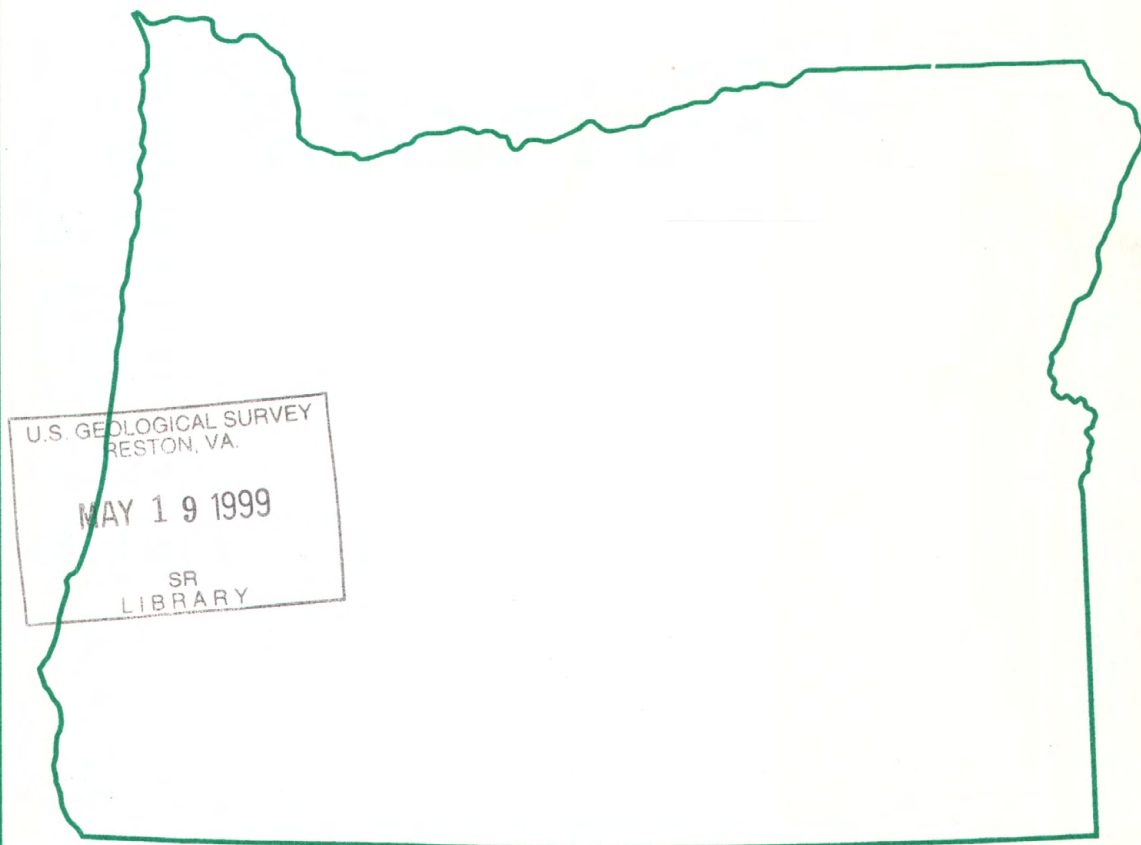


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Water Resources Data Oregon Water Year 1995



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-95-1
Prepared in cooperation with other agencies

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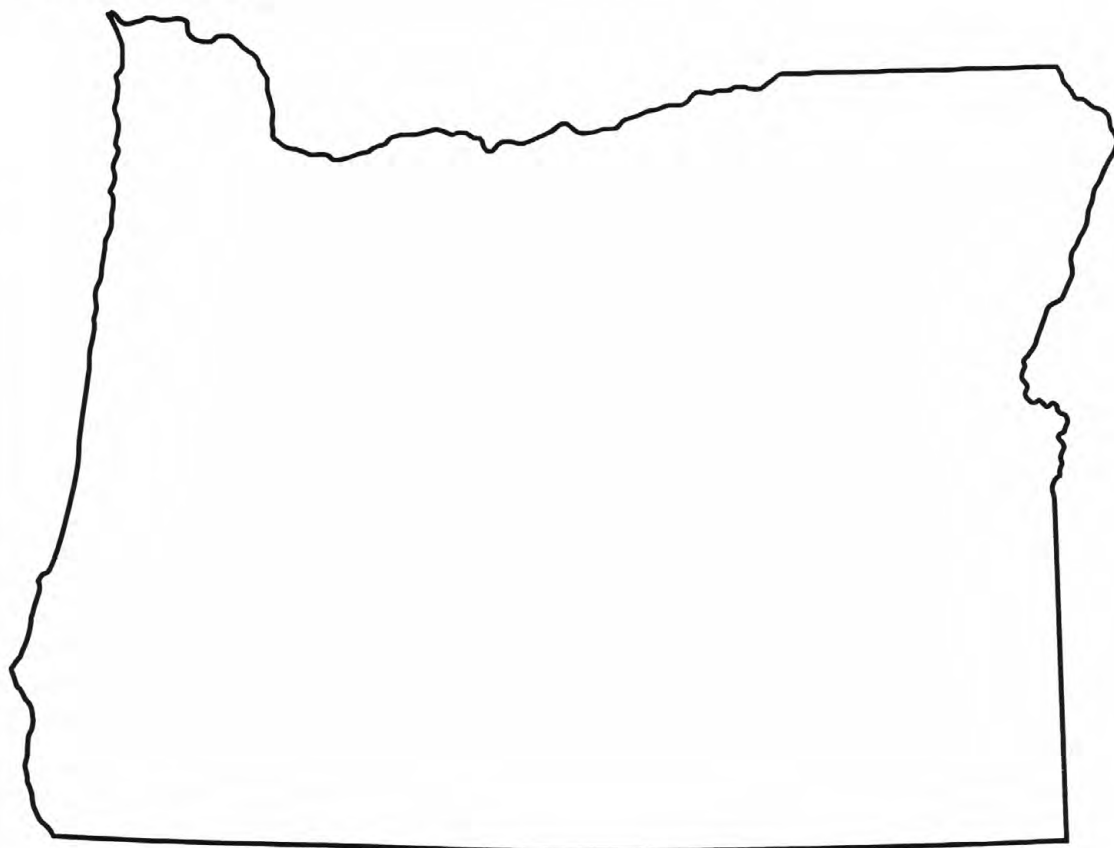
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Water Resources Data Oregon Water Year 1995

by L.E. Hubbard, T.A. Herrett, J.E. Poole, G.P. Ruppert, and
M.L. Courts



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-95-1
Prepared in cooperation with other agencies

U.S. DEPARTMENT OF THE INTERIOR

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**See additional USGS information on water resources of
Oregon
on the World Wide Web at
<http://www.oregon.wr.usgs.gov>**

1996

PREFACE

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.

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:

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This report was prepared in cooperation with other agencies under the general supervision of Dennis D. Lynch, District Chief, and T. John Conomos, Regional Hydrologist, Western Region.

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13. ABSTRACT (Maximum 200 words) Water resources data for the 1995 water year for Oregon consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs and water levels of wells <ul style="list-style-type: none"> • Water discharge for 201 gaging stations on streams, canals and drains. • Discharge data for 63 partial-record or miscellaneous sites and water-quality sampling sites. • Stage and (or) contents for 37 lakes and reservoirs. • Water-quality data for 47 streams, canals, lakes and wells. • Water levels for 2 observation wells. • Water-quality for 2 atmospheric deposition sites. • Air-temperature records for 2 data sites. <p>These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating States and Federal agencies in Oregon.</p>				
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NOTE.--Data for chemical quality of precipitation and miscellaneous sites are published in separate sections of the data report. See references at the end of this list of page numbers for these sections.

Letter after station name designates type of data: (d) discharge; (e) elevation; (g) gage height; (v) contents; (c) chemical, including periodic biological, microbiological, sediment, pesticide, and radio-chemical where applicable; (s) daily suspended sediment; (t) water temperature; (tb) turbidity; (k) specific conductance; and (at) air temperature.

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Elk Creek near Elkhead (d)	14321400	376
COOS RIVER BASIN		
Pony Creek at Coos Bay (d)	14324580	378
COQUILLE RIVER BASIN		
South Fork Coquille River at Powers (d)	14325000	379
Elk River above Anvil Creek, near Port Orford (d)	14327250	380
ROGUE RIVER BASIN		
Rogue River above Prospect (d)	14328000	383
Rogue River below Prospect (d,t)	14330000	384
South Fork Rogue River near Prospect (d)	14332000	387
Lost Creek Lake near McLeod (e)	14335040	388
Rogue River at McLeod (t)	14335075	389
Big Butte Creek near McLeod (d,t)	14337500	391
Rogue River near McLeod (d,t)	14337600	394
Elk Creek near Cascade Gorge (d,t)	14337800	397
Elk Creek below Alco Creek, near Trail (d,t)	14337830	400
West Branch Elk Creek near Trail (d,t)	14337870	403
Elk Creek near Trail (d,t)	14338000	406
Rogue River at Trail (t)	14338100	409
Rogue River at Dodge Bridge, near Eagle Point (d,t)	14339000	411
Bear Creek below Ashland Creek, at Ashland (d)	14354200	414
Bear Creek at Medford (d)	14357500	415
Rogue River at Raygold, near Central Point (d,t)	14359000	416
Rogue River at Grants Pass (d)	14361500	419
Applegate River:		
Applegate Lake near Copper (e)	14361900	420
Applegate River near Copper (d,t)	14362000	421
Star Gulch near Ruch (d)	14362250	424

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH xiii
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ROGUE RIVER BASIN--Continued		
Applegate River near Applegate (d,t)	14366000	425
Applegate River near Wilderville (d,t)	14369500	428
Rogue River near Agness (d,t)	14372300	431
Illinois River near Kerby (d)	14377100	434
CHETCO RIVER BASIN		
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GROUND-WATER WELLS, BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

GROUND-WATER LEVELS

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MULTNOMAH COUNTY

Well	452938122254801	Local number	01S/03E-10CCA	445
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UMATILLA COUNTY

Well	453934118491701	Local number	02N/32E-16BAB	446
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DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Oregon have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

[Letters after station name designate type of data collected: (d) discharge, (g) gage height, (e) elevation]

Station name	Station number	Drainage area (mi ²)	Period of record
WARNER LAKES BASIN			
Twentymile Creek near Adel (d)	10366000	194	1910-16;1918-19;1921-22; 1941-44;1945-91
Deep Creek above Dismal Creek, near Warner Lake (d)	10366500	13.0	1918-19
Dismal Creek above Big Valley, near Warner Lake (d)	10367000	12.5	1913
Dismal Creek near Warner Lake (d)	10367500	14.0	1919
Deep Creek below Dismal Creek, near Warner Lake (d)	10368000	27	1913;1918-19
Deep Creek at Big Valley, near Lakeview (d)	10368500	76	1912-15
Camas Creek near Plush (d)	10369000	32.0	1912
Mud Creek near Plush (d)	10369500	18.0	1912;1915;1928-30
Camas Creek near Lakeview (d)	10370000	63.0	1913-15;1951-73
Crane Creek near Lakeview (d)	10370500	7.00	1914
Drake Creek near Adel (d)	10371000	67.0	1915;1923;1951-64;1966-73
Deep Creek above Adel (d)	10371500	249	1923;1930-91
Givan Canal near Adel (d)	10373000	--	1915
Deep Creek at Adel (d)	10374500	274	1910-16;1918-19;1921-22
Mud Creek Ditch at Adel (d)	10375000	--	1915
Fish Creek near Plush (d)	10376500	38.0	1914
Honey Creek at Chalstrand's ranch, near Plush (d)	10377000	56.0	1911
Snyder Creek near Plush (d)	10377500	--	1911
Twelvemile Creek near Plush (d)	10378000	37.0	1911
Honey Creek near Plush (d)	10378500	170	1911-14;1915;1921;1922; 1930-91
ABERT LAKE BASIN			
Chewaucan River at damsite, near Paisley (d)	10382500	158	1913-16
Chewaucan River near Buck Mountain, near Paisley (d)	10382550	157	1983-86
Chewaucan River below Coffeepot Creek, near Paisley (d)	10382600	216	1983-86
Conn Ditch near Paisley (d)	10383500	--	1915-20
Chewaucan River near Paisley (d)	10384000	275	1912-21;1924-91
Chewaucan River at Paisley (d)	10384100	278	1905-07;1909-12
Smalls Canal at Paisley (d)	10384500	--	1914-21
Jones-Innis-ZX Ditch near Paisley (d)	10385500	--	1915-20
Chewaucan River at narrows, near Paisley (d)	10386000	380	1914-21
Chewaucan River at Hotchkiss Ford, near Paisley (d)	10386500	430	1914-20
Crooked Creek near Valley Falls (d)	10387000	--	1912-13
Ana River plus Summer Lake Canal, near Summer Lake (d)	10388001	--	1930-39;1940-42;1951-91
SUMMER LAKE BASIN			
West Fork Silver Creek near Silver Lake (d)	10389000	27	1919-23;1925-32
Silver Creek plus Silver Lake Ir Canal, near Silver Lake (d)	10390001	180	1905-07;1909-27;1928; 1929-91
Bridge Creek near Silver Lake (d)	10390500	30	1922-23
Buck Creek above Timothy Creek, near Silver Lake (d)	10390800	250	1922-23
Buck Creek near Silver Lake (d)	10391000	290	1905-06;1909-10;1919-21
Duncan Creek near Silver Lake (d)	10392000	58	1922-23
Silvies River near Burns (d)	10393500	934	1903-06;1909-12;1913-17; 1918-20;1921-22;1923-91
MALHEUR AND HARNEY LAKES BASIN			
Silvies River near Silvies (d)	10392500	510	1904;1909-11;1916; 1921-23
Emigrant Creek near Burns (d)	10393000	240	1921
Poison Creek near Burns (d)	10394000	81	1921
Prater Creek near Burns (d)	10394500	20	1921-23
East Fork Silvies River near Lawen (d)	10395000	--	1916;1973-77
West Fork Silvies River near Lawen (d)	10395500	--	1916-17;1919;1922; 1973-77
Flood Bypass Silvies River near Burns (d)	10395505	--	1976

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
MALHEUR AND HARNEY LAKES BASIN-Continued			
Rock Creek near Burns (d)	10395600	--	1976
Mud Creek near Diamond (d)	10396500	30	1911-16;1930
Bridge Creek near Frenchglen (d)	10397000	30.0	1911-16;1930;1938-70
Krumbo Creek near Diamond (d)	10397500	37	1911;1930
Donner und Blitzen River near Narrows (d)	10398500	420	1915-20
Kiger Creek near Diamond (d)	10399000	75	1911-13;1916-21;1930; 1941
Cucamonga Creek near Diamond (d)	10399500	15	1916;1930
McCoy Creek near Diamond (d)	10400000	45	1910-11;1914;1916-21; 1930;1941
Riddle Creek near Smith (d)	10405000	60	1911
Riddle Creek near Diamond (d)	10401000	120	1917-21
Donner Und Blitzen River near Voltage (d)	10401500	760	1938-46;1973-77
Malheur Lake near Voltage (e)	10401800	2,150	1976-80;1983-89
Malheur Lake on west side Cole Island dike, at Voltage (e)	10401810	--	1983-84
Malheur Lake at break in Cole Island dike, near Voltage (e)	10401830	2,150	1972-79
Malheur Lake Outlet at Narrows (d)	10402000	2,150	1916;1973-77
Mud Lake Outlet near Narrows (d)	10402500	2,160	1916-18;1921-22
Silver Creek near Riley (d)	10403000	228	1952-80
Silver Creek above Suintex (d)	10403500	260	1904-06;1909-12;1914-23; 1925-26
Chickahominy Creek near Suintex (d)	10404000	90	1917;1922
Rock Quarry Creek near Suintex (d)	10404500	--	1921;1922
Silver Creek below Suintex (d)	10405000	550	1912-13;1921-23
Silver Creek near Narrows (d)	10406000	630	1917;1919-23
ALVORD LAKE BASIN			
Trout Creek near Denio, NV (d)	10406500	88	1911-12;1922-23;1925-31; 1932-91
CATLOW VALLEY BASIN			
Home Creek near Beckley (Narrows) (d)	10406300	38	1911-12;1915-17;1930
ALVORD LAKE BASIN			
Little Cottonwood Creek near Denio, NV (d)	10407000	8	1911-12
GOOSE LAKE (CLOSED BASIN)			
Dog Creek near Lakeview (d)	11338000	27	1912-13
North Drews Canal near Lakeview (d)	11339000	--	1976-81
Drews Creek near Lakeview (d)	11339500	212	1909-81
Cottonwood Creek near Lakeview (d)	11340500	32.9	1909-19;1924-81
Thomas Creek near Lakeview (d)	11341000	30	1912-17;1919;1927-31
LOST RIVER BASIN			
Miller Creek at Gerber Reservoir, near Lorella (d)	11483500	220	1905-08;1925-50
Miller Creek near Lorella (d)	11484000	270	1909-20
Lost River above Olene (d)	11484500	1,410	1915-17
Lost River at Olene (d)	11485000	1,590	1904;1907-12
Lost River Diversion Canal near Olene (d)	11486000	--	1961-68
Lost River at Wilson Bridge, near Olene (d)	11487000	1,620	1912-20
Lost River near Merrill (d)	11487500	1,670	1904-07
Lost River at Merrill (d)	11488000	1,680	1916
KLAMATH RIVER BASIN			
Williamson River below Sheep Creek, near Lenz (d)	11491400	205	1974-91
Williamson River near Silver Lake (d)	11491500	220	1917-18;1920-21
Miller Creek near Crescent (d)	11492000	23.7	1912;1914
Sand Creek near Fort Klamath (d)	11492500	35	1917-22
Scott Creek near Fort Klamath (d)	11493000	10	1917-20
Williamson River above Spring Creek, near Klamath Agency (d)	11494000	1,330	1912-13;1918-25
Williamson River at Chiloquin (d)	11494500	1,400	1911-16;1917
South Fork Sprague River near Bly (d)	11495500	110	1925-26
North Fork Sprague River near Bly (d)	11496500	45	1917-18;1925-26
Fivemile Creek near Bly (d)	11497000	40	1917-20
Sprague River near Beatty (d)	11497500	513	1912-26;1953-91
Sycan River near Silver Lake (d)	11498000	100	1918-20
Sycan River at Sycan Marsh, near Silver Lake (d)	11498100	220	1905
Long Creek near Silver Lake (d)	11498500	40	1918-24;1927-29

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
KLAMATH RIVER BASIN-Continued			
Sycan River near Beatty (d)	11499000	540	1912-25
Sycan River below Snake Creek, near Beatty (d)	11499100	568	1974-91
Sprague River near Yainax (d)	11500000	1,270	1904
Sprague River at Chiloquin (d)	11502000	1,600	1911-19;1923;1925
Anna Creek near Fort Klamath (d)	11503500	40	1923-27
Wood River at Fort Klamath (d)	11504000	90.0	1911-36
Wood River near Fort Klamath (d)	11504100	87.7	1965-67
Crooked Creek near Fort Klamath (d)	11504200	5.68	1965-67
Fourmile Creek near Odessa (d)	11505500	10.6	1912-17
Fourmile Creek near Rocky Point (d)	11505600	105	1965-67
Varney Creek near Rocky Point (d)	11505700	7.43	1965-67
"A" Canal at Klamath Falls (d)	11507200	--	1911-50;1961-81
Keno Canal at Klamath Falls (d)	11507400	--	1967-83
Diversion from Klamath River to Lost River, near Olene (d)	11508500	--	1931-68
Spencer Creek near Keno (d)	11510000	90	1929-32
Klamath River at Spencer Bridge, near Keno (d)	11510500	4,050	1914-31
Howard Prairie Lake Outlet near Pinehurst (d)	11512920	--	1961-65
Keene Creek near Ashland (d)	11514500	12.1	1917-22;1949-65
Green Springs Powerplant Diversion near Ashland (d)	11516100	--	1961-65
OWYHEE RIVER BASIN			
Crooked Creek near Rome (d)	13181500	1,700	1950
Owyhee River above Owyhee Reservoir (d)	13182000	10,400	1929-51
Owyhee River at Owyhee (d)	13184000	11,300	1890-96;1904-16; 1920-29;1980-86
MALHEUR RIVER BASIN			
Malheur River at Jone's Ranch, near Drewsey (d)	13213500	530	1914
Malheur River near Drewsey (d)	13214000	910	1920-23;1926-94
Warm Springs Reservoir near Riverside (e)	13214500	1,100	1920-91
South Fork Malheur River at Riverside (d)	13215500	630	1910-14;1919-20; 1927-29;1938
Malheur River at Riverside (d)	13216000	1,750	1909-15
North Fork Malheur River abv Beulah Reservoir, nr Beulah (d)	13216500	355	1914;1936-94
North Fork Malheur River at Foley's Ranch, near Beulah (d)	13218000	470	1909-12;1914
North Fork Malheur River at Juntura (d)	13218500	530	1919-22;1926-32;1935-40
Malheur River near Namorf (d)	13219000	2,590	1913-23;1926-31
Malheur River near Westfall (d)	13219500	2,970	1904-05
Malheur River at Little Valley, near Hope (d)	13220000	3,010	1949-79
Malheur River near Hope (d)	13220500	3,030	1919-49
Malheur River near Little Valley (d)	13221500	3,030	1914
Malheur River at McLaughlin Bridge, near Vale (d)	13223500	3,060	1905-06
Bully Creek near Westfall (d)	13225500	160	1912-13;1923
Cottonwood Creek near Westfall (d)	13226000	82	1922-23
Bully Creek at Warm Springs, near Vale (d)	13226500	539	1903-07;1910-17; 1922-23;1964-86
Bully Creek near Vale (d)	13227000	570	1934-62
Bully Creek at Vale (d)	13227500	620	1904
Malheur River at Vale (d)	13228000	3,880	1890-91;1895-97; 1903-14;1919
Willow Creek near Malheur (d)	13229500	250	1912-15;1921-29
Willow Creek below reservoir, near Malheur (d)	13230500	290	1905-06;1911;1921-29
Cow Creek near Brogan (d)	13231000	75	1912-14
Willow Creek near Brogan (d)	13231500	420	1912-14
Willow Creek at Cole's Ranch, near Brogan (d)	13232000	455	1904-06
Pole Creek near Brogan (d)	13232500	14	1912
Pole Creek below Black Creek feed canal, near Brogan (d)	13233000	14	1913
Malheur River at Halliday Bridge, near Ontario (d)	13233500	4,620	1905
Malheur River near Ontario (d)	13234000	4,680	1904
BURNT RIVER BASIN			
North Fork Burnt River near Whitney (d)	13269300	110	1965-80
North Fork Burnt River at Audrey (d)	13269500	139	1915-16
Middle Fork Burnt River near Audrey (d)	13270000	9.54	1915-16
South Fork Burnt River near Unity (d)	13270500	30.9	1915-16
South Fork Burnt River above Barney Creek, near Unity (d)	13270800	38.5	1963-81
South Fork Burnt River at Hardman Ranch, near Unity (d)	13271000	44.4	1916-20;1938-41
Fleetwood Ditch near Unity (d)	13271500	--	1918-20

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
BURNT RIVER BASIN-Continued			
Sawmill Creek near Unity (d)	13272000	--	1915
Burnt River at Bridgeport (d)	13274000	600	1915-16;1931-36
Burnt River near Bridgeport (d)	13274200	650	1957-80
Burnt River near Durkee (d)	13274500	700	1931-38
Burnt River at Huntington (d)	13275000	1,093	1929-32;1957-59;1962-80
POWDER RIVER BASIN			
Powder River near Baker (d)	13275500	219	1904-14;1929-68
Old Settlers Slough at Baker (d)	13276000	--	1913-14
Baldock Slough at Baker (d)	13276500	--	1913-14
Pine Creek near Baker (d)	13277500	8.8	1913-14;1929-30
Goodrich Creek near Baker (d)	13278000	3.1	1913
Mill Creek near Baker (d)	13279000	3.9	1913-14;1929-30
Marble Creek near Baker (d)	13279500	3.9	1913-14;1929-30
Salmon Creek near Baker (d)	13280000	4.4	1913-14;1929
Willow Creek near Haines (d)	13280500	2.4	1913
Powder River at Haines (d)	13281000	539	1914
Powder River near Haines (d)	13281500	572	1947-53
North Powder River near North Powder (d)	13282000	47.7	1912
Anthony Fork near North Powder (d)	13282500	37	1912
North Powder River at North Powder (d)	13283000	129	1912-14
Wolf Creek at Bauer's Ranch, near North Powder (d)	13283500	30	1913-14
Wolf Creek near North Powder (d)	13284000	32.9	1947-53
Powder River near North Powder (d)	13284500	860	1913-16;1920-25
Big Creek near Medical Springs (d)	13286000	35.5	1913-14
Goose Creek near Keating (d)	13286500	41.9	1913-14
Eagle Creek above West Fork, near Baker (d)	13287000	18	1911
West Fork Eagle Creek near Baker (d)	13287500	15	1911
Eagle Creek near Baker (d)	13288000	42	1909-10
Eagle Creek near Newbridge (d)	13288500	170	1910-11;1914
Daly Creek near Richland (d)	13289000	40.5	1913
Powder River near Robinette (d)	13289500	1,660	1929-57
IMNAHA RIVER BASIN			
Imnaha River above Gumbo Creek (d)	13291000	99.6	1945-53
Big Sheep Creek near Joseph (d)	13291500	12.5	1920
GRANDE RONDE RIVER BASIN			
Meadow Creek near Starkey (d)	13318000	140	1932-35
Meadow Creek below Smith Creek, near Starkey (d)	13318050	33.2	1978-79
Meadow Creek above Bear Creek, near Starkey (d)	13318060	48.2	1978-79
Grande Ronde River near Hilgard (d)	13318500	505	1938-56
Grande Ronde River at Hilgard (d)	13318800	555	1967-81
Grande Ronde River at La Grande (d)	13319000	678	1904-15;1918-23;1926-89
Little Creek near Union (d)	13321000	30.4	1918
Ladd Creek near Hot Lake (d)	13321500	40	1918
Mill Creek near Cove (d)	13322000	11.6	1918;1920-21
Mill Creek near Summerville (d)	13322500	--	1914-15
Grande Ronde River near Elgin (d)	13323500	1,250	1956-81
Indian Creek near Imbler (d)	13323600	22.0	1938-50
Grande Ronde River at Elgin (d)	13324000	1,400	1903-12;1918-19
Wallowa Falls powerplant tailrace near Joseph (d)	13324500	--	1925-52;1967-83
East Fork Wallowa River near Joseph (d)	13325000	10.3	1925-52;1967-82
Wallowa River above Wallowa Lake, near Joseph (d)	13325500	43.0	1924-33;1937-38;1940-41
Wallowa Lake near Joseph (g)	13326000	50.8	1904-06;1912-15;1926-91
Joseph powerplant tailrace at Joseph (d)	13326500	--	1951-56
Wallowa River at Joseph (d)	13327500	50.9	1904-07;1908-14;1915;1927-91
Hurricane Creek near Joseph (d)	13329500	29.6	1915;1924-78
Wallowa River at Wallowa (d)	13329900	--	1976-77
Wallowa River near Wallowa (d)	13331000	520	1904-07
Wallowa River at Minam (d)	13332000	880	1904-14
Grande Ronde River at Rondowa (d)	13332500	2,550	1927-91
Joseph Creek at Chico (d)	13333500	280	1931-33

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
WALLA WALLA RIVER BASIN			
South Fork Walla Walla River near Milton-Freewater (d)	14010000	63.0	1903;1906-17;1931-91
South Fork Walla Walla River blw PP&L plant, near Milton (d)	14010500	80.0	1904-06;1931-45
North Fork Walla Walla River near Milton-Freewater (d)	14010800	34.4	1970-91
North Fork Walla Walla River near Milton (d)	14011000	43.8	1930-69
Walla Walla River near Milton (d)	14011500	130	1905-06;1918-29
Walla Walla River at Milton (d)	14012000	155	1903-05
Walla Walla River below Freewater (d)	14012500	160	1941-48
COLUMBIA RIVER MAIN STEM			
Columbia River at McNary Dam, near Umatilla (d)	14019200	214,000	1951-81
UMATILLA RIVER BASIN			
North Fork Umatilla River near Gibbon (d)	14019500	31	1912-15;1940-43
Umatilla River at Gibbon (d)	14020500	310	1896-99;1900-01;1902-12
Umatilla River near Cayuse (d)	14020700	384	1969-75
Umatilla River at Pendleton (d)	14021000	637	1891-92;1904-05;1935-89
Umatilla River above McKay Creek, near Pendleton (d)	14022000	700	1921-34
McKay Creek near Pilot Rock (d)	14022500	180	1921;1927-89
McKay Reservoir near Pendleton (g)	14023000	186	1927-92
McKay Creek near Pendleton (d)	14023500	186	1919-23;1925-91
McKay Creek at mouth, near Pendleton (d)	14024000	190	1903-04;1922-24
East Birch Creek near Pilot Rock (d)	14024200	69.7	1968-73
Birch Creek near Pilot Rock (d)	14024500	240	1920-26
Birch Creek at Rieth (d)	14025000	291	1921-23;1927-76
Umatilla River near Yoakum (d)	14025500	1,260	1915-36
Umatilla River at Yoakum (d)	14026000	1,280	1903-91
Butter Creek near Pine City (d)	14032000	291	1928-88
WILLOW CREEK BASIN			
Rhea Creek near Heppner (d)	14034800	120	1960-91
Willow Creek near Morgan (d)	14035000	630	1921;1929-31
Willow Creek above Eightmile Canyon, near Arlington (d)	14035500	680	1905
Willow Creek near Arlington (d)	14036000	850	1906;1961-79
JOHN DAY RIVER BASIN			
Strawberry Creek above Slide Creek, near Prairie City (d)	14037500	7.00	1931-91
Strawberry Creek near Prairie City (d)	14038000	15	1916-17;1925-30
John Day River at Prairie City (d)	14038500	231	1916-17;1925-68
John Day River near John Day (d)	14038530	386	1969-94
John Day River near Dayville (d)	14039000	960	1909-14;1920-21;1925-26
South Fork John Day River near Dayville (d)	14039500	590	1952-56
South Fork John Day at Dayville (d)	14040000	600	1909-14;1920-21;1925-26
John Day River at Picture Gorge, near Dayville (d)	14040500	1,680	1986-91
Mountain Creek near Mitchell (d)	14040600	20.0	1986-89
Desolation Creek near Dale (d)	14041000	108	1915-17;1949-58
North Fork John Day River near Dale (d)	14041500	525	1930-58
Camas Creek near Lehman (d)	14042000	60.7	1951-70
Camas Creek near Ukiah (d)	14042500	121	1914-17;1920-24;1932-91
Cable Creek near Ukiah (d)	14043000	39	1914-17;1919-24;1932-37;1939
Snipe Creek near Ukiah (d)	14043560	37.0	1968-73
Fox Creek at gorge, near Fox (d)	14044500	90.2	1931-58
Cottonwood Creek near Monument (d)	14045000	210	1926-31
Cottonwood Creek at Monument (d)	14045500	232	1925
John Day River at Clarno (d)	14047000	5,940	1914-15;1920-21
Lone Rock Creek near Lonerock (d)	14047380	69	1966-74;1976-91
Rock Creek above Whyte Park near Condon (d)	14047390	297	1976-89
Rock Creek at Rock Creek (d)	14047500	500	1905;1911
DESCHUTES RIVER BASIN			
Deschutes River above Snow Creek, near La Pine (d)	14049000	109	1922-25
Snow Creek above Crane Prairie, near La Pine (d)	14049500	23.0	1922-25
Deschutes River below Snow Creek, near La Pine (d)	14050000	32	1938-91
Cultus River above Cultus Creek, near La Pine (d)	14050500	16.5	1923-25;1938-91
Cultus Creek abv Crane Prairie Reservoir, nr La Pine(d)	14051000	33.2	1924;1938-91
Cultus River below Cultus Creek, near La Pine (d)	14051500	52.8	1922
Deer Creek above Crane Prairie Reservoir, near La Pine (d)	14052000	21.5	1924;1938-91
Quinn River near La Pine (d)	14052500	--	1922-25;1938-91

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
DESCHUTES RIVER BASIN--Continued			
Charlton Creek above Crane Prairie Reservoir, near La Pine (d)	14053000	15.6	1923-24;1938-79
Crane Prairie Reservoir near La Pine (e)	14053500	254	1923-91
Deschutes River blw Crane Prairie Reservoir, nr La Pine (d)	14054000	254	1907-08;1912-17;1922-91
Brown Creek near La Pine (d)	14054500	21.0	1922-25;1938-91
Deschutes River above Davis Creek, near La Pine (d)	14055000	290	1925-32
Odell Creek near Crescent (d)	14055500	39.0	1912-14;1924;1933-76
Deschutes River below Wickiup Reservoir, near La Pine (d)	14056500	483	1938-91
Deschutes River at Pringle Falls, near La Pine (d)	14057000	507	1916-17;1922-60
Fall River near La Pine (d)	14057500	45.1	1938-91
Deschutes River near La Pine (d)	14058000	600	1910-17;1920;1922
Deschutes River near Lava (d)	14058500	659	1905-07;1909-12
Little Deschutes River at Crescent (d)	14059000	109	1905-08;1911-14
Crescent Lake near Crescent (e)	14059500	60.7	1922-91
Crescent Creek at Crescent lake, near Crescent (d)	14060000	60.7	1911;1912-15;1927;1928-91
Crescent Creek below Cold Creek, near Crescent (d)	14060500	77.0	1922-26;1931-32
Big Marsh Creek at Hoey Ranch, near Crescent (d)	14061000	51.5	1912-14;1924;1928-58
Crescent Creek near Crescent (d)	14061500	137	1912-14
Little Deschutes R above Walker Basin intake, nr La Pine (d)	14062000	307	1914-17;1919-26;1931-22
Little Deschutes River near La Pine	14063000	859	1911;1913-20;1924-94
Little Deschutes River at Allen's Ranch, near La Pine (d)	14063500	1,020	1905-12;1913-15;1931-32 1943-44
Deschutes River at Benham Falls, near Bend (d)	14064500	1,759	1906-14;1921;1924-91
Deschutes River above Lava Island, near Bend (d)	14065000	1,790	1915-16;1943-50
Arnold Canal near Bend (d)	14065500	--	1913-90
Deschutes River below Lava Island, near Bend (d)	14066000	1,829	1926-65
Central Oregon Canal above Pilot Butte Canal (d)	14066500	--	1933-90
Deschutes County Mncpl Improvement Dist Canal at Bend (d)	14068500	--	1923-90
North Unit Main Canal near Bend (d)	14069000	--	1946-90
North Canal near Bend (d)	14069500	--	1913-90
Swalley Canal near Bend (d)	14070000	--	1913-90
Deschutes River below Bend (d)	14070500	1,899	1915-91
Bridge Creek near Bend (d)	14070700	6.58	1981-85
Tumalo Creek near Tumalo (d)	14071500	30.9	1906-14
Tumalo Creek near Bend (d)	14073000	47.3	1913-21;1922;1923-87
Deschutes River at Tumalo (d)	14074000	1,983	1910-12;1914-15
Deschutes River at Cline Falls, near Redmond (d)	14074500	2,080	1910-13;1928-46
Snow Creek near Sisters (d)	14074900	1.65	1986-91
Squaw Creek near Sisters (d)	14075000	45.2	1906-18;1919-94
South Fork Beaver Creek near Paulina (d)	14077000	95	1944-53
North Fork Beaver Creek near Paulina (d)	14077500	64.4	1942-54
Beaver Creek near Paulina (d)	14078000	450	1943-75
North Fork Crooked River above Deep Creek (d)	14078500	159	1942-54
North Fork Crooked River below Deep Creek (d)	14079000	264	1947-53
Crooked River near Post (d)	14079500	2,160	1909-11;1940-62;1969-73
Crooked River above Prineville Reservoir, near Post (d)	14079800	2,400	1961-68
Bear Creek at Rickman Ranch, near Roberts (d)	14080000	44	1920-23
Bear Creek near Prineville (d)	14080250	205	1976-81
Prineville Reservoir near Prineville (e)	14080400	2,700	1961-91
Crooked River near Prineville (d)	14080500	2,700	1909-14;1941-91
Crooked River at Prineville (d)	14081500	2,820	1914
Marks Creek near Prineville (d)	14082500	61.0	1916
Ochoco Creek above Mill Creek, near Prineville (d)	14083000	200	1918-22;1924-33
Mill Creek near Prineville (d)	14083500	78.8	1916-18;1920-22;1924-33
Ochoco Creek at Elliott Ranch, near Prineville (d)	14085000	300	1909-10;1915-17
Ochoco Creek at Prineville (d)	14085500	358	1912;1914-15
McKay Creek near Prineville (d)	14086000	76.6	1925-32
McKay Creek above Old Dry Creek, near Prineville (d)	14086500	86.2	1918-19;1920
McKay Creek below Old Dry Creek, near Prineville (d)	14087000	103	1915
Crooked River near Terrebonne (d)	14087300	4,240	1968-73
Crooked River near Culver (d)	14087500	4,330	1918-63
Lake Creek near Sisters (d)	14088000	22.2	1912-13;1915-91
Metolius River at Allingham ranger station, near Sisters (d)	14088500	81.5	SS1911-13;1915-17
First Creek near Sisters (d)	14089000	12.2	1915-17;1924-28
Jack Creek near Sisters (d)	14089500	16.0	1915-16
Canyon Creek near Sisters (d)	14090000	32.5	1915-16
Whitewater River near Grandview (d)	14090500	30.6	1911-13
Metolius River at Riggs Ranch, near Sisters (d)	14092000	347	1909-12
Seekseequa Creek near Warm Springs (d)	14092150	47.3	1987-93
Shitike Creek at Warm Springs (d)	14093000	105	1911-16;1923-28;1973-74
Deschutes River at Mecca (d)	14093500	7,940	1911-27

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
DESCHUTES RIVER BASIN--Continued			
Trout Creek near Antelope (d)	14094000	220	1915-17
Trout Creek near Gateway (d)	14094500	-	1915-16
Hay Creek near Hay Creek (d)	14095000	78	1915-16
Mill Creek at outlet of Olallie Lake (d)	14096000	5.6	1915-16
Mill Creek near Warm Springs (d)	14096500	28.8	1915
Warm Springs River near Warm Springs (d)	14097000	517	1911-19
White River near Government Camp (d)	14097200	40.7	1970-1980
Clear Creek below Clear Lake, near Govt Camp (d)	14097400	8.32	1969-73
Clear Creek near Government Camp (d)	14097500	9.94	1941-41;1947-53
Clear Creek above intake, near Wapinitia (d)	14098000	17.7	1918-21;1934-35
Clear Creek Ditch near Government Camp (d)	14098100	-	1969-73
Clear Creek near Pine Grove (d)	14098600	38.3	1968-73
Gate Creek at Purcell Ranch, near Wamic (d)	14099500	23.9	1921-23
Gate Creek near Wamic (d)	14100000	28.3	1918
White River near Tygh Valley (d)	14100500	221	1911-18
White River below Tygh Valley (d)	14101500	417	1918-90
Deschutes River at Sherars Bridge (d)	14102000	10,200	1923-32
FIFTEENMILE CREEK BASIN			
Fifteenmile Creek near Dufur (d)	14104000	19.6	1918-19
Fifteenmile Creek near Wrentham (d)	14104500	171	1947-53
Eightmile Creek near Boyd (d)	14105000	56	1947-53
Fivemile Creek near The Dalles (d)	14105500	32.4	1926;1928;1930-31;1949-50
MILL CREEK BASIN			
South Fork Mill Creek near The Dalles (d)	14105850	28.0	1961-75
MOSIER CREEK BASIN			
Mosier Creek near Mosier (d)	14113200	41.5	1964-81
HOOD RIVER BASIN			
Dog River near Parkdale (d)	14113400	4.50	1961-71
East Fork Hood River above intake, near Mount Hood (d)	14113500	77.2	1915-22
East Fork Hood River near Mount Hood (d)	14115000	78.8	1913-14
East Fork Hood River near Dee (d)	14115500	108	1917
Clear Branch below Laurance Lake, near Parkdale (d)	14115815	8.62	1987-95
Hood River at Dee (d)	14116000	155	1913-17
Green Point Creek near Dee (d)	14116500	10.0	1919-21
North Fork Green Point Creek near Dee (d)	14117500	7.6	1919;1921
Green Point below North Fork, near Dee (d)	14118000	20.0	1950-54
West Fork Hood River near Dee (d)	14118500	95.6	1914-16;1932-91
Hood River at Winans (d)	14119000	259	1906-07;1910-12;1913
Hood River near Hood River (d)	14121000	329	1913-64
COLUMBIA RIVER MAIN STEM			
Columbia River at Bonneville Dam (g)	14128860	239,900	1981-87
Columbia River at Warrendale (g)	14128910	240,000	1972-87
Columbia River at Washougal (g)	14129400	240,000	1972-81;1990-93
SANDY RIVER BASIN			
Lost Creek near Brightwood (d)	14130000	11.2	1913-18
Little Zigzag River at Twin Bridges, near Rhododendron (d)	14131000	3.70	1926-36
Zigzag River near Rhododendron (d)	14131400	14.8	1981-93
Zigzag River at Rhododendron (d)	14131500	31.0	1920-21;1926-30
Sandy River above Salmon River, at Brightwood (d)	14133500	117	1910-14;1926-31
Salmon River near Government Camp (d)	14134000	8.00	1910-12;1926-91
Salmon River below Linney Creek (d)	14134500	54.0	1928-50
Salmon River at Welches (d)	14135000	100	1913-14;1920-21;1925-36
Salmon River above Boulder Creek, near Brightwood (d)	14135500	106	1936-52
Bull Run River below Lake Ben Morrow (d)	14139500	74.0	1930-54
Little Sandy River near Marmot (d)	14140500	17.9	1913-19
WILLAMETTE RIVER BASIN			
Hills Creek above Hills Creek Reservoir, near Oakridge (d)	14144900	52.7	1959-81
Hills Creek near Oakridge (d)	14145000	59.0	1935-43
Salt Creek near Oakridge (d)	14146000	113	1913-14;1934-51
Salmon Creek near Oakridge (d)	14146500	117	1910;1913-19;1934-85;1987-94
Gray Creek near Oakridge (d)	14146700	5.06	1979-86
Waldo Lake Outlet near Oakridge (d)	14147000	30.5	1937-53;1970-82;1984

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
WILLAMETTE RIVER BASIN--Continued			
N.Fork of Middle Fork Willamette River, nr Oakridge (d)	14147500	246	1910-16;1936-85;1987-94
Fall Creek above Winberry Creek, near Lowell (d)	14150500	127	1936-43
Winberry Creek near Lowell (d)	14150800	43.9	1964-81
Little Fall Creek near Fall Creek (d)	14151500	52.5	1936-48
Coast Fork Willamette River at London (d)	14152500	72.1	1936-87
Mosby Creek near Cottage Grove (d)	14156000	85.0	1936-46
Mosby Creek at mouth, near Cottage Grove (d)	14156500	95.3	1947-68;1970-81
Coast Fork Willamette River at Saginaw (d)	14157000	529	1924-26;1928-51
Willamette River at Springfield (d)	14158000	2,030	1912-13;1920-57
McKenzie River near Belknap Springs (d)	14158700	146	1958-62
Budworm Creek near Belknap Springs (d)	14158930	3.00	1979-83;1984-86
McKenzie River above Boulder Creek, near Belknap Springs (d)	14158955	--	1983
McKenzie River at McKenzie Bridge (d)	14159000	348	1910-94
Horse Creek near McKenzie Bridge (d)	14159100	149	1963-69
South Fork McKenzie River above Cougar Lake, nr Rainbow (d)	14159200	160	1958-87
Blue River above Quentin Creek (d)	14161000	11.5	1948-55
Blue River near Blue River (d)	14162000	75.0	1936-64
Gate Creek at Vida (d)	14163000	47.6	1952-57;1967-90
McKenzie River near Springfield (d)	14164000	1,066	1906-15
McKenzie River near Coburg (d)	14165500	1,337	1945-72
Coyote Creek near Crow (d)	14167000	95.1	1941-87
Amazon Creek at Eugene (d)	14169300	3.35	1963-75
Amazon Creek near Eugene (d)	14169500	21.3	1955-68;1980-82
Rock Creek near Philomath (d)	14170500	14.6	1946-52;1975-79
Marys River near Philomath (d)	14171000	159	1941-85
Muddy Creek near Corvallis (d)	14171500	107	1964-68
Calapooia River at Holley (d)	14172000	105	1936-90
Calapooia River at Albany (d)	14173500	372	1941-81
East Humbug Creek near Detroit (d)	14178700	7.32	1978-94
Breitenbush River above French Creek, near Detroit (d)	14179000	106	1933-87
Middle Santiam River near Upper Soda (d)	14185700	74.6	1981-94
Middle Santiam River near Cascadia (d)	14185800	104	1963-81
Packers Gulch near Cascadia (d)	14185880	7.45	1984-86;1988
Middle Santiam River near Foster (d)	14186000	271	1932-47
Middle Santiam River at mouth, near Foster (d)	14186500	287	1951-66
South Santiam River at Foster (d)	14186700	493	1967-73
Wiley Creek at Foster (d)	14187100	62.3	1974-88
Crabtree Creek near Crabtree (d)	14188700	111	1964-70
Thomas Creek near Scio (d)	14188800	109	1963-87
Luckiamute River near Hoskins (d)	14189500	34.3	1935-78
Luckiamute River at Pedee (d)	14190000	115	1940-70
Little Luckiamute River at Falls City (d)	14190100	22.7	1965-71
Rickreall Creek near Dallas (d)	14190700	27.4	1957-78
Mill Creek at Penitentiary Annex, near Salem (d)	14191500	104	1940-56
Mill Creek at Salem (d)	14192000	110	1940-78
South Yamhill River near Willamina (d)	14192500	133	1934-93
Willamina Creek near Willamina (d)	14193000	64.7	1934-91
Mill Creek near Willamina (d)	14193300	27.4	1958-73
South Yamhill River near Whiteson (d)	14194000	502	1940-91
North Yamhill River near Fairdale (d)	14194300	9.03	1959-66;1968-91
Haskins Creek near McMinnville (d)	14195000	6.48	1928-51
North Yamhill River near Pike (d)	14196500	47.8	1940-51
North Yamhill River at Pike (d)	14197000	66.8	1948-73
Willamette River at Wilsonville (d)	14198000	8,400	1948-73
Molalla River above Pine Creek, near Wilhoit (d)	14198500	97.0	1936-93
Molalla River near Molalla (d)	14199000	201	1906-09;1947-51
Molalla River near Canby (d)	14200000	323	1929-59;1964-78
Silver Creek at Silverton (d)	14200300	47.9	1964-68;1971-79
Pudding River near Mount Angel (d)	14201000	204	1940-66
Butte Creek at Monitor (d)	14201500	58.7	1936;1941-52;1967-85
Tualatin River near Gaston (d)	14202500	48.5	1941-56;1973-76;1979-84
Scoggins Creek above Henry Hagg Lake, near Gaston (d)	14202850	15.9	1973-76
Sain Creek near Gaston (d)	14202920	10.3	1973-76
Scoggin Creek near Gaston (d)	14203000	43.3	1941-74
Gales Creek near Gales Creek (d)	14204000	33.2	1936-45;1964-70
Gales Creek near Forest Grove (d)	14204500	66.1	1941-56;1971-81
East Fork Dairy Creek at Mountaindale (d)	14205500	43.0	1941-51
Dairy Creek near Cornelius (d)	14205800	147	1974-76
McKay Creek near North Plains (d)	14206000	27.6	1941-43;1949-56

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
WILLAMETTE RIVER BASIN--Continued			
McKay Creek near Hillsboro (d)	14206180	61.0	1973-76
Tualatin River at Farmington (d)	14206500	568	1940-58;1973-76
Oswego Canal near Lake Oswego (d)	14207000	--	1929-91
Clackamas River at Big Bottom (d)	14208000	136	1920-70
Collawash River near Breitenbush (d)	14208300	142	1966-68
Oak Grove Fork at Timothy Meadows (d)	14208500	54.0	1913-14;1916-29
Roaring River near Estacada (d)	14209600	42.4	1966-68
Clackamas River near Clackamas (d,g)	14211000	930	(d)1963-83; (g)1988-89
Willamette River at Portland (d)	14211720	11,100	1973-94
COLUMBIA RIVER MAIN STEM			
Columbia River at Columbia City (g)	14222880	254,000	1971-81
Columbia River at Longview, WA (g)	14245300	256,700	1984-90
Bear Creek near Svensen (d)	14248700	3.33	1966-75
Youngs River near Astoria (d)	14251500	40.1	1928-58
NESTUCCA RIVER BASIN			
Trask River near Tillamook (d)	14302500	145	1932-55;1962-72
Nestucca River near McMinnville (d)	14303000	12.0	1929-44
Nestucca River near Beaver (d)	14303600	180	1965-91
SILETZ RIVER BASIN			
Sunshine Creek near Valsetz (d)	14304350	6.70	1973-91
Big Rock Creek near Valsetz (d)	14304850	6.90	1986-89
YAQUINA RIVER BASIN			
Yaquina River near Chitwood (d)	14306030	71.0	1973-91
Mill Creek near Toledo (d)	14306036	4.18	1961-73
ALSEA RIVER BASIN			
North Fork Beaver Creek near Seal Rock (d)	14306040	10.0	1966-67
North Fork Alsea River at Alsea (d)	14306100	63.0	1958-89
South Fork Alsea River near Alsea (d)	14306200	49.5	1961-63
Fall Creek near Alsea (d)	14306300	29.4	1961-63
Five Rivers near Fisher (d)	14306400	114	1961-63;1968-90
Drift Creek near Salado (d)	14306600	20.5	1959-63;1966-70
Needle Branch near Salado (d)	14306700	.27	1959-73
Flynn Creek near Salado (d)	14306800	.78	1959-73
Deer Creek near Salado (d)	14306810	1.17	1959-73
BIG CREEK BASIN			
Big Creek near Roosevelt Beach (d)	14306900	11.9	1973-91
SIUSLAW RIVER BASIN			
Siuslaw River above Wildcat Creek, at Austa (d)	14307000	267	1932-40
Lake Creek at Triangle Lake (d)	14307500	52.5	1932-55
Lake Creek near Deadwood (d)	14307580	174	1968-89
Siuslaw River near Mapleton (d)	14307620	588	1968-94
North Fork Siuslaw River near Minerva (d)	14307645	41.2	1968-85
UMPQUA RIVER BASIN			
Jackson Creek near Tillier (d)	14307700	152	1956-86
South Umpqua River at Days Creek (d)	14308600	641	1975-90
Days Creek at Days Creek (d)	14308700	55.3	1956-72
South Myrtle Creek near Myrtle Creek (d)	14310700	43.9	1956-72
North Myrtle Creek near Myrtle Creek (d)	14311000	54.2	1956-86
Olalla Creek near Tenmile (d)	14311200	61.3	1957-73
Tenmile Creek at Tenmile (d)	14311300	29.6	1968-73
Deer Creek near Roseburg (d)	14312200	53.2	1956-73
Silent Creek near Diamond Lake (d)	14312400	8.24	1972-77
Lake Creek near Diamond Lake (d)	14312500	54.9	1923-29;1930;1931-53 1972-84
North Umpqua River at Toketee Falls (d)	14315500	339	1926-45;1947-48
North Umpqua River above Rock Creek, near Glide (d)	14317500	886	1925-45
Rock Creek near Glide (d)	14317600	97.4	1958-73
Little River at Peel (d)	14318000	177	1955-89
North Umpqua River near Glide (d)	14318500	1,210	1916-18;1928-38
Sutherlin Creek at Sutherlin (d)	14319200	16.4	1956-67
Calapooya Creek at Nonpareil (d)	14319900	88.6	1977-88
Elk Creek near Drain (d)	14322000	104	1956-73;1978-79

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

Station name	Station number	Drainage area (mi ²)	Period of record
UMPQUA RIVER BASIN--Continued			
Umpqua River near Scottsburg (d)	14322900	4,095	1967-69
Smith River near Gardiner (d)	14323100	206	1966-73
Tenmile Creek near Lakeside (d)	14323200	87.0	1958-76
COOS RIVER BASIN			
West Fork Millicoma River near Allegany (d)	14324500	46.9	1955-81
COQUILLE RIVER BASIN			
South Fork Coquille River above Panther Creek, nr Illahe (d)	14324600	31.2	1957-70
South Fork Coquille River near Illahe (d)	14324700	40.6	1957-74
South Fork Coquille River near Powers (d)	14324900	93.2	1957-70
Middle Fork Coquille River near Myrtle Point (d)	14326500	305	1931-46
North Fork Coquille River near Fairview (d)	14326800	73.9	1964-81
North Fork Coquille River near Myrtle Point (d)	14327000	282	1929-46;1964-68
SIXES RIVER BASIN			
Sixes River at Sixes (d)	14327150	116	1968-70
Elk River near Sixes (d)	14327300	86.1	1968-70
ROGUE RIVER BASIN			
Rogue River above Bybee Creek, near Union Creek (d)	14327500	156	1930-52
Mill Creek near Prospect (d)	14329500	32.0	1926-35
South Fork Rogue River above Imnaha Creek, near Prospect (d)	14330500	52.0	1932-49
Imnaha Creek near Prospect (d)	14331000	26.0	1932-49
Middle Fork Rogue River near Prospect (d)	14333000	56.5	1926-55
Red Blanket Creek near Prospect (d)	14333500	45.5	1926-32;1934-81
South Fork Rogue River south of Prospect (d)	14334700	246	1969-92
Rogue River below South Fork Rogue River, near Prospect (d)	14335000	650	1929-65
Rogue River at McLeod (d)	14335075	697	1978-81
South Fk Big Butte Creek, abv Willow Cr, nr Butte Falls (d)	14335200	67.6	1986-91
South Fork Big Butte Creek near Butte Falls (d)	14335500	138	1911;1915;1918-22;1925-91
South Fork Little Butte Collect Canal near Pinehurst (d)	14339400	--	1961-65
South Fork Little Butte Creek at Big Elk Ranger Station (d)	14339500	16.6	1927-50
Dead Indian Collect Canal near Pinehurst (d)	14340400	--	1961-65
South Fork Little Butte Creek near Lakecreek (d)	14341500	138	1922-57;1961-82
North Fork Little Butte Creek at Fish Lake, nr Lakecreek(d)	14342500	20.8	1915;1917-89
North Fork Little Butte Creek near Lakecreek (d)	14343000	43.8	1912-13;1917;1923-27;1929-64;1966-85
N F Little Butte Creek abv Intake Canal, near Lakecreek (d)	14344500	60.4	1918-19;1922-50
Little Butte Creek above Eagle Point (d)	14347000	269	1917-26;1929
Little Butte Creek below Eagle Point (d)	14348000	293	1908-16;1924-26;1946-50
Emigrant Creek near Ashland (d)	14350000	64.3	1920-86
West Fork Ashland Creek near Ashland (d)	14353000	10.5	1925-33;1975-82
East Fork Ashland Creek near Ashland (d)	14353500	8.14	1925-33;1975-82
Evans Creek near Bybee Springs, near Rogue River (d)	14359500	116	1925-27;1951-53
Middle Fork Applegate River near Copper (d)	14361590	50.7	1980-87
Elliott Creek near Copper (d)	14361600	51.8	1978-87
Carberry Creek near Copper (d)	14361700	68.9	1978-87
Applegate River near Ruch (d)	14363000	302	1912-14;1926-53
Powell Creek near Williams (d)	14368500	8.17	1947-58
Slate Creek at Wonder (d)	14370000	31.4	1944-57
Grave Creek at Pease Bridge, near Placer (d)	14371500	22.1	1941-89
Grave Creek near Placer (d)	14372000	45.6	1914;1941-50
East Fork Illinois River near Takilma (d)	14372500	42.3	1926;1927-32;1941-91
Althouse Creek near Holland (d)	14373500	24.3	1947-53
Sucker Creek near Holland (d)	14375000	76.2	1942-65
Sucker Creek below Little Grayback Creek, near Holland (d)	14375100	83.9	1966-91
Elk Creek near O'Brien (d)	14375400	26.6	1986-91
West Fork Illinois River below Rock Creek, near O'Brien (d)	14375500	42.4	1955-85
West Fork Illinois River near O'Brien (d)	14376500	49.7	1947-54
Illinois River at Kerby (d)	14377000	364	1926-61
Deer Creek near Dryden (d)	14377500	22.0	1942-56
Illinois River near Selma (d)	14378000	665	1957-68
Illinois River near Agness (d)	14378200	988	1961-81

WATER RESOURCES DATA FOR OREGON, 1995

xxv

DISCONTINUED SURFACE-WATER QUALITY STATIONS

The following continuous-record water-quality stations in Oregon have been discontinued. Continuous water-quality data were collected and published for the period of record shown for each station. For each station entry, a period of record, expressed in water years, is provided for each type of record listed. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page.

[Type of record: sc (specific conductance), ph (pH), t (temperature), do (dissolved oxygen)

tb (turbidity), sed (sediment)]

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record
MALHEUR AND HARNEY LAKES BASIN				
Donner und Blitzen River near Frenchglen	10396000	200	t, sc	1976-81
OWYHEE RIVER BASIN				
Owyhee River near Rome	13181000	8,000	t	1973-77
Owyhee River at Owyhee	13184000	11,300	t, sc	1980-82
Bully Creek near Vale	13227000	570	t, sed	1959-62
POWDER RIVER BASIN				
Powder River at Baker	13277000	351	sed	1961
Powder River near Richland	13286700	1,310	t	1960-61
Eagle Creek above Smith Creek near New Bridge	13288200	156	t	1960-61
GRANDE RONDE RIVER BASIN				
Imnaha River at Imnaha	13292000	622	t	1966-68;1977
Meadow Creek below Smith Creek near Starkey	13318050	33.2	t	1978-79
Meadow Creek above Bear Creek near Starkey	13318060	48.2	t	1978-79
Grande Ronde River at La Grande	13319000	678	t	1960-61
Wallowa River at Wallowa	13329900	--	t	1977
Lostine River near Lostine	13330000	70.9	t	1958
Lostine River at Lostine	13330200	--	t	1976-77
Minam River at Minam	13331500	240	t	1966-85
Grande Ronde River at Rondowa	13332500	2,555	t	1960-61
WALLA WALLA RIVER BASIN				
South Fork Walla Walla River near Milton-Freewater	14010000	63	t	1960-61
COLUMBIA RIVER MAIN STEM				
Columbia River at McNary Dam	14019200	214,000	t	1962
			sed	1966
Columbia River at Umatilla	14019250	214,000	t	1975-79
UMATILLA RIVER BASIN				
Umatilla River above Meacham Creek near Gibbon	14020000	131	t	1960-80
Umatilla River near Umatilla	14033500	2,290	t	1963-69
WILLOW CREEK RIVER BASIN				
Willow Creek at Heppner	14034500	96.8	t	1963-68; 1972-73
			sed	1963-68
Willow Creek near Arlington	14036000	850	t	1963-68
			sed	1963-70
JOHN DAY RIVER BASIN				
South Fork John Day River near Dayville	14039500	590	t	1952-56
Desolation Creek near Dale	14041000	108	t	1958
Middle Fork John Day River at Ritter	14044000	515	t	1967-68
North Fork John Day River at Monument	14046000	2,520	t	1967-68
John Day River at McDonald Ferry	14048000	7,580	t	1963-68 1976-81
			sc	1976-81
			sed	1963-70
Columbia River at Biggs Junction	14048330	226,400	t	1975-76

DISCONTINUED SURFACE-WATER QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record
DESCHUTES RIVER BASIN				
Deschutes River at Benham Falls	14064500	1,759	t	1968-80
Deschutes River near Culver	14076500	2,705	t	1955-57;1959-74
Crooked River at Post	14079500	2,160	t, sed	1960-62
Bear Creek in Prineville	14080250	205	t	1976
			sed	1976-80
Crooked River near Prineville	14080500	2,700	t, sed	1959
Crooked River below Opal Springs, near Culver	14087400	4,300	t	1964-74
Crooked River near Culver	14087500	4,330	t	1955-63
Metolius River near Grandview	14091500	316	t	1955-74
Deschutes River near Madras	14092500	7,820	t	1953-56
				1958;1972-88
White River below Tygh Valley	14101500	417	t, sed	1982
			tb	1982-83
Deschutes River at Moody	14103000	10,500	t	1955-58;1962-81
COLUMBIA RIVER MAIN STEM				
Columbia River at The Dalles	14105700	237,000	t	1956-70;1974-76
			sc	1965-85
Columbia River at Warrendale	14128910	240,000	t, sc	1976-92
Columbia River at Vancouver	14144700	241,000	t	1968-70;1973-79
			sed	1964-69
WILLAMETTE RIVER BASIN				
Middle Fork Willamette River near Oakridge	14144800	258	t	1957-87
Hills Creek above Hills Creek Reservoir, near Oakridge	14144900	52.7	t	1959-81
Middle Fork Willamette River below North Fork, near Oakridge	14148000	924	t	1951-87
Fall Creek near Lowell	14150300	118	t	1964-87
Winberry Creek near Lowell	14150800	43.9	t	1964-81
Middle Fork Willamette River at Jasper	14152000	1,340	t	1954-87
Coast Fork Willamette River at London	14152500	72.1	t	1961-65;1968-87
Coast Fork Willamette River near Goshen	14157500	642	t	1962-75
McKenzie River below Trail Bridge Dam, near Belknap Springs	14158850	184	t, sc	1977-85
McKenzie River at McKenzie Bridge	14159000	348	t, sc	1977-85
Horse Creek near McKenzie Bridge	14159100	149	t	1963-69;1984
South Fork McKenzie River above Cougar Lake, near Rainbow	14159200	160	t	1958-87
Blue River below Tidbits Creek, near Blue River	14161100	45.8	t	1964-87
Lookout Creek near Blue River	14161500	24.1	t	1952-55;1964-81
Blue River near Blue River	14162000	75	t	1962-64
McKenzie River at Finn Rock	14162400	--	t	1984
McKenzie River near Vida	14162500	930	t	1962-85
			sc	1977-85
Gate Creek at Vida	14163000	47.6	t	1984
McKenzie River at Leaburg Dam	14163100	--	t	1984
McKenzie River near Springfield	14164000	1,066	t	1984
Walterville Canal near Walterville	14164200	--	t	1984
McKenzie River above Hayden Bridge, at Springfield	14164900	--	t	1984
Mohawk River near Springfield	14165000	177	t	1964-69;1984
McKenzie River near Coburg	14165500	1,337	t	1964-75;1984
Willamette River at Harrisburg	14166000	3,420	t	1962-87
			sc, do	1970-76
			ph	1970-75
Willamette River above Calapooia River at Albany	14171750	4,460	t	1964-87
North Santiam River below Boulder Creek, near Detroit	14178000	216	t	1952-87
Breitenbush River above French Creek, near Detroit	14179000	108	t	1951;1954-87
North Santiam River at Fisherman's Bend, near Mill City	14181800	--	t	1986
Little North Santiam River near Mehama	14182500	112	t	1986
North Santiam River at Mehama	14183000	655	t	1986
North Santiam River near Jefferson	14184100	736	t	1985-86
South Santiam River below Cascadia	14185000	174	t	1963-63;1967;1970-87
Middle Santiam River near Cascadia	14185800	104	t	1964-79;1981-82

DISCONTINUED SURFACE-WATER QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record
WILLAMETTE RIVER BASIN--Continued				
Quartzville Creek near Cascadia	14185900	99.2	t	1964-87
Middle Santiam River at mouth, near Foster	14186500	287	t	1954-64;1966
South Santiam River at Foster	14186700	493	t	1968;1970-73; 1985
South Santiam River at Waterloo	14187500	640	t	1964-87
Crabtree Creek near Scio	14188750	--	t	1985
Thomas Creek near Scio	14188800	109	t	1963-75
Thomas Creek near Crabtree	14188850	--	t	1986
South Santiam River below Thomas Creek, near Jefferson	14188900	--	t	1986
Santiam River at Jefferson	14189000	1,790	t	1964-65;1967-87
Luckiamute River at Pedee	14190000	115	t	1965-70
Willamette River at Salem	14191000	7,280	t	1964-87
			sc	1952-60;1965-72 1976-84
Willamina Creek near Willamina	14193000	64.7	t	1964-68
South Yamhill River near Whiteson	14194000	502	t	1964-68
North Yamhill River at Pike	14197000	66.8	t	1964-69
Molalla River above Pine Creek, near Wilhoit	14198500	97	t	1964-69
Molalla River near Canby	14200000	323	t	1964-69
Silver Creek at Silverton	14200300	47.9	t	1964-68
Tualatin River near Gaston	14202500	48.5	t	1979-84
Tualatin River near Dilley	14203500	125	t	1964-68
Gales Creek near Gales Creek	14204000	33.2	t	1964-69
Tualatin River at West Linn	14207500	706	t	1964-68;1976-81
			sc	1976-81
Willamette River at Oregon City	14207700	10,000	t	1963-67
Clackamas River near Clackamas	14211000	930	t	1964-76
Willamette River at Portland	14211720	11,100	t, sc	1976-81
Willamette River above St. Johns Bridge, at Portland	14211805	11,450	t	1972-75
COLUMBIA RIVER MAIN STEM				
Columbia River at Columbia City	14222880	254,000	t	1971
Columbia River near Columbia City	14222890	253,900	t	1969-72
Columbia River at Kalama	14222910	254,000	t	1969-79
Columbia River at Prescott	14223780	254,200	t	1968-69
Columbia River at Rainier	14245295	256,700	t	1972-79
Columbia River at Longview, WA	14245300	256,700	t	1968-72
Columbia River at Beaver Army Terminal, near Quincy	14246900	256,900	t	1968-70
Columbia River at Wauna	14247295	256,900	t	1972-76
Columbia River at Bradwood	14247400	257,100	t	1977-81
Columbia River at Altoona, WA	14248600	258,000	t	1972-79
Bear Creek near Svenson	14248700	3.33	t	1966-75
PACIFIC SLOPE BASINS IN OREGON				
NEHALEM RIVER BASIN				
Nehalem River near Foss	14301000	667	t	1975-81
			sc	1981
NESTUCCA RIVER BASIN				
Trask River near Tillamook	14302500	145	t	1962-71
Nestucca River near Beaver	14303600	180	t	1965-87
SILETZ RIVER BASIN				
Big Rock Creek near Valsetz	14304850	6.90	t	1979-85
Siletz River at Siletz	14305500	202	t	1979-85
YAQUINA RIVER BASIN				
Yaquina River near Chitwood	14306030	71	sed	1973-74
ALSEA RIVER BASIN				
North Fork Beaver Creek near Seal Rock	14306040	10	t	1966-67
North Fork Alsea River at Alsea	14306100	63	t	1958-66
South Fork Alsea River near Alsea	14306200	49.5	t	1958-63
Fall Creek near Alsea	14306300	29.4	t	1959
Five Rivers near Fisher	14306400	114	t	1959

DISCONTINUED SURFACE-WATER QUALITY STATIONS

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record
ALSEA RIVER BASIN--Continued				
Alsea River near Tidewater	14306500	334	t, sc sed	1980-81 1973-74
Drift Creek near Salado	14306600	20.5	t	1959-63;1969-70
Needle branch near Salado	14306700	0.27	t, sed	1959-73
Flynn Creek near Salado	14306800	0.78	t, sed	1959-73
Deer Creek near Salado	14306810	1.17	t, sed	1959-73
SIUSLAW RIVER BASIN				
Siuslaw River near Mapleton	14307620	588	t sc sed	1968-75;1978-81 1978-81 1968-75
UMPQUA RIVER BASIN				
South Umpqua River at Days Creek	14308600	641	t tb sc, ph, do	1971-82;1991-92 1973-82 1991-92
North Umpqua River at Winchester	14319500	1,344	t	1971-91
Umpqua River near Elkton	14321000	3,683	t	1971-92
COOS RIVER BASIN				
West Fork Millicoma River near Allegany	14324500	46.9	t	1973-76
COQUILLE RIVER BASIN				
South Fork Coquille River near Illahe	14324700	40.6	t	1971-74
Rock Creek near Illahe	14324800	--	t	1958
South Fork Coquille River near Powers	14324900	93.2	t	1957-70
SIXES RIVER BASIN				
Sixes River at Sixes	14327150	116	t sed	1968 1968-70
ROGUE RIVER BASIN				
South Fork Rogue River south of Prospect	14334700	246	t sed	1969-92 1977-81
Rogue River at Grants Pass	14361500	2,459	t	1956-58;1974-87
Middle Fork Applegate River near Copper	14361590	50.7	t	1980-87
Elliott Creek near Copper	14361600	51.8	t sed	1978-87 1978-80
Carberry Creek near Copper	14361700	68.9	t sed	1978-87 1981
Rogue River near Merlin	14370400	3,268	t	1975-87
Rogue River at Marial	14372250	3,812	t	1975-87
Rogue River near Agness	14372300	3,939	t	1961-87
Illinois River near Selma	14378000	665	t	1962-68

WATER RESOURCES DATA FOR OREGON, 1995

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with state agencies, obtains a large amount of data pertaining to the water resources of Oregon each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Oregon."

This report includes records on both surface and ground water in the State. Specifically, it contains: (1) Discharge records for 201 stream-gaging stations, stage only records for 4 gaging stations, 63 partial-record or miscellaneous streamflow stations, and 1 crest-stage, partial-record streamflow station; (2) stage and content records for 33 lakes and reservoirs; (3) water-quality records for 54 streamflow-gaging stations, 1 lake and 6 ungaged streamsites; (4) water-quality for 2 atmospheric disposition stations; (5) water-level records for 2 observation wells; and (6) air-temperature records for 2 data sites.

This series of annual reports for Oregon began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one or two volumes, data on quantities of surface water, quality of surface and ground water, and ground-water levels. In 1981, the annual report was divided into two volumes: Volume 1 described the activities for Eastern Oregon, while Volume 2 described the activities for Western Oregon. Beginning with the 1985 water year, presentation of ground-water levels in this report was discontinued. In 1991, the annual report returned to a single volume report.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Oregon were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10, 11, 13, and 14." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in the libraries of the principal cities of the United States, or if not out of print, may be purchased from the U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, CO 80225. For further ordering information, telephone (303) 236-7476.

Publications similar to this report are published annually by the Geological Survey for all states. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report OR-95-1." For archiving and general distribution, the reports for 1971-74 water years also are 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. For further ordering information, the Customer Inquiries telephone number is (703) 487-4650.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on back of title page or by telephone (503) 251-3201 or by calling 1-800-USA MAPS.

The USGS is continually updating the availability of its information on the World Wide Web. Current streamflow conditions (via satellite) for Oregon and other water resource information can be found at the following Universal Resource Locator (URL): <<http://www.oregon.wr.usgs.gov>>. Nationwide information on water resources, including real-time and historic streamflow data, water-use data, publications and USGS program activities, can be found at URL: <<http://h2o.usgs.gov>>.

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:

State of Oregon Water Resources Department, Martha O. Pagel, Director.
 State of Oregon Department of Fish and Wildlife, Rudy Rosen, Director.
 State of Oregon Department of Environmental Quality, Langdon Marsh, Director.
 Clackamas County, Helene K. Lichtman, director.
 Coos Bay-North Bend Water Board, Robert K. Schab, General Manager.
 Eugene Water and Electric Board, Everett Jordan, General Manager.
 Coos County, Board of Commissioners, Beverly Owen, Chair.
 Douglas County, Natural Resources Division of Public Works, Frank M. Nielsen, Division Manager.
 City of Albany, Steve Bryant, City Manager.
 City of Ashland, Department of Public Works, Steven M. Hall, Director.
 City of Gresham, Department of Environmental Services, Mel Miracle.
 City of McMinnville, Kent Taylor, City Manager.
 City of McMinnville Water and Light, John L. Harshman, General Manager.
 City of Portland, Bureau of Environmental Services, Dean Marriott, Director.
 City of Portland, Bureau of Water Works, Michael F. Rosenberger, Administrator.
 City of West Linn, David Monson, Director of Public Works.
 The Confederated Tribes of the Umatilla Indian Reservation, Donald G. Sampson, Chair, Board of Trustees.
 The Confederated Tribes of the Warm Springs Indian Reservation, Bruce Brunoe, Chair of Tribal Council.
 Unified Sewage Agency, Bill Gaffi, General 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; Grayco Resources, Inc.; Idaho Power Co.; Middle Fork Irrigation District; Pacific Power Co.; Portland General Electric Co.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

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.

Surface-water Conditions

The 1995 water year brought a welcome change to streamflows throughout Oregon. Dry conditions which had persisted for the previous 8 out of 10 years gave way to normal conditions during the year. Rivers and streams which experienced critical low flows during the previous year saw flows return to normal. The long-term gage on the South Fork of the Coquille River, along the southern Oregon coast, recorded flows which were only 49 percent of the long-term average during the previous year. By the end of the 1995 water year, flows had recovered and were to 138 percent of average. Many other basins followed a similar pattern.

The 1995 water year began with flows generally below average during the period October to December as indicated by the flows in the Rogue and Umpqua basins which ranged from a low of 64 percent for November to a high of 67 percent in December. The month of February had the greatest runoff during the year as indicated by flows of the Owyhee River in southeastern Oregon which were 270 percent of average.

Streamflows across the state generally returned to normal by the end of April. At that time, flows ranged from a low of 80 percent of average in the Upper Deschutes basin of central Oregon to a high of 144 percent in Lake County of south-central Oregon.

By the close of the water year total runoff for long-term index stations was normal ranging from a low of 73 percent in the Upper Deschutes basin to a high of 148 percent in the Imnaha basin of eastern Oregon.

No significant flooding was reported during the year. Peak streamflows recorded during the year for selected gages are shown in Table 1.

Table 1.--Comparison of peak discharge for the 1995 water year with peak discharge for the period of record at long-term stations

Station number	Station name	Drainage area (mi ²)	Peak discharge		Recurrence Interval (years)	Peak discharge period of record	
			1995 water year Date	ft ³ /s		Date	ft ³ /s
10396000	Donner und Blitzen near Frenchglen	a200	May 6	2,180	5	Apr. 26, 1978	4,270
11502500	Williamson River below Sprague River near Chiloquin	a3,000	Apr. 12	2,910	2	Dec. 26, 1964	16,100
13181000	Owyhee River near Rome	8,000	Feb. 2	*16,600	<5	Mar. 18, 1993	55,700
13331500	Minam River at Minam	240	June 5	2,840	2	June 16, 1974	6,260
14048000	John Day River at McDonald Ferry	a7,580	Mar. 17	13,100	2	Dec. 24, 1964	42,800
14137000	Sandy River near Marmot	262	Oct. 31	25,400	<10	Dec. 22, 1964	61,400
14178000	North Santiam River below Boulder Creek near Detroit	216	Feb. 1	10,100	5	Dec. 22, 1964	26,700
14301000	Nehalem River near Foss	667	Dec. 20	29,700	2	Jan. 9, 1990	53,400
14321000	Umpqua River near Elkton	3,683	Jan. 10	96,900	2	Dec. 23, 1964	265,000
14325000	South Fork Coquille River at Powers	169	Jan. 9	24,100	<10	Dec. 22, 1964	48,900

a Approximately.

< Less than indicated value

* Flow regulated by upstream reservoir.

NOTE.--The recurrence interval, or return period, of a flood of a given magnitude is the average interval of time within which the given flood will be exceeded once by the annual maximum discharge. The recurrence interval is inversely related to the chance of a specific flood discharge being exceeded in any one year. Thus, a flood with a 50-year recurrence interval would have 1 chance in 50 of being exceeded in any one year. Recurrence intervals are average figures based on historical data; because the occurrence of floods is erratic, the 50-year flood may not necessarily occur in any given 50-year period, or floods of this magnitude may occur several times during that period. A similar relation is true for a flood of any given recurrence interval.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 53 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in national or regional water-quality planning and management. The 284 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150 station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, diverse, and geographically distributed part of the Nation's ground- and surface-water resources, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

Assessment activities have begun in about two-thirds of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Radiochemical Programs is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1995 water year that began October 1, 1994, and ended September 30, 1995. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The

following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The two systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for surface-water stations where only miscellaneous measurements are made. Basin designation is based on the Hydrologic Unit Map for Oregon prepared in cooperation with the U.S. Water Resources Council (1974).

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 14105700, which appears just to the left of the station name, includes the two-digit Part number "14" plus the six-digit downstream-order number "105700." The Part number designates the major river basin; for example, part "14" refers to the Pacific slope basins in Oregon and lower Columbia River basin.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude (figure 1, page 6). The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a one-second grid. This site-identification number, once assigned, is a pure number, and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description.

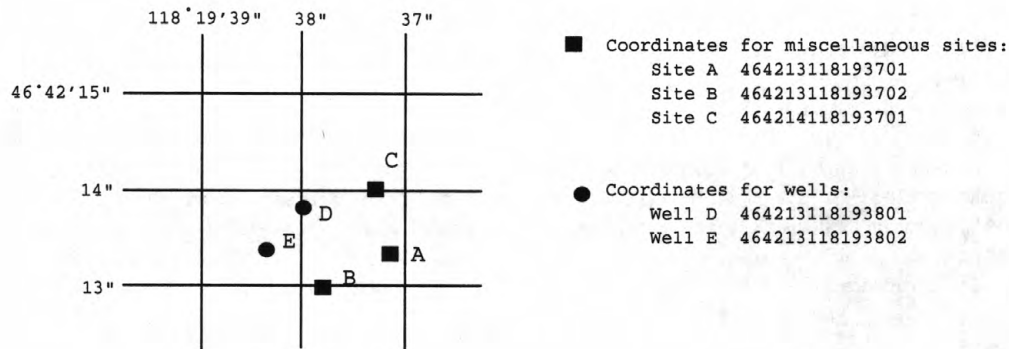


Figure 1. System for numbering wells and miscellaneous sites (latitude and longitude).

Local Identifier Well-Numbering System

In addition to the latitude-longitude based site identification number, wells in the State of Oregon are assigned local well numbers. These numbers are based on and show locations of wells according to the rectangular system for subdivision of public land, indicating township, range, section, and 40-acre tract within the section. For example, in the well number 25/43E-15M1, the part preceding the hyphen indicates successively the township and range (T.25 N., R.43 E.) north and east of the Willamette base line and meridian. The first number following the hyphen indicates the section (sec.15) and the letter (M) given the 40-acre subdivision of the section as shown in figure 2, page 7. The last number (1) is the serial number of the well in that particular 40-acre tract. Thus, the first well recorded in NW 1/4 SW 1/4 sec.15, T.25 N., R.43 E., would have the number 25/43-15M1, and the second well would have the number 25/43-15M2 or 25/43E-15M2.

R. 43 E.

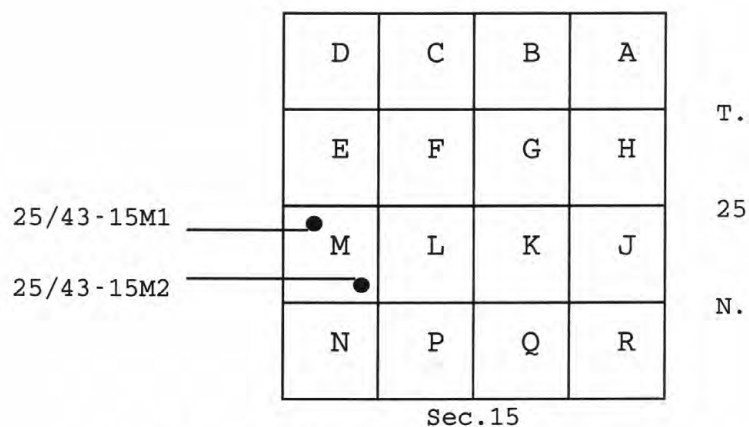


Figure 2. Local identifier well numbering system.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relations between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relation between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey that are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapter A6. These methods are described in standard textbooks, Water-Supply Paper 2175, and the U.S. Geological Survey Techniques of Water

Resources Investigations (TWRI's), Book 3, Chapter A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. 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 the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some gaging stations, acoustic velocity meter (AVM) systems are used to compute discharge. The AVM system measures the stream's velocity at one or more paths in the cross section. Coefficients are developed to relate this path velocity to the mean velocity in the cross section. Because the AVM sensors are fixed in position, the adjustment coefficients generally vary with stage. Cross-sectional area curves are developed to relate stage, recorded as noted above, to cross section area. Discharge is computed by multiplying path velocity by the appropriate stage related coefficient and area.

In computing records of lake or reservoir contents, it is necessary to have information available from surveys, curves, or tables that define the relation of stage to content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relation changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relation. Discharges over lake or reservoir spillways are computed from stage-discharge relations much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the validity of the recorded gage height is so questionable 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 from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description; the data table of daily mean values of discharges for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration. Summary statistics were not included for certain sites where these data would be misleading. Contact the District Office for further information concerning summary statistics for these sites.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages are based on information developed by the Hydraulics and Hydrology Committee of the Pacific Northwest River Basins Commission.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means the instantaneous maximum discharge was revised; "(m)" the instantaneous minimum was revised; and "(P)" the peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level (see "DEFINITION OF TERMS"), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily

Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, special methods of computation, conditions that affect natural flow at the station and, possibly, other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic average of the water-year mean discharges. Average discharge is computed only for stations having at least 5 water years of complete record; water years with incomplete record are not included in the computation. The mean-discharge value that uses all published data may differ from that given in the summary statistics data, which is based only on computer-stored data. The summary data does not include values of monthly or yearly data that were determined by various methods for the series of Water-Supply Papers entitled "Compilation of Records of Surface Water of the United States". The average-discharge value is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water projects that significantly alter flow at a station are put into use after the station has been in operation for a period of years, the new average is computed as soon as 5 water years of record have accumulated after the project began.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the Oregon office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream

stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Data table of daily mean values

The daily table for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for the month. Discharge for the month also is usually 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 or if the drainage area includes large noncontributing areas. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEAR _____-_____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly and daily flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS _____-_____", will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using computerized data for complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under

the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes. At least 5 complete years of record must be available before this statistic is published for the designated period.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1 - March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

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

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason

are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual state data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

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

The accuracy attributed to the records is indicated under the "REMARKS" paragraph. "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record. Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; the nearest tenth between 1.0 and 10 ft³/s; whole numbers between 10 and 1,000 ft³/s; and 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff because of the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation, or other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, changes in contents of reservoirs, or other changes incident to use and control. 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 losses are large in comparison with the observed discharge.

Other Records 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 1987 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.

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.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-site Measurements and Sample Collection

In obtaining water-quality data, it is important that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, treating the samples to prevent changes in quality pending analysis, and shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are detailed in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapter A1, A3, and A4. These references are listed in the PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS section of this report. These methods are consistent with ASTM standards and generally follow ISO standards. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey Oregon office.

One 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 needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see "DEFINITION OF TERMS") are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

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. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon

dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S. Geological Survey office whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the Oregon office.

Sediment

Suspended-sediment concentrations are determined from samples collected by one of the standard sampling techniques discussed in TWRI, Book 3, Chapter C2, "Field methods for measurement of fluvial sediment." Samples are obtained using standard depth- or point-integrating samplers, or by means of an approved pumping sampler. Mean concentrations for the sampled cross section are in turn determined from these samples.

During periods of rapidly changing flow or rapidly changing suspended-sediment concentration, samples may have been collected more frequently (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 loads for other periods of similar discharge. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

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

In addition to the records of suspended-sediment discharge, periodic measurements of particle-size distributions for the suspended-sediment, bed-load, and bed-material samples are included for stations where samples were obtained to measure this parameter.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for identification of biological populations, samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used to analyze sediment samples and to compute sediment records are described in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent

with ASTM standards and generally follow ISO standards.

In March 1989, the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia and consists of related files and data bases.

- * Station Header File - Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- * Daily Values File - Contains more than 220 million daily values of stream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
- * Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- * Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.
- * Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, Virginia 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk and on CD-ROM discs. For the 1990-93 water years, all water-data reports are available on Compact Disc - Read Only Memory (CD-ROM).

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 (SI) Units 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 equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

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

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while 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 are 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 that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters (mL) of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warmblooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 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 plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Base flow. See Base runoff.

Base runoff refers to sustained or fair weather runoff. In most streams, base runoff is composed largely of ground-water effluent. The term base flow is often used in the

same sense as base runoff. However, the distinction is the same as that between streamflow and runoff. When the concept in the terms base flow and base runoff is that of the natural flow in a stream, base runoff is the logical term.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

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

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

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

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

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

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

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

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

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

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.

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.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

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 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day [$(\text{ft}^3/\text{s})/\text{d}$] 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, about 646,000 gallons, or 2,445 cubic meters.

Cubic feet per second per square mile [(ft³/s)/mi²] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1 - March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

Dissolved refers to that material in a representative water sample which passes through a 0.45-um 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.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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 hydrologic data are 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 computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO₃).

Hydrologic Bench-Mark Network is a network of more than 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

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

eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (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 concentration of chemical constituents in solution. Milligrams per liter represents the mass 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 dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) 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.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in national or regional water-quality planning and management. The several hundred sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objective of NASQAN is to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting. The design of the network is intended to provide data for (1) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (2) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (3) a nationally consistent data base useful for water-quality assessment and hydrologic research.

National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

NTU (Nephelometric Turbidity Unit) is a method of quantitative analysis in which the concentration or particle size of suspended matter in a liquid is determined by measurement of light absorption.

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meter (m²), acre, or hectare. 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 milliliter (mL) or liter (L). Numbers 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.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and (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 a particle determined by either 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 the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
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 matter 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 composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 disintegrations per minute (dpm).

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 the primary food producers in the aquatic environment, and are commonly known as algae.

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

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

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

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 aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2 \cdot \text{time})$] for periphyton and macrophytes and [$\text{mg C}/(\text{m}^3 \cdot \text{time})$] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [$\text{mg O}/(\text{m}^2 \cdot \text{time})$] for periphyton and macrophytes and [$\text{mg O}/(\text{m}^3 \cdot \text{time})$] for phytoplankton are units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent 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.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN, 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.

Sea level, in this report, refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed very close to the bed surface. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total-sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Seven-day 10-year low flow (7 Q10) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical

current. It is expressed in microsiemens 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 microsiemens). 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 the 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" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-um filter.

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-um 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 are 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-um 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.....	Ephemeroptera
Family.....	Ephemeridae
Genus.....	<u>Hexagenia</u>
Species.....	<u>Hexagenia limbata</u>

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

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

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

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

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 determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

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 are required of all laboratories performing such analyses, because different digestion procedures are likely to produce different

analytical results.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Water year in Geological Survey reports dealing with surface-water supply is 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, 1980, is called the "1980 water year."

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).

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 water year after thorough mixing in the reservoir.

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

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting 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) pertains to 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 Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

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1-D2. Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

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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.

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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.

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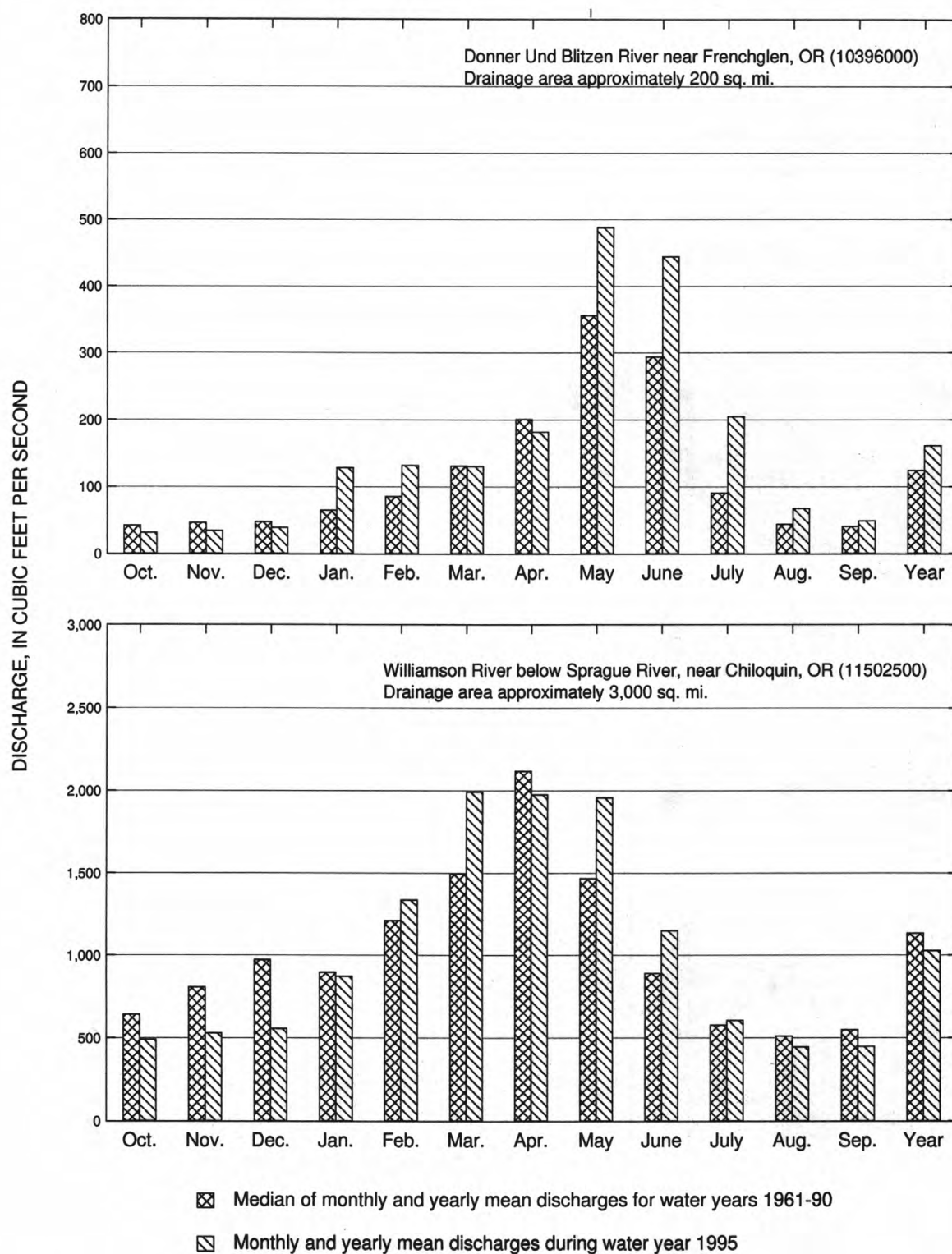


Figure 3. Discharge during 1995 water year compared with median discharge for period 1961-90 for two representative gaging stations in Eastern Oregon.

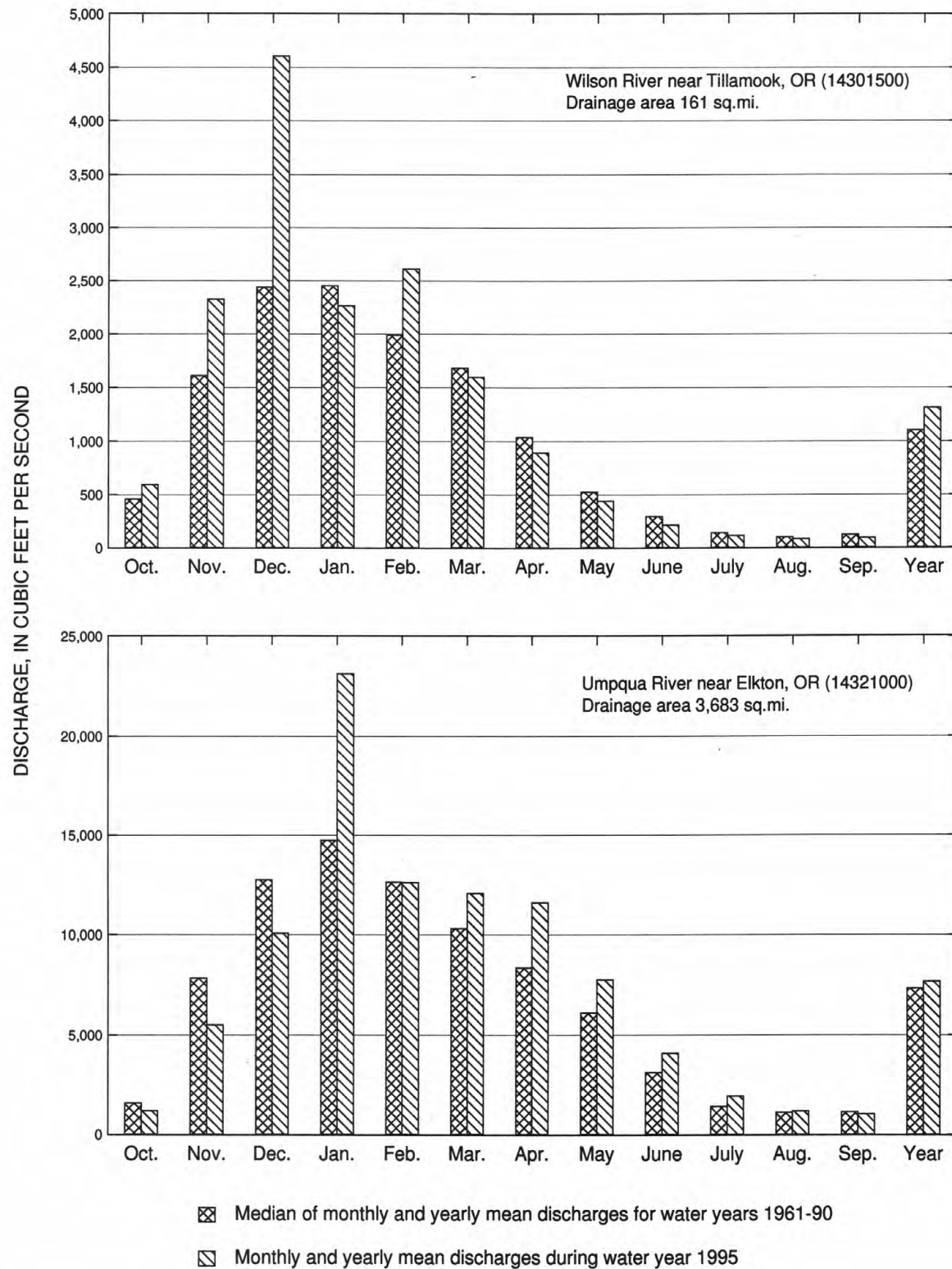


Figure 4. Discharge during 1995 water year compared with median discharge for period 1961-90 for two representative gaging stations in Western Oregon.

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SURFACE-WATER RECORDS

Remark Codes

The following remark codes may appear with the water-quality data in this section:

PRINTED OUTPUT	REMARK
E	Estimated value
<	Actual value is known to be less than the value shown
>	Actual value is known to be greater than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
ND	Materials specifically analyzed for but not detected

Dissolved Trace-Element Concentrations

NOTE.--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (ug/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ug/L). Data above the ug/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Change in National Trends Network Procedures

NOTE.--Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

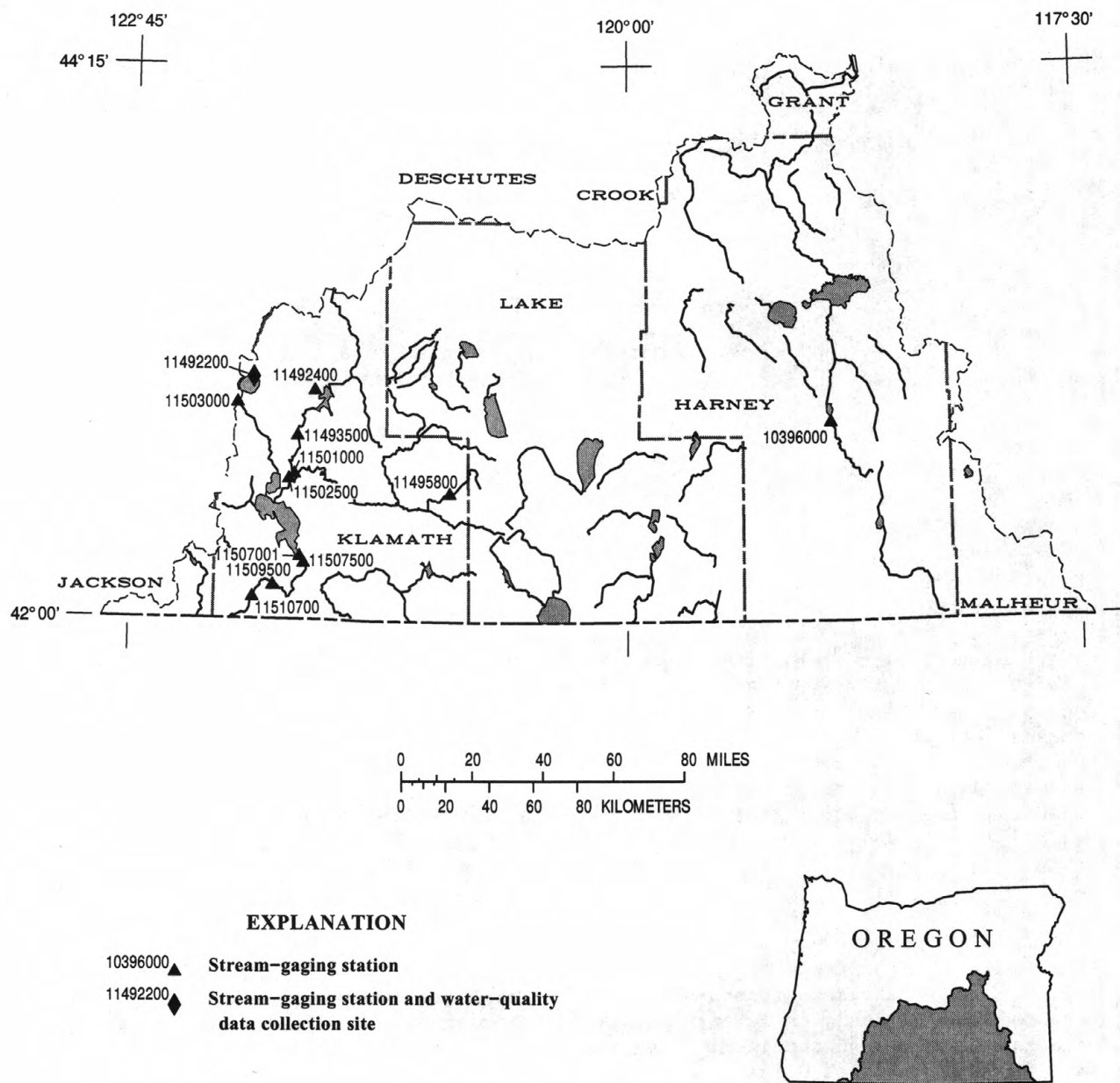


Figure 5. Location of surface-water and water-quality stations in The Great Basin and the Klamath River Basin.

THE GREAT BASIN

MALHEUR AND HARNEY LAKES BASIN

10396000 DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OR

LOCATION.--Lat 42°47'28", long 118°52'00", in NW 1/4 NW 1/4 sec.20, T.32 S., R.32-1/2 E., Harney County, Hydrologic Unit 17120003, Bureau of Land Management land, on left bank 1.5 mi upstream from upper diversions for Malheur National Wildlife Refuge, 2.0 mi downstream from Fish Creek, and 3.5 mi southeast of Frenchglen.

DRAINAGE AREA.--200 mi², approximately.

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

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

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

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station. Periodic water-quality records for the period March 1975 to September 1986 and continuous water-quality records for the period October 1975 to September 1981 have been collected at this location. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--65 years (water years 1912-13, 1915-16, 1918-21, 1939-95), 126 ft³/s, 91,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,270 ft³/s Apr. 26, 1978, gage height, 7.15 ft, from floodmarks, from rating curve extended above 1,900 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 4.2 ft³/s Dec. 9, 1972, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	1900	1,020	4.28	May 1	1730	668	3.75
Jan. 30	1330	941	4.17	May 6	0930	*2,180	*5.54
Jan. 31	0600	883	4.09	May 23	0100	663	3.74
Feb. 1	2000	668	3.76	June 4	0100	768	3.92

Minimum discharge, 5.8 ft³/s Dec. 30, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	32	54	e15	442	111	100	371	629	346	89	51
2	29	32	56	e20	313	108	93	403	641	331	88	51
3	29	26	41	e25	171	112	95	329	675	389	87	53
4	30	33	32	e30	145	105	108	312	659	346	85	54
5	30	36	e25	52	128	102	124	336	651	297	83	51
6	30	37	e25	56	121	87	207	1580	480	291	82	50
7	30	34	e25	43	115	91	242	826	408	297	83	50
8	30	28	28	39	109	94	218	461	352	283	78	50
9	29	37	35	41	102	98	193	382	316	332	74	51
10	29	35	43	168	95	118	186	361	325	312	71	50
11	30	34	56	158	94	142	196	390	412	230	70	49
12	30	35	42	71	90	143	219	400	455	191	68	49
13	31	31	39	355	90	167	257	323	469	172	67	48
14	33	31	32	437	83	199	260	288	438	165	66	47
15	35	35	36	159	72	219	209	287	392	166	64	47
16	33	34	36	73	87	175	187	374	439	172	66	47
17	33	31	39	55	77	151	175	412	465	176	74	49
18	32	27	94	56	152	162	172	437	504	174	65	48
19	32	31	54	48	229	178	162	447	441	170	62	47
20	31	43	42	42	140	166	163	459	352	153	60	47
21	31	21	41	46	97	164	177	509	304	146	59	47
22	31	28	35	44	90	145	162	608	290	142	59	47
23	31	46	28	43	92	139	148	586	313	134	59	47
24	31	51	41	42	103	124	151	529	348	130	58	47
25	31	40	36	53	109	119	169	495	416	124	57	47
26	31	34	33	104	112	111	173	501	484	117	55	48
27	31	33	40	77	112	105	183	494	493	116	54	48
28	33	34	50	98	113	102	181	496	433	112	53	49
29	32	34	28	382	---	96	198	525	370	116	53	51
30	30	35	14	501	---	94	350	573	360	116	53	50
31	32	---	e15	622	---	94	---	630	---	94	52	---
TOTAL	960	1018	1195	3955	3683	4021	5458	15124	13314	6340	2094	1470
MEAN	31.0	33.9	38.5	128	132	130	182	488	444	205	67.5	49.0
MAX	35	51	94	622	442	219	350	1580	675	389	89	54
MIN	29	21	14	15	72	87	93	287	290	94	52	47
AC-FT	1900	2020	2370	7840	7310	7980	10830	30000	26410	12580	4150	2920

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1995, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
43.5	47.7	54.9	64.6	91.0	150
86.4	94.3	181	239	310	500
1985	1985	1965	1971	1921	1993
24.2	25.3	25.2	25.0	27.8	40.5
1993	1962	1960	1916	1964	1977
221	373	287	98.4	47.8	42.2
666	812	802	320	113	87.3
1952	1984	1917	1984	1984	1984
61.2	105	44.7	28.9	21.1	22.2
1968	1992	1992	1968	1992	1992

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1911 - 1995
ANNUAL TOTAL	27162	58632	
ANNUAL MEAN	74.4	161	126
HIGHEST ANNUAL MEAN			273
LOWEST ANNUAL MEAN			49.1
HIGHEST DAILY MEAN	526	May 10	2700
LOWEST DAILY MEAN	14	Dec 30	11
ANNUAL SEVEN-DAY MINIMUM	28	Sep 22	14
ANNUAL RUNOFF (AC-FT)	53880	116300	91040
10 PERCENT EXCEEDS	165	435	325
50 PERCENT EXCEEDS	40	92	57
90 PERCENT EXCEEDS	29	31	32

e Estimated

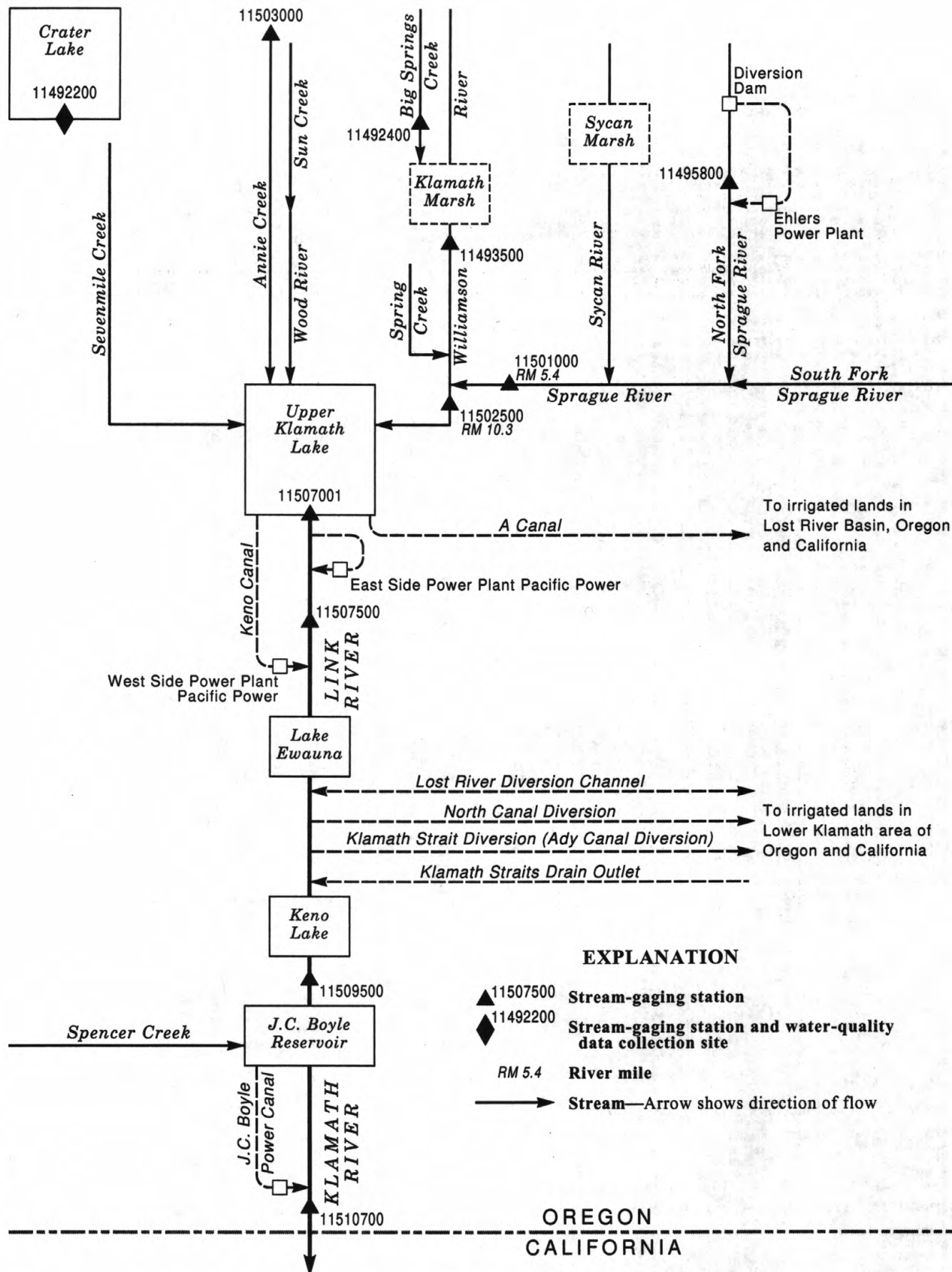


Figure 6. Schematic diagram showing gaging stations and major diversions in the Klamath Basin in Oregon.

KLAMATH RIVER BASIN

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

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

DRAINAGE AREA.--26.2 mi², of which 20.5 mi² is lake area at elevation 6,176 ft.

WATER-ELEVATION RECORDS

PERIOD OF RECORD.--October 1961 to current year. 1878 to September 1961 (fragmentary records) available in files of U.S. Geological Survey.

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 6,179.34 ft Mar. 25, 1975; minimum observed, 6,163.2 ft Sept. 10, 1942.

