.8
11	8.6	7.7	7.9	7.7	7.5	7.5	7.5	7.5	7.5	7.5	8.4	7.8
12	8.6	7.6	7.8	7.7	7.5	7.5	7.5	7.3	7.5	7.4	8.4	7.9
13	8.6	7.7	7.9	7.8	7.6	7.5	7.5	7.5	7.4	7.3	8.5	7.9
14	8.6	7.7	7.8	7.7	7.7	7.4	7.6	7.5	7.4	7.4	8.4	7.9
15	8.5	7.7	7.9	7.8	7.6	7.3	7.6	7.5	7.4	7.4	8.4	7.9
16	8.7	7.7	8.0	7.9	7.3	7.2	7.7	7.6	7.4	7.4	8.3	7.9
17	8.6	7.8	---	---	7.4	7.3	7.7	7.6	7.5	7.4	8.4	7.9
18	8.7	7.8	---	---	7.5	7.4	7.7	7.6	7.5	7.5	8.5	7.9
19	8.7	7.8	7.6	7.5	7.5	7.4	7.7	7.6	---	---	8.4	7.8
20	8.7	7.8	7.6	7.6	7.5	7.4	7.7	7.7	---	---	8.4	7.8
21	8.7	7.8	7.7	7.6	7.5	7.4	7.7	7.7	---	---	7.8	7.6
22	8.2	7.8	7.7	7.6	7.5	7.5	7.8	7.7	7.7	7.5	7.8	7.6
23	8.4	7.7	7.7	7.6	7.6	7.5	7.8	7.6	7.7	7.6	7.7	7.6
24	8.4	7.7	7.8	7.5	7.6	7.6	7.7	7.6	7.7	7.6	7.8	7.7
25	8.4	7.7	7.5	7.5	7.6	7.6	7.7	7.6	7.8	7.6	7.8	7.7
26	8.5	7.7	7.6	7.5	7.6	7.4	7.6	7.6	7.8	7.6	8.0	7.6
27	8.5	7.7	7.6	7.6	7.4	7.3	7.6	7.6	7.8	7.6	7.7	7.5
28	8.5	7.7	7.7	7.6	7.5	7.4	7.7	7.6	7.8	7.6	7.7	7.6
29	8.2	7.7	7.8	7.7	7.4	7.4	7.7	7.7	7.7	7.7	7.8	7.6
30	8.0	7.7	7.8	7.7	7.4	7.2	7.8	7.7	---	---	7.8	7.6
31	8.2	7.7	---	---	7.3	7.2	7.8	7.7	---	---	7.8	7.7
MONTH	9.0	7.6	---	---	7.8	7.2	7.8	7.3	---	---	8.5	7.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.8	7.7	8.0	7.8	8.3	7.8	8.1	7.5	8.6	7.4	8.8	7.0
2	7.8	7.7	8.0	7.7	8.3	7.8	8.2	7.5	8.6	7.3	8.9	7.1
3	7.8	7.7	7.8	7.6	8.4	7.8	8.2	7.5	8.7	7.2	8.8	7.2
4	7.9	7.8	7.7	7.6	8.2	7.8	8.3	7.5	8.8	7.3	8.9	7.2
5	7.8	7.4	7.7	7.6	8.1	7.8	8.4	7.5	8.7	7.3	8.8	7.2
6	7.9	7.3	7.8	7.6	8.0	7.8	8.5	7.5	8.8	7.4	---	---
7	7.9	7.7	7.8	7.7	8.0	7.7	8.6	7.6	8.8	7.3	---	---
8	---	---	7.8	7.6	7.7	7.5	8.6	7.6	8.8	7.3	---	---
9	---	---	7.9	7.7	7.6	7.5	8.7	7.7	8.8	7.2	---	---
10	---	---	8.0	7.7	7.7	7.6	8.7	7.6	8.8	7.2	---	---
11	7.6	7.5	8.0	7.7	7.8	7.7	8.8	7.7	8.8	7.2	8.6	7.2
12	7.8	7.6	8.0	7.8	7.9	7.7	8.7	7.7	8.9	7.2	8.8	7.2
13	7.8	7.7	7.9	7.7	8.0	7.7	8.7	7.6	9.0	7.3	8.8	7.2
14	7.8	7.6	8.0	7.7	8.0	7.7	8.8	7.6	9.1	7.4	8.4	7.2
15	7.7	7.6	7.9	7.7	8.1	7.8	8.8	7.6	9.0	7.4	8.7	7.1
16	7.7	7.6	8.0	7.7	8.1	7.8	8.8	7.6	9.1	7.4	8.7	7.2
17	7.8	7.7	8.1	7.7	8.2	7.8	8.8	7.5	9.0	7.3	8.7	7.2
18	7.9	7.7	8.1	7.7	8.2	7.8	8.8	7.5	9.0	7.3	8.5	7.2
19	7.9	7.8	8.0	7.7	8.2	7.8	8.8	7.5	9.0	7.3	8.5	7.1
20	7.9	7.7	8.2	7.8	8.1	7.8	8.8	7.5	9.0	7.3	8.7	7.1
21	7.8	7.7	8.2	7.8	8.2	7.8	8.8	7.5	8.9	7.1	8.7	7.1
22	7.9	7.7	8.0	7.8	8.2	7.8	8.9	7.6	8.9	7.1	8.5	7.1
23	7.9	7.8	8.2	7.7	8.2	7.9	8.9	7.6	8.9	7.1	8.6	7.2
24	7.9	7.8	8.2	7.8	8.2	7.8	8.9	7.5	8.9	7.1	8.7	7.3
25	7.9	7.8	8.2	7.8	8.2	7.8	---	7.5	---	---	8.7	7.3
26	7.9	7.8	8.3	7.8	8.3	7.8	8.8	7.4	---	---	8.7	7.3
27	8.0	7.8	8.3	7.8	8.3	7.8	8.8	7.5	9.0	7.1	8.7	7.3
28	8.0	7.8	8.3	7.8	8.0	7.5	8.7	7.4	8.9	7.1	8.7	7.3
29	8.0	7.8	8.3	7.8	7.9	7.4	8.8	7.4	8.9	7.0	8.7	7.3
30	8.0	7.8	8.2	7.8	8.1	7.5	8.8	7.4	8.6	7.0	8.6	7.3
31	---	---	8.3	7.8	---	---	8.8	7.4	8.5	7.0	---	---
MONTH	---	---	8.3	7.6	8.4	7.4	---	7.4	---	---	---	---

UMPQUA RIVER BASIN

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14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	12.1	8.7	10.2	10.6	9.1	9.7	11.2	11.1	11.2	12.5	12.2	12.3
2	12.3	8.7	10.3	10.4	9.2	9.7	11.2	11.1	11.1	12.4	12.3	12.4
3	12.3	8.8	10.2	10.2	9.3	9.7	11.2	11.0	11.1	12.3	12.2	12.2
4	12.0	8.7	10.1	10.4	9.3	9.8	11.6	11.2	11.4	12.2	11.9	12.0
5	11.9	8.5	9.8	10.2	9.6	9.8	11.5	11.4	11.4	11.9	11.8	11.8
6	12.6	8.6	10.3	10.7	9.6	10.0	11.4	11.0	11.1	11.8	11.7	11.8
7	12.5	8.6	10.2	10.9	10.2	10.5	11.0	10.9	11.0	11.8	11.7	11.8
8	12.0	8.6	10.1	11.0	10.5	10.7	11.1	10.7	11.0	12.0	11.8	11.9
9	12.2	8.8	10.2	11.2	10.6	10.8	10.7	10.3	10.5	12.0	11.8	11.9
10	12.4	8.8	10.3	10.6	10.3	10.5	10.8	10.5	10.7	11.9	11.8	11.9
11	12.1	8.7	9.9	10.5	10.3	10.4	11.0	10.8	10.8	12.0	11.7	11.9
12	11.8	8.5	9.8	10.6	10.5	10.5	11.2	11.0	11.1	11.8	11.6	11.7
13	11.6	8.6	9.8	10.9	10.6	10.7	11.2	11.1	11.1	11.9	11.7	11.8
14	11.8	8.6	9.9	11.1	10.9	11.1	11.2	10.9	11.1	12.4	11.9	12.2
15	11.5	8.8	9.9	11.1	11.0	11.1	11.2	10.9	11.1	12.8	12.4	12.6
16	12.3	9.1	10.3	11.0	10.8	10.9	10.9	10.6	10.8	13.1	12.7	12.9
17	12.0	9.2	10.3	---	---	---	10.9	10.8	10.9	13.2	13.0	13.2
18	12.2	9.4	10.5	---	---	---	10.9	10.8	10.8	13.4	13.1	13.3
19	12.2	9.3	10.4	10.7	10.5	10.6	11.0	10.8	10.9	13.5	13.2	13.4
20	12.1	9.2	10.4	10.8	10.6	10.7	11.8	11.0	11.3	13.4	13.1	13.3
21	12.0	9.2	10.3	11.0	10.8	10.9	12.8	11.8	12.4	13.1	12.9	13.0
22	10.7	9.1	9.7	11.0	11.0	11.0	13.4	12.8	13.2	12.9	12.7	12.8
23	11.4	9.0	9.9	11.1	10.8	11.0	13.8	13.3	13.6	12.9	12.6	12.8
24	11.6	9.2	10.1	10.8	10.6	10.7	14.1	13.8	13.9	12.7	12.5	12.6
25	11.4	9.4	10.2	11.1	10.7	10.9	14.0	13.4	13.7	12.5	12.2	12.4
26	11.5	9.5	10.2	11.2	11.1	11.2	13.4	12.7	12.9	12.3	12.2	12.2
27	11.3	9.5	10.2	11.2	11.1	11.2	12.7	12.5	12.6	12.5	12.3	12.4
28	11.3	9.3	10.1	11.1	10.9	11.0	12.8	12.6	12.7	12.7	12.5	12.6
29	10.7	9.2	9.8	11.0	10.9	11.0	12.7	12.2	12.5	12.7	12.4	12.6
30	10.3	9.2	9.5	11.2	11.0	11.1	12.2	12.0	12.0	12.7	12.5	12.6
31	10.6	9.0	9.7	---	---	---	12.2	11.9	12.1	12.8	12.5	12.6
MONTH	12.6	8.5	10.1	---	---	---	14.1	10.3	11.7	13.5	11.6	12.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	12.9	12.6	12.8	12.0	11.8	11.9	11.6	11.4	11.5	10.7	10.3	10.5
2	13.1	12.8	12.9	12.2	11.9	12.1	11.6	11.2	11.4	10.9	10.6	10.7
3	13.0	12.8	12.9	12.2	12.1	12.1	11.2	11.1	11.2	10.9	10.7	10.8
4	13.0	12.7	12.9	12.2	12.1	12.2	11.2	11.1	11.1	10.8	10.5	10.7
5	13.0	12.8	12.9	12.1	11.9	12.0	11.2	10.3	10.9	11.1	10.6	10.9
6	13.0	12.8	12.9	11.9	11.8	11.8	11.6	11.1	11.4	11.4	10.9	11.1
7	13.0	12.6	12.8	12.0	11.6	11.8	11.4	11.0	11.2	11.2	10.6	10.9
8	12.8	12.4	12.6	11.8	11.5	11.6	---	---	---	10.8	10.4	10.5
9	12.6	12.3	12.5	11.7	11.4	11.5	---	---	---	11.2	10.3	10.8
10	12.8	12.5	12.7	11.6	11.2	11.4	---	---	---	11.1	10.3	10.7
11	12.9	12.7	12.8	11.4	11.1	11.3	11.7	11.5	11.6	10.9	10.1	10.5
12	12.8	12.1	12.5	11.6	11.2	11.4	11.6	11.3	11.5	11.0	10.2	10.5
13	12.7	11.9	12.3	11.3	11.0	11.2	11.4	11.1	11.3	10.8	10.2	10.5
14	12.8	12.6	12.7	11.4	11.0	11.2	11.1	10.5	10.9	10.9	10.1	10.5
15	12.6	12.5	12.6	11.4	11.3	11.4	10.7	10.4	10.5	11.2	10.3	10.7
16	12.6	12.5	12.6	11.7	11.4	11.6	11.1	10.7	10.9	11.4	10.5	10.9
17	12.7	12.6	12.7	12.0	11.7	11.9	11.2	10.9	11.1	11.2	10.2	10.7
18	12.7	12.5	12.6	11.9	11.8	11.8	11.0	10.8	10.9	11.0	10.0	10.4
19	---	---	---	11.8	11.2	11.6	11.1	10.8	10.9	10.7	9.8	10.2
20	---	---	---	11.2	10.9	11.0	11.4	11.0	11.2	10.9	9.8	10.4
21	---	---	---	11.3	11.0	11.2	11.3	11.1	11.2	10.9	9.8	10.4
22	12.8	12.6	12.7	11.5	11.2	11.4	11.4	10.9	11.1	10.7	9.9	10.3
23	12.8	12.6	12.7	11.3	11.1	11.2	11.1	10.5	10.8	11.1	10.0	10.5
24	12.6	12.4	12.5	11.4	11.2	11.3	11.0	10.5	10.8	11.2	10.3	10.7
25	12.6	12.4	12.5	11.3	11.2	11.2	11.3	10.7	11.0	10.9	10.0	10.4
26	12.5	12.4	12.4	11.5	11.3	11.4	11.6	11.0	11.3	11.1	9.9	10.5
27	12.4	12.2	12.4	11.5	11.4	11.4	11.7	11.1	11.3	11.1	9.8	10.5
28	12.2	12.0	12.2	11.4	11.3	11.3	11.4	10.7	11.1	11.0	9.4	10.2
29	12.1	11.9	12.0	11.4	11.2	11.3	11.4	10.6	10.9	10.7	8.9	9.8
30	---	---	---	11.5	11.3	11.4	10.9	10.4	10.6	10.2	8.9	9.5
31	---	---	---	11.4	11.2	11.3	---	---	---	10.9	9.3	10.1
MONTH	---	---	---	12.2	10.9	11.5	---	---	---	11.4	8.9	10.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	14.5	14.0	13.5	8.0	7.5	7.0	6.5	6.0	5.5	9.0	8.0
2	17.0	14.5	14.0	13.5	8.5	8.0	7.0	6.5	6.0	5.5	9.0	8.0
3	17.5	15.0	14.5	13.5	8.0	7.5	7.5	7.0	6.0	5.5	8.0	7.5
4	18.0	15.0	14.0	13.0	7.5	7.0	8.0	7.0	6.0	5.5	8.0	7.0
5	17.5	16.0	13.5	13.0	7.0	7.0	8.5	8.0	6.5	5.5	9.0	7.0
6	17.5	15.5	13.0	12.0	8.0	7.0	8.5	8.0	7.0	6.0	9.0	7.5
7	17.0	14.5	12.0	11.0	8.5	8.0	8.0	8.0	7.5	6.5	10.0	8.0
8	16.0	14.5	11.0	10.0	8.5	8.0	8.0	7.5	8.0	7.0	10.5	8.5
9	16.5	15.0	10.5	9.5	8.5	8.0	8.0	7.5	8.0	7.5	11.0	9.5
10	17.5	15.5	10.5	10.5	9.0	8.5	8.0	7.5	7.5	7.0	11.5	10.0
11	18.0	16.0	10.5	10.0	8.5	7.5	8.0	7.5	7.5	7.0	11.0	10.0
12	18.0	16.5	10.5	10.0	7.5	7.5	7.5	7.5	9.0	7.5	10.5	9.5
13	16.5	15.5	10.0	9.0	8.0	7.5	7.5	6.5	9.5	8.0	10.0	9.5
14	16.5	15.5	9.0	8.5	9.0	8.0	6.5	5.5	8.0	7.0	10.0	9.0
15	15.5	14.0	9.0	8.5	9.0	9.0	5.5	4.0	7.5	7.0	9.5	9.0
16	15.0	13.5	9.5	9.0	9.0	8.5	4.0	3.0	7.0	7.0	9.0	8.0
17	14.5	13.5	---	9.0	9.0	8.5	3.0	2.5	7.0	6.5	8.0	7.5
18	15.5	13.5	9.5	---	9.0	9.0	3.0	2.5	7.5	7.0	8.5	8.0
19	15.5	13.5	9.5	9.0	9.0	8.0	3.0	2.5	---	7.5	10.0	8.5
20	15.5	13.5	9.0	8.5	8.0	6.5	3.5	3.0	---	---	10.5	10.0
21	15.5	13.5	8.5	8.0	6.5	5.0	4.5	3.5	8.0	---	10.5	10.0
22	15.0	14.5	8.0	7.5	5.0	3.5	5.5	4.5	7.5	6.5	10.0	9.5
23	15.5	14.0	8.0	7.5	3.5	1.5	6.0	5.0	7.0	6.5	10.5	9.5
24	15.0	13.0	9.0	8.0	1.5	.5	7.0	6.0	7.0	6.5	10.5	9.5
25	15.0	13.0	9.0	8.0	3.5	1.0	7.5	7.0	7.5	6.5	9.5	9.0
26	15.0	13.0	8.0	8.0	5.5	3.5	8.0	7.5	7.5	6.5	9.0	8.5
27	14.5	13.0	8.5	8.0	6.0	5.5	7.5	7.0	8.0	7.0	9.5	8.5
28	14.0	13.0	9.0	8.5	6.0	5.5	7.0	6.5	8.5	7.5	10.0	9.0
29	13.5	13.0	8.5	8.0	7.0	5.5	6.5	6.5	8.5	8.0	10.0	9.0
30	13.5	13.0	8.0	7.5	8.0	7.0	6.5	6.0	---	---	9.5	8.5
31	14.0	13.0	---	---	7.5	7.0	6.5	6.0	---	---	9.0	8.5
MONTH	18.0	13.0	---	---	9.0	.5	8.5	2.5	---	---	11.5	7.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.5	12.5	11.5	18.0	16.5	23.5	21.5	24.5	23.0	23.0	19.5
2	10.0	8.5	11.5	10.5	18.0	16.0	25.0	22.5	24.5	22.5	23.5	19.0
3	11.0	9.5	12.0	10.5	17.0	15.5	25.5	22.5	25.0	21.5	23.5	19.5
4	10.5	10.0	11.5	11.0	17.0	15.5	26.5	23.5	25.0	21.0	23.5	19.5
5	11.5	10.0	11.0	10.0	16.0	15.0	26.5	24.0	24.5	22.0	23.0	19.5
6	10.5	9.0	11.5	9.5	15.0	13.5	25.5	23.0	25.5	21.5	---	---
7	11.0	10.0	13.5	10.5	13.5	11.5	25.0	22.0	26.0	22.0	---	---
8	---	---	13.0	12.5	12.5	10.5	25.0	21.5	27.0	22.5	---	---
9	---	---	13.0	11.5	13.0	12.0	25.5	22.0	27.5	23.5	---	---
10	8.5	---	14.0	12.0	13.0	12.0	26.0	22.0	28.0	24.0	---	---
11	8.5	8.0	15.0	13.5	15.0	12.0	25.5	22.0	26.0	23.5	22.0	20.0
12	9.5	8.0	15.0	13.5	16.5	13.5	25.0	22.0	26.0	23.0	22.0	18.5
13	10.5	9.0	14.5	13.5	17.0	16.0	25.0	21.5	25.5	21.5	22.0	18.0
14	12.0	10.0	14.5	13.5	18.5	16.5	26.0	21.5	25.5	21.5	20.0	18.5
15	12.0	11.0	13.5	13.0	20.0	17.5	27.0	22.0	26.0	21.5	21.5	18.0
16	11.0	10.5	14.0	12.0	20.0	18.5	28.0	23.5	26.5	22.0	22.0	18.5
17	11.5	10.0	15.5	13.0	20.0	18.0	28.5	24.5	26.5	22.5	23.0	19.0
18	11.5	10.0	16.0	14.5	20.0	18.0	27.0	24.5	26.5	23.0	22.0	20.0
19	11.5	10.5	16.5	15.5	20.5	18.5	27.0	23.5	25.5	22.0	23.0	20.5
20	11.5	10.0	16.5	15.0	20.5	19.5	26.5	22.5	26.0	21.5	23.0	20.5
21	11.5	10.0	16.5	15.0	19.5	18.5	25.0	22.0	25.5	21.5	21.5	19.5
22	12.5	10.5	15.5	15.0	19.0	17.5	26.0	22.0	25.0	21.5	20.0	18.0
23	13.5	11.5	15.5	14.0	20.5	18.0	26.5	22.0	25.0	22.0	19.5	17.5
24	12.5	11.5	15.5	14.0	21.5	20.0	27.5	23.5	24.5	21.0	19.0	16.0
25	11.5	10.5	16.5	15.0	23.5	21.5	---	23.5	---	21.0	18.0	15.5
26	10.5	9.5	17.0	15.0	23.0	22.5	26.0	23.0	---	---	18.5	15.0
27	11.5	9.5	18.0	15.5	24.0	22.5	25.5	22.0	24.5	21.5	18.5	15.5
28	11.5	10.0	20.0	16.5	24.5	23.0	24.5	22.5	24.5	21.0	19.0	15.5
29	12.5	11.0	21.5	18.0	24.0	22.5	26.0	22.0	25.0	21.0	19.0	15.5
30	12.5	12.0	21.0	19.0	23.5	22.0	27.0	22.5	23.0	21.0	18.5	16.5
31	---	---	19.0	17.0	---	---	27.0	23.5	21.5	20.0	---	---
MONTH	---	---	21.5	9.5	24.5	10.5	---	21.5	---	---	---	---

UMPQUA RIVER BASIN

14312500 LAKE CREEK NEAR DIAMOND LAKE, OR

LOCATION.--Lat 43°11'10", long 122°09'55", in NW1/4 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 mi².

PERIOD OF RECORD.--May 1922 to September 1925 (no winter records), October 1926 to September 1929, April, July, August 1930, October 1930 to September 1933, October 1971 to October 1977, February 1978 to September 1984 (discontinued). 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 except those for periods of no gage-height record Oct. 28 to Dec. 4 and Dec. 12 to Feb. 6, which are poor. Flow regulated by gates and fish racks at lake outlet. No diversion above station.

AVERAGE DISCHARGE.--38 years (water years 1927-29, 1931-53, 1972-77, 1979-84), 57.3 ft³/s, 41,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 336 ft³/s Jan. 1, 1943, gage height, 2.8 ft, from rating curve extended above 120 ft³/s; no flow Aug. 25-27, 1931, Sept. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 165 ft³/s occurred sometime during period Oct. 27, 1983 to Feb. 7, 1984, gage height, 1.75 ft, from peak-stage indicator; minimum discharge, 14 ft³/s Oct. 14, 15, July 19-21, result of regulation at lake outlet.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	60	110	100	70	84	84	74	120	100	28	43
2	33	70	100	100	70	83	81	76	117	98	29	43
3	33	80	100	100	70	81	80	81	118	96	30	43
4	33	94	100	95	68	79	80	80	130	94	30	42
5	34	110	100	95	68	77	79	80	135	92	29	42
6	34	160	108	95	68	75	78	80	146	90	30	42
7	33	160	114	95	66	74	80	79	151	87	30	43
8	32	160	112	90	64	72	85	78	150	86	31	43
9	35	160	110	90	66	72	86	78	148	82	32	42
10	36	150	112	90	67	71	89	78	145	72	33	42
11	37	150	109	90	68	71	89	85	143	70	33	40
12	36	150	110	90	75	72	90	87	143	69	31	40
13	36	150	110	90	91	75	89	88	140	68	30	40
14	28	150	110	85	92	80	87	89	138	67	30	40
15	15	140	110	85	92	82	85	90	136	67	31	40
16	15	140	110	85	92	85	83	89	132	66	31	40
17	16	140	110	85	91	86	82	89	128	65	32	40
18	17	130	110	80	90	84	83	89	125	64	31	40
19	18	130	110	80	89	83	83	91	123	35	31	41
20	18	130	110	80	88	82	84	93	122	14	31	44
21	19	130	110	80	88	85	74	93	121	15	30	42
22	21	120	110	80	87	83	67	96	118	17	30	41
23	25	120	110	75	86	81	66	100	117	18	30	41
24	25	120	110	75	87	80	66	101	115	19	30	41
25	26	120	110	75	90	81	67	112	114	21	31	41
26	42	110	110	75	89	88	68	118	113	21	31	41
27	57	110	100	75	86	87	69	117	111	22	32	41
28	55	110	100	75	83	86	68	117	109	23	34	40
29	52	110	100	75	81	86	67	118	106	24	35	40
30	51	110	100	70	---	84	69	119	103	25	36	40
31	52	---	100	70	---	84	---	119	---	26	43	---
TOTAL	997	3774	3325	2625	2322	2493	2358	2884	3817	1713	975	1238
MEAN	32.2	126	107	84.7	80.1	80.4	78.6	93.0	127	55.3	31.5	41.3
MAX	57	160	114	100	92	88	90	119	151	100	43	44
MIN	15	60	100	70	64	71	66	74	103	14	28	40
AC-FT	1980	7490	6600	5210	4610	4940	4680	5720	7570	3400	1930	2460
CAL YR 1983	TOTAL	28032	MEAN	76.8	MAX	173	MIN	15	AC-FT	55600		
WTR YR 1984	TOTAL	28521	MEAN	77.9	MAX	160	MIN	14	AC-FT	56570		

UMPOUA RIVER BASIN

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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 mi².

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, 13,160 acre-ft Aug. 16, elevation, 4,147.55 ft; minimum observed, 4,540 acre-ft Feb. 12, elevation, 4,121.18 ft.

MONTHEND ELEVATION AND CONTENTS AT 0900, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	4,145.0	12,120	-
Oct. 31.....	4,126.4	5,940	-6,180
Nov. 30.....	4,128.2	6,460	+520
Dec. 31.....	4,135.8	8,810	+2,350
CAL YR 1983.....	-	-	+1,760
Jan. 31.....	4,123.6	5,170	-3,640
Feb. 29.....	4,133.8	8,170	+3,000
Mar. 31.....	4,133.2	7,970	-200
Apr. 30.....	4,139.0	9,890	+1,920
May 31.....	4,147.2	13,010	+3,120
June 30.....	4,147.4	13,100	+90
July 31.....	4,146.8	12,850	-250
Aug. 31.....	4,146.3	12,640	-210
Sept. 30.....	4,142.8	11,270	-1,370
WTR YR 1984.....	-	-	-850

UMPOUA RIVER BASIN

14313500 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 mi² (see REMARKS).

PERIOD OF RECORD.--October 1927 to December 1945, March 1946 to current year. Records since October 1983 are equivalent to earlier records if diversion to Lemolo No. 1 power canal is added to flow past station. 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. Records given herein do not 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.

AVERAGE DISCHARGE.--55 years (1928-83), 423 ft³/s, 33.79 in/yr, 306,500 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 4,600 ft³/s Dec. 25, 1964, from rating curve extended above 450 ft³/s on basis of slope-area measurement of peak flow, gage height, 9.20 ft, from floodmark; minimum, 6.4 ft³/s July 17, 1954.

Combined flow, maximum discharge, 4,680 ft³/s Dec. 25, 1964, from river rating curve extended above 450 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 9.7 ft³/s May 13, 1955.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 444 ft³/s Aug. 14, gage height, 6.31 ft; minimum, 19 ft³/s Oct 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	21	20	26	23	25	26	27	425	181	27	26
2	20	21	20	26	23	25	26	27	421	180	26	26
3	20	21	20	26	23	25	26	28	418	180	26	26
4	20	21	20	26	23	25	26	28	358	180	26	26
5	21	21	20	26	23	24	26	28	319	180	26	27
6	21	21	20	26	23	24	26	28	320	179	25	27
7	20	21	20	26	22	24	26	28	359	179	25	27
8	20	20	20	26	22	24	26	28	379	179	231	27
9	20	20	20	25	22	24	26	28	376	151	362	27
10	20	20	21	25	22	24	26	29	375	72	397	27
11	20	20	21	25	22	24	26	29	319	30	419	26
12	20	20	22	25	23	24	26	29	281	30	422	26
13	21	20	23	25	25	24	26	30	281	30	423	26
14	21	20	27	25	25	24	26	98	280	30	426	26
15	21	20	29	25	25	24	26	147	248	30	426	26
16	21	20	29	24	26	24	26	172	229	30	292	26
17	20	20	29	24	26	24	26	189	229	30	29	26
18	20	20	29	24	26	24	26	152	199	30	29	25
19	20	21	29	24	26	24	27	128	179	30	28	25
20	21	21	28	23	26	25	27	129	180	30	28	25
21	22	20	28	23	26	25	27	153	180	30	27	25
22	22	20	28	23	25	25	27	169	180	30	26	25
23	22	20	27	23	26	25	27	224	180	30	26	25
24	21	21	27	24	25	25	27	258	181	30	26	25
25	21	21	27	24	25	25	27	286	181	30	26	25
26	22	21	27	23	25	26	27	305	181	28	26	25
27	22	21	27	23	25	26	27	305	181	26	26	25
28	22	21	26	23	25	26	27	306	182	26	26	25
29	22	21	27	23	25	26	27	330	182	26	26	25
30	21	20	27	23	---	26	27	380	181	27	26	24
31	21	---	27	23	---	26	---	416	---	29	26	---
TOTAL	645	615	765	757	703	766	792	4514	7984	2273	3980	772
MEAN	20.8	20.5	24.7	24.4	24.2	24.7	26.4	146	266	73.3	128	25.7
MAX	22	21	29	26	26	26	27	416	425	181	426	27
MIN	20	20	20	23	22	24	26	27	179	26	25	24
AC-FT	1280	1220	1520	1500	1390	1520	1570	8950	15840	4510	7890	1530
CAL YR 1983	TOTAL	18580	MEAN	50.9	MAX	702	MIN	20	AC-FT	36850		
WTR YR 1984	TOTAL	24566	MEAN	67.1	MAX	426	MIN	20	AC-FT	48730		

14314500 CLEARWATER RIVER ABOVE TRAP CREEK, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°14'40", long 122°17'10", in SW 1/4 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 mi². (See REMARKS.)

PERIOD OF RECORD.--October 1927 to December 1945, March 1946 to current year. Records since October 1983 are equivalent to earlier records if diversion to Clearwater No. 1 power canal is added to flow past station. 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. Records after September 1983 do not 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.

AVERAGE DISCHARGE.--55 years (1928-83), 173 ft³/s, 125,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 848 ft³/s Dec. 23, 1964, gage height, 7.19 ft; maximum gage height, 7.87 ft Dec. 23, 1964, log jam; minimum discharge, 0.08 ft³/s Sept. 21, 1977, result of beavers plugging release gate at diversion dam 900 ft upstream.

Combined flow, maximum discharge, 1,020 ft³/s Dec. 23, 1964; minimum daily, 91 ft³/s Nov. 4-6, 1931.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 310 ft³/s May 23, gage height, 5.06 ft; minimum, 3.1 ft³/s Oct. 6.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	5.8	5.9	18	7.1	16	37	33	43	26	6.3	5.9
2	4.6	5.9	6.0	16	6.3	13	34	34	38	27	6.2	5.9
3	4.3	5.8	5.9	17	6.0	11	32	47	35	26	6.1	5.9
4	3.6	6.1	5.9	20	6.0	10	33	45	52	26	6.1	5.9
5	3.4	5.7	5.9	22	6.1	9.8	33	42	54	26	6.1	6.0
6	4.3	7.3	6.2	23	6.2	9.8	31	38	56	23	6.1	6.0
7	5.4	6.0	6.8	25	6.0	9.9	31	36	78	19	6.1	6.0
8	5.5	5.7	6.3	25	6.1	10	38	38	58	16	6.0	5.9
9	5.7	5.7	6.2	22	6.9	11	31	40	49	14	6.0	5.9
10	5.7	6.0	6.9	23	6.5	14	34	42	40	13	5.9	5.9
11	5.5	6.2	6.3	20	6.5	15	29	56	36	14	5.9	5.8
12	5.5	6.1	6.2	17	23	15	32	60	38	12	6.0	5.7
13	5.5	6.0	6.9	14	74	26	27	63	38	11	5.9	5.8
14	5.5	5.9	50	13	44	27	29	209	36	9.7	5.9	5.8
15	5.5	5.9	116	13	38	26	34	289	39	9.8	5.9	5.8
16	5.5	6.1	70	12	32	25	38	276	42	10	5.9	5.7
17	5.5	8.1	52	12	25	24	38	269	38	9.9	5.9	5.7
18	5.5	6.2	42	12	23	21	40	267	36	9.1	6.1	5.7
19	5.5	6.6	37	11	21	24	41	272	36	7.8	6.1	5.7
20	5.5	6.5	28	10	23	28	36	283	39	7.1	6.1	5.8
21	5.5	6.0	23	8.1	25	35	31	279	36	6.9	6.1	5.7
22	5.6	5.9	22	6.9	20	30	30	274	29	6.8	6.1	5.7
23	5.6	6.1	22	6.6	18	30	31	303	30	6.7	6.1	5.8
24	5.5	8.5	22	16	19	31	34	184	36	6.7	6.1	5.7
25	5.5	6.5	22	14	49	34	33	44	41	6.6	6.0	5.7
26	5.5	6.1	20	11	19	61	31	46	41	6.5	6.0	5.7
27	5.5	5.9	14	9.1	13	46	29	44	38	6.5	5.9	5.7
28	5.5	5.9	13	8.5	12	46	26	48	42	6.4	5.9	5.7
29	5.5	5.9	17	8.2	11	42	26	66	41	6.3	5.9	5.7
30	5.5	5.9	35	7.9	---	39	28	76	29	6.3	6.0	5.7
31	5.7	---	23	7.4	---	39	---	57	---	6.3	6.2	---
TOTAL	163.2	186.3	709.4	448.7	558.7	778.5	977	3860	1244	388.4	186.9	173.9
MEAN	5.26	6.21	22.9	14.5	19.3	25.1	32.6	125	41.5	12.5	6.03	5.80
MAX	5.7	8.5	116	25	74	61	41	303	78	27	6.3	6.0
MIN	3.4	5.7	5.9	6.6	6.0	9.8	26	33	29	6.3	5.9	5.7
AC-FT	324	370	1410	890	1110	1540	1940	7660	2470	770	371	345
CAL YR 1983	TOTAL	11367.8	MEAN	31.1	MAX	324	MIN	2.6	AC-FT	22550		
WTR YR 1984	TOTAL	9675.0	MEAN	26.4	MAX	303	MIN	3.4	AC-FT	19190		

UMPUQUA RIVER BASIN

14316000 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 mi² (see REMARKS).

PERIOD OF RECORD.--October 1947 to current year. Records since October 1983 are equivalent to earlier records if diversion to Fish Creek power canal is added to flow past station. 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. Records given herein do not 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.

AVERAGE DISCHARGE.--36 years (1947-83), 237 ft³/s, 46.78 in/yr, 171,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 12,100 ft³/s Dec. 22, 1964, gage height, 13.9 ft, from floodmark; minimum, 2.3 ft³/s Sept. 25, 1957.

Combined flow, maximum discharge, 12,100 ft³/s Dec. 22, 1964; minimum daily, 19 ft³/s July 30, 1979, result of diversion dam manipulation.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 2,230 ft³/s Dec. 15, gage height, 6.97 ft; minimum, 5.1 ft³/s Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	35	39	108	399	76	201	207	191	465	149	41	23		
2	11	27	133	317	70	216	185	258	439	136	37	12		
3	27	29	121	332	66	182	165	512	413	124	34	10		
4	22	91	93	404	66	155	165	412	571	114	33	13		
5	12	23	68	428	70	140	170	326	597	104	31	18		
6	7.9	151	166	409	71	141	154	267	647	94	32	28		
7	7.5	66	522	386	68	143	161	236	858	80	34	15		
8	7.3	31	438	348	66	155	278	247	626	69	32	13		
9	22	25	370	286	73	184	232	264	493	62	31	13		
10	10	56	473	271	64	207	245	245	408	52	29	15		
11	7.1	92	370	250	66	210	212	399	357	44	27	15		
12	6.8	80	286	207	370	189	250	417	338	58	26	14		
13	10	86	391	175	1400	287	241	415	341	38	25	13		
14	11	58	1090	147	703	318	272	452	330	33	23	13		
15	6.6	137	1780	125	492	291	337	350	340	31	22	15		
16	6.7	161	929	106	388	271	334	292	333	30	20	12		
17	6.4	381	617	98	306	246	291	265	303	28	19	14		
18	7.4	227	468	78	252	217	277	258	281	26	18	16		
19	6.2	278	411	70	225	257	255	296	269	24	17	15		
20	6.6	295	335	64	260	321	225	342	285	22	15	24		
21	8.0	185	277	73	274	353	207	305	270	21	17	17		
22	16	128	227	81	231	312	195	281	225	20	21	16		
23	23	171	215	74	206	298	190	463	221	21	20	19		
24	6.7	484	225	115	189	273	180	372	239	27	19	17		
25	5.9	336	243	149	160	267	154	332	249	26	18	15		
26	6.3	228	279	139	135	455	129	357	240	26	16	14		
27	6.1	176	228	118	125	416	111	337	223	25	19	13		
28	6.1	146	198	104	121	351	97	386	220	23	23	15		
29	6.8	121	329	93	114	297	85	585	218	21	22	19		
30	11	114	712	85	---	251	93	654	174	29	24	19		
31	29	---	534	81	---	227	---	534	---	40	44	---		
TOTAL	361.4	4422	12636	6012	6707	7831	6097	11050	10973	1597	789	475		
MEAN	11.7	147	408	194	231	253	203	356	366	51.5	25.5	15.8		
MAX	35	484	1780	428	1400	455	337	654	858	149	44	28		
MIN	5.9	23	68	64	64	140	85	191	174	20	15	10		
CFSH	.17	2.14	5.93	2.82	3.36	3.68	2.95	5.17	5.32	.75	.37	.23		
IN.	.20	2.39	6.83	3.25	3.63	4.23	3.30	5.97	5.93	.86	.43	.26		
AC-FT	717	8770	25060	11920	13300	15530	12090	21920	21760	3170	1560	942		
CAL YR 1983	TOTAL	75962.4	MEAN	208	MAX	1780	MIN	5.9	CFSH	3.02	IN.	41.07	AC-FT	150700
WTR YR 1984	TOTAL	68950.4	MEAN	188	MAX	1780	MIN	5.9	CFSH	2.73	IN.	37.28	AC-FT	136800

UMPQUA RIVER BASIN

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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 mi².

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.--35 years, 1,521 ft³/s, 1,102,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,700 ft³/s Dec. 22, 1964, gage height, 19.1 ft, from floodmark, from rating curve extended above 7,200 ft³/s on basis of slope-area measurement of peak flow; minimum, 370 ft³/s Sept. 30, 1981; minimum daily, 565 ft³/s Sept. 13, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,910 ft³/s Dec. 14, gage height, 11.75 ft; minimum, 768 ft³/s Oct. 3, 4; minimum daily, 771 ft³/s Oct. 4.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	810	1080	1620	2710	1660	2160	2260	2180	2600	1790	1210	1010
2	796	1110	1800	2450	1460	2360	2190	2440	2480	1790	1240	989
3	788	948	1820	2480	1590	2130	2070	2950	2410	1830	1200	983
4	771	1300	1640	2820	1540	1960	2070	2940	2790	1750	1150	1010
5	980	1130	1580	2900	1540	1860	2010	2610	2900	1630	1220	991
6	1040	1390	1790	2800	1540	1860	1870	2360	3110	1680	1140	948
7	1030	1170	3250	2720	1550	1960	1890	2200	4390	1730	1200	933
8	1000	1080	2610	2560	1550	2050	2470	2200	3780	1670	1100	1040
9	1020	1090	2310	2360	1520	2030	2310	2230	3280	1500	932	1050
10	1020	1200	2760	2310	1540	2080	2490	2200	3000	1440	956	1020
11	1020	1340	2410	2360	1500	2100	2420	2430	2720	1450	1060	1050
12	1000	1240	2120	2240	2320	2040	2430	2600	2590	1450	1070	986
13	958	1410	3070	2130	6330	2140	2380	2620	2630	1440	1060	989
14	962	1330	6130	1890	3940	2280	2370	2800	2500	1380	1010	1010
15	973	1400	7810	1820	2980	2090	2550	2640	2520	1320	1000	987
16	999	1420	4800	1750	2760	2230	2580	2420	2440	1370	1020	996
17	1040	1810	3660	1650	2450	2250	2330	2390	2380	1380	1070	1000
18	1000	1700	3150	1600	2290	2110	2260	2310	2260	1330	1140	1010
19	957	1740	3180	1600	2230	2270	2290	2260	2200	1340	1130	980
20	978	2000	2780	1590	2410	2590	2170	2480	2190	1310	1060	981
21	975	1690	2470	1600	2530	2820	2160	2390	2240	1250	1050	940
22	960	1570	2220	1690	2310	2660	2070	2310	2080	1240	1080	964
23	890	1630	2090	1810	2100	2490	2000	2830	2020	1200	1110	1030
24	1010	2740	2050	2180	2060	2390	2010	2680	2030	1250	1090	1080
25	1010	2110	2040	2430	2040	2370	1960	2560	2080	1250	1060	1010
26	977	1830	2240	2380	1970	4270	1850	2660	1970	1220	1060	993
27	971	1740	2020	2140	1930	3710	1760	2580	2000	1200	991	1010
28	948	1720	1880	1980	1860	3030	1680	2620	1980	1020	1020	1020
29	922	1630	2270	1860	1860	2680	1770	2880	1980	1030	963	1040
30	940	1580	3630	1810	---	2440	1780	3110	1900	1010	990	1020
31	1030	---	3270	1710	---	2340	---	2840	---	1160	1020	---
TOTAL	29775	45128	86470	66330	63360	73750	64450	78720	75450	43410	33402	30070
MEAN	960	1504	2789	2140	2185	2379	2148	2539	2515	1400	1077	1002
MAX	1040	2740	7810	2900	6330	4270	2580	3110	4390	1830	1240	1080
MIN	771	948	1580	1590	1460	1860	1680	2180	1900	1010	932	933
AC-FT	59060	89510	171500	131600	125700	146300	127800	156100	149700	86100	66250	59640
CAL YR 1983	TOTAL	645627	MEAN	1769	MAX	7810	MIN	771	AC-FT	1281000		
WTR YR 1984	TOTAL	690315	MEAN	1886	MAX	7810	MIN	771	AC-FT	1369000		

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 mi².

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 Federal Highway Administration). October 1955 to June 1956, nonrecording gage at site 100 ft upstream at same datum.

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

AVERAGE DISCHARGE.--28 years, 750 ft³/s, 44.87 in/yr, 543,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft³/s Dec. 22, 1964, gage height, 25.6 ft, from floodmark, from rating curve extended above 13,000 ft³/s on basis of slope-area measurement at 17.96 ft; minimum, 30 ft³/s Sept. 15-17, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	0230	8,850	9.68	Dec. 30	0600	8,890	9.70
Dec. 14	2400	15,500	12.97	Feb. 13	1100	*19,100	*14.67

Minimum, 45 ft³/s Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	49	166	1200	2070	564	1890	1210	2550	381	204	86	75		
2	48	210	1750	1490	499	1950	1190	2990	347	194	85	67		
3	46	234	1590	1450	453	1390	1020	3590	318	184	85	63		
4	46	392	1090	1640	422	1100	904	2380	722	177	83	60		
5	46	247	932	1410	400	963	892	1580	1390	169	82	61		
6	46	812	3060	1180	394	980	871	1250	2000	162	80	84		
7	45	697	7060	1030	360	957	843	1030	4140	156	79	80		
8	45	385	4450	899	338	913	2680	920	2460	150	77	82		
9	53	305	2550	760	367	871	2320	845	1610	146	76	71		
10	60	298	3630	801	411	847	3300	742	1290	142	74	64		
11	66	383	2630	1490	561	816	2660	933	1010	137	73	61		
12	57	537	2130	1240	2510	726	2520	1020	812	133	71	59		
13	51	1210	3730	976	13200	893	2250	909	695	129	71	58		
14	52	1130	9980	808	4640	1660	2020	906	607	125	70	58		
15	53	1230	8780	683	2810	1710	1860	785	546	123	70	60		
16	51	1090	3430	595	2890	1670	1380	713	491	119	68	58		
17	49	2570	2150	527	1870	2000	1090	648	437	115	67	57		
18	49	2040	1660	478	1380	1910	979	595	398	111	67	56		
19	49	2000	1860	440	1200	1960	1040	580	370	109	65	54		
20	48	2580	1530	404	1810	1990	1160	600	384	105	64	56		
21	46	1460	1230	521	2150	2530	1230	539	428	104	64	56		
22	59	1030	997	1020	1700	2250	1030	507	373	104	62	53		
23	123	1580	840	1310	1340	1700	884	885	331	102	61	59		
24	83	4950	784	2140	1470	1310	784	758	313	100	61	61		
25	64	2960	868	2410	1870	1170	710	646	293	101	61	57		
26	57	1680	1460	1910	1520	5020	658	641	275	98	60	56		
27	53	1250	1190	1350	1280	3480	628	579	258	95	58	54		
28	51	1340	1000	1040	1530	2070	610	550	244	93	57	53		
29	49	1060	1610	858	1470	1550	576	570	252	92	57	52		
30	58	886	6220	732	---	1280	713	549	222	89	58	52		
31	133	---	3430	640	---	1130	---	448	---	87	74	---		
TOTAL	1785	36712	84821	34302	51409	50686	40012	32238	23397	3955	2166	1837		
MEAN	57.6	1224	2736	1107	1773	1635	1334	1040	780	128	69.9	61.2		
MAX	133	4950	9980	2410	13200	5020	3300	3590	4140	204	86	84		
MIN	45	166	784	404	338	726	576	448	222	87	57	52		
CFSM	.25	5.39	12.1	4.88	7.81	7.20	5.88	4.58	3.44	.56	.31	.27		
IN.	.29	6.02	13.90	5.62	8.42	8.31	6.56	5.28	3.83	.65	.35	.30		
AC-FT	3540	72820	168200	68040	102000	100500	79360	63940	46410	7840	4300	3640		
CAL YR 1983	TOTAL	350101	MEAN	959	MAX	9980	MIN	45	CFSM	4.22	IN.	57.37	AC-FT	694400
WTR YR 1984	TOTAL	363320	MEAN	993	MAX	13200	MIN	45	CFSM	4.37	IN.	59.54	AC-FT	720600

UMPQUA RIVER BASIN

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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 mi².

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. No regulation. Small diversions for rural domestic use and irrigation above station.

AVERAGE DISCHARGE.--30 years, 478 ft³/s, 36.67 in/yr, 346,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft³/s Dec. 11, 1956, gage height, 19.63 ft, from rating curve extended above 5,900 ft³/s on basis of slope-area measurement at gage height 16.55 ft; minimum, 14 ft³/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 ft³/s, from rating curve extended above 5,900 ft³/s on basis of slope-area measurement at gage height 16.55 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	0100	*11,100	14.45	Feb. 13	1130	*11,100	*14.49
Minimum, 23 ft ³ /s Sept. 29, 30.							

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	32	96	662	1100	328	1220	1120	1690	204	133	49	45		
2	30	112	1110	835	295	1310	1100	1700	193	126	52	36		
3	29	101	1170	718	269	953	898	1830	184	118	51	32		
4	29	179	840	680	249	761	776	1490	407	112	48	29		
5	30	129	849	615	233	665	777	1180	681	107	47	29		
6	31	427	2530	546	224	637	733	994	972	103	46	38		
7	29	440	4110	492	208	619	714	811	2830	99	43	40		
8	29	258	2640	454	198	598	2250	685	1870	95	41	43		
9	31	192	1680	398	221	574	1900	593	1190	92	40	35		
10	35	166	2210	432	233	575	2430	517	906	90	39	32		
11	37	231	1770	728	314	560	1870	590	693	86	38	31		
12	33	298	1500	643	785	499	1500	556	551	84	38	29		
13	30	1030	2890	536	7230	632	1310	497	456	83	37	28		
14	30	742	7360	456	3210	881	1220	486	386	79	37	27		
15	30	567	7080	396	2100	835	1130	466	334	76	36	28		
16	29	539	2850	350	2000	1100	894	442	296	73	35	27		
17	30	1350	1780	312	1320	1400	736	397	266	70	34	26		
18	30	1200	1370	286	973	1140	688	362	241	67	33	25		
19	29	1210	1780	267	877	1230	721	336	220	65	33	25		
20	29	1850	1420	248	1260	1370	803	338	244	62	33	27		
21	28	1190	1070	354	1950	1580	771	304	305	62	32	34		
22	33	876	811	609	1440	1360	660	294	249	62	31	27		
23	71	1340	646	754	1100	1080	583	481	214	60	30	31		
24	49	3560	684	1020	1380	864	528	408	192	58	32	31		
25	38	2520	1190	1220	1840	902	501	359	175	66	32	28		
26	34	1450	1650	1030	1250	4440	481	329	164	65	30	26		
27	32	1000	1230	771	987	3170	455	294	156	59	28	26		
28	31	858	941	607	1040	1830	436	272	148	57	27	25		
29	30	691	1120	503	951	1380	419	257	165	57	27	24		
30	37	568	2380	430	---	1100	666	244	146	53	28	24		
31	86	---	1600	374	---	1010	---	224	---	51	40	---		
TOTAL	1081	25170	60923	18164	34465	36275	29070	19426	15038	2470	1147	908		
MEAN	34.9	839	1965	586	1188	1170	969	627	501	79.7	37.0	30.3		
MAX	86	3560	7360	1220	7230	4440	2430	1830	2830	133	52	45		
MIN	28	96	646	248	198	499	419	224	146	51	27	24		
CFSM	.20	4.74	11.1	3.31	6.71	6.61	5.47	3.54	2.83	.45	.21	.17		
IN.	.23	5.29	12.80	3.82	7.24	7.62	6.11	4.08	3.16	.52	.24	.19		
AC-FT	2140	49920	120800	36030	68360	71950	57660	38530	29830	4900	2280	1800		
CAL YR 1983	TOTAL	234847	MEAN	643	MAX	7360	MIN	28	CFSM	3.63	IN.	49.36	AC-FT	465800
WTR YR 1984	TOTAL	244137	MEAN	667	MAX	7360	MIN	24	CFSM	3.77	IN.	51.31	AC-FT	484200

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 mi².