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

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6,168.92 ft July 18, 20, 25; minimum, 6,166.13 Oct. 26, 27 but may have been lower during period of no record.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	6166.26	6166.84	6166.68	6167.69	6167.64	6168.18	6168.59	6168.54	6168.72	6168.80	6168.24
2	---	6166.25	6166.83	6166.66	6167.73	6167.68	6168.17	6168.59	6168.54	6168.72	6168.79	6168.22
3	---	6166.24	6166.82	6166.64	6167.73	6167.69	6168.16	6168.61	6168.54	6168.71	6168.78	6168.19
4	---	6166.37	6166.78	6166.64	6167.72	6167.73	6168.17	6168.61	6168.58	6168.70	6168.76	6168.16
5	---	6166.38	6166.77	6166.65	6167.71	6167.71	6168.21	6168.60	6168.58	6168.70	6168.76	6168.15
6	---	6166.35	6166.81	6166.64	6167.69	6167.70	6168.29	6168.59	6168.61	6168.72	6168.75	6168.13
7	---	6166.34	6166.81	6166.72	6167.69	6167.72	6168.36	6168.58	6168.59	6168.71	6168.72	6168.10
8	---	6166.30	6166.78	6166.75	6167.66	6167.82	6168.37	6168.55	6168.58	6168.73	6168.70	6168.09
9	---	6166.43	6166.76	6166.91	6167.66	6167.87	6168.35	6168.58	6168.56	6168.83	6168.68	6168.08
10	---	6166.41	6166.75	6166.97	6167.66	6167.92	6168.35	6168.61	6168.58	6168.81	6168.66	6168.07
11	---	6166.40	6166.77	6167.03	6167.63	6167.93	6168.32	6168.62	6168.56	6168.81	6168.65	6168.05
12	---	6166.40	6166.77	6167.10	6167.63	6167.99	6168.43	6168.61	6168.56	6168.91	6168.63	6168.04
13	---	6166.37	6166.75	6167.18	6167.67	6168.09	6168.43	6168.59	6168.56	6168.90	6168.61	6168.03
14	---	6166.31	6166.77	6167.31	6167.66	6168.09	6168.42	6168.58	6168.63	6168.89	6168.60	6168.02
15	---	6166.44	6166.77	6167.33	6167.61	6168.07	6168.42	6168.57	6168.64	6168.89	6168.57	6168.00
16	---	6166.57	6166.82	6167.31	6167.72	6168.07	6168.41	6168.57	6168.64	6168.89	6168.55	6167.99
17	---	6166.61	6166.80	6167.30	6167.74	6168.16	6168.41	6168.56	6168.68	6168.88	6168.51	6167.97
18	6166.24	6166.57	6166.85	6167.33	6167.74	6168.14	6168.40	6168.56	6168.73	6168.92	6168.50	6167.95
19	6166.23	6166.60	6166.84	6167.31	6167.73	6168.26	6168.44	6168.55	6168.75	6168.92	6168.48	6167.94
20	6166.21	6166.61	6166.80	6167.28	6167.72	6168.27	6168.43	6168.54	6168.74	6168.91	6168.47	6167.91
21	6166.21	6166.58	6166.79	6167.26	6167.71	6168.28	6168.42	6168.55	6168.74	6168.90	6168.46	6167.88
22	6166.18	6166.57	6166.78	6167.24	6167.70	6168.31	6168.41	6168.55	6168.73	6168.89	6168.44	6167.86
23	6166.16	6166.60	6166.75	6167.27	6167.69	6168.30	6168.40	6168.54	6168.73	6168.88	6168.41	6167.85
24	6166.15	6166.64	6166.76	6167.25	6167.69	6168.28	6168.39	6168.55	6168.73	6168.87	6168.40	6167.83
25	6166.14	6166.68	6166.74	6167.25	6167.68	6168.27	6168.38	6168.54	6168.73	6168.91	6168.37	6167.82
26	6166.13	6166.67	6166.78	6167.24	6167.66	6168.25	6168.39	6168.54	6168.73	6168.90	6168.35	6167.84
27	6166.27	6166.72	6166.76	6167.25	6167.66	6168.24	6168.45	6168.54	6168.73	6168.88	6168.33	6167.81
28	6166.24	6166.68	6166.76	6167.29	6167.64	6168.23	6168.47	6168.53	6168.71	6168.87	6168.31	6167.82
29	6166.23	6166.75	6166.74	6167.32	---	6168.22	6168.48	6168.53	6168.71	6168.84	6168.28	6167.80
30	6166.22	6166.80	6166.73	6167.43	---	6168.20	6168.54	6168.53	6168.72	6168.82	6168.26	6167.79
31	6166.26	---	6166.70	6167.51	---	6168.21	---	6168.54	---	6168.81	6168.25	---
MAX	---	6166.80	6166.85	6167.51	6167.74	6168.31	6168.54	6168.62	6168.75	6168.92	6168.80	6168.24
MIN	---	6166.24	6166.70	6166.64	6167.61	6167.64	6168.16	6168.53	6168.54	6168.70	6168.25	6167.79

KLAMATH RIVER BASIN

11492200 CRATER LAKE NEAR CRATER LAKE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder from October 1963 to current year. Elevation of probe is approximately 6,157 ft above sea level.

REMARKS.--Samples were collected at boat harbor at end of trail in Cleetwood Cove and 6 mi northeast of Crater Lake post office. Records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 18.5°C Aug. 9, 10, 1978, several days in July and August, 1994; minimum recorded, 0.5°C on several days in 1969, but may have been as low or lower during period of missing record Oct. 29, 1985 to July 1, 1986.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.5°C Aug. 6, 7, 15, Sept. 18; minimum, 3.5°C Mar. 22-29, Apr. 16.

WATER-QUALITY DATA

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS, TOTAL (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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 18... JUN 1995	1230	108	7.6	10.5	0.2	27	6.6	2.6	10	43	0.8	1.7
30... SEP	1100	115	7.4	7.0	0.2	28	6.7	2.6	10	42	0.8	2.0
05...	1130	114	7.2	14.0	0.2	28	6.9	2.7	11	44	0.9	2.0

DATE	ALKALINITY, DIS-SOLVED FIELD (MG/L AS CaCO3)	BICARBONATE, DIS-SOLVED FIELD (MG/L AS HCO3)	CARBONATE, DIS-SOLVED FIELD (MG/L AS CO3)	SULFATE, DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)
OCT 1994 18...	--	--	--	10	9.9	0.1	17	62	76	0.08	<0.015
JUN 1995 30...	29	36	0	9.2	10	0.1	18	81	77	0.11	0.090
SEP 05...	28	35	0	9.4	9.7	<0.1	18	77	77	0.10	0.020

DATE	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM, DIS-SOLVED (UG/L AS LI)
OCT 1994 18...	<0.01	<0.2	<0.05	<0.01	<0.01	<0.01	<10	6	<3	4	46
JUN 1995 30...	<0.01	<0.2	<0.05	<0.01	0.02	<0.01	<10	6	<3	9	47
SEP 05...	<0.01	<0.2	<0.05	0.02	0.02	0.02	40	6	<3	15	46

DATE	MANGANESE, DIS-SOLVED (UG/L AS MN)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	URANIUM NATURAL, DIS-SOLVED (UG/L AS U)	URANIUM NATURAL 2 SIGMA, DIS-SOLVED WATER, (UG/L)	VANADIUM, DIS-SOLVED (UG/L AS V)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	RA-226 2 SIGMA, WATER, DISS, (PCI/L)
OCT 1994 18...	<1	10	<1	<1	<1	55	--	--	<6	--	--
JUN 1995 30...	1	<10	<1	<1	<1	58	<0.01	0	<6	0.02	0.01
SEP 05...	2	20	<1	<1	<1	59	--	--	<6	--	--

KLAMATH RIVER BASIN

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11492200 CRATER LAKE NEAR CRATER LAKE OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

KLAMATH RIVER BASIN

43

11492400 BIG SPRINGS CREEK BELOW LENZ RANCH, NEAR LENZ, OR

LOCATION.--Lat 42°55'26", long 121°44'21", in SE 1/4 SW 1/4 sec.35, T.30 S., R.8 E., Klamath County, Hydrologic Unit 18010201, on right bank 1.8 mi upstream from Klamath Marsh, 2.7 mi southeast of Lenz Ranch, and 4.1 mi east of Lenz.

DRAINAGE AREA.--Indeterminate, normal flow is from Big Springs and other springs or wells in area.

PERIOD OF RECORD.--May 1992 to September 1995 (discontinued).

GAGE.--Water-stage recorder and parshall flume. Elevation of gage is 4,516 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--3 years, 3.62 ft³/s, 2,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 95 ft³/s Mar. 20, 1993; minimum discharge, no flow many days during summer and fall months.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 22 ft³/s Feb. 5, maximum gage height, 3.56 ft Feb. 1, backwater from ice; minimum discharge, no flow many days October to December, June to September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.01	e.00	e10	e2.9	6.2	6.9	.42	.00	.00	.00
2	.00	.00	.83	e.00	e14	e2.9	5.8	5.9	.45	.00	.00	.00
3	.00	.00	e2.0	e.00	e17	e2.9	5.5	4.3	.35	.00	.00	.00
4	.00	.00	e1.9	e.00	e21	e2.8	5.0	7.4	.24	.00	.00	.00
5	.00	.00	e1.1	e.00	e22	e2.3	4.9	6.0	.10	.00	.00	.00
6	.00	.00	e.80	e.20	e21	e1.7	5.4	4.0	.08	.00	.00	.00
7	.00	.00	e.40	e.30	e18	e2.2	8.5	3.3	.31	.00	.00	.00
8	.00	.00	e.00	e1.0	e16	e3.1	8.3	3.3	.36	.00	.00	.00
9	.00	.00	e.00	e.00	e12	e6.0	6.9	3.3	.27	.00	.00	.00
10	.00	.00	e.00	e6.8	e7.0	e7.5	5.5	3.2	.11	.00	.00	.00
11	.00	.00	e.00	e7.6	e4.5	e7.0	4.6	2.9	.04	.00	.00	.00
12	.00	.00	e.00	e11	e3.0	e3.0	4.8	2.7	.01	.00	.00	.00
13	.00	.00	e.00	e14	e2.2	e2.0	7.4	2.4	.00	.00	.00	.00
14	.00	.00	e.00	e16	e1.9	e10	6.2	2.2	.08	.00	.00	.00
15	.00	.00	e.00	e19	e1.7	e9.0	4.8	2.0	.85	.00	.00	.00
16	.00	.00	e1.1	e17	e1.9	e6.0	3.9	1.9	1.3	.00	.00	.00
17	.00	.00	e1.3	e6.0	e2.0	e4.5	3.3	1.8	1.6	.00	.00	.00
18	.00	.00	e1.0	e3.9	e3.0	e7.0	2.6	1.7	1.7	.00	.00	.00
19	.00	.00	e.70	e2.5	e4.0	e6.2	2.4	1.5	1.8	.00	.00	.00
20	.00	.00	e.30	e2.3	e7.0	e7.2	2.5	1.4	1.9	.00	.00	.00
21	.00	.00	e.00	e2.1	e6.3	e5.8	2.5	1.6	1.9	.00	.00	.00
22	.00	.00	e.00	e2.0	e5.3	e4.0	2.1	2.3	1.9	.00	.00	.00
23	.00	.00	e.00	e1.9	e4.7	e5.1	1.7	2.1	1.6	.00	.00	.00
24	.00	.00	e.00	e1.9	e4.0	e6.2	1.5	1.9	1.1	.00	.00	.00
25	.00	.00	e.00	e1.9	e3.5	e7.0	1.2	1.8	.58	.00	.00	.00
26	.00	.00	e.00	e1.9	e3.2	e7.5	1.1	1.6	.22	.00	.00	.00
27	.00	.00	e.00	e2.0	e3.1	e7.8	1.9	1.4	.02	.00	.00	.00
28	.00	.00	e.00	e2.8	e3.0	e7.5	3.4	1.3	.01	.00	.00	.00
29	.00	.00	e.00	e4.1	---	e7.0	4.5	1.2	.00	.00	.00	.00
30	.00	.00	e.00	e6.0	---	e6.4	4.0	1.0	.00	.00	.00	.00
31	.00	---	e.00	e8.0	---	e6.3	---	.45	---	.00	.00	---
TOTAL	0.00	0.00	11.44	145.00	222.3	166.8	128.4	84.75	19.30	0.00	0.00	0.00
MEAN	.000	.000	.37	4.68	7.94	5.38	4.28	2.73	.64	.000	.000	.000
MAX	.00	.00	2.0	19	22	10	8.5	7.4	1.9	.00	.00	.00
MIN	.00	.00	.00	.00	1.7	1.7	1.1	.45	.00	.00	.00	.00
AC-FT	.00	.00	23	288	441	331	255	168	38	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1995, BY WATER YEAR (WY)

	1992	1993	1994	1995	1992	1993	1994	1995	1992	1993	1994	1995
MEAN	.92	1.55	1.78	3.24	4.34	13.5	11.9	3.35	1.90	.61	.39	.48
MAX	1.61	2.72	4.69	5.05	7.94	30.7	28.2	4.55	3.75	1.45	1.47	1.52
(WY)	1994	1993	1994	1994	1995	1993	1993	1993	1993	1992	1993	1993
MIN	.000	.000	.29	.000	.000	4.60	3.13	2.73	.40	.000	.000	.000
(WY)	1995	1995	1993	1993	1993	1994	1994	1995	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1992 - 1995

ANNUAL TOTAL	643.91	777.99	
ANNUAL MEAN	1.76	2.13	
HIGHEST ANNUAL MEAN			3.62
LOWEST ANNUAL MEAN			6.30
HIGHEST DAILY MEAN	18	22	2.13
LOWEST DAILY MEAN	.00	.00	95
ANNUAL SEVEN-DAY MINIMUM	.00	.00	Mar 20 1993
ANNUAL RUNOFF (AC-FT)	1280	1540	Dec 5 1992
10 PERCENT EXCEEDS	4.2	6.6	
50 PERCENT EXCEEDS	.00	.01	
90 PERCENT EXCEEDS	.00	.00	

e Estimated

KLAMATH RIVER BASIN

11493500 WILLIAMSON RIVER NEAR KLAMATH AGENCY, OR

LOCATION.--Lat 42°44'25", long 121°50'00", in NW 1/4 SW 1/4 sec.1, T.33 S., R.7 E., Klamath County, Hydrologic Unit 18010201, on right bank 250 ft downstream from highway bridge, 0.6 mi southwest of railroad station at Kirk, 10 mi upstream from Spring Creek, and 10 mi northeast of Klamath Agency.

DRAINAGE AREA.--1,290 mi², approximately.

PERIOD OF RECORD.--March 1908 to January 1909, April 1909 to June 1910, October 1954 to September 1995 (discontinued). Monthly discharge only June 1910, published in WSP 1315-B.

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

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

REMARKS.--Records good. Flow affected by natural storage in Klamath Marsh. Small diversions upstream from station for irrigation in vicinity of marsh.

AVERAGE DISCHARGE.--41 years (water years 1955-95), 184 ft³/s, 133,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,590 ft³/s Mar. 13, 1910, gage height, 3.7 ft, site and datum then in use, from rating curve extended above 800 ft³/s; maximum gage height, 5.75 ft Mar. 3, 1958; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 159 ft³/s Mar. 27, gage height, 3.91 ft; no flow Oct. 1 to Feb. 5, July 7 to Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	67	140	95	41	1.3	.00	.00
2	.00	.00	.00	.00	.00	66	136	96	42	.72	.00	.00
3	.00	.00	.00	.00	.00	66	132	98	39	.40	.00	.00
4	.00	.00	.00	.00	.00	61	127	103	34	.28	.00	.00
5	.00	.00	.00	.00	.11	65	123	106	32	.18	.00	.00
6	.00	.00	.00	.00	9.6	65	123	105	31	.10	.00	.00
7	.00	.00	.00	.00	12	64	118	103	33	.04	.00	.00
8	.00	.00	.00	.00	19	62	118	101	30	.00	.00	.00
9	.00	.00	.00	.00	24	61	128	99	26	.00	.00	.00
10	.00	.00	.00	.00	30	73	127	97	22	.00	.00	.00
11	.00	.00	.00	.00	32	83	127	93	21	.00	.00	.00
12	.00	.00	.00	.00	36	87	122	93	18	.00	.00	.00
13	.00	.00	.00	.00	45	95	130	97	17	.00	.00	.00
14	.00	.00	.00	.00	47	103	132	94	17	.00	.00	.00
15	.00	.00	.00	.00	49	113	133	88	19	.00	.00	.00
16	.00	.00	.00	.00	51	119	133	84	18	.00	.00	.00
17	.00	.00	.00	.00	52	119	125	81	16	.00	.00	.00
18	.00	.00	.00	.00	59	120	127	79	16	.00	.00	.00
19	.00	.00	.00	.00	62	127	119	75	15	.00	.00	.00
20	.00	.00	.00	.00	64	123	119	71	15	.00	.00	.00
21	.00	.00	.00	.00	66	129	121	69	12	.00	.00	.00
22	.00	.00	.00	.00	69	136	118	70	11	.00	.00	.00
23	.00	.00	.00	.00	69	141	113	66	9.6	.00	.00	.00
24	.00	.00	.00	.00	69	147	107	64	8.4	.00	.00	.00
25	.00	.00	.00	.00	68	151	106	61	7.5	.00	.00	.00
26	.00	.00	.00	.00	67	152	100	58	6.9	.00	.00	.00
27	.00	.00	.00	.00	68	154	98	56	6.4	.00	.00	.00
28	.00	.00	.00	.00	68	153	100	53	4.8	.00	.00	.00
29	.00	.00	.00	.00	---	148	99	49	2.6	.00	.00	.00
30	.00	.00	.00	.00	---	143	99	45	1.6	.00	.00	.00
31	.00	---	.00	.00	---	138	---	42	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	1135.71	3331	3600	2491	572.8	3.02	0.00	0.00
MEAN	.000	.000	.000	.000	40.6	107	120	80.4	19.1	.097	.000	.000
MAX	.00	.00	.00	.00	69	154	140	106	42	1.3	.00	.00
MIN	.00	.00	.00	.00	.00	61	98	42	1.6	.00	.00	.00
AC-FT	.00	.00	.00	.00	2250	6610	7140	4940	1140	6.0	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1995, BY WATER YEAR (WY)

	41.9	118	217	221	294	432	440	256	121	44.3	14.7	11.8
MEAN	41.9	118	217	221	294	432	440	256	121	44.3	14.7	11.8
MAX	255	391	580	730	799	1039	1081	952	531	332	146	95.8
(WY)	1958	1957	1956	1956	1965	1986	1956	1956	1956	1958	1958	1958
MIN	.000	.000	.000	.000	.000	58.6	22.3	7.35	.000	.000	.000	.000
(WY)	1962	1965	1991	1992	1993	1994	1992	1992	1992	1981	1961	1960

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1955 - 1995

ANNUAL TOTAL	3457.42	11133.53	
ANNUAL MEAN	9.47	30.5	184
HIGHEST ANNUAL MEAN			468
LOWEST ANNUAL MEAN			7.84
HIGHEST DAILY MEAN	95 Mar 24	154 Mar 27	1250 Mar 1 1958
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jul 23 1960
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Jul 23 1960
ANNUAL RUNOFF (AC-FT)	6860	22080	133000
10 PERCENT EXCEEDS	45	118	482
50 PERCENT EXCEEDS	.00	.00	106
90 PERCENT EXCEEDS	.00	.00	.00

KLAMATH RIVER BASIN

45

11495800 NORTH FORK SPRAGUE RIVER AT POWERPLANT, NEAR BLY, OR

LOCATION.--Lat 42°30'06", long 120°59'13", in SW 1/4 SE 1/4 sec.30, T.35 S., R.15 E., Klamath County, Hydrologic Unit 18010202, at powerplant 0.1 mi upstream from Yaden Creek, and 7.6 mi northeast of Bly.

DRAINAGE AREA.--77.7 mi².

PERIOD OF RECORD.--May 1993 to current year.

GAGE.--Water-stage record. Elevation of gage is 4,750 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. All records given herein do not include flow diverted through powerplant.

AVERAGE DISCHARGE.--3 years, 64.4 ft³/s, 46,670 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 730 ft³/s May 21, 1995, gage height, 6.70 ft; minimum discharge, 12 ft³/s Dec. 10, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 730 ft³/s May 21, gage height, 6.70 ft; minimum discharge, 13 ft³/s Jan. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	31	34	33	230	39	36	452	267	170	35	38
2	30	30	35	31	204	35	34	403	275	159	34	38
3	30	27	35	30	103	36	41	350	255	153	34	38
4	30	28	32	30	73	32	57	388	234	145	34	37
5	30	27	31	30	62	31	80	367	235	137	33	37
6	30	34	31	30	54	44	182	275	205	134	17	37
7	30	29	30	30	48	33	371	243	257	109	19	37
8	30	28	28	28	41	34	306	236	266	69	29	37
9	30	29	30	33	35	107	215	248	229	61	34	37
10	30	25	30	39	33	75	182	244	211	41	34	37
11	30	31	31	37	31	67	183	319	205	37	34	37
12	31	32	30	36	31	52	199	295	200	42	34	43
13	32	30	30	40	30	47	208	226	201	50	34	48
14	32	30	30	51	40	65	162	221	312	46	33	48
15	31	30	29	46	38	100	143	242	355	52	34	48
16	30	29	30	45	32	77	131	296	255	57	34	48
17	30	29	31	40	34	74	117	332	211	55	34	48
18	30	29	31	42	37	131	106	318	264	54	34	48
19	30	31	31	46	40	113	95	322	237	77	33	48
20	30	29	31	44	39	118	92	332	232	55	33	47
21	29	27	31	43	36	99	80	406	231	32	33	47
22	29	27	30	39	36	84	80	475	219	33	33	47
23	28	32	30	36	40	75	92	420	212	43	33	47
24	28	33	31	38	44	65	125	345	210	33	40	47
25	29	31	30	38	53	56	182	322	210	32	53	47
26	29	29	30	37	46	58	182	301	208	35	52	48
27	29	29	30	36	45	45	195	284	205	34	52	49
28	38	29	30	38	44	42	191	303	193	33	48	49
29	30	29	26	42	---	39	211	316	182	34	39	49
30	29	31	24	49	---	34	212	314	175	36	39	48
31	30	---	29	69	---	34	---	291	---	35	38	---
TOTAL	935	885	941	1206	1579	1941	4490	9886	6951	2083	1100	1314
MEAN	30.2	29.5	30.4	38.9	56.4	62.6	150	319	232	67.2	35.5	43.8
MAX	38	34	35	69	230	131	371	475	355	170	53	49
MIN	28	25	24	28	30	31	34	221	175	32	17	37
AC-FT	1850	1760	1870	2390	3130	3850	8910	19610	13790	4130	2180	2610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1995, BY WATER YEAR (WY)

	1993	1994	1995	1993	1994	1995	1993	1994	1995	1993	1994	1995
MEAN	35.1	32.8	34.3	36.4	46.0	50.0	101	250	148	44.2	31.5	33.1
MAX	40.0	36.2	38.2	38.9	56.4	62.6	150	386	232	67.2	35.5	43.8
(WY)	1994	1994	1994	1995	1995	1995	1995	1993	1995	1995	1995	1995
MIN	30.2	29.5	30.4	33.9	35.5	37.4	52.6	43.9	36.1	29.9	27.5	25.6
(WY)	1995	1995	1995	1994	1994	1994	1994	1994	1994	1993	1993	1993

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1993 - 1995
ANNUAL TOTAL	12965	33311	
ANNUAL MEAN	35.5	91.3	64.4
HIGHEST ANNUAL MEAN			91.3
LOWEST ANNUAL MEAN			37.6
HIGHEST DAILY MEAN	101	475	582
LOWEST DAILY MEAN	16	17	16
ANNUAL SEVEN-DAY MINIMUM	23	28	23
ANNUAL RUNOFF (AC-FT)	25720	66070	46670
10 PERCENT EXCEEDS	43	246	228
50 PERCENT EXCEEDS	32	39	36
90 PERCENT EXCEEDS	29	30	28

KLAMATH RIVER BASIN

11501000 SPRAGUE RIVER NEAR CHILOQUIN, OR

LOCATION.--Lat 42°35'05", long 121°50'55", in NE 1/4 NW 1/4 sec.35, T.34 S., R.7 E., Klamath County, Hydrologic Unit 18010202, on right bank 1.0 mi northeast of Chiloquin, 4.6 mi upstream from Modoc Point Canal intake, and at mile 5.4.

DRAINAGE AREA.--1,580 mi², approximately.

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

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

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

REMARKS.--Records good except for estimated daily discharges, which are fair. Minor regulation from irrigation diversions upstream from station.

AVERAGE DISCHARGE.--74 years (water years 1922-95), 573 ft³/s, 415,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,900 ft³/s Dec. 26, 1964, gage height, 10.37 ft; minimum daily discharge, 50 ft³/s May 26, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,630 ft³/s Feb. 5, gage height, 4.82 ft; minimum daily discharge, 120 ft³/s Nov. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	182	228	e245	e210	1290	601	1330	1510	1040	506	298	142
2	187	223	e260	e260	1760	617	1230	1700	1010	478	314	153
3	170	231	e280	e270	2210	638	1160	1810	972	462	305	157
4	170	237	e280	e290	2540	672	1100	1910	962	461	279	165
5	184	243	e265	e280	2580	820	1050	2020	944	455	261	161
6	178	232	e250	268	2200	1040	1040	2050	909	470	246	154
7	182	231	e225	264	1560	1010	1070	2020	902	455	244	158
8	192	236	e190	266	1200	862	1230	2010	929	473	235	157
9	190	246	e230	356	1040	873	1510	1990	913	471	233	152
10	180	244	e190	499	926	1130	1930	1910	894	442	224	160
11	182	238	e240	557	830	1470	2360	1820	815	413	208	162
12	182	246	e280	726	753	1820	2560	1720	731	402	212	166
13	189	237	e270	879	701	2110	2450	1670	671	388	216	173
14	194	234	e250	965	660	2310	2150	1650	644	409	219	187
15	207	233	e240	1110	617	2390	1970	1630	674	441	215	190
16	206	230	e265	1300	543	2240	2030	1550	748	470	212	184
17	201	e225	e275	1480	528	2090	2170	1450	871	462	222	223
18	220	e185	e280	1390	563	2190	2110	1380	952	460	230	225
19	225	e145	e280	861	597	2240	1890	1360	928	450	215	212
20	216	e205	e315	616	686	2080	1740	1360	904	469	199	207
21	212	e180	e305	520	744	2100	1590	1370	949	510	187	210
22	213	e120	e290	460	698	2230	1470	1360	979	462	176	204
23	211	e210	e283	446	657	2320	1400	1350	972	411	189	183
24	211	e205	260	440	632	2350	1320	1360	896	374	180	189
25	210	e220	246	434	616	2190	1210	1390	788	367	167	184
26	209	e200	252	439	616	1960	1140	1390	693	374	174	181
27	204	e220	253	436	610	1830	1140	1330	612	343	166	191
28	192	e210	e250	447	594	1690	1180	1280	581	331	174	205
29	195	e220	e245	473	---	1550	1270	1210	555	332	178	209
30	197	e230	e195	643	---	1470	1360	1140	533	318	170	219
31	215	---	e175	895	---	1400	---	1080	---	303	157	---
TOTAL	6106	6544	7864	18480	28951	50293	47160	48780	24971	13162	6705	5463
MEAN	197	218	254	596	1034	1622	1572	1574	832	425	216	182
MAX	225	246	315	1480	2580	2390	2560	2050	1040	510	314	225
MIN	170	120	175	210	528	601	1040	1080	533	303	157	142
AC-FT	12110	12980	15600	36660	57420	99760	93540	96760	49530	26110	13300	10840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1995, BY WATER YEAR (WY)

	294	342	464	502	657	927	1259	1125	604	279	219	235
MEAN	294	342	464	502	657	927	1259	1125	604	279	219	235
MAX	848	789	2853	1961	2764	2904	4250	3211	1762	560	405	374
(WY)	1963	1974	1965	1965	1982	1972	1956	1956	1983	1983	1956	1956
MIN	183	218	215	196	223	286	263	119	93.8	85.1	76.9	125
(WY)	1934	1995	1933	1937	1933	1992	1977	1992	1992	1994	1992	1992

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1921 - 1995
ANNUAL TOTAL	86315	264479	
ANNUAL MEAN	236	725	
HIGHEST ANNUAL MEAN			573
LOWEST ANNUAL MEAN			1395
HIGHEST DAILY MEAN	577	Mar 4	1999
LOWEST DAILY MEAN	58	Aug 20	14500
ANNUAL SEVEN-DAY MINIMUM	67	Jul 18	50
ANNUAL RUNOFF (AC-FT)	171200		65
10 PERCENT EXCEEDS	369		415000
50 PERCENT EXCEEDS	237		1280
90 PERCENT EXCEEDS	89		343
			200

e Estimated

ANNUAL TOTAL	187623			375224			
ANNUAL MEAN	514			1028		1036	
HIGHEST ANNUAL MEAN						2187	1956
LOWEST ANNUAL MEAN						483	1992
HIGHEST DAILY MEAN	852	Mar	4	2870	Apr	12	16000
LOWEST DAILY MEAN	288	Aug	6	401	Sep	1	288
ANNUAL SEVEN-DAY MINIMUM	294	Aug	4	413	Sep	1	294
ANNUAL RUNOFF (AC-FT)	372200			744300		750600	
10 PERCENT EXCEEDS	739			2220		1940	
50 PERCENT EXCEEDS	532			650		742	
90 PERCENT EXCEEDS	309			451		506	

KLAMATH RIVER BASIN

11503000 ANNIE SPRING NEAR CRATER LAKE, OR

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

DRAINAGE AREA.--Indeterminate, normal flow is entirely from Annie Spring.

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

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 5,982.65 ft above sea level (National Park Service bench mark).

REMARKS.--No estimated daily discharges. Records good. Fluctuations caused by pumps 0.1 mi upstream. Diversion for domestic use by National Park Service 0.1 mi upstream.

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

AVERAGE DISCHARGE.--18 years (water years 1978-95), 2.72 ft³/s, 1,970 acre-ft/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18 ft³/s July 6, 1984, gage height, 1.56 ft; minimum daily discharge, 0.28 ft³/s Mar. 2-5, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5.9 ft³/s June 30 to July 6, gage height, 1.21 ft; minimum daily discharge, 0.46 ft³/s Dec. 13, 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.80	.55	.54	.78	1.2	1.1	1.3	5.2	5.9	4.2	2.4
2	1.2	.79	.54	.54	.77	1.2	1.1	1.4	5.4	5.9	4.1	2.4
3	1.2	.79	.54	.52	.91	1.2	1.1	1.5	5.5	5.9	4.0	2.3
4	1.2	.79	.54	.53	.95	1.2	1.0	1.5	5.7	5.9	4.0	2.3
5	1.2	.79	.54	.54	1.0	1.2	1.0	1.6	5.7	5.9	4.0	2.3
6	1.1	.79	.54	.54	1.1	1.2	1.0	1.6	5.7	5.8	3.9	2.3
7	1.1	.77	.54	.54	1.1	1.3	1.1	1.6	5.8	5.8	3.9	2.3
8	1.1	.76	.51	.54	1.1	1.3	1.1	1.7	5.8	5.8	3.8	2.2
9	1.1	.76	.51	.54	1.1	1.2	1.1	1.7	5.8	5.7	3.7	2.2
10	1.1	.74	.51	.51	1.1	1.2	1.1	1.7	5.7	5.7	3.6	2.2
11	1.1	.72	.49	.54	1.1	1.2	1.1	1.7	5.7	5.7	3.5	2.2
12	1.1	.72	.48	.54	1.1	1.2	1.1	1.7	5.5	5.6	3.5	2.2
13	1.2	.71	.46	.54	1.2	1.2	1.1	1.7	5.5	5.6	3.4	2.2
14	1.1	.69	.46	.57	1.2	1.2	1.1	1.8	5.5	5.5	3.3	2.2
15	1.1	.69	.47	.57	1.2	1.2	1.1	1.8	5.5	5.4	3.2	2.2
16	1.1	.68	.49	.57	1.2	1.2	1.1	1.8	5.5	5.4	3.2	2.1
17	1.1	.66	.49	.57	1.1	1.2	1.1	1.8	5.5	5.3	3.1	2.1
18	1.1	.66	.49	.60	1.1	1.2	1.1	1.8	5.5	5.3	3.0	2.1
19	1.0	.66	.49	.60	1.1	1.2	1.1	1.9	5.5	5.2	2.9	2.1
20	1.0	.66	.49	.60	1.1	1.2	1.1	2.0	5.4	5.2	2.8	2.1
21	1.0	.66	.49	.59	1.1	1.3	1.1	2.0	5.4	5.1	2.7	2.1
22	1.0	.65	.50	.57	1.1	1.3	1.1	2.2	5.4	5.0	2.7	2.0
23	1.0	.63	.51	.57	1.0	1.4	1.1	2.8	5.4	4.9	2.8	2.1
24	.96	.63	.51	.60	1.0	1.3	1.2	3.1	5.4	4.8	2.7	2.0
25	.96	.62	.51	.60	1.0	1.3	1.2	3.5	5.4	4.7	2.6	2.0
26	.94	.60	.51	.60	1.1	1.2	1.2	3.8	5.5	4.6	2.6	2.0
27	.91	.60	.51	.60	1.1	1.1	1.2	4.0	5.7	4.6	2.6	2.0
28	.88	.60	.52	.60	1.1	1.1	1.2	4.1	5.7	4.5	2.5	2.1
29	.84	.57	.54	.60	---	1.1	1.3	4.5	5.7	4.4	2.5	2.0
30	.82	.57	.54	.64	---	1.1	1.3	4.7	5.8	4.3	2.4	2.0
31	.82	---	.53	.72	---	1.1	---	5.0	---	4.2	2.4	---
TOTAL	32.53	20.76	15.80	17.73	29.81	37.5	33.6	73.3	166.8	163.6	99.6	64.7
MEAN	1.05	.69	.51	.57	1.06	1.21	1.12	2.36	5.56	5.28	3.21	2.16
MAX	1.2	.80	.55	.72	1.2	1.4	1.3	5.0	5.8	5.9	4.2	2.4
MIN	.82	.57	.46	.51	.77	1.1	1.0	1.3	5.2	4.2	2.4	2.0
AC-FT	65	41	31	35	59	74	67	145	331	325	198	128
MEAN†	1.08	0.71	0.52	0.59	1.08	1.24	1.14	2.40	5.63	5.38	3.36	2.24
AC-FT†	66.43	42.10	32.27	36.17	59.98	75.96	68.02	147.66	335.17	330.72	206.67	133.56

CAL YR 1994 TOTAL 566.66 MEAN 1.55 MAX 4.2 MIN .46 AC-FT 1120 MEAN† 1.59 AC-FT† 1153.45
WTR YR 1995 TOTAL 755.73 MEAN 2.07 MAX 5.9 MIN .46 AC-FT 1500 MEAN† 2.12 AC-FT† 1534.71

† Adjusted for diversion by pumping.

KLAMATH RIVER BASIN

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11507001 UPPER KLAMATH LAKE NEAR KLAMATH FALLS, OR

LOCATION.--Lat 42°15'00", long 121°48'55", in NW 1/4 SW 1/4 sec.19, T.38 S., R.9 E., Klamath County, Hydrologic Unit 18010203, at southeast end of lake, 1.4 mi upstream from outlet and 2.5 mi northwest of Main Street Bridge at Klamath Falls.

DRAINAGE AREA.--3,810 mi², approximately, including 26.2 mi² in closed basin of Crater Lake.

PERIOD OF RECORD.--May 1904 to September 1922 (gage heights only), October 1922 to current year. Monthend contents only October 1923 to September 1927, published in WSP 1315-B.

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

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 4,143.29 ft May 4, 5; minimum daily, 4,136.80 ft Oct. 4, 6-9.

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

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

ELEVATION (USBR DATUM)), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4136.84	4136.96	4137.84	4138.62	4140.38	4141.96	4142.75	4143.20	4143.11	4143.10	4142.20	4140.74
2	4136.86	4137.02	4137.86	4138.63	4140.54	4142.05	4142.76	4143.25	4143.11	4143.09	4142.17	4140.69
3	4136.86	4137.00	4137.90	4138.65	4140.65	4142.08	4142.76	4143.25	4143.11	4143.06	4142.15	4140.63
4	4136.80	4137.01	4137.95	4138.67	4140.76	4142.09	4142.75	4143.28	4143.10	4143.00	4142.12	4140.60
5	4136.82	4137.06	4137.94	4138.70	4140.86	4142.17	4142.74	4143.29	4143.11	4142.97	4142.06	4140.56
6	4136.80	4137.13	4137.96	4138.72	4140.95	4142.21	4142.76	4143.27	4143.09	4142.94	4142.00	4140.52
7	4136.80	4137.19	4137.99	4138.75	4141.06	4142.24	4142.77	4143.23	4143.09	4142.90	4141.98	4140.47
8	4136.80	4137.20	4138.02	4138.76	4141.12	4142.21	4142.81	4143.18	4143.08	4142.87	4141.90	4140.43
9	4136.80	4137.12	4138.03	4138.81	4141.13	4142.26	4142.85	4143.17	4143.08	4142.83	4141.86	4140.39
10	4136.81	4137.30	4138.06	4138.94	4141.17	4142.39	4142.83	4143.20	4143.04	4142.83	4141.78	4140.35
11	4136.81	4137.31	4138.08	4139.02	4141.24	4142.55	4142.84	4143.20	4143.08	4142.80	4141.72	4140.32
12	4136.83	4137.32	4138.11	4139.11	4141.24	4142.61	4142.76	4143.20	4143.09	4142.82	4141.68	4140.29
13	4136.83	4137.31	4138.13	4139.20	4141.31	4142.69	4142.94	4143.16	4143.08	4142.81	4141.62	4140.25
14	4136.87	4137.33	4138.17	4139.29	4141.34	4142.76	4142.95	4143.10	4143.08	4142.81	4141.55	4140.21
15	4136.85	4137.27	4138.21	4139.37	4141.37	4142.86	4142.92	4143.06	4143.17	4142.79	4141.48	4140.17
16	4136.84	4137.30	4138.25	4139.45	4141.40	4142.87	4142.94	4143.02	4143.20	4142.76	4141.45	4140.13
17	4136.81	4137.44	4138.28	4139.50	4141.42	4142.80	4142.89	4143.02	4143.15	4142.71	4141.37	4140.11
18	4136.82	4137.49	4138.31	4139.55	4141.49	4142.79	4142.93	4143.01	4143.18	4142.68	4141.31	4140.08
19	4136.83	4137.50	4138.33	4139.61	4141.56	4142.78	4142.89	4143.02	4143.20	4142.67	4141.28	4140.06
20	4136.84	4137.52	4138.36	4139.64	4141.60	4142.75	4142.97	4143.00	4143.23	4142.64	4141.23	4140.01
21	4136.83	4137.54	4138.39	4139.64	4141.63	4142.78	4142.98	4143.01	4143.23	4142.63	4141.20	4139.98
22	4136.86	4137.56	4138.41	4139.66	4141.67	4142.72	4143.00	4143.04	4143.23	4142.60	4141.16	4139.94
23	4136.87	4137.58	4138.44	4139.73	4141.71	4142.77	4143.01	4143.02	4143.24	4142.56	4141.11	4139.90
24	4136.88	4137.63	4138.46	4139.76	4141.76	4142.81	4143.02	4143.04	4143.25	4142.53	4141.08	4139.87
25	4136.88	4137.68	4138.49	4139.80	4141.80	4142.78	4143.02	4143.06	4143.26	4142.50	4141.03	4139.86
26	4136.87	4137.70	4138.51	4139.83	4141.84	4142.76	4143.03	4143.07	4143.26	4142.44	4140.97	4139.79
27	4136.85	4137.72	4138.53	4139.89	4141.88	4142.75	4143.02	4143.08	4143.25	4142.41	4140.93	4139.76
28	4136.91	4137.76	4138.55	4139.97	4141.92	4142.75	4143.07	4143.09	4143.21	4142.37	4140.88	4139.77
29	4136.94	4137.78	4138.57	4140.01	---	4142.72	4143.16	4143.10	4143.18	4142.36	4140.85	4139.73
30	4136.94	4137.81	4138.58	4140.09	---	4142.71	4143.17	4143.10	4143.13	4142.31	4140.82	4139.72
31	4136.92	---	4138.60	4140.23	---	4142.71	---	4143.10	---	4142.25	4140.78	---
MEAN	4136.85	4137.38	4138.24	4139.34	4141.31	4142.56	4142.91	4143.12	4143.15	4142.71	4141.47	4140.18
MAX	4136.94	4137.81	4138.60	4140.23	4141.92	4142.87	4143.17	4143.29	4143.26	4143.10	4142.20	4140.74
MIN	4136.80	4136.96	4137.84	4138.62	4140.38	4141.96	4142.74	4143.00	4143.04	4142.25	4140.78	4139.72
(†)	52800	115800	167600	285400	410300	475400	512700	507600	510100	432600	318300	243000
(+)	+1900	+63000	+51800	+117800	+124900	+65100	+37300	-5100	+2500	-77500	-114300	-75300

CAL YR 1994 MEAN 4139.70 MAX 4142.29 MIN 4136.80 AC-FT† -90800
WTR YR 1995 MEAN 4140.76 MAX 4143.29 MIN 4136.80 AC-FT† +192100

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

+ Change in contents, in acre-feet.

LOCATION.--Lat 42°13'25", long 121°47'35", in SW 1/4 NW 1/4 sec.32, T.38 S., R.9 E., Klamath County, Hydrologic Unit 18010204, on right bank 600 ft upstream from outlet of Keno Canal and 0.4 mi upstream from Main Street Bridge at Klamath Falls.

PERIOD OF RECORD.--May 1904 to current year. Records since October 1983 equivalent to earlier records if flow in Keno Canal is added to flow past station.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1919 by Upper Klamath Lake (station 11507001). Large diurnal fluctuation caused by powerplant upstream from station. Water diverted upstream from station by main or "A" Canal of Klamath project. Many other diversions upstream from lake. All records presented herein do not include flow in Keno Canal which, since September 1908, has diverted from Upper Klamath Lake at Link River Dam for power generation, and returns flow to Link River downstream from station.

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

EXTREMES FOR CURRENT YEAR.-- Maximum discharge, 5,700 ft³/s Mar. 17; minimum, 81 ft³/s Nov. 30, result of regulation from Upper Klamath Lake, minimum daily, 115 ft³/s Jan. 12, 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	519	793	561	454	155	327	1430	1990	860	1030	865	847
2	524	726	509	480	214	292	1570	3130	875	1030	834	849
3	644	571	386	521	167	191	1750	3130	839	1030	734	779
4	642	477	384	524	232	186	1630	3130	825	1020	731	616
5	647	479	384	524	348	185	1490	3180	822	1020	729	601
6	638	476	385	522	449	193	1500	3180	856	1020	729	517
7	640	472	386	523	675	192	1500	3170	813	1050	728	1120
8	640	467	387	452	323	188	1680	2750	613	1060	887	1160
9	640	417	388	448	239	187	2370	2360	478	1040	1120	1170
10	703	422	389	230	164	191	2890	2370	451	839	880	1160
11	778	419	390	119	199	197	2890	2660	463	997	877	982
12	771	541	426	115	394	198	2600	3540	461	1160	1060	959
13	661	570	516	116	392	199	2460	4630	518	1170	1010	1120
14	689	533	527	115	287	1370	2940	4910	1010	452	929	1090
15	690	523	529	116	193	3650	3510	4540	633	339	930	866
16	688	532	492	170	259	4580	3520	3270	691	335	927	808
17	667	464	454	528	388	5170	3090	2820	1120	572	929	907
18	647	433	456	659	390	4370	2210	2190	869	738	1080	931
19	647	410	457	660	390	4130	1690	1500	500	848	1150	1000
20	629	409	454	660	390	4050	1220	1530	585	757	1150	1030
21	630	408	451	733	393	4110	1170	1560	946	623	1160	1030
22	632	409	435	515	270	4000	1510	1630	1110	436	1150	982
23	631	261	409	425	164	4110	1820	1350	721	407	1150	793
24	631	225	410	290	164	4210	1390	791	486	692	925	794
25	616	438	410	209	164	4150	1210	723	666	688	803	793
26	565	490	551	275	218	4130	1010	813	1100	596	937	1010
27	555	430	552	279	333	3860	898	993	1180	592	998	1100
28	559	329	507	280	331	3220	1110	993	1210	593	1090	901
29	553	410	474	274	---	2640	847	889	1130	590	1160	811
30	548	423	467	191	---	1970	787	829	1030	655	1160	648
31	612	---	451	118	---	1430	---	810	---	833	975	---
TOTAL	19636	13957	13977	11525	8285	67876	55692	71361	23861	24212	29787	27374
MEAN	633	465	451	372	296	2190	1856	2302	795	781	961	912
MAX	778	793	561	733	675	5170	3520	4910	1210	1170	1160	1170
MIN	519	225	384	115	155	185	787	723	451	335	728	517
AC-FT	38950	27680	27720	22860	16430	134600	110500	141500	47330	48020	59080	54300
WTR YR 1994												
TOTAL	224457	MEAN	615	MAX	1200	MIN	186	AC-FT	445200			
YR 1995	TOTAL 367543	MEAN 1007	MAX 5170	MIN 115	AC-FT 729000							

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LOCATION.--Lat 42°08'00", long 121°57'40", in NW 1/4 SE 1/4 sec.35, T.39 S., R.7 E., Klamath County, Hydrologic Unit 18010206, on left bank 1.7 mi northwest of Keno and 4.5 mi upstream from Spencer Creek, and at mile 231.9.

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

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1919 by Upper Klamath Lake (station 11507001). Fluctuation by Keno powerplant 0.9 mi upstream. Diversions for irrigation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,300 ft³/s Feb. 28, 1986, gage height, 12.82 ft, caused by regulation from Keno powerplant 0.9 mi upstream; minimum discharge, 26 ft³/s Sept. 23, 1956; minimum daily, 60 ft³/s May 19, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,890 ft³/s Mar. 16, gage height, 11.48 ft; minimum discharge, 109 ft³/s Sept. 14, 20, 22, 29; minimum daily, 263 ft³/s Feb. 10.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	519	652	538	614	305	514	2260	2540	411	503	590	830
2	516	620	545	631	279	516	2250	3950	426	500	661	1030
3	518	624	545	609	277	604	2260	4090	435	497	682	1030
4	523	621	542	615	272	915	2170	4120	414	494	701	1050
5	527	619	546	610	268	1730	2200	4540	412	497	703	1060
6	528	615	548	617	271	943	2140	4100	413	504	705	1070
7	527	617	547	621	273	515	2510	4070	386	503	770	1070
8	525	617	547	624	279	542	2750	3690	336	512	794	1070
9	513	592	547	627	275	568	3260	2980	306	492	758	1070
10	565	573	548	598	263	860	3560	3040	308	488	761	1060
11	611	573	538	1260	267	1620	3710	3420	314	394	758	1060
12	614	573	577	505	266	1840	3490	4370	308	446	757	1020
13	639	575	622	268	270	1960	3140	5250	304	502	755	788
14	655	575	622	1040	276	2630	3900	5710	596	488	752	498
15	656	574	639	1450	270	4720	4310	4990	687	452	751	638
16	655	578	618	383	343	6870	4500	3640	1110	412	750	547
17	655	578	619	308	465	7210	4420	2940	1330	403	751	645
18	660	560	609	509	462	5660	3000	2640	1230	390	752	499
19	663	553	608	511	460	5320	2110	1720	1120	354	749	671
20	663	538	621	508	459	5440	2430	1900	987	359	745	544
21	666	531	616	511	462	5620	2140	1830	986	352	714	662
22	669	530	615	521	464	5470	1150	1500	993	355	664	525
23	669	528	623	531	478	5380	1110	1390	871	356	664	688
24	665	524	607	543	497	5530	2100	871	754	355	668	557
25	663	533	619	542	502	5800	2110	614	747	354	680	540
26	659	536	611	538	499	5500	1890	590	744	353	687	622
27	657	537	615	538	503	5050	1370	590	506	354	686	541
28	658	535	614	542	512	4640	1200	590	520	381	581	633
29	667	533	628	542	---	4040	1210	595	529	406	326	547
30	669	534	630	533	---	3020	1270	591	525	411	319	707
31	663	---	625	787	---	2200	---	572	---	464	320	---
TOTAL	19037	17148	18329	19036	10217	103227	75920	83433	19008	13331	20954	23272
MEAN	614	572	591	614	365	3330	2531	2691	634	430	676	776
MAX	669	652	639	1450	512	7210	4500	5710	1330	512	794	1070
MIN	513	524	538	268	263	514	1110	572	304	352	319	498
AC-FT	37760	34010	36360	37760	20270	204800	150600	165500	37700	26440	41560	46160

MEAN	1416	1666	1901	1933	2073	2528	2278	1717	1156	853	961	1187
MAX	3055	4673	5732	7702	7564	8197	6594	5258	7075	4177	2513	2214
(WY)	1957	1985	1984	1965	1965	1972	1956	1956	1904	1904	1904	1943
MIN	564	290	391	542	254	215	166	109	97.6	114	146	246
(WY)	1982	1935	1935	1935	1992	1992	1931	1931	1931	1931	1992	1992

ANNUAL TOTAL	176031		422912			
ANNUAL MEAN	482		1159		1624	
HIGHEST ANNUAL MEAN					3582	1956
LOWEST ANNUAL MEAN					340	1992
HIGHEST DAILY MEAN	1140	Jan 12	7210	Mar 17	9780	Mar 5 1972
LOWEST DAILY MEAN	242	Mar 29	263	Feb 10	60	May 19 1934
ANNUAL SEVEN-DAY MINIMUM	246	Mar 26	270	Feb 9	78	Jun 4 1931
ANNUAL RUNOFF (AC-FT)	349200		838800		1177000	
10 PERCENT EXCEEDS	667		3190		3150	
50 PERCENT EXCEEDS	517		617		1270	
90 PERCENT EXCEEDS	261		372		406	

KLAMATH RIVER BASIN

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

LOCATION.--Lat 42°05'05", long 122°04'20", in SE 1/4 SE 1/4 sec.14, T.40 S., R.6 E., Klamath County, Hydrologic Unit 18010206, on right bank 0.7 mi downstream from John C. Boyle powerplant, 8 mi downstream from Spencer Creek, and 8.5 mi southwest of Keno, and at mile 219.7.

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

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

REVISED RECORDS.--WDR OR-87-1: 1967.

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

REMARKS.--No estimated daily discharges. Records excellent. Flow regulated by Upper Klamath Lake (station 11507001). Large diurnal fluctuation caused by Keno and John C. Boyle powerplants. Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--36 years(water years 1960-95), 1,764 ft³/s, 1,278,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s Mar. 5, 1972, gage height, 9.33 ft; minimum discharge, 283 ft³/s Feb. 17, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,240 ft³/s Mar. 16, gage height, 8.38 ft; minimum discharge, 297 ft³/s many days December through March and August.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	675	862	755	795	601	801	2500	2800	638	740	952	1160
2	673	851	717	803	485	857	2710	4170	637	747	950	1410
3	680	915	714	806	709	860	2710	4410	646	747	931	1160
4	720	951	834	896	641	1050	2700	4260	641	748	925	1160
5	773	883	723	862	517	1930	2610	4780	753	740	897	1410
6	769	839	687	854	493	1300	2280	4490	686	739	869	1160
7	760	801	687	680	478	786	2890	4220	686	745	991	1480
8	756	809	705	680	591	647	3300	4030	638	781	1090	1440
9	764	771	732	974	577	933	3650	3210	586	752	1030	1160
10	760	804	737	723	525	1180	3790	3410	785	754	977	1360
11	736	765	735	1510	484	2070	3960	3670	493	698	1040	1160
12	812	791	739	822	491	2250	3870	4500	502	656	987	1360
13	908	771	887	628	586	2380	3490	5480	493	687	993	1110
14	858	760	852	1090	589	2640	4010	5660	787	793	1040	1080
15	857	823	854	1830	584	4800	4490	5350	978	698	1050	1370
16	861	774	892	713	705	6940	4620	4130	1660	641	1010	1180
17	855	732	805	427	801	7710	4710	3000	1240	636	1000	1380
18	854	763	798	725	627	5900	3620	3190	1500	648	1010	1090
19	863	640	850	725	636	5430	2490	2220	1490	597	1010	1430
20	863	714	828	816	637	5560	2530	2000	1390	732	1020	1130
21	906	684	838	723	730	5730	2700	2450	1100	556	700	1450
22	862	696	894	700	779	5710	1450	1850	1450	556	856	1100
23	860	738	847	833	829	5570	1120	1570	1040	585	1100	1470
24	860	739	758	875	878	5650	2690	1270	1150	550	945	1260
25	896	734	747	774	627	5860	2390	977	1050	655	948	1120
26	857	739	754	823	605	5680	2220	884	1030	609	858	1390
27	867	739	755	884	826	5140	1840	896	1040	604	864	1120
28	857	739	965	780	780	4840	1530	884	604	608	1120	1410
29	763	737	854	732	---	4180	1610	887	595	615	583	1140
30	777	755	796	740	---	3560	1620	939	787	602	302	1510
31	904	---	804	1120	---	2390	---	884	---	754	528	---
TOTAL	25206	23319	24543	26343	17811	110334	86100	92471	27075	20973	28576	38160
MEAN	813	777	792	850	636	3559	2870	2983	902	677	922	1272
MAX	908	951	965	1830	878	7710	4710	5660	1660	793	1120	1510
MIN	673	640	687	427	478	647	1120	884	493	550	302	1080
AC-FT	50000	46250	48680	52250	35330	218800	170800	183400	53700	41600	56680	75690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1995, BY WATER YEAR (WY)

MEAN	1563	1954	2369	2349	2351	2910	2400	1644	880	660	890	1219
MAX	3157	4506	5733	7905	7780	8755	5645	3935	2327	1424	1198	1898
(WY)	1985	1985	1984	1965	1965	1972	1974	1971	1983	1959	1959	1959
MIN	786	735	792	771	489	450	537	418	391	349	349	457
(WY)	1982	1992	1995	1993	1992	1992	1994	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1959 - 1995

	1994	1995	1959-1995
ANNUAL TOTAL	252341	520911	
ANNUAL MEAN	691	1427	1764
HIGHEST ANNUAL MEAN			3024
LOWEST ANNUAL MEAN			564
HIGHEST DAILY MEAN	1500	7710	10800
LOWEST DAILY MEAN	306	302	302
ANNUAL SEVEN-DAY MINIMUM	400	520	338
ANNUAL RUNOFF (AC-FT)	500500	1033000	1278000
10 PERCENT EXCEEDS	893	3630	3210
50 PERCENT EXCEEDS	717	860	1280
90 PERCENT EXCEEDS	477	628	599

KLAMATH RIVER BASIN

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11516530 KLAMATH RIVER BELOW IRON GATE DAM, CA

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

DRAINAGE AREA.--4,630 mi², approximately (not including Lost River, Butte Creek, or Lower Klamath Lake basins).

PERIOD OF RECORD.--October 1960 to current year. Chemical data available October 1961 to September 1981. Water temperature data available October 1962 to September 1980.

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

REMARKS.--No estimated daily discharges. Records excellent. Flow regulated by Upper Klamath Lake (station 11507001), capacity, 523,700 acre-ft, Iron Gate Reservoir, other smaller reservoirs, and diversions upstream from station.

AVERAGE DISCHARGE.--35 years (water years 1961-95), 3,657 ft³/s, 1,498,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft³/s Dec. 22, 1964, gage height, 13.63 ft, from rating curve extended above 15,000 ft³/s, on basis of slope-area measurement of peak flow; minimum daily discharge, 389 ft³/s Aug. 25-28, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,380 ft³/s Mar. 18, gage height, 8.90 ft; minimum daily discharge, 729 ft³/s July 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	919	962	890	962	2760	972	2530	2930	805	762	1030	1350
2	920	958	890	962	2090	1030	2570	4430	796	761	1030	1350
3	916	953	890	961	1630	1230	2650	4690	797	761	1030	1350
4	915	927	888	960	1210	1400	2730	4750	797	761	1030	1350
5	916	912	886	961	969	1630	2770	4910	801	762	1030	1350
6	916	907	888	961	966	1780	2920	5070	802	771	1040	1350
7	919	907	886	963	966	1490	3060	5020	786	762	1040	1350
8	922	907	921	969	962	1410	3580	4740	755	763	1040	1350
9	922	919	955	1000	960	1410	4000	4040	751	771	1040	1350
10	927	912	958	1180	984	1670	4130	4030	749	768	1050	1350
11	927	908	959	1540	986	2860	4110	4100	748	756	1040	1350
12	931	907	958	1610	984	2960	4250	4090	747	741	1040	1350
13	933	907	958	1410	985	3030	4970	4980	747	735	1040	1350
14	935	907	960	1770	985	3660	4740	5730	1080	733	1040	1340
15	938	907	960	2670	989	5620	4730	5760	1240	733	1040	1350
16	938	906	962	2390	972	7310	4770	4900	1490	731	1040	1350
17	944	908	964	1420	960	8740	4810	3890	1750	729	1040	1350
18	944	907	966	955	960	8630	4800	2990	1750	733	1040	1350
19	944	906	966	958	960	6440	3570	2440	1660	731	1040	1350
20	950	905	964	950	959	6290	2530	2200	1560	730	1040	1350
21	943	904	963	948	954	6620	2170	2170	1560	736	1050	1350
22	944	897	962	943	954	6570	2140	1830	1560	733	1040	1350
23	944	890	961	956	954	6460	2110	1470	1450	733	1040	1350
24	949	892	963	964	954	6270	2160	1470	1320	734	1040	1350
25	949	900	965	968	961	6320	2250	1400	1310	733	1040	1350
26	952	891	963	984	972	6310	2210	1240	1190	735	1040	1350
27	951	890	963	985	973	5750	2260	1100	901	733	1040	1350
28	954	890	973	999	971	5100	2270	1100	770	736	1040	1350
29	959	890	965	990	---	4560	2420	1110	760	736	1040	1350
30	957	890	963	1020	---	4290	2330	1100	762	736	1040	1350
31	962	---	961	1610	---	2750	---	1100	---	764	1070	---
TOTAL	29040	27266	29271	36919	30930	130562	96540	100780	32194	23103	32240	40490
MEAN	937	909	944	1191	1105	4212	3218	3251	1073	745	1040	1350
MAX	962	962	973	2670	2760	8740	4970	5760	1750	771	1070	1350
MIN	915	890	886	943	954	972	2110	1100	747	729	1030	1340
AC-FT	57600	54080	58060	73230	61350	259000	191500	199900	63860	45820	63950	80310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1673	2165	2775	2795	2872	3555	2959	2011	1036	750	967	1303
MAX	3353	5254	6735	9489	9150	10780	6922	4973	2591	1429	1208	2052
(WY)	1985	1985	1984	1965	1965	1972	1971	1971	1983	1982	1965	1965
MIN	852	873	889	888	525	511	572	512	506	428	398	538
(WY)	1982	1992	1992	1992	1992	1992	1994	1992	1992	1992	1992	1992

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1961 - 1995			
ANNUAL TOTAL	286281				609335				2068			
ANNUAL MEAN	784				1669				3657			
HIGHEST ANNUAL MEAN									641			
LOWEST ANNUAL MEAN									25000			
HIGHEST DAILY MEAN	1380				Jan 1				Dec 22			
LOWEST DAILY MEAN	541				May 7				Aug 25			
ANNUAL SEVEN-DAY MINIMUM	563				May 2				Aug 24			
INSTANTANEOUS PEAK FLOW									29400			
INSTANTANEOUS PEAK STAGE									8.90			
INSTANTANEOUS LOW FLOW									13.63			
ANNUAL RUNOFF (AC-FT)	567800				1209000				1498000			
10 PERCENT EXCEEDS	963				4100				3960			
50 PERCENT EXCEEDS	775				989				1390			
90 PERCENT EXCEEDS	569				766				729			

LOCATION.--Lat 46°37'44", long 119°51'49", in SE 1/4 NW 1/4 sec.7, T.13 N., R.24 E., Grant County, Hydrologic Unit 17020016, on left bank 2.6 mi downstream from Priest Rapids Dam, 14.7 mi south of Beverly, and at mile 394.5.

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 251,000 ft³/s June 26, elevation, 414.59 ft; minimum discharge, 35,800 ft³/s Oct. 23, elevation, 396.30 ft; minimum daily discharge, 47,300 ft³/s Sept. 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52500	81600	90700	95100	87200	150000	73400	151000	150000	149000	126000	85300
2	49500	79300	85400	104000	83400	143000	77900	145000	120000	110000	104000	61700
3	73000	82400	84300	124000	74600	116000	98600	124000	121000	137000	105000	47300
4	54900	83200	92900	128000	68000	99400	114000	139000	97100	112000	95000	58200
5	60000	83100	112000	119000	71600	108000	135000	143000	108000	143000	88700	73000
6	61800	76400	113000	117000	115000	121000	129000	95200	127000	152000	67100	83200
7	72100	75200	111000	111000	112000	113000	88300	93400	122000	148000	88500	68900
8	59400	79300	116000	92900	109000	109000	69600	105000	123000	140000	131000	65100
9	58000	82100	110000	101000	108000	86100	63700	108000	166000	113000	102000	53600
10	83600	73000	95300	92000	125000	93900	99200	123000	148000	117000	102000	49900
11	86600	76300	89300	101000	90500	93600	75200	135000	160000	134000	124000	77800
12	76800	80100	109000	93200	107000	80100	77500	119000	173000	142000	99800	74200
13	67200	69000	113000	79300	126000	99300	90600	102000	178000	123000	81800	83000
14	82800	70600	123000	66800	129000	88600	92600	100000	177000	118000	115000	82300
15	80500	79700	128000	63800	138000	93100	84600	139000	164000	116000	113000	82900
16	57700	84500	101000	69300	139000	82100	68000	167000	155000	125000	100000	71100
17	62100	86400	74400	93600	122000	66000	92800	182000	119000	137000	104000	65300
18	68900	92800	62800	83000	90000	61400	106000	162000	120000	145000	87700	83300
19	78800	90100	75300	96000	74100	61600	109000	148000	134000	133000	79900	77600
20	79100	77000	69100	88100	79900	67300	94300	116000	156000	124000	79700	71300
21	77800	98600	82500	87000	126000	109000	92400	102000	157000	132000	110000	76200
22	70700	109000	90200	83900	141000	133000	76000	137000	172000	111000	121000	75200
23	59600	94700	71000	107000	127000	149000	75700	141000	183000	111000	111000	63200
24	68100	69000	60600	113000	122000	147000	120000	147000	186000	130000	95800	57200
25	77900	66400	63500	112000	106000	135000	134000	159000	172000	108000	88300	78400
26	81400	74500	65800	100000	88200	119000	144000	149000	205000	128000	69800	74800
27	87300	79200	72900	104000	116000	120000	145000	122000	183000	160000	82500	83000
28	86800	102000	88200	106000	136000	129000	117000	94500	167000	131000	104000	88800
29	80000	97000	98600	74200	---	102000	117000	127000	173000	112000	99500	84600
30	69500	86900	101000	107000	---	84800	120000	183000	172000	118000	100000	65900
31	69900	---	85100	109000	---	66300	---	185000	---	133000	106000	---
TOTAL	2194500	2479400	2834900	3021200	3011500	3226600	2980400	4143100	4588100	3992000	3082100	2162300
MEAN	70790	82650	91450	97460	107600	104100	99350	133600	152900	128800	99420	72080
MAX	87500	109000	128000	128000	141000	150000	145000	185000	205000	160000	131000	88800
MIN	49500	66400	60600	63800	68000	61400	63700	93400	97100	108000	67100	47300
AC-FT	4353000	4918000	5623000	5993000	5973000	6400000	5912000	8218000	9100000	7918000	6113000	4289000
CAL YR 1994	TOTAL	34505600	MEAN	94540	MAX	180000	MIN	40700	AC-FT	68440000		
WTR YR 1995	TOTAL	37716100	MEAN	103300	MAX	205000	MIN	47300	AC-FT	74810000		

OWYHEE RIVER BASIN

55

13177985 JORDAN CREEK AT DE LAMAR MINE NEAR JORDAN VALLEY, OR

LOCATION.--Lat 43°01'27", long 116°51'15", in NW 1/4 NW 1/4 sec.6, T.5 S., R.4 W., Owyhee County, Hydrologic Unit 17050108, on left bank, 0.2 mi below road crossing to De Lamar Mine, and 10.5 mi northeast of Jordan Valley.

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,280 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.82	e4.0	e2.0	182	61	46	142	178	27	3.6	.75
2	.00	.82	e6.0	e2.0	148	53	43	201	175	25	3.2	.73
3	.00	.71	e6.0	e1.0	85	52	50	e250	170	24	3.0	.80
4	.00	e.90	e4.5	e1.0	62	46	69	252	162	21	2.8	.99
5	.00	e1.0	e3.0	e1.5	53	41	91	265	150	19	2.7	.99
6	.00	e1.0	e2.5	e2.0	49	37	176	330	125	18	2.4	.87
7	.00	1.1	e2.0	e2.5	45	36	160	385	100	16	2.0	.82
8	.00	1.3	e2.0	e3.0	43	33	163	335	81	15	2.6	.91
9	.00	1.3	e1.5	3.8	40	40	132	304	72	18	2.4	.93
10	.17	1.4	e2.0	13	36	68	107	291	65	16	2.0	.91
11	.77	1.3	e2.5	15	33	116	99	320	70	13	1.9	.86
12	.78	1.5	e4.0	9.8	28	94	97	280	79	17	1.8	.78
13	.43	1.9	e3.5	28	25	84	100	232	82	15	1.7	.75
14	.66	e1.5	e3.0	92	23	99	96	206	78	12	1.8	.66
15	.73	e1.5	e3.0	56	e20	124	91	203	73	11	1.6	.66
16	.66	e1.5	e3.5	33	e15	106	85	214	71	10	1.5	.66
17	.66	e1.5	e4.0	24	18	95	81	222	72	9.1	2.1	.66
18	.66	e1.5	e4.0	18	22	114	76	237	81	8.8	2.0	.70
19	.66	e1.5	e4.0	10	27	114	68	239	75	9.1	1.7	.66
20	.66	e1.5	e4.0	8.8	38	115	64	232	65	8.2	1.4	.75
21	.66	e1.5	e4.0	e6.0	46	116	63	241	56	9.6	1.3	.78
22	.66	e1.0	e4.0	e6.0	53	101	66	251	49	7.8	1.3	.82
23	.66	e2.0	e4.5	e6.5	63	91	68	231	44	6.6	1.3	.78
24	.66	e3.5	e4.5	e7.0	77	78	71	205	43	6.1	1.2	.78
25	.66	e3.5	e4.0	7.1	84	69	75	182	43	5.4	1.1	.78
26	.66	e3.0	e4.5	8.0	80	61	82	168	43	4.9	1.0	.80
27	.64	e2.5	e5.0	7.6	81	54	89	157	41	4.6	.93	.90
28	.69	e2.5	e4.5	7.3	70	48	94	146	38	4.2	.87	.90
29	.84	e2.5	e3.5	7.3	---	44	92	148	33	4.3	.84	1.1
30	.78	e3.0	e3.0	11	---	41	86	154	30	5.0	.84	1.2
31	.73	---	e2.5	101	---	43	---	168	---	4.2	.82	---
TOTAL	14.48	50.55	113.0	501.2	1546	2274	2680	7191	2444	374.9	55.70	24.68
MEAN	.47	1.68	3.65	16.2	55.2	73.4	89.3	232	81.5	12.1	1.80	.82
MAX	.84	3.5	6.0	101	182	124	176	385	178	27	3.6	1.2
MIN	.00	.71	1.5	1.0	15	33	43	142	30	4.2	.82	.66
AC-FT	29	100	224	994	3070	4510	5320	14260	4850	744	110	49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995
MEAN	.97	1.71	2.86	9.56	29.9	47.5	76.6	141	44.8	6.31	.90	.41
MAX	1.48	1.74	3.65	16.2	55.2	73.4	89.3	232	81.5	12.1	1.80	.82
(WY)	1994	1994	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	.47	1.68	2.08	2.96	4.50	21.7	63.8	49.4	8.11	.52	.000	.000
(WY)	1995	1995	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1994 - 1995

ANNUAL TOTAL	4773.47	17269.51	
ANNUAL MEAN	13.1	47.3	30.2
HIGHEST ANNUAL MEAN			47.3
LOWEST ANNUAL MEAN			13.0
HIGHEST DAILY MEAN	120	385	385
LOWEST DAILY MEAN	.00	a.00	b.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		435	435
INSTANTANEOUS PEAK STAGE		2.38	2.38
ANNUAL RUNOFF (AC-FT)	9470	34250	21860
10 PERCENT EXCEEDS	46	152	91
50 PERCENT EXCEEDS	2.9	8.8	3.2
90 PERCENT EXCEEDS	.00	.75	.00

- a No flow Oct. 1-10.
b No flow July 23 to Sept. 30, 1994.
e Estimated.

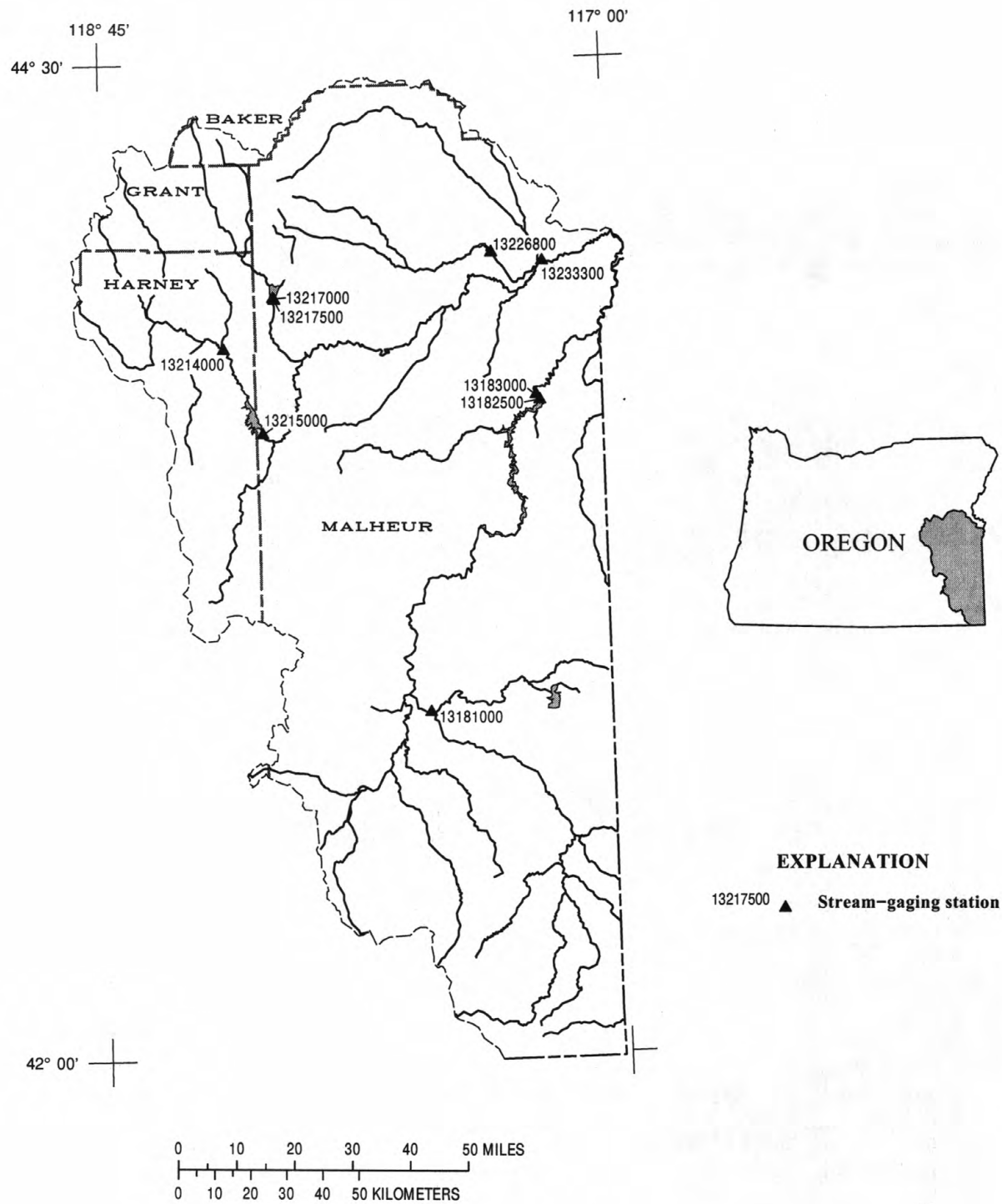


Figure 7. Location of surface-water stations in the Owyhee and Malheur River Basins.

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LOCATION.--Lat 42°52'02", long 117°38'52", in SE 1/4 NE 1/4 sec.14, T.31 S., R.41 E., Malheur County, Hydrologic Unit 17050107, on right bank 0.5 mi downstream from Jordan Creek, 2.6 mi north of Rome, and at mile 122.4.

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

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Antelope Reservoir, capacity, 70,000 acre-ft, increased in 1970, and Wild Horse Reservoir, capacity, 32,690 acre-ft, and numerous small reservoirs. Diversions upstream from station for irrigation. Continuous water-quality records for the period October 1972 to June 1977 have been collected at this location. U.S. Geological Survey satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,700 ft³/s Mar. 18, 1993, gage height, 20.11 ft; minimum, 42 ft³/s Aug. 12, 1954, July 28, Aug. 5, 1961, July 31, 1968.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1995, BY WATER YEAR (WY)

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1950 - 1995
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e Estimated

OWYHEE RIVER BASIN

13182500 LAKE OWYHEE NEAR NYSSA, OR

LOCATION.--Lat 43°38'30", long 117°14'30", in NW 1/4 SE 1/4 sec.20, T.22 S., R.45 E., Malheur County, Hydrologic Unit 17050110, near left abutment on Owyhee Dam on Owyhee River, 21 mi southwest of Nyssa, and at mile 28.5.

DRAINAGE AREA.--11,160 mi², approximately.

PERIOD OF RECORD.--October 1932 to current year (month-end contents and change in contents only prior to October 1979). Prior to October 1958, published as Owyhee Reservoir at Owyhee Dam, near Nyssa.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Bureau of Reclamation). Prior to Oct. 1, 1965, nonrecording gage at same site and datum. U.S. Bureau of Reclamation satellite telemeter at station.

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,140,000 acre-ft Apr. 15, 1952, elevation, 2,671.50 ft, furnished by Owyhee Irrigation District; minimum contents observed since full capacity was attained on May 7, 1936, 397,700 acre-ft Aug. 25, 1992, elevation, 2,588.56 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,133,000 acre-ft May 20, elevation, 2,670.88 ft; minimum contents, 449,000 acre-ft Oct. 21, elevation, 2,597.30 ft.

Capacity table (elevation, in feet, and total contents, in acre-feet)

2,590	405,700	2,640	787,300
2,600	466,300	2,650	888,300
2,610	535,400	2,660	999,700
2,620	611,900	2,670	1,122,000
2,630	696,800	2,671	1,134,000

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2599.60	2598.34	2600.95	2604.24	2614.30	2636.58	2650.51	2654.94	2670.38	2667.65	2660.89	2653.01
2	2599.41	2598.40	2600.96	---	2617.73	2637.09	2650.82	2655.29	2670.26	2667.44	2660.63	2652.81
3	---	2598.54	2600.97	2604.46	2620.86	2637.51	2651.13	2655.64	2670.21	2667.24	2660.39	2652.57
4	2598.90	2598.56	---	2604.48	2622.69	2637.90	2651.35	2656.07	2670.18	2667.03	2660.16	2652.39
5	2598.82	2598.65	2601.32	2604.65	2623.92	---	2651.62	2656.47	2670.10	2666.83	2659.88	2652.22
6	2598.71	2598.82	2601.46	2604.75	2624.81	2638.88	2651.84	2657.07	2670.04	2666.60	2659.67	2651.84
7	2598.50	2598.98	2601.55	---	2625.61	2639.25	2652.06	2659.36	2670.01	2666.43	2659.37	2651.66
8	2598.36	2599.00	2601.72	2604.95	2626.28	2639.62	2652.23	2661.58	2670.00	---	2659.13	2651.51
9	2598.26	2599.01	2601.77	2605.10	2626.94	---	2652.46	2663.38	2669.98	2666.01	2658.86	2651.28
10	---	2599.05	2601.80	2605.32	2627.67	2640.16	2652.66	2664.65	2669.92	2665.79	2658.60	2650.94
11	2597.97	---	2602.08	2605.43	2628.27	2640.44	2652.91	2665.63	2669.92	2665.54	2658.35	2650.84
12	2597.85	2599.43	2602.33	2605.60	2628.73	2641.49	2653.07	2666.50	2669.87	2665.40	2658.07	2650.59
13	2597.71	2599.45	2602.37	2605.85	2629.20	2642.41	2653.27	2667.46	2669.73	2665.23	2657.84	2650.42
14	2597.61	2599.55	2602.37	2606.35	2629.56	2643.09	2653.42	2668.33	2669.65	2665.01	2657.59	2650.16
15	2597.52	2599.70	2602.57	2607.12	2629.88	2643.61	2653.57	2669.02	2669.56	2664.80	2657.29	2649.90
16	2597.51	2599.74	2602.72	2608.09	2630.14	2644.41	2653.75	2669.56	---	2664.60	---	2649.69
17	2597.47	2599.78	2602.78	2608.87	2630.38	2645.05	2653.92	2670.05	---	2664.40	2656.81	2649.52
18	2597.40	2599.94	2602.90	2609.39	2630.63	---	2654.07	2670.44	2669.26	2664.17	2656.57	2649.38
19	2597.34	2600.07	2602.91	2609.74	2630.86	2645.96	2654.14	2670.74	2669.21	2664.02	2656.36	2649.06
20	2597.31	2600.09	2603.05	2610.03	2631.18	---	2654.30	2670.88	2669.14	2663.74	2656.09	---
21	2597.30	2600.15	2603.16	2610.33	2631.75	2647.06	2654.36	2670.81	2669.10	2663.54	2655.82	2648.62
22	2597.32	2600.19	2603.26	2610.55	2632.38	2647.52	2654.44	2670.73	2669.04	2663.27	2655.61	2648.42
23	2597.53	---	2603.37	2610.75	2632.97	2648.00	2654.53	2670.68	2668.97	2663.08	2655.29	2648.27
24	2597.59	---	2603.45	2610.94	2633.55	2648.35	2654.63	2670.71	2668.88	2662.83	2655.04	2648.08
25	2597.74	---	2603.55	2611.09	2634.18	2648.69	2654.70	2670.80	2668.77	2662.59	2654.83	2647.83
26	2597.80	2600.77	2603.64	2611.29	2634.87	2649.02	2654.76	2670.77	2668.56	2662.31	2654.60	2647.75
27	2597.82	2600.81	2603.74	2611.47	2635.48	2649.31	2654.64	2670.77	2668.42	2662.10	2654.32	2647.53
28	2597.99	2600.82	2603.86	2611.69	2636.05	2649.56	2654.65	2670.73	2668.23	2661.84	2654.11	2647.37
29	2598.05	2600.86	---	2611.92	---	2649.81	2654.71	2670.69	2668.02	2661.60	2653.87	2647.28
30	2598.06	2600.93	2604.01	2612.20	---	2650.06	2654.71	2670.59	2667.85	2661.38	2653.63	2647.01
31	2598.34	---	2604.11	2612.60	---	2650.32	---	2670.47	---	2661.12	2653.31	---
MAX	---	---	---	---	2636.05	---	2654.76	2670.88	---	---	---	---
MIN	---	---	---	---	2614.30	---	2650.51	2654.94	---	---	---	---
(†)	455600	472400	493800	554600	750100	891800	939500	1127800	1094700	1012900	924100	857100
(‡)	-10300	+16800	+21400	+60800	+195500	+141700	+47700	+188300	-33100	-81800	-88800	-67000

CAL YR 1994 ACRE-FT† -336600
WTR YR 1995 ACRE-FT† +391200

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

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LOCATION.--Lat 43°39'17", long 117°15'16", in SE 1/4 sec.18, T.22 S., R.45 E.,Malheur County, Hydrologic Unit 17050110, on left bank 0.8 mi downstream from Owyhee Dam. 20 mi southwest of Nyssa, and at mile 27.3.

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

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

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

REMARKS.--No estimated daily discharges. Records good. Flow regulated since October 1932 by Lake Owyhee (station 13182500), and by many smaller reservoirs. Diversion of up to 457,000 acre-ft from Lake Owyhee during the year for irrigation of lands downstream from station and outside the basin. Many smaller diversions upstream from Lake Owyhee for irrigation upstream from station. Computation of monthly and annual adjusted flows discontinued in 1991.

AVERAGE DISCHARGE.--63 years (water years 1933-95), 413 ft³/s, 299,200 acre-ft/yr, not adjusted for storage or diversion.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,700 ft³/s May 21, gage height, 11.76 ft; minimum discharge, 1.2 ft³/s Nov. 6-8.

[illegible]

SNAKE RIVER BASIN

13213100 SNAKE RIVER AT NYSSA, OR

LOCATION.--Lat 43°52'34", long 116°58'53", in NW 1/4 SW 1/4 NE 1/4 sec.7, T.6 N., R.5 W., Canyon County, Hydrologic Unit 17050115, on right bank, 300 upstream from U.S. Highway 20-26 bridge at Nyssa, 2.3 mi downstream from Boise River and at mile 385.2.

DRAINAGE AREA.--58,700 mi², approximately.

PERIOD OF RECORD.--November 1974 to September 1986, February 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,170 ft above sea level, from topographic map. Prior to 1989, station located on left bank, in Oregon.

REMARKS.--No estimated daily discharges. Records good except for daily discharges Oct. 1-14, which are fair. Station equipment includes satellite telemetry. Flow regulated by many reservoirs upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8250	9200	9090	8900	8840	9020	8070	11400	25900	17700	9270	9400
2	8630	9070	8850	8760	10100	8490	8200	14500	23300	17500	8870	9250
3	8840	8710	9050	8500	11900	8700	7700	14500	21300	16000	8660	9300
4	9400	8510	9120	8190	10600	8660	7680	13000	20700	14600	8980	9920
5	10000	9160	9280	8980	8870	8610	7630	13600	19900	13700	8660	10400
6	10000	9680	9460	9170	9000	8630	7820	14900	20500	13300	9050	10300
7	9440	11600	9330	9070	8720	8070	8070	17200	23600	13000	8950	10400
8	9410	10300	9060	9100	8740	8900	8590	17200	24700	12600	8900	10900
9	9090	9330	8820	9800	9000	8740	8360	18700	26100	12300	8890	10200
10	10000	9290	8960	10000	8790	8360	7710	19600	28800	12400	9070	10400
11	8780	9220	8970	9770	8680	8400	8140	20500	32400	13200	8850	11000
12	9190	9020	8890	9780	8850	8470	8460	22600	32600	13100	8720	10800
13	9380	9330	8850	10800	8860	8470	9140	21400	30700	13300	9030	10800
14	9570	9170	9050	10800	8620	9540	9120	21400	29000	12100	8980	11100
15	9860	9010	8850	10400	8510	9370	8410	22400	26000	12300	8870	11000
16	9880	8930	9100	10300	8820	8950	8880	22300	21400	12000	9150	11200
17	9470	8660	8950	10700	9110	9020	9370	22000	19600	11400	9050	10800
18	11900	8780	9140	10300	8380	9020	8910	23000	15700	10000	9230	10900
19	9410	8650	9080	9990	8240	9350	8760	21000	15400	9220	9180	10700
20	9190	8560	8550	8500	8360	9320	8900	18300	15900	9090	9020	10700
21	9050	8690	8800	8390	8230	9760	8490	18400	14500	9060	9120	10500
22	9340	8700	8750	9760	8490	9070	8830	21900	16400	10300	9080	10800
23	9600	8700	8690	8970	8980	8820	9290	23600	18000	9300	9560	10800
24	9950	8930	8730	9200	9500	9500	8670	24700	17700	10000	9370	10900
25	9980	8700	8650	8800	9110	9310	9010	26900	18800	9020	9010	11000
26	9200	8730	8640	8640	8930	8390	9440	28300	19100	7780	9020	11100
27	8700	8690	8730	8960	8870	8230	9950	30500	18200	8340	9370	11000
28	9200	8550	9230	8510	8900	8680	10500	30400	18200	8960	9540	10800
29	9120	8880	8710	8710	---	8300	10800	28400	19500	8710	9380	10700
30	9150	9040	8730	8510	---	8150	10400	28000	18900	9020	9200	10400
31	9200	---	8920	8620	---	7900	---	27500	---	9310	9300	---
TOTAL	292180	271790	277030	288290	251700	272850	263300	658100	652800	358610	281330	317470
MEAN	9425	9060	8936	9300	8989	8802	8777	21230	21760	11570	9075	10580
MAX	11900	11600	9460	10800	11900	9760	10800	30500	32600	17700	9560	11200
MIN	8250	8510	8550	8190	8230	7900	7630	11400	14500	7780	8660	9250
AC-FT	579500	539100	549500	571800	499200	541200	522300	1305000	1295000	711300	558000	629700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1995, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	12370	13120	13400	14130	14540	16700	20240	19650	15690	8666	8534	10510									
MAX	21360	24660	24320	30290	26690	40010	43970	49060	41100	16480	11630	13650									
(WY)	1985	1985	1984	1984	1986	1986	1984	1984	1984	1983	1984	1984									
MIN	8102	8924	8902	8908	8562	8018	6033	5367	5223	5546	5075	6664									
(WY)	1993	1993	1993	1993	1992	1991	1992	1992	1992	1992	1992	1992									

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1975 - 1995

ANNUAL TOTAL	3342240	4185450	
ANNUAL MEAN	9157	11470	13850
HIGHEST ANNUAL MEAN			26260
LOWEST ANNUAL MEAN			7365
HIGHEST DAILY MEAN	12300	Mar 2	57400
LOWEST DAILY MEAN	6180	Jun 26	4240
ANNUAL SEVEN-DAY MINIMUM	6510	Jun 24	4520
INSTANTANEOUS PEAK FLOW			57900
INSTANTANEOUS PEAK STAGE			13.34
INSTANTANEOUS LOW FLOW			4110
ANNUAL RUNOFF (AC-FT)	6629000	8302000	10040000
10 PERCENT EXCEEDS	11100	19600	25600
50 PERCENT EXCEEDS	9090	9200	10700
90 PERCENT EXCEEDS	7270	8510	7180

a Also occurred Apr. 10, July 26; gage height, 5.16 ft.

b Gage height, 4.32 ft.

13215000 MALHEUR RIVER BELOW WARMSPRINGS RESERVOIR, NEAR RIVERSIDE, OR

LOCATION.--Lat 43d34'29", long 118°12'31", on line between NW 1/4 SW 1/4 and SW 1/4 NW 1/4 sec.17, T.23 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank 0.9 mi downstream from Warm Springs Dam, 3.0 mi upstream from South Fork, 4.0 mi northwest of Riverside, and at mile 113.

DRAINAGE AREA.--1,100 mi², approximately.

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

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,305 ft above sea level, by barometer. See WSP 1317 or 1737 for history of changes prior to Sept. 29, 1949.

REMARKS.--Records good except for flows below 100 ft³/s, and estimated daily discharges, which are poor. Flow completely regulated since November 1919 by Warm Springs Reservoir (station 13214500). Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--76 years (water years 1920-95), 187 ft³/s, 135,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 7,200 ft³/s Mar. 1, 1910, gage height, 10.7 ft, site and datum then in use, from rating curve extended above 820 ft³/s; maximum discharge since storage began November 1919, 3,150 ft³/s Mar. 22, 1984, gage height, 9.70 ft, from floodmark; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 599 ft³/s July 3, 4, 5, gage height, 5.27 ft; minimum daily discharge no flow Dec. 8-14, Jan. 2-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	e.04	e.04	e.01	e.03	e.03	e.03	9.4	361	550	469	415
2	3.1	e.04	e.04	e.00	e.03	e.03	e.03	10	363	565	454	414
3	2.8	e.04	e.04	e.00	e.03	e.03	e.03	10	360	588	453	411
4	2.4	e.04	e.04	e.00	e.03	e.03	e.03	11	359	599	456	409
5	2.3	e.04	e.02	e.00	e.03	e.03	e.03	11	346	587	453	396
6	2.0	e.04	e.01	e.01	e.03	e.03	e.03	11	326	582	454	372
7	2.4	e.04	e.02	e.01	e.03	e.03	e.03	11	298	580	455	357
8	3.0	e.04	e.00	e.02	e.03	e.03	e.03	11	280	578	438	346
9	4.0	e.04	e.00	e.03	e.03	e.03	e.03	10	277	577	432	335
10	4.8	e.04	e.00	e.03	e.03	e.03	e.03	11	277	556	441	329
11	5.3	e.04	e.00	e.06	e.03	e.03	e.03	9.7	277	543	452	325
12	3.8	e.04	e.00	e.05	e.03	e.03	e.03	9.4	289	542	456	323
13	.86	e.04	e.00	e.03	e.03	e.03	e.03	9.2	326	479	456	318
14	1.4	e.04	e.00	e.03	e.03	e.03	e.03	8.7	353	420	478	313
15	2.9	e.04	e.01	e.03	e.03	e.03	e.03	8.0	364	415	485	311
16	4.3	e.04	e.01	e.03	e.03	e.03	e.03	128	367	420	481	307
17	3.7	e.04	e.02	e.03	e.03	e.03	e.03	215	364	420	454	303
18	.46	e.04	e.02	e.03	e.03	e.03	e.03	177	363	415	440	308
19	.33	e.04	e.03	e.03	e.03	e.03	e.03	206	326	418	440	310
20	.26	e.04	e.03	e.03	e.03	e.03	e.03	247	303	431	439	299
21	.18	e.04	e.03	e.03	e.03	e.03	e.03	254	304	444	436	277
22	.12	e.04	e.03	e.03	e.03	e.03	e.03	267	305	451	438	266
23	.09	e.04	e.03	e.03	e.03	e.03	e.03	308	307	451	435	265
24	.04	e.04	e.03	e.03	e.03	e.03	e.03	323	337	441	432	265
25	.04	e.04	e.03	e.03	e.03	e.03	e.03	323	355	435	429	243
26	.04	e.04	e.03	e.03	e.03	e.03	e.03	318	411	440	424	222
27	e.04	e.04	e.03	e.03	e.03	e.03	23	317	458	466	424	193
28	e.04	e.04	e.03	e.03	e.03	e.03	87	316	481	484	421	167
29	e.04	e.04	e.02	e.03	---	e.03	40	326	509	497	417	147
30	e.04	e.04	e.02	e.03	---	e.03	8.5	340	523	503	419	138
31	e.04	---	e.01	e.03	---	e.03	---	354	---	494	415	---
TOTAL	53.72	1.20	0.62	0.79	0.84	0.93	159.28	4569.4	10569	15371	13776	9084
MEAN	1.73	.040	.020	.025	.030	.030	5.31	147	352	496	444	303
MAX	5.3	.04	.04	.06	.03	.03	87	354	523	599	485	415
MIN	.04	.04	.00	.00	.03	.03	.03	8.0	277	415	415	138
AC-FT	107	2.4	1.2	1.6	1.7	1.8	316	9060	20960	30490	27320	18020

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1995, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
33.7	.83	7.58	15.9	33.5	84.7
138	19.8	323	452	763	1440
1953	1920	1984	1971	1983	1984
.000	.000	.000	.000	.000	.000
1934	1933	1933	1933	1933	1935
312	428	340	429	351	197
1603	1162	557	677	575	394
1984	1958	1953	1945	1946	1928
.000	31.4	92.0	30.3	.041	.000
1935	1932	1942	1992	1988	1988

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1920 - 1995

ANNUAL TOTAL	59742.96	53586.78	
ANNUAL MEAN	164	147	187
HIGHEST ANNUAL MEAN			566
LOWEST ANNUAL MEAN			46.8
HIGHEST DAILY MEAN	638	599	3030
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	118500	106300	135500
10 PERCENT EXCEEDS	514	451	497
50 PERCENT EXCEEDS	.33	.04	3.0
90 PERCENT EXCEEDS	.04	.03	.00

e Estimated

MALHEUR RIVER BASIN

13217000 BEULAH RESERVOIR AT BEULAH, OR

LOCATION.--Lat 43°54'41", long 118°9'25", in SW 1/4 SE 1/4 sec.15, T.19 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on top of dam near right end of dam on North Fork Malheur River, 0.2 mi northwest of Beulah, and at mile 15.0.

DRAINAGE AREA.--440 mi², approximately.

PERIOD OF RECORD.--December 1935 to current year. Prior to October 1968, published as Agency Valley Reservoir at Beulah. Prior to March 1979, monthend contents only. Gage heights at 24:00 hours for the period October 1-20, 1992 published in WDR OR-93-1 are in error and should not be used.

REVISED RECORDS.--WSP 1397: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.49 ft above sea level. Prior to Oct. 1, 1978, published as "National Geodetic Vertical Datum of 1929, Bureau of Reclamation construction datum." Prior to Mar. 28, 1979, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began December 1935. Capacity, 59,920 acre-ft between gage heights 3,263.21 ft, bottom of outlet tunnel, and 3,340.0 ft, top of spillway gates; with gates open the capacity is 32,220 acre-ft. No dead storage. Storage below 3,268 ft unusable due to restriction at the trashrack structure. Water is used for irrigation of lands below Juntura, on Vale project, Bureau of Reclamation. U.S. Bureau of Reclamation satellite telemeter at station.

COOPERATION.--Prior to Mar. 28, 1979, daily gage heights furnished by Vale-Oregon Irrigation District. Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 62,770 acre-ft May 3, 1941, gage height, 3,341.50 ft; no contents Sept. 17 to Oct. 13, 1950, Aug. 28 to Oct. 4, 1955, Aug. 13 to Oct. 1, 1961, Sept. 21 to Oct. 5, 1968, Aug. 31 to Oct. 3, 1977, Aug. 25 to Sept. 30, 1994, Oct. 1 to Oct. 15, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 62,410 acre-ft May 16, gage height, 3,341.30 ft; no contents Oct. 1-15.

Capacity table (gage height, in feet, and total contents, in acre-feet)

3,263	0	3,290	3,750	3,320	28,250
3,265	3	3,295	6,090	3,325	35,025
3,270	70	3,300	8,980	3,330	42,530
3,275	310	3,305	12,520	3,335	50,820
3,280	925	3,310	16,950	3,340	59,925
3,285	2,020	3,315	22,220	3,341	61,840

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	3283.73	3292.44	---	3308.19	3318.96	3334.94	3340.05	3339.58	3336.34	3330.70	3326.05
2	---	3284.13	3292.73	---	3308.96	3319.27	3335.30	3340.05	3339.68	3336.09	3330.52	3325.96
3	---	3284.43	3292.99	---	3309.45	3319.61	3335.64	3339.96	3339.73	3335.89	3330.31	3325.86
4	---	3284.87	---	---	3309.90	3319.91	3335.92	3340.00	3339.72	3335.69	3330.12	3325.79
5	---	3285.27	---	3298.58	3310.33	3320.18	3336.30	3340.08	3339.64	3335.49	3329.91	3325.71
6	---	3285.68	---	3298.78	3310.77	---	3336.73	3340.07	3339.60	3335.26	3329.68	3325.63
7	---	3286.02	---	3298.99	3311.15	3320.75	3337.27	3340.07	3339.55	3335.08	3329.42	3325.58
8	---	3286.31	---	3299.19	3311.55	3321.03	3337.87	3340.06	3339.47	3334.85	3329.24	3325.55
9	---	3286.74	---	3299.43	3311.89	3321.44	3338.39	3340.08	3339.36	3334.68	3329.04	3325.49
10	---	3287.11	---	3299.72	3312.22	3321.99	3338.81	3340.09	3339.25	3334.46	3328.79	3325.45
11	---	3287.43	---	3300.05	---	3322.87	3339.23	3340.18	3339.14	3334.23	3328.60	3325.41
12	---	3287.77	3294.57	3300.43	---	3323.52	3339.70	3340.30	3338.99	3334.07	3328.35	3325.37
13	---	3288.07	3294.76	3300.95	---	3324.27	3339.86	3340.45	3338.84	3333.94	3328.14	3325.33
14	---	3288.34	---	3301.61	---	3325.06	---	3340.65	3338.67	3333.81	3327.94	3325.28
15	---	3288.60	3295.18	3301.96	3313.39	3326.01	---	3340.89	3338.51	3333.67	3327.76	3325.23
16	3273.37	3288.90	3295.43	---	3313.60	3326.72	3339.71	3341.30	3338.42	3333.52	3327.56	3325.15
17	3274.66	3289.18	3295.67	3302.37	3313.76	3327.35	3339.72	3339.56	3338.27	3333.37	3327.41	3325.12
18	3275.71	3289.36	3295.91	3302.58	3314.11	3328.18	3339.78	3339.58	3338.11	3333.20	3327.30	3325.06
19	3276.58	3289.54	3296.12	3302.78	3314.50	3328.95	3339.82	3339.62	3337.97	3333.05	3327.25	3325.00
20	3277.37	3289.82	3296.29	3302.96	3314.98	3329.73	3339.85	3339.66	3337.88	3332.93	3327.19	3324.93
21	3278.08	3290.00	---	---	3315.44	3330.48	3339.80	3339.67	3337.80	3332.77	3327.13	3324.85
22	3278.73	3290.12	3295.57	---	3315.90	3331.14	3339.75	3339.69	3337.70	3332.60	3327.05	3324.81
23	3279.33	3290.24	---	3303.36	3316.36	3331.69	3339.80	3339.66	3337.62	3332.42	3327.00	3324.79
24	3279.87	3290.52	3296.90	3303.55	3316.84	---	3339.85	3339.67	3337.52	3332.24	3326.91	3324.76
25	3280.40	3290.83	3297.10	3303.74	3317.33	3332.66	3339.88	3339.66	3337.45	3332.04	3326.83	3324.73
26	3280.93	---	3297.32	3303.91	3317.80	3333.04	3339.97	3339.65	3337.28	3331.86	3326.74	3324.70
27	3281.42	3291.30	3297.52	3304.08	3318.25	3333.41	3339.99	3339.65	3337.10	3331.68	3326.64	3324.67
28	3281.98	3291.56	3297.72	3304.24	3318.63	3333.73	3340.00	3339.64	3336.92	3331.49	3326.51	3324.62
29	3282.46	3291.84	---	3304.43	---	3334.11	3340.00	3339.61	3336.73	3331.25	3326.40	3324.60
30	3282.88	3292.15	---	3304.83	---	3334.37	3340.02	3339.56	3336.54	3331.07	3326.22	3324.61
31	3283.32	---	a3298.10	3306.55	---	3334.65	---	3339.55	---	3330.89	3326.13	---
MAX	---	---	---	---	---	---	---	3341.30	3339.73	3336.34	3330.70	3326.05
MIN	---	---	---	---	---	---	---	3339.55	3336.54	3330.89	3326.13	3324.60
(†)	1580	4710	7800	13790	26550	50210	59960	59080	53550	43940	36680	34460
(‡)	+1580	+3130	+3090	+59990	+12760	+23660	+9750	-880	-5530	-9610	-7260	-2220

CAL YR 1994 AC-FT† -22940

WTR YR 1995 ACFT‡ +34460

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

‡ Change in contents, in acre-ft.

a Interpolated.

MALHEUR RIVER BASIN

63

13217500 NORTH FORK MALHEUR RIVER AT BEULAH, OR

LOCATION.--Lat 43°54'28", long 118°09'08", in NW 1/4 NE 1/4 sec.22, T.19 S., R.37 E., Malheur County, Hydrologic Unit 17050116, on left bank at Beulah, 0.3 mi downstream from Agency Valley Dam, 12 mi northwest of Juntura, and at mile 14.5.

DRAINAGE AREA.--440 mi², approximately.

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

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

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

REMARKS.--No estimated daily discharges. Records good except those below 20 ft³/s, which are poor. Flow regulated since 1935 by Beulah Reservoir (station 13217000). Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--60 years (water years 1936-95), 142 ft³/s, 102,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft³/s May 7, 1942, gage height, 9.4 ft, present datum, from floodmark, caused by failure of gates at Agency Valley Dam, from rating curve extended above 1,100 ft³/s on basis of computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 566 ft³/s Apr. 14, gage height, 3.86 ft; minimum daily discharge, no flow many days during winter.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	.05	.17	.09	.35	.02	14	371	332	267	201	92
2	34	.00	.19	.09	.30	.02	15	397	331	267	200	92
3	34	.00	.18	.09	.24	.05	16	453	330	267	200	92
4	37	.03	.16	.09	.21	.07	20	404	330	264	200	92
5	38	.14	.08	.07	.16	.12	24	366	331	264	207	77
6	38	.09	.09	.05	.09	.25	24	422	329	264	211	70
7	39	.09	.09	.05	.06	.23	29	424	329	249	211	70
8	38	.01	.11	.05	.03	.31	30	424	327	244	211	70
9	39	.16	.14	.02	.00	.41	29	424	321	244	210	70
10	37	.27	.14	.00	.00	.46	33	420	318	241	208	70
11	40	.16	.14	.00	.00	.47	38	372	315	239	208	71
12	41	.17	.14	.00	.00	.58	43	372	315	238	208	72
13	42	.14	.14	.07	.00	.80	386	373	314	238	208	72
14	25	.11	.14	.30	.00	1.3	560	373	314	215	205	72
15	3.5	.10	.14	.50	.00	1.6	518	376	312	198	196	78
16	2.0	.16	.10	.50	.00	1.8	424	353	312	192	188	74
17	.35	.20	.10	.47	.00	2.1	340	327	309	190	171	72
18	.19	.09	.16	.39	.00	2.3	262	326	309	190	133	73
19	.13	.00	.19	.34	.00	2.6	284	324	290	190	101	75
20	.07	.00	.22	.32	.00	2.9	289	327	265	190	91	75
21	.09	.00	.20	.25	.00	3.2	354	327	238	190	90	75
22	.05	.00	.19	.23	.00	3.3	322	327	228	197	90	75
23	.05	.00	.19	.23	.00	3.3	235	327	217	200	88	66
24	.05	.00	.19	.23	.00	3.4	211	327	211	198	88	60
25	.05	.02	.19	.29	.00	3.4	211	327	208	198	93	59
26	.07	.05	.16	.33	.00	3.5	211	333	232	198	108	59
27	.10	.05	.14	.32	.00	4.6	226	330	241	198	115	59
28	.15	.09	.10	.32	.00	5.7	307	330	241	198	115	59
29	.07	.09	.14	.30	.00	7.2	362	330	250	200	120	59
30	.05	.11	.14	.37	---	8.1	362	332	261	203	121	59
31	.01	---	.11	.35	---	8.9	---	333	---	204	102	---
TOTAL	521.98	2.38	4.57	6.71	1.44	72.99	6179	11251	8660	6835	4898	2159
MEAN	16.8	.079	.15	.22	.051	2.35	206	363	289	220	158	72.0
MAX	42	.27	.22	.50	.35	8.9	560	453	332	267	211	92
MIN	.01	.00	.08	.00	.00	.02	14	324	208	190	88	59
AC-FT	1040	4.7	9.1	13	2.9	145	12260	22320	17180	13560	9720	4280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1995, BY WATER YEAR (WY)

	MEAN	134	135.5	62.7	287	478	936	856	810	510	402	399	341
MAX	1954	1936	1943	1943	1965	1983	1958	1983	1974	1979	1980	1945	
(WY)	.086	.000	.000	.000	.000	.000	2.29	120	53.7	39.5	30.4	31.9	
MIN	1974	1938	1938	1936	1938	1938	1981	1977	1939	1992	1992	1961	
(WY)													

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1936 - 1995
ANNUAL TOTAL	32103.22	40592.07	
ANNUAL MEAN	88.0	111	142
HIGHEST ANNUAL MEAN			335
LOWEST ANNUAL MEAN			54.6
HIGHEST DAILY MEAN	420	Aug 23	560
LOWEST DAILY MEAN	.00	Nov 2	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Nov 19	.00
ANNUAL RUNOFF (AC-FT)	63680	80510	102700
10 PERCENT EXCEEDS	272	329	362
50 PERCENT EXCEEDS	35	37	41
90 PERCENT EXCEEDS	.09	.02	.10

MALHEUR RIVER BASIN

13226800 BULLY CREEK RESERVOIR NEAR VALE, OR

LOCATION.--Lat 44°00'55", long 117°23'45", in SE 1/4 SW 1/4 sec.12, T.18 S., R.43 E., Malheur County, Hydrologic Unit 17050118, U.S. Bureau of Reclamation land, on top of dam over outlet works near right end of dam on Bully Creek, 8.0 mi northwest of Vale, and at mile 12.5.

DRAINAGE AREA.--547 mi².

PERIOD OF RECORD.--February 1963 to current year. Prior to March 1979, monthend contents only.

REVISED RECORDS.--WDR-OR-94-1: 1993.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum). Prior to Mar. 22, 1979, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began Feb. 1, 1963. Capacity, 29,980 acre-ft between elevations 2,456.58 ft, outlet works, and 2,516.00 ft, spillway crest. Dead storage, 1,650 acre-ft below elevation 2,456.58 ft. Figures given herein do not include dead storage. Water used for irrigation lands of Vale-Oregon Irrigation District. Bully Creek Reservoir feed canal diverts from Malheur River by way of Vale Oregon canal. U.S. Bureau of Reclamation satellite telemeter at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents not determined, occurred during period Apr. 4 to May 2, 1969, elevation above 2,516.00 ft, spillway crest; no usable contents at times in 1973, 1977, 1978, 1988, 1989, 1991, 1992, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 30,870 acre-ft Apr. 23, 24, elevation, 2,516.90 ft; no storage at times during September. Minimum elevation not determined as water surface dropped below minimum recording limit of instrument.