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. WDR OR-72-1: 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.--41 years, 3,794 ft³/s, 38.34 in/yr, 2,749,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 150,000 ft³/s Dec. 22, 1964, gage height, 34.2 ft, from floodmark; minimum, 374 ft³/s Sept. 18, 1983; minimum daily, 578 ft³/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 ft³/s. Flood of Nov. 23, 1953, reached a stage of 28.4 ft, from floodmarks, present site and datum, discharge, 93,300 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2130	21,600	10.48	Dec. 30	1230	24,200	11.24
Dec. 7	0630	29,800	12.78	Feb. 13	1630	*62,700	*21.24
Dec. 15	0600	52,600	18.64	Mar. 26	2030	25,900	11.69

Minimum, 526 ft³/s Oct. 13, 14; minimum daily, 985 ft³/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1200	1570	5090	10200	3590	6970	6630	7870	3950	2660	1470	1310		
2	1040	1780	6480	7650	3310	8760	6570	11400	3700	2550	1530	1280		
3	1020	1750	7480	6540	3060	7090	5990	12000	3540	2490	1540	1230		
4	1000	1860	6030	6910	3030	5920	5480	11200	4100	2520	1490	1210		
5	985	2340	5560	6690	2910	5310	5360	8470	6570	2380	1480	1230		
6	1210	2180	10500	6190	2870	5000	5180	7160	7460	2220	1500	1250		
7	1280	4240	26000	5740	2800	4970	5010	6100	15300	2260	1410	1240		
8	1260	2860	18700	5360	2750	5000	11600	5450	12800	2290	1460	1220		
9	1250	2220	11600	4800	2800	4850	12200	5160	9040	2210	1350	1310		
10	1290	2060	12700	4640	2930	4760	13600	4870	7500	1970	1190	1300		
11	1300	2340	11600	6120	3100	4860	12900	4950	6290	1940	1220	1250		
12	1430	2770	9830	6140	5530	4640	10500	5670	5430	1950	1330	1280		
13	1220	5250	13000	5360	45800	4770	9880	5360	4990	1920	1330	1220		
14	1090	5660	28600	4710	25700	6870	8430	5330	4630	1910	1320	1220		
15	1220	4770	42200	4200	14000	7160	8240	5210	4380	1810	1260	1250		
16	1220	4590	19900	3890	13400	7430	7230	4820	4150	1760	1250	1220		
17	1250	8100	12500	3550	10000	9960	6250	4460	3910	1760	1250	1220		
18	1350	9040	9400	3310	7780	9160	5680	4260	3720	1760	1310	1220		
19	1290	7350	9890	3160	6720	8410	5930	4050	3480	1730	1370	1230		
20	1240	11600	8930	2980	7670	9230	6160	4180	3470	1720	1360	1210		
21	1250	8250	7440	3210	11900	10900	6120	4120	3700	1670	1290	1210		
22	1260	6160	6130	4000	10100	10500	5640	3920	3620	1610	1290	1180		
23	1350	6030	5280	5770	7900	8560	5100	4830	3230	1600	1300	1200		
24	1310	17600	4990	6040	8740	7160	4770	5050	3140	1560	1340	1260		
25	1410	16300	5370	8400	11400	6380	4580	4620	3090	1650	1320	1320		
26	1390	9620	7650	7920	8810	17100	4410	4480	3030	1630	1300	1230		
27	1140	6890	7430	6380	7050	18500	4010	4350	2910	1580	1290	1210		
28	1150	6100	6300	5410	6810	11600	3900	4170	2890	1530	1200	1220		
29	1200	5420	6840	4690	6680	9110	3760	4270	2880	1360	1240	1230		
30	1200	4690	18100	4270	---	7530	4280	4570	2860	1350	1170	1250		
31	1350	---	14800	3910	---	6880	---	4390	---	1340	1240	---		
TOTAL	38155	171390	366320	168140	249140	245340	205390	176740	149760	58690	41400	37210		
MEAN	1231	5713	11820	5424	8591	7914	6846	5701	4992	1893	1335	1240		
MAX	1430	17600	42200	10200	45800	18500	13600	12000	15300	2660	1540	1320		
MIN	985	1570	4990	2980	2750	4640	3760	3920	2860	1340	1170	1180		
CFSM	.92	4.25	8.79	4.04	6.39	5.89	5.09	4.24	3.71	1.41	.99	.92		
IN.	1.06	4.74	10.14	4.65	6.90	6.79	5.68	4.89	4.15	1.62	1.15	1.03		
AC-FT	75680	340000	726600	333500	494200	486600	407400	350600	297000	116400	82120	73810		
CAL YR 1983	TOTAL	1859392	MEAN	5094	MAX	53500	MIN	837	CFSM	3.79	IN.	51.47	AC-FT	3688000
WTR YR 1984	TOTAL	1907675	MEAN	5212	MAX	45800	MIN	985	CFSM	3.88	IN.	52.80	AC-FT	3784000

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, 1984.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 10; minimum, 0.0°C Dec. 23.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	10.5	11.5	11.0	7.0	6.5	6.0	6.0	5.5	5.0	7.5	7.0
2	12.0	10.5	11.5	11.0	8.0	7.0	6.5	6.0	6.0	4.5	7.5	6.5
3	13.0	11.0	11.5	11.0	7.5	6.5	7.0	6.5	5.0	4.0	7.0	6.0
4	14.0	12.0	11.0	10.5	7.0	6.5	7.5	7.0	5.0	4.5	7.0	6.0
5	13.5	12.5	10.5	10.0	6.5	6.5	7.5	7.0	6.0	5.0	7.5	6.0
6	13.0	12.0	10.5	9.5	7.5	6.5	7.0	6.5	6.5	6.0	7.5	6.0
7	12.5	11.0	---	---	8.0	7.5	6.5	6.5	6.5	6.0	8.5	7.0
8	12.0	11.5	---	---	8.0	7.5	7.0	6.5	7.0	6.5	9.0	7.5
9	11.5	11.5	8.5	---	8.0	8.0	7.0	6.0	7.0	6.5	9.5	8.0
10	13.0	11.5	9.0	8.0	8.5	8.0	7.0	6.5	6.5	6.0	9.5	8.5
11	13.5	12.5	9.5	9.0	8.0	7.0	7.5	6.5	6.5	6.0	8.5	7.5
12	14.0	12.5	9.5	8.5	7.0	6.5	6.5	5.5	8.0	6.0	8.5	7.0
13	13.0	12.0	8.5	8.0	8.0	7.0	5.5	4.0	8.0	6.5	8.5	7.5
14	12.0	11.5	8.0	7.5	9.0	8.0	4.0	3.0	6.5	6.5	8.5	7.5
15	11.5	10.5	8.0	7.5	9.0	8.0	3.5	2.5	6.5	6.5	8.0	7.5
16	10.5	10.0	8.5	8.0	8.0	8.0	3.0	2.0	6.5	6.0	7.5	6.5
17	11.0	10.0	9.0	8.5	8.0	8.0	2.5	1.5	6.5	6.0	7.5	6.5
18	11.5	10.5	8.5	8.5	8.5	8.0	3.0	2.0	6.5	6.0	7.5	7.0
19	12.0	10.5	8.5	8.0	8.0	6.5	3.5	3.0	7.0	6.5	9.0	7.5
20	11.5	10.5	8.0	7.0	6.5	5.0	4.0	3.5	7.0	6.5	9.0	8.5
21	11.5	10.5	7.5	7.0	5.0	3.0	5.5	4.0	7.0	6.0	8.5	7.5
22	11.5	11.0	7.0	6.5	3.0	1.5	5.5	5.5	6.0	6.0	8.5	7.5
23	11.5	10.5	7.5	6.5	1.5	.0	6.5	5.5	6.0	6.0	9.0	8.0
24	11.5	10.5	8.5	7.5	2.0	.5	7.5	6.5	6.0	6.0	9.0	8.0
25	11.5	10.5	8.0	7.0	4.0	2.0	7.5	7.0	6.5	6.0	8.0	7.5
26	11.0	9.5	7.5	7.0	5.0	4.0	7.5	6.0	6.5	6.0	8.5	7.5
27	10.5	9.5	7.5	7.0	5.5	5.0	6.0	5.5	7.0	6.5	8.5	7.5
28	10.0	9.5	8.0	7.5	5.0	5.0	6.0	5.5	7.5	6.5	8.5	8.0
29	10.0	10.0	7.5	6.5	6.5	5.0	6.0	5.5	7.5	7.0	8.5	7.0
30	10.5	10.0	6.5	6.5	7.0	6.5	6.0	4.5	---	---	8.0	7.0
31	11.0	10.0	---	---	6.5	6.0	5.0	5.0	---	---	7.5	7.0
MONTH	14.0	9.5	---	---	9.0	.0	7.5	1.5	8.0	4.0	9.5	6.0

UMPQUA RIVER BASIN

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

UMPOUA RIVER BASIN

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14319900 CALAPOOYA CREEK AT NONPAREIL, OR

LOCATION.--Lat 43°25'04", long 123°09'13", in SW1/4 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 mi².

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 July 12 to September 30, which are fair. Only minor diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--8 years, 211 ft³/s, 32.34 in/yr, 152,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,640 ft³/s Dec. 6, 1981, gage height, 11.16 ft; minimum, 5.3 ft³/s Aug. 17-19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	0100	2,790	7.24	Feb. 13	1100	*4,020	*8.47
Minimum, 9.2 ft ³ /s Aug. 27-29.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	58	284	515	143	405	367	475	94	69	21	17
2	16	60	351	383	130	429	334	501	91	66	23	14
3	16	49	372	312	122	355	297	687	89	61	23	13
4	16	108	316	263	115	301	270	611	168	57	22	11
5	16	70	324	230	108	264	269	474	324	54	21	11
6	16	166	965	203	106	238	245	405	550	51	21	14
7	16	172	1700	185	99	218	271	337	1100	49	19	17
8	16	111	1070	172	95	202	1040	286	770	47	18	18
9	16	89	709	153	108	188	978	247	569	45	17	18
10	21	77	575	179	114	184	1220	218	509	43	17	18
11	24	114	485	298	166	172	968	224	387	41	17	17
12	20	201	424	272	513	164	779	194	301	41	18	16
13	18	558	396	237	3070	219	646	174	247	40	18	15
14	18	375	1200	208	1460	353	539	165	207	39	17	14
15	18	248	1990	182	950	334	461	165	177	37	17	14
16	18	244	986	160	862	391	372	162	153	36	16	13
17	18	649	632	142	609	636	311	147	137	34	15	12
18	19	855	467	132	452	556	311	135	125	33	15	11
19	18	605	440	125	375	456	331	128	114	31	16	11
20	18	918	392	118	468	517	355	130	127	31	15	12
21	18	669	335	133	982	811	317	117	174	30	14	13
22	20	469	277	178	760	653	278	121	142	29	14	13
23	34	523	236	209	554	496	245	181	121	26	14	14
24	24	1060	226	218	818	379	222	155	106	25	12	14
25	20	1130	267	280	1120	340	212	144	94	26	11	12
26	18	723	392	293	720	943	207	146	87	29	11	11
27	17	484	377	256	520	1050	192	129	85	26	9.6	11
28	17	381	337	224	433	705	175	120	78	24	9.9	11
29	16	308	383	199	369	563	179	111	92	24	9.6	11
30	20	265	958	180	---	455	242	106	77	23	9.7	10
31	46	---	729	160	---	414	---	103	---	21	14	---
TOTAL	605	11739	18595	6799	16341	13391	12633	7298	7295	1188	494.8	406
MEAN	19.5	391	600	219	563	432	421	235	243	38.3	16.0	13.5
MAX	46	1130	1990	515	3070	1050	1220	687	1100	69	23	18
MIN	16	49	226	118	95	164	175	103	77	21	9.6	10
CFSM	.22	4.41	6.77	2.47	6.35	4.88	4.75	2.65	2.74	.43	.18	.15
IN.	.25	4.93	7.81	2.85	6.86	5.62	5.30	3.06	3.06	.50	.21	.17
AC-FT	1200	23280	36880	13490	32410	26560	25060	14480	14470	2360	981	805

CAL YR 1983	TOTAL	102924	MEAN	282	MAX	3230	MIN	16	CFSM	3.18	IN.	43.21	AC-FT	204100
WTR YR 1984	TOTAL	96784.8	MEAN	264	MAX	3070	MIN	9.6	CFSM	2.98	IN.	40.64	AC-FT	192000

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 mi².

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.—79 years, 7,549 ft³/s, 27.83 in/yr, 5,469,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 265,000 ft³/s Dec. 23, 1964, gage height, 51.95 ft, from floodmarks; minimum observed, 640 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	1330	63,800	21.63	Feb. 13	2400	*145,000	*35.90
Dec. 15	1000	104,000	29.17				

Minimum, 1,090 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1220	1640	9590	22600	6430	14200	13100	8680	6000	3560	1510	1300		
2	1350	1920	11300	17400	5960	16300	12900	16700	5500	3320	1610	1370		
3	1260	2270	13800	14200	5450	15400	12100	17900	5000	3180	1670	1380		
4	1200	2490	12600	13300	5230	12800	11000	19900	5000	3090	1680	1380		
5	1200	2720	11000	12700	5000	11200	10500	15600	6000	3070	1640	1370		
6	1160	3310	18100	12000	4870	10100	10200	12900	9000	2880	1620	1370		
7	1280	4220	59700	11000	4750	9660	9720	11100	10000	2720	1660	1360		
8	1400	5400	51400	10200	4580	9300	16600	9750	19000	2730	1560	1360		
9	1380	4190	33100	9410	4560	9030	27300	8910	16000	2750	1570	1320		
10	1410	3450	29200	8560	5040	8680	26100	8300	14000	2580	1490	1400		
11	1430	3550	27400	9250	5980	8530	30500	7850	8440	2260	1330	1420		
12	1450	7130	26800	10700	7400	8390	23400	8720	8940	2230	1310	1390		
13	1530	7640	25500	9690	78500	8290	20600	8850	7710	2220	1410	1390		
14	1490	15900	53200	8740	99800	12400	17300	8290	7030	2180	1440	1350		
15	1240	11300	97800	7710	40700	16500	15600	8360	6360	2160	1430	1320		
16	1360	9130	54500	7010	35400	16300	14100	7860	6030	2070	1370	1370		
17	1370	11400	32500	6430	28700	23200	12300	7150	5630	2000	1340	1340		
18	1380	23100	23700	5950	21100	23800	10900	6650	5310	1970	1350	1340		
19	1470	18700	21300	5630	16800	19300	10500	6260	4980	1950	1380	1350		
20	1450	22200	20600	5370	15300	18000	10700	6040	4710	1900	1440	1350		
21	1410	25000	17900	5370	22400	18900	10600	6160	4760	1880	1440	1320		
22	1440	17100	13300	5850	25900	19800	10100	5990	5050	1840	1380	1310		
23	1460	13800	11300	8200	20400	16800	9140	6030	4760	1790	1350	1300		
24	1530	25200	10300	9620	19700	14100	8380	7370	4350	1770	1370	1310		
25	1540	45300	10800	11900	35200	12200	7950	6890	4140	1740	1390	1400		
26	1650	27700	15900	13100	28500	17100	7740	6370	4030	1800	1400	1430		
27	1680	18300	19700	11700	20600	39600	7370	6250	3880	1790	1380	1390		
28	1470	13800	16800	9970	16800	25400	6750	5970	3780	1760	1370	1360		
29	1370	11700	15600	8720	15600	19000	6490	5810	3680	1710	1330	1350		
30	1470	10100	28500	7750	---	15400	6410	5940	3660	1550	1280	1360		
31	1530	---	38900	7040	---	13500	---	6190	---	1510	1280	---		
TOTAL	43580	369660	832090	307070	606650	483180	396350	274740	202730	69960	44780	40760		
MEAN	1406	12320	26840	9905	20920	15590	13210	8863	6758	2257	1445	1359		
MAX	1680	45300	97800	22600	99800	39600	30500	19900	19000	3560	1680	1430		
MIN	1160	1640	9590	5370	4560	8290	6410	5810	3660	1510	1280	1300		
CFSM	.38	3.35	7.29	2.69	5.68	4.23	3.59	2.41	1.83	.61	.39	.37		
IN.	.44	3.73	8.40	3.10	6.13	4.88	4.00	2.78	2.05	.7	.45	.41		
AC-FT	86440	733200	1650000	609100	1203000	958400	786200	544900	402100	130000	88820	80850		
CAL YR 1983	TOTAL	3986120	MEAN	10920	MAX	129000	MIN	1070	CFSM	2.96	IN.	40.26	AC-FT	7906000
WTR YR 1984	TOTAL	3671550	MEAN	10030	MAX	99800	MIN	1160	CFSM	2.72	IN.	37.08	AC-FT	7283000

UMPOUA RIVER BASIN

545

14321000 UMPOUA 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, 26.0°C July 17; minimum, 1.0°C Dec. 25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	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)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 27...	1430	1700	93	7.5	12.5	10.8	K6	42	32	0	7.7
JAN 12...	1400	10600	76	7.2	7.5	12.0	--	140	29	0	7.0
MAR 15...	0915	16800	81	7.7	9.5	11.2	K1100	1000	32	0	7.4
MAY 09...	0900	9100	68	6.9	12.0	10.8	40	58	26	0	6.4
JUL 10...	1000	2480	71	7.9	21.5	8.8	--	--	24	0	6.1
SEP 06...	1000	1400	76	7.5	19.5	8.7	K6	1400	24	0	5.7
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 CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	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 27...	3.1	5.8	1.2	39	3.2	5.0	<.10	.020	<.10	.70	.12
JAN 12...	2.8	3.8	.70	30	4.0	2.8	<.10	.010	<.10	<.20	.06
MAR 15...	3.2	4.0	.70	38	4.7	2.5	<.10	.040	<.10	.30	.03
MAY 09...	2.4	3.5	.60	30	3.3	1.7	<.10	<.010	<.10	.20	.09
JUL 10...	2.2	4.0	.90	33	2.4	2.2	<.10	<.010	<.10	.40	.06
SEP 06...	2.4	4.9	1.2	36	2.6	2.9	<.10	.020	<.10	<.20	.15

UMPUA RIVER BASIN

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 27...	.090	.110	19	70	69	321	.80	--	--	--
JAN 12...	.020	.040	17	55	56	1570	8.4	10	286	83
MAR 15...	.010	.060	17	64	63	2900	30	49	2220	82
MAY 09...	.040	.050	17	57	53	1400	4.6	5	123	90
JUL 10...	.010	.010	17	52	55	348	1.4	--	--	--
SEP 06...	.010	.030	20	60	62	227	1.0	--	--	--
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 27...	10	1	15	<.5	<1	<1	<3	1	24	1
MAR 15...	60	<1	19	.6	<1	<1	<3	2	140	<1
MAY 09...	170	1	16	<.5	<1	2	<3	2	84	1
SEP 06...	20	1	15	<.5	<1	<1	<3	2	19	<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 27...	9	2	.1	<10	3	<1	3	65	<6	4
MAR 15...	<4	3	<.1	<10	4	<1	<1	53	<6	16
MAY 09...	5	3	.1	<10	<1	<1	<1	45	<6	33
SEP 06...	<4	<1	.1	<10	<1	<1	<1	50	<6	11

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	16.0	15.0	13.0	12.5	7.5	7.5	7.0	7.0	6.5	6.0	8.5	8.0
2	16.0	15.0	12.5	12.5	8.0	7.5	7.0	6.5	6.5	6.0	8.5	8.0
3	16.0	14.5	12.5	12.5	8.0	7.5	7.0	7.0	6.0	6.0	8.5	8.0
4	16.0	15.0	12.5	12.5	7.5	7.0	7.5	7.0	6.5	6.0	8.0	7.5
5	15.5	14.5	12.5	12.0	7.0	7.0	8.0	7.5	6.0	6.0	8.5	7.0
6	15.5	14.5	12.0	11.5	7.5	7.0	8.0	7.5	6.5	6.0	8.5	7.5
7	15.5	14.0	11.5	10.5	8.0	7.5	8.0	8.0	7.0	6.5	9.0	8.0
8	15.0	14.5	10.5	9.5	8.5	8.0	8.0	7.5	7.5	7.0	10.0	8.5
9	15.0	14.5	10.5	9.5	8.5	8.0	7.5	7.5	8.0	7.5	10.5	9.5
10	15.0	14.5	10.5	10.0	8.5	8.5	8.0	7.5	7.5	7.0	10.5	10.0
11	15.5	14.5	10.5	10.0	8.5	8.0	7.5	7.5	7.5	7.0	10.5	10.0
12	16.0	15.0	10.0	10.0	8.0	7.5	7.5	7.5	8.0	7.5	10.5	9.5
13	15.5	14.5	10.0	9.5	7.5	7.5	7.5	7.0	8.5	8.0	9.5	9.5
14	15.0	14.5	9.5	9.0	8.5	7.5	7.0	5.5	8.0	7.5	9.5	9.0
15	14.5	14.0	9.0	8.5	9.0	8.5	5.5	4.5	7.5	7.0	9.5	9.0
16	14.0	13.0	9.0	9.0	9.0	8.5	4.5	4.0	7.5	7.0	9.0	8.5
17	13.5	13.0	9.5	9.0	8.5	8.0	4.0	3.5	7.0	7.0	8.5	8.0
18	13.5	13.0	9.5	9.0	8.5	8.0	3.5	3.0	7.5	7.0	8.5	8.0
19	13.5	13.0	9.5	9.0	8.5	8.5	3.5	3.0	7.5	7.5	9.5	8.5
20	14.0	13.0	9.0	8.5	8.5	7.0	4.0	3.5	8.0	7.5	10.0	9.5
21	14.0	13.0	8.5	8.0	7.0	5.5	4.5	4.0	8.0	7.5	10.0	9.5
22	14.0	13.5	8.0	8.0	5.5	4.0	5.5	4.5	7.5	7.0	10.0	9.5
23	14.0	13.5	8.0	7.5	4.0	2.5	6.0	5.0	7.0	7.0	10.0	9.5
24	13.5	12.5	8.5	8.0	2.5	1.5	6.5	6.0	7.0	7.0	10.0	9.5
25	13.5	12.5	8.5	8.5	2.0	1.0	7.5	6.5	7.5	7.0	10.0	9.5
26	13.0	12.5	8.5	8.0	4.0	2.0	8.0	7.5	7.5	7.0	9.5	8.5
27	13.0	12.5	8.0	8.0	5.5	4.0	7.5	7.5	7.5	7.0	9.0	8.5
28	12.5	12.0	8.5	8.0	5.5	5.5	7.5	7.0	8.0	7.5	9.5	9.0
29	12.5	12.0	8.5	8.0	6.0	5.5	7.0	6.5	8.5	8.0	9.5	9.0
30	12.5	12.5	8.0	7.5	7.0	6.0	7.0	6.5	---	---	10.0	9.0
31	13.0	12.5	---	---	7.5	7.0	6.5	6.5	---	---	9.0	9.0
MONTH	16.0	12.0	13.0	7.5	9.0	1.0	8.0	3.0	8.5	6.0	10.5	7.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	9.5	8.5	11.5	11.5	17.0	15.5	22.0	20.0	24.0	22.5	21.0	20.0
2	9.5	8.5	11.5	10.5	16.0	15.5	22.5	20.5	22.5	21.5	22.0	20.0
3	10.0	9.0	11.5	10.5	15.5	14.5	23.0	21.0	23.0	21.0	22.0	20.0
4	10.5	9.5	11.0	10.5	15.0	14.5	24.0	22.0	23.0	21.5	21.5	20.0
5	10.5	10.0	10.5	10.5	14.5	14.0	24.0	22.5	22.5	21.5	21.0	20.0
6	10.5	9.5	11.5	9.5	14.0	12.5	23.5	22.0	22.5	20.5	20.5	19.5
7	10.5	10.0	12.5	10.0	12.5	11.0	23.0	21.5	23.5	21.0	21.0	19.5
8	10.0	9.5	12.5	11.5	11.5	10.5	23.0	21.0	24.5	22.0	22.0	20.0
9	9.5	8.0	12.5	12.0	12.0	11.0	23.0	21.0	25.0	23.0	22.0	21.0
10	8.5	8.0	12.5	11.5	12.5	11.5	23.5	21.0	25.0	23.5	21.0	20.0
11	8.5	8.5	13.5	12.5	14.0	11.5	23.0	21.5	24.5	23.5	20.5	19.5
12	9.0	8.5	14.5	13.5	15.0	13.0	23.0	21.0	24.0	22.5	20.0	18.5
13	10.0	9.0	14.5	14.0	15.5	14.5	23.5	21.5	23.5	21.5	20.0	18.5
14	11.5	10.0	14.0	13.5	17.0	15.0	24.0	22.0	23.5	21.5	20.0	18.5
15	11.5	11.0	13.5	12.5	18.0	16.0	24.5	22.5	23.5	21.5	19.0	18.0
16	11.5	10.5	13.5	12.0	18.5	17.0	25.5	23.0	24.0	22.0	20.0	18.5
17	11.0	10.0	14.0	13.0	19.0	17.5	26.0	24.0	24.5	22.5	21.0	19.0
18	11.5	10.0	14.5	13.5	19.0	17.5	25.5	24.0	24.0	22.5	21.0	19.5
19	11.5	10.5	14.5	14.5	19.5	17.5	25.0	23.0	23.5	22.0	20.5	19.5
20	11.5	10.5	15.5	14.0	19.0	18.0	24.5	23.0	23.5	21.5	20.5	20.0
21	11.0	10.5	15.0	14.0	18.0	17.0	24.0	22.5	23.5	21.5	20.0	18.5
22	12.0	10.5	14.5	13.5	18.5	16.5	24.0	22.0	23.0	22.0	19.0	17.5
23	12.5	11.0	14.5	13.5	19.0	16.5	24.0	22.0	23.0	21.5	18.0	17.0
24	12.5	11.5	14.0	13.5	20.0	17.5	25.0	22.5	23.0	21.5	17.5	16.0
25	12.0	11.5	14.0	13.5	21.5	18.5	24.5	23.0	22.5	21.0	17.0	15.5
26	11.5	10.5	15.5	14.0	20.5	20.0	23.5	21.5	23.0	21.0	16.5	15.0
27	11.5	10.5	16.0	14.5	21.5	19.5	23.5	22.0	23.0	21.5	16.5	15.0
28	11.0	10.5	17.0	15.0	22.0	20.0	23.5	22.0	23.0	21.0	16.5	15.0
29	11.5	10.5	19.0	16.5	21.5	20.5	24.0	21.5	23.0	21.5	16.5	15.5
30	12.0	11.5	18.0	17.0	21.5	19.5	24.5	22.5	22.5	21.5	16.5	15.5
31	---	---	17.5	16.0	---	---	25.0	23.0	21.5	20.5	---	---
MONTH	12.5	8.0	19.0	9.5	22.0	10.5	26.0	20.0	25.0	20.5	22.0	15.0
YEAR	26.0	1.0										

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 mi².

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 ft³/s is diverted to the Coos Bay-North Bend water treatment plant, maximum capacity, 10.8 ft³/s.

AVERAGE DISCHARGE.--9 years, 11.0 ft³/s, 38.30 in/yr, 7,970 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 ft³/s Dec. 6, 1981, gage height, 6.19 ft, former site and datum; minimum, 0.01 ft³/s Feb. 11-20, Apr. 27, 29, May 12, 13, June 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 85 ft³/s Feb. 13, gage height, 30.92 ft; minimum, 0.02 ft³/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 1983 TO SEPTEMBER 1984

	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.....	15	389	+5	-211	198 0.95
November.....	414	366	+7	+305	1,090 5.24
December.....	943	430	+5	+305	1,680 8.07
CAL YR 1983.....	7,180	4,500	+7	+106	11,790 56.70
January.....	476	386	-9	-80	773 3.72
February.....	913	403	+5	+59	1,380 6.64
March.....	406	377	-2	+332	1,110 5.34
April.....	426	334	-1	-1	758 3.65
May.....	326	364	-10	-7	673 3.24
June.....	152	407	-21	-90	448 2.15
July.....	1.9	512	+17	-289	242 1.16
August.....	2.7	524	-7	-315	205 0.99
September.....	25	397	+3	-303	122 0.59
WTR YR 1984.....	4,100	4,890	-8	-295	8,690 41.78

COOS RIVER BASIN

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14324580 PONY CREEK AT COOS, BAY, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.17	11	23	4.3	12	7.6	15	.02	.02	.02	.02
2	.60	.02	11	19	1.3	13	7.4	15	.02	.03	.02	.02
3	1.2	.37	9.9	15	2.5	10	5.0	15	.02	.37	.02	.03
4	1.2	1.0	11	13	3.0	9.1	5.2	13	.02	.02	.02	.64
5	1.4	.24	13	12	2.9	8.5	4.6	11	2.2	.02	.04	.42
6	.80	1.1	19	9.7	3.3	7.2	5.0	8.9	8.1	.02	.58	1.8
7	.02	2.2	14	12	1.1	5.2	5.0	6.8	21	.02	.20	2.5
8	.02	.27	13	11	1.1	2.9	21	6.8	20	.02	.02	1.8
9	.02	.72	16	11	3.9	.12	16	5.5	11	.02	.02	1.3
10	.02	5.0	14	9.7	9.7	.02	13	4.9	11	.02	.02	1.1
11	.02	3.7	15	11	6.4	.02	11	8.4	2.8	.02	.02	.27
12	.02	3.9	14	10	8.9	.02	11	5.8	.15	.02	.02	.87
13	.02	6.9	11	9.8	70	.02	9.5	6.3	.02	.02	.02	.76
14	.02	2.9	21	3.5	47	1.1	8.3	4.9	.02	.02	.02	.68
15	.02	1.9	19	4.5	29	3.3	7.3	5.0	.02	.02	.02	.04
16	.02	2.9	22	5.1	25	.79	7.0	1.3	.02	.02	.02	.02
17	.02	7.6	18	3.9	19	3.5	5.4	4.3	.02	.02	.02	.02
18	.02	8.0	15	5.9	15	.67	5.2	1.5	.02	.02	.02	.02
19	.02	13	14	3.1	13	1.0	7.7	1.9	.02	.02	.02	.02
20	.02	15	12	3.6	15	5.2	6.9	4.4	.02	.02	.02	.02
21	.02	14	9.7	5.3	27	12	5.5	2.7	.02	.02	.02	.02
22	.02	13	11	5.4	22	11	4.9	2.1	.02	.02	.02	.02
23	.02	15	8.8	4.5	20	10	4.9	3.6	.02	.02	.02	.02
24	.02	16	11	3.7	26	7.2	3.5	.56	.02	.02	.02	.02
25	.02	15	14	3.9	23	11	4.8	2.7	.02	.02	.02	.02
26	.04	13	14	3.7	18	19	6.1	2.3	.02	.02	.02	.02
27	.02	14	14	3.5	16	14	4.1	1.6	.02	.02	.02	.02
28	.33	12	13	3.7	14	9.8	3.7	1.4	.02	.02	.02	.02
29	.03	9.0	21	3.4	13	11	3.6	1.6	.02	.02	.02	.02
30	.61	11	37	3.9	---	8.2	4.5	.02	.02	.02	.02	.02
31	.70	---	29	3.1	---	7.9	---	.02	---	.02	.02	---
TOTAL	7.33	208.89	475.4	239.9	460.4	204.76	214.7	164.30	76.69	.98	1.38	12.55
MEAN	.24	6.96	15.3	7.74	15.9	6.61	7.16	5.30	2.56	.03	.04	.42
MAX	1.4	16	37	23	70	19	21	15	21	.37	.58	2.5
MIN	.02	.02	8.8	3.1	1.1	.02	3.5	.02	.02	.02	.02	.02
AC-FT	15	414	943	476	913	406	426	326	152	1.9	2.7	25
CAL YR 1983	TOTAL	3620.59	MEAN	9.92	MAX	107	MIN	.02	AC-FT	7180		
WTR YR 1984	TOTAL	2067.28	MEAN	5.65	MAX	70	MIN	.02	AC-FT	4100		

COOUILLE RIVER BASIN

14325000 SOUTH FORK COOUILLE 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 mi².

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.--65 years (water years 1917-26, 1930-84), 797 ft³/s, 64.04 in/yr, 577,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,900 ft³/s Dec. 22, 1964, gage height, 26.51 ft, from floodmarks, from rating curve extended above 19,000 ft³/s on basis of contracted-opening measurement at gage height 18.14 ft and slope-area measurement of peak flow; minimum, 12 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2230	9,390	9.83	Feb. 13	0830	*17,500	*13.81
Minimum, 24 ft ³ /s Sept. 30.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	201	874	1800	275	1620	812	666	158	121	48	33
2	39	239	1040	1290	251	1520	768	2480	150	116	48	34
3	38	470	1050	1010	238	1210	687	1910	146	112	47	33
4	38	1020	1030	825	223	983	652	1680	169	105	45	32
5	38	443	1340	698	211	841	632	1270	230	101	44	31
6	38	1420	6020	606	203	749	590	1080	567	99	43	33
7	37	1060	7040	544	192	668	723	906	1400	95	42	37
8	36	686	4900	501	187	592	2880	724	1020	91	41	37
9	37	773	3520	442	494	543	2180	564	734	90	40	35
10	44	3750	4570	539	701	510	3340	494	590	88	39	33
11	49	3500	2910	686	737	479	2480	543	489	86	39	32
12	42	3160	2140	590	3310	490	2030	500	426	81	39	31
13	38	5510	3220	520	12200	1410	1620	426	378	79	39	30
14	36	3670	5430	465	4400	3340	1280	418	336	77	38	30
15	35	2160	5520	424	2940	3510	1050	446	298	74	38	30
16	34	2140	2990	387	3210	4680	869	417	270	70	38	30
17	34	5930	1940	357	2220	3760	736	374	249	68	37	29
18	34	4250	1390	331	1580	2720	670	338	228	66	37	30
19	34	2790	1170	311	1310	2140	677	308	211	64	37	30
20	33	3440	1040	293	1360	1830	694	297	210	62	36	31
21	33	2730	924	306	1970	2200	634	271	223	60	35	32
22	35	1970	783	335	1690	2010	562	255	200	60	34	30
23	41	1880	685	349	1350	1570	511	275	180	58	34	32
24	39	5690	911	364	2920	1230	484	246	166	57	34	30
25	36	4350	1780	437	4330	1030	533	226	157	58	34	29
26	35	2750	2230	492	2520	1800	597	236	146	56	34	29
27	33	1880	1550	453	1700	1990	621	225	143	53	33	28
28	32	1380	1170	404	1420	1460	609	205	138	53	32	27
29	32	1090	2160	363	1270	1190	573	188	136	52	32	26
30	72	888	5990	328	---	962	533	178	128	51	31	25
31	206	---	2830	298	---	811	---	170	---	49	32	---
TOTAL	1349	71220	80147	16748	55412	49848	31027	18316	9876	2352	1180	929
MEAN	43.5	2374	2585	540	1911	1608	1034	591	329	75.9	38.1	31.0
MAX	206	5930	7040	1800	12200	4680	3340	2480	1400	121	48	37
MIN	32	201	685	293	187	479	484	170	128	49	31	25
CFSM	.26	14.0	15.3	3.20	11.3	9.51	6.12	3.50	1.95	.45	.23	.18
IN.	.30	15.68	17.64	3.69	12.20	10.97	6.83	4.03	2.17	.52	.26	.20
AC-FT	2680	141300	159000	33220	109900	98870	61540	36330	19590	4670	2340	1840

CAL YR 1983	TOTAL	437739	MEAN	1199	MAX	15400	MIN	32	CFSM	7.09	IN.	96.35	AC-FT	868300
WTR YR 1984	TOTAL	338404	MEAN	925	MAX	12200	MIN	25	CFSM	5.47	IN.	74.49	AC-FT	671200

14328000 ROGUE RIVER ABOVE PROSPECT, OR

LOCATION.--Lat 42°46'30", long 122°29'55", in SE1/4 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 mi².

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, publi "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.--64 years (water years 1909-11, 1924-84), 830 ft³/s, 36.13 in/yr, 601,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s Dec. 22, 1964, gage height, 11.55 ft, from floodmark, from rating curve extended above 9,000 ft³/s on basis of slope-area measurement at 16,600 ft³/s; minimum observed, 200 ft³/s Nov. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	0200	*7,320	*6.55	Mar. 26	1700	3,020	4.08
Feb. 13	1200	5,220	5.48	June 7	0630	3,330	4.31

Minimum, 489 ft³/s Oct. 22, 27-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	513	648	885	1550	1030	1090	1310	1540	1660	1090	712	633		
2	508	651	995	1410	1000	1210	1220	1710	1590	1080	690	611		
3	507	686	1000	1360	980	1110	1160	2020	1530	1070	682	596		
4	507	759	917	1540	982	1070	1140	1920	1960	1060	677	591		
5	503	624	883	1700	1020	1050	1200	1680	2170	1040	671	590		
6	501	911	945	1730	1020	1060	1160	1510	2240	1020	668	605		
7	497	785	1370	1720	1010	1090	1130	1440	3040	995	660	611		
8	499	655	1400	1640	993	1180	1470	1500	2410	971	653	608		
9	596	630	1310	1520	1020	1290	1320	1560	2030	941	649	591		
10	565	679	1770	1460	991	1380	1440	1530	1800	918	644	584		
11	541	911	1550	1500	974	1410	1300	2080	1670	902	642	583		
12	515	879	1320	1370	1310	1330	1340	2160	1590	886	636	579		
13	508	957	1480	1230	4050	1550	1320	2090	1610	867	635	577		
14	510	808	3370	1110	2680	1790	1420	2160	1560	854	631	578		
15	506	810	5910	1060	2030	1710	1650	1850	1570	840	628	590		
16	501	1030	3270	1010	1710	1610	1720	1650	1580	830	624	578		
17	501	1610	2470	946	1480	1520	1560	1580	1520	822	621	571		
18	500	1240	2050	912	1340	1390	1520	1550	1480	812	620	565		
19	495	1250	2060	896	1260	1490	1500	1620	1460	801	617	564		
20	495	1450	1770	853	1400	1730	1370	1790	1440	782	614	656		
21	495	1080	1550	901	1490	1870	1290	1710	1410	771	611	603		
22	509	983	1350	1000	1330	1670	1260	1560	1290	767	607	578		
23	590	1010	1300	1000	1210	1580	1350	1920	1260	751	604	577		
24	515	1610	1290	1210	1170	1530	1350	1800	1300	744	604	575		
25	502	1440	1270	1440	1100	1490	1210	1660	1340	738	604	570		
26	495	1110	1370	1400	1040	2540	1110	1650	1320	733	598	565		
27	490	1020	1170	1220	1030	2280	1070	1670	1260	721	597	564		
28	489	967	1080	1120	1020	1860	1050	1730	1260	715	591	559		
29	489	910	1360	1080	1000	1650	1040	2000	1260	711	591	557		
30	523	883	1980	1060	---	1500	1070	2140	1150	699	603	557		
31	618	---	1810	1050	---	1420	---	1880	---	698	708	---		
TOTAL	15983	28986	52255	38998	38670	46450	39050	54660	48760	26629	19692	17566		
MEAN	516	966	1686	1258	1333	1498	1302	1763	1625	859	635	586		
MAX	618	1610	5910	1730	4050	2540	1720	2160	3040	1090	712	656		
MIN	489	624	883	853	974	1050	1040	1440	1150	698	591	557		
CFSM	1.65	3.10	5.40	4.03	4.27	4.80	4.17	5.65	5.21	2.75	2.04	1.88		
IN.	1.91	3.46	6.23	4.65	4.61	5.54	4.66	6.52	5.81	3.17	2.35	2.09		
AC-FT	31700	57490	103600	77350	76700	92130	77460	108400	96720	52820	39060	34840		
CAL YR 1983	TOTAL	413232	MEAN	1132	MAX	5910	MIN	489	CFSM	3.63	IN.	49.27	AC-FT	819600
WTR YR 1984	TOTAL	427699	MEAN	1169	MAX	5910	MIN	489	CFSM	3.75	IN.	50.99	AC-FT	848300

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 mi².

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 and crest-stage gage. 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.—33 years, 1,285 ft³/s, 931,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,900 ft³/s Jan. 18, 1971, gage height, 7.62 ft, from high-water mark; minimum, 205 ft³/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 ft³/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, 8,430 ft³/s Dec. 15, gage height, 6.66 ft; minimum, 297 ft³/s Oct. 12, caused by regulation of diversion gates upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	1200	1560	2340	1860	1940	2100	2440	2530	1940	1460	1330
2	1100	1280	1700	2180	1830	2070	2070	2790	2450	1920	1420	1290
3	1030	1300	1710	2150	1810	1990	2030	3200	2370	1900	1440	1280
4	1050	1370	1620	2350	1820	1950	2030	3000	2800	1880	1430	1280
5	1050	1210	1520	2500	1850	1890	2070	2700	3010	1870	1420	1280
6	1030	1530	1660	2550	1840	1910	2040	2500	3100	1820	1420	1300
7	1110	1430	2080	2540	1830	1950	2020	2300	3890	1800	1400	1310
8	1110	1280	2050	2440	1800	2010	2310	2400	3300	1780	1380	1300
9	1220	1260	1900	2320	1840	2090	2180	2500	2930	1740	1380	1280
10	1160	1300	2440	2250	1810	2180	2300	2350	2710	1740	1380	1270
11	1020	1560	2200	2310	1780	2210	2180	2900	2570	1700	1380	1270
12	884	1500	1980	2210	2090	2170	2210	3020	2490	1700	1370	1270
13	1040	1610	2200	2080	5050	2340	2200	2970	2490	1660	1360	1260
14	985	1430	4120	1970	3570	2620	2240	2970	2410	1650	1360	1260
15	1030	1320	7050	1920	2880	2550	2520	2630	2450	1630	1350	1280
16	1030	1480	4060	1860	2540	2460	2610	2420	2480	1590	1350	1260
17	1030	2040	3150	1790	2270	2320	2430	2350	2380	1590	1340	1250
18	983	1860	2750	1750	2130	2200	2380	2290	2300	1580	1330	1240
19	1100	1950	2770	1730	2060	2300	2360	2370	2240	1560	1330	1220
20	1090	2110	2500	1670	2180	2590	2220	2550	2200	1550	1310	1360
21	1090	1800	2390	1680	2280	2730	2160	2460	2150	1560	1320	1210
22	1110	1640	2140	1790	2130	2540	2120	2290	2090	1550	1310	1260
23	1210	1710	1920	1780	2050	2430	2190	2690	2100	1520	1310	1260
24	1130	2320	1910	1970	2040	2350	2190	2530	2130	1510	1310	1260
25	1100	2120	2050	2150	1960	2310	2090	2450	2150	1500	1320	1190
26	1100	1840	2140	2110	1890	3410	2020	2520	2130	1480	1310	1260
27	1070	1690	2020	2010	1910	3090	1960	2550	2090	1490	1280	1260
28	1080	1620	1940	1960	1890	2700	1970	2640	2090	1480	1280	1250
29	1070	1550	2150	1930	1870	2460	1970	2880	2070	1470	1270	1240
30	1110	1530	2780	1910	---	2320	2030	3010	2000	1450	1290	1250
31	1210	---	2600	1880	---	2210	---	2770	---	1410	1430	---
TOTAL	33442	47840	75060	64080	62860	72290	65200	81440	74100	51020	42040	38030
MEAN	1079	1595	2421	2067	2168	2332	2173	2627	2470	1646	1356	1268
MAX	1220	2320	7050	2550	5050	3410	2610	3200	3890	1940	1460	1360
MIN	884	1200	1520	1670	1780	1890	1960	2290	2000	1410	1270	1190
AC-FT	66330	94890	148900	127100	124700	143400	129300	161500	147000	101200	83390	75430
CAL YR 1983	TOTAL	677842	MEAN	1857	MAX	7050	MIN	884	AC-FT	1344000		
WTR YR 1984	TOTAL	707402	MEAN	1933	MAX	7050	MIN	884	AC-FT	1403000		

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 microsiemens Sept. 22, 1980; minimum recorded, 28 microsiemens 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, 15.5°C July 17; minimum recorded, 1.5°C Jan. 17, 18, but may have been lower during period of missing record in December.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	6.5	8.0	7.5	4.5	3.5	4.0	3.5	4.5	4.0	5.5	4.5
2	8.5	6.5	7.5	7.0	5.0	4.5	4.5	4.0	4.0	3.5	5.5	4.5
3	9.0	7.0	8.0	7.5	5.0	4.5	5.0	4.0	4.5	3.5	5.0	4.0
4	9.5	7.0	8.0	7.0	4.5	4.0	5.0	4.5	5.0	4.0	5.0	4.0
5	9.0	7.0	7.0	6.5	4.5	3.5	5.0	4.0	4.5	4.0	5.5	4.0
6	9.0	7.0	7.0	6.5	3.5	3.0	4.5	4.0	5.5	4.5	5.5	4.0
7	8.5	7.0	6.5	5.5	---	3.0	4.5	4.0	4.5	4.0	6.0	4.5
8	8.5	7.0	5.5	4.5	---	---	5.0	4.5	5.5	4.5	6.0	5.0
9	9.0	8.0	6.0	5.0	---	---	4.5	4.0	5.0	4.0	6.5	5.5
10	9.0	8.0	6.5	6.0	---	---	5.0	4.5	4.0	3.5	6.0	5.5
11	9.0	7.5	7.0	6.0	---	---	5.0	4.5	4.0	3.0	5.5	4.5
12	9.0	7.0	6.0	5.5	---	---	5.0	3.5	4.0	3.0	6.0	5.0
13	8.0	7.0	5.5	4.5	---	---	3.5	3.0	---	---	5.5	5.5
14	8.0	7.0	4.5	4.5	---	---	3.0	2.0	---	---	5.5	5.0
15	7.5	6.0	5.0	4.5	---	---	3.0	2.0	4.0	---	5.5	4.5
16	7.0	5.5	5.5	5.0	---	---	3.0	2.0	4.0	3.5	4.5	4.0
17	7.0	6.0	6.0	5.5	---	---	2.5	1.5	4.0	3.5	5.0	4.0
18	7.5	6.0	5.5	5.0	---	---	2.5	1.5	5.0	3.5	5.5	4.5
19	7.0	5.5	5.0	5.0	---	---	3.5	2.5	5.0	4.0	6.5	5.5
20	7.0	6.0	5.0	4.0	---	---	3.0	2.5	5.0	4.5	6.0	5.5
21	7.0	6.0	5.0	4.0	---	---	3.5	3.0	4.5	4.0	5.5	5.0
22	7.5	6.5	4.5	4.0	---	---	4.5	3.5	4.0	3.5	6.0	4.5
23	8.0	7.0	4.0	4.0	---	---	4.0	3.5	4.0	3.5	6.5	5.5
24	7.0	6.0	5.0	4.0	---	---	5.0	4.0	4.0	2.5	6.0	5.0
25	7.0	5.5	4.5	4.0	---	---	5.0	4.5	3.5	2.5	5.5	5.0
26	7.0	5.5	4.5	4.0	---	---	4.5	4.0	4.5	3.0	6.5	5.0
27	7.5	6.0	5.0	4.0	---	---	4.5	3.5	5.0	3.5	6.5	5.0
28	7.5	6.5	4.5	4.5	3.0	---	4.0	3.5	5.5	4.5	6.5	6.0
29	7.5	6.5	4.5	4.0	4.5	3.0	4.0	3.5	5.0	4.5	6.0	5.0
30	8.0	7.5	4.5	3.5	4.5	4.0	4.5	3.5	---	---	6.0	5.0
31	8.5	7.5	---	---	4.5	3.5	4.5	3.5	---	---	6.0	5.0
MONTH	9.5	5.5	8.0	3.5	---	---	5.0	1.5	---	---	6.5	4.0

ROGUE RIVER BASIN

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

14332000 SOUTH FORK ROGUE RIVER NEAR PROSPECT, OR

LOCATION.--Lat 42°42'30", long 122°23'30", in SE1SW1 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 mi². Area at site above Imnaha Creek used October 1931 to September 1949, 61.3 mi², and Imnaha Creek near Prospect, 22.2 mi².

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. Records since October 1983 equivalent to earlier records if South Fork Rogue River power canal diversion is added to flow past station.

REVISED RECORDS.--WSP 1318: 1925(M), 1927(M), 1930(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Elevation 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 do not include flow in South Fork power canal (completed in March 1932) which diverts 1,500 ft upstream from station and returns water to Rogue River upstream from South Fork Rogue River; practically no storage upstream from diversion dam.

AVERAGE DISCHARGE.--59 years (water years 1925-83), 178 ft³/s, 129,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 7,010 ft³/s Dec. 22, 1964, gage height, 11.1 ft, from floodmark, from rating curve extended above 410 ft³/s on basis of measurement of flow over dam of 3,180 ft³/s; no flow Jan. 31, 1950, Sept. 29, 30, 1967 (entire flow diverted to canal).

Combined flow, maximum discharge, 7,010 ft³/s Dec. 22, 1964 (no flow in canal); minimum daily, about 38 ft³/s Aug. 1-31, 1931.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 2,640 ft³/s Dec. 15, gage height, 6.06 ft; minimum, 0.24 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.8	6.2	254	80	88	226	182	285	167	35	2.7
2	2.2	1.7	12	218	71	93	207	196	271	160	30	6.8
3	2.2	1.7	7.7	191	66	87	209	283	256	151	28	2.2
4	2.2	2.0	3.5	185	66	83	186	279	477	139	26	2.1
5	2.2	1.7	2.8	186	68	80	191	230	501	130	25	1.8
6	2.1	5.2	16	182	65	79	178	197	495	144	22	2.1
7	2.1	2.5	100	181	61	80	166	184	691	110	16	2.0
8	2.1	2.0	91	174	59	83	214	193	444	102	14	1.4
9	2.2	2.1	94	163	64	89	185	210	355	95	13	1.2
10	2.0	2.0	174	160	58	96	191	208	301	88	12	.78
11	2.0	2.0	138	160	59	102	173	363	274	84	10	.72
12	1.9	2.0	98	144	98	99	208	387	275	77	9.6	.78
13	1.9	2.1	157	129	250	143	209	367	270	71	9.5	.76
14	1.9	1.9	800	117	221	190	214	453	270	68	9.4	.67
15	1.8	1.9	1820	105	193	180	243	439	281	64	7.0	.77
16	1.8	64	969	94	166	169	268	391	288	60	4.5	.62
17	1.8	102	658	86	139	155	250	373	272	58	3.5	.54
18	1.8	3.0	479	79	127	147	236	364	266	56	3.2	.56
19	1.8	19	450	73	123	165	223	392	267	52	3.0	.57
20	1.7	27	357	68	145	189	200	434	269	50	17	1.3
21	1.8	3.6	303	77	154	220	184	425	255	49	2.8	.55
22	1.9	2.6	259	98	134	200	174	405	216	54	2.7	.55
23	1.9	15	246	86	143	194	180	576	214	48	2.6	.56
24	1.6	86	234	149	117	189	180	485	228	43	2.6	.51
25	1.4	47	208	173	102	192	160	358	239	44	2.6	.53
26	1.4	21	200	155	95	500	143	290	233	38	2.5	.46
27	1.4	9.9	167	125	96	428	125	296	220	36	2.4	.37
28	1.4	5.9	148	107	90	349	112	311	221	35	2.2	.27
29	1.4	3.9	242	96	84	305	111	377	218	34	2.2	.25
30	1.6	3.9	360	91	---	268	119	404	188	32	3.9	.24
31	1.6	---	309	91	---	248	---	332	---	43	21	---
TOTAL	57.3	446.4	9109.2	4197	3194	5490	5665	10384	9040	2382	345.2	34.66
MEAN	1.85	14.9	294	135	110	177	189	335	301	76.8	11.1	1.16
MAX	2.2	102	1820	254	250	500	268	576	691	167	35	6.8
MIN	1.4	1.7	2.8	68	58	79	111	182	188	32	2.2	.24
AC-FT	114	885	18070	8320	6340	10890	11240	20600	17930	4720	685	69
CAL YR 1983	TOTAL	38225.3	MEAN	105	MAX	1820	MIN	1.4	AC-FT	75820		
WTR YR 1984	TOTAL	50344.76	MEAN	138	MAX	1820	MIN	.24	AC-FT	99860		

ROGUE RIVER BASIN

14334700 SOUTH FORK ROGUE RIVER, SOUTH OF PROSPECT, OR

LOCATION.--Lat 42°42'45", long 122°30'20", in NW1/4 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 mi².

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 Blanket Creek divert water to Rogue River via Main Canal. During summer base flow all of streamflow is diverted for power except that for fish life. Base flow at station is principally from springs downstream from power diversions.

AVERAGE DISCHARGE.--16 years, 406 ft³/s, 294,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,880 ft³/s Mar. 3, 1972, gage height, 12.71 ft, from floodmark; minimum, 54 ft³/s Aug. 16-19, 1977; minimum daily, 54 ft³/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 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,300 ft³/s Dec. 15, gage height, 11.50 ft; minimum, 129 ft³/s Oct. 26, 27, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	245	450	1060	486	642	941	725	905	735	338	240
2	170	168	472	959	458	676	849	785	866	724	333	237
3	225	172	433	881	452	651	781	993	842	708	295	232
4	208	221	371	861	437	625	765	990	1410	677	292	222
5	209	190	372	866	441	606	765	897	1580	651	287	205
6	216	311	604	856	427	601	714	816	1450	641	281	237
7	143	246	971	851	416	594	686	772	2120	596	285	222
8	142	173	863	808	414	587	857	771	1440	562	286	204
9	163	170	808	761	437	592	809	788	1190	552	260	198
10	149	172	974	738	417	602	886	755	1050	508	269	199
11	280	203	878	738	437	608	862	1150	980	519	254	203
12	354	214	773	673	565	600	924	1250	949	473	257	196
13	216	252	1220	634	1160	692	892	1160	921	475	253	193
14	269	229	3220	597	1060	827	886	1230	951	455	249	195
15	213	330	5600	557	981	815	934	1100	958	445	246	197
16	214	456	3100	521	939	849	963	975	992	451	238	196
17	210	639	2190	495	829	848	903	917	970	444	240	198
18	254	454	1650	475	776	815	879	885	987	436	239	209
19	138	410	1520	456	744	848	856	931	1010	428	238	248
20	138	518	1260	467	803	910	800	1030	1000	403	249	258
21	140	365	1060	552	877	1030	752	1020	971	377	231	238
22	150	326	908	618	803	926	712	965	852	380	232	230
23	163	427	831	593	783	892	709	1310	810	382	233	227
24	142	673	793	736	763	863	702	1180	861	375	224	206
25	145	575	827	805	725	869	666	1010	912	384	211	266
26	140	462	832	773	668	1660	633	930	910	370	204	191
27	134	423	738	685	645	1480	599	937	880	335	228	191
28	142	391	689	605	634	1300	573	931	872	334	221	191
29	147	361	881	583	618	1120	567	1110	878	329	221	193
30	165	362	1330	540	---	990	591	1230	784	326	245	190
31	191	---	1210	512	---	964	---	1030	---	369	321	---
TOTAL	5735	10138	37828	21256	19195	26082	23456	30573	31301	14844	7960	6412
MEAN	185	338	1220	686	662	841	782	986	1043	479	257	214
MAX	354	673	5600	1060	1160	1660	963	1310	2120	735	338	266
MIN	134	168	371	456	414	587	567	725	784	326	204	190
AC-FT	11380	20110	75030	42160	38070	51730	46520	60640	62090	29440	15790	12720
CAL YR 1983	TOTAL	211583	MEAN	580	MAX	5600	MIN	134	AC-FT	419700		
WTR YR 1984	TOTAL	234780	MEAN	641	MAX	5600	MIN	134	AC-FT	465700		

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 recorded, 14.5°C July 18; minimum, 1.5°C Dec. 23-25.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

14335040 LOST CREEK LAKE NEAR MCLEOD, OR

LOCATION.--Lat 42°40'16", long 122°40'25", in SW 1/4 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 mi².

WATER-ELEVATION RECORDS

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, 464,900 acre-ft May 23, elevation, 1,871.98 ft; minimum, 284,800 acre-ft Dec. 12, elevation, 1,811.94 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1833.01	1820.95	1813.10	1818.10	1827.06	1851.71	1863.18	1871.81	1871.52	1871.46	1853.15	1824.76
2	1832.43	1820.59	1813.08	1818.15	1827.52	1852.05	1863.24	1871.84	1871.59	1871.32	1852.25	1823.93
3	1831.87	1820.18	1813.05	1818.12	1828.16	1852.28	1863.11	1871.88	1871.62	1871.12	1851.34	1823.09
4	1831.49	1819.71	1812.85	1818.17	1828.83	1852.44	1863.00	1871.58	1871.84	1870.86	1850.42	1822.19
5	1831.11	1819.11	1812.66	1818.37	1829.58	1853.10	1863.16	1871.00	1871.63	1870.59	1849.46	1821.29
6	1830.71	1818.89	1813.05	1818.58	1830.35	1853.94	1863.51	1870.29	1871.65	1870.29	1848.50	1820.44
7	1830.34	1818.42	1813.19	1818.76	1831.17	1854.81	1863.81	1870.01	1871.72	1869.92	1847.55	1819.62
8	1829.99	1817.77	1812.56	1818.83	1831.97	1855.74	1864.51	1870.08	1871.28	1869.53	1846.60	1818.79
9	1829.77	1817.09	1812.15	1818.75	1832.81	1856.62	1864.95	1870.10	1871.25	1869.11	1845.64	1817.97
10	1829.32	1816.48	1812.23	1818.63	1833.62	1857.21	1865.45	1870.10	1871.16	1868.67	1844.65	1817.15
11	1828.96	1816.04	1812.10	1818.67	1834.47	1857.81	1865.76	1870.33	1871.12	1868.21	1843.67	1816.41
12	1828.58	1815.64	1812.03	1818.66	1835.61	1858.21	1866.12	1870.33	1871.15	1867.71	1842.66	1815.62
13	1828.17	1815.43	1813.92	1818.75	1839.70	1858.77	1866.42	1870.21	1871.18	1867.19	1841.65	1814.98
14	1827.78	1814.97	1813.68	1818.74	1842.49	1859.24	1866.72	1869.80	1871.17	1866.66	1840.63	1814.42
15	1827.40	1814.53	1828.45	1818.61	1844.38	1859.30	1867.18	1869.39	1871.19	1866.11	1839.64	1813.97
16	1827.00	1814.50	1831.14	1818.72	1845.64	1859.13	1867.72	1868.98	1871.22	1865.54	1838.73	1813.54
17	1826.60	1815.08	1832.33	1819.00	1846.27	1858.59	1867.98	1868.58	1871.19	1864.95	1837.80	1813.19
18	1826.18	1814.99	1830.76	1819.26	1846.73	1858.23	1868.14	1868.91	1871.12	1864.35	1836.86	1812.87
19	1825.77	1814.79	1829.81	1819.60	1847.14	1858.27	1868.25	1869.57	1871.03	1863.68	1835.93	1812.64
20	1825.36	1814.86	1827.96	1819.95	1847.70	1858.55	1868.13	1870.46	1871.02	1862.95	1835.05	1812.66
21	1824.95	1814.46	1825.71	1820.39	1848.47	1858.95	1867.90	1871.26	1871.04	1862.22	1834.21	1812.45
22	1824.60	1814.00	1823.24	1820.94	1848.98	1859.01	1867.99	1871.75	1871.02	1861.46	1833.35	1812.45
23	1824.29	1813.92	1821.21	1821.50	1849.38	1859.12	1868.61	1871.87	1871.11	1860.68	1832.49	1812.38
24	1823.89	1814.53	1820.01	1822.30	1849.86	1859.39	1869.25	1871.54	1871.33	1859.90	1831.63	1812.39
25	1823.49	1814.76	1819.03	1823.16	1850.24	1859.74	1869.76	1871.45	1871.59	1859.12	1830.78	1812.47
26	1823.09	1814.50	1818.15	1823.86	1850.43	1861.35	1870.18	1871.54	1871.85	1858.31	1829.92	1812.55
27	1822.66	1814.07	1816.99	1824.46	1850.71	1862.27	1870.50	1871.66	1871.93	1857.48	1829.05	1812.61
28	1822.22	1813.54	1816.13	1825.09	1851.05	1862.52	1870.83	1871.82	1871.87	1856.65	1828.15	1812.66
29	1821.79	1813.18	1816.13	1825.65	1851.34	1862.54	1871.17	1871.81	1871.80	1855.78	1827.25	1812.69
30	1821.47	1813.08	1817.09	1826.16	---	1862.66	1871.50	1871.76	1871.64	1854.90	1826.44	1812.73
31	1821.21	---	1817.79	1826.63	---	1862.99	---	1871.54	---	1854.02	1825.60	---
MEAN	1826.95	1816.00	1818.63	1820.47	1840.75	1857.95	1866.93	1870.75	1871.39	1864.54	1839.07	1815.83
MAX	1833.01	1820.95	1832.33	1826.63	1851.34	1862.99	1871.50	1871.88	1871.93	1871.46	1853.15	1824.76
MIN	1821.21	1813.08	1812.03	1818.10	1827.06	1851.71	1863.00	1868.58	1871.02	1854.02	1825.60	1812.38
(+)	309500	287800	300300	324300	397300	434700	463300	463400	463800	405700	321500	286900
(+)	-32900	-21700	+12500	+24000	+73000	+37400	+28600	+100	+400	-58100	-84200	-34600

CAL YR 1983 MEAN 1845.42 MAX 1871.17 MIN 1811.86 AC-FT# +15700
WTR YR 1984 MEAN 1842.45 MAX 1871.93 MIN 1812.03 AC-FT# -55500

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

ROGUE RIVER BASIN

14335040 LOST CREEK LAKE NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 42°41'38", long 122°35'52", in SE¼SE¼ sec.17, T.33 S., R.2 E., Jackson County, Hydrologic Unit 17100307, at Highway 62 crossing (Payton Bridge), and 0.4 mi southeast of Needle Rock.

PERIOD OF RECORD.--January to September 1984.

REMARKS.--Local identifier 4241381223552 Lost Creek Lake #3.

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JAN								
6...	1315	0.0	6.2	--	--	52	2.9	--
12...	1400	0.0	5.9	--	--	53	2.2	12.4
12...	1405	7.0	5.3	--	--	51	1.9	--
12...	1410	14.0	5.1	--	--	50	1.4	--
12...	1415	21.0	4.9	--	--	50	1.6	--
12...	1420	29.0	4.8	--	--	50	1.6	--
17...	1320	0.0	2.8	--	--	--	1.1	12.3
17...	1325	10.0	3.0	--	--	--	1.0	--
17...	1330	20.0	3.1	--	--	--	1.0	--
17...	1335	30.0	3.3	--	--	--	1.0	--
26...	1315	0.0	5.5	--	--	--	1.6	12.0
26...	1320	7.0	4.9	--	--	--	1.3	--
26...	1325	14.0	4.7	--	--	--	1.2	--
26...	1330	21.0	4.3	--	--	--	1.3	--
26...	1335	28.0	4.1	--	--	--	1.1	--
31...	1300	0.0	3.9	--	7.7	51	1.0	--
31...	1305	7.0	3.9	--	7.6	52	1.0	--
31...	1310	14.0	3.8	--	7.6	51	1.3	--
31...	1315	21.0	3.8	--	7.6	51	1.1	--
31...	1320	28.0	3.8	--	7.5	52	1.1	--
FEB								
9...	1245	0.0	4.9	--	7.4	53	1.9	11.9
9...	1250	7.0	4.7	--	7.5	54	1.5	--
9...	1255	14.0	4.5	--	7.5	54	1.3	--
9...	1300	21.0	4.4	--	7.5	56	1.3	--
9...	1305	30.0	4.4	--	7.6	56	1.3	--
14...	1130	0.0	5.0	11.4	7.3	54	1.6	10.2
14...	1135	10.0	4.5	11.6	7.4	54	1.6	--
14...	1140	20.0	4.1	11.7	7.4	49	1.4	--
14...	1145	30.0	4.0	11.9	7.5	42	1.1	--
14...	1150	40.0	4.0	11.9	7.5	41	1.0	--
MAR								
1...	1215	0.0	5.3	11.7	7.5	55	2.6	5.2
1...	1220	10.0	4.7	12.0	7.5	54	2.7	--
1...	1225	20.0	4.6	11.5	7.6	54	2.6	--
1...	1230	35.0	4.0	11.9	7.6	54	2.1	--
6...	1245	0.0	5.8	11.9	7.4	57	2.2	8.0
6...	1250	15.0	5.0	12.1	7.4	58	1.6	--
15...	1315	0.0	7.6	11.5	7.4	51	1.9	8.7
15...	1320	5.0	7.3	11.4	7.3	51	--	--
15...	1325	10.0	5.8	11.6	7.3	50	2.3	--
15...	1330	20.0	5.4	11.5	7.3	50	2.1	--
15...	1335	30.0	5.0	11.6	7.3	51	2.3	--
15...	1340	35.0	4.5	11.6	7.3	52	2.1	--

ROGUE RIVER BASIN

351

14335040 LOST CREEK LAKE NEAR MCLEOD, OR--Continued

4241381223552

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
APR								
5...	1310	0.0	9.9	11.1	7.4	54	2.2	10.4
5...	1315	5.0	8.7	--	7.4	54	--	--
5...	1320	10.0	6.7	11.3	7.5	53	1.8	--
5...	1325	30.0	5.8	10.8	7.5	53	1.3	--
5...	1330	50.0	4.7	--	7.3	54	--	--
12...	1225	0.0	9.2	10.5	7.4	56	1.9	11.6
12...	1230	5.0	8.6	10.5	7.5	57	--	--
12...	1235	10.0	6.9	10.8	7.5	57	1.8	--
12...	1240	20.0	5.9	11.0	7.5	56	1.9	--
12...	1245	30.0	5.4	11.2	7.5	55	1.7	--
12...	1250	45.0	5.1	11.4	7.5	55	1.5	--
17...	1250	0.0	10.2	10.4	7.2	55	2.0	9.2
17...	1255	5.0	10.2	10.6	7.2	55	--	--
17...	1300	10.0	7.7	10.7	7.2	53	--	--
17...	1305	20.0	6.7	11.0	7.2	53	--	--
17...	1310	40.0	5.2	11.1	7.2	54	1.7	--
17...	1315	50.0	5.0	10.9	7.1	55	1.2	--
17...	1320	52.0	5.0	10.8	7.1	55	--	--
26...	1245	0.0	11.0	10.5	7.2	54	2.6	9.4
26...	1250	5.0	10.8	10.4	7.2	54	--	--
26...	1255	15.0	7.2	11.0	7.2	53	2.3	--
26...	1300	20.0	6.4	11.2	7.3	52	--	--
26...	1305	40.0	5.5	11.0	7.2	53	--	--
26...	1310	45.0	5.2	10.9	7.1	53	2.1	--
MAY								
8...	1300	0.0	11.5	10.5	7.7	56	2.2	8.3
8...	1305	10.0	7.3	10.7	7.6	53	2.1	--
8...	1310	20.0	6.6	11.3	7.5	53	1.4	--
8...	1315	30.0	6.2	11.1	7.4	54	2.0	--
8...	1320	40.0	5.8	10.9	7.4	56	1.7	--
18...	1250	0.5	14.9	9.6	7.8	52	1.5	10.3
18...	1255	3.0	13.6	9.3	7.6	51	--	--
18...	1300	6.0	9.5	9.5	7.6	47	--	--
18...	1305	10.0	8.1	11.0	7.4	47	1.3	--
18...	1310	20.0	7.1	11.2	7.4	45	1.1	--
18...	1315	50.5	5.3	10.5	7.2	52	1.1	--
29...	1210	0.0	17.6	9.4	7.6	53	1.3	7.6
29...	1215	10.0	9.3	10.5	7.6	47	1.1	--
29...	1220	20.0	7.5	10.9	7.6	49	1.9	--
29...	1225	35.0	6.3	10.9	7.5	54	1.3	--
29...	1230	50.0	5.4	10.4	7.4	56	2.0	--
JUN								
12...	1330	0.5	17.4	11.5	9.0	57	4.4	5.3
12...	1335	3.0	15.5	--	--	57	--	--
12...	1340	4.0	12.0	--	--	53	--	--
12...	1345	7.0	9.8	--	--	53	--	--
12...	1350	10.0	9.0	11.1	8.2	51	2.0	--
12...	1355	20.0	7.8	11.1	8.1	50	2.7	--
12...	1400	53.0	5.6	--	--	61	--	--
28...	1300	0.0	23.6	10.6	9.2	55	4.7	6.8
28...	1305	10.0	10.2	10.1	7.8	50	3.6	--
28...	1310	20.0	8.0	10.6	7.7	47	3.0	--
28...	1315	35.0	6.4	9.9	7.5	53	3.3	--
28...	1320	50.0	5.6	9.5	7.3	57	2.7	--

ROGUE RIVER BASIN

14335040 LOST CREEK LAKE NEAR MCLEOD, OR--Continued

4241381223552

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JUL								
12...	1235	0.0	21.7	8.6	8.5	50	1.1	9.1
12...	1240	10.0	11.9	9.5	7.8	51	1.2	--
12...	1245	20.0	8.4	10.1	7.7	45	1.2	--
12...	1250	30.0	7.0	9.9	7.6	46	1.4	--
12...	1255	45.0	5.8	8.8	7.4	53	1.0	--
25...	1215	0.5	23.2	8.0	7.6	55	2.7	10.4
25...	1220	2.0	22.7	--	--	56	--	--
25...	1225	5.0	14.9	--	--	61	--	--
25...	1230	10.0	11.7	9.3	7.5	60	1.4	--
25...	1235	20.0	8.4	9.9	7.3	51	2.0	--
25...	1240	45.0	6.0	8.0	7.3	58	1.7	--
AUG								
9...	1300	0.0	23.7	8.3	7.0	61	2.2	8.9
9...	1305	4.0	19.0	--	7.2	63	--	--
9...	1310	6.0	14.6	--	7.5	65	--	--
9...	1315	10.0	12.8	9.9	7.6	65	1.1	--
9...	1320	20.0	8.6	10.3	7.3	54	1.0	--
9...	1325	40.0	6.0	9.3	7.1	58	1.9	--
16...	1355	0.0	22.1	8.2	7.2	63	1.9	9.7
16...	1400	3.0	20.5	8.1	7.2	63	--	--
16...	1405	7.0	13.9	8.2	7.5	67	--	--
16...	1410	20.0	9.0	7.7	7.1	58	1.2	--
16...	1415	25.0	7.2	6.7	7.1	59	--	--
16...	1420	40.0	6.2	7.5	6.9	59	1.2	--
16...	1425	43.4	6.1	7.3	6.9	60	--	--
30...	1330	0.0	19.7	8.7	8.1	60	1.2	7.0
30...	1335	4.0	19.5	8.7	8.0	60	--	--
30...	1340	7.0	13.9	8.5	7.8	62	--	--
30...	1345	20.0	8.0	7.7	6.9	57	1.0	--
30...	1350	25.0	6.7	7.4	6.8	56	--	--
30...	1355	40.0	6.2	8.0	6.8	56	1.7	--
SEP								
27...	1320	0.5	15.8	10.1	7.5	62	2.5	--
27...	1325	2.0	13.7	9.9	7.4	63	--	--
27...	1330	7.0	12.6	10.6	7.2	63	--	--
27...	1335	10.0	11.0	10.5	6.9	64	1.1	--
27...	1340	20.0	8.7	11.3	7.7	64	1.2	--
27...	1345	35.0	6.6	7.9	6.6	60	--	--

PHYTOPLANKTON ANALYSES, OCTOBER 1983 TO SEPTEMBER 1984

DATE 84/06/15

SPECIES DIVERSITY 0.00
TOTAL COUNT (NO./ML) 553.

COUNT PCT

CYANOPHYTA	BLUE-GREEN ALGAE		
--MYXOPHYCEAE			
--OSCILLATORIALES			
----NOSTOCACEAE			
-----ANABAENA FLOS-AQUAE		11	1.9
-----ANABAENA PLANCTONICA		284	51.4
-----ANABAENA SPIROIDES		258	46.7

ROGUE RIVER BASIN

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14335040 LOST CREEK LAKE NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 42°41'05", long 122°39'20", in SW¼ sec.24, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, 1.2 mi northeast of outlet structure, and 1.9 mi south of Fawn Butte.

PERIOD OF RECORD.--January to September 1984.

REMARKS.--Local identifier 4241051223920 Lost Creek Lake #9.

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JAN								
6...	1230	0.0	6.0	--	--	50	3.4	--
12...	1300	0.0	6.1	--	--	52	2.7	6.1
12...	1305	20.0	5.3	--	--	51	3.2	--
12...	1310	40.0	4.5	--	--	52	2.4	--
12...	1315	60.0	4.3	--	--	53	2.2	--
12...	1320	70.0	4.3	--	--	50	2.2	--
17...	1200	0.0	5.0	--	--	--	2.2	7.6
17...	1205	20.0	4.9	--	--	--	2.1	--
17...	1210	40.0	4.7	--	--	--	1.8	--
17...	1215	60.0	4.4	--	--	--	1.9	--
17...	1220	70.0	4.3	--	--	--	1.7	--
26...	1200	0.0	5.4	--	--	--	2.1	10.4
26...	1205	20.0	4.8	--	--	--	1.9	--
26...	1210	40.0	4.1	--	--	--	1.6	--
26...	1215	60.0	4.0	--	--	--	1.6	--
26...	1220	70.0	3.9	--	--	--	1.5	--
31...	1155	0.0	5.1	--	7.7	51	2.1	10.6
31...	1200	20.0	4.6	--	7.7	52	1.6	--
31...	1205	40.0	4.1	--	7.7	52	1.4	--
31...	1210	60.0	3.9	--	7.7	53	1.2	--
31...	1215	70.0	4.0	--	7.6	53	1.2	--
FEB								
9...	1120	0.0	5.7	--	7.4	52	2.0	12.0
9...	1125	20.0	4.7	--	7.4	51	1.9	--
9...	1130	40.0	4.2	--	7.4	52	1.6	--
9...	1135	60.0	4.0	--	7.4	53	1.5	--
9...	1140	70.0	4.0	--	7.5	53	1.5	--
14...	1045	0.0	5.5	11.0	7.5	52	1.7	12.5
14...	1050	20.0	4.5	11.2	7.5	53	1.6	--
14...	1055	40.0	4.1	11.4	7.5	53	1.4	--
14...	1100	75.0	4.0	11.2	7.5	55	--	--
MAR								
1...	1030	0.5	6.0	11.2	7.4	53	2.5	12.8
1...	1035	20.0	4.7	11.1	7.4	53	1.6	--
1...	1040	40.0	4.2	11.4	7.5	52	1.4	--
1...	1045	70.0	4.2	10.9	7.3	55	2.5	--
6...	1110	0.0	7.0	11.5	7.4	57	1.9	--
6...	1115	35.0	4.4	11.9	7.4	56	1.4	--
6...	1120	70.0	4.2	11.8	7.4	57	1.2	--
15...	1235	0.0	7.8	11.6	7.3	50	2.1	12.6
15...	1240	5.0	7.5	11.5	7.2	50	--	--
15...	1245	15.0	5.1	11.5	7.2	50	--	--
15...	1250	40.0	4.4	11.7	7.3	49	2.2	--
15...	1255	70.0	4.1	11.5	7.2	50	2.8	--
22...	1210	0.0	8.6	11.2	7.5	56	1.9	12.6
22...	1215	10.0	6.9	11.0	--	56	--	--
22...	1220	20.0	5.3	11.2	7.5	56	2.2	--
22...	1225	40.0	4.5	11.3	7.4	55	2.0	--
22...	1230	80.0	4.2	11.1	7.4	57	2.9	--
29...	1240	0.0	10.7	11.0	7.2	55	2.0	14.1
29...	1245	10.0	6.3	--	7.3	55	--	--
29...	1250	20.0	5.6	11.4	7.2	54	2.1	--
29...	1255	40.0	4.7	11.4	7.2	55	2.0	--
29...	1300	60.0	4.3	11.5	7.2	55	2.1	--
29...	1305	80.0	4.2	11.1	7.1	56	2.3	--

ROGUE RIVER BASIN

14335040 LOST CREEK LAKE NEAR MCLEOD, OR--Continued

4241051223920

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
APR								
5...	1225	0.0	10.1	10.8	7.6	53	2.2	11.8
5...	1230	5.0	9.4	--	7.6	54	--	--
5...	1235	10.0	7.1	--	7.5	53	--	--
5...	1240	20.0	5.8	10.8	7.5	52	2.1	--
5...	1245	40.0	5.1	10.9	7.4	54	2.0	--
5...	1250	60.0	4.5	10.9	7.4	53	2.3	--
5...	1255	80.0	4.2	11.0	7.3	54	2.6	--
12...	1100	0.0	9.3	10.6	7.3	56	1.9	11.2
12...	1105	5.0	8.7	10.4	7.3	56	--	--
12...	1110	15.0	5.9	10.8	7.2	54	--	--
12...	1115	40.0	4.8	10.7	7.2	56	2.1	--
12...	1120	80.0	4.2	10.8	7.1	56	2.0	--
17...	1210	0.0	11.4	10.5	7.2	55	2.2	8.3
17...	1215	10.0	7.4	10.8	7.2	54	--	--
17...	1220	20.0	6.1	11.1	7.3	53	2.1	--
17...	1225	40.0	5.4	11.1	7.2	54	2.3	--
17...	1230	60.0	4.7	11.0	7.2	55	2.1	--
17...	1235	82.5	4.3	10.7	7.1	55	--	--
26...	1220	0.0	10.9	10.2	7.3	53	3.4	6.5
26...	1225	10.0	8.8	10.6	7.3	53	--	--
26...	1230	20.0	6.5	10.8	7.3	52	2.3	--
26...	1235	40.0	5.6	11.0	7.2	52	2.7	--
26...	1240	60.0	4.7	10.8	7.2	53	2.9	--
26...	1245	80.0	4.4	10.6	7.2	53	4.0	--
MAY								
8...	1215	0.0	12.7	10.1	7.8	56	2.4	8.4
8...	1220	20.0	6.4	10.8	7.6	55	2.6	--
8...	1225	40.0	5.6	11.0	7.6	54	3.0	--
8...	1230	60.0	4.8	10.9	7.5	56	3.1	--
8...	1235	80.0	4.5	10.7	7.5	56	2.7	--
18...	1240	0.5	15.4	9.7	7.8	52	1.4	9.0
18...	1245	5.0	13.4	9.7	7.6	51	--	--
18...	1250	8.0	8.9	10.1	7.3	50	--	--
18...	1255	13.0	7.5	10.7	7.2	49	--	--
18...	1300	20.0	7.1	11.0	7.2	51	1.3	--
18...	1305	40.0	5.8	11.1	7.2	50	1.9	--
18...	1310	60.0	5.0	10.9	7.1	52	2.2	--
18...	1315	80.0	4.6	10.9	7.1	52	2.0	--
29...	1105	0.0	18.5	8.4	7.5	55	1.6	10.3
29...	1110	20.0	7.4	10.9	7.5	53	1.4	--
29...	1115	40.0	6.0	11.0	7.5	54	1.6	--
29...	1120	60.0	5.1	10.8	7.5	56	2.4	--
29...	1125	80.0	4.7	10.7	7.5	56	1.4	--
JUN								
12...	1300	0.0	18.2	11.5	8.9	56	5.2	5.2
12...	1305	5.0	13.9	--	--	55	--	--
12...	1310	8.0	9.7	--	--	52	--	--
12...	1315	12.0	8.6	--	--	52	--	--
12...	1320	30.0	7.2	--	--	54	--	--
12...	1325	60.0	5.3	10.6	7.7	59	2.0	--
12...	1330	80.0	4.9	10.4	7.7	60	2.1	--
28...	1230	0.0	24.4	11.0	9.4	57	4.4	4.9
28...	1235	20.0	8.2	10.1	8.2	48	2.0	--
28...	1240	40.0	6.1	10.5	7.9	55	2.2	--
28...	1245	60.0	5.3	10.3	7.6	56	4.4	--
28...	1250	80.0	5.0	10.1	7.4	56	3.5	--

ROGUE RIVER BASIN

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14535040 LOST CREEK LAKE NEAR MCLEOD, OR--Continued

4241051223920

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JUL								
12...	1130	0.0	21.4	8.9	8.5	49	1.6	9.8
12...	1135	20.0	8.8	9.9	7.3	45	1.3	--
12...	1140	40.0	6.0	9.9	7.4	51	1.0	--
12...	1145	60.0	5.3	10.1	7.3	51	1.1	--
12...	1150	80.0	5.0	10.0	7.2	52	1.0	--
25...	1100	0.5	22.3	7.7	7.7	55	2.5	11.2
25...	1105	2.0	22.3	7.7	--	55	--	--
25...	1110	6.0	13.7	7.9	--	57	--	--
25...	1115	14.0	10.4	9.3	--	52	--	--
25...	1120	20.0	8.7	10.1	7.8	49	1.6	--
25...	1125	40.0	6.0	10.2	7.7	57	2.3	--
25...	1130	60.0	5.4	10.2	7.6	57	4.0	--
25...	1135	80.0	5.1	9.4	7.5	57	2.6	--
AUG								
9...	1230	0.0	23.8	8.0	7.1	58	2.3	--
9...	1235	3.0	21.6	--	7.2	58	--	--
9...	1240	6.0	15.2	--	7.5	62	--	--
9...	1245	10.0	12.3	--	7.5	60	--	--
9...	1250	20.0	8.7	9.3	7.4	52	1.8	--
9...	1255	40.0	5.9	10.2	7.5	58	2.2	--
9...	1300	60.0	5.4	9.9	7.3	59	2.0	--
9...	1305	75.0	5.1	9.3	7.2	59	3.0	--
16...	1310	1.0	22.1	7.4	7.2	61	2.0	7.9
16...	1315	4.0	20.9	7.8	7.3	61	--	--
16...	1320	11.0	12.6	9.1	7.5	64	--	--
16...	1325	20.0	8.7	9.8	7.4	53	1.3	--
16...	1330	40.0	5.9	10.5	7.6	58	1.6	--
16...	1335	60.0	4.9	10.3	7.4	59	1.9	--
16...	1340	74.2	5.1	9.6	7.1	60	1.0	--
30...	1230	0.0	20.8	8.5	7.9	58	1.6	5.3
30...	1235	3.0	20.6	8.6	7.8	58	--	--
30...	1240	7.0	14.0	8.3	7.4	60	--	--
30...	1245	20.0	7.9	9.9	6.8	48	1.1	--
30...	1250	40.0	5.9	10.0	6.8	54	2.0	--
30...	1255	60.0	5.3	9.7	6.9	55	1.3	--
30...	1300	70.0	5.3	9.2	6.9	55	2.3	--
SEP								
15...	1230	1.0	17.5	9.1	7.5	64	1.3	9.1
15...	1235	5.0	17.1	8.9	--	64	--	--
15...	1240	7.1	13.5	8.1	--	65	--	--
13...	1245	20.0	8.0	9.4	7.4	54	1.0	--
13...	1250	30.0	6.3	9.2	--	56	--	--
13...	1255	60.0	5.4	9.2	7.2	59	2.4	--
13...	1300	67.0	5.4	8.9	--	59	--	--
27...	1240	0.5	16.8	10.5	7.9	61	2.3	--
27...	1245	2.0	15.2	10.7	7.9	61	--	--
27...	1250	6.0	14.8	10.4	7.7	61	--	--
27...	1255	8.0	12.2	8.4	6.9	62	--	--
27...	1300	20.0	9.7	9.3	6.7	62	1.1	--
27...	1305	40.0	6.3	9.2	6.6	54	2.1	--
27...	1310	60.0	5.2	9.2	6.6	55	3.0	--
27...	1315	66.6	5.1	8.6	6.4	57	--	--

PHYTOPLANKTON ANALYSES, OCTOBER 1983 TO SEPTEMBER 1984

DATE 84/06/15

SPECIES DIVERSITY 0.00
TOTAL COUNT (NO./ML) 493.

COUNT PCT

CYANOPHYTA BLUE-GREEN ALGAE
---HYXOPHYCEAE
---OSCILLATORIALES
---NOSTOCACEAE
----ANABAENA FLOS-AQUAE 25 5.1
----ANABAENA PLANCTONICA 240 48.7
----ANABAENA SPIROIDES 228 46.2

ROGUE RIVER BASIN

14335040 LOST CREEK LAKE NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 42°40'25", long 122°40'04", near center of sec.26, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, 0.2 mi northeast of outlet structure, and 2.4 mi southeast of Yellow Rock.

PERIOD OF RECORD.--January to September 1984.

REMARKS.--Local Identifier 4240251224004 Lost Creek Lake #11.

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JAN								
6...	1130	0.0	5.8	--	7.4	--	3.5	5.1
12...	1145	0.0	5.8	--	--	56	3.1	5.7
12...	1150	20.0	5.3	--	--	56	3.0	--
12...	1155	40.0	4.6	--	--	50	2.5	--
12...	1200	60.0	4.4	--	--	51	2.5	--
12...	1205	86.0	4.3	--	--	53	2.4	--
17...	1045	0.0	5.1	--	--	--	2.9	7.2
17...	1050	20.0	5.0	--	--	--	2.5	--
17...	1055	40.0	4.5	--	--	--	2.0	--
17...	1100	60.0	4.3	--	--	--	2.4	--
17...	1105	75.0	4.3	--	--	--	2.1	--
26...	1110	0.0	5.4	--	--	--	2.1	10.3
26...	1115	20.0	4.9	--	--	--	2.0	--
26...	1120	40.0	4.2	--	--	--	2.2	--
26...	1125	60.0	4.2	--	--	--	2.1	--
26...	1130	80.0	4.2	--	--	--	1.7	--
31...	1035	0.0	5.5	--	7.6	52	2.0	11.8
31...	1040	20.0	4.9	--	7.6	52	2.1	--
31...	1045	40.0	4.1	--	7.7	52	1.4	--
31...	1050	60.0	4.0	--	7.6	51	1.3	--
31...	1055	80.0	4.0	--	7.6	52	1.5	--
FEB								
9...	1030	0.0	5.6	--	7.3	53	2.1	12.3
9...	1035	20.0	4.5	--	7.4	54	1.7	--
9...	1040	40.0	4.1	--	7.4	53	1.4	--
9...	1045	60.0	4.0	--	7.4	55	1.1	--
9...	1050	80.0	4.0	--	7.3	55	1.1	--
14...	1000	0.0	5.5	11.1	7.4	52	1.8	13.7
14...	1005	20.0	4.6	11.1	7.8	53	1.9	--
14...	1010	40.0	4.1	11.3	7.4	53	1.8	--
14...	1015	60.0	4.0	11.2	7.4	54	1.4	--
14...	1020	80.0	4.0	11.1	7.4	53	1.2	--
24...	1020	0.0	5.3	11.4	7.3	56	2.2	10.6
24...	1025	20.0	4.2	10.8	7.5	57	1.6	--
24...	1030	40.0	4.1	11.3	7.5	58	1.0	--
24...	1035	60.0	4.1	11.1	7.5	58	1.0	--
24...	1040	80.0	4.1	11.0	7.5	59	1.0	--
MAR								
1...	1000	0.0	6.1	11.3	7.5	54	2.1	11.5
1...	1005	20.0	4.5	11.4	7.4	53	2.4	--
1...	1010	40.0	4.2	11.3	7.4	54	1.8	--
1...	1015	60.0	4.1	11.2	7.4	53	1.1	--
1...	1020	75.0	4.1	11.1	7.3	54	2.6	--
6...	1020	0.0	7.6	10.6	7.0	56	2.0	12.6
6...	1025	20.0	5.0	11.4	7.2	56	1.8	--
6...	1030	40.0	4.3	11.5	7.3	56	2.5	--
6...	1035	60.0	4.2	11.1	7.3	56	3.1	--
6...	1040	80.0	4.2	11.0	7.3	57	2.7	--
15...	1150	80.0	4.2	11.5	7.3	50	3.0	--
15...	1155	0.0	7.8	11.5	7.3	50	1.9	--
15...	1200	20.0	5.3	11.4	7.4	50	2.2	--
15...	1205	40.0	4.5	11.6	7.4	20	2.5	--
15...	1210	60.0	4.2	11.6	7.3	50	2.3	--
22...	1115	0.0	8.7	11.1	7.5	57	2.0	--
22...	1120	20.0	5.4	11.1	7.5	56	2.4	--
22...	1125	40.0	4.7	11.1	7.5	56	2.3	--
22...	1130	60.0	4.3	11.1	7.4	56	2.6	--
22...	1135	80.0	4.2	11.1	7.4	56	3.2	--
29...	1120	0.0	9.9	10.7	7.2	57	2.1	13.3
29...	1125	10.0	6.4	--	7.4	56	--	--
29...	1130	20.0	5.7	11.1	7.3	56	2.9	--
29...	1135	40.0	4.6	11.1	7.2	57	2.8	--
29...	1140	60.0	4.3	11.7	7.2	56	2.6	--
29...	1145	80.0	4.3	11.4	7.1	56	2.8	--

ROGUE RIVER BASIN

367

14335040 LOST CREEK LAKE NEAR MCLEOD, OR--Continued

4240251224004

WATER QUALITY DATA, JANUARY TO SEPTERRER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
APR								
5...	1050	0.0	10.2	10.9	7.5	53	2.3	13.3
5...	1055	10.0	7.2	--	7.5	53	--	--
5...	1100	20.0	6.0	10.9	7.5	51	3.0	--
5...	1105	40.0	5.2	11.0	7.4	54	2.4	--
5...	1110	60.0	4.5	10.9	7.4	54	2.3	--
5...	1115	80.0	4.2	11.2	7.3	54	2.5	--
12...	1015	0.0	9.2	10.6	7.4	56	1.9	10.0
12...	1020	5.0	8.7	10.6	7.4	56	--	--
12...	1025	10.0	6.5	10.8	7.3	55	--	--
12...	1030	40.0	5.1	10.8	7.3	56	2.1	--
12...	1035	60.0	4.6	10.8	7.2	56	2.3	--
12...	1040	80.0	4.3	10.7	7.2	56	2.0	--
17...	1050	0.0	11.1	10.4	7.3	55	2.8	7.5
17...	1055	10.0	7.3	10.7	7.4	54	--	--
17...	1100	20.0	6.2	11.0	7.4	53	2.0	--
17...	1105	40.0	5.4	10.8	7.3	54	2.7	--
17...	1110	60.0	4.5	10.9	7.2	55	2.5	--
17...	1115	85.0	4.3	10.8	7.2	55	2.1	--
26...	1100	0.0	11.0	10.3	7.2	53	3.3	5.9
26...	1105	10.0	8.3	10.7	7.3	53	--	--
26...	1110	20.0	6.7	10.9	7.3	53	2.1	--
26...	1115	40.0	5.4	11.0	7.2	53	2.7	--
26...	1120	60.0	4.5	10.9	7.2	53	2.5	--
26...	1125	80.0	4.4	10.9	7.2	53	3.1	--
MAY								
8...	1040	0.0	13.1	10.5	7.7	56	2.2	9.4
8...	1045	20.0	6.8	10.9	7.6	55	2.0	--
8...	1050	40.0	5.6	11.0	7.5	55	3.3	--
8...	1055	60.0	4.9	11.0	7.5	56	2.3	--
8...	1100	80.0	4.6	10.9	7.4	56	2.1	--
18...	1100	0.0	14.2	9.7	7.3	51	1.9	8.4
18...	1105	3.0	13.3	9.9	7.4	51	--	--
18...	1110	5.0	9.5	9.2	7.4	49	--	--
18...	1115	7.0	8.1	10.0	7.2	47	--	--
18...	1120	20.0	6.0	11.1	7.2	50	1.1	--
18...	1125	40.0	5.2	10.8	7.3	51	1.8	--
18...	1130	70.0	0.0	10.7	7.4	53	2.1	--
29...	1000	0.0	17.9	9.4	7.6	55	1.6	10.3
29...	1005	20.0	7.8	10.9	7.5	51	1.0	--
29...	1010	40.0	5.9	10.8	7.4	54	1.9	--
29...	1015	60.0	5.1	10.9	7.4	55	2.0	--
29...	1020	80.0	4.8	10.8	7.4	56	2.2	--
JUN								
12...	1115	0.0	18.1	12.0	8.6	56	5.4	4.8
12...	1120	4.0	14.5	--	--	55	--	--
12...	1125	7.0	10.0	--	--	52	--	--
12...	1130	20.0	7.9	10.8	7.6	51	2.2	--
12...	1135	40.0	6.5	10.7	7.5	57	1.9	--
12...	1140	60.0	5.4	10.6	7.5	59	3.0	--
12...	1145	82.5	4.9	10.5	7.4	60	2.3	--
28...	1120	0.0	24.1	11.2	9.4	57	4.4	5.2
28...	1125	20.0	8.5	10.5	8.3	48	1.9	--
28...	1130	40.0	6.3	9.7	7.7	55	3.0	--
28...	1135	60.0	5.4	10.3	7.5	56	4.3	--
28...	1140	80.0	5.1	10.1	7.4	56	3.4	--

ROGUE RIVER BASIN

14335040 LOST CREEK LAKE NEAR MCLEOD, OR--Continued

4240251224004

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JUL								
12...	1045	0.0	22.6	8.4	8.7	49	1.4	8.0
12...	1050	20.0	8.4	9.9	8.0	45	1.1	--
12...	1055	40.0	6.1	9.6	7.9	51	1.1	--
12...	1100	60.0	5.3	10.1	7.6	52	1.0	--
12...	1105	80.0	5.1	9.5	7.4	52	1.0	--
25...	1020	0.0	22.7	7.7	7.8	54	2.5	12.1
25...	1025	3.0	20.3	7.7	8.1	55	--	--
25...	1030	6.0	14.2	8.2	8.3	58	--	--
25...	1035	20.0	8.9	9.7	7.9	50	1.6	--
25...	1040	40.0	6.2	9.8	7.8	56	2.3	--
25...	1045	60.0	5.5	9.8	7.7	57	4.0	--
25...	1050	80.0	5.2	9.6	7.4	57	2.6	--
AUG								
9...	1100	0.0	23.5	8.0	7.3	59	2.5	9.2
9...	1105	4.0	22.3	--	7.4	59	--	--
9...	1110	6.0	14.9	--	8.0	61	--	--
9...	1115	14.0	11.6	--	8.0	54	--	--
9...	1120	20.0	6.5	10.0	7.2	52	2.6	--
9...	1125	40.0	5.5	8.6	7.2	58	2.4	--
9...	1130	60.0	5.2	9.3	7.0	59	2.5	--
9...	1135	80.0	5.2	9.3	6.8	59	2.5	--
16...	1220	0.0	22.8	7.7	7.7	58	2.1	10.4
16...	1225	4.0	21.2	7.7	7.6	61	--	--
16...	1230	6.0	15.0	7.4	8.1	64	--	--
16...	1235	10.0	12.6	8.6	8.1	61	--	--
16...	1240	17.0	11.2	8.7	7.9	58	--	--
16...	1245	20.0	9.1	9.0	7.9	53	1.7	--
16...	1250	35.0	6.2	9.5	8.0	58	--	--
16...	1255	60.0	5.4	9.4	7.7	60	2.2	--
16...	1300	79.2	5.3	8.8	7.4	60	1.4	--
30...	1100	0.0	20.9	8.5	7.6	57	1.4	5.7
30...	1105	3.0	20.7	8.3	7.5	57	--	--
30...	1110	7.0	13.6	8.6	7.0	60	--	--
30...	1115	20.0	8.3	9.8	6.5	48	1.0	--
30...	1120	40.0	6.0	9.8	6.5	54	2.0	--
30...	1125	60.0	5.5	9.5	6.6	55	2.7	--
30...	1130	66.2	5.4	9.5	6.7	55	2.5	--
SEP								
13...	1115	0.0	18.5	8.7	7.5	63	1.5	5.7
13...	1120	4.0	17.7	8.8	--	62	--	--
13...	1125	7.0	13.2	8.1	--	63	--	--
13...	1130	20.0	7.9	9.5	7.3	53	1.0	--
13...	1135	40.0	5.8	9.7	7.2	57	2.0	--
13...	1140	70.0	5.4	9.0	7.2	60	2.6	--
27...	1130	0.0	16.5	10.4	8.0	60	2.0	--
27...	1135	6.0	15.2	10.9	8.0	62	--	--
27...	1140	8.1	12.4	9.0	7.3	62	--	--
27...	1145	30.0	6.7	9.4	6.9	52	2.3	--
27...	1150	69.5	5.4	8.6	6.6	58	--	--

PHYTOPLANKTON ANALYSES, OCTOBER 1983 TO SEPTEMBER 1984

DATE	84/06/15
SPECIES DIVERSITY	0.00
TOTAL COUNT (NO./ML)	487.
COUNT	PCT
CYANOPHYTA	BLUE-GREEN ALGAE
---MYXOPHYCEAE	
---OSCILLATORIALES	
---NOSTOCACEAE	
-----ANABAENA FLOS-AQUAE	35 7.1
-----ANABAENA PLANCTONICA	276 56.6
-----ANABAENA SPIROIDES	177 36.3

ROGUE RIVER BASIN

569

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 mi², 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, 14.5°C July 14, 15, 18-20; minimum, 4.5°C Jan. 20 to Mar. 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

[illegible]

ROGUE RIVER BASIN

371

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 mi².

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. Elevation 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 datum.

REMARKS.--Records good. 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.--65 years (water years 1911, 1918-22, 1926-84), 156 ft³/s, 113,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s Dec. 22, 1964, gage height, 7.65 ft, from rating curve extended above 1,600 ft³/s on basis of slope-area measurement of peak flow; minimum, 29 ft³/s Sept. 26, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	0630	*1,750	*3.74	Mar. 26	0800	752	2.66
Feb. 13	0400	486	2.23	Apr. 9	2330	476	2.21

Minimum, 66 ft³/s Oct. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	77	130	357	176	309	400	268	158	133	118	113
2	72	75	125	321	170	309	370	257	155	130	115	110
3	72	75	133	297	164	293	361	282	155	125	113	110
4	72	81	123	282	158	271	361	271	188	128	113	110
5	72	75	118	275	155	257	361	261	197	125	113	110
6	70	105	219	264	150	247	334	250	229	123	113	110
7	70	90	282	254	148	240	366	236	282	125	115	108
8	70	77	233	243	150	233	440	229	271	123	115	108
9	75	77	200	229	158	226	425	222	243	120	113	108
10	74	75	219	233	150	226	450	219	226	123	113	108
11	72	79	215	219	176	222	415	261	212	120	110	108
12	72	81	197	209	219	219	435	243	200	123	110	108
13	72	98	514	200	440	271	415	233	191	120	113	108
14	72	87	1130	188	361	257	395	236	182	118	110	108
15	72	81	1490	182	361	301	375	226	179	115	108	108
16	70	85	978	173	334	334	361	212	173	118	108	108
17	70	115	745	167	297	317	343	206	167	120	110	105
18	70	98	575	161	275	309	339	197	161	118	110	105
19	70	115	536	167	278	309	339	191	161	118	110	105
20	70	128	470	161	339	352	330	191	164	115	110	118
21	70	105	420	176	361	343	305	191	173	115	110	108
22	74	96	366	188	330	321	289	182	158	118	110	108
23	77	128	317	191	330	301	278	215	150	115	110	108
24	72	158	317	222	339	282	271	203	148	115	110	105
25	70	135	334	240	309	435	261	185	143	115	110	105
26	70	113	317	229	285	703	254	179	145	113	110	105
27	70	103	297	219	275	569	243	176	143	113	105	103
28	70	96	309	209	275	492	229	173	140	113	105	103
29	70	94	357	203	275	430	226	170	138	115	105	103
30	70	96	425	194	---	400	243	170	135	115	120	103
31	72	---	400	185	---	420	---	164	---	115	120	---
TOTAL	2216	2898	12491	6838	7438	10198	10214	6699	5367	3702	3455	3227
MEAN	71.5	96.6	403	221	256	329	340	216	179	119	111	108
MAX	77	158	1490	357	440	703	450	282	282	133	120	118
MIN	70	75	118	161	148	219	226	164	135	113	105	103
AC-FT	4400	5750	24780	13560	14750	20230	20260	13290	10650	7340	6850	6400
CAL YR 1983	TOTAL	63118	MEAN	173	MAX	1490	MIN	70	AC-FT	125200		
WTR YR 1984	TOTAL	74743	MEAN	204	MAX	1490	MIN	70	AC-FT	148300		

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR

LOCATION.--Lat 42°39'05", long 122°41'25", in NE¼ 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 mi².

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.--29 years, 287 ft³/s, 207,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft³/s Dec. 22, 1955, gage height, 12.75 ft, site and datum then in use, from rating curve extended above 3,300 ft³/s on basis of slope-area measurement of peak flow; minimum, 6.4 ft³/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 ft³/s, from rating curve, at former site, extended above 9,000 ft³/s and field estimate of overflow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2100	2,390	7.46	Feb. 13	1230	2,000	6.89
Dec. 15	0730	*4,460	*9.82				

Minimum, 66 ft³/s Oct. 25-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	91	376	803	309	661	892	496	195	122	93	93
2	137	82	281	709	290	722	792	464	184	119	90	83
3	135	75	293	648	277	666	729	505	180	116	88	79
4	133	80	248	603	266	615	748	472	229	113	83	78
5	129	77	262	559	258	565	754	451	256	113	85	78
6	128	153	1320	527	250	528	696	449	312	107	83	77
7	128	118	1130	502	236	495	656	388	386	104	83	79
8	134	86	828	477	232	471	940	370	363	104	88	80
9	145	81	618	438	251	451	946	356	328	101	83	77
10	143	97	715	425	255	440	1050	345	299	101	80	76
11	139	108	699	425	307	436	899	468	275	98	80	77
12	136	118	623	386	378	422	897	473	256	98	80	78
13	136	265	2220	367	1340	504	827	440	242	93	83	76
14	136	157	3520	344	996	558	762	432	225	93	83	78
15	136	111	3850	322	996	569	710	422	214	88	80	83
16	134	127	2290	305	939	809	666	403	202	88	78	79
17	134	267	1830	291	757	854	626	386	195	93	78	77
18	133	169	1230	279	663	757	610	368	184	90	78	74
19	133	229	1130	271	630	728	658	316	180	88	80	78
20	130	289	957	256	750	723	645	272	187	86	80	108
21	127	210	856	287	1110	806	557	287	206	90	83	98
22	127	180	743	320	849	740	518	337	180	95	83	91
23	143	408	648	316	763	696	487	382	167	89	80	91
24	111	475	658	392	938	656	468	333	157	89	83	85
25	67	344	803	438	914	709	451	249	154	90	83	83
26	67	237	809	437	732	1410	431	238	148	91	80	84
27	66	183	732	407	670	1280	416	225	148	87	78	82
28	66	155	648	385	640	1040	383	217	138	87	73	83
29	96	147	720	368	627	908	369	210	135	87	76	194
30	69	158	1040	349	---	807	425	206	128	88	79	198
31	81	---	918	328	---	913	---	202	---	88	115	---
TOTAL	3718	5277	32995	12964	17623	21939	20008	11162	6453	2996	2569	2697
MEAN	120	176	1064	418	608	708	667	360	215	96.6	82.9	89.9
MAX	145	475	3850	803	1340	1410	1050	505	386	122	115	198
MIN	66	75	248	256	232	422	369	202	128	86	73	74
AC-FT	7370	10470	65450	25710	34960	43520	39690	22140	12800	5940	5100	5350
CAL YR 1983	TOTAL	130520	MEAN	358	MAX	3850	MIN	64	AC-FT	258900		
WTR YR 1984	TOTAL	140401	MEAN	384	MAX	3850	MIN	66	AC-FT	278500		

ROGUE RIVER BASIN

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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 17; minimum, 1.0°C Dec. 23.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

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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 mi².

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.--19 years, 2,188 ft³/s, 1,585,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s Mar. 3, 1972, gage height, 12.24 ft; minimum, 468 ft³/s Feb. 18, 1977, result of closure of Lost Creek Dam, minimum prior to that time, 604 ft³/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 ft³/s, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,270 ft³/s Dec. 16, gage height, 5.95 ft; minimum, 1,240 ft³/s Feb. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1920	1930	2660	4070	2030	2820	3860	3270	3690	2990	3120	2760
2	1920	2040	2650	3970	1910	3060	3820	3970	3370	2910	3130	2740
3	1930	2110	2660	3890	1590	2980	3890	4590	3370	2980	3120	2730
4	1930	2270	2620	3850	1490	2950	3920	5030	4200	2990	3120	2730
5	1920	2350	2630	3830	1480	2090	3430	5000	5500	3000	3120	2730
6	1940	2500	3940	3790	1380	1680	3030	4990	5090	2980	3100	2690
7	1930	2490	4770	3770	1270	1650	3000	3930	6590	2990	3100	2630
8	1930	2460	5250	3760	1260	1620	3350	3390	6070	2980	3080	2620
9	1940	2460	4400	3750	1280	1730	3550	3550	4630	2980	3070	2620
10	1940	2470	4700	3650	1290	2310	4000	3540	4250	2970	3080	2540
11	1930	2480	4300	3540	1330	2300	3800	4300	3910	2960	3090	2460
12	1920	2500	3500	3290	1410	2540	3800	4970	3620	2970	3080	2470
13	1920	2690	4250	2990	2500	2790	3710	4930	3610	2970	3090	2270
14	1920	2550	4350	2970	2130	3400	3620	4920	3600	2960	3090	2200
15	1930	2380	6090	2960	2540	4090	3550	4900	3580	2950	3000	2090
16	1920	2210	6580	2490	2900	4810	3500	4880	3590	2960	2890	2010
17	1910	2460	7490	2170	3140	5220	3680	4470	3570	2960	2880	1900
18	1910	2760	6960	2110	3050	4550	3790	3020	3570	2970	2900	1850
19	1910	3090	7300	1950	3000	3940	3930	2470	3500	3050	2900	1750
20	1910	3150	7750	1880	3140	3930	4050	2450	3400	3090	2800	1730
21	1910	3050	7660	1910	3610	4160	3950	2420	3300	3090	2710	1650
22	1910	2900	7560	1940	3250	4270	3350	2800	3130	3090	2710	1510
23	1930	2990	6330	1920	3150	3960	2400	4220	2870	3100	2700	1540
24	1890	3060	5400	2050	3390	3510	2380	4710	2750	3110	2680	1390
25	1840	3040	5700	2290	3370	3580	2360	3930	2720	3100	2680	1290
26	1840	3050	6000	2400	3120	4600	2350	3540	2740	3100	2710	1310
27	1850	2980	5250	2290	2920	4900	2330	3530	2940	3100	2700	1330
28	1840	2950	4620	2090	2740	5010	2300	3520	3170	3110	2700	1340
29	1870	2580	3980	2080	2710	4780	2290	4320	3160	3120	2690	1450
30	1840	2360	4390	2060	---	4180	2570	4670	3150	3120	2740	1450
31	1850	---	4190	2050	---	3910	---	4460	---	3120	2760	---
TOTAL	59050	78310	155930	87760	68380	107320	99560	124690	112640	93770	90540	61780
MEAN	1905	2610	5030	2831	2358	3462	3319	4022	3755	3025	2921	2059
MAX	1940	3150	7750	4070	3610	5220	4050	5030	6590	3120	3130	2760
MIN	1840	1930	2620	1880	1260	1620	2290	2420	2720	2910	2680	1290
AC-FT	117100	155300	309300	174100	135600	212900	197500	247300	223400	186000	179600	122500
CAL YR 1983	TOTAL	1075650	MEAN	2947	MAX	9910	MIN	1250	AC-FT	2134000		
WTR YR 1984	TOTAL	1139730	MEAN	3114	MAX	7750	MIN	1260	AC-FT	2261000		

ROGUE RIVER BASIN

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, 14.0°C July 14-16, 18-20, 22; minimum, 4.5°C many days from January 17 to March 5.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

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14337600 ROGUE RIVER NEAR MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	8.0	10.0	9.5	12.5	11.5	12.5	12.5	13.5	13.0
2	6.0	5.5	8.0	7.5	10.5	9.5	12.5	12.0	12.5	12.0	13.5	13.0
3	6.0	6.0	8.5	8.0	10.0	9.5	12.5	12.0	12.5	11.5	13.5	12.0
4	6.0	6.0	8.0	8.0	10.0	9.5	13.0	12.0	12.5	12.0	12.0	12.0
5	6.5	6.0	8.0	7.5	9.5	8.5	13.0	12.5	12.5	12.0	12.5	11.5
6	6.0	5.5	8.0	7.5	8.5	8.5	13.0	12.5	12.5	12.0	12.0	11.5
7	6.0	6.0	8.5	8.0	8.5	8.0	13.5	12.5	12.0	11.5	12.5	12.0
8	6.0	6.0	8.5	8.5	8.5	8.0	13.0	12.5	12.0	11.5	12.5	12.0
9	6.0	5.5	9.0	8.5	10.0	8.5	13.5	12.5	11.5	11.0	12.5	12.0
10	6.0	5.5	9.0	8.5	10.0	9.5	13.5	12.5	11.5	10.5	12.5	12.0
11	6.0	5.5	9.0	8.5	10.0	10.0	13.5	13.0	10.5	10.0	12.0	11.5
12	6.5	6.0	9.0	8.5	10.5	10.0	13.5	13.0	10.5	10.0	12.0	11.5
13	6.5	6.0	9.0	8.5	10.5	10.5	13.5	13.0	10.5	10.0	12.0	11.5
14	7.0	6.5	9.0	8.5	11.0	10.0	14.0	13.0	11.0	10.0	11.5	11.0
15	7.0	6.5	9.0	8.0	11.0	10.5	14.0	13.5	11.5	10.5	11.5	10.0
16	7.0	6.5	8.5	8.0	11.0	10.5	14.0	13.0	12.0	11.5	10.0	9.5
17	6.5	6.0	9.0	8.5	11.0	10.5	13.5	13.0	12.0	11.5	10.0	8.5
18	6.5	6.5	10.0	9.0	11.0	10.5	14.0	13.0	12.5	12.0	8.5	7.5
19	6.5	6.0	10.5	10.0	11.0	10.5	14.0	13.0	12.5	12.0	8.0	7.0
20	6.5	6.0	11.0	10.0	11.5	10.5	14.0	13.0	12.5	12.0	8.0	7.5
21	6.5	6.5	11.0	10.5	11.5	11.0	13.5	13.0	13.0	12.0	8.0	7.5
22	7.5	6.5	11.0	10.0	12.0	11.0	14.0	13.5	13.0	12.5	7.5	7.5
23	7.5	7.0	10.0	9.0	12.5	11.5	13.5	13.5	13.0	12.5	7.5	7.0
24	7.5	7.0	9.0	8.5	13.0	12.0	13.5	13.0	13.0	12.5	7.0	7.0
25	7.5	7.0	9.5	9.0	13.0	12.5	13.5	12.5	13.0	12.5	7.0	6.5
26	8.0	7.0	10.0	9.0	13.0	12.5	13.5	12.5	13.5	13.0	7.0	6.5
27	8.0	7.0	10.0	9.5	13.0	12.0	13.0	13.0	13.5	13.0	7.0	6.5
28	8.0	7.5	10.0	9.5	12.0	11.5	13.0	12.0	13.5	13.0	7.0	6.5
29	8.0	7.5	10.0	10.0	12.0	11.5	12.5	12.0	13.5	13.0	7.5	7.0
30	8.0	7.5	10.0	9.5	12.5	11.5	12.5	12.0	13.5	13.0	7.5	7.0
31	---	---	10.0	9.0	---	---	12.5	12.0	13.0	13.0	---	---
MONTH	8.0	5.5	11.0	7.5	13.0	8.0	14.0	11.5	13.5	10.0	13.5	6.5

ROGUE RIVER BASIN

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 mi².