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

2,456.5	0	2,480	5,430	2,505	20,130
2,460	465	2,485	7,430	2,510	24,370
2,465	1,310	2,490	9,930	2,515	29,000
2,470	2,401	2,495	12,900	2,520	34,040
2,475	3,770	2,500	16,290		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	2463.25	2471.15	---	2496.99	2510.87	2516.55	2516.28	2515.25	2511.47	2505.89	2499.15
2	---	2463.48	2471.39	---	2500.04	2511.01	2516.54	2516.30	2515.15	2511.24	2505.63	2498.91
3	---	2463.71	2471.65	---	2501.71	2511.16	2516.52	2516.31	2515.05	2510.98	2505.38	2498.68
4	---	2464.06	2471.87	---	2502.97	2511.30	2516.49	2516.29	2514.93	2510.76	2505.17	2498.47
5	---	2464.38	2472.06	---	2504.06	2511.40	2516.46	2516.28	2514.85	2510.57	2504.95	2498.22
6	---	2464.70	2472.29	---	2505.03	2511.50	2516.45	2516.28	2514.74	2510.32	2504.70	2498.06
7	---	2465.02	2472.50	---	2505.74	2511.59	2516.45	2516.40	2514.71	2510.13	2504.38	2497.85
8	---	2465.35	2472.67	---	2506.18	2511.65	2516.43	2516.46	2514.63	2509.91	2504.14	2497.73
9	---	2465.70	2472.87	---	2506.57	2511.80	2516.41	2516.47	2514.59	2509.72	2503.91	2497.59
10	---	2466.03	2473.01	---	2506.89	2511.96	2516.44	2516.72	2514.55	2509.50	2503.61	2497.45
11	---	2466.35	2473.21	2476.91	2507.21	2512.28	2516.44	2516.72	2514.50	2509.34	2503.37	2497.24
12	---	2466.69	2473.46	2477.62	2507.51	2512.50	2516.47	2516.71	2514.41	2509.20	2503.09	2497.07
13	---	2466.97	2473.61	2479.06	2507.79	2512.70	2516.50	2516.68	2514.29	2509.14	2502.82	2496.89
14	---	2467.25	2473.78	2481.41	2507.98	2512.99	2516.51	2516.67	2514.15	2509.07	2502.62	2496.71
15	---	2467.53	2473.96	2483.84	2508.14	2513.37	2516.56	2516.61	2513.99	2509.00	2502.33	2496.54
16	---	2467.81	2474.17	2484.45	2508.32	2513.80	2516.58	2516.55	2513.83	2508.97	2502.22	2496.39
17	---	2468.08	2474.35	2484.89	2508.43	2514.16	2516.57	2516.42	2513.68	2508.93	2502.05	2496.23
18	---	2468.32	2474.54	2485.48	2508.53	2514.55	2516.58	2516.36	2513.55	2508.83	2501.92	2496.06
19	---	2468.57	2474.73	2486.20	2508.67	2515.11	2516.73	2516.33	2513.40	2508.68	2501.76	2495.90
20	2459.31	2468.83	2474.93	2486.81	2508.88	2515.56	2516.80	2516.30	2513.27	2508.55	2501.62	2495.67
21	2459.80	2469.03	2475.13	2487.31	2509.11	2515.97	2516.85	2516.25	2513.15	2508.38	2501.45	2495.49
22	2460.20	2469.14	2475.31	2487.82	2509.46	2516.35	2516.84	2516.18	2513.07	2508.18	2501.25	2495.36
23	2460.56	2469.36	2475.48	2488.29	2509.71	2516.58	2516.84	2516.08	2512.92	2507.93	2501.07	2495.25
24	2460.91	2469.60	2475.67	2488.68	2509.95	2516.66	2516.84	2515.99	2512.77	2507.67	2500.86	2495.11
25	2461.23	2469.78	2475.83	2489.00	2510.19	2516.69	2516.66	2515.90	2512.62	2507.46	2500.69	2495.00
26	2461.56	2469.98	2476.05	2489.31	2510.39	2516.71	2516.58	2515.80	2512.39	2507.20	2500.49	2494.89
27	2461.88	2470.22	2476.27	2489.61	2510.57	2516.69	2516.46	2515.75	2512.13	2507.00	2500.33	2494.79
28	2462.14	2470.43	2476.43	2489.99	2510.75	2516.65	2516.38	2515.66	2511.92	2506.73	2500.19	2494.67
29	2462.43	2470.67	2476.48	2490.33	---	2516.65	2516.34	2515.60	2511.70	2506.49	2499.84	2494.55
30	2462.74	2470.90	2476.50	2490.66	---	2516.63	2516.30	2515.47	2511.65	2506.27	2499.61	2494.47
31	2463.00	---	e2476.56	2492.83	---	2516.62	---	2515.37	---	2506.08	2499.38	---
MAX	---	2470.90	2476.56	---	2510.75	2516.71	2516.85	2516.72	2515.25	2511.47	2505.89	2499.15
MIN	---	2463.25	2471.15	---	2496.99	2510.87	2516.30	2515.37	2511.65	2506.08	2499.38	2494.47
(†)	941	2420	4260	11560	25040	30590	30280	29360	25850	21010	15850	12570
(†)	+941	+1479	+1840	+7300	+13480	+5550	-310	-920	-3510	-4840	-5160	-3280

CAL YR 1994 AC-FT# -11370
WTR YR 1995 AC-FT# +12570

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

MALHEUR RIVER BASIN

65

13233300 MALHEUR RIVER BELOW NEVADA DAM, NEAR VALE, OR

LOCATION.--Lat 43°59'20", long 117°13'10", in NE 1/4 SW 1/4 sec.21, T.18 S., R.45 E., Malheur County, Hydrologic Unit 17050117, on right bank, 510 ft downstream from dam and headgates of Nevada Canal, and 1.5 mi northeast of Vale.

DRAINAGE AREA.--3,880 mi², approximately.

PERIOD OF RECORD.--June 1926 to September 1934, April 1936 to March 1942, March 1944 to September 1954, October 1993 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Elevation of gage is 2,220 ft above sea level, from topographic map. Prior to Nov. 17, 1930, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Many diversions for irrigation upstream from station. Since March 1930, Vale-Oregon Canal has diverted in sec.31 T.20 S., R.41 E., for irrigation upstream from station and on Willow Creek, a tributary which enters partly above and partly below station. Gilleman-Frohman Canal diverts on left bank in sec.8 T.19 S., R.44 E., for irrigation above and below station. Nevada Canal diverts on right bank 300 ft above station for irrigation below station. Flow regulated by Warm Springs Reservoir and, since December 1935, by Beulah Reservoir.

AVERAGE DISCHARGE.--15 years (water years 1937-41, 1945-52, 1994-95), 198 ft³/s, 143,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,530 ft³/s Feb. 28, 1940, gage height, 8.88 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 24, 1957 reached a stage of 14.6 ft, discharge 21,000 ft³/s. Flood of Mar. 19, 1993 reached a stage of 13.31 ft, discharge 16,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft³/s Feb. 2, gage height, 4.68 ft; minimum discharge, 12 ft³/s Oct. 1-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	97	88	76	1540	204	294	166	78	42	157	104
2	12	96	88	80	1520	203	277	171	76	32	150	101
3	12	96	88	76	990	202	265	184	122	46	118	109
4	12	96	86	81	567	207	250	225	120	100	95	132
5	20	99	85	82	395	207	220	326	115	138	92	159
6	26	99	85	82	323	206	193	348	142	103	90	183
7	35	101	83	84	e310	202	196	682	140	77	93	178
8	42	101	82	86	e320	202	205	565	129	52	98	160
9	43	107	82	107	e300	204	206	572	99	65	105	167
10	56	112	82	268	e270	209	222	626	105	79	99	174
11	60	111	78	388	e250	228	223	574	114	84	80	175
12	61	110	78	347	e250	266	216	476	99	94	69	175
13	64	106	82	377	e240	269	222	404	67	320	63	161
14	69	106	79	489	e240	260	284	353	43	388	60	147
15	94	104	80	1130	e240	270	629	335	51	269	58	143
16	92	107	79	687	e230	333	674	253	61	219	95	145
17	128	103	80	361	e223	347	625	203	90	209	225	143
18	133	99	80	248	236	329	446	193	122	181	191	146
19	118	96	80	196	236	338	336	195	198	152	153	149
20	111	96	79	170	248	398	335	130	219	133	137	141
21	106	96	76	154	249	414	369	86	172	113	136	138
22	109	98	69	144	239	345	396	88	156	108	121	145
23	102	99	65	134	229	348	384	76	157	108	104	154
24	99	102	72	125	223	383	309	54	120	124	99	157
25	99	102	74	124	216	390	268	44	113	117	94	158
26	99	101	74	128	212	384	187	49	85	112	96	163
27	97	101	74	122	208	369	162	55	48	95	94	176
28	98	92	74	120	206	348	117	60	35	84	103	176
29	96	88	73	118	---	333	110	61	36	90	92	172
30	96	88	74	120	---	318	166	62	38	124	88	166
31	96	---	77	336	---	304	---	61	---	153	92	---
TOTAL	2297	3009	2446	7040	10710	9020	8786	7677	3150	4011	3347	4597
MEAN	74.1	100	78.9	227	382	291	293	248	105	129	108	153
MAX	133	112	88	1130	1540	414	674	682	219	388	225	183
MIN	12	88	65	76	206	202	110	44	35	32	58	101
AC-FT	4560	5970	4850	13960	21240	17890	17430	15230	6250	7960	6640	9120

CAL YR 1994 TOTAL 24642.0 MEAN 67.5 MAX 296 MIN 8.0 AC-FT 48880
WTR YR 1995 TOTAL 66090 MEAN 181 MAX 1540 MIN 12 AC-FT 131100

e Estimated

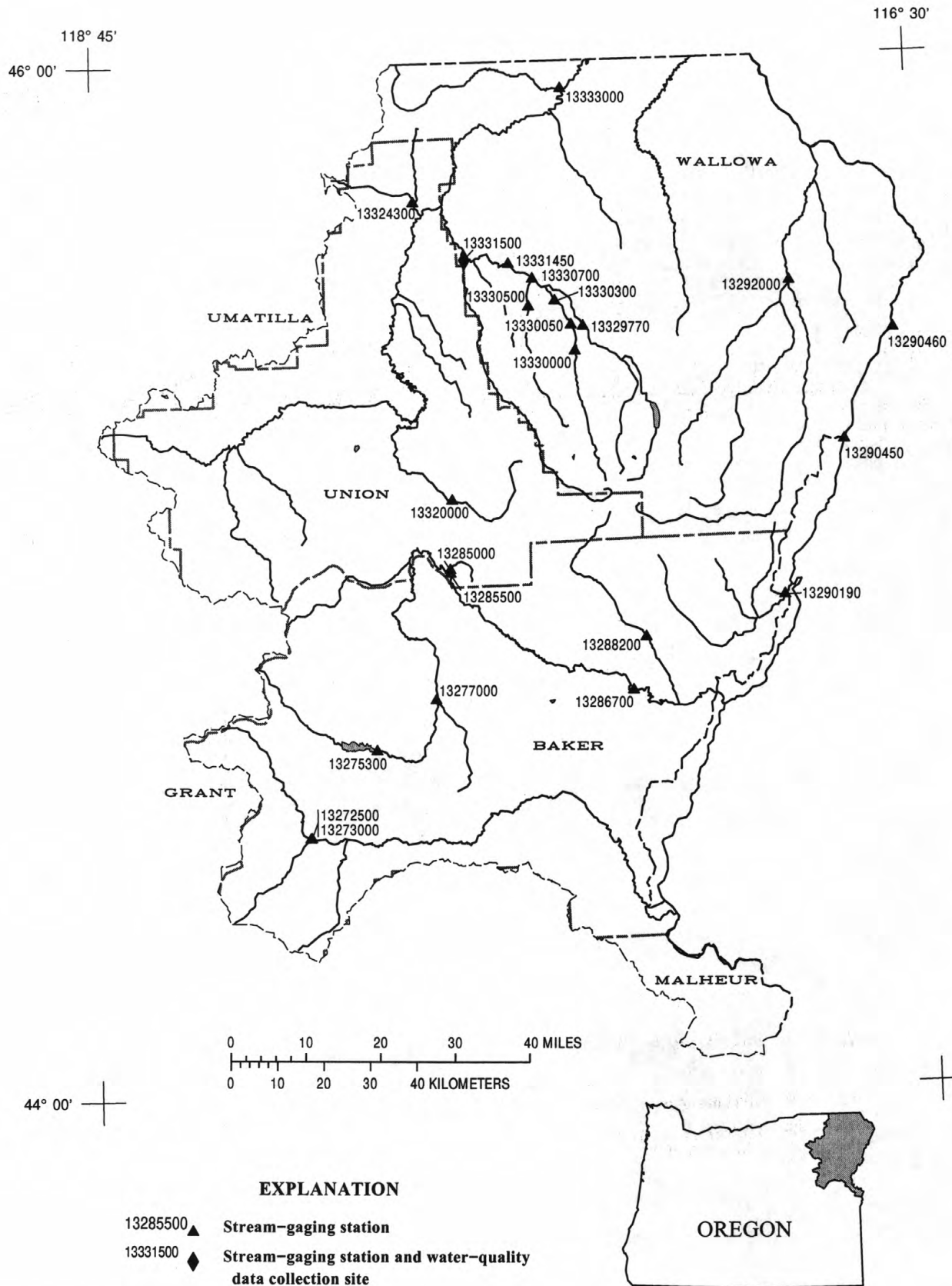
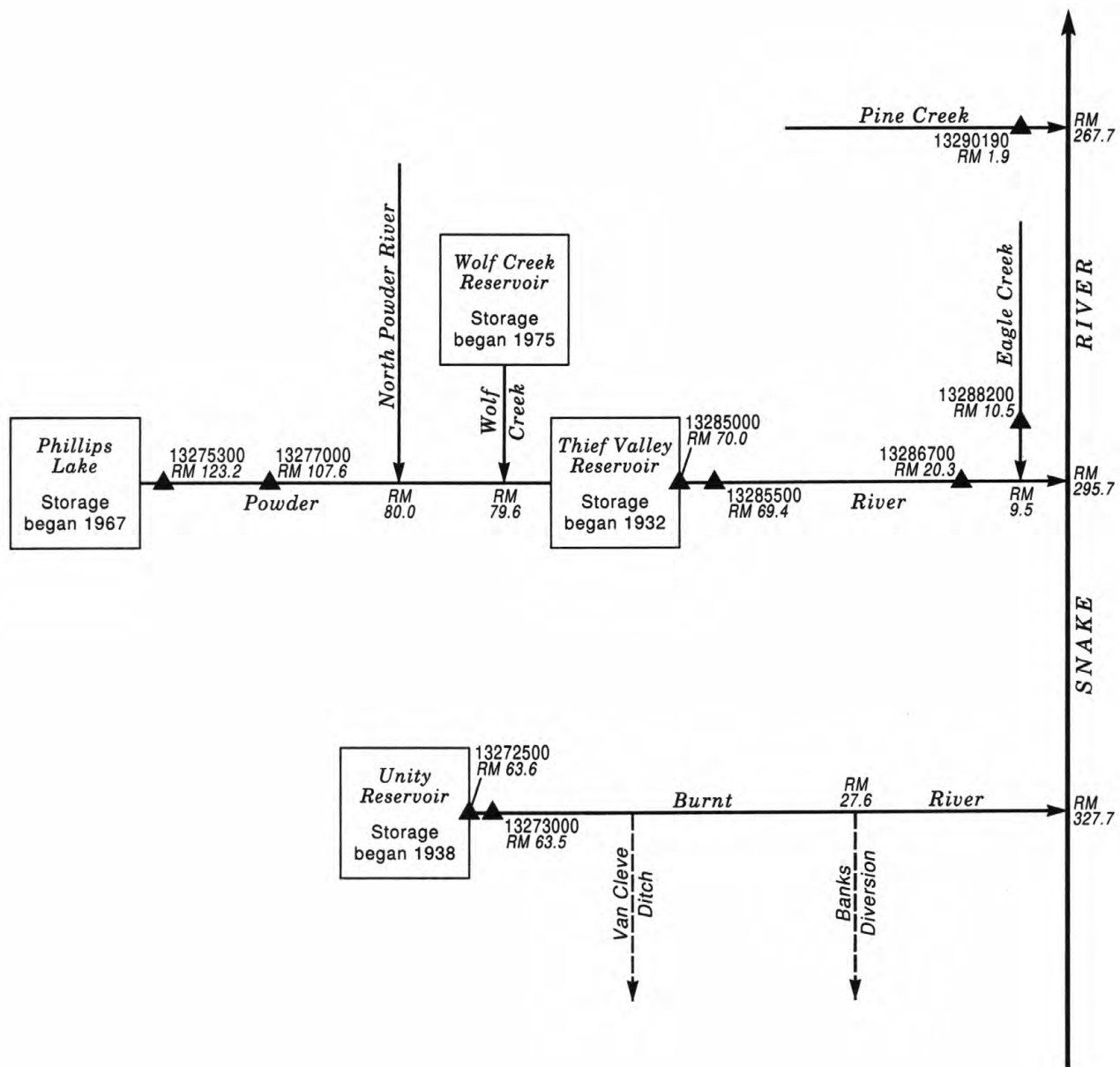


Figure 8. Location of surface-water and water-quality stations in the Burnt River, Powder River, Pine Creek, Imnaha River, and Grande Ronde River Basins.



EXPLANATION

- ▲ 13285000 Stream-gaging station
- RM 70.0 River mile
- Stream—Arrow shows direction of flow
- Tunnel, canal or pipe—Arrow shows direction of flow

Figure 9. Schematic diagram showing gaging stations in Burnt and Powder River Basins.

BURNT RIVER BASIN

13272500 UNITY RESERVOIR NEAR UNITY, OR

LOCATION.--Lat 44°30'13", long 118°10'45", in SE 1/4 SW 1/4 sec.21, T.12 S., R.37 E., Baker County, Hydrologic Unit 17050202, at spillway near right end of dam on Burnt River, 4.4 mi north of Unity, and at mile 63.6.

DRAINAGE AREA.--309 mi².

PERIOD OF RECORD.--March 1938 to current year. Prior to September 1978, monthend contents only.

GAGE.-- Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation bench mark). Mar. 13, 1938, to Nov. 4, 1941, reference mark or manometer pressure gage and Nov. 5, 1941, to Dec. 10, 1978, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway and outlet works, completed by Bureau of Reclamation in 1937; storage began Feb. 19, 1938. Capacity, 25,200 acre-ft between elevations 3,776.5 ft, bottom of outlet gates, and 3,820.0 ft, top of radial gates on spillway when closed. Dead storage, 600 acre-ft below elevation 3,776.5 ft. Records given herein represent usable contents. Water used for irrigation in the Burnt River Irrigation District near Hereford and Bridgeport. U.S. Bureau of Reclamation satellite telemeter at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 26,770 acre-ft Apr. 8, 1971, elevation, 3,821.62 ft; no contents Sept. 5 to Oct. 4, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum observed contents, 25,400 acre-ft April 8, elevation, 3,820.20 ft; minimum observed contents, 510 acre-ft Oct. 1, elevation, 3,779.60.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

3,780	590	3,805	12,960
3,785	1,960	3,810	16,680
3,790	4,020	3,815	20,770
3,795	6,610	3,820	25,220
3,800	9,600	3,821	26,150

RESERVOIR ELEVATION SURFACE WATER (FEET), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3779.67	3782.06	3786.83	3790.48	3798.56	3810.91	3819.93	3819.86	3818.94	3815.42	3810.64	3801.86
2	3779.77	3782.22	3786.97	3790.49	3799.11	3811.25	3819.89	3819.77	3818.89	3815.24	3810.31	3801.57
3	3779.88	3782.37	3787.12	3790.54	3799.70	3811.51	3819.92	3819.68	3818.85	3815.10	3809.99	3801.27
4	3779.93	3782.54	3787.21	3790.60	3800.17	3811.69	3820.01	3819.58	3818.73	3815.00	3809.67	3800.97
5	3779.99	3782.72	3787.28	3790.68	3800.38	3811.84	3820.07	3819.44	3818.60	3814.87	3809.34	3800.68
6	3779.92	3782.88	3787.41	3790.76	3800.41	3811.96	3820.10	3819.33	3818.54	3814.72	3809.01	3800.38
7	3779.93	3783.01	3787.54	3790.82	3800.42	3812.06	3820.17	3819.18	3818.54	3814.61	3808.74	3800.13
8	3779.97	3783.15	3787.67	3791.08	3800.42	3812.19	3819.88	3819.10	3818.45	3814.50	3808.43	3799.58
9	3780.00	3783.35	3787.82	3791.28	3800.41	3812.40	3819.53	3819.17	3818.38	3814.32	3808.11	3799.24
10	3780.08	3783.53	3787.97	3791.92	3800.65	3812.79	3819.67	3819.20	3818.30	3814.18	3807.79	3798.89
11	3780.12	3783.67	3788.14	3792.78	3801.01	3813.41	3819.78	3819.20	3818.22	3814.09	3807.47	3798.54
12	3780.17	3783.83	3788.31	3793.61	3801.32	3814.11	3819.83	3819.18	3818.09	3813.93	3807.22	3798.20
13	3780.25	3783.97	3788.43	3793.95	3801.56	3814.86	3819.89	3819.10	3817.93	3813.80	3806.87	3797.89
14	3780.32	3784.10	3788.57	3794.32	3801.80	3815.63	3819.88	3818.98	3817.73	3813.68	3806.58	3797.60
15	3780.40	3784.25	3788.71	3794.65	3802.06	3816.28	3819.81	3818.87	3817.53	3813.52	3806.34	3797.30
16	3780.51	3784.38	3788.86	3794.92	3802.28	3816.39	3819.82	3818.88	3817.34	3813.31	3806.08	3797.02
17	3780.59	3784.53	3788.99	3795.19	3802.58	3816.57	3819.87	3818.90	3817.19	3813.10	3805.80	3796.74
18	3780.66	3784.68	3789.12	3795.48	3802.89	3817.19	3819.89	3818.92	3817.07	3813.08	3805.53	3796.59
19	3780.77	3784.86	3789.24	3795.74	3803.35	3817.48	3819.92	3818.89	3816.95	3812.93	3805.28	3796.40
20	3780.85	3785.02	3789.35	3795.92	3804.02	3817.72	3820.01	3818.86	3816.79	3812.81	3805.03	3796.23
21	3780.87	3785.17	3789.45	3796.06	3804.82	3817.94	3820.00	3818.87	3816.72	3812.66	3804.77	3796.12
22	3780.92	3785.24	3789.52	3796.44	3805.68	3818.10	3819.98	3818.88	3816.59	3812.50	3804.53	3796.02
23	3780.97	3785.37	3789.58	3796.72	3806.54	3818.20	3819.94	3819.03	3816.46	3812.33	3804.26	3795.97
24	3781.02	3785.53	3789.70	3796.89	3807.44	3818.30	3819.99	3819.20	3816.34	3812.17	3804.00	3795.96
25	3781.13	3785.73	3789.82	3797.04	3808.38	3818.63	3820.04	3819.24	3816.24	3812.01	3803.73	3795.93
26	3781.26	3785.87	3789.98	3797.18	3809.28	3819.97	3820.10	3819.21	3816.10	3811.84	3803.47	3795.93
27	3781.38	3786.06	3790.12	3797.33	3810.05	3819.28	3820.07	3819.22	3815.93	3811.68	3803.20	3795.93
28	3781.49	3786.22	3790.20	3797.50	3810.56	3819.44	3820.01	3819.22	3815.80	3811.52	3802.95	3795.94
29	3781.59	3786.42	3790.28	3797.66	--	3819.59	3820.00	3819.18	3815.67	3811.30	3802.67	3795.91
30	3781.72	3786.61	3790.35	3797.84	--	3819.71	3819.96	3819.08	3815.56	3811.09	3802.40	3795.94
31	3781.93	--	3790.41	3798.19	--	3819.87	--	3819.01	--	3810.88	3802.13	--
MAX	3781.93	3786.61	3790.41	3798.19	3810.56	3819.97	3820.17	3819.86	3818.94	3815.42	3810.64	3801.86
MIN	3779.67	3782.06	3786.83	3790.48	3798.56	3810.91	3819.53	3818.86	3815.56	3810.88	3802.13	3795.91
(†)	1030	2560	4220	7340	17120	25090	25180	24320	21250	17360	10990	7140
(‡)	+500	+1530	+1660	+3120	+9780	+7970	+90	-860	-3070	-3890	-6370	-3850

CAL YR 1994 AC-FT† -7490

WTR YR 1995 AC-FT‡ +6610

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

‡ Change in contents, in acre-feet.

BURNT RIVER BASIN

69

13273000 BURNT RIVER NEAR HEREFORD, OR

LOCATION.--Lat 44°30'14", long 118°10'35", in SE 1/4 sec.21, T.12 S., R.37 E., Baker County, Hydrologic Unit 17050202, on left bank 800 ft downstream from Unity Dam, 0.4 mi upstream from Van Cleve ditch, 7 mi west of Hereford, and at mile 63.5.

DRAINAGE AREA.--309 mi².

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

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

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

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1938 by Unity Reservoir (station 13272500). Diversions for irrigation upstream from station. U.S. Bureau of Reclamation satellite telemeter at station.

AVERAGE DISCHARGE.--67 years (water years 1929-95), 84.9 ft³/s, 61,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft³/s Apr. 17, 1943, gage height, 5.91 ft, present datum, from rating curve extended above 1,300 ft³/s; maximum gage height, 9.07 ft Apr. 8, 1971; no flow at times; minimum discharge before construction of Unity Dam, 1.6 ft³/s Aug. 31, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 874 ft³/s Apr. 8, gage height, 7.52 ft; minimum discharge, 1.1 ft³/s Oct. 25, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	4.1	5.2	5.8	5.2	62	210	317	107	83	109	99
2	5.0	4.2	5.2	5.8	4.0	62	301	316	107	82	125	105
3	5.0	2.8	5.0	5.8	3.7	61	251	314	107	82	137	108
4	4.9	5.7	5.2	5.8	3.5	60	271	314	107	82	139	107
5	5.0	7.6	5.2	5.8	3.6	60	352	314	106	82	139	107
6	4.1	7.2	5.2	5.8	3.7	60	421	313	105	82	138	116
7	3.5	6.8	5.2	5.8	3.6	60	542	312	105	81	137	120
8	3.3	6.4	5.2	5.8	3.3	60	809	272	105	81	136	120
9	3.1	6.4	5.2	5.8	3.2	60	714	232	105	81	135	119
10	3.4	6.7	5.4	6.1	3.1	60	331	249	106	81	134	118
11	3.5	6.7	5.5	6.1	3.4	60	310	256	105	80	133	117
12	3.4	6.1	5.5	6.1	3.8	60	373	255	105	81	132	116
13	3.3	5.9	5.5	6.1	4.2	59	365	255	114	80	131	106
14	3.5	5.4	5.5	6.1	4.2	158	409	255	128	80	118	99
15	3.6	5.5	5.5	6.1	4.2	367	378	226	134	80	109	99
16	3.5	5.5	5.5	6.1	4.2	564	304	178	125	80	108	98
17	3.1	5.3	5.5	6.1	4.2	423	269	170	120	80	108	98
18	2.9	4.7	5.5	6.2	4.2	280	238	170	120	79	107	71
19	3.1	4.7	5.7	6.4	4.2	467	198	170	120	79	106	48
20	3.2	4.9	5.8	6.4	4.2	472	182	152	119	79	105	41
21	2.2	5.0	5.8	6.6	9.7	407	217	130	108	79	105	36
22	5.9	5.0	5.8	6.7	13	369	218	124	102	79	104	30
23	9.0	5.0	5.8	6.7	15	347	193	34	102	78	103	21
24	7.7	5.1	5.8	6.7	16	284	185	16	91	77	102	17
25	3.7	5.0	5.8	6.9	17	120	183	53	84	76	101	17
26	3.6	5.2	5.7	6.2	14	90	190	71	84	76	101	10
27	4.5	5.0	5.2	5.8	11	90	248	72	83	76	100	6.7
28	4.7	5.0	5.8	5.8	43	124	260	76	82	76	100	7.0
29	4.1	5.1	5.8	5.8	---	144	258	91	82	89	100	7.0
30	3.7	5.2	5.8	5.8	---	144	281	107	82	95	99	6.7
31	4.3	---	5.8	5.4	---	145	---	107	---	94	99	---
TOTAL	128.8	163.2	170.6	188.4	216.4	5779	9461	5921	3150	2510	3600	2170.4
MEAN	4.15	5.44	5.50	6.08	7.73	186	315	191	105	81.0	116	72.3
MAX	9.0	7.6	5.8	6.9	43	564	809	317	134	95	139	120
MIN	2.2	2.8	5.0	5.4	3.1	59	182	16	82	76	99	6.7
AC-FT	255	324	338	374	429	11460	18770	11740	6250	4980	7140	4300

CAL YR 1994 TOTAL 15112.87 MEAN 41.4 MAX 124 MIN .21 AC-FT 29980
WTR YR 1995 TOTAL 33458.8 MEAN 91.7 MAX 809 MIN 2.2 AC-FT 66370

POWDER RIVER BASIN

13275300 POWDER RIVER NEAR SUMPTER, OR

LOCATION.--Lat 44°40'20", long 117°59'40", in NE 1/4 NE 1/4 sec.25, T.10 S., R.38 E., Baker County, Hydrologic Unit 17050203, Wallowa Whitman National Forest, on left bank 1,200 ft downstream from Mason Dam, 1.4 mi upstream from California Gulch, 11.4 mi southeast of Sumpter, and at mile 123.2.

DRAINAGE AREA.--168 mi², approximately. Prior to Oct. 1, 1970, 170 mi² at cableway, 0.5 mi downstream.

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

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

REMARKS.--No estimated daily discharges. Records good except for discharges below 5 ft³/s, which are poor. Flow completely regulated since Oct. 31, 1967, by Phillips Lake, active capacity, 90,540 acre-ft. Many small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--30 years (water years 1966-95), 105 ft³/s, 76,070 acre-ft/yr, not adjusted for storage in Phillips Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 971 ft³/s Apr. 30, 1965, gage height, 4.43 ft; no flow Nov. 12, 1967; Nov. 23-29, 1988; Sept. 29, 1989; Oct. 13, 1994.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 362 ft³/s Aug. 2, gage height, 3.34 ft; minimum discharge, no flow Oct. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	5.7	3.1	4.0	3.8	3.3	2.8	68	319	112	309	209
2	7.7	5.7	3.0	3.8	3.8	3.3	2.9	58	319	123	345	205
3	6.4	5.7	3.0	3.2	3.8	3.3	3.3	71	319	155	358	205
4	2.8	5.7	2.8	2.9	4.1	3.3	3.5	87	319	154	358	203
5	2.7	5.7	2.5	2.8	4.1	3.3	3.6	100	315	154	357	203
6	2.8	5.6	2.5	2.8	4.1	3.3	3.8	100	318	178	355	187
7	2.8	5.4	2.5	2.8	4.4	3.3	3.5	100	327	188	354	154
8	2.8	5.4	2.5	2.9	4.2	3.4	2.9	98	310	188	343	132
9	2.8	5.4	2.5	3.6	4.4	3.7	2.8	83	301	188	298	126
10	2.8	5.4	2.5	4.1	4.4	3.8	2.4	64	301	188	227	126
11	2.8	5.4	2.4	4.1	4.1	3.4	2.3	56	301	188	216	87
12	2.8	5.4	2.3	4.1	4.1	3.0	2.3	44	288	188	217	72
13	4.8	5.4	2.3	4.2	4.3	3.2	2.3	34	258	188	217	72
14	11	5.7	2.3	4.4	4.7	3.3	2.3	34	249	188	217	72
15	5.7	6.0	2.3	4.4	5.0	3.3	2.3	35	210	200	217	72
16	5.7	7.1	3.1	4.4	5.0	3.2	2.3	35	162	241	195	72
17	5.7	7.1	4.1	4.2	5.4	3.3	2.7	55	136	247	163	72
18	5.7	6.4	4.4	4.1	5.2	3.3	3.0	66	131	221	133	98
19	5.7	4.6	4.4	4.1	5.4	3.5	3.0	84	107	214	133	140
20	5.5	5.3	4.4	4.1	5.4	3.5	3.0	109	64	214	140	154
21	5.0	4.6	4.4	3.8	5.4	3.2	3.1	116	50	219	156	154
22	5.0	4.3	4.4	3.8	5.4	3.0	3.3	139	50	233	187	147
23	5.0	4.0	4.4	3.6	5.4	3.3	3.3	187	43	232	194	130
24	5.5	4.6	4.4	3.3	5.4	3.0	16	228	41	215	194	119
25	5.7	3.9	4.4	3.4	4.6	3.0	77	255	41	210	194	103
26	5.7	4.5	4.4	3.5	3.8	3.1	85	243	35	227	194	89
27	5.7	5.5	4.4	3.5	3.3	3.2	85	233	31	244	194	61
28	5.7	6.0	4.4	3.5	3.3	3.2	85	230	58	251	194	44
29	5.7	4.8	4.4	3.5	---	3.0	85	230	87	249	195	35
30	5.7	3.0	4.4	3.5	---	3.0	85	272	112	249	210	19
31	5.7	---	4.3	3.8	---	2.8	---	309	---	279	217	---
TOTAL	162.4	159.3	107.2	114.2	126.3	100.8	584.7	3823	5602	6325	7281	3562
MEAN	5.24	5.31	3.46	3.68	4.51	3.25	19.5	123	187	204	235	119
MAX	13	7.1	4.4	4.4	5.4	3.8	85	309	327	279	358	209
MIN	2.7	3.0	2.3	2.8	3.3	2.8	2.3	34	31	112	133	19
AC-FT	322	316	213	227	251	200	1160	7580	11110	12550	14440	7070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	11.2	8.15	7.76	12.7	15.1	47.7	121	283	266	204	215	82.6
MEAN	11.2	8.15	7.76	12.7	15.1	47.7	121	283	266	204	215	82.6
MAX	19.6	16.0	14.0	105	67.7	317	355	519	546	411	301	171
(WY)	1981	1985	1984	1984	1984	1982	1984	1975	1983	1984	1974	1974
MIN	2.55	.46	.50	.36	.78	1.10	4.81	123	101	77.1	56.0	21.7
(WY)	1974	1968	1968	1968	1968	1968	1993	1995	1990	1992	1976	1984

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1968 - 1995

ANNUAL TOTAL	33381.2	27947.9	
ANNUAL MEAN	91.5	76.6	107
HIGHEST ANNUAL MEAN			186
LOWEST ANNUAL MEAN			60.0
HIGHEST DAILY MEAN	314	Aug 14	592
LOWEST DAILY MEAN	2.3	Dec 12	.00
ANNUAL SEVEN-DAY MINIMUM	2.4	Dec 9	.02
ANNUAL RUNOFF (AC-FT)	66210	55430	77330
10 PERCENT EXCEEDS	240	232	301
50 PERCENT EXCEEDS	19	5.7	18
90 PERCENT EXCEEDS	4.4	2.9	4.1

POWDER RIVER BASIN

71

13277000 POWDER RIVER AT BAKER CITY, OR

LOCATION.--Lat 44°46'06", long 117°49'50", in SE 1/4 NE 1/4 sec.20, T.9 S., R.40 E., Baker County, Hydrologic Unit 17050203, on right bank 600 ft upstream from Myrtle Street Bridge in Baker City, 0.5 mi downstream from Sutton Creek, and at mile 107.6.

DRAINAGE AREA.--351 mi².

PERIOD OF RECORD.--May to September 1913, April to July 1914, November 1971 to current year. Monthly discharge only May 1913, April 1914 published in WSP 1317. November 1971 to September 1978 in reports of Oregon Water Resources Department. Prior to October 1990, published as "at Baker".

REVISED RECORDS.--WSP 1317: 1913.

GAGE.--Water-stage recorder. Datum of gage is 3,441.71 ft above sea level. Prior to Oct. 19, 1971, nonrecording gage at site 0.7 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated since Oct. 31, 1967, by Phillips Lake, active capacity, 90,540 acre-ft. Old Settlers Slough diverts from left bank 0.2 mi upstream for irrigation downstream from station. U.S. Bureau of Reclamation satellite telemeter at station. Continuous water-quality records for the period October 1960 to September 1961 have been collected at this location.

AVERAGE DISCHARGE.--23 years (water years 1973-95), 100 ft³/s, 72,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,120 ft³/s Jan. 15, 1974, gage height, 5.55 ft; maximum gage height, 5.57 ft Jan. 5, 1984 (ice jam); minimum discharge, 0.7 ft³/s Oct. 28, 29, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 321 ft³/s Aug. 7, gage height, 3.28 ft; minimum daily discharge, 4.4 ft³/s Oct. 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	10	e8.5	e15	85	38	47	85	250	75	227	140
2	12	9.8	e8.0	e15	89	37	46	69	263	78	261	135
3	10	9.7	e7.0	e10	53	38	44	66	256	109	289	136
4	9.4	11	e6.5	e15	46	35	44	79	247	111	286	136
5	6.6	11	e5.5	e15	41	34	49	105	255	109	284	137
6	5.8	11	e7.5	e25	39	31	56	111	246	118	286	135
7	5.6	11	e7.0	34	37	28	74	115	261	133	304	115
8	5.6	9.0	e7.0	37	35	31	97	120	250	130	292	92
9	5.4	12	e7.0	49	32	33	91	121	235	130	267	83
10	5.2	12	e7.0	152	29	40	85	122	230	128	188	83
11	5.2	11	e6.5	43	30	56	81	112	223	129	157	73
12	4.4	12	e6.5	26	27	49	76	118	212	131	151	45
13	4.4	11	e6.0	28	24	52	82	98	184	133	149	43
14	8.7	11	e6.5	61	26	58	83	88	174	128	149	44
15	11	11	e6.5	39	35	81	77	95	162	129	149	44
16	7.4	10	e8.0	27	30	77	72	87	133	161	139	41
17	7.2	9.7	e9.5	22	26	68	69	79	120	185	116	43
18	7.1	e9.0	e10	20	43	73	63	81	121	157	86	53
19	6.9	e7.0	e10	19	69	84	59	78	126	139	68	80
20	6.9	e8.0	e10	18	61	79	54	84	92	138	75	100
21	7.1	e7.0	e10	17	54	78	49	89	63	134	84	104
22	7.0	e6.0	e10	21	52	73	47	94	63	142	110	106
23	7.3	e7.0	e10	25	48	77	41	125	62	144	118	98
24	7.4	e8.5	e10	16	50	75	36	161	52	139	116	84
25	7.6	e8.0	e10	16	52	69	62	189	46	124	114	79
26	8.0	e8.5	e10	17	49	64	81	197	40	130	113	66
27	8.6	e9.5	e10	16	47	58	79	177	28	143	112	66
28	9.9	e10	e10	15	42	53	81	169	31	167	107	49
29	8.9	e9.0	e15	16	---	52	93	166	53	169	107	41
30	8.9	e8.0	e15	24	---	47	101	182	77	169	119	30
31	9.3	---	e15	85	---	43	---	223	---	187	140	---
TOTAL	241.8	287.7	275.5	938	1251	1711	2019	3685	4555	4199	5163	2481
MEAN	7.80	9.59	8.89	30.3	44.7	55.2	67.3	119	152	135	167	82.7
MAX	17	12	15	152	89	84	101	223	263	187	304	140
MIN	4.4	6.0	5.5	10	24	28	36	66	28	75	68	30
AC-FT	480	571	546	1860	2480	3390	4000	7310	9030	8330	10240	4920

CAL YR 1994 TOTAL 24945.7 MEAN 68.3 MAX 230 MIN 4.4 AC-FT 49480
WTR YR 1995 TOTAL 26807.0 MEAN 73.4 MAX 304 MIN 4.4 AC-FT 53170

e Estimated

POWDER RIVER BASIN

13285000 THIEF VALLEY RESERVOIR NEAR NORTH POWDER, OR

LOCATION.--Lat 45°00'45", long 117°46'50", in NE 1/4 SW 1/4 sec.26, T.6 S., R.40 E., Baker County, Hydrologic Unit 17050203, Bureau of Reclamation land, on top of right end of dam on Powder River, 7.0 mi east of North Powder, and at mile 70.0.

DRAINAGE AREA.--910 mi², approximately.

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation bench mark).

REMARKS.--Reservoir is formed by concrete dam. Storage began in February 1932. Capacity, 17,400 acre-ft between elevations 3,094.00 ft, minimum pool, and 3,133.00 ft, spillway crest. No dead storage. Water used for irrigation of lands of Lower Powder River Irrigation District. U.S. Bureau of Reclamation satellite telemeter at station.

COOPERATION.--Capacity table furnished by Oregon Water Resources Department. Table uncertain below about 3,096 ft, due to siltation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 18,900 acre-ft July 2, 1982, elevation, 3,134.99 ft; no contents observed Sept. 17, 1987; probably no contents most days during September 1987, Sept. 7-18, 1988, August to September 1992, several days in October 1992, August 25 to October 2, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,170 acre-ft June 20, elevation, 3,134.03 no usable contents Oct. 1, 2.

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

3,096	230	3,120	8,950
3,100	966	3,125	11,880
3,105	2,360	3,130	15,210
3,110	4,170	3,135	18,910
3,115	6,370		

RESERVOIR ELEVATION SURFACE WATER (FEET), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	--	3105.38	3113.52	3120.16	3133.52	3133.34	3133.38	3133.60	3133.76	3133.43	3127.47	3118.96
2	--	3105.65	3113.83	3120.29	3133.55	3133.37	3133.40	3133.69	3133.77	3133.38	3127.13	3118.65
3	3096.64	3105.91	3114.11	3120.39	3133.51	3133.39	3133.43	3133.67	3133.72	3133.36	3126.81	3118.25
4	3097.26	3106.31	3114.29	3120.54	3133.45	3133.40	3133.41	3133.66	3133.71	3133.34	3126.48	3117.81
5	3097.75	3106.61	3114.45	3120.65	3133.42	3133.35	3133.41	3133.64	3133.84	3133.34	3126.16	3117.40
6	3098.19	3106.97	3114.65	3120.80	3133.40	3133.35	3133.43	3133.69	3133.73	3133.28	3125.81	3117.08
7	3098.72	3107.30	3114.89	3121.00	3133.37	3133.34	3133.51	3133.69	3133.62	3133.26	3125.51	3116.70
8	3099.01	3107.61	3115.09	3121.22	3133.35	3133.36	3133.58	3133.73	3133.56	3133.23	3125.24	3116.37
9	3099.24	3107.96	3115.28	3121.81	3133.35	3133.42	3133.56	3133.80	3133.52	3133.06	3124.97	3116.09
10	3099.46	3108.40	3115.48	3123.18	3133.33	3133.47	3133.59	3133.85	3133.55	3132.82	3124.77	3115.78
11	3099.61	3108.69	3115.69	3124.50	3133.34	3133.51	3133.62	3133.87	3133.56	3132.68	3124.61	3115.42
12	3099.91	3108.97	3115.86	3125.20	3133.30	3133.49	3133.65	3133.82	3133.60	3132.53	3124.34	3115.06
13	3100.37	3109.35	3116.03	3125.92	3133.21	3133.46	3133.65	3133.75	3133.63	3132.40	3124.09	3114.66
14	3100.79	3109.71	3116.27	3126.74	3133.21	3133.48	3133.64	3133.73	3133.68	3132.24	3123.81	3114.28
15	3101.18	3109.97	3116.46	3127.52	3133.23	3133.58	3133.64	3133.70	3133.72	3132.05	3123.46	3113.88
16	3101.39	3110.27	3116.62	3128.12	3133.27	3133.60	3133.62	3133.69	3133.73	3131.83	3123.16	3113.46
17	3101.64	3110.54	3116.83	3128.49	3133.33	3133.57	3133.62	3133.68	3133.79	3131.56	3122.96	3113.03
18	3101.88	3110.70	3117.08	3128.95	3133.45	3133.57	3133.56	3133.72	3133.86	3131.32	3122.76	3112.57
19	3102.14	3110.84	3117.32	3129.24	3133.59	3133.56	3133.53	3133.78	3133.95	3131.11	3122.56	3112.12
20	3102.37	3111.11	3117.57	3129.63	3133.61	3133.57	3133.50	3133.77	3134.01	3130.87	3122.34	3111.57
21	3102.58	3111.37	3117.76	3129.96	3133.55	3133.56	3133.47	3133.74	3133.91	3130.61	3122.05	3111.01
22	3102.79	3111.46	3117.95	3130.20	3133.51	3133.53	3133.43	3133.71	3133.80	3130.35	3121.77	3110.48
23	3103.00	3111.50	3118.15	3130.50	3133.48	3133.56	3133.43	3133.64	3133.79	3130.09	3121.48	3109.96
24	3103.23	3111.71	3118.36	3130.81	3133.48	3133.53	3133.42	3133.63	3133.78	3129.86	3121.15	3109.47
25	3103.44	3111.95	3118.58	3131.11	3133.48	3133.50	3133.35	3133.59	3133.76	3129.63	3120.88	3109.13
26	3103.72	3112.22	3118.89	3131.44	3133.46	3133.47	3133.35	3133.53	3133.72	3129.36	3120.61	3108.84
27	3103.98	3112.49	3119.18	3131.75	3133.36	3133.45	3133.38	3133.50	3133.64	3129.08	3120.36	3108.66
28	3104.23	3112.71	3119.51	3132.05	3133.36	3133.41	3133.39	3133.52	3133.56	3128.80	3120.10	3108.48
29	3104.54	3112.99	3119.73	3132.35	--	3133.41	3133.51	3133.56	3133.52	3128.43	3119.81	3108.37
30	3104.81	3113.23	3119.86	3132.76	--	3133.43	3133.58	3133.59	3133.47	3128.09	3119.55	3108.25
31	3105.12	--	3120.02	3133.29	--	3133.42	--	3133.69	--	3127.79	3119.28	--
MAX	--	3113.23	3120.02	3133.29	3133.61	3133.60	3133.65	3133.87	3134.01	3133.43	3127.47	3118.96
MIN	--	3105.38	3113.52	3120.16	3133.21	3133.34	3133.35	3133.50	3133.47	3127.79	3119.28	3108.25
(†)	2400	5550	8960	17620	17670	17720	17840	17920	17750	13680	8550	3490
(‡)	+2400	+3150	+3410	+8660	+50	+50	+120	+80	-170	-4070	-5130	-5060

CAL YR 1994 AC-FT# -8600

WTR YR 1995 AC-FT# +3490

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

POWDER RIVER BASIN

73

13285500 POWDER RIVER BELOW THIEF VALLEY RESERVOIR, NEAR NORTH POWDER, OR

LOCATION.--Lat 45°00'20", long 117°46'50", in NE 1/4 NW 1/4 sec.35, T.6 S., R.40 E., Baker County, Hydrologic Unit 17050203, on right bank 0.6 mi downstream from Thief Valley Reservoir, 7.0 mi east of North Powder, and at mile 69.4.

DRAINAGE AREA.--910 mi², approximately.

PERIOD OF RECORD.--March 1909 to June 1912, July to September 1932, August 1978 to current year. Prior to July 1932, published as Powder River near North Powder.

REVISED RECORDS.--WSP 1317: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,080.166 ft above sea level (Bureau of Reclamation bench mark). Prior to Aug. 18, 1978, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good except those below 0.5 ft³/s, which are poor. Flow regulated by Phillips Lake since October 1967, usable capacity, 90,540 acre-ft, by Wolf Creek Reservoir since April 1975, usable capacity, 10,400 acre-ft, by Pilcher Creek Reservoir since April 1984, usable capacity 5,560 acre-ft, and by Thief Valley Reservoir since February 1932, usable capacity, 17,400 acre-ft. Many diversions for irrigation upstream from station. U.S. Bureau of Reclamation satellite telemeter at station.

AVERAGE DISCHARGE.--17 years (water years 1979-95), 191 ft³/s, 138,300 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,920 ft³/s Mar. 21, 1910, gage height, 10.0 ft, site and datum then in use, from rating curve extended above 1,000 ft³/s; maximum gage height, 10.05 ft July 2, 1982; no flow Aug. 9 to Sept. 10, 1910, Nov. 26, 1992 to Jan. 15, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 768 ft³/s June 20, gage height, 7.70 ft; minimum daily discharge, 2.7 ft³/s Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	2.9	4.2	6.6	215	175	168	323	371	157	115	78
2	7.4	2.9	4.1	9.1	306	168	157	403	415	134	115	82
3	7.1	3.0	4.1	9.3	309	179	155	410	413	124	115	104
4	2.7	2.9	4.1	9.5	251	185	158	385	376	114	112	108
5	5.1	3.0	4.4	9.3	215	181	154	391	496	102	112	100
6	4.2	3.0	4.5	9.2	195	166	162	401	505	110	110	99
7	4.1	3.0	4.9	9.2	188	158	199	425	398	89	105	98
8	4.0	3.0	5.1	9.6	181	158	286	419	324	78	100	97
9	3.5	3.5	5.3	11	166	170	317	460	248	113	101	97
10	3.6	3.3	5.2	11	163	199	304	529	209	116	105	96
11	3.6	3.2	5.0	10	154	231	325	603	216	93	106	95
12	3.4	3.3	5.2	11	160	254	346	597	280	94	107	94
13	3.5	3.3	5.0	11	135	234	366	523	315	94	105	93
14	3.6	3.1	5.4	12	103	223	371	447	339	94	105	92
15	3.2	2.9	5.3	11	113	289	362	404	391	93	101	90
16	3.1	2.8	5.5	12	127	335	350	369	409	99	98	90
17	3.1	3.0	5.6	12	146	312	337	384	427	115	97	88
18	3.2	3.5	5.6	12	191	296	329	417	507	112	94	87
19	3.2	3.3	5.5	12	292	308	297	464	648	111	94	88
20	3.1	3.3	5.5	13	356	295	266	468	747	108	93	94
21	3.2	3.2	5.6	13	317	294	240	457	681	100	94	97
22	3.2	3.3	5.8	13	274	280	207	447	526	100	91	95
23	3.1	3.5	6.0	13	248	290	171	386	443	98	87	89
24	3.0	4.0	6.0	13	229	309	162	331	432	97	85	84
25	2.9	4.2	5.8	13	224	281	150	313	416	113	80	75
26	2.8	4.0	6.0	13	223	250	119	287	424	110	79	71
27	2.8	4.1	6.0	14	214	230	125	241	382	110	75	70
28	2.8	4.1	5.9	14	186	206	150	214	320	108	72	61
29	2.8	4.1	5.8	14	---	182	209	227	240	114	71	57
30	2.9	4.3	6.0	14	---	178	304	248	191	117	70	53
31	2.9	---	6.2	45	---	171	---	286	---	116	72	---
TOTAL	113.0	101.0	164.6	388.8	5881	7187	7246	12259	12089	3333	2966	2622
MEAN	3.65	3.37	5.31	12.5	210	232	242	395	403	108	95.7	87.4
MAX	7.4	4.3	6.2	45	356	335	371	603	747	157	115	108
MIN	2.7	2.8	4.1	6.6	103	158	119	214	191	78	70	53
AC-FT	224	200	326	771	11660	14260	14370	24320	23980	6610	5880	5200

CAL YR 1994 TOTAL 26329.2 MEAN 72.1 MAX 335 MIN 1.6 AC-FT 52220
WTR YR 1995 TOTAL 54350.4 MEAN 149 MAX 747 MIN 2.7 AC-FT 107800

POWDER RIVER BASIN

13286700 POWDER RIVER NEAR RICHLAND, OR

LOCATION.--Lat 44°46'40", long 117°17'30", in SE 1/4 sec.14, T.9 S., R.44 E., Baker County, Hydrologic Unit 17050203, on left bank 0.4 mi upstream from Upper Timber Canyon, 6.0 mi west of Richland, and at mile 20.3.

DRAINAGE AREA.--1,310 mi², approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 2,277.42 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Phillips Lake since October 1967, usable capacity, 90,540 acre-ft, Wolf Creek Reservoir since April 1975, usable capacity, 10,400 acre-ft, Thief Valley Reservoir since February 1932, usable capacity, 17,400 acre-ft, and Pilcher Creek Reservoir since April 1984, usable capacity, 5,560 acre-ft. Diversions for irrigation upstream and downstream from station. Continuous water-quality records for the period June 1959 to September 1961 have been collected at this location.

AVERAGE DISCHARGE.--38 years (water years 1958-95), 249 ft³/s, 180,400 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,090 ft³/s Feb. 21, 1982, gage height, 7.50 ft, from floodmark; maximum gage height, 9.29 ft Jan. 15, 1974 (ice jam); minimum discharge, 0.80 ft³/s Aug. 11, 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 873 ft³/s May 12, gage height, 3.62 ft; minimum discharge, 4.7 ft³/s Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	14	26	e35	443	386	358	508	179	135	21	36
2	5.9	14	43	e30	571	355	361	563	267	108	10	32
3	6.1	14	26	e35	562	342	347	646	313	98	9.2	32
4	6.8	14	e25	e40	506	356	359	616	295	84	9.6	36
5	7.7	16	e25	e45	434	336	386	609	292	74	8.6	50
6	9.5	16	e25	e45	395	313	416	605	456	70	23	53
7	11	16	e30	e45	373	285	480	614	424	65	30	48
8	10	15	e25	e50	357	272	605	640	314	59	54	54
9	9.3	16	e25	e110	333	292	632	645	246	51	56	55
10	16	19	e25	e320	308	319	582	702	176	43	46	52
11	12	18	e25	387	300	405	543	770	137	54	60	51
12	11	19	e25	218	294	475	558	856	138	50	54	48
13	12	17	e25	318	289	492	595	780	183	81	42	45
14	14	17	e25	514	237	490	618	661	226	69	58	45
15	14	17	e25	362	207	604	592	566	266	52	75	47
16	14	16	e35	210	224	690	560	509	346	47	54	46
17	16	16	e35	161	236	659	529	491	349	45	55	44
18	14	21	e40	138	295	694	505	483	397	45	53	44
19	14	18	e40	133	494	823	474	503	542	45	51	45
20	13	14	e40	129	619	723	428	530	701	57	49	44
21	12	e15	e35	116	607	677	394	502	752	84	47	40
22	13	e15	e35	101	565	622	359	479	644	53	45	43
23	13	e15	e35	90	518	623	325	442	515	45	46	56
24	13	e20	e35	91	495	616	298	357	416	39	42	61
25	13	e25	e35	91	493	560	321	295	389	37	40	61
26	13	e25	e35	102	491	501	336	274	362	32	38	60
27	13	e20	e40	116	474	456	307	198	346	31	36	56
28	13	e25	e50	111	432	421	293	161	294	31	35	51
29	13	e25	e40	104	---	387	336	134	238	30	36	51
30	13	e30	e35	109	---	362	463	136	172	36	32	49
31	13	---	e35	328	---	353	---	144	---	41	32	---
TOTAL	366.6	542	1000	4684	11552	14889	13360	15419	10375	1791	1247.4	1435
MEAN	11.8	18.1	32.3	151	413	480	445	497	346	57.8	40.2	47.8
MAX	16	30	50	514	619	823	632	856	752	135	75	61
MIN	5.9	14	25	30	207	272	293	134	137	30	8.6	32
AC-FT	727	1080	1980	9290	22910	29530	26500	30580	20580	3550	2470	2850

CAL YR 1994 TOTAL 31339.2 MEAN 85.9 MAX 517 MIN 3.5 AC-FT 62160
WTR YR 1995 TOTAL 76661.0 MEAN 210 MAX 856 MIN 5.9 AC-FT 152100

e Estimated

LOCATION.--Lat 44°52'50", long 117°15'10", in SE 1/4 sec.7, T.8 S., R.45 E., Baker County, Hydrologic Unit 17050203, Wallowa-Whitman National Forest, on left bank 0.5 mi upstream from Skull Creek, 6.5 mi northwest of New Bridge, and at mile 10.5.

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

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation. Some diversions upstream from station for irrigation and one small interbasin diversion for irrigation supply. All diversions are small compared to flow at station during irrigation season. Continuous water-quality records for the period June 1959 to September 1961 have been collected at this location.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 30	2230	1,950	3.72	June 26	2230	1,830	3.64
June 5	0430	*2,110	*3.82				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	82	e96	e74	263	281	327	570	1640	1080	307	114
2	60	77	e86	e72	272	260	322	592	1640	1070	297	131
3	60	67	e76	e70	216	252	335	604	1760	1130	285	135
4	60	81	e66	e78	189	234	381	579	1780	990	277	135
5	62	81	e66	e86	177	220	443	571	1910	919	268	131
6	60	78	e71	e96	176	206	500	596	1290	948	261	129
7	60	74	e70	e110	172	194	586	649	971	966	299	129
8	60	67	e65	e125	165	194	611	687	855	944	267	129
9	60	80	e64	e140	156	220	541	714	819	1030	238	126
10	60	87	e70	e145	149	271	495	777	853	1060	219	123
11	60	87	e71	e155	147	440	474	917	1130	948	207	120
12	60	82	e70	e145	141	403	470	858	1260	862	195	118
13	60	76	e68	e160	135	402	523	755	1340	808	189	115
14	71	75	e71	177	123	438	496	716	1300	688	188	114
15	66	74	e80	143	122	600	466	763	1220	655	186	111
16	62	76	e80	116	126	549	438	850	1200	642	202	111
17	63	71	e78	98	122	501	417	1030	1430	627	192	110
18	62	68	e77	95	123	569	400	1110	1520	621	178	108
19	61	e66	77	89	163	570	383	1100	1270	609	168	108
20	60	e65	76	84	227	538	369	1130	967	600	161	106
21	61	e66	74	76	265	505	347	1220	841	578	156	105
22	63	e69	e70	e72	277	460	341	1270	803	551	153	104
23	60	e72	e69	e72	281	431	355	1240	886	507	152	103
24	60	e78	e72	e84	303	385	406	1180	1070	479	151	101
25	60	e82	e74	85	330	351	469	1160	1310	459	143	100
26	60	e66	76	85	338	326	498	1090	1480	442	138	100
27	66	e70	84	83	329	308	532	1090	1430	423	135	98
28	90	e71	86	82	305	294	602	1160	1200	416	131	101
29	72	e73	78	82	---	287	600	1330	1090	406	127	101
30	67	e78	e76	89	---	285	567	1560	1070	362	123	97
31	73	---	e75	226	---	294	---	1690	---	327	120	---
TOTAL	1962	2239	2312	3294	5792	11268	13694	29558	37335	22147	6113	3413
MEAN	63.3	74.6	74.6	106	207	363	456	953	1244	714	197	114
MAX	90	87	96	226	338	600	611	1690	1910	1130	307	135
MIN	60	65	64	70	122	194	322	570	803	327	120	97
AC-FT	3890	4440	4590	6530	11490	22350	27160	58630	74050	43930	12130	6770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1995, BY WATER YEAR (WY)

MEAN	105	120	111	107	122	189	418	916	993	407	146	104
MAX	323	264	211	191	230	493	658	1747	2134	1011	252	172
(WY)	1960	1974	1959	1974	1963	1986	1990	1958	1974	1975	1983	1978
MIN	56.1	67.9	69.8	52.7	60.0	64.8	191	252	276	84.0	62.8	61.4
(WY)	1989	1988	1994	1993	1994	1977	1967	1977	1977	1977	1977	1988

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1958 - 1995

ANNUAL TOTAL	71201		139127				
ANNUAL MEAN	195		381			312	
HIGHEST ANNUAL MEAN						519	1974
LOWEST ANNUAL MEAN						118	1977
HIGHEST DAILY MEAN	1390	May 12	1910	Jun 5	3400		Jun 16 1974
LOWEST DAILY MEAN	51	Feb 10	60	Oct 2	30		Nov 28 1976
ANNUAL SEVEN-DAY MINIMUM	52	Feb 7	60	Oct 6	42		Jan 5 1993
ANNUAL RUNOFF (AC-FT)	141200		276000		226000		
10 PERCENT EXCEEDS	533		1070		838		
50 PERCENT EXCEEDS	82		188		138		
90 PERCENT EXCEEDS	60		67		77		

e Estimated

PINE CREEK BASIN

13290190 PINE CREEK NEAR OXBOW, OR

LOCATION.--Lat 44°57'13", long 116°52'21", in NE 1/4 SW 1/4 sec.17, T.7 S., R.48 E., Baker County, Hydrologic Unit 17050201, 1.8 mi south of Oxbow, and at mile 1.9.

DRAINAGE AREA.--230 mi², approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,850.48 ft above sea level (levels by Idaho Power Co.). Prior to Aug. 24, 1967, nonrecording gage at site 1.7 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Diversions upstream from station for irrigation of about 19,000 acres (1966 determination).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	63	93	156	1850	650	584	877	1440	674	78	52
2	26	64	98	142	1890	582	576	933	1400	658	77	49
3	26	56	93	133	1260	567	565	906	1450	630	71	50
4	26	59	85	142	1010	535	609	882	1440	582	72	53
5	28	59	67	223	865	481	717	868	1750	546	68	51
6	30	77	111	209	804	439	860	914	1360	545	66	47
7	30	75	97	176	734	402	1150	1010	1020	557	69	49
8	30	64	90	170	684	392	1300	1090	867	552	89	50
9	30	81	90	235	635	460	1060	1100	833	582	77	51
10	30	109	89	679	582	571	872	1150	784	592	71	51
11	32	98	86	953	546	1070	783	1310	937	564	72	48
12	32	97	94	939	501	960	741	1240	1010	554	68	46
13	32	93	94	1150	466	963	837	1050	1030	699	65	46
14	40	83	91	1890	419	1020	839	959	999	514	65	46
15	44	79	94	1300	385	1760	748	977	913	448	64	45
16	40	83	99	905	358	1530	676	1060	887	416	70	45
17	39	79	159	676	367	1250	630	1260	1150	383	119	45
18	40	76	190	562	457	1570	608	1240	1310	349	97	44
19	40	67	198	503	705	1650	583	1200	1330	328	85	42
20	40	81	182	456	861	1410	556	1190	1010	302	77	42
21	40	64	167	402	913	1280	517	1220	843	308	74	44
22	40	57	147	343	939	1100	486	1250	758	279	69	46
23	40	72	137	313	905	1190	512	1240	765	242	67	50
24	40	90	157	301	913	956	580	1180	851	199	64	52
25	41	89	150	285	951	814	693	1160	987	164	61	54
26	41	79	153	325	929	713	742	1110	1030	144	58	55
27	45	71	259	346	867	641	775	1070	1010	115	54	55
28	66	72	318	330	755	592	925	1090	842	99	55	58
29	55	75	303	321	---	559	942	1180	736	101	53	70
30	49	77	221	406	---	537	895	1330	698	102	53	70
31	54	---	191	1570	---	529	---	1590	---	89	52	---
TOTAL	1173	2289	4403	16541	22551	27173	22361	34636	31440	12317	2180	1506
MEAN	37.8	76.3	142	534	805	877	745	1117	1048	397	70.3	50.2
MAX	66	109	318	1890	1890	1760	1300	1590	1750	699	119	70
MIN	26	56	67	133	358	392	486	868	698	89	52	42
AC-FT	2330	4540	8730	32810	44730	53900	44350	68700	62360	24430	4320	2990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	MEAN	66.6	126	200	259	379	627	651	866	751	194	48.3	51.8
MAX	135	491	619	962	1042	1140	1031	1604	1929	541	95.3	119	
(WY)	1983	1974	1974	1974	1986	1983	1989	1971	1974	1983	1983	1978	
MIN	23.9	45.1	58.3	51.9	65.9	69.0	64.9	94.0	67.3	20.6	14.2	19.9	
(WY)	1989	1988	1979	1979	1977	1977	1977	1977	1977	1977	1977	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1967 - 1995

ANNUAL TOTAL	74476	178570	350
ANNUAL MEAN	204	489	674
HIGHEST ANNUAL MEAN			55.3
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	924	May 10	1890
LOWEST DAILY MEAN	17	Sep 9	26
ANNUAL SEVEN-DAY MINIMUM	18	Sep 7	28
INSTANTANEOUS PEAK FLOW			2380
INSTANTANEOUS PEAK STAGE			7.07
INSTANTANEOUS LOW FLOW			Feb 1
ANNUAL RUNOFF (AC-FT)	147700	354200	253700
10 PERCENT EXCEEDS	566	1170	948
50 PERCENT EXCEEDS	94	346	151
90 PERCENT EXCEEDS	20	46	36

a Occurred Aug. 17-24, 1977; gage height, 2.12 ft.

SNAKE RIVER MAIN STEM

77

13290450 SNAKE RIVER AT HELLS CANYON DAM, IDAHO-OREGON STATE LINE

LOCATION.--Lat 45°15'05", long 116°41'50", in SE 1/4 SE 1/4 sec.33, T.3 S.; R.49 E., unsurveyed (Willamette meridian), Wallowa County, Wallowa-Whitman National Forest, Hydrologic Unit 17050201, on left bank, 0.2 mi upstream from Hells Canyon Creek, 0.4 mi downstream from Deep Creek, 0.6 mi downstream from Hells Canyon Dam, 15.5 mi northeast of Homestead, Oregon, and at mile 247.0.

DRAINAGE AREA.--73,300 mi², approximately.

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

REVISED RECORDS.--WDR ID-78-2: 1969-70, 1972-76, WDR ID-79-2: 1972-73(m).

GAGE.--Water-stage recorder. Datum of gage is 1,400 ft above sea level (levels by Idaho Power Company.)

REMARKS.--No estimated daily discharges. Records good. Station equipment includes satellite telemetry. Flow regulated by many reservoirs upstream from station, with a total usable capacity of more than 10,000,000 acre-feet, the most effective of which is Brownlee Reservoir, 38 mi upstream. Diurnal fluctuations caused by Hells Canyon powerplant. Diversions upstream from station for irrigation of about 3,820,000 acres, of which 742,000 acres are irrigated by withdrawals from ground water (1966 determination).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6900	9250	9260	11500	16900	23100	20000	26200	44700	29700	19600	16200
2	6870	9310	9250	9870	21000	27000	16500	27400	40200	25700	18700	15800
3	7890	9240	9250	13600	27600	24200	21300	26200	38000	26300	19700	12200
4	8910	9230	9260	12900	19300	22700	20800	28900	36500	25500	19100	12300
5	10000	9240	9250	11900	21200	24300	20100	29900	39800	24600	18300	14500
6	10900	9200	9290	14500	21100	25100	20200	27700	34800	20900	18900	15000
7	9630	9210	9230	13000	21000	27000	23800	29600	37700	20100	18200	16800
8	10700	9230	9250	13200	21300	23200	24200	28500	41800	21000	17000	14100
9	7850	9250	9210	10200	19800	22200	24900	28700	38700	20400	18100	15100
10	12100	9270	9260	16500	20500	16300	25200	31200	37500	19800	11600	12400
11	11500	9270	9230	17800	20500	16300	27000	30900	40000	21200	10200	14000
12	14300	9260	9270	19800	24900	18200	28600	31200	44300	21200	10800	16100
13	13600	9250	9220	23400	24100	20000	28200	27100	44700	19200	10100	16700
14	18400	9210	11300	25900	25400	18000	27000	29500	43200	22100	11400	17400
15	20000	9250	10900	30400	27600	19000	27300	32700	41800	19800	10100	14900
16	19800	9260	9970	28200	25000	19200	28400	35800	37400	16800	11000	12900
17	20200	9220	9260	26300	22100	17800	27500	35800	35000	17900	9400	11500
18	19700	9210	9320	21700	18700	16900	28600	35800	34400	19100	12200	14900
19	19900	9260	9270	21900	14600	14600	27500	35800	31500	14800	10800	18000
20	19900	9280	10300	22900	18500	19400	25300	35800	31800	12600	11400	15400
21	19900	9260	9110	18000	19100	23000	23700	35900	33400	10600	12000	15000
22	10300	9270	10600	18200	16900	18900	18400	35900	28600	11300	12600	14200
23	9220	9300	9290	19400	16800	22700	16500	35900	29900	9270	12700	14900
24	9250	9280	9260	13300	18200	23700	23300	35800	30200	16000	13200	15800
25	9250	9300	9210	11500	17500	22500	22100	35800	30400	20100	11600	15400
26	9250	9330	9120	11600	18800	18600	25400	35900	30200	18900	10900	16200
27	9270	9290	9090	11100	24200	20400	24700	41600	29600	19400	9560	17600
28	9300	9240	9150	11900	23400	17700	26100	44100	30700	19600	13900	16700
29	9250	9230	9170	13200	---	17300	23300	43300	30500	18400	12400	18100
30	9240	9250	12200	15000	---	21400	18500	38200	30300	18200	13100	14700
31	9230	---	11300	15500	---	21400	---	41700	---	17400	14800	---
TOTAL	382510	277650	298050	524170	586000	642100	714400	1038800	1077600	597870	423360	454800
MEAN	12340	9255	9615	16910	20930	20710	23810	33510	35920	19290	13660	15160
MAX	20200	9330	12200	30400	27600	27000	28600	44100	44700	29700	19700	18100
MIN	6870	9200	9090	9870	14600	14600	16500	26200	28600	9270	9400	11500
AC-FT	758700	550700	591200	1040000	1162000	1274000	1417000	2060000	2137000	1186000	839700	902100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	MEAN	15560	16490	18330	21720	23490	27400	29070	26640	23400	13580	10990	13700
MAX	24140	28630	30410	38230	44670	66340	61960	68840	59080	25550	17090	19120	
(WY)	1972	1985	1984	1984	1971	1986	1984	1984	1984	1983	1983	1984	
MIN	9962	9193	9391	12850	11570	10600	7371	6401	5868	6901	6583	6887	
(WY)	1989	1993	1993	1991	1988	1991	1988	1977	1992	1977	1992	1977	

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1966 - 1995

ANNUAL TOTAL	4206990	7017310	
ANNUAL MEAN	11530	19230	20000
HIGHEST ANNUAL MEAN			36560
LOWEST ANNUAL MEAN			9746
HIGHEST DAILY MEAN	25300	May 9	44700
LOWEST DAILY MEAN	5390	Aug 4	6870
ANNUAL SEVEN-DAY MINIMUM	5550	Aug 2	8730
INSTANTANEOUS PEAK FLOW			48800
INSTANTANEOUS PEAK STAGE			76.51
INSTANTANEOUS LOW FLOW			a6380
ANNUAL RUNOFF (AC-FT)	8345000	13920000	14490000
10 PERCENT EXCEEDS	17000	32200	37300
50 PERCENT EXCEEDS	9970	18200	16200
90 PERCENT EXCEEDS	6800	9250	8990

a Gage height, 63.48 ft. Also occurred Oct. 10, Aug. 12.

b Gage height, 59.9 ft.

SNAKE RIVER MAIN STEM

13290460 SNAKE RIVER AT JOHNSON BAR, ID

LOCATION.--Lat 45°27'50", long 116°33'16", in SE 1/4 NE 1/4 sec.22, T.1 S., R.50 E., (Willamette meridian), Wallowa County, Hydrologic Unit 17060101, Hells Canyon National Recreation Area, on left bank opposite lower end of Johnson Bar, 0.5 mi upstream from mouth of Sheep Creek, and at mile 229.9.

DRAINAGE AREA.--73,400 mi², approximately.

PERIOD OF RECORD.--July 1959 to September 1992 (gage heights only), October 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,226 ft above sea level (levels by Corps of Engineers.)

REMARKS.--Records good. Station equipment includes satellite telemetry. Diurnal fluctuations in stage are caused by Hells Canyon Powerplant. Records for years prior to the 1991 water year were not published, but are available from the Boise, Idaho Field Office.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6910	9140	9140	11700	16300	22700	20000	25600	45900	29600	e19500	16000
2	6860	9200	9140	10000	19900	26300	16300	27200	41100	26000	e18500	15300
3	7780	9260	9180	13300	27800	23700	20500	25800	38800	26000	e19500	12400
4	8770	9280	9280	12900	19000	22500	20400	28600	36700	25700	e19000	12100
5	9690	9170	9290	12100	20500	23400	19700	29700	40800	24800	e18500	13600
6	10700	9110	9290	14400	20800	24400	19600	27600	35100	21100	e19000	14600
7	9720	9110	9230	13000	20300	26500	23400	30100	37800	20200	e18000	15300
8	10500	9110	9290	13300	20800	23100	23500	28900	42300	20600	e17000	13900
9	7900	9130	9280	10700	19500	21900	24800	28900	39400	20200	17300	15000
10	12000	9160	9280	16000	20000	16300	24600	31500	37800	19900	12000	12300
11	11500	9180	9200	17600	19800	16100	26600	31200	40300	20800	10100	13700
12	13600	9200	9100	19800	23900	17700	28200	31500	44900	21000	10600	15700
13	13400	9160	9180	23200	23800	19900	27900	27300	45800	19200	10000	16100
14	17600	9110	11100	25400	24600	17900	26600	29500	44000	21800	11000	17000
15	19500	9140	11400	30600	26900	18500	27000	32700	42700	19700	10500	14800
16	19600	9170	10100	28400	25000	19200	28000	36200	37900	16700	10700	12900
17	20200	9110	9270	26500	22000	17700	27300	36200	35500	17400	9360	11400
18	19700	9110	9400	21700	18400	16500	28200	36200	34900	19100	11700	14700
19	19800	9200	9410	21900	14100	14700	27400	36200	31600	14600	10600	17400
20	19800	9210	10400	22400	18400	18900	25200	36300	31700	12800	10900	15200
21	19700	9140	9140	18000	19100	22700	23600	36300	33700	10500	11800	14900
22	11200	9150	10300	18000	16900	19000	18500	36300	28600	11700	12400	14400
23	9380	9260	9520	19000	16900	22100	16400	36300	29800	9300	12300	14400
24	9440	9260	9290	13500	17600	23200	22800	36200	30200	e16000	13000	15900
25	9250	9260	9260	11200	17100	22100	22200	36200	30500	e20000	11400	15400
26	9420	9260	9220	11300	18500	18300	24800	36100	30400	e19000	10800	16200
27	9660	9210	9210	10800	23300	19900	24500	41800	29600	e19500	9130	17600
28	9460	9110	9260	11700	23000	17500	25600	44600	30800	e19500	13300	16800
29	9100	9140	9260	12500	---	16900	22900	44200	30600	e18500	12700	18000
30	9110	9130	11800	14800	---	21300	18300	39100	30400	e18000	12400	15200
31	9210	---	11800	15200	---	21100	---	42200	---	e17500	14200	---
TOTAL	380460	275180	299020	520900	574200	632000	704800	1046500	1089600	596700	417190	449300
MEAN	12270	9173	9646	16800	20510	20390	23490	33760	36320	19250	13460	14980
MAX	20200	9280	11800	30600	27800	26500	28200	44600	45900	29600	19500	18000
MIN	6860	9110	9100	10000	14100	14700	16300	25600	28600	9300	9130	11400
AC-FT	754600	545800	593100	1033000	1139000	1254000	1398000	2076000	2161000	1184000	827500	891200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1995, BY WATER YEAR (WY)

	1993	1994	1995	1993	1994	1995	1993	1994	1995
MEAN	12590	9294	9906	14340	16110	19720	22420	27720	25110
MAX	15270	9429	10620	16800	20510	25140	30410	33760	36320
(WY)	1994	1994	1994	1995	1995	1993	1993	1995	1995
MIN	10240	9173	9450	12830	13560	13640	13360	16380	8034
(WY)	1993	1995	1993	1993	1994	1994	1994	1994	1994

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1993 - 1995
ANNUAL TOTAL	4209840	6985850	
ANNUAL MEAN	11530	19140	16410
HIGHEST ANNUAL MEAN			19140
LOWEST ANNUAL MEAN			11890
HIGHEST DAILY MEAN	25500	May 9	55800
LOWEST DAILY MEAN	5360	Aug 3	5360
ANNUAL SEVEN-DAY MINIMUM	5540	Aug 2	5540
INSTANTANEOUS PEAK FLOW		49600	Jun 13
INSTANTANEOUS LOW FLOW		15.18	Jun 13
ANNUAL RUNOFF (AC-FT)	8350000	13860000	11890000
10 PERCENT EXCEEDS	16800	32100	30500
50 PERCENT EXCEEDS	9940	17900	13300
90 PERCENT EXCEEDS	6910	9200	9160

a Also occurred Aug. 18.

e Estimated.

79

LOCATION.--Lat 45°33'45", long 116°50'00", in SW 1/4 sec.16, T.1 N., R.48 E., Wallowa County, Hydrologic Unit 17060102, on left bank at Imnaha, 0.3 mi downstream from Big Sheep Creek, and at mile 19.3.

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

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

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation. Diversions for irrigation upstream from station. Water is diverted from Big Sheep Creek and tributaries upstream from station for irrigation in Wallowa River basin. National Weather Service satellite telemeter at station. Continuous water-quality records for the period August 1965 to September 1968 and from May 1976 to September 1977 have been collected at this location.

AVERAGE DISCHARGE.--67 years (water years 1929-95). 506 ft³/s. 366,600 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Mar. 11	0830	2,780	5.22	May 7	1100	*4,410	*6.29
Mar. 15	1130	1,900	4.49	June 5	1300	2,560	5.05
Apr. 8	0330	1,990	4.57				

Minimum discharge observed, 26 ft³/s Nov. 22, result of freezeup.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	142	149	e55	449	554	724	1790	2010	1600	511	216
2	99	146	152	e50	693	505	692	1820	1980	1620	490	205
3	98	130	143	e50	625	476	683	1810	2010	1620	474	201
4	102	117	127	e60	540	444	736	1730	2040	1520	459	200
5	104	126	e40	e70	502	415	908	1760	2410	1450	444	195
6	102	132	e60	e90	506	372	1140	2240	1940	1430	430	194
7	99	133	e55	e120	510	340	1520	4030	1600	1500	475	199
8	99	111	e50	e170	485	345	1850	3680	1430	1480	493	212
9	97	123	e70	e220	441	450	1590	3100	1350	1580	419	198
10	97	149	e80	e360	406	997	1340	2820	1300	1740	390	193
11	105	141	e85	637	385	2340	1220	2810	1510	1650	378	187
12	106	138	e95	502	363	1830	1140	2820	1620	1600	360	182
13	103	130	e110	412	332	1460	1340	2470	1650	1790	346	180
14	107	121	e50	479	281	1320	1350	2180	1640	1420	333	176
15	115	125	e90	577	e260	1790	1270	2060	1630	1270	326	169
16	111	128	141	485	e265	1610	1180	2080	1590	1210	353	164
17	111	116	156	393	e270	1430	1100	2240	1820	1150	355	163
18	111	123	166	348	278	1400	1030	2250	2070	1110	325	161
19	109	100	157	317	283	1450	960	2120	2140	1080	311	159
20	110	118	142	280	407	1450	906	2040	1900	1040	301	160
21	112	102	139	231	626	1520	843	2040	1720	1030	287	159
22	113	e30	131	204	691	1390	791	2050	1570	953	280	159
23	110	e35	122	217	672	1280	793	1970	1540	879	277	157
24	109	e55	123	274	687	1110	886	1870	1620	812	269	155
25	108	e100	151	269	759	982	1060	1810	1790	763	256	153
26	107	128	143	257	742	881	1130	1740	1910	715	249	153
27	114	113	143	240	690	803	1260	1640	1960	682	240	153
28	165	118	152	226	620	756	1580	1640	1780	661	233	164
29	142	126	135	227	---	727	1680	1700	1640	645	228	181
30	124	134	79	237	---	700	1760	1830	1600	612	228	163
31	121	---	60	284	---	688	---	1980	---	550	224	---
TOTAL	3414	3490	3496	8341	13768	31815	34462	68120	52770	37162	10744	5311
MEAN	110	116	113	269	492	1026	1149	2197	1759	1199	347	177
MAX	165	149	166	637	759	2340	1850	4030	2410	1790	511	216
MIN	97	130	40	50	260	340	683	1640	1300	550	224	153
AC-FT	6770	6920	6930	16540	27310	63110	68360	135100	104700	73710	21310	10530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1995, BY WATER YEAR (WY)

MEAN	156	183	204	196	238	406	927	1547	1318	555	194	144
MAX	501	625	806	855	569	1026	1760	2804	2612	1348	380	256
(WY)	1963	1974	1942	1974	1982	1995	1956	1948	1974	1975	1982	1978
MIN	81.5	80.0	88.6	69.3	82.4	114	345	445	361	123	78.8	82.8
(WY)	1937	1937	1936	1937	1937	1977	1977	1977	1992	1977	1931	1931

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1929 - 1995
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ANNUAL TOTAL	113618		272893			
ANNUAL MEAN	311		748		506	
HIGHEST ANNUAL MEAN					897	1974
LOWEST ANNUAL MEAN					184	1977
HIGHEST DAILY MEAN	1430	May 12	4030	May 7	5880	Apr 27 1978
LOWEST DAILY MEAN	30	Nov 22	30	Nov 22	25	Nov 22 1931
ANNUAL SEVEN-DAY MINIMUM	63	Dec 5	61	Dec 30	43	Jan 8 1993
ANNUAL RUNOFF (AC-FT)	225400		541300		366800	
10 PERCENT EXCEEDS	906		1820		1380	
50 PERCENT EXCEEDS	138		407		226	
90 PERCENT EXCEEDS	98		106		111	

e Estimated

GRANDE RONDE RIVER BASIN

81

13324300 LOOKINGGLASS CREEK NEAR LOOKING GLASS, OR

LOCATION.--Lat 45°43'55", long 117°51'50", in NW 1/4 NW 1/4 sec.19, T.3 N., R.40 E., Union County, Hydrologic Unit 17060104, on left bank at Oregon State Fish and Wildlife Service fish hatchery, 310 ft upstream from Jarboe Creek, 2.3 mi northwest of Looking Glass, and at mile 2.3.

DRAINAGE AREA.--78.3 mi².

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,530 ft above sea level, from topographic map.

REMARKS.--Records fair. Records include a diversion by the fish hatchery 0.3 mi upstream from station of up to 50 ft³/s that is returned through the fish ladder to the gage pool.

AVERAGE DISCHARGE.--13 years (water years 1983-95), 129 ft³/s 93,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,240 ft³/s May 12, 1993, gage height, 6.55 ft; minimum discharge, 25 ft³/s Oct. 11, 1983, result of regulation at fish hatchery upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 2	0030	719	5.91	Mar. 15	1600	561	5.66
Feb. 20	2100	423	5.42	Apr. 8	0330	556	5.65
Feb. 26	1100	381	5.34	May 11	0500	*752	*6.08

Minimum discharge, 41 ft³/s Oct. 3, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e43	111	99	70	500	284	204	533	228	105	50	47
2	e42	69	91	67	606	255	198	603	216	105	49	47
3	e41	61	81	68	402	238	206	595	197	124	49	46
4	e43	61	70	69	306	224	229	557	189	109	49	47
5	e44	62	67	70	269	210	266	546	216	101	49	46
6	e43	60	65	69	247	192	325	547	198	98	49	49
7	41	58	62	66	231	178	449	575	194	94	53	55
8	42	56	59	67	216	176	517	575	190	88	52	53
9	43	67	60	90	196	216	458	588	159	86	50	52
10	42	69	58	133	183	238	409	619	146	75	49	51
11	43	64	58	155	184	273	399	709	146	68	49	50
12	42	65	58	148	192	282	384	624	145	67	47	51
13	42	60	58	164	163	298	410	531	139	66	47	52
14	47	58	56	263	149	340	379	482	137	63	48	51
15	44	57	57	224	144	527	343	474	132	62	48	45
16	44	58	59	176	136	473	320	476	129	62	48	44
17	43	57	89	145	161	426	301	464	120	61	47	43
18	44	57	105	136	187	416	285	417	145	61	47	43
19	44	59	94	124	279	437	281	391	188	62	47	42
20	43	60	82	111	369	439	268	390	190	60	48	42
21	48	56	76	100	388	440	243	387	166	58	48	42
22	44	57	70	96	380	379	236	360	159	54	47	42
23	44	59	66	93	334	331	242	334	148	53	47	42
24	43	58	67	93	329	294	288	317	143	53	46	42
25	43	59	66	91	352	262	334	301	140	53	45	42
26	45	58	70	89	356	240	349	296	129	52	45	43
27	58	58	105	86	327	221	412	273	127	52	44	45
28	54	58	117	82	297	211	556	249	117	52	45	45
29	45	61	100	85	---	202	552	234	112	50	46	52
30	44	66	83	102	---	196	540	233	118	47	45	44
31	74	---	75	235	---	196	---	232	---	48	45	---
TOTAL	1402	1859	2323	3567	7883	9094	10383	13912	4763	2189	1478	1395
MEAN	45.2	62.0	74.9	115	282	293	346	449	159	70.6	47.7	46.5
MAX	74	111	117	263	606	527	556	709	228	124	53	55
MIN	41	56	56	66	136	176	198	232	112	47	44	42
AC-FT	2780	3690	4610	7080	15640	18040	20590	27590	9450	4340	2930	2770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1995, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	52.9	64.2	66.9	77.1	115	183	312	346	159	67.9	52.8	51.9		
MAX	66.7	79.5	86.0	129	282	314	441	588	425	117	65.3	61.9		
(WY)	1986	1985	1983	1983	1995	1986	1989	1993	1984	1984	1985	1984		
MIN	45.2	46.8	53.2	52.9	54.8	83.3	220	114	57.4	47.0	37.1	40.1		
(WY)	1995	1988	1988	1987	1993	1985	1991	1992	1992	1994	1994	1994		

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1982 - 1995

ANNUAL TOTAL	39755	60248	129
ANNUAL MEAN	109	165	175
HIGHEST ANNUAL MEAN			175
LOWEST ANNUAL MEAN			97.9
HIGHEST DAILY MEAN	747	Apr 21	709
LOWEST DAILY MEAN	35	Aug 16	41
ANNUAL SEVEN-DAY MINIMUM	35	Aug 16	42
ANNUAL RUNOFF (AC-FT)	78850	119500	93450
10 PERCENT EXCEEDS	245	405	307
50 PERCENT EXCEEDS	61	91	67
90 PERCENT EXCEEDS	40	44	49

e Estimated

GRANDE RONDE RIVER BASIN

13329770 WALLOWA RIVER ABOVE CROSS COUNTRY CANAL, NEAR ENTERPRISE, OR

LOCATION.--Lat 45°29'18", long 117°24'10", in SW 1/4 SE 1/4 sec.11, T.1 N., R.42 E., Wallowa County, Hydrologic Unit 17060105, on left bank, 300 ft upstream from Cross Country canal, 6 mi northwest of Enterprise, and at mile 32.5.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--April to September 1995.

GAGE.--Water-stage recorder. Elevation of gage is 3,330 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Regulation by Wallowa Lake. Many diversions for irrigation upstream from gage. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD APRIL TO SEPTEMBER.--Maximum discharge, 1,260 ft³/s June 30, gage height, 3.05 ft; maximum gage height, 3.33 ft July 9; minimum recorded discharge, 148 ft³/s Apr. 27.

DISCHARGE, CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	APR	MAY	JUN	JUL	AUG	SEP
1	---	245	517	1100	243	249
2	---	231	497	1140	217	233
3	---	208	522	1110	198	242
4	---	193	557	1040	187	245
5	---	235	815	1040	183	248
6	---	282	753	1040	191	250
7	---	382	679	1030	266	280
8	---	367	569	964	288	301
9	---	326	512	1080	277	300
10	---	312	456	1020	280	300
11	---	358	485	936	308	281
12	---	334	501	908	329	259
13	---	293	492	938	344	254
14	---	266	494	750	352	260
15	---	254	513	709	342	261
16	---	263	526	711	369	258
17	---	304	569	665	367	261
18	---	319	646	630	345	251
19	---	320	740	610	333	235
20	---	307	694	594	341	227
21	---	327	615	600	326	214
22	---	331	602	555	303	217
23	---	325	617	523	310	220
24	---	324	666	489	316	225
25	---	334	727	447	312	226
26	---	322	847	399	305	231
27	---	344	935	344	298	240
28	191	394	916	298	291	248
29	217	441	1020	302	277	268
30	293	474	1110	296	275	281
31	---	503	---	276	265	---
TOTAL	---	9918	19592	22544	9038	7565
MEAN	---	320	653	727	292	252
MAX	---	503	1110	1140	369	301
MIN	---	193	456	276	183	214
AC-FT	---	19670	38860	44720	17930	15010

GRANDE RONDE RIVER BASIN

83

13330000 LOSTINE RIVER NEAR LOSTINE, OR

LOCATION.--Lat 45°26'20", long 117°25'35", in NW 1/4 sec.34, T.1 S., R.43 E., Wallowa County, Hydrologic Unit 17060105, on left bank, 3.5 mi south of Lostine, and at mile 10.0.

DRAINAGE AREA.--70.9 mi².

PERIOD OF RECORD.--August 1912 to March 1914, April to September 1915, July 1925 to September 1991, April to September 1995. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1913, 1942. WSP 1737: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,650 ft above sea level, by barometer. See WSP 1317 or 1737 for history of changes prior to Dec. 16, 1953. Dec. 16, 1953 to Aug. 23 1977, at datum 1.04 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Minam Lake, capacity 440 acre-ft, has stored and diverted flow from Minam River since 1917 for irrigation in Lostine River basin. Diversions for irrigation upstream from station. Continuous water-quality records for the period October 1957 to September 1958 have been collected at this location. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--66 years (water years 1926-91), 192 ft³/s, 139,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,550 ft³/s June 16, 1974, gage height, 8.59 ft, present datum; minimum discharge, 7.5 ft³/s Mar. 2, 1966, result of freezeup; minimum daily, 10 ft³/s Nov. 28-30, 1936.

EXTREMES FOR PERIOD APRIL TO SEPTEMBER.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum (*):.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 5	0500	1,380	6.77	July 3	0315	1,150	6.28
June 17	0130	1,240	6.47	July 9	2200	1,370	6.75
June 26	2245	*1,400	*6.80				

Minimum discharge, 47 ft³/s Sept. 16-18, 24-28.

DISCHARGE, CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	APR	MAY	JUN	JUL	AUG	SEP
1	---	132	1050	882	e180	63
2	---	147	1040	892	174	61
3	---	151	1070	1010	168	60
4	---	149	1050	809	160	61
5	---	159	1220	779	156	60
6	---	183	793	848	153	59
7	---	237	579	917	183	58
8	---	268	479	878	191	61
9	---	277	426	1090	149	56
10	---	310	457	1100	130	55
11	---	354	676	931	125	54
12	---	317	807	e790	117	52
13	---	276	885	e800	112	51
14	---	246	903	e740	105	50
15	---	257	920	e680	100	49
16	---	310	913	e620	131	48
17	---	423	1110	e580	113	47
18	---	459	1100	e540	102	49
19	---	468	876	e500	95	53
20	e100	486	631	e450	90	52
21	93	563	528	e410	85	52
22	90	598	490	e370	85	51
23	88	586	577	e340	85	50
24	90	571	723	e310	92	48
25	98	570	939	e290	86	47
26	97	547	1110	e270	80	47
27	104	535	1110	e250	75	48
28	122	597	931	e230	72	48
29	127	721	847	e220	69	53
30	132	917	853	e210	67	51
31	---	1040	---	e190	65	---
TOTAL	---	12854	25093	18926	3595	1594
MEAN	---	415	836	611	116	53.1
MAX	---	1040	1220	1100	191	63
MIN	---	132	426	190	65	47
AC-FT	---	25500	49770	37540	7130	3160

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	56.5	62.8	58.1	49.2	46.0	54.5	159	513	785	382	85.2	49.6
MAX	291	226	212	158	117	169	393	909	1374	913	180	104
(WY)	1960	1928	1959	1974	1971	1986	1934	1928	1974	1975	1943	1978
MIN	18.0	14.7	15.3	15.0	14.8	16.3	35.7	203	332	59.7	30.6	23.0
(WY)	1937	1937	1937	1937	1937	1955	1975	1977	1926	1977	1931	1931

SUMMARY STATISTICS

WATER YEARS 1926 - 1995

ANNUAL MEAN	192
HIGHEST ANNUAL MEAN	288
LOWEST ANNUAL MEAN	90.9
HIGHEST DAILY MEAN	2290
LOWEST DAILY MEAN	10
ANNUAL SEVEN-DAY MINIMUM	11
ANNUAL RUNOFF (AC-FT)	138900
10 PERCENT EXCEEDS	601
50 PERCENT EXCEEDS	63
90 PERCENT EXCEEDS	28

e Estimated

GRANDE RONDE RIVER BASIN

13330050 LOSTINE RIVER AT CAUDLE LANE, AT LOSTINE, OR

LOCATION.--Lat 45°29'22", long 117°26'08", in NW 1/4 SW 1/4 sec.10, T.1 S., R.43 E., Wallowa County, Hydrologic Unit 17060105, on left bank, 500 ft downstream from bridge at Caudle Lane, at Lostine, and at mile 5.4.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--April to September 1995.

GAGE.--Water-stage recorder. Elevation of gage is 3,360 ft above sea level, from topographic map.

REMARKS.--Records good. Minam Lake, capacity 400 acre-ft, has stored and diverted flow from Minam River since 1917 for irrigation in Lostine River basin. Many diversions for irrigation upstream from station.

EXTREMES FOR PERIOD AUGUST TO SEPTEMBER.--Maximum discharge, 186 ft³/s Aug. 7, gage height, 4.69 ft; minimum discharge, 10 ft³/s Sept. 25.

DISCHARGE, CUBIC FEET PER SECOND, AUGUST TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	AUG	SEP
1	e130	23
2	e120	22
3	e110	21
4	106	24
5	94	22
6	79	16
7	116	17
8	101	18
9	77	18
10	69	17
11	65	16
12	60	15
13	56	15
14	50	14
15	51	14
16	62	14
17	54	13
18	49	13
19	44	13
20	40	13
21	37	13
22	37	13
23	38	12
24	43	11
25	39	11
26	36	14
27	38	20
28	38	22
29	36	25
30	34	23
31	29	---
TOTAL	1938	502
MEAN	62.5	16.7
MAX	130	25
MIN	29	11
AC-FT	3840	996

e Estimated

GRANDE RONDE RIVER BASIN

85

13330300 LOSTINE RIVER AT BAKER ROAD, NEAR LOSTINE, OR

LOCATION.--Lat 45°32'14", long 117°28'43", in NW 1/4 SW 1/4 sec.29, T.1 N., R.42 E., Wallowa County, Hydrologic Unit 17060105, on left bank, 300 ft upstream from bridge at Baker road, 4 mi northwest of Lostine, and at mile 1.3.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--June to September 1995.

GAGE.--Water-stage recorder. Elevation of gage is 3,050 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Minam Lake, capacity 440 acre-ft, has stored and diverted flow from Minam River since 1917 for irrigation in Lostine River basin. Many diversions for irrigation upstream from gage.

EXTREMES FOR PERIOD JUNE TO SEPTEMBER.--Maximum discharge, 1,690 ft³/s June 26, gage height, 6.66 ft; minimum discharge, 6.3 ft³/s Aug. 22.

DISCHARGE, CUBIC FEET PER SECOND, JUNE TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	JUN	JUL	AUG	SEP
1	991	914	55	20
2	999	911	44	13
3	1030	1050	45	17
4	1050	775	45	22
5	1340	752	35	18
6	859	827	21	11
7	592	936	42	12
8	475	858	44	23
9	425	1090	30	24
10	451	1130	32	24
11	698	929	38	21
12	858	766	39	17
13	956	781	38	19
14	952	566	33	20
15	989	496	32	20
16	929	469	47	22
17	1230	438	35	18
18	1290	412	28	13
19	1040	370	24	11
20	734	375	18	13
21	589	323	12	13
22	534	282	7.4	15
23	619	232	9.4	17
24	785	207	21	18
25	1060	168	29	32
26	1270	118	32	22
27	1300	99	31	31
28	1020	94	35	54
29	877	84	32	65
30	868	69	30	68
31	---	67	27	---
TOTAL	26810	16588	990.8	693
MEAN	894	535	32.0	23.1
MAX	1340	1130	55	68
MIN	425	67	7.4	11
AC-FT	53180	32900	1970	1370

GRANDE RONDE RIVER BASIN

13330500 BEAR CREEK NEAR WALLOWA, OR

LOCATION.--Lat 45°31'37", long 117°33'05", in NW 1/4 NE 1/4 sec.34, T.1 N., R.42 E., Wallowa County, Hydrologic Unit 17060105, on left bank, at private road bridge, 3.0 mi southwest of Wallowa, and at mile 4.4.

DRAINAGE AREA.--68 mi², approximately.

PERIOD OF RECORD.--April to September 1915, April 1924 to September 1985, April to September 1995. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1915, 1927, 1929-30, 1932, 1936-40, 1945, 1949.

GAGE.--Water-stage recorder. Elevation of gage is 3,250 ft above sea level, by barometer. Apr. 13 to Sept. 16, 1915, nonrecording gage at site 1.0 mi upstream at different datum. Apr. 22, 1924 to Nov. 2, 1931, water-stage recorder at site 1.5 mi upstream at different datum.

REMARKS.--Records good. No regulation. Diversions for irrigation upstream from station. Water for irrigation in Lostine River basin diverted from Little Bear Creek, a tributary upstream from station, in sec.32, T.1 S., R.43 E. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--61 years (water years 1925-85), 114 ft³/s, 82,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,730 ft³/s June 15, 1974, gage height, 3.58 ft; maximum gage height, 5.38 ft Jan. 24, 1984 (result of ice jam); minimum daily discharge, 3 ft³/s Jan. 20, Feb. 1, 1937.

EXTREMES FOR PERIOD APRIL TO SEPTEMBER.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 30	2030	767	3.46	No other peak greater than base discharge.			
Minimum discharge, 14 ft ³ /s Sept. 25.							

DISCHARGE, CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	APR	MAY	JUN	JUL	AUG	SEP
1	---	152	571	256	37	19
2	---	188	522	261	35	18
3	---	211	489	267	34	18
4	---	208	475	229	32	18
5	---	216	532	221	31	18
6	---	273	341	231	30	18
7	---	336	275	227	50	19
8	---	371	246	212	43	18
9	---	375	227	233	37	18
10	---	388	234	221	34	17
11	---	423	301	189	34	17
12	---	370	350	188	31	17
13	---	315	364	236	30	16
14	---	265	351	176	29	16
15	---	252	339	153	29	16
16	---	285	342	136	31	15
17	---	395	352	123	29	15
18	---	415	372	113	28	15
19	e125	390	336	102	26	15
20	113	395	293	93	25	15
21	103	427	262	85	24	15
22	96	441	245	78	23	15
23	90	402	255	70	23	15
24	92	384	288	64	23	15
25	101	377	330	59	22	15
26	101	354	345	56	22	15
27	106	342	321	52	21	15
28	124	376	284	48	21	16
29	133	453	265	45	20	19
30	137	572	258	43	20	17
31	---	603	---	40	20	---
TOTAL	---	10954	10165	4507	894	495
MEAN	---	353	339	145	28.8	16.5
MAX	---	603	571	267	50	19
MIN	---	152	227	40	20	15
AC-FT	---	21730	20160	8940	1770	982
CFSM	---	5.20	4.98	2.14	.42	.24
IN.	---	5.99	5.56	2.47	.49	.27

e Estimated

GRANDE RONDE RIVER BASIN

87

13330700 BEAR CREEK AT WALLOWA, OR

LOCATION.--Lat 45°34'50", long 117°32'21", in NW 1/4 SW 1/4 sec.11, T.1 N., R.42 E., Wallowa County, Hydrologic Unit 17060105, on right bank, 5 ft upstream from bridge crossing, 0.5 mi northwest of Wallowa, and at mile 0.7.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--May to September 1995.

GAGE.--Water-stage recorder. Elevation of gage is 2,900 ft above sea level, from topographic map.

REMARKS.--Records fair. No regulation. Many diversions for irrigation upstream from station. Water for irrigation in the Lostine River basin is diverted from Little Bear Creek, a tributary upstream from station.

EXTREMES FOR PERIOD MAY TO SEPTEMBER.--Maximum discharge, 802 ft³/s May 30, gage height, 5.95 ft; minimum discharge, 4.4 ft³/s Aug. 31, Sept. 25-28.

DISCHARGE, CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	MAY	JUN	JUL	AUG	SEP
1	---	620	257	7.4	5.5
2	---	557	263	5.6	5.5
3	---	520	269	5.9	5.4
4	---	510	222	6.0	5.9
5	---	534	223	5.4	6.2
6	---	399	227	5.5	6.2
7	---	328	226	15	6.5
8	---	290	209	12	6.6
9	e430	266	230	11	6.1
10	445	268	216	10	5.9
11	493	331	176	9.6	6.1
12	445	371	167	9.4	6.3
13	396	382	233	17	6.3
14	348	366	170	18	6.0
15	335	353	146	8.5	6.4
16	365	352	127	9.3	6.1
17	461	384	113	8.4	6.6
18	480	400	101	8.3	6.3
19	454	359	91	8.0	6.1
20	454	308	78	7.3	5.3
21	488	274	65	7.3	5.0
22	494	257	55	8.2	5.3
23	470	266	49	7.7	5.5
24	449	287	39	5.5	5.2
25	448	327	31	5.2	5.1
26	421	344	29	5.1	4.8
27	413	329	27	5.0	4.8
28	438	289	21	5.0	4.9
29	504	268	17	5.1	6.0
30	587	258	12	5.2	6.5
31	654	---	10	5.0	---
TOTAL	---	10797	4099	251.9	174.4
MEAN	---	360	132	8.13	5.81
MAX	---	620	269	18	6.6
MIN	---	257	10	5.0	4.8
AC-FT	---	21420	8130	500	346

e Estimated

GRANDE RONDE RIVER BASIN

13331450 WALLOWA RIVER BELOW WATER CANYON, NEAR WALLOWA, OR

LOCATION.--Lat 45°36'30", long 117°36'55", in NW 1/4 SW 1/4 sec.31, T.2 N., R.42 E., Wallowa County, Hydrologic Unit 17060105, on left bank, 160 ft upstream from bridge, approximately 6 mi east of Wallowa, and at mile 18.3.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--August to September 1995.

GAGE.--Water-stage recorder. Elevation of gage is 2,760 ft above sea level, from topographic map.

REMARKS.--Records good. Flow regulated by Wallowa Lake. Many diversions for irrigation upstream from station.

EXTREMES FOR PERIOD AUGUST TO SEPTEMBER.--Maximum discharge, 449 ft³/s Aug. 16, gage height, 0.91 ft; minimum discharge, 222 ft³/s Sept. 20, 21, gage height, 0.41 ft.

DISCHARGE, CUBIC FEET PER SECOND, AUGUST AND SEPTEMBER 1995
DAILY MEAN VALUES

DAY	AUG	SEP
1	---	277
2	---	259
3	---	250
4	---	263
5	---	268
6	---	279
7	---	290
8	---	310
9	---	310
10	---	311
11	---	292
12	---	283
13	---	283
14	---	269
15	---	267
16	e440	274
17	407	283
18	393	278
19	385	271
20	375	261
21	350	228
22	318	237
23	315	238
24	325	246
25	327	260
26	318	283
27	315	287
28	312	304
29	295	327
30	293	333
31	285	---
TOTAL	---	8321
MEAN	---	277
MAX	---	333
MIN	---	228
AC-FT	---	16500

e Estimated

GRANDE RONDE RIVER BASIN

89

13331500 MINAM RIVER AT MINAM, OR
(Hydrologic bench-mark station)

LOCATION.--Lat 45°37'12", long 117°43'32", in SW 1/4 SW 1/4 sec.29, T.2 N., R.41 E., Wallowa County, Hydrologic Unit 17060105, on left bank 2.3 mi downstream from Squaw Creek, 0.3 mi west of Minam, and at mile 0.3.

DRAINAGE AREA.--240 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1912 to March 1914, September 1965 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 2,540.48 ft above sea level. June 1912 to March 1914, nonrecording gage at approximately same site at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation. Minam Lake, capacity 440 acre-ft, has stored and diverted flow from Minam River since 1917 for irrigation in Lostine River basin.

AVERAGE DISCHARGE.--31 years (water years 1913, 1966-95), 448 ft³/s, 25.39 in/yr, 324,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,260 ft³/s June 16, 1974, gage height, 6.89 ft; maximum gage height, 7.3 ft May 28, 1913, datum then in use; minimum discharge, 10 ft³/s Dec. 6, 1972, Jan. 10, 1973, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 11	1630	1,500	2.96	June 17	0200	2,330	3.81
May 22	0200	1,760	3.25	June 27	0030	2,370	3.84
June 5	0630	*2,840	*4.23	July 10	0200	1,690	3.18

Minimum discharge observed, 21 ft³/s Nov. 22, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	144	169	e110	1030	399	355	748	2320	1560	300	113
2	54	114	e120	e95	1040	370	335	953	2320	1600	283	110
3	52	90	e95	e90	712	351	323	998	2290	1670	274	107
4	52	75	e60	e95	524	331	342	915	2300	1440	265	109
5	54	83	e35	e105	461	312	381	884	2630	1370	257	104
6	56	87	e45	e120	435	286	426	970	1990	1380	249	102
7	53	84	e70	e130	411	264	514	1110	1580	1460	323	107
8	52	70	e85	e170	373	261	677	1180	1390	1390	319	113
9	52	80	e95	e200	330	286	651	1220	1270	1460	259	105
10	51	97	e105	e250	299	374	597	1290	1230	1540	232	101
11	53	90	e110	221	278	511	566	1460	1500	1380	224	97
12	54	91	e120	196	261	487	547	1450	1700	1240	206	94
13	52	88	e120	209	231	462	689	1300	1860	1240	198	91
14	61	84	e80	426	206	453	719	1150	1840	1040	190	88
15	68	81	e100	482	e200	598	681	1120	1880	936	183	86
16	60	85	e150	357	212	594	625	1170	1790	887	215	84
17	59	75	200	282	236	583	572	1390	2120	847	193	82
18	60	82	262	248	396	649	521	1470	2170	819	182	82
19	59	e70	279	222	573	828	476	1460	2020	799	173	80
20	59	e72	229	196	799	853	447	1490	1700	767	164	79
21	69	e45	185	170	779	842	412	1590	1490	740	156	77
22	74	e26	162	151	664	741	389	1660	1360	676	151	77
23	64	e35	e145	e130	564	669	369	1650	1390	599	147	75
24	59	e50	e140	e120	535	586	375	1600	1560	532	153	74
25	57	e70	e130	e125	568	515	409	1610	1850	482	146	73
26	58	94	e160	e130	532	463	413	1540	2060	450	141	72
27	74	98	190	e140	485	424	448	1500	2090	421	134	73
28	139	84	225	142	433	398	560	1550	1790	408	129	77
29	99	88	220	140	---	376	606	1710	1610	397	123	99
30	79	107	155	173	---	357	671	2020	1570	366	121	95
31	84	---	e130	503	---	346	---	2280	---	327	117	---
TOTAL	1985	2439	4371	6128	13567	14969	15096	42438	54670	30223	6207	2726
MEAN	64.0	81.3	141	198	485	483	503	1369	1822	975	200	90.9
MAX	139	144	279	503	1040	853	719	2280	2630	1670	323	113
MIN	51	26	35	90	200	261	323	748	1230	327	117	72
AC-FT	3940	4840	8670	12150	26910	29690	29940	84180	108400	59950	12310	5410
CFSM	.27	.34	.59	.82	2.02	2.01	2.10	5.70	7.59	4.06	.83	.38
IN.	.31	.38	.68	.95	2.10	2.32	2.34	6.58	8.47	4.68	.96	.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1995, BY WATER YEAR (WY)

MEAN	94.7	142	174	196	242	316	525	1284	1575	620	156	97.6
MAX	173	493	604	412	567	697	888	2016	3125	1392	276	179
(WY)	1969	1974	1978	1969	1986	1986	1913	1971	1974	1975	1912	1978
MIN	38.1	56.1	62.4	59.6	56.9	66.7	235	484	493	125	72.6	45.9
(WY)	1988	1994	1979	1977	1977	1977	1967	1977	1992	1977	1966	1987

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1912 - 1995
ANNUAL TOTAL	115530	194819	
ANNUAL MEAN	317	534	448
HIGHEST ANNUAL MEAN			713
LOWEST ANNUAL MEAN			189
HIGHEST DAILY MEAN	2170	May 12	5160
LOWEST DAILY MEAN	26	Nov 22	11
ANNUAL SEVEN-DAY MINIMUM	50	Sep 22	52
ANNUAL RUNOFF (AC-FT)	229200	386400	324900
ANNUAL RUNOFF (CFSM)	1.32	2.22	1.87
ANNUAL RUNOFF (INCHES)	17.91	30.20	25.39
10 PERCENT EXCEEDS	992	1540	1270
50 PERCENT EXCEEDS	115	278	194
90 PERCENT EXCEEDS	59	71	71

e Estimated

GRANDE RONDE RIVER BASIN

13331500 MINAM RIVER AT MINAM, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1965 to September 1985.

REMARKS.--Some samples were analyzed by different methods and may have data with different levels of detection.