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.--11 years, 160 ft³/s, 27.57 in/yr, 115,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft³/s Jan. 15, 1974, gage height, 8.9 ft, from floodmark; minimum daily, 0.72 ft³/s Aug. 24, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2400	1,620	5.70	Feb. 13	1200	3,790	7.37
Dec. 15	0030	*4,840	*8.00	Mar. 26	1200	1,820	5.89

Minimum, 2.9 ft³/s Sept. 17, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	5.3	27	440	426	145	437	313	469	79	35	8.9	10		
2	5.0	23	542	347	129	467	290	512	76	32	8.7	7.9		
3	5.1	25	431	303	118	378	254	438	72	31	8.0	6.6		
4	4.9	35	323	303	111	317	243	374	132	30	8.4	5.6		
5	4.9	25	244	303	107	279	260	313	133	28	8.5	5.3		
6	4.4	77	708	290	102	262	239	261	216	27	8.6	4.9		
7	4.3	51	1430	266	95	259	222	222	393	26	7.7	5.2		
8	4.8	33	884	233	90	258	408	200	317	25	7.1	6.0		
9	8.0	26	631	202	96	246	438	183	233	24	6.1	4.7		
10	8.8	25	828	189	95	232	719	173	188	22	6.1	4.0		
11	7.7	47	614	199	121	217	596	240	158	22	5.9	4.3		
12	6.4	77	516	183	360	200	491	226	136	21	5.8	4.5		
13	5.8	194	1800	164	2450	260	430	204	119	20	6.2	4.1		
14	5.9	150	3270	149	1050	330	400	190	108	20	6.0	3.9		
15	6.1	105	3040	135	688	379	370	171	98	19	5.5	5.3		
16	6.1	141	1300	122	617	477	316	153	89	18	5.3	4.2		
17	6.0	444	729	110	459	526	266	141	83	16	4.9	3.5		
18	5.9	296	541	103	374	434	254	133	79	14	4.5	3.4		
19	6.0	436	602	95	350	422	284	127	74	13	4.8	3.3		
20	6.0	484	511	89	476	436	328	128	71	13	4.4	12		
21	6.0	293	404	110	592	412	299	119	71	12	4.3	7.7		
22	7.6	195	324	187	476	370	266	111	64	11	4.4	5.6		
23	14	557	262	230	390	322	237	128	60	11	4.0	5.9		
24	9.7	982	244	370	389	279	214	109	56	11	4.3	6.1		
25	8.6	572	371	428	399	306	193	103	52	11	5.0	5.7		
26	8.5	362	481	375	361	1490	178	98	47	11	4.2	4.8		
27	8.5	253	400	303	350	935	162	95	45	11	3.8	4.5		
28	8.3	200	347	247	394	567	149	93	41	10	4.0	4.2		
29	8.1	163	417	209	397	425	143	95	39	9.9	3.9	4.1		
30	9.7	170	774	182	---	344	187	93	36	9.1	5.0	4.0		
31	20	---	574	163	---	319	---	86	---	8.4	12	---		
TOTAL	226.4	6468	23982	7015	11781	12585	9149	5988	3365	571.4	186.3	161.3		
MEAN	7.30	216	774	226	406	406	305	193	112	18.4	6.01	5.38		
MAX	20	982	3270	428	2450	1490	719	512	393	35	12	12		
MIN	4.3	23	244	89	90	200	143	86	36	8.4	3.8	3.3		
CFSM	.09	2.74	9.82	2.87	5.15	5.15	3.87	2.45	1.42	.23	.08	.07		
IN.	.11	3.05	11.32	3.31	5.56	5.94	4.32	2.83	1.59	.27	.09	.08		
AC-FT	449	12830	47570	13910	23370	24960	18150	11880	6670	1130	370	320		
CAL YR 1983	TOTAL	85527.7	MEAN	234	MAX	3270	MIN	4.1	CFSM	2.97	IN.	40.38	AC-FT	169600
WTR YR 1984	TOTAL	81478.4	MEAN	223	MAX	3270	MIN	3.3	CFSM	2.83	IN.	38.46	AC-FT	161600

ROGUE RIVER BASIN

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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 on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.0°C July 17; minimum, 0.0°C Dec. 23.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	9.0	11.5	10.0	6.5	4.5	5.5	4.5	6.0	3.5	6.5	5.5
2	13.5	9.5	10.5	9.5	7.0	6.0	6.0	4.5	5.5	3.0	7.0	4.5
3	15.0	9.5	11.5	10.5	6.5	5.5	6.5	5.0	6.0	3.0	7.0	4.0
4	15.5	10.0	11.0	8.5	6.0	5.0	6.5	5.5	7.0	3.5	7.5	4.0
5	15.0	10.0	8.5	7.5	5.0	4.0	6.5	5.0	6.5	4.0	7.5	4.0
6	14.5	9.0	9.5	7.5	5.5	3.5	6.0	5.0	7.5	5.0	8.0	4.5
7	13.5	8.5	9.0	6.0	6.5	5.5	6.0	4.5	6.5	3.5	8.5	5.0
8	14.0	10.5	7.0	4.5	7.0	5.5	6.5	5.5	8.0	5.0	8.5	5.0
9	14.5	12.0	9.0	6.5	7.0	6.5	5.5	4.5	6.0	4.5	9.0	6.0
10	15.5	12.0	9.0	8.0	7.0	6.0	6.5	5.5	5.5	3.5	8.5	5.5
11	14.5	10.0	9.5	7.0	6.0	5.5	6.0	4.5	4.0	3.0	7.0	5.0
12	14.5	9.5	8.5	6.0	6.0	5.5	4.5	3.5	5.5	4.0	9.0	5.5
13	12.5	10.0	7.0	5.5	6.5	5.5	4.0	2.0	6.0	5.5	8.0	6.0
14	12.5	8.5	7.0	6.5	7.0	6.5	3.0	1.0	6.0	4.5	7.0	6.0
15	11.5	7.0	8.0	6.5	7.5	6.5	4.0	2.5	6.0	4.5	7.0	5.5
16	10.5	6.5	8.0	7.0	7.0	6.5	3.0	1.5	5.5	5.0	6.0	5.0
17	11.0	7.0	7.5	7.0	7.5	6.5	2.5	.5	5.5	4.0	7.0	5.0
18	11.0	6.5	7.5	6.5	6.5	6.5	3.0	.5	6.5	4.5	7.0	5.5
19	11.0	7.0	7.5	6.5	6.5	5.0	4.0	2.0	6.5	5.0	9.0	6.5
20	11.0	7.0	6.5	6.0	5.0	4.0	3.5	1.0	7.0	5.5	8.5	6.5
21	10.5	6.5	7.0	5.5	4.0	2.5	4.5	3.0	5.5	4.5	7.0	5.5
22	10.5	9.5	6.0	5.0	2.5	.5	5.0	3.5	6.0	4.5	8.5	5.0
23	12.5	9.5	6.5	5.0	2.0	.0	4.5	3.5	5.5	4.0	9.0	6.5
24	10.5	6.5	7.0	6.5	3.5	1.0	6.5	4.5	4.5	3.0	8.5	5.0
25	10.5	6.0	6.5	6.0	4.5	3.5	7.0	6.0	5.5	3.5	6.5	5.5
26	10.0	6.5	6.0	5.5	5.5	4.5	6.0	4.5	6.5	3.5	7.5	6.0
27	10.5	6.5	7.0	5.5	5.5	4.0	5.5	4.0	7.0	4.0	8.5	6.0
28	11.0	7.5	6.5	5.0	4.5	3.5	6.0	4.0	6.5	5.0	8.0	6.0
29	10.5	8.0	6.0	5.0	6.0	4.5	6.0	4.0	6.0	5.0	8.0	5.5
30	11.5	9.0	6.0	4.5	6.5	5.5	6.0	3.5	---	---	8.0	4.5
31	12.0	10.5	---	---	5.5	4.5	6.5	4.0	---	---	7.0	5.0
MONTH	15.5	6.0	11.5	4.5	7.5	.0	7.0	.5	8.0	3.0	9.0	4.0

ROGUE RIVER BASIN

14337800 ELK CREEK NEAR CASCADE GORGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

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14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR

LOCATION.--Lat 42°42'40", long 122°44'55", in SW 1/4 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 mi².

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 except those for July and August, which are fair. No regulation or diversions above station.

AVERAGE DISCHARGE.--10 years, 25.0 ft³/s, 23.91 in/yr, 18,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft³/s Jan. 15, 1974, gage height, 5.30 ft, from rating curve extended above 600 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.26 ft³/s Sept. 16, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2400	468	3.01	Feb. 13	1100	*729	*3.81
Dec. 14	0830	620	3.50				

Minimum, 2.0 ft³/s Aug. 23, 24, 27-29, Sept. 4, 5, 17-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	3.2	7.4	56	64	11	83	51	59	6.0	5.5	2.3	3.1		
2	3.1	5.8	63	43	10	81	54	68	6.1	5.3	2.3	2.7		
3	3.1	6.2	49	31	9.3	68	45	58	6.2	5.1	2.3	2.6		
4	3.1	6.8	27	26	8.9	50	37	50	11	4.9	2.3	2.3		
5	3.1	6.0	20	23	8.6	39	36	37	15	4.7	2.3	2.2		
6	3.0	18	153	19	7.9	32	34	28	27	4.6	2.3	2.5		
7	2.9	11	254	18	7.3	28	31	23	45	4.4	2.3	2.8		
8	3.0	6.8	133	15	7.3	25	72	20	34	4.2	2.3	2.7		
9	3.5	5.8	91	14	7.9	21	81	18	22	4.1	2.3	2.5		
10	4.3	6.3	126	13	7.3	19	114	16	17	4.0	2.2	2.4		
11	3.8	11	96	14	8.6	18	106	18	14	3.9	2.2	2.3		
12	3.7	22	83	13	36	17	83	16	12	3.8	2.2	2.3		
13	3.5	42	194	13	421	28	78	14	10	3.8	2.2	2.2		
14	3.6	22	434	12	150	43	66	13	9.4	3.7	2.2	2.4		
15	3.7	17	273	11	107	56	49	13	8.3	3.6	2.2	2.7		
16	3.7	26	122	10	106	89	36	12	7.7	3.5	2.2	2.4		
17	3.7	76	80	9.5	74	99	29	11	7.3	3.3	2.2	2.2		
18	3.7	36	62	9.3	57	76	28	10	7.1	3.2	2.2	2.1		
19	3.7	53	60	8.8	52	69	27	9.6	6.8	3.1	2.2	2.3		
20	3.7	64	52	8.6	75	75	28	9.3	6.7	2.9	2.2	8.0		
21	3.7	32	40	9.1	106	106	27	8.8	6.9	2.7	2.2	3.1		
22	4.7	20	29	11	88	40	24	8.7	6.6	2.5	2.1	2.7		
23	5.4	54	24	12	66	32	21	9.4	6.3	2.4	2.0	2.7		
24	4.3	135	23	22	64	27	20	8.1	6.0	2.3	2.0	2.8		
25	3.8	82	42	34	73	33	19	7.8	5.6	2.3	2.2	2.7		
26	3.8	41	83	30	66	146	18	7.5	5.7	2.6	2.1	2.5		
27	3.8	23	77	25	64	134	18	7.1	5.7	2.5	2.2	2.4		
28	3.8	18	51	21	78	82	17	6.8	5.7	2.4	2.2	2.4		
29	3.8	15	57	18	76	64	17	6.5	5.7	2.4	2.2	2.4		
30	4.7	16	136	15	---	49	24	6.5	5.6	2.4	2.7	2.5		
31	7.0	---	89	13	---	47	---	6.2	---	2.3	3.8	---		
TOTAL	117.9	885.1	3079	585.3	1853.1	1776	1290	586.3	338.4	108.4	70.6	80.9		
MEAN	3.80	29.5	99.3	18.9	63.9	57.3	43.0	18.9	11.3	3.50	2.28	2.70		
MAX	7.0	135	434	64	421	146	114	68	45	5.5	3.8	8.0		
MIN	2.9	5.8	20	8.6	7.3	17	17	6.2	5.6	2.3	2.0	2.1		
CFSM	.27	2.08	6.99	1.33	4.50	4.04	3.03	1.33	.80	.25	.16	.19		
IN.	.31	2.32	8.07	1.53	4.85	4.65	3.38	1.54	.89	.28	.18	.21		
AC-FT	234	1760	6110	1160	3680	3520	2560	1160	671	215	140	160		
CAL YR 1983	TOTAL	12082.5	MEAN	33.1	MAX	469	MIN	2.5	CFSM	2.33	IN.	31.65	AC-FT	23970
WTR YR 1984	TOTAL	10771.0	MEAN	29.4	MAX	434	MIN	2.0	CFSM	2.07	IN.	28.22	AC-FT	21360

NOTE.--No gage-height record June 30 to Aug. 27.

ROGUE RIVER BASIN

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, Jan. 28-31, 1980, and Dec. 23, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C July 17; minimum, 0.0°C Dec. 23.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	8.0	10.0	9.0	7.0	5.0	6.0	4.5	---	---	7.0	5.5
2	11.0	8.0	10.0	9.0	7.0	5.5	6.5	5.0	---	---	6.5	5.0
3	11.5	8.5	10.5	9.5	6.0	5.0	7.0	5.0	---	---	6.5	4.0
4	12.5	9.0	10.0	8.0	5.5	4.5	6.5	6.0	---	---	7.0	4.5
5	12.0	9.0	8.0	7.0	5.0	4.0	7.0	6.0	---	---	7.5	4.0
6	11.5	8.0	9.0	7.5	6.5	3.5	6.0	5.5	---	---	8.0	4.5
7	11.5	8.0	7.5	5.5	7.0	6.5	6.5	5.0	---	---	8.5	5.5
8	12.0	9.0	6.5	4.5	7.0	6.5	7.0	6.0	---	---	9.0	5.5
9	12.0	11.0	8.0	6.0	7.5	6.5	6.0	4.5	---	---	9.5	6.5
10	12.5	10.5	8.5	7.5	7.5	6.5	6.5	5.5	---	---	9.5	6.5
11	11.5	8.5	8.5	7.0	6.5	6.0	6.5	4.5	---	---	7.5	5.5
12	12.0	8.5	7.5	6.5	6.5	6.0	4.5	3.5	---	---	9.0	6.0
13	10.5	8.5	6.5	5.0	7.0	6.0	3.5	2.0	---	---	8.0	6.5
14	10.5	8.0	6.5	6.0	8.0	7.0	2.5	1.5	---	---	7.5	6.5
15	9.0	6.5	7.5	6.0	8.0	7.0	3.5	2.5	---	---	7.5	6.0
16	9.5	6.0	8.0	7.0	7.5	7.0	2.5	1.5	---	---	6.5	5.5
17	10.0	6.5	7.5	7.0	8.0	7.0	2.0	.5	---	---	7.0	5.5
18	9.0	6.5	7.0	6.5	7.0	6.5	2.5	1.0	---	---	7.0	6.0
19	9.5	6.5	7.5	6.5	7.0	5.0	---	---	---	---	9.0	7.0
20	9.5	6.5	6.5	5.5	5.0	4.0	---	---	---	---	8.5	7.0
21	9.5	6.5	6.0	5.5	4.0	2.5	---	---	---	---	7.5	6.0
22	9.5	8.5	6.0	4.5	2.5	.5	---	---	---	---	8.5	5.0
23	10.5	8.0	6.5	4.5	2.0	.0	---	---	---	---	9.0	6.5
24	9.0	6.5	7.0	6.5	3.5	.5	---	---	---	---	8.5	5.0
25	9.0	6.0	6.5	5.5	5.0	3.5	---	---	---	---	6.5	5.5
26	9.0	6.5	6.0	5.5	5.5	5.0	---	---	---	---	8.0	6.5
27	9.0	6.5	6.5	5.0	5.5	4.0	---	---	---	---	8.5	5.5
28	10.0	7.5	6.0	5.0	5.0	3.5	---	---	7.0	---	8.0	6.0
29	9.5	7.5	5.5	4.5	6.0	5.0	---	---	6.5	5.5	8.0	5.5
30	10.5	9.0	5.5	4.5	7.0	6.0	---	---	---	---	8.0	4.5
31	11.0	9.5	---	---	6.0	5.0	---	---	---	---	6.5	4.5
MONTH	12.5	6.0	10.5	4.5	8.0	.0	---	---	---	---	9.5	4.0

ROGUE RIVER BASIN

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14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

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 mi².

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.—39 years, 234 ft³/s, 169,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 19,200 ft³/s Dec. 22, 1964, gage height, 18.84 ft, from rating curve extended above 4,700 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.40 ft³/s Aug. 16, 1965.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2400	3,100	7.50	Feb. 13	1230	5,720	9.81
Dec. 15	0330	*5,920	*9.97				

Minimum, 5.3 ft³/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	35	652	684	197	688	464	629	99	48	14	16
2	8.7	42	802	508	177	751	439	772	93	45	14	12
3	8.6	39	644	422	162	559	384	633	89	43	14	10
4	8.5	49	424	397	152	443	359	538	142	39	13	10
5	8.6	43	343	389	146	382	376	474	184	37	13	9.6
6	8.4	124	1240	360	138	350	352	353	251	36	13	9.3
7	8.1	113	2310	330	130	335	324	299	508	35	12	8.4
8	8.1	63	1500	296	124	322	641	265	426	33	10	8.1
9	9.1	46	991	260	131	305	783	242	297	32	9.9	8.3
10	13	39	1340	241	132	286	1260	225	238	30	9.7	7.7
11	14	79	1020	261	154	271	1100	284	199	29	9.6	8.2
12	12	128	852	242	423	247	836	274	171	27	9.1	9.7
13	11	336	2390	221	3710	316	699	248	150	27	9.3	8.2
14	10	264	4390	201	1790	440	596	232	134	26	9.4	6.4
15	11	194	4160	183	1170	513	524	214	121	25	11	10
16	11	228	1760	167	1100	787	427	195	110	23	10	9.7
17	11	682	1140	153	779	923	360	180	102	19	9.3	7.7
18	11	417	823	142	580	705	338	168	95	16	8.5	6.8
19	11	571	879	135	502	624	364	160	90	16	8.5	5.3
20	10	744	742	127	721	612	428	159	87	16	8.5	25
21	10	435	577	141	1040	563	394	150	89	16	9.1	21
22	11	301	444	210	821	490	350	142	80	14	7.4	16
23	18	711	358	282	619	415	313	159	74	16	6.4	12
24	16	1540	332	483	641	358	284	139	68	16	6.5	12
25	13	973	509	614	746	371	260	130	64	16	7.6	11
26	12	539	889	524	630	2090	239	124	60	17	7.3	13
27	16	359	695	409	567	1560	220	118	58	15	6.8	10
28	13	288	537	333	664	933	205	114	55	15	6.5	9.6
29	12	242	627	284	636	652	196	114	53	15	6.5	8.9
30	13	226	1310	248	---	502	247	113	51	14	6.9	8.9
31	24	---	999	220	---	465	---	107	---	13	11	---
TOTAL	360.1	9850	35679	9467	18782	18258	13762	7954	4238	769	297.8	318.8
MEAN	11.6	328	1151	305	648	589	459	257	141	24.8	9.61	10.6
MAX	24	1540	4390	684	3710	2090	1260	772	508	48	14	25
MIN	8.1	35	332	127	124	247	196	107	51	13	6.4	5.3
AC-FT	714	19540	70770	18780	37250	36210	27300	15780	8410	1530	591	632
CAL YR 1983	TOTAL	130814.4	MEAN	358	MAX	4390	MIN	7.3	AC-FT	259500		
WTR YR 1984	TOTAL	119735.7	MEAN	327	MAX	4390	MIN	5.3	AC-FT	237500		

ROGUE RIVER BASIN

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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.--Temperature recorder since June 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.5°C July 17, 1979; minimum, 0.0°C at times most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 28.5°C July 17, 31, Aug. 9, 10; minimum, 0.0°C Dec. 23.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	12.0	13.0	11.5	7.0	5.0	5.5	4.5	6.0	3.5	7.0	5.5
2	16.0	11.5	12.0	11.0	7.5	6.5	6.0	4.5	5.0	2.5	---	5.0
3	17.5	12.0	12.0	11.0	6.5	6.0	6.5	5.0	5.5	2.5	---	---
4	18.5	13.0	12.0	11.0	6.0	5.0	7.0	6.0	6.5	3.0	---	---
5	18.0	13.0	11.0	9.0	5.5	5.0	6.5	6.0	5.5	3.5	---	---
6	16.5	12.0	10.0	9.0	6.0	3.5	6.0	5.5	7.5	5.5	---	---
7	16.5	11.5	9.0	8.0	7.0	6.0	6.0	5.0	6.0	4.0	---	---
8	16.0	13.0	8.0	6.0	7.0	6.0	7.5	6.0	7.5	5.0	---	---
9	16.5	14.0	9.0	7.0	7.5	6.5	6.5	5.5	6.0	5.5	---	---
10	17.5	14.5	9.5	9.0	7.5	6.5	6.5	5.5	6.0	4.5	---	---
11	17.0	13.0	10.5	8.5	6.5	5.5	6.5	5.5	5.0	4.0	---	---
12	16.0	12.5	8.5	7.5	6.0	5.5	5.5	4.0	6.0	4.5	---	---
13	14.5	12.0	7.5	6.0	7.0	6.0	4.0	2.5	6.5	6.0	---	---
14	14.5	11.5	7.0	6.5	7.5	6.5	2.5	1.0	6.0	5.5	---	---
15	13.5	9.0	8.0	6.5	8.0	7.0	3.5	2.5	6.0	5.0	---	---
16	12.5	9.0	8.0	7.5	7.5	6.5	3.0	1.5	6.0	5.0	7.5	---
17	12.5	9.5	8.0	7.5	8.0	7.0	2.0	.5	6.0	4.0	7.0	6.0
18	13.5	9.0	7.5	7.0	7.0	6.5	2.5	.5	7.0	4.5	10.0	6.5
19	13.0	9.5	7.5	6.5	7.0	5.5	3.5	1.0	6.5	5.0	9.0	7.0
20	13.0	9.5	7.0	6.0	5.5	4.5	2.5	1.0	7.0	6.0	8.0	6.0
21	12.0	9.0	7.0	6.0	4.5	3.0	4.5	2.5	6.0	5.0	9.0	5.0
22	12.0	11.0	6.5	5.0	3.0	1.5	5.5	4.0	6.5	4.5	9.5	6.5
23	14.0	11.0	6.5	5.0	1.5	.0	4.5	3.0	5.5	4.0	9.0	5.5
24	12.5	9.0	7.5	6.5	3.5	1.0	6.5	4.5	5.0	4.0	6.5	5.5
25	12.5	8.5	7.0	6.5	4.5	3.5	7.5	6.5	6.5	4.0	8.0	6.5
26	12.5	9.0	7.0	6.0	5.5	4.5	6.5	5.0	6.5	4.0	9.0	6.0
27	12.5	9.0	7.5	5.5	5.5	4.5	6.0	4.0	7.5	4.0	8.5	6.5
28	12.5	10.0	6.5	5.5	4.5	3.5	6.0	4.0	7.0	5.5	8.5	5.5
29	11.5	10.0	6.0	5.5	6.5	3.5	5.5	3.5	6.5	5.5	8.5	4.5
30	12.5	11.0	6.0	5.0	7.0	6.0	5.5	3.5	---	---	6.5	5.5
31	13.0	12.0	---	---	6.0	5.0	5.5	3.5	---	---	---	---
MONTH	18.5	8.5	13.0	5.0	8.0	.0	7.5	.5	7.5	2.5	---	---

ROGUE RIVER BASIN

14338000 ELK CREEK NEAR TRAIL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	8.0	7.0	17.0	10.5	23.5	17.0	27.5	21.0	22.0	15.5
2	---	---	9.5	7.0	17.5	12.0	24.5	18.0	26.0	20.5	23.0	16.5
3	---	---	---	---	15.5	11.0	24.5	18.0	25.5	19.5	24.0	17.5
4	---	---	---	---	14.0	11.0	25.5	19.5	25.5	18.0	23.5	17.0
5	---	---	---	---	12.0	10.0	25.0	19.0	25.0	18.5	22.0	17.5
6	7.5	---	---	---	10.5	9.5	25.5	19.5	25.5	19.0	21.5	17.0
7	7.5	5.5	---	---	11.0	9.0	24.0	17.5	26.5	18.0	22.5	17.5
8	7.5	5.5	---	---	12.5	7.5	24.0	17.0	28.0	20.0	24.0	17.5
9	8.0	5.5	---	---	12.0	8.5	24.0	17.0	28.5	21.0	24.5	18.5
10	9.5	6.5	11.5	---	13.5	7.0	25.0	18.0	28.5	21.5	22.0	16.5
11	---	---	11.0	9.5	15.0	9.0	25.0	18.5	28.0	21.5	20.5	15.0
12	---	---	13.5	8.5	16.0	9.5	24.5	18.0	25.0	19.0	19.5	14.0
13	---	---	13.5	9.5	17.5	11.5	25.0	18.0	25.0	17.5	20.5	14.0
14	---	---	11.5	9.0	19.0	12.5	26.0	18.5	25.5	17.5	17.5	14.5
15	---	---	11.0	7.5	19.5	13.5	27.0	20.0	25.5	18.0	20.0	14.5
16	---	---	12.5	6.5	19.0	13.5	27.5	21.0	26.0	19.0	21.0	15.0
17	---	---	15.0	9.0	19.0	13.0	28.5	22.0	26.5	19.5	22.5	16.0
18	---	---	15.0	9.5	19.5	13.0	27.5	22.0	25.5	20.0	21.0	17.0
19	---	---	14.5	10.5	19.0	14.0	27.0	19.5	25.0	17.5	22.0	18.5
20	---	---	15.0	11.0	17.0	14.5	26.0	19.0	25.5	17.5	20.5	17.5
21	---	---	14.0	10.0	17.0	12.5	24.0	18.5	25.5	18.0	19.0	14.5
22	---	---	13.0	9.5	19.5	12.0	26.0	19.0	25.5	18.5	15.5	13.0
23	---	---	14.0	10.5	21.5	14.5	26.0	19.5	24.5	18.5	15.0	12.5
24	---	---	15.5	10.0	23.0	16.5	26.5	21.0	23.0	17.5	15.5	10.5
25	---	---	13.5	10.5	23.5	17.0	27.0	21.5	24.0	17.5	14.5	10.5
26	---	---	17.0	11.0	22.0	18.0	26.5	19.5	25.5	18.0	15.5	10.0
27	11.0	---	17.5	11.0	24.5	18.0	26.5	19.5	25.0	18.5	16.5	11.0
28	11.0	5.5	19.5	12.5	25.0	19.5	26.5	19.5	25.0	18.0	17.5	11.5
29	12.0	7.0	20.5	14.0	22.5	19.0	27.0	19.5	23.5	19.0	17.5	12.5
30	9.5	7.5	18.5	14.0	22.0	15.5	28.0	20.0	22.0	19.0	15.5	13.0
31	---	---	16.0	10.0	---	---	28.5	21.5	21.0	17.5	---	---
MONTH	---	---	---	---	25.0	7.0	28.5	17.0	28.5	17.5	24.5	10.0

ROGUE RIVER BASIN

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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, end at mile 138.61.

DRAINAGE AREA.—1,215 mi².

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 sta 14335040). Diversions for irrigation above station; most of low flow of Big Butte Creek (see sta 14337500) is diverted near Butte Falls.

AVERAGE DISCHARGE.—46 years, 2,634 ft³/s, 1,908,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 87,600 ft³/s Dec. 22, 1964, gage height, 12.78 ft, datum then in use, from rating curve extended above 23,000 ft³/s; minimum, 567 ft³/s Feb. 18, 1977, result of closure of Lost Creek dam, minimum prior to that time, 611 ft³/s Aug. 6, 14, 29, Sept. 9, 1940.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 15,800 ft³/s Feb. 13, gage height, 7.95 ft; minimum, 1,370 ft³/s Sept. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1900	1900	3730	5250	2330	3900	4650	3930	3810	3130	3320	2890
2	1910	2050	3750	4860	2230	4220	4470	4940	3550	2990	3310	2870
3	1900	2090	3610	4610	1870	3880	4460	5260	3520	3100	3310	2850
4	1890	2230	3290	4480	1700	3680	4470	5730	4080	3090	3320	2840
5	1890	2350	3220	4420	1680	2920	4150	5560	5700	3100	3320	2840
6	1910	2560	7500	4320	1630	2280	3630	5450	5380	3090	3290	2820
7	1910	2600	9730	4200	1440	2200	3540	4540	6850	3090	3300	2730
8	1900	2490	7840	4140	1430	2140	4430	3730	6760	3090	3270	2730
9	1920	2450	6090	4090	1450	2100	4760	3860	5020	3080	3270	2710
10	1920	2450	6670	4000	1480	2750	6020	3830	4560	3070	3260	2680
11	1910	2530	6520	3900	1520	2730	5580	4520	4100	3070	3280	2570
12	1910	2600	5610	3730	1880	2870	5080	5300	3840	3080	3270	2580
13	1910	3280	9700	3370	9790	3380	4760	5220	3790	3090	3280	2470
14	1900	3000	12300	3330	5390	4050	4490	5180	3760	3080	3280	2290
15	1910	2680	12900	3290	4810	4890	4280	5140	3740	3070	3210	2190
16	1900	2520	9370	2910	4890	6130	4100	5090	3720	3080	3040	2090
17	1890	3610	9500	2430	4500	6950	4140	4790	3710	3070	3050	2020
18	1900	3330	8350	2360	4020	5850	4230	3370	3690	3080	3040	1910
19	1900	3840	8490	2210	3840	4930	4400	2710	3670	3140	3070	1840
20	1890	4210	8860	2090	4270	4830	4680	2680	3560	3210	2970	1850
21	1890	3720	8540	2120	5880	4950	4480	2650	3460	3230	2860	1790
22	1890	3440	8220	2230	4700	4980	4030	2900	3330	3230	2860	1600
23	1920	4200	7140	2340	4170	4640	2900	4170	3100	3240	2870	1600
24	1900	5790	5730	2630	4790	4000	2830	4900	2880	3250	2850	1550
25	1870	4560	6480	3080	5020	4060	2780	4120	2870	3270	2840	1390
26	1830	3840	6940	3160	4280	7450	2730	3700	2840	3270	2830	1380
27	1830	3520	6410	2930	3930	7110	2700	3680	3000	3270	2820	1380
28	1830	3550	5640	2610	3800	6290	2660	3670	3300	3280	2840	1390
29	1850	3000	5060	2520	3730	5740	2620	4270	3290	3280	2850	1450
30	1820	2630	7050	2440	---	4990	2910	4690	3280	3290	2860	1500
31	1850	---	5910	2380	---	4680	---	4650	---	3290	2910	---
TOTAL	58550	92820	220150	102430	102450	135570	120960	134230	118160	97700	95850	64800
MEAN	1889	3094	7102	3304	3533	4373	4032	4330	3939	3152	3092	2160
MAX	1920	5790	12900	5250	9790	7450	6020	5730	6850	3290	3320	2890
MIN	1820	1900	3220	2090	1430	2100	2620	2650	2840	2990	2820	1380
AC-FT	116100	184100	436700	203200	203200	268900	239900	266200	234400	193800	190100	128500
CAL YR 1983	TOTAL	1274580	MEAN	3492	MAX	15500	MIN	1390	AC-FT	2528000		
WTR YR 1984	TOTAL	1343670	MEAN	3671	MAX	12900	MIN	1380	AC-FT	2665000		

ROGUE RIVER BASIN

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, 17.5°C July 14, 15; minimum, 3.0°C Jan. 17, 20, Feb. 3.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

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14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

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 mi².

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 good. Since 1915, Fish Lake (see below) has stored water for irrigation by Medford Irrigation District. Cascade Canal diverts from Fourmile Lake in Klamath River basin and discharges into lava bed 1.0 mi above Fish Lake; diversion began August 1923. No diversion from creek above station.

AVERAGE DISCHARGE.—68 years (water years 1917-84), 35.9 ft³/s, 26,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, about 940 ft³/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, 102 ft³/s Aug. 31, gage height, 1.67 ft; minimum recorded, 21 ft³/s Mar. 2-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	27	46	48	38	38	35	54	78	74	78	88
2	26	27	46	46	38	29	36	56	76	72	78	79
3	26	27	46	46	38	21	36	67	76	71	78	76
4	26	27	46	43	38	21	36	69	83	70	78	72
5	26	27	46	43	38	23	36	69	85	68	78	76
6	26	28	46	43	38	23	38	72	88	62	78	78
7	26	27	46	42	38	23	38	72	98	64	78	72
8	26	27	46	42	38	23	38	70	90	70	76	70
9	27	35	46	42	38	23	38	70	88	70	76	69
10	27	42	46	42	38	23	39	70	87	70	76	69
11	26	42	46	42	38	23	39	79	87	70	81	69
12	26	42	46	40	38	24	39	83	87	70	76	69
13	27	42	46	40	38	25	39	83	87	70	76	67
14	27	42	51	40	38	25	39	88	83	70	74	67
15	27	42	56	40	38	25	42	90	81	70	74	67
16	27	42	53	40	38	25	42	88	81	70	74	67
17	27	46	51	40	38	25	42	87	79	70	74	67
18	27	50	51	40	38	25	43	85	79	70	74	67
19	27	51	51	40	38	26	43	83	78	70	74	69
20	27	51	51	40	38	26	43	83	79	69	72	72
21	27	51	51	40	38	26	43	83	80	70	72	72
22	27	51	51	40	38	26	43	83	79	70	70	72
23	27	51	51	39	38	27	45	88	78	70	70	72
24	27	51	51	40	38	27	45	87	76	74	72	72
25	27	51	51	40	38	28	45	85	74	76	70	72
26	27	48	51	39	38	34	45	83	73	76	70	70
27	27	48	51	39	38	34	45	83	72	76	70	70
28	27	48	51	39	38	34	46	87	72	76	70	70
29	27	48	51	39	38	34	46	85	72	78	70	70
30	27	48	50	38	---	34	50	81	72	79	76	70
31	27	---	48	38	---	35	---	78	---	78	90	---
TOTAL	827	1239	1519	1270	1102	835	1234	2441	2418	2213	2323	2140
MEAN	26.7	41.3	49.0	41.0	38.0	26.9	41.1	78.7	80.6	71.4	74.9	71.3
MAX	27	51	56	48	38	38	50	90	98	79	90	88
MIN	26	27	46	38	38	21	35	54	72	62	70	67
AC-FT	1640	2460	3010	2520	2190	1660	2450	4840	4800	4390	4610	4240
(†)	a7180	a6750	a6560	6230	a6050	7040	8020	8020	a8100	a8150	a8110	a7510
CAL YR 1983	TOTAL	13774	MEAN	37.7	MAX	76	MIN	20	AC-FT	27320		
WTR YR 1984	TOTAL	19561	MEAN	53.4	MAX	98	MIN	21	AC-FT	38800		

† Monthend contents, in acre-feet, of Fish Lake.

a Interpolated.

ROGUE RIVER BASIN

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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 Wesson Canyon, 4.9 mi east of Lakecreek, and at mile 4.8.

DRAINAGE AREA.—43.8 mi².

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 good. Flow partly regulated since 1915 by Fish Lake (published with station 14342500). Diversions for irrigation above station; some water diverted into Fish Lake from Fourmile Lake, in Klamath River basin, since 1923.

AVERAGE DISCHARGE.—62 years (water years 1912, 1923-64, 1966-84), 71.6 ft³/s, 51,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,750 ft³/s Dec. 22, 1964, gage height, 6.06 ft, present site and datum; minimum, 11 ft³/s Oct. 29 to Nov. 8, 1931.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 950 ft³/s Dec. 15, gage height, 5.15 ft; minimum, 46 ft³/s Oct. 1-9, 18-22, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	51	87	114	82	123	168	112	109	116	111	126
2	46	48	94	109	80	123	146	111	105	111	107	114
3	46	48	100	103	79	102	128	126	105	111	109	107
4	46	51	92	100	79	94	131	126	118	109	107	102
5	46	48	94	98	77	89	138	123	123	105	107	100
6	46	57	153	92	75	85	128	121	136	98	107	107
7	46	52	158	91	75	82	121	121	190	100	105	103
8	46	51	123	89	75	80	160	118	170	111	105	100
9	48	56	112	87	77	79	141	118	156	107	105	96
10	48	65	112	87	75	79	138	118	148	105	105	94
11	47	67	112	89	80	77	123	136	143	103	109	94
12	47	65	114	85	80	76	131	133	138	102	107	94
13	47	73	344	83	138	87	121	131	138	103	103	92
14	47	67	425	82	105	83	114	136	133	103	103	92
15	47	66	588	80	98	87	112	143	128	103	103	94
16	47	65	303	78	100	94	112	136	128	102	103	92
17	47	75	225	77	91	98	111	131	126	102	103	92
18	47	79	188	76	89	94	111	126	123	102	103	94
19	47	94	206	76	89	92	114	121	123	102	102	96
20	47	91	173	76	105	102	111	121	123	100	102	107
21	46	83	156	78	131	107	105	121	126	102	98	105
22	47	80	141	82	112	96	103	121	123	102	98	105
23	48	98	126	88	105	91	102	131	121	102	98	103
24	47	109	121	96	111	89	102	123	118	105	98	103
25	47	100	121	105	118	116	100	121	114	107	98	103
26	47	87	131	98	105	291	98	118	114	107	98	103
27	47	82	123	92	105	198	98	116	112	107	96	102
28	47	80	114	91	111	160	94	116	112	107	96	102
29	47	79	116	89	111	143	94	116	112	109	98	102
30	47	79	136	85	---	128	102	114	112	111	103	102
31	47	---	126	83	---	148	---	111	---	111	121	---
TOTAL	1452	2146	5214	2759	2758	3393	3557	3816	3827	3265	3208	3026
MEAN	46.8	71.5	168	89.0	95.1	109	119	123	128	105	103	101
MAX	48	109	588	114	138	291	168	143	190	116	121	126
MIN	46	48	87	76	75	76	94	111	105	98	96	92
AC-FT	2880	4260	10340	5470	5470	6730	7060	7570	7590	6480	6360	6000
CAL YR 1983	TOTAL	29293	MEAN	80.3	MAX	588	MIN	46	AC-FT	58100		
WTR YR 1984	TOTAL	38421	MEAN	105	MAX	588	MIN	46	AC-FT	76210		

ROGUE RIVER BASIN

14350000 EMIGRANT CREEK NEAR ASHLAND, OR

LOCATION.--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 mi².

PERIOD OF RECORD.--January to June 1920, October 1921 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.--44 years (water years 1925, 1927-30, 1934-35, 1941-47, 1954-84), 33.9 ft³/s, 24,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,260 ft³/s Feb. 20, 1927, by computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s Dec. 15, gage height, 4.95 ft; minimum, 0.50 ft³/s Dec. 20, Jan. 13-27, Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	90	90	265	.70	.70	204	259	28	20	37	26
2	.70	90	92	148	.70	.70	283	267	28	20	35	24
3	.70	90	92	96	.70	.70	415	229	28	26	33	23
4	.70	92	92	96	.70	.70	365	175	21	34	35	23
5	.70	90	92	96	.70	.90	320	153	3.0	36	36	23
6	.70	90	92	96	.70	.90	290	120	2.5	35	36	23
7	.70	90	142	96	.90	.70	290	60	2.0	35	37	23
8	.70	90	240	96	.90	.70	293	1.6	1.6	35	40	23
9	.70	90	285	98	.90	.70	290	1.6	1.6	35	43	23
10	.70	89	288	98	.90	.70	290	2.0	1.2	38	46	23
11	.70	90	288	98	.90	.70	290	132	1.2	39	50	23
12	.70	89	285	98	.90	.70	196	204	.90	38	48	23
13	.70	89	380	40	.90	.70	204	204	5.0	38	46	23
14	.70	89	798	.50	.90	.70	204	152	20	38	44	23
15	.70	89	1160	.50	.90	.70	206	52	20	38	42	23
16	.70	89	1130	.50	.90	.70	206	2.0	20	44	40	23
17	.70	89	1110	.50	.90	.70	206	2.0	20	44	39	23
18	.70	89	1070	.50	.90	.70	206	2.0	20	45	38	23
19	.70	89	966	.50	.90	.75	245	2.5	20	45	37	23
20	.70	90	75	.50	.90	170	298	2.5	20	44	36	23
21	.70	90	107	.50	1.2	107	298	3.0	20	44	34	23
22	.70	90	328	.50	.90	182	298	3.0	20	44	33	23
23	.70	90	328	.50	.90	288	253	3.5	20	44	32	23
24	.70	90	238	.50	.90	285	206	4.0	20	43	30	23
25	.70	90	186	.50	.90	285	109	4.0	20	43	29	23
26	.70	90	125	.50	.90	228	63	4.5	20	43	28	23
27	.70	90	153	.70	.90	202	104	5.0	20	43	27	23
28	.70	90	190	.70	.90	202	106	5.0	20	43	27	23
29	.70	90	233	.70	.90	202	106	5.6	20	43	27	11
30	.70	90	268	.70	---	202	155	8.6	20	42	27	.50
31	48	---	268	.70	---	202	---	29	---	37	27	---
TOTAL	69.00	2693	11191	1431.00	25.20	2643.00	6999	2098.4	464.00	1196	1119	659.50
MEAN	2.23	89.8	361	46.2	.87	85.3	233	67.7	15.5	38.6	36.1	22.0
MAX	48	92	1160	265	1.2	288	415	267	28	45	50	26
MIN	.70	89	75	.50	.70	.70	63	1.6	.90	20	27	.50
AC-FT	137	5340	22200	2840	50	5240	13880	4160	920	2370	2220	1310
(+)	19440	19090	18940	23590	31180	337800	38920	37300	34030	25370	16410	11820
(+)	0	0	0	0	0	0	40	4970	6580	8690	8360	5900
CAL YR 1983	TOTAL	37503.80	MEAN	103	MAX	1380	MIN	.40	AC-FT	74390		
WTR YR 1984	TOTAL	30588.10	MEAN	83.6	MAX	1160	MIN	.50	AC-FT	60670		

NOTE.--No gage-height record Aug. 7 to Sept. 11.

+ Monthend contents, in acre-feet, of Emigrant Lake.

* Diversion, in acre-feet, by East Lateral.

a Interpolated.

ROGUE RIVER BASIN

393

14357500 BEAR CREEK AT MEDFORD, OR

LOCATION.—Lat 42°19'40", long 122°52'10", in NW¼ sec.30, T.37 S., R.1 W., Jackson County, Hydrologic Unit 17100308, on left bank 40 ft upstream from Main street Bridge, in Medford, and at mile 9.91.

DRAINAGE AREA.—289 mi².

PERIOD OF RECORD.—March 1915 to June 1920 (no low-flow records), October 1920 to September 1981, December 1983 to September 1984. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.—WSP 1044: 1944. WSP 1448: 1916, 1917(M), 1918-20, 1922, 1924, 1927(M), 1928, 1930. WSP 1568: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 1,343.98 ft above National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Dec. 31, 1947.

REMARKS.—Records excellent. Flow partly regulated since 1924 by Emigrant Lake (published with sta 14350000). Numerous diversions for irrigation upstream from station.

AVERAGE DISCHARGE.—61 years (water years 1921-81), 114 ft³/s, 82,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 14,500 ft³/s Dec. 2, 1962, gage height, 8.04 ft; minimum gage height, about 11.0 ft Feb. 20, 1927, from floodmarks, present datum, site then in use; no flow at times.

EXTREMES FOR CURRENT PERIOD.—Maximum discharge, December to September, 3,620 ft³/s Dec. 13, gage height, 5.21 ft; minimum for period, 13 ft³/s July 4, 6, 7, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			228	535	116	209	714	417	121	52	105	110
2			246	460	112	223	585	441	129	53	96	109
3			612	352	115	197	758	417	133	35	71	107
4			356	350	112	186	710	364	192	17	71	98
5			341	350	110	174	752	318	167	25	74	89
6			711	341	109	169	687	295	202	20	70	76
7			982	330	108	169	604	243	196	17	48	74
8			664	317	107	180	674	140	182	23	36	86
9			629	304	109	168	616	128	153	27	43	77
10			695	294	108	165	600	133	149	19	44	73
11			1060	292	115	163	566	213	141	19	45	70
12			756	282	117	159	502	303	109	23	73	74
13			2960	258	491	243	442	233	90	31	104	74
14			2920	186	269	243	436	243	87	29	62	74
15			2480	179	230	229	427	175	80	28	40	85
16			1850	172	235	255	423	151	61	34	53	87
17			1670	167	185	280	422	145	62	26	72	81
18			1300	167	174	253	415	135	62	30	71	80
19			1320	166	173	260	434	136	56	32	80	81
20			687	162	291	343	490	130	75	31	80	123
21			449	167	621	399	470	128	133	49	72	112
22			647	167	301	292	461	114	109	56	69	118
23			588	160	244	444	426	143	96	62	68	119
24			556	173	273	440	362	131	98	56	63	111
25			546	174	248	477	320	121	94	45	61	98
26			491	165	211	763	187	133	59	45	53	97
27			469	155	219	562	259	132	68	45	49	94
28			460	142	217	461	268	127	57	46	37	89
29			510	139	205	434	271	110	59	42	41	104
30			742	135	---	415	314	107	58	44	82	65
31			604	129	---	704	---	134	---	48	184	---
TOTAL			28529	7370	5925	9659	14595	6140	3278	1109	2117	2735
MEAN			920	238	204	312	487	198	109	35.8	68.3	91.2
MAX			2960	535	621	763	758	441	202	62	184	123
MIN			228	129	107	159	187	107	56	17	36	65
AC-FT			56590	14620	11750	19160	28950	12180	6500	2200	4200	5420

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 mi².

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.--79 years, 2,997 ft³/s, 2,171,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 131,000 ft³/s Dec. 23, 1964, gage height, 23.43 ft, from rating curve extended above 63,000 ft³/s on basis of slope-area measurement of 113,000 ft³/s; minimum not determined; minimum daily, 616 ft³/s Sept. 6, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32,100 ft³/s Dec. 13, gage height, 11.26 ft; minimum, 1,600 ft³/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2170	2310	4670	6900	2860	4840	7130	4730	4230	3270	3370	3140
2	2120	2480	4760	6300	2770	5380	6310	5940	3900	3040	3370	3080
3	2100	2460	5530	5850	2420	4920	6170	6140	3840	3160	3340	3050
4	2090	2590	4970	5670	2210	4620	6130	6660	4310	3130	3330	3000
5	2080	2710	4760	5600	2170	3890	6100	6390	5990	3140	3350	2970
6	2080	3130	10400	5500	2130	3020	5440	6190	5820	3120	3320	2960
7	2080	3200	16800	5380	1920	2910	5100	5480	7020	3120	3300	2840
8	2080	2920	11400	5270	1900	2830	6220	4400	7470	3120	3260	2840
9	2140	2860	7900	5150	1910	2770	6530	4540	5610	3120	3260	2820
10	2150	2900	9110	5010	1960	3390	7530	4480	5130	3070	3230	2780
11	2120	3060	10300	4880	2020	3440	7220	5060	4670	3050	3250	2640
12	2100	3150	8920	4710	2410	3530	6500	6070	4330	3070	3270	2660
13	2090	4510	24000	4230	13100	4190	6090	5880	4180	3070	3290	2580
14	2080	4130	25100	4040	8260	4960	5750	5860	4110	3080	3250	2410
15	2090	3380	24900	3980	6530	5700	5930	5760	4020	3070	3170	2390
16	2090	3090	15700	3670	6600	6900	5370	5660	3970	3080	2990	2280
17	2080	4650	14800	3050	5770	8560	5370	5490	3960	3040	3030	2210
18	2080	4220	11500	2950	5120	6970	5430	4080	3950	3060	3040	2070
19	2090	5050	11400	2820	4790	5880	5610	3210	3880	3100	3100	2010
20	2090	5860	11300	2660	5360	5800	5920	3140	3790	3190	3050	2170
21	2090	4880	10300	2740	9660	6080	5650	3120	3760	3230	2870	2130
22	2120	4370	9880	2850	6570	5890	5330	3220	3630	3250	2870	1890
23	2210	5460	8800	2980	5540	5770	4030	4420	3340	3250	2900	1890
24	2160	8140	7040	3240	6180	5110	3850	5390	3080	3260	2880	1820
25	2120	6520	8290	3800	7010	5150	3770	4630	3050	3270	2870	1630
26	2120	5100	8910	3930	5640	9800	3510	4180	2970	3260	2880	1630
27	2110	4440	7960	3680	5150	9440	3480	4120	3060	3250	2850	1630
28	2110	4140	7160	3260	4940	7880	3410	4110	3400	3270	2830	1630
29	2100	3800	6570	3140	4790	7140	3360	4550	3380	3290	2830	1680
30	2100	3280	9920	3040	---	6310	3700	4960	3400	3280	2910	1690
31	2180	---	8050	2950	---	6680	---	5090	---	3270	3290	---
TOTAL	65420	118790	331100	129230	137690	169750	161540	152950	127250	97980	96550	70520
MEAN	2110	3960	10680	4169	4748	5476	5385	4934	4242	3161	3115	2351
MAX	2210	8140	25100	6900	13100	9800	7530	6660	7470	3290	3370	3140
MIN	2080	2310	4670	2660	1900	2770	3360	3120	2970	3040	2830	1630
AC-FT	129800	235600	656700	256300	273100	336700	320400	303400	252400	194300	191500	139900
CAL YR 1983	TOTAL	1669610	MEAN	4574	MAX	29200	MIN	1980	AC-FT	3312000		
WTR YR 1984	TOTAL	1658770	MEAN	4532	MAX	25100	MIN	1630	AC-FT	3290000		

ROGUE RIVER BASIN

395

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, 19.5°C July 15; minimum, 2.5°C Jan. 18.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

397

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 mi².

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.--46 years, 3,547 ft³/s, 2,570,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 152,000 ft³/s Dec. 23, 1964, gage height, 35.15 ft, present datum, from rating curve extended above 93,000 ft³/s; minimum, 195 ft³/s Jan. 30, 1961; minimum daily, 606 ft³/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, 32,500 ft³/s Dec. 13, gage height, 13.60 ft; minimum, 1,530 ft³/s Sept. 26, 29; minimum daily, 1,570 ft³/s Sept. 26, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2350	2570	5340	9180	3330	6690	8780	5320	4680	3290	3330	3180
2	2300	2770	5790	8180	3210	7300	7750	7040	4220	3060	3340	3100
3	2260	2770	6320	7490	2890	6610	7480	7050	4070	3140	3320	3050
4	2250	2860	6320	7130	2560	6100	7400	7850	4360	3110	3310	3000
5	2240	3060	5580	6950	2510	5420	7470	7440	6560	3110	3330	2980
6	2160	3420	11700	6760	2480	4110	6660	7260	6510	3080	3300	2950
7	2150	3760	21500	6550	2270	3870	6180	6680	7530	3090	3280	2850
8	2160	3340	14900	6380	2220	3740	7690	5090	8600	3080	3220	2840
9	2220	3250	10300	6110	2280	3640	8270	5190	6480	3100	3210	2820
10	2260	3340	11500	6050	2330	4140	9310	5120	5740	3060	3190	2790
11	2240	3610	12600	5850	2350	4450	9460	5570	5160	3020	3210	2610
12	2210	3720	12300	5680	2850	4480	8330	6990	4730	3020	3230	2630
13	2210	5440	23800	5100	15300	5350	7730	6730	4520	3030	3280	2630
14	2180	5890	27600	4820	13000	6560	7220	6680	4400	3050	3260	2400
15	2160	4490	25300	4720	9360	7340	6880	6600	4230	3040	3220	2420
16	2180	3870	17800	4490	9740	8910	6630	6450	4200	3030	3010	2260
17	2320	5870	16600	3640	8130	11800	6550	6310	4170	3010	3030	2190
18	2310	5310	13600	3520	7000	9520	6610	4890	4120	2990	2980	2030
19	2310	5850	13000	3370	6400	7860	6780	3600	4070	3010	3020	2000
20	2310	7450	12900	3120	6780	7570	7120	3460	3980	3130	3040	2090
21	2290	6180	11800	3210	11300	7670	6800	3400	3890	3170	2820	2180
22	2320	5290	11200	3340	8730	7420	6580	3290	3810	3230	2800	1920
23	2450	6150	10500	3490	7220	7280	5040	4530	3470	3210	2820	1850
24	2420	11200	8620	3620	8480	6420	4520	6090	3070	3220	2820	1830
25	2350	9040	9770	4340	10500	6260	4240	5270	3030	3220	2810	1620
26	2340	6570	11100	4590	8160	10400	4250	4640	2930	3220	2830	1570
27	2330	5520	10000	4400	7220	11700	4060	4490	2930	3210	2800	1580
28	2340	5030	9180	3860	6820	9770	4030	4450	3360	3230	2770	1570
29	2330	4700	8280	3670	6580	8910	3970	4760	3360	3270	2800	1590
30	2340	3920	13000	3550	---	7900	4270	5310	3390	3270	2860	1660
31	2440	---	10900	3450	---	7790	---	5670	---	3250	3240	---
TOTAL	70730	146240	389100	156610	182000	216980	198060	173220	135570	96950	95480	70190
MEAN	2282	4875	12550	5052	6276	6999	6602	5588	4519	3127	3080	2340
MAX	2450	11200	27600	9180	15300	11800	9460	7850	8600	3290	3340	3180
MIN	2150	2570	5340	3120	2220	3640	3970	3290	2930	2990	2770	1570
AC-FT	140300	290100	771800	310600	361000	430400	392900	343600	268900	192300	189400	139200
CAL YR 1983	TOTAL	2011290	MEAN	5510	MAX	50400	MIN	2080	AC-FT	3989000		
WTR YR 1984	TOTAL	1931130	MEAN	5276	MAX	27600	MIN	1570	AC-FT	3830000		

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, 20.5°C July 16; minimum recorded, 2.5°C Jan. 18.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

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14361500 ROGUE RIVER AT GRANTS PASS, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 mi².

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.