WATER-QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCCI, KF AGAR (COLS. PER 100 ML)
NOV 1994 15...	1145	82	59	7.9	1.5	0.5	12.6	691	99	K3	K3
FEB 1995 22...	1245	663	52	7.7	5.0	4.4	12.2	700	103	<1	K10
MAY 23...	1030	1650	32	7.5	6.5	2.7	11.7	699	104	K2	K7
AUG 31...	1100	117	48	7.7	14.5	0.2	9.5	701	101	K4	370

DATE	HARD-NESS, TOTAL (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)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY, DIS IT FIELD (MG/L AS CACO3)	BICAR-BONATE, DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE, DIS IT FIELD (MG/L AS CO3)	SULFATE, DIS-SOLVED (MG/L AS SO4)
NOV 1994 15...	23	6.6	1.6	2.5	18	0.2	1.1	26	32	0	0.8
FEB 1995 22...	21	5.4	1.7	2.3	19	0.2	1.1	23	28	0	0.5
MAY 23...	11	3.3	0.76	1.4	20	0.2	0.7	16	20	0	0.4
AUG 31...	18	5.2	1.1	2.0	19	0.2	1.0	23	28	0	0.8

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	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 AC-FT)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
NOV 1994 15...	0.6	<0.1	19	43	48	0.06	<0.015	<0.01	<0.2	<0.05	0.02
FEB 1995 22...	0.5	<0.1	27	61	53	0.08	<0.015	<0.01	<0.2	<0.05	0.02
MAY 23...	0.3	<0.1	14	31	31	0.04	<0.015	<0.01	<0.2	<0.05	<0.01
AUG 31...	0.4	<0.1	15	35	39	0.05	<0.015	<0.01	<0.2	<0.05	0.02

DATE	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	BARIUM, DIS-SOLVED (UG/L AS BA)	COBALT, DIS-SOLVED (UG/L AS CO)	IRON, DIS-SOLVED (UG/L AS FE)	LITHIUM, DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)
NOV 1994 15...	<0.01	<0.01	10	3	<3	21	<4	1	<10	<1
FEB 1995 22...	0.02	0.03	550	6	<3	420	<4	3	<10	<1
MAY 23...	<0.01	0.01	40	2	<3	170	<4	2	<10	<1
AUG 31...	<0.01	<0.01	<10	3	<3	4	<4	<1	<10	<1

DATE	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)	URANIUM 2 SIGMA WATER, DISS, (UG/L)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	RA-226 2 SIGMA WATER, DISS, (PCI/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 1994 15...	<1	<1	23	0.30	0.009	<6	<0.02	0.01	2	0.44
FEB 1995 22...	<1	<1	22	--	--	<6	--	--	2	3.6
MAY 23...	<1	<1	13	0.14	0.009	<6	0.02	0.01	22	98
AUG 31...	<1	<1	20	0.16	0.004	<6	0.03	0.01	2	0.63

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

GRANDE RONDE RIVER BASIN

91

13333000 GRANDE RONDE RIVER AT TROY, OR

LOCATION.--(Revised) Lat 45°56'45", long 117°27'00", in NE 1/4 NW 1/4 sec.4, T.5 N., R.43 E., Wallowa County, Hydrologic Unit 17060106, on left bank, on upstream side of bridge at Troy, 100 ft downstream from Wenaha River, and at mile 45.3.

DRAINAGE AREA.--3,275 mi².

PERIOD OF RECORD.--August 1944 to current year. Monthly discharge only August 1944, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1946(M), 1948-50.

GAGE.--Water-stage recorder. Datum of gage is 1,585.98 ft above sea level. Aug. 17, 1944, to Sept. 30, 1949, nonrecording gage at datum 10.85 ft lower. Oct. 1, 1949, to Sept. 5, 1963, water-stage recorder at datum 1.15 ft higher. Sept. 6, 1963 to Oct. 19, 1994, water-stage recorder at site 500 ft downstream, at present datum.

REMARKS.--No estimated daily discharges. Records good except those for Dec. 19 to Jan. 13, which are poor. Flow slightly regulated by Wallowa Lake and small reservoirs. Diversions for irrigation upstream from station, chiefly in vicinity of La Grande, Enterprise, and Wallowa; one transbasin diversion from Big Sheep Creek and tributaries in Imnaha River basin for irrigation in Wallowa Valley. U.S. Geological Survey satellite telemeter and National Weather Service telemeter at station.

AVERAGE DISCHARGE.--51 years (water years 1945-95), 3,016 ft³/s, 2,185,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,200 ft³/s Dec. 23, 1964, gage height, 11.25 ft; minimum discharge, 321 ft³/s Nov. 25, 1993; result of freezeup, but may have been less during period of ice effect that day.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	2000	9,180	7.46	Apr. 8	0700	9,670	7.60
Feb. 2	0230	*22,200	*10.36	May 11	1600	16,500	8.67
Feb. 21	0200	12,300	8.28	June 5	1600	11,000	7.47
Mar. 15	1200	10,200	7.75	June 27	0830	9,030	6.96
Mar. 21	0400	10,300	7.77				

Minimum discharge, 445 ft³/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	453	1600	1710	1350	15700	5840	4030	7440	9920	5960	1190	729
2	465	1240	2210	1140	17700	5160	3960	9060	9810	5940	1090	712
3	496	996	2050	1150	12100	4710	3890	9020	9610	6400	1020	689
4	507	939	1750	1190	9740	4400	3990	8710	9360	5700	1000	687
5	516	894	1370	1250	8270	4040	4340	8710	10300	5280	974	690
6	528	856	1200	1540	7350	3670	4910	9090	9210	5090	923	697
7	514	858	1210	1600	6720	3300	6220	10100	7650	5510	966	761
8	510	819	1220	1430	6160	3140	8970	10800	6670	5240	1310	816
9	500	845	1170	1500	5520	3660	8140	11300	5930	5260	1200	812
10	500	932	1100	2270	4930	4560	7350	11400	5500	5900	1120	796
11	518	978	1080	2930	4420	5240	6900	14700	5760	5420	1090	780
12	529	1000	1070	2860	4070	5800	6600	15800	6420	4930	1090	751
13	531	1020	1050	3220	3650	5940	6690	14800	6880	5050	1080	727
14	566	964	1000	7230	3090	6300	6800	13400	6860	4460	1080	718
15	611	918	976	7830	2900	9320	6380	12400	6980	3950	1040	687
16	590	922	1000	5920	2720	9650	5970	11700	6720	3680	1090	679
17	583	920	1280	4500	3030	8780	5560	12200	7580	3420	1100	693
18	581	840	2370	3590	6170	8440	5150	11800	8080	3130	1060	694
19	573	824	3030	3090	9420	9360	4790	11200	8620	2930	1030	684
20	567	870	2770	2770	11800	9360	4520	10800	8130	2730	983	673
21	649	836	2440	2400	11700	9890	4220	10800	7420	2750	929	648
22	652	785	2110	2030	10600	9020	3920	10700	6840	2480	881	614
23	641	673	1860	1780	9290	8310	3710	10300	6600	2260	844	625
24	660	757	1670	1780	8570	7500	3690	9740	6690	2050	831	621
25	619	812	1660	1760	8580	6640	3940	9410	7360	1910	837	631
26	603	846	1650	1700	8170	5920	4010	8980	7940	1720	831	663
27	709	812	2510	1680	7520	5310	4240	8420	8190	1600	798	704
28	860	824	4140	1600	6630	4830	5360	8200	7160	1500	793	739
29	892	840	3970	1560	---	4480	5750	8410	6450	1420	773	800
30	744	933	2830	1870	---	4210	7610	9080	6100	1340	754	829
31	866	---	1880	6560	---	4030	---	9830	---	1270	746	---
TOTAL	18533	27353	57336	83080	216520	190810	161610	328300	226740	116280	30453	21349
MEAN	598	912	1850	2680	7733	6155	5387	10590	7558	3751	982	712
MAX	892	1600	4140	7830	17700	9890	8970	15800	10300	6400	1310	829
MIN	453	673	976	1140	2720	3140	3690	7440	5500	1270	746	614
AC-FT	36760	54250	113700	164800	429500	378500	320600	651200	449700	230600	60400	42350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1995, BY WATER YEAR (WY)

	873	1193	1899	2076	3009	4161	6208	7349	5698	2175	846	765
MEAN	873	1193	1899	2076	3009	4161	6208	7349	5698	2175	846	765
MAX	2559	3023	6295	6280	7733	11520	10780	13820	11610	4951	1385	1291
(WY)	1960	1974	1978	1974	1995	1972	1956	1948	1974	1975	1984	1984
MIN	528	618	685	702	769	888	2257	2368	1501	520	438	414
(WY)	1988	1988	1945	1979	1977	1977	1968	1977	1992	1977	1992	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1945 - 1995

ANNUAL TOTAL	724649	1478364	
ANNUAL MEAN	1985	4050	
HIGHEST ANNUAL MEAN			3016
LOWEST ANNUAL MEAN			4912
HIGHEST DAILY MEAN	8360	17700	1136
LOWEST DAILY MEAN	366	453	35700
ANNUAL SEVEN-DAY MINIMUM	374	497	344
ANNUAL RUNOFF (AC-FT)	1437000	2932000	361
10 PERCENT EXCEEDS	4720	9360	2185000
50 PERCENT EXCEEDS	1100	2770	7370
90 PERCENT EXCEEDS	433	686	1600
			691

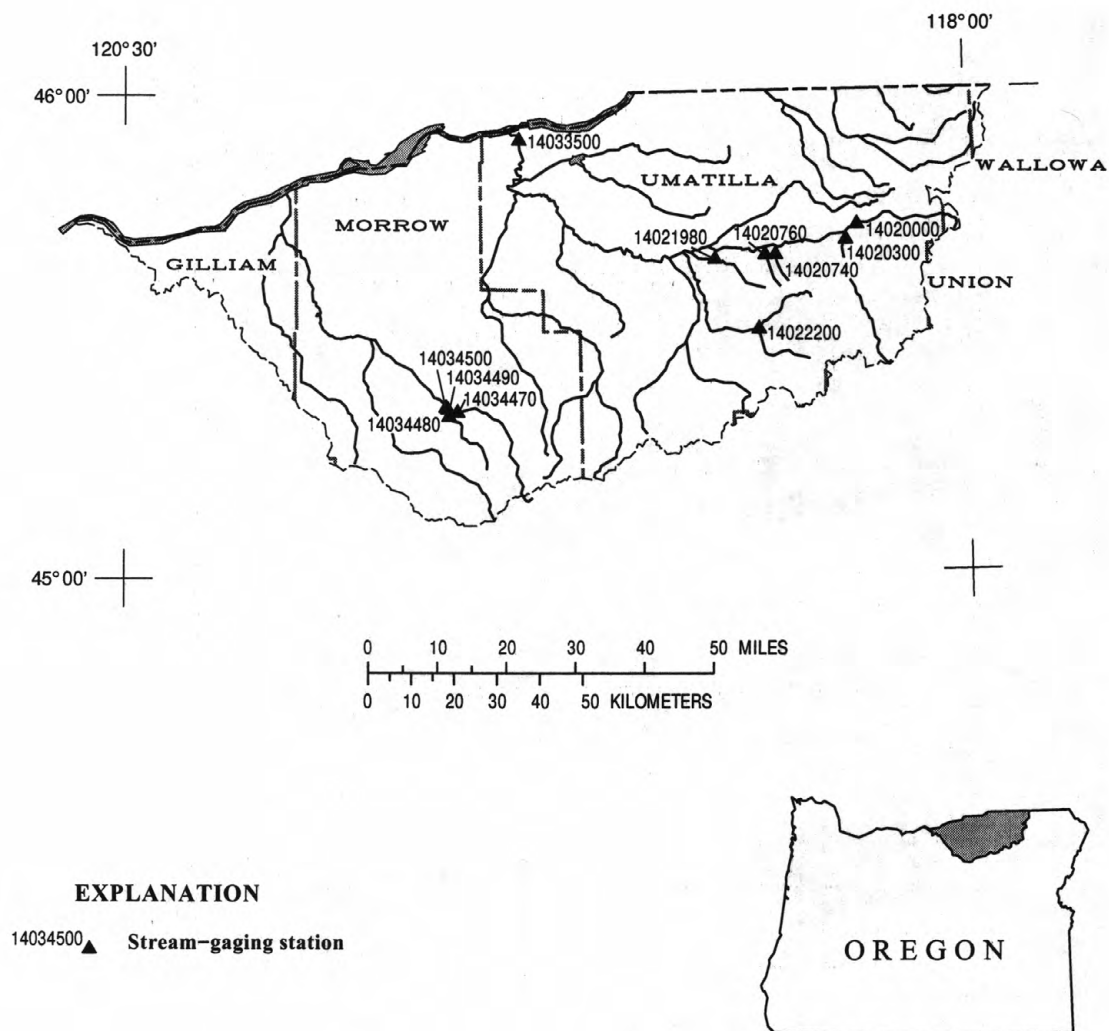


Figure 10. Location of surface-water stations in the Umatilla and Willow Creek Basins.

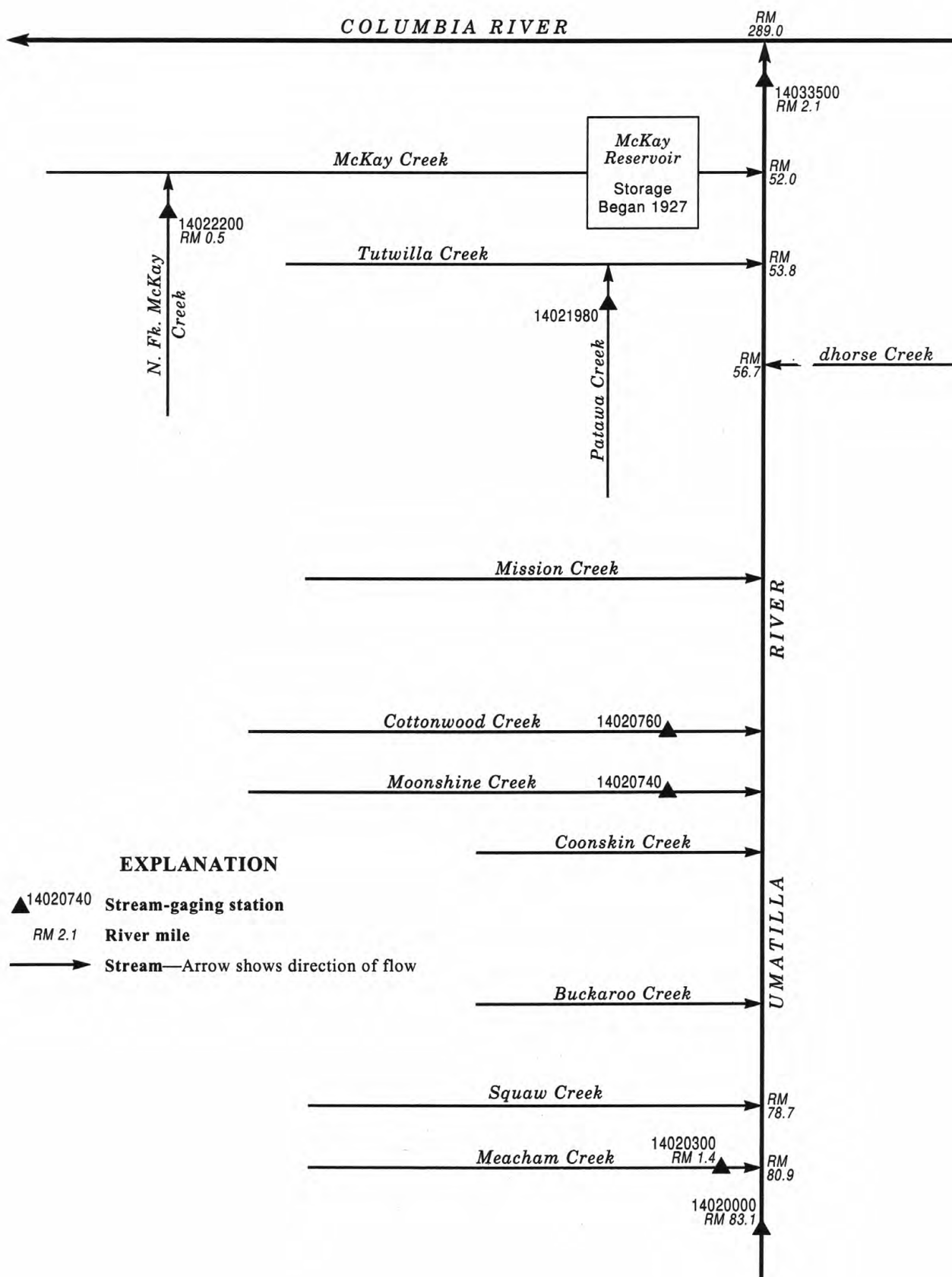


Figure 11. Schematic diagram showing gaging stations in the Umatilla River Basin.

UMATILLA RIVER BASIN

14020000 UMATILLA RIVER ABOVE MEACHAM CREEK, NEAR GIBBON, OR

LOCATION---Lat 45°43'11", long 118°19'20", in SE 1/4 SW 1/4 sec.21, T.3 N., R.36 E., Umatilla County, Hydrologic Unit 17070103, Umatilla Indian Reservation, on right bank 0.8 mi downstream from Ryan Creek, 2.2 mi upstream from Meacham Creek, 2.5 mi northeast of Gibbon, and at mile 83.1.

DRAINAGE AREA---131 mi².

PERIOD OF RECORD---April 1933 to current year.

REVISED RECORDS---WSP 1935: 1946-48(M), 1950(M), 1953(M), 1956-59(M), drainage area.

GAGE---Water-stage recorder. Datum of gage is 1,854.81 ft above sea level. Prior to June 27, 1939, at site 1 mi downstream at datum 43.94 ft lower.

REMARKS---Records good except for those above 300 ft³/s and estimated daily discharges, which are fair. No regulation or diversion upstream from station. Continuous water-quality records for the period June 1959 to September 1980 have been collected at this location.

AVERAGE DISCHARGE---62 years (water years 1934-95), 224 ft³/s, 23.26 in/yr, 162,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD---Maximum discharge, 5,930 ft³/s Jan. 25, 1975, gage height, 9.18 ft, from rating curve extended above 3,500 ft³/s; maximum gage height, 9.50 ft Jan. 29, 1965; minimum discharge, 16 ft³/s Nov. 9, 1965, momentary regulation from unknown source.

EXTREMES FOR CURRENT YEAR---Peak discharges greater than base discharge 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. 14	1400	1,480	5.24	May 11	2200	1,360	5.33
Feb. 2	0030	*3,110	*6.85				

Minimum discharge, 38 ft³/s several days in September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	213	840	228	e2020	e280	267	928	144	103	47	41
2	42	132	513	192	2300	e240	253	1040	138	100	47	40
3	42	102	340	169	1260	e210	257	948	129	98	46	40
4	42	99	251	152	919	e180	294	813	125	92	46	40
5	42	103	204	140	e800	e160	341	874	144	86	45	40
6	42	115	177	129	e670	e155	433	1200	139	87	45	40
7	42	127	155	123	e580	e150	559	1130	140	88	52	44
8	42	125	136	122	e540	e140	694	968	130	80	49	45
9	41	192	129	165	e460	e160	636	938	117	76	46	42
10	41	257	119	465	e370	e180	577	967	109	74	46	41
11	42	200	116	613	e320	e220	563	1380	111	71	48	40
12	42	201	114	520	e280	e260	552	1380	103	69	47	40
13	42	188	110	578	e250	e320	596	1060	99	67	45	40
14	49	161	107	1290	e220	e520	564	818	100	64	45	39
15	47	145	105	1060	e200	e770	512	668	102	63	45	39
16	45	147	117	707	e180	e1000	451	578	98	61	45	39
17	44	130	523	515	e190	854	400	515	94	59	45	39
18	44	118	949	444	e400	763	361	444	136	57	43	39
19	43	117	645	455	e1200	768	323	396	366	57	43	39
20	43	163	436	399	e1610	742	321	369	490	58	42	39
21	49	158	350	342	e1500	731	297	345	388	55	42	38
22	46	140	294	294	e1300	656	292	315	304	54	41	38
23	45	126	262	257	e1020	572	291	289	245	53	41	39
24	44	116	243	230	e800	483	314	267	206	52	41	39
25	44	124	235	213	e580	410	358	247	178	51	41	39
26	44	132	264	206	e540	357	359	230	157	51	41	39
27	58	125	855	200	e480	318	417	207	140	51	41	41
28	63	118	800	193	e400	292	655	190	127	50	41	49
29	52	140	537	198	---	273	761	177	116	48	41	49
30	49	433	376	255	---	258	1020	166	109	48	40	45
31	74	---	284	944	---	252	---	154	---	48	41	---
TOTAL	1429	4647	10586	11798	21389	12674	13718	20001	4984	2071	1370	1222
MEAN	46.1	155	341	381	764	409	457	645	166	66.8	44.2	40.7
MAX	74	433	949	1290	2300	1000	1020	1380	490	103	52	49
MIN	41	99	105	122	180	140	253	154	94	48	40	38
AC-FT	2830	9220	21000	23400	42430	25140	27210	39670	9890	4110	2720	2420
CFSM	.35	1.18	2.61	2.91	5.83	3.12	3.49	4.93	1.27	.51	.34	.31
IN.	.41	1.32	3.01	3.35	6.07	3.60	3.90	5.68	1.42	.59	.39	.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1995, BY WATER YEAR (WY)

	MEAN	57.6	126	231	258	318	386	536	449	191	65.0	47.4	46.9
MAX	169	405	716	656	910	989	885	1135	591	110	63.4	81.6	
(WY)	1952	1948	1976	1965	1982	1972	1974	1948	1974	1948	1975	1959	
MIN	39.1	40.2	44.4	45.7	71.8	189	162	67.0	49.4	39.5	36.9	34.9	
(WY)	1936	1936	1966	1937	1977	1955	1941	1934	1992	1934	1939	1935	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1933 - 1995

ANNUAL TOTAL	70116	105889	
ANNUAL MEAN	192	290	
HIGHEST ANNUAL MEAN			224
LOWEST ANNUAL MEAN			415
HIGHEST DAILY MEAN	1400	Mar 2	2300
LOWEST DAILY MEAN	38	Aug 25	38
ANNUAL SEVEN-DAY MINIMUM	38	Aug 25	39
ANNUAL RUNOFF (AC-FT)	139100	210000	162500
ANNUAL RUNOFF (CFSM)	1.47	2.21	1.71
ANNUAL RUNOFF (INCHES)	19.91	30.07	23.26
10 PERCENT EXCEEDS	443	769	550
50 PERCENT EXCEEDS	114	155	116
90 PERCENT EXCEEDS	40	42	44

e Estimated

UMATILLA RIVER BASIN

95

14020300 MEACHAM CREEK AT GIBBON, OR

LOCATION.--Lat 45°41'20", long 118°21'20", in SE 1/4 SE 1/4 sec.31, T.3. N., R.36 E., Umatilla County, Hydrologic Unit 17070103, on left bank 250 ft downstream from Union Pacific railroad bridge, 0.9 mi southeast of Gibbon, and at mile 1.4.

DRAINAGE AREA.--176 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,803.05 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--20 years (water years 1976-95), 195 ft³/s, 15.03 in/yr, 141,000 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,750 ft³/s Feb. 20, 1982, gage height, 6.60 ft, from floodmark, from rating curve extended above 2,600 ft³/s; minimum discharge, 6.6 ft³/s Aug. 29, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1975, reached a stage of 7.21 ft, from floodmark, discharge, about 8,200 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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. 1	2400	*3,060	*6.08	Feb. 20	0330	1,660	4.93
Minimum discharge, 7.5 ft ³ /s Aug. 28, Sept. 1.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	36	298	299	2320	301	179	871	65	45	16	8.2
2	9.5	28	320	246	2410	255	170	1350	66	41	16	8.4
3	9.5	28	247	206	1510	224	163	1140	60	40	16	8.4
4	9.5	33	190	182	1140	203	169	793	56	37	15	8.4
5	9.5	40	158	164	975	184	184	681	65	33	15	8.8
6	9.5	40	150	149	837	164	221	1060	65	35	15	8.8
7	9.5	43	137	144	680	150	259	1010	69	38	14	10
8	9.5	44	117	137	495	147	328	804	63	33	14	10
9	9.5	54	105	137	391	153	328	780	57	28	14	9.9
10	9.5	74	96	195	339	180	318	832	50	26	13	9.6
11	9.5	83	91	400	295	231	319	1130	48	25	13	10
12	9.5	91	87	437	265	278	320	1160	44	23	12	11
13	9.5	100	83	511	237	314	334	846	40	23	12	9.7
14	11	95	80	1320	208	381	321	581	43	23	12	10
15	11	86	78	1150	193	1000	300	438	44	22	12	9.8
16	11	86	83	748	175	1170	275	360	41	22	11	9.7
17	11	83	255	522	197	933	247	306	40	21	11	9.5
18	11	76	652	431	383	810	223	255	53	21	11	9.6
19	11	72	552	400	980	926	200	220	100	20	10	10
20	11	105	398	356	1610	837	193	193	153	20	10	9.1
21	12	129	308	319	1370	717	181	171	148	20	10	8.7
22	11	115	249	280	1010	563	173	152	141	20	9.6	8.7
23	11	102	217	251	725	464	166	143	124	20	9.1	8.7
24	11	92	199	225	604	391	165	134	106	20	8.6	8.6
25	11	85	186	206	602	334	175	122	90	20	8.4	8.5
26	11	82	202	197	511	286	171	111	80	19	8.3	8.9
27	14	77	708	191	432	252	181	99	71	19	8.4	9.7
28	15	72	846	187	361	225	264	89	63	18	8.1	13
29	13	73	608	189	---	205	320	82	57	18	8.6	12
30	13	143	450	250	---	191	800	76	50	18	8.7	12
31	16	---	362	1390	---	180	---	71	---	17	8.4	---
TOTAL	338.5	2267	8512	11819	21255	12649	7647	16060	2152	785	358.2	287.7
MEAN	10.9	75.6	275	381	759	408	255	518	71.7	25.3	11.6	9.59
MAX	16	143	846	1390	2410	1170	800	1350	153	45	16	13
MIN	9.5	28	78	137	175	147	163	71	40	17	8.1	8.2
AC-FT	671	4500	16880	23440	42160	25090	15170	31860	4270	1560	710	571
CFSM	.06	.43	1.56	2.17	4.31	2.32	1.45	2.94	.41	.14	.07	.05
IN.	.07	.48	1.80	2.50	4.49	2.67	1.62	3.39	.45	.17	.08	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1995, BY WATER YEAR (WY)

	MEAN	16.0	68.9	188	217	373	482	533	318	105	24.7	13.1	12.1
MAX	26.7	200	582	503	950	804	956	668	354	52.2	20.7	16.7	
(WY)	1985	1987	1976	1984	1986	1984	1985	1991	1984	1984	1993	1978	
MIN	8.48	11.2	18.0	22.2	27.1	134	228	58.3	21.7	13.2	8.48	9.37	
(WY)	1988	1988	1977	1977	1977	1977	1986	1992	1992	1977	1986	1987	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1975 - 1995

ANNUAL TOTAL	58307.5	84130.4	195
ANNUAL MEAN	160	230	301
HIGHEST ANNUAL MEAN			66.2
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	1650	2410	4220
LOWEST DAILY MEAN	9.5	8.1	7.5
ANNUAL SEVEN-DAY MINIMUM	9.5	8.4	7.7
ANNUAL RUNOFF (AC-FT)	115700	166900	141000
ANNUAL RUNOFF (CFSM)	.91	1.31	1.11
ANNUAL RUNOFF (INCHES)	12.32	17.78	15.03
10 PERCENT EXCEEDS	452	712	532
50 PERCENT EXCEEDS	74	99	64
90 PERCENT EXCEEDS	9.7	9.6	11

UMATILLA RIVER BASIN

14020740 MOONSHINE CREEK NEAR MISSION, OR

LOCATION.--Lat 45°39'37", long 118°35'42", in NW 1/4 NE 1/4 sec.16, T.2 N., R.34 E., Umatilla County, Hydrologic Unit 17070103, Umatilla Indian Reservation, on left bank, 60 ft upstream from county road crossing, 5.7 mi west of Mission, and at mile 1.1.

DRAINAGE AREA.--4.62 mi².

PERIOD OF RECORD.--November 1991 to current year.

REVISED RECORDS.--WDR OR-93-1: 1992(M); WDR OR-94-1: 1993.

GAGE.--Water-stage recorder. Elevation of gage is 1,600 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No known regulation.

AVERAGE DISCHARGE.--3 years (water years 1993-95), 3.08 ft³/s, 2,230 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 119 ft³/s Jan. 14, 1995, gage height, 5.70 ft; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 119 ft³/s Jan. 14, gage height, 5.70 ft; minimum discharge, 0.03 ft³/s most days in September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.36	17	4.6	23	2.4	2.4	19	.44	.14	.18	.05
2	.06	.28	9.2	3.7	26	2.1	2.1	22	.44	.12	.18	.04
3	.06	.27	7.1	3.1	17	2.0	1.8	19	.39	.11	.19	.04
4	.07	3.2	5.4	2.7	12	2.0	1.6	14	.41	.10	.19	.03
5	.09	5.2	4.2	2.4	9.8	1.8	1.6	20	.52	.10	.21	.03
6	.10	2.6	3.5	2.2	8.2	1.6	1.7	29	.60	.10	.24	.04
7	.10	2.1	3.0	2.2	7.7	1.4	2.1	21	.73	.09	.30	.05
8	.11	1.7	2.6	2.4	7.1	1.8	2.9	16	.49	.07	.34	.04
9	.11	13	2.4	3.4	6.4	2.2	3.0	22	.39	.08	.34	.04
10	.12	11	2.3	3.7	5.6	2.5	3.1	25	.34	.07	.37	.04
11	.12	6.5	2.1	4.1	5.1	2.7	3.2	59	.34	.07	.29	.03
12	.12	6.4	1.9	4.7	4.8	3.2	3.2	35	.31	.07	.26	.03
13	.12	5.2	1.8	12	4.2	4.5	4.2	22	.26	.06	.26	.03
14	.15	3.9	1.7	41	3.7	10	4.4	15	.32	.06	.23	.03
15	.12	3.0	1.7	19	3.7	44	4.4	10	.34	.06	.20	.03
16	.12	2.6	3.8	14	3.6	21	4.2	7.9	.34	.06	.19	.03
17	.12	2.2	17	11	4.5	14	3.8	6.4	.32	.06	.18	.03
18	.12	2.0	22	17	6.9	11	3.5	5.0	.34	.05	.17	.03
19	.12	1.9	14	19	8.3	9.4	3.2	4.1	.43	.05	.17	.03
20	.11	2.8	9.5	12	8.5	9.4	3.3	3.4	.39	.06	.16	.03
21	.12	2.6	7.4	9.2	7.8	10	3.0	2.9	.34	.05	.15	.03
22	.13	2.2	6.2	7.7	6.9	9.0	2.9	2.5	.34	.06	.14	.03
23	.14	1.9	5.4	6.4	6.0	8.0	2.7	2.1	.30	.06	.14	.03
24	.14	1.7	4.8	5.3	5.1	7.2	2.5	1.8	.24	.07	.15	.03
25	.14	1.9	4.4	4.8	4.5	6.2	2.2	1.5	.22	.08	.15	.03
26	.14	2.1	6.4	4.4	3.8	5.2	2.0	1.2	.20	.10	.14	.03
27	.20	2.1	19	3.9	3.3	4.5	2.5	1.0	.18	.12	.13	.03
28	.16	2.1	14	3.8	2.8	3.8	6.4	.80	.18	.13	.11	.04
29	.16	3.6	9.7	4.2	---	3.3	24	.67	.16	.16	.10	.04
30	.16	13	7.4	6.6	---	3.0	27	.55	.14	.19	.09	.04
31	.28	---	5.7	13	---	2.7	---	.50	---	.21	.07	---
TOTAL	3.87	109.41	222.6	253.5	216.3	211.9	134.9	390.32	10.44	2.81	6.02	1.03
MEAN	.12	3.65	7.18	8.18	7.72	6.84	4.50	12.6	.35	.091	.19	.034
MAX	.28	13	22	41	26	44	27	59	.73	.21	.37	.05
MIN	.06	.27	1.7	2.2	2.8	1.4	1.6	.50	.14	.05	.07	.03
AC-FT	7.7	217	442	503	429	420	268	774	21	5.6	12	2.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1995, BY WATER YEAR (WY)

	1992	1993	1994	1995
MEAN	.11	1.91	3.86	5.51
MAX	.12	3.65	7.18	8.18
(WY)	1995	1995	1995	1995
MIN	.098	.26	.48	1.93
(WY)	1994	1994	1994	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1992 - 1995

ANNUAL TOTAL	890.82	1563.10	3.08
ANNUAL MEAN	2.44	4.28	4.28
HIGHEST ANNUAL MEAN			1.59
LOWEST ANNUAL MEAN			1995
HIGHEST DAILY MEAN	29	59	59
LOWEST DAILY MEAN	.03	.03	.00
ANNUAL SEVEN-DAY MINIMUM	.03	.03	.00
ANNUAL RUNOFF (AC-FT)	1770	3100	2230
10 PERCENT EXCEEDS	6.7	12	7.8
50 PERCENT EXCEEDS	.66	2.0	.60
90 PERCENT EXCEEDS	.08	.06	.00

UMATILLA RIVER BASIN

97

14020760 COTTONWOOD CREEK NEAR MISSION, OR

LOCATION.--Lat 45°39'38", long 118°33'52", in SW 1/4 SW 1/4 sec.8, T.2 N., R.34 E., Umatilla County, Hydrologic Unit 17070103, Umatilla Indian Reservation, on right bank, on downstream side of county road crossing, 4.5 mi west of Mission, and at mile 1.3.

DRAINAGE AREA.--4.01 mi².

PERIOD OF RECORD.--November 1991 to current year.

GAGE.--Water-stage recorder, elevation of gage is 1,500 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No known regulation.

AVERAGE DISCHARGE.--3 years (water years 1993-95), 2.45 ft³/s, 1,770 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60 ft³/s Jan. 14, 1995, gage height, 5.11 ft; maximum gage height, 5.17 ft Nov. 15, 1995; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60 ft³/s Jan. 14, gage height, 5.11 ft; maximum gage height, 5.17 ft Mar. 15; no flow many days during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	16	3.1	20	1.1	e1.5	17	e.22	e.00	.00	.00
2	.00	.00	10	2.1	23	.89	e1.3	21	e.18	e.00	.00	.00
3	.00	.00	8.1	1.5	17	.82	e1.0	18	e.15	e.00	.00	.00
4	.00	.62	6.2	e1.1	13	.76	e.90	15	e.11	e.00	.00	.00
5	.00	3.8	4.7	e.80	11	.73	e.86	18	e.15	e.00	.00	.00
6	.00	2.9	3.7	.62	8.3	.63	e.90	25	e.25	e.00	.00	.00
7	.00	2.8	2.9	.55	7.5	.58	e2.8	20	e.45	e.00	.00	.00
8	.00	2.2	2.3	.89	6.9	.59	e2.6	16	e.25	e.00	.00	.00
9	.00	11	2.1	1.8	6.2	.48	e2.5	15	e.15	e.00	.00	.00
10	.00	13	1.9	1.6	5.5	.49	e2.8	16	e.09	e.00	.00	.00
11	.00	9.5	1.7	1.5	4.8	.54	e2.8	30	e.09	e.00	.00	.00
12	.00	8.8	1.4	1.7	4.2	.87	3.3	24	e.08	e.00	.00	.00
13	.00	7.0	1.2	6.7	e3.8	1.6	4.2	18	e.07	e.00	.00	.00
14	.00	5.3	1.0	34	e3.3	5.5	4.6	13	e.11	e.00	.00	.00
15	.00	4.0	1.1	24	2.9	29	4.7	9.8	e.11	e.00	.00	.00
16	.00	2.7	3.3	19	2.8	20	4.4	7.0	e.11	e.00	.00	.00
17	.00	1.8	15	15	3.9	15	4.0	5.3	e.14	e.00	.00	.00
18	.00	1.3	18	22	6.8	12	3.8	4.5	e.18	e.00	.00	.00
19	.00	1.1	14	26	7.7	10	3.5	4.0	e.25	e.00	.00	.00
20	.00	2.0	11	19	7.2	10	3.4	3.9	e.00	e.00	.00	.00
21	.00	1.9	8.1	14	6.4	11	3.3	e3.0	e.00	e.00	.00	.00
22	.00	1.3	6.4	11	5.4	9.6	3.2	e2.3	e.00	e.00	.00	.00
23	.00	.96	5.3	8.3	4.5	8.4	3.0	e1.8	e.00	e.00	.00	.00
24	.00	.55	4.3	6.9	3.7	7.1	e2.0	e1.4	e.00	e.00	.00	.00
25	.00	.90	3.7	5.9	2.8	5.9	e1.5	e1.1	e.00	e.00	.00	.00
26	.00	1.0	5.7	5.2	2.1	5.0	e1.1	e.90	e.00	e.00	.00	.00
27	.00	1.0	15	4.4	1.7	4.4	e1.5	e.80	e.00	.00	.00	.00
28	.00	.92	12	4.2	1.2	e3.5	5.6	e.60	e.00	.00	.00	.00
29	.00	2.2	8.3	4.7	---	e2.8	16	e.45	e.00	.00	.00	.00
30	.00	13	6.2	7.4	---	e2.3	21	e.35	e.00	.00	.00	.00
31	.00	---	4.5	14	---	e1.9	---	e.30	---	.00	.00	---
TOTAL	0.00	103.55	205.1	268.96	193.6	173.48	114.06	313.50	3.14	0.00	0.00	0.00
MEAN	.000	3.45	6.62	8.68	6.91	5.60	3.80	10.1	.10	.000	.000	.000
MAX	.00	13	18	34	23	29	21	30	.45	.00	.00	.00
MIN	.00	.00	1.0	.55	1.2	.48	.86	.30	.00	.00	.00	.00
AC-FT	.00	205	407	533	384	344	226	622	6.2	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1995, BY WATER YEAR (WY)

	1992	1993	1994	1995
MEAN	.000	1.44	3.00	4.75
MAX	.000	3.45	6.62	8.68
(WY)	1993	1995	1995	1995
MIN	.000	.000	.000	.97
(WY)	1993	1994	1994	1992

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1992 - 1995

ANNUAL TOTAL	791.56	1375.39	2.45
ANNUAL MEAN	2.17	3.77	3.77
HIGHEST ANNUAL MEAN			1.32
LOWEST ANNUAL MEAN			1.32
HIGHEST DAILY MEAN	30 Mar 1	34 Jan 14	34 Jan 14
LOWEST DAILY MEAN	.00 Feb 9	.00 Oct 1	.00 Apr 27
ANNUAL SEVEN-DAY MINIMUM	.00 Feb 9	.00 Oct 1	.00 Apr 27
ANNUAL RUNOFF (AC-FT)	1570	2730	1770
10 PERCENT EXCEEDS	7.4	13	6.8
50 PERCENT EXCEEDS	.01	.90	.05
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

UMATILLA RIVER BASIN

14021980 PATAWA CREEK AT WEST RESERVATION BOUNDARY, NEAR PENDLETON, OR

LOCATION.--Lat 45°39'11", long 118°44'39", in NW 1/4 SW 1/4 sec. 18, T.2 N., R.33 E., Umatilla County, Hydrologic Unit 17070103, Umatilla Indian Reservation, on left bank, at downstream side of county road crossing, 2 mi southwest of Pendleton City Hall, and at mile 2.9.

DRAINAGE AREA.--30 mi², excludes about 1 mi² in upper basin where water has been diverted directly to the Umatilla River.

PERIOD OF RECORD.--December 1973 to April 1975 (discharge measurements only), October 1991 to current year.

REVISED RECORDS.--WDR OR-94-1: 1993 (M).

GAGE.--Water-stage recorder. Elevation of gage is 1,220 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--4 years (water years 1992-95), 5.38 ft³/s, 2.44 in/yr, 3,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 356 ft³/s May 20, 1994, gage height, 7.82 ft; minimum discharge, 0.09 ft³/s Oct. 30, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 309 ft³/s Mar. 15, gage height, 7.58 ft; minimum discharge, 0.38 ft³/s several days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	1.5	15	5.3	47	e10	e8.6	49	e2.5	e.90	.76	.59
2	.39	.93	10	e4.6	50	e9.6	e8.2	74	e2.5	e.90	.75	.58
3	.41	.92	8.8	e3.8	33	e9.4	e7.8	56	e2.5	e.80	.75	.58
4	.41	1.1	6.9	e3.2	26	e9.2	e7.6	42	e2.5	e.80	.75	.57
5	.43	1.2	e6.0	e2.6	21	e9.0	e7.4	83	e3.0	e.80	.74	.58
6	.43	1.1	e5.0	2.4	18	e8.8	e8.0	104	e3.5	e.80	.74	.60
7	.42	1.0	3.9	2.5	21	e8.4	e11	68	e4.0	e.70	.82	.68
8	.42	1.0	3.5	3.5	20	e9.0	16	51	e3.0	e.70	.77	.64
9	.42	4.6	3.4	5.5	18	e10	e13	44	e2.5	e.70	.75	.59
10	.43	12	3.3	4.6	17	e11	e12	41	e2.0	e.70	.75	.56
11	.42	8.3	3.4	4.3	16	e11	e12	141	e1.8	e.70	.76	.55
12	.42	7.1	3.2	4.4	e15	e13	e12	83	e1.6	e.70	.74	.55
13	.47	5.7	2.9	15	e14	e16	e14	56	e1.6	e.60	.73	.55
14	.57	4.0	2.8	86	e13	e23	e13	41	e1.8	e.60	.69	.55
15	.52	3.1	2.8	43	e13	117	e12	33	e1.8	e.60	.70	.55
16	.56	2.3	8.2	31	19	47	e11	27	e1.8	e.60	.71	.54
17	.58	1.9	29	26	25	33	e10	23	e1.6	e.60	.70	.54
18	.55	1.5	28	49	29	29	e9.6	20	e1.8	e.60	.68	.54
19	.57	1.4	19	52	26	25	e9.2	17	e2.5	e.60	.69	.54
20	.59	1.7	13	36	23	26	e9.6	16	e2.0	e.60	.68	.54
21	.56	1.8	10	28	20	25	e8.6	14	e2.0	e.70	.68	.55
22	.53	1.5	8.6	22	19	21	e7.6	13	e1.8	e.80	.67	.55
23	.53	1.4	7.3	17	18	19	e6.8	e11	e1.6	e.90	.66	.52
24	.53	1.3	6.4	14	17	17	e6.2	e9.0	e1.4	e.94	.66	.53
25	.54	1.5	5.8	e13	e15	15	e5.6	e7.0	e1.2	.87	.67	.54
26	.54	2.0	7.2	e12	e14	14	e5.0	e6.0	e1.2	.88	.67	.54
27	.62	2.0	18	e11	e12	e12	e8.0	e5.0	e1.0	.87	.61	.54
28	.63	2.2	14	e11	e11	36	e11	e4.0	e1.0	.86	.59	.60
29	.59	2.4	11	e12	---	e10	75	e3.5	e1.0	.84	.59	.58
30	.58	15	8.4	20	---	e9.6	65	e3.0	e1.0	.84	.60	.58
31	.95	---	6.6	28	---	e9.2	---	e3.0	---	.78	.59	---
TOTAL	16.03	93.45	281.4	572.7	590	597.2	435.8	1147.5	59.5	23.28	21.65	16.95
MEAN	.52	3.11	9.08	18.5	21.1	19.3	14.5	37.0	1.98	.75	.70	.56
MAX	.95	15	29	86	50	117	75	141	4.0	.94	.82	.68
MIN	.39	.92	2.8	2.4	11	8.4	5.0	3.0	1.0	.60	.59	.52
AC-FT	32	185	558	1140	1170	1180	864	2280	118	46	43	34
CFSM	.02	.10	.30	.62	.70	.64	.48	1.23	.07	.03	.02	.02
IN.	.02	.12	.35	.71	.73	.74	.54	1.42	.07	.03	.03	.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1995, BY WATER YEAR (WY)

	MEAN	.51	2.66	4.01	8.60	8.22	13.5	8.93	14.8	1.49	.63	.61	.60
MAX	.71	5.88	9.08	18.5	21.1	20.2	16.8	37.0	1.98	.81	.98	.89	
(WY)	1994	1992	1995	1995	1995	1993	1993	1995	1995	1994	1993	1993	
MIN	.31	.80	.65	1.30	2.84	5.19	1.81	1.01	.48	.22	.24	.41	
(WY)	1993	1994	1993	1992	1992	1992	1992	1992	1992	1992	1992	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1992 - 1995

ANNUAL TOTAL	1521.81	3855.46	
ANNUAL MEAN	4.17	10.6	5.38
HIGHEST ANNUAL MEAN			10.6
LOWEST ANNUAL MEAN			2.08
HIGHEST DAILY MEAN	148	May 20	148
LOWEST DAILY MEAN	.38	Sep 26	.10
ANNUAL SEVEN-DAY MINIMUM	.39	Sep 22	.12
ANNUAL RUNOFF (AC-FT)	3020	7650	3900
ANNUAL RUNOFF (CFSM)	.14	.35	.18
ANNUAL RUNOFF (INCHES)	1.89	4.78	2.44
10 PERCENT EXCEEDS	8.7	27	16
50 PERCENT EXCEEDS	2.0	3.2	1.3
90 PERCENT EXCEEDS	.43	.55	.39

e Estimated

UMATILLA RIVER BASIN

99

14022200 NORTH FORK MCKAY CREEK NEAR PILOT ROCK, OR

LOCATION.--Lat 45°30'24", long 118°36'57", in NE 1/4 SE 1/4 sec.1, T.1 S., R.33 E., Umatilla County, Hydrologic Unit 17070103, Umatilla Indian Reservation, on left bank 10 mi northeast of Pilot Rock and at mile 0.5.

DRAINAGE AREA.--48.6 mi².

PERIOD OF RECORD.--May 1973 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,870 ft above sea level, from topographic map.

REMARKS.--Records fair. No regulation. Minor diversion upstream from station.

AVERAGE DISCHARGE.--22 years, 42.4 ft³/s, 30,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft³/s Jan. 25, 1975, gage height, 8.48 ft, from floodmark, from rating curve extended above 150 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 0.22 ft³/s June 26, 1985 (result of temporary construction upstream).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 290 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 17	1630	370	3.40	Mar. 15	0530	454	3.68
Dec. 27	0530	534	3.98	Apr. 29	2200	537	3.99
Jan. 14	0800	588	4.18	May 2	1900	438	3.63
Jan. 18	2200	294	3.13	May 6	0600	473	3.75
Feb. 1	2200	*683	*4.51	May 11	1800	513	3.90

Minimum discharge, 0.65 ft³/s Sept. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	9.6	191	e60	414	39	28	253	e37	8.4	1.5	.75
2	1.2	8.3	103	e50	405	33	24	380	e36	7.7	1.3	.74
3	1.2	6.9	75	e42	258	30	20	309	e35	7.2	1.2	.83
4	1.2	9.8	58	e38	200	28	17	209	57	6.6	1.2	.76
5	1.1	23	e46	e32	157	26	17	242	56	5.9	1.2	.74
6	1.0	22	e36	e28	130	23	20	406	54	5.5	1.0	.83
7	1.1	22	e28	e24	116	20	22	290	60	6.0	1.2	1.4
8	1.2	20	24	e23	102	22	37	209	57	5.5	1.4	1.3
9	1.2	26	22	22	88	32	40	189	52	5.3	1.3	1.1
10	1.2	41	21	34	77	34	42	217	43	4.6	1.1	1.0
11	1.2	41	20	46	70	35	46	464	35	4.2	1.2	.95
12	1.2	47	19	55	66	45	45	358	29	3.9	1.2	.89
13	1.2	46	19	141	60	64	61	234	26	3.7	1.2	.81
14	1.6	37	18	420	58	96	66	152	25	3.3	1.1	.76
15	1.7	30	18	253	51	420	63	107	26	3.1	1.2	.74
16	1.5	25	35	192	45	297	57	83	26	2.8	1.2	.71
17	1.5	21	258	146	64	206	50	68	24	2.7	1.2	.72
18	1.4	18	273	193	128	171	45	59	24	2.5	1.2	.74
19	1.4	17	176	241	166	154	40	49	40	2.2	1.1	.76
20	1.4	30	116	175	164	140	44	41	43	2.2	.95	.77
21	1.4	33	90	131	143	152	48	35	39	2.1	.91	.77
22	1.4	27	74	102	119	131	48	30	33	2.1	.83	.79
23	1.4	22	62	83	99	114	44	27	26	2.0	.77	.80
24	1.4	19	54	70	85	94	40	30	22	1.9	.81	.82
25	1.4	19	51	64	74	79	36	38	19	1.8	.80	.85
26	1.4	19	105	60	65	67	31	e60	17	1.8	.79	1.1
27	2.1	17	388	56	55	57	31	e56	14	1.8	.75	1.1
28	2.7	17	230	54	46	49	74	e50	13	1.8	.78	1.6
29	2.0	37	147	66	---	42	224	e44	11	1.7	.84	1.7
30	1.8	191	106	113	---	36	371	e40	9.6	1.6	.85	1.4
31	2.1	---	79	325	---	31	---	e38	---	1.5	.79	---
TOTAL	44.8	901.6	2942	3339	3505	2767	1731	4767	988.6	113.4	32.87	28.23
MEAN	1.45	30.1	94.9	108	125	89.3	57.7	154	33.0	3.66	1.06	.94
MAX	2.7	191	388	420	414	420	371	464	60	8.4	1.5	1.7
MIN	1.0	6.9	18	22	45	20	17	27	9.6	1.5	.75	.71
AC-FT	89	1790	5840	6620	6950	5490	3430	9460	1960	225	65	56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1995, BY WATER YEAR (WY)

MEAN	2.56	21.9	53.3	75.6	90.7	112	85.7	49.6	15.0	2.38	1.17	1.24
MAX	8.50	74.6	197	170	213	223	200	154	60.4	4.97	2.77	2.74
(WY)	1983	1992	1974	1976	1982	1984	1974	1995	1984	1991	1993	1977
MIN	.90	1.30	3.11	5.01	4.39	29.3	16.2	5.08	2.26	.73	.72	.78
(WY)	1988	1988	1977	1977	1977	1992	1992	1992	1992	1985	1987	1987

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1974 - 1995

ANNUAL TOTAL	13307.39	21160.50	
ANNUAL MEAN	36.5	58.0	
HIGHEST ANNUAL MEAN			42.4
LOWEST ANNUAL MEAN			72.5
HIGHEST DAILY MEAN	425	464	1070
LOWEST DAILY MEAN	.77	.71	.45
ANNUAL SEVEN-DAY MINIMUM	.85	.74	.50
ANNUAL RUNOFF (AC-FT)	26400	41970	30700
10 PERCENT EXCEEDS	93	173	120
50 PERCENT EXCEEDS	12	28	11
90 PERCENT EXCEEDS	.93	1.1	1.0

e Estimated

UMATILLA RIVER BASIN

14033500 UMATILLA RIVER NEAR UMATILLA, OR

LOCATION.--Lat 45°54'11", long 119°19'33", in SW 1/4 NW 1/4 sec.21, T.5 N., R.28 E., Umatilla County, Hydrologic Unit 17070103, on left bank 1.6 mi downstream from West Division main canal of Umatilla project, 1.2 mi southeast of Umatilla, and at mile 2.1.

DRAINAGE AREA.--2,290 mi², approximately.

PERIOD OF RECORD.--October 1903 to current year.

REVISED RECORDS.--WSP 794: Drainage area. WSP 1398: 1909, 1911, 1914, 1928, 1935.

GAGE.--Water-stage recorder. Datum of gage is 330.47 ft above sea level. Oct. 21, 1903, to Jan. 25, 1931, nonrecording gage.

REMARKS.--Records fair. Some regulation since 1927 by McKay Reservoir (station 14023000). Many diversions upstream from station for irrigation of lands upstream and downstream from station; Brownell Canal diverts downstream from station. Diversions since 1908 to Cold Springs Reservoir, an off-channel reservoir, capacity, 52,380 acre-ft. Continuous water-quality records for the period October 1962 to September 1969 have been collected at this location. U.S. Bureau of Reclamation satellite telemeter at station.

AVERAGE DISCHARGE.--68 years (water years 1928-95), 462 ft³/s, 334,700 acre-ft/yr. Water years prior to 1928 not included in computation of average discharge owing to increased regulation and diversion since 1927.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,800 ft³/s Jan. 30, 1965, gage height, 10.75 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 15	0230	4,380	5.75	May 3	unknown	unknown	unknown
Feb. 2	2345	*8,420	*6.90	May 7	0900	5,600	6.14
Feb. 20	2215	3,520	5.43	May 12	0815	5,670	6.16
Mar. 15	2215	4,730	5.87				

Minimum discharge, 2.8 ft³/s July 20, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	167	959	654	4240	1080	472	3310	91	35	4.3	65
2	66	300	1430	e560	6510	939	513	e3500	136	11	4.4	65
3	71	276	1040	e490	5980	809	480	e4300	208	7.7	3.6	67
4	68	222	738	e440	3370	735	393	3570	178	4.9	3.2	68
5	70	238	501	e400	2700	677	403	3150	187	4.2	3.7	68
6	149	283	403	e380	2350	588	581	4260	259	3.8	4.3	86
7	170	269	532	e360	2090	535	624	5500	382	3.5	4.7	109
8	173	282	443	e400	1840	482	1030	4420	273	3.6	5.1	95
9	174	296	390	615	1370	554	1010	3550	144	3.8	4.5	95
10	174	449	320	644	1130	563	945	3960	90	21	4.0	97
11	167	470	345	800	971	656	1060	4250	73	17	3.6	85
12	169	341	328	1070	875	848	960	5390	67	7.2	3.1	82
13	173	414	359	1050	841	992	1110	4820	63	3.8	3.1	80
14	185	349	341	2130	765	1040	1020	3280	63	3.1	9.2	78
15	198	422	328	3960	978	3120	921	2230	94	3.7	79	74
16	199	411	305	2680	1380	4730	960	1690	104	3.6	72	70
17	191	403	382	1770	1330	4290	841	1290	77	3.5	62	77
18	199	383	1700	1310	1220	3500	780	1020	74	3.8	68	85
19	194	349	2160	1290	1810	3070	683	850	74	3.9	71	79
20	188	330	1370	1200	3060	2950	555	719	408	3.1	64	81
21	155	418	918	1020	3520	2770	549	534	662	2.9	62	81
22	154	332	707	867	3280	2750	442	414	530	4.9	58	81
23	159	312	582	731	2490	2260	463	435	416	7.8	65	86
24	161	389	495	624	1980	1630	e490	361	318	4.1	60	80
25	155	367	452	543	1770	1450	e400	319	206	3.1	68	87
26	153	374	420	486	1660	1270	488	316	150	3.7	70	174
27	166	374	579	449	1450	1050	442	256	103	3.6	69	201
28	216	353	1880	428	1270	798	983	186	72	5.2	65	196
29	237	340	1570	419	---	712	1060	143	72	5.4	64	195
30	171	349	1110	441	---	597	2700	125	67	5.2	67	194
31	134	---	810	796	---	535	---	93	---	4.2	65	---
TOTAL	4899	10262	23897	29007	62230	47980	23358	68241	5641	201.3	1189.8	2981
MEAN	158	342	771	936	2222	1548	779	2201	188	6.49	38.4	99.4
MAX	237	470	2160	3960	6510	4730	2700	5500	662	35	79	201
MIN	60	167	305	360	765	482	393	93	63	2.9	3.1	65
AC-FT	9720	20350	47400	57540	123400	95170	46330	135400	11190	399	2360	5910

CAL YR 1994 TOTAL 126050.0 MEAN 345 MAX 3380 MIN 1.4 AC-FT 250000
WTR YR 1995 TOTAL 279887.1 MEAN 767 MAX 6510 MIN 2.9 AC-FT 555200

e Estimated

WILLOW CREEK BASIN

101

14034470 WILLOW CREEK ABOVE WILLOW CREEK LAKE, NEAR HEPPNER, OR

LOCATION.--Lat 45°20'27", long 119°30'53", in NE 1/4 NE 1/4 sec.1, T.3 S., R.26 E., Morrow County, Hydrologic Unit 17070104, on right bank 1.5 mi southeast of Heppner, 1.7 mi upstream from Willow Creek dam, and at mile 54.1.

DRAINAGE AREA.--67.6 mi².

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,085.41 ft above sea level (levels by Corps of Engineers).

REMARKS.--Records good except for estimated daily discharges, which are fair. Many diversions for irrigation upstream from station. Part of flow of Ditch Creek (John Day River basin) is diverted to Willow Creek upstream from station. Chemical analysis May 1985 to September 1987.

AVERAGE DISCHARGE.--13 years (water years 1983-95), 22.2 ft³/s, 16,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 445 ft³/s Mar. 4, 1983, gage height, 6.93 ft; maximum gage height, 8.34 ft May 6, 1995; minimum discharge, 0.01 ft³/s July 31 to Sept. 14, 1988, Aug. 20, 1992, but may have been less during period of no gage-height record July 31 to Sept. 14, 1988.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	1000	154	6.76	Mar. 15	1845	151	6.73
Feb. 2	0015	157	6.79	May 6	1330	*341	*8.34
Feb. 19	0045	196	7.18	May 11	0245	249	7.64

Minimum discharge, 1.0 ft³/s Sept. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	10	30	e11	118	60	58	e170	20	e19	2.2	2.2
2	1.5	6.7	28	e9.0	149	53	55	e140	20	e20	2.6	2.1
3	1.7	4.9	25	e9.0	124	49	53	e130	19	e19	2.5	2.4
4	1.8	5.6	17	e12	103	46	52	e140	18	e17	2.1	2.4
5	2.0	6.2	13	e13	95	43	54	e170	23	e16	2.3	2.4
6	2.0	5.7	15	e15	89	39	60	305	25	e16	2.1	2.4
7	2.0	6.0	15	e13	84	35	66	257	33	e15	2.6	2.6
8	2.0	5.6	13	e15	77	35	e77	213	30	e15	2.9	3.0
9	2.0	6.4	e13	e21	69	48	e65	178	27	e15	2.8	2.9
10	1.9	7.5	e12	e29	61	52	e67	167	25	e14	2.9	2.4
11	1.9	8.2	e11	e27	58	81	e66	228	24	e13	3.5	1.4
12	2.0	8.3	e10	23	52	82	e63	180	24	e13	3.4	2.0
13	2.0	8.2	e9.8	29	39	77	e71	149	22	e12	3.6	1.8
14	2.5	7.6	e9.6	112	43	77	e69	127	24	e12	3.5	1.3
15	3.5	7.1	e9.2	101	47	146	e66	110	31	e11	3.4	1.2
16	2.3	6.9	e10	79	45	141	e61	97	27	e9.0	3.6	1.5
17	1.6	6.3	e20	64	56	125	e58	85	25	e8.4	3.6	1.6
18	1.8	6.4	e30	56	157	123	e54	72	29	e8.2	3.3	1.8
19	2.2	5.8	e29	49	193	120	e52	62	35	e8.4	2.6	2.0
20	2.1	7.3	e28	43	178	121	e49	57	42	e9.0	2.5	2.1
21	2.0	6.5	e26	38	153	120	e48	50	e63	e4.3	2.4	2.2
22	2.5	5.4	e22	34	130	112	e42	45	e52	e5.2	1.6	2.2
23	2.2	7.1	e20	32	112	102	e41	41	e45	e2.3	1.9	2.1
24	2.0	7.1	e19	31	101	94	e38	37	e40	e3.3	2.1	1.8
25	1.9	7.6	e18	28	94	85	e35	34	e33	e3.5	2.4	1.6
26	1.9	7.6	e18	28	87	78	e32	36	e28	e4.0	2.6	1.8
27	2.0	7.6	e26	26	79	73	e35	30	e26	3.8	2.9	1.9
28	3.8	7.5	e28	26	68	66	e42	26	e23	4.3	2.6	2.7
29	2.9	7.3	e26	29	---	62	e60	25	e22	4.4	2.1	3.0
30	2.3	15	e16	44	---	61	e110	23	e20	4.2	2.4	2.7
31	2.6	---	e12	82	---	58	---	20	---	3.3	2.5	---
TOTAL	66.4	215.4	578.6	1128.0	2661	2464	1699	3404	875	312.6	83.5	63.5
MEAN	2.14	7.18	18.7	36.4	95.0	79.5	56.6	110	29.2	10.1	2.69	2.12
MAX	3.8	15	30	112	193	146	110	305	63	20	3.6	3.0
MIN	1.5	4.9	9.2	9.0	39	35	32	20	18	2.3	1.6	1.2
AC-FT	132	427	1150	2240	5280	4890	3370	6750	1740	620	166	126

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1995, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	3.21	8.06	13.1	18.9	34.6	61.5	53.6	48.1	18.3	4.66	1.33	1.46	
MAX	7.10	21.2	29.8	53.1	95.5	128	116	110	55.4	11.2	3.44	6.13	
(WY)	1983	1987	1984	1984	1986	1993	1984	1995	1984	1993	1984	1984	
MIN	.20	2.79	4.02	6.68	7.52	9.81	11.9	2.73	1.60	.88	.010	.064	
(WY)	1989	1988	1991	1990	1994	1988	1992	1992	1992	1985	1988	1988	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1983 - 1995

ANNUAL TOTAL	4649.25	13551.0	
ANNUAL MEAN	12.7	37.1	
HIGHEST ANNUAL MEAN			22.2
LOWEST ANNUAL MEAN			44.3
HIGHEST DAILY MEAN	123	305	6.84
LOWEST DAILY MEAN	.16	1.2	.01
ANNUAL SEVEN-DAY MINIMUM	.18	1.5	.01
ANNUAL RUNOFF (AC-FT)	9220	26880	16060
10 PERCENT EXCEEDS	26	101	63
50 PERCENT EXCEEDS	7.6	20	8.6
90 PERCENT EXCEEDS	.40	2.1	.59

e Estimated

WILLOW CREEK BASIN

14034480 BALM FORK NEAR HEPPNER, OR

LOCATION.--Lat 45°19'56", long 119°32'24", in NW 1/4 SE 1/4 sec.2, T.3 S., R.26 E., Morrow County, Hydrologic Unit 17070104, on right bank, 0.7 mi upstream from bridge on Willow Creek Road, 1.0 mi southeast of Heppner, 1.2 mi upstream from Willow Creek dam, and at mile 1.1.

DRAINAGE AREA.--26.3 mi².

PERIOD OF RECORD.--May 1982 to current year.

REVISED RECORDS.--WDR OR-83-1: Drainage area. WDR OR-88-1: 1987(M).

GAGE.--Water-stage recorder. Concrete control since Aug. 24, 1982. Datum of gage is 2,101.52 ft above sea level (Corps of Engineers bench mark).

REMARKS.--No estimated daily discharges. Records fair. Diversion for irrigation of about 170 acres upstream from station. Chemical analysis May 1985 to September 1987.

AVERAGE DISCHARGE.--13 years (water years 1983-95), 2.62 ft³/s, 1,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 190 ft³/s Mar. 4, 1983, gage height, 4.90 ft, from rating curve extended above 82 ft³/s on basis of slope-area measurement of peak flow; no flow for part or all of several days in 1982, 1990, 1991, 1992.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, about 36,000 ft³/s June 14, 1903, by computation of slope-area measurement (see WSP 96).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 18	2100	*42	*4.26				

Minimum discharge, 0.04 ft³/s Oct. 1-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.30	.38	1.6	2.7	5.2	4.3	12	2.5	1.9	.11	.08
2	.05	.16	.48	1.6	5.1	4.5	4.0	14	2.9	1.9	.11	.08
3	.05	.16	.56	1.6	4.0	4.3	4.1	13	2.8	1.9	.16	.08
4	.05	.19	.57	1.5	4.4	3.9	2.7	13	3.1	1.8	.09	.09
5	.05	.21	.67	1.5	4.9	3.7	2.9	16	3.6	1.6	.09	.09
6	.05	.18	.76	1.4	5.5	3.7	2.6	30	2.7	1.5	.08	.08
7	.05	.18	.77	1.4	7.1	3.7	2.0	23	3.3	1.4	.09	.09
8	.06	.18	.78	1.4	6.4	3.6	1.4	30	2.9	1.2	.08	.09
9	.07	.19	.87	1.5	5.8	3.4	1.7	22	2.5	1.2	.08	.08
10	.08	.22	.91	1.5	5.5	3.1	2.1	21	2.5	1.2	.08	.08
11	.08	.21	1.1	1.4	5.4	3.1	3.0	33	2.4	1.1	.09	.08
12	.08	.21	1.2	1.4	5.2	3.1	4.9	21	2.3	.84	.08	.08
13	.07	.21	1.3	1.7	4.0	3.2	6.5	17	2.3	.66	.08	.09
14	.08	.21	1.3	3.0	4.8	3.5	6.3	14	2.7	.54	.12	.09
15	.08	.21	1.3	3.7	4.9	8.1	5.3	14	3.2	.47	.11	.10
16	.07	.21	1.4	3.4	5.8	11	5.3	15	3.0	.43	.11	.08
17	.07	.22	1.4	3.4	9.1	9.9	5.1	13	2.9	.37	.12	.07
18	.07	.22	3.1	3.4	28	9.5	5.2	11	2.8	.27	.11	.07
19	.08	.23	3.2	3.3	29	9.1	3.6	9.7	3.2	.33	.10	.07
20	.08	.23	2.8	3.3	19	8.6	4.3	8.0	4.0	.31	.20	.07
21	.08	.23	2.6	3.2	14	8.3	4.4	7.3	4.2	.27	.14	.07
22	.08	.24	2.5	3.2	13	8.3	4.1	6.7	3.8	.26	.11	.07
23	.08	.25	2.5	3.0	12	8.0	4.0	6.0	3.1	.24	.12	.07
24	.08	.25	2.3	2.9	10	7.8	4.5	5.6	2.9	.23	.11	.06
25	.08	.26	2.1	2.8	9.1	7.4	4.2	5.1	2.7	.17	.11	.06
26	.08	.27	2.1	2.7	8.0	7.0	4.0	5.0	2.5	.12	.10	.07
27	.10	.32	1.9	2.5	6.7	6.6	4.7	4.4	2.4	.12	.11	.06
28	.10	.32	1.9	2.5	5.8	6.2	5.4	4.0	2.3	.12	.10	.06
29	.09	.33	1.9	2.5	---	5.0	5.4	3.6	2.2	.11	.10	.06
30	.10	.33	1.8	2.1	---	4.1	10	3.3	2.1	.12	.09	.06
31	.13	---	1.7	2.1	---	4.6	---	3.1	---	.12	.09	---
TOTAL	2.32	6.93	48.15	72.5	245.2	181.5	128.0	403.8	85.8	22.80	3.27	2.28
MEAN	.075	.23	1.55	2.34	8.76	5.85	4.27	13.0	2.86	.74	.11	.076
MAX	.13	.33	3.2	3.7	29	11	10	33	4.2	1.9	.20	.10
MIN	.05	.16	.38	1.4	2.7	3.1	1.4	3.1	2.1	.11	.08	.06
AC-FT	4.6	14	96	144	486	360	254	801	170	45	6.5	4.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1995, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	.37	.84	1.78	2.69	5.28	8.58	4.98	4.62	1.53	.46	.18	.23	.23
MAX	1.53	3.01	4.60	7.81	17.1	21.0	16.4	13.0	3.82	1.24	.51	1.02	1.02
(WY)	1985	1987	1984	1984	1986	1993	1984	1995	1984	1993	1984	1984	1984
MIN	.000	.002	.038	.28	.66	.47	.29	.24	.077	.034	.012	.006	.006
(WY)	1992	1992	1991	1991	1990	1992	1992	1992	1992	1992	1992	1991	1991

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1983 - 1995

ANNUAL TOTAL	332.06	1202.55	
ANNUAL MEAN	.91	3.29	
HIGHEST ANNUAL MEAN			2.62
LOWEST ANNUAL MEAN			6.15
HIGHEST DAILY MEAN	5.4 Jun 7	33 May 11	.24
LOWEST DAILY MEAN	.03 Jul 29	.05 Oct 1	.00
ANNUAL SEVEN-DAY MINIMUM	.03 Jul 29	.05 Oct 1	.00
ANNUAL RUNOFF (AC-FT)	659	2390	1900
10 PERCENT EXCEEDS	2.2	8.2	6.8
50 PERCENT EXCEEDS	.81	1.8	.81
90 PERCENT EXCEEDS	.04	.08	.04

WILLOW CREEK BASIN

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14034490 WILLOW CREEK LAKE AT HEPNER, OR

LOCATION.--Lat 45°20'50", long 119°32'37", in NW 1/4 SE 1/4 sec.35, T.2 S., R.26 E., Morrow County, Hydrologic Unit 17070104, U.S. Corps of Engineers land, on top left side of spillway on dam on Willow Creek, 2,000 ft upstream from Court Street bridge and at mile 52.4.

DRAINAGE AREA.--96.6 mi².

PERIOD OF RECORD.--February 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Corps of Engineers). Prior to Dec. 22, 1983, nonrecording gage at nearby site at present datum. U.S. Geological Survey satellite telemeter at station.

REMARKS.--Lake is formed behind roller-compacted, concrete dam; storage began Feb. 16, 1983. Capacity, 14,020 acre-ft between elevations 2,000.0 ft, sill of outlet gates, and 2,113.5 ft, crest of spillway. Average minimum lake elevation 2,047.0 ft, storing 2,540 acre-ft. Dead storage, 73 acre-ft below elevation 2,000.0 ft. 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, 7,340 acre-ft May 8, 1995, elevation, 2,083.06 ft; no usable contents at times.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,340 acre-ft May 8, elevation, 2,083.06 ft; minimum contents, 4,230 acre-ft Nov. 24, 25, 29, elevation, 2,062.22 ft.

Capacity table (elevation, in feet, and total contents, in acre-feet)

2,050	2,840	2,060	3,950	2,070	5,280	2,080	6,820
2,055	3,370	2,065	4,590	2,075	6,020		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2071.99	2068.38	2062.64	2062.86	2064.69	2066.89	2076.86	2079.36	2076.77	2076.74	2075.80	2073.90
2	2071.94	2068.08	2062.83	2062.65	2066.04	2066.70	2077.11	2079.78	2076.72	2076.76	2075.73	2073.85
3	2071.89	2067.74	2062.94	---	2066.72	2066.46	2077.02	2079.23	2076.64	2076.77	2075.65	2073.81
4	2071.85	2067.45	2062.94	---	2067.04	2066.19	2076.85	2078.33	2076.61	2076.78	2075.57	2073.76
5	2071.79	2067.14	2062.90	---	2067.25	2065.85	2076.93	2078.05	2076.58	2076.78	2075.48	2073.71
6	2071.71	2066.82	2062.93	---	2067.38	2065.81	2077.10	2080.49	2076.65	2076.77	2075.41	2073.69
7	2071.64	2066.49	2062.96	---	2067.49	2065.92	2077.33	2082.32	2076.78	2076.75	2075.31	2073.66
8	2071.57	2066.18	2062.97	---	2067.49	2066.05	2077.58	2082.98	2076.86	2076.72	2075.24	2073.63
9	2071.50	2065.87	2062.95	---	2067.36	2066.31	2077.78	2082.53	2076.89	2076.67	2075.17	2073.60
10	2071.43	2065.57	2062.93	2063.53	2067.15	2066.64	2077.67	2081.90	2076.90	2076.61	2075.11	2073.56
11	2071.34	2065.28	2062.91	2063.76	2066.94	2067.31	2077.31	2082.93	2076.89	2076.54	2075.05	2073.50
12	2071.27	2064.98	2062.88	2063.91	2066.66	2068.00	2076.97	2082.38	2076.86	2076.49	2074.99	2073.45
13	2071.23	2064.68	2062.84	2064.20	2066.17	2068.60	2077.02	2081.34	2076.82	2076.49	2074.94	2073.39
14	2071.20	2064.39	2062.80	2065.45	2065.82	2069.28	2077.26	2079.91	2076.86	2076.49	2074.88	2073.33
15	2071.16	2064.05	2062.77	2066.42	2065.46	2070.86	2077.48	2078.20	2076.97	2076.48	2074.82	2073.27
16	2071.10	2063.72	2062.75	2066.85	2065.10	2072.01	2077.65	2076.46	2076.93	2076.46	2074.77	2073.21
17	2071.05	2063.41	2062.76	2066.91	2064.90	2072.46	2077.78	2075.64	2076.70	2076.43	2074.72	2073.14
18	2071.00	2063.08	2062.99	2066.77	2066.50	2072.87	2077.87	2075.38	2076.53	2076.43	2074.66	2073.10
19	2070.94	2062.76	2063.32	2066.55	2068.08	2073.25	2077.91	2075.56	2076.60	2076.46	2074.61	2073.05
20	2070.89	2062.43	2063.36	2066.27	2068.30	2073.76	2077.96	2075.76	2077.10	2076.46	2074.55	2072.98
21	2070.84	2062.29	2063.40	2065.93	2068.08	2074.77	2077.96	2076.13	2077.43	2076.43	2074.48	2072.93
22	2070.80	2062.30	2063.41	2065.53	2067.48	2075.69	2077.92	2076.43	2077.61	2076.39	2074.41	2072.88
23	2070.75	2062.24	2063.39	2065.10	2066.57	2076.17	2077.85	2076.51	2077.59	2076.34	2074.33	2072.83
24	2070.69	2062.25	2063.35	2064.64	2066.23	2076.04	2077.77	2076.45	2077.39	2076.28	2074.25	2072.78
25	2070.60	2062.24	2063.32	2064.15	2066.62	2075.81	2077.69	2076.49	2077.10	2076.23	2074.21	2072.72
26	2070.30	2062.26	2063.25	2063.74	2066.89	2075.54	2077.58	2076.66	2076.81	2076.18	2074.16	2072.68
27	2069.97	2062.24	2063.25	2063.42	2067.01	2075.45	2077.52	2076.77	2076.69	2076.13	2074.12	2072.64
28	2069.62	2062.24	2063.29	2063.11	2067.01	2075.53	2077.63	2076.83	2076.66	2076.08	2074.07	2072.62
29	2069.27	2062.24	2063.28	2062.84	---	2075.86	2077.91	2076.87	2076.66	2076.01	2074.02	2072.60
30	2068.89	2062.36	2063.20	2062.95	---	2076.22	2078.63	2076.85	2076.72	2075.95	2073.98	2072.55
31	2068.62	---	2063.05	2063.53	---	2076.54	---	2076.79	---	2075.89	2073.94	---
MAX	2071.99	2068.38	2063.41	---	2068.30	2076.54	2078.63	2082.98	2077.61	2076.78	2075.80	2073.90
MIN	2068.62	2062.24	2062.64	---	2064.69	2065.81	2076.85	2075.38	2076.53	2075.89	2073.94	2072.55
(†)	5080	4240	4330	4390	4860	6260	6590	6300	6280	6150	5860	5650
(‡)	-490	-840	+90	+60	+470	+1400	+330	-290	-20	-130	-290	-210

CAL YR 1994 MAX 2078.34 MIN 2062.24 AC-FT† +40
WTR YR 1995 MAX --- MIN --- AC-FT† +80

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

WILLOW CREEK BASIN

14034500 WILLOW CREEK AT HEPPNER, OR

LOCATION.--Lat 45°21'02", long 119°32'56", in SE 1/4 NW 1/4 sec.35, T.2 S., R.26 E., Morrow County, Hydrologic Unit 17070104, on right bank at Heppner, 100 ft upstream from Court Street bridge, 800 ft southeast of Morrow County courthouse, 0.2 mi downstream from Willow Creek Dam and at mile 52.2.

DRAINAGE AREA.--96.8 mi².

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

REVISED RECORDS.--WDR OR-83-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since September 1985. Datum of gage is 1,952.73 ft above sea level.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Willow Creek Lake, 0.2 mi upstream, since Feb. 16, 1983. Many diversions for irrigation upstream from station. Part of flow of Ditch Creek (John Day River basin) is diverted to Willow Creek upstream from station. Continuous water-quality records for the period February 1963 to June 1968 and March 1972 to September 1973 have been collected at this location. Chemical analysis Oct. 1984 to September 1987.

AVERAGE DISCHARGE.--31 years (water years 1952-82), 19.1 ft³/s, 13,840 acre-ft/yr (unregulated).
12 years (water years 1984-95), 21.4 ft³/s, 15,510 acre-ft/yr (regulated).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 812 ft³/s May 10, 1957, gage height, 6.15 ft, from rating curve extended above 230 ft³/s; maximum gage height, 6.46 ft May 25, 1971, backwater from Shobe Canyon; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, about 36,000 ft³/s June 14, 1903, result of slope-area measurement (see WSP 96). Discharge for flood of Feb. 22, 1949, was 1,700 ft³/s, result of slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 333 ft³/s May 11, gage height, 5.22 ft; minimum discharge, 1.3 ft³/s Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	28	8.9	24	33	60	27	57	23	15	6.9	4.6
2	3.2	28	11	24	34	60	27	92	23	15	6.9	4.7
3	3.2	28	13	14	36	60	50	168	23	15	6.9	4.6
4	3.2	28	13	7.3	36	60	55	196	22	15	6.9	4.6
5	4.2	28	13	7.0	36	60	42	156	22	15	6.8	4.6
6	6.7	27	13	7.0	36	43	38	143	22	15	6.8	4.7
7	6.3	27	13	6.8	36	31	41	146	22	15	6.9	4.6
8	5.4	27	13	6.9	36	31	44	195	22	15	6.7	4.6
9	5.4	27	13	9.6	36	31	44	258	22	15	6.5	4.6
10	5.8	27	13	11	36	31	66	259	22	15	6.5	4.6
11	5.8	27	13	14	36	31	86	204	22	15	6.5	4.6
12	5.8	27	13	15	36	31	86	298	22	13	6.5	4.6
13	5.8	27	13	15	36	31	61	292	22	10	6.5	4.6
14	5.9	27	13	15	32	31	45	286	22	9.2	6.5	4.6
15	5.8	27	13	22	27	31	45	282	22	9.2	6.4	4.6
16	5.8	27	13	36	27	50	45	259	27	8.7	6.3	4.5
17	5.8	27	13	45	27	88	45	155	38	8.5	6.3	4.5
18	5.8	27	13	51	27	88	45	97	39	6.7	6.3	4.5
19	5.8	27	13	52	27	88	45	52	35	3.6	6.3	4.4
20	5.8	27	19	52	32	74	45	45	22	4.3	6.3	4.4
21	5.8	17	24	52	49	40	45	25	33	5.9	6.2	4.5
22	5.9	8.7	24	52	59	37	45	25	38	6.1	6.1	4.5
23	6.0	8.8	24	52	59	56	45	35	44	6.3	6.1	4.5
24	6.1	8.9	24	52	59	92	45	40	52	7.2	6.4	4.5
25	9.3	8.9	24	52	59	92	45	35	52	7.3	5.3	4.5
26	23	8.9	24	48	59	89	46	23	48	7.0	4.6	4.5
27	28	8.9	24	42	59	71	46	22	34	6.4	4.6	4.5
28	28	8.9	24	42	60	51	46	22	24	6.8	4.6	4.4
29	28	8.9	24	42	---	33	46	22	21	6.9	4.6	4.4
30	28	8.9	24	37	---	27	46	23	15	6.9	4.6	4.3
31	28	---	24	33	---	27	---	22	---	6.9	4.6	---
TOTAL	300.8	641.8	523.9	938.6	1125	1625	1437	3934	855	311.9	189.4	136.1
MEAN	9.70	21.4	16.9	30.3	40.2	52.4	47.9	127	28.5	10.1	6.11	4.54
MAX	28	28	24	52	60	92	86	298	52	15	6.9	4.7
MIN	3.2	8.7	8.9	6.8	27	27	27	22	15	3.6	4.6	4.3
AC-FT	597	1270	1040	1860	2230	3220	2850	7800	1700	619	376	270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	5.67	9.08	13.5	19.0	26.4	51.1	53.0	44.7	19.1	6.14	5.27	4.47
MAX	15.6	21.4	37.5	70.1	105	113	152	127	54.2	10.5	14.3	12.4
(WY)	1994	1995	1984	1984	1986	1993	1984	1995	1984	1993	1992	1988
MIN	1.93	1.69	2.65	3.40	5.95	8.09	10.4	2.15	2.17	2.39	2.79	2.56
(WY)	1992	1992	1993	1991	1994	1988	1994	1992	1992	1987	1991	1991

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1984 - 1995

ANNUAL TOTAL	4553.3	12018.5	21.4
ANNUAL MEAN	12.5	32.9	45.5
HIGHEST ANNUAL MEAN			7.79
LOWEST ANNUAL MEAN			298
HIGHEST DAILY MEAN	58	Jun 11	298
LOWEST DAILY MEAN	2.7	Mar 2	3.2
ANNUAL SEVEN-DAY MINIMUM	3.0	Aug 22	4.3
ANNUAL RUNOFF (AC-FT)	9030	23840	15510
10 PERCENT EXCEEDS	27	59	55
50 PERCENT EXCEEDS	8.7	23	8.4
90 PERCENT EXCEEDS	3.1	4.6	2.8

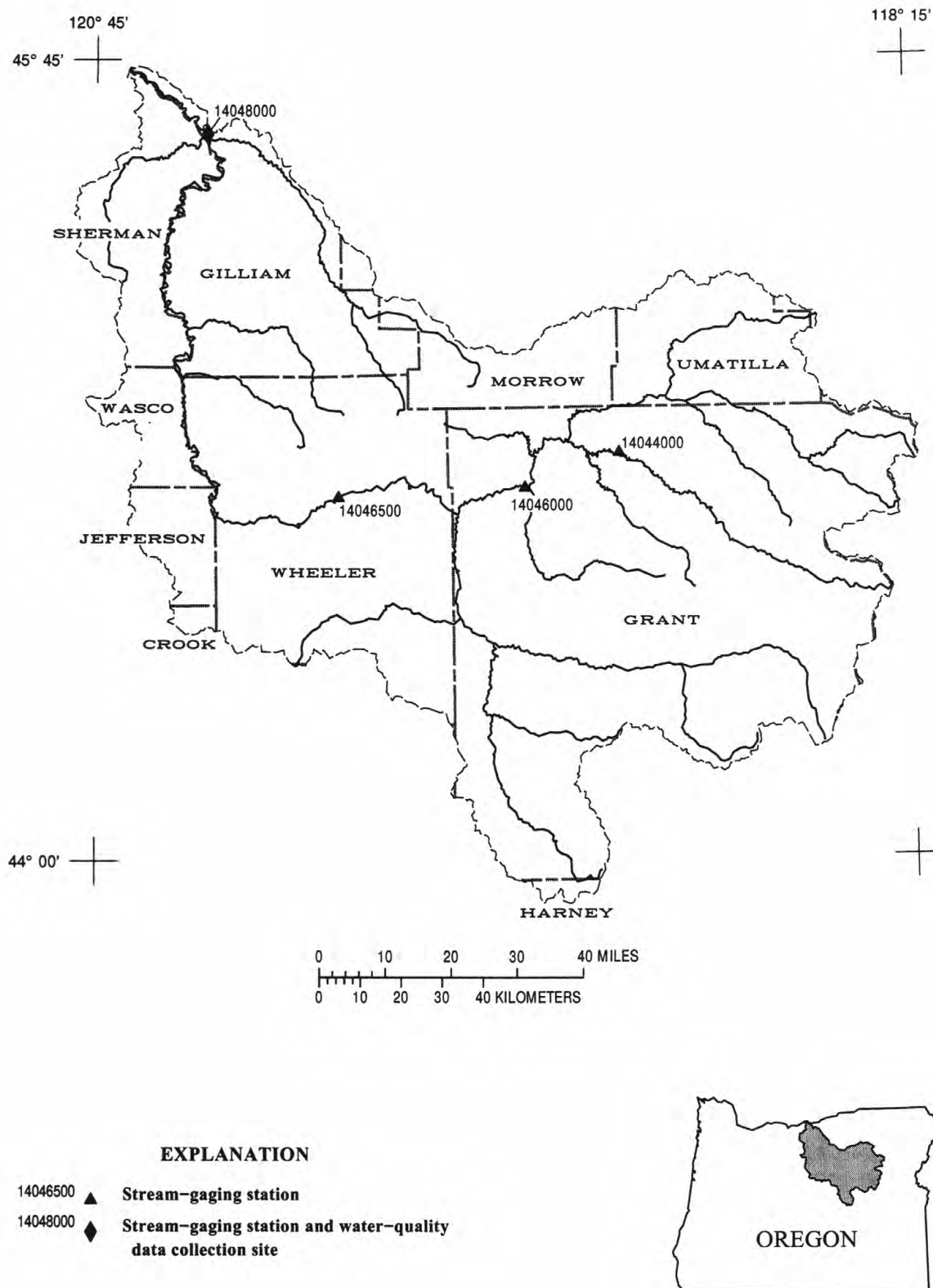


Figure 12. Location of surface-water and water-quality stations in the John Day River Basin.

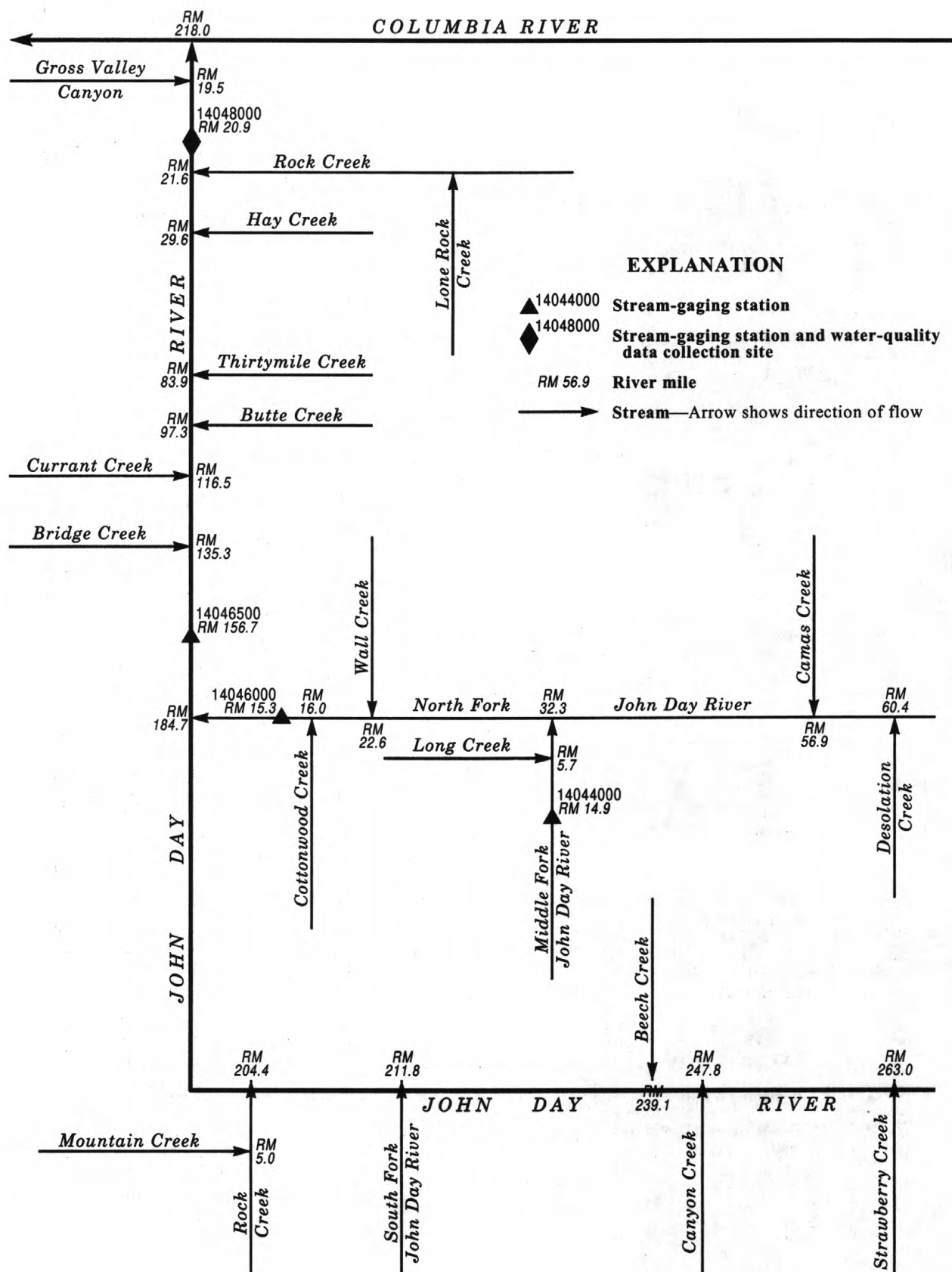


Figure 13. Schematic diagram showing gaging stations in the John Day River Basin.

14044000 MIDDLE FORK JOHN DAY RIVER AT RITTER, OR

LOCATION.--Lat 44°53'20", long 119°08'25", in SW 1/4 NW 1/4 sec.8, T.8 S., R.30 E., Grant County, Hydrologic Unit 17070203, on left bank 0.2 mi south of Ritter, 0.8 mi downstream from Twelvemile Creek, and at mile 14.9.

DRAINAGE AREA.--515 mi².

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

REVISED RECORDS.--WSP 739: 1931. WSP 1218: 1950. WSP 1448: 1930-32, 1937, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,544.56 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation. Diversions for irrigation upstream from station. Continuous water-quality records for the period July 1966 to September 1968 have been collected at this location.

AVERAGE DISCHARGE.--66 years (water years 1930-95), 253 ft³/s, 183,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,730 ft³/s Jan. 30, 1965, gage height, 8.39 ft, from rating curve extended above 2,200 ft³/s; maximum gage height, 9.13 ft Feb. 1, 1963, ice jam; minimum discharge, 0.90 ft³/s Aug. 19, 20, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Feb. 2	0500	1,220	5.21	Apr. 30	0230	1,170	5.15
Mar. 15	1830	*1,900	*5.81	May 6	1200	1,670	5.63
Mar. 18	1430	1,630	5.59	May 11	1730	1,580	5.55
Apr. 8	0930	1,540	5.51				

Minimum discharge observed, 4 ft³/s Nov. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	48	193	e40	886	482	503	913	690	218	53	35
2	27	59	116	e37	1030	434	497	1140	642	207	51	34
3	26	52	98	e35	679	409	486	1040	594	232	51	34
4	26	45	e70	e34	541	392	521	1020	562	209	50	36
5	27	47	e50	e38	509	370	595	1220	654	188	49	34
6	29	48	e35	e46	492	334	734	1540	558	174	48	34
7	29	49	e50	e60	478	294	931	1350	519	182	58	34
8	28	44	87	90	449	325	1430	1180	479	156	84	39
9	28	46	85	117	401	450	1270	1110	441	145	65	42
10	28	64	e80	204	360	590	1100	1100	399	134	58	39
11	28	59	e76	287	347	747	1090	1400	401	129	66	37
12	29	56	e70	223	328	782	1070	1260	391	123	58	35
13	30	59	e68	240	272	802	1160	1060	387	123	55	34
14	34	53	e64	514	256	810	1160	922	379	118	54	33
15	42	48	e60	450	247	1560	1020	849	404	110	52	32
16	42	51	e66	326	246	1430	902	825	388	103	54	32
17	36	50	e170	238	270	1120	804	902	367	96	53	32
18	34	45	250	224	500	1290	742	892	409	89	51	32
19	34	38	166	200	579	1500	670	836	579	86	49	31
20	34	e30	131	183	727	1290	652	810	535	86	47	30
21	34	e20	110	157	760	1260	635	834	496	83	45	30
22	37	e13	94	128	726	1050	572	834	447	77	42	31
23	37	e9.0	78	126	671	935	533	787	407	73	40	31
24	34	e20	83	138	682	846	524	746	381	70	39	32
25	34	55	93	138	715	754	550	733	358	67	38	31
26	34	61	91	144	691	657	562	681	336	64	38	39
27	36	53	159	145	658	601	600	638	310	62	37	36
28	53	53	175	141	557	556	675	621	283	61	36	37
29	63	57	113	189	---	517	795	632	262	57	36	61
30	47	100	e80	333	---	494	992	657	238	56	35	63
31	40	---	e45	752	---	480	---	685	---	55	35	---
TOTAL	1069	1432.0	3106	5977	15057	23561	23775	29217	13296	3633	1527	1080
MEAN	34.5	47.7	100	193	538	760	792	942	443	117	49.3	36.0
MAX	63	100	250	752	1030	1560	1430	1540	690	232	84	63
MIN	26	9.0	35	34	246	294	486	621	238	55	35	30
AC-FT	2120	2840	6160	11860	29870	46730	47160	57950	26370	7210	3030	2140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1995, BY WATER YEAR (WY)

MEAN	43.7	72.1	122	152	237	465	743	707	354	80.7	31.7	31.6
MAX	99.5	231	482	580	707	1214	1426	1457	1127	285	98.4	108
(WY)	1983	1974	1956	1965	1958	1972	1984	1984	1984	1984	1984	1984
MIN	17.4	20.2	29.0	23.4	31.3	69.8	175	79.2	56.6	17.4	3.75	10.0
(WY)	1937	1937	1933	1937	1937	1977	1968	1934	1992	1973	1966	1935

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1930 - 1995

ANNUAL TOTAL	57816.0	122730.0	253
ANNUAL MEAN	158	336	538
HIGHEST ANNUAL MEAN			1984
LOWEST ANNUAL MEAN			85.1
HIGHEST DAILY MEAN	1130	May 20	1977
LOWEST DAILY MEAN	9.0	Nov 23	4360
ANNUAL SEVEN-DAY MINIMUM	21	Aug 26	1.1
ANNUAL RUNOFF (AC-FT)	114700	243400	183300
10 PERCENT EXCEEDS	430	896	723
50 PERCENT EXCEEDS	70	141	90
90 PERCENT EXCEEDS	23	34	25

e Estimated

JOHN DAY RIVER BASIN

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14046500 JOHN DAY RIVER AT SERVICE CREEK, OR

LOCATION.--Lat 44°47'38", long 120°00'20", in NW 1/4 NE 1/4 sec.18, T.9 S., R.23 E., Wheeler County, Hydrologic Unit 17070204, on left bank 0.2 mi downstream from bridge on State Highway 207, 0.8 mi downstream from Service Creek, 0.5 mi southwest of town of Service Creek, and at mile 156.7.

DRAINAGE AREA.--5,090 mi², approximately.

PERIOD OF RECORD.--March 1925 to September 1926, October 1929 to current year. Monthly discharge only March 1925 to September 1926, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,632.42 ft above sea level. See WSP 1738 for history of changes prior to Feb. 24, 1957.

REMARKS.--Records good except for estimated daily discharges, which are fair. Slight regulation by several small reservoirs upstream from station. Many small diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--67 years (water years 1926, 1930-95), 1,906 ft³/s, 1,381,000 acre-ft/yr.
66 years (water years 1930-95), 1,918 ft³/s, 1,389,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft³/s Dec. 23, 1964, gage height, 17.85 ft, from rating curve extended above 14,000 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 6.0 ft³/s Aug. 23, 24, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	2330	7,490	7.88	Mar. 19	0830	11,000	9.30
Feb. 2	1200	11,600	9.54	Apr. 8	1730	8,470	8.30
Feb. 19	1000	8,040	8.12	May 6	2300	12,300	9.79
Mar. 16	0830	*12,600	*9.91				

Minimum discharge, 87 ft³/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	358	441	e500	9650	3560	3340	6160	3610	1530	319	119
2	125	366	876	e460	10500	3190	3480	7500	3590	1410	300	113
3	140	431	850	e430	7980	2940	3260	7960	3490	1360	277	111
4	139	428	738	e420	5920	2850	3240	7330	3280	1400	268	119
5	182	395	504	e400	5020	2690	3490	8270	3450	1280	253	117
6	208	387	353	e440	4580	2500	4020	10000	3960	1190	243	112
7	215	382	304	e560	4240	2260	4850	11100	3410	1160	236	130
8	217	378	449	e700	3950	2100	7250	9650	3200	1160	219	146
9	218	365	584	906	3510	2380	7530	8680	2860	1080	298	149
10	224	339	555	1050	3100	3440	6770	8250	2550	996	352	155
11	224	364	557	1650	2820	4260	6060	9010	2320	916	307	165
12	226	416	522	1710	2770	5130	6040	9890	2300	870	320	159
13	225	394	534	1550	2490	4850	6030	8290	2190	852	314	150
14	231	393	522	4380	2070	5100	7230	7250	2210	853	298	143
15	241	383	492	5720	2080	8250	6470	6360	2370	800	276	138
16	259	364	481	3370	2100	11400	5840	5900	2460	736	257	133
17	294	365	537	2550	2070	8550	5260	5960	2350	693	245	123
18	285	388	1030	2060	4680	7650	4880	6030	2320	643	251	121
19	273	370	1830	1880	7330	10600	4540	5650	2890	600	250	120
20	267	336	1370	1680	7240	9140	4200	5220	3720	587	244	121
21	259	337	1140	1510	6580	8810	4160	4960	3700	596	227	119
22	254	317	1000	1300	6030	7790	3800	4840	3320	555	203	117
23	254	271	853	1200	5440	6830	3520	4590	2960	529	180	116
24	263	263	758	1250	5020	6140	3370	4270	2710	493	163	118
25	268	306	803	1230	4940	5670	3390	4020	2510	461	154	126
26	257	433	839	1200	4860	5110	3570	3880	2350	432	151	133
27	257	420	801	1220	4570	4600	3630	3640	2170	404	144	131
28	267	394	1280	1210	4110	4190	4030	3420	2000	384	145	147
29	290	391	1400	1600	---	3840	4560	3300	1830	363	146	190
30	421	415	1000	2920	---	3570	6420	3280	1670	329	136	227
31	376	---	702	8110	---	3400	---	3350	---	324	126	---
TOTAL	7458	11149	24105	55166	135650	162790	144230	198010	83750	24986	7302	4068
MEAN	241	372	778	1780	4845	5251	4808	6387	2792	806	236	136
MAX	421	433	1830	8110	10500	11400	7530	11100	3960	1530	352	227
MIN	99	263	304	400	2070	2100	3240	3280	1670	324	126	111
AC-FT	14790	22110	47810	109400	269100	322900	286100	392800	166100	49560	14480	8070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1995, BY WATER YEAR (WY)

	MEAN	324	590	1162	1508	2284	3701	5203	4930	2435	571	181	183
MAX	811	2284	5540	6335	7930	9773	10280	12050	8327	1850	594	862	
(WY)	1985	1974	1965	1965	1982	1983	1984	1948	1948	1982	1984	1984	
MIN	70.5	152	216	195	358	597	1010	491	302	90.6	15.2	31.4	
(WY)	1937	1937	1936	1937	1937	1977	1968	1934	1992	1973	1973	1935	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1930 - 1995

ANNUAL TOTAL	384638	858664	
ANNUAL MEAN	1054	2353	1918
HIGHEST ANNUAL MEAN			4116
LOWEST ANNUAL MEAN			619
HIGHEST DAILY MEAN	8010	May 21	11400
LOWEST DAILY MEAN	36	Sep 4	99
ANNUAL SEVEN-DAY MINIMUM	41	Aug 18	117
ANNUAL RUNOFF (AC-FT)	762900		1703000
10 PERCENT EXCEEDS	2700		6240
50 PERCENT EXCEEDS	555		1160
90 PERCENT EXCEEDS	74		155
			130

e Estimated

JOHN DAY RIVER BASIN

14048000 JOHN DAY RIVER AT McDONALD FERRY, OR
(National stream quality accounting network station)

LOCATION.--Lat 45°35'16", long 120°24'30", in NE 1/4 NW 1/4 sec.11, T.1 N., R.19 E., Sherman County, Hydrologic Unit 17070204, on left bank at McDonald Ferry, 0.8 mi downstream from Rock Creek, 10 mi east of Klondike, and at mile 20.9.

GAGE AREA.--7,580 mi², approximately.

PERIOD OF RECORD.--December 1904 to current year. Prior to Oct. 1, 1930, published as "at McDonald."

REVISED RECORDS.--WSP 1094: 1894(M), 1932(M). WSP 1448: 1908-9, 1912, 1916, 1920(M), 1922, 1932.

GAGE.--Water-stage recorder. Datum of gage is 392.27 ft above sea level. Prior to Aug. 30, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation. Many diversions for irrigation upstream from station. Additional water-quality data available for this site.

AVERAGE DISCHARGE.--90 years (water years 1906-95), 2,074 ft³/s, 1,503,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft³/s Dec. 24, 1964, gage height, 13.59 ft, from floodmark, from rating curve extended above 11,000 ft³/s on basis of slope-area measurement of peak flow; no flow for part of Sept. 2, 1966, Aug. 15 to Sept. 16, 1973, Aug. 13, 14, 19-25, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1894 reached a stage of 12.8 ft, from floodmarks, discharge, 39,100 ft³/s, from rating curve extended above 22,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 15	2230	7,670	6.47	Mar. 20	0530	11,500	7.94
Feb. 3	0930	12,100	8.15	Apr. 9	1500	8,690	6.87
Feb. 20	0800	9,310	7.11	May 7	2030	13,100	8.51
Mar. 17	0400	*13,100	*8.53				

Minimum discharge, 55 ft³/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	406	407	e800	9050	4690	3880	6850	3540	1720	407	156
2	60	458	429	e500	10600	4120	3760	6770	3860	1570	376	145
3	75	417	438	e460	11200	3700	3900	8020	3930	1450	362	136
4	78	396	736	e440	8480	3400	3670	8460	3820	1350	357	129
5	75	419	762	e420	6540	3290	3600	7920	3590	1360	337	126
6	86	464	694	e400	5640	3100	3860	8980	3620	1330	309	133
7	130	441	592	e380	5190	2900	4400	11100	4380	1210	291	148
8	137	412	522	e420	4870	2620	5240	11700	3760	1160	273	151
9	196	414	372	e500	4580	2460	7680	10300	3540	1160	267	148
10	223	412	408	e700	4110	2740	7760	9310	3180	1220	259	160
11	227	417	552	1130	3650	3670	7060	9040	2830	1050	245	161
12	233	397	569	1350	3390	4710	6430	9960	2550	957	319	162
13	242	376	571	2000	3240	5560	6430	10400	2450	878	369	161
14	246	420	540	2470	2950	5360	6420	8930	2390	842	336	165
15	254	419	544	4490	2530	5900	7500	7870	2410	829	344	166
16	256	412	524	6240	2490	9500	6770	6960	2470	822	333	158
17	269	408	546	4020	2540	11700	6170	6400	2630	788	307	144
18	274	400	522	3060	4090	9100	5650	6390	2510	737	291	140
19	301	388	548	2400	6400	8540	5260	6410	2460	689	277	132
20	335	403	1280	2180	8690	11100	4980	6030	2730	647	263	138
21	330	404	1550	1940	8200	9650	4630	5610	3760	615	264	130
22	317	383	1210	1740	7350	9350	4570	5350	3900	600	265	123
23	311	367	1070	1580	6720	8240	4250	5220	3560	596	264	126
24	304	367	962	1380	6100	7340	3930	4980	3160	572	233	127
25	300	350	844	1330	5650	6660	3740	4690	2850	551	215	125
26	302	323	778	1370	5510	6180	3720	4450	2620	519	197	123
27	333	318	816	1320	5390	5640	3970	4280	2400	500	189	125
28	345	379	829	1310	5090	5140	4040	4030	2230	475	174	127
29	325	440	817	1420	---	4750	4450	3750	2030	446	170	137
30	321	429	1390	1870	---	4410	5100	3580	1870	431	162	156
31	320	---	1250	3680	---	4090	---	3500	---	412	159	---
TOTAL	7266	12039	23072	53300	160240	179610	152820	217240	91030	27486	8614	4258
MEAN	234	401	744	1719	5723	5794	5094	7008	3034	887	278	142
MAX	345	464	1550	6240	11200	7760	11700	4380	1720	1200	366	166
MIN	60	318	372	380	2490	2460	3600	3500	1870	412	159	123
AC-FT	14410	23880	45760	105700	317800	356300	303100	430900	180600	54520	17090	8450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1995, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
MEAN	327	609	1181	1640	2599
MAX	892	2310	7030	6402	8882
(WY)	1985	1974	1965	1965	1982
MIN	59.9	157	221	217	374
(WY)	1937	1937	1937	1937	1933

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1906 - 1995
ANNUAL TOTAL	403905	936975	2074
ANNUAL MEAN	1107	2567	4724
HIGHEST ANNUAL MEAN			603
LOWEST ANNUAL MEAN			39400
HIGHEST DAILY MEAN	8040	11700	Mar 17
LOWEST DAILY MEAN	11	60	Oct 2
ANNUAL SEVEN-DAY MINIMUM	15	81	Oct 1
ANNUAL RUNOFF (AC-FT)	801100	1858000	1503000
10 PERCENT EXCEEDS	2830	6770	5820
50 PERCENT EXCEEDS	612	1210	790
90 PERCENT EXCEEDS	53	162	141

e Estimated

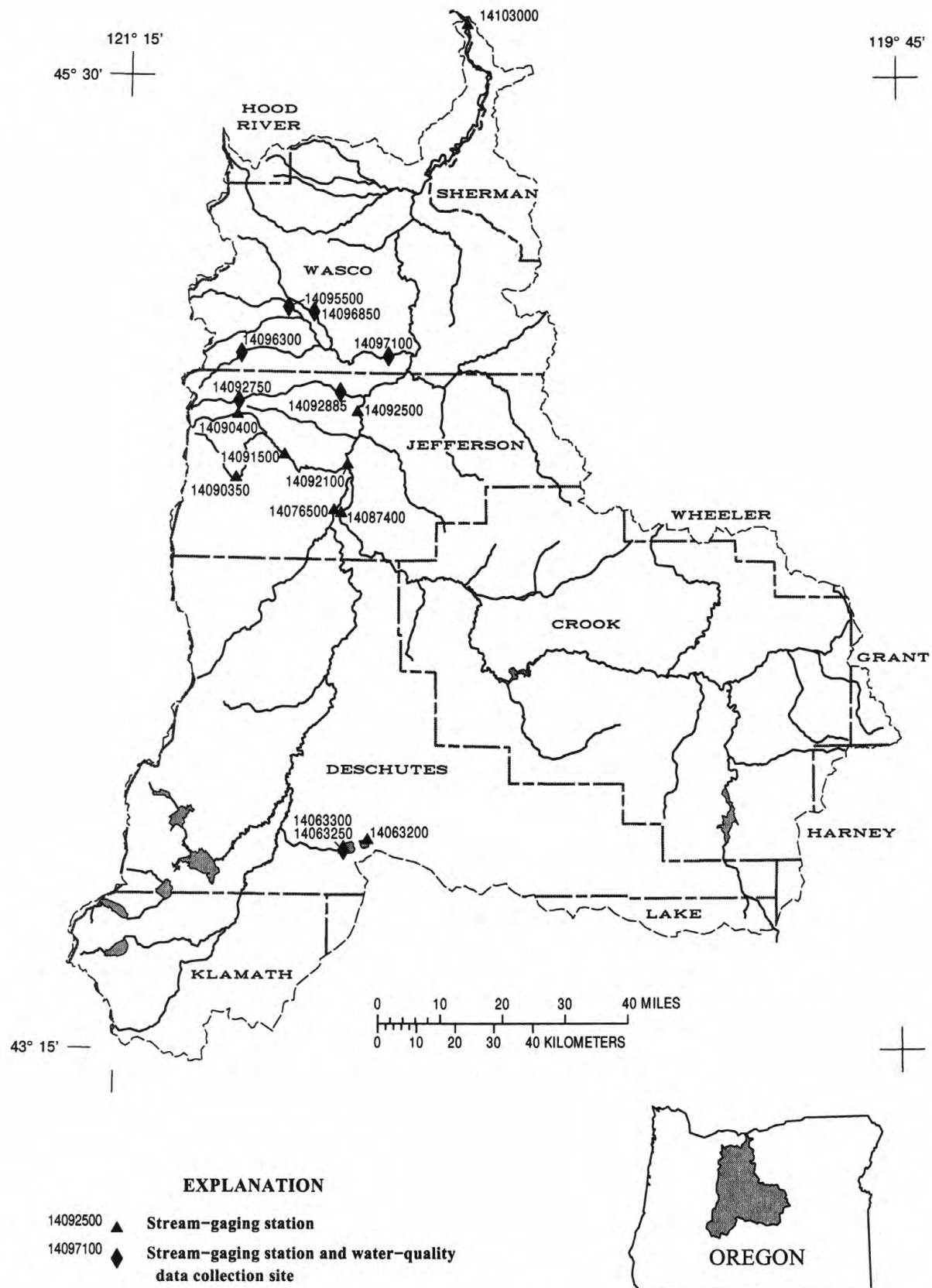


Figure 14. Location of surface-water and water-quality stations in the Deschutes River Basin.

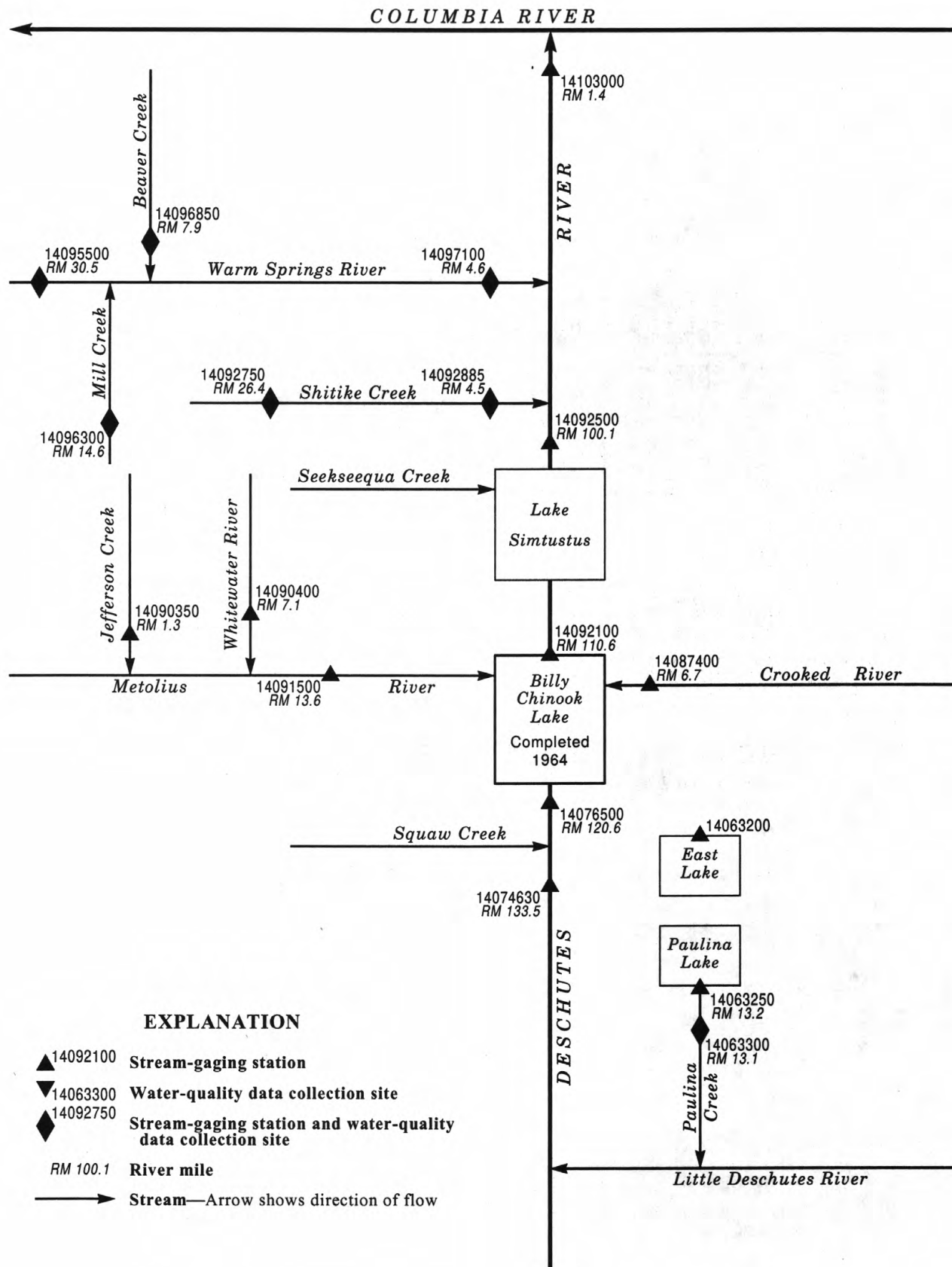


Figure 15. Schematic diagram showing gaging stations in the Deschutes River Basin.

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LOCATION.--Lat 43°43'13", long 121°11'57", in SE 1/4 SE 1/4 sec.29, T.21 S., R.13 E., Deschutes County, Hydrologic Unit 17070302, on south shore, east end of lake, 17 mi northeast of La Pine.

PERIOD OF RECORD.--February 1992 to September 1995 (discontinued).

REMARKS.--Lake is one of two lakes in Newberry Crater. No overland outflow.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6,373.21 ft June 19; minimum, 6,371.78 ft Oct. 27.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6372.05	6371.92	6372.09	6372.06	6372.56	6372.57	6372.81	6373.05	---	6373.09	6372.76	6372.30
2	6372.03	6371.92	6372.08	6372.06	6372.56	6372.58	6372.81	6373.06	---	6373.08	6372.75	6372.29
3	6371.98	6371.91	6372.08	6372.05	6372.55	6372.60	6372.80	6373.05	---	6373.05	6372.73	6372.28
4	6371.96	6371.96	6372.07	6372.05	6372.55	6372.63	6372.80	6373.07	---	6373.04	6372.72	6372.26
5	6371.94	6371.95	6372.07	6372.06	6372.54	6372.65	6372.83	6373.07	---	6373.03	6372.71	6372.24
6	6371.93	6371.95	6372.09	6372.08	6372.54	6372.64	6372.86	6373.07	---	6373.04	6372.68	6372.23
7	6371.93	6371.94	6372.10	6372.09	6372.53	6372.63	6372.90	6373.06	---	6373.03	6372.66	6372.20
8	6371.92	6371.94	6372.09	6372.11	6372.53	6372.66	6372.92	6373.06	6373.15	6373.03	6372.65	6372.19
9	6371.91	6371.96	6372.08	6372.12	6372.52	6372.68	6372.90	6373.07	6373.14	6373.03	6372.63	6372.18
10	6371.91	6371.95	6372.08	6372.15	6372.52	6372.72	6372.89	6373.09	6373.14	6373.02	6372.62	6372.17
11	6371.89	6371.94	6372.10	6372.16	6372.52	6372.73	6372.89	6373.11	6373.13	6373.04	6372.60	6372.16
12	6371.87	6371.94	6372.10	6372.20	6372.56	6372.75	6372.91	6373.11	6373.12	6373.03	6372.58	6372.15
13	6371.87	6371.92	6372.09	6372.25	6372.57	6372.76	6372.94	6373.11	6373.12	6373.02	6372.57	6372.14
14	6371.91	6371.91	6372.10	6372.29	6372.57	6372.78	6372.94	6373.10	6373.18	6373.01	6372.56	6372.13
15	6371.89	6371.91	6372.11	6372.32	6372.56	6372.78	6372.94	6373.10	6373.17	6372.99	6372.54	6372.13
16	6371.86	6371.99	6372.12	6372.31	6372.55	6372.78	6372.93	6373.10	6373.17	6372.98	6372.52	6372.12
17	6371.86	6372.01	6372.11	6372.32	6372.60	6372.79	6372.94	6373.10	6373.18	6372.97	6372.50	6372.11
18	6371.85	6371.99	6372.12	6372.31	6372.60	6372.83	6372.94	6373.10	6373.20	6372.97	6372.49	6372.09
19	6371.84	6372.00	6372.13	6372.32	6372.61	6372.84	6372.96	6373.10	6373.20	6372.96	6372.47	6372.08
20	6371.83	6372.00	6372.10	6372.31	6372.60	6372.85	6372.98	6373.10	6373.19	6372.95	6372.47	6372.06
21	6371.84	6372.00	6372.09	6372.30	6372.60	6372.86	6372.98	6373.10	6373.18	6372.93	6372.45	6372.04
22	6371.82	6371.99	6372.09	6372.30	6372.59	6372.87	6372.97	6373.09	6373.18	6372.92	6372.44	6372.03
23	6371.82	6372.00	6372.08	6372.30	6372.60	6372.87	6372.96	6373.08	6373.17	6372.90	6372.43	6372.02
24	6371.81	6372.00	6372.08	6372.29	6372.60	6372.87	6372.95	6373.08	6373.17	6372.89	6372.41	6372.01
25	6371.80	6372.02	6372.08	6372.29	6372.59	6372.86	6372.95	6373.08	6373.16	6372.87	6372.40	6372.01
26	6371.80	6372.01	6372.09	6372.28	6372.59	6372.86	6372.94	6373.08	6373.15	6372.86	6372.38	6372.01

DESCHUTES RIVER BASIN

14063250 PAULINA LAKE NEAR LA PINE, OR

LOCATION.--Lat 43°42'48", long 121°16'34", in NW 1/4 SE 1/4 sec.34, T.21 S., R.12 E., Deschutes County, Hydrologic Unit 17070302, Deschutes National Forest, on left bank, at outflow gate, 12 mi northeast of La Pine, and at mile 13.2.

DRAINAGE AREA.--10.1 mi².

PERIOD OF RECORD.--November 1991 to September 1995 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Estimated midnight elevations interpolated from adjacent good record. Lake is one of two lakes in Newberry Crater. Outflow is controlled by concrete spillway and fish-screen gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 6,332.83 ft Mar. 17, 1993; minimum elevation, 6,329.89 ft Sept. 8, 10, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6,332.74 ft June 7; minimum elevation, 6,330.55 ft Oct. 7, 9.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6330.71	6330.99	6331.49	6331.77	6332.43	6332.40	6332.47	6332.58	6332.61	6332.45	6332.33	6332.07
2	6330.85	6330.99	6331.50	6331.78	6332.42	6332.41	6332.46	6332.57	6332.61	6332.43	6332.33	6332.06
3	6330.74	6330.99	e6331.53	6331.78	6332.42	6332.44	6332.46	6332.56	6332.62	6332.43	6332.33	6332.04
4	6330.63	6331.08	e6331.52	6331.78	6332.41	6332.47	6332.46	6332.57	6332.62	6332.42	6332.33	6332.02
5	6330.59	6331.07	e6331.51	6331.80	6332.40	e6332.48	6332.49	6332.56	6332.62	6332.42	6332.31	6332.01
6	6330.59	6331.09	e6331.54	6331.82	6332.40	e6332.47	6332.51	6332.55	6332.70	6332.44	6332.30	6331.99
7	6330.59	e6331.09	e6331.56	6331.84	6332.40	6332.46	6332.54	6332.54	6332.69	6332.44	6332.31	6331.98
8	6330.59	6331.07	e6331.55	6331.86	6332.39	6332.47	6332.54	6332.54	6332.66	6332.44	6332.30	6331.97
9	6330.57	6331.12	6331.57	6331.89	6332.38	6332.49	6332.53	6332.54	6332.64	6332.44	6332.30	6331.96
10	6330.62	6331.13	6331.59	6331.92	6332.37	6332.52	6332.52	6332.56	6332.61	6332.44	6332.29	6331.95
11	6330.62	6331.13	6331.61	6331.94	6332.38	6332.53	6332.51	6332.57	6332.60	6332.46	6332.28	6331.94
12	6330.61	6331.12	6331.62	6331.98	6332.42	6332.54	6332.53	6332.58	6332.58	6332.46	6332.27	6331.93
13	6330.62	e6331.12	e6331.62	6332.02	6332.41	6332.54	6332.56	6332.57	6332.56	6332.45	6332.27	6331.92
14	6330.71	6331.13	6331.64	6332.08	6332.40	6332.56	6332.54	6332.55	6332.63	6332.45	6332.27	6331.91
15	6330.70	6331.13	6331.66	6332.12	6332.40	6332.55	6332.54	6332.55	6332.62	6332.45	6332.26	6331.90
16	6330.70	6331.22	6331.67	6332.12	6332.39	6332.54	6332.52	6332.54	6332.59	6332.44	6332.25	6331.89
17	6330.69	e6331.27	6331.67	6332.13	6332.45	6332.53	6332.54	6332.54	6332.59	6332.43	6332.24	6331.88
18	6330.70	e6331.25	6331.70	6332.14	6332.46	6332.58	6332.53	6332.54	6332.60	6332.43	6332.24	6331.87
19	6330.71	6331.28	6331.69	6332.15	6332.45	6332.56	6332.55	6332.54	6332.60	6332.44	6332.25	6331.87
20	6330.69	e6331.30	6331.70	6332.14	6332.44	6332.57	6332.55	6332.53	6332.59	6332.44	6332.24	6331.85
21	6330.73	e6331.30	6331.70	6332.14	6332.44	6332.57	6332.54	6332.53	6332.57	6332.43	6332.23	6331.83
22	6330.73	6331.29	6331.71	6332.14	6332.43	6332.57	6332.53	6332.52	6332.56	6332.42	6332.21	6331.80
23	6330.73	6331.32	6331.70	6332.15	6332.43	6332.56	6332.52	6332.54	6332.55	6332.42	6332.20	6331.79
24	6330.73	6331.32	6331.72	6332.15	6332.42	6332.55	6332.51	6332.53	6332.54	6332.41	6332.19	6331.78
25	6330.84	e6331.33	6331.72	6332.16	6332.42	6332.53	6332.50	6332.52	6332.53	6332.41	6332.17	6331.80
26	6330.65	e6331.36	6331.73	6332.16	6332.42	6332.53	6332.50	6332.52	6332.52	6332.40	6332.15	6331.80
27	6330.85	6331.38	6331.76	6332.17	6332.41	6332.52	6332.52	6332.52	6332.50	6332.39	6332.14	6331.79
28	6330.87	6331.41	6331.76	6332.21	6332.41	6332.50	6332.53	6332.51	6332.48	6332.39	6332.12	6331.80
29	6330.89	6331.45	e6331.77	6332.24	---	6332.49	6332.57	6332.51	6332.47	6332.37	6332.11	6331.79
30	6330.90	6331.47	e6331.77	6332.31	---	6332.48	6332.56	6332.53	6332.46	6332.36	6332.10	6331.78
31	6330.88	---	6331.76	6332.34	---	6332.48	---	6332.53	---	6332.35	6332.08	---
MAX	6330.90	6331.47	6331.77	6332.34	6332.46	6332.58	6332.57	6332.58	6332.70	6332.46	6332.33	6332.07
MIN	6330.57	6330.99	6331.49	6331.77	6332.37	6332.40	6332.46	6332.51	6332.46	6332.35	6332.08	6331.78

CAL YR 1994 MAX 6332.65 MIN 6329.99
WTR YR 1995 MAX 6332.70 MIN 6330.57

e Estimated

DESCHUTES RIVER BASIN

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14063300 PAULINA CREEK NEAR LA PINE, OR

LOCATION.--Lat 43°42'47", long 121°16'39", in SW 1/4 NE 1/4 sec.34, T.21 S., R.12 E., Deschutes County, Hydrologic Unit 17070302, on right bank 180 ft downstream from dam at outlet of Paulina Lake, 12 mi east of La Pine, and at mile 13.1.

DRAINAGE AREA.--10.1 mi², of which 2.2 mi² is lake surface at elevation 6,331 ft, hydrologic drainage boundary uncertain because of interbasin ground-water exchange.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1989, October 1991 to September 1995 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 6,315.31 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by dam at outlet of Paulina Lake 180 ft upstream.

AVERAGE DISCHARGE.--11 years (water years 1983-89, 1992-95), 17.8 ft³/s, 12,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66 ft³/s Apr. 29, 1983, gage height, 2.35 ft; minimum discharge, 0.19 ft³/s Oct. 19, 1982, Nov. 22, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34 ft³/s June 7, gage height, 1.72 ft, result of regulation; minimum discharge, 0.49 ft³/s Oct. 10, 13, result of regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	8.1	4.2	6.2	12	12	16	20	11	15	10	15
2	12	8.8	4.1	6.2	12	12	15	20	9.4	15	10	15
3	12	9.5	4.2	6.0	12	12	15	20	9.6	15	9.9	15
4	11	9.6	4.3	6.0	13	13	15	20	9.7	15	9.9	15
5	11	9.5	4.3	5.9	13	14	15	19	13	15	10	15
6	12	9.3	4.4	6.3	13	14	16	19	17	15	10	15
7	12	9.1	4.4	6.3	13	14	18	19	27	15	10	15
8	12	8.7	4.3	6.1	13	14	18	18	31	15	9.9	14
9	12	8.4	4.3	6.0	12	15	18	17	29	14	9.6	14
10	11	8.4	4.3	6.0	12	15	18	16	29	14	9.5	14
11	12	8.2	4.3	6.0	12	16	17	17	27	14	9.0	14
12	12	8.0	4.4	6.0	13	16	17	17	26	15	9.1	14
13	11	7.6	4.4	6.1	14	17	19	17	24	14	9.0	14
14	13	7.6	5.1	6.3	13	18	19	16	26	14	8.7	14
15	13	7.6	5.0	6.5	13	20	18	16	28	14	8.8	14
16	13	7.5	5.1	6.9	13	19	17	15	27	13	8.8	14
17	12	7.5	5.1	7.1	14	19	16	15	25	12	8.8	15
18	11	4.6	5.1	7.3	15	21	16	15	26	12	8.9	15
19	11	4.8	5.1	7.5	15	20	17	15	27	12	9.0	15
20	11	4.5	5.1	7.6	14	21	19	15	26	12	9.1	15
21	11	4.5	4.9	7.6	14	20	19	14	25	12	9.1	14
22	11	4.5	5.0	7.6	14	21	18	14	24	12	13	14
23	11	4.5	4.8	7.6	13	21	18	14	22	11	16	15
24	11	4.4	4.9	7.6	13	20	17	14	21	11	16	15
25	7.4	4.3	5.2	7.7	13	18	17	14	20	11	16	14
26	7.6	4.3	5.8	7.8	12	18	16	14	19	10	16	14
27	15	4.3	6.1	7.7	12	18	17	14	19	10	15	14
28	13	4.2	6.1	7.9	12	17	17	14	18	10	15	14
29	11	4.1	6.1	8.9	---	17	18	14	17	10	15	14
30	9.6	4.3	6.1	9.2	---	16	19	14	16	11	15	14
31	8.5	---	6.0	9.8	---	16	---	14	---	10	15	---
TOTAL	352.1	200.7	152.5	217.7	364	524	515	500	648.7	398	349.1	433
MEAN	11.4	6.69	4.92	7.02	13.0	16.9	17.2	16.1	21.6	12.8	11.3	14.4
MAX	15	9.6	6.1	9.8	15	21	19	20	31	15	16	15
MIN	7.4	4.1	4.1	5.9	12	12	15	14	9.4	10	8.7	14
AC-FT	698	398	302	432	722	1040	1020	992	1290	789	692	859

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1995, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	15.0	9.40	10.1	16.0	20.3	20.9	19.8	20.7	22.4	19.8	20.8	19.0	
MAX	21.4	14.6	21.5	22.0	36.3	27.4	25.5	29.5	32.7	29.1	32.8	31.1	
(WY)	1984	1993	1985	1989	1983	1989	1983	1983	1984	1985	1983	1984	
MIN	10.2	5.16	4.54	3.87	8.91	13.3	15.7	13.7	15.9	12.8	11.3	11.9	
(WY)	1992	1989	1988	1993	1993	1992	1994	1992	1992	1995	1995	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1983 - 1995

ANNUAL TOTAL	5036.3	4654.8	
ANNUAL MEAN	13.8	12.8	17.8
HIGHEST ANNUAL MEAN			23.4
LOWEST ANNUAL MEAN			12.8
HIGHEST DAILY MEAN	29	31	59
LOWEST DAILY MEAN	4.1	4.1	.23
ANNUAL SEVEN-DAY MINIMUM	4.2	4.2	.37
ANNUAL RUNOFF (AC-FT)	9990	9230	12920
10 PERCENT EXCEEDS	19	19	28
50 PERCENT EXCEEDS	14	13	18
90 PERCENT EXCEEDS	5.1	5.1	7.6

DESCHUTES RIVER BASIN

14063300 PAULINA CREEK NEAR LA PINE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1991 to September 1995 (discontinued).

WATER TEMPERATURE: November 1991 to September 1995 (discontinued).

INSTRUMENTATION.--Water-quality monitor and data logger.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 650 microsiemens Oct. 16, 1994; minimum, 368 microsiemens Oct. 15, 1993.

WATER TEMPERATURE: Maximum recorded, 23.0°C July 15, 1992, July 20, 21, Aug. 2, 1994; minimum recorded, 0.0°C several days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 650 microsiemens Oct. 16; minimum, 430 microsiemens Oct. 26, 27.

WATER TEMPERATURE: Maximum, 22.0°C Aug. 4, 5; minimum, 0.0°C Jan. 9, 10, 14, Feb. 8.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	594	574	584	616	432	480	590	584	588	594	579	585
2	604	585	595	620	587	599	596	563	577	583	572	578
3	610	582	596	602	562	595	585	563	571	586	573	580
4	592	575	582	602	557	584	586	527	541	581	572	576
5	589	576	582	593	544	576	555	528	534	581	572	577
6	593	575	586	594	579	586	534	526	531	577	570	574
7	593	578	586	593	575	588	557	524	533	575	567	571
8	592	578	585	586	527	569	565	554	559	571	563	567
9	590	570	580	594	571	581	561	552	557	567	547	560
10	582	552	575	607	586	596	558	552	555	567	549	560
11	582	568	576	616	602	611	572	548	555	570	562	566
12	575	558	568	615	608	612	576	568	572	571	563	568
13	609	520	562	646	599	622	605	575	595	571	563	567
14	640	601	616	648	608	638	596	585	591	572	561	566
15	624	602	612	636	617	622	594	583	586	575	569	572
16	650	590	609	627	608	615	591	579	585	579	571	575
17	646	618	630	615	607	611	591	583	587	581	573	578
18	631	613	621	628	590	617	593	579	587	581	574	577
19	622	597	609	637	604	614	597	588	592	580	574	576
20	627	572	612	617	601	606	598	589	593	581	575	578
21	626	605	617	624	611	617	600	592	596	583	577	580
22	617	600	609	623	583	615	604	584	592	581	574	578
23	607	583	595	595	584	590	591	581	587	578	572	576
24	589	562	576	587	569	581	589	580	585	579	572	575
25	578	531	562	578	564	573	598	584	591	585	574	578
26	533	430	474	591	563	581	592	581	587	587	575	579
27	482	430	459	592	577	584	592	578	585	583	576	579
28	490	460	478	604	583	590	591	578	586	582	575	578
29	496	456	483	605	587	598	605	588	594	580	571	576
30	494	450	480	591	584	587	609	594	599	573	564	568
31	491	438	474	---	---	---	599	588	593	570	561	566
MONTH	650	430	570	648	432	595	609	524	577	594	547	574
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	570	556	563	602	594	598	587	577	582	577	568	572
2	583	566	577	601	593	597	587	578	583	580	570	576
3	584	576	580	601	589	595	587	577	582	582	570	576
4	582	573	579	598	590	593	586	578	582	579	569	574
5	582	571	577	598	591	594	583	573	578	576	570	573
6	582	574	579	600	586	593	585	574	579	578	571	575
7	585	576	581	600	591	594	579	570	574	578	569	574
8	584	573	579	595	588	592	580	570	577	578	569	574
9	590	576	584	591	584	587	582	570	578	578	569	573
10	590	574	581	598	584	590	583	574	579	576	566	572
11	584	570	579	596	589	592	581	574	577	574	565	570
12	586	577	582	597	587	593	579	562	575	575	567	570
13	589	580	585	597	586	591	580	564	573	572	563	568
14	589	582	585	594	584	591	582	574	578	572	565	568
15	588	576	583	597	590	593	585	577	580	573	565	569
16	588	580	584	597	589	593	584	575	579	572	563	568
17	585	577	581	598	587	593	593	578	586	574	564	569
18	586	578	582	593	584	589	590	583	587	575	563	569
19	588	576	581	597	589	593	590	578	586	573	563	568
20	588	579	583	595	585	589	589	578	585	573	564	568
21	587	580	584	598	590	594	596	573	586	573	564	568
22	588	580	584	598	588	592	579	560	571	570	564	567
23	591	574	583	598	591	594	580	573	576	571	563	567
24	594	587	590	599	592	594	578	569	574	572	561	566
25	596	587	592	598	590	595	573	559	567	570	562	566
26	594	588	591	599	591	596	568	557	563	570	563	566
27	596	588	592	601	589	595	571	557	563	572	560	566
28	598	590	594	597	586	593	575	565	570	570	562	566
29	---	---	---	598	579	590	573	562	568	573	563	569
30	---	---	---	586	577	581	576	567	571	571	560	565
31	---	---	---	585	577	581	---	---	---	571	559	565
MONTH	598	556	583	602	577	592	596	557	577	582	559	570

DESCHUTES RIVER BASIN

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14063300 PAULINA CREEK NEAR LA PINE, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	567	537	553	570	564	568	571	556	565	566	554	560
2	556	545	551	571	562	567	571	558	565	564	555	559
3	568	554	561	570	561	566	570	556	565	564	554	560
4	565	557	562	570	563	567	571	557	566	563	553	558
5	570	557	564	571	564	568	571	554	565	561	551	557
6	571	550	563	571	560	567	570	556	565	561	551	557
7	563	551	558	571	564	568	569	555	561	563	552	558
8	563	557	560	572	565	569	569	554	563	561	555	558
9	564	559	561	572	563	567	570	559	564	564	554	560
10	564	559	562	572	563	568	571	559	565	566	556	562
11	564	558	562	571	558	567	569	556	563	567	560	563
12	564	559	561	572	564	568	570	553	563	566	558	563
13	564	558	561	572	563	568	567	555	561	568	559	565
14	562	550	556	573	567	570	568	554	562	571	563	567
15	562	552	557	574	566	570	570	554	563	572	562	566
16	565	559	562	573	567	570	571	556	563	575	562	569
17	565	561	563	574	565	571	571	554	562	574	564	570
18	566	555	561	---	---	572	569	557	564	573	564	569
19	565	559	562	---	---	578	569	556	563	574	564	569
20	568	562	565	---	---	577	571	556	564	576	566	571
21	568	562	566	583	572	578	571	554	564	577	567	572
22	570	564	567	582	571	578	571	561	566	578	569	573
23	569	564	567	---	---	578	571	557	565	576	567	572
24	569	563	567	---	---	580	570	560	565	579	571	575
25	569	561	565	---	---	581	569	560	564	579	561	572
26	568	561	565	583	573	579	568	557	563	579	568	573
27	568	562	566	583	574	579	569	558	563	576	567	572
28	569	561	565	581	565	572	568	557	562	574	566	570
29	568	562	565	574	559	567	567	556	561	574	566	570
30	569	561	566	571	561	566	565	554	560	574	565	569
31	---	---	---	572	561	567	566	557	561	---	---	---
MONTH	571	537	562	---	---	571	571	553	563	579	551	566

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	16.5	11.5	14.0	6.0	2.5	4.0	2.5	2.0	2.0	1.5	.5	1.0
2	15.5	9.0	12.5	5.5	4.0	4.5	2.0	1.0	1.5	1.5	1.0	1.0
3	11.5	7.5	9.0	5.0	2.5	3.5	1.5	1.0	1.0	1.5	.5	1.0
4	12.0	6.0	9.0	4.5	1.5	3.0	1.0	.5	.5	1.0	.5	1.0
5	13.5	8.5	10.5	5.5	1.5	4.0	1.5	.5	1.0	1.0	.5	.5
6	14.5	8.5	11.0	4.5	4.0	4.0	1.5	1.5	1.5	1.0	.5	1.0
7	15.0	9.0	11.5	5.5	3.0	4.0	2.0	1.5	1.5	1.0	.5	.5
8	15.0	9.0	12.0	4.0	2.5	3.0	2.0	1.5	2.0	.5	.5	.5
9	13.5	9.5	11.5	4.0	3.0	3.5	2.5	1.5	2.0	.5	.0	.5
10	12.0	9.5	10.5	3.5	2.0	3.0	2.0	1.5	1.5	1.0	.0	.5
11	13.0	8.5	10.5	4.5	2.5	3.5	1.5	1.0	1.5	1.0	1.0	1.0
12	11.5	8.5	10.0	4.5	3.5	4.0	1.5	1.0	1.5	1.0	.5	1.0
13	13.0	7.5	9.5	5.5	3.5	4.0	2.0	1.5	1.5	.5	.5	.5
14	10.5	7.0	9.0	4.0	2.5	3.0	1.5	.5	1.0	1.0	.0	.5
15	10.0	7.5	8.5	3.5	2.5	3.0	1.0	.5	.5	.5	.5	.5
16	12.5	6.5	9.5	3.0	1.0	2.0	1.0	.5	.5	1.5	.5	1.0
17	12.0	7.5	9.5	2.0	1.0	1.5	1.5	1.0	1.0	1.0	1.0	1.0
18	12.5	7.5	9.5	1.0	1.0	1.0	1.0	.5	.5	1.0	1.0	1.0
19	10.5	7.5	9.0	2.0	1.0	1.5	1.5	.5	1.0	1.5	1.0	1.0
20	11.0	7.5	9.0	2.5	1.5	1.5	2.0	.5	1.0	1.0	.5	1.0
21	9.5	7.5	8.5	2.5	1.5	2.0	2.5	1.0	1.5	1.5	1.0	1.0
22	11.0	5.5	8.0	2.5	1.5	2.0	3.0	1.5	2.0	1.0	1.0	1.0
23	11.5	7.0	9.0	2.5	1.5	2.0	2.5	1.0	1.5	1.5	1.0	1.0
24	11.0	6.5	8.5	2.0	1.5	1.5	1.5	.5	1.0	1.5	1.0	1.0
25	11.5	7.0	9.0	1.5	1.0	1.5	2.0	1.0	1.5	1.5	1.0	1.0
26	8.5	6.5	7.5	2.0	1.0	1.5	2.0	1.0	1.5	1.5	1.0	1.0
27	8.5	7.0	7.5	2.0	1.0	1.0	2.0	1.0	1.5	1.5	1.0	1.0
28	8.5	6.0	7.0	2.0	1.0	1.5	2.0	1.0	1.5	1.0	1.0	1.0
29	9.5	4.5	6.5	2.0	1.5	2.0	2.0	.5	1.0	1.5	1.0	1.0
30	7.5	5.5	6.5	2.5	2.0	2.5	2.0	1.0	1.5	1.5	1.0	1.0
31	6.5	5.5	6.0	---	---	---	1.5	1.0	1.0	1.5	1.0	1.5
MONTH	16.5	4.5	9.5	6.0	1.0	2.5	3.0	.5	1.5	1.5	.0	1.0

14063300 PAULINA CREEK NEAR LA PINE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	1.5	1.0	1.5	3.0	1.5	2.0	4.5	2.0	2.5	6.0	3.5	4.5
2	2.5	1.0	1.5	2.0	1.0	1.5	4.5	1.5	3.0	6.0	3.0	4.5
3	2.0	1.0	1.5	2.0	1.0	1.5	5.5	2.0	3.0	7.0	3.0	5.0
4	2.5	1.0	2.0	2.0	1.0	1.5	4.5	2.0	3.0	6.0	3.5	5.0
5	3.0	1.5	2.0	2.0	1.0	1.5	3.5	2.0	2.5	4.5	3.5	4.0
6	2.0	1.0	1.5	2.5	1.0	1.5	3.5	2.0	2.5	4.5	3.5	4.0
7	2.5	.5	1.5	2.5	1.0	1.5	3.0	2.0	2.5	7.0	3.0	5.0
8	2.0	.0	1.0	1.5	1.0	1.0	3.0	1.5	2.0	6.5	3.5	5.0
9	2.5	.5	1.5	1.0	.5	.5	3.5	1.5	2.5	6.5	4.0	5.5
10	2.5	1.0	1.5	1.5	.5	1.0	3.5	2.0	2.5	6.0	4.5	5.0
11	2.5	1.0	1.5	2.5	1.0	1.5	4.5	2.0	3.0	5.5	3.0	4.0
12	2.0	1.5	1.5	3.0	1.0	2.0	3.5	1.5	3.0	7.0	3.0	4.5
13	2.0	1.5	1.5	2.5	1.0	1.5	3.5	1.5	2.5	4.5	3.0	3.5
14	2.0	1.5	1.5	2.0	1.5	1.5	4.5	2.0	3.0	9.5	2.0	5.5
15	1.5	1.0	1.5	3.0	1.0	2.0	3.5	2.0	2.5	8.5	4.0	6.5
16	2.0	1.5	1.5	4.0	1.0	2.0	4.5	1.0	2.5	8.5	5.0	6.5
17	1.5	1.0	1.0	4.0	1.5	2.5	2.5	1.5	2.0	10.0	5.0	7.5
18	1.5	1.0	1.5	2.0	1.0	1.5	4.0	1.5	2.5	10.5	4.5	7.0
19	2.5	1.5	2.0	3.0	1.0	2.0	4.5	2.0	3.0	10.5	5.0	8.0
20	3.0	1.5	2.0	2.0	1.0	1.5	3.5	2.0	2.5	11.5	7.0	8.5
21	3.0	1.5	2.0	2.5	1.0	1.5	5.0	2.0	3.0	9.5	5.0	7.0
22	3.5	1.5	2.5	2.0	.5	1.5	5.5	2.0	3.5	10.0	5.5	7.5
23	3.5	1.5	2.5	2.0	1.0	1.5	6.5	2.0	4.0	10.0	4.5	7.5
24	3.5	1.0	2.0	2.0	1.0	1.5	6.5	2.5	4.0	10.5	5.0	8.0
25	3.0	1.5	2.0	3.0	1.0	2.0	7.5	3.0	4.5	10.0	5.0	7.5
26	2.5	1.5	2.0	3.0	1.0	1.5	6.0	3.0	4.5	12.0	6.0	9.0
27	4.0	1.0	2.0	3.5	1.0	2.0	4.0	3.0	3.5	12.5	8.0	10.0
28	4.0	1.5	2.5	3.5	1.0	2.0	5.0	3.0	4.0	13.5	7.5	10.5
29	---	---	---	4.0	1.0	2.0	4.5	2.5	3.5	15.0	9.0	12.0
30	---	---	---	3.5	1.5	2.0	7.5	3.0	5.0	13.0	9.5	11.5
31	---	---	---	3.5	1.5	2.0	---	---	---	12.5	8.0	10.0
MONTH	4.0	.0	1.5	4.0	.5	1.5	7.5	1.0	3.0	15.0	2.0	7.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	10.0	8.0	9.0	17.5	12.0	14.5	21.0	16.0	18.5	19.0	14.0	16.5
2	13.5	8.0	10.5	15.0	11.5	13.0	20.5	14.5	17.5	19.0	14.0	16.5
3	15.0	10.0	12.5	15.0	10.0	12.5	21.0	16.0	18.0	19.0	14.5	16.5
4	13.0	9.0	11.5	16.5	10.5	13.0	22.0	16.0	19.0	17.5	14.0	15.5
5	9.0	5.5	7.0	16.0	11.0	13.5	22.0	17.0	19.5	17.5	13.5	15.0
6	6.0	4.5	5.0	14.0	12.0	13.0	20.5	15.5	18.0	17.5	13.0	15.5
7	7.5	4.5	6.0	16.0	12.0	13.5	17.5	14.5	16.0	16.5	13.5	15.0
8	9.5	5.5	7.0	16.0	12.0	14.0	19.5	13.5	16.0	17.0	12.5	14.5
9	10.5	6.0	8.5	14.0	12.0	13.0	19.5	14.0	16.5	18.5	13.0	16.0
10	9.5	6.5	8.5	14.0	11.0	12.5	17.0	15.0	16.0	18.5	14.0	16.0
11	11.0	6.0	8.0	15.0	12.0	13.0	19.0	13.5	16.0	18.5	13.5	16.0
12	10.5	6.0	8.0	13.0	11.5	12.0	18.5	14.0	16.0	18.5	13.5	16.0
13	8.5	6.0	7.0	15.0	10.5	13.0	17.5	13.0	15.0	18.5	13.5	16.0
14	8.5	7.0	7.5	17.0	11.5	14.0	19.0	13.5	16.0	18.5	14.0	16.5
15	10.0	6.0	8.0	18.5	12.5	15.0	18.0	14.5	16.0	18.5	14.5	16.5
16	9.0	7.5	8.5	19.5	13.5	16.0	17.5	14.0	15.5	18.5	14.5	16.0
17	10.0	7.0	8.0	20.5	14.5	17.5	15.5	12.5	14.0	18.5	14.0	16.0
18	8.5	6.0	7.0	18.0	15.5	17.0	18.0	11.5	14.5	18.5	13.5	16.0
19	8.5	6.0	7.0	19.5	14.5	16.5	19.0	13.0	15.5	18.0	14.0	16.0
20	9.0	6.5	7.5	18.5	14.0	16.0	19.0	14.0	16.5	18.0	14.0	15.5
21	12.5	7.0	9.5	19.5	13.5	16.0	19.0	14.0	16.0	16.5	12.0	14.0
22	14.0	8.0	11.0	19.0	14.0	16.5	18.5	13.5	16.0	16.5	11.5	14.0
23	15.0	10.0	12.5	19.5	14.0	16.5	18.5	15.0	16.0	17.0	12.0	14.5
24	16.0	12.0	13.5	19.5	13.5	16.5	18.0	13.5	15.5	16.5	13.0	14.5
25	16.0	11.0	13.5	20.0	14.0	17.0	18.5	13.5	16.0	14.0	13.0	13.5
26	17.0	11.0	13.5	19.5	14.5	16.5	18.0	13.5	15.5	15.0	12.5	13.5
27	17.0	11.5	14.5	20.5	14.5	17.0	18.0	13.0	15.5	14.0	11.5	13.0
28	16.0	11.0	13.5	20.5	14.5	17.5	18.0	13.5	15.5	12.5	11.5	12.0
29	17.0	11.0	13.5	19.5	15.0	17.0	18.0	13.5	15.5	13.0	11.0	12.0
30	17.0	12.0	14.5	19.5	13.5	16.5	18.5	13.5	16.0	13.5	11.5	12.0
31	---	---	---	20.5	14.0	17.0	19.0	14.0	16.5	---	---	---
MONTH	17.0	4.5	9.5	20.5	10.0	15.0	22.0	11.5	16.5	19.0	11.0	15.0
YEAR	22.0	.0	7.0									

DESCHUTES RIVER BASIN

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14074630 DESCHUTES RIVER AT LOWER BRIDGE, NEAR TERREBONNE, OR

LOCATION.--Lat 44°21'37", long 121°17'36", in SE 1/4 NE 1/4 sec.16, T.14 S., R.12 E., Deschutes County, Hydrologic Unit 17070300, on right bank 2 ft downstream from highway bridge, 7.0 mi northwest of Terrebonne, on Lower Bridge Road, and at mile 133.5.

DRAINAGE AREA.--2,160 mi², approximately.

PERIOD OF RECORD.--June 1994 to September 1995.

GAGE.--Water-stage recorder. Datum of gage is 2,523.81 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Crescent Lake, Crane Prairie and Wickiup Reservoirs. Many diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--1 year (water year 1995), 248 ft³/s, 179,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft³/s Feb. 2, 1995; minimum discharge, 28 ft³/s July 28, 29, 1995.

EXTREME FOR PERIOD JUNE TO SEPTEMBER 1994.--Maximum discharge, 84 ft³/s Sept. 30; minimum discharge, 27 ft³/s, July 29.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,250 ft³/s Feb. 2, gage height, 10.58 ft; minimum discharge, 28 ft³/s July 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, JUNE TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	JUN	JUL	AUG	SEP
1	e49	37	29	50
2	59	36	29	46
3	50	41	31	43
4	49	37	32	39
5	48	38	32	38
6	56	37	32	39
7	54	37	34	41
8	42	38	34	40
9	41	40	35	39
10	41	41	35	37
11	54	39	37	41
12	54	35	35	42
13	53	35	34	40
14	65	32	32	40
15	42	32	32	39
16	41	32	32	43
17	41	32	32	41
18	42	31	32	41
19	48	30	35	40
20	50	30	36	54
21	55	34	38	70
22	60	32	35	72
23	60	30	44	75
24	53	35	38	72
25	38	34	40	74
26	38	31	41	74
27	43	31	39	75
28	41	30	39	73
29	40	29	36	79
30	45	29	48	81
31	---	29	51	---
TOTAL	1452	1054	1109	1578
MEAN	48.4	34.0	35.8	52.6
MAX	65	41	51	81
MIN	38	29	29	37
AC-FT	2880	2090	2200	3130

e Estimated

DESCHUTES RIVER BASIN

14074630 DESCHUTES RIVER AT LOWER BRIDGE, NEAR TERREBONNE, OR--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	389	429	e357	910	227	493	94	108	40	32	36
2	65	401	433	e330	1180	202	388	84	109	43	36	35
3	60	408	413	e310	1110	199	342	65	89	50	33	36
4	75	426	441	316	1150	495	305	52	82	47	33	36
5	85	519	405	338	1160	498	301	135	85	42	34	37
6	93	457	e390	365	1170	470	304	131	69	38	33	38
7	85	421	e410	414	1150	421	307	97	59	46	34	39
8	72	117	e500	394	1130	528	348	89	47	50	39	40
9	60	131	477	408	973	469	355	81	38	43	38	41
10	53	137	475	131	880	517	447	74	49	121	34	40
11	198	170	470	126	821	563	162	56	48	130	39	38
12	115	525	439	130	760	563	111	54	55	104	35	38
13	84	533	155	149	715	411	119	49	51	68	34	37
14	76	537	150	650	575	578	91	47	49	43	35	36
15	87	214	335	640	637	599	67	41	47	40	34	36
16	291	141	422	597	582	570	52	39	53	39	34	38
17	310	140	446	239	550	532	67	45	37	38	35	39
18	298	138	469	172	705	605	68	52	39	37	35	39
19	290	353	362	165	740	606	50	48	47	37	37	38
20	298	584	181	308	729	593	45	52	39	38	36	37
21	293	514	101	471	249	731	35	59	38	57	35	34
22	283	475	95	458	270	796	58	61	36	51	34	34
23	280	461	190	414	270	814	68	55	48	45	35	35
24	276	512	429	349	264	825	92	51	39	39	34	35
25	273	448	417	392	654	802	73	38	52	35	33	36
26	270	345	412	393	651	761	46	51	58	33	33	37
27	277	346	455	374	571	726	51	52	53	31	33	38
28	409	420	447	403	233	614	48	50	48	30	33	39
29	285	459	400	443	---	580	48	55	41	29	33	41
30	278	523	332	427	---	541	75	73	41	33	31	42
31	274	---	332	566	---	522	---	143	---	33	33	---
TOTAL	5965	11244	11412	11229	20789	17358	5016	2073	1654	1510	1067	1125
MEAN	192	375	368	362	742	560	167	66.9	55.1	48.7	34.4	37.5
MAX	409	584	500	650	1180	825	493	143	109	130	39	42
MIN	53	117	95	126	233	199	35	38	36	29	31	34
AC-FT	11830	22300	22640	22270	41230	34430	9950	4110	3280	3000	2120	2230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

MEAN	192	375	368	362	742	560	167	66.9	51.8	41.4	35.1	45.0
MAX	192	375	368	362	742	560	167	66.9	55.1	48.7	35.8	52.6
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1994	1994
MIN	192	375	368	362	742	560	167	66.9	48.4	34.0	34.4	37.5
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1994	1994	1995	1995

SUMMARY STATISTICS

FOR 1995 WATER YEAR

WATER YEARS 1994 - 1995

ANNUAL TOTAL	90442											
ANNUAL MEAN	248								248			
HIGHEST ANNUAL MEAN									248			1995
LOWEST ANNUAL MEAN									248			1995
HIGHEST DAILY MEAN	1180						Feb 2		1180		Feb 2	1995
LOWEST DAILY MEAN	29						Jul 29		29		Jul 29	1994
ANNUAL SEVEN-DAY MINIMUM	32						Jul 26		29		Jul 27	1994
ANNUAL RUNOFF (AC-FT)	179400								179500			
10 PERCENT EXCEEDS	581								532			
50 PERCENT EXCEEDS	117								56			
90 PERCENT EXCEEDS	35								34			

e Estimated

DESCHUTES RIVER BASIN

121

14076500 DESCHUTES RIVER NEAR CULVER, OR

LOCATION.--Lat 44°29'56", long 121°19'12", in NW 1/4 SE 1/4 sec.29, T.12 S., R.12 E., Jefferson County, Hydrologic Unit 17070301, on right bank 2.5 mi downstream from Squaw Creek, 6.0 mi southwest of Culver, and at mile 120.6.

DRAINAGE AREA.--2,705 mi².

PERIOD OF RECORD.--July 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,980 ft above sea level (river-profile survey). July 14, 1952, to Sept. 30, 1961, at site 4.1 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records excellent. Flow regulated by Crescent Lake and Crane Prairie and Wickiup Reservoirs. Many diversions for irrigation upstream from station. Continuous water-quality records for the period October 1954 to September 1957 and January 1959 to September 1974 have been collected at this location.

AVERAGE DISCHARGE.--43 years (water years 1953-95), 893 ft³/s, 646,600 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,680 ft³/s Dec. 24, 1964, gage height, 10.00 ft, from rating curve extended above 2,200 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 418 ft³/s July 7, 8, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,800 ft³/s Feb. 2, gage height, 5.03 ft; minimum discharge, 469 ft³/s Aug. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	525	838	889	812	1550	839	991	563	598	508	479	474
2	507	833	869	820	1680	781	942	539	603	517	479	477
3	508	822	860	810	1470	763	912	519	581	538	477	477
4	507	838	850	804	1410	968	875	503	571	542	476	477
5	542	869	819	813	1390	1020	869	573	582	518	476	477
6	532	845	858	824	1380	1010	869	636	554	498	476	480
7	548	833	889	871	1330	971	871	563	518	511	476	482
8	519	625	869	866	1300	1030	893	550	499	532	479	481
9	512	585	879	917	1220	1010	901	533	486	580	484	482
10	502	598	877	721	1180	1040	954	523	491	672	478	482
11	591	625	878	648	1170	1050	750	503	492	643	479	481
12	606	779	875	645	1150	1050	593	496	501	620	479	479
13	542	830	700	690	1110	996	609	495	500	568	476	478
14	526	830	647	951	1040	1050	572	491	498	541	477	477
15	540	750	760	1000	1060	1070	545	487	506	543	477	476
16	668	636	869	976	1050	1060	511	483	509	529	477	477
17	750	632	888	832	1050	1040	516	483	489	502	477	478
18	749	628	908	721	1150	1080	531	491	512	502	479	480
19	747	714	866	704	1180	1090	502	484	514	510	477	479
20	753	886	716	764	1220	1080	505	490	495	525	477	476
21	750	859	580	923	941	1140	485	493	490	550	477	473
22	750	826	544	917	929	1170	497	502	483	534	477	474
23	745	851	600	905	923	1180	519	494	492	528	477	476
24	744	870	828	870	891	1180	537	489	488	516	478	475
25	743	868	834	889	1080	1160	547	476	510	500	476	477
26	735	820	833	890	1120	1140	495	486	537	485	476	475
27	786	818	850	886	1070	1120	501	489	531	483	475	476
28	947	836	857	896	873	1080	497	483	524	477	477	479
29	795	860	860	930	---	1060	499	490	508	478	473	481
30	773	896	831	977	---	1040	510	485	507	478	471	482
31	768	---	820	1170	---	1010	---	610	---	479	472	---
TOTAL	20210	23500	25203	26442	32917	32278	19798	15902	15569	16407	14784	14338
MEAN	652	783	813	853	1176	1041	660	513	519	529	477	478
MAX	947	896	908	1170	1680	1180	991	636	603	672	484	482
MIN	502	585	544	645	873	763	485	476	483	477	471	473
AC-FT	40090	46610	49990	52450	65290	64020	39270	31540	30880	32540	29320	28440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1995, BY WATER YEAR (WY)

	703	1133	1245	1309	1365	1324	836	582	623	545	525	548
MEAN	703	1133	1245	1309	1365	1324	836	582	623	545	525	548
MAX	1172	1706	2130	2012	2034	2360	1799	1228	1020	766	741	782
(WY)	1985	1985	1985	1975	1975	1972	1984	1956	1956	1975	1953	1953
MIN	470	783	813	853	892	839	510	457	455	430	441	455
(WY)	1964	1995	1995	1995	1993	1964	1968	1964	1964	1964	1964	1963

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1953 - 1995

ANNUAL TOTAL	245834	257348	893
ANNUAL MEAN	674	705	1283
HIGHEST ANNUAL MEAN			677
LOWEST ANNUAL MEAN			4790
HIGHEST DAILY MEAN	1160	Apr 3	1680
LOWEST DAILY MEAN	474	Jul 28	471
ANNUAL SEVEN-DAY MINIMUM	475	Jul 28	474
ANNUAL RUNOFF (AC-FT)	487600	510400	646600
10 PERCENT EXCEEDS	947	1050	1540
50 PERCENT EXCEEDS	580	598	731
90 PERCENT EXCEEDS	481	477	488

DESCHUTES RIVER BASIN

14087400 CROOKED RIVER BELOW OPAL SPRINGS, NEAR CULVER, OR

LOCATION.--Lat 44°29'33", long 121°17'50", in NW 1/4 NE 1/4 sec.33, T.12 S., R.12 E., Jefferson County, Hydrologic Unit 17070305, on right bank 0.2 mi downstream from Opal Springs, 4.8 mi southwest of Culver, and at mile 6.7.

DRAINAGE AREA.--4,300 mi², approximately, of which 500 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,953.60 ft above sea level (Portland General Electric Co. bench mark).

REMARKS.--No estimated daily discharges. Records good. Flow regulated since December 1960 by Prineville Reservoir, active capacity of 152,800 acre-ft and Ochoco Reservoir, active capacity, 46,500 acre-ft. Dam and powerplant 500 ft upstream, completed in 1985, causes brief fluctuations in flow. Many diversions for irrigation upstream from station. Practically all of the summer flow comes from Opal Springs and other springs within 15 mi upstream from station. Simultaneous records (1961-63) at former gaging station 5.6 mi downstream indicated over 15 percent increase to summer flow from springs downstream from this station. Continuous water-quality records for the period October 1963 to September 1974 have been collected at this location.

AVERAGE DISCHARGE.--34 years (water years 1962-95), 1,556 ft³/s, 1,127,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft³/s Dec. 24, 1964, gage height, 9.36 ft; minimum daily discharge, 1,090 ft³/s May 11, 1981, minimum instantaneous discharge after October 1989, 656 ft³/s many days in the 1990 water year, prior to that date minimum instantaneous discharge was not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,320 ft³/s Dec. 14, gage height, 4.20 ft, due to powerplant operation; minimum recorded discharge, 684 ft³/s Dec. 14, due to powerplant operation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	1310	1290	1260	1650	1780	1380	1720	1190	1190	1200	1250
2	1250	1320	1290	1260	1680	1780	1380	1770	1190	1190	1190	1220
3	1250	1310	1290	1260	1570	1790	1380	1790	1180	1200	1190	1210
4	1250	1310	1290	1270	1480	1790	1380	1780	1210	1200	1180	1210
5	1230	1320	1280	1270	1440	1780	1390	1790	1220	1200	1190	1220
6	1200	1310	1280	1270	1410	1770	1380	1790	1250	1200	1200	1220
7	1190	1310	1290	1270	1390	1720	1400	1800	1260	1210	1190	1220
8	1190	1310	1280	1270	1380	1620	1410	1800	1300	1210	1200	1220
9	1190	1330	1280	1280	1670	1530	1440	1770	1360	1270	1200	1240
10	1200	1330	1290	1290	1790	1440	1440	1750	1360	1370	1190	1240
11	1190	1320	1290	1310	1790	1400	1370	1750	1360	1390	1200	1230
12	1190	1310	1290	1310	1790	1400	1410	1750	1310	1370	1220	1270
13	1200	1300	1280	1340	1790	1400	1410	1760	1250	1360	1200	1270
14	1210	1300	1320	1380	1780	1400	1430	1760	1340	1350	1200	1270
15	1200	1310	1310	1460	1780	1430	1610	1750	1430	1310	1210	1250
16	1310	1300	1290	1370	1770	1460	1730	1680	1460	1240	1190	1240
17	1320	1310	1280	1330	1770	1440	1740	1610	1470	1200	1180	1270
18	1350	1310	1280	1310	1790	1430	1720	1560	1460	1190	1190	1310
19	1370	1310	1280	1320	1800	1470	1700	1570	1470	1200	1200	1290
20	1330	1310	1280	1320	1810	1470	1670	1490	1470	1220	1210	1230
21	1320	1290	1280	1310	1810	1460	1600	1510	1450	1320	1210	1230
22	1320	1290	1280	1300	1830	1450	1530	1550	1350	1240	1210	1230
23	1320	1290	1290	1290	1830	1440	1460	1510	1280	1230	1190	1240
24	1310	1300	1290	1290	1830	1430	1440	1360	1230	1210	1190	1250
25	1310	1300	1270	1290	1790	1420	1410	1270	1200	1200	1190	1270
26	1310	1290	1270	1290	1790	1420	1370	1220	1180	1200	1190	1270
27	1320	1290	1270	1290	1780	1410	1350	1210	1180	1190	1190	1270
28	1320	1290	1270	1290	1780	1410	1410	1200	1180	1190	1190	1290
29	1320	1290	1270	1310	---	1390	1540	1210	1180	1190	1190	1300
30	1300	1290	1270	1440	---	1390	1690	1240	1180	1190	1180	1320
31	1310	---	1260	1680	---	1380	---	1210	---	1200	1190	---
TOTAL	39330	39160	39780	40930	47770	46900	44570	48930	38950	38430	37050	37550
MEAN	1269	1305	1283	1320	1706	1513	1486	1578	1298	1240	1195	1252
MAX	1370	1330	1320	1680	1830	1790	1740	1800	1470	1390	1220	1320
MIN	1190	1290	1260	1260	1380	1380	1350	1200	1180	1190	1180	1210
AC-FT	78010	77670	78900	81180	94750	93030	88400	97050	77260	76230	73490	74480

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1995, BY WATER YEAR (WY)

MEAN	1427	1376	1498	1590	1773	1968	2122	1688	1317	1269	1299	1362
MAX	1650	2069	2686	3551	3490	4208	4793	3295	1777	1475	1593	1541
(WY)	1970	1985	1965	1965	1965	1972	1984	1984	1984	1983	1976	1965
MIN	1239	1232	1179	1182	1245	1232	1192	1173	1196	1122	1133	1187
(WY)	1969	1964	1964	1964	1989	1977	1977	1964	1977	1981	1980	1980

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1962 - 1995
ANNUAL TOTAL	461060	499350	
ANNUAL MEAN	1263	1368	1556
HIGHEST ANNUAL MEAN			2196
LOWEST ANNUAL MEAN			1250
HIGHEST DAILY MEAN	1530	Jan 1	6130
LOWEST DAILY MEAN	1160	May 12	1090
ANNUAL SEVEN-DAY MINIMUM	1170	May 9	1100
ANNUAL RUNOFF (AC-FT)	914500	990500	1127000
10 PERCENT EXCEEDS	1350	1750	2180
50 PERCENT EXCEEDS	1260	1310	1350
90 PERCENT EXCEEDS	1180	1190	1200

DESCHUTES RIVER BASIN

123

14090350 JEFFERSON CREEK NEAR CAMP SHERMAN, OR

LOCATION.--Lat 44°34'18", long 121°38'17", in SW 1/4 SE 1/4 sec.34, T.11 S., R.9 E., Jefferson County, Hydrologic Unit 17070301, Warm Springs Indian Reservation, on left bank 100 ft upstream from bridge, 7.6 mi north of Camp Sherman, and at mile 1.3.

DRAINAGE AREA.--27.8 mi².

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,780 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records excellent below 180 ft³/s, good above. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--12 years (water years 1984-95), 86.4 ft³/s, 42.23 in/yr, 62,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 428 ft³/s Feb. 23, 1986, gage height, 3.21 ft; minimum daily discharge, 36 ft³/s Dec. 22, 1990, but could have been lower during period of ice effect Dec. 19-25, 1990.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	1600	420	3.19	Feb. 1	1700	397	3.12
Oct. 31	2230	*423	*3.20				

Minimum discharge, 45 ft³/s Nov. 22, Dec. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	131	86	58	350	107	90	99	144	120	97	84
2	54	75	69	59	212	106	89	118	136	125	98	84
3	53	66	66	54	139	104	89	103	138	127	97	83
4	53	66	59	56	123	103	93	113	138	118	97	84
5	54	62	49	56	114	102	94	105	134	115	97	83
6	53	60	55	54	109	98	94	101	116	117	97	82
7	54	58	57	53	104	97	97	103	112	115	102	82
8	54	57	54	56	100	98	90	102	110	122	97	82
9	53	58	55	66	99	109	86	102	110	144	94	81
10	53	57	55	66	93	115	85	100	113	123	94	80
11	53	56	54	63	93	114	85	103	115	115	94	80
12	53	55	53	62	90	106	86	101	116	114	93	80
13	53	54	52	82	85	105	92	98	118	110	92	80
14	60	53	52	96	84	109	87	95	122	109	91	79
15	56	54	53	79	87	108	85	100	140	108	92	79
16	55	54	61	72	85	103	82	111	125	107	92	79
17	54	54	114	69	101	101	82	117	124	107	95	78
18	54	52	86	68	132	107	81	114	127	107	92	77
19	54	55	70	66	168	108	80	112	113	107	90	77
20	53	54	68	65	143	106	80	114	110	109	89	77
21	58	52	65	64	127	103	79	121	111	108	88	76
22	54	50	61	64	117	101	79	120	117	107	88	75
23	53	53	60	63	112	98	79	120	120	105	88	75
24	53	53	60	62	113	96	81	121	125	103	88	75
25	53	55	58	62	117	94	85	125	127	102	87	75
26	61	51	67	61	116	93	85	127	125	103	87	75
27	243	52	88	61	114	92	90	124	122	102	86	91
28	100	52	70	64	110	92	89	126	117	101	86	84
29	65	64	65	73	---	91	89	134	117	101	86	82
30	59	87	61	109	---	90	87	144	119	99	85	80
31	150	---	59	284	---	90	---	144	---	98	84	---
TOTAL	2030	1800	1982	2267	3437	3146	2590	3517	3661	3448	2843	2399
MEAN	65.5	60.0	63.9	73.1	123	101	86.3	113	122	111	91.7	80.0
MAX	243	131	114	284	350	115	97	144	144	144	102	91
MIN	53	50	49	53	84	90	79	95	110	98	84	75
AC-FT	4030	3570	3930	4500	6820	6240	5140	6980	7260	6840	5640	4760
CFSM	2.36	2.16	2.30	2.63	4.42	3.65	3.11	4.08	4.39	4.00	3.30	2.88
IN.	2.72	2.41	2.65	3.03	4.60	4.21	3.47	4.71	4.90	4.61	3.80	3.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

MEAN	72.6	76.9	68.9	72.1	75.4	79.0	90.7	112	121	104	87.5	76.8
MAX	90.1	101	86.4	112	123	129	110	163	153	145	117	98.5
(WY)	1985	1985	1984	1984	1995	1986	1993	1993	1993	1984	1984	1984
MIN	55.5	59.3	58.6	57.8	50.6	57.9	68.9	83.3	80.0	70.5	62.0	56.8
(WY)	1993	1988	1993	1993	1989	1985	1994	1991	1992	1992	1994	1994

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1984 - 1995
ANNUAL TOTAL	24322	33120	
ANNUAL MEAN	66.6	90.7	86.4
HIGHEST ANNUAL MEAN			109
LOWEST ANNUAL MEAN			66.8
HIGHEST DAILY MEAN	243	350	350
LOWEST DAILY MEAN	48	49	36
ANNUAL SEVEN-DAY MINIMUM	51	52	38
ANNUAL RUNOFF (AC-FT)	48240	65690	62590
ANNUAL RUNOFF (CFSM)	2.40	3.26	3.11
ANNUAL RUNOFF (INCHES)	32.55	44.32	42.23
10 PERCENT EXCEEDS	86	122	124
50 PERCENT EXCEEDS	61	90	80
90 PERCENT EXCEEDS	53	54	59

DESCHUTES RIVER BASIN

14090400 WHITEWATER RIVER NEAR CAMP SHERMAN, OR

LOCATION.--Lat 44°43'04", long 121°38'07", in SE 1/4 NE 1/4 sec.11, T.10 S., R.9 E., Jefferson County, Hydrologic Unit 17070301, Warm Springs Indian Reservation, on left bank 0.2 mi downstream from Lionshead Creek, 18 mi north of Camp Sherman, and at mile 7.1.

DRAINAGE AREA.--22.9 mi².

PERIOD OF RECORD.--July 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,230 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--13 years (water years 1983-95), 77.0 ft³/s, 45.66 in/yr, 55,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 613 ft³/s Dec. 10, 1987, from rating curve extended above 170 ft³/s, gage height, 3.24 ft; maximum gage height, 3.39 ft Feb. 1, 1995; minimum daily discharge, 28 ft³/s Dec. 22, 1990, but could be less because of ice effect.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	1500	442	2.86	Feb. 1	0200	*523	*3.39
Oct. 31	2230	466	2.92				

Minimum discharge, 29 ft³/s several days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	156	82	69	400	103	69	73	112	107	80	62
2	35	71	67	67	276	99	67	82	107	120	84	64
3	31	57	62	65	215	95	67	77	110	129	86	66
4	30	69	60	64	193	92	67	85	111	117	86	67
5	32	62	56	63	177	88	67	83	108	107	87	62
6	31	57	56	63	162	84	67	81	95	110	95	59
7	32	56	55	62	149	82	69	78	89	108	104	58
8	32	54	53	60	136	83	70	79	86	120	79	58
9	33	56	53	74	126	95	67	80	85	149	73	58
10	32	55	51	73	118	111	66	80	85	122	71	57
11	31	54	51	72	113	107	66	80	87	104	70	58
12	30	54	51	73	107	95	67	79	87	97	67	59
13	30	52	50	102	98	91	72	76	89	91	64	59
14	40	51	49	136	94	92	68	74	93	89	64	59
15	31	51	49	111	91	92	67	74	106	90	72	62
16	30	51	62	99	88	88	65	77	94	90	68	63
17	31	51	97	94	137	86	64	83	95	94	66	63
18	31	49	82	93	139	88	63	86	99	96	60	61
19	30	51	74	88	178	88	63	83	87	99	59	59
20	29	58	71	85	175	90	62	82	84	108	60	57
21	38	50	70	82	168	87	61	86	85	106	62	53
22	31	48	67	78	149	83	61	86	89	106	63	51
23	30	53	66	75	146	82	60	86	92	101	66	51
24	29	50	65	72	136	80	60	88	98	94	63	51
25	29	49	63	71	133	76	60	92	106	90	61	51
26	49	49	72	69	131	75	61	94	108	93	60	49
27	313	47	95	67	116	75	68	94	106	91	59	67
28	99	47	87	68	109	73	68	95	103	90	61	60
29	50	55	80	79	---	72	67	99	104	89	61	54
30	42	84	76	118	---	71	66	107	106	81	59	52
31	192	---	73	305	---	70	---	112	---	78	59	---
TOTAL	1544	1747	2045	2697	4260	2693	1965	2631	2906	3166	2169	1750
MEAN	49.8	58.2	66.0	87.0	152	86.9	65.5	84.9	96.9	102	70.0	58.3
MAX	313	156	97	305	400	111	72	112	112	149	104	67
MIN	29	47	49	60	88	70	60	73	84	78	59	49
AC-FT	3060	3470	4060	5350	8450	5340	3900	5220	5760	6280	4300	3470
CFSM	2.17	2.54	2.88	3.80	6.64	3.79	2.86	3.71	4.23	4.46	3.06	2.55
IN.	2.51	2.84	3.32	4.38	6.92	4.37	3.19	4.27	4.72	5.14	3.52	2.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1995, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	48.7	60.3	60.2	65.7	71.9	75.8	87.3	104	115	100	76.7	57.6	
MAX	65.3	97.9	93.9	121	152	132	134	177	157	139	109	76.1	
(WY)	1983	1985	1983	1983	1995	1986	1989	1993	1983	1983	1983	1983	
MIN	36.0	34.7	45.5	38.4	37.1	50.1	50.3	64.5	60.7	54.0	54.8	42.2	
(WY)	1993	1994	1994	1993	1994	1985	1991	1991	1992	1992	1994	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1983 - 1995

ANNUAL TOTAL	21196	29573											
ANNUAL MEAN	58.1	81.0								77.0			
HIGHEST ANNUAL MEAN										105		1983	
LOWEST ANNUAL MEAN										54.0		1994	
HIGHEST DAILY MEAN	313	Oct 27				400	Feb 1			460	Feb 23	1986	
LOWEST DAILY MEAN	29	Oct 20				29	Oct 20			28	Dec 22	1990	
ANNUAL SEVEN-DAY MINIMUM	31	Oct 19				31	Oct 19			31	Oct 19	1994	
ANNUAL RUNOFF (AC-FT)	42040					58660				55750			
ANNUAL RUNOFF (CFSM)	2.54					3.54				3.36			
ANNUAL RUNOFF (INCHES)	34.43					48.04				45.66			
10 PERCENT EXCEEDS	80					111				123			
50 PERCENT EXCEEDS	54					73				68			
90 PERCENT EXCEEDS	35					50				41			

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LOCATION.--Lat 44°37'33", long 121°28'55", in SE 1/4 SW 1/4 sec.12, T.11 S., R.10 E., Jefferson County, Hydrologic Unit 17070301, Deschutes National Forest, on right bank 1.0 mi upstream from maximum controlled pool of Lake Billy Chinook, 15.0 mi northwest of Culver, and at mile 13.6.

PERIOD OF RECORD.--April 1910 to February 1912 (gage heights and discharge measurements only), March 1912 to December 1913, October 1921 to current year. Published as "at Hubbard's ranch, near Sisters" 1910, and as "at Hubbard's ranch, near Grandview" 1910-13.

GAGE.--Water-stage recorder. Datum of gage is 1,974.36 ft above sea level (levels by Portland General Electric Co.). Prior to Dec. 31, 1913, nonrecording gage at site 2.3 mi upstream at different datum. Oct. 1, 1921, to May 3, 1949, nonrecording gage and May 4, 1949, to June 18, 1963, water-stage recorder at site 2.7 mi downstream at datum 64 ft lower.

REMARKS.--No estimated daily discharges. Records excellent. No regulation. Many small diversions for irrigation upstream from station. Stream is spring fed. Records herein are for measuring site. Continuous water-quality records for the period October 1954 to September 1974 have been collected at this location.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,530 ft³/s Dec. 24, 1964, gage height, 6.81 ft; minimum discharge, 1,080 ft³/s Feb. 17, 1932, Oct. 2-31, Nov. 6, 7, 10-14, 1942.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,940 ft³/s Feb. 1, gage height, 3.21 ft; minimum discharge, 1,120 ft³/s Oct. 13, 1925.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	1540	1320	1240	2670	1620	1420	1420	1500	1420	1310	1260
2	1150	1270	1260	1240	2580	1600	1410	1500	1500	1440	1320	1260
3	1140	1220	1230	1220	2200	1580	1400	1460	1490	1450	1320	1260
4	1140	1240	1220	1220	2050	1570	1410	1500	1490	1430	1320	1270
5	1140	1230	1200	1230	1930	1560	1410	1500	1490	1410	1320	1260
6	1140	1210	1210	1220	1830	1530	1420	1480	1440	1420	1330	1260
7	1140	1190	1210	1230	1760	1510	1440	1470	1430	1420	1350	1250
8	1140	1190	1200	1220	1720	1520	1440	1470	1410	1450	1310	1250
9	1140	1200	1200	1280	1660	1570	1420	1460	1400	1550	1300	1260
10	1140	1190	1200	1280	1620	1590	1410	1450	1400	1480	1300	1250
11	1130	1180	1200	1280	1600	1580	1400	1460	1400	1420	1290	1240
12	1130	1180	1190	1280	1590	1550	1420	1440	1400	1410	1290	1240
13	1130	1180	1190	1490	1550	1560	1440	1430	1410	1380	1290	1240
14	1160	1170	1190	1750	1510	1570	1410	1420	1440	1370	1280	1240
15	1150	1170	1190	1600	1510	1560	1400	1420	1510	1370	1290	1250
16	1140	1180	1230	1500	1490	1540	1390	1430	1450	1360	1290	1250
17	1140	1180	1360	1460	1710	1520	1380	1450	1440	1360	1290	1250
18	1140	1170	1330	1440	2010	1550	1380	1440	1460	1370	1280	1250
19	1130	1170	1290	1410	2130	1560	1370	1430	1420	1380	1270	1250
20	1130	1190	1280	1380	2090	1570	1380	1430	1400	1390	1270	1240
21	1150	1170	1260	1360	1980	1550	1360	1440	1400	1380	1270	1230
22	1140	1160	1250	1350	1900	1540	1350	1440	1410	1380	1270	1230
23	1130	1180	1250	1330	1830	1530	1350	1440	1410	1370	1270	1230
24	1130	1180	1240	1320	1790	1510	1350	1440	1420	1350	1270	1230
25	1130	1180	1230	1310	1770	1490	1360	1450	1440	1340	1270	1230
26	1150	1170	1250	1310	1720	1470	1350	1450	1440	1340	1270	1230
27	1620	1170	1330	1300	1680	1460	1390	1450	1430	1400	1260	1280
28	1400	1170	1290	1340	1650	1450	1380	1440	1410	1340	1260	1260
29	1210	1190	1270	1380	---	1440	1390	1460	1410	1340	1270	1250
30	1180	1260	1260	1520	---	1430	1380	1480	1410	1320	1260	1240
31	1320	---	1250	2060	---	1430	---	1490	---	1310	1260	---
TOTAL	36360	36080	38580	42550	51530	47510	41810	45040	43060	43090	39950	37440
MEAN	1173	1203	1245	1373	1840	1533	1394	1453	1435	1390	1289	1248
MAX	1620	1540	1360	2060	2670	1620	1440	1500	1510	1550	1350	

[illegible]

ANNUAL TOTAL	446650		503000			
ANNUAL MEAN	1224		1378		1479	
HIGHEST ANNUAL MEAN					1845	1956
LOWEST ANNUAL MEAN					1167	1941
HIGHEST DAILY MEAN	1620	Oct 27	2670	Feb 1	7100	Dec 24 1964
LOWEST DAILY MEAN	1130	Oct 11	1130	Oct 11	1080	Feb 17 1932
ANNUAL SEVEN-DAY MINIMUM	1130	Oct 19	1130	Oct 19	1080	Oct 2 1942
ANNUAL RUNOFF (AC-FT)	885900		997700		1071000	
10 PERCENT EXCEEDS	1290		1570		1780	
50 PERCENT EXCEEDS	1220		1360		1440	
90 PERCENT EXCEEDS	1160		1180		1220	

DESCHUTES RIVER BASIN

14092100 LAKE BILLY CHINOOK NEAR METOLIUS, OR

LOCATION.--Lat 44°36'14", long 121°16'40", in SW 1/4 NE 1/4 sec.22, T.11 S., R.12 E., Jefferson County, Hydrologic Unit 17070301, Warm Springs Indian Reservation, near left end of Round Butte Dam on Deschutes River, 5.0 mi west of Metolius, and at mile 110.6.

DRAINAGE AREA.--7,490 mi², approximately.

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

GAGE.--Nonrecording gage. Datum of gage is sea level (levels by Portland General Electric Co.).

REMARKS.--Reservoir is formed by rock fill dam completed in June 1964 by Portland General Electric Co.; storage began Jan. 2, 1964. Total capacity is 534,700 acre-ft at elevation 1,945.0 ft proposed upper limit of operation, and usable capacity is 273,900 acre-ft between elevations 1,860.0 ft, proposed lower limit of operation, and 1,945.0 ft. Reservoir used for power generation under FERC license 2030. Figures given herein represent total contents.

COOPERATION.--Gage readings and capacity tables furnished by Portland General Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 538,700 acre-ft July 15, 16, 1972, elevation, 1,946.00 ft; minimum contents observed since first filling, 431,100 acre-ft Feb. 13, 1972, elevation, 1,917.13 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 535,900 acre-ft July 11, elevation, 1,945.30 ft; minimum contents observed, 520,200 acre-ft Jan. 28, elevation, 1,941.29 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1,944.02	530,800	--
Oct. 31.....	1,944.30	532,000	+1,200
Nov. 30.....	1,943.01	526,900	-5,100
Dec. 31.....	1,942.67	525,600	-1,300
CAL YR 1994.....	--	--	-5,400
Jan. 31.....	1,942.17	523,600	-2,000
Feb. 28.....	1,942.31	524,200	+600
Mar. 31.....	1,942.09	523,300	-900
Apr. 30.....	1,942.58	525,200	+1,900
May 31.....	1,944.07	531,000	+5,800
June 30.....	1,943.94	530,500	-500
July 31.....	1,944.10	531,200	+700
Aug. 31.....	1,944.13	531,300	+100
Sept. 30.....	1,944.05	531,000	-300
WTR YR 1995.....	--	--	+200

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LOCATION.--Lat 44°43'34", long 121°14'45", in SE 1/4 SW 1/4 sec.1, T.10 S., R.12 E., Jefferson County, Hydrologic Unit 17070306, on right bank 400 ft downstream from reregulating dam, 2.7 mi downstream from Pelton Dam, 8.5 mi northwest of Madras, and at mile 100.1.

PERIOD OF RECORD. -- October 1923 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,390.25 ft above sea level (levels by Portland General Electric Co.). See WSP 1738 for history of changes prior to Nov. 23, 1957.

AVERAGE DISCHARGE.--72 years (water years 1924-95), 4,517 ft³/s, 3,272,000 acre-ft/yr.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,280 ft³/s Feb. 4, gage height, 3.64 ft; minimum discharge, 3,060 ft³/s Oct. 17, result of regulation.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3590	4560	3870	3880	4520	5150	4060	3890	3720	3630	3510	3600
2	3580	4720	3880	3890	4970	5120	4050	3890	3720	3630	3540	3480
3	3580	4720	3870	3900	6020	4830	4060	3880	3720	3600	3510	3490
4	3570	4660	3870	3900	6250	4640	4060	3880	3710	3610	3550	3490
5	3560	4260	3920	3880	6250	4600	4050	3890	3760	3600	3540	3510
6	3550	4250	4340	3880	5940	4600	4050	4380	4020	3610	3550	3500
7	3520	4230	4350	3870	5790	4610	4350	4560	3990	3630	3620	3490
8	3510	4230	4340	3870	5510	4820	4340	4530	3980	3620	3600	3490
9	3510	4220	4300	3960	5360	4950	4340	4530	3840	3710	3510	3480
10	3490	4120	3900	4350	5080	4940	4370	4520	3730	3960	3600	3740
11	3490	4060	3860	4360	5080	4940	4490	4210	3720	4300	3710	3880
12	3490	3870	3860	4330	5090	4880	4460	4110	3720	4310	3710	3950
13	3500	3870	3860	4100	5100	4550	4330	4060	3720	4310	3710	3740
14	3510	3880	3860	4120	5640	4510	4340	4050	3720	4050	3690	3740
15	3500	3890	3850	4290	5640	4500	4330	4080	3730	3810	3640	3760
16	3530	3870	3880	4580	5630	4490	4100	4190	4090	3810	3630	3640
17	3530	3870	4120	4600	5630	4480	4090	4320	4090	3790	3620	3630
18	3550	3870	4100	4610	5640	4480	4080	4200	4090	3630	3590	3640
19	3580	3880	4110	4610	5680	4490	4090	4170	4090	3600	3390	3640
20	3830	3870	4390	4600	5690	4770	4090	4150	4210	3590	3370	3650
21	4000	3870	4380	4600	5720	4930	4080	4160	4220	3550	3400	3670
22	4000	3870	4380	4600	5950	4890	4080	4160	4220	3850	3400	3630
23	4000	3870	4380	4600	5920	4920	4090	4100	4050	3840	3450	3620
24	4000	3860	3910	4590	5710	4930	4090	4100	3810	3840	3680	3620
25	3990	3860	3870	4590	5690	4920	4000	4070	3770	3830	3770	3630
26	4000	3860	3880	4560	5690	4910	4000	3810	3770	3780	3710	3630
27	4000	3870	3890	4340	5690	4930	4000	3710	3760	3700	3710	3630
28	3990	3860	3880	4340	5640	4920	4000	3690	3740	3720	3700	3630
29	3980	3880	3880	4330	---	4920	4000	3740	3720	3740	3600	3600
30	3980	3880	3870	4150	---	4880	4000	3730	3720	3730	3580	3590
31	4050	---	3870	4290	---	4520	---	3750	---	3720	3580	---
TOTAL	114960	121580	124720	132570	156520	148020	124470	126510	116170	117100	111170	108790
MEAN	3708	4053	4023	4276	5590	4775	4149	4081	3872	3777	3586	3626
MAX	4050	4720	4390	4610	6250	5150	4490	4560	4220	4310		

MEAN	3955	4457	4826	4979	5223	5452	5302	4425	4173	3869	3764	3798
MAX	5097	6124	6655	8097	8590	9590	9888	6949	5759	4786	4718	4553
(WY)	1973	1985	1982	1965	1958	1972	1984	1956	1948	1974	1976	1984
MIN	3085	3521	3731	3305	3094	3455	3602	3431	3239	3059	3015	3022
(WY)	1965	1965	1932	1964	1964	1964	1968	1931	1931	1964	1931	1931

ANNUAL TOTAL	1400750		1502580			
ANNUAL MEAN	3838		4117		4517	
HIGHEST ANNUAL MEAN					5878	1984
LOWEST ANNUAL MEAN					3558	1964
HIGHEST DAILY MEAN	4950	Feb 9	6250	Feb 4	15100	Dec 28 1964
LOWEST DAILY MEAN	3270	Jul 22	3370	Aug 20	2440	Dec 3 1957
ANNUAL SEVEN-DAY MINIMUM	3290	Jul 18	3460	Aug 17	2590	Nov 30 1957
ANNUAL RUNOFF (AC-FT)	2778000		2980000		3272000	
10 PERCENT EXCEEDS	4400		4920		5880	
50 PERCENT EXCEEDS	3740		3920		4220	
90 PERCENT EXCEEDS	3490		3580		3470	

DESCHUTES RIVER BASIN

14092750 SHITIKE CREEK AT PETERS PASTURE, NEAR WARM SPRINGS, OR

LOCATION.--Lat 44°45'02", long 121°37'56", in NW 1/4 NE 1/4 sec.35, T.9 S., R.9 E., Jefferson County, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on left bank 0.5 mi downstream from Peters Pasture, and 18 mi west of town of Warm Springs, and at mile 26.4.

DRAINAGE AREA.--22.9 mi².

PERIOD OF RECORD.--July 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,580 ft, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--13 years (water years 1983-95), 70.5 ft³/s, 41.83 in/yr, 51,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft³/s Feb. 1, 1995, gage height, 3.92 ft, from rating curve extended above 680 ft³/s; minimum daily discharge, 17 ft³/s Dec. 22, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft³/s Feb. 1, gage height 3.92 ft; minimum discharge 18 ft³/s many days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	368	134	82	1170	109	61	85	118	87	49	27
2	18	155	109	76	633	102	58	121	115	93	48	26
3	18	109	94	68	326	96	57	109	115	96	47	25
4	18	106	82	66	248	92	59	122	114	87	46	25
5	18	93	69	62	208	86	63	119	113	80	45	25
6	18	79	69	59	180	81	67	107	93	82	44	25
7	18	69	64	58	160	77	73	104	85	80	53	25
8	18	64	58	56	145	78	74	103	79	89	49	25
9	18	63	55	74	131	96	70	100	77	111	45	24
10	18	58	51	84	120	121	66	99	78	91	43	23
11	18	53	49	87	112	128	64	101	82	81	43	23
12	18	50	46	84	104	116	67	94	83	79	41	22
13	18	46	44	124	94	115	77	86	87	74	40	22
14	21	43	42	202	e80	122	75	79	93	72	39	21
15	21	42	41	170	e75	125	71	76	125	71	38	21
16	20	41	57	141	83	115	67	90	111	69	37	21
17	20	39	158	123	136	107	64	108	105	70	44	21
18	20	36	158	111	199	111	60	105	110	69	42	20
19	19	37	129	101	339	112	58	96	89	69	37	20
20	18	45	118	93	331	112	57	94	82	70	35	20
21	25	39	106	86	262	105	54	99	84	67	34	19
22	24	35	97	80	210	98	52	101	88	65	33	19
23	21	40	90	75	177	92	51	100	90	62	32	19
24	20	40	84	70	162	86	50	101	97	60	32	19
25	19	39	78	67	154	80	54	104	104	58	31	19
26	27	37	85	64	140	75	58	106	99	57	30	19
27	225	36	155	61	128	72	e70	104	90	56	30	30
28	170	35	134	62	118	69	e72	104	85	54	29	37
29	91	39	115	74	---	66	73	110	87	53	29	43
30	68	79	101	130	---	64	71	120	87	52	29	34
31	263	---	91	615	---	63	---	120	---	50	28	---
TOTAL	1327	2015	2763	3305	6225	2971	1913	3167	2865	2254	1202	719
MEAN	42.8	67.2	89.1	107	222	95.8	63.8	102	95.5	72.7	38.8	24.0
MAX	263	368	158	615	1170	128	77	122	125	111	53	43
MIN	18	35	41	56	75	63	50	76	77	50	28	19
AC-FT	2630	4000	5480	6560	12350	5890	3790	6280	5680	4470	2380	1430
CFSM	1.87	2.93	3.89	4.66	9.71	4.19	2.78	4.46	4.17	3.18	1.69	1.05
IN.	2.16	3.27	4.49	5.37	10.11	4.83	3.11	5.14	4.65	3.66	1.95	1.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1995, BY WATER YEAR (WY)

	MEAN	34.3	58.3	58.6	71.1	85.7	85.9	96.9	113	104	66.3	41.4	31.5
MAX	60.2	103	117	152	222	166	137	197	154	111	67.8	48.6	
(WY)	1983	1985	1983	1983	1995	1986	1990	1993	1983	1983	1983	1983	
MIN	20.3	23.4	34.9	35.9	28.2	41.4	50.4	69.4	41.7	33.4	24.5	20.1	
(WY)	1988	1994	1991	1993	1994	1985	1991	1991	1992	1992	1992	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1983 - 1995

ANNUAL TOTAL	19224	30726	70.5	
ANNUAL MEAN	52.7	84.2	106	1983
HIGHEST ANNUAL MEAN			43.2	1994
LOWEST ANNUAL MEAN			1170	Feb 1 1995
HIGHEST DAILY MEAN	368	Nov 1	18	Oct 2
LOWEST DAILY MEAN	18	Sep 24	17	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	18	Oct 2	18	Oct 2 1994
ANNUAL RUNOFF (AC-FT)	38130	60950	51080	
ANNUAL RUNOFF (CFSM)	2.30	3.68	3.08	
ANNUAL RUNOFF (INCHES)	31.23	49.91	41.83	
10 PERCENT EXCEEDS	93	128	130	
50 PERCENT EXCEEDS	44	73	55	
90 PERCENT EXCEEDS	20	22	26	

e Estimated

DESCHUTES RIVER BASIN

129

14092885 SHITIKE CREEK BELOW WOLFORD CANYON, NEAR WARM SPRINGS, OR

LOCATION.--Lat 44°46'20", long 121°18'15", in NW 1/4 SE 1/4 sec.21, T.9 S., R.12 E., Jefferson County, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on left bank at bridge crossing 2.3 mi upstream from Tenino Creek, and 2.1 mi northwest of Warm Springs, and at mile 4.53.

DRAINAGE AREA.--75.8 mi².

PERIOD OF RECORD.--October 1974 to current year. Records for June 1911 to October 1916, April 1923 to September 1928, and October 1972 to September 1974 (see sta 14093000) at sites downstream not equivalent owing to difference in drainage areas.

GAGE.--Water-stage recorder. Elevation of gage is 1,600 ft above sea level, from topographic map.

REMARKS.--Discharge records good except those for period July 9-25 and estimated daily discharges, which are fair. No regulation. Some diversion for irrigation and Warm Springs water supply.

AVERAGE DISCHARGE.--21 years (water years 1975-95), 92.6 ft³/s, 16.60 in/yr, 67,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft³/s Feb. 23, 1986, gage height, 6.40 ft, from rating curve extended above 860 ft³/s; maximum gage height, 7.35 ft Dec. 13, 1977; minimum daily discharge, 17 ft³/s Oct. 12-15, 17-22, 24-27, Nov. 12, 1978.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	2230	416	4.75	Feb. 17	2200	604	5.10
Nov. 1	0300	944	5.48	Feb. 19	2200	683	5.20
Feb. 1	2330	*1,630	*6.13				

Minimum discharge, 20 ft³/s Sept. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	518	151	e86	1320	160	68	79	128	77	55	29
2	29	195	126	e78	1080	146	65	131	122	80	54	28
3	29	132	105	e73	540	136	63	127	125	88	53	28
4	29	117	e89	e70	390	129	63	138	121	80	52	28
5	29	111	e75	e68	327	118	65	149	123	73	49	27
6	29	90	e68	e65	282	105	70	129	98	69	49	28
7	29	79	e65	e63	246	98	75	120	85	73	54	29
8	29	71	e63	64	223	96	78	120	76	80	57	28
9	29	70	63	76	194	119	73	114	70	132	50	27
10	29	67	58	86	171	157	69	111	71	130	49	27
11	29	62	57	90	155	182	65	112	74	101	49	26
12	29	58	54	88	147	164	67	106	76	100	46	25
13	29	55	52	147	126	159	78	95	80	92	45	24
14	32	53	e51	334	121	164	78	84	93	86	43	24
15	35	51	e49	251	115	178	73	77	139	87	41	23
16	32	51	55	192	102	159	69	84	124	82	41	23
17	32	50	135	160	256	146	65	112	109	83	45	23
18	31	46	178	141	425	145	62	118	117	82	49	22
19	31	45	146	127	549	152	59	103	91	82	42	22
20	30	54	133	113	593	151	58	97	77	84	39	22
21	31	50	120	103	468	141	55	100	75	80	38	22
22	38	49	108	93	378	131	52	105	82	77	36	22
23	34	52	96	87	314	122	50	104	82	73	35	22
24	33	49	89	82	276	109	49	105	86	74	35	22
25	32	49	83	79	255	99	50	108	103	71	34	21
26	32	47	80	76	229	91	53	110	97	68	33	22
27	164	47	154	72	202	85	64	109	84	68	32	28
28	251	46	152	73	178	80	71	106	73	65	32	34
29	114	46	129	86	---	76	73	113	76	63	32	48
30	82	61	113	139	---	72	70	127	76	61	31	38
31	123	---	97	545	---	70	---	132	---	57	30	---
TOTAL	1535	2471	2994	3807	9662	3940	1950	3425	2833	2518	1330	792
MEAN	49.5	82.4	96.6	123	345	127	65.0	110	94.4	81.2	42.9	26.4
MAX	251	518	178	545	1320	182	78	149	139	132	57	48
MIN	29	45	49	63	102	70	49	77	70	57	30	21
AC-FT	3040	4900	5940	7550	19160	7810	3870	6790	5620	4990	2640	1570
CFSM	.65	1.09	1.27	1.62	4.55	1.68	.86	1.46	1.25	1.07	.57	.35
IN.	.75	1.21	1.47	1.87	4.74	1.93	.96	1.68	1.39	1.24	.65	.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1995, BY WATER YEAR (WY)

MEAN	47.7	76.3	104	97.4	129	117	111	127	123	82.9	54.6	44.6
MAX	76.5	134	238	183	345	263	167	217	217	147	86.5	67.9
(WY)	1983	1985	1978	1976	1995	1986	1989	1993	1982	1982	1983	1982
MIN	17.9	29.7	43.9	40.4	35.8	40.3	50.8	56.3	57.5	37.6	29.0	25.7
(WY)	1979	1979	1986	1979	1994	1977	1977	1977	1992	1977	1978	1978

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1975 - 1995
ANNUAL TOTAL	25285	37257	
ANNUAL MEAN	69.3	102	92.6
HIGHEST ANNUAL MEAN			143
LOWEST ANNUAL MEAN			46.8
HIGHEST DAILY MEAN	518	Nov 1	1360
LOWEST DAILY MEAN	25	Feb 8	17
ANNUAL SEVEN-DAY MINIMUM	29	Sep 22	17
ANNUAL RUNOFF (AC-FT)	50150	73900	67110
ANNUAL RUNOFF (CFSM)	.91	1.35	1.22
ANNUAL RUNOFF (INCHES)	12.41	18.28	16.60
10 PERCENT EXCEEDS	126	160	163
50 PERCENT EXCEEDS	55	76	73
90 PERCENT EXCEEDS	31	29	38

e Estimated

DESCHUTES RIVER BASIN

131

14096300 MILL CREEK NEAR BADGER BUTTE, NEAR WARM SPRINGS, OR

LOCATION.--Lat 44°51'42", long 121°37'35", in SW 1/4 sec.23, T.8 S., R.9 E., Wasco County, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on right bank 200 ft upstream from bridge on road B241, 3.4 mi upstream from headworks of Mill Creek Canal, and 19.3 mi northwest of Warm Springs, and at mile 14.6.

DRAINAGE AREA.--26.8 mi².

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,380 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--12 years (water years 1984-95), 60.5 ft³/s, 30.65 in/yr, 43,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 800 ft³/s Feb. 1, 1995, gage height, 7.35; maximum gage height, 7.88 ft, from high-water mark on crest-stage gage; minimum discharge recorded, 23 ft³/s Feb. 15, 25, 1993, but may have been lower during period of estimated record.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 1	unknown	(a)320	(b)6.58	Feb. 1	2100	---	*(b)7.88
Jan. 14	1430	217	5.84	Feb. 17	2300	327	6.17
Feb. 1	2100	*800	7.35				

Minimum daily discharge, 28 ft³/s Oct. 1-3, 5-13.

(a) Based on drawdown rating.

(b) High-water mark from crest-stage gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	e300	e130	64	678	77	58	83	70	48	e37	e30
2	29	e220	e110	60	610	72	55	106	70	46	e37	e30
3	29	e130	e90	57	362	69	54	106	66	45	e36	e30
4	30	e110	e80	57	242	70	54	117	64	45	e36	e29
5	30	e100	e70	55	184	69	59	113	66	44	e36	e29
6	29	e90	66	53	148	65	62	103	70	48	e36	e29
7	29	e80	66	55	121	61	68	95	75	48	e40	e29
8	29	e70	62	58	112	64	71	97	69	50	e37	e29
9	29	e65	63	78	104	82	69	91	65	60	e35	e28
10	30	e60	62	80	96	97	64	86	64	54	e34	e28
11	29	e58	61	86	90	101	62	88	63	51	e34	e28
12	29	e56	63	84	94	91	66	86	59	50	e33	e27
13	30	e54	60	126	111	91	77	79	61	48	e33	e27
14	39	e54	59	196	110	95	76	74	68	47	e33	e27
15	39	e54	59	152	101	99	72	71	88	46	e32	e27
16	34	e52	81	120	95	94	67	71	75	45	e32	e26
17	e31	e52	111	104	187	84	64	79	70	45	e35	e26
18	e31	e52	107	98	231	92	63	84	69	45	e34	e26
19	e31	e56	105	91	258	99	60	80	68	49	e33	e26
20	e30	e56	100	83	260	98	62	77	66	47	e32	e26
21	e36	e54	91	76	212	90	59	75	63	44	e32	e25
22	e34	e50	84	71	170	83	58	77	61	43	e31	e25
23	e32	e54	78	67	141	78	57	77	59	44	e31	e25
24	e30	e54	73	64	122	73	57	76	57	e42	e31	e25
25	e30	e54	68	62	112	69	58	73	55	e41	e31	e25
26	e40	e52	73	61	104	65	59	73	52	e41	e31	e25
27	e240	e54	95	61	94	62	67	74	51	e40	e30	e30
28	e100	e56	94	64	85	60	71	70	50	e39	e30	e35
29	e70	e66	87	76	---	59	73	71	48	e39	e30	e40
30	e60	e100	77	101	---	58	73	72	48	e38	e30	e35
31	e140	---	70	271	---	58	---	71	---	e37	e30	---
TOTAL	1429	2363	2495	2731	5234	2425	1915	2595	1910	1409	1032	847
MEAN	46.1	78.8	80.5	88.1	187	78.2	63.8	83.7	63.7	45.5	33.3	28.2
MAX	240	300	130	271	678	101	77	117	88	60	40	40
MIN	29	50	59	53	85	58	54	70	48	37	30	25
AC-FT	2830	4690	4950	5420	10380	4810	3800	5150	3790	2790	2050	1680
CFSM	1.72	2.94	3.00	3.29	6.97	2.92	2.38	3.12	2.38	1.70	1.24	1.05
IN.	1.98	3.28	3.46	3.79	7.27	3.37	2.66	3.60	2.65	1.96	1.43	1.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	40.3	58.8	61.0	66.9	76.3	73.3	82.4	82.9	66.7	43.8	37.8	36.8
MAX	50.6	80.5	80.5	92.0	187	106	106	116	92.1	56.5	47.3	48.6
(WY)	1985	1985	1995	1990	1995	1986	1988	1993	1984	1984	1984	1984
MIN	30.0	38.2	44.1	43.8	40.0	58.1	62.4	43.7	33.3	34.2	31.1	28.2
(WY)	1993	1988	1994	1992	1993	1994	1991	1992	1992	1994	1992	1995

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1984 - 1995
ANNUAL TOTAL	19568	26385	
ANNUAL MEAN	53.6	72.3	60.5
HIGHEST ANNUAL MEAN			72.3
LOWEST ANNUAL MEAN			46.5
HIGHEST DAILY MEAN	300	Nov 1	678
LOWEST DAILY MEAN	28	Sep 22	25
ANNUAL SEVEN-DAY MINIMUM	29	Sep 22	25
ANNUAL RUNOFF (AC-FT)	38810	52330	43800
ANNUAL RUNOFF (CFSM)	2.00	2.70	2.26
ANNUAL RUNOFF (INCHES)	27.16	36.62	30.65
10 PERCENT EXCEEDS	78	106	94
50 PERCENT EXCEEDS	52	62	54
90 PERCENT EXCEEDS	31	30	34

e Estimated

DESCHUTES RIVER BASIN

14096850 BEAVER CREEK BELOW QUARTZ CREEK, NEAR SIMNASHO, OR

LOCATION.--Lat 44°57'32", long 121°23'35", in NE 1/4 SW 1/4 sec.14, T.7 S., R.11 E., Wasco County, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on right bank 600 ft downstream from culvert on Warm Springs Reservation Highway 9, 200 ft downstream from Quartz Creek, and 2.4 mi west of Simnasho, and at mile 7.92.

DRAINAGE AREA.--145 mi².

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,260 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversions upstream from station.

AVERAGE DISCHARGE.--12 years (water years 1984-95), 75.0 ft³/s, 7.03 in/yr, 54,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,340 ft³/s, Feb. 23, 1986, gage height, 7.96 ft; minimum discharge, 4.5 ft³/s Jan. 7, 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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. 14	0500	1,130	5.04	Feb. 17	2230	*1,650	*5.71
Feb. 1	1700	1,130	5.04				

Minimum discharge, 29 ft³/s Oct. 1-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	106	111	55	816	177	99	149	58	45	37	36
2	30	65	94	52	671	166	95	164	58	44	37	36
3	30	49	77	46	432	161	93	136	56	44	37	36
4	30	46	66	47	334	158	92	143	55	44	37	36
5	30	46	52	47	272	151	95	185	55	44	37	36
6	30	43	55	51	230	140	98	152	58	44	37	36
7	30	41	54	52	209	131	102	136	71	45	37	38
8	30	39	50	52	254	131	105	127	65	48	37	37
9	30	39	50	61	202	155	99	121	59	58	37	36
10	30	39	48	71	178	162	94	116	56	55	38	36
11	31	38	47	74	167	173	92	113	55	49	38	36
12	31	38	46	78	164	157	95	109	53	46	37	35
13	31	37	45	283	144	161	117	104	54	44	37	35
14	31	36	43	918	152	172	107	99	62	43	37	35
15	32	36	43	398	159	173	102	94	77	42	37	35
16	31	37	47	260	160	160	97	92	69	42	37	35
17	31	37	74	191	696	152	93	88	61	41	37	35
18	31	35	78	170	962	156	90	84	58	41	37	35
19	31	36	75	146	745	169	88	81	56	41	36	35
20	31	41	71	136	589	172	89	80	54	40	36	35
21	31	40	67	120	477	165	86	79	53	40	36	35
22	31	36	63	109	396	155	81	76	52	40	36	35
23	31	40	62	100	332	153	80	75	50	39	36	35
24	31	39	60	94	286	146	80	73	49	39	37	35
25	31	39	58	90	254	135	80	71	48	39	36	35
26	31	38	57	87	229	125	80	69	47	39	36	36
27	52	38	67	84	206	117	91	66	46	39	36	38
28	63	38	71	85	190	111	127	64	46	38	36	37
29	39	40	68	149	---	108	143	63	45	37	36	36
30	35	57	63	326	---	105	154	61	45	37	36	36
31	40	---	61	577	---	102	---	60	---	37	36	---
TOTAL	1026	1289	1923	5009	9906	4599	2944	3130	1671	1324	1137	1072
MEAN	33.1	43.0	62.0	162	354	148	98.1	101	55.7	42.7	36.7	35.7
MAX	63	106	111	918	962	177	154	185	77	58	38	38
MIN	30	35	43	46	144	102	80	60	45	37	36	35
AC-FT	2040	2560	3810	9940	19650	9120	5840	6210	3310	2630	2260	2130
CFSM	.23	.30	.43	1.11	2.44	1.02	.68	.70	.38	.29	.25	.25
IN.	.26	.33	.49	1.29	2.54	1.18	.76	.80	.43	.34	.29	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

MEAN	37.2	48.2	52.7	91.6	169	149	113	78.4	54.8	40.5	36.7	35.9
MAX	42.6	104	85.5	244	634	305	175	110	95.5	45.4	40.2	40.4
(WY)	1985	1985	1984	1984	1986	1986	1988	1993	1984	1984	1984	1986
MIN	33.1	35.6	40.0	47.6	42.7	58.9	60.8	44.6	36.6	32.3	30.5	30.4
(WY)	1995	1988	1986	1987	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1984 - 1995

ANNUAL TOTAL	15994	35030	75.0	1986
ANNUAL MEAN	43.8	96.0	123	1994
HIGHEST ANNUAL MEAN			41.6	1986
LOWEST ANNUAL MEAN			3680	1991
HIGHEST DAILY MEAN	111	Dec 1	962	Feb 18
LOWEST DAILY MEAN	30	Aug 15	30	Oct 1
ANNUAL SEVEN-DAY MINIMUM	30	Aug 15	30	Oct 1
ANNUAL RUNOFF (AC-FT)	31720	69480	54320	
ANNUAL RUNOFF (CFSM)	.30	.66	.52	
ANNUAL RUNOFF (INCHES)	4.10	8.99	7.03	
10 PERCENT EXCEEDS	63	169	140	
50 PERCENT EXCEEDS	40	55	46	
90 PERCENT EXCEEDS	30	35	35	

DESCHUTES RIVER BASIN

133

14097100 WARM SPRINGS RIVER NEAR KAHNEETA HOT SPRINGS, OR

LOCATION.--Lat 44°51'24", long 121°08'55", in SE 1/4 SW 1/4 sec.23, T.8 S., R.13 E., Wasco County, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on right bank 25 ft upstream from bridge, 2.5 mi east of Kahneeta Hot Springs, and at mile 4.6.

DRAINAGE AREA.--526 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,400 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--23 years(water years 1973-95), 419 ft³/s, 10.82 in/yr, 303,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,240 ft³/s Feb. 23, 1986, gage height, 10.54 ft; minimum discharge, 149 ft³/s Dec. 20, 1990, but may have been less during period of ice effect Dec. 20, 1990 to Jan. 10, 1991.

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)
Jan. 14	0900	3,270	5.94	Feb. 18	0130	*4,410	*7.01
Feb. 1	2300	4,030	6.67				

Minimum discharge, 193 ft³/s Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	203	685	514	e295	2880	816	491	582	362	272	239	223
2	200	571	522	e290	3240	761	478	683	360	269	238	222
3	196	391	443	e290	2200	728	471	638	352	269	236	221
4	197	338	387	e285	1690	705	468	644	343	269	235	222
5	197	365	e300	e280	1390	682	475	797	340	268	234	220
6	198	319	e290	294	1190	633	494	710	352	270	234	222
7	198	294	e280	306	1060	597	508	658	387	281	236	230
8	198	276	e290	299	1060	580	530	638	387	298	240	230
9	199	275	306	336	935	644	512	627	359	328	236	227
10	199	269	297	389	832	709	490	604	342	341	238	224
11	198	259	288	404	774	774	478	589	339	301	240	222
12	198	253	282	409	765	711	481	584	330	287	236	219
13	199	248	272	817	672	693	554	563	322	277	235	219
14	204	243	260	2560	665	723	541	537	357	270	235	219
15	219	240	263	1470	692	748	518	510	439	266	233	219
16	212	243	276	1070	703	718	498	494	430	264	232	219
17	207	251	383	824	1430	690	481	492	377	261	232	219
18	200	238	442	726	3080	687	470	489	358	259	235	217
19	200	235	436	650	2330	767	461	479	351	259	233	216
20	200	261	422	605	2200	764	463	464	342	261	231	216
21	202	262	404	549	1910	744	456	452	335	256	228	215
22	205	225	387	507	1650	694	438	442	323	252	226	216
23	204	250	372	473	1430	681	426	434	315	250	225	216
24	202	259	359	448	1260	658	421	433	307	249	225	216
25	200	253	344	429	1150	621	422	421	298	247	225	217
26	201	247	333	415	1060	587	425	410	291	247	225	218
27	307	244	372	404	966	561	456	402	285	246	224	232
28	551	246	399	418	881	539	555	391	281	244	224	238
29	348	243	388	500	---	523	565	384	277	239	225	232
30	274	300	e340	962	---	513	618	376	274	239	225	229
31	258	---	e310	1540	---	503	---	370	---	239	224	---
TOTAL	6974	8783	10961	19244	40095	20754	14644	16297	10215	8278	7184	6655
MEAN	225	293	354	621	1432	669	488	526	340	267	232	222
MAX	551	685	522	2560	3240	816	618	797	439	341	240	238
MIN	196	225	260	280	665	503	421	370	274	239	224	215
AC-FT	13830	17420	21740	38170	79530	41170	29050	32330	20260	16420	14250	13200
CFSM	.43	.56	.67	1.18	2.72	1.27	.93	1.00	.65	.51	.44	.42
IN.	.49	.62	.78	1.36	2.84	1.47	1.04	1.15	.72	.59	.51	.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1995, BY WATER YEAR (WY)

MEAN	254	310	455	537	674	623	552	493	374	274	250	246
MAX	318	570	1210	1520	1732	1285	814	819	803	401	323	301
(WY)	1973	1985	1978	1974	1986	1986	1993	1974	1974	1974	1974	1974
MIN	211	229	242	201	239	274	278	278	235	198	196	197
(WY)	1993	1994	1994	1979	1994	1977	1977	1977	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1973 - 1995
ANNUAL TOTAL	95103	170084	
ANNUAL MEAN	261	466	419
HIGHEST ANNUAL MEAN			660
LOWEST ANNUAL MEAN			246
HIGHEST DAILY MEAN	685	Nov 1	3240
LOWEST DAILY MEAN	193	Aug 13	196
ANNUAL SEVEN-DAY MINIMUM	194	Sep 21	198
ANNUAL RUNOFF (AC-FT)	188600	337400	303400
ANNUAL RUNOFF (CFSM)	.50	.89	.80
ANNUAL RUNOFF (INCHES)	6.73	12.03	10.82
10 PERCENT EXCEEDS	341	762	701
50 PERCENT EXCEEDS	247	340	308
90 PERCENT EXCEEDS	195	219	226

e Estimated

DESCHUTES RIVER BASIN

14103000 DESCHUTES RIVER AT MOODY, NEAR BIGGS, OR

LOCATION.--Lat 45°37'20", long 120°54'05", in SW 1/4 SE 1/4 sec.26, T.2 N., R.15 E., Sherman County, Hydrologic Unit 17070306, on right bank at Moody, 4.0 mi southwest of Biggs, and at mile 1.4.

DRAINAGE AREA.--10,500 mi², approximately.

PERIOD OF RECORD.--October 1897 to December 1899 (published as "near Moro"), July 1906 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 754: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 167.54 ft above sea level. Oct. 19, 1897, to Dec. 31, 1899, nonrecording gage at site 10 mi upstream at different datum. July 22, 1906, to July 18, 1930, nonrecording gage at site 300 ft downstream at datum 0.50 ft lower.

REMARKS.--Records good. Some fluctuation caused by regulation at Lake Simtustus since 1957. Some winter and spring runoff stored in Ochoco Reservoir, capacity, 46,420 acre-ft, in Crescent Lake, Crane Prairie, and Wickiup Reservoirs, combined capacity, 323,390 acre-ft, and since 1960, in Prineville Reservoir, and since 1964 in Lake Billy Chinook (station 14092100). Large diversions in upper river basin for irrigation. Water-quality records for periods 1911-12, 1953-58, 1962-90, have been collected at this location.