AVERAGE DISCHARGE.—5 years, 209 ft³/s, 55.98 in/yr, 151,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,880 ft³/s Dec. 19, 1981, gage height, 9.74 ft; minimum, 8.3 ft³/s Sept. 14-26, 1981.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 1,100 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0300	1,450	5.98	Dec. 14	1230	1,850	6.46
Nov. 24	1000	1,150	5.53	Dec. 30	0330	1,780	6.38
Dec. 6	2200	1,260	5.70	Feb. 13	0930	*2,160	*6.80
Dec. 9	2230	1,310	5.78				

Minimum, 13 ft³/s Sept. 17-19, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	19	78	187	540	108	253	241	271	175	57	24	18		
2	19	56	186	455	105	260	222	319	165	55	24	17		
3	18	91	184	443	102	235	207	448	160	54	24	16		
4	18	169	163	502	101	218	214	395	170	51	24	15		
5	18	80	159	508	101	208	207	315	169	49	23	15		
6	18	209	499	470	101	211	194	273	230	48	23	15		
7	17	129	1030	435	100	219	200	258	220	46	22	15		
8	17	85	730	394	103	238	341	293	173	44	21	15		
9	18	103	853	345	119	258	268	319	154	42	20	14		
10	21	403	977	316	109	269	293	292	141	41	20	14		
11	19	452	660	288	110	267	267	544	133	40	20	14		
12	18	321	534	260	183	244	272	521	129	39	19	14		
13	18	296	723	235	1190	523	265	453	129	37	19	14		
14	18	201	1590	214	568	601	309	396	131	36	19	14		
15	17	196	1430	197	430	512	374	301	135	35	19	14		
16	17	448	913	181	376	454	368	258	129	33	18	14		
17	17	898	689	169	311	414	330	248	115	32	18	14		
18	17	421	571	160	271	372	313	256	106	32	18	13		
19	16	534	481	148	256	399	284	271	100	31	18	13		
20	16	544	412	142	304	517	255	282	96	30	18	24		
21	16	361	358	140	346	531	239	263	89	31	17	17		
22	17	274	313	134	296	428	246	240	83	35	17	16		
23	21	274	282	129	266	387	258	285	79	30	16	15		
24	20	768	339	127	266	365	245	248	78	29	16	14		
25	18	542	414	127	236	344	224	230	76	28	16	14		
26	17	382	460	124	223	441	205	251	72	27	16	14		
27	16	302	394	119	215	388	192	241	68	26	16	14		
28	16	254	349	115	211	342	180	261	66	26	15	14		
29	16	224	425	112	212	308	174	287	63	25	15	13		
30	17	203	1190	111	---	281	183	256	60	24	16	13		
31	32	---	663	109	---	263	---	211	---	24	19	---		
TOTAL	562	9298	18158	7749	7319	10750	7570	9486	3694	1137	590	446		
MEAN	18.1	310	586	250	252	347	252	306	123	36.7	19.0	14.9		
MAX	32	898	1590	540	1190	601	374	544	230	57	24	24		
MIN	16	56	159	109	100	208	174	211	60	24	15	13		
CFSM	.36	6.11	11.6	4.93	4.97	6.84	4.97	6.04	2.43	.72	.37	.29		
IN.	.41	6.82	13.32	5.69	5.37	7.89	5.55	6.96	2.71	.83	.43	.33		
AC-FT	1110	18440	36020	15370	14520	21320	15020	18820	7330	2260	1170	885		
CAL YR 1983	TOTAL	114230	MEAN	313	MAX	2840	MIN	16	CFSM	6.17	IN.	83.81	AC-FT	226600
WTR YR 1984	TOTAL	76759	MEAN	210	MAX	1590	MIN	13	CFSM	4.14	IN.	56.32	AC-FT	152300

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, 0.0°C Dec. 24, 1983.

EXTREMES CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C July 17, 18; minimum, 0.0°C Dec. 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	9.0	10.0	9.0	6.0	5.5	5.5	4.5	4.5	3.5	6.0	5.0
2	11.5	9.0	10.0	9.0	6.0	5.5	5.5	5.0	4.0	2.5	5.0	3.5
3	11.5	8.5	10.5	9.5	5.5	2.5	6.0	5.0	4.0	2.5	5.0	3.0
4	12.5	9.5	10.0	8.0	4.0	3.5	5.5	5.5	4.5	3.0	5.5	3.5
5	12.0	9.5	8.5	7.0	4.0	3.5	5.5	5.0	5.5	3.5	6.0	3.5
6	11.5	9.0	8.5	6.5	5.0	3.5	5.5	5.0	5.5	4.0	6.5	4.0
7	11.5	9.0	6.5	5.0	5.5	5.0	6.0	5.0	5.0	3.5	6.5	4.5
8	12.5	10.0	6.0	4.0	6.0	5.0	6.0	4.5	6.0	4.5	6.5	4.5
9	12.0	11.0	7.0	5.5	6.0	5.5	5.0	4.0	5.5	3.5	6.5	5.0
10	13.0	11.0	7.0	6.5	6.0	5.5	5.5	5.0	4.0	3.0	6.5	5.0
11	12.0	9.5	7.0	6.0	5.5	4.0	5.0	4.5	4.0	3.5	6.0	4.5
12	12.0	9.0	6.5	5.5	5.0	4.5	4.5	3.5	5.5	4.0	6.5	5.0
13	11.0	9.5	5.5	5.0	5.5	5.0	3.5	2.0	5.0	3.5	5.5	4.5
14	11.0	8.5	6.0	5.0	5.5	5.0	2.5	1.5	4.0	3.0	5.5	4.0
15	9.5	7.0	6.0	5.5	6.0	5.5	3.0	2.5	4.0	3.5	5.0	4.0
16	9.0	7.0	6.5	6.0	6.0	5.5	3.0	2.0	4.0	3.0	5.0	3.5
17	9.5	7.0	6.5	5.5	6.0	5.0	2.0	1.5	4.0	3.0	5.5	3.5
18	9.5	7.5	6.0	5.5	6.0	5.0	3.0	1.5	5.0	3.5	6.0	4.5
19	9.5	7.0	6.0	5.5	6.0	4.5	3.5	2.5	5.5	4.5	7.5	5.0
20	9.5	7.5	5.5	4.5	4.5	4.0	3.0	2.0	6.0	5.0	6.5	4.5
21	9.0	7.0	5.5	4.5	4.0	2.0	4.5	3.0	5.0	3.5	5.5	4.0
22	9.0	8.0	5.0	4.5	2.0	1.0	5.0	3.5	3.5	2.5	6.0	4.0
23	10.5	9.0	5.5	4.5	1.0	.5	4.0	3.0	4.5	3.0	7.0	5.0
24	9.0	7.0	5.5	5.0	3.5	.0	5.5	4.0	4.0	1.5	6.0	5.0
25	8.5	6.5	5.5	5.0	4.5	3.5	5.5	4.0	4.0	2.0	6.0	4.5
26	9.0	7.0	5.0	4.5	4.5	4.0	4.5	3.5	4.5	2.5	6.0	5.0
27	9.0	7.0	5.5	4.5	4.5	4.0	4.0	3.0	5.0	3.5	6.5	4.5
28	9.5	7.5	5.0	4.5	4.5	3.5	4.0	3.0	5.5	4.0	7.0	5.0
29	9.5	8.0	4.5	4.0	5.5	4.5	4.5	3.0	5.5	4.5	6.0	4.0
30	10.5	9.5	5.5	4.5	5.5	4.5	4.5	3.0	---	---	6.0	3.5
31	11.0	10.0	---	---	5.0	4.5	5.0	3.5	---	---	5.0	4.5
MONTH	13.0	6.5	10.5	4.0	6.0	.0	6.0	1.5	6.0	1.5	7.5	3.0

ROGUE RIVER BASIN

14361590 MIDDLE FORK APPLEGATE RIVER NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	4.5	7.0	6.0	12.0	7.5	18.0	12.0	20.5	17.0	18.0	14.0
2	7.0	4.5	7.0	5.5	12.5	8.5	18.5	13.0	20.5	16.5	17.5	13.0
3	6.0	5.0	7.5	6.0	11.0	8.0	19.5	13.0	20.5	16.5	16.5	13.5
4	6.0	5.5	7.0	5.5	10.5	9.0	20.0	14.0	20.0	15.0	17.5	13.0
5	7.0	5.0	7.0	4.0	9.5	8.0	20.0	14.0	19.5	15.0	17.0	13.5
6	6.5	4.5	8.0	4.5	9.0	8.0	19.5	15.0	20.5	15.5	16.5	14.0
7	6.5	4.5	9.0	5.0	9.0	7.5	19.0	13.0	20.0	15.0	18.0	14.0
8	5.5	4.0	9.0	6.5	11.5	7.5	18.5	12.5	21.0	15.5	18.0	14.0
9	4.5	3.5	8.5	6.0	10.5	7.5	18.5	13.0	21.5	16.5	18.0	14.5
10	5.0	4.0	8.0	6.0	11.5	7.0	19.0	13.0	21.5	17.0	17.0	13.0
11	5.5	3.5	7.5	7.0	12.5	9.0	20.0	14.0	20.0	15.0	16.5	13.5
12	7.0	5.0	9.5	6.5	13.0	8.5	19.5	14.0	19.5	15.0	15.0	11.5
13	8.0	4.0	10.0	6.5	14.5	9.5	19.5	13.5	19.0	14.0	15.5	11.5
14	9.0	5.5	7.5	6.0	14.5	10.0	20.0	14.0	19.0	14.5	14.0	12.0
15	8.0	6.0	7.0	5.0	15.0	10.5	21.0	15.0	19.5	15.0	15.0	12.0
16	6.5	5.5	9.0	5.0	14.5	10.5	21.5	16.0	19.5	15.0	16.0	12.0
17	7.5	5.0	10.0	7.0	14.5	9.5	22.0	17.0	19.5	15.0	16.5	12.5
18	6.5	5.0	10.5	6.5	15.0	9.5	22.0	17.0	19.5	15.0	15.5	13.5
19	6.0	4.5	10.5	7.0	15.0	10.0	21.0	15.5	19.0	14.5	16.5	14.5
20	7.5	4.0	10.5	8.0	12.0	10.5	20.5	15.0	19.0	14.5	16.0	14.5
21	7.0	4.0	9.5	6.5	14.5	9.5	19.0	15.0	19.0	14.5	14.5	12.0
22	9.0	6.0	11.0	6.5	15.5	9.0	20.5	15.0	19.0	14.5	13.5	10.5
23	8.5	5.5	10.0	8.0	17.0	11.0	19.5	14.5	19.0	14.5	13.0	10.5
24	6.0	4.5	10.0	7.0	18.0	12.0	20.0	15.5	18.0	14.0	12.5	9.5
25	4.5	3.5	10.0	7.0	18.5	12.5	20.5	16.0	18.5	14.0	12.0	8.5
26	5.0	3.5	11.0	7.5	17.0	12.0	20.5	14.5	18.5	13.5	12.0	8.0
27	7.5	4.5	12.0	7.5	19.0	13.0	20.5	15.0	18.0	14.0	12.0	8.5
28	7.5	4.0	13.5	9.0	19.0	13.5	21.0	15.5	18.5	14.0	12.5	9.0
29	8.0	5.0	13.5	10.0	17.5	13.5	21.0	15.0	18.0	15.0	13.0	9.5
30	8.5	6.0	12.0	9.5	17.0	11.5	21.5	15.5	17.0	14.5	12.0	10.5
31	---	---	11.0	7.5	---	---	21.5	16.5	17.0	14.0	---	---
MONTH	9.0	3.5	13.5	4.0	19.0	7.0	22.0	12.0	21.5	13.5	18.0	8.0

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 mi².

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. No diversion or regulation.

AVERAGE DISCHARGE.—7 years, 121 ft³/s, 31.72 in/yr, 87,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,980 ft³/s Dec. 19, 1981, gage height, 7.13 ft; minimum, 3.9 ft³/s Sept. 10, 1980; minimum daily, 7.1 ft³/s Sept. 14-16, 1981.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 600 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0230	696	3.53	Dec. 15	1200	611	3.34
Dec. 6	2130	*803	*3.74	Dec. 30	0330	653	3.44
Dec. 9	2000	746	3.63				

Minimum, 16 ft³/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	26	46	87	296	92	140	179	167	260	99	35	21		
2	26	44	84	271	88	139	167	173	243	93	35	21		
3	26	42	87	261	84	129	164	208	231	88	35	21		
4	24	58	82	273	84	120	167	212	227	85	34	20		
5	24	44	80	284	85	116	167	181	222	82	34	20		
6	24	82	308	278	83	115	165	171	221	79	33	20		
7	23	67	495	272	83	120	163	172	225	77	30	20		
8	23	48	338	255	83	130	224	198	212	73	28	20		
9	26	57	411	233	85	140	186	225	197	70	27	20		
10	29	122	450	225	81	140	189	209	185	67	26	19		
11	26	151	331	209	79	130	174	327	179	64	26	19		
12	24	121	265	196	102	120	171	335	173	61	25	19		
13	23	133	354	184	300	264	168	330	170	58	25	19		
14	23	91	538	170	189	302	188	321	173	57	25	18		
15	23	90	584	164	182	265	218	277	178	53	24	19		
16	23	168	442	155	186	255	232	249	177	51	24	18		
17	23	340	357	146	152	252	217	240	168	58	24	18		
18	22	133	303	139	140	232	214	243	161	53	23	17		
19	21	142	273	133	139	237	200	258	155	48	23	17		
20	21	152	243	126	165	267	180	272	154	46	23	21		
21	21	114	217	124	176	276	172	267	154	44	22	21		
22	22	98	188	121	151	239	176	257	142	46	22	19		
23	32	110	180	115	141	224	186	307	136	43	21	19		
24	31	261	255	126	143	217	182	279	133	43	21	19		
25	24	179	293	119	140	210	167	282	131	41	21	19		
26	23	134	297	112	133	245	159	290	126	40	21	18		
27	22	114	259	106	133	225	151	275	120	39	20	18		
28	21	104	231	102	133	209	146	302	116	38	20	17		
29	21	96	256	98	128	197	142	341	111	38	20	16		
30	22	92	496	95	---	185	145	333	105	36	20	16		
31	30	---	340	93	---	183	---	290	---	34	21	---		
TOTAL	749	3433	9124	5481	3760	6023	5359	7991	5185	1804	788	569		
MEAN	24.2	114	294	177	130	194	179	258	173	58.2	25.4	19.0		
MAX	32	340	584	296	300	302	232	341	260	99	35	21		
MIN	21	42	80	93	79	115	142	167	105	34	20	16		
CFSM	.47	2.20	5.68	3.42	2.51	3.75	3.46	4.98	3.34	1.12	.49	.37		
IN.	.54	2.47	6.55	3.94	2.70	4.33	3.85	5.74	3.72	1.30	.57	.41		
AC-FT	1490	6810	18100	10870	7460	11950	10630	15850	10280	3580	1560	1130		
CAL YR 1983	TOTAL	75950	MEAN	208	MAX	1490	MIN	21	CFSM	4.02	IN.	54.54	AC-FT	150600
WTR YR 1984	TOTAL	50266	MEAN	137	MAX	584	MIN	16	CFSM	2.64	IN.	36.10	AC-FT	99700

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, Dec. 23, 24, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.0°C July 16-18; minimum, 0.0°C Dec. 23, 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	8.5	10.5	9.0	6.0	5.0	5.0	4.0	4.0	3.0	---	---
2	10.5	8.5	10.5	9.0	6.0	5.5	5.5	4.5	3.0	2.5	---	---
3	10.0	8.0	11.0	10.0	5.5	2.5	6.0	5.0	3.5	2.5	---	---
4	11.0	9.0	10.5	8.5	4.0	3.0	6.0	5.5	4.5	3.0	---	---
5	11.0	9.0	8.5	7.5	4.5	3.5	5.5	5.0	5.5	3.5	---	---
6	10.5	8.5	9.5	7.0	5.0	4.0	5.5	5.0	5.0	4.0	6.5	---
7	10.5	8.5	7.0	5.5	6.0	5.0	5.5	5.0	5.0	3.0	7.0	4.5
8	12.0	9.5	6.0	4.0	5.5	5.0	5.5	4.5	6.0	4.5	7.0	4.5
9	12.0	11.0	7.5	6.0	6.0	5.5	5.0	3.5	5.5	3.5	7.0	5.0
10	12.0	11.0	7.5	6.5	6.0	5.5	5.5	5.0	4.0	3.0	7.5	5.5
11	11.0	9.0	7.0	6.0	5.5	3.5	5.0	4.0	---	3.5	6.5	4.5
12	10.5	8.5	6.5	6.0	5.0	4.0	4.0	3.0	---	---	7.0	5.0
13	10.5	9.0	6.0	4.5	5.5	5.0	3.0	2.0	---	---	6.0	5.0
14	10.0	8.5	6.0	4.5	6.5	5.5	2.0	1.0	---	---	6.0	5.0
15	8.5	6.5	6.5	5.5	6.5	5.5	3.0	2.0	---	---	5.5	5.0
16	8.5	6.5	6.5	6.0	6.0	5.5	3.0	2.0	---	---	5.0	4.0
17	8.5	6.5	6.5	6.0	6.0	5.0	2.0	1.0	---	---	5.5	4.0
18	8.0	7.0	6.5	5.5	5.5	4.5	2.5	1.0	---	---	6.5	4.5
19	8.5	6.5	6.5	5.5	6.0	4.5	2.5	2.0	---	---	8.0	5.5
20	9.0	7.5	5.5	4.5	4.5	3.5	3.0	1.5	---	---	8.0	5.5
21	9.0	7.0	5.0	4.5	3.5	2.0	4.5	3.0	---	---	6.0	4.0
22	9.5	8.0	4.5	4.0	2.0	.5	4.5	3.5	---	---	6.5	4.0
23	10.5	9.0	5.5	4.5	.5	.0	4.0	3.0	---	---	8.0	5.5
24	9.0	7.5	6.0	5.0	3.0	.0	5.0	4.0	---	---	7.0	5.0
25	8.0	6.5	5.5	4.5	4.5	3.0	5.0	4.5	---	---	6.0	4.5
26	8.0	6.5	5.0	4.0	4.5	4.0	4.5	3.0	---	---	7.0	5.5
27	8.5	6.5	4.5	4.0	4.5	4.0	3.5	3.0	---	---	6.5	4.5
28	9.5	7.5	4.5	3.5	4.0	3.0	3.5	3.0	---	---	7.5	5.0
29	10.0	8.0	4.0	3.0	6.0	4.0	4.0	3.0	---	---	6.5	4.0
30	11.0	10.0	5.0	4.0	5.5	5.0	4.0	3.0	---	---	6.5	3.0
31	11.0	10.0	---	---	5.0	4.0	4.5	3.5	---	---	5.5	4.0
MONTH	12.0	6.5	11.0	3.0	6.5	.0	6.0	1.0	---	---	---	---

ROGUE RIVER BASIN

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14361600 ELLIOTT CREEK NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	4.0	8.0	6.0	11.0	6.0	16.5	10.5	18.5	15.5	15.0	12.0
2	7.0	4.5	8.0	5.5	11.0	7.0	17.0	11.5	18.0	15.5	15.0	11.5
3	6.0	4.5	9.0	6.5	10.0	6.0	17.5	11.5	18.0	15.5	14.5	12.5
4	6.0	5.5	8.0	5.5	9.0	7.0	18.0	12.0	18.0	13.5	15.5	12.0
5	7.0	5.0	8.0	4.5	8.0	7.0	18.0	12.5	17.5	13.5	15.0	12.5
6	7.0	4.0	9.0	4.5	8.0	6.5	18.0	13.5	18.0	14.0	15.0	13.0
7	7.0	4.5	10.5	4.5	8.5	6.5	17.0	11.5	18.0	13.0	15.5	13.0
8	6.0	4.0	10.5	6.5	10.0	6.0	16.5	11.0	19.0	14.0	15.5	12.5
9	5.0	3.5	9.5	6.0	9.5	6.5	17.0	11.5	19.5	15.0	16.0	13.5
10	6.0	4.0	8.0	6.0	10.5	5.5	17.5	11.5	19.0	15.5	15.0	12.0
11	6.0	3.0	8.5	7.0	11.5	7.5	18.0	12.5	17.5	14.0	14.0	12.0
12	8.0	5.0	10.0	6.5	12.5	7.0	17.5	12.0	17.0	13.5	12.5	10.0
13	9.0	4.0	10.5	6.0	13.0	8.5	17.5	12.0	17.0	12.5	13.0	10.0
14	11.0	5.5	8.0	5.5	13.5	8.5	18.5	12.5	17.0	13.0	13.0	11.0
15	9.5	6.5	6.5	4.5	14.5	9.5	19.5	13.5	17.5	13.0	13.5	10.5
16	7.5	6.0	9.0	4.5	13.5	9.0	20.0	15.0	17.5	13.5	13.5	11.0
17	8.0	5.0	10.0	6.5	13.0	8.0	20.0	15.0	17.0	13.5	14.0	11.5
18	7.0	5.5	11.0	6.0	13.5	8.0	20.0	15.5	17.0	13.5	14.5	12.5
19	7.0	4.5	10.5	6.5	13.5	8.5	19.0	14.0	16.5	13.0	15.0	13.5
20	7.5	4.0	10.5	7.0	11.0	9.0	18.5	13.5	17.0	13.0	15.0	14.0
21	8.0	4.0	9.5	6.0	11.5	8.0	17.0	13.0	17.0	13.0	14.0	11.0
22	10.0	6.0	11.0	6.0	14.0	7.5	18.5	14.0	16.5	13.5	11.0	9.0
23	9.0	5.5	9.5	8.0	15.5	9.5	17.5	13.0	16.0	13.0	11.0	9.5
24	6.5	4.0	9.5	6.5	16.5	11.0	18.5	14.0	15.5	13.0	10.5	8.5
25	4.5	3.0	10.5	6.5	16.5	11.5	18.5	14.5	16.0	13.0	9.5	7.5
26	5.0	3.0	11.0	7.0	16.0	10.5	18.5	13.0	16.0	12.0	9.5	7.0
27	8.0	4.0	12.0	6.0	17.0	11.5	18.5	13.5	16.0	13.0	10.0	7.5
28	8.0	3.5	13.5	7.5	17.0	12.5	18.5	14.0	16.0	13.0	10.5	8.0
29	8.0	5.0	14.0	8.5	15.5	12.0	19.0	13.5	16.5	13.5	11.0	9.0
30	7.5	5.5	10.5	8.0	15.0	9.5	19.5	14.0	16.5	14.0	11.0	9.5
31	---	---	10.0	5.5	---	---	19.5	15.0	14.5	13.0	---	---
MONTH	11.0	3.0	14.0	4.5	17.0	5.5	20.0	10.5	19.5	12.0	16.0	7.0

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 mi².

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 ft³/s, fair above. No regulation. Diversion for irrigation of up to 8 ft³/s from Sturgis Fork into Thompson Creek above station.

AVERAGE DISCHARGE.--6 years, 180 ft³/s, 35.48 in/yr, 130,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,680 ft³/s Feb. 18, 1983, gage height, 8.02 ft; maximum gage height, 8.10 ft Dec. 19, 1981; minimum discharge, 5.9 ft³/s Sept. 14-16, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 4.2 ft³/s was measured Sept. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 9	2130	1,320	4.07	Dec. 30	0430	1,450	4.27
Dec. 14	1000	*2,380	*5.55	Feb. 13	1030	1,350	4.12

Minimum, 14 ft³/s Sept. 5, 6, 10, 11, 14-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	21	70	154	730	115	205	290	207	165	54	25	18		
2	21	51	152	639	115	230	248	236	155	49	25	17		
3	20	54	154	625	110	207	232	292	150	47	29	16		
4	19	87	133	682	110	200	248	279	154	45	28	15		
5	19	55	132	663	105	203	220	235	145	43	23	14		
6	18	112	356	625	105	203	203	206	181	41	21	15		
7	18	82	798	589	110	208	206	197	198	42	20	16		
8	18	60	669	545	112	217	300	226	155	41	20	16		
9	18	70	780	494	125	225	280	242	137	40	21	16		
10	22	355	927	465	115	230	267	225	129	37	18	15		
11	21	330	696	429	117	223	253	384	121	37	18	14		
12	19	242	515	398	146	204	264	375	114	36	18	15		
13	18	246	770	357	821	490	261	340	110	36	19	15		
14	19	155	1770	332	477	594	290	309	108	36	19	14		
15	22	140	1660	311	382	532	333	252	106	34	18	15		
16	22	341	1110	294	350	510	329	217	102	32	18	15		
17	21	709	873	270	292	515	302	214	95	31	18	14		
18	21	357	750	250	251	475	291	217	90	31	18	14		
19	21	387	625	230	233	497	264	230	86	29	18	14		
20	22	419	524	220	258	603	240	240	85	29	18	26		
21	20	286	466	200	256	653	224	216	86	32	16	24		
22	20	214	413	190	226	562	223	202	78	37	16	21		
23	28	210	374	180	206	494	227	224	75	32	16	20		
24	26	678	445	190	213	477	213	203	71	31	16	19		
25	24	523	524	170	181	445	194	190	70	27	16	18		
26	23	353	571	160	168	554	179	203	68	26	16	19		
27	22	274	502	150	167	486	169	193	66	26	16	18		
28	22	223	461	140	169	417	159	216	65	26	15	17		
29	22	192	528	130	167	390	152	243	60	25	15	16		
30	27	171	1110	125	---	364	166	227	56	24	16	16		
31	49	---	831	120	---	342	---	193	---	25	20	---		
TOTAL	683	7446	19773	10903	6202	11955	7227	7433	3281	1081	590	502		
MEAN	22.0	248	638	352	214	386	241	240	109	34.9	19.0	16.7		
MAX	49	709	1770	730	821	653	333	384	198	54	29	26		
MIN	18	51	132	120	105	200	152	190	56	24	15	14		
CFSM	.32	3.60	9.26	5.11	3.11	5.60	3.50	3.48	1.58	.51	.28	.24		
IN.	.37	4.02	10.68	5.89	3.35	6.45	3.90	4.01	1.77	.58	.32	.27		
AC-FT	1350	14770	39220	21630	12300	23710	14330	14740	6510	2140	1170	996		
CAL YR 1983	TOTAL	120547	MEAN	330	MAX	3330	MIN	18	CFSM	4.79	IN.	65.08	AC-FT	239100
WTR YR 1984	TOTAL	77076	MEAN	211	MAX	1770	MIN	14	CFSM	3.06	IN.	41.61	AC-FT	152900

ROGUE RIVER BASIN

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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, Dec. 24, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C July 17; minimum, 0.0°C Dec. 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	10.0	10.5	9.5	6.0	5.5	5.5	4.0	4.5	3.5	6.5	5.0
2	12.0	10.0	10.5	9.0	6.0	5.0	5.5	4.5	4.0	2.5	5.5	4.0
3	12.0	9.5	11.0	10.5	5.0	3.0	6.5	5.0	4.0	2.5	5.5	3.0
4	13.0	10.0	10.5	9.0	4.5	3.5	6.0	5.0	4.5	2.5	6.0	3.5
5	12.5	10.0	9.0	8.0	4.0	3.5	6.0	5.0	5.5	3.0	6.0	3.5
6	12.0	10.0	9.0	7.5	5.0	4.0	5.5	4.5	5.0	3.5	6.5	4.0
7	12.0	10.0	7.5	6.5	6.0	5.0	6.5	4.5	5.0	3.0	7.0	4.5
8	13.0	10.5	6.5	5.5	5.5	5.0	6.0	5.0	6.5	4.5	7.0	4.5
9	13.0	11.5	7.0	6.5	6.0	5.5	5.0	3.5	5.5	3.5	7.5	5.0
10	13.5	11.5	7.5	7.0	6.0	5.5	6.0	5.0	4.5	3.0	7.5	5.5
11	12.5	10.0	7.5	6.5	5.5	3.5	5.0	4.5	4.5	3.5	6.5	4.5
12	12.5	10.0	6.5	5.5	5.0	4.5	5.0	3.0	6.0	4.5	7.0	4.5
13	11.5	10.0	5.5	5.0	5.5	5.0	3.0	2.5	6.0	3.5	6.0	5.0
14	10.5	9.5	6.5	4.5	6.5	5.5	2.5	1.5	4.0	3.0	6.0	4.5
15	10.0	7.5	7.0	6.0	6.5	6.0	3.5	2.5	4.5	3.0	5.5	4.5
16	9.5	7.5	6.5	6.0	6.5	5.5	3.0	2.0	4.5	3.0	5.0	3.5
17	10.0	7.5	6.5	5.5	6.0	5.5	2.0	1.0	4.0	3.0	5.5	3.5
18	10.0	8.5	6.5	5.5	6.0	5.0	3.0	1.0	5.5	3.5	6.5	4.5
19	10.0	8.0	6.5	5.5	6.0	4.5	3.5	2.5	5.5	4.5	8.5	5.0
20	9.5	8.0	5.5	4.5	4.5	3.5	3.0	1.5	6.5	5.0	8.0	5.0
21	9.5	8.0	5.5	4.5	3.5	2.0	4.5	3.0	5.0	3.5	6.5	4.5
22	9.5	8.5	5.0	4.5	2.0	.5	5.0	3.5	4.0	2.5	7.0	4.0
23	10.5	9.5	6.0	5.0	1.0	.5	4.0	3.0	4.5	2.5	8.0	5.5
24	9.5	8.0	6.0	4.5	3.5	.0	5.5	4.0	4.0	1.0	7.0	5.0
25	9.5	7.0	5.5	4.5	4.5	3.5	5.5	4.5	4.5	2.0	6.5	4.5
26	9.5	7.5	5.0	4.5	4.5	4.0	4.5	3.5	4.5	2.5	7.5	5.5
27	9.5	7.0	5.5	4.5	4.5	4.0	4.0	2.5	5.5	3.0	7.0	4.5
28	9.5	8.0	5.0	4.0	4.5	3.5	4.0	2.5	5.5	4.0	7.5	5.5
29	9.5	8.5	4.5	3.5	6.0	4.5	4.5	3.0	6.0	4.5	6.5	4.5
30	10.5	9.5	5.5	4.5	5.5	4.5	4.5	3.0	---	---	7.0	3.5
31	11.0	10.0	---	---	5.0	4.5	5.0	3.0	---	---	6.0	5.0
MONTH	13.5	7.0	11.0	3.5	6.5	.0	6.5	1.0	6.5	1.0	8.5	3.0

ROGUE RIVER BASIN

14361700 CARBERRY CREEK NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	5.0	8.0	6.0	12.5	7.5	18.5	12.5	18.5	17.0	17.0	14.0
2	7.5	5.0	8.5	6.0	13.0	8.5	19.5	13.0	18.0	16.5	17.0	13.0
3	6.5	5.0	9.0	6.5	12.0	8.0	20.0	13.5	19.5	16.0	17.0	14.0
4	6.5	5.5	8.5	6.0	10.5	9.0	20.5	14.0	19.5	14.5	17.0	13.0
5	7.0	5.5	8.5	4.5	10.0	8.5	20.0	14.5	18.5	15.0	16.5	13.5
6	7.5	4.5	9.0	5.0	9.5	8.0	20.0	15.5	19.5	15.5	16.5	14.0
7	7.5	5.0	10.5	5.0	10.0	7.5	19.0	13.0	20.0	14.5	17.5	14.0
8	6.0	4.5	10.5	7.0	11.5	7.0	18.5	12.5	20.5	15.5	18.0	14.0
9	5.5	3.5	10.0	6.0	10.5	7.5	19.0	13.0	21.5	16.5	18.0	15.0
10	5.5	4.0	9.5	6.5	12.0	7.0	19.5	13.0	21.0	17.5	16.5	14.0
11	6.5	3.5	9.0	7.5	12.5	9.0	19.5	14.0	20.0	16.0	16.0	13.5
12	8.0	5.0	10.5	7.0	13.5	8.5	19.5	13.5	19.0	15.5	14.5	11.5
13	9.0	4.0	11.0	6.5	14.5	9.5	19.5	13.5	18.5	14.0	15.0	11.5
14	10.0	5.5	8.5	6.5	15.0	10.0	20.0	14.0	19.0	14.5	14.0	12.0
15	8.5	6.0	8.0	5.5	16.0	11.0	21.0	15.0	19.0	15.0	15.0	12.0
16	7.0	6.0	10.0	5.5	15.5	11.0	21.5	16.5	19.5	15.5	15.5	12.0
17	8.0	5.5	11.0	7.0	15.0	10.0	22.0	17.0	19.0	15.5	16.0	13.0
18	7.0	5.5	11.0	7.0	15.0	9.5	21.5	17.0	19.0	16.0	15.5	14.0
19	7.5	4.5	12.0	7.5	15.0	10.5	20.5	15.0	18.5	14.0	17.0	15.0
20	8.5	4.0	11.5	8.5	13.0	11.0	19.5	14.5	18.5	14.0	16.0	14.5
21	8.0	4.5	10.5	7.0	13.0	9.5	18.5	14.5	19.0	14.5	14.5	12.5
22	10.5	6.0	11.5	6.5	15.5	9.5	20.0	15.0	18.5	15.0	13.0	10.5
23	9.5	6.0	11.0	8.5	17.0	11.0	19.0	14.5	18.0	15.0	12.0	10.5
24	7.5	5.0	11.0	7.5	18.5	12.5	20.0	16.0	17.0	14.0	12.0	9.0
25	5.5	4.0	10.5	7.0	18.5	13.0	20.0	16.0	17.5	14.5	11.0	8.5
26	5.5	3.5	12.0	7.5	17.5	12.5	20.0	14.5	17.5	13.5	11.5	8.0
27	8.5	4.5	13.0	7.5	19.0	13.5	20.0	15.0	18.0	14.5	12.0	8.5
28	8.5	4.0	14.5	9.0	19.5	14.0	20.0	15.5	18.0	14.5	12.5	9.0
29	8.5	5.0	15.0	10.0	18.0	14.5	20.5	15.0	18.5	15.5	13.0	10.0
30	8.0	6.0	12.5	10.0	17.5	12.0	21.0	15.5	17.5	15.0	12.0	10.5
31	---	---	11.5	7.5	---	---	21.0	17.0	16.0	14.0	---	---
MONTH	10.5	3.5	15.0	4.5	19.5	7.0	22.0	12.5	21.5	13.5	18.0	8.0

14361900 APPLGATE 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 mi northeast of former town of Copper, 13 mi south of Ruch and at mile 46.3.

DRAINAGE AREA.--223 mi².

WATER-ELEVATION RECORDS

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, 82,110 acre-ft May 3, elevation, 1,986.90 ft; minimum, 16,360 acre-ft Nov. 15, elevation, 1,887.25 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 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1955.28	1915.60	1888.91	1891.86	1892.28	1929.48	1962.95	1986.40	1986.54	1986.60	1979.18	1965.49
2	1954.22	1913.78	1889.00	1889.90	1893.25	1931.17	1963.85	1986.76	1986.64	1986.54	1978.81	1964.96
3	1953.15	1912.12	1889.13	1889.21	1894.27	1932.65	1964.69	1986.84	1986.73	1986.48	1978.44	1964.41
4	1952.07	1910.76	1888.98	1889.54	1895.26	1933.97	1965.58	1986.47	1986.71	1986.44	1978.08	1963.85
5	1951.02	1908.21	1889.05	1889.48	1896.21	1935.21	1966.39	1985.82	1986.54	1986.36	1977.69	1963.27
6	1949.96	1906.67	1891.78	1889.43	1897.15	1936.44	1967.13	1985.08	1986.57	1986.24	1977.30	1962.63
7	1948.81	1904.50	1893.85	1889.19	1898.03	1937.69	1967.92	1985.13	1986.61	1986.10	1976.90	1961.98
8	1947.64	1901.88	1890.02	1889.04	1898.95	1938.99	1969.39	1985.36	1986.56	1985.94	1976.51	1961.34
9	1946.48	1899.46	1891.24	1888.99	1900.05	1940.35	1970.47	1985.61	1986.53	1985.79	1976.13	1960.70
10	1945.30	1900.05	1891.83	1889.10	1900.98	1941.73	1971.49	1985.42	1986.51	1985.61	1975.74	1960.01
11	1944.10	1899.51	1889.44	1889.00	1901.92	1943.08	1972.09	1985.30	1986.49	1985.43	1975.33	1959.30
12	1942.88	1896.54	1889.20	1888.99	1903.39	1944.24	1972.70	1985.13	1986.50	1985.24	1974.93	1958.59
13	1941.62	1893.67	1891.41	1889.01	1912.59	1946.94	1973.35	1984.97	1986.53	1985.03	1974.53	1957.85
14	1940.34	1889.31	1900.17	1889.01	1916.85	1948.58	1974.34	1984.79	1986.56	1984.79	1974.13	1957.13
15	1939.06	1887.44	1902.82	1889.03	1920.08	1948.79	1975.58	1984.67	1986.61	1984.53	1973.72	1956.41
16	1936.46	1889.26	1896.72	1888.99	1922.73	1948.53	1976.81	1984.64	1986.64	1984.27	1973.32	1955.67
17	1936.44	1889.35	1889.28	1889.00	1924.55	1948.08	1977.72	1984.65	1986.60	1984.02	1972.90	1954.94
18	1935.14	1888.76	1888.94	1889.08	1925.85	1948.14	1978.39	1985.01	1986.53	1983.75	1972.49	1954.20
19	1933.78	1889.96	1888.89	1889.13	1926.70	1949.17	1978.78	1985.68	1986.51	1983.46	1972.08	1953.59
20	1932.42	1890.00	1888.84	1889.13	1927.64	1950.82	1979.01	1986.36	1986.52	1983.16	1971.62	1952.96
21	1931.04	1889.08	1888.89	1889.12	1928.38	1952.20	1979.45	1986.62	1986.53	1982.88	1971.12	1952.24
22	1929.69	1888.88	1888.90	1889.09	1928.27	1952.95	1980.05	1986.57	1986.54	1982.61	1970.61	1951.51
23	1928.42	1889.07	1888.98	1889.12	1927.81	1953.86	1980.68	1986.65	1986.57	1982.31	1970.10	1950.77
24	1927.04	1892.44	1889.27	1889.30	1926.55	1954.86	1981.24	1986.53	1986.59	1981.99	1969.58	1950.03
25	1925.62	1891.46	1889.30	1889.40	1924.99	1955.97	1981.81	1986.50	1986.60	1981.68	1969.07	1949.29
26	1924.15	1890.15	1889.17	1889.40	1924.19	1957.41	1982.55	1986.62	1986.60	1981.35	1968.55	1948.55
27	1922.66	1889.19	1888.88	1889.50	1924.89	1958.28	1983.36	1986.59	1986.65	1981.00	1968.02	1947.79
28	1921.16	1889.05	1888.99	1889.95	1926.26	1959.14	1984.07	1986.68	1986.67	1980.64	1967.49	1947.03
29	1919.63	1889.06	1889.86	1890.35	1927.76	1960.12	1984.75	1986.80	1986.66	1980.28	1966.97	1946.26
30	1918.12	1888.97	1893.99	1890.79	---	1961.10	1985.49	1986.75	1986.64	1979.91	1966.48	1945.50
31	1916.76	---	1892.83	1891.44	---	1962.01	---	1986.59	---	1979.54	1966.01	---
MEAN	1937.11	1896.14	1890.92	1889.47	1913.37	1947.16	1975.07	1985.90	1986.58	1983.87	1973.03	1955.94
MAX	1955.28	1915.60	1902.82	1891.86	1928.38	1962.01	1985.49	1986.84	1986.73	1981.00	1979.18	1965.49
MIN	1916.76	1887.44	1888.84	1888.99	1892.28	1929.48	1962.95	1984.64	1986.49	1979.54	1966.01	1945.50
(†)	29260	16990	18450	17920	35310	59670	80740	81800	81850	75040	63000	46940
(‡)	-25840	-12270	+1460	-530	+17390	+24360	+21070	+1060	+50	-6810	-12040	-16060

CAL YR 1983 MEAN 1947.17 MAX 1986.82 MIN 1887.44 AC-FT† +1920
WTR YR 1984 MEAN 1944.62 MAX 1986.84 MIN 1887.44 AC-FT† -8160

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

‡ Change in contents, in acre-feet.

ROGUE RIVER BASIN

14361900 APPLEGATE LAKE NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 42°03'15", long 123°06'55", on line between secs. 25 and 36, T.40 S., R.4 W., Jackson County, Hydrologic Unit 17100309, 0.1 mi southwest of outlet structure, and 0.5 mi northwest of Hart-fish Park boat ramp.

PERIOD OF RECORD.--January to September 1984.

REMARKS.--Local Identifier: 4203151230655 Applegate Lake #1.

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JAN								
5...	1030	0.0	5.7	--	--	--	--	--
5...	1035	5.0	5.1	--	--	--	--	--
5...	1040	10.0	5.3	--	--	--	--	--
5...	1045	15.0	5.1	--	--	--	--	--
5...	1050	21.0	5.0	--	--	--	--	--
10...	1035	0.0	6.1	--	--	--	--	10.1
10...	1040	5.0	6.0	--	--	--	--	--
10...	1045	10.0	5.9	--	--	--	--	--
10...	1050	15.0	5.9	--	--	--	--	--
10...	1055	20.0	5.5	--	--	--	--	--
24...	1205	0.0	5.4	--	--	--	--	14.3
24...	1210	5.0	4.9	--	--	--	--	--
24...	1215	10.0	4.5	--	--	--	--	--
24...	1220	15.0	4.1	--	--	--	--	--
24...	1225	20.0	3.9	--	--	--	--	--
FEB								
2...	1110	0.0	4.8	11.6	--	--	1.0	--
2...	1115	7.0	4.5	11.7	--	--	1.0	--
2...	1120	14.0	4.4	11.8	--	--	1.0	--
2...	1125	21.0	4.2	11.8	--	--	1.0	--
2...	1130	28.0	4.2	11.9	--	--	1.0	--
7...	1100	0.0	5.6	12.1	7.7	98	1.0	--
7...	1105	5.0	4.8	11.9	7.7	99	1.0	--
7...	1110	10.0	4.6	11.8	7.8	97	1.0	--
7...	1115	15.0	4.2	11.6	7.8	100	1.0	--
7...	1120	20.0	4.3	11.7	7.9	110	1.0	--
16...	1020	0.0	5.1	11.4	--	--	2.6	--
16...	1025	10.0	5.0	11.7	--	--	2.3	--
16...	1030	20.0	4.8	11.5	--	--	1.2	--
16...	1035	30.0	4.6	11.4	--	--	1.7	--
16...	1040	33.0	4.7	11.5	--	--	3.1	--
21...	1020	0.0	5.5	11.5	--	--	3.1	3.9
21...	1025	8.0	5.0	11.2	--	--	3.0	--
21...	1030	16.0	4.9	11.2	--	--	2.0	--
21...	1035	24.0	4.9	11.2	--	--	1.4	--
21...	1040	32.0	5.0	11.2	--	--	1.1	--
28...	1010	0.0	5.7	11.7	--	--	3.6	4.5
28...	1015	8.0	5.4	11.5	--	--	2.5	--
28...	1020	16.0	5.1	11.5	--	--	2.6	--
28...	1025	24.0	4.9	11.7	--	--	2.9	--
28...	1030	32.0	4.6	11.8	--	--	1.5	--
MAR								
13...	1100	0.0	8.2	11.3	7.4	93	2.2	6.3
13...	1105	10.0	7.9	11.4	7.4	94	1.3	--
13...	1110	20.0	5.1	11.4	7.4	96	2.2	--
13...	1115	30.0	4.8	11.6	7.5	100	1.1	--
13...	1120	35.0	4.8	11.6	7.5	101	2.3	--
20...	1100	0.0	8.7	11.3	7.3	99	1.0	11.9
20...	1105	10.0	6.6	11.2	7.3	105	1.0	--
20...	1110	20.0	6.0	11.2	7.3	98	1.2	--
20...	1115	30.0	5.6	11.1	7.3	97	1.0	--
20...	1120	35.0	5.4	11.1	7.3	97	1.5	--
27...	1040	0.0	9.5	10.9	7.8	108	1.0	16.5
27...	1045	10.0	7.3	11.0	7.8	106	1.0	--
27...	1050	20.0	6.6	11.0	7.8	103	1.4	--
27...	1055	30.0	6.0	11.0	7.8	101	1.4	--
27...	1100	45.0	5.8	11.1	7.8	101	1.1	--

ROGUE RIVER BASIN

411

14361900 APPLEGATE LAKE NEAR COPPER, OR--Continued

4203151230655

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
APR								
3...	1110	0.0	10.0	10.5	7.0	106	1.1	13.1
3...	1115	10.0	7.5	10.4	7.8	100	1.0	--
3...	1120	20.0	6.8	10.4	7.0	98	1.2	--
3...	1125	30.0	6.4	10.5	7.0	97	1.0	--
3...	1130	43.0	6.0	10.4	7.0	99	1.0	--
10...	1120	0.0	9.4	10.4	7.7	106	1.3	--
10...	1125	10.0	9.1	10.5	7.6	105	1.1	--
10...	1130	20.0	7.8	10.4	7.5	102	1.0	--
10...	1135	30.0	6.6	10.6	7.6	101	1.6	--
10...	1140	45.0	6.2	10.5	7.6	98	1.0	--
19...	1030	0.0	11.3	10.5	7.6	106	1.0	8.7
19...	1035	5.0	11.0	11.0	7.6	106	--	--
19...	1040	15.0	7.8	10.6	7.6	102	1.0	--
19...	1045	30.0	6.7	10.7	7.5	102	1.0	--
19...	1050	40.0	6.5	10.8	7.5	98	1.0	--
19...	1055	50.0	6.4	10.6	7.4	98	1.0	--
23...	1040	0.0	12.6	10.0	7.6	110	1.0	10.4
23...	1045	5.0	10.4	10.0	7.7	109	--	--
23...	1050	15.0	7.8	10.3	7.7	102	1.0	--
23...	1055	30.0	7.0	10.5	7.4	101	1.0	--
23...	1100	40.0	6.7	10.7	7.3	101	1.0	--
23...	1105	50.0	6.6	10.5	7.3	100	1.0	--
MAY								
3...	1100	0.0	12.6	10.2	8.2	106	1.0	9.3
3...	1105	7.0	11.8	10.1	8.3	106	--	--
3...	1110	10.0	8.9	10.5	8.1	104	1.0	--
3...	1115	20.0	7.5	10.6	8.0	100	1.0	--
3...	1120	35.0	7.1	10.6	8.0	99	1.0	--
3...	1125	50.0	6.6	10.2	8.0	100	1.0	--
10...	1045	0.0	14.3	9.9	7.9	110	1.0	11.5
10...	1050	10.0	9.6	10.4	8.1	104	1.1	--
10...	1055	20.0	7.8	10.5	7.9	102	1.0	--
10...	1100	35.0	7.1	10.5	7.9	101	1.3	--
10...	1105	50.0	6.7	10.4	7.8	102	1.1	--
16...	1050	0.0	14.4	9.7	7.7	109	1.1	13.4
16...	1055	10.0	9.9	10.1	7.6	94	1.0	--
16...	1100	20.0	8.1	10.1	7.6	101	1.2	--
16...	1105	35.0	7.2	10.1	7.5	101	1.1	--
16...	1110	50.0	6.9	9.6	7.4	102	1.2	--
24...	0950	0.5	15.4	10.0	7.6	106	1.0	--
24...	0955	4.0	14.9	9.7	--	105	--	--
24...	1000	10.0	10.4	10.6	7.6	92	1.0	--
24...	1005	20.0	8.3	10.5	7.4	94	1.0	--
24...	1010	50.0	6.9	10.3	7.4	102	1.0	--
31...	1150	0.5	17.0	9.4	7.6	98	1.1	13.4
31...	1155	5.0	15.8	9.2	--	--	--	--
31...	1200	9.5	10.8	9.8	7.5	80	1.0	--
31...	1205	19.5	8.5	10.0	--	--	--	--
31...	1210	50.0	0.0	10.2	7.4	99	1.0	--
JUN								
7...	1030	1.0	16.1	9.5	7.6	98	1.1	--
7...	1035	4.0	16.1	9.4	--	93	--	--
7...	1040	10.0	10.9	10.3	7.7	82	1.0	--
7...	1045	20.0	7.9	10.0	7.6	101	1.0	--
7...	1050	40.0	7.1	10.0	7.4	102	1.0	--
14...	1100	0.0	18.4	9.5	8.0	99	1.0	22.8
14...	1105	10.0	11.7	10.3	7.5	82	1.2	--
14...	1110	20.0	8.9	10.1	7.4	90	1.0	--
14...	1115	35.0	7.6	10.1	7.3	101	1.0	--
14...	1120	50.0	7.1	9.7	7.3	104	1.0	--
21...	1030	0.0	19.0	9.0	8.0	99	1.0	19.9
21...	1035	5.0	18.2	9.5	8.1	99	--	--
21...	1040	10.0	12.6	10.2	8.3	84	1.1	--
21...	1045	20.0	9.1	9.8	7.8	89	1.0	--
21...	1050	35.0	7.7	9.5	7.8	109	1.0	--
21...	1055	50.0	7.2	9.7	7.7	103	1.0	--
26...	1000	0.0	21.2	8.7	7.9	101	1.0	20.2
26...	1005	4.0	21.0	8.5	7.9	101	--	--
26...	1010	10.0	13.3	10.4	8.3	86	1.0	--
26...	1015	20.0	9.8	9.8	7.7	88	1.0	--
26...	1020	35.0	7.8	9.8	7.6	100	1.0	--
26...	1025	50.0	7.4	9.6	7.4	102	1.0	--

ROGUE RIVER BASIN

14361900 APPLGATE LAKE NEAR COPPER, OR--Continued

4203151230655

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JUL								
5...	1000	0.5	22.9	8.3	8.2	99	1.0	20.0
5...	1005	4.0	22.4	8.3	8.2	99	--	--
5...	1010	10.0	14.5	10.3	8.4	87	1.0	--
5...	1015	20.0	9.9	9.5	7.8	84	1.0	--
5...	1020	35.0	7.9	9.6	7.7	100	1.0	--
5...	1025	50.0	7.4	9.1	7.6	102	1.0	--
10...	1045	0.0	22.6	8.5	7.8	101	1.0	19.7
10...	1050	5.0	22.0	8.3	7.8	101	--	--
10...	1055	10.0	14.9	10.0	8.0	90	1.0	--
10...	1100	20.0	10.1	9.3	7.9	87	1.0	--
10...	1105	35.0	8.0	9.6	7.7	97	1.0	--
10...	1110	50.0	7.5	8.9	7.5	101	1.0	--
19...	1020	0.0	24.4	8.0	7.9	101	1.0	18.8
19...	1025	4.0	24.0	8.0	8.0	101	--	--
19...	1030	10.0	16.3	9.2	8.1	93	1.0	--
19...	1035	20.5	10.2	9.1	7.9	83	1.0	--
19...	1040	30.5	8.3	9.4	7.9	93	1.0	--
19...	1045	45.0	7.7	8.8	7.7	97	1.0	--
24...	1040	0.0	24.0	7.9	7.8	104	1.0	19.2
24...	1045	5.0	23.7	7.9	7.9	104	--	--
24...	1050	10.0	16.3	9.2	7.8	98	1.0	--
24...	1055	20.5	10.2	9.1	7.7	84	1.0	--
24...	1100	30.5	8.5	9.4	7.7	92	1.0	--
24...	1105	45.0	7.7	8.7	7.4	98	1.0	--
AUG								
2...	1000	0.0	23.2	7.6	8.3	108	1.0	19.7
2...	1005	6.0	21.9	7.8	--	117	--	--
2...	1010	10.0	16.2	8.6	7.8	97	1.0	--
2...	1015	15.0	11.7	8.1	--	83	--	--
2...	1020	20.0	10.2	8.6	7.7	86	1.0	--
2...	1025	30.0	8.5	9.0	7.5	92	1.0	--
2...	1030	45.0	7.7	8.3	7.3	99	1.0	--
7...	1000	0.0	23.3	8.0	7.9	108	1.0	26.2
7...	1005	7.0	22.8	8.0	--	109	--	--
7...	1010	10.5	17.5	8.3	7.9	99	1.0	--
7...	1015	15.0	12.5	8.3	--	86	--	--
7...	1020	20.0	10.4	9.1	7.8	83	1.0	--
7...	1025	30.0	8.7	9.2	7.6	103	1.0	--
7...	1030	45.0	7.8	8.4	7.6	98	1.0	--
14...	1235	0.0	24.3	7.7	8.0	116	1.0	25.8
14...	1240	7.0	22.9	7.6	--	116	--	--
14...	1245	10.0	17.8	8.1	7.9	106	1.0	--
14...	1250	15.0	12.6	7.4	--	88	--	--
14...	1255	20.0	10.6	8.2	7.7	88	1.0	--
14...	1300	30.0	8.8	8.9	7.6	96	1.0	--
14...	1305	40.0	8.1	8.2	7.4	99	1.0	--
14...	1310	46.5	7.8	7.8	--	103	--	--
21...	1030	0.0	24.7	8.0	7.3	107	1.0	20.9
21...	1035	10.0	24.5	7.7	8.2	113	1.0	--
21...	1040	20.0	19.0	8.0	7.7	85	1.0	--
21...	1045	30.0	10.7	8.8	7.6	89	1.0	--
21...	1050	40.0	9.4	8.0	7.3	95	1.0	--
28...	1000	0.0	22.5	8.0	7.9	118	1.0	15.9
28...	1005	8.0	22.1	7.7	7.9	118	--	--
28...	1010	10.0	18.0	8.3	7.2	105	1.0	--
28...	1015	15.0	12.9	7.8	6.9	88	--	--
28...	1020	19.5	11.0	8.4	6.9	88	--	--
28...	1025	35.0	8.7	7.0	7.0	93	1.0	--
28...	1030	40.0	8.3	7.8	7.0	98	1.0	--
SEP								
4...	1045	0.0	22.1	8.0	7.6	110	1.0	19.7
4...	1050	9.0	21.5	8.5	--	111	--	--
4...	1055	10.0	20.3	7.8	7.6	108	1.0	--
4...	1100	15.0	14.5	7.5	--	87	--	--
4...	1105	20.0	11.6	7.4	7.1	79	1.0	--
4...	1110	30.0	10.1	8.4	7.5	81	1.0	--
4...	1115	40.0	9.0	8.6	7.3	88	1.0	--
4...	1120	46.0	8.0	7.2	--	92	--	--
11...	1100	0.0	21.1	8.3	7.9	117	1.0	17.2
11...	1105	7.0	20.9	8.2	--	117	--	--
11...	1110	10.0	18.6	7.5	7.7	108	1.0	--
11...	1115	15.0	13.7	7.1	--	90	--	--
11...	1120	20.0	11.2	8.1	7.3	83	1.0	--
11...	1125	30.0	9.6	8.4	7.2	87	1.0	--
11...	1130	40.0	8.4	6.8	7.2	97	1.0	--
18...	1025	0.0	20.5	8.1	7.5	123	1.0	27.8
18...	1030	10.0	19.8	7.9	7.5	122	1.0	--
18...	1035	20.0	11.6	7.5	7.5	89	1.0	--
18...	1040	30.0	9.7	8.0	7.6	91	1.0	--
18...	1045	40.0	8.3	6.0	7.5	100	1.0	--
25...	1000	0.0	18.6	8.1	7.2	121	1.0	--
25...	1005	10.0	18.6	8.1	7.1	122	1.0	--
25...	1010	20.0	11.6	7.2	6.8	89	1.0	--
25...	1015	30.0	9.6	7.8	6.9	90	1.0	--
25...	1020	45.0	8.3	6.2	6.8	98	1.0	--

14-61900 APPLGATE LAKE NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 42°02'54", long 123°07'39", in SW1/4 sec.36, T.40 S., R.4 W., Jackson County, Hydrologic Unit 17100309, near mouth of Grouse Creek, 0.2 mi south of Hart-fish Park swimming area, 1.2 mi east of Collings Mountain, and 0.8 mi southwest of outlet structure.

PERIOD OF RECORD.--January to May 1984.

REMARKS.--Local identifier 4202541230739 Applegate Lake #2.