AVERAGE DISCHARGE.--91 years (water years, 1898, 1899, 1907-95), 5,793 ft³/s, 4,158,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,500 ft³/s Dec. 22, 1964, gage height, 11.80 ft, from rating curve extended above 47,000 ft³/s; minimum discharge, 2,400 ft³/s Dec. 5, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,200 ft³/s Feb. 18, gage height, 5.80 ft; minimum discharge, 3,790 ft³/s Aug. 21, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3940	6730	5310	4680	11600	7830	5710	5640	4680	4300	4190	4020
2	3930	6750	5470	4610	15200	7370	5360	5790	4650	4180	4020	4000
3	3910	6130	5140	4520	13000	7170	5330	5830	4640	4220	4020	3880
4	3900	5870	4870	4460	11900	6750	5340	5720	4600	4190	4010	3900
5	3900	5630	4680	4460	11100	6550	5360	5930	4580	4170	e4040	3900
6	3880	5220	4790	4500	10300	6400	5390	6110	4730	4180	e4030	3920
7	3880	5100	5160	4530	9590	6290	5510	6420	5070	4210	e4040	3980
8	3840	5020	5130	4450	9050	6240	5830	6450	5030	4260	e4130	3970
9	3830	4990	5070	4520	8640	6640	5780	6500	4870	4470	e4120	3940
10	3840	4930	4890	4960	8070	6870	5710	6410	4660	4540	e4060	3980
11	3820	4770	4430	5500	7550	7040	5750	6250	4580	4720	4170	4250
12	3820	4600	4400	5620	7450	7030	5830	5980	4530	4940	4250	4350
13	3830	4410	4350	6450	7370	6750	5940	5780	4480	4910	4240	4340
14	3850	4390	4330	11900	7210	6600	5880	5660	4570	4810	4230	4140
15	3890	4400	4310	10100	7560	6710	5800	5590	4780	4520	4180	4140
16	3890	4380	4320	8020	7790	6760	5650	5590	4960	4340	4140	4160
17	3900	4370	4740	7410	8100	6600	5430	5700	5080	4340	4110	4050
18	3880	4360	5400	6870	14700	6530	5380	5720	5010	4280	4130	4040
19	3900	4340	5350	6570	12300	6690	5330	5560	5000	4160	4030	4040
20	4000	4360	5330	6320	12200	6780	5350	5480	5000	4140	3860	4030
21	4290	4410	5520	6100	11500	7050	5300	5440	5070	4130	3840	4060
22	4470	4350	5430	5960	10800	7010	5260	5410	5030	4150	3860	4060
23	4470	4320	5370	5830	10400	6890	5220	5330	4950	4400	3850	4030
24	4460	4370	5230	5730	9830	6800	5210	5300	4740	4410	3960	4030
25	4450	4350	4650	5660	9310	6670	5190	5260	4500	4400	4180	4030
26	4460	4330	4610	5600	9000	6560	5130	5140	4450	4370	4210	4040
27	4700	4320	4900	5510	8650	6480	5210	4860	4400	4300	4180	4040
28	5620	4320	5150	5360	8300	6410	5480	4730	4370	4250	4160	4100
29	5150	4300	5040	5870	---	6350	5530	4710	4350	4260	4140	4070
30	4760	4530	4880	7020	---	6290	5640	4750	4300	4270	4020	4040
31	4710	---	4770	8750	---	6120	---	4690	---	4250	4020	---
TOTAL	129170	144350	153020	187840	278470	208230	164830	173730	141660	135070	126420	121530
MEAN	4167	4812	4936	6059	9945	6717	5494	5604	4722	4357	4078	4051
MAX	5620	6750	5520	11900	15200	7830	5940	6500	5080	4940	4250	4350
MIN	3820	4300	4310	4450	7210	6120	5130	4690	4300	4130	3840	3880
AC-FT	256200	286300	303500	372600	552300	413000	326900	344600	281000	267900	250800	241100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1995, BY WATER YEAR (WY)

	MEAN	5345	6411	7052	7197	7209	6647	5812	5201	4594	4388	4435
MAX	5594	7814	13150	11290	13090	13580	10930	8267	7643	5917	5359	5185
(WY)	1973	1985	1965	1974	1986	1972	1984	1984	1974	1974	1976	1984
MIN	3385	3910	4446	4873	4401	4418	4467	4141	3988	3606	3748	3809
(WY)	1965	1965	1994	1992	1977	1994	1977	1977	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1965 - 1995
ANNUAL TOTAL	1576100	1964320	
ANNUAL MEAN	4318	5382	5739
HIGHEST ANNUAL MEAN			7376
LOWEST ANNUAL MEAN			4290
HIGHEST DAILY MEAN	6750	Nov 2	15200
LOWEST DAILY MEAN	3440	Jul 24	3820
ANNUAL SEVEN-DAY MINIMUM	3460	Jul 19	3830
ANNUAL RUNOFF (AC-FT)	3126000		3896000
10 PERCENT EXCEEDS	5120		7100
50 PERCENT EXCEEDS	4230		4810
90 PERCENT EXCEEDS	3660		4020

e Estimated

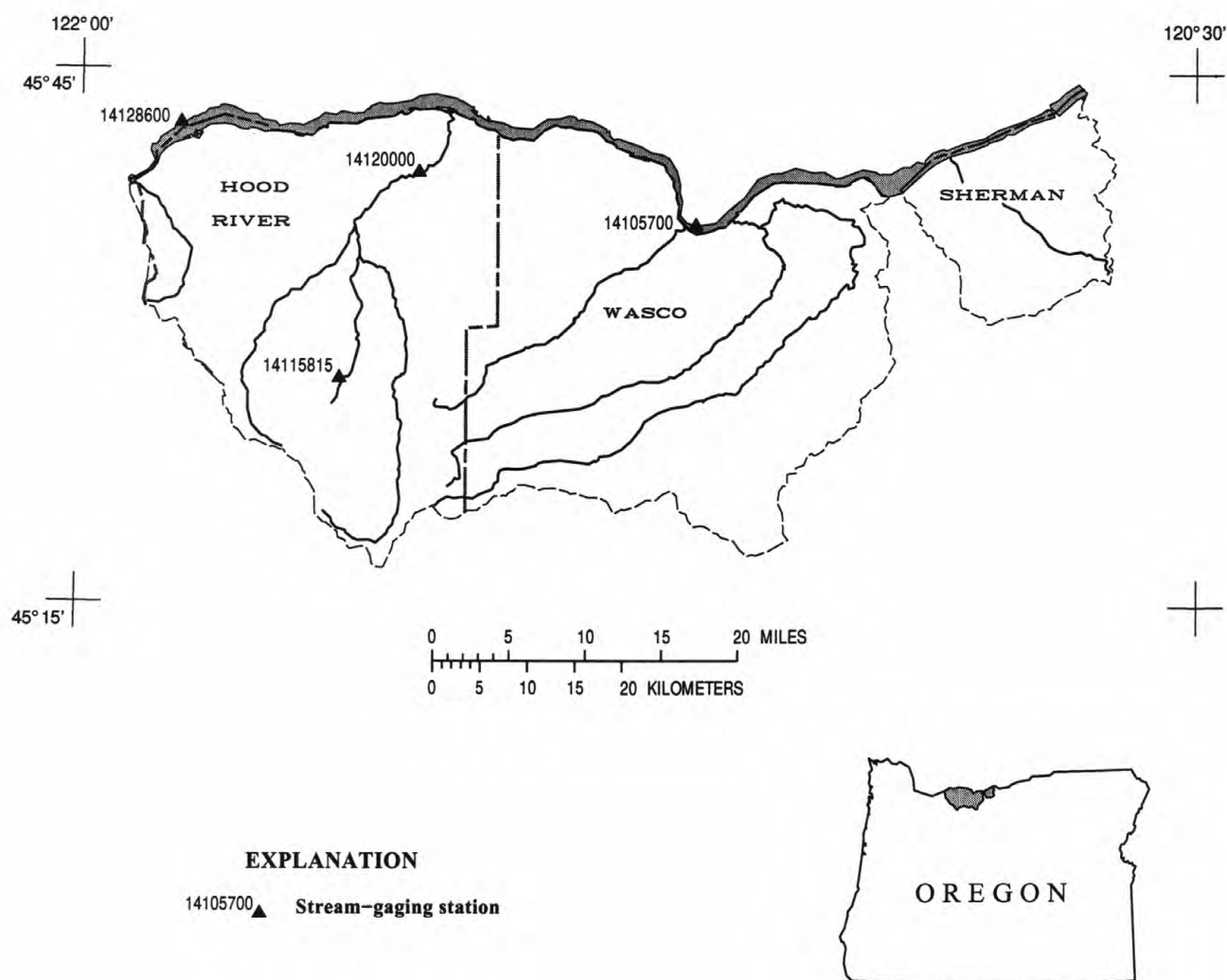
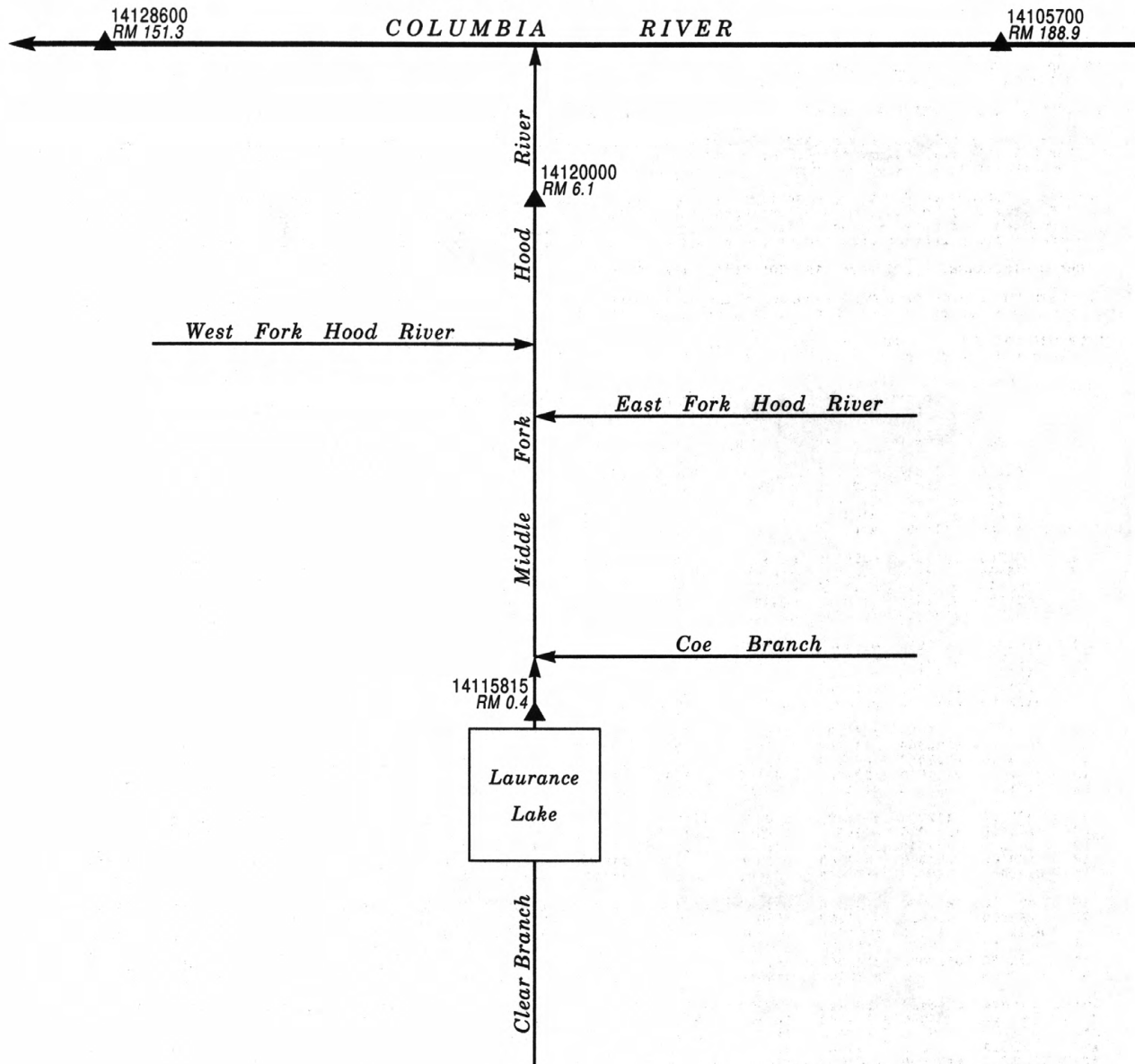


Figure 16. Location of surface-water stations in the Columbia River between the Deschutes River and Bonneville Dam and in the Hood River Basin.



EXPLANATION

- ▲ 14128600 Stream-gaging station
- RM 6.1 River mile
- Stream—Arrow shows direction of flow

Figure 17. Schematic diagram showing gaging stations in the Columbia River between the Deschutes River and Bonneville Dam and in the Hood River Basin.

COLUMBIA RIVER MAIN STEM

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14105700 COLUMBIA RIVER AT THE DALLES, OR

LOCATION.--Lat 45°36'27", long 121°10'20", in SW 1/4 SW 1/4 sec.34, T.2 N., R.13 E., Wasco County, Hydrologic Unit 17070105, Corps of Engineers land, on left bank 0.3 mi downstream from Mill Creek, 2.6 mi downstream from The Dalles Dam, and at mile 188.9.

DRAINAGE AREA.--237,000 mi², approximately.

PERIOD OF RECORD.--October 1857 to September 1877 (annual maximum only, at Lower Cascades Landing, published in WSP 1318), June 1878 to current year. Published as "near The Dalles" 1936-56.

REVISED RECORDS.--WSP 534: 1920(m). WSP 1094: 1894. WSP 1248: 1866, 1888, 1899, 1909. WSP 1518: 1876(M).

GAGE.--Acoustic velocity meter (AVM) with water-stage and velocity-index recorder. Datum of gage is sea level. See WSP 1738 for history of changes prior to Mar. 16, 1957. Mar. 16, 1957, to Sept 30, 1968, water-stage recorder at site 0.4 mi upstream at same datum.

REMARKS.--Records good. Daily discharge estimates for period Oct. 7 to Jan. 10 determined from records provided by U.S. Army Corps of Engineers. Considerable regulation by many large reservoirs. Diurnal fluctuations caused by powerplant and gates at The Dalles Dam. Many diversions for irrigation upstream from station. Continuous water-quality records for the period October 1957 to February 1985 have been collected at this location.

AVERAGE DISCHARGE.--117 years, 190,700 ft³/s, 138,200,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (since 1858), 1,240,000 ft³/s June 6, 1894, elevation, 106.5 ft; minimum discharge (since 1878), 12,100 ft³/s Apr. 16, 1968 (due to closure of John Day dam, recorded by AVM).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 303,000 ft³/s May 19; maximum elevation, 80.81 ft May 17; minimum daily discharge, 62,600 ft³/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62600	e96500	e120000	e121000	192000	217000	131000	227000	289000	230000	173000	116000
2	67800	e113000	e122000	e129000	204000	222000	148000	248000	299000	272000	177000	97100
3	89100	e135000	e117000	e157000	211000	204000	144000	243000	295000	217000	150000	81100
4	72000	e109000	e104000	e145000	173000	185000	153000	228000	274000	217000	147000	89700
5	88700	e113000	e147000	e146000	138000	170000	189000	253000	266000	227000	147000	101000
6	78200	e85500	e156000	e143000	159000	189000	169000	257000	289000	227000	130000	98100
7	e74800	e103000	e145000	e147000	193000	183000	182000	238000	288000	240000	128000	107000
8	e91300	e123000	e141000	e101000	208000	175000	152000	261000	282000	245000	143000	100000
9	e64000	e114000	e130000	e152000	170000	168000	150000	274000	278000	198000	164000	84400
10	e83900	e110000	e131000	e136000	196000	166000	165000	259000	278000	192000	151000	67400
11	e101000	e109000	e101000	130000	182000	145000	160000	279000	274000	215000	142000	106000
12	e112000	e79900	e137000	153000	154000	163000	181000	266000	281000	205000	154000	112000
13	e104000	e91100	e135000	145000	195000	161000	160000	251000	299000	208000	125000	109000
14	e84800	e102000	e146000	155000	184000	168000	188000	239000	300000	217000	133000	122000
15	e126000	e117000	e162000	150000	201000	140000	183000	241000	299000	177000	150000	108000
16	e116000	e108000	e140000	155000	198000	167000	167000	271000	289000	181000	145000	121000
17	e84300	e126000	e98400	167000	194000	162000	191000	294000	252000	180000	137000	77100
18	e90900	e135000	e83700	159000	200000	167000	205000	299000	246000	190000	142000	116000
19	e102000	e101000	e132000	141000	175000	158000	176000	303000	244000	193000	127000	121000
20	e105000	e66800	e111000	137000	194000	163000	194000	270000	272000	175000	128000	123000
21	e90500	e122000	e106000	140000	171000	176000	178000	243000	277000	174000	126000	113000
22	e113000	e133000	e126000	139000	223000	188000	183000	260000	283000	156000	147000	109000
23	e82200	e121000	e118000	146000	209000	250000	141000	278000	284000	162000	137000	89200
24	e108000	e81900	e97900	141000	214000	226000	183000	269000	294000	178000	148000	85100
25	e106000	e100000	e77600	153000	199000	223000	203000	282000	276000	186000	139000	110000
26	e92600	e95900	e95800	149000	190000	221000	197000	300000	269000	180000	114000	108000
27	e97800	e80800	e102000	157000	213000	206000	223000	260000	279000	183000	128000	107000
28	e111000	e127000	e106000	134000	208000	175000	244000	227000	276000	218000	126000	119000
29	e102000	e127000	e134000	127000	---	177000	250000	236000	283000	150000	144000	104000
30	e91200	e120000	e141000	150000	---	165000	244000	263000	302000	186000	144000	132000
31	e107000	---	e138000	167000	---	149000	---	299000	---	170000	138000	---
TOTAL	2899700	3246400	3801400	4472000	5348000	5629000	5434000	8118000	8417000	6149000	4384000	3133200
MEAN	93540	108200	122600	144300	191000	181600	181100	261900	280600	198400	141400	104400
MAX	126000	135000	162000	167000	223000	250000	250000	303000	302000	272000	177000	132000
MIN	62600	66800	77600	101000	138000	140000	131000	227000	244000	150000	114000	67400
AC-FT	5752000	6439000	7540000	8870000	10610000	11170000	10780000	16100000	16700000	12200000	8696000	6215000

CAL YR 1994 TOTAL 48164900 MEAN 132000 MAX 230000 MIN 61100 AC-FT 95540000
WTR YR 1995 TOTAL 61031700 MEAN 167200 MAX 303000 MIN 62600 AC-FT 121056370

e Estimated

HOOD RIVER BASIN

14115815 CLEAR BRANCH BELOW LAURANCE LAKE, NEAR PARKDALE, OR

LOCATION.--Lat 45°27'44", long 121°39'04", in SE 1/4 SE 1/4 sec.22, T.1 S., R.9 E., Hood River County, Hydrologic Unit 17070105, on right bank 0.3 mi downstream from Laurance Lake, and 5.0 mi southwest of Parkdale, and at mile 0.35.

DRAINAGE AREA.--8.62 mi².

PERIOD OF RECORD.--May 1986 to September 1995 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 2,790 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Laurance Lake 0.3 mi upstream. Diversion for irrigation directly from Laurance Lake bypasses gage via Clear Branch conduit.

AVERAGE DISCHARGE.--9 years (water years 1987-95), 21.3 ft³/s, 15,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 373 ft³/s Feb. 19, 1995, gage height, 7.56 ft; minimum discharge, no flow Nov. 3, 1992, due to construction upstream from gage.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 373 ft³/s Feb. 19, gage height, 7.56 ft; minimum discharge, 1.3 ft³/s Oct. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	32	31	28	282	32	29	30	24	8.0	7.7	12
2	12	31	31	30	177	30	29	30	23	8.1	7.5	16
3	12	29	31	28	77	30	29	30	23	7.9	7.3	16
4	12	29	31	28	62	30	28	30	22	7.8	7.3	16
5	12	30	30	28	51	30	28	30	28	7.8	7.2	16
6	12	29	30	30	43	30	28	31	30	7.8	7.2	16
7	12	29	30	31	38	30	28	31	32	7.8	7.1	16
8	12	30	30	31	34	30	28	31	27	7.9	7.0	16
9	12	29	29	31	30	30	28	31	24	7.8	6.8	16
10	12	29	29	31	28	30	28	31	23	7.8	6.8	16
11	9.7	29	29	30	27	30	28	31	25	7.8	6.7	16
12	4.2	29	29	30	26	30	28	31	22	7.7	6.6	16
13	10	29	29	31	26	29	28	31	22	7.5	6.6	16
14	10	27	29	45	26	29	28	31	23	7.5	6.6	16
15	10	25	29	50	26	29	29	15	25	7.5	6.6	18
16	10	25	29	39	26	29	30	7.1	24	7.5	6.7	19
17	11	27	29	33	93	29	30	7.2	15	7.5	6.7	19
18	13	29	29	34	138	29	30	7.3	16	7.5	6.6	19
19	14	26	29	34	286	29	30	7.3	13	7.7	6.6	19
20	14	27	29	31	169	29	30	7.3	12	8.4	6.6	19
21	22	29	30	31	104	29	30	7.5	10	8.2	6.6	19
22	29	29	29	30	75	29	30	7.5	9.1	8.1	6.4	18
23	22	29	30	30	59	29	30	15	14	7.9	6.4	16
24	15	29	30	30	51	29	30	24	19	7.8	6.4	16
25	13	29	30	30	47	29	30	25	20	7.7	6.4	15
26	17	29	33	30	43	29	30	25	18	7.4	6.4	15
27	28	29	111	30	38	29	30	25	14	7.3	6.4	21
28	30	29	80	30	34	29	30	25	12	7.2	6.4	24
29	29	29	52	30	---	29	30	25	12	7.1	6.4	24
30	29	31	40	31	---	29	30	26	12	7.1	6.4	24
31	33	---	32	151	---	29	---	26	---	7.6	6.4	---
TOTAL	492.9	862	1089	1106	2116	913	874	711.2	593.1	238.7	208.8	525
MEAN	15.9	28.7	35.1	35.7	75.6	29.5	29.1	22.9	19.8	7.70	6.74	17.5
MAX	33	32	111	151	286	32	30	31	32	8.4	7.7	24
MIN	4.2	25	29	28	26	29	28	7.1	9.1	7.1	6.4	12
AC-FT	978	1710	2160	2190	4200	1810	1730	1410	1180	473	414	1040

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1995, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	14.4	21.6	26.0	27.7	33.2	28.4	33.2	27.8	17.4
MAX	20.6	29.8	35.1	41.7	75.6	33.1	48.9	55.1	31.7
(WY)	1991	1989	1995	1991	1995	1988	1993	1990	1992
MIN	4.45	5.59	8.53	8.22	10.3	12.0	8.76	12.8	8.95
(WY)	1988	1988	1987	1987	1987	1987	1987	1987	1991

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1987 - 1995

ANNUAL TOTAL	7786.1	9729.7	
ANNUAL MEAN	21.3	26.7	
HIGHEST ANNUAL MEAN			21.3
LOWEST ANNUAL MEAN			26.7
HIGHEST DAILY MEAN	111	286	286
LOWEST DAILY MEAN	2.7	4.2	1.3
ANNUAL SEVEN-DAY MINIMUM	2.8	6.4	1.3
ANNUAL RUNOFF (AC-FT)	15440	19300	15450
10 PERCENT EXCEEDS	33	32	33
50 PERCENT EXCEEDS	24	28	19
90 PERCENT EXCEEDS	6.4	7.3	6.6

HOOD RIVER RIVER BASIN

139

14120000 HOOD RIVER AT TUCKER BRIDGE, NEAR HOOD RIVER, OR

LOCATION.--Lat 45°39'20", long 121°32'50", in SE 1/4 sec.15, T.2 N., R.10 E., Hood River County, Hydrologic Unit 17070105, on right bank 25 ft downstream from Tucker Bridge, 0.5 mi upstream from Odell Creek, 4.0 mi, southwest of town of Hood River, and at mile 6.1.

DRAINAGE AREA.--279 mi².

PERIOD OF RECORD.--October 1897 to December 1899, September 1913 to September 1914, August 1915 to September 1917, January 1965 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1318: 1899. WSP 1935: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 383.2 ft above sea level (Oregon State Highway Department bench mark). Prior to July 23, 1915, nonrecording gage at bridge at various datums. July 23 to Dec. 21, 1915, water-stage recorder at site 0.8 mi upstream at different datum. January 1916 to September 1917, nonrecording gage at bridge at different datum. Jan. 16 to July 23, 1965, nonrecording gage at bridge.

REMARKS.--Records good. Some daily fluctuation possibly caused by diversion dam upstream from station and sawmill at Dee. Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--35 years (water years 1898-99, 1914, 1916-17, 1966-95), 1,000 ft³/s, 724.100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,300 ft³/s Dec. 13, 1977, gage height, 15.59 ft; minimum discharge recorded, 136 ft³/s Sept. 16, 1915, caused by temporary storage behind dam at Dee.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 20.6 ft, present datum, discharge, 33,200 ft³/s, from rating curve extended above 1,500 ft³/s on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Oct. 27	1230	4,720	8.18	Jan. 31	1730	10,900	11.96
Oct. 31	1930	*11,100	*12.10	Feb. 17	1700	6,690	9.60
Nov. 30	2100	6,920	9.75	Feb. 19	1330	8,040	10.44

Minimum discharge, 194 ft³/s Oct. 13, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	3870	3930	1170	6720	1370	882	1140	695	511	311	263
2	226	1790	2310	1050	5410	1270	862	1540	669	550	346	274
3	234	1190	1640	968	3560	1220	858	1400	626	635	359	282
4	256	1240	1270	903	2800	1210	893	1240	619	570	350	294
5	252	1070	1070	856	2390	1130	915	1210	659	517	359	267
6	252	902	974	816	2100	1060	956	1130	712	505	394	259
7	256	808	878	798	1890	1020	1030	1090	765	490	487	406
8	270	746	802	767	1740	1060	1100	1040	691	521	380	304
9	279	765	817	885	1580	1310	1040	1020	641	755	298	295
10	275	712	760	1040	1460	1360	975	990	588	702	304	281
11	267	662	717	1000	1430	1360	998	1030	589	531	322	285
12	249	656	678	1090	1370	1260	1050	997	536	460	285	263
13	208	650	642	2100	1260	1340	1450	927	536	426	266	258
14	263	634	615	2840	1180	1500	1290	883	569	412	261	263
15	259	621	611	2290	1170	1540	1220	883	636	407	298	296
16	214	666	1080	1850	1170	1380	1130	902	577	403	302	307
17	207	617	3070	1550	4240	1280	1070	880	555	445	301	316
18	206	562	2410	1710	4390	1390	1040	817	608	458	281	302
19	206	600	2060	1670	6770	1550	976	e800	595	458	256	303
20	208	1090	2070	1450	4630	1570	988	e780	626	508	257	299
21	350	775	1920	1290	3440	1420	943	e770	605	492	260	258
22	280	682	1600	1180	2770	1310	917	e760	572	487	262	247
23	235	737	1380	1080	2340	1230	923	e740	551	455	266	245
24	216	770	1230	1010	2120	1140	911	e720	549	415	262	244
25	208	753	1110	953	1970	1060	923	730	549	385	247	251
26	337	684	1870	899	1800	1010	917	738	540	407	246	256
27	3690	674	3500	854	1620	969	992	718	516	431	246	404
28	2020	651	2610	978	1480	939	1090	704	487	388	249	397
29	1040	897	1920	1310	---	917	1050	719	489	370	261	406
30	714	3330	1550	2250	---	898	1060	721	488	325	274	403
31	5080	---	1320	7120	---	888	---	705	---	309	260	---
TOTAL	18991	29804	48414	45727	74800	37961	30449	28724	17838	14728	9250	8928
MEAN	613	993	1562	1475	2671	1225	1015	927	595	475	298	298
MAX	5080	3870	3930	7120	6770	1570	1450	1540	765	755	487	406
MTN	206	562	611	767	1170	888	858	704	487	309	246	244
AC-FT	37670	59120	96030	90700	148400	75300	60400	56970	35380	29210	18350	17710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 1995, BY WATER YEAR (WY)

MEAN	466	1007	1415	1550	1541	1331	1301	1188	934	589	398	376
MAX	929	1009	4109	3313	3367	2915	2358	2418	2439	1687	1088	804
(WY)	1900	1898	1978	1974	1982	1972	1916	1969	1899	1899	1899	1899
MIN	218	282	438	363	430	681	704	532	278	229	209	188
(WY)	1988	1988	1977	1979	1977	1977	1973	1992	1992	1992	1992	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1898 - 1995
ANNUAL TOTAL	277215	365614	1000
ANNUAL MEAN	759	1002	1664
HIGHEST ANNUAL MEAN			1664
LOWEST ANNUAL MEAN			465
HIGHEST DAILY MEAN	5080	7120	18000
LOWEST DAILY MEAN	144	206	144
ANNUAL SEVEN-DAY MINIMUM	155	223	155
ANNUAL RUNOFF (AC-FT)	549900	725200	724100
10 PERCENT EXCEEDS	1430	1880	1880
50 PERCENT EXCEEDS	569	765	773
90 PERCENT EXCEEDS	196	262	308

e Estimated

COLUMBIA RIVER MAIN STEM

14128600 COLUMBIA RIVER AT STEVENSON, WA

LOCATION.--Lat 45°41'58", long 121°52'02", in NW 1/4 SE 1/4 sec.36, T.3 N., R.7-1/2 E., Skamania County,
Hydrologic Unit 17070105, on right bank 0.9 mi east of Stevenson, and at mile 151.3.

DRAINAGE AREA.--239,800 mi², approximately.

PERIOD OF RECORD.--October 1973 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 79.79 ft June 20, 1974; minimum, 70.39 ft Oct. 25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 77.67 ft May 19; minimum, 72.45 ft Oct. 4.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	75.07	74.41	74.68	76.65	75.03	75.52	76.42	74.82	75.24	75.92	75.11	75.46
2	74.62	73.27	74.20	75.32	74.56	75.06	75.16	74.14	74.75	76.21	75.32	75.65
3	73.27	72.68	72.88	75.41	74.54	75.00	75.98	74.26	75.05	76.28	74.13	75.17
4	73.26	72.45	72.82	75.38	74.44	74.91	76.23	75.12	75.67	75.76	73.74	74.72
5	74.54	72.73	73.54	76.49	75.27	75.95	76.09	74.95	75.30	76.54	74.24	75.42
6	75.48	74.36	74.83	76.34	75.22	75.69	75.76	74.23	74.74	76.47	75.33	75.70
7	75.95	75.12	75.51	75.48	74.68	75.22	75.24	74.07	74.52	76.02	74.21	75.16
8	75.85	75.59	75.75	75.96	74.81	75.43	75.74	73.19	74.54	76.12	74.62	75.27
9	75.99	75.03	75.51	75.75	74.72	75.25	75.62	74.18	75.10	76.16	74.66	75.14
10	75.72	74.68	75.16	76.24	74.08	74.78	76.12	74.68	75.30	76.28	74.86	75.45
11	76.46	75.34	75.86	76.71	75.45	76.11	76.12	75.26	75.54	77.07	74.81	75.94
12	76.27	75.69	76.06	76.63	75.61	76.06	75.65	74.30	75.04	76.92	75.62	76.08
13	76.11	75.51	75.80	76.34	75.82	76.01	75.47	73.70	74.41	76.70	74.86	75.41
14	75.90	75.08	75.47	76.19	75.35	75.59	75.02	73.17	73.81	75.46	74.25	74.87
15	76.53	75.78	76.08	75.57	74.93	75.32	74.68	72.90	73.51	75.38	74.12	74.80
16	76.09	75.05	75.36	75.71	74.78	75.33	76.81	74.25	75.03	75.78	73.42	74.56
17	75.45	74.54	74.81	76.20	74.99	75.61	76.81	75.07	75.63	75.90	74.43	75.17
18	75.78	74.65	75.16	75.62	74.39	75.03	76.12	75.46	75.73	77.09	75.45	76.21
19	76.49	75.44	75.95	76.83	74.71	75.45	76.51	75.15	75.71	76.90	75.13	75.82
20	76.54	76.26	76.47	76.98	75.06	75.93	76.36	75.11	75.59	75.47	74.24	74.73
21	76.26	75.39	75.81	75.06	73.95	74.57	76.73	75.03	75.85	75.64	74.87	75.18
22	76.61	75.92	76.22	75.38	73.74	74.63	76.70	75.92	76.22	75.60	74.78	75.07
23	76.23	75.78	75.92	76.06	74.32	75.22	76.45	75.04	75.80	75.57	74.94	75.26
24	76.12	75.42	75.84	76.01	74.83	75.29	76.68	75.30	75.96	75.89	73.75	74.79
25	76.30	75.14	75.58	76.10	74.80	75.35	76.67	75.47	75.97	77.10	75.02	75.94
26	76.41	75.78	76.09	76.06	75.50	75.73	76.71	74.69	75.66	77.02	75.80	76.21
27	76.86	76.12	76.48	76.06	75.25	75.72	76.59	75.94	76.27	76.22	74.55	75.31
28	76.22	75.62	75.95	76.40	74.30	75.08	76.65	75.56	76.10	76.18	74.76	75.46
29	76.17	75.54	75.88	76.25	74.87	75.41	76.52	75.82	76.19	76.10	74.68	75.30
30	76.25	75.56	75.86	76.56	74.25	75.40	76.38	75.68	75.96	76.53	74.28	74.99
31	76.81	75.48	76.10	---	---	---	76.44	75.35	75.86	77.37	75.15	76.32
MONTH	76.86	72.45	75.41	76.98	73.74	75.39	76.81	72.90	75.36	77.37	73.42	75.37

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	77.42	75.24	75.87	76.24	73.63	74.28	75.49	73.93	74.70	76.04	75.61	75.80
2	76.35	74.08	75.18	77.18	75.94	76.59	75.95	74.64	75.26	76.47	75.04	75.73
3	76.86	73.88	75.24	76.10	75.01	75.40	75.86	75.05	75.32	76.66	75.66	76.29
4	76.87	74.56	75.39	75.85	75.18	75.55	75.78	74.72	75.29	75.86	75.26	75.56
5	75.58	74.22	74.78	75.18	74.36	74.64	76.26	74.58	75.22	75.90	75.30	75.67
6	75.44	74.16	74.73	74.36	73.81	73.96	76.21	75.43	75.68	76.35	75.83	76.13
7	76.34	75.03	75.59	74.72	72.90	73.45	75.91	75.17	75.44	76.54	76.08	76.31
8	75.78	75.34	75.48	75.41	74.11	74.78	76.03	75.31	75.48	76.56	75.89	76.24
9	75.91	75.06	75.43	74.13	72.64	73.14	75.64	75.03	75.26	76.66	76.10	76.22
10	75.94	75.34	75.64	73.75	72.76	73.05	75.60	75.23	75.45	77.15	75.82	76.38
11	76.29	75.34	75.88	74.04	72.92	73.58	75.55	73.88	74.67	77.14	76.65	76.83
12	76.43	74.58	75.26	74.36	73.43	73.70	76.92	75.21	75.90	76.88	75.95	76.25
13	76.61	75.98	76.38	73.67	72.84	73.14	76.90	75.46	76.20	76.44	75.94	76.17
14	76.95	75.24	75.90	73.80	72.70	73.23	75.73	74.04	74.84	76.14	74.75	75.72
15	75.91	75.13	75.51	74.17	72.96	73.32	75.90	75.28	75.62	75.44	73.88	74.69
16	76.62	75.01	75.90	74.90	73.49	74.38	75.79	75.09	75.38	76.88	74.96	75.72
17	75.66	75.06	75.35	74.32	72.86	73.43	76.51	75.72	76.22	77.65	76.55	77.22
18	75.72	74.95	75.29	74.43	73.79	74.14	76.30	75.32	75.82	77.51	76.42	77.05
19	76.66	75.07	76.06	74.42	73.53	74.00	75.85	74.83	75.26	77.67	76.39	77.05
20	76.37	75.36	75.58	74.36	72.87	73.41	76.31	75.20	75.78	77.11	75.08	75.71
21	75.51	74.02	74.60	74.73	73.44	74.05	76.09	74.10	74.82	75.52	74.09	74.70
22	75.14	74.46	74.89	75.06	74.65	74.85	75.28	73.00	73.90	75.73	74.81	75.39
23	75.09	73.66	74.27	76.16	74.75	75.52	75.49	74.58	74.94	76.11	74.80	75.34
24	76.36	74.82	75.64	76.12	75.03	75.55	75.69	75.10	75.44	76.95	75.46	76.14
25	76.41	75.29	75.99	76.78	75.03	75.99	75.56	74.83	75.19	76.31	75.18	75.67
26	75.91	75.03	75.53	76.50	76.00	76.27	75.17	74.45	74.89	76.40	75.82	76.11
27	75.21	74.28	74.63	76.54	75.06	75.90	75.73	74.97	75.42	76.46	75.71	76.02
28	74.46	73.15	73.61	75.60	73.88	74.57	76.07	75.41	75.80	76.25	75.67	75.99
29	---	---	---	76.60	75.28	75.75	76.04	75.69	75.89	75.73	74.89	75.22
30	---	---	---	76.93	75.77	76.37	75.78	75.46	75.61	77.53	74.35	74.90
31	---	---	---	76.07	74.85	75.46	---	---	---	75.44	75.35	76.51
MONTH	77.42	73.15	75.34	77.18	72.64	74.56	76.92	73.00	75.36	77.67	73.88	75.96

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	77.12	76.14	76.65	76.69	74.72	75.31	75.77	74.48	74.98	75.68	74.29	75.07
2	77.12	76.40	76.76	77.08	75.16	76.23	76.98	75.58	76.20	75.50	74.63	74.95
3	77.12	76.40	76.76	76.24	75.03	75.68	76.94	76.07	76.47	75.31	73.51	74.23
4	76.93	75.56	76.10	76.21	75.20	75.64	76.82	75.51	76.02	73.67	73.00	73.35
5	75.86	74.82	75.22	76.90	75.42	75.89	75.51	74.20	74.59	73.31	72.52	72.93
6	76.45	74.60	75.38	76.81	75.19	75.63	74.43	73.01	73.70	74.04	73.16	73.57
7	77.14	75.39	76.05	75.99	75.36	75.60	74.04	72.53	73.21	75.97	73.90	74.71
8	77.18	76.53	76.85	75.85	75.17	75.54	75.07	72.62	73.65	76.30	75.73	75.99
9	76.86	75.81	76.23	75.46	74.47	74.82	76.00	74.09	75.03	76.20	75.54	75.75
10	76.33	75.47	75.74	75.63	74.66	75.04	76.59	74.95	75.85	75.68	74.68	75.21
11	75.49	74.65	75.24	75.70	74.77	75.12	76.38	74.98	75.74	74.96	74.06	74.37
12	75.26	73.99	74.54	76.10	74.93	75.42	75.10	74.28	74.74	75.74	74.21	74.92
13	76.43	75.06	75.70	76.01	75.34	75.71	74.28	73.45	73.69	76.02	75.22	75.63
14	77.17	76.00	76.64	75.88	75.16	75.38	74.28	73.23	73.85	76.17	75.53	75.85
15	77.20	76.98	77.08	75.70	75.23	75.48	74.45	72.97	73.67	76.14	75.21	75.39
16	77.16	76.19	76.61	75.84	75.47	75.67	74.64	73.58	74.11	76.68	74.48	75.28
17	76.25	75.83	76.10	75.50	75.21	75.34	74.52	73.53	73.80	76.54	75.46	75.68
18	76.06	75.83	75.94	75.92	74.91	75.19	75.10	73.25	74.28	75.71	74.02	74.83
19	76.16	74.95	75.34	76.66	75.92	76.27	75.64	74.61	75.14	76.08	74.78	75.37
20	75.44	75.04	75.26	76.53	75.33	75.67	75.12	74.52	74.93	76.04	75.16	75.51
21	75.98	75.04	75.35	76.13	74.82	75.41	75.09	73.50	74.24	75.90	74.84	75.22
22	77.25	75.98	76.82	76.06	75.60	75.76	75.00	74.26	74.66	75.65	75.18	75.45
23	76.98	76.41	76.68	75.96	75.10	75.59	75.30	74.06	74.75	75.52	74.87	75.12
24	76.60	76.24	76.45	76.00	75.07	75.56	76.29	74.93	75.61	75.53	75.18	75.30
25	76.72	76.17	76.38	76.12	74.36	75.73	76.17	75.06	75.42	75.63	74.95	75.34
26	76.68	75.60	76.03	75.26	72.83	73.78	75.47	74.30	74.74	75.85	75.26	75.64
27	76.39	75.47	76.07	76.60	75.26	75.74	75.64	74.34	74.78	75.61	74.71	75.10
28	76.79	74.96	75.76	77.24	76.36	76.75	75.17	74.14	74.37	76.51	74.97	75.60
29	76.63	75.67	76.04	76.96	75.10	75.59	75.03	74.12	74.47	76.28	75.28	75.70
30	76.69	75.56	76.11	76.40	75.30	75.82	75.13	74.77	75.02	76.04	75.22	75.60
31	---	---	---	76.66	75.33	75.95	75.13	74.23	74.70	---	---	---
MONTH	77.25	73.99	76.06	77.24	72.83	75.56	76.98	72.53	74.72	76.68	72.52	75.09

YEAR	77.67	72.45	75.35
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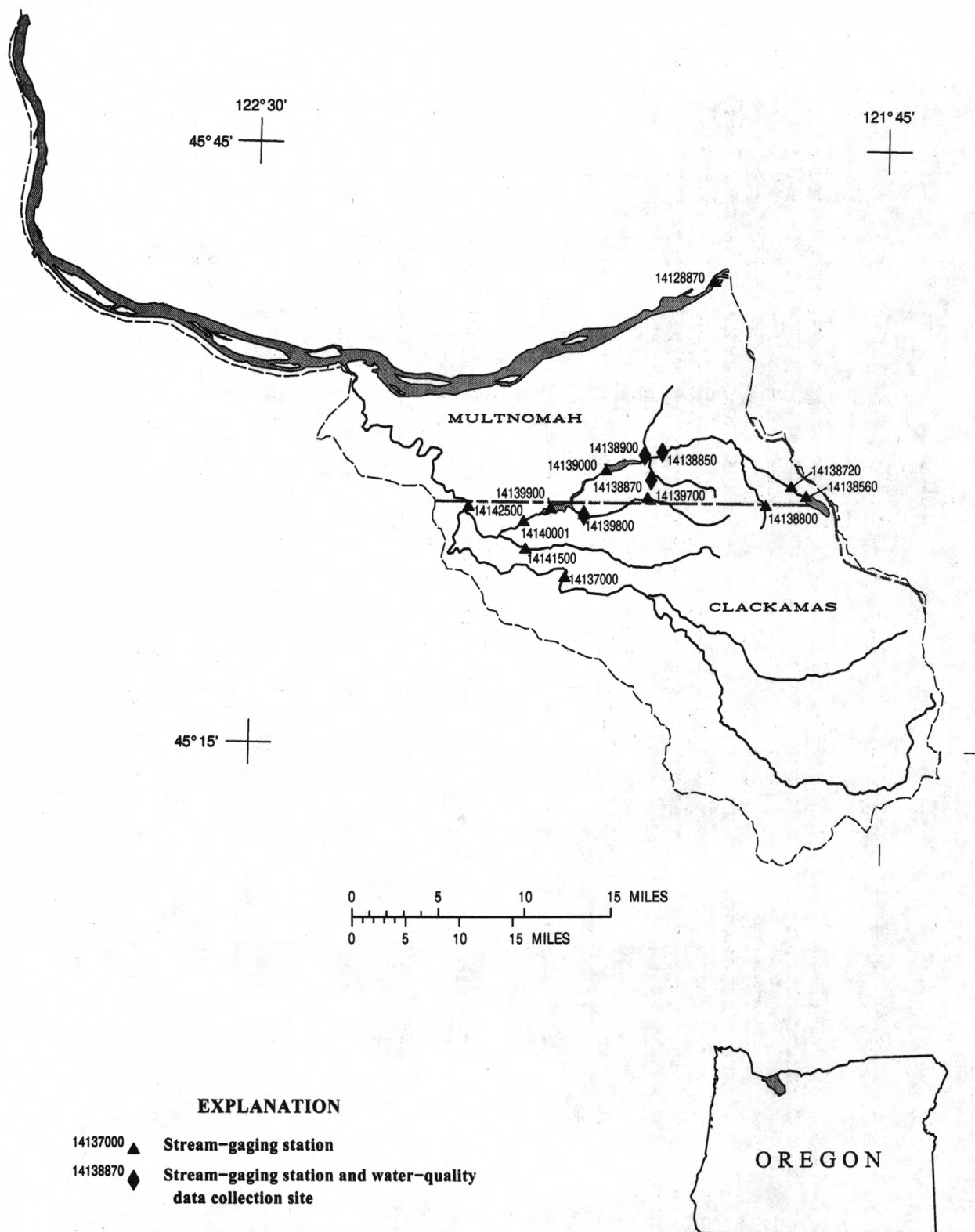


Figure 18. Location of surface-water and water-quality stations in the Columbia River between Bonneville Dam and confluence with the Willamette river and the Sandy River Basin.

COLUMBIA RIVER MAIN STEM

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14128870 COLUMBIA RIVER BELOW BONNEVILLE DAM, OR

LOCATION.--Lat 45°38'00", long 121°57'33", in sec.21, T.2 N., R.7 E., Multnomah County, Hydrologic Unit 17080001, on left bank 0.9 mi downstream from Bonneville Dam left bank powerhouse, 50 ft upstream from Tanner Creek, and at mile 144.5.

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 sea level. Prior to August 15, 1990, at a site 0.5 mi upstream at the same datum.

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 30.40 ft June 11, 1981; minimum, 6.22 ft Sept. 26, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 24.46 ft May 19; minimum, 6.44 ft Oct. 1.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.01	6.44	7.35	14.12	11.79	13.64	17.20	14.34	15.87	14.90	11.52	12.60
2	9.77	6.81	7.89	13.72	11.14	12.84	15.98	13.98	15.00	13.32	11.48	12.18
3	9.51	7.30	8.59	14.94	11.29	13.66	14.80	12.82	13.89	16.40	12.98	14.62
4	8.70	6.52	7.68	13.94	10.82	12.42	13.62	11.87	12.53	13.92	11.97	13.32
5	9.00	6.63	7.62	13.94	9.88	11.60	16.20	11.12	14.32	15.03	11.78	13.43
6	8.85	6.94	7.73	12.73	9.62	10.96	16.43	11.95	15.20	16.07	10.71	14.02
7	8.97	6.92	7.72	12.23	9.70	11.15	16.28	13.41	14.68	15.69	10.58	13.31
8	9.93	7.75	8.86	13.29	9.22	11.60	14.10	12.63	13.64	13.62	10.39	11.45
9	9.66	7.03	7.82	13.39	---	---	14.57	11.46	13.06	15.50	10.67	13.30
10	8.92	7.10	8.07	12.41	9.26	11.05	14.01	10.73	12.56	15.27	11.34	13.67
11	10.55	7.62	9.20	11.38	9.06	10.47	---	---	---	14.34	11.96	13.42
12	11.37	9.39	10.50	10.23	8.57	9.52	---	---	---	17.83	12.04	15.31
13	10.86	9.07	10.10	11.53	8.19	9.31	---	---	---	18.99	13.11	16.47
14	9.23	8.04	8.67	11.83	8.36	10.69	---	---	---	18.86	14.57	17.21
15	12.90	7.54	11.01	13.00	8.08	11.25	16.13	11.70	14.42	19.30	14.24	17.26
16	12.65	11.44	11.73	12.48	8.87	11.28	14.24	11.34	13.20	17.96	15.92	17.09
17	11.54	7.98	9.07	14.39	9.42	12.37	14.24	12.50	13.57	18.61	14.63	17.18
18	9.33	6.99	8.26	14.60	10.61	12.92	13.47	11.45	12.35	17.71	15.24	16.79
19	10.56	7.08	9.06	12.28	8.84	10.14	15.82	11.31	14.02	18.61	14.09	16.81
20	11.13	8.82	10.17	10.91	8.99	9.76	15.37	12.50	14.04	15.95	13.19	15.06
21	10.78	8.41	9.64	13.01	9.35	11.95	13.85	11.96	13.05	16.73	12.18	14.57
22	12.12	8.51	10.45	12.94	9.75	11.93	14.99	11.19	13.71	15.60	11.50	13.77
23	9.86	7.99	8.88	12.61	10.12	11.61	14.76	11.74	12.96	17.23	11.23	14.33
24	11.01	7.96	9.58	10.72	9.18	9.92	13.74	10.66	11.34	15.92	10.82	13.42
25	10.88	8.80	9.79	10.45	8.60	9.62	10.93	10.21	10.59	15.08	11.12	13.28
26	10.70	7.65	9.53	11.79	8.80	10.15	11.81	9.47	10.63	16.66	11.10	14.65
27	12.82	8.55	11.17	10.91	8.55	9.77	15.24	10.44	13.16	16.27	12.62	14.98
28	13.45	10.19	11.87	12.98	9.33	11.66	14.85	11.70	13.58	15.27	12.40	13.37
29	11.14	8.92	10.42	14.31	10.63	13.16	16.05	11.93	14.63	16.26	11.88	13.83
30	11.09	8.14	9.62	15.23	10.81	13.31	15.70	13.84	14.50	17.36	11.51	14.68
31	14.21	7.66	11.50	---	---	---	15.57	10.98	13.73	21.90	15.60	18.21
MONTH	14.21	6.44	9.34	15.23	---	---	---	---	---	21.90	10.39	14.63

COLUMBIA RIVER MAIN STEM

14128870 COLUMBIA RIVER BELOW BONNEVILLE DAM, OR--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	22.57	19.23	21.52	19.47	15.40	17.64	15.33	13.21	13.58	19.84	18.35	19.22
2	22.28	20.87	21.53	20.22	14.87	18.11	14.37	13.33	13.91	21.02	18.46	19.86
3	21.97	19.35	20.75	19.03	17.66	18.42	14.60	13.28	13.99	21.20	19.81	20.55
4	19.35	18.30	18.92	17.70	16.94	17.20	15.10	13.32	14.36	20.61	18.54	19.67
5	19.21	15.68	16.35	17.08	16.18	16.72	17.19	14.12	15.70	21.07	18.44	20.44
6	17.93	14.38	16.10	17.55	15.67	16.84	16.50	14.29	15.69	21.68	20.06	20.78
7	19.47	14.37	17.72	17.19	13.78	16.22	16.73	14.02	15.78	20.23	19.46	19.92
8	19.03	16.93	18.33	18.75	13.30	15.62	15.94	14.24	14.98	21.37	19.61	20.65
9	17.58	14.45	16.53	17.32	14.08	16.22	14.80	13.65	14.16	22.05	20.40	21.44
10	19.03	13.69	17.03	16.83	14.08	16.17	16.13	14.20	14.90	21.54	19.54	20.62
11	18.23	14.87	16.71	16.07	11.99	14.34	16.31	14.04	15.09	23.16	20.11	21.73
12	17.54	13.54	14.57	17.02	13.96	15.90	16.74	14.27	15.23	22.83	21.01	21.87
13	18.05	13.89	16.26	16.64	13.79	15.67	17.54	13.76	15.61	21.14	19.98	20.50
14	18.81	15.35	17.24	18.01	14.00	16.38	17.82	15.94	17.05	21.45	19.75	20.40
15	18.71	16.06	17.53	16.93	12.64	14.98	17.51	15.93	16.85	21.24	18.22	19.64
16	19.24	16.04	18.01	18.89	12.28	15.57	16.49	14.77	15.84	21.27	19.41	20.58
17	20.35	16.93	18.88	18.58	14.55	15.93	17.63	14.62	16.50	23.12	20.55	22.15
18	20.71	19.01	20.08	17.73	14.25	16.16	18.96	17.45	18.28	24.26	21.92	22.88
19	20.57	18.90	19.85	17.46	14.37	15.82	18.26	15.90	16.62	24.46	22.53	23.09
20	21.77	20.11	21.21	17.81	15.33	16.57	17.87	15.40	16.78	23.76	20.87	22.37
21	21.16	18.71	19.74	18.10	14.89	16.68	18.88	15.88	17.21	21.31	18.72	20.25
22	22.24	18.35	20.35	19.45	15.30	17.40	17.91	14.63	16.01	22.45	18.73	20.23
23	22.21	18.67	19.80	21.75	16.09	19.55	15.03	12.30	13.49	21.92	19.89	21.06
24	19.76	17.31	18.57	20.86	19.08	20.05	17.10	14.58	15.79	22.16	19.72	21.29
25	19.25	17.73	18.67	20.35	17.42	18.75	18.14	16.76	17.25	22.96	19.52	21.33
26	18.44	16.39	17.69	19.03	18.38	18.66	18.13	16.70	17.31	23.01	21.23	22.17
27	20.49	16.91	18.51	19.38	17.89	18.76	19.50	16.26	18.03	23.58	19.93	21.27
28	19.75	16.74	18.59	17.89	14.72	15.94	20.78	17.97	19.73	20.07	18.49	19.00
29	---	---	---	16.33	14.33	15.27	20.99	18.67	20.17	20.93	17.25	19.11
30	---	---	---	16.86	13.14	15.64	21.11	19.71	20.19	22.18	18.35	20.64
31	---	---	---	16.17	12.86	14.71	---	---	---	23.67	20.38	21.52
MONTH	22.57	13.54	18.47	21.75	11.99	16.71	21.11	12.30	16.20	24.46	17.25	20.85

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	23.72	21.53	22.29	22.55	18.85	19.91	15.97	14.02	15.00	13.49	9.85	11.19
2	23.66	22.04	22.48	21.02	20.02	20.64	15.86	14.04	14.81	10.85	8.97	9.91
3	23.38	21.80	22.42	20.21	17.82	18.50	15.56	12.52	13.62	10.45	8.27	9.70
4	23.36	21.07	22.02	19.39	17.58	18.50	15.56	13.65	14.30	11.33	7.97	9.50
5	22.57	20.54	21.64	19.35	15.69	17.79	15.48	13.55	14.34	10.79	7.90	9.58
6	22.35	20.44	21.27	19.53	18.48	19.12	15.11	11.24	12.66	10.44	8.07	9.09
7	23.34	20.66	21.77	20.17	18.49	19.21	15.00	10.89	12.47	10.88	7.61	9.04
8	22.35	20.60	21.73	20.46	18.65	19.55	14.56	10.93	12.36	11.42	7.57	9.72
9	22.02	19.75	21.47	19.23	16.47	17.56	15.21	12.16	13.48	10.74	8.29	9.01
10	22.19	20.90	21.86	16.97	15.44	16.11	15.17	12.23	13.53	9.21	7.24	8.18
11	22.26	20.80	21.80	18.52	16.86	17.89	15.40	12.46	14.17	11.47	8.07	9.98
12	22.03	20.14	21.53	18.53	16.87	17.21	15.58	13.65	14.65	11.03	8.79	9.97
13	22.89	21.55	22.06	18.27	17.40	17.79	15.10	11.09	12.79	11.29	8.96	10.18
14	23.22	21.65	22.24	19.05	17.10	18.15	14.50	10.71	12.19	11.89	9.74	11.10
15	23.01	21.84	22.65	18.58	15.05	16.24	14.77	12.88	13.56	12.17	10.54	11.05
16	23.38	22.07	22.62	16.23	14.89	15.81	14.76	11.04	12.99	11.16	9.34	10.33
17	22.91	20.15	20.96	16.25	15.18	15.78	14.74	11.52	13.27	11.19	7.83	8.75
18	20.56	19.11	20.14	16.13	15.47	15.85	14.64	10.90	12.13	11.35	7.85	10.25
19	21.26	18.05	19.94	18.15	15.44	16.21	13.24	10.29	11.44	12.64	8.82	10.44
20	21.62	20.50	21.28	17.93	15.18	16.11	13.61	11.07	12.14	12.53	9.09	11.13
21	21.77	20.16	21.22	15.80	14.14	14.99	13.66	10.09	11.46	11.48	8.42	10.25
22	22.27	19.93	21.04	15.66	13.73	14.42	14.30	11.66	12.98	11.16	7.11	9.94
23	22.60	21.06	21.82	15.68	13.79	14.47	14.33	11.65	12.75	10.45	7.72	9.03
24	22.61	21.23	22.13	15.95	14.81	15.26	13.35	11.92	12.61	9.87	7.56	8.85
25	22.05	20.64	21.42	18.51	15.44	16.60	13.87	12.29	13.38	11.97	7.63	10.40
26	22.02	20.65	21.21	18.16	14.15	15.62	12.29	10.03	11.11	12.20	8.36	10.60
27	21.97	20.70	21.47	16.14	14.28	14.86	12.78	10.75	12.12	11.50	9.33	10.73
28	21.78	18.15	20.68	18.28	15.73	17.60	12.95	11.75	12.43	12.01	9.47	10.94
29	22.49	20.45	21.47	17.18	14.43	15.11	13.96	11.30	12.86	11.84	9.42	10.82
30	23.35	21.81	22.15	16.21	14.17	15.16	14.05	11.40	12.92	13.75	10.29	12.47
31	---	---	---	16.17	15.16	15.54	14.02	11.30	12.72	---	---	---
MONTH	23.72	18.05	21.63	22.55	13.73	16.89	15.97	10.03	13.01	13.75	7.11	10.07

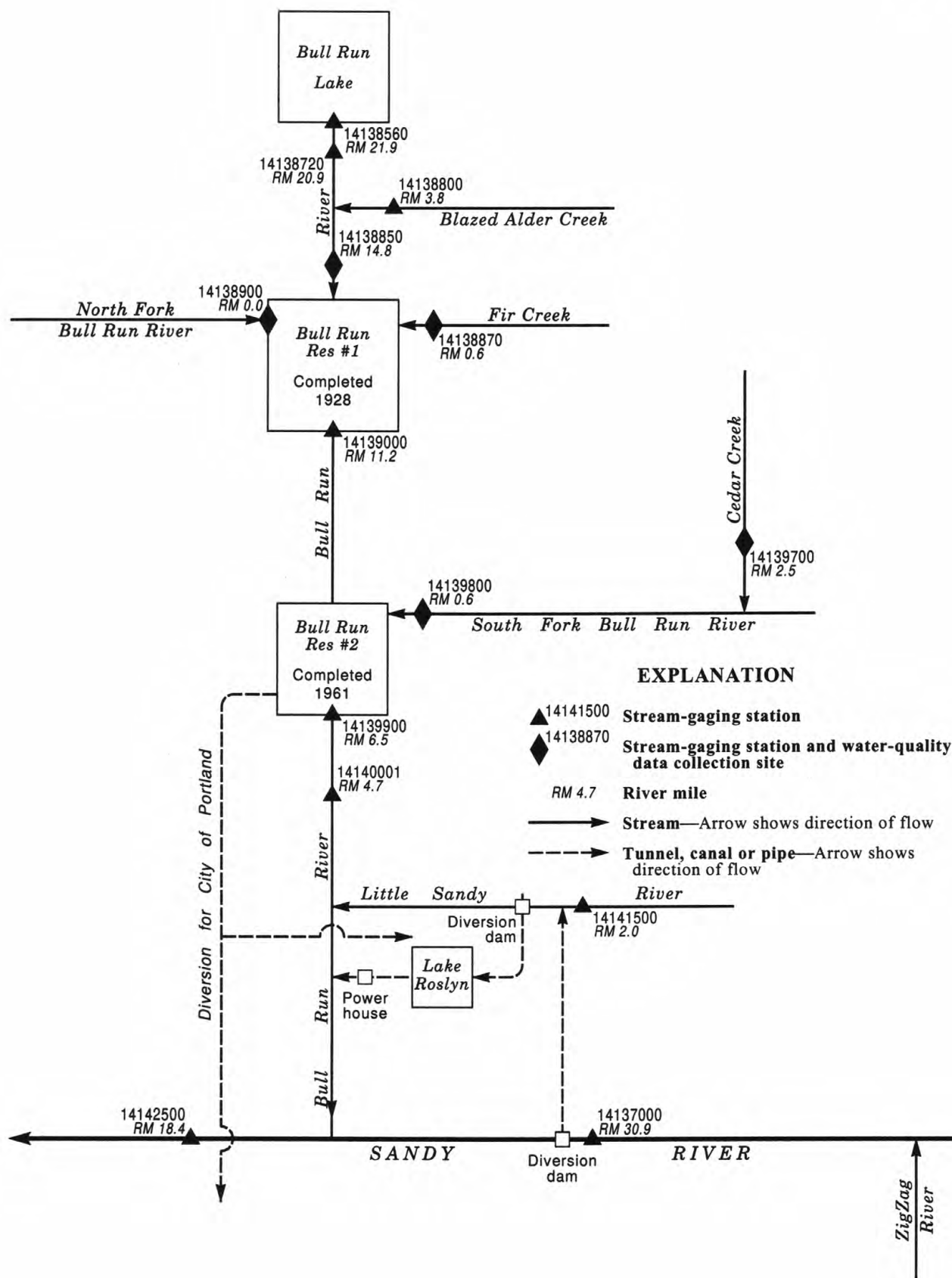


Figure 19. Schematic diagram showing gaging stations and diversions in the Sandy River Basin.

SANDY RIVER BASIN

14137000 SANDY RIVER NEAR MARMOT, OR

LOCATION.--Lat 45°23'30", long 122°07'40", in SE 1/4 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. Monthly discharges only, January to September 1916, October 1918 to June 1919, published in WSP 1318. 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. Elevation of gage is 730 ft above sea level, 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.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--84 years (water years 1912-95), 1,343 ft³/s, 69.63 in/yr, 972,700 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; maximum gage height, 17.10 ft, Feb. 23, 1986; minimum, 190 ft³/s Oct. 13, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Oct. 27	1230	10,900	12.32	Jan. 14	0500	8,400	11.68
Oct. 31	2030	*25,400	*15.32	Feb. 1	2230	12,100	12.69
Nov. 30	2200	15,900	13.55	Feb. 17	2030	12,700	12.84
Dec. 27	0130	8,070	11.59				

Minimum discharge, 190 ft³/s Oct. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232	8230	8750	1500	10300	1330	973	1730	815	796	450	371
2	221	3360	4570	1330	7900	1230	943	2980	800	790	453	373
3	208	2170	2960	1200	4480	1170	929	2780	777	818	453	379
4	197	2620	2170	1110	3420	1170	981	2220	760	783	452	387
5	195	2330	1750	1030	2860	1110	996	2260	897	733	451	365
6	195	1840	1520	981	2460	1020	1100	2320	1320	724	453	372
7	196	1580	1340	946	2150	975	1160	2240	2020	721	595	643
8	196	1380	1190	908	1940	1010	1290	2000	1370	699	584	484
9	199	1430	1290	1090	1720	1360	1320	1840	1140	896	462	416
10	196	1340	1200	1390	1540	1460	1320	1730	1050	835	456	389
11	197	1180	1130	1390	1570	1410	1520	1830	1040	689	509	375
12	194	1220	1070	1610	1510	1320	1600	1840	922	643	452	367
13	193	1230	980	4580	1320	1340	2270	1680	910	612	427	361
14	295	1210	929	6970	1220	1510	2050	1520	974	596	417	358
15	312	1140	904	4090	1220	1570	1820	1450	1230	591	442	365
16	241	1260	1490	2970	1210	1450	1640	1440	1150	581	436	370
17	219	1130	4470	2400	6810	1350	1500	1400	1090	579	475	374
18	211	968	3380	2960	6860	1540	1530	1280	1190	584	462	362
19	202	1110	2670	2650	7980	1970	1430	1190	1390	577	418	359
20	202	2730	2600	2150	5750	1940	1480	1140	1900	577	405	352
21	418	1690	2530	1800	4010	1730	1440	1110	1880	572	400	330
22	328	1330	2180	1570	3050	1530	1370	1070	1580	559	399	321
23	249	1480	1980	1390	2470	1380	1380	1040	1350	536	404	320
24	223	1690	1810	1260	2190	1300	1420	1010	1200	521	397	318
25	213	1830	1660	1170	1980	1190	1430	974	1100	506	380	321
26	304	1550	3480	1090	1790	1120	1370	950	1020	520	375	331
27	7840	1410	6320	1030	1600	1070	1470	917	946	524	369	460
28	3950	1270	3950	1330	1440	1040	1630	896	881	497	371	544
29	1940	2630	2730	1900	---	1010	1580	895	845	486	391	617
30	1200	7790	2110	2650	---	986	1600	884	808	455	387	581
31	10600	---	1740	7940	---	977	---	846	---	445	370	---
TOTAL	31566	62128	76853	66385	92750	40568	42542	47462	34355	19445	13495	11965
MEAN	1018	2071	2479	2141	3312	1309	1418	1531	1145	627	435	399
MAX	10600	8230	8750	7940	10300	1970	2270	2980	2020	896	595	643
MIN	193	968	904	908	1210	975	929	846	760	445	369	318
AC-FT	62610	123200	152400	131700	184000	80470	84380	94140	68140	38570	26770	23730
CFSM	3.89	7.90	9.46	8.17	12.6	4.99	5.41	5.84	4.37	2.39	1.66	1.52
IN.	4.48	8.82	10.91	9.43	13.17	5.76	6.04	6.74	4.88	2.76	1.92	1.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1995, BY WATER YEAR (WY)

MEAN	645	1568	2048	2001	1849	1645	1885	1807	1228	644	429	417
MAX	2168	3699	6278	4752	4686	3983	3134	3443	3457	1385	663	1056
(WY)	1960	1956	1965	1953	1961	1972	1962	1949	1917	1917	1974	1959
MIN	239	236	445	498	464	631	658	743	420	354	268	244
(WY)	1988	1937	1977	1937	1977	1941	1941	1992	1992	1992	1940	1994

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1912 - 1995
ANNUAL TOTAL	448215	539514	
ANNUAL MEAN	1228	1478	1343
HIGHEST ANNUAL MEAN			1933
LOWEST ANNUAL MEAN			766
HIGHEST DAILY MEAN	10600	10600	41400
LOWEST DAILY MEAN	193	193	193
ANNUAL SEVEN-DAY MINIMUM	196	196	196
ANNUAL RUNOFF (AC-FT)	889000	1070000	972700
ANNUAL RUNOFF (CFSM)	4.69	5.64	5.12
ANNUAL RUNOFF (INCHES)	63.64	76.60	69.63
10 PERCENT EXCEEDS	2620	2660	2600
50 PERCENT EXCEEDS	872	1160	990
90 PERCENT EXCEEDS	239	364	350

SANDY RIVER BASIN

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14138560 BULL RUN LAKE NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°27'39", long 121°50'34", in SE 1/4 SE 1/4 sec.20, T.1 S., R.8 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, in main cabin on northwest side of Bull Run Lake, near outlet structure, 10.7 mi northeast of Brightwood, and at mile 21.9.

DRAINAGE AREA.--3.5 mi².

PERIOD OF RECORD.--October 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,147.2 ft above sea level, Portland Water Bureau datum.

REMARKS.--Bull Run Lake was formed by natural processes, including a large landslide. A temporary log crib dam was constructed in 1917 to increase the capacity of the lake. In 1920 the log crib dam was reconstructed. A concrete dam and improved outlet valve were constructed in 1958. A lower outlet and tunnel was constructed in 1961. Portland Water Bureau releases water from the lake to augment streamflows during periods of low flow.

COOPERATION.--Capacity table provided by Portland Water Bureau.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 43,800 acre-ft May 13, 14, 1995, elevation, 3,174.92 ft; minimum contents observed, 31,080 acre-ft Oct. 29, 1992, elevation, 3,143.97 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 43,800 acre-ft May 13, 14, elevation, 3,174.92 ft; minimum contents, 36,190 acre-ft Oct. 26, elevation, 3,157.09 ft, but may have been lower during period of missing record in November.

REVISIONS.--Contents and change in contents in acre-feet for the 1993 and 1994 water years have been revised as shown in the following tables. These figures supercede those published in the reports for those years. The Capacity Tables (elevation, in feet and contents, in acre-feet) published in the 1993 and 1994 reports are also superceded by the Capacity Table shown below.

WATER YEAR 1993:

(†)	31340	a33180	33690	33850	a33870	a35240	37580	39450	39570	38990	38050	37060
(†)	-100	+1840	+510	+160	+20	+1370	+2340	+1870	+120	-580	-940	-990

WTR YR 1993 AC-FT† +5620

WATER YEAR 1994:

(†)	36260	35720	36690	38550	38540	a39180	40210	40040	39820	38760	37660	36790
(†)	-800	-540	+970	+1860	-10	+640	+1030	-170	-220	-1060	-1100	-870

CAL YR 1993 AC-RT† +3000

WTR YR 1994 AC-FT† -270

Capacity Table (elevation, in feet and contents, in acre-feet)

2,905	0	3,100	17,280
2,940	229	3,140	29,510
2,980	1,270	3,150	33,410
3,020	3,740	3,160	37,380
3,060	8,880	3,180	46,080

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3158.49	---	3164.32	3167.55	3171.14	3174.66	3173.89	3174.11	3173.89	3172.48	3169.54	3166.75
2	3158.42	---	3164.54	3167.53	3171.48	3174.56	3173.81	3174.37	3173.79	3172.37	3169.43	3166.66
3	3158.30	---	3164.61	3167.49	3171.63	3174.55	3173.75	3174.44	3173.70	3172.33	3169.33	3166.57
4	3158.21	---	3164.59	3167.39	3171.73	3174.55	3173.73	3174.51	3173.63	3172.24	3169.23	3166.47
5	3158.13	---	3164.60	3167.36	3171.80	3174.48	3173.75	3174.60	3173.68	3172.15	3169.11	3166.39
6	3158.05	---	3164.62	3167.34	3171.84	3174.40	3173.72	3174.70	3173.80	3172.08	3169.07	3166.37
7	3157.98	---	3164.65	3167.29	3171.87	3174.32	3173.78	3174.71	3173.74	3171.99	3169.00	3166.40
8	3157.90	---	3164.64	3167.24	3171.87	3174.32	3173.84	3174.73	3173.72	3171.93	3168.90	3166.32
9	3157.82	---	3164.68	3167.30	3171.87	3174.34	3173.86	3174.74	3173.64	3171.92	3168.80	3166.23
10	3157.75	---	3164.64	3167.35	3171.86	3174.27	3173.80	3174.78	3173.60	3171.82	3168.72	3166.13
11	3157.67	---	3164.62	3167.33	3171.92	3174.31	3173.83	3174.88	3173.51	3171.71	3168.63	3166.05
12	3157.59	---	3164.57	3167.46	3171.87	3174.30	3173.89	3174.89	3173.46	3171.61	3168.53	3165.95
13	3157.55	---	3164.51	3167.92	3171.89	3174.37	3174.02	3174.90	3173.40	3171.51	3168.43	3165.86
14	3157.58	---	3164.49	3168.25	3171.83	3174.40	3174.08	3174.86	3173.36	3171.41	3168.34	3165.77
15	3157.53	---	3164.58	3168.41	3171.90	3174.45	3174.03	3174.87	3173.36	3171.31	3168.25	3165.68
16	3157.46	---	3164.82	3168.47	3171.93	3174.45	3174.00	3174.86	3173.29	3171.22	3168.19	3165.60
17	3157.39	---	3165.29	3168.53	3172.64	3174.39	3174.02	3174.84	3173.28	3171.10	3168.15	3165.50
18	3157.31	---	3165.56	3168.69	3173.07	3174.48	3174.00	3174.79	3173.26	3171.00	3168.05	3165.41
19	3157.24	---	3165.74	3168.76	3174.14	3174.55	3173.96	3174.74	3173.29	3170.90	3167.95	3165.32
20	3157.26	---	3165.94	3168.67	3174.45	3174.57	3173.97	3174.69	3173.31	3170.80	3167.86	3165.29
21	3157.36	---	3166.05	3168.72	3174.65	3174.54	3173.92	3174.65	3173.28	3170.69	3167.76	3165.09
22	3157.31	---	3166.11	3168.65	3174.72	3174.55	3173.86	3174.61	3173.24	3170.57	3167.66	3164.98
23	3157.24	---	3166.14	3168.64	3174.76	3174.50	3173.82	3174.56	3173.18	3170.47	3167.56	3164.89
24	3157.18	---	3166.18	3168.55	3174.79	3174.45	3173.80	3174.48	3173.11	3170.37	3167.47	3164.79
25	3157.14	---	3166.23	3168.53	3174.80	3174.39	3173.78	3174.45	3173.04	3170.26	3167.38	3164.73
26	3157.58	---	3166.81	3168.48	3174.79	3174.33	3173.76	3174.37	3172.96	3170.18	3167.27	3164.67
27	3158.85	---	3167.28	3168.46	3174.73	3174.23	3173.85	3174.30	3172.88	3170.07	3167.18	3164.74
28	3159.21	---	3167.52	3168.54	3174.70	3174.20	3173.89	3174.23	3172.72	3169.96	3167.07	3164.79
29	3159.29	3162.89	3167.62	3168.61	---	3174.09	3173.96	3174.15	3172.67	3169.84	3167.03	3164.80
30	3159.34	3163.78	3167.58	3168.96	---	3174.00	3173.99	3174.07	3172.53	3169.75	3166.94	3164.83
31	3161.25	---	3167.69	3170.29	---	3173.93	---	3173.98	---	3169.65	3166.84	---
MAX	3161.25	---	3167.69	3170.29	3174.80	3174.66	3174.08	3174.90	3173.89	3172.48	3169.54	3166.75
MIN	3157.14	---	3164.32	3167.24	3171.14	3173.93	3173.72	3173.98	3172.53	3169.65	3166.84	3164.67
(†)	37900	38960	40630	41760	43710	43360	43390	43390	42740	41480	40270	39410
(†)	-1110	+1060	+1670	+1130	+1950	-350	+30	0	-650	-1260	-1210	-860
CAL YR 1994	AC-FT†	+3940										
WTR YR 1995	AC-FT†	+2620										

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

† Change, in contents, in acre-feet.

a Interpolated from recorded gage readings.

SANDY RIVER BASIN

14138720 BULL RUN RIVER AT LOWER FLUME, NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°28'14", long 121°51'55", in SE 1/4 NE 1/4 sec.19, T.1 S., R.8 E., Multnomah County, Hydrologic Unit 17080001, at flume, 1.0 mi downstream from outlet structure at Bull Run Lake, 10.4 mi northeast of Brightwood, and at mile 20.9.

DRAINAGE AREA.--5.08 mi².

PERIOD OF RECORD.--October 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,840 ft above sea level, from topographic map.

REMARKS.--Records good. Regulation at times by Bull Run Lake.

AVERAGE DISCHARGE.--3 years (water years 1993-95), 20.2 ft³/s, 14,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61 ft³/s Jan. 31, 1995, gage height, 2.24 ft; minimum discharge, 8.2 ft³/s Oct. 28, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 61 ft³/s Jan. 31, gage height, 2.24 ft; minimum discharge, 10 ft³/s several days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	30	36	30	51	34	26	27	26	23	20	18
2	11	26	32	29	47	33	26	29	25	23	20	18
3	11	24	29	28	43	32	26	29	25	23	20	18
4	11	23	28	28	41	31	26	29	25	23	20	18
5	11	23	27	27	40	31	26	29	25	23	20	18
6	11	22	26	27	40	30	26	30	25	23	20	e18
7	11	21	25	26	39	30	26	30	25	23	20	e18
8	11	21	25	25	37	30	26	30	25	23	20	e18
9	11	22	24	25	35	30	26	30	24	23	19	e17
10	11	22	24	25	33	30	26	29	24	22	19	e17
11	11	21	23	25	32	29	26	30	24	22	19	e17
12	11	21	23	25	31	29	27	30	24	22	19	e17
13	11	21	23	28	31	29	28	30	24	22	19	17
14	11	20	22	30	30	29	28	30	24	22	19	17
15	11	20	22	30	30	29	28	29	24	22	19	17
16	10	20	22	29	29	29	28	29	24	22	19	17
17	10	20	28	28	37	29	27	29	24	22	19	e17
18	10	20	27	28	39	29	27	29	24	22	19	e17
19	10	20	27	28	51	29	27	29	24	21	19	e17
20	10	21	28	28	47	29	27	28	24	21	18	17
21	11	20	28	27	44	29	27	28	24	21	18	17
22	10	20	28	27	42	29	27	28	24	21	18	17
23	10	20	27	26	41	29	27	28	24	21	18	17
24	10	20	27	26	40	29	27	27	24	21	18	17
25	10	20	27	26	40	28	27	27	24	21	18	16
26	11	20	29	25	38	28	27	27	24	21	18	16
27	24	20	36	25	37	28	27	27	23	21	18	e17
28	21	19	34	24	35	27	27	27	23	21	18	e17
29	18	21	32	25	---	27	27	26	23	20	18	17
30	17	32	31	29	---	27	27	26	23	20	18	17
31	28	---	30	49	---	27	---	26	---	20	18	---
TOTAL	385	650	850	858	1080	909	803	882	725	675	585	516
MEAN	12.4	21.7	27.4	27.7	38.6	29.3	26.8	28.5	24.2	21.8	18.9	17.2
MAX	28	32	36	49	51	34	28	30	26	23	20	18
MIN	10	19	22	24	29	27	26	26	23	20	18	16
AC-FT	764	1290	1690	1700	2140	1800	1590	1750	1440	1340	1160	1020

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1995, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	11.7	15.8	20.2	22.8	24.0	26.7	26.5	25.3	21.3	18.4	15.8	13.9
MAX	12.4	21.7	27.4	27.7	38.6	29.3	27.6	28.5	24.2	21.8	18.9	17.2
(WY)	1995	1995	1995	1995	1995	1995	1993	1995	1995	1995	1995	1995
MIN	10.5	11.9	16.4	15.3	15.6	21.5	25.2	21.2	18.5	16.2	13.4	11.6
(WY)	1993	1994	1993	1993	1993	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1993 - 1995

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
ANNUAL TOTAL	7075	8918									
ANNUAL MEAN	19.4	24.4									
HIGHEST ANNUAL MEAN		24.4									1995
LOWEST ANNUAL MEAN		17.6									1994
HIGHEST DAILY MEAN	36	Dec 1	51	Feb 1							1995
LOWEST DAILY MEAN	10	Oct 16	10	Oct 16							1992
ANNUAL SEVEN-DAY MINIMUM	10	Oct 16	10	Oct 16							1992
ANNUAL RUNOFF (AC-FT)	14030	17690									
10 PERCENT EXCEEDS	27	31									
50 PERCENT EXCEEDS	20	25									
90 PERCENT EXCEEDS	11	17									

e Estimated

14138800 BLAZED ALDER CREEK NEAR RHODODENDRON, OR

LOCATION.--Lat 45°27'10", long 121°53'25", in NW 1/4 SE 1/4 sec.25, T.1 S., R.7 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 600 ft downstream from the confluence of Bedrock and Hickman Creeks and 8.6 mi north of Rhododendron, and at mile 3.78.

DRAINAGE AREA.--8.17 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 2,540 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--32 years (water years 1964-95), 56.9 ft³/s, 94.61 in/yr, 41,220 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 discharge, 1.2 ft³/s Oct. 16, 1991.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	1300	798	4.35	Jan. 31	1530	765	4.26
Oct. 31	1600	*1,250	*5.46	Feb. 1	1800	521	3.55
Nov. 30	1930	897	4.61	Feb. 17	1500	798	4.35
Dec. 26	2300	620	3.85	Feb. 19	1000	750	4.24
Jan. 13	1600	543	3.62				

Minimum discharge, 2.7 ft³/s Oct. 2-13.DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	301	393	38	464	28	23	69	11	13	4.6	3.5
2	2.8	110	152	32	281	25	22	168	11	12	4.5	3.5
3	2.7	67	83	28	135	24	22	123	10	13	4.2	3.5
4	2.7	88	55	44	104	24	26	83	9.9	12	4.2	3.5
5	2.7	68	41	72	88	21	30	80	19	11	4.2	3.7
6	2.8	53	34	21	72	19	34	70	40	11	4.5	4.7
7	2.8	45	30	20	62	19	53	64	45	11	8.7	14
8	2.7	45	26	19	57	28	62	56	28	11	7.7	7.2
9	2.7	69	26	35	47	61	59	49	21	14	5.1	5.4
10	2.7	53	23	57	39	71	51	45	20	13	5.0	4.6
11	2.7	42	21	62	42	65	71	59	19	10	5.8	4.2
12	2.7	39	19	109	39	55	77	62	16	9.6	4.8	3.9
13	2.7	40	18	373	33	68	124	51	17	9.0	4.3	3.8
14	7.7	38	18	298	35	76	88	43	21	8.6	4.2	3.7
15	6.4	35	18	145	34	83	67	38	30	8.4	4.5	3.5
16	3.7	39	89	95	32	64	56	35	26	7.9	4.9	3.5
17	3.2	31	312	64	477	51	47	32	26	7.4	9.4	3.5
18	3.0	26	184	136	298	67	48	28	38	7.1	7.4	3.5
19	2.9	58	147	119	578	77	41	25	49	6.9	5.5	3.3
20	3.7	120	144	74	238	72	50	23	74	6.5	4.8	3.3
21	36	63	130	53	145	58	45	21	64	6.2	4.5	3.3
22	12	45	94	41	94	46	41	20	45	6.2	4.2	3.3
23	7.1	62	79	34	71	37	43	19	34	6.2	4.2	3.2
24	5.7	70	70	30	64	31	54	18	27	6.0	4.0	3.1
25	5.0	68	64	26	55	27	57	17	23	5.7	3.8	3.2
26	50	52	291	24	47	24	53	16	20	6.0	3.7	3.8
27	621	43	380	23	39	22	55	15	18	5.7	3.5	12
28	277	35	193	57	33	21	59	14	16	5.3	3.5	18
29	121	155	103	117	---	20	57	13	14	5.0	4.7	29
30	68	468	68	249	---	20	56	12	13	4.9	4.0	34
31	693	---	49	631	---	20	---	12	---	4.6	3.7	---
TOTAL	1962.0	2428	3354	3126	3703	1324	1571	1380	804.9	264.2	152.1	202.7
MEAN	63.3	80.9	108	101	132	42.7	52.4	44.5	26.8	8.52	4.91	6.76
MAX	693	468	393	631	578	83	124	168	74	14	9.4	34
MIN	2.7	26	18	19	32	19	22	12	9.9	4.6	3.5	3.1
AC-FT	3890	4820	6650	6200	7340	2630	3120	2740	1600	524	302	402
CFSM	7.75	9.91	13.2	12.3	16.2	5.23	6.41	5.45	3.28	1.04	.60	.83
IN.	8.93	11.06	15.27	14.23	16.86	6.03	7.15	6.28	3.66	1.20	.69	.92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	MEAN	28.4	84.9	102	104	80.8	66.7	77.5	72.6	39.5	10.9	5.75	11.3
MAX	82.5	177	288	207	183	167	150	165	115	35.4	27.6	35.5	
(WY)	1968	1978	1965	1974	1982	1972	1990	1969	1964	1983	1968	1977	
MIN	1.57	12.5	22.6	19.2	17.5	17.7	33.1	18.1	4.74	3.95	2.37	1.67	
(WY)	1988	1994	1977	1985	1969	1992	1983	1992	1992	1992	1967	1991	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1964 - 1995

ANNUAL TOTAL	19252.5	20271.9	
ANNUAL MEAN	52.7	55.5	56.9
HIGHEST ANNUAL MEAN			88.1
LOWEST ANNUAL MEAN			33.5
HIGHEST DAILY MEAN	693	Oct 31	1780
LOWEST DAILY MEAN	2.7	Sep 21	1.3
ANNUAL SEVEN-DAY MINIMUM	2.7	Sep 21	1.3
ANNUAL RUNOFF (AC-FT)	38190	40210	41220
ANNUAL RUNOFF (CFSM)	6.46	6.80	6.96
ANNUAL RUNOFF (INCHES)	87.66	92.30	94.61
10 PERCENT EXCEEDS	131	118	128
50 PERCENT EXCEEDS	24	28	31
90 PERCENT EXCEEDS	3.1	3.7	3.5

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.

REVISED RECORDS.--WDR OR-91-1: 1990.

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

REMARKS.--Water-discharge records good except for estimated daily discharges, which are fair. Regulation at times since 1915 by Bull Run Lake, usable capacity, 12,270 acre-ft. No diversion upstream from station.

AVERAGE DISCHARGE.--29 years (water years 1967-95), 404 ft³/s, 114.54 in/yr, 292,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,610 ft³/s Jan. 20, 1972, gage height, 13.22 ft; minimum discharge, 30 ft³/s Oct. 28-31, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Oct. 27	0730	4,710	10.09	Jan. 31	1800	4,960	10.29
Oct. 31	1800	*5,320	*10.57	Feb. 17	1530	4,850	10.20
Nov. 30	1930	5,150	10.44				

Minimum discharge, 33 ft³/s Oct. 4-13.DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	1720	2540	328	2760	257	219	477	109	117	57	57
2	35	717	1120	284	1630	237	199	1030	105	114	56	55
3	34	450	641	255	891	222	189	761	100	127	55	55
4	33	694	446	228	673	220	207	539	100	115	55	55
5	e33	532	358	211	556	206	215	526	186	104	54	57
6	e33	417	311	200	483	189	236	484	287	105	55	61
7	e33	365	274	189	426	181	333	447	301	101	110	154
8	e33	345	237	186	394	230	419	394	216	95	88	94
9	e33	620	239	345	348	501	434	352	177	123	66	74
10	e33	464	221	533	311	544	404	334	165	117	64	67
11	e33	361	212	550	345	483	501	413	166	98	98	63
12	e33	356	193	819	332	424	513	445	141	90	76	60
13	33	402	176	1910	281	502	791	383	148	86	67	58
14	61	364	169	1620	257	618	632	334	175	83	64	57
15	58	342	180	1010	250	613	524	303	243	81	69	55
16	41	379	857	721	289	492	449	288	222	77	71	55
17	38	e300	2230	532	2980	403	392	274	224	74	139	56
18	37	243	1290	1020	2000	492	398	248	345	71	121	55
19	36	362	1100	867	3640	614	362	227	460	70	90	53
20	40	785	1100	571	1540	669	397	211	663	68	79	53
21	212	431	1050	433	964	518	386	197	546	66	72	51
22	89	327	719	354	660	426	353	185	405	66	69	50
23	62	437	577	303	516	360	348	175	318	66	66	50
24	52	538	513	270	458	316	359	166	263	65	65	49
25	49	553	480	246	407	279	352	156	226	63	62	50
26	452	409	1920	226	366	256	327	148	197	68	60	54
27	3790	356	2310	219	319	238	334	140	173	66	58	142
28	1710	330	1290	342	282	223	383	133	153	62	57	272
29	730	1180	745	648	---	211	386	126	137	60	76	394
30	429	3120	513	1410	---	201	410	120	125	59	67	461
31	3050	---	395	3880	---	194	---	114	---	57	60	---
TOTAL	11371	17899	24406	20710	24358	11319	11452	10130	7076	2614	2246	2867
MEAN	367	597	787	668	870	365	382	327	236	84.3	72.5	95.6
MAX	3790	3120	2540	3880	3640	669	791	1030	663	127	139	461
MIN	33	243	169	186	250	181	189	114	100	57	54	49
AC-FT	22550	35500	48410	41080	48310	22450	22720	20090	14040	5180	4450	5690
CFSM	7.66	12.5	16.4	13.9	18.2	7.62	7.97	6.82	4.92	1.76	1.51	2.00
IN.	8.83	13.90	18.95	16.08	18.92	8.79	8.89	7.87	5.50	2.03	1.74	2.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	MEAN	226	586	694	694	600	501	512	434	285	115	85.8	128
MAX	535	1050	1434	1238	1215	1120	834	885	699	292	231	294	
(WY)	1968	1978	1978	1975	1972	1993	1993	1969	1974	1983	1968	1977	
MIN	36.5	72.4	193	177	167	148	242	150	54.8	54.0	43.7	40.9	
(WY)	1988	1994	1977	1985	1993	1992	1967	1992	1992	1977	1967	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1967 - 1995

ANNUAL TOTAL	131778					146448						
ANNUAL MEAN	361					401						
HIGHEST ANNUAL MEAN										404		
LOWEST ANNUAL MEAN										643		1974
HIGHEST DAILY MEAN	3790					3880				249		1977
LOWEST DAILY MEAN	33					33				7000		Dec 1 1975
ANNUAL SEVEN-DAY MINIMUM	33					33				30		Oct 29 1987
ANNUAL RUNOFF (AC-FT)	261400					290500				31		Oct 25 1987
ANNUAL RUNOFF (CFSM)	7.54					8.38				8.43		
ANNUAL RUNOFF (INCHES)	102.34					113.73				114.54		
10 PERCENT EXCEEDS	909					771				862		
50 PERCENT EXCEEDS	196					246				254		
90 PERCENT EXCEEDS	39					55				60		

e Estimated

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.

pH: August 1990 to September 1992.

WATER TEMPERATURE: October 1977 to current year.

TURBIDITY: August 1990 to July 1994.

SUSPENDED SEDIMENT DISCHARGE: October 1977 to September 1986.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Turbidity data prior to October 1990 are available in the files of the Portland field office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 44 microsiemens Sept. 17, 1988; minimum recorded, 9 microsiemens Jan. 23, 1982, Feb. 23, 1986, Dec. 4, 1989.

pH: Maximum recorded, 8.1 units Aug. 30, Sept. 1, 1990; minimum recorded, 5.7 units Jan. 18, 1991.

WATER TEMPERATURE: Maximum, 18.0°C June 22-25, 1992, July 23, 1994; minimum, 0.0°C on many days during winter periods.

TURBIDITY: Maximum recorded, 44 NTU Jan. 15, 1991; minimum recorded, 0.08 NTU Aug. 30, 31, 1992.

SEDIMENT CONCENTRATION: 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 recorded, 31 microsiemens Aug. 4-6; minimum recorded, 12 microsiemens Oct. 31.

WATER TEMPERATURE: Maximum, 16.5°C July 17, 20, 21; minimum, 0.0°C Feb. 13-15.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	30	29	30	15	13	14	15	14	15	19	19	19
2	29	28	29	17	15	16	17	15	16	20	19	20
3	29	28	28	17	16	17	18	17	17	20	20	20
4	28	28	28	18	15	16	19	18	18	21	20	20
5	28	28	28	17	16	16	19	19	19	21	20	21
6	---	---	---	17	17	17	19	19	19	21	20	21
7	---	---	---	18	17	17	20	19	19	22	21	21
8	---	---	---	18	17	18	20	20	20	22	21	22
9	---	---	---	17	16	16	20	19	20	22	18	20
10	---	---	---	17	16	17	20	20	20	18	18	18
11	---	---	---	18	17	17	21	20	20	18	18	18
12	28	27	28	18	17	18	21	20	21	18	16	17
13	28	27	28	18	17	17	21	21	21	16	15	15
14	27	27	27	18	17	17	21	21	21	16	15	16
15	27	26	27	18	17	18	21	20	21	17	16	16
16	28	27	27	18	17	18	20	15	18	18	17	17
17	28	27	28	19	18	18	15	15	15	18	18	18
18	28	27	28	19	18	19	16	15	16	18	16	17
19	28	27	28	19	16	19	16	15	16	17	16	17
20	28	27	27	17	16	16	16	16	16	18	17	18
21	27	24	25	17	17	17	16	16	16	19	18	18
22	25	25	25	18	17	18	17	16	17	19	19	19
23	26	25	26	18	16	17	18	17	17	20	19	20
24	26	26	26	17	16	17	18	17	18	20	20	20
25	26	26	26	17	16	16	18	17	18	21	20	20
26	26	18	24	17	17	17	18	13	15	21	21	21
27	18	13	14	18	17	17	15	13	14	21	21	21
28	16	14	15	18	18	18	16	15	15	21	17	20
29	17	16	16	18	15	17	17	16	17	18	17	17
30	18	17	17	16	13	15	18	17	17	17	15	16
31	18	12	14	---	---	---	19	18	18	15	13	14
MONTH	---	---	---	19	13	17	21	13	18	22	13	19

SANDY RIVER BASIN

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	15	14	14	20	20	20	20	19	20	20	18	19
2	16	14	15	20	20	20	20	20	20	18	16	17
3	16	15	16	21	20	20	21	20	20	18	17	17
4	17	16	17	21	20	20	21	20	20	19	18	18
5	18	17	17	21	20	20	20	19	20	19	18	19
6	18	17	18	21	20	21	20	19	19	19	18	19
7	18	18	18	21	21	21	20	18	19	19	19	19
8	18	18	18	21	19	20	18	17	17	20	19	19
9	19	18	19	19	16	18	18	17	17	20	20	20
10	19	19	19	17	16	17	18	17	18	20	20	20
11	19	18	19	17	17	17	18	17	17	20	19	19
12	19	18	19	18	17	17	18	17	17	19	19	19
13	20	19	19	18	17	17	17	16	17	20	19	19
14	20	19	20	17	16	16	18	17	18	20	20	20
15	20	19	20	17	16	16	18	18	18	21	20	20
16	20	18	19	17	16	17	19	18	19	21	20	20
17	18	13	15	18	17	18	19	19	19	21	20	21
18	15	14	14	18	16	17	19	19	19	21	21	21
19	14	13	13	17	16	16	19	19	19	22	21	21
20	15	14	15	17	16	16	19	19	19	22	21	22
21	16	15	16	17	17	17	19	19	19	22	21	22
22	17	16	16	18	17	18	20	19	19	22	22	22
23	18	17	17	18	18	18	20	19	19	22	22	22
24	18	17	18	19	18	19	20	19	19	23	22	22
25	18	18	18	20	19	19	20	19	19	23	22	23
26	19	18	18	19	19	19	20	19	20	24	23	23
27	19	19	19	21	19	20	20	19	20	23	23	23
28	20	19	20	20	19	20	19	19	19	24	23	23
29	---	---	---	22	20	20	19	19	19	24	23	24
30	---	---	---	21	20	20	19	19	19	24	23	24
31	---	---	---	20	20	20	---	---	---	25	24	24
MONTH	20	13	17	22	16	19	21	16	19	25	16	21

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	24	23	24	25	24	24	30	28	29	---	---	---
2	24	23	24	25	24	24	29	28	29	---	---	---
3	25	24	24	25	24	24	30	28	29	---	---	---
4	25	24	24	26	24	24	31	29	30	---	---	---
5	24	22	23	26	24	25	31	29	30	---	---	---
6	22	21	21	26	24	25	31	28	29	---	---	---
7	21	20	21	25	25	25	30	26	27	---	---	---
8	21	21	21	26	25	26	27	25	26	---	---	---
9	22	21	22	29	24	25	28	26	27	---	---	---
10	23	21	22	26	24	25	29	26	27	---	---	---
11	22	22	22	27	25	25	28	25	26	---	---	---
12	23	22	23	28	24	25	28	25	27	---	---	---
13	23	22	23	25	24	25	28	26	27	29	27	28
14	23	22	22	26	25	25	29	26	27	29	26	28
15	25	22	23	27	25	25	28	26	27	---	---	---
16	25	22	23	30	25	26	28	25	26	---	---	---
17	24	21	23	29	26	27	27	23	24	30	28	29
18	21	20	20	28	26	27	25	23	23	30	29	30
19	20	19	19	29	26	28	26	24	24	30	29	29
20	19	18	19	29	27	28	26	24	25	30	29	29
21	19	18	19	29	27	28	27	25	26	---	---	28
22	20	19	20	29	27	28	---	---	---	---	---	---
23	21	20	20	29	27	28	---	---	---	---	---	28
24	21	21	21	29	28	29	---	---	26	29	29	29
25	22	21	21	30	28	29	---	---	26	29	28	29
26	22	22	22	29	27	28	30	25	27	28	27	28
27	23	22	22	29	27	28	---	---	26	28	26	26
28	23	22	23	29	28	28	29	26	27	26	21	24
29	24	23	23	29	27	28	---	---	---	22	20	21
30	24	23	24	29	27	28	---	---	26	21	18	19
31	---	---	---	29	28	28	---	---	---	---	---	---
MONTH	25	18	22	30	24	26	---	---	---	---	---	---

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

SANDY RIVER BASIN

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14138870 FIR CREEK NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°28'49", long 122°01'28", in NE 1/4 SE 1/4 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, WDR OR-91-1: 1976.

GAGE.--Water-stage recorder. Elevation of gage is 1,440 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--20 years (water years 1976-95), 34.3 ft³/s, 85.40 in/yr, 24,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft³/s Dec. 2, 1977, gage height, 5.64 ft; minimum discharge, 1.5 ft³/s Oct. 19-21, 1991.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	0900	568	4.71	Jan. 31	1830	472	4.52
Oct. 31	1730	465	4.51	Feb. 17	1500	535	4.65
Nov. 30	1830	*573	*4.72	Feb. 19	0730	430	4.42

Minimum discharge, 2.1 ft³/s Oct. 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	176	277	26	274	20	18	42	6.7	11	3.9	3.9
2	2.4	76	121	21	155	18	16	92	6.4	10	3.7	3.7
3	2.4	48	71	17	79	17	15	67	6.1	11	3.7	3.6
4	2.3	87	50	15	57	17	16	47	6.2	9.9	3.6	3.6
5	2.3	69	39	14	46	15	16	52	13	8.9	3.6	4.0
6	2.3	52	32	13	39	14	16	48	22	8.8	3.8	4.2
7	2.3	43	27	12	32	13	27	43	24	8.3	9.9	18
8	2.3	41	23	12	28	19	33	36	17	7.7	7.0	10
9	2.3	89	23	30	24	48	33	30	14	9.5	4.9	7.0
10	2.2	63	22	48	21	45	33	28	13	9.3	4.5	5.9
11	2.2	45	22	47	24	37	51	33	13	7.8	7.8	5.3
12	2.2	41	20	75	23	31	51	36	11	7.2	5.7	4.9
13	2.2	44	18	184	20	41	76	30	11	6.8	5.0	4.5
14	5.2	43	17	154	18	50	59	26	13	6.5	4.6	4.3
15	5.0	39	17	89	18	47	49	22	19	6.3	5.6	4.1
16	3.0	41	99	62	21	37	42	21	17	6.0	5.5	4.0
17	2.6	32	249	46	325	30	35	20	18	5.7	9.1	4.0
18	2.6	26	133	106	221	39	33	18	28	5.5	8.0	3.9
19	2.5	45	113	83	339	54	29	17	47	5.3	6.4	3.8
20	2.7	95	111	50	154	72	31	15	70	5.1	5.7	3.6
21	14	53	107	35	95	52	31	14	56	5.0	5.2	3.4
22	5.9	38	67	26	61	40	30	13	39	4.9	4.8	3.3
23	4.1	51	54	21	47	31	30	12	29	4.8	4.7	3.2
24	3.5	68	48	18	40	26	29	11	23	4.8	4.6	3.2
25	3.3	72	44	15	34	22	27	11	20	4.6	4.3	3.3
26	47	51	200	14	29	20	24	9.9	18	4.8	4.1	3.6
27	412	42	227	13	24	19	25	9.3	16	4.7	4.0	11
28	202	37	114	25	21	18	28	8.7	14	4.4	3.9	26
29	79	158	65	49	---	17	29	8.1	13	4.2	5.7	34
30	44	344	46	121	---	16	32	7.6	12	4.0	4.7	45
31	244	---	33	361	---	16	---	7.1	---	4.0	4.1	---
TOTAL	1112.3	2109	2489	1802	2269	941	964	834.7	615.4	206.8	162.1	242.3
MEAN	35.9	70.3	80.3	58.1	81.0	30.4	32.1	26.9	20.5	6.67	5.23	8.08
MAX	412	344	277	361	339	72	76	92	70	11	9.9	45
MIN	2.2	26	17	12	18	13	15	7.1	6.1	4.0	3.6	3.2
AC-FT	2210	4180	4940	3570	4500	1870	1910	1660	1220	410	322	481
CFSM	6.57	12.9	14.7	10.6	14.8	5.56	5.89	4.93	3.76	1.22	.96	1.48
IN.	7.58	14.37	16.96	12.28	15.46	6.41	6.57	5.69	4.19	1.41	1.10	1.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1995, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	17.0	53.3	62.8	53.0	55.8	44.1	47.8	33.0	23.4	8.97	5.43	9.05								
MAX	42.2	88.6	133	96.9	126	81.8	73.2	53.0	58.6	27.3	13.0	27.7								
(WY)	1991	1989	1978	1976	1982	1993	1993	1977	1981	1983	1978	1977								
MIN	1.97	6.09	15.3	16.6	16.9	14.0	28.6	14.6	3.80	3.50	3.01	2.57								
(WY)	1988	1994	1977	1979	1977	1992	1983	1992	1992	1992	1987	1991								

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1976 - 1995

ANNUAL TOTAL	12640.2		13747.6	
ANNUAL MEAN	34.6		37.7	
HIGHEST ANNUAL MEAN				34.3
LOWEST ANNUAL MEAN				47.4
HIGHEST DAILY MEAN	412	Oct 27	412	Oct 27
LOWEST DAILY MEAN	2.2	Oct 10	2.2	Oct 10
ANNUAL SEVEN-DAY MINIMUM	2.2	Oct 7	2.2	Oct 7
ANNUAL RUNOFF (AC-FT)	25070		27270	
ANNUAL RUNOFF (CFSM)	6.34		6.90	
ANNUAL RUNOFF (INCHES)	86.12		93.66	
10 PERCENT EXCEEDS	85		79	
50 PERCENT EXCEEDS	18		20	
90 PERCENT EXCEEDS	2.7		3.9	

SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.

pH: August 1990 to September 1992.

WATER TEMPERATURE: October 1977 to current year.

TURBIDITY: August 1990 to September 1994.

SUSPENDED SEDIMENT DISCHARGE: October 1977 to September 1986.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Turbidity data prior to October 1990 are available in the files of the Portland field office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 49 microsiemens May 6, 1988, Aug. 13, 1990; minimum, 7 microsiemens Nov. 30, 1994.

pH: Maximum recorded, 7.7 units Sept. 13, 1990, but may have been higher during periods of missing record; minimum recorded, 6.0 units Sept. 5, 6, 8, 1991, but may have been lower during periods of missing record.

WATER TEMPERATURE: Maximum recorded, 16.0°C Sept. 1, 1987, June 23, 24, July 18, 19, 1992; minimum recorded, 0.0°C on several days in 1978-80, 1983, 1989, 1991, 1993, Nov. 24-26, 1994, Feb. 13, 15, 1995.

TURBIDITY: Maximum recorded, 11 NTU Nov. 25, 1991; minimum recorded, 0.04 NTU Feb. 15, 16, 1993.

SEDIMENT CONCENTRATION: 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 Aug. 1-7; minimum, 7 microsiemens Nov. 30.

WATER TEMPERATURE: Maximum recorded, 14.5°C July 19, 20; minimum, 0.0°C Feb. 13, 15.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	26	25	25	18	15	17	13	10	12	13	11	12
2	25	23	25	20	17	18	14	12	13	14	12	13
3	25	24	24	21	19	20	15	11	12	14	12	13
4	25	24	24	20	18	18	14	12	13	14	13	13
5	25	24	24	20	18	19	14	12	13	14	13	14
6	25	24	24	20	19	20	15	13	14	14	13	14
7	25	22	24	21	20	20	15	14	15	14	13	14
8	25	24	24	21	19	21	15	15	15	14	13	13
9	25	24	24	19	17	18	15	15	15	13	11	12
10	25	22	24	19	17	18	15	15	15	12	10	11
11	24	22	24	19	18	19	15	15	15	12	11	11
12	24	22	23	19	19	19	16	15	15	15	11	12
13	23	22	23	19	19	19	16	15	16	15	11	13
14	24	22	23	19	19	19	16	16	16	16	14	15
15	25	24	24	20	19	19	16	15	16	17	16	16
16	25	24	24	20	19	19	15	12	13	18	16	17
17	24	24	24	20	19	20	14	11	12	18	17	18
18	24	22	24	20	18	20	13	12	12	18	16	16
19	24	23	24	20	17	20	14	11	12	17	16	17
20	24	23	24	18	17	18	13	11	12	18	17	17
21	24	22	24	19	17	18	14	11	12	18	18	18
22	24	22	24	20	17	19	12	11	11	19	18	19
23	24	22	23	20	18	19	13	11	12	19	19	19
24	22	21	22	18	18	18	13	11	12	20	19	19
25	22	22	22	18	17	18	14	11	12	20	20	20
26	22	15	21	19	18	18	13	9	11	20	20	20
27	16	10	13	19	18	19	13	10	11	20	20	20
28	17	14	15	20	19	19	13	10	11	20	17	19
29	17	14	16	20	15	18	13	10	11	17	16	17
30	17	16	16	16	7	14	13	11	12	16	13	15
31	17	13	15	---	---	---	13	11	12	14	11	12
MONTH	26	10	22	21	7	19	16	9	13	20	10	15

SANDY RIVER BASIN

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14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	14	12	13	19	19	19	20	19	19	22	17	20
2	16	13	15	20	19	20	20	19	19	17	16	16
3	17	16	16	20	20	20	20	19	20	18	16	17
4	17	17	17	20	19	20	20	19	20	18	17	18
5	18	17	18	20	20	20	19	19	19	18	17	18
6	18	18	18	20	19	20	19	19	19	18	18	18
7	19	18	19	20	20	20	19	17	18	19	18	18
8	19	19	19	20	18	20	17	17	17	19	18	19
9	19	19	19	18	15	17	17	17	17	20	19	19
10	20	19	20	17	16	16	18	17	17	20	19	19
11	20	19	19	17	17	17	17	16	16	22	19	20
12	19	18	19	17	17	17	17	15	16	19	18	19
13	19	19	19	17	16	17	16	15	15	19	19	19
14	20	19	20	16	16	16	16	16	16	20	19	19
15	20	19	19	16	16	16	17	16	17	20	20	20
16	20	18	19	17	16	17	17	17	17	21	20	20
17	18	11	13	18	17	17	18	17	18	20	20	20
18	14	13	14	18	15	17	18	18	18	21	20	20
19	14	11	12	16	15	16	18	18	18	21	20	21
20	15	13	14	16	15	16	18	18	18	21	21	21
21	16	14	15	17	16	16	18	18	18	22	21	21
22	17	16	17	19	17	17	18	18	18	22	21	22
23	18	17	17	19	17	17	18	18	18	22	21	22
24	18	18	18	18	18	18	20	18	18	22	22	22
25	18	18	18	19	18	18	22	18	20	23	22	22
26	19	18	18	---	---	---	23	18	21	23	22	23
27	19	19	19	19	19	19	22	18	20	23	22	23
28	19	19	19	19	19	19	18	17	18	23	23	23
29	---	---	---	20	19	19	18	17	18	24	23	23
30	---	---	---	20	19	19	22	17	18	24	23	23
31	---	---	---	20	19	20	---	---	---	24	23	24
MONTH	20	11	17	---	---	---	23	15	18	24	16	20
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	24	23	24	23	22	23	28	27	27	27	26	27
2	24	23	24	23	23	23	28	27	27	27	26	27
3	24	23	24	23	22	23	28	27	27	27	26	27
4	24	23	24	23	22	23	28	27	28	27	26	27
5	24	22	23	24	23	23	28	27	28	27	26	26
6	23	21	22	24	23	24	28	27	27	27	26	27
7	22	21	21	24	23	24	28	26	26	27	24	25
8	22	20	21	25	24	24	26	26	26	26	25	25
9	22	21	21	25	23	24	27	25	26	25	25	25
10	23	21	22	24	23	24	27	26	26	26	25	25
11	22	21	22	24	24	24	26	25	26	26	25	25
12	22	22	22	25	24	24	26	25	26	26	25	25
13	22	22	22	25	24	24	26	25	26	26	25	26
14	22	22	22	25	24	25	27	26	26	27	25	26
15	22	21	21	25	24	25	27	25	26	26	25	26
16	22	21	21	26	25	25	26	25	26	27	25	26
17	22	21	21	26	25	25	26	24	25	26	25	26
18	21	19	20	26	25	26	25	25	25	26	25	26
19	20	17	19	26	25	26	26	25	26	26	26	26
20	18	17	18	27	25	26	26	26	26	26	26	26
21	19	18	18	26	25	26	26	26	26	26	26	26
22	19	19	19	26	25	26	26	25	26	26	26	26
23	20	18	19	27	25	26	26	25	25	26	26	26
24	21	20	20	27	25	26	25	25	25	27	26	26
25	22	21	21	27	26	26	26	25	25	27	25	26
26	22	21	21	27	26	26	26	25	25	26	25	26
27	22	21	22	27	26	27	26	25	25	27	25	26
28	22	22	22	27	26	27	26	25	26	27	23	25
29	23	22	22	27	26	26	26	25	25	23	22	22
30	23	22	23	27	26	26	26	26	26	22	21	21
31	---	---	---	27	27	27	27	26	26	---	---	---
MONTH	24	17	21	27	22	25	28	24	26	27	21	26

SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

SANDY RIVER BASIN

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14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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 SE 1/4 and SW 1/4 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.

REVISED RECORDS.--WDR OR-91-1: 1976.

GAGE.--Water-stage recorder. Elevation of gage is 1,060 ft above sea level, from topographic map. Prior to Oct. 1, 1978, and from June 13, 1989 to July 1990 (during bridge construction), at site 700 ft upstream at datum 18.7 ft higher. From Oct. 1, 1978 to June 13, 1989, and July 1990 to present, site located 5 ft upstream from bridge, on left bank wing wall.

REMARKS.--Records good except those above 400 ft³/s, which are poor. Regulation at times since 1958 by North Fork Reservoir, capacity, about 1,030 acre-ft. No diversion upstream from station.