WATER QUALITY DATA, JANUARY TO MAY 1984

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JAN								
5...	1125	0.0	6.3	--	--	--	--	--
5...	1130	4.0	6.0	--	--	--	--	--
5...	1135	8.0	5.9	--	--	--	--	--
5...	1140	12.0	5.4	--	--	--	--	--
5...	1145	18.0	5.6	--	--	--	--	--
10...	1110	0.0	6.1	--	--	--	--	10.1
10...	1115	5.0	5.9	--	--	--	--	--
10...	1120	10.0	5.8	--	--	--	--	--
10...	1125	15.0	5.9	--	--	--	--	--
24...	1300	0.0	3.5	--	--	--	--	21.7
24...	1305	4.0	3.4	--	--	--	--	--
24...	1310	8.0	3.4	--	--	--	--	--
24...	1315	12.0	3.5	--	--	--	--	--
24...	1320	16.0	3.6	--	--	--	--	--
FEB								
2...	1220	0.0	5.1	12.0	--	--	1.0	--
2...	1225	5.0	4.6	12.0	--	--	1.0	--
2...	1230	10.0	4.5	12.1	--	--	1.0	--
2...	1235	12.0	4.5	12.1	--	--	1.0	--
2...	1240	15.0	4.4	12.1	--	--	1.0	--
7...	1215	0.0	5.5	12.0	7.8	96	1.0	14.8
7...	1220	5.0	4.8	12.1	7.8	98	1.0	--
7...	1225	10.0	4.6	11.5	7.9	100	1.0	--
7...	1230	16.0	4.3	12.0	7.9	101	1.0	--
16...	1050	0.0	5.3	11.4	--	--	7.5	2.2
16...	1055	7.0	5.1	11.4	--	--	8.9	--
16...	1100	14.0	5.0	11.5	--	--	3.0	--
16...	1105	21.0	4.8	11.6	--	--	7.1	--
16...	1110	28.0	4.8	11.6	--	--	1.6	--
21...	1100	0.0	5.3	11.4	--	--	2.7	3.9
21...	1105	8.0	5.1	11.3	--	--	2.2	--
21...	1110	16.0	4.9	11.3	--	--	1.6	--
21...	1115	24.0	4.9	11.3	--	--	1.4	--
21...	1120	30.0	4.9	11.3	--	--	1.1	--
28...	1125	0.0	5.8	11.8	--	--	2.5	4.8
28...	1130	7.0	5.1	11.7	--	--	3.4	--
28...	1135	14.0	4.9	11.8	--	--	3.0	--
28...	1140	21.0	4.6	11.9	--	--	2.0	--
28...	1145	28.0	4.5	11.1	--	--	1.9	--
MAR								
8...	1120	0.0	8.4	11.7	7.4	97	1.6	5.2
8...	1125	10.0	5.6	11.5	7.5	94	1.2	--
8...	1130	20.0	4.7	11.6	7.4	99	1.4	--
8...	1135	30.0	4.6	11.5	7.4	102	1.0	--
13...	1140	0.0	7.9	11.4	7.5	96	1.1	5.8
13...	1145	10.0	7.4	11.6	7.6	97	1.5	--
13...	1150	20.0	5.7	11.5	7.6	94	1.2	--
13...	1155	30.0	4.9	11.6	7.6	98	1.1	--
20...	1130	0.0	9.0	11.1	7.4	104	1.0	12.5
20...	1135	10.0	6.6	11.1	7.4	99	1.0	--
20...	1140	20.0	5.9	11.0	7.4	94	1.4	--
20...	1145	30.0	5.6	11.1	7.4	96	1.2	--
20...	1150	35.0	5.5	11.0	7.3	102	1.6	--
27...	1125	0.0	9.5	10.9	7.8	109	1.2	13.1
27...	1130	10.0	7.3	11.0	7.8	103	1.1	--
27...	1135	20.0	6.5	10.9	7.7	100	1.5	--
27...	1140	30.0	6.0	11.1	7.7	99	1.8	--
27...	1145	35.0	5.9	11.1	7.8	101	1.2	--

ROGUE RIVER BASIN

14361900 APPLEGATE LAKE NEAR COPPER, OR- Continued

4202541230739

WATER QUALITY DATA, JANUARY TO MAY 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
APR								
3...	1150	0.0	10.2	10.5	7.8	108	1.2	--
3...	1155	10.0	7.7	10.5	7.8	100	1.0	--
3...	1200	20.0	6.7	10.4	7.7	96	1.0	--
3...	1205	30.0	6.3	10.5	7.7	97	1.0	--
3...	1210	35.0	6.2	10.4	7.7	97	1.0	--
10...	1145	5.0	8.9	11.0	7.7	105	--	--
10...	1150	10.0	8.6	11.2	7.8	105	1.0	--
10...	1155	15.0	8.0	11.1	7.7	103	--	--
10...	1200	20.0	7.4	11.1	7.7	103	1.0	--
10...	1205	30.0	6.5	11.0	7.7	99	1.0	--
10...	1210	40.0	6.3	10.7	7.6	99	1.0	--
19...	1130	0.0	11.0	10.5	7.4	105	1.4	9.0
MAY								
10...	1240	0.0	15.6	9.7	7.9	112	1.0	--
10...	1245	10.0	9.4	10.5	7.8	94	1.0	--
10...	1250	20.0	7.7	10.7	7.8	98	1.0	--
10...	1255	30.0	7.2	10.5	7.8	101	1.3	--
10...	1300	45.0	6.8	10.2	7.8	101	1.4	--

ROGUE RIVER BASIN

415

14361900 APPLGATE LAKE NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 42°02'28", long 123°07'39", in SW¼SW¼ sec.36, T.40 S., R.4 W., Jackson County, Hydrologic Unit 17100309, near confluence with Squaw Creek arm, 0.7 mi south of Hart-tish Park swimming area, 1.3 mi southeast of Collings Mountain, and 1.2 mi southwest of outlet structure.

PERIOD OF RECORD.--January to September 1984.

REMARKS.--Local Identifier 4202281230739 Applegate Lake #3.

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984

DATE	TIME	DEPTH (M)	TEMPERATURE (DEG C)	OXYGEN DIS-SOLVED (MG/L)	PH (STANDARD UNITS)	SPECIFIC CONDUCTANCE (US/CM)	TURBIDITY (NTU)	TRANSPAR-ENCY (SECCHI DISK) (FT)
JAN								
5...	1255	0.0	6.2	--	--	--	--	--
5...	1300	4.0	6.0	--	--	--	--	--
5...	1305	8.0	5.9	--	--	--	--	--
5...	1310	12.0	5.7	--	--	--	--	--
5...	1315	17.0	5.5	--	--	--	--	--
10...	1210	0.0	6.1	--	--	--	--	12.2
10...	1215	4.0	5.8	--	--	--	--	--
10...	1220	8.0	5.6	--	--	--	--	--
10...	1225	12.0	5.1	--	--	--	--	--
10...	1230	18.0	5.5	--	--	--	--	--
24...	1330	0.0	3.7	--	--	--	--	22.5
24...	1335	5.0	3.6	--	--	--	--	--
24...	1340	10.0	4.1	--	--	--	--	--
24...	1345	15.0	4.0	--	--	--	--	--
24...	1350	18.0	4.1	--	--	--	--	--
FEB								
2...	1245	0.0	4.9	12.2	--	--	1.0	22.4
2...	1250	4.0	4.2	12.2	--	--	1.0	--
2...	1255	8.0	4.2	12.2	--	--	1.0	--
2...	1300	12.0	4.0	12.3	--	--	1.0	--
2...	1305	16.0	4.0	12.2	--	--	1.0	--
2...	1310	20.0	4.4	12.2	--	--	1.0	--
7...	1245	0.0	5.4	11.8	7.9	94	1.0	16.7
7...	1250	5.0	4.6	12.0	7.9	95	1.0	--
7...	1255	10.0	4.4	11.6	7.9	99	1.0	--
7...	1300	15.0	4.2	12.0	7.9	102	1.0	--
7...	1305	18.0	4.2	11.5	7.9	103	1.0	--
16...	1120	0.0	4.8	11.4	--	--	4.6	3.3
16...	1125	7.0	4.5	11.5	--	--	4.7	--
16...	1130	14.0	5.0	11.4	--	--	4.4	--
16...	1135	21.0	4.9	11.5	--	--	3.3	--
16...	1140	28.0	5.0	11.4	--	--	1.4	--
21...	1200	0.0	5.1	11.7	--	--	2.4	4.1
21...	1205	6.0	4.9	11.4	--	--	2.5	--
21...	1210	12.0	4.7	11.4	--	--	2.0	--
21...	1215	18.0	4.3	11.5	--	--	1.9	--
21...	1220	24.0	4.2	11.5	--	--	1.5	--
28...	1225	0.0	5.2	11.4	--	--	2.2	6.3
28...	1230	6.0	5.1	11.3	--	--	1.6	--
28...	1235	12.0	4.9	11.5	--	--	2.0	--
28...	1240	18.0	4.1	11.5	--	--	1.2	--
28...	1245	24.0	4.0	11.9	--	--	1.2	--
MAR								
8...	1120	0.0	7.9	11.7	7.5	100	1.1	5.5
8...	1125	10.0	5.5	11.5	7.5	97	1.0	--
8...	1130	15.0	5.1	11.6	7.6	97	1.0	--
8...	1135	20.0	4.9	11.6	7.6	100	1.6	--
8...	1140	30.0	4.6	11.6	7.6	100	1.3	--
13...	1220	0.0	7.4	11.5	7.5	97	1.5	--
13...	1225	10.0	6.5	11.5	7.6	98	1.3	--
13...	1230	20.0	5.5	11.5	7.6	99	2.1	--
13...	1235	25.0	5.3	11.5	7.6	102	1.3	--
20...	1200	0.0	8.5	11.1	7.4	99	1.0	10.5
20...	1205	10.0	6.7	11.1	7.4	99	1.0	--
20...	1210	20.0	5.9	11.0	7.4	103	1.0	--
20...	1215	30.0	5.2	11.1	7.3	101	1.0	--
27...	1150	0.0	9.8	10.9	7.7	115	1.3	15.1
27...	1155	10.0	7.1	10.9	7.8	101	1.7	--
27...	1200	20.0	6.6	11.1	7.8	99	1.5	--
27...	1205	30.0	6.2	11.3	7.7	97	2.0	--
27...	1210	38.0	5.7	11.2	7.7	97	2.2	--

ROGUE RIVER BASIN

14361900 APPLEGATE LAKE NEAR COPPER, OR--Continued

4202281230739

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
APR								
3...	1220	0.0	10.8	10.6	7.7	111	1.0	--
3...	1225	10.0	7.6	10.5	7.6	99	--	--
3...	1230	20.0	6.7	10.4	7.6	99	1.1	--
3...	1235	30.0	6.2	10.4	7.6	96	1.0	--
3...	1240	40.0	6.0	10.3	7.6	95	--	--
10...	1210	0.0	9.4	10.4	7.8	113	1.0	--
10...	1215	10.0	7.9	10.4	7.7	100	1.0	--
10...	1220	20.0	7.5	10.6	7.8	99	1.1	--
10...	1225	25.0	7.4	10.6	7.7	99	--	--
10...	1230	30.0	6.5	10.5	7.6	98	1.0	--
10...	1235	40.0	6.4	10.5	7.6	98	1.0	--
19...	1140	0.0	11.0	10.6	7.5	108	1.4	9.7
19...	1145	5.0	10.6	10.6	7.5	105	--	--
19...	1150	10.0	8.6	10.7	7.5	115	--	--
19...	1155	20.0	7.3	10.9	7.5	98	--	--
19...	1200	30.0	6.8	10.9	7.4	103	--	--
19...	1205	45.0	6.3	10.7	7.4	98	1.0	--
23...	1125	0.0	12.5	10.2	7.2	110	1.0	10.0
23...	1130	10.0	8.8	10.5	7.2	102	--	--
23...	1135	20.0	7.4	10.6	7.2	101	--	--
23...	1140	45.0	6.6	10.4	7.2	101	1.0	--
MAY								
3...	1235	0.0	13.2	10.0	8.3	113	1.0	--
3...	1240	1.0	13.1	9.7	--	112	--	--
3...	1245	2.0	12.6	9.9	--	110	--	--
3...	1250	10.0	9.4	10.2	8.1	106	1.2	--
3...	1255	11.0	8.4	8.5	--	107	--	--
3...	1300	12.0	8.0	10.5	--	101	--	--
3...	1305	20.0	7.2	10.6	8.1	94	1.0	--
3...	1310	40.0	6.7	10.2	8.0	99	1.0	--
16...	1130	0.0	15.0	9.6	8.0	112	1.1	15.2
16...	1135	10.0	9.5	10.0	7.9	83	1.4	--
16...	1140	20.0	8.0	10.0	7.8	99	1.1	--
16...	1145	30.0	7.3	9.9	7.8	99	1.0	--
16...	1150	45.0	6.9	9.7	7.8	101	1.0	--
24...	1040	0.5	16.1	9.9	7.6	111	1.0	13.4
24...	1045	5.0	14.6	9.7	--	110	--	--
24...	1050	7.0	11.8	9.8	--	87	--	--
24...	1055	10.0	10.4	10.1	7.6	86	1.0	--
24...	1100	20.0	8.1	10.5	7.5	95	1.0	--
24...	1105	45.5	7.0	10.0	7.4	103	1.0	--
31...	1100	0.5	17.5	9.6	7.6	103	1.0	15.3
31...	1105	5.0	16.5	9.6	--	99	--	--
31...	1110	8.0	12.0	10.0	--	82	--	--
31...	1115	10.0	10.8	10.2	7.6	84	1.0	--
31...	1120	20.0	8.3	10.4	7.6	91	1.0	--
31...	1125	30.0	7.4	10.0	7.6	101	1.1	--
31...	1130	45.5	7.0	9.9	7.6	103	1.0	--
JUN								
7...	1230	0.0	16.4	9.3	7.6	98	1.0	17.6
7...	1235	10.0	--	9.6	7.7	76	1.0	--
7...	1240	20.0	--	9.7	7.6	81	1.0	--
7...	1245	30.0	--	9.7	7.6	92	1.0	--
7...	1250	45.0	--	9.7	7.6	99	1.0	--
14...	1230	0.0	19.1	9.1	7.9	102	1.0	18.2
14...	1235	10.0	11.7	10.0	7.8	82	1.0	--
14...	1240	20.0	9.1	9.9	7.7	94	1.0	--
14...	1245	30.0	7.7	9.7	7.6	98	1.0	--
14...	1250	45.0	7.2	9.4	7.5	103	1.0	--
21...	1130	0.5	19.2	8.9	7.9	100	1.0	17.1
21...	1135	4.0	18.7	8.9	8.0	99	--	--
21...	1140	6.0	15.8	9.6	8.2	93	--	--
21...	1145	10.0	12.8	10.1	7.9	86	1.0	--
21...	1150	15.0	10.6	9.6	7.6	84	--	--
21...	1155	20.0	9.4	9.8	7.6	89	1.0	--
21...	1200	30.0	8.2	9.5	7.6	95	1.0	--
21...	1210	45.0	7.3	9.2	7.4	101	1.0	--
26...	1100	0.5	21.8	8.5	7.8	102	1.0	20.6
26...	1105	4.0	20.8	8.4	7.7	101	--	--
26...	1110	7.0	16.2	9.5	8.0	95	--	--
26...	1115	10.0	13.8	9.9	7.9	89	1.0	--
26...	1120	15.0	11.2	9.6	7.6	85	--	--
26...	1125	20.0	9.6	9.7	7.2	88	1.0	--
26...	1130	29.5	7.9	9.4	7.4	97	1.0	--
26...	1135	44.5	7.4	9.1	7.2	101	--	--

14361900 APPLEGATE LAKE NEAR COPPER, OR--Continued

4202281230739

WATER QUALITY DATA, JANUARY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
JUL								
10...	1200	0.0	23.6	8.2	7.6	102	1.0	18.3
10...	1205	5.0	22.1	8.3	7.8	102	--	--
10...	1210	10.0	19.1	9.0	7.8	93	--	--
10...	1215	15.0	12.0	8.7	7.5	84	--	--
10...	1220	20.0	10.1	9.0	7.4	85	--	--
10...	1225	30.5	8.3	8.7	7.4	87	--	--
10...	1230	40.0	7.8	8.6	7.2	96	1.0	--
19...	1100	0.5	24.5	8.0	7.8	103	1.2	15.2
19...	1105	4.0	24.3	7.9	7.8	103	--	--
19...	1110	6.0	22.2	8.5	7.9	108	--	--
19...	1115	10.0	16.2	9.0	7.6	97	1.0	--
19...	1120	15.0	12.2	8.6	7.6	88	--	--
19...	1125	19.5	10.4	9.1	7.4	84	1.0	--
19...	1130	30.5	8.3	8.8	7.4	91	1.0	--
19...	1135	40.0	7.8	8.4	7.3	95	1.0	--
24...	1130	0.0	24.2	7.9	7.7	105	1.0	19.8
24...	1135	5.0	23.7	7.8	7.7	105	--	--
24...	1140	10.0	16.6	8.9	7.6	98	1.4	--
24...	1145	15.0	12.3	8.5	7.6	87	--	--
24...	1150	20.5	10.4	8.9	7.6	82	1.2	--
24...	1155	30.0	8.5	8.6	7.5	90	1.0	--
24...	1200	40.0	7.9	8.3	7.4	94	1.0	--
AUG								
2...	1040	0.0	23.6	8.1	8.1	109	1.0	18.4
2...	1045	6.0	23.2	7.3	--	116	--	--
2...	1050	10.0	16.1	8.0	7.5	98	1.0	--
2...	1055	15.0	12.1	7.9	--	86	--	--
2...	1100	20.0	10.1	8.4	7.4	85	1.0	--
2...	1105	30.0	8.5	8.0	7.3	97	1.0	--
2...	1110	40.0	7.9	7.4	7.3	97	1.0	--
7...	1100	0.5	23.5	7.9	7.9	110	1.0	20.5
7...	1105	7.0	22.8	7.7	--	111	--	--
7...	1110	10.0	17.3	8.7	7.7	102	1.0	--
7...	1115	15.0	12.5	8.2	--	89	--	--
7...	1120	20.0	10.3	8.8	7.6	84	1.0	--
7...	1125	30.0	8.7	8.5	7.6	91	1.0	--
7...	1130	40.0	8.0	7.5	7.4	96	1.0	--
14...	1300	0.5	23.8	7.7	7.9	119	1.0	23.9
14...	1305	7.0	23.0	7.6	--	118	--	--
14...	1310	10.5	17.6	7.9	7.8	107	1.0	--
14...	1315	15.0	12.7	7.6	--	93	--	--
14...	1320	20.0	10.6	8.3	7.6	88	1.0	--
14...	1325	30.0	8.9	8.0	7.5	94	1.0	--
14...	1330	43.5	8.0	6.5	7.4	101	1.0	--
21...	1135	0.0	20.1	7.8	7.4	115	1.0	19.7
21...	1140	9.5	19.8	7.7	7.8	115	1.0	--
21...	1145	20.0	13.1	8.0	7.8	85	1.0	--
21...	1150	30.0	10.6	7.8	7.7	89	1.0	--
21...	1155	40.0	8.8	7.0	7.6	94	1.0	--
28...	1045	0.0	22.5	8.1	8.6	121	1.0	15.5
28...	1050	7.0	22.0	7.8	8.4	120	--	--
28...	1055	10.0	17.8	8.2	7.6	107	1.0	--
28...	1100	15.0	12.8	7.9	7.4	90	--	--
28...	1105	20.5	10.7	8.0	7.2	87	1.0	--
28...	1110	40.5	8.2	6.4	7.2	98	1.0	--
SEP								
4...	1135	1.0	21.7	8.1	7.8	113	1.0	17.7
4...	1140	8.0	21.3	7.5	--	116	--	--
4...	1145	10.0	19.1	7.5	7.9	113	1.0	--
4...	1150	15.0	13.6	7.5	--	86	--	--
4...	1155	21.0	10.9	8.2	7.6	80	1.0	--
4...	1200	30.0	9.5	8.0	7.4	86	1.0	--
4...	1205	35.0	8.9	7.2	7.3	90	1.0	--
4...	1210	41.5	8.1	5.9	--	93	--	--
11...	1230	0.0	21.3	8.4	8.0	120	1.0	16.7
11...	1235	7.0	21.1	8.3	--	119	--	--
11...	1240	10.5	18.6	7.6	7.7	116	1.0	--
11...	1245	15.0	13.6	7.4	--	90	--	--
11...	1250	20.5	11.1	7.9	7.4	86	1.0	--
11...	1255	29.5	9.7	7.5	7.3	87	1.0	--
11...	1300	35.5	9.0	6.5	7.3	90	1.0	--
18...	1130	0.0	20.5	8.2	7.2	126	1.0	23.1
18...	1135	10.0	19.9	8.0	7.4	126	1.0	--
18...	1140	20.0	11.4	7.2	7.2	91	1.0	--
18...	1145	30.0	9.7	6.3	7.2	92	1.0	--
18...	1150	35.0	9.0	5.4	7.2	94	1.0	--
25...	1100	0.0	18.7	8.2	7.2	123	1.0	--
25...	1105	10.0	18.7	8.5	7.1	123	1.0	--
25...	1110	20.0	11.7	7.1	6.7	89	1.0	--
25...	1115	30.0	9.7	6.0	6.7	90	1.0	--
25...	1120	35.0	8.7	6.0	6.7	98	1.0	--

ROGUE RIVER BASIN

14361900 APPLEGATE LAKE NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 42°02'16", long 123°08'30", near line between NE½ and NW¼ sec.2, T.41 S., R.4 W., Jackson County, Hydrologic Unit 17100309, 0.4 mi north of mouth of Panther Gulch, and 0.9 mi southeast of Collings Mountain.

PERIOD OF RECORD.--May to September 1984.

REMARKS.--Local Identifier 4202161230830 Applegate Lake #4.

WATER QUALITY DATA, MAY TO SEPTEMBER 1984

DATE	TIME	DEPTH (M)	TEMPERATURE (DEG C)	OXYGEN DIS-SOLVED (MG/L)	PH (STANDARD UNITS)	SPECIFIC CONDUCTANCE (US/CM)	TURBIDITY (NTU)	TRANSPARENCY (SECCHI DISK) (FT)
MAY								
24...	1110	0.0	15.7	9.8	7.8	105	1.5	13.4
24...	1115	5.0	15.3	9.7	--	105	--	--
24...	1120	10.0	10.5	8.6	--	82	--	--
24...	1125	20.0	8.3	10.3	--	83	--	--
24...	1130	35.0	7.3	9.9	--	99	--	--
31...	1020	0.0	17.2	9.7	7.8	96	1.2	11.5
31...	1025	4.0	16.9	9.5	--	85	--	--
31...	1030	7.0	12.4	9.6	--	77	--	--
31...	1035	10.0	11.2	10.3	7.7	76	1.2	--
31...	1040	20.5	8.2	10.4	7.7	79	1.0	--
31...	1045	35.0	7.3	9.8	7.6	92	1.0	--
JUN								
7...	1300	0.0	--	9.4	7.6	94	1.0	14.3
7...	1305	10.0	--	9.9	7.7	77	1.0	--
7...	1310	20.0	--	9.8	7.6	78	1.0	--
7...	1315	30.0	--	9.8	7.6	89	1.0	--
7...	1320	35.0	--	9.3	7.6	94	1.0	--
14...	1325	0.0	18.5	9.3	7.8	100	1.0	18.2
14...	1330	10.0	12.1	9.7	7.8	85	1.0	--
14...	1335	20.0	9.2	10.2	7.8	83	1.0	--
14...	1340	30.0	7.7	9.2	7.7	94	1.0	--
14...	1345	35.0	7.5	9.1	7.6	98	1.0	--
21...	1230	0.0	19.6	8.7	8.2	99	2.0	20.5
21...	1235	3.0	19.0	8.7	8.2	99	--	--
21...	1240	10.0	12.4	9.8	8.1	86	1.0	--
21...	1245	20.0	9.6	9.6	7.8	82	1.0	--
21...	1250	25.0	8.4	9.1	7.8	89	--	--
21...	1255	34.5	7.7	9.0	7.6	96	1.0	--
26...	1130	0.5	21.5	8.7	7.7	101	1.0	19.0
26...	1135	3.0	20.9	8.3	7.8	101	--	--
26...	1140	10.0	13.2	9.1	7.7	92	1.0	--
26...	1145	20.0	9.7	9.7	7.4	82	1.0	--
26...	1150	25.0	8.4	9.2	7.3	90	--	--
26...	1155	35.0	7.7	8.8	7.3	99	1.0	--
JUL								
5...	1105	0.5	23.3	8.4	8.0	101	1.0	18.3
5...	1110	4.0	22.8	8.4	8.2	100	--	--
5...	1115	6.0	18.3	9.6	8.2	98	--	--
5...	1120	10.0	14.6	9.5	7.9	90	1.0	--
5...	1125	15.0	11.7	9.2	7.7	80	--	--
5...	1130	20.0	10.1	9.3	7.6	80	1.0	--
5...	1135	30.0	8.2	8.4	7.5	92	1.0	--
5...	1140	35.0	7.9	8.3	7.4	95	1.0	--
10...	1300	0.5	23.2	8.2	7.6	103	1.1	17.4
10...	1305	4.0	22.7	7.8	7.6	103	--	--
10...	1310	10.5	14.7	9.1	7.3	92	1.0	--
10...	1315	15.0	12.0	8.7	7.2	85	--	--
10...	1320	20.0	10.2	9.0	7.0	82	1.0	--
10...	1325	30.0	8.2	7.8	7.0	93	1.0	--
19...	1130	0.5	24.8	8.0	7.8	104	1.0	18.8
19...	1135	4.0	24.6	7.9	7.8	104	--	--
19...	1140	10.0	16.1	9.4	7.6	95	1.0	--
19...	1145	15.0	12.4	8.5	7.6	86	--	--
19...	1150	20.0	10.4	9.0	7.5	81	1.0	--
19...	1155	30.0	8.4	--	7.4	91	1.0	--
24...	1200	0.0	24.4	7.9	7.6	105	1.0	--
24...	1205	5.0	23.6	7.3	7.7	106	--	--
24...	1210	10.0	16.4	9.1	7.4	97	1.0	--
24...	1215	15.0	12.6	8.4	7.4	86	--	--
24...	1220	20.0	10.6	8.6	7.4	82	1.0	--
24...	1225	30.0	8.4	7.9	7.2	91	1.0	--

ROGUE RIVER BASIN

419

14361900 APPLEGATE LAKE NEAR COPPER, OR--Continued

4202161230830

WATER QUALITY DATA, MAY TO SEPTEMBER 1984--Continued

DATE	TIME	DEPTH (M)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SPECIFIC CONDUCT- ANCE (US/CM)	TURBID- ITY (NTU)	TRANS- PAR- ENCY (SECCHI DISK) (FT)
AUG								
2...	1100	0.0	23.6	7.3	7.9	110	1.0	21.4
2...	1105	6.0	23.1	7.4	--	116	--	--
2...	1110	9.5	15.4	8.6	7.6	96	1.0	--
2...	1115	15.0	11.9	8.1	--	85	--	--
2...	1120	20.0	10.2	8.3	7.3	85	1.0	--
2...	1125	30.0	8.5	7.1	7.2	93	1.0	--
7...	1130	0.0	23.8	7.9	7.8	110	1.0	18.2
7...	1135	7.0	22.0	7.5	7.6	116	--	--
7...	1140	20.0	10.5	8.7	7.5	83	1.0	--
7...	1145	30.0	8.7	7.5	7.4	90	1.0	--
14...	1345	0.5	23.5	7.7	7.8	118	1.0	20.9
14...	1350	7.0	23.0	7.6	--	118	--	--
14...	1355	9.5	18.1	8.3	7.8	109	1.0	--
14...	1400	15.0	12.8	7.7	--	90	--	--
14...	1405	20.0	10.9	7.9	7.6	88	1.0	--
14...	1410	30.0	9.0	6.8	7.4	93	1.0	--
21...	1220	0.0	21.7	7.8	7.7	114	1.0	16.9
21...	1225	9.5	17.7	7.8	7.7	113	1.0	--
21...	1230	20.0	11.3	7.9	7.7	85	1.0	--
21...	1235	29.5	9.6	6.9	7.4	89	1.0	--
28...	1130	0.0	22.4	8.0	8.6	121	1.0	14.7
28...	1135	7.0	21.8	7.7	8.5	125	--	--
28...	1140	10.5	18.2	8.0	7.8	109	1.0	--
28...	1145	15.0	12.1	7.8	7.3	90	--	--
28...	1150	20.5	9.1	7.8	7.3	89	1.0	--
28...	1155	25.0	9.1	6.0	7.2	94	1.0	--
SEP								
4...	1215	1.0	22.0	8.4	7.8	113	1.0	12.1
4...	1220	8.0	21.1	8.4	--	113	--	--
4...	1225	10.0	19.0	8.1	8.0	117	1.0	--
4...	1230	15.0	13.6	7.6	--	84	--	--
4...	1235	25.0	10.0	5.8	7.4	82	1.0	--
4...	1240	29.5	9.5	5.8	7.4	87	1.0	--
11...	1300	0.5	21.4	8.4	8.0	121	1.1	15.1
11...	1305	8.0	21.1	8.2	--	120	--	--
11...	1310	10.5	18.2	7.2	7.6	115	1.0	--
11...	1315	15.0	13.7	7.8	--	90	--	--
11...	1320	20.0	11.3	6.4	7.3	86	1.0	--
11...	1325	25.0	10.2	5.7	7.1	88	1.0	--
18...	1230	0.0	20.6	8.1	7.6	124	1.0	26.6
18...	1235	10.0	19.4	7.2	7.3	126	1.0	--
18...	1240	20.0	11.7	6.4	7.3	92	1.0	--
18...	1245	25.0	10.6	5.6	7.4	92	1.0	--
25...	1130	0.0	18.8	8.3	7.3	123	1.0	--
25...	1135	10.0	18.6	8.8	7.2	123	1.0	--
25...	1140	20.0	11.6	5.4	6.6	92	1.0	--
25...	1145	25.0	10.4	5.0	6.5	92	1.0	--

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR

LOCATION.--Lat 42°03'50", long 123°06'37", in SW¼ 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 mi².

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.--46 years, 459 ft³/s, 332,500 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft³/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 ft³/s on basis of four slope-area measurements of peak flows made in 1950, 1955, 1964, and 1974; minimum, 1.5 ft³/s Dec. 20, 1980, result of regulation at Applegate dam, 0.6 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,470 ft³/s Dec. 16, gage height, 8.31 ft; minimum, 112 ft³/s Feb. 2; minimum daily, 140 ft³/s Feb. 8-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	495	535	467	1680	201	192	348	255	650	232	266	290
2	494	640	434	1670	164	194	315	568	551	232	266	291
3	492	636	454	1380	144	195	316	926	545	232	266	291
4	491	687	437	1280	142	196	317	1090	600	209	266	290
5	473	817	395	1360	144	197	317	1090	655	215	266	301
6	473	817	792	1280	143	198	318	1070	654	239	266	323
7	506	811	2020	1240	144	199	317	652	657	238	266	323
8	504	803	2490	1130	140	200	319	625	582	239	261	323
9	508	794	1910	995	140	202	320	674	523	239	258	322
10	518	810	2410	897	140	203	397	854	478	240	258	334
11	513	1160	2260	868	140	204	508	1330	460	240	258	340
12	507	1420	1460	774	142	205	508	1340	425	240	257	340
13	518	1400	1770	708	147	414	473	1220	409	240	256	345
14	515	1380	2440	659	150	941	398	1150	410	253	256	344
15	513	820	3120	623	153	1280	401	914	409	258	256	344
16	512	669	3700	599	200	1390	401	767	410	258	256	342
17	514	2020	3310	554	266	1390	475	719	410	258	256	342
18	520	1050	1700	516	324	1090	569	563	406	258	257	341
19	518	869	1410	496	432	766	616	443	367	258	256	340
20	516	1160	1230	479	505	767	619	482	346	258	275	340
21	514	959	1060	478	633	875	486	646	334	262	288	338
22	512	652	929	463	787	901	417	760	305	264	289	336
23	509	580	843	430	838	739	417	801	284	261	291	336
24	513	1170	1000	418	1160	640	418	829	282	261	291	334
25	511	1500	1220	418	1150	550	372	740	280	256	290	333
26	511	1150	1340	418	884	633	254	710	264	263	289	332
27	507	905	1210	382	447	718	182	749	232	272	289	332
28	505	649	1010	309	247	619	203	752	232	271	288	331
29	502	549	1020	309	192	488	203	831	232	268	288	331
30	499	521	2020	293	---	409	203	868	232	269	288	330
31	496	---	2050	246	---	412	---	800	---	266	287	---
TOTAL	15679	27933	47911	23352	10299	17407	11407	25218	12624	7749	8400	9839
MEAN	506	931	1546	753	335	562	380	813	421	250	271	328
MAX	520	2020	3700	1680	1160	1390	619	1340	657	272	291	345
MIN	473	521	395	246	140	192	182	255	232	209	256	290
AC-FT	31100	55410	95030	46320	20430	34530	22630	50020	25040	15370	16660	19520
MEAN†	85.5	725	1569	745	657	958	734	831	422	139	75.1	58.1
AC-FT†	5260	43140	96490	45790	37820	58890	43700	51080	25090	8560	4620	3460

CAL YR 1983 TOTAL 332280 MEAN 910 MAX 4430 MIN 191 AC-FT 659100 MEAN† 913 AC-FT† 661020
WTR YR 1984 TOTAL 217818 MEAN 595 MAX 3700 MIN 140 AC-FT 432000 MEAN† 584 AC-FT† 423840

† Adjusted for change in contents of Applegate Lake.

14362000 APPLGATE 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 upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 188 microsiemens Sept. 13, 1980; minimum, 61 microsiemens Dec. 3, 1980, Dec. 20, 1981, June 19, 20, 1983.

pH: Maximum, 9.0 units Sept. 4, 1980; minimum, 7.2 units Oct. 26 to Nov. 3, 1983.

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, 121 microsiemens Nov. 10; minimum, 73 microsiemens Oct. 27.

pH: Maximum, 8.2 units on many days during year; minimum, 7.2 units Oct. 26 to Nov. 3.

WATER TEMPERATURES: Maximum, 18.0°C July 26-28; minimum, 3.5°C Jan. 21-26.

DISSOLVED OXYGEN: Maximum, 14.7 mg/l Dec. 31; minimum, 7.3 mg/l July 28, result of releases from dam.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	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 06...	1130	143	100	8.0	4.5	13.0	2	2	<100	2	<10
AUG 17...	1200	256	101	8.0	14.0	10.8	<1	<1	<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 RECOV-ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
FEB 06...	<1	6	140	20	40	.1	<.1	<1	<1	50
AUG 17...	1	4	80	6	20	<.1	<.1	<1	<1	20

DATE	DIS-CHARGE, IN CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	DATE	DIS-CHARGE, IN CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 13...	518	1	1.4	APR 20...	619	4	6.7
NOV 04...	687	3	5.6	MAY 07...	652	2	3.5
17...	2020	12	65	23...	801	2	4.3
DEC 02...	434	2	2.3	JUN 05...	655	1	1.8
22...	652	4	7.0	19...	406	2	2.2
JAN 05...	1360	3	11	JUL 05...	215	2	1.2
20...	418	1	1.1	19...	258	2	1.4
FEB 06...	143	2	.81	AUG 03...	266	1	.72
21...	633	5	8.5	17...	256	1	.69
MAR 06...	198	7	3.7	SEP 07...	323	3	2.6
20...	767	4	8.3	19...	340	2	1.8
APR 05...	317	4	3.4				

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	81	105	92	107	108	96	102	91	95	99	100
2	100	84	105	89	98	106	97	103	89	94	100	100
3	100	99	105	89	98	105	96	102	89	95	100	100
4	101	116	107	90	100	111	97	102	92	94	100	99
5	101	117	107	90	101	115	95	102	93	95	100	99
6	92	115	105	91	102	116	95	101	93	94	101	99
7	94	116	104	92	103	114	95	102	92	95	101	98
8	95	113	99	93	101	112	96	102	92	94	100	97
9	96	117	97	93	99	111	96	101	91	95	100	97
10	97	119	96	94	102	108	96	101	91	94	101	98
11	94	104	92	92	100	105	96	100	90	96	101	98
12	89	98	94	94	99	103	97	101	90	96	102	93
13	91	103	94	97	101	102	97	100	90	95	102	87
14	92	109	95	96	104	100	97	100	90	97	102	88
15	93	114	90	96	103	98	97	98	90	97	102	88
16	94	114	83	96	103	99	97	96	90	97	102	88
17	92	103	83	98	104	100	97	96	91	97	101	90
18	90	87	86	100	100	99	98	95	91	98	101	90
19	92	91	91	101	99	95	98	95	91	97	101	90
20	93	95	94	101	99	95	96	95	92	97	100	91
21	93	92	98	100	107	96	97	95	92	97	100	93
22	94	95	96	102	110	97	96	95	93	97	99	94
23	94	100	98	101	104	97	96	94	93	97	100	94
24	85	102	97	103	100	96	97	94	93	98	99	96
25	76	94	97	103	99	97	100	94	93	96	100	98
26	75	91	97	104	100	97	103	93	93	95	99	99
27	75	94	97	106	102	96	103	92	93	96	99	100
28	75	97	99	108	104	96	104	92	94	97	100	101
29	76	101	96	109	108	96	102	91	93	98	99	101
30	77	104	92	109	---	95	103	91	95	99	100	102
31	79	---	92	111	---	95	---	93	---	99	100	---
MEAN	90	102	96	98	102	102	98	97	92	96	100	96

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.8	7.7	7.3	7.2	7.8	7.8	7.8	7.8	8.1	7.9	8.1	7.9
2	7.8	7.7	7.2	7.2	7.8	7.8	7.8	7.8	8.1	7.9	8.1	7.9
3	7.8	7.7	7.4	7.2	7.8	7.8	7.8	7.8	8.1	7.9	8.1	7.9
4	7.8	7.7	7.6	7.4	7.9	7.8	7.8	7.8	8.1	7.9	8.1	7.9
5	8.0	7.7	7.8	7.6	7.9	7.8	7.8	7.8	8.1	7.8	8.1	7.9
6	7.8	7.5	7.8	7.7	7.9	7.8	7.8	7.8	8.1	7.9	8.1	8.0
7	7.8	7.6	7.8	7.7	7.8	7.7	7.8	7.8	8.2	7.9	8.1	8.0
8	7.8	7.6	7.8	7.8	7.8	7.8	7.8	7.8	8.2	7.9	8.1	7.9
9	7.8	7.6	7.8	7.8	7.8	7.7	7.8	7.8	8.2	7.9	8.1	7.9
10	7.8	7.6	7.8	7.7	7.8	7.8	7.9	7.8	8.2	7.9	8.1	7.9
11	7.8	7.6	7.8	7.7	7.8	7.6	7.9	7.8	8.2	7.9	8.1	7.9
12	7.7	7.5	7.8	7.7	7.8	7.8	7.9	7.8	8.2	8.0	8.1	7.9
13	7.6	7.5	7.8	7.7	7.8	7.8	7.9	7.8	8.1	8.0	8.1	7.9
14	7.7	7.5	7.8	7.8	7.8	7.8	7.9	7.8	8.1	7.9	7.9	7.9
15	7.8	7.6	7.8	7.7	7.8	7.8	7.9	7.8	8.1	8.0	7.9	7.9
16	7.8	7.6	7.8	7.7	7.8	7.7	7.9	7.8	8.1	7.9	7.9	7.9
17	7.7	7.5	7.7	7.6	7.8	7.7	7.9	7.8	8.0	7.9	7.9	7.9
18	7.7	7.5	7.7	7.7	7.8	7.7	7.9	7.8	8.0	7.9	7.9	7.9
19	7.7	7.5	7.8	7.7	7.8	7.7	7.9	7.8	8.0	7.9	7.9	7.9
20	7.7	7.5	7.8	7.7	7.8	7.7	7.9	7.8	8.0	7.9	7.9	7.9
21	7.7	7.5	7.8	7.8	7.8	7.8	7.9	7.8	8.0	7.9	7.9	7.9
22	7.6	7.5	7.8	7.8	7.9	7.7	7.9	7.8	8.0	7.9	7.9	7.9
23	7.7	7.5	7.8	7.8	7.9	7.8	7.9	7.8	8.0	7.9	7.9	7.9
24	7.6	7.3	7.8	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.9	7.9
25	7.3	7.3	7.8	7.8	7.8	7.8	7.9	7.8	7.9	7.9	7.9	7.9
26	7.3	7.2	7.8	7.8	7.8	7.8	7.9	7.9	8.0	7.9	7.9	7.9
27	7.3	7.2	7.8	7.8	7.8	7.8	7.9	7.9	8.0	7.9	7.9	7.9
28	7.3	7.2	7.8	7.8	7.8	7.8	8.0	7.9	8.1	7.9	7.9	7.9
29	7.2	7.2	7.8	7.8	7.8	7.8	8.0	7.9	8.1	7.9	7.9	7.9
30	7.3	7.2	7.8	7.8	7.8	7.8	8.0	7.9	---	---	8.0	7.9
31	7.2	7.2	---	---	7.8	7.8	8.0	7.9	---	---	7.9	7.9
MONTH	8.0	7.2	7.8	7.2	7.9	7.6	8.0	7.8	8.2	7.8	8.1	7.9
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.9	8.1	8.0	8.0	7.9	8.1	7.8	8.1	7.8	7.9	7.7
2	8.0	7.9	8.0	7.9	7.9	7.9	8.1	7.8	8.1	7.8	7.9	7.7
3	8.0	7.9	7.9	7.8	7.9	7.9	8.1	7.8	8.1	7.8	7.9	7.7
4	7.9	7.9	7.9	7.8	7.9	7.8	8.2	7.8	8.2	7.8	7.9	7.7
5	7.9	7.8	7.9	7.9	8.0	7.8	8.2	7.8	8.2	7.8	7.9	7.7
6	8.0	7.9	7.9	7.9	8.0	7.8	8.1	7.8	8.2	7.8	7.9	7.7
7	8.0	7.8	8.0	7.9	7.9	7.8	8.1	7.8	8.2	7.8	7.9	7.7
8	7.9	7.8	8.0	7.9	7.9	7.8	8.2	7.8	8.1	7.7	7.9	7.7
9	8.0	7.8	7.9	7.9	7.9	7.8	8.1	7.8	8.2	7.7	7.9	7.7
10	8.0	7.8	7.9	7.9	8.0	7.8	8.1	7.8	8.2	7.7	7.9	7.7
11	7.9	7.8	7.9	7.8	8.0	7.8	8.1	7.8	8.2	7.8	7.9	7.7
12	7.9	7.8	7.9	7.8	8.0	7.8	8.1	7.8	8.2	7.7	7.9	7.6
13	7.9	7.8	7.9	7.8	8.0	7.8	8.1	7.8	8.2	7.8	7.7	7.6
14	7.9	7.8	7.9	7.8	8.0	7.8	8.1	7.8	8.2	7.8	7.7	7.6
15	7.9	7.8	8.0	7.9	8.0	7.8	8.1	7.8	8.1	7.7	7.7	7.5
16	7.9	7.8	8.0	7.9	8.0	7.8	8.1	7.8	8.1	7.7	7.6	7.5
17	7.9	7.9	8.0	7.9	8.0	7.8	8.1	7.8	8.1	7.7	7.6	7.5
18	7.9	7.8	8.0	7.9	8.0	7.8	8.1	7.8	8.1	7.7	7.6	7.5
19	7.9	7.8	8.0	7.9	8.0	7.8	8.1	7.8	8.1	7.7	7.6	7.5
20	7.9	7.8	7.9	7.9	8.0	7.8	8.1	7.8	8.0	7.7	7.7	7.6
21	7.9	7.8	7.9	7.8	8.0	7.8	8.2	7.8	8.0	7.7	7.7	7.6
22	7.9	7.8	8.0	7.9	8.0	7.8	8.1	7.8	8.0	7.7	7.7	7.6
23	7.9	7.8	8.0	7.9	8.0	7.8	8.2	7.8	8.0	7.7	7.7	7.6
24	7.9	7.8	8.0	8.0	8.0	7.8	8.2	7.8	8.0	7.7	7.7	7.6
25	8.0	7.8	8.1	7.9	8.1	7.8	8.2	7.8	8.0	7.7	7.7	7.6
26	8.1	7.9	8.0	7.9	8.1	7.8	8.2	8.0	8.0	7.7	7.8	7.6
27	8.1	7.9	8.0	7.9	8.1	7.8	8.1	8.0	8.0	7.7	7.8	7.6
28	8.1	7.9	8.0	7.9	8.1	7.8	8.1	7.9	8.0	7.7	7.8	7.6
29	8.1	7.9	8.0	7.9	8.1	7.8	8.1	7.8	8.0	7.7	7.8	7.6
30	8.1	7.9	8.0	7.9	8.1	7.8	8.0	7.8	7.9	7.7	7.8	7.6
31	---	---	8.0	7.9	---	---	8.0	7.8	8.0	7.7	---	---
MONTH	8.1	7.8	8.1	7.8	8.1	7.8	8.2	7.8	8.2	7.7	7.9	7.5

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	16.0	15.5	10.0	9.5	6.0	6.0	5.0	5.0	4.5	4.0	5.0	4.5
2	16.0	15.5	11.0	10.0	6.0	6.0	5.0	5.0	4.5	4.0	5.0	4.5
3	15.5	15.5	12.0	11.0	6.0	6.0	5.0	5.0	4.5	4.0	5.0	4.5
4	15.5	15.5	12.5	12.0	6.5	6.0	5.0	5.0	5.0	4.0	5.0	4.5
5	17.0	14.0	12.5	12.5	6.0	5.5	5.0	5.0	4.5	4.0	5.5	4.5
6	14.0	10.5	12.5	12.0	6.0	5.5	5.5	5.0	4.5	4.0	5.5	5.0
7	14.0	14.0	12.0	11.5	6.5	6.0	5.5	5.0	4.5	4.0	5.5	5.0
8	14.5	14.0	11.5	11.0	6.0	6.0	5.5	5.0	5.0	4.0	5.5	5.0
9	14.5	14.0	11.0	11.0	6.0	6.0	5.5	5.5	4.5	4.5	5.5	5.0
10	14.5	14.0	11.0	11.0	6.0	6.0	5.5	5.5	4.5	4.0	5.5	5.0
11	14.5	12.5	11.0	9.5	6.0	6.0	5.5	5.0	4.5	4.5	5.5	5.0
12	12.5	10.5	9.5	9.5	6.0	5.5	5.5	5.0	5.0	4.5	5.5	5.0
13	12.5	12.5	9.5	9.0	5.5	5.5	5.5	5.0	5.0	4.5	5.5	5.0
14	13.0	12.5	9.0	8.5	5.5	5.0	5.0	4.5	4.5	4.5	5.0	5.0
15	13.0	12.5	9.0	9.0	6.0	5.5	4.5	4.5	5.0	4.5	5.0	5.0
16	13.0	13.0	9.0	8.5	6.0	6.0	4.5	4.0	4.5	4.5	5.0	5.0
17	13.0	11.5	9.0	8.0	6.5	6.0	4.5	4.0	5.0	4.5	5.5	5.0
18	12.0	11.5	8.0	7.5	6.5	6.0	4.0	4.0	5.0	4.5	5.5	5.5
19	12.0	12.0	8.0	7.5	6.0	6.0	4.0	4.0	4.5	4.5	5.5	5.5
20	12.0	12.0	8.0	7.5	6.0	6.0	4.0	4.0	5.0	4.5	5.5	5.5
21	12.0	12.0	7.5	7.0	6.0	5.5	4.0	3.5	4.5	4.5	5.5	5.5
22	12.0	12.0	7.0	6.5	5.5	5.0	4.0	3.5	4.5	4.5	5.5	5.5
23	12.0	11.5	7.0	7.0	5.0	4.5	4.0	3.5	5.0	4.5	6.0	5.5
24	12.0	8.5	7.0	7.0	5.0	4.5	4.0	3.5	5.0	4.5	6.0	5.5
25	9.0	8.5	7.0	6.5	4.5	4.0	4.0	3.5	5.0	4.5	6.0	5.5
26	9.0	8.5	6.5	6.5	4.0	4.0	4.0	3.5	5.0	4.5	6.0	5.5
27	9.0	8.5	6.5	6.5	4.0	4.0	4.0	4.0	5.0	4.5	6.0	5.5
28	9.0	9.0	6.5	6.0	4.0	4.0	4.0	4.0	5.0	4.5	6.0	5.5
29	9.0	9.0	6.5	6.0	4.5	4.0	4.0	4.0	5.0	4.5	6.0	5.5
30	9.5	9.0	6.5	6.0	4.5	4.0	4.5	4.0	---	---	6.0	5.5
31	9.5	9.5	---	---	5.0	4.5	4.5	4.0	---	---	6.0	6.0
MONTH	17.0	8.5	12.5	6.0	6.5	4.0	5.5	3.5	5.0	4.0	6.0	4.5

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

ROGUE RIVER BASIN

425

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	10.8	9.7	10.4	11.9	10.9	11.4	12.5	12.0	12.4	14.4	13.9	14.2
2	10.8	9.9	10.4	11.7	10.8	11.2	12.5	11.9	12.1	14.3	13.8	14.1
3	10.8	10.0	10.4	11.4	10.4	10.9	12.3	11.7	12.0	14.3	13.8	14.0
4	10.4	9.9	10.1	11.7	10.4	11.3	12.4	11.6	12.1	14.4	13.8	14.0
5	10.5	9.6	10.1	11.3	10.6	11.1	12.3	11.8	12.1	14.4	13.8	14.0
6	12.0	10.1	10.7	11.2	10.6	10.9	13.0	12.1	12.5	14.1	13.2	13.7
7	11.0	10.2	10.6	11.3	10.8	11.1	13.1	12.4	12.8	13.6	13.1	13.4
8	10.9	10.1	10.4	11.4	11.1	11.3	13.0	12.5	12.8	13.5	13.2	13.4
9	10.7	10.2	10.4	11.4	11.1	11.3	12.8	12.4	12.6	13.5	13.1	13.3
10	10.8	10.1	10.4	11.2	10.7	11.0	13.3	12.6	12.9	13.4	13.0	13.2
11	11.3	9.9	10.7	11.9	11.0	11.5	13.3	12.8	13.0	13.6	13.2	13.4
12	11.8	10.5	11.2	11.7	11.2	11.5	13.5	12.9	13.1	13.4	13.0	13.3
13	11.8	10.8	11.4	---	---	---	13.5	13.1	13.3	13.4	12.9	13.1
14	11.6	10.5	11.0	---	---	---	13.5	13.1	13.3	13.4	12.8	13.1
15	11.2	10.1	10.7	---	---	---	---	---	---	13.5	13.0	13.2
16	11.2	10.1	10.6	---	---	---	---	---	---	13.6	13.1	13.3
17	11.3	10.0	10.7	---	---	---	---	---	---	13.4	13.0	13.3
18	11.5	10.5	10.9	13.0	12.4	12.7	---	---	---	13.5	12.9	13.3
19	11.5	10.5	11.0	12.7	12.2	12.4	---	---	---	13.5	13.2	13.3
20	11.6	10.5	11.0	12.5	12.1	12.3	---	---	---	13.9	13.0	13.4
21	11.7	10.4	11.0	12.8	12.4	12.6	---	---	---	13.9	13.2	13.6
22	11.3	10.6	11.0	12.7	12.3	12.5	---	---	---	13.6	13.3	13.4
23	11.7	10.5	11.2	12.6	12.1	12.4	13.9	13.0	13.3	13.6	13.3	13.5
24	12.7	10.8	11.8	12.8	12.1	12.5	13.6	12.6	13.1	13.7	13.3	13.5
25	12.6	11.9	12.3	13.1	12.5	12.8	13.6	13.0	13.2	13.7	13.4	13.5
26	12.5	11.8	12.1	13.2	12.7	13.0	13.8	13.4	13.6	13.8	13.3	13.5
27	12.5	11.6	12.1	13.3	12.7	12.9	14.0	13.5	13.8	13.8	13.2	13.5
28	12.5	11.7	12.1	13.2	12.5	12.8	14.1	13.7	13.9	13.6	13.0	13.3
29	12.5	11.6	12.0	12.8	12.2	12.5	14.1	13.7	13.9	13.3	12.9	13.1
30	12.3	11.6	11.9	12.5	12.2	12.4	14.5	14.0	14.3	13.3	12.7	13.0
31	12.3	11.1	11.7	---	---	---	14.7	14.0	14.3	13.2	12.8	12.9
MONTH	12.7	9.6	11.0	---	---	---	---	---	---	14.4	12.7	13.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	13.3	12.6	12.9	12.5	12.2	12.4	12.3	12.0	12.2	11.3	10.6	11.0
2	13.3	12.6	12.9	12.8	12.3	12.5	12.4	12.0	12.2	---	---	---
3	13.2	12.5	12.8	12.8	12.2	12.5	12.3	12.0	12.1	---	---	---
4	13.2	12.5	12.7	12.8	12.2	12.4	12.2	11.8	12.0	---	---	---
5	13.3	12.4	12.7	12.7	12.0	12.4	12.2	11.5	11.8	---	---	---
6	13.0	12.5	12.7	12.6	12.2	12.4	12.3	11.8	12.1	---	---	---
7	13.4	12.4	12.9	12.8	12.3	12.6	12.2	11.7	11.9	---	---	---
8	13.0	12.0	12.5	12.9	12.3	12.5	12.5	11.9	12.1	12.7	12.1	12.4
9	12.6	12.0	12.3	13.0	12.2	12.6	12.4	11.8	12.1	12.9	12.4	12.6
10	13.0	12.0	12.4	12.9	12.4	12.6	12.4	11.9	12.1	13.0	12.6	12.9
11	12.4	11.8	12.1	12.7	12.3	12.5	12.4	12.0	12.2	13.8	12.7	13.4
12	12.2	11.6	11.9	12.6	12.1	12.3	12.5	12.1	12.3	13.7	13.1	13.5
13	12.1	11.4	11.7	12.9	12.0	12.4	12.6	12.1	12.2	13.4	13.0	13.3
14	12.4	11.6	11.9	13.3	12.7	13.1	12.6	12.0	12.3	13.6	13.1	13.3
15	12.0	11.4	11.7	13.6	13.1	13.3	12.7	12.2	12.4	13.3	12.7	12.9
16	12.1	11.6	11.8	13.5	13.1	13.3	12.6	12.1	12.4	12.9	12.4	12.6
17	12.2	11.6	11.8	13.6	13.2	13.4	12.6	12.0	12.4	12.8	12.3	12.6
18	12.0	11.6	11.8	13.6	12.9	13.3	12.6	12.2	12.4	12.7	11.9	12.2
19	12.1	11.6	11.8	13.2	12.9	13.1	12.7	12.3	12.6	12.0	11.3	11.7
20	11.9	11.5	11.7	13.1	12.5	12.9	13.6	12.4	13.2	12.3	11.7	12.0
21	12.9	11.7	12.3	13.0	12.6	12.8	13.8	12.4	13.0	12.8	11.8	12.2
22	13.0	12.3	12.6	13.1	12.4	12.7	13.2	12.5	12.9	12.2	11.6	11.9
23	12.7	12.2	12.5	12.9	12.4	12.6	13.0	12.5	12.8	12.2	11.6	11.8
24	12.8	12.3	12.6	12.8	12.3	12.5	13.0	12.3	12.7	11.7	11.5	11.6
25	13.2	12.7	12.9	12.6	12.2	12.4	12.8	11.2	12.0	11.6	10.9	11.2
26	13.2	12.4	12.7	12.8	12.1	12.4	11.9	11.3	11.6	11.6	10.9	11.3
27	12.7	12.1	12.3	12.9	12.3	12.5	11.5	10.7	11.1	11.5	11.2	11.3
28	13.6	12.1	12.4	12.7	12.2	12.5	11.5	10.2	11.1	11.4	11.1	11.3
29	12.6	12.0	12.3	12.4	12.1	12.3	11.9	11.3	11.6	11.4	11.1	11.2
30	---	---	---	12.4	11.9	12.2	11.6	10.9	11.2	11.7	11.0	11.4
31	---	---	---	12.3	12.1	12.2	---	---	---	11.7	11.1	11.4
MONTH	13.6	11.4	12.3	13.6	11.9	12.6	13.8	10.2	12.2	---	---	---

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	11.7	11.0	11.5	11.3	10.6	10.9	10.6	9.9	10.2	10.8	10.1	10.4
2	11.6	11.2	11.4	11.4	10.5	10.9	10.6	10.0	10.2	10.8	10.0	10.3
3	11.4	11.2	11.3	11.4	10.6	11.0	10.7	10.0	10.3	10.7	10.1	10.3
4	11.5	11.0	11.3	11.3	10.4	10.9	10.7	9.8	10.2	10.7	10.0	10.3
5	11.6	10.3	11.3	11.5	10.4	10.9	10.7	9.9	10.2	10.7	10.1	10.3
6	11.5	11.2	11.3	11.5	10.8	11.1	10.8	9.9	10.3	10.9	10.2	10.5
7	11.8	11.5	11.7	11.5	10.7	11.1	10.8	9.8	10.2	10.9	10.1	10.4
8	12.0	11.6	11.8	11.6	10.8	11.1	11.1	9.8	10.4	10.7	10.0	10.3
9	11.8	11.6	11.7	11.7	10.9	11.2	11.1	10.1	10.5	10.6	9.9	10.2
10	11.8	11.4	11.6	11.7	10.9	11.3	11.1	10.0	10.5	10.3	9.7	10.0
11	11.7	11.4	11.6	11.8	11.0	11.3	11.1	10.1	10.5	10.3	9.7	9.9
12	11.7	11.4	11.5	11.8	11.0	11.4	11.2	10.1	10.5	10.6	9.8	10.1
13	11.7	11.4	11.5	11.6	10.8	11.2	11.1	10.1	10.5	10.5	10.0	10.2
14	11.9	11.5	11.7	11.6	10.9	11.2	11.0	10.1	10.5	10.4	9.9	10.1
15	11.9	11.5	11.7	11.5	10.8	11.2	11.0	10.0	10.4	10.5	9.9	10.1
16	11.9	11.6	11.7	11.5	10.7	11.1	11.0	10.1	10.4	10.4	9.9	10.1
17	11.9	11.3	11.6	11.4	10.7	11.0	10.9	9.9	10.4	10.6	9.8	10.2
18	11.8	11.2	11.5	11.3	10.7	11.0	10.9	10.0	10.3	10.6	10.2	10.4
19	11.4	10.8	11.2	11.3	10.5	10.9	10.8	9.9	10.3	10.6	10.1	10.3
20	11.6	11.0	11.3	11.3	10.5	10.9	10.9	10.0	10.3	10.5	10.1	10.3
21	11.4	10.6	11.0	11.0	10.1	10.7	10.9	10.1	10.4	10.6	10.0	10.3
22	11.3	10.6	10.9	10.9	10.2	10.5	10.8	10.1	10.4	10.5	10.0	10.2
23	11.3	10.6	10.9	10.8	10.0	10.4	10.9	10.1	10.4	10.6	10.0	10.2
24	11.4	10.8	11.0	10.8	10.0	10.3	10.8	10.0	10.4	10.5	9.9	10.2
25	11.4	10.8	11.1	10.7	9.5	10.1	10.8	10.0	10.3	10.4	9.9	10.1
26	11.4	10.8	11.1	10.0	9.4	9.7	10.8	10.0	10.3	10.4	9.9	10.1
27	11.5	10.7	11.1	9.9	9.4	9.7	10.8	10.0	10.3	10.4	9.9	10.1
28	11.4	10.6	11.0	9.5	7.3	8.2	10.8	10.0	10.3	10.2	9.7	10.0
29	11.3	10.5	10.9	10.1	8.9	9.6	10.7	10.0	10.3	10.1	9.6	9.8
30	11.4	10.5	10.8	10.3	9.9	10.1	10.6	10.0	10.2	10.1	9.6	9.8
31	---	---	---	10.4	9.9	10.1	10.8	10.1	10.3	---	---	---
MONTH	12.0	10.3	11.3	11.8	7.3	10.7	11.2	9.8	10.4	10.9	9.6	10.2

ROGUE RIVER BASIN

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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 mi².

PERIOD OF RECORD.--July 1983 to current year.

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 OF RECORD.--Maximum discharge, 153 ft³/s Dec. 14, 1983, gage height, 3.11 ft; minimum, 0.83 ft³/s Aug. 27, 28, Sept. 17, 18, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	0130	61	2.49	Dec. 30	1530	49	2.36
Dec. 9	2230	91	2.74	Mar. 17	0200	51	2.38
Dec. 14	1300	*153	*3.11				

Minimum, 0.83 ft³/s Aug. 27, 28, Sept. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.9	5.0	33	5.4	23	12	8.2	3.9	2.3	1.7	1.3
2	1.9	2.7	4.7	27	5.2	20	11	7.8	3.8	2.2	1.6	1.2
3	1.9	2.4	6.1	24	5.2	17	11	7.6	3.9	2.1	1.6	1.1
4	1.9	2.6	6.9	21	5.0	16	12	7.2	4.1	2.0	1.4	1.0
5	1.9	2.4	7.8	18	5.0	14	12	7.0	4.1	1.9	1.4	.96
6	1.9	2.8	23	17	4.9	13	11	6.7	4.4	1.9	1.3	1.0
7	1.8	2.7	54	15	4.9	12	11	6.6	4.2	1.9	1.3	1.0
8	1.8	2.5	47	14	5.2	11	18	6.4	3.9	1.9	1.2	1.0
9	1.9	2.7	46	12	5.9	10	19	6.2	3.7	1.9	1.2	.96
10	2.1	6.3	69	12	5.5	9.7	20	6.2	3.7	1.8	1.1	.95
11	2.0	6.2	47	11	5.6	9.3	20	6.5	3.6	1.8	1.1	.97
12	2.0	7.2	36	10	8.0	9.0	20	6.1	3.5	1.7	1.1	.99
13	1.9	12	86	9.9	34	19	18	5.9	3.4	1.7	1.2	.97
14	1.9	7.7	139	9.6	25	26	16	5.8	3.3	1.7	1.1	1.0
15	2.0	5.4	95	9.1	20	28	14	5.9	3.2	1.6	1.1	1.1
16	2.0	9.2	58	8.6	18	34	13	5.6	3.1	1.6	1.1	1.0
17	2.0	20	41	8.2	15	49	13	5.5	3.0	1.7	1.1	.94
18	1.9	11	32	8.0	13	44	13	5.3	3.0	1.6	1.1	.92
19	1.9	11	27	7.7	13	38	12	5.1	2.9	1.5	1.1	1.0
20	2.1	16	23	7.4	15	34	11	5.1	3.1	1.4	1.1	1.8
21	2.6	11	20	7.3	17	30	9.9	5.0	3.4	1.5	1.0	1.3
22	2.2	7.5	17	7.0	16	25	9.5	4.9	3.0	1.5	.99	1.2
23	2.1	6.7	15	6.7	15	22	9.3	4.8	2.8	1.4	1.0	1.2
24	2.1	19	16	6.5	18	19	9.2	4.7	2.7	1.5	1.1	1.2
25	2.0	20	16	6.4	21	18	9.0	4.6	2.6	1.4	1.1	1.2
26	1.9	12	25	6.2	23	17	8.8	4.6	2.5	1.4	.99	1.1
27	1.8	8.6	29	6.0	23	15	8.4	4.4	2.4	1.4	.94	1.1
28	1.8	6.9	27	5.8	26	14	8.1	4.2	2.4	1.4	.93	1.0
29	1.8	6.0	26	5.8	25	13	7.8	4.1	2.3	1.3	.97	.98
30	2.0	5.5	45	5.7	---	13	8.3	4.1	2.3	1.3	1.2	1.0
31	2.4	---	41	5.6	---	13	---	4.0	---	1.4	1.5	---
TOTAL	61.5	238.9	1130.5	351.5	402.8	635.0	375.3	176.1	98.2	51.7	36.62	32.44
MEAN	1.98	7.96	36.5	11.3	13.9	20.5	12.5	5.68	3.27	1.67	1.18	1.08
MAX	2.6	20	139	33	34	49	20	8.2	4.4	2.3	1.7	1.8
MIN	1.8	2.4	4.7	5.6	4.9	9.0	7.8	4.0	2.3	1.3	.93	.92
AC-FT	122	474	2240	697	799	1260	744	349	195	103	73	64
WTR YR 1984	TOTAL	3590.56	MEAN	9.81	MAX	139	MIN	.92	AC-FT	7120		

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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1938 to current year.

REVISED RECORDS.—WSP 1738: Drainage area. WSP 1935: 1953(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 except those for October, November, March, and April, which are fair. Flow regulated since December 1980 by Applegate Lake (see sta 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.—46 years, 567 ft³/s, 410,800 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 37,200 ft³/s Jan. 15, 1974, gage height, 20.41 ft, from rating curve extended above 18,000 ft³/s on basis of slope-area measurements of flow at gage heights 18.00 ft and 19.57 ft; minimum, 4.6 ft³/s Sept. 22-25, 1979. Minimum since first filling of Applegate Lake, 161 ft³/s Nov. 11, 1981.

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, 5,560 ft³/s Dec. 16, gage height, 7.31 ft; minimum, 194 ft³/s July 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	503	510	580	2170	343	515	654	426	824	247	248	274
2	503	648	527	2090	308	494	616	683	680	243	244	277
3	498	648	564	1830	273	468	616	1060	656	241	244	275
4	491	654	583	1630	270	451	643	1250	691	228	243	268
5	472	770	526	1690	266	437	654	1240	763	203	247	269
6	465	840	889	1610	265	427	654	1220	772	227	244	301
7	503	859	2540	1540	263	417	637	846	775	223	240	300
8	506	840	3230	1430	255	409	728	789	717	224	238	301
9	512	820	2360	1280	260	402	716	833	614	223	230	305
10	527	893	3110	1170	256	397	764	970	579	222	226	310
11	522	1100	2950	1120	292	393	886	1400	539	222	226	315
12	509	1480	1990	1010	253	386	879	1550	509	216	229	315
13	521	1540	2950	946	436	655	833	1390	476	215	226	321
14	515	1450	4550	877	423	1230	734	1340	478	225	219	323
15	515	1020	4640	829	393	1540	728	1140	472	237	221	326
16	510	712	4860	792	477	1730	740	979	473	234	220	324
17	501	2220	4530	747	532	1850	783	900	470	240	220	321
18	510	1260	2450	692	539	1600	886	790	463	234	222	318
19	505	976	2020	673	626	1170	900	625	428	231	223	319
20	505	1350	1730	648	738	1160	886	640	406	229	227	362
21	505	1140	1500	647	887	1210	770	773	395	233	248	340
22	505	795	1310	630	1060	1250	670	922	367	242	251	333
23	505	703	1170	597	1040	1060	670	969	330	236	250	333
24	508	1360	1270	579	1460	946	665	1000	325	231	251	332
25	508	1730	1530	579	1530	853	616	934	321	232	253	330
26	510	1370	1740	573	1320	955	501	871	325	229	257	329
27	507	1070	1630	555	856	1060	406	922	275	245	255	330
28	501	807	1430	448	628	900	410	934	265	244	251	327
29	501	667	1420	445	535	783	399	981	262	241	253	324
30	501	619	2520	437	---	659	414	1020	257	241	265	330
31	505	---	2720	385	---	693	---	967	---	246	282	---
TOTAL	15649	30851	65819	30649	16744	26500	20458	30364	14907	7184	7453	9432
MEAN	505	1028	2123	989	577	855	682	979	497	232	240	314
MAX	527	2220	4860	2170	1530	1850	900	1550	824	247	282	362
MIN	465	510	526	385	252	386	399	426	257	203	219	268
AC-FT	31040	61190	130600	60790	33210	52560	40580	60230	29570	14250	14780	18710
CAL YR 1983	TOTAL	429713	MEAN	1177	MAX	7230	MIN	192	AC-FT	852300		
WTR YR 1984	TOTAL	276010	MEAN	754	MAX	4860	MIN	203	AC-FT	547500		

ROGUE RIVER BASIN

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14366000 APPLEGATE RIVER NEAR APPLEGATE, 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, 25.5°C July 5, 1984; minimum recorded, 1.5°C Feb. 5, 6, 11, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.5°C July 5; minimum recorded, 2.5°C Jan. 17, Feb. 2, 3.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	13.5	11.5	10.0	7.5	6.5	5.5	4.5	5.5	3.5	8.5	6.0
2	16.5	14.0	11.5	10.0	7.5	6.5	6.0	5.0	5.5	2.5	8.5	5.0
3	17.0	13.5	12.5	11.0	6.5	5.5	6.5	5.0	5.5	2.5	7.5	4.0
4	17.5	14.0	12.5	11.5	7.0	5.5	6.0	5.5	6.0	3.0	8.0	4.0
5	17.0	14.0	12.5	11.5	6.5	5.5	6.5	5.5	6.0	3.5	8.5	4.0
6	16.0	13.0	12.5	11.5	7.0	6.0	6.0	5.5	7.0	4.0	9.0	5.0
7	16.0	11.5	12.0	10.5	7.5	6.5	6.5	5.5	6.0	4.0	9.5	6.0
8	16.0	13.0	11.0	10.5	7.0	6.0	6.5	6.0	7.5	4.5	9.0	5.5
9	15.5	14.0	12.0	10.5	7.0	6.5	6.0	5.5	6.0	5.0	10.0	6.0
10	16.5	14.0	11.5	10.5	7.0	6.5	7.0	5.5	6.0	4.0	10.0	7.0
11	16.0	13.0	11.5	10.0	6.5	5.5	6.5	5.5	6.0	4.5	8.0	6.0
12	15.0	11.5	10.5	9.5	6.0	5.5	6.5	4.5	8.0	5.5	9.5	5.5
13	13.5	11.5	10.0	9.0	6.0	5.5	5.5	3.5	7.5	5.5	8.5	6.0
14	14.0	11.5	9.5	8.5	7.0	6.0	5.0	3.5	5.5	5.0	7.5	5.5
15	14.0	10.5	10.0	9.0	7.0	6.5	5.0	3.5	6.0	4.5	7.0	5.0
16	14.0	10.5	9.5	8.5	7.0	6.5	5.0	3.0	6.0	4.5	6.0	5.0
17	14.5	11.0	9.5	8.5	7.0	6.5	---	2.5	6.5	4.5	7.0	5.0
18	13.5	10.0	9.0	8.0	7.0	6.5	---	---	7.0	4.5	7.0	5.5
19	13.5	10.5	8.5	8.0	7.0	6.0	---	---	7.0	5.5	10.0	6.0
20	13.0	10.5	8.5	7.5	6.0	5.5	---	---	7.5	6.0	9.0	6.5
21	13.0	10.5	8.0	7.0	5.5	4.5	---	---	6.5	4.5	8.5	5.5
22	12.5	11.5	7.0	6.5	4.5	3.0	---	---	6.5	4.5	9.0	5.0
23	13.5	12.0	7.5	6.5	4.0	3.0	---	---	5.5	4.0	9.5	6.0
24	13.5	10.5	8.0	7.5	4.5	3.0	---	---	5.5	5.0	9.0	6.0
25	11.0	8.0	7.5	7.0	5.5	4.5	---	---	6.5	4.5	7.0	5.5
26	11.0	8.0	7.5	6.5	5.0	4.5	---	---	7.0	4.5	9.5	6.5
27	11.0	8.0	7.5	6.5	5.0	4.0	---	---	7.0	4.5	9.5	6.0
28	11.0	8.5	---	---	4.5	4.0	---	---	7.0	5.0	9.0	6.5
29	10.0	8.5	---	---	6.0	4.5	---	---	7.5	5.5	9.0	6.0
30	11.0	9.5	7.0	6.0	5.5	5.0	---	---	---	---	9.0	5.0
31	11.5	10.0	---	---	5.5	4.5	6.0	---	---	---	7.5	6.0
MONTH	17.5	8.0	---	---	7.5	3.0	---	---	8.0	2.5	10.0	4.0

ROGUE RIVER BASIN

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

431

14369500 APPLGATE RIVER NEAR WILDERVILLE, OR

LOCATION.—Lat 45°21'15", long 123°24'20", in SE¼ 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 mi².

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 ft³/s 0.3 mi upstream and at the mouth of Jackson Creek.

AVERAGE DISCHARGE.—23 years, 783 ft³/s, 567,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 47,500 ft³/s Jan. 18, 1953, gage height, 18.3 ft, from floodmark, site and datum then in use, from rating curve extended above 12,000 ft³/s as explained below; minimum, 0.78 ft³/s Aug. 22-24, 1979. Minimum since first filling of Applegate Lake, 183 ft³/s Aug. 9, 1983.

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 ft³/s, from rating curve extended above 12,000 ft³/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, 9,150 ft³/s Dec. 14, gage height, 8.69 ft; minimum, 193 ft³/s July 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	566	618	899	3150	517	1150	1050	637	942	253	251	305
2	561	733	804	2900	472	1120	944	798	786	248	248	299
3	561	750	851	2610	429	1000	917	1250	733	237	248	298
4	551	793	895	2250	413	922	946	1550	746	242	247	289
5	539	899	900	2250	406	860	931	1540	842	216	248	283
6	521	1050	2910	2170	404	814	929	1530	887	221	245	309
7	548	1030	5160	2060	399	777	934	1210	903	229	241	315
8	567	958	5210	1930	395	751	1440	958	866	227	238	319
9	574	952	3690	1760	468	725	1300	1030	721	228	230	315
10	589	1130	4740	1650	482	709	1460	1120	688	229	221	310
11	586	1550	4560	1580	453	690	1590	1470	625	224	222	317
12	570	1880	3360	1460	506	676	1510	1830	594	219	224	313
13	578	2330	6250	1350	2240	1070	1410	1620	545	216	227	312
14	573	2030	8360	1240	1740	2020	1250	1590	532	219	225	321
15	577	1640	7270	1160	1480	2380	1210	1390	520	236	224	336
16	571	1090	6580	1100	1760	2940	1170	1160	505	236	226	332
17	563	2990	6210	1050	1440	3350	1170	1030	495	230	225	331
18	568	2180	3690	950	1230	2730	1260	968	488	234	223	337
19	567	1730	2940	927	1200	2060	1320	730	463	230	222	339
20	566	2360	2590	880	1310	1960	1280	711	442	225	215	400
21	561	1880	2210	877	1460	1940	1190	793	440	226	232	390
22	568	1360	1970	860	1640	1950	992	994	415	238	236	383
23	596	1190	1720	816	1570	1700	961	1040	371	238	233	383
24	591	2360	1840	786	2390	1530	940	1070	358	238	242	381
25	576	2720	2220	779	2650	1390	914	1040	347	240	253	383
26	573	2100	2590	760	2230	1430	791	917	336	226	256	379
27	581	1670	2450	744	1650	1600	643	972	304	238	253	379
28	575	1340	2180	645	1330	1390	629	987	275	243	250	379
29	568	1070	2170	621	1140	1240	609	1040	274	246	254	375
30	572	949	4210	612	---	1080	628	1130	268	238	262	368
31	597	---	4090	566	---	1060	---	1100	---	236	301	---
TOTAL	17654	45332	105519	42493	33804	45014	32318	35205	16711	7206	7422	10180
MEAN	569	1511	3404	1371	1166	1452	1077	1136	557	232	239	339
MAX	597	2990	8360	3150	2650	3350	1590	1830	942	253	301	400
MIN	521	618	804	566	395	676	609	637	268	216	215	283
AC-FT	35020	89920	209300	84280	67050	89290	64100	69830	33150	14290	14720	20190
CAL YR 1983	TOTAL	624324	MEAN	1710	MAX	16200	MIN	186	AC-FT	1238000		
WTR YR 1984	TOTAL	398858	MEAN	1090	MAX	8360	MIN	215	AC-FT	791100		

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, 25.5°C July 17; minimum recorded, 3.0°C Jan. 18, may have been lower during period of missing record in December.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	14.0	12.0	9.5	7.0	6.0	---	---	6.0	4.5	9.0	7.5
2	17.0	14.5	11.0	10.5	7.5	6.5	---	---	6.0	4.5	8.5	6.0
3	17.0	14.0	12.0	11.0	6.5	5.5	---	---	5.5	4.0	8.0	5.5
4	17.5	14.5	12.5	11.0	6.0	5.0	7.0	---	6.5	4.0	9.0	5.5
5	16.5	14.5	12.0	11.0	5.5	5.0	7.0	6.0	6.5	4.5	9.5	6.0
6	16.5	14.0	12.0	11.0	7.5	5.5	6.5	6.0	7.5	5.0	10.0	6.5
7	15.5	13.5	11.0	9.5	---	---	7.0	6.0	7.0	5.0	10.5	7.5
8	16.0	14.0	10.0	9.0	---	---	7.0	6.5	7.5	6.0	10.5	7.5
9	16.0	15.0	11.0	10.0	---	---	7.0	6.5	7.5	6.0	11.0	8.0
10	17.0	15.0	11.0	10.5	---	---	7.5	6.0	7.0	5.0	11.5	9.0
11	16.0	14.5	11.0	10.0	---	---	7.5	6.5	6.5	5.5	9.0	7.5
12	---	14.0	10.0	9.0	---	---	6.5	5.5	8.5	6.0	10.5	7.5
13	---	---	9.5	8.5	---	---	6.0	5.0	8.0	6.5	9.5	8.5
14	---	---	9.0	8.0	---	---	5.0	3.5	6.5	6.0	8.5	7.0
15	---	---	10.0	9.0	---	---	5.0	4.5	6.5	6.0	8.0	6.5
16	---	---	10.0	9.5	---	---	5.0	4.0	7.0	5.5	7.0	6.0
17	14.0	---	9.5	8.0	---	---	4.5	3.5	7.0	5.0	8.0	6.0
18	13.5	12.0	8.0	7.0	---	---	4.5	3.0	7.5	5.5	8.0	6.5
19	13.5	11.5	7.5	7.0	---	---	5.0	4.0	7.5	7.0	11.0	7.5
20	13.0	11.5	7.0	6.0	---	---	4.0	3.5	8.0	7.0	10.0	8.0
21	13.5	11.0	7.0	6.0	---	---	5.5	4.0	7.5	6.5	9.0	7.0
22	12.5	12.0	6.0	5.5	---	---	6.5	5.0	7.0	5.0	10.0	6.0
23	13.5	12.0	6.5	5.5	---	---	5.5	5.0	6.0	4.5	10.0	7.5
24	12.0	10.5	7.5	6.5	---	---	7.0	5.0	6.0	5.0	10.0	7.0
25	11.0	10.0	7.0	6.0	---	---	8.0	6.5	7.5	5.5	8.5	7.0
26	12.0	9.0	7.0	6.0	---	---	6.5	5.0	7.5	4.5	10.0	7.5
27	11.5	10.0	7.0	6.0	---	---	5.5	4.5	7.5	5.5	10.5	6.5
28	11.5	10.5	7.0	6.0	---	---	5.5	4.5	8.0	6.5	10.5	8.0
29	11.0	10.0	6.0	5.0	---	---	5.5	4.5	8.5	7.0	10.5	7.5
30	12.0	10.5	6.0	5.5	---	---	5.5	4.5	---	---	9.5	6.5
31	12.0	11.5	---	---	---	---	5.5	4.0	---	---	8.5	7.5
MONTH	---	---	12.5	5.0	---	---	---	---	8.5	4.0	11.5	5.5

ROGUE RIVER BASIN

433

14369600 APPLEGATE RIVER NEAR WILDERVILLE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 mi².

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1974 to current year.

INSTRUMENTATION.--Temperature recorder February 1974 to January 1983; water-quality monitor since February 1983.

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 June 28, July 16, 17; minimum, 4.0°C Jan. 18.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

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14370400 ROGUE RIVER NEAR MERLIN, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	7.5	11.5	10.5	15.5	---	19.5	15.0	19.5	17.0	18.0	15.0
2	9.5	8.0	11.5	10.0	17.0	13.0	20.0	16.0	18.5	16.0	18.5	15.0
3	9.5	8.5	12.0	10.0	16.0	13.5	20.5	16.5	19.0	15.5	18.5	15.5
4	9.0	8.0	12.0	11.0	15.0	13.0	20.5	17.0	19.0	15.5	18.5	16.0
5	9.0	8.0	11.5	10.0	13.5	11.5	20.5	17.0	19.0	16.0	17.0	15.0
6	10.0	8.5	11.5	10.5	11.5	10.5	20.0	17.0	19.5	16.0	17.0	15.0
7	10.0	8.5	12.5	10.5	12.0	10.5	20.0	16.5	19.0	15.5	18.0	15.0
8	9.5	8.5	14.0	11.0	12.0	11.5	19.5	16.0	19.5	15.5	18.0	15.5
9	9.0	7.5	14.0	12.0	13.0	11.5	20.0	16.5	19.5	16.0	18.0	16.0
10	8.5	7.5	13.5	12.0	14.0	12.0	20.5	16.5	19.5	16.0	17.5	16.0
11	8.5	7.5	13.0	12.0	16.0	12.5	20.5	17.0	19.0	16.0	16.5	15.0
12	9.5	8.0	13.0	11.5	17.0	13.5	20.0	17.0	18.0	15.0	16.0	14.5
13	10.0	9.0	13.5	12.5	17.5	14.0	20.0	17.0	17.5	14.5	16.0	13.5
14	11.5	9.5	13.0	11.5	18.5	14.5	20.5	17.0	17.5	14.0	15.5	14.0
15	12.0	10.5	12.0	11.0	19.0	15.0	21.0	17.5	18.0	14.5	15.5	14.0
16	11.5	9.5	12.5	11.0	18.5	15.0	21.5	18.0	18.0	14.5	16.0	13.5
17	10.5	9.5	14.0	11.5	18.0	14.5	21.5	18.5	19.0	15.5	16.5	14.5
18	11.0	9.5	14.5	12.5	18.0	14.0	21.0	18.5	18.5	16.0	16.0	14.5
19	10.0	9.0	---	---	18.0	14.5	20.5	17.5	18.0	15.5	16.5	14.5
20	10.5	9.0	---	---	16.5	14.5	20.0	17.0	18.5	15.0	15.5	14.0
21	10.5	9.0	---	---	16.5	13.5	20.0	17.0	18.5	15.5	15.0	13.0
22	11.5	9.0	---	---	18.0	14.0	20.0	16.5	18.5	16.0	14.0	13.0
23	13.0	10.5	---	---	19.5	14.5	20.5	17.0	18.5	16.0	14.0	12.0
24	12.5	10.5	---	---	20.0	16.0	20.5	17.0	18.0	16.0	13.5	11.0
25	11.5	9.5	---	---	21.0	17.0	20.5	17.0	18.5	16.0	13.0	11.0
26	11.0	9.0	16.5	13.0	20.0	17.0	20.5	17.0	18.5	15.5	13.0	10.5
27	12.0	9.0	17.0	13.5	21.0	17.0	20.0	16.5	18.5	16.0	13.0	10.5
28	12.5	10.0	---	---	21.5	17.5	20.0	17.0	19.0	16.5	13.5	11.0
29	13.5	10.5	---	---	20.0	17.0	20.0	16.5	18.5	16.5	14.0	11.5
30	12.0	11.0	---	---	19.0	16.0	20.0	16.5	18.0	16.5	13.5	12.0
31	---	---	---	---	---	---	20.5	16.5	17.0	15.0	---	---
MONTH	13.5	7.5	---	---	21.5	---	21.5	15.0	19.5	14.0	18.5	10.5

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 mi² 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 except those for period of no gage-height record Aug. 3 to Sept. 16, which are poor. 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.--39 years (water years 1946-84), 60.1 ft³/s, 36.93 in/yr, 43,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft³/s Dec. 22, 1964, gage height, 11.20 ft, from rating curve extended above 1,200 ft³/s on basis of slope-area measurement at gage height 9.66 ft; minimum, 0.12 ft³/s July 15, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1000	1,090	4.94	Dec. 15	0230	885	4.51
Dec. 6	2300	982	4.72	Feb. 13	0900	*1,970	*6.52

Minimum, 0.80 ft³/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1.4	7.8	128	181	33	192	79	110	12	7.0	2.4	2.0		
2	1.3	7.9	149	138	30	207	78	119	11	6.6	2.4	1.4		
3	1.2	16	136	114	28	147	72	102	11	6.2	2.4	1.3		
4	1.2	26	106	108	27	122	69	87	14	6.4	2.2	1.2		
5	1.3	13	91	100	25	112	65	73	14	6.0	2.1	1.3		
6	1.2	50	363	87	24	106	59	62	24	5.3	2.0	1.5		
7	1.2	30	739	78	23	103	57	52	34	4.6	1.9	1.4		
8	1.1	17	423	69	22	100	123	47	30	4.0	1.7	1.3		
9	1.2	17	301	61	29	93	122	44	27	3.6	1.7	1.2		
10	1.9	76	329	59	28	86	200	40	25	3.3	1.6	1.3		
11	1.9	107	271	57	29	77	174	49	22	3.1	1.6	1.2		
12	1.7	114	211	52	156	69	137	43	20	3.2	1.6	1.2		
13	1.6	144	455	48	1130	149	115	39	14	3.0	1.6	1.2		
14	1.4	84	798	45	335	213	100	38	13	2.6	1.5	1.2		
15	1.7	69	708	40	212	187	88	37	14	2.6	1.4	1.3		
16	1.7	254	365	38	176	221	77	35	14	2.6	1.5	1.2		
17	2.0	364	255	36	127	214	66	30	13	2.6	1.5	1.1		
18	1.8	145	186	34	102	167	62	28	13	2.5	1.5	.97		
19	1.9	129	168	32	104	154	60	26	12	2.6	1.4	.89		
20	1.9	152	143	30	150	159	57	25	12	2.5	1.4	2.0		
21	1.9	90	116	31	179	140	52	23	13	2.5	1.3	1.7		
22	2.3	58	94	32	136	112	48	22	11	2.6	1.2	1.4		
23	3.9	102	80	32	108	96	45	22	9.7	2.4	1.2	1.6		
24	3.1	635	90	37	102	83	44	19	8.2	2.2	1.3	1.5		
25	2.6	309	154	46	94	80	45	18	8.4	2.3	1.3	1.6		
26	2.3	182	221	51	86	162	47	18	8.0	2.4	1.2	1.6		
27	2.1	131	167	48	82	170	51	17	7.8	2.4	1.1	1.6		
28	2.0	109	130	44	89	129	54	16	7.7	2.3	1.1	1.5		
29	2.0	93	146	42	102	103	53	14	7.5	2.3	1.1	1.4		
30	2.7	84	467	39	---	85	61	13	7.3	2.4	1.2	1.4		
31	5.0	---	262	36	---	79	---	13	---	2.2	1.9	---		
TOTAL	60.5	3615.7	8252	1845	3768	4117	2360	1281	437.6	106.3	49.3	41.46		
MEAN	1.95	121	266	59.5	130	133	78.7	41.3	14.6	3.43	1.59	1.38		
MAX	5.0	635	798	181	1130	221	200	119	34	7.0	2.4	2.0		
MIN	1.1	7.8	80	30	22	69	44	13	7.3	2.2	1.1	.89		
CFSM	.09	5.48	12.0	2.69	5.88	6.02	3.56	1.87	.66	.16	.07	.06		
IN.	.10	6.09	13.89	3.11	6.34	6.93	3.97	2.16	.74	.18	.08	.07		
AC-FT	120	7170	16370	3660	7470	8170	4680	2540	868	211	98	82		
CAL YR 1983	TOTAL	34301.9	MEAN	94.0	MAX	1660	MIN	1.1	CFSM	4.25	IN.	57.74	AC-FT	68040
WTR YR 1984	TOTAL	25933.86	MEAN	70.9	MAX	1130	MIN	.89	CFSM	3.21	IN.	43.65	AC-FT	51440

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 mi².

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, 23.0°C July 15, 17; minimum recorded, 4.0°C Dec. 24, may have been lower during period of missing record in January.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

ROGUE RIVER BASIN

14372250 ROGUE RIVER AT MARIAL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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 Shesta Costa Creek, 1.5 mi north of Agness, 2.6 mi upstream from Illinois River, and at mile 29.7.

DRAINAGE AREA.—3,939 mi².

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. Flow regulated since February 1977 by Lost Creek Lake (see sta 14335040), since December 1980 by Applegate Lake (see sta 14361900), slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation and mining.

AVERAGE DISCHARGE.—24 years, 6,389 ft³/s, 4,629,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 290,000 ft³/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 ft³/s July 9, 10, 1968

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 52,000 ft³/s Dec. 15, gage height, 16.76 ft; minimum, 2,070 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2890	3240	6960	18400	4700	11200	11400	7030	6440	3760	3550	3660
2	2910	3410	8450	15400	4500	11900	10500	8780	5510	3370	3650	3510
3	2850	3720	8160	13500	4280	11000	9690	9750	5080	3410	3660	3430
4	2820	4120	9130	12200	3870	9880	9580	10400	5140	3450	3630	3400
5	2790	4030	8260	11500	3640	9090	9640	10400	6280	3430	3630	3330
6	2780	4910	17700	11100	3570	7700	9070	9910	7960	3390	3660	3320
7	2710	5510	41500	10500	3470	6960	8460	9440	8170	3370	3600	3320
8	2750	4890	33900	10000	3260	6580	10300	7680	9970	3390	3560	3220
9	2790	4700	24300	9520	3630	6300	12200	6860	8650	3410	3510	3220
10	2910	7270	25500	9230	4430	6170	13300	6960	7100	3390	3490	3170
11	2920	10700	23300	8900	4600	6560	15500	7250	6460	3380	3420	3120
12	2890	8620	26100	8540	7630	6460	13400	8800	5920	3340	3440	2950
13	2850	13200	28600	7950	33500	8300	12000	9070	5330	3350	3500	3020
14	2830	14100	50100	7350	35300	15100	11000	8780	5250	3350	3530	2930
15	2800	9730	46800	7020	19500	16100	10100	8650	5100	3380	3490	2800
16	2800	8270	36800	6780	22600	20300	9550	8250	4900	3380	3400	2800
17	2810	15600	29000	6180	17700	24700	9230	7930	4880	3350	3240	2680
18	2940	16800	24000	5600	14000	20400	9120	7230	4840	3290	3270	2550
19	2850	12400	19700	5370	12100	16300	9230	5600	4790	3320	3270	2470
20	2850	16000	18900	5130	11700	14400	9420	4790	4700	3380	3350	2510
21	2830	14300	17000	5100	15200	14400	9310	4710	4580	3430	3260	2730
22	2830	10700	15600	5200	15600	13500	8800	4690	4570	3510	3110	2640
23	2940	9890	14600	5280	12600	12500	7910	5120	4320	3560	3100	2410
24	3030	19800	13400	5260	14000	11200	6790	6700	3950	3530	3120	2380
25	2940	23800	15400	5790	22100	10200	6350	7100	3670	3550	3130	2340
26	2870	15700	19500	6300	17100	12100	6100	6210	3510	3560	3150	2130
27	2870	11600	17700	6120	13800	17000	5850	5790	3430	3520	3150	2110
28	2860	9570	15500	5720	12200	14200	5560	5740	3320	3540	3090	2110
29	2850	8330	14600	5240	11400	12800	5510	5650	3390	3580	3100	2100
30	2950	7250	25600	5070	---	11500	5560	6350	3700	3610	3090	2110
31	3050	---	24400	4890	---	10400	---	6700	---	3560	3340	---
TOTAL	88760	302160	680460	250140	352180	375200	280430	228320	160910	106840	104490	84470
MEAN	2863	10070	21950	8069	12140	12100	9348	7365	5364	3446	3371	2816
MAX	3050	23800	50100	18400	35500	24700	15500	10400	9970	3760	3660	3660
MIN	2710	3240	6960	4890	3260	6170	5510	4690	3320	3290	3090	2100
AC-FT	176100	599300	1350000	496200	698500	744200	556200	452900	319200	211900	207300	167500
CAL YR 1983	TOTAL	3877940	MEAN	10620	MAX	148000	MIN	2430	AC-FT	7692000		
WTR YR 1984	TOTAL	3014360	MEAN	8236	MAX	50100	MIN	2100	AC-FT	5979000		

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, 23.0°C July 17, 18; minimum, 4.0°C Dec. 23, 24, Jan. 18, 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	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)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	
OCT 26...	1000	3060	99	7.9	12.0	--	64	82	40	13	9.4	
JAN 11...	1030	6500	100	7.7	7.5	12.2	--	100	42	0	10	
MAR 14...	1030	15900	89	7.5	9.5	11.7	400	K3900	39	0	8.7	
MAY 08...	1130	7600	86	7.7	12.5	11.1	K5	27	35	0	8.4	
JUL 11...	0930	3370	78	7.8	19.5	8.9	K4	1700	30	0	7.2	
SEP 05...	0845	3300	89	7.6	18.5	8.9	--	--	34	0	8.4	
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 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 26...	3.9	4.5	1.2	45	2.9	2.6	<.10	.010	.10	.70	.15	
JAN 11...	4.2	4.0	1.0	44	4.2	2.0	<.10	.060	.15	<.20	.06	
MAR 14...	4.1	3.7	.80	43	3.7	1.7	<.10	.060	<.10	.30	.06	
MAY 08...	3.5	3.6	.80	43	2.8	1.3	<.10	<.010	<.10	.30	.09	
JUL 11...	2.8	3.7	1.0	38	3.0	1.5	<.10	.010	<.10	.30	.18	
SEP 05...	3.2	4.4	1.4	41	3.0	1.8	.10	<.010	.12	<.20	.18.	

ROGUE RIVER BASIN

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14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 26...	.100	.050	21	71	62	587	1.2	--	--	--
JAN 11...	.030	.060	21	67	73	1180	6.0	13	228	68
MAR 14...	.010	.070	18	68	67	2920	20	94	4040	53
MAY 08...	.040	.060	20	70	66	1440	3.2	9	185	76
JUL 11...	.030	.040	21	61	63	555	2.5	6	55	86
SEP 05...	.040	.730	25	70	72	624	2.4	--	--	--

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 26...	20	<1	16	<.5	<1	<1	<3	4	27	1
MAR 14...	80	<1	18	1.2	<1	<1	<3	1	100	<1
MAY 08...	60	<1	16	1.1	1	1	<3	2	57	<1
SEP 05...	30	<1	18	<.5	<1	1	<3	2	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 26...	9	3	<.1	<10	2	<1	<1	68	<6	9
MAR 14...	<4	3	<.1	<10	2	<1	<1	60	<6	15
MAY 08...	5	2	<.1	<10	<1	<1	<1	59	<6	7
SEP 05...	<4	2	.1	<10	2	<1	<1	64	<6	13

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 1983 TO SEPTEMBER 1984

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

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 mi².

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.--43 years (water years 1942-84), 181 ft³/s, 58.11 in./yr, 131,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s Dec. 22, 1964, gage height, 14.90 ft, present site and datum, from floodmark, from rating curve extended above 4,400 ft³/s on basis of slope-area measurement of peak flow; minimum, 4.6 ft³/s Nov. 3, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 13	0930	*2,990	*7.49	No other peak greater than base discharge.			
Minimum, 10 ft ³ /s Sept. 28-30.							

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	16	113	169	448	69	258	163	252	78	32	16	13		
2	15	65	188	344	66	286	146	327	73	31	17	13		
3	15	117	191	306	63	228	136	439	69	30	17	12		
4	15	285	167	305	61	194	140	365	86	29	16	12		
5	15	116	212	288	60	182	136	269	85	28	16	12		
6	14	365	1220	254	58	186	128	209	125	27	16	13		
7	14	211	1600	227	57	191	136	178	175	26	15	13		
8	14	124	953	199	56	200	348	182	119	26	15	12		
9	15	204	1190	170	80	203	292	188	96	25	14	12		
10	19	1020	1310	173	79	204	441	165	83	25	14	12		
11	16	874	743	163	142	195	373	417	76	24	14	12		
12	15	720	547	144	391	175	424	357	71	24	14	12		
13	15	730	1420	131	1760	575	392	293	68	23	14	12		
14	15	427	1860	118	756	808	396	245	66	23	14	12		
15	15	347	1290	111	589	721	414	190	63	22	14	12		
16	15	726	771	102	584	735	343	159	60	21	14	11		
17	14	1360	554	95	398	586	283	144	55	21	14	11		
18	14	730	414	89	305	438	262	138	52	20	13	11		
19	14	942	338	84	282	458	245	142	49	20	13	11		
20	14	879	284	80	351	589	227	145	49	19	13	11		
21	14	485	235	91	389	606	208	132	47	19	13	11		
22	15	320	197	91	311	455	197	118	44	20	13	11		
23	21	370	174	90	249	373	192	129	42	19	13	11		
24	17	1310	293	96	290	333	179	116	41	19	13	11		
25	15	748	653	99	297	297	158	108	40	19	13	11		
26	14	435	739	94	241	387	141	119	38	19	13	11		
27	14	314	488	88	207	362	127	107	37	18	12	11		
28	14	255	375	83	204	297	116	115	36	18	12	11		
29	14	216	580	80	199	245	110	124	35	18	12	10		
30	22	188	1430	76	---	208	128	113	33	17	13	11		
31	65	---	680	72	---	185	---	93	---	16	13	---		
TOTAL	524	14996	21265	4791	8594	11160	6981	6078	1991	698	433	348		
MEAN	16.9	500	686	155	296	360	233	196	66.4	22.5	14.0	11.6		
MAX	65	1360	1860	448	1760	808	441	439	175	32	17	13		
MIN	14	65	167	72	56	175	110	93	33	16	12	10		
CFSM	.40	11.8	16.2	3.66	7.00	8.51	5.51	4.63	1.57	.53	.33	.27		
IN.	.46	13.19	18.70	4.21	7.56	9.81	6.14	5.35	1.75	.61	.38	.31		
AC-FT	1040	29740	42180	9500	17050	22140	13850	12060	3950	1380	859	690		
CAL YR 1983	TOTAL	111164	MEAN	305	MAX	4050	MIN	14	CFSM	7.21	IN.	97.76	AC-FT	220500
WTR YR 1984	TOTAL	77859	MEAN	213	MAX	1860	MIN	10	CFSM	5.04	IN.	68.47	AC-FT	154400

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 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,713.92 ft above 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 upstream from station. Return flow from these diversions enters creek upstream from station.

AVERAGE DISCHARGE.--19 years, 251 ft³/s, 40.63 in/yr, 181,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,550 ft³/s Jan. 15, 1974, gage height, 8.20 ft; minimum, 12 ft³/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 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2200	2,150	4.91	Dec. 30	0400	1,560	4.42
Dec. 9	2200	2,240	4.98	Feb. 13	1100	2,150	4.91
Dec. 14	0930	*3,540	*5.82				

Minimum, 24 ft³/s Sept. 17, 18, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	43	142	266	780	181	437	403	322	232	111	55	41		
2	42	90	271	638	174	452	378	334	222	107	59	36		
3	41	102	265	588	169	407	361	387	215	104	60	34		
4	41	156	242	577	165	375	362	375	233	102	59	31		
5	40	97	262	555	163	361	343	347	227	99	57	32		
6	39	233	860	526	159	357	320	327	268	97	56	38		
7	37	152	1430	496	155	357	317	316	282	94	53	34		
8	38	110	1020	460	155	360	467	326	239	92	52	33		
9	43	138	1210	418	182	360	429	324	219	91	51	31		
10	56	545	1370	408	173	364	495	311	209	89	51	30		
11	44	454	913	379	195	357	489	459	202	86	49	31		
12	41	403	716	349	286	339	506	436	195	84	47	31		
13	40	443	1660	326	1300	647	492	413	192	81	47	30		
14	40	339	3070	310	843	795	501	389	187	79	47	30		
15	40	280	2440	297	631	754	511	348	185	76	46	31		
16	40	502	1500	280	610	788	497	322	179	71	44	28		
17	40	961	1080	265	508	794	472	312	168	69	44	27		
18	38	600	893	252	448	719	463	307	161	69	44	26		
19	38	698	766	241	426	718	449	311	156	67	44	29		
20	37	734	635	232	465	825	426	312	161	66	41	39		
21	37	502	549	229	501	821	405	293	157	68	39	33		
22	41	385	484	221	456	708	391	279	145	66	39	30		
23	58	399	441	213	420	634	379	295	139	63	39	30		
24	46	938	496	218	453	577	362	274	136	64	40	29		
25	41	765	608	217	471	543	339	265	133	63	40	30		
26	40	519	707	212	431	609	319	272	128	62	38	28		
27	38	420	623	204	403	570	302	263	126	61	36	26		
28	37	363	553	199	391	520	284	293	122	64	35	26		
29	37	320	602	195	385	483	271	321	119	65	36	25		
30	52	288	1280	190	---	447	289	296	115	59	39	27		
31	111	---	939	186	---	430	---	258	---	54	48	---		
TOTAL	1356	12078	28151	10661	11299	16908	12022	10087	5452	2423	1435	926		
MEAN	43.7	403	908	344	390	545	401	325	182	78.2	46.3	30.9		
MAX	111	961	3070	780	1300	825	511	459	282	111	60	41		
MIN	37	90	242	186	155	339	271	258	115	54	35	25		
CFSM	.52	4.80	10.8	4.10	4.65	6.50	4.78	3.87	2.17	.93	.55	.37		
IN.	.60	5.36	12.48	4.73	5.01	7.50	5.33	4.47	2.42	1.07	.64	.41		
AC-FT	2690	23960	55840	21150	22410	33540	23850	20010	10810	4810	2850	1840		
CAL YR 1983	TOTAL	160232	MEAN	439	MAX	4540	MIN	37	CFSM	5.23	IN.	71.04	AC-FT	317800
WTR YR 1984	TOTAL	112798	MEAN	308	MAX	3070	MIN	25	CFSM	3.67	IN.	50.01	AC-FT	223700

ROGUE RIVER BASIN

445

14375500 WEST FORK ILLINOIS RIVER BELOW ROCK CREEK, NEAR O'BRIEN, OR

LOCATION.—Lat 42°02'20", long 123°44'50", in SW¼ 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 mi².

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 above National Geodetic Vertical Datum of 1929.

REMARKS.—Records good. Three small diversions from Elk Creek for irrigation upstream from station.

AVERAGE DISCHARGE.—30 years, 221 ft³/s, 70.78 in/yr, 160,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,100 ft³/s Dec. 22, 1964, gage height, 16.05 ft, from rating curve extended above 6,200 ft³/s, on basis of slope-area measurement at gage height 14.79 ft; minimum, 1.5 ft³/s Sept. 2-4, 1974.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2000	*3,840	*9.60	Dec. 30	0100	3,070	8.90
Dec. 13	0600	2,700	8.53	Feb. 13	0800	3,990	9.38

Minimum, 5.4 ft³/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	11	131	194	494	82	375	143	308	49	24	10	7.4		
2	11	84	177	364	78	342	131	428	47	23	10	7.5		
3	11	207	178	287	74	260	121	507	46	22	10	7.2		
4	11	425	166	239	70	217	121	350	61	21	10	7.0		
5	11	188	351	207	67	192	113	247	66	20	9.6	6.5		
6	11	851	2710	183	64	172	107	194	170	19	9.4	7.6		
7	11	345	2030	165	62	157	143	161	218	19	9.2	7.6		
8	11	209	1170	151	60	144	583	141	137	18	9.3	7.3		
9	11	344	1200	140	110	133	452	127	107	18	8.8	7.1		
10	17	1230	1380	159	190	127	805	117	91	17	8.5	6.6		
11	14	1210	850	182	474	120	556	327	80	17	7.2	6.9		
12	13	956	859	165	1290	117	498	296	71	17	7.5	7.2		
13	12	1290	2120	150	2570	566	403	218	63	16	7.6	6.8		
14	12	839	2040	138	988	1290	298	178	58	15	7.9	6.7		
15	12	531	1310	131	1120	1230	237	155	53	14	7.6	7.2		
16	13	879	784	120	1110	1400	201	137	49	14	7.3	7.1		
17	13	1540	575	112	666	1180	175	121	46	13	7.8	6.5		
18	12	1060	440	107	466	739	185	110	43	13	8.0	5.6		
19	12	1180	347	103	392	563	252	101	41	12	7.4	6.0		
20	12	1160	284	102	394	530	310	94	41	12	6.9	6.3		
21	12	656	239	168	460	645	258	87	41	12	6.9	6.3		
22	12	437	205	180	377	510	213	84	38	13	7.2	6.5		
23	15	670	183	172	301	380	181	82	35	12	7.3	6.3		
24	14	1820	271	153	618	295	158	75	33	12	6.9	6.2		
25	13	1030	632	137	690	247	141	72	31	12	7.2	6.2		
26	13	581	763	124	447	340	128	69	30	12	6.8	6.3		
27	12	403	495	112	339	284	116	63	29	12	6.7	6.3		
28	12	315	400	105	299	229	108	60	27	12	6.7	6.3		
29	12	260	1080	99	280	195	100	56	27	11	6.9	6.2		
30	18	223	1840	92	---	171	101	54	26	11	6.8	6.5		
31	54	---	759	87	---	158	---	51	---	10	7.5	---		
TOTAL	428	21054	26032	5128	14138	13308	7338	5070	1854	473	246.9	201.2		
MEAN	13.8	702	840	165	488	429	245	164	61.8	15.3	7.96	6.71		
MAX	54	1820	2710	494	2570	1400	805	507	218	24	10	7.6		
MIN	11	84	166	87	60	117	100	51	26	10	6.7	5.6		
CFSM	.33	16.6	19.8	3.89	11.5	10.1	5.78	3.87	1.46	.36	.19	.16		
IN.	.38	18.47	22.84	4.50	12.40	11.68	6.44	4.45	1.63	.41	.22	.18		
AC-FT	849	41760	51630	10170	28040	26400	14550	10060	3680	938	490	399		
CAL YR 1983	TOTAL	128954.9	MEAN	353	MAX	3390	MIN	7.2	CFSM	8.33	IN.	113.14	AC-FT	255800
WTR YR 1984	TOTAL	95271.1	MEAN	260	MAX	2710	MIN	5.6	CFSM	6.13	IN.	83.59	AC-FT	189000

ROGUE RIVER BASIN

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 mi².

PERIOD OF RECORD.—October 1961 to current year.

GAGE.—Water-stage recorder. Datum of gage is 1,198.8 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.—23 years, 1,360 ft³/s, 48.60 in/yr, 985,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 92,200 ft³/s Dec. 22, 1964, gage height, 45.28 ft, from floodmark, site and datum then in use, from rating curve extended above 30,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 14 ft³/s Aug. 11, 13, 14, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base of 11,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1330	11,400	16.87	Dec. 14	1130	12,700	17.79
Dec. 6	2400	16,400	20.25	Dec. 30	0500	14,600	19.08
Dec. 10	0130	11,000	16.55	Feb. 13	1230	*17,500	*20.94

Minimum, 47 ft³/s Aug. 11, Sept. 8, 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	508	1500	3910	666	2460	1430	1650	506	158	58	62
2	106	581	1440	3110	637	2580	1310	2400	471	144	58	59
3	114	715	1410	2640	614	2140	1220	2600	452	133	59	56
4	108	2020	1310	2390	594	1850	1220	2230	476	125	62	53
5	106	1040	1660	2210	579	1680	1170	1760	520	118	68	49
6	106	3100	9330	2020	565	1580	1110	1470	729	118	64	49
7	108	1930	11600	1850	549	1510	1110	1280	1400	116	61	49
8	103	1120	7550	1700	536	1460	3070	1190	955	110	58	49
9	103	1320	6580	1540	934	1410	2640	1150	750	107	57	49
10	119	4710	8500	1570	1270	1390	3850	1060	644	105	55	49
11	128	6160	6080	1680	1650	1360	3420	1870	575	102	48	53
12	120	4610	5000	1510	5170	1300	3060	2130	528	99	58	49
13	113	6310	10200	1340	13000	3230	2730	1730	495	97	62	51
14	111	4560	11200	1240	6540	6980	2390	1510	462	89	61	51
15	109	3100	8630	1190	6110	6370	2250	1310	428	86	57	51
16	109	4320	5920	1100	6750	7640	2050	1150	406	87	58	55
17	109	7940	4540	1030	4340	7170	1840	1050	379	86	57	56
18	108	5710	3570	966	3230	4830	1770	973	357	83	58	57
19	108	5600	2990	913	2760	3930	1950	928	341	78	61	58
20	105	6240	2560	872	2770	3940	2010	903	323	76	63	55
21	105	3880	2240	1070	3210	4340	1860	855	327	70	60	56
22	110	2810	1950	1160	2710	3560	1700	775	294	67	58	70
23	123	3130	1740	1130	2330	2950	1550	787	274	66	57	56
24	130	8500	2350	1060	3270	2560	1420	742	252	65	64	55
25	123	6080	4010	999	3840	2280	1280	691	227	66	69	58
26	117	3730	5110	928	2880	2520	1180	690	210	64	66	56
27	112	2780	3720	861	2420	2460	1090	658	197	60	65	54
28	109	2260	3030	809	2210	2110	1010	645	186	61	64	52
29	108	1920	4870	770	2110	1870	940	674	181	62	61	52
30	121	1680	10700	736	---	1680	966	633	184	63	60	55
31	209	---	5640	700	---	1550	---	556	---	61	62	---
TOTAL	3562	108364	156930	45004	84244	92690	54596	38050	13529	2822	1869	1624
MEAN	115	3612	5062	1452	2905	2990	1820	1227	451	91.0	60.3	54.1
MAX	209	8500	11600	3910	13000	7640	3850	2600	1400	158	69	70
MIN	102	508	1310	700	536	1300	940	556	181	60	48	49
CFSM	.30	9.51	13.3	3.82	7.64	7.87	4.79	3.23	1.19	.24	.16	.14
IN.	.35	10.61	15.36	4.41	8.25	9.07	5.34	3.72	1.32	.28	.18	.16
AC-FT	7070	214900	311300	89270	167100	183900	108300	75470	26830	5600	3710	3220
CAL YR 1983	TOTAL	839343	MEAN	2300	MAX	19100	MIN	58	CFSM	6.05	IN.	82.17
WTR YR 1984	TOTAL	603284	MEAN	1648	MAX	13000	MIN	48	CFSM	4.34	IN.	59.06
											AC-FT	1665000
											AC-FT	1197000

CHETCO RIVER BASIN

447

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 mi².