AVERAGE DISCHARGE.--30 years (water years 1966-95), 72.6 ft³/s, 118.57 in/yr, 52,600 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 discharge, 8.6 ft³/s Oct. 19-29, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*), from rating curve extended above 250 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	0900	828	6.11	Jan. 31	1530	*1,160	*6.49
Oct. 31	1630	1,000	6.35	Feb. 17	1400	904	6.15
Nov. 30	1730	1,070	6.39	Feb. 19	0530	1,120	6.45
Dec. 26	2300	941	6.20				

Minimum discharge, 8.9 ft³/s Oct. 19, 20.DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	247	498	59	505	41	39	89	19	21	11	13
2	12	115	207	53	262	38	33	184	18	21	11	12
3	12	75	117	47	145	37	31	114	18	24	11	12
4	12	128	82	44	103	36	33	83	18	21	11	12
5	11	90	66	41	85	35	33	89	41	19	11	13
6	9.6	73	57	39	73	33	33	77	43	20	11	14
7	9.6	64	51	38	64	32	53	66	35	19	22	28
8	9.6	57	46	42	58	45	58	58	27	19	16	18
9	9.6	87	51	81	53	91	59	52	24	21	13	15
10	9.6	69	49	98	49	78	57	51	24	21	13	14
11	9.6	55	48	97	57	73	73	69	25	18	25	13
12	9.6	60	45	142	52	64	71	64	22	16	17	12
13	9.6	69	40	360	47	88	97	54	23	16	14	12
14	20	63	39	278	44	101	84	48	26	15	13	12
15	17	55	42	196	44	92	80	44	35	15	13	11
16	11	61	179	139	54	73	72	42	28	15	16	11
17	10	50	373	102	508	63	66	41	30	14	40	11
18	9.6	43	219	209	318	88	67	37	41	14	27	11
19	9.5	75	190	154	801	89	60	e35	53	13	20	11
20	11	131	188	101	252	103	67	32	79	13	18	11
21	44	70	182	79	151	78	67	30	64	13	16	10
22	18	54	119	66	99	66	60	28	49	13	15	10
23	13	78	96	57	78	57	56	27	42	13	15	10
24	12	94	86	52	67	52	52	25	37	13	15	10
25	11	99	84	48	60	47	49	24	33	13	14	10
26	99	71	484	46	54	44	46	23	30	14	13	13
27	594	65	460	46	48	42	48	22	28	13	13	42
28	222	61	234	76	44	39	61	21	25	12	12	63
29	102	214	134	103	---	36	60	20	24	12	21	75
30	66	592	91	187	---	34	66	20	22	12	16	66
31	469	---	71	814	---	33	---	19	---	11	14	---
TOTAL	1873.9	3065	4628	3894	4175	1828	1731	1588	983	494	497	575
MEAN	60.4	102	149	126	149	59.0	57.7	51.2	32.8	15.9	16.0	19.2
MAX	594	592	498	814	801	103	97	184	79	24	40	75
MIN	9.5	43	39	38	44	32	31	19	18	11	11	10
AC-FT	3720	6080	9180	7720	8280	3630	3430	3150	1950	980	986	1140
CFSM	7.27	12.3	17.9	15.1	17.9	7.09	6.94	6.16	3.94	1.92	1.93	2.30
IN.	8.38	13.70	20.69	17.41	18.67	8.17	7.74	7.10	4.40	2.21	2.22	2.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	41.1	103	126	131	107	87.8	87.8	73.1	49.2	25.2	17.8	24.5																		
MAX	88.2	199	285	309	216	200	147	137	111	62.7	35.2	54.4																		
(WY)	1969	1974	1976	1975	1982	1972	1993	1972	1974	1983	1968	1977																		
MIN	9.08	16.9	33.4	32.1	35.2	28.8	49.5	28.3	14.6	12.6	10.6	10.9																		
(WY)	1988	1994	1977	1979	1993	1992	1967	1992	1992	1992	1994	1987																		

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1966 - 1995

ANNUAL TOTAL	23972.3		25331.9		72.6	
ANNUAL MEAN	65.7		69.4		121	
HIGHEST ANNUAL MEAN					46.1	1974
LOWEST ANNUAL MEAN					1910	1977
HIGHEST DAILY MEAN	594	Oct 27	814	Jan 31	8.6	Dec 2 1977
LOWEST DAILY MEAN	8.7	Sep 2	9.5	Oct 19	8.7	Oct 24 1987
ANNUAL SEVEN-DAY MINIMUM	9.2	Aug 27	9.6	Oct 6		Oct 23 1987
ANNUAL RUNOFF (AC-FT)	47550		50250		52600	
ANNUAL RUNOFF (CFSM)	7.89		8.34		8.73	
ANNUAL RUNOFF (INCHES)	107.18		113.26		118.57	
10 PERCENT EXCEEDS	177		132		150	
50 PERCENT EXCEEDS	39		44		47	
90 PERCENT EXCEEDS	11		12		15	

e Estimated

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, August 1990 to September 1992.

WATER TEMPERATURE: October 1978 to current year.

TURBIDITY: August 1990 to September 1994.

SUSPENDED SEDIMENT DISCHARGE: October 1978 to September 1986.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Turbidity data prior to October 1990 are available in the files of the Portland field office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 103 microsiemens Jan. 13, 1981 (cement spill); minimum, 7 microsiemens

Jan. 31, 1995, Feb. 19, 1995.

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

WATER TEMPERATURE: Maximum, 14.5°C several days in 1988, 1992, 1993, 1994; minimum, 0.0°C on several days during winter periods.

TURBIDITY: Maximum recorded, 25 NTU Nov. 24, 1990; minimum recorded, 0.06 NTU Sept. 7, 13, 14, 1992.

SEDIMENT CONCENTRATION: Maximum daily, 205 mg/L Dec. 25, 1980; minimum, 0 mg/L on many days.

SEDIMENT DISCHARGE: Maximum daily, 765 tons Feb. 23, 1986; minimum, 0 tons on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 43 microsiemens Oct. 2-4, Sept. 5, 18-20, 23, 24; minimum, 7 microsiemens

Jan. 31, Feb. 19.

WATER TEMPERATURE: Maximum recorded, 14.0°C July 19, 20; minimum, 0.5°C Feb. 13-15.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	42	40	41	15	13	14	13	11	12	18	16	17
2	43	40	41	17	15	16	14	12	13	19	17	18
3	43	40	41	19	17	18	16	14	15	19	18	19
4	43	40	42	19	15	17	17	15	16	20	19	20
5	42	40	41	18	16	17	18	17	17	21	20	21
6	41	40	40	18	18	18	19	18	18	22	21	21
7	41	40	40	19	18	19	20	18	19	22	20	21
8	41	40	40	20	19	20	20	19	20	21	19	20
9	41	40	41	19	17	18	20	19	19	20	14	16
10	41	40	40	19	18	18	20	19	20	14	13	14
11	41	40	40	20	19	19	20	19	19	14	14	14
12	40	40	40	19	19	19	20	19	20	14	11	13
13	40	39	40	19	17	18	21	20	21	11	9	10
14	39	36	37	19	17	18	21	21	21	11	9	10
15	38	37	37	19	18	19	21	19	21	11	10	11
16	39	38	39	19	18	19	19	12	15	13	11	12
17	39	39	39	20	19	19	12	11	12	14	13	13
18	39	39	39	21	20	20	13	12	12	13	11	11
19	39	39	39	21	16	20	13	12	13	13	11	12
20	39	36	39	17	16	16	13	12	13	14	12	13
21	36	29	30	18	17	18	13	12	13	15	14	14
22	36	33	34	19	18	19	14	13	14	16	15	16
23	37	36	36	19	16	18	15	14	15	17	16	17
24	37	37	37	17	16	16	16	15	15	20	17	18
25	38	37	37	16	15	16	16	14	16	19	18	18
26	37	17	32	18	16	17	14	9	11	21	19	19
27	17	13	14	18	17	18	11	9	10	21	19	19
28	16	15	15	19	18	18	12	10	11	22	13	17
29	19	16	18	19	13	16	14	12	13	16	13	15
30	20	19	19	13	10	12	15	14	15	13	10	11
31	20	12	15	--	--	--	17	15	16	12	7	8
MONTH	43	12	35	21	10	18	21	9	16	22	7	15

SANDY RIVER BASIN

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	11	8	9	22	20	20	23	21	22	21	16	19
2	12	8	10	22	20	21	24	23	23	18	14	15
3	15	11	12	22	21	22	26	24	24	---	---	---
4	15	12	13	24	21	22	26	24	25	---	---	---
5	16	13	14	22	22	22	25	24	25	---	---	---
6	17	14	15	25	22	23	26	24	25	---	---	---
7	18	15	16	25	23	23	25	19	21	---	---	---
8	19	16	16	24	19	22	20	19	20	---	---	---
9	20	16	17	19	14	16	20	19	20	---	---	---
10	20	17	18	17	14	16	20	19	20	---	---	---
11	19	17	18	16	15	16	19	17	18	22	19	20
12	19	17	18	17	16	17	19	17	19	21	19	20
13	20	19	19	17	14	16	17	16	16	22	20	21
14	20	19	20	15	14	14	17	16	17	23	22	22
15	20	20	20	15	14	15	18	17	17	24	23	23
16	20	16	19	17	15	16	18	17	18	24	23	23
17	16	9	11	18	16	17	19	18	18	24	23	24
18	11	9	10	18	14	16	19	18	18	25	24	24
19	10	7	8	16	14	15	19	18	19	---	---	---
20	12	10	11	16	13	15	19	18	19	---	---	---
21	13	12	12	16	15	16	19	18	18	---	---	---
22	15	13	14	19	16	17	19	19	19	---	---	---
23	16	14	15	18	17	18	21	19	20	---	---	---
24	17	15	16	19	18	18	21	20	20	---	---	---
25	17	16	17	20	19	19	22	20	21	---	---	---
26	18	17	18	20	19	20	22	21	21	---	---	---
27	19	18	19	21	20	21	22	20	21	---	---	---
28	20	19	19	22	21	21	21	18	20	---	---	---
29	---	---	---	25	22	22	20	18	19	---	---	---
30	---	---	---	27	23	23	20	19	19	---	---	---
31	---	---	---	25	23	23	---	---	---	---	---	---
MONTH	20	7	15	27	13	19	26	16	20	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	34	33	34	40	39	40	41	38	39
2	---	---	---	34	33	33	40	39	39	42	38	39
3	---	---	---	33	32	32	40	39	40	40	38	39
4	---	---	---	34	33	33	40	39	40	42	38	39
5	---	---	---	35	34	34	40	39	40	43	38	39
6	---	---	---	35	34	34	40	39	40	41	38	39
7	---	---	---	37	34	34	40	35	36	39	32	35
8	---	---	---	36	34	35	38	35	37	40	35	37
9	---	---	---	36	33	35	40	38	39	38	36	37
10	---	---	---	35	33	34	40	38	39	39	37	37
11	---	---	---	37	35	35	38	33	35	41	37	38
12	---	---	---	36	35	36	38	36	37	42	37	38
13	---	---	---	37	36	36	40	38	38	41	37	38
14	---	---	---	37	36	37	40	38	39	41	38	39
15	---	---	---	38	37	37	40	38	39	42	38	39
16	---	---	---	38	37	37	40	36	39	41	38	39
17	---	---	---	39	37	38	36	30	32	42	38	40
18	---	---	---	39	37	38	36	32	33	43	39	40
19	---	---	---	39	37	39	37	34	35	43	39	41
20	---	---	---	39	38	39	38	35	36	43	38	40
21	27	23	25	39	38	39	38	36	37	42	39	40
22	29	24	26	39	38	39	40	37	38	42	39	40
23	27	26	26	39	38	39	41	37	39	43	39	40
24	28	27	27	39	38	39	40	37	39	43	39	40
25	29	28	28	42	39	39	41	38	40	42	39	40
26	32	29	29	39	37	38	41	38	40	42	38	40
27	31	30	30	39	37	38	42	38	39	40	34	36
28	32	30	31	39	38	39	41	38	39	35	26	30
29	33	31	32	39	38	39	42	33	36	27	25	25
30	34	32	33	39	38	39	40	35	37	26	24	25
31	---	---	---	40	39	39	41	37	38	---	---	---
MONTH	---	---	---	42	32	37	42	30	38	43	24	38

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

SANDY RIVER BASIN

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14139000 BULL RUN RESERVOIR NUMBER ONE NEAR BULL RUN, OR

LOCATION.--Lat 45°28'50", long 122°04'50", in NW 1/4 SW 1/4 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 sea level (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.--Midnight readings Sept. 13-30 furnished by Portland General Electric. 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 contents observed, 169 acre-ft Jan. 10, 1960, elevation, 887.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum observed contents, 31,080 acre-ft June 18-20, 23-26, elevation, 1,046.19 ft; minimum contents, 6,790 acre-ft Oct. 22, elevation, 962.73 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	995.72	1036.25	1037.55	1034.29	1039.47	1034.40	1035.17	1034.47	1037.11	1045.00	1040.49	1014.38
2	996.11	1035.47	1035.76	1034.73	1036.73	1034.33	1035.37	1035.61	1037.84	1044.60	1040.89	1014.89
3	995.42	1034.19	1035.07	1035.07	1036.23	1034.35	1035.02	1034.86	1036.80	1044.53	1040.09	1012.42
4	993.18	1034.71	1034.38	1034.20	1035.04	1034.36	1034.23	1034.73	1036.49	1044.62	1040.47	1012.93
5	990.50	1034.65	1034.59	1034.19	1035.24	1034.64	1034.31	1034.49	1036.99	1044.62	1040.85	1010.67
6	990.89	1034.72	1035.01	1034.13	1034.23	1034.96	1034.72	1034.80	1038.94	1044.36	1040.12	1011.27
7	990.24	1034.38	1034.71	1034.81	1034.37	1034.29	1034.58	1034.58	1040.80	1044.34	1040.90	1010.71
8	990.61	1034.10	1034.79	1034.51	1034.67	1034.35	1034.34	1035.61	1041.27	1044.05	1040.32	1011.56
9	991.01	1034.43	1034.44	1033.98	1034.54	1034.27	1034.53	1036.01	1041.35	1044.13	1040.14	1010.38
10	991.37	1034.61	1034.96	1034.50	1034.37	1034.26	1034.39	1035.64	1041.82	1044.12	1040.64	1011.02
11	990.45	1034.84	1034.87	1034.62	1034.23	1034.37	1034.47	1035.45	1042.46	1044.09	1041.34	1009.61
12	988.50	1034.72	1034.22	1034.70	1034.23	1034.65	1034.34	1035.47	1042.43	1043.87	1040.21	1010.16
13	980.24	1034.74	1034.83	1037.69	1034.19	1034.37	1035.03	1035.58	1042.57	1043.37	1040.68	1007.70
14	974.23	1034.70	1034.80	1036.34	1034.22	1034.17	1034.23	1036.14	1043.04	1043.18	1040.18	1008.20
15	970.20	1034.96	1034.91	1035.84	1034.18	1034.16	1035.03	1035.61	1044.78	1043.00	1040.68	1006.10
16	969.61	1034.59	1035.83	1035.50	1034.39	1035.22	1035.00	1035.28	1045.45	1042.37	1041.23	1006.60
17	968.22	1034.58	1037.29	1034.71	1040.08	1034.77	1034.19	1035.98	1045.57	1041.37	1040.59	1007.20
18	966.39	1034.25	1035.94	1035.71	1037.48	1034.29	1034.51	1035.71	1045.87	1040.56	1040.09	1004.00
19	964.60	1035.01	1035.51	1035.68	1039.34	1034.28	1034.78	1036.23	1046.19	1041.06	1040.73	1004.60
20	962.85	1034.78	1035.45	1034.26	1036.35	1034.63	1034.46	1036.56	1046.08	1040.33	1041.29	1003.30
21	963.43	1034.69	1035.83	1034.41	1035.99	1034.24	1034.44	1035.95	1045.74	1040.77	1040.32	1001.20
22	963.20	1034.74	1035.13	1034.37	1035.05	1034.12	1034.50	1036.77	1045.99	1041.24	1040.80	1000.30
23	964.22	1034.48	1034.60	1034.42	1034.84	1034.34	1034.54	1037.94	1046.05	1041.72	1041.28	1000.70
24	965.11	1034.05	1034.47	1034.44	1034.42	1034.32	1035.14	1039.01	1045.98	1040.44	1040.12	1000.20
25	965.97	1034.29	1034.80	1034.32	1034.81	1034.37	1034.71	1038.17	1045.94	1040.89	1040.56	998.00
26	972.64	1034.69	1039.52	1034.34	1034.68	1035.06	1034.96	1038.28	1045.90	1040.18	1040.98	998.60
27	1016.01	1034.58	1037.57	1034.31	1034.52	1034.48	1034.43	1038.20	1045.83	1040.66	1041.37	998.60
28	1030.91	1034.35	1035.97	1034.73	1034.58	1034.32	1034.51	1038.19	1045.84	1040.09	1041.79	1000.20
29	1034.73	1037.24	1035.49	1034.54	--	1034.26	1034.71	1039.01	1045.84	1040.48	1035.56	1004.00
30	1034.57	1041.06	1034.53	1035.66	--	1034.26	1034.57	1038.22	1045.47	1040.89	1025.49	1008.10
31	1040.75	--	1034.26	1041.47	--	1034.62	--	1037.46	--	1040.11	1017.15	--
MAX	1040.75	1041.06	1039.52	1041.47	1040.08	1035.22	1035.37	1039.01	1046.19	1045.00	1041.79	1014.89
MIN	962.85	1034.05	1034.22	1033.98	1034.18	1034.12	1034.19	1034.47	1036.49	1040.09	1017.15	998.00
(†)	28800	28920	26270	29090	26390	26410	26390	27500	30770	28540	20230	17370
(‡)	+15080	+120	-2650	+2820	-2700	+20	-20	+1110	+3270	-2230	-8310	-2860

CAL YR 1994 MAX 1045.18 MIN 962.85 AC-FT‡ -30
WTR YR 1995 MAX 1046.19 MIN 962.85 AC-FT‡ +3650

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

SANDY RIVER BASIN

14139700 CEDAR CREEK NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°27'30", long 122°01'50", in NE 1/4 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. Elevation of gage is 1,960 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--30 years (water years 1966-95), 65.3 ft³/s, 111.80 in/yr, 47,270 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 discharge, 4.7 ft³/s Oct. 28, 29, 1987.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	1130	*1,100	*4.43	Jan. 13	1230	520	3.66
Oct. 31	2000	877	4.18	Jan. 31	0800	573	3.75
Dec. 26	2300	537	3.69				

Minimum discharge, 6.2 ft³/s Oct. 4-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	311	e420	56	364	37	38	70	18	e24	e11	11
2	6.8	137	e200	48	233	35	34	180	18	e23	e11	10
3	6.6	82	e90	42	135	33	32	128	17	e22	e11	10
4	6.5	156	e75	38	99	34	33	87	18	e21	e10	10
5	6.3	115	e60	35	79	33	34	92	31	e20	e10	11
6	6.5	88	e50	33	66	31	37	83	60	e19	e10	12
7	6.5	74	e41	33	58	31	60	73	59	e18	e20	51
8	6.2	65	36	35	52	46	68	63	37	e17	e19	25
9	6.2	115	43	82	45	86	75	55	31	e18	e15	18
10	6.2	84	40	132	41	80	68	53	30	e20	e14	16
11	6.2	63	42	132	54	72	94	67	29	e18	e17	15
12	6.2	69	40	218	e51	63	88	74	26	e17	e15	14
13	6.3	75	35	380	e45	79	144	58	28	e16	e13	13
14	14	65	33	273	e40	83	118	50	33	e16	e13	12
15	14	62	38	188	e40	90	95	44	45	e15	e15	12
16	8.9	e83	126	134	e55	72	77	41	36	e15	e16	11
17	7.7	e62	304	103	e400	60	68	39	38	e15	e18	12
18	7.3	e50	215	208	e350	78	75	36	59	e15	e17	12
19	6.9	e70	180	154	e450	90	64	32	72	e15	e16	11
20	7.8	e170	175	103	e250	102	73	30	102	e14	e15	10
21	49	e90	174	77	e150	81	66	28	84	e13	e14	9.9
22	20	e70	116	62	e90	70	60	26	64	e13	e13	9.8
23	13	e90	93	52	e70	60	57	25	51	e13	e13	9.5
24	11	e120	86	45	e60	54	54	24	42	e13	e13	9.5
25	9.6	e125	87	41	e50	49	50	23	37	e12	e12	9.7
26	60	e95	291	39	e45	44	46	22	33	e13	11	10
27	781	e75	351	39	e42	41	47	21	29	e13	11	34
28	345	e65	222	94	e39	39	53	21	e26	e13	10	60
29	141	e150	127	125	---	37	52	20	e25	e12	15	80
30	79	e400	87	210	---	35	53	19	e25	e12	13	97
31	392	---	69	465	---	33	---	19	---	e11	11	---
TOTAL	2050.7	3276	3946	3676	3453	1778	1913	1603	1203	496	422	625.4
MEAN	66.2	109	127	119	123	57.4	63.8	51.7	40.1	16.0	13.6	20.8
MAX	781	400	420	465	450	102	144	180	102	24	20	97
MIN	6.2	50	33	33	39	31	32	19	17	11	10	9.5
AC-FT	4070	6500	7830	7290	6850	3530	3790	3180	2390	984	837	1240
CFSM	8.34	13.8	16.1	15.0	15.6	7.23	8.04	6.52	5.06	2.02	1.72	2.63
IN.	9.62	15.37	18.51	17.24	16.20	8.34	8.97	7.52	5.64	2.33	1.98	2.93

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1995, BY WATER YEAR (WY)

	MEAN	37.3	92.1	109	114	97.0	83.4	85.2	64.2	43.9	21.8	15.8	22.1
MAX	86.5	166	232	218	196	181	130	136	115	53.9	38.1	51.4	
(WY)	1968	1978	1978	1975	1982	1972	1974	1969	1981	1983	1968	1977	
MIN	5.43	15.5	29.4	31.8	29.8	22.6	46.5	30.6	12.8	10.9	8.68	7.86	
(WY)	1988	1994	1977	1981	1993	1992	1967	1992	1992	1992	1970	1987	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1966 - 1995
ANNUAL TOTAL	23178.7	24442.1	
ANNUAL MEAN	63.5	67.0	65.3
HIGHEST ANNUAL MEAN			105
LOWEST ANNUAL MEAN			41.8
HIGHEST DAILY MEAN	781	781	1020
LOWEST DAILY MEAN	6.2	6.2	4.8
ANNUAL SEVEN-DAY MINIMUM	6.3	6.3	4.9
ANNUAL RUNOFF (AC-FT)	45970	48480	47270
ANNUAL RUNOFF (CFSM)	8.01	8.44	8.23
ANNUAL RUNOFF (INCHES)	108.73	114.66	111.80
10 PERCENT EXCEEDS	162	139	139
50 PERCENT EXCEEDS	35	41	41
90 PERCENT EXCEEDS	7.8	11	12

e Estimated

SANDY RIVER BASIN

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14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'38", long 122°06'20", in NE 1/4 NE 1/4 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.

REVISED RECORDS.--WDR OR-91-1: 1989.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 990 ft above sea level, from topographic map.

REMARKS.--Records fair except for flows above 650 ft³/s, which are poor. No regulation or diversion upstream from station.AVERAGE DISCHARGE.--21 years (water years 1975-95), 107 ft³/s, 94.26 in/yr, 77,400 acre-ft/yr.EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,480 ft³/s Jan. 9, 1989, gage height, 8.85 ft, from rating curve extended above 1,200 ft³/s; minimum discharge, 5.4 ft³/s Oct. 13, 1994.EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge 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)
Oct. 27	1100	*1,900	*7.22	No other peaks greater than base discharge.			
Minimum discharge, 5.4 ft ³ /s Oct. 13.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	540	697	100	650	69	64	108	25	37	15	15
2	6.8	254	341	86	388	64	58	265	24	36	15	15
3	6.4	166	217	76	245	61	55	226	24	36	15	14
4	6.1	252	153	69	183	62	55	162	24	35	14	16
5	e6.0	224	121	63	152	59	56	161	40	32	14	19
6	e6.0	175	101	59	128	54	59	150	75	32	14	22
7	5.9	148	87	59	110	53	85	135	88	31	29	71
8	5.8	130	75	60	97	67	103	115	64	28	27	49
9	5.8	190	87	100	85	120	116	99	53	32	19	40
10	5.7	161	85	150	77	127	116	91	48	34	18	35
11	5.6	129	88	161	95	120	151	106	47	28	23	33
12	5.6	130	87	219	98	110	147	118	40	26	19	31
13	5.6	137	77	495	82	127	219	101	41	25	17	29
14	15	131	72	423	75	142	201	88	47	24	17	28
15	17	123	74	305	74	149	171	77	63	23	19	28
16	9.9	130	182	245	85	129	141	70	56	22	20	27
17	7.9	106	419	190	564	109	120	66	56	21	30	27
18	7.5	88	324	314	474	124	125	59	86	21	27	27
19	7.0	111	273	265	789	152	112	53	111	20	22	26
20	7.7	281	264	189	388	166	122	49	181	19	20	25
21	58	171	276	146	261	142	114	45	168	18	18	24
22	30	128	205	117	188	124	103	43	130	18	17	24
23	20	158	167	98	147	105	96	39	100	18	17	23
24	18	191	150	86	124	93	91	37	82	18	17	23
25	17	206	149	77	106	83	85	35	70	17	17	23
26	69	157	434	73	93	76	77	34	61	18	16	24
27	1370	137	567	71	82	71	77	32	53	18	15	47
28	647	123	326	125	75	66	84	30	47	17	15	81
29	265	312	215	181	---	63	82	29	43	16	21	115
30	165	639	157	291	---	59	85	28	39	16	19	154
31	625	---	122	774	---	57	---	26	---	15	16	---
TOTAL	3434.5	5828	6592	5667	5915	3003	3170	2677	1986	751	582	1115
MEAN	111	194	213	183	211	96.9	106	86.4	66.2	24.2	18.8	37.2
MAX	1370	639	697	774	789	166	219	265	181	37	30	154
MIN	5.6	88	72	59	74	53	55	26	24	15	14	14
AC-FT	6810	11560	13080	11240	11730	5960	6290	5310	3940	1490	1150	2210
CFSM	7.19	12.6	13.8	11.9	13.7	6.29	6.86	5.61	4.30	1.57	1.22	2.41
IN.	8.30	14.08	15.92	13.69	14.29	7.25	7.66	6.47	4.80	1.81	1.41	2.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1995, BY WATER YEAR (WY)

	MEAN	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	55.2	157	184	176	172	141	144	99.3	73.1	32.7	22.7	33.1										
MAX	136	253	379	315	302	235	215	162	180	91.2	53.2	93.4										
(WY)	1976	1989	1978	1975	1982	1989	1976	1977	1981	1983	1978	1977										
MIN	8.31	23.3	50.4	58.3	54.7	53.8	89.6	47.1	15.4	14.8	11.7	9.03										
(WY)	1988	1994	1977	1979	1977	1992	1983	1992	1992	1992	1994	1994										

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1975 - 1995

ANNUAL TOTAL	39958.2	40720.5	
ANNUAL MEAN	109	112	107
HIGHEST ANNUAL MEAN			150
LOWEST ANNUAL MEAN			75.4
HIGHEST DAILY MEAN	1370	1370	1610
LOWEST DAILY MEAN	5.6	5.6	5.6
ANNUAL SEVEN-DAY MINIMUM	5.7	5.7	5.7
ANNUAL RUNOFF (AC-FT)	79260	80770	77400
ANNUAL RUNOFF (CFSM)	7.11	7.24	6.94
ANNUAL RUNOFF (INCHES)	96.52	98.36	94.26
10 PERCENT EXCEEDS	267	245	224
50 PERCENT EXCEEDS	63	75	71
90 PERCENT EXCEEDS	8.3	17	16

e Estimated

SANDY RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD---

SPECIFIC CONDUCTANCE: October 1978 to current year.
 pH: November 1980 to September 1981, June 1990 to September 1992.
 WATER TEMPERATURE: October 1978 to current year.
 TURBIDITY: June 1990 to September 1994.
 SUSPENDED SEDIMENT DISCHARGE: October 1978 to September 1986.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Turbidity prior to October 1990 are available in the files of the Portland field office.

EXTREMES FOR PERIOD OF DAILY RECORD---

SPECIFIC CONDUCTANCE: Maximum recorded, 56 microsiemens Oct. 31, 1988; minimum, 9 microsiemens Jan. 4, 1983.
 pH: Maximum recorded, 8.0 units Aug. 17, Oct. 2, 1990, but may have been higher in water year 1990, 1992 during period of missing record; minimum recorded, 6.4 units Dec. 6, 1991, but may have been lower during period of missing record.
 WATER TEMPERATURE: Maximum, 18.0°C June 23, 24, July 18, 19, 1992; minimum, 0.0°C on many days during winter periods.
 TURBIDITY: Maximum recorded, 16 NTU Oct. 16, 1993; minimum recorded, 0.08 NTU Sept. 2, 1994.
 SEDIMENT CONCENTRATION: Maximum daily, 212 mg/L Nov. 7, 1985; minimum, 0 mg/L on many days.
 SEDIMENT DISCHARGE: Maximum daily, 794 tons Nov. 7, 1985; minimum, 0 tons on many days.

EXTREMES FOR CURRENT YEAR---

SPECIFIC CONDUCTANCE: Maximum, 45 microsiemens Oct. 1-3; minimum, 13 microsiemens Feb. 17-19.
 WATER TEMPERATURE: Maximum, 16.5°C July 20; minimum, 1.0°C Jan. 5, Feb. 13-15.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	45	43	44	21	17	19	20	18	19	24	23	23
2	45	44	45	23	20	22	22	20	21	24	23	24
3	45	44	44	25	22	24	23	22	22	25	24	25
4	44	43	44	25	20	23	24	23	23	25	25	25
5	44	43	43	22	20	21	26	24	25	26	25	25
6	43	42	43	22	21	22	26	25	26	27	26	26
7	44	43	43	23	22	22	27	26	26	27	25	26
8	44	43	44	23	21	22	27	26	27	27	26	26
9	44	43	44	22	21	22	27	26	26	26	22	25
10	44	43	44	23	21	22	27	26	27	22	21	22
11	44	42	43	23	22	23	27	26	27	21	21	21
12	43	42	43	24	23	23	27	27	27	21	16	18
13	43	42	43	24	23	24	28	27	27	16	14	15
14	43	40	41	24	23	23	28	27	28	16	14	15
15	40	39	40	24	23	24	28	27	28	17	16	17
16	41	39	40	24	23	24	27	22	24	18	17	18
17	41	40	41	25	23	24	22	20	20	19	18	19
18	41	40	41	25	24	25	21	21	21	18	15	17
19	42	41	41	26	22	25	22	21	22	20	17	18
20	42	41	42	23	21	22	22	21	22	21	20	20
21	42	33	36	24	22	23	22	21	21	21	21	21
22	35	34	35	24	22	23	23	22	22	22	21	22
23	36	35	36	24	23	23	23	23	23	24	22	23
24	37	36	37	23	23	23	24	23	24	24	23	24
25	38	37	37	23	22	23	24	23	23	26	24	25
26	38	26	36	24	23	24	23	18	21	25	24	25
27	26	17	19	25	24	24	19	18	19	25	25	25
28	21	17	19	25	24	25	20	18	19	25	19	23
29	23	20	22	25	20	23	20	19	20	20	19	19
30	24	23	24	20	18	19	21	20	21	19	17	18
31	24	16	21	---	---	---	24	21	22	17	14	15
MONTH	45	16	38	26	17	23	28	18	23	27	14	21

SANDY RIVER BASIN

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

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	16	14	15	23	22	23	28	26	26	26	23	24
2	18	15	17	24	23	24	27	26	26	23	17	19
3	19	18	18	25	24	24	28	27	27	19	17	18
4	20	19	20	25	24	25	28	26	27	22	19	20
5	21	20	21	25	24	25	28	26	27	21	20	21
6	23	21	22	26	25	26	28	26	27	21	20	20
7	23	21	22	27	26	26	27	23	25	---	---	---
8	22	21	22	27	23	26	24	21	22	---	---	---
9	22	22	22	23	20	21	23	21	22	---	---	---
10	24	22	23	20	20	20	22	21	21	---	---	---
11	24	21	23	21	20	20	22	20	21	---	---	---
12	22	20	21	21	20	21	21	20	21	---	---	---
13	22	21	22	21	20	21	20	18	19	---	---	---
14	23	22	22	20	19	20	19	19	19	---	---	---
15	23	22	23	20	19	19	20	19	20	---	---	---
16	23	21	23	20	19	20	23	19	20	---	---	---
17	21	13	16	22	20	21	23	21	22	---	---	---
18	16	13	15	22	20	21	22	21	21	---	---	---
19	16	13	14	21	18	20	23	21	22	---	---	---
20	17	14	16	20	19	19	22	21	22	---	---	---
21	18	17	17	21	19	20	23	21	22	---	---	---
22	18	17	18	21	19	20	23	22	22	---	---	---
23	19	18	19	21	20	21	26	22	23	---	---	---
24	22	19	20	22	21	22	26	23	24	---	---	---
25	23	21	22	23	22	22	26	23	25	---	---	---
26	22	21	21	23	23	23	28	23	25	---	---	---
27	22	21	22	24	23	24	27	24	25	---	---	---
28	23	21	22	25	24	25	25	23	25	---	---	---
29	---	---	---	26	25	25	26	23	24	---	---	---
30	---	---	---	27	25	26	27	23	24	---	---	---
31	---	---	---	28	25	27	---	---	---	---	---	---
MONTH	24	13	20	28	18	22	28	18	23	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	30	29	30	38	38	38	39	38	38
2	---	---	---	30	30	30	39	38	38	39	38	38
3	---	---	---	31	30	30	39	38	39	39	38	39
4	---	---	---	31	30	31	39	39	39	39	38	39
5	---	---	---	32	31	31	40	39	39	39	38	38
6	---	---	---	32	31	32	40	39	40	39	38	38
7	---	---	---	32	31	32	40	35	37	38	29	32
8	---	---	---	33	32	32	36	35	35	31	30	31
9	---	---	---	33	32	33	38	36	37	32	31	31
10	---	---	---	32	31	31	38	37	38	33	32	32
11	---	---	---	33	32	32	37	36	37	33	33	33
12	---	---	---	33	32	33	37	37	37	34	33	33
13	---	---	---	34	33	33	38	37	37	34	34	34
14	---	---	---	34	33	34	39	38	38	35	34	34
15	---	---	---	35	34	34	39	37	38	35	35	35
16	---	---	---	35	34	35	37	36	37	36	35	35
17	---	---	---	36	35	35	37	34	35	36	35	36
18	---	---	---	36	35	36	35	34	34	36	35	36
19	---	---	---	36	35	36	36	35	35	36	36	36
20	23	22	22	37	36	36	37	36	36	36	36	36
21	23	22	22	37	36	36	37	36	37	36	36	36
22	23	22	22	37	36	36	37	37	37	37	36	36
23	24	23	23	37	36	37	37	36	37	37	37	37
24	25	24	24	37	36	37	37	37	37	37	36	37
25	26	25	25	37	37	37	37	37	37	37	37	37
26	26	26	26	37	36	37	37	37	37	37	37	37
27	27	26	27	38	37	37	38	37	38	37	33	35
28	28	27	27	38	37	37	38	37	38	33	27	31
29	28	27	28	37	37	37	38	36	37	27	25	26
30	29	28	29	38	37	37	37	36	37	25	23	24
31	---	---	---	38	38	38	38	37	37	---	---	---
MONTH	---	---	---	38	29	34	40	34	37	39	23	35

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

SANDY RIVER BASIN

14139900 BULL RUN RESERVOIR NUMBER TWO NEAR BULL RUN, OR

LOCATION.--Lat 45°26'55", long 122°08'45", on line between secs.25 and 26, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on headworks dam on Bull Run River, 4.4 mi northeast of Bull Run, and at mile 6.5.

DRAINAGE AREA.--102 mi².

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

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Portland Water Bureau). Prior to Dec. 31, 1975, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth and rockfill dam with concrete spillway built by Portland Water Bureau. Storage began about Dec. 20, 1961; first filling occurred Dec. 24, 1961. Capacity, 20,990 acre-ft at crest of spillway, elevation, 860.0 ft. Dead storage negligible. Water is used as municipal supply for city of Portland and for power generation by Portland General Electric Co.

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 Oct. 31, elevation, 862.75 ft; minimum contents, 10,610 acre-ft Aug. 29, elevation, 831.9 ft (observed by PGE).

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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	847.71	860.93	861.28	859.16	861.58	859.36	859.52	859.02	858.98	859.48	848.97	857.54
2	846.99	859.80	860.31	859.27	860.72	859.31	859.53	859.66	858.19	859.70	847.60	856.52
3	846.98	859.58	859.36	859.14	859.62	859.38	859.51	859.59	858.71	859.94	847.54	857.88
4	848.03	859.70	859.44	859.06	859.61	859.66	859.65	859.54	858.73	859.87	846.14	857.18
5	849.34	859.58	859.64	858.34	859.90	859.27	859.38	859.40	858.95	859.72	844.65	857.65
6	848.63	859.53	859.03	858.70	859.56	859.09	858.90	859.10	858.82	859.85	844.63	856.93
7	848.58	859.45	859.02	858.50	859.54	859.74	859.12	858.56	859.80	843.71	857.97	
8	847.87	859.59	858.71	858.89	859.38	858.89	859.61	859.57	858.74	859.93	844.26	857.37
9	847.13	859.47	859.04	858.98	859.29	859.40	859.54	858.87	858.89	859.78	843.71	857.92
10	846.32	859.36	859.07	859.69	859.78	859.78	859.87	859.62	858.83	859.84	842.46	857.10
11	846.33	859.33	859.33	859.61	859.83	859.35	859.58	859.53	858.44	859.86	841.51	857.56
12	847.02	858.95	859.40	859.86	859.68	859.30	859.67	859.45	858.67	859.86	842.55	856.71
13	851.34	859.17	858.77	861.22	859.62	859.50	859.51	859.39	858.72	859.86	841.47	857.91
14	854.13	858.55	858.98	860.83	859.41	859.65	859.55	859.53	859.01	859.80	841.30	857.04
15	855.61	858.42	859.30	860.37	858.90	859.72	859.42	859.25	858.75	859.55	840.20	857.93
16	855.38	859.30	859.40	859.51	858.92	858.75	859.39	859.72	858.90	859.46	839.22	857.06
17	855.48	859.64	861.08	859.58	862.14	859.08	859.83	859.77	859.69	859.76	840.30	856.32
18	855.76	859.66	860.48	860.22	860.97	859.44	859.21	859.63	859.73	859.69	840.99	857.95
19	856.00	859.14	860.61	859.70	860.86	859.64	859.52	859.38	859.72	858.45	839.95	857.06
20	856.27	858.98	860.51	859.67	860.77	858.94	859.47	859.25	858.87	858.33	838.75	857.15
21	857.05	859.81	860.04	859.69	859.88	859.74	859.59	859.95	859.51	857.12	839.20	857.88
22	857.13	859.00	859.26	859.59	859.80	859.40	859.48	859.59	859.85	856.00	837.98	857.87
23	856.51	858.56	859.33	859.02	859.38	859.62	859.54	858.84	859.63	855.00	836.81	856.91
24	855.86	858.98	859.32	859.27	859.36	859.64	858.92	858.01	859.89	855.43	837.52	856.60
25	855.20	859.64	859.11	859.52	859.30	859.40	859.10	858.97	859.80	854.24	---	857.44
26	855.26	859.26	861.75	859.44	859.17	859.11	859.06	858.90	860.00	854.29	---	856.76
27	858.79	858.98	861.17	859.05	859.43	858.91	859.58	858.92	859.96	853.26	---	857.11
28	858.93	858.86	860.36	858.71	859.53	859.18	859.31	858.93	859.70	852.99	---	857.91
29	859.87	860.71	859.78	858.85	---	859.47	859.19	858.14	859.44	851.71	---	857.89
30	859.22	862.59	859.38	859.96	---	859.64	859.16	858.63	859.43	850.53	849.81	858.05
31	862.65	---	859.00	862.34	---	859.55	---	858.96	---	850.42	856.25	---
MAX	862.65	862.59	861.75	862.34	862.14	859.78	859.87	859.95	860.00	859.94	---	858.05
MIN	846.32	858.42	858.71	858.34	858.90	858.75	858.90	858.01	858.19	850.42	---	856.32
(†)	22170	22140	20560	22030	20790	20800	20630	20540	20750	16970	19350	20140
(‡)	+5970	-30	-1580	+1470	-1240	+10	-170	-90	+210	-3780	+2380	+790

CAL YR 1994 MAX --- MIN --- AC-FT# -180
WTR YR 1995 MAX --- MIN --- AC-FT# +3940

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

SANDY RIVER BASIN

173

14140001 BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'15", long 122°10'40", in NE 1/4 SW 1/4 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 sea level (levels by Portland Water Bureau). Prior to July 27, 1909, nonrecording gage at site 1.5 mi upstream at different datum. July 27, 1909, to Sept. 30, 1959, water-stage recorder at site 2.5 mi upstream at different datums.

REMARKS.--No estimated daily discharges. Records good 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 (station 14139000), since 1958 by North Fork Reservoir, capacity, 1,030 acre-ft, and since 1961 by Bull Run Reservoir Number Two (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 downstream from station. Total diversion, 193,800 acre-ft of which 64,430 acre-ft were used for power generation and returned to Bull Run River.

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

AVERAGE DISCHARGE.--88 years (water years 1908-95), 772 ft³/s, 97.98 in/yr, 559,300 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 discharge, 1.1 ft³/s Oct. 4, 1974.

Combined flow, maximum discharge, 25,100 ft³/s Dec. 22, 1964; minimum daily, 11 ft³/s Nov. 16, 1987.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 8,960 ft³/s Oct. 31, gage height, 11.96 ft; minimum discharge, 2.5 ft³/s Aug. 25-28, 30.

Combined flow, maximum discharge, 9,250 ft³/s (of which approximately 290 ft³/s were diverted for Portland water supply) Oct. 31; minimum daily, 132 ft³/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	5240	6500	684	5840	567	324	969	258	327	304	261
2	147	2240	3290	506	4030	470	308	1580	229	285	285	252
3	146	1470	1970	488	2170	407	395	1660	273	229	270	201
4	148	1650	1230	656	1580	368	517	1160	268	215	285	190
5	144	1470	806	607	1010	450	435	1170	226	236	294	204
6	146	1150	803	358	1210	358	443	1040	172	243	265	191
7	147	1040	698	324	819	335	425	957	200	229	228	185
8	144	891	619	364	717	610	801	702	231	223	201	200
9	147	1350	675	809	717	827	768	807	254	231	252	212
10	161	1060	485	805	495	892	712	571	231	223	261	226
11	165	847	535	1100	714	951	987	881	172	193	209	241
12	158	979	661	1500	762	750	960	863	218	216	188	226
13	159	902	513	2750	531	966	1350	728	226	261	215	200
14	176	1020	423	3680	550	1140	1390	487	163	255	242	232
15	186	811	405	2510	655	1110	975	715	176	249	221	241
16	181	832	1530	2010	597	945	942	507	189	260	205	227
17	159	705	3450	1520	3530	803	872	343	186	321	200	196
18	156	682	3060	1950	4920	959	921	516	470	315	187	217
19	159	843	2240	2060	6710	1090	615	376	768	317	213	222
20	154	1910	2200	1590	4180	1340	893	333	1350	305	237	236
21	159	916	2130	999	2320	935	746	317	995	301	249	231
22	158	996	1790	827	1610	953	718	241	651	278	238	216
23	158	1240	1320	826	1240	657	647	252	621	246	221	239
24	157	1300	1080	540	1030	658	682	260	525	237	236	238
25	159	1200	1010	479	770	617	675	215	428	275	237	220
26	160	1100	2080	508	774	447	540	246	352	267	236	191
27	873	1070	5150	571	594	623	582	254	344	243	239	192
28	977	943	3160	742	494	409	732	235	345	277	235	173
29	597	1540	1810	1200	---	349	705	234	321	288	206	171
30	1150	4870	1400	1810	---	340	777	259	327	254	179	180
31	3500	---	1020	5450	---	327	---	276	---	281	251	---
TOTAL	11163	42267	54043	40223	50569	21653	21837	19154	11169	8080	7289	6411
MEAN	360	1409	1743	1298	1806	698	728	618	372	261	235	214
MAX	3500	5240	6500	5450	6710	1340	1390	1660	1350	327	304	261
MIN	132	682	405	324	494	327	308	215	163	193	179	171
AC-FT	22140	83840	107200	79780	100300	42950	43310	37990	22150	16030	14460	12720
MEAN†	703	1411	1674	1368	1676	700	725	634	431	163	139	179
CFSM†	6.57	13.2	15.6	12.8	15.7	6.54	6.77	5.93	4.03	1.52	1.30	1.67
IN.†	7.57	14.7	18.0	14.7	16.9	7.54	7.56	6.84	4.49	1.76	1.49	1.87
AC-FT†	43210	83950	102950	84100	96390	43010	43110	39010	25640	10029	8519	10644

CAL YR 1994 TOTAL 275089 MEAN 754 MAX 6500 MIN 116 AC-FT 545600 MEAN† 754 CFSM† 7.04 IN.† 95.6 AC-FT† 545590
WTR YR 1995 TOTAL 293858 MEAN 805 MAX 6710 MIN 132 AC-FT 582900 MEAN† 813 CFSM† 7.60 IN.† 103 AC-FT† 590490

† Adjusted for change in contents in Bull Run Reservoir Number One and Bull Run Reservoir Number Two.

SANDY RIVER BASIN

14141500 LITTLE SANDY RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°24'55", long 122°10'20", in NE 1/4 NE 1/4 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. Elevation of gage is 720 ft above sea level, 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 above sea level. Nov. 4, 1967, to Aug. 8, 1971, water-stage recorder at site 0.1 mi downstream at datum 697.44 ft above sea level (Portland General Electric Co. bench mark).

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--76 years (water years 1920-95), 144 ft³/s, 87.54 in/yr, 104,100 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 discharge, 8 ft³/s Aug. 20, Sept. 16, 17, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Oct. 27	1000	*2,060	*5.52	Oct. 31	1930	1,670	5.14

Minimum discharge, 9.6 ft³/s Oct. 8-10, 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	647	819	139	758	96	82	159	36	42	18	18
2	11	325	452	121	550	88	77	422	35	41	18	17
3	11	210	298	105	326	83	68	323	33	46	17	17
4	10	318	221	96	257	85	73	220	34	44	17	18
5	10	287	178	89	219	82	77	251	56	39	17	19
6	10	220	154	84	187	73	90	254	130	38	17	21
7	10	184	132	86	161	69	116	227	172	39	40	120
8	9.9	162	115	85	145	83	131	189	93	36	46	65
9	9.8	204	132	130	126	155	136	163	69	43	26	41
10	9.7	179	129	204	110	161	134	149	60	50	24	33
11	10	150	128	200	151	145	205	170	63	38	32	29
12	9.9	157	122	274	154	130	194	181	52	34	25	26
13	9.9	164	112	661	121	149	294	156	56	32	22	24
14	24	163	103	612	107	170	238	131	66	30	21	23
15	29	153	99	388	105	184	199	116	96	29	25	22
16	17	170	202	312	115	156	175	106	82	27	26	21
17	14	146	539	253	671	131	153	99	83	25	42	22
18	13	122	382	408	638	153	160	89	139	24	42	22
19	12	147	304	342	858	177	142	80	164	24	30	20
20	12	344	303	249	485	178	156	73	307	23	25	19
21	81	207	327	197	365	151	151	66	248	22	22	18
22	40	163	244	165	263	131	143	62	172	22	21	17
23	24	206	204	142	210	115	140	58	128	22	21	17
24	18	255	185	126	182	106	141	54	101	22	21	17
25	16	264	183	114	161	94	133	52	84	22	20	18
26	66	213	527	105	142	87	120	48	72	22	19	19
27	1460	190	683	104	122	84	125	45	62	23	18	43
28	654	168	421	192	107	79	143	43	55	21	17	87
29	316	450	267	277	---	76	137	41	49	20	25	136
30	182	827	202	429	---	72	138	39	44	19	24	191
31	768	---	164	852	---	70	---	37	---	18	20	---
TOTAL	3879.2	7395	8331	7541	7796	3613	4271	4103	2841	937	758	1160
MEAN	125	246	269	243	278	117	142	132	94.7	30.2	24.5	38.7
MAX	1460	827	819	852	858	184	294	422	307	50	46	191
MIN	9.7	122	99	84	105	69	68	37	33	18	17	17
AC-FT	7690	14670	16520	14960	15460	7170	8470	8140	5640	1860	1500	2300
CFSM	5.61	11.1	12.1	10.9	12.5	5.23	6.38	5.94	4.25	1.36	1.10	1.73
IN.	6.47	12.34	13.90	12.58	13.00	6.03	7.12	6.84	4.74	1.56	1.26	1.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1995, BY WATER YEAR (WY)

	MEAN	85.4	207	242	237	208	185	196	162	103	39.8	23.5	38.9
MAX	271	588	585	589	452	407	325	328	268	121	96.1	184	184
(WY)	1960	1956	1965	1953	1961	1932	1920	1945	1933	1983	1968	1927	1927
MIN	10.6	14.3	57.5	45.9	59.2	49.9	54.0	55.8	19.2	13.8	10.1	12.4	12.4
(WY)	1988	1930	1977	1937	1977	1941	1941	1947	1992	1940	1940	1938	1938

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1920 - 1995	
ANNUAL TOTAL	48807.9		52625.2			
ANNUAL MEAN	134		144		144	
HIGHEST ANNUAL MEAN					223	
LOWEST ANNUAL MEAN					87.6	
HIGHEST DAILY MEAN	1460	Oct 27	1460	Oct 27	3500	Mar 31 1931
LOWEST DAILY MEAN	9.7	Oct 10	9.7	Oct 10	8.0	Sep 16 1940
ANNUAL SEVEN-DAY MINIMUM	9.9	Oct 7	9.9	Oct 7	9.0	Aug 16 1940
ANNUAL RUNOFF (AC-FT)	96810		104400		104100	
ANNUAL RUNOFF (CFSM)	6.00		6.47		6.44	
ANNUAL RUNOFF (INCHES)	81.42		87.79		87.54	
10 PERCENT EXCEEDS	320		309		300	
50 PERCENT EXCEEDS	81		105		96	
90 PERCENT EXCEEDS	12		18		18	

SANDY RIVER BASIN

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

LOCATION.--Lat 45°26'57", long 122°14'38", in SW 1/4 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 above sea level, 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 fair. Flow regulated since 1915 by Bull Run Lake, since 1929 by Bull Run Reservoir Number One (station 14139000), and since 1961 by Bull Run Reservoir Number Two (station 14139900). Some fluctuation caused by Bull Run powerplant of Portland General Electric Company. Portland Water Bureau diverted 193,800 acre-ft from Bull Run River during the 1995 water year, of which 64,430 acre-ft were used for power generation by Portland General Electric Company and returned to Bull Run River.

AVERAGE DISCHARGE.--52 years (water years 1911-14, 1930-66, 1985-95) 2,291 ft³/s, 1,645,000 acre-ft/yr.
11 years (water years 1985-95), 1,954 ft³/s, 1,416,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 84,400 ft³/s Dec. 22, 1964, gage height, 22.3 ft, site and datum then in use; minimum discharge, 45 ft³/s Sept. 26, 1962, minimum daily, 63 ft³/s Oct. 12, Nov. 9, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,100 ft³/s Oct. 31, gage height, 18.33 ft; minimum discharge, 188 ft³/s Sept. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	15000	16200	2300	15700	1880	1260	2810	894	894	495	407
2	251	6240	8250	1960	12000	1650	1230	4860	917	893	495	401
3	265	4010	5170	1750	7020	1640	1230	4630	853	937	500	410
4	279	4660	3650	1810	5150	1610	1420	3480	833	904	503	414
5	236	4490	2740	1680	4060	1610	1400	3720	956	814	488	402
6	236	3460	2470	1380	3950	1410	1580	3690	1370	753	488	397
7	239	2980	2140	1300	3260	1340	1580	3500	2250	836	676	840
8	242	2560	1890	1270	2850	1550	2100	2980	1500	799	690	614
9	242	3070	2040	1910	2640	2170	2110	2870	1260	948	527	458
10	274	2620	1820	2250	2200	2430	2080	2420	1120	1030	489	443
11	242	2190	1800	2610	2400	2430	2510	2840	1150	858	603	411
12	237	2270	1860	3100	2520	2090	2560	2880	1010	711	508	405
13	236	2240	1610	7300	2050	2310	3700	2600	984	687	455	392
14	407	2340	1440	10700	1920	2670	3600	2130	1080	667	471	384
15	457	2040	1380	6920	2040	2730	2910	2220	1360	668	488	392
16	357	2180	2840	5320	1980	2440	2690	2020	1330	657	497	392
17	279	2010	7870	4150	9700	2200	2400	1810	1190	668	560	410
18	267	1760	6820	5220	12200	2440	2580	1830	1600	667	513	395
19	295	1880	5320	5010	14700	3060	2160	1630	2050	658	451	384
20	257	e5080	5190	3980	10200	3320	2540	1480	3200	663	448	374
21	620	e2380	4950	2970	6680	2750	2270	1420	2960	644	488	343
22	487	2390	4120	2500	4820	2580	2190	1280	2260	616	420	345
23	336	2730	3440	2340	3830	2070	2030	1210	1910	595	435	323
24	292	3150	2910	1900	3250	1980	2130	1140	1640	579	429	356
25	319	3290	2710	1740	2780	1840	2200	1110	1390	560	405	331
26	407	2890	5380	1670	2580	1620	2000	1080	1250	566	401	368
27	9490	2640	11700	1670	2220	1700	2080	1040	1150	590	392	485
28	6210	2350	7380	2030	1960	1480	2430	995	1060	540	400	743
29	3140	4150	4700	3170	---	1340	2300	997	968	534	444	832
30	2770	12600	3630	4550	---	1290	2480	970	930	421	434	809
31	12700	---	2850	12700	---	1270	---	924	---	496	428	---
TOTAL	42410	111650	136270	109160	146660	62900	65750	68566	42425	21853	15021	13660
MEAN	1368	3722	4396	3521	5238	2029	2192	2212	1414	705	485	455
MAX	12700	15000	16200	12700	15700	3320	3700	4860	3200	1030	690	840
MIN	236	1760	1380	1270	1920	1270	1230	924	833	421	392	323
AC-FT	84120	221500	270300	216500	290900	124800	130400	136000	84150	43350	29790	27090

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1995, BY WATER YEAR (WY)

	724	2962	2765	2931	3291	2743	3087	2094	1465	660	436	416
MEAN	724	2962	2765	2931	3291	2743	3087	2094	1465	660	436	416
MAX	1378	4611	4396	4265	6207	4200	4010	2920	2465	1212	620	812
(WY)	1986	1985	1995	1989	1986	1993	1988	1993	1985	1993	1993	1985
MIN	242	354	1568	1204	1196	1183	2155	998	479	390	308	309
(WY)	1988	1994	1987	1985	1993	1992	1986	1992	1992	1992	1992	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1985 - 1995
ANNUAL TOTAL	742624	836325	
ANNUAL MEAN	2035	2291	1954
HIGHEST ANNUAL MEAN			2291
LOWEST ANNUAL MEAN			1463
HIGHEST DAILY MEAN	16200	Dec 1	16200
LOWEST DAILY MEAN	236	Oct 5	236
ANNUAL SEVEN-DAY MINIMUM	244	Oct 5	244
ANNUAL RUNOFF (AC-FT)	1473000	1659000	1416000
10 PERCENT EXCEEDS	4870	4750	4100
50 PERCENT EXCEEDS	1260	1680	1370
90 PERCENT EXCEEDS	318	399	340

e Estimated

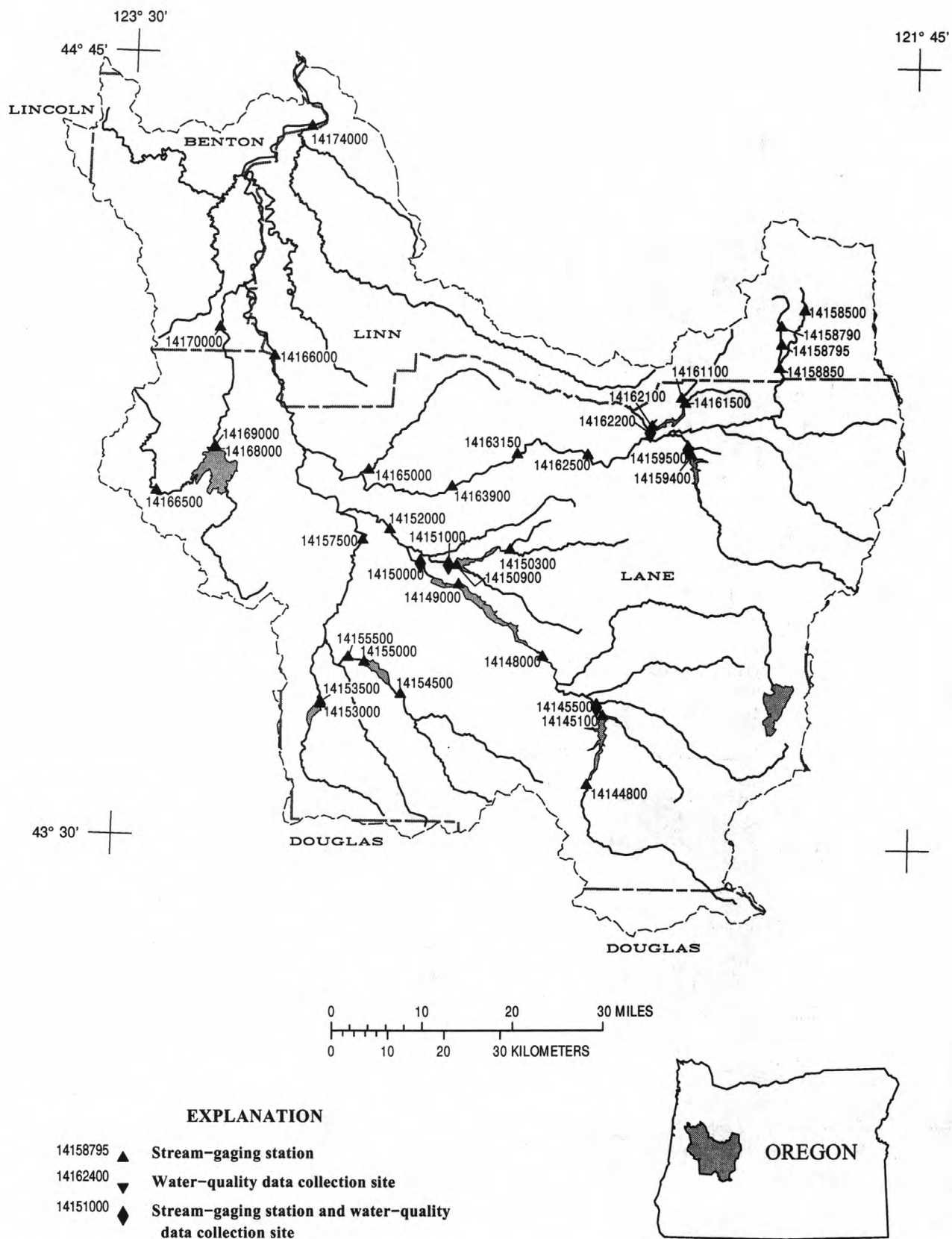


Figure 20. Location of surface-water and water-quality stations in the Willamette River Basin upstream from the Luckiamute River..

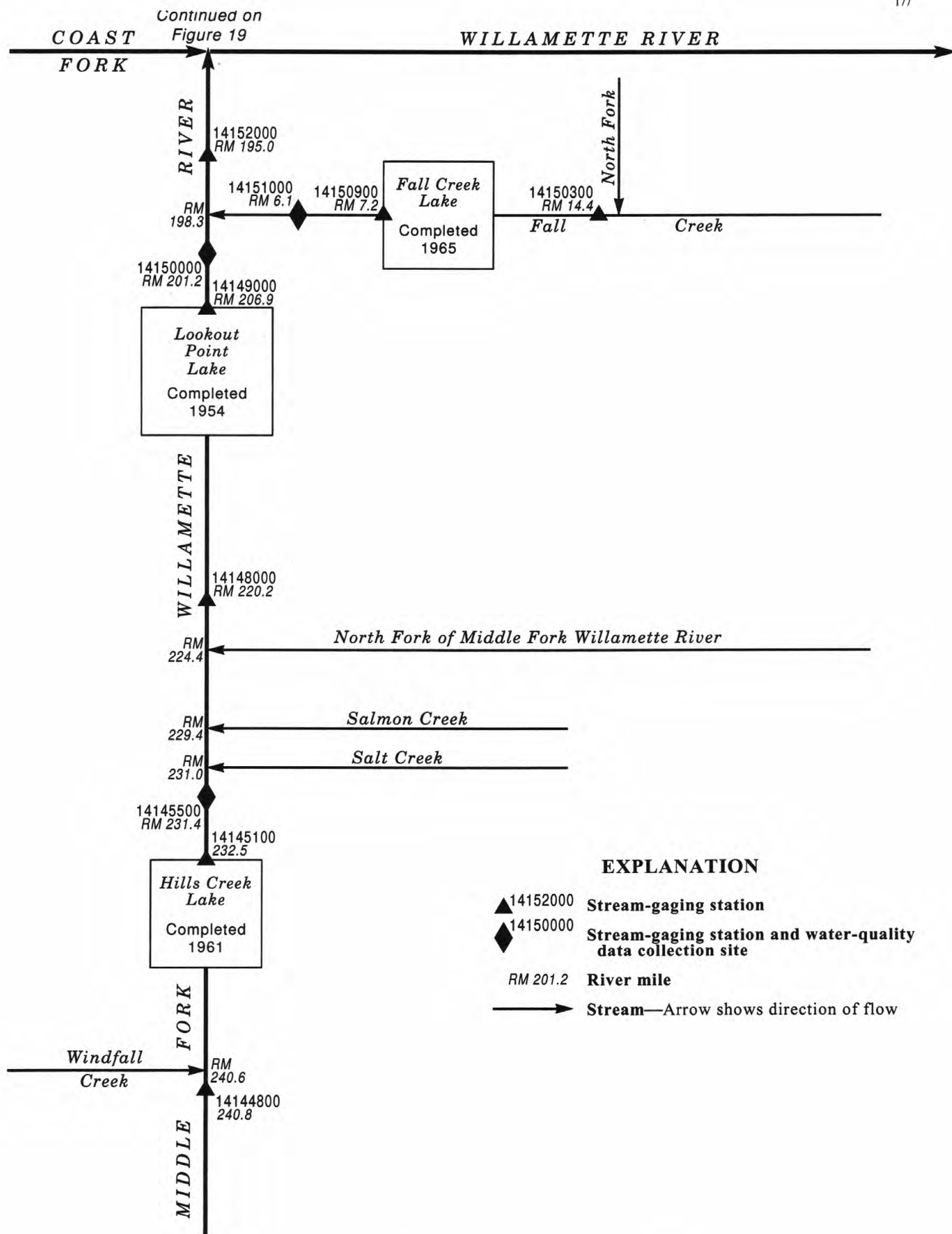


Figure 21. Schematic diagram showing gaging stations in the Middle Fork Willamette River Basin..

WILLAMETTE RIVER BASIN

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14145100 HILLS CREEK LAKE NEAR OAKRIDGE, OR

LOCATION.--Lat 43°42'30", long 122°25'25", in NW 1/4 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 sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1961 by the Corps of Engineers; storage began August 1961. Total capacity is 355,600 acre-ft 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 contents, 104,800 acre-ft Jan. 2, 1969, elevation, 1,412.52 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 351,700 acre-ft July 9, 10, elevation, 1,541.62 ft; minimum contents, 156,500 acre-ft Jan. 5, elevation, 1,448.72 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1491.60	1463.18	1461.36	1450.72	1481.15	1493.80	1522.39	1534.85	1541.45	1541.26	1541.08	1539.36
2	1490.21	1462.85	1462.17	1450.05	1485.15	1494.43	1522.88	1536.31	1541.43	1541.23	1541.06	1539.27
3	1488.73	1462.37	1462.17	1449.47	1483.52	1495.09	1523.35	1536.39	1541.41	1541.17	1541.03	1539.16
4	1487.31	1462.49	1461.66	1449.03	1480.97	1495.71	1523.85	1536.16	1541.43	1541.04	1541.00	1539.07
5	1485.87	1462.56	1460.87	1448.73	1479.07	1496.31	1524.51	1536.42	1541.48	1541.01	1540.96	1538.73
6	1484.42	1462.42	1459.96	1448.84	1479.13	1496.84	1525.38	1536.76	1541.50	1541.16	1540.91	1537.95
7	1482.99	1462.18	1458.90	1448.93	1479.38	1497.36	1526.84	1537.11	1541.51	1541.27	1540.90	1537.09
8	1481.53	1461.79	1457.69	1449.14	1479.41	1497.95	1528.51	1537.41	1541.42	1541.35	1540.84	1536.21
9	1480.07	1461.94	1456.44	1451.10	1479.23	1499.14	1529.92	1537.63	1541.43	1541.62	1540.80	1535.31
10	1478.60	1461.91	1455.14	1452.98	1479.30	1500.76	1530.58	1537.89	1541.46	1541.30	1540.77	1534.41
11	1477.11	1461.61	1453.86	1454.33	1479.67	1502.37	1530.79	1538.39	1541.44	1541.04	1540.77	1533.50
12	1475.63	1461.26	1452.63	1455.79	1480.01	1503.77	1531.19	1538.77	1541.45	1541.02	1540.73	1532.60
13	1474.13	1460.84	1451.86	1461.88	1479.63	1505.26	1532.52	1538.88	1541.44	1541.01	1540.68	1531.65
14	1473.13	1460.36	1451.57	1470.72	1478.80	1506.85	1532.93	1538.97	1541.48	1541.02	1540.63	1530.71
15	1472.39	1459.91	1451.44	1475.16	1477.98	1508.88	1532.86	1539.21	1541.48	1541.02	1540.58	1529.77
16	1471.55	1459.65	1451.75	1477.69	1477.22	1510.05	1532.85	1539.51	1541.31	1541.01	1540.55	1528.81
17	1470.83	1459.33	1452.92	1477.41	1478.44	1510.58	1532.87	1539.77	1541.12	1541.03	1540.52	1527.85
18	1470.20	1458.89	1454.71	1474.55	1481.31	1512.96	1532.90	1540.08	1541.14	1541.14	1540.47	1526.87
19	1469.55	1458.46	1455.27	1471.28	1482.88	1515.46	1532.84	1540.37	1541.21	1541.32	1540.43	1525.88
20	1468.91	1458.55	1455.05	1468.22	1483.88	1517.29	1532.92	1540.68	1541.27	1541.37	1540.37	1524.87
21	1468.28	1458.50	1454.52	1466.96	1485.15	1518.32	1533.01	1540.98	1541.20	1541.40	1540.31	1523.86
22	1467.64	1458.21	1453.87	1466.43	1486.69	1518.94	1533.06	1541.11	1541.02	1541.39	1540.23	1522.83
23	1466.98	1457.96	1453.11	1466.27	1488.01	1519.25	1533.07	1541.27	1540.94	1541.39	1540.15	1521.78
24	1466.32	1458.05	1452.85	1466.07	1489.26	1519.37	1533.09	1541.49	1540.97	1541.38	1540.07	1520.73
25	1465.64	1459.06	1452.50	1465.80	1490.40	1519.34	1533.10	1541.56	1541.03	1541.35	1539.99	1519.77
26	1464.98	1459.37	1452.13	1465.45	1491.40	1519.15	1533.03	1541.50	1541.08	1541.32	1539.90	1518.76
27	1464.68	1459.50	1452.22	1465.08	1492.30	1519.42	1533.02	1541.47	1541.15	1541.29	1539.81	1517.75
28	1464.84	1459.05	1452.29	1464.76	1493.10	1520.07	1533.26	1541.47	1541.20	1541.25	1539.71	1516.74
29	1464.41	1458.21	1452.14	1464.58	---	1520.70	1533.72	1541.48	1541.24	1541.20	1539.63	1515.76
30	1463.85	1458.84	1451.79	1466.18	---	1521.28	1534.21	1541.51	1541.26	1541.14	1539.55	1514.71
31	1463.29	---	1451.30	1472.69	---	1521.84	---	1541.47	---	1541.11	1539.46	---
MAX	1491.60	1463.18	1462.17	1477.69	1493.10	1521.84	1534.21	1541.56	1541.51	1541.62	1541.08	1539.36
MIN	1463.29	1457.96	1451.30	1448.73	1477.22	1493.80	1522.39	1534.85	1540.94	1541.01	1539.46	1514.71
(†)	180500	173000	160600	197200	237200	301600	332300	351300	350700	350300	345900	284800
(‡)	-56400	-7500	-12400	+36600	+40000	+64400	+30700	+19000	-600	-400	-4400	-61100

CAL YR 1994 MAX 1526.88 MIN 1450.08 AC-FT† +2700
WTR YR 1995 MAX 1541.62 MIN 1448.73 AC-FT† +47900

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

WILLAMETTE RIVER BASIN

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

LOCATION.--Lat 43°43'20", long 122°26'15", in NW 1/4 NE 1/4 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 above sea level (levels by Corps of Engineers). Oct. 3, 1913, to Sept. 30, 1914, nonrecording gage and Sept. 1, 1935, to Aug. 18, 1960, water-stage recorder at sites 400 ft and 1,000 ft downstream, respectively, at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1961 by Hills Creek Lake (station 14145100). No diversions upstream from station.

AVERAGE DISCHARGE.--61 years (water years 1914, 1936-95), 1,133 ft³/s, 39.25 in/yr, 820,900 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 discharge, 0.70 ft³/s Sept. 8-11, 13, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,150 ft³/s Feb. 2, gage height, 7.33 ft; minimum discharge, 291 ft³/s Mar. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1670	807	1630	1190	1770	327	319	1390	1030	633	399	405
2	1690	802	1630	1190	3200	328	319	1490	987	636	399	400
3	1700	803	1630	1070	5990	328	316	2530	910	666	399	401
4	1690	809	1630	925	5910	327	319	2940	821	729	399	397
5	1690	808	1620	784	4710	307	315	2230	891	553	396	708
6	1680	804	1620	479	2160	308	317	1940	1000	399	396	1250
7	1670	802	1610	480	1640	307	313	1710	1100	408	396	1400
8	1670	803	1630	482	1590	309	308	1480	1090	573	394	1410
9	1660	806	1620	942	1570	316	315	1460	882	764	394	1440
10	1660	804	1620	1540	1160	319	948	1400	871	1390	391	1430
11	1650	801	1610	1460	793	319	1490	1400	947	1140	388	1430
12	1650	801	1600	1390	812	318	1490	1450	809	735	388	1410
13	1650	800	1210	1440	1410	322	1500	1630	806	595	386	1460
14	1320	795	796	1390	1740	320	2110	1420	842	574	384	1460
15	1030	795	698	1260	1660	327	2310	1150	1130	566	382	1450
16	1030	807	698	1160	1570	791	1860	1010	1220	536	381	1450
17	904	815	814	2680	1550	1240	1620	1020	1210	453	383	1460
18	810	810	823	4950	1560	332	1490	926	1220	403	383	1470
19	814	808	1340	5220	1560	334	1490	901	1440	404	381	1480
20	813	815	1740	4570	1560	911	1500	879	1450	403	380	1490
21	813	810	1740	2630	937	1490	1490	883	1440	418	385	1480
22	815	807	1740	1720	314	1490	1480	1090	1430	440	398	1500
23	813	807	1740	1260	318	1490	1500	1030	1150	440	396	1510
24	810	804	1300	1200	319	1490	1500	941	880	440	396	1510
25	817	808	1240	1200	320	1490	1490	1070	794	440	397	1510
26	821	807	1240	1200	323	1490	1500	1210	758	440	399	1510
27	806	809	1240	1200	324	865	1510	1140	685	439	399	1530
28	803	1240	1230	1410	326	320	1340	1040	640	437	400	1540
29	800	1610	1210	1770	---	296	1220	1030	628	436	399	1540
30	795	1620	1200	1770	---	298	1220	1050	629	436	396	1540
31	805	---	1200	1780	---	309	---	1090	---	413	401	---
TOTAL	37349	26217	42649	51742	47096	19418	34899	41930	29690	17339	12165	38971
MEAN	1205	874	1376	1669	1682	626	1163	1353	990	559	392	1299
MAX	1700	1620	1740	5220	5990	1490	2310	2940	1450	1390	401	1540
MIN	795	795	698	479	314	296	308	879	628	399	380	397
AC-FT	74080	52000	84590	102600	93410	38520	69220	83170	58890	34390	24130	77300
MEAN†	287	748	1174	2263	2403	1673	1680	1662	980	553	321	272
CFSM	0.73	1.91	2.99	5.77	6.13	4.27	4.28	4.24	2.50	1.41	0.82	0.69
IN.†	0.85	2.13	3.45	6.66	6.38	4.92	4.78	4.89	2.79	1.63	0.94	0.77
AC-FT†	17680	44500	72190	139200	133400	102900	99920	102200	58290	33990	19730	16200

CAL YR 1994 TOTAL 236837 MEAN 649 MAX 1750 MIN 266 AC-FT 469800 MEAN† 653 CFSM† 1.66 IN.† 22.60 AC-FT† 472500
WTR YR 1995 TOTAL 399465 MEAN 1094 MAX 5990 MIN 296 AC-FT 792300 MEAN† 1160 CFSM† 2.96 IN.† 40.19 AC-FT† 840200

† Adjusted for change in contents in Hills Creek Lake.

WILLAMETTE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1960 to current year.

INSTRUMENTATION.--Temperature recorder since October 1960.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 25.0°C Sept. 4, 1960; minimum, 1.5°C Jan. 4, 1961.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 16.5°C several days in October; minimum, 5.5°C several days in December and January.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	16.5	16.0	16.0	13.0	12.0	12.5	7.5	7.0	7.5	5.5	5.5	5.5
2	16.5	16.0	16.0	12.5	12.0	12.5	7.0	7.0	7.0	5.5	5.5	5.5
3	16.5	16.0	16.5	12.5	12.0	12.0	7.0	6.5	7.0	5.5	5.5	5.5
4	16.5	16.0	16.0	12.0	11.5	12.0	6.5	6.5	6.5	5.5	5.5	5.5
5	16.5	16.0	16.0	11.5	11.5	11.5	6.5	6.5	6.5	5.5	5.5	5.5
6	16.5	16.0	16.0	11.5	11.0	11.5	6.5	6.5	6.5	5.5	5.5	5.5
7	16.5	15.5	16.0	11.5	11.0	11.0	6.5	6.5	6.5	5.5	5.5	5.5
8	16.5	16.0	16.0	11.0	11.0	11.0	6.5	6.0	6.5	5.5	5.5	5.5
9	16.5	15.5	16.0	11.0	10.5	11.0	6.5	6.0	6.0	6.0	5.5	5.5
10	16.0	15.5	16.0	11.0	10.5	10.5	6.5	6.0	6.0	5.5	5.5	5.5
11	16.0	15.5	15.5	10.5	10.0	10.5	6.0	6.0	6.0	6.0	5.5	6.0
12	16.0	15.5	15.5	10.5	10.0	10.0	6.5	6.0	6.0	6.0	5.5	6.0
13	15.5	15.0	15.5	10.0	10.0	10.0	6.5	6.0	6.0	6.0	6.0	6.0
14	15.5	14.5	15.0	10.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0	6.0
15	15.0	14.5	14.5	10.0	10.0	10.0	6.0	6.0	6.0	6.5	6.0	6.0
16	15.0	14.5	14.5	10.0	9.5	9.5	6.0	6.0	6.0	6.5	6.0	6.0
17	14.5	14.0	14.0	9.5	9.0	9.0	6.5	6.0	6.0	6.0	6.0	6.0
18	14.5	13.5	14.0	9.0	9.0	9.0	6.5	6.0	6.0	6.0	6.0	6.0
19	14.5	14.0	14.0	9.0	8.5	8.5	6.5	6.0	6.0	6.0	6.0	6.0
20	14.0	13.5	14.0	8.5	8.5	8.5	6.0	6.0	6.0	6.0	6.0	6.0
21	14.0	13.5	14.0	8.5	8.0	8.0	6.0	6.0	6.0	6.0	6.0	6.0
22	14.5	13.5	13.5	8.5	8.0	8.0	6.0	6.0	6.0	6.0	6.0	6.0
23	14.0	13.5	13.5	8.0	8.0	8.0	6.0	6.0	6.0	6.5	6.0	6.0
24	14.0	13.5	13.5	8.0	8.0	8.0	6.0	6.0	6.0	6.0	6.0	6.0
25	13.5	13.5	13.5	8.0	7.5	8.0	6.0	6.0	6.0	6.0	6.0	6.0
26	13.5	13.5	13.5	8.0	7.5	7.5	6.0	6.0	6.0	6.0	6.0	6.0
27	14.0	12.5	13.5	7.5	7.5	7.5	6.0	6.0	6.0	6.0	6.0	6.0
28	13.5	13.0	13.5	7.5	7.5	7.5	6.0	5.5	6.0	6.0	6.0	6.0
29	13.5	13.0	13.0	7.5	7.0	7.5	6.0	5.5	6.0	6.0	6.0	6.0
30	13.0	13.0	13.0	7.5	7.0	7.5	6.0	5.5	5.5	6.5	6.0	6.5
31	13.5	13.0	13.0	---	---	---	5.5	5.5	5.5	7.0	6.5	6.5
MONTH	16.5	12.5	14.5	13.0	7.0	9.5	7.5	5.5	6.0	7.0	5.5	6.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

LOCATION.--Lat 43°48'05", long 122°33'35", in SW 1/4 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.

PERIOD OF RECORD.--March 1911 to September 1912, July 1923 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "near Hazeldell" 1911-12 and as "at Eula" 1923-50.

REVISED RECORDS.--WSP 694: 1925-28. WSP 814: Drainage area at Eula. WSP 1248: 1924, 1925(M), 1926-28, 1929(M), 1930, 1933, 1946(M). WSP 1398: 1927(M). WSP 1638: 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 934.76 ft above sea level. Mar. 22, 1911, to Sept. 30, 1912, nonrecording gage at site 4.0 mi upstream, just downstream from 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.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1961 by Hills Creek Lake (station 14145100); slight regulation at times by logponds upstream from station. No diversion upstream from station. Continuous water-quality records for the period September 1950 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--39 years (water years 1912, 1924-61), 2,725 ft³/s, 1,974,000 acre-ft/yr.
34 years (water years 1962-95), 2,772 ft³/s, 2,008,000 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 discharge, 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 March 1911, 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, 17,300 ft³/s Jan. 14, gage height, 6.96 ft; minimum discharge, 825 ft³/s Sept. 4, 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1980	1720	8080	2710	13300	2050	1780	e3600	2530	1610	975	847
2	1980	1620	6100	2580	13800	1920	1690	e7000	2440	1570	968	836
3	2000	1440	4890	2380	13000	1850	1660	7040	2290	1560	960	837
4	1990	1870	4070	2110	11400	1840	1690	7330	2150	1600	952	834
5	1990	2040	3580	1960	9420	1800	1970	6530	2320	1430	942	1070
6	1970	1790	3330	1580	6080	1680	2170	5980	2580	1250	935	1670
7	1970	1720	3120	1560	4890	1610	2850	5450	2970	1280	989	1870
8	1960	1550	2960	1580	4400	1600	2970	4810	2740	1430	978	1870
9	1950	1790	2850	2850	4030	1890	2900	4470	2360	1990	950	1910
10	1950	1800	2760	4450	3420	2210	3780	4350	2270	2710	937	1900
11	1950	1590	2720	4270	2790	2190	4000	4760	2350	2340	965	1900
12	1940	1550	2740	4200	2790	2160	4580	4900	2130	1770	927	1870
13	1930	1520	2360	8560	3210	2250	5480	4750	2040	1570	913	1920
14	1780	1470	1810	14800	3470	2400	6060	4240	2130	1460	899	1910
15	1540	1430	1720	9410	3280	3090	5300	3690	2760	1410	889	1910
16	1410	1600	1930	7080	3080	3190	4500	3420	2740	1350	890	1910
17	1260	1680	2610	6880	4330	3630	4060	3320	2640	1250	923	1910
18	1120	1550	3280	8820	6800	3130	3870	3130	3050	1160	919	1930
19	1110	1500	3630	8930	6190	3500	3850	2990	3630	1170	890	1920
20	1100	2430	4000	7900	5740	4050	4150	2920	3660	1300	869	1930
21	1120	2060	3850	5610	4620	4670	4110	2910	3470	1180	865	1920
22	1150	1780	3740	4160	3360	4340	4000	3050	3260	1170	878	1930
23	1120	1770	3640	3500	3020	4030	3950	2970	2830	1160	876	1950
24	1100	2080	3210	3240	2850	3820	3930	2800	2410	1140	873	1950
25	1100	2690	3000	3090	2690	3620	3840	2840	2200	1110	869	2020
26	1110	2390	3080	2990	2500	3460	e4000	2960	2070	1100	865	2020
27	1280	2230	3720	2940	2340	2820	e4000	2830	1900	1090	857	2040
28	2250	2670	3790	3430	2190	2030	e3400	2680	1770	1070	858	2160
29	1490	3240	3420	4420	---	1910	e3200	2640	1680	1050	858	2300
30	1300	5160	3120	5570	---	1820	e3200	2640	1630	1040	849	2190
31	1260	---	2890	9540	---	1780	---	2650	---	1010	848	---
TOTAL	49160	59730	106000	153100	148990	82340	106940	125650	75000	43330	28166	53234
MEAN	1586	1991	3419	4939	5321	2656	3565	4053	2500	1398	909	1774
MAX	2250	5160	8080	14800	13800	4670	6060	7330	3660	2710	989	2300
MIN	1100	1430	1720	1560	2190	1600	1660	2640	1630	1010	848	834
AC-FT	97510	118500	210300	303700	295500	163300	212100	249200	148800	85950	55870	105600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1995, BY WATER YEAR (WY)

MEAN	1852	3310	4648	4349	3287	2978	3120	3193	2395	1272	1212	1678
MAX	2929	7306	13540	10120	8093	7802	5606	5524	4969	1901	1753	2639
(WY)	1963	1985	1965	1965	1972	1972	1993	1993	1974	1971	1982	1966
MIN	625	1414	1073	874	710	1167	1464	1113	811	703	629	1117
(WY)	1962	1994	1977	1977	1977	1992	1968	1992	1992	1994	1994	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1962 - 1995

	1994	1995	1962-1995
ANNUAL TOTAL	619495	1031640	
ANNUAL MEAN	1697	2826	2772
HIGHEST ANNUAL MEAN			4301
LOWEST ANNUAL MEAN			1416
HIGHEST DAILY MEAN	8080	14800	43500
LOWEST DAILY MEAN	577	834	334
ANNUAL SEVEN-DAY MINIMUM	583	844	349
ANNUAL RUNOFF (AC-FT)	1229000	2046000	2008000
10 PERCENT EXCEEDS	2980	4780	5270
50 PERCENT EXCEEDS	1490	2210	2050
90 PERCENT EXCEEDS	665	1030	1020

e Estimated

WILLAMETTE RIVER BASIN

14149000 LOOKOUT POINT LAKE NEAR LOWELL, OR

LOCATION.--Lat 43°54'50", long 122°45'00", in SE 1/4 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 sea level (levels by Corps of Engineers). Nov. 7, 1953, to Dec. 4, 1954, approximate elevations obtained from reference marks and Dec. 5, 1954, to Feb. 4, 1955, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1954 by Corps of Engineers. Planned storage began in November 1953. Total capacity is 455,800 acre-ft 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 contents observed since first filling, 91,450 acre-ft Dec. 1, 1954, elevation, 811.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 449,300 acre-ft June 21, elevation, 927.47 ft; minimum contents, 118,400 acre-ft Jan. 1, elevation, 824.81 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	828.67	832.25	839.39	825.95	853.74	865.80	892.82	922.48	926.39	924.79	913.44	884.27
2	828.78	832.75	841.33	825.17	857.35	866.32	893.12	923.90	926.41	924.57	912.67	883.30
3	828.92	833.01	842.13	825.11	857.66	866.79	893.41	923.91	926.27	924.36	911.85	882.30
4	829.05	833.86	842.23	825.22	856.56	867.33	893.76	923.40	926.14	924.15	911.02	881.21
5	829.18	834.51	840.79	825.35	855.66	867.77	894.16	923.57	926.14	923.86	910.19	880.29
6	829.33	834.89	839.13	825.54	855.53	868.13	894.75	923.85	926.20	923.54	909.38	879.71
7	829.47	835.13	837.39	825.68	856.01	868.43	895.63	924.05	926.44	923.20	908.64	879.31
8	829.61	834.78	835.19	825.95	856.08	868.50	896.77	924.15	926.54	922.94	907.86	878.89
9	829.74	834.56	832.93	827.21	856.10	868.65	897.84	924.17	926.45	922.99	906.97	878.53
10	829.84	834.45	831.79	829.44	855.61	868.71	899.12	924.44	926.35	923.28	906.16	878.12
11	829.95	834.08	830.65	831.11	855.37	868.76	900.68	924.96	926.24	923.36	905.25	877.71
12	830.03	833.72	829.51	832.62	855.19	868.91	902.39	925.33	926.02	923.16	904.39	877.34
13	830.02	833.31	828.88	839.72	854.53	869.62	904.84	925.35	925.87	922.88	903.48	876.96
14	830.10	832.78	828.84	851.70	854.09	870.47	907.22	925.43	925.85	922.54	902.53	876.54
15	830.40	832.22	828.69	854.19	853.39	871.88	908.73	925.64	926.06	922.19	901.66	876.16
16	830.55	831.99	829.06	853.41	851.34	873.21	909.19	925.69	926.23	921.79	900.80	875.74
17	830.56	830.57	829.58	852.28	849.58	874.85	909.74	925.69	926.34	921.34	899.94	875.39
18	830.45	828.90	830.85	852.72	851.92	876.22	910.32	925.60	926.64	920.89	898.97	874.98
19	830.36	827.88	832.39	853.01	853.66	877.74	911.31	925.43	926.75	920.44	898.10	874.64
20	830.25	828.57	832.66	852.55	855.00	879.59	912.84	925.40	926.93	920.02	897.21	874.29
21	830.18	829.39	832.53	850.46	856.67	881.80	914.45	925.36	926.73	919.55	896.29	873.84
22	830.10	829.89	832.18	847.54	858.46	883.75	915.97	925.37	926.42	919.04	895.35	873.42
23	830.01	830.30	831.77	844.35	859.94	885.45	917.36	925.44	925.98	918.55	894.39	872.97
24	829.91	830.84	831.31	841.85	861.22	887.05	918.57	925.58	925.66	918.06	893.41	872.63
25	829.83	831.88	830.63	840.87	862.54	888.45	919.46	925.77	925.54	917.54	892.28	872.30
26	829.74	832.68	830.03	840.05	863.54	889.76	920.04	926.02	925.37	917.01	891.14	871.96
27	829.98	833.27	830.10	839.25	864.42	890.70	920.63	926.13	925.38	916.49	890.07	871.64
28	831.02	833.87	829.76	838.74	865.21	891.18	921.20	926.17	925.31	915.93	888.95	871.46
29	831.28	833.68	829.17	839.07	---	891.63	921.48	926.17	925.15	915.38	887.81	871.36
30	831.32	835.68	828.34	840.34	---	892.05	921.85	926.20	924.96	914.83	886.64	871.20
31	831.49	---	827.29	845.13	---	892.42	---	926.31	---	914.24	885.46	---
MAX	831.49	835.68	842.23	854.19	865.21	892.42	921.85	926.31	926.93	924.79	913.44	884.27
MIN	828.67	827.88	827.29	825.11	849.58	865.80	892.82	922.48	924.96	914.24	885.46	871.20
(†)	132800	142300	123600	165100	220900	311000	425500	444300	438600	394300	286400	239300
(‡)	+6800	+9600	-18700	+41500	+55800	+90100	+114500	+18800	-5700	-44300	-107900	-47100

CAL YR 1994 MAX 898.94 MIN 822.36 AC-FT† +10300

WTR YR 1995 MAX 926.93 MIN 825.11 AC-FT† +113300

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

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

185

14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR

LOCATION.--Lat 43°56'45", long 122°50'10", in SE 1/4 NW 1/4 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 current year. Prior to October 1954, published as "at Lowell".

REVISED RECORDS.--WSP 1638: 1948(P).

GAGE.--Water-stage recorder. Datum of gage is 592.30 ft above sea level (levels by Corps of Engineers). Prior to Aug. 23, 1950, nonrecording gage and Aug. 23, 1950, to Sept. 30, 1954, at site 4.0 mi upstream at different datum, and June 9, 1955, to Feb. 18, 1977, at datum 3.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1953 by Lookout Point Lake (station 14149000), since 1955 by Dexter Lake (re-regulating), and since 1961 by Hills Creek Lake (station 14145100).

AVERAGE DISCHARGE.--49 years (water years 1947-95), 3,066 ft³/s, 2,222,000 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 discharge, 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 Feb. 5, gage height, 10.02 ft; minimum discharge, 932 ft³/s Apr. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1830	1280	4220	4140	2540	1140	1090	3400	2310	1960	2500	2870
2	1830	1280	4240	3590	8460	1140	1090	4210	2310	1970	2510	2580
3	1850	1280	4230	2560	11800	1140	1090	7070	2410	1970	2520	2570
4	1830	1280	4230	1930	12100	1140	1090	8480	2470	1970	2490	2570
5	1840	1560	5480	1930	10400	1150	1090	6470	2410	1960	2470	2560
6	1840	1600	5620	1470	6700	1150	1080	5580	2480	1920	2480	2540
7	1850	1590	5400	1410	4240	1150	1080	5240	2500	1920	2500	2500
8	1840	2030	5590	1410	4210	1320	1090	4880	2470	1930	2520	2500
9	1840	2090	5500	1660	4210	1830	1100	4650	2500	1930	2520	2500
10	1840	2100	4330	2510	4120	2190	1090	3920	2440	1930	2520	2500
11	1840	2100	4160	3010	3210	2180	1090	3890	2490	2120	2540	2500
12	1850	2090	4140	3020	3180	1970	1070	4300	2500	2090	2550	2500
13	1860	2080	3440	2240	4150	1170	1080	4940	2330	2090	2550	2500
14	1860	2080	2080	989	4150	1150	1570	4390	2360	2090	2550	2500
15	1340	2070	2050	6340	4090	1150	2910	3370	2340	2090	2550	2510
16	1260	2080	1740	8480	5710	1140	4100	3400	2310	2080	2540	2520
17	1260	3570	1920	8540	7290	1140	3460	3420	2470	2090	2510	2510
18	1260	3660	2080	8510	4140	1130	2920	3440	2460	2080	2470	2520
19	1260	2910	2040	8490	4080	1140	2020	3430	3480	2070	2470	2520
20	1260	2120	3680	8490	4120	1140	1290	3030	3420	2070	2460	2520
21	1260	1490	4110	8390	2500	1150	1110	2980	3940	2070	2460	2510
22	1260	1430	4150	8030	1110	1150	1120	2980	3790	2080	2550	2530
23	1260	1420	4180	7760	1120	1150	1360	2710	3560	2080	2550	2550
24	1260	1770	3900	6600	1130	1140	1410	2570	3050	2080	2580	2570
25	1260	1770	3830	4370	1120	1140	2010	2340	2820	2080	2830	2580
26	1250	1780	3810	4120	1120	1120	2630	2300	2330	2080	2800	2610
27	1270	1760	3840	4080	1120	1120	2680	2550	1860	2080	2800	2600
28	1260	2260	4190	4100	1130	1110	2640	2490	1870	2080	2850	2550
29	1260	3430	4160	4100	---	1110	3380	2530	1930	2080	2860	2530
30	1260	3090	4140	4110	---	1100	3390	2560	1970	2090	2870	2480
31	1270	---	4130	4020	---	1090	---	2300	---	2090	2870	---
TOTAL	47310	61050	120610	140399	123250	39040	54130	119820	77580	63220	80240	76300
MEAN	1526	2035	3891	4529	4402	1259	1804	3865	2586	2039	2588	2543
MAX	1860	3660	5620	8540	12100	2190	4100	8480	3940	2120	2870	2870
MIN	1250	1280	1740	989	1110	1090	1070	2300	1860	1920	2460	2480
AC-FT	93840	121100	239200	278500	244500	77440	107400	237700	153900	125400	159200	151300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1995, BY WATER YEAR (WY)

	MEAN	2819	4392	5127	4690	3300	2666	2590	2981	2572	1607	1767	2292
MAX	5266	8779	11300	13510	8224	8084	6183	6752	5497	2189	2981	3932	
(WY)	1963	1985	1965	1965	1951	1957	1952	1949	1950	1993	1993	1972	
MIN	808	874	981	1050	668	525	437	526	816	1053	852	785	
(WY)	1953	1953	1955	1977	1977	1977	1977	1977	1977	1957	1949	1949	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1947 - 1995
ANNUAL TOTAL	657515	1002949	
ANNUAL MEAN	1801	2748	3066
HIGHEST ANNUAL MEAN			4653
LOWEST ANNUAL MEAN			1392
HIGHEST DAILY MEAN	5620	Dec 6	50100
LOWEST DAILY MEAN	771	Apr 6	100
ANNUAL SEVEN-DAY MINIMUM	793	Apr 4	344
ANNUAL RUNOFF (AC-FT)	1304000		2222000
10 PERCENT EXCEEDS	3430		6120
50 PERCENT EXCEEDS	1420		2190
90 PERCENT EXCEEDS	865		1120

WILLAMETTE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1955 to current year.

INSTRUMENTATION.--Temperature recorder since August 1955.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 20.5°C several days in September, 1992; minimum recorded, 2.5°C Feb. 6-8, 1989, but may have been lower during period of missing record Feb. 9 to Mar. 30, 1989.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 18.5 °C Oct. 1, 2; minimum recorded, 5.5°C Jan. 27, but may have been lower during period of missing record, Dec. 28 to Jan. 26.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

WILLAMETTE RIVER BASIN

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.

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

GAGE.--Water-stage recorder. Datum of gage is 844.42 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station. Continuous water-quality records for the period August 1963 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--32 years (water years 1964-95), 398 ft³/s, 45.88 in/yr, 288,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft³/s Apr. 27, 1990, gage height, 12.28 ft; minimum discharge, 15 ft³/s Aug. 30, 31, Sept. 1, 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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. 1	0230	3,980	6.77	Feb. 1	1900	4,090	6.85
Jan. 13	2200	*7,590	*9.35				

Minimum discharge, 18 ft³/s Oct. 9-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	398	3100	341	2560	233	225	551	109	98	38	35
2	23	285	1870	297	2460	218	204	1790	104	92	37	34
3	21	175	1280	265	1280	216	189	1130	100	89	36	34
4	19	690	803	241	855	238	184	928	97	85	35	36
5	19	588	585	226	649	263	209	994	144	80	35	35
6	19	376	478	270	529	239	268	875	197	85	34	35
7	19	356	413	285	452	224	413	776	264	82	52	34
8	19	231	357	276	390	239	652	627	176	80	49	33
9	18	398	323	592	338	313	709	513	138	150	42	32
10	18	337	321	919	300	331	640	468	125	144	42	31
11	18	224	362	904	292	304	563	659	139	95	48	30
12	18	226	448	1030	396	285	557	821	113	83	43	30
13	18	236	401	3920	415	343	1110	668	105	76	43	29
14	48	205	363	4870	335	396	1060	517	154	70	42	29
15	94	177	378	2330	301	737	768	421	381	66	44	29
16	42	263	576	1650	292	542	581	364	258	63	47	29
17	29	322	856	1260	1370	416	498	325	216	60	73	30
18	25	249	937	1640	1940	515	566	286	414	58	60	30
19	23	251	750	1430	1180	674	522	257	598	59	49	29
20	22	1680	646	1060	808	782	879	236	539	103	45	28
21	45	658	537	781	620	740	953	217	400	66	42	26
22	47	413	479	628	508	585	772	200	307	58	40	25
23	30	567	435	529	429	468	627	186	245	55	40	24
24	26	768	405	462	377	414	517	174	206	52	40	25
25	23	1030	377	410	335	381	426	163	178	50	38	39
26	27	687	489	379	302	347	359	152	157	48	37	43
27	324	699	719	384	275	318	364	144	140	48	36	53
28	528	788	743	529	252	292	387	136	124	45	36	107
29	133	1040	601	609	---	267	423	128	112	42	39	184
30	75	2130	488	775	---	242	438	121	104	41	37	98
31	61	---	403	1470	---	222	---	114	---	40	36	---
TOTAL	1859	16447	20923	30762	20240	11784	16063	14941	6344	2263	1315	1256
MEAN	60.0	548	675	992	723	380	535	482	211	73.0	42.4	41.9
MAX	528	2130	3100	4870	2560	782	1110	1790	598	150	73	184
MIN	18	175	321	226	252	216	184	114	97	40	34	24
AC-FT	3690	32620	41500	61020	40150	23370	31860	29640	12580	4490	2610	2490
CFSM	.51	4.65	5.72	8.41	6.13	3.22	4.54	4.08	1.79	.62	.36	.35
IN.	.59	5.18	6.60	9.70	6.38	3.71	5.06	4.71	2.00	.71	.41	.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	114	540	772	859	654	605	541	335	202	72.5	46.1	55.1
MEAN	114	540	772	859	654	605	541	335	202	72.5	46.1	55.1
MAX	312	1389	2282	1849	1691	1326	1002	707	662	163	99.8	188
(WY)	1983	1974	1965	1972	1986	1993	1991	1984	1983	1968	1986	1986
MIN	18.8	44.4	60.6	102	91.8	108	220	98.6	53.8	45.7	21.1	23.7
(WY)	1988	1994	1977	1977	1977	1992	1987	1966	1966	1979	1992	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1964 - 1995
ANNUAL TOTAL	105065	144197	
ANNUAL MEAN	288	395	398
HIGHEST ANNUAL MEAN			644
LOWEST ANNUAL MEAN			183
HIGHEST DAILY MEAN	3100	Dec 1	9900
LOWEST DAILY MEAN	17	Sep 22	15
ANNUAL SEVEN-DAY MINIMUM	17	Sep 22	16
ANNUAL RUNOFF (AC-FT)	208400	286000	288700
ANNUAL RUNOFF (CFSM)	2.44	3.35	3.38
ANNUAL RUNOFF (INCHES)	33.12	45.46	45.88
10 PERCENT EXCEEDS	712	855	943
50 PERCENT EXCEEDS	170	258	207
90 PERCENT EXCEEDS	22	32	33

WILLAMETTE RIVER BASIN

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14150900 FALL CREEK LAKE NEAR LOWELL, OR

LOCATION.--Lat 43°56'40", long 122°45'20", in SW 1/4 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 sea level. Levels by U.S. Army Corps of Engineers (USACE).

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 USACE.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 123,200 acre-ft May 30, 31, 1972, May 19, 1991; maximum elevation, 832.98 ft May 31, 1972; minimum contents, no contents Nov. 7 to Dec. 6, 1969, Nov. 14-16, 1970, Nov. 18-25, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 118,900 acre-ft June 15, elevation, 830.58 ft; minimum contents, 1,220 acre-ft Nov. 14, elevation, 693.54.

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	92,750
705	2,850	765	33,770	825	109,200
715	5,200	775	42,580	833	123,200

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	763.96	697.18	733.82	728.08	753.07	774.63	799.99	826.42	830.05	830.30	826.81	816.54
2	760.98	696.35	733.54	728.22	759.44	775.12	800.26	826.90	830.03	830.30	826.57	816.08
3	757.86	695.67	730.61	728.11	758.95	775.63	800.60	826.30	829.99	830.33	826.34	815.68
4	754.72	702.94	724.87	727.99	759.19	776.19	800.93	826.32	830.05	830.30	826.12	815.19
5	751.41	704.14	720.28	727.95	759.03	776.86	801.18	826.72	830.09	830.22	825.89	814.43
6	747.84	699.75	720.06	728.24	759.54	777.38	801.65	826.99	830.27	830.20	825.66	812.97
7	744.04	698.84	720.44	728.37	760.12	777.92	802.37	827.26	830.35	830.18	825.46	811.27
8	740.11	696.77	721.31	728.30	760.80	778.43	803.71	827.38	830.37	830.14	825.22	809.55
9	735.96	699.83	722.39	728.61	761.59	778.87	805.17	827.43	830.33	830.27	825.02	807.77
10	731.78	699.60	723.72	728.65	762.31	779.59	806.44	827.32	830.32	830.14	824.77	806.05
11	727.53	697.43	725.18	729.04	763.23	780.22	807.49	827.46	830.37	830.02	824.59	804.28
12	723.46	695.47	726.98	729.27	764.44	780.88	808.68	827.38	830.36	830.03	824.36	802.47
13	720.05	693.59	728.22	745.61	765.69	781.60	810.77	827.35	830.35	829.96	824.11	800.59
14	717.66	694.96	728.53	764.77	766.70	782.63	812.87	827.60	830.52	829.88	823.87	798.65
15	716.22	694.00	728.86	767.31	766.54	784.54	814.28	828.07	830.47	829.82	823.61	796.72
16	714.30	695.20	729.34	765.88	763.65	785.85	815.31	828.39	830.36	829.77	823.43	794.68
17	711.95	696.29	728.99	762.95	760.78	786.81	816.17	828.71	830.27	829.70	823.27	792.57
18	709.71	695.17	728.79	760.83	762.29	787.97	817.17	829.03	830.47	829.60	822.91	790.41
19	708.39	695.19	728.35	758.63	763.02	789.45	818.09	829.33	830.34	829.49	822.46	788.24
20	706.97	711.54	728.04	756.59	765.37	791.15	819.60	829.52	830.31	829.35	822.05	786.02
21	705.73	711.85	727.83	754.93	767.27	792.75	820.89	829.65	830.33	829.12	821.54	783.68
22	704.61	710.30	728.01	753.55	768.82	793.95	821.77	829.76	830.34	828.97	821.14	781.36
23	703.19	712.32	728.01	752.68	770.02	794.89	822.36	829.88	830.43	828.76	820.68	778.88
24	701.59	716.02	728.24	752.09	771.10	795.78	822.75	830.02	830.47	828.56	820.18	776.46
25	699.92	718.88	728.44	751.51	771.98	796.49	823.13	830.05	830.42	828.35	819.75	773.93
26	698.33	719.22	729.18	750.96	772.74	797.22	823.42	830.06	830.42	828.18	819.34	771.27
27	699.97	719.43	729.59	750.42	773.44	797.85	823.87	830.11	830.46	827.95	818.88	768.58
28	702.17	719.31	728.52	749.76	774.05	798.38	824.33	830.03	830.43	827.69	818.43	765.81
29	698.18	719.02	728.39	747.18	---	798.88	824.94	830.09	830.33	827.47	817.96	763.31
30	694.62	726.23	728.26	743.91	---	799.33	825.60	830.01	830.29	827.26	817.51	760.36
31	694.70	---	728.17	743.27	---	799.68	---	830.02	---	827.09	816.99	---
MAX	763.96	726.23	733.82	767.31	774.05	799.68	825.60	830.11	830.52	830.33	826.81	816.54
MIN	694.62	693.59	720.06	727.85	753.07	774.63	799.99	826.30	829.99	827.09	816.99	760.36
(†)	1360	8840	9700	18400	41670	70580	110200	117900	118300	112800	95900	30090
(†)	-33850	+7480	+860	+8700	+23270	+28910	+39620	+7700	+400	-5500	-16900	-65810

CAL YR 1994 MAX 830.74 MIN 693.59 AC-FT† +1930
WTR YR 1995 MAX 830.52 MIN 693.59 AC-FT† -5120

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

† Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

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

LOCATION.--Lat 43°56'40", long 122°46'25", in NW 1/4 SE 1/4 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 above sea level (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 on left bank at present site and datum. Aug. 4, 1950 to Aug. 27, 1982 water-stage recorder. Aug. 27, 1982 gage moved to right bank at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1966 by Fall Creek Lake (station 14150900). No diversion upstream from station.

AVERAGE DISCHARGE.--60 years (water years 1936-95), 571 ft³/s, 41.69 in/yr, 413,700 acre-ft/yr, adjusted for storage in Fall Creek Lake 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 discharge, 1.5 ft³/s Oct. 7, 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,100 ft³/s Feb. 17, gage height, 6.60 ft; minimum discharge, 53 ft³/s Apr. 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	424	2010	505	222	62	131	312	165	157	262	410
2	1100	490	2470	410	921	62	131	2190	165	120	262	409
3	1100	324	2460	410	1900	62	84	2190	165	146	262	409
4	1080	382	2430	390	1120	62	77	1430	165	165	262	409
5	1070	787	1750	344	974	63	146	1140	165	163	262	633
6	1090	952	776	344	579	63	147	1100	189	163	262	1100
7	1110	626	566	384	428	63	109	920	387	167	262	1270
8	1100	525	416	430	308	63	55	846	307	165	262	1260
9	1090	331	297	740	186	64	57	784	281	176	262	1260
10	1010	508	233	1460	148	65	57	841	223	322	262	1250
11	950	504	234	e1650	62	66	57	844	223	235	261	1240
12	825	488	236	e1600	62	68	58	1200	194	165	259	1230
13	632	472	282	1020	65	64	61	1000	165	165	259	1260
14	456	256	453	144	65	65	108	629	220	165	259	1260
15	335	335	454	2170	460	74	163	238	640	165	259	1250
16	329	370	640	2970	1510	73	161	168	582	165	259	1270
17	349	522	1130	2950	2610	71	160	166	497	169	262	1280
18	312	512	1240	2920	1710	72	112	165	519	179	345	1270
19	183	401	1080	2620	1260	73	59	176	983	212	413	1260
20	182	577	921	2120	191	74	103	220	833	257	413	1250
21	179	965	778	1640	64	73	339	223	604	263	413	1230
22	176	849	620	1290	63	71	412	202	490	259	413	1220
23	174	561	609	994	63	71	501	165	319	259	413	1200
24	169	586	520	816	63	71	446	165	293	259	413	1190
25	167	985	482	735	63	71	356	189	338	259	413	1180
26	148	1000	482	688	63	71	354	220	249	259	413	1220
27	184	1000	841	688	63	71	238	222	224	259	413	1270
28	487	1190	1230	859	62	71	204	223	223	259	413	1270
29	475	1410	865	1560	---	74	164	223	224	259	413	1250
30	301	1160	723	1970	---	90	167	199	224	259	410	1290
31	107	---	584	1960	---	105	---	165	---	259	409	---
TOTAL	17940	19492	27812	38781	15285	2168	5217	18755	10256	6474	10145	33300
MEAN	579	650	897	1251	546	69.9	174	605	342	209	327	1110
MAX	1110	1410	2470	2970	2610	105	501	2190	983	322	413	1290
MIN	107	256	233	144	62	62	55	165	165	120	259	409
AC-FT	35580	38660	55170	76920	30320	4300	10350	37200	20340	12840	20120	66050
MEAN†	28.1	775	911	1392	965	540	840	730	349	119	52.4	4.03
CFSM†	0.15	4.17	4.90	7.49	5.19	2.90	4.51	3.93	1.87	0.64	0.28	0.02
IN.†	0.17	4.65	5.65	8.63	5.40	3.35	5.04	4.53	2.09	0.74	0.32	0.02
AC-FT†	1730	46140	56030	85620	53590	33210	49970	44900	20740	7340	3220	240

CAL YR 1994 TOTAL 134952 MEAN 370 MAX 2470 MIN 30 AC-FT 267700 MEAN† 372 CFSM† 2.00 IN.† 27.19 AC-FT† 269630
WTR YR 1995 TOTAL 205625 MEAN 563 MAX 2970 MIN 55 AC-FT 407900 MEAN† 556 CFSM† 2.99 IN.† 40.61 AC-FT† 402780

e Estimated

† Adjusted for change in contents in Fall Creek Lake.

WILLAMETTE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1950 to current year.