PERIOD OF RECORD.—October 1969 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 50 ft, from topographic map.

REMARKS.—Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.—15 years, 2,423 ft³/s, 121.42 in/yr, 1,755,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 65,800 ft³/s Jan. 16, 1971, gage height, 27.45 ft; minimum, 45 ft³/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 ft³/s, from rating curve extended above 45,000 ft³/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 20,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 10	2030	22,100	14.12	Dec. 14	1200	20,600	13.53
Nov. 17	0600	21,000	13.68	Dec. 30	0400	23,300	14.57
Nov. 24	1200	21,400	13.86	Feb. 13	0800	*44,600	*21.09
Dec. 6	1630	28,900	16.53				

Minimum, 64 ft³/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	149	1020	2060	5910	1230	4990	1940	4130	625	401	145	91		
2	148	1360	1870	4330	1180	4980	1780	5900	597	382	144	89		
3	147	4130	1660	3410	1140	4170	1630	6060	572	362	142	85		
4	144	5990	1500	2820	1110	3670	1540	4690	800	344	139	82		
5	141	2700	2360	2430	1080	3340	1440	3520	966	328	135	82		
6	141	7950	18600	2150	1100	3030	1350	2830	3200	313	132	95		
7	137	4540	20800	1960	1040	2770	1890	2380	4100	298	130	95		
8	135	2780	14100	1810	1080	2600	5150	2050	2440	287	125	90		
9	145	2840	11100	1650	1840	2510	4120	1820	1850	281	121	85		
10	210	10900	13000	1890	2140	2460	7750	1640	1550	272	118	82		
11	192	14800	9520	2140	3490	2440	5810	3030	1350	266	116	79		
12	159	9450	7960	1910	15200	2450	5180	3110	1200	259	117	77		
13	148	10200	15900	1730	34000	5580	4340	2460	1090	247	115	77		
14	142	8210	18200	1610	14600	11500	3570	2110	999	236	112	76		
15	137	6070	14100	1640	11100	12700	3090	1860	921	226	110	76		
16	134	7660	9040	1530	11400	14000	2640	1670	844	220	109	76		
17	135	16100	6240	1450	8280	10400	2300	1510	785	212	109	75		
18	134	10500	4560	1390	6480	7370	2470	1380	735	201	107	74		
19	132	9860	3590	1350	5500	5840	3320	1270	688	193	104	75		
20	130	9390	2990	1320	5740	5350	3430	1210	654	186	100	77		
21	130	6250	2590	1870	6480	5540	3060	1110	627	181	98	74		
22	130	4500	2260	2210	5410	4770	2780	1050	595	177	96	71		
23	141	5370	2040	2240	4700	3960	2500	1030	559	178	96	70		
24	141	17000	4430	2010	6070	3390	2190	926	533	175	96	70		
25	135	10800	8350	1860	7100	3020	1940	881	508	171	95	69		
26	129	6620	8480	1710	5690	3730	1750	909	490	168	94	68		
27	126	4580	5640	1590	4740	3440	1580	841	475	163	92	67		
28	124	3440	4220	1490	4340	2930	1450	787	454	161	90	66		
29	123	2760	8500	1410	4100	2590	1330	740	446	158	87	65		
30	298	2310	17600	1340	---	2320	1330	695	421	153	86	69		
31	555	---	9100	1280	---	2150	---	654	---	147	89	---		
TOTAL	4972	210080	252360	63440	177360	149990	84650	64253	31074	7346	3449	2327		
MEAN	160	7003	8141	2046	6116	4838	2822	2073	1036	237	111	77.6		
MAX	555	17000	20800	5910	34000	14000	7750	6060	4100	401	145	95		
MIN	123	1020	1500	1280	1040	2150	1330	654	421	147	86	65		
CFSM	.59	25.8	30.0	7.55	22.6	17.9	10.4	7.65	3.82	.87	.41	.29		
IN.	.68	28.84	34.64	8.71	24.35	20.59	11.62	8.82	4.27	1.01	.47	.32		
AC-FT	9860	416700	500600	125800	351800	297500	167900	127400	61640	14570	6840	4620		
CAL YR 1983	TOTAL	1260367	MEAN	3453	MAX	35000	MIN	121	CFSM	12.7	IN.	173.01	AC-FT	2500000
WTR YR 1984	TOTAL	1051301	MEAN	2872	MAX	34000	MIN	65	CFSM	10.6	IN.	144.31	AC-FT	2085000

COLUMBIA RIVER BASIN

Discharge at ungaged sites

Monthly records for the following sites have been computed by routing methods described in USGS Circular 550. Circular 550 contains monthly records for these sites for water years 1928-65, including monthly flows adjusted for major upstream storage. Figures given here represent unadjusted flows, and are rated fair. Adjusted records are available from the Oregon office of the U.S. Geological Survey, 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 mi², 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 mi², 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 mi², 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 mi², approximately. Records available, monthly discharge October 1927 to current year.

MONTHLY AND ANNUAL MEAN DISCHARGE IN CUBIC FEET PER SECOND
WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
14144700 COLUMBIA RIVER AT VANCOUVER, WA												
122,200	157,600	206,800	220,700	233,000	244,900	302,000	336,000	372,300	219,100	146,200	124,300	224,000
14222870 COLUMBIA RIVER AT SAINT HELENS, OR												
139,600	232,100	292,100	287,600	300,100	307,800	351,700	385,200	416,300	233,700	156,200	142,300	270,500
14245300 COLUMBIA RIVER AT LONGVIEW, WA												
145,100	265,000	310,400	306,700	315,600	322,200	364,200	399,300	431,900	241,200	160,200	146,300	284,100
14280000 COLUMBIA RIVER AT MOUTH, NEAR ASTORIA, OR												
146,900	280,300	324,700	317,300	326,000	332,000	370,700	404,000	438,300	256,400	162,700	149,000	291,900

453006121533600 LOG CREEK NEAR BULL RUN, OR

LOCATION.—Lat 45°30'06", long 121°53'36", in SE¼NW¼ sec.12, T.1 S., R.7 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, upstream from culvert on Forest Service road S-155 and Bull Run Reservoir Number One.

DRAINAGE AREA.—2.35 mi².

PERIOD OF RECORD.—Biological analyses: July 1977 to July 1978.

REMARKS.—Unpublished periodic chemical data available from the City of Portland Water Quality Laboratory.

BENTHIC INVERTEBRATE DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

COMPOSITE	
DATE	77/09/01
HABITAT (riffle)	
SPECIES DIVERSITY (BRILLOUIN INDEX)	3.39
EQUITABILITY	.61
TOTAL COUNT (NO./SQ.FOOT)	447.
	COUNT PCT
PLATYHELMINTHES	
-TURBELLARIA	2 0.5
ANNELIDA	
-OLIGOCHAETA	3 0.7
ARTHROPODA	
-OSTRACODA	5 1.1
-COPEPODA	
--HARPACTACOIDA	2 0.5
-INSECTA	
--DIPTERA	
---TIPULIDAE	
----ANTOCHA	1 0.2
----HEXATOMA	2 0.5
----DICRANOTA	2 0.5
---PSYCHODIDAE	
----MARAINA	1 0.2
---EMPIDIDAE	1 0.2
---CHELIFERA	1 0.2
---CHIRONOMIDAE (LARVAE)	103 23.0
---CHIRONOMIDAE (PUPAE)	1 0.2
---DIXIDAE	2 0.5
--TRICHOPTERA	
---HYDROPSYCHIDAE	
----CHEUMATOPSYCHE	3 0.7
---RYACOPHILIDAE	
----RHYACOPHILA	14 3.1
---LIMNephilidae	
----APATANIA	1 0.2
----ECCLISOMYIA	2 0.5
----OLIGOPHELIBODES	12 2.7
---GLOSSOSOMATIDAE	
----ANAGAPETUS	4 0.9
--PLECOPTERA	9 2.0
---NEMOURIDAE	
----NEMOURA	18 4.0
---PERLIDAE	
----ACRONEURIA	3 0.7
---PERLODIDAE	
----ISOPERLA	9 2.1
---ARCYNOPTERYX	1 0.2
---CHLOROPERLIDAE	
----HASTAPERLA	14 3.1
--COLEOPTERA	
---ELMIDAE (ADULTS)	1 0.2
---ELMIDAE (LARVAE)	1 0.2
--HYMENOPTERA	
---EULOPHIDAE	1 0.2
--EPHEMEROPTERA	
---EPHEMERELLIDAE	
----DRUNELLA	1 0.2
----SERATELLA	14 3.1
---LEPTOPHLEBIIDAE	
----PARALEPTOPHLEBIA	5 1.1
---BAETIDAE	
----BAETIS	130 29.1
---HEPTAGENIIDAE	
----CINYGMULA	7 1.6
----RHITHROGENA	61 13.6
--ARACHNIDA	
--ACARINA	10 2.2

453006121533600 LOG CREEK NEAR BULL RUN, OR--Continued

PERIPHYTON DATA, WATER YEARS OCTOBER 1977 TO SEPTEMBER 1978

DATE	78/07/13
SPECIES DIVERSITY (BRILLOUIN INDEX)	1.49
EQUITABILITY	.41
TOTAL COUNT (CELLS/SQ. INCH)*1000	6192.
PERIPHYTON SLIDE EXPOSURE (DAYS)	55
	COUNT PCT
CHLOROPHYTA GREEN ALGAE	28 0.4
CHRYSTOPHYTA YELLOW-BROWN ALGAE	
-BACILLARIOPHYCEAE DIATOMS	
--PENNALES PENNATE DIATOMS	57 0.9
---FRAGILARIACEAE	
----DIATOMA HIEMALE MESODON	28 0.4
----FRAGILARIA VAUCHERIAE	57 0.9
----HANNEA ARCUS	85 1.4
----ACHNANTHACEAE	
----ACHNANTHES LANCEOLATA	284 4.6
----ACHNANTHES LINEARIS	85 1.4
----ACHNANTHES MINUTISSIMA	4687 75.9
----COCCONEIS PLANCENTULA ENGLYPTA	114 1.8
---GOMPHONEMACEAE	
----GOMPHONEMA ANGUSTATUM	341 5.5
---CYMBELLACEAE	
----CYMBELLA MINUTA	398 6.4
CYANOPHYTA BLUE-GREEN ALGAE	
-MYXOPHYCEAE	
--CHROOCOCCALES	
---CHROOCOCCACEAE	
----ANACYSTIS SPP.	28 0.4

SANDY RIVER BASIN

451

453042121545200 OTTER CREEK NEAR BULL RUN, OR

LOCATION.--Lat 45°30'42", long 121°54'52", in SE¼SE¼ sec.3, T.1 S., R.7 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, upstream from culvert on Forest Service road S-10 and Bull Run Reservoir Number One.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Biological analyses: July to September 1977

REMARKS.--Unpublished periodic chemical data available from the City of Portland Water Quality Laboratory.

BENTHIC INVERTEBRATE DATA, WATER YEARS OCTOBER 1976 TO SEPTEMBER 1977

DATE	COMPOSITE		COMPOSITE	
	77/07/15		77/09/01	
HABITAT (riffle)				
SPECIES DIVERSITY (BRILLOUIN INDEX)	2.06		1.83	
EQUITABILITY	.45		.39	
TOTAL COUNT	805.		91.	
(NO./SQ.FOOT)				
	COUNT	PCT	COUNT	PCT
ANNELIDA				
-OLIGOCHAETA	8	1.0	3	3.4
ARTHROPODA				
-OSTRACODA				
--PODOCOPA	1	0.1	--	---
-COPEPODA				
--HARPACTACOIDA	1	0.1	--	---
-INSECTA				
--DIPTERA				
---CERATOPOGONIDAE (ADULTS)	1	0.1	1	1.1
---TIPULIDAE	1	0.1	1	1.1
---CHIRONOMIDAE (LARVAE)	412	51.1	45	50.0
---CHIRONOMIDAE (PUPAE)	5	0.6	1	1.1
---TRICHOPTERA				
---PSYCHOMYIIDAE				
---POLYCENTROPUS	6	0.7	2	2.2
---RYACOPHILIDAE				
---RHYACOPHILA	3	0.4	--	---
---LIMNephilidae				
---DICASMOECUS	6	0.7	--	---
--PLECOPTERA				
---NEMOURIDAE				
---NEMOURA	1	0.1	1	1.1
---PERLODIDAE				
---ISOPERLA	1	0.1	--	---
---CHLOROPERLIDAE				
---HASTAPERLA	16	2.1	1	1.1
---CAPNIIDAE	5	0.6	--	---
--COLEOPTERA				
---ELMIDAE (LARVAE)	2	0.2	--	---
--EPHEMEROPTERA				
---EPHEMERELLIDAE				
---EPHEMERELLA	--	---	1	1.1
---SERATELLA	12	1.5	--	---
---LEPTOPHLEBIIDAE				
---PARALEPTOPHLEBIA	70	8.8	1	1.1
---BAETIDAE				
---BAETIS	221	27.5	30	33.3
---HEPTAGENIIDAE				
---RHITHROGENA	1	0.1	3	3.4
---STENONEMA	28	3.6	--	---
-ARACHNIDA				
--ACARINA	4	0.5	--	---

CHEMICAL QUALITY OF PRECIPITATION

SANDY RIVER BASIN

452650122091801 BULL RUN RESERVOIR NUMBER TWO, OR

LOCATION.--Lat 45°26'55", long 122°08'45", in SE-1/4SE-1/2 sec.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 town of Bull Run, and approximately 20 mi east of Portland.

PERIOD OF RECORD.--June 1980 to September 1981 (event sampling), September 1981 to November 1981 (weekly composite), July 1982 to current year (weekly composite).

INSTRUMENTATION.--A bulk-type plastic double cylinder with receiving funnel directing deposition to inner cylinder was used for the period of record June 1980 to September 1981. The wet-deposition sample collector is an Aerochem Model 301^a wet/dry deposition collector. The sensing circuit is activated by wet deposition, causing the motor to move the cover from the wet bucket and cover the dry bucket. When the heater in the sensor evaporates the precipitation, the cycle is reversed. The sample buckets are polyethylene and have a capacity of 13 liters (28.6 cm inside diameter, 23.2 cm deep). The opening of the collector is approximately 5 ft above ground level has been used for the weekly composite sampling period of record September 1981 to current year.

REMARKS.--Inches of precipitation obtained from an on-site recording weighing-bucket gage. The sample collector is located in the restricted access area of the city of Portland's Bull Run River Watershed.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SODIUM, DIS- SOLVED (MG/L AS NA)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT							
11-18	.04	.024	.023	.136	.120	.61	.23
18-25	.03	.017	.013	.100	<.020	.19	.19
25-31	.05	.011	.012	.022	.070	.38	.07
NOV							
01-01	.05	.011	.012	.022	.070	.38	.07
01-08	.02	.048	.019	.379	.030	.12	.67
15-22	.04	.067	.025	.563	<.020	.13	.98
22-29	.03	.057	.028	.420	.040	.26	.72
DEC							
06-13	.03	.068	.022	.538	<.020	.12	.96
20-27	.06	.068	.032	.520	<.020	.26	.89
JAN							
03-10	.11	.036	.055	.148	.130	.26	.16
10-17	.16	.042	.022	.278	.050	.56	.43
17-24	.02	.017	.013	.120	.060	.20	.26
24-31	.06	.082	.042	.626	.090	.24	1.13
31-31	.48	.199	.091	.579	.410	2.17	.70
FEB							
01-07	.48	.199	.091	.579	.410	2.17	.70
07-14	.01	.022	.011	.176	.040	.12	.30
14-21	.03	.022	.011	.170	<.020	.20	.30
21-28	.14	.212	.068	1.700	.070	.38	3.07
28-29	.15	.053	.028	.333	.070	.41	.56
MAR							
01-06	.15	.053	.028	.333	.070	.41	.56
06-13	.13	.094	.055	.740	.230	.62	1.28
13-20	.11	.042	.019	.269	<.020	.19	.47
27-31	.14	.086	.046	.663	.310	1.34	1.05
APR							
01-03	.14	.086	.046	.663	.310	1.34	1.05
03-10	.04	.030	.012	.210	.080	.43	.36
10-17	.13	.176	.077	1.310	.140	.66	2.32
17-24	.12	.139	.047	1.040	.220	.61	1.80
24-30	.10	.089	.040	.661	.250	.58	1.14
MAY							
01-01	.10	.089	.040	.661	.250	.58	1.14
01-08	.04	.032	.015	.202	.080	.29	.33
08-15	.08	.050	.024	.337	.140	.53	.56
22-29	.04	.029	.010	.201	.070	.27	.34
29-31	.04	.030	.019	.210	.080	.30	.33
JUN							
01-05	.04	.030	.019	.210	.080	.30	.33
19-26	.02	.013	.006	.083	.090	.25	.15
26-30	.04	.015	.016	.083	.090	.32	.12
JUL							
01-03	.04	.015	.016	.083	.090	.32	.12

* The use of the brand name in this report is for identification purposes only and does not imply endorsement by the U.S. Geological Survey.

CHEMICAL QUALITY OF PRECIPITATION

453

SANDY RIVER BASIN

452650122091801 BULL RUN RESERVOIR NUMBER TWO, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM)	PH (UNITS)	PH LAB (UNITS)	PRECIP- ITATION TOTAL INCHES/ WEEK
OCT							
11-18	.85	<.002	9.3	6.8	4.68	5.17	.98
18-25	.30	<.001	4.3	3.6	5.12	5.34	1.70
25-31	.66	<.001	6.1	6.7	4.89	5.27	.72
NOV							
01-01	.66	<.001	6.1	6.7	4.89	5.27	.72
01-08	<.10	<.001	5.7	4.7	5.10	5.48	3.57
15-22	<.10	<.001	6.7	6.3	5.15	5.36	2.15
22-29	.43	<.001	7.5	6.9	4.86	5.13	2.99
DEC							
06-13	<.10	<.001	6.5	6.3	5.17	5.83	2.70
20-27	.56	<.001	7.9	6.6	4.93	5.44	.57
JAN							
03-10	.44	<.001	4.2	4.4	5.16	5.99	.59
10-17	.41	<.001	6.6	5.4	5.05	5.65	1.20
17-24	<.10	<.001	3.8	3.0	5.20	5.68	3.55
24-31	.34	<.001	7.0	7.1	5.27	5.66	.93
31-31	1.1	<.001	--	12.7	--	6.10	.03
FEB							
01-07	1.1	<.001	--	12.7	--	6.10	.03
07-14	.23	<.001	3.8	3.1	5.25	5.72	3.90
14-21	.36	<.001	4.9	3.8	5.02	5.41	1.44
21-28	.80	<.001	16.9	15.6	5.01	5.54	1.56
28-29	.59	<.001	7.0	5.8	5.09	5.37	1.07
MAR							
01-06	.59	<.001	7.0	5.8	5.09	5.37	1.07
06-13	.68	<.001	10.6	10.0	5.11	5.83	1.28
13-20	.46	<.001	4.5	4.4	5.39	5.92	2.30
27-31	1.3	<.001	19.6	16.6	4.52	4.77	1.60
APR							
01-03	1.3	<.001	19.6	16.6	4.52	4.77	1.60
03-10	.53	<.001	7.8	6.5	4.84	5.07	4.00
10-17	1.0	<.001	16.3	15.8	4.84	5.02	.77
17-24	.76	<.001	14.2	11.3	4.89	5.73	.54
24-30	.82	.002	12.2	10.0	4.92	5.27	1.30
MAY							
01-01	.82	.002	12.2	10.0	4.92	5.27	1.30
01-08	.42	<.001	5.8	4.8	5.06	5.38	2.33
08-15	.58	<.001	9.6	7.6	4.85	5.20	1.34
22-29	.56	<.001	5.7	4.7	5.08	5.30	1.92
29-31	.59	<.001	7.4	6.2	4.87	5.15	1.64
JUN							
01-05	.59	<.001	7.4	6.2	4.87	5.15	1.64
19-26	.33	<.001	4.1	3.7	5.10	5.25	3.62
26-30	.38	.002	4.2	3.8	5.13	5.18	1.41
JUL							
01-03	.38	.002	4.2	3.8	5.13	5.18	1.41
DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SODIUM, DIS- SOLVED (MG/L AS NA)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
AUG							
28-31	.09	.039	.049	.149	.160	.51	.23
SEP							
01-04	.09	.039	.049	.149	.160	.51	.23
04-11	.04	.022	.037	.139	.030	.23	.27
11-18	.35	.213	.142	1.220	.270	1.38	1.92
18-25	.08	.075	.028	.571	<.020	.43	1.07
DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM)	PH (STAND- ARD UNITS)	PH LAB (STAND- ARD UNITS)	PRECIP- ITATION TOTAL INCHES/ WEEK
AUG							
28-31	.60	<.001	6.9	6.0	5.01	5.24	.59
SEP							
01-04	.60	<.001	6.9	6.0	5.01	5.24	.59
04-11	.50	.003	4.8	5.3	5.23	5.17	--
11-18	1.8	<.001	16.5	17.2	5.54	5.97	.24
18-25	.62	<.001	11.2	10.5	4.92	4.90	1.00

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

Station No.	Station Name	Location	Drainage area (mi)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft ³ /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	1978-84	1-25-84	3.87	164
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	1978-84	1-25-84	—	305
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	1978-84	1-25-84	—	a170
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	1978-84	1-25-84	1.67	43.3
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	1978-84	1-25-84	3.12	196
CLATSKANIE RIVER BASIN							
14247020	FALL CREEK NEAR CLATSKANIE, OR (Station discontinued)	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	1972-84	11-17-83	—	56
BIG CREEK BASIN							
14248510	LITTLE CREEK NEAR KNAPPA, OR (Station discontinued)	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	1972-84	11-17-83	10.94	64
ROGUE RIVER BASIN							
14338005	ROGUE RIVER TRIBUTARY NEAR TRAIL, OR (Station discontinued)	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	1980-84	12-14-83	16.27	26

a Estimated.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

455

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 1984

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water years)	Date	Measurements Discharge (ft ³ /s)
Part 14 SANDY RIVER BASIN						
Deer Creek	Bull Run River	SE½SW¼ sec.10, T.1 S., R.6 E.	1.62	1979-83	10- 5-83 10- 6-83 2-24-84 8- 2-84	*1.32 *1.19 9.86 *0.93
Cougar Creek	.....do.....	SW½SW¼ sec.10, T.1 S., R.6 E.	3.06	1979-83	10- 6-83 2-29-84 8- 2-84	*2.76 17.4 *1.95
Bear Creek	.....do.....	NW½NW¼ sec.16, T.1 S., R.6 E.	1.68	1979-83	10- 5-83 2-29-84 8- 7-84	*.65 11.6 *3.91
Fivemile Creek	.....do.....	SW½NE¼ sec.17, T.1 S., R.6 E.	.79	1979-83	10- 5-83 2-29-84 8- 7-84	*.22 4.78 *.21
Camp Creek	.....do.....	SW½SW¼ sec.20, T.1 S., R.6 E.	3.27	1979-83	10- 3-83 3- 1-84 8- 1-84	*1.96 21.5 *2.11
Part 14 ROGUE RIVER BASIN						
Dutton Creek	Castle Creek	Lat 42°53'40", long 122°10'00".	---	1967-68, 1977-83	10-11-83 7- 2-84 9-12-84	*.58 6.22 *.60
Castle Creek	Rogue River	Lat 42°54'45", long 122°17'00".	---	1967-68, 1977-83	10-11-83 7- 2-84 9-12-84	*1.02 18.1 *1.41
Castle Creek Tributary	Castle Creek	Lat 42°53'30", long 122°10'00".	---	1967-68, 1977-78, 1980-83	10-11-83 7- 2-84 9-12-84	*.01 1.90 *.01
.....Do.....	.....do.....	Lat 42°53'25", long 122°09'45".	---	1967-68, 1977-83	10-11-83 7- 2-84 9-12-84	*0 1.17 0

* Base flow.

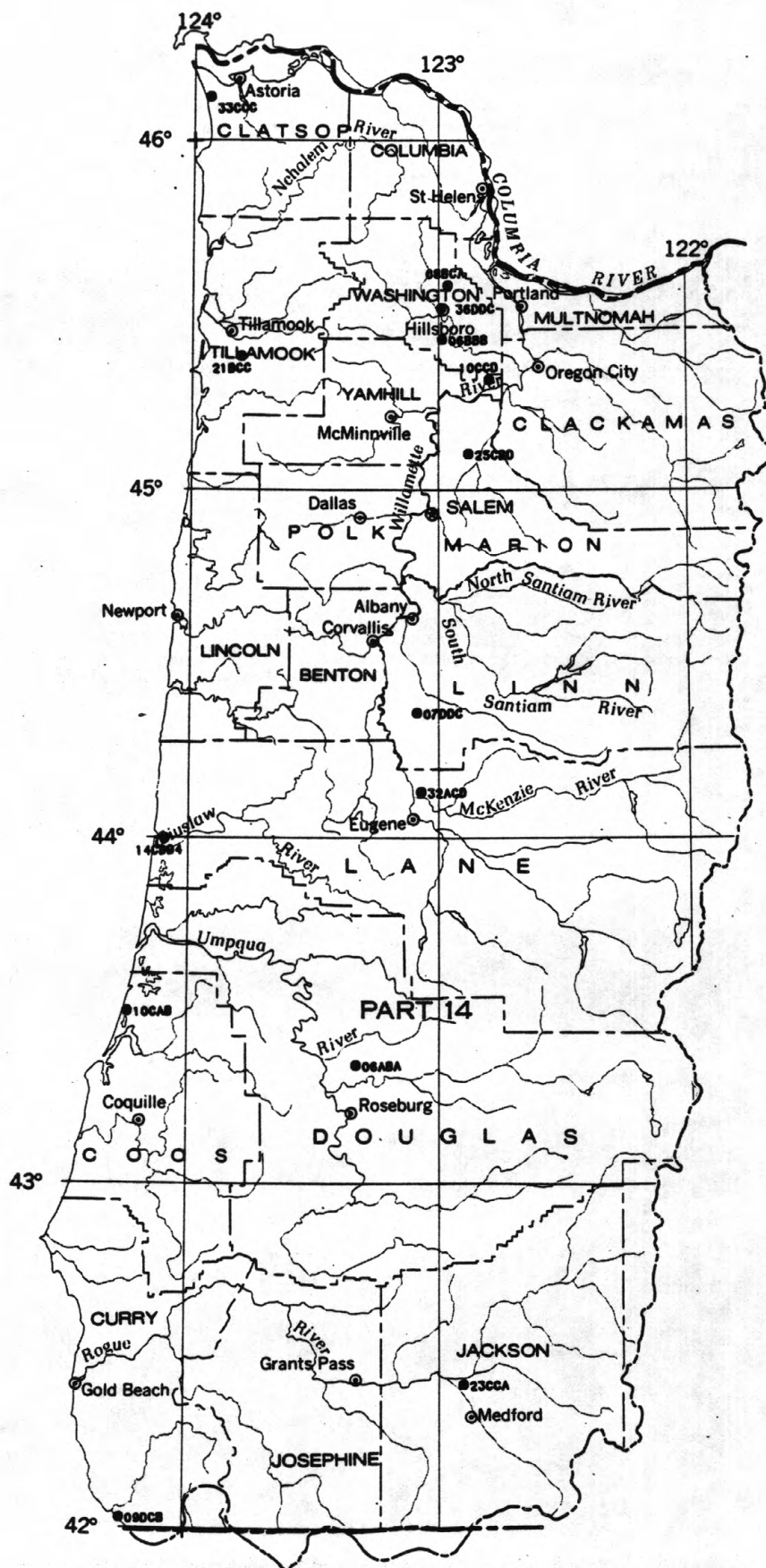


Figure 5. Map of Western Oregon showing location of observation wells

GROUND-WATER LEVELS

457

CLACKAMAS COUNTY

451905122475801. Local number 03S/01W-10CCD.

LOCATION.--Lat 45°19'05", long 122°47'58", Hydrologic Unit 17090007.

Owner: Pemouskis.

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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	89.84	MAY 21	84.11

CLATSOP COUNTY

460733123560301. Local number 08N/10W-33CCC.

LOCATION.--Lat 46°07'33", long 123°56'03", Hydrologic Unit 17080006.

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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	14.16	DEC 15	13.50	FEB 25	13.41	MAY 31	12.61
OCT 10	14.21	DEC 20	13.61	FEB 29	13.33	JUN 5	12.56
OCT 15	14.27	DEC 25	13.72	MAR 5	13.28	JUN 15	12.53
OCT 20	14.31	DEC 31	13.67	MAR 10	13.30	JUN 20	12.55
OCT 25	14.35	JAN 5	13.60	MAR 15	13.32	JUL 31	12.63
OCT 31	14.39	JAN 10	13.66	MAR 31	13.42	AUG 5	12.64
NOV 5	14.17	JAN 15	13.72	APR 5	13.15	AUG 10	12.66
NOV 10	14.09	JAN 20	13.79	APR 10	13.24	AUG 15	12.71
NOV 15	13.89	JAN 25	13.62	APR 15	13.01	AUG 20	12.85
NOV 20	13.61	JAN 31	13.65	APR 20	13.03	AUG 25	12.95
NOV 25	13.32	FEB 5	13.72	APR 25	13.02	AUG 31	13.01
NOV 30	13.26	FEB 10	13.75	APR 30	12.91	SEP 5	13.09
DEC 5	13.41	FEB 15	13.57	MAY 5	12.80	SEP 10	13.17
DEC 10	13.48	FEB 20	13.59	MAY 25	12.66	SEP 20	13.91

COOS COUNTY

CURRY COUNTY

420205124145501. Local number 41S/13W-09DCB.

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.

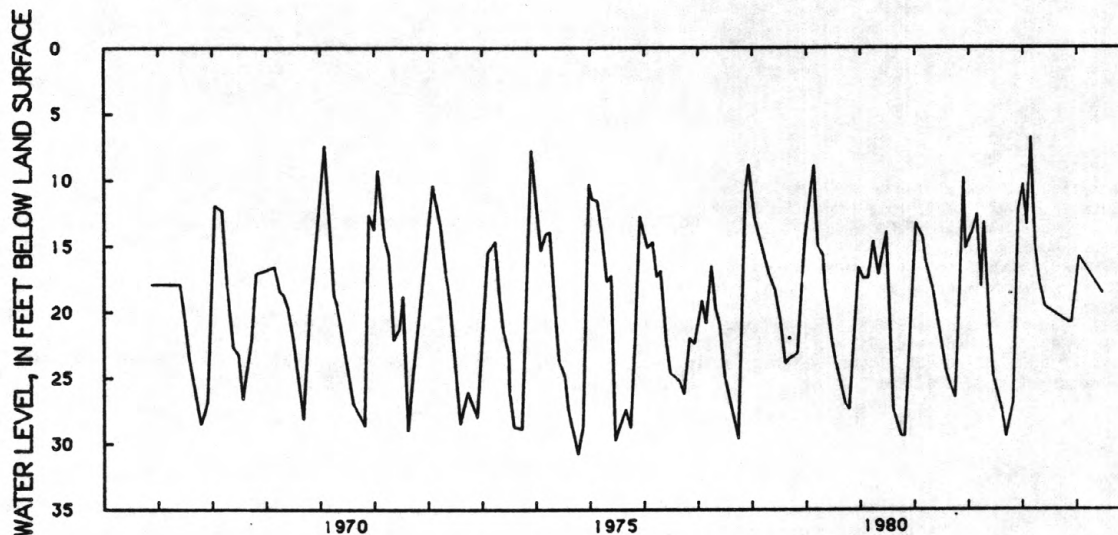
DATUM.--Altitude of land surface datum is about 110 ft. Measuring point: Top of casing, 0.9 ft above datum.

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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 23	20.82	JAN 13	15.85	JUN 18	18.59



41S/13W-09DCB

DOUGLAS COUNTY

432035123200001. Local number 26S/05W-06ABA.

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.

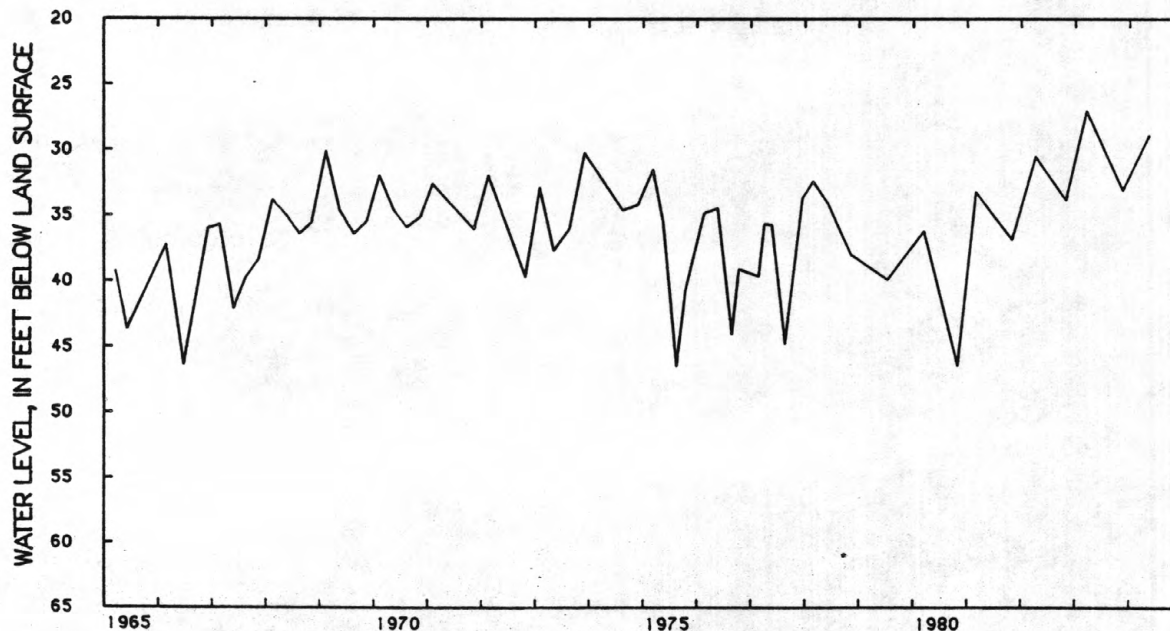
DATUM.--Altitude of land surface datum is 560 ft. Measuring point: Hole in casing seal, 0.7 ft above datum.

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, 61.19 ft (well recently pumped) below datum, Sept. 10, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	33.09	APR 13	28.92



26S/05W-06ABA

GROUND-WATER LEVELS

459

JACKSON COUNTY

422517122543401. Local number 36S/02W-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.

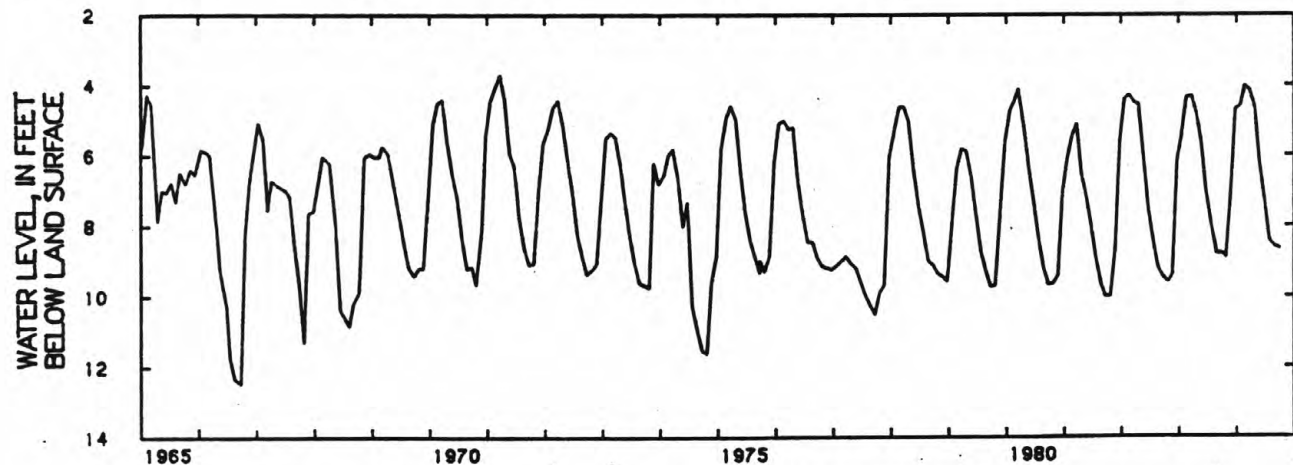
DATUM.--Altitude of land surface datum is 1,235 ft. Measuring point: Top of casing, 2.00 ft above datum.

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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	8.91	JAN 24	4.60	APR 24	4.65	JUL 25	8.42
NOV 23	7.05	FEB 21	4.02	MAY 22	6.17	AUG 24	8.57
DEC 23	4.70	MAR 21	4.14	JUN 25	7.29	SEP 25	8.65



36S/02W-23CCA

LANE COUNTY

440803124042601. Local number 16S/03W-32ACD.

LOCATION.--Lat 44°08'03", long 123°04'26", Hydrologic Unit 17090004.

Owner: Peter Gutoski.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 8 in, depth 40 ft, cased to 40 ft, perforated 18.40 ft, drilled inside old dug irrigation well, diam 4 ft, depth 19 ft.

DATUM.--Altitude of land surface is 388.98 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 8.00 ft below datum.

REMARKS.--Continuous water-level recorder installed Feb. 16, 1977, removed Mar. 6, 1978.

PERIOD OF RECORD.--1928-30, 1935-36, 1938 to Mar. 1, 1981, Nov. 18, 1983 to current year. Published every fifth day February 20 to September 20, 1977.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.53 ft below datum, Jan. 16, 1936; lowest measured, 22.02 ft below datum, Oct. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	18.53	MAR 12	13.41

GROUND-WATER LEVELS

LANE COUNTY--Continued

440000124054001. Local number 18S/12W-14CDD4.

LOCATION.--Lat 44°00'00", long 124°05'40", Hydrologic Unit 17100206.

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.

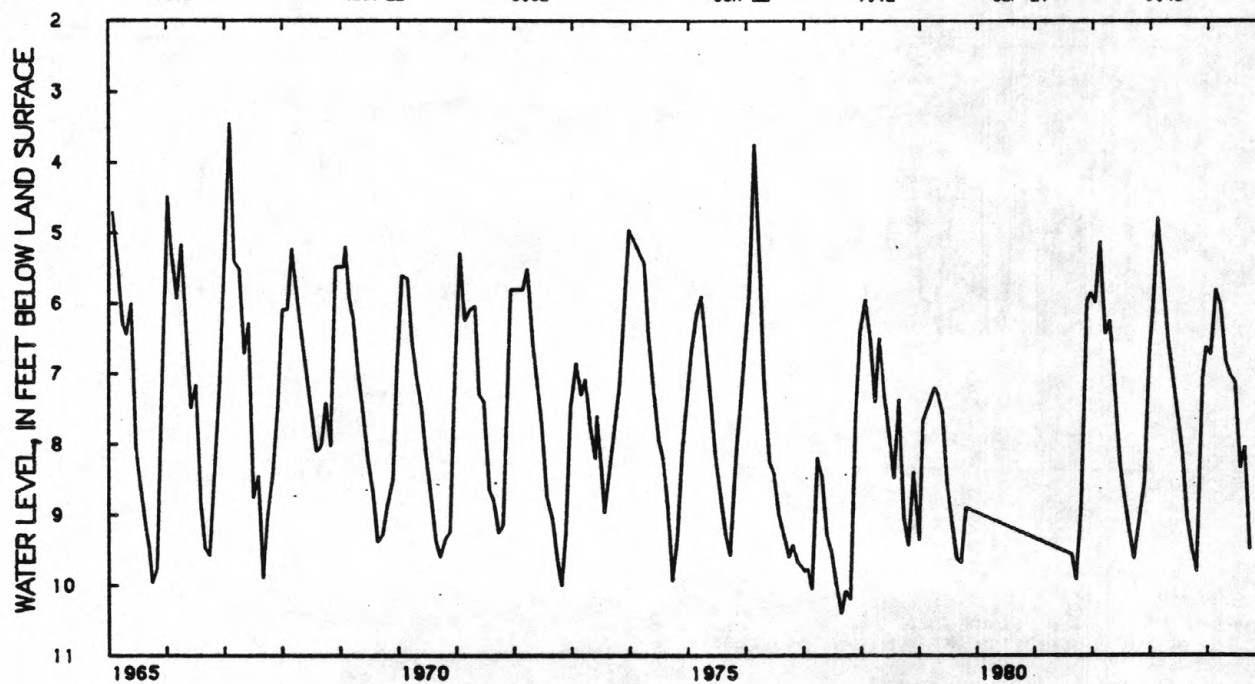
DATUM.--Altitude of land surface datum is 70 ft. Measuring point: Top of casing at datum.

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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	9.8	JAN 20	6.72	APR 24	6.82	JUL 22	8.33
NOV 30	7.08	FEB 23	5.80	MAY 21	7.01	AUG 22	8.04
DEC 31	6.62	MAR 22	6.02	JUN 22	7.12	SEP 21	9.48



18S/12W-14CDD4

LINN COUNTY

442140123052601. Local number 14S/03W-07DCC.

LOCATION.--Lat 44°21'40", long 123°05'26", Hydrologic Unit 17090003.

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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	8.96	JAN 19	2.44	APR 26	2.41	JUL 25	5.80
NOV 26	3.45	FEB 17	2.29	MAY 30	3.45	AUG 22	7.06
DEC 27	3.13	MAR 27	2.05	JUN 21	3.58	SEP 24	8.17

GROUND-WATER LEVELS

461

MARION COUNTY

450620122530501. Local number 05S/02W-25CBD.

LOCATION.--Lat 45°06'20", long 122°53'05", Hydrologic Unit 17090009.

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.

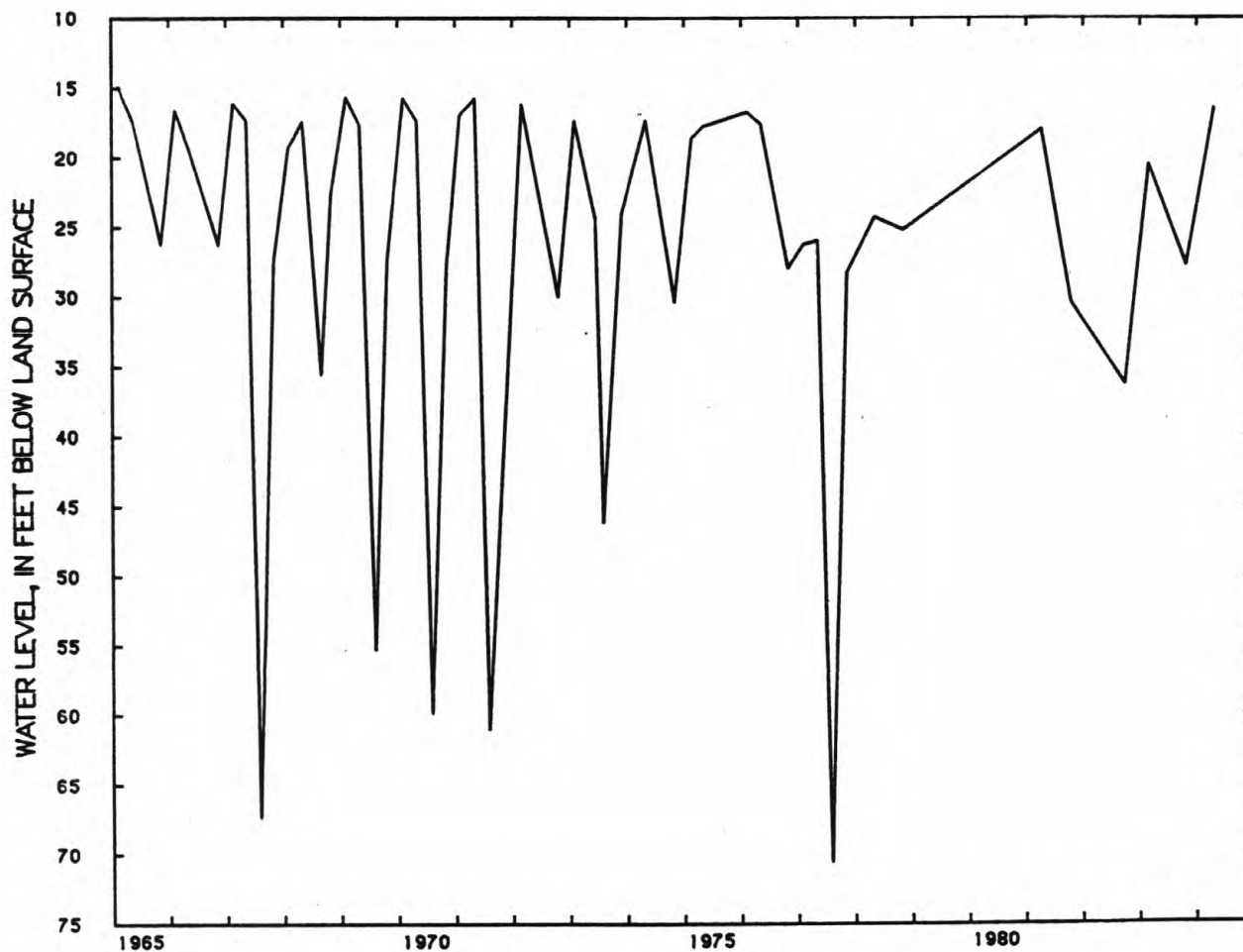
DATUM.--Land surface datum is 180.31 ft National Geodetic Vertical Datum of 1929. Measuring point: Top edge of seal around pump column, 0.65 ft below datum.

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, 70.60 ft (well recently pumped) below datum, Aug. 3, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	27.80	APR 18	16.51



05S/02W-25CBD

GROUND-WATER LEVELS

TILLAMOOK COUNTY

452304123480601. Local number 02S/09W-21BCC.

LOCATION.--Lat 45°23'04", long 123°48'05", Hydrologic Unit 17100203.

Owner: Vern Darby.

AQUIFER.--Gravel.

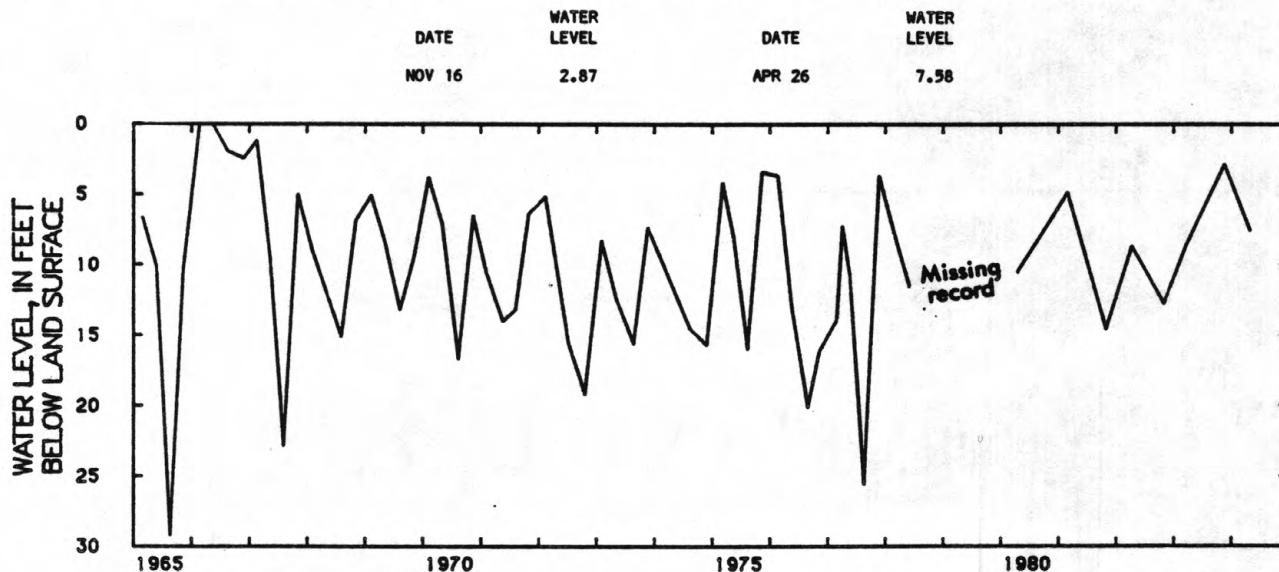
WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in, depth 128 ft.

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 1983 TO SEPTEMBER 1984



02S/09W-21BCC

WASHINGTON COUNTY

453514122575801. Local number 01N/02W-08BCA.

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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	17.49	MAY 23	6.92

453117122593602. Local number 01N/03W-36DDC.

LOCATION.--Lat 45°31'17", long 122°59'36", Hydrologic Unit 17090010.

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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	16.78	JUN 7	14.04

GROUND-WATER LEVELS

463

WASHINGTON COUNTY--Continued

452556122592001. Local number 02S/02W-06BBB.

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.

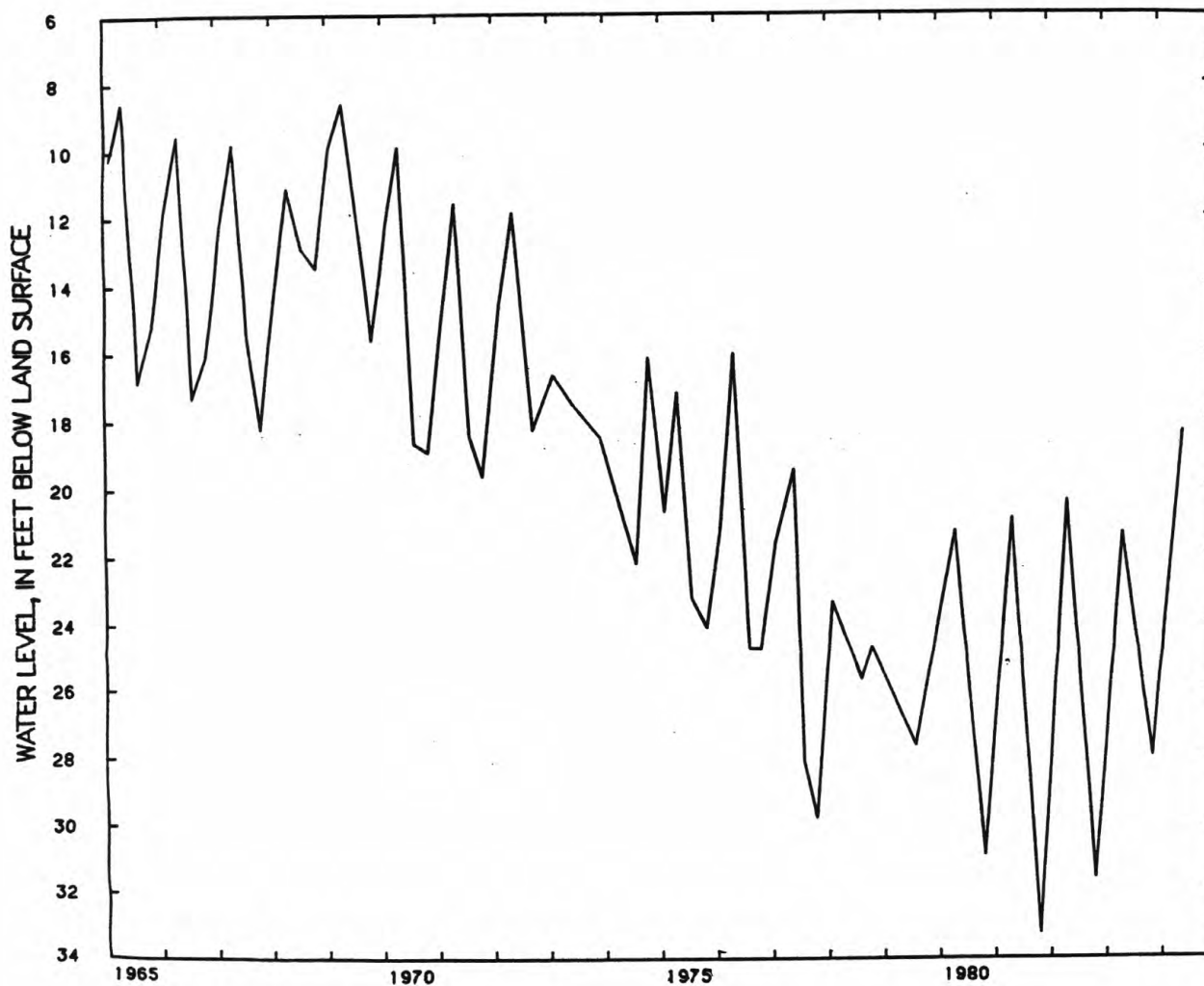
DATUM.--Altitude of land surface datum is 190 ft. Measuring point: Hole in south side of pumpbase, 0.60 ft above datum.

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, 33.28 ft (nearby well recently pumped) below datum, Oct. 21, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	28.02	MAY 23	18.41



02S/02W-06BBB

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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)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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