INSTRUMENTATION.--Temperature recorder since August 1950.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.0°C July 28, 1958; minimum, 0.0°C Dec. 23, 24, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.5°C Sept. 27-29; minimum, 4.0°C Nov. 19.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	18.5	17.5	18.0	10.0	7.5	9.0	7.5	7.0	7.0	5.5	5.0	5.5
2	19.0	18.5	18.5	7.5	7.0	7.0	7.5	7.0	7.5	5.0	5.0	5.0
3	19.0	18.5	19.0	7.0	6.0	6.5	7.5	7.0	7.0	5.0	4.5	5.0
4	19.0	19.0	19.0	7.0	6.0	6.5	7.0	6.5	6.5	4.5	4.5	4.5
5	19.0	18.5	18.5	7.0	6.5	6.5	6.5	6.0	6.0	4.5	4.5	4.5
6	18.5	18.5	18.5	7.0	7.0	7.0	6.0	5.0	5.5	4.5	4.5	4.5
7	18.5	18.0	18.5	7.0	6.0	6.5	5.5	5.0	5.0	4.5	4.5	4.5
8	18.5	18.0	18.0	6.5	5.5	6.0	5.0	4.5	5.0	5.0	4.5	4.5
9	18.0	18.0	18.0	7.0	5.5	6.0	5.0	4.5	5.0	5.5	5.0	5.0
10	18.0	17.5	18.0	6.5	6.0	6.5	5.0	4.5	4.5	6.5	5.0	6.0
11	17.5	17.0	17.5	6.5	6.0	6.0	4.5	4.5	4.5	6.5	6.0	6.5
12	17.0	16.5	17.0	7.0	6.0	6.5	5.0	4.5	4.5	7.0	6.5	6.5
13	16.5	16.0	16.5	7.0	6.0	6.5	5.0	4.5	4.5	8.0	7.0	7.0
14	16.0	15.5	16.0	6.5	5.5	6.0	4.5	4.5	4.5	8.0	7.5	7.5
15	15.5	14.0	15.0	7.0	5.5	6.0	5.0	4.5	4.5	8.0	7.5	8.0
16	14.5	14.0	14.5	7.0	6.0	6.0	5.0	5.0	5.0	8.0	8.0	8.0
17	14.5	14.0	14.5	6.0	5.0	5.0	5.5	5.0	5.5	8.0	7.5	7.5
18	14.5	14.0	14.0	5.5	4.5	5.0	6.0	5.5	5.5	7.5	7.0	7.5
19	14.5	14.0	14.0	5.0	4.0	4.5	6.5	6.0	6.0	7.5	7.0	7.0
20	14.5	13.5	14.0	6.0	4.5	5.0	6.5	6.0	6.5	7.0	7.0	7.0
21	14.0	13.5	14.0	6.0	5.5	5.5	6.5	6.5	6.5	7.0	7.0	7.0
22	14.0	12.0	13.5	5.5	5.0	5.0	7.0	6.5	6.5	7.0	7.0	7.0
23	13.5	12.0	13.0	5.0	4.5	5.0	6.5	6.5	6.5	7.0	7.0	7.0
24	13.5	12.0	12.5	5.5	5.0	5.0	6.5	6.5	6.5	7.0	6.5	7.0
25	13.0	12.0	12.5	6.0	5.5	5.5	6.5	6.0	6.5	7.0	6.5	6.5
26	13.0	12.5	12.5	6.0	6.0	6.0	6.5	6.5	6.5	7.0	6.5	7.0
27	13.0	12.5	12.5	6.0	5.5	5.5	6.5	6.5	6.5	7.0	7.0	7.0
28	12.5	10.5	11.5	6.0	5.5	6.0	6.5	6.5	6.5	7.0	7.0	7.0
29	11.0	10.0	10.5	6.0	6.0	6.0	6.5	6.5	6.5	7.5	7.0	7.0
30	10.5	10.0	10.5	7.0	6.0	6.5	6.5	5.5	6.0	7.5	7.5	7.5
31	10.5	9.5	10.0	--	--	--	6.0	5.5	5.5	7.5	7.0	7.5
MONTH	19.0	9.5	15.0	10.0	4.0	6.0	7.5	4.5	6.0	8.0	4.5	6.5

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

YEAR	19.5	4.0	9.5
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WILLAMETTE RIVER BASIN

193

14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR

LOCATION.--Lat 43°59'54", long 122°54'17", in SW 1/4 SW 1/4 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.

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 above sea level. September 1905 to February 1912 and July 1913 to March 1917, nonrecording gage at approximately same site at datum about 1.5 ft higher Oct. 22, 1952, to Sept. 30, 1953, nonrecording gage at site 25 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1953 by Lookout Point Lake (station 14149000), since 1961 by Hills Creek Lake (station 14145100), and since 1966 by Fall Creek Lake (station 14150900). Continuous water-quality records for the period October 1953 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--9 years (water years 1906-16), 3,724 ft³/s, 2,698,000 acre-ft/yr.
29 years (water years 1967-95), 3,970 ft³/s, 2,876,000 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 discharge, 366 ft³/s Dec. 5, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,200 ft³/s Feb. 3, gage height, 8.74 ft; minimum discharge, 1,380 ft³/s Apr. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3070	2190	8700	5130	4980	1550	1510	4480	2660	2300	2870	3400
2	3110	2220	8680	4490	12000	1530	1490	8260	2660	2250	2900	3140
3	3130	1930	8450	3450	16300	1520	1440	10700	2780	2270	2920	3100
4	3100	2230	7950	2690	15600	1550	1410	11700	2810	2290	2900	3100
5	3090	3060	8310	2610	13400	1600	1500	8540	2840	2280	2870	3290
6	3120	3050	7240	2230	8630	1570	1510	7400	2930	2240	2880	3800
7	3140	2690	6740	2190	5380	1540	1590	6810	3160	2250	2910	3990
8	3140	2870	6670	2230	5180	1660	1820	6280	3030	2250	2930	3980
9	3130	2830	6370	3050	4960	2160	1970	5940	3000	2260	2920	3980
10	3040	3000	5180	4980	4820	2590	1830	5310	2910	2420	2930	3960
11	2990	2930	4940	5690	3800	2600	1760	5340	2930	2530	2950	3950
12	2870	2920	4990	5990	3780	2450	1720	6230	2900	2410	2960	3940
13	2650	2880	4290	8030	4790	1640	2010	6640	2720	2400	2950	3960
14	2480	2630	3140	7110	4770	1630	2720	5690	2800	2410	2950	3980
15	1870	2680	3080	11300	4980	1840	3970	4210	3450	2410	2940	3970
16	1720	2820	3040	14800	7500	1740	4900	3990	3310	2400	2950	4000
17	1730	4590	3850	14100	11800	1660	4350	3980	3270	2400	2940	4010
18	1720	4670	4310	14100	7610	1690	3750	3950	3330	2400	2960	4000
19	1540	3820	4090	13600	6660	1720	2720	3920	4770	2410	3040	3990
20	1530	3880	5250	12700	5270	1910	2230	3610	4700	2470	3020	3980
21	1540	3300	5570	11800	3570	1910	2340	3510	4900	2470	3020	3960
22	1560	2890	5370	10800	1650	1820	2300	3470	4590	2480	3100	3950
23	1540	2640	5330	9870	1570	1740	2490	3170	4150	2490	3100	3960
24	1530	3200	4940	8270	1510	1700	2430	3010	3610	2470	3130	3960
25	1520	4080	4790	5930	1460	1680	2830	2780	3430	2470	3360	3960
26	1500	3890	4790	5420	1420	1610	3430	2790	2920	2470	3360	4020
27	1610	3800	5270	5350	1460	1580	3430	2990	2290	2470	3360	4090
28	2230	4450	6210	5570	1560	1540	3370	2950	2260	2460	3390	4090
29	1990	5760	5750	6280	---	1510	4010	2950	2320	2460	3410	4110
30	1790	5560	5480	6930	---	1490	4250	2960	2360	2480	3410	4030
31	1540	---	5250	7360	---	1490	---	2670	---	2480	3410	---
TOTAL	70520	99460	174020	224050	166410	54220	77080	156230	95790	74250	94740	115650
MEAN	2275	3315	5614	7227	5943	1749	2569	5040	3193	2395	3056	3855
MAX	3140	5760	8700	14800	16300	2600	4900	11700	4900	2530	3410	4110
MIN	1500	1930	3040	2190	1420	1490	1410	2670	2260	2240	2870	3100
AC-FT	139900	197300	345200	444400	330100	107500	152900	309900	190000	147300	187900	229400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	3894	6152	7268	6217	3795	3320	2960	3183	2889	1958	2437	3538																	
MAX	5392	12730	14630	11480	9460	10550	6834	6675	6746	2562	3395	4823																	
(WY)	1985	1985	1978	1976	1972	1972	1993	1993	1984	1969	1993	1984																	
MIN	1586	2618	1517	1327	787	1111	729	844	1187	1248	1766	1830																	
(WY)	1993	1988	1977	1977	1977	1977	1977	1973	1977	1978	1984	1968																	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

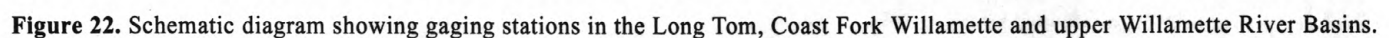
FOR 1995 WATER YEAR

WATER YEARS 1967 - 1995

	1994	1995	1967-1995
ANNUAL TOTAL	915960	1402420	
ANNUAL MEAN	2509	3842	3970
HIGHEST ANNUAL MEAN			6215
LOWEST ANNUAL MEAN			1877
HIGHEST DAILY MEAN	8700	Dec 1	20900
LOWEST DAILY MEAN	1090	May 12	536
ANNUAL SEVEN-DAY MINIMUM	1130	May 9	555
ANNUAL RUNOFF (AC-FT)	1817000	2782000	2876000
10 PERCENT EXCEEDS	4720	6660	7720
50 PERCENT EXCEEDS	1990	3050	3000
90 PERCENT EXCEEDS	1280	1620	1510

▲14166500 Stream-gaging station

→ **Stream**—Arrow shows direction of flow



WILLAMETTE RIVER BASIN

195

14153000 COTTAGE GROVE LAKE NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°43'00", long 123°02'55", in NE 1/4 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 sea level (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 contents 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, 32,070 acre-ft June 15, elevation, 790.25 ft; minimum contents, 3,070 acre-ft Dec. 22, elevation, 749.77 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	774.76	751.21	752.83	750.21	758.83	765.37	778.32	786.67	790.00	790.13	789.57	787.65
2	774.17	750.61	751.99	750.25	761.66	765.61	778.53	786.97	790.00	790.13	789.52	787.59
3	773.57	750.45	750.87	750.34	761.68	765.87	778.70	786.81	790.00	790.13	789.45	787.51
4	772.97	750.72	750.77	750.36	761.64	766.21	778.88	786.76	790.01	790.13	789.39	787.44
5	772.36	750.15	750.58	750.36	761.58	766.66	779.06	786.97	790.04	790.12	789.32	787.27
6	771.75	750.05	750.86	750.59	761.55	767.05	779.27	787.08	790.11	790.12	789.26	786.88
7	771.07	750.17	751.14	750.79	761.34	767.36	779.72	787.20	790.09	790.12	789.21	786.44
8	770.34	750.18	750.90	751.00	761.15	767.69	780.70	787.34	790.07	790.12	789.15	786.00
9	769.62	751.06	750.54	752.75	761.01	768.13	781.74	787.50	790.07	790.12	789.09	785.55
10	768.88	750.00	750.51	754.01	760.99	768.60	781.98	787.65	790.09	790.12	789.04	785.10
11	768.14	750.13	750.65	755.88	761.25	769.07	781.81	787.82	790.10	790.12	788.99	784.64
12	767.38	750.39	751.00	757.04	761.69	769.47	781.83	787.93	790.09	790.14	788.93	784.18
13	766.61	750.55	750.74	765.74	762.02	769.88	782.24	788.17	790.10	790.12	788.86	783.72
14	765.86	750.60	750.63	774.92	762.10	770.55	782.21	788.51	790.23	790.09	788.80	783.26
15	765.12	750.60	750.53	776.53	761.44	771.84	782.16	788.81	790.17	790.06	788.74	782.79
16	764.33	750.79	750.85	775.56	759.02	772.70	782.15	789.07	789.96	790.03	788.69	782.34
17	763.53	750.82	750.43	773.15	757.10	773.34	782.29	789.29	789.86	790.00	788.65	781.89
18	762.71	750.50	750.55	770.11	757.75	773.94	782.49	789.47	789.88	789.97	788.60	781.41
19	761.88	750.26	750.11	767.38	758.57	774.04	782.70	789.62	789.88	790.02	788.54	780.94
20	761.02	750.85	749.92	765.12	760.00	774.61	783.15	789.75	789.86	790.05	788.48	780.46
21	760.15	750.51	749.79	763.20	761.16	774.72	783.40	789.86	789.84	790.02	788.40	779.96
22	759.26	750.20	750.03	761.71	762.08	775.06	---	789.95	789.82	789.99	788.33	779.47
23	758.24	750.47	750.21	760.75	762.82	775.40	---	790.02	789.90	789.97	788.27	778.98
24	757.32	750.32	750.25	759.84	763.44	775.83	---	790.09	789.98	789.94	788.19	778.49
25	756.49	750.16	750.26	758.96	763.95	776.20	---	790.09	790.03	789.91	788.12	778.04
26	755.81	750.07	750.21	757.99	764.41	776.46	784.99	790.08	790.06	789.87	788.06	777.59
27	755.36	750.67	750.57	757.14	764.79	776.81	785.23	790.05	790.14	789.84	787.99	777.15
28	754.21	750.11	750.51	756.36	765.10	777.20	785.51	790.02	790.14	789.79	787.93	776.76
29	753.37	749.99	750.38	753.91	---	777.54	785.91	789.98	790.13	789.73	787.86	776.35
30	752.43	750.88	750.29	751.51	---	777.81	786.17	789.98	790.13	789.67	787.79	775.59
31	751.91	---	750.22	752.67	---	778.08	---	790.00	---	789.63	787.72	---
MAX	774.76	751.21	752.83	776.53	765.10	778.08	---	790.09	790.23	790.14	789.57	787.65
MIN	751.91	749.99	749.79	750.21	757.10	765.37	---	786.67	789.82	789.63	787.72	775.59
(†)	3740	3410	3200	4000	10030	19710	27590	31780	31930	31370	29250	17560
(†)	-13610	-330	-210	+800	+6030	+9680	+7880	+4190	+150	-560	-2120	-11690

CAL YR 1994 MAX 788.11 MIN 749.79 AC-FT# -560
WTR YR 1995 MAX --- MIN --- AC-FT# +210

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

WILLAMETTE RIVER BASIN

14153500 COAST FORK WILLAMETTE RIVER BELOW COTTAGE GROVE DAM, OR

LOCATION.--Lat 43°43'15", long 123°02'55", in NE 1/4 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 sea level (Corps of Engineers bench mark). Jan. 1 to Oct. 12, 1939, nonrecording gage and Oct. 13, 1939, to Sept. 30, 1944, water-stage recorder at several sites and datums 0.8 mi downstream.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1942 by Cottage Grove Lake (station 14153000). Small diversions for irrigation upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--56 years (water years 1940-95), 263 ft³/s, 34.34 in/yr, 190,500 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, 2,060 ft³/s Jan. 18, gage height, 7.44 ft; minimum discharge, 40 ft³/s Feb. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	373	897	201	98	80	81	221	72	49	50	48
2	251	264	956	171	365	79	81	799	72	49	50	49
3	249	128	852	150	669	79	81	749	72	49	50	49
4	248	247	488	150	521	81	81	549	72	49	50	48
5	247	381	389	150	429	81	81	341	72	49	50	108
6	246	186	298	150	367	81	81	338	72	49	50	222
7	267	131	298	167	365	81	81	309	128	49	50	253
8	278	110	334	204	327	81	83	255	103	49	50	252
9	275	112	311	627	290	83	85	214	78	49	50	251
10	273	325	247	1010	234	83	318	206	70	49	50	249
11	271	107	247	1020	154	83	472	248	70	49	49	249
12	269	76	291	1060	138	83	387	330	70	49	49	248
13	267	75	320	650	181	83	451	218	71	50	49	247
14	265	75	281	89	214	84	714	105	118	50	49	246
15	263	75	281	1620	380	86	563	78	340	50	49	244
16	261	154	287	2010	761	86	430	79	298	50	49	244
17	257	304	415	1950	1040	86	312	79	203	50	49	242
18	255	265	447	1930	839	136	261	79	192	50	49	241
19	252	199	482	1600	420	322	251	79	260	51	49	241
20	249	333	370	1240	109	478	333	79	263	50	49	240
21	247	338	308	993	62	591	413	79	216	50	49	238
22	244	244	219	786	62	384	281	79	179	50	49	238
23	266	162	198	591	62	284	192	81	89	50	49	237
24	234	280	198	528	62	213	188	81	68	50	49	235
25	204	584	198	486	62	193	169	112	68	50	49	236
26	172	425	198	480	63	193	182	112	68	50	49	235
27	183	283	198	430	70	131	139	112	68	50	49	235
28	386	444	334	422	81	81	110	112	68	50	49	233
29	218	337	302	700	---	81	131	113	69	50	49	233
30	202	366	266	744	---	81	225	81	59	50	48	340
31	149	---	228	602	---	81	---	72	---	50	48	---
TOTAL	7700	7383	11138	22911	8425	4649	7257	6389	3648	1539	1527	6431
MEAN	248	246	359	739	301	150	242	206	122	49.6	49.3	214
MAX	386	584	956	2010	1040	591	714	799	340	51	50	340
MIN	149	75	198	89	62	79	81	72	59	49	48	48
AC-FT	15270	14640	22090	45440	16710	9220	14390	12670	7240	3050	3030	12760
MEAN†	27.0	240	356	752	409	307	374	274	124	40.5	14.8	18.0
CFSM†	0.26	2.31	3.42	7.23	3.93	2.95	3.60	2.63	1.19	0.39	0.14	0.17
IN.†	0.30	2.58	3.95	8.34	4.10	3.41	4.02	3.04	1.33	0.45	0.16	0.19
AC-FT†	1660	14310	21880	46240	22740	18900	22270	16860	7390	2490	910	1070

CAL YR 1994 TOTAL 54536 MEAN 149 MAX 956 MIN 49 AC-FT 108200 MEAN† 149 CFSM† 1.43 IN.† 19.41 AC-FT† 107640
WTR YR 1995 TOTAL 88997 MEAN 244 MAX 2010 MIN 48 AC-FT 176500 MEAN† 244 CFSM† 2.35 IN.† 31.87 AC-FT† 176710

† Adjusted for change in contents, in Cottage Grove Lake.

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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.

PERIOD OF RECORD.--September 1935 to current year. Prior to October 1949, published as "at Star."

REMARKS.--No estimated daily discharges. Records good. Slight regulation caused by upstream logponds. No diversions upstream from station. Several measurements of water temperature were made during the year.

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 discharge, 10 ft³/s Sept. 24, 25, 1951, Oct. 7, 8, 1958.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	2300	*13,200	*11.58	No other peak greater than base discharge.			
Minimum discharge, 14 ft ³ /s Oct. 10-14.							

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	435	4780	433	3700	282	411	932	156	146	47	28
2	21	394	2480	374	2830	262	375	2850	148	135	46	27
3	18	252	1620	337	1500	269	342	1850	138	128	45	27
4	17	968	1030	308	1090	290	325	1310	133	121	43	28
5	16	942	747	290	863	349	362	1350	183	113	42	28
6	15	536	602	312	697	335	505	1300	276	114	41	27
7	15	506	505	348	583	317	913	1260	626	116	54	26
8	15	331	436	446	497	354	1270	994	453	111	61	26
9	15	829	389	2460	423	740	1220	800	328	178	48	26
10	15	600	368	3090	370	855	1110	724	274	216	45	25
11	15	349	397	2460	339	794	1070	923	277	147	51	24
12	15	291	555	2540	360	642	1150	1390	230	126	47	23
13	14	269	474	6180	395	741	2080	1110	205	114	42	23
14	38	240	427	8900	341	907	1910	835	246	102	40	22
15	118	216	478	4270	309	2100	1380	667	658	94	38	22
16	63	438	787	2750	297	1290	1030	565	541	88	39	23
17	41	469	1460	1670	1840	874	860	497	445	83	43	24
18	34	344	1640	1730	2940	1250	878	441	721	77	45	24
19	30	290	1220	1640	1560	1420	813	390	1000	86	40	23
20	28	1820	1070	1270	1040	1850	1110	357	903	120	37	22
21	28	888	875	996	786	1680	1210	332	704	86	35	21
22	41	546	802	817	624	1170	1120	307	539	76	33	19
23	36	540	732	692	525	872	1010	283	423	73	32	19
24	31	980	687	614	471	706	927	262	346	69	32	19
25	28	1940	616	543	419	619	769	249	296	66	31	26
26	27	1040	585	494	368	553	627	229	258	62	30	43
27	92	834	987	468	334	519	567	213	225	61	29	43
28	811	972	1090	540	306	501	551	202	199	57	29	84
29	220	960	805	749	---	476	612	188	175	54	30	168
30	117	2650	635	1250	---	440	854	179	159	51	29	107
31	84	---	514	2860	---	408	---	167	---	49	29	---
TOTAL	2083	21869	29793	51831	25807	23865	27361	23156	11265	3119	1233	1047
MEAN	67.2	729	961	1672	922	770	912	747	375	101	39.8	34.9
MAX	811	2650	4780	8900	3700	2100	2080	2850	1000	216	61	168
MIN	14	216	368	290	297	262	325	167	133	49	29	19
AC-FT	4130	43380	59090	102800	51190	47340	54270	45930	22340	6190	2450	2080
CFSM	.32	3.45	4.55	7.92	4.37	3.65	4.32	3.54	1.78	.48	.19	.17
IN.	.37	3.86	5.25	9.14	4.55	4.21	4.82					

MEAN	156	746	1124	1151	1076	999	829	553	278	76.8	38.0	45.8
MAX	1152	2569	4114	2606	2321	2168	2161	1333	847	236	107	259
(WY)	1951	1974	1965	1971	1986	1972	1937	1963	1993	1983	1976	1978
MIN	12.8	19.2	58.0	86.0	81.1	159	290	116	52.1	26.3	15.0	15.7
(WY)	1988	1937	1977	1977	1977	1992	1941	1987	1987	1940	1940	1951

ANNUAL TOTAL	131633		222429			
ANNUAL MEAN	361		609		587	
HIGHEST ANNUAL MEAN					1008	1974
LOWEST ANNUAL MEAN					233	1977
HIGHEST DAILY MEAN	4780	Dec 1	8900	Jan 14	23800	Dec 22 1964
LOWEST DAILY MEAN	12	Sep 24	14	Oct 13	11	Sep 24 1951
ANNUAL SEVEN-DAY MINIMUM	13	Sep 22	15	Oct 7	11	Oct 21 1987
ANNUAL RUNOFF (AC-FT)	261100		441200		425100	
ANNUAL RUNOFF (CFSM)	1.71		2.89		2.78	
ANNUAL RUNOFF (INCHES)	23.21		39.21		37.79	
10 PERCENT EXCEEDS	963		1360		1410	
50 PERCENT EXCEEDS	234		357		274	
90 PERCENT EXCEEDS	18		28		27	

WILLAMETTE RIVER BASIN

14155000 DORENA LAKE NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'10", long 122°57'15", in SE 1/4 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 sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete outlet and spillway, completed in 1949 by Corps of Engineers; controlled storage began Oct. 11, 1949. Capacity, 77,580 acre-ft 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 contents observed since first filling, 159 acre-ft Dec. 14, 1970, elevation, 743.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 72,650 acre-ft July 21, elevation, 832.33 ft; minimum contents, 6,900 acre-ft Jan. 31, elevation, 770.13 ft.

Capacity table (elevation, in feet, and total contents, in acre-feet)

760	2,810	785	15,850	810	39,380	835	77,600
765	4,560	790	19,580	815	45,620	840	87,320
770	6,840	795	23,780	820	52,480		
775	9,540	800	28,490	825	60,060		
780	12,530	805	33,700	830	68,470		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	810.39	773.53	786.58	770.54	786.28	794.29	813.38	826.09	832.07	832.27	831.73	829.56
2	809.52	771.25	785.99	770.69	792.25	794.57	813.80	826.91	832.05	832.24	831.67	829.48
3	808.63	770.89	783.04	770.75	791.09	794.89	814.15	826.51	832.04	832.19	831.60	829.39
4	807.73	773.18	777.46	770.66	788.69	795.30	814.47	826.32	832.02	832.14	831.55	829.29
5	806.83	771.83	771.70	770.45	786.56	795.85	814.88	826.59	832.06	832.06	831.52	829.07
6	805.92	770.80	771.39	770.75	785.64	796.35	815.54	826.80	832.17	832.03	831.46	828.50
7	805.00	770.52	770.70	771.07	785.51	796.75	816.93	827.09	832.22	832.05	831.39	827.81
8	804.02	770.38	770.44	771.33	785.75	797.25	818.89	827.40	832.02	832.11	831.34	827.08
9	802.95	772.52	770.62	776.46	785.92	798.63	820.77	827.73	831.89	832.24	831.28	826.34
10	801.86	770.79	770.64	779.88	786.09	800.26	821.65	828.07	831.80	832.26	831.26	825.61
11	800.75	770.55	770.84	780.16	786.28	801.69	821.75	828.58	831.68	832.14	831.21	825.06
12	799.61	770.62	771.13	780.63	786.42	802.76	821.97	828.82	831.50	832.17	831.15	824.63
13	798.46	770.59	770.86	796.15	786.27	803.99	822.84	829.06	831.37	832.21	831.08	824.21
14	797.36	770.33	771.04	814.98	785.92	805.23	822.44	829.39	831.43	832.23	831.01	823.78
15	796.46	770.26	771.59	818.45	785.33	806.14	822.34	829.82	832.01	832.24	830.95	823.34
16	795.38	770.88	772.23	818.23	783.30	806.20	822.25	830.29	832.06	832.25	830.89	822.90
17	794.23	770.71	771.67	815.52	783.73	806.30	822.29	830.75	831.91	832.25	830.83	822.48
18	793.06	770.72	771.32	812.03	787.10	806.75	822.46	831.15	832.01	832.26	830.77	822.01
19	791.81	770.79	770.60	807.85	787.23	806.78	822.58	831.49	832.02	832.28	830.71	821.44
20	790.51	775.00	770.33	803.32	787.68	807.49	822.98	831.78	831.92	832.32	830.65	820.76
21	789.23	773.68	770.23	798.49	788.52	807.52	823.04	832.02	831.87	832.33	830.58	820.02
22	787.98	771.03	770.43	793.58	789.65	807.66	823.25	832.05	831.81	832.28	830.46	819.27
23	786.65	771.35	770.29	789.42	790.77	807.96	823.43	832.03	831.88	832.22	830.37	818.42
24	785.36	771.93	771.21	785.90	791.71	808.55	823.54	832.05	832.00	832.16	830.28	817.53
25	784.05	775.30	770.83	783.76	792.46	809.02	823.66	832.13	832.05	832.08	830.19	816.76
26	782.69	774.57	770.49	782.20	793.06	809.69	823.88	832.14	832.14	832.05	830.10	815.95
27	781.63	773.01	771.06	780.57	793.55	810.37	824.23	832.12	832.23	832.01	830.01	815.19
28	779.82	771.49	770.81	779.06	793.96	811.12	824.55	832.13	832.26	831.97	829.93	814.48
29	777.95	771.78	770.45	774.69	---	811.78	825.07	832.08	832.28	831.90	829.84	813.92
30	776.04	778.92	770.49	770.39	---	812.36	825.49	832.07	832.28	831.85	829.72	812.97
31	774.72	---	770.34	773.43	---	812.87	---	832.07	---	831.79	829.66	---
MAX	810.39	778.92	786.58	818.45	793.96	812.87	825.49	832.14	832.28	832.33	831.73	829.56
MIN	774.72	770.26	770.23	770.39	783.30	794.29	813.38	826.09	831.37	831.79	829.66	812.97
(†)	9380	11860	7010	8660	22870	42880	60850	72180	72560	71670	67870	43010
(+)	-31500	+2480	-4850	+1650	+14210	+20010	+17970	+11330	+380	-890	-3800	-24860

CAL YR 1994 MAX 832.24 MIN 770.23 AC-FT† -1310
WTR YR 1995 MAX 832.33 MIN 770.23 AC-FT† +2130

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

† Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

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14155500 ROW RIVER NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'35", long 122°59'25", in NE 1/4 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 sea level (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.--No estimated daily discharges. Records good. Flow regulated since October 1949 by Dorena Lake (station 14155000). No diversion upstream from station.

AVERAGE DISCHARGE.--56 years (water years 1940-95), 734 ft³/s, 36.92 in/yr, 531,800 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 discharge, 0.20 ft³/s Sept. 25 to Oct. 7, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,040 ft³/s Jan. 18, gage height, 8.20 ft; minimum discharge, 88 ft³/s July 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	548	913	2770	490	426	202	195	842	181	185	98	101
2	543	1070	3480	427	1090	202	195	2950	181	185	98	101
3	540	410	3390	393	2500	205	195	2750	181	185	98	101
4	537	604	3390	391	2440	207	197	1930	180	185	98	101
5	532	1540	2680	388	1990	209	198	1460	182	185	98	198
6	528	912	909	338	1260	209	198	1450	271	173	98	487
7	526	683	847	378	815	209	201	1300	697	97	98	613
8	551	438	649	490	564	209	205	989	708	98	98	611
9	579	437	483	1390	476	209	209	733	483	98	98	608
10	590	1090	483	2510	417	212	725	640	398	224	98	605
11	585	482	483	3010	365	215	1280	750	398	259	98	458
12	579	329	628	3030	438	217	1280	1540	398	93	98	342
13	573	329	663	1810	598	220	1900	1210	352	93	98	342
14	568	329	506	197	579	407	2840	783	296	93	98	342
15	563	267	478	2810	621	1880	1880	477	376	93	98	342
16	557	410	777	3980	1090	1530	1420	313	652	93	98	342
17	551	693	1780	4420	1790	1040	1130	225	707	93	98	340
18	545	457	1980	4850	2190	1180	1030	190	767	93	97	361
19	561	374	1620	4940	1880	1640	987	178	1270	93	96	416
20	564	1130	1340	4450	1140	1760	1190	178	1240	93	96	505
21	557	1510	1070	3940	667	1990	1580	184	908	109	105	540
22	549	1340	900	3450	345	1380	1300	323	727	134	111	543
23	540	673	887	2720	217	893	1160	342	434	134	103	611
24	521	1160	624	2180	213	603	1060	293	306	134	103	608
25	507	1600	809	1500	213	481	853	215	294	134	102	606
26	499	1630	759	1170	213	397	615	258	226	98	101	602
27	527	1590	1010	1120	208	274	486	258	177	98	101	598
28	1530	1710	1340	1170	202	195	467	257	181	98	101	595
29	831	1220	1060	2150	---	195	446	254	184	98	102	592
30	685	1100	764	2500	---	195	806	202	185	98	101	734
31	492	---	659	2540	---	195	---	181	---	98	101	---
TOTAL	18358	26430	39218	65132	24947	18960	26228	23655	13540	3944	3086	13345
MEAN	592	881	1265	2101	891	612	874	763	451	127	99.5	445
MAX	1530	1710	3480	4940	2500	1990	2840	2950	1270	259	111	734
MIN	492	267	478	197	202	195	195	178	177	93	96	101
AC-FT	36410	52420	77790	129200	49480	37610	52020	46920	26860	7820	6120	26470
MEAN†	79.9	923	1190	2130	1150	937	1180	947	458	113	37.7	27.1
CFSM†	0.30	3.42	4.41	7.89	4.26	3.47	4.37	3.51	1.70	0.42	0.14	0.10
IN.†	0.34	3.81	5.07	9.09	4.42	4.00	4.86	4.05	1.89	0.48	0.16	0.11
AC-FT†	4910	54900	72940	130850	63690	57620	69990	58250	27240	6930	2320	1610

CAL YR 1994 TOTAL 163231 MEAN 447 MAX 3480 MIN 86 AC-FT 323800 MEAN† 445 CFSM† 1.65 IN.† 22.40 AC-FT† 322490
WTR YR 1995 TOTAL 276843 MEAN 758 MAX 4940 MIN 93 AC-FT 549100 MEAN† 756 CFSM† 2.80 IN.† 37.99 AC-FT† 546970

† Adjusted for change in contents in Dorena Lake.

WILLAMETTE RIVER BASIN

14157500 COAST FORK WILLAMETTE RIVER NEAR GOSHEN, OR

LOCATION.--Lat 43°58'50", long 122°57'55", in NW 1/4 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 sea level. Aug. 23, 1905, to Feb. 7, 1912, nonrecording gage at site 600 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1942 by Cottage Grove Lake (station 14153000) and since 1949 by Dorena Lake (station 14155000). Several small diversions for logponds and irrigation upstream from station. Several observations of water temperature were made during the year. Continuous water-quality records for the period October 1961 to September 1975 have been collected at this location.

AVERAGE DISCHARGE.--51 years (water years 1906-11, 1951-95), 1,566 ft³/s, 1,135,000 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 discharge, 36 ft³/s Sept. 29, 30, Oct. 11, 12, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,400 ft³/s Jan. 14, gage height, 13.58 ft; minimum discharge, 146 ft³/s Aug. 2-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	804	1210	e4500	1100	5120	565	566	2080	350	307	151	158
2	794	1810	e6400	986	4440	547	539	5570	341	298	148	152
3	782	1010	e6200	865	5050	538	516	5360	335	293	146	153
4	775	666	e5600	834	4260	547	502	4100	337	285	146	156
5	770	2750	e4300	817	3650	671	514	2810	351	282	146	162
6	765	1690	e3200	846	2560	645	523	2680	442	281	149	558
7	764	1230	e2100	980	1940	604	715	2500	762	233	158	856
8	803	914	e1700	1150	1510	585	1700	2040	1010	202	161	861
9	820	816	1410	3430	1260	676	1830	1580	779	207	158	861
10	835	1660	1250	6620	1140	800	1690	1370	591	252	161	861
11	835	1240	1240	6700	935	829	2600	1420	587	392	167	803
12	831	666	1400	7360	953	769	2420	2530	577	243	163	618
13	829	623	1580	9470	1350	834	3310	2240	558	180	165	611
14	839	589	1300	12000	1310	1010	5290	1610	519	176	167	607
15	837	528	1270	7670	1380	2720	4000	1090	1040	172	166	599
16	832	709	1510	9740	1880	2590	2940	845	1200	168	167	599
17	819	1620	2730	8060	4630	1800	2240	708	1200	164	175	599
18	805	1330	3350	8150	e4900	1830	2000	608	1080	155	175	609
19	809	988	3120	7910	e3900	2640	1880	544	1790	155	175	640
20	817	1910	2450	6980	2440	3630	2550	516	2040	216	175	726
21	808	2460	2010	5870	1660	4130	3220	493	1630	203	171	783
22	796	2000	1680	5290	1120	3100	2500	560	1250	213	184	784
23	799	1430	1500	4160	873	2110	2110	615	873	214	173	828
24	793	2040	1280	3500	769	1600	1870	583	627	213	169	841
25	726	3590	1290	2710	714	1310	1560	501	538	204	169	855
26	706	3210	1370	2140	666	1140	1290	492	489	189	168	852
27	702	2750	1530	2040	622	961	1100	508	363	166	166	863
28	1860	2990	2260	2180	590	715	1110	504	361	163	166	866
29	1290	2280	2090	3010	---	660	1280	496	339	160	166	880
30	980	e2200	1570	4570	---	617	1890	450	328	160	164	1020
31	834	---	1370	5210	---	582	---	361	---	155	160	---
TOTAL	26459	48909	74560	142348	61622	41755	56255	47764	22687	6701	5075	19761
MEAN	854	1630	2405	4592	2201	1347	1875	1541	756	216	164	659
MAX	1860	3590	6400	12000	5120	4130	5290	5570	2040	392	184	1020
MIN	702	528	1240	817	590	538	502	361	328	155	146	152
AC-FT	52480	97010	147900	282300	122200	82820	111600	94740	45000	13290	10070	39200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1995, BY WATER YEAR (WY)

MEAN	820	1918	3337	3412	2655	2245	1579	1010	582	268	426	590
MAX	3119	6305	9820	7239	6891	5716	4020	3285	2424	588	1115	1057
(WY)	1951	1974	1965	1956	1961	1963	1963	1983	1993	1957	1955	1978
MIN	204	121	196	200	203	385	459	247	129	134	127	171
(WY)	1959	1953	1977	1977	1977	1992	1987	1987	1987	1994	1994	1957

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1951 - 1995
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ANNUAL TOTAL	317987			553896				
ANNUAL MEAN	871			1518			1566	
HIGHEST ANNUAL MEAN							2701	1956
LOWEST ANNUAL MEAN							512	1977
HIGHEST DAILY MEAN	6400	Dec 2		12000	Jan 14		31500	Dec 24 1964
LOWEST DAILY MEAN	112	Sep 3		146	Aug 3		86	Nov 28 1952
ANNUAL SEVEN-DAY MINIMUM	115	Aug 29		149	Jul 31		90	Nov 24 1952
ANNUAL RUNOFF (AC-FT)	630700			1099000			1135000	
10 PERCENT EXCEEDS	2170			3610			4180	
50 PERCENT EXCEEDS	586			841			734	
90 PERCENT EXCEEDS	128			169			198	

e Estimated

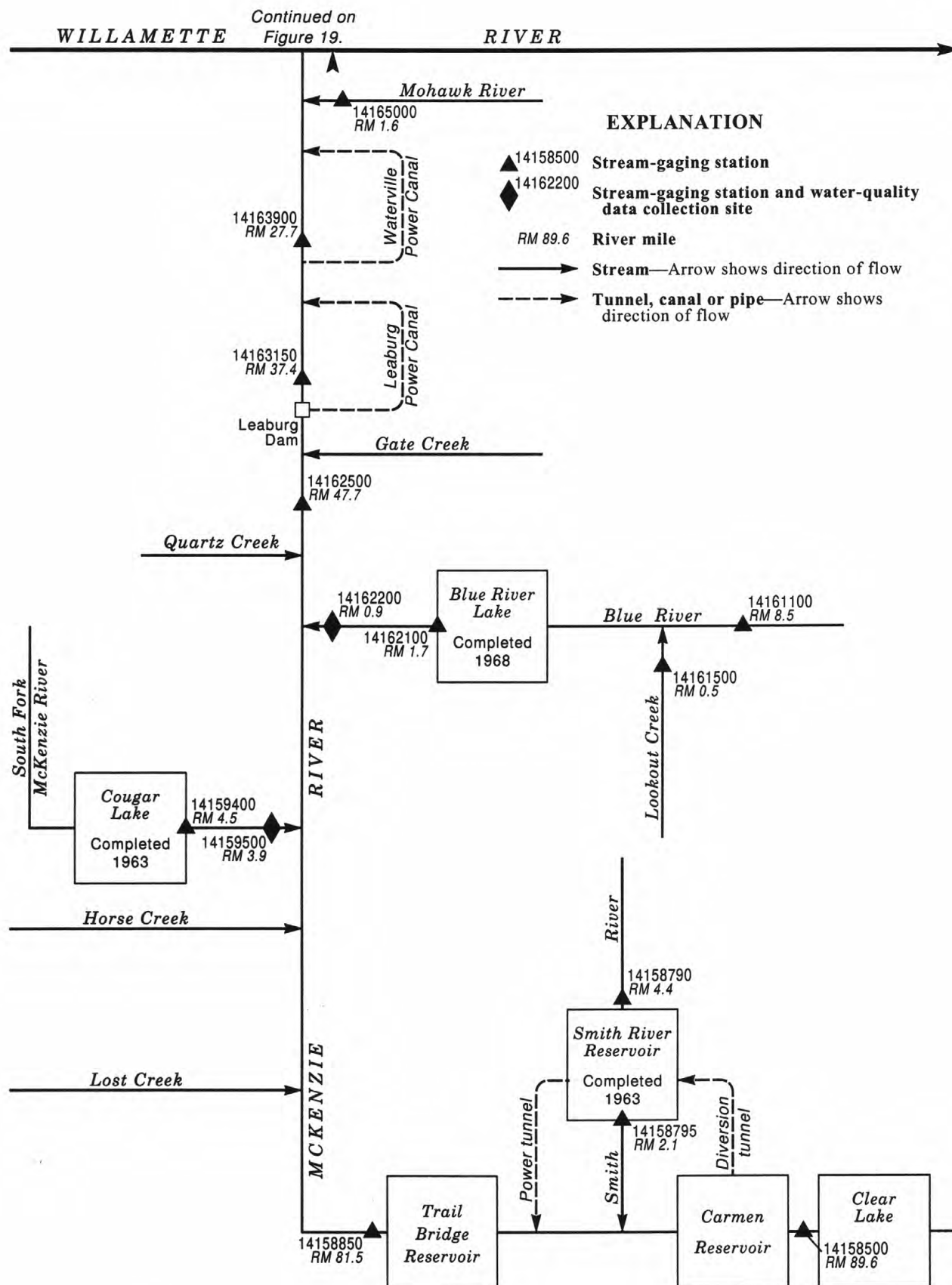


Figure 23. Schematic diagram showing gaging stations and diversions in the McKenzie River Basin.

WILLAMETTE RIVER BASIN

14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR

LOCATION.--Lat 44°21'40", long 121°59'40", in SE 1/4 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 above sea level (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.--No estimated daily discharges. 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 upstream from station.

AVERAGE DISCHARGE.--51 years (water years 1913-15, 1948-95), 450 ft³/s, 66.17 in/yr, 326,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft³/s Dec. 23, 1964, gage height, 8.15 ft; minimum discharge, 116 ft³/s Oct. 27, 28, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft³/s Feb. 1, gage height, 5.51 ft; minimum discharge, 127 ft³/s Oct. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	209	242	419	1510	707	533	589	446	389	273	225
2	139	214	274	429	1420	681	520	711	439	387	271	224
3	138	238	300	420	1030	656	508	736	431	385	269	222
4	137	262	315	402	973	638	504	719	422	380	266	221
5	137	268	324	386	1000	609	509	729	418	376	264	220
6	136	271	334	374	998	573	522	729	416	374	262	219
7	135	274	339	365	971	545	554	721	412	370	262	217
8	134	277	336	359	931	527	597	713	406	368	260	216
9	133	286	337	369	884	528	592	704	403	374	256	215
10	133	281	333	366	839	553	578	699	402	363	255	213
11	132	278	332	370	803	571	572	710	403	356	254	212
12	131	278	326	385	775	577	589	699	400	351	252	211
13	131	273	318	491	735	593	682	671	400	346	250	210
14	135	266	312	880	693	633	699	645	404	342	249	208
15	134	258	308	857	659	686	665	625	405	338	248	207
16	131	258	310	694	623	672	641	612	399	334	247	206
17	130	248	317	617	661	657	628	597	400	330	249	205
18	130	233	315	602	788	704	621	579	402	325	245	205
19	130	225	314	607	870	773	605	561	402	323	243	203
20	129	221	317	605	916	819	598	546	403	322	242	202
21	131	210	322	590	864	826	578	534	408	312	241	201
22	129	205	327	567	823	780	562	524	411	307	239	200
23	128	204	332	542	798	744	550	514	411	302	238	199
24	128	200	337	513	797	717	546	504	409	299	236	199
25	128	200	339	483	796	689	549	492	406	295	235	200
26	131	195	352	455	777	663	552	482	403	291	233	199
27	154	196	374	435	756	639	559	473	399	288	232	201
28	159	193	373	430	732	614	573	464	395	284	230	201
29	157	195	375	426	---	589	577	458	394	281	230	202
30	172	208	380	452	---	567	577	454	392	277	228	202
31	188	---	388	817	---	550	---	451	---	275	226	---
TOTAL	4280	7124	10202	15707	24422	20080	17340	18645	12241	10344	7685	6265
MEAN	138	237	329	507	872	648	578	601	408	334	248	209
MAX	188	286	388	880	1510	826	699	736	446	389	273	225
MIN	128	193	242	359	623	527	504	451	392	275	226	199
AC-FT	8490	14130	20240	31150	48440	39830	34390	36980	24280	20520	15240	12430
CFSM	1.49	2.57	3.56	5.48	9.44	7.01	6.26	6.51	4.42	3.61	2.68	2.26
IN.	1.72	2.87	4.11	6.32	9.83	8.08	6.98	7.51	4.93	4.16	3.09	2.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1995, BY WATER YEAR (WY)

MEAN	247	366	525	503	515	498	581	675	561	385	298	250
MAX	428	828	1209	999	986	1205	872	1178	1202	737	499	392
(WY)	1951	1951	1965	1974	1961	1972	1993	1949	1974	1950	1974	1974
MIN	122	141	209	191	180	224	341	319	203	173	149	132
(WY)	1993	1988	1977	1977	1977	1977	1955	1992	1992	1977	1992	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1913 - 1995

ANNUAL TOTAL	107312	154335	
ANNUAL MEAN	294	423	450
HIGHEST ANNUAL MEAN			683
LOWEST ANNUAL MEAN			241
HIGHEST DAILY MEAN	575	Jan 12	3100
LOWEST DAILY MEAN	128	Oct 23	116
ANNUAL SEVEN-DAY MINIMUM	129	Oct 19	117
ANNUAL RUNOFF (AC-FT)	212900	306100	326000
ANNUAL RUNOFF (CFSM)	3.18	4.58	4.87
ANNUAL RUNOFF (INCHES)	43.20	62.13	66.17
10 PERCENT EXCEEDS	482	720	780
50 PERCENT EXCEEDS	291	375	389
90 PERCENT EXCEEDS	147	199	208

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

LOCATION.--Lat 44°20'05", long 122°02'45", in SW 1/4 SW 1/4 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. Datum of gage is 2,610.00 ft above sea level (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 upstream from station. Discharges for periods November 2 to May 31, July 6 to Sept. 30 computed from data provided by Eugene Water and Electric Board.

AVERAGE DISCHARGE.--35 years (water years 1961-95), 88.1 ft³/s, 73.88 in/yr, 63,820 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 discharge, 1.2 ft³/s Oct. 13, 1991, result of log jam.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	1800	997	7.77	Jan. 31	1130	*1,230	*8.03

Minimum discharge, 2.9 ft³/s Oct. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	176	e454	e90	e1100	e105	e69	e213	49	21	e7.1	e4.3
2	3.4	e84	e249	e76	e653	e91	e67	e405	44	20	e7.0	e4.1
3	3.2	e56	e159	e66	e390	381	e72	e272	39	19	e6.8	e4.1
4	3.1	e50	e116	e58	e331	e74	e81	e263	36	18	e6.6	e4.1
5	3.1	e42	e94	e52	e291	e65	e98	e246	41	16	e6.5	e4.2
6	3.1	e39	e79	e47	e249	e57	e112	e213	48	e18	e6.3	e4.1
7	3.1	e34	e67	e44	e211	e53	e175	e186	57	e17	e8.0	e4.1
8	3.1	e33	e56	e51	e176	e57	e176	e163	51	e17	e7.0	e4.1
9	3.1	e70	e51	e140	e146	e104	e142	e148	46	e26	e6.4	e3.9
10	3.1	e57	e45	e176	e123	e136	e122	e143	43	e21	e6.5	e3.8
11	3.1	e44	e42	e187	e112	e158	e129	e167	40	e18	e6.5	e3.8
12	3.1	e38	e38	e225	e103	e146	e183	e149	35	e17	e5.9	e3.7
13	3.0	e33	e34	e678	e89	e186	e313	e129	34	e15	e5.7	e3.6
14	8.0	e29	e32	e787	e78	e239	e221	e114	43	e14	e5.6	e3.5
15	7.8	e28	e32	e427	e70	e243	e171	e110	56	e14	e5.5	e3.5
16	5.0	e29	e94	e267	e63	e190	e140	e111	47	e13	e5.7	e3.4
17	4.1	e27	e279	e194	e325	e158	e121	e107	46	e12	e11	e3.4
18	3.8	e23	e274	e162	e515	e246	e107	e98	57	e11	e7.2	e3.4
19	3.6	e24	e205	e148	e524	e245	e95	e91	71	e12	e6.2	e3.4
20	3.6	e26	e170	e128	e421	e277	e89	e91	77	e13	e5.8	e3.4
21	6.3	e23	e146	e109	e317	e219	e83	e90	67	e11	e5.4	e3.2
22	4.5	e22	e134	e96	e248	e171	e87	e88	57	e10	e5.2	e3.1
23	4.0	e23	e122	e84	e214	e137	e93	e85	49	e9.7	e5.0	e3.1
24	3.7	e31	e113	e74	e208	e113	e111	e79	43	e9.4	e5.0	e3.1
25	3.6	e45	e101	e67	e188	e95	e122	e73	38	e9.0	e4.9	e5.1
26	9.9	e38	e187	e63	e162	e84	e123	e70	34	e8.7	e4.7	e4.9
27	171	e35	e350	e60	e142	e76	e144	e65	30	e8.6	e4.6	e15
28	113	e31	e257	e97	e122	e71	e154	e62	27	e8.1	e4.6	e22
29	46	e58	e179	e165	---	e69	e153	e61	25	e7.8	e4.9	e21
30	30	e336	e136	e356	---	e68	e153	e58	23	e7.4	e4.5	e18
31	93	---	e107	e1060	---	e68	---	e53	---	e7.2	e4.4	---
TOTAL	562.0	1584	4402	6234	7571	4082	3906	4203	1353	428.9	186.5	174.4
MEAN	18.1	52.8	142	201	270	132	130	136	45.1	13.8	6.02	5.81
MAX	171	336	454	1060	1100	277	313	405	77	26	11	22
MIN	3.0	22	32	44	63	53	67	53	23	7.2	4.4	3.1
AC-FT	1110	3140	8730	12370	15020	8100	7750	8340	2680	851	370	346
CFSM	1.12	3.26	8.77	12.4	16.7	8.13	8.04	8.37	2.78	.85	.37	.36
IN.	1.29	3.64	10.11	14.32	17.39	9.37	8.97	9.65	3.11	.98	.43	.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1995, BY WATER YEAR (WY)

MEAN	21.9	111	146	133	133	117	144	151	74.3	16.8	6.77	7.40
MAX	75.9	218	404	293	309	321	270	318	260	51.5	11.7	23.5
(WY)	1969	1985	1965	1970	1961	1993	1993	1971	1974	1971	1968	1978
MIN	3.33	4.47	9.88	13.5	12.8	41.2	50.3	28.1	8.63	5.23	3.22	3.74
(WY)	1988	1994	1977	1977	1977	1992	1967	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1961 - 1995

ANNUAL TOTAL	23849.5	34686.8	
ANNUAL MEAN	65.3	95.0	88.1
HIGHEST ANNUAL MEAN			136
LOWEST ANNUAL MEAN			38.5
HIGHEST DAILY MEAN	546	1100	2590
LOWEST DAILY MEAN	3.0	3.0	2.5
ANNUAL SEVEN-DAY MINIMUM	3.1	3.1	2.6
ANNUAL RUNOFF (AC-FT)	47310	68800	63820
ANNUAL RUNOFF (CFSM)	4.03	5.87	5.44
ANNUAL RUNOFF (INCHES)	54.77	79.65	73.88
10 PERCENT EXCEEDS	158	223	210
50 PERCENT EXCEEDS	37	57	51
90 PERCENT EXCEEDS	3.7	4.1	4.9

e Estimated

WILLAMETTE RIVER BASIN

14158795 SMITH RIVER RESERVOIR NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°18'20", long 122°02'40", in SW 1/4 SW 1/4 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.

REVISED RECORDS.--WDR OR-86-2: 1985.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Eugene Water and Electric Board).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1963 by Eugene Water and Electric Board; storage began Mar. 18, 1963. Total capacity is 15,000 acre-ft 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 and are furnished by Eugene Water and Electric Board.

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 contents, 5,700 acre-ft Apr. 11, 14, 1964, elevation, 2,532.90 ft.

EXTREMES FOR CURRENT YEAR.--(based only on monthend readings) Maximum contents, 14,760 acre-ft July 16, elevation, 2,603.89 ft; minimum contents, 13,050 acre-ft Dec. 22, elevation, 2,593.44 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	2,601.19	14,300	--
Oct. 31.....	2,596.29	13,510	-790
Nov. 30.....	2,956.90	13,600	+90
Dec. 31.....	2,595.34	13,350	-250
CAL YR 1994.....	--	--	-580
Jan. 31.....	2,597.58	13,710	+360
Feb. 28.....	2,596.72	13,580	-130
Mar. 31.....	2,597.35	13,680	+100
Apr. 30.....	2,600.42	14,170	+490
May 31.....	2,600.93	14,260	+90
June 30.....	2,601.45	14,350	+90
July 31.....	2,601.70	14,390	+40
Aug. 31.....	2,601.73	14,390	0
Sept.30.....	2,601.98	14,440	+50
WTR YR 1995.....	--	--	+140

WILLAMETTE RIVER BASIN

205

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.

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

GAGE.--Water-stage recorder. Datum of gage is 1,980.00 ft above sea level (levels by Eugene Water and Electric Board). Prior to Oct. 11, 1963, at datum 5.60 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1963 by Smith River Reservoir (station 14158795). Diurnal fluctuations by powerplants and by Trail Bridge re-regulating reservoir upstream. Water is diverted from McKenzie River in SW 1/4 sec.20, T.14 S., R.7 E., to Smith River Reservoir and returned to river upstream from station. Continuous water-quality records for the period November 1976 to September 1985, July 1992 September 1993 have been collected at this location.

AVERAGE DISCHARGE.--36 years (water years 1960-95), 996 ft³/s, 73.51 in/yr, 721,600 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 discharge, 185 ft³/s Feb. 3, 1963; minimum daily, 423 ft³/s Nov. 22, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,810 ft³/s Feb. 1, gage height, 9.22 ft; minimum discharge, 501 ft³/s Oct. 11-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	526	872	1300	950	3180	1390	1180	1250	1000	885	732	672
2	519	731	1060	990	2800	1370	1150	1530	986	869	733	667
3	516	682	944	920	2140	1330	1120	1400	973	870	731	669
4	514	694	938	919	1910	1320	1110	1420	961	869	732	667
5	516	726	888	924	1870	1290	1110	1470	961	871	723	667
6	517	717	867	889	1810	1290	1110	1430	965	863	714	668
7	517	702	866	846	1750	1210	1180	1410	985	841	714	668
8	515	702	871	841	1670	1180	1250	1390	984	848	715	654
9	516	833	852	968	1620	1220	1180	1360	950	899	705	659
10	516	744	823	1000	1570	1260	1170	1350	927	870	713	658
11	508	716	808	1010	1510	1270	1230	1400	924	847	718	667
12	510	716	794	1120	1490	1270	1330	1370	912	836	719	674
13	510	715	794	1800	1430	1280	1440	1340	887	807	719	665
14	523	703	771	2120	1370	1340	1370	1330	938	807	717	641
15	542	685	747	1670	1360	1370	1310	1290	990	811	705	649
16	543	699	860	1500	1330	1370	1330	1260	916	811	687	653
17	539	700	1090	1420	1630	1320	1310	1260	916	810	736	639
18	543	687	1090	1410	1870	1430	1270	1220	936	808	728	638
19	538	676	1030	1330	1870	1460	1270	1200	1010	800	708	641
20	538	664	962	1280	1820	1430	1240	1190	951	807	687	641
21	538	639	945	1240	1750	1460	1220	1160	945	803	684	641
22	540	636	938	1200	1670	1480	1200	1170	945	778	685	641
23	541	612	926	1160	1580	1470	1190	1160	945	764	686	640
24	541	616	924	1140	1590	1450	1200	1120	945	763	685	642
25	539	666	911	1090	1580	1380	1230	1100	914	761	685	641
26	545	669	977	1060	1450	1330	1210	1100	902	759	686	642
27	797	655	1210	995	1440	1300	1210	1070	900	762	685	682
28	778	651	1120	1040	1430	1290	1230	1040	900	752	678	693
29	625	695	1050	1080	---	1230	1250	1050	898	748	677	686
30	604	1000	990	1330	---	1230	1240	1040	901	736	677	651
31	662	---	950	2640	---	1210	---	1020	---	736	678	---
TOTAL	17176	21203	29296	37882	48490	41230	36840	38900	28267	25191	21842	19716
MEAN	554	707	945	1222	1732	1330	1228	1255	942	813	705	657
MAX	797	1000	1300	2640	3180	1480	1440	1530	1010	899	736	693
MIN	508	612	747	841	1330	1180	1110	1020	887	736	677	638
AC-FT	34070	42060	58110	75140	96180	81780	73070	77160	56070	49970	43320	39110
MEAN†	541	709	941	1228	1730	1331	1237	1256	944	813	704	658
CFSM†	2.94	3.85	5.11	6.67	9.40	7.24	6.72	6.83	5.13	4.42	3.83	3.58
IN.†	3.39	4.30	5.90	7.69	9.79	8.34	7.50	7.87	5.72	5.10	4.41	3.99
AC-FT†	33280	42150	57860	75500	96050	81880	73560	77250	56160	50010	43320	39160

CAL YR 1994 TOTAL 279805 MEAN 767 MAX 1390 MIN 508 AC-FT 555000 MEAN† 766 CFSM† 4.16 IN.† 56.49 AC-FT† 554400
WTR YR 1995 TOTAL 366033 MEAN 1003 MAX 3180 MIN 508 AC-FT 726000 MEAN† 1003 CFSM† 5.45 IN.† 73.99 AC-FT† 726100

† Adjusted for change in contents in Smith River Reservoir.

WILLAMETTE RIVER BASIN

14159400 COUGAR LAKE NEAR RAINBOW, OR

LOCATION.--Lat 44°07'40", long 122°14'25", in SE 1/4 SE 1/4 sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, in intake tower near left end of Cougar Dam on South Fork McKenzie River, 2.7 mi south of Rainbow, and at mile 4.5.

DRAINAGE AREA.--207 mi².

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

GAGE.--Water-stage recorder. Datum of gage is sea level (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, 215,900 acre-ft Apr. 28, 1990, elevation, 1,696.51 ft; minimum contents, 33,690 acre-ft Oct. 31 to Nov. 2, 1965, elevation, 1,475.40 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 208,900 acre-ft June 7, July 10, elevation, 1,690.93 ft; minimum contents, 65,180 acre-ft Jan. 8, elevation, 1,534.00 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1573.70	1550.27	1555.04	1539.20	1600.40	1615.12	1655.79	1682.58	1690.14	1690.67	1679.93	1648.58
2	1572.27	1550.06	1557.54	1537.84	1611.19	1616.27	1656.44	1684.65	1690.34	1690.67	1678.99	1647.13
3	1570.84	1549.51	1558.19	1536.33	1610.65	1617.37	1657.10	1684.89	1690.48	1690.66	1678.00	1645.65
4	1569.39	1549.65	1557.82	1534.67	1605.44	1618.52	1657.82	1684.79	1690.63	1690.63	1676.99	1644.18
5	1567.95	1549.78	1556.91	1534.12	1599.11	1619.42	1658.79	1684.76	1690.76	1690.58	1675.97	1643.03
6	1566.51	1549.77	1555.74	1534.13	1592.95	1620.22	1659.99	1684.80	1690.80	1690.59	1674.94	1642.05
7	1565.05	1549.54	1554.32	1534.05	1588.34	1620.98	1661.76	1684.82	1690.91	1690.49	1673.99	1641.05
8	1563.60	1549.09	1552.64	1534.05	1585.50	1621.75	1663.70	1685.15	1690.75	1690.51	1672.98	1640.06
9	1562.13	1549.36	1550.83	1534.40	1583.29	1622.84	1665.27	1685.82	1690.55	1690.86	1671.92	1639.06
10	1560.66	1549.43	1548.95	1534.68	1582.28	1624.22	1666.55	1686.60	1690.52	1690.52	1670.88	1638.06
11	1559.17	1549.15	1547.05	1535.03	1581.99	1625.59	---	1687.84	1690.54	1690.06	1669.83	1637.04
12	1557.63	1548.82	1545.11	1535.56	1581.65	1626.97	1669.00	1688.21	1690.47	1690.00	1668.74	1636.02
13	1556.09	1548.35	1543.06	1547.59	1581.11	1628.50	1670.93	1688.00	1690.43	1690.02	1667.63	1634.99
14	1555.46	1547.79	1541.00	1564.82	1580.36	1630.36	1672.14	1687.88	1690.47	1690.01	1666.51	1633.95
15	1555.15	1547.17	1538.99	1571.91	1579.48	1632.59	1672.92	1688.07	1690.38	1689.98	1665.39	1632.92
16	1554.66	1546.90	1537.76	1575.04	1578.44	1634.45	1673.39	1688.40	1689.95	1689.93	1664.30	1631.89
17	1554.11	1546.44	1538.25	1576.81	1581.71	1636.07	1673.72	1688.58	1689.82	1689.86	1663.34	1630.84
18	1553.55	1545.78	1539.79	---	1588.11	1638.49	1673.91	1688.79	1690.14	1689.77	1662.24	1629.78
19	1552.97	1545.33	1540.50	1579.44	1592.31	1641.06	1674.04	1689.14	1690.41	1689.82	1661.09	1628.71
20	1552.39	1545.94	1540.92	1579.16	1595.71	---	1674.33	1689.60	---	1689.59	1659.92	1627.65
21	1551.95	1545.98	1540.97	1576.93	1598.07	---	1674.94	1690.04	---	1688.91	1658.74	1626.55
22	1551.42	1545.68	1540.82	1574.33	1600.81	1647.06	1675.84	1690.15	---	1688.18	1658.05	1625.45
23	1550.86	1545.60	1540.56	1572.09	1603.61	1648.40	1676.78	1690.12	---	1687.43	1657.71	1624.35
24	1550.31	1545.94	1540.20	1570.14	1606.14	1649.51	1677.83	1690.12	---	1686.66	1657.40	1623.28
25	1549.74	1546.84	1539.56	1568.62	1608.44	1650.35	1678.67	1690.07	---	1685.87	1657.12	1622.34
26	1549.18	1547.23	1539.22	1567.74	1610.44	1651.08	1678.97	1690.08	1690.31	1685.07	1656.59	1621.31
27	1550.46	1547.49	1540.37	1566.84	1612.20	1651.90	1679.34	1690.12	1690.46	1684.26	1655.46	1620.34
28	---	1546.55	1541.35	1566.61	1613.79	1652.75	1679.76	1690.12	1690.55	1683.42	1654.14	1619.54
29	1551.49	1545.64	1541.54	1567.26	---	1653.55	1680.20	1690.11	1690.61	1682.57	1652.78	1618.80
30	1550.75	1548.70	1541.14	1570.40	---	1654.31	1680.95	1690.07	1690.64	1681.71	1651.39	1617.91
31	1550.06	---	1540.32	1582.57	---	1655.05	---	1690.03	---	1680.82	1649.99	---
MAX	---	1550.27	1558.19	---	1613.79	---	---	1690.15	---	1690.86	1679.93	1648.58
MIN	---	1545.33	1537.76	---	1578.44	---	---	1682.58	---	1680.82	1649.99	1617.91
(†)	75980	75030	69330	100300	127000	167700	196800	207800	208600	196700	162300	130700
(‡)	-18390	-950	-5700	+30970	+26700	+40700	+29100	+11000	+800	-11900	-34400	-31600

CAL YR 1994 MAX --- MIN --- AC-FT† +3740

WTR YR 1995 MAX --- MIN --- AC-FT‡ +36330

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

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

207

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR

LOCATION.--Lat 44°08'10", long 122°14'50", in NE 1/4 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 sea level (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.--Records good except for flows below 300 ft³/s, which are fair. Discharges for periods Oct. 1 to Dec. 15 and Dec. 17 to Feb. 8 computed from data obtained through U.S. Army Corps of Engineers Columbia River Operational Hydromet System (CROHMS) database. Flow regulated since 1963 by Cougar Lake (station 14159400), usable capacity, 165,000 acre-ft. No diversion upstream from station.

AVERAGE DISCHARGE.--48 years (water years 1948-95), 839 ft³/s, 54.78 in/yr, 607,900 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, 5,260 ft³/s Feb. 3, gage height, 4.88 ft; minimum discharge, 239 ft³/s Mar. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	706	592	1180	1140	329	311	307	457	535	424	804	968
2	705	584	1190	1140	1280	310	305	1150	464	427	834	979
3	710	584	1190	1140	3770	315	306	1790	466	428	851	983
4	708	584	1190	1130	5010	316	305	1910	466	425	858	981
5	703	584	1200	772	4970	316	306	1800	599	427	864	813
6	702	584	1200	585	4450	316	307	1620	659	425	864	722
7	700	584	1190	588	3460	316	306	1510	730	476	862	726
8	699	584	1190	584	2490	317	304	1180	797	437	873	731
9	700	586	1180	755	2030	316	306	903	754	447	877	723
10	701	590	1180	1040	1450	316	405	899	626	774	879	728
11	702	590	1170	1050	1110	314	472	906	596	782	878	729
12	712	589	1170	1040	1110	316	472	1350	599	495	883	729
13	706	584	1160	740	1090	318	717	1500	565	416	887	728
14	541	586	1150	324	1070	315	864	1290	598	413	890	726
15	407	580	1150	848	1070	313	855	994	827	416	883	727
16	400	578	1140	1150	1080	316	855	890	915	415	886	726
17	404	578	1140	1140	861	316	855	891	747	418	893	728
18	406	578	1140	1140	732	316	871	893	667	414	882	729
19	407	578	1150	1140	1060	316	868	729	844	414	893	728
20	404	584	1150	1460	1040	388	865	636	915	622	893	720
21	404	580	1150	2020	1030	463	620	636	920	787	893	728
22	407	582	1150	2020	590	466	455	800	835	789	640	735
23	404	584	1140	1800	315	466	451	831	734	789	452	727
24	404	586	1140	1620	312	466	450	811	661	789	427	722
25	402	590	1140	1420	310	472	560	798	618	790	413	721
26	402	588	1140	1160	307	468	818	720	511	790	533	728
27	479	584	1140	1170	311	371	864	684	431	790	834	726
28	597	915	1140	1170	312	316	893	684	435	797	944	728
29	600	1150	1140	1170	---	316	901	680	434	797	968	730
30	603	1160	1150	1170	---	311	721	681	429	795	969	729
31	603	---	1150	741	---	307	---	650	---	801	970	---
TOTAL	17428	19000	35990	34367	42949	10799	17584	31273	19377	18209	25477	22898
MEAN	562	633	1161	1109	1534	348	586	1009	646	587	822	763
MAX	712	1160	1200	2020	5010	472	901	1910	920	801	970	983
MIN	400	578	1140	324	307	307	304	457	429	413	413	720
AC-FT	34570	37690	71390	68170	85190	21420	34880	62030	38430	36120	50530	45420
MEAN†	263	618	1068	1612	2015	1010	1076	1187	659	394	262	232
CFSM†	1.26	2.97	5.14	7.75	9.69	4.86	5.17	5.71	3.17	1.89	1.26	1.12
IN.†	1.46	3.31	5.92	8.94	10.09	5.60	5.77	6.58	3.54	2.18	1.45	1.25
AC-FT†	16180	36740	65690	99140	111900	62120	63980	73030	39230	24220	16130	13820

CAL YR 1994 TOTAL 208746 MEAN 572 MAX 1200 MIN 244 AC-FT 414000 MEAN† 577 CFSM† 2.77 IN.† 37.65 AC-FT† 417700
WTR YR 1995 TOTAL 295351 MEAN 809 MAX 5010 MIN 304 AC-FT 585800 MEAN† 859 CFSM† 4.13 IN.† 56.08 AC-FT† 622100

e Estimated

† 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 TEMPERATURE: July 1955 to current year.

INSTRUMENTATION.--Temperature recorder since July 1955.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 20.0°C July 28, 1958; minimum, 0.5°C Jan. 20-23, 1962.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.5°C several days in October; minimum recorded, 4.5°C Dec. 5, 6, but may have been lower during period of missing record Dec. 7 to Feb. 22.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

WILLAMETTE RIVER BASIN

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

LOCATION.--Lat 44°13'05", long 122°15'50", in SE 1/4 NE 1/4 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.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,386.90 ft above sea level (Corps of Engineers bench mark).

REMARKS.--Records fair. No regulation or diversion upstream from station. Continuous water-quality records for the period September 1963 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--32 years (water years 1964-95), 246 ft³/s, 73.05 in/yr, 178,400 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 daily discharge, 6.0 ft³/s Oct. 27-29, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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. 30	2330	2,520	7.46	Jan. 31	0400	2,030	6.94
Jan. 13	2000	*3,840	*8.58	Feb. 17	1700	2,350	7.29

Minimum discharge, 8.8 ft³/s Oct. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	694	1690	254	e3200	203	185	445	77	65	e26	18
2	11	285	874	218	e1800	184	174	1140	74	61	e25	17
3	10	188	530	196	945	174	168	695	70	59	24	17
4	10	216	358	176	723	180	173	522	67	57	23	17
5	9.2	207	281	162	589	168	187	436	89	53	22	16
6	9.4	212	239	153	478	155	209	391	114	56	22	17
7	9.6	197	210	153	398	148	344	348	166	53	e25	16
8	9.6	164	178	192	331	171	422	306	117	e55	e24	16
9	9.6	460	164	743	285	377	386	278	97	70	e23	16
10	9.6	332	153	776	252	454	349	263	89	62	e23	15
11	9.6	222	143	745	238	398	368	353	85	52	e23	15
12	9.6	190	143	859	249	340	521	369	76	49	e22	15
13	9.0	171	140	2480	222	403	949	329	73	45	e22	14
14	40	154	130	2620	197	518	648	281	92	43	e21	14
15	e54	144	131	1240	184	e620	488	248	142	41	20	14
16	24	161	438	762	177	449	393	225	117	39	20	14
17	17	147	1190	532	e1500	350	339	205	107	37	55	14
18	14	123	956	477	e2000	470	309	187	133	35	40	14
19	13	124	681	519	e1300	516	281	169	196	37	29	14
20	12	261	590	439	e950	e660	290	159	218	43	25	13
21	e28	196	491	373	e700	563	291	150	185	36	23	13
22	21	157	456	324	e550	433	302	140	154	33	21	12
23	16	163	420	291	e430	347	311	131	131	32	21	12
24	14	237	394	268	364	301	328	124	115	31	20	12
25	13	368	353	250	321	262	313	117	103	30	20	20
26	26	266	626	263	281	236	283	109	93	29	19	21
27	852	217	1120	289	252	221	293	103	84	29	19	64
28	549	192	795	451	226	213	309	96	77	28	18	89
29	196	359	532	647	---	206	317	91	72	e28	20	135
30	119	1370	379	1120	---	197	326	86	68	e27	19	102
31	304	---	304	e2700	---	191	---	82	---	e27	18	---
TOTAL	2440.2	8177	15089	20672	19142	10108	10256	8578	3281	1342	732	786
MEAN	78.7	273	487	667	684	326	342	277	109	43.3	23.6	26.2
MAX	852	1370	1690	2700	3200	660	949	1140	218	70	55	135
MIN	9.0	123	130	153	177	148	168	82	67	27	18	12
AC-FT	4840	16220	29930	41000	37970	20050	20340	17010	6510	2660	1450	1560
CFSM	1.72	5.95	10.6	14.6	14.9	7.12	7.46	6.04	2.39	.95	.52	.57
IN.	1.98	6.64	12.26	16.79	15.55	8.21	8.33	6.97	2.66	1.09	.59	.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995		
MEAN	65.1	323	482	487	422	377	347	250	125	39.4	21.4	25.8																						
MAX	180	731	1471	1033	934	995	597	521	320	90.9	51.9	82.2																						
(WY)	1969	1974	1965	1970	1986	1972	1993	1971	1974	1983	1968	1978																						
MIN	6.42	21.0	33.0	48.3	65.0	84.6	147	70.7	27.3	17.7	9.51	8.62																						
(WY)	1988	1994	1977	1977	1992	1968	1992	1992	1992	1992	1992	1987																						

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1964 - 1995			
ANNUAL TOTAL	69552.8				100603.2				246			
ANNUAL MEAN	191				276				404			
HIGHEST ANNUAL MEAN									106			
LOWEST ANNUAL MEAN									10000			
HIGHEST DAILY MEAN	1690				3200				10000			
LOWEST DAILY MEAN	8.4				9.0				6.0			
ANNUAL SEVEN-DAY MINIMUM	8.9				9.5				6.1			
ANNUAL RUNOFF (AC-FT)	138000				199500				178400			
ANNUAL RUNOFF (CFSM)	4.16				6.02				5.38			
ANNUAL RUNOFF (INCHES)	56.49				81.71				73.05			
10 PERCENT EXCEEDS	526				622				562			
50 PERCENT EXCEEDS	102				171				138			
90 PERCENT EXCEEDS	11				16				16			

e Estimated

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, 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 above sea level (Corps of Engineers bench mark).

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station. Continuous water-quality records for the period August 1950 to September 1955 and September 1963 to September 1981 have been collected at this location.

AVERAGE DISCHARGE.--38 years (water years 1950-55, 1964-95), 120 ft³/s, 67.82 in/yr, 87,150 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 discharge, 4.8 ft³/s Sept. 16, 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Nov. 30	2400	1,020	5.05	Feb. 1	1500	1,460	5.63
Jan. 13	2030	*1,770	*5.98	Feb. 17	2200	1,100	5.17

Minimum discharge, 8.0 ft³/s several days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	222	760	e153	1260	105	79	165	44	35	16	12
2	8.8	122	459	e129	836	95	74	291	42	33	15	12
3	8.3	84	320	e113	490	89	72	254	40	32	15	12
4	8.1	107	e236	e100	369	90	74	254	38	30	15	12
5	8.2	109	e183	92	304	84	83	235	49	29	15	12
6	8.2	111	148	89	254	77	91	220	54	32	15	12
7	8.2	101	123	93	217	72	138	199	59	29	17	12
8	8.2	83	104	96	181	77	171	176	50	30	16	12
9	8.0	176	94	182	152	106	173	159	44	46	15	11
10	8.0	150	85	231	131	118	156	155	42	38	15	11
11	8.0	109	82	252	121	118	155	213	43	32	15	11
12	8.0	94	81	301	120	114	186	213	38	29	14	11
13	8.0	83	76	999	110	133	292	188	37	27	14	11
14	16	74	71	1140	98	166	260	163	47	26	14	11
15	20	68	74	605	92	216	229	145	69	25	14	11
16	12	72	196	398	88	188	194	131	56	24	14	11
17	10	68	447	297	552	160	167	118	53	22	33	11
18	9.2	58	402	271	764	199	148	106	68	22	21	11
19	8.8	61	326	273	538	208	132	97	87	21	17	10
20	8.6	155	278	239	425	237	142	91	93	24	15	10
21	11	117	243	203	332	228	137	85	85	21	14	9.9
22	10	92	222	175	267	197	131	79	74	20	14	9.8
23	9.2	93	207	153	226	166	128	75	65	19	14	9.8
24	8.8	128	197	138	201	144	133	71	59	19	13	9.8
25	8.6	183	179	126	174	125	130	66	53	18	13	13
26	13	147	255	125	151	112	122	62	49	18	13	13
27	240	125	445	134	134	102	135	58	45	18	13	19
28	178	114	367	186	117	95	142	54	41	17	13	27
29	77	183	287	245	---	89	139	52	39	17	13	36
30	48	537	e229	408	---	84	137	49	36	16	13	26
31	77	---	e185	1080	---	81	---	46	---	16	12	---
TOTAL	872.4	3826	7361	9026	8704	4075	4350	4270	1599	785	470	399.3
MEAN	28.1	128	237	291	311	131	145	138	53.3	25.3	15.2	13.3
MAX	240	537	760	1140	1260	237	292	291	93	46	33	36
MIN	8.0	58	71	89	88	72	72	46	36	16	12	9.8
AC-FT	1730	7590	14600	17900	17260	8080	8630	8470	3170	1560	932	792
CFSM	1.17	5.29	9.85	12.1	12.9	5.45	6.02	5.72	2.21	1.05	.63	.55
IN.	1.35	5.91	11.36	13.93	13.44	6.29	6.71	6.59	2.47	1.21	.73	.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1995, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
35.9	144	222	236	210	171
179	322	794	591	449	420
1951	1978	1965	1953	1986	1972
5.46	9.36	19.9	25.1	27.0	48.2
1988	1994	1977	1977	1977	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1950 - 1995

ANNUAL TOTAL	34325.4	45737.7	120
ANNUAL MEAN	94.0	125	182
HIGHEST ANNUAL MEAN			1972
LOWEST ANNUAL MEAN			49.2
HIGHEST DAILY MEAN	760	1260	4890
LOWEST DAILY MEAN	8.0	8.0	5.1
ANNUAL SEVEN-DAY MINIMUM	8.1	8.1	5.2
ANNUAL RUNOFF (AC-FT)	68080	90720	87150
ANNUAL RUNOFF (CFSM)	3.90	5.20	4.99
ANNUAL RUNOFF (INCHES)	52.98	70.60	67.82
10 PERCENT EXCEEDS	239	254	270
50 PERCENT EXCEEDS	56	84	73
90 PERCENT EXCEEDS	9.6	11	12

e Estimated

WILLAMETTE RIVER BASIN

14162100 BLUE RIVER LAKE NEAR BLUE RIVER, OR

LOCATION.--Lat 44°10'20", long 122°19'40", in SE 1/4 SE 1/4 sec.16, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, in intake tower near left end of Blue River Dam on Blue River, 1.4 mi north of town of Blue River, and at mile 1.7.

DRAINAGE AREA.--87.3 mi².

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

REVISED RECORDS.--WDR OR-92-1: 1975-77.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1968 by Corps of Engineers; storage began October 1968. Total capacity is 89,520 acre-ft 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. Additional data for the period Oct. 1 to Jan. 3 available in the files of the Portland Field Office. Data for Dec. 31 furnished by Corps of Engineers.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 86,260 acre-ft Apr. 28, 1990, elevation, 1,353.63 ft; minimum contents observed since first filling in 1968, 305 acre-ft Dec. 7, 1973, elevation, 1,125.47 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents recorded, 84,390 acre-ft May 22, elevation, 1,351.66 ft; minimum contents recorded, 3,690 acre-ft Jan. 11, elevation, 1,177.81 ft, but may have been less during period Oct. 1 to Jan. 3.

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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	1272.84	1287.19	1323.13	1345.96	1350.41	1350.40	1349.65	1325.23
2	---	---	---	---	1282.32	1288.08	1323.65	1347.60	1350.32	1350.32	1349.62	1323.97
3	---	---	---	---	1279.26	1288.92	1324.17	1346.87	1350.20	1350.25	1349.59	1322.69
4	---	---	---	1181.74	1271.86	1289.88	1324.75	1346.54	1350.10	1350.16	1349.57	1321.42
5	---	---	---	1181.83	1262.27	1290.71	1325.41	1346.64	1350.17	1350.04	1349.53	1320.14
6	---	---	---	1181.96	1254.89	1291.43	1326.15	1346.85	1350.33	1350.07	1349.51	1318.86
7	---	---	---	1182.31	1252.77	1292.11	1327.58	1347.03	1350.61	1350.10	1349.30	1317.57
8	---	---	---	1183.57	1252.97	1292.94	1329.37	1347.26	1350.68	1350.13	1348.93	1316.26
9	---	---	---	1187.42	1253.90	1294.72	1331.11	1347.40	1350.68	1350.14	1348.54	1314.95
10	---	---	---	1180.94	1255.45	1296.79	1331.86	1347.59	1350.66	1350.00	1348.15	1313.62
11	---	---	---	1185.79	1257.33	1298.59	1332.06	1348.04	1350.61	1350.03	1347.78	1312.30
12	---	---	---	1190.03	1259.38	1300.15	1332.73	1348.05	1350.51	1350.11	1347.38	1310.96
13	---	---	---	1232.44	1261.09	1302.00	1333.45	1347.87	1350.44	1350.17	1346.98	1309.61
14	---	---	---	1262.25	1262.49	1304.39	1333.28	1347.83	1350.51	1350.22	1346.15	1308.24
15	---	---	---	1265.93	1261.40	1307.27	1333.38	1348.00	1350.73	1350.27	1345.03	1306.87
16	---	---	---	1257.83	1253.44	1309.41	1333.49	1348.62	1350.82	1350.31	1343.94	1305.49
17	---	---	---	1247.05	1257.61	1311.03	1333.68	1349.34	1350.90	1350.34	1343.08	1304.10
18	---	---	---	1237.06	1267.50	1313.21	1334.12	1349.97	1351.10	1350.38	1342.03	1302.70
19	---	---	---	1231.74	1267.68	1315.52	1335.03	1350.52	1351.00	1350.36	1340.92	1301.20
20	---	---	---	1227.25	1269.05	1318.33	1336.26	1351.03	1350.22	1350.30	1339.82	1299.66
21	---	---	---	1222.16	1271.03	1319.18	1337.42	1351.50	1349.95	1350.21	1338.69	1298.09
22	---	---	---	1218.24	1274.52	1319.05	1338.54	1351.39	1349.99	1350.13	1337.51	1296.51
23	---	---	---	1217.41	1277.39	1318.89	1339.67	1350.92	1349.92	1350.02	1336.32	1294.93
24	---	---	---	1217.89	1279.81	1318.87	1340.49	1350.76	1349.87	1349.92	1335.11	1293.34
25	---	---	---	1217.94	1281.82	1319.00	1341.13	1350.71	1349.82	1349.81	1333.88	1291.80
26	---	---	---	1218.21	1283.51	1319.17	1341.70	1350.64	1349.95	1349.75	1332.67	1290.24
27	---	---	---	1218.93	1284.94	1319.70	1342.41	1350.62	1350.17	1349.76	1331.44	1288.88
28	---	---	---	1217.55	1286.15	1320.48	1343.15	1350.62	1350.36	1349.73	1330.21	1287.72
29	---	---	---	1209.35	---	1321.20	1343.92	1350.60	1350.46	1349.71	1328.98	1286.86
30	---	1215.91	---	1206.58	---	1321.89	1344.70	1350.56	1350.46	1349.69	1327.75	1285.68
31	1217.50	---	1182.12	1245.40	---	1322.53	---	1350.49	---	1349.67	1326.49	---
MAX	---	---	---	---	1286.15	1322.53	1344.70	1351.50	1351.10	1350.40	1349.65	1325.23
MIN	---	---	---	---	1252.77	1287.19	1323.13	1345.96	1349.82	1349.67	1326.49	1285.68
(†)	10480	10130	4260	17790	34790	59190	77920	83280	83250	82510	62330	34540
(‡)	-2960	-350	-5870	+13530	+17000	+24400	+18730	+5360	-30	+740	-20180	-27790

CAL YR AC-FT: -1760
WTR YR AC-FT: +21100

† 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 NW 1/4 SE 1/4 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 above sea level (Corps of Engineers bench mark). Prior to Aug. 25, 1966, nonrecording gage at datum 0.80 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since October 1968 by Blue River Lake (station 14162100). No diversion upstream from station. Discharge not adjusted for storage or release from Blue River Lake as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--29 years (water years 1967-95), 445 ft³/s, 322,000 acre-ft/yr, unadjusted.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,040 ft³/s Jan. 15, gage height, 7.64 ft; minimum discharge, 41 ft³/s June 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	363	1540	441	74	67	71	236	159	147	57	513
2	124	572	2380	442	1000	68	71	1090	159	147	57	513
3	123	713	2260	438	2400	69	68	1440	159	147	57	509
4	122	720	2040	344	2870	69	66	1050	159	147	57	509
5	122	707	1050	303	2930	70	66	744	159	147	57	506
6	128	688	557	303	2200	63	66	631	159	111	57	505
7	132	710	548	303	1080	56	68	569	161	92	155	504
8	131	738	449	305	546	56	69	471	161	92	215	500
9	130	610	312	879	328	56	70	466	161	177	215	497
10	129	544	312	1510	142	57	336	411	161	175	215	497
11	128	539	312	968	65	57	555	508	161	88	215	494
12	127	526	314	1150	66	57	595	730	161	57	215	493
13	126	512	313	971	67	58	1190	705	161	57	215	490
14	126	497	311	71	67	59	1160	540	161	57	391	490
15	126	383	309	1540	521	61	810	378	163	57	513	488
16	124	193	322	2970	1750	61	648	144	163	57	511	486
17	124	354	779	2910	1950	60	542	56	163	57	510	485
18	122	453	1060	2520	1410	61	369	56	163	57	509	482
19	122	252	1670	1690	2080	62	142	55	423	92	509	503
20	121	250	1870	1340	1270	63	64	54	727	109	509	509
21	120	517	1710	1210	709	608	70	54	458	109	505	507
22	119	572	850	958	97	774	70	283	272	109	519	505
23	117	361	633	600	62	647	70	429	272	109	525	504
24	116	284	736	431	66	525	203	281	238	109	522	501
25	128	725	730	432	67	403	257	214	215	109	521	498
26	104	768	823	432	67	339	232	213	109	85	521	495
27	157	557	1660	432	67	180	232	176	49	52	518	493
28	363	419	1930	891	67	71	233	161	49	61	517	490
29	448	450	1210	1740	---	71	235	161	86	61	517	490
30	441	653	895	1980	---	71	235	160	130	57	516	488
31	383	---	578	973	---	71	---	159	---	57	513	---
TOTAL	5007	15630	30463	31477	24018	4990	8863	12625	5922	2988	10933	14944
MEAN	162	521	983	1015	858	161	295	407	197	96.4	353	498
MAX	448	768	2380	2970	2930	774	1190	1440	727	177	525	513
MIN	104	193	309	71	62	56	64	54	49	52	57	482
AC-FT	9930	31000	60420	62430	47640	9900	17580	25040	11750	5930	21690	29640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	252	624	919	806	448	381	326	335	246	321	433	234
MAX	611	1459	2189	1371	1351	1766	853	676	549	626	765	536
(WY)	1985	1974	1978	1972	1968	1972	1993	1971	1984	1979	1971	1972
MIN	45.7	39.4	63.1	68.1	32.6	12.0	12.0	35.0	63.9	46.6	26.6	27.1
(WY)	1993	1988	1977	1977	1977	1977	1977	1973	1973	1967	1967	1967

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1967 - 1995

ANNUAL TOTAL	129194	167860										
ANNUAL MEAN	354	460										
HIGHEST ANNUAL MEAN										445		
LOWEST ANNUAL MEAN										727		1972
HIGHEST DAILY MEAN	2410					2970		Jan 16		192		1977
LOWEST DAILY MEAN	36			Jan 29		49		Jun 27		3.7		Feb 23 1968
ANNUAL SEVEN-DAY MINIMUM	43			Jan 29		57		Mar 7		7.0		Oct 8 1968
ANNUAL RUNOFF (AC-FT)	256300					333000						Oct 5 1968
10 PERCENT EXCEEDS	740					1050				950		
50 PERCENT EXCEEDS	171					309				288		
90 PERCENT EXCEEDS	51					61				51		

WILLAMETTE RIVER BASIN
14162200 BLUE RIVER AT BLUE RIVER, OR--Continued
WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1966 to current year.

INSTRUMENTATION.--Temperature recorder since August 1966.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.0°C July 6, 1968; minimum, 0.0°C Jan. 5-9, 1974, Dec. 23, 24, 1983.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.0°C Oct. 1-3; minimum, 3.5°C Jan. 3-7.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	19.0	18.5	19.0	9.5	8.5	9.5	6.5	6.0	6.0	4.5	4.0	4.0
2	19.0	18.5	18.5	8.5	8.5	8.5	6.5	6.5	6.5	4.0	4.0	4.0
3	19.0	18.5	18.5	8.5	8.0	8.0	7.0	6.5	6.5	4.0	3.5	3.5
4	18.5	18.0	18.0	8.0	8.0	8.0	6.5	5.5	6.0	3.5	3.5	3.5
5	18.0	17.5	17.5	8.0	7.0	7.5	5.5	4.5	5.0	3.5	3.5	3.5
6	17.5	17.0	17.5	7.5	7.0	7.0	4.5	4.0	4.5	3.5	3.5	3.5
7	18.0	17.0	17.0	7.5	7.0	7.5	4.5	4.0	4.5	4.0	3.5	4.0
8	17.5	17.0	17.0	7.0	7.0	7.0	4.5	4.0	4.5	5.0	4.0	4.5
9	17.5	17.0	17.0	7.0	7.0	7.0	4.5	4.0	4.5	6.0	5.0	5.5
10	17.0	16.5	17.0	7.0	6.0	6.5	4.5	4.0	4.5	6.5	6.0	6.5
11	17.0	16.5	16.5	6.5	5.5	6.5	4.5	4.0	4.5	6.5	6.5	6.5
12	16.5	16.5	16.5	6.5	5.0	6.0	5.0	4.0	4.5	6.5	6.0	6.5
13	16.5	16.0	16.5	6.5	6.0	6.0	5.0	4.0	4.5	7.5	6.0	7.0
14	16.0	16.0	16.0	6.5	6.0	6.0	4.5	4.0	4.5	8.0	5.5	7.5
15	16.0	14.0	15.0	6.5	5.5	6.0	5.0	4.5	4.5	7.0	6.5	6.5
16	14.5	14.0	14.0	5.5	5.5	5.5	6.0	4.5	5.5	7.0	6.5	6.5
17	14.5	14.0	14.0	5.5	4.5	5.0	6.5	5.5	6.0	6.5	6.0	6.5
18	14.5	14.5	14.5	5.0	4.5	4.5	7.0	5.5	6.5	6.5	6.0	6.0
19	14.5	14.0	14.5	4.5	4.0	4.0	7.5	6.0	7.0	6.5	6.0	6.0
20	14.5	14.5	14.5	5.0	4.0	4.5	7.5	7.0	7.0	6.0	5.5	6.0
21	14.5	14.5	14.5	4.5	4.0	4.5	8.0	7.0	7.0	6.0	5.5	6.0
22	14.5	14.0	14.5	4.5	4.0	4.0	7.5	6.5	7.0	6.0	5.5	5.5
23	14.5	14.0	14.0	4.5	4.0	4.5	7.5	5.5	6.5	6.0	5.5	5.5
24	14.5	13.5	14.0	4.5	4.0	4.5	7.0	6.0	6.5	6.0	5.5	5.5
25	14.5	13.5	14.0	4.5	4.0	4.5	7.0	6.0	7.0	5.5	5.5	5.5
26	14.0	13.5	14.0	5.0	4.5	5.0	7.5	7.0	7.0	5.5	5.5	5.5
27	13.5	12.0	13.0	5.5	5.0	5.0	8.0	7.0	7.5	5.5	5.5	5.5
28	12.0	10.5	11.0	5.0	5.0	5.0	8.0	7.0	7.5	6.0	5.5	5.5
29	10.5	10.0	10.0	6.0	5.0	5.0	7.0	5.5	6.5	6.0	6.0	6.0
30	10.0	10.0	10.0	6.0	5.5	6.0	6.0	4.5	5.5	7.0	6.0	6.5
31	10.0	9.5	10.0	---	---	---	5.0	4.5	4.5	8.0	7.0	7.5
MONTH	19.0	9.5	15.0	9.5	4.0	6.0	8.0	4.0	6.0	8.0	3.5	5.5

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.5	7.5	8.0	6.5	5.5	6.0	6.5	6.0	6.5	6.5	6.5	6.5
2	8.0	7.5	7.5	6.0	5.5	6.0	7.0	6.0	6.5	6.5	6.5	6.5
3	8.0	7.0	7.5	6.0	5.5	6.0	7.0	6.0	6.5	7.0	5.5	6.5
4	7.5	5.5	7.5	6.0	6.0	6.0	6.5	5.5	6.5	6.5	6.5	6.5
5	7.5	7.0	7.0	6.5	6.0	6.0	7.5	6.5	6.5	6.5	6.5	6.5
6	7.5	7.0	7.0	6.5	6.0	6.0	7.0	6.5	6.5	6.5	6.5	6.5
7	7.5	6.0	7.0	7.0	5.5	6.0	6.5	6.0	6.5	7.5	6.5	7.0
8	7.0	6.5	7.0	6.5	6.0	6.0	7.0	6.5	6.5	7.0	7.0	7.0
9	8.0	6.0	7.0	6.5	6.0	6.5	7.5	6.5	7.0	7.0	6.0	7.0
10	7.5	6.5	7.0	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0
11	7.0	6.0	6.5	7.0	5.5	6.5	6.5	6.5	6.5	7.0	5.5	7.0
12	6.5	6.0	6.5	6.5	5.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0
13	6.5	6.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0
14	7.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	8.0	7.0	7.0
15	6.5	6.5	6.5	7.5	6.5	7.0	6.5	6.5	6.5	7.5	5.5	7.0
16	6.5	6.5	6.5	7.5	6.0	6.5	6.5	6.5	6.5	7.5	6.5	7.0
17	7.0	5.5	6.5	7.5	6.0	6.5	6.5	6.5	6.5	8.0	7.0	7.5
18	7.0	6.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5	8.5	6.0	7.5
19	6.5	6.0	6.0	7.0	5.5	6.5	7.0	6.0	6.5	8.5	6.0	7.5
20	6.5	6.0	6.0	7.0	6.5	6.5	7.0	6.5	7.0	8.5	6.0	7.5
21	6.5	6.0	6.0	7.0	5.5	6.0	7.5	7.0	7.0	8.5	4.5	7.5
22	7.0	5.5	6.0	6.0	6.0	6.0	8.0	6.0	7.0	7.5	4.5	7.5
23	6.5	6.0	6.0	6.0	5.5	6.0	7.5	6.5	7.0	7.5	5.5	7.0
24	6.5	6.0	6.0	6.5	6.0	6.0	7.0	5.5	6.5	7.5	7.0	7.5
25	6.5	6.0	6.0	6.5	6.0	6.0	7.5	5.5	6.5	7.5	7.0	7.5
26	6.0	5.5	6.0	6.5	6.0	6.0	6.5	6.5	6.5	7.5	7.5	7.5
27	6.5	6.0	6.0	7.0	5.0	6.0	6.5	6.5	6.5	8.0	7.5	7.5
28	6.5	5.5	6.0	7.5	5.5	6.5	6.5	6.5	6.5	8.0	7.5	7.5
29	---	---	---	7.0	6.0	6.5	7.0	5.5	6.5	8.0	7.5	7.5
30	---	---	---	7.0	6.0	6.5	7.0	6.5	6.5	8.0	7.5	7.5
31	---	---	---	6.5	5.5	6.5	---	---	---	8.0	7.5	7.5
MONTH	8.5	5.5	6.5	7.5	5.0	6.5	8.0	5.5	6.5	8.5	4.5	7.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	8.0	7.5	7.5	8.5	7.0	8.5	10.0	8.5	9.0	9.5	9.5	9.5
2	8.0	6.5	7.5	8.5	8.0	8.0	10.0	8.5	9.0	9.5	9.5	9.5
3	8.0	7.0	7.5	8.5	8.0	8.5	10.0	8.5	9.0	9.5	9.5	9.5
4	7.5	7.0	7.5	8.5	8.0	8.5	10.0	8.5	9.0	10.		

WILLAMETTE RIVER BASIN

14162500 MCKENZIE RIVER NEAR VIDA, OR

LOCATION.--Lat 44°07'30", long 122°28'10", in NE 1/4 NE 1/4 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.

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 and crest-stage gage. Datum of gage is 855.71 ft above sea level (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.--No estimated daily discharges. Records good. Flow regulated since 1963 by Smith River Reservoir (station 14158795) and Cougar Lake (station 14159400), and since 1968 by Blue River Lake (station 14162100). No diversion upstream from station. All records given herein are for measuring site. Continuous water-quality records for the period June 1961 to September 1985 have been collected at this location.

AVERAGE DISCHARGE.--71 years (water years 1925-95), 3,997 ft³/s, 2,896,000 acre-ft/yr.
27 years (water years 1969-95), 4,028 ft³/s, 2,918,000 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 discharge, 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, 16,100 ft³/s Feb. 1, gage height, 6.41 ft; minimum discharge, 1,600 ft³/s Oct. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1980	3660	9980	4090	13000	3620	3130	4170	3120	2630	2560	2970
2	1950	3310	8800	4010	13200	3510	3020	7370	3000	2580	2560	2980
3	1940	3150	7600	3850	13000	3400	2960	7860	2940	2570	2580	2970
4	1920	3660	6620	3680	13600	3440	2930	7500	2900	2540	2570	2970
5	1920	3690	5290	3340	13100	3390	3020	7140	3140	2530	2570	2830
6	1920	3410	4450	3100	11700	3270	3190	6580	3320	2550	2570	2690
7	1920	3340	4280	3030	9470	3130	3540	6220	3490	2500	2720	2690
8	1930	3220	4010	3000	7610	3090	4090	5580	3410	2510	2780	2690
9	1920	3500	3760	4100	6500	3330	3910	5080	3260	2940	2730	2670
10	1920	3340	3660	5660	5570	3510	3980	5030	3050	3190	2730	2660
11	1930	3080	3640	5230	4880	3490	4310	5570	3010	3000	2760	2660
12	1920	3020	3660	5660	4920	3480	4560	6270	2940	2600	2730	2670
13	1920	2990	3580	10400	4750	3560	6500	6150	2850	2420	2720	2650
14	1920	2900	3500	12700	4460	3830	6460	5480	3020	2370	2860	2620
15	1810	2730	3500	9670	4750	4430	5580	4880	3590	2350	3000	2620
16	1700	2620	4140	9950	5910	4090	5170	4390	3470	2340	3000	2620
17	1670	2890	5930	8970	9080	3810	4870	4180	3290	2310	3190	2620
18	1650	2890	6440	8530	9890	4190	4590	4090	3440	2310	3110	2610
19	1640	2650	6460	7430	9710	4600	4230	3840	4150	2320	3030	2630
20	1620	3620	6410	6810	8140	4760	4360	3660	4550	2590	2990	2630
21	1650	3330	5970	6940	6930	5290	4090	3600	4110	2780	2960	2620
22	1670	3130	5050	6400	5400	5300	3710	3900	3650	2750	2760	2630
23	1650	3020	4610	5650	4580	4920	3620	4130	3450	2700	2490	2620
24	1640	3170	4660	5090	4470	4600	3700	3940	3280	2690	2460	2610
25	1620	4050	4520	4780	4350	4280	3870	3740	3140	2680	2430	2680
26	1630	3870	4750	4360	4040	4050	4060	3620	2900	2650	2490	2680
27	2830	3470	6780	4290	3900	3710	4260	3480	2670	2620	2820	2750
28	4080	3610	6880	4890	3770	3410	4380	3390	2620	2610	2950	2880
29	2900	4300	5730	6230	---	3290	4420	3370	2610	2590	3020	3000
30	2610	6730	5020	7620	---	3210	4380	3360	2640	2580	2990	2830
31	2490	---	4450	11000	---	3170	---	3300	---	2570	2980	---
TOTAL	61870	102350	164130	190460	210680	119160	124890	150870	97010	80370	86110	81750
MEAN	1996	3412	5295	6144	7524	3844	4163	4867	3234	2593	2778	2725
MAX	4080	6730	9980	12700	13600	5300	6500	7860	4550	3190	3190	3000
MIN	1620	2620	3500	3000	3770	3090	2930	3300	2610	2310	2430	2610
AC-FT	122700	203000	325600	377800	417900	236400	247700	299300	192400	159400	170800	162200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	MEAN	2734	4499	5999	5769	4660	4424	4227	4373	3573	2698	2793	2600
MAX	3696	8718	12370	9295	8772	11210	7097	6567	6604	3529	3510	3358	
(WY)	1985	1985	1978	1971	1982	1972	1993	1969	1974	1974	1971	1972	
MIN	1640	1925	1865	1752	1542	2351	2671	2268	2180	2138	1907	2019	
(WY)	1993	1988	1977	1977	1977	1992	1977	1992	1973	1991	1992	1992	

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1969 - 1995			
ANNUAL TOTAL	1110690				1469650							
ANNUAL MEAN	3043				4026				4028			
HIGHEST ANNUAL MEAN									5823			
LOWEST ANNUAL MEAN									2447			
HIGHEST DAILY MEAN	9980				Dec 1				23600			
LOWEST DAILY MEAN	1620				Oct 20				1330			
ANNUAL SEVEN-DAY MINIMUM	1640				Oct 20				1350			
ANNUAL RUNOFF (AC-FT)	2203000				2915000				2918000			
10 PERCENT EXCEEDS	4720				6530				6870			
50 PERCENT EXCEEDS	2670				3400				3190			
90 PERCENT EXCEEDS	1930				2490				2260			

WILLAMETTE RIVER BASIN

217

14163150 MCKENZIE RIVER BELOW LEABURG DAM, NEAR LEABURG, OR

LOCATION.--Lat 44°07'26", long 122°37'35", in NE 1/4 NE 1/4 sec.1, T.17 S., R.1 E., Lane County, Hydrologic Unit 17090004, on right bank 1.4 mi downstream from Leaburg Dam, 3.0 mi northeast of Leaburg, and at mile 37.4.

DRAINAGE AREA.--1,030 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 710 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1963 by Smith River Reservoir (station 14158795) and Cougar Lake (station 14159400), and since 1968 by Blue River Lake (station 14162100). Diversion upstream from station through the Leaburg Power canal. Continuous water temperature records for the period June 1992 to September 1993 have been collected at this location.

AVERAGE DISCHARGE.--6 years (water years 1990-95), 2,089 ft³/s, 1,513,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,300 ft³/s Apr. 27, 1990, gage height, 14.40 ft; minimum discharge, 457 ft³/s Aug. 29, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,700 ft³/s Jan. 13, gage height, 12.46 ft; minimum discharge, 939 ft³/s June 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	2370	11300	2470	13000	1740	1190	2510	1220	1040	1030	1050
2	1090	1560	8580	2360	13900	1610	1080	6150	1100	1020	1140	1040
3	1070	1270	6740	2180	11900	1510	1030	6480	1060	1030	1240	1030
4	1070	2210	5470	1980	12300	1590	1040	5920	1050	1030	1240	1030
5	1060	2240	4050	1630	11600	1550	1230	5520	1170	1030	1240	1020
6	1060	1750	3010	1360	9970	1390	1650	4920	1410	1040	1220	1020
7	1070	1580	2700	1270	7620	1240	1950	4560	1550	1040	1340	1030
8	1080	1380	2390	1240	5770	1210	2530	3890	1480	1040	1410	1020
9	1070	1860	2090	2540	4590	1520	2440	3300	1340	1120	1380	1030
10	1060	1630	1970	4440	3730	1720	2330	3250	1160	1240	1360	1030
11	1070	1240	1970	4000	3000	1660	2670	3860	1080	1120	1150	1040
12	1060	1170	2140	4500	3160	1620	2850	4730	1030	1040	1020	1040
13	1060	1130	1960	11400	2990	1750	4780	4560	1050	1120	1020	1030
14	1160	1150	1850	15800	2650	2090	4950	3810	1110	1120	1030	1020
15	1070	1200	1880	9630	2830	2860	4030	3150	1790	1100	1020	1020
16	1030	1400	2970	9260	3920	2460	3560	2610	1620	1070	1030	1030
17	1020	1190	5150	7950	8310	2040	3160	2370	1410	1120	1130	1030
18	1020	1080	5540	7670	9490	2380	2870	2270	1630	1080	1060	1020
19	1020	1050	5310	6500	8560	2860	2480	2020	2370	1080	1260	1040
20	1020	2760	5160	5680	6720	3110	2720	1820	2740	1300	2060	1040
21	1030	1990	4580	5680	5450	3610	2540	1730	2320	1180	2680	1020
22	1040	1430	3640	5050	3880	3610	2090	1980	1800	1020	2010	1030
23	1030	1380	3060	4230	2920	3150	1920	2210	1560	1020	1210	1020
24	1030	1680	3060	3540	2740	2820	1930	2020	1370	1020	1210	1040
25	1030	2910	2930	3230	2560	2480	2090	1830	1240	1020	1170	1050
26	1040	2520	3200	2770	2250	2220	2220	1690	1080	1020	1190	1050
27	2200	2020	5500	2710	2050	1880	2450	1530	1040	1030	1520	1060
28	3080	2170	5620	3290	1900	1540	2590	1440	1030	1020	1330	1050
29	1110	3000	4430	4720	---	1400	2640	1410	1030	1020	1060	1050
30	1030	6350	3540	6130	---	1300	2660	1350	1040	1030	1040	1030
31	1100	---	2900	10200	---	1250	---	1330	---	1030	1040	---
TOTAL	35990	56670	124690	155410	169760	63170	73670	96220	41880	33190	39840	31010
MEAN	1161	1889	4022	5013	6063	2038	2456	3104	1396	1071	1285	1034
MAX	3080	6350	11300	15800	13900	3610	4950	6480	2740	1300	2680	1060
MIN	1020	1050	1850	1240	1900	1210	1030	1330	1030	1020	1020	1020
AC-FT	71390	112400	247300	308300	336700	125300	146100	190900	83070	65830	79020	61510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	MEAN	870	2089	2952	3282	2591	2531	3038	2767	2018	1048	1029	889
MAX	1161	3840	4455	5013	6063	6149	6042	5410	3393	1151	1285	1051	
(WY)	1995	1992	1992	1995	1995	1993	1993	1993	1993	1992	1995	1994	
MIN	610	741	1269	1380	1329	897	1618	1099	1161	946	907	525	
(WY)	1990	1990	1990	1992	1993	1992	1994	1994	1992	1993	1991	1990	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1990 - 1995

ANNUAL TOTAL	623735	921500											
ANNUAL MEAN	1709	2525											
HIGHEST ANNUAL MEAN													
LOWEST ANNUAL MEAN													
HIGHEST DAILY MEAN	11300	Dec 1	15800	Jan 14	21600	Apr 28	1990						
LOWEST DAILY MEAN	995	Sep 12	1020	Oct 17	478	Dec 29	1989						
ANNUAL SEVEN-DAY MINIMUM	1030	Jul 20	1020	Jul 22	486	Dec 24	1989						
ANNUAL RUNOFF (AC-FT)	1237000		1828000		1513000								
10 PERCENT EXCEEDS	3290		5370		4570								
50 PERCENT EXCEEDS	1070		1620		1150								
90 PERCENT EXCEEDS	1030		1030		810								

WILLAMETTE RIVER BASIN

14163900 MCKENZIE RIVER NEAR WALTERVILLE, OR

LOCATION.--Lat 44°04'13", long 122°46'12", in NW 1/4 NE 1/4 sec.26, T.17 S., R.1 W., Lane County, Hydrologic Unit 17090004, on right bank 0.8 mi downstream from Walterville Power Canal Diversion, 1.7 mi east of Walterville, and at mile 27.7.

DRAINAGE AREA.--1,081 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 600 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1963 by Smith River Reservoir (station 14158795) and Cougar Lake (station 14159400), and since 1968 by Blue River Lake (station 14162100). Diversion upstream from station through the Walterville Power Canal. Continuous water-quality records for period June 1992 to September 1993 have been collected at this location.

AVERAGE DISCHARGE.--6 years (water years 1990-95), 2,293 ft³/s, 1,556,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,600 ft³/s Apr. 28, 1990, gage height, 11.68 ft; minimum discharge, 420 ft³/s Nov. 8, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge not determined, but probably occurred Jan. 13, 14 during period of no record; maximum daily discharge, 18,000 ft³/s Jan. 14; minimum discharge, 1,050 ft³/s Sept. 30

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	2940	11800	2500	13700	3500	1510	2440	1160	1690	1860	2430
2	1100	2040	9840	2360	14900	3910	1510	6180	1110	1660	2150	2440
3	1110	1470	7740	2180	13100	3810	1510	6960	1110	1700	2180	2430
4	1110	2210	6090	1960	13700	3900	1520	6270	1100	1670	2170	2430
5	1110	2500	4570	1620	12800	3900	1590	5810	1160	1640	2170	2360
6	1110	1680	3280	1250	11300	2480	1530	5110	1230	1650	2150	2170
7	1110	1580	2940	1170	9120	1150	1670	4720	1350	1650	2270	2160
8	1120	1480	2590	1110	7020	1090	2490	4120	1260	1630	2390	2140
9	1110	1730	2190	2310	5650	1360	3060	3430	1160	1940	2340	2110
10	1110	1610	2020	4700	6050	1520	4230	3340	1090	2380	2310	2100
11	1110	1450	2020	4400	5530	1490	5090	3900	1120	2210	2370	2100
12	1100	1430	2190	4870	5680	1480	5260	4930	1110	1760	2320	2120
13	1100	1430	1990	e13000	5580	1610	7190	4870	1110	1490	2310	2090
14	1250	1490	1870	e18000	5140	1960	7710	4050	1140	1440	2400	2070
15	1400	1510	1890	11900	4050	2900	6690	3340	1520	1410	2560	2060
16	1410	1450	2970	11200	3930	2480	6160	2680	1370	1380	2430	2070
17	1400	1450	5250	9260	8590	2060	5710	2370	1210	1380	2710	2080
18	1390	1430	5880	8950	10600	2300	5420	2240	1340	1330	2660	2040
19	1410	1400	5640	7590	9780	2910	4620	1980	2050	1410	2490	2050
20	1420	2620	5500	6420	7600	3190	3600	1700	2640	1630	2450	1590
21	1440	2570	4880	6320	6090	3690	2720	1590	2250	1910	2440	1120
22	1430	1880	3960	5630	4340	3790	2100	1720	1580	1870	2320	1110
23	1410	1520	3180	4760	3180	3270	1880	2080	1350	1830	1960	1110
24	1410	1690	3180	3910	2870	2950	1870	1930	1660	1800	1940	1100
25	1420	3030	3010	3560	2630	2530	2010	1630	1390	1790	1890	1170
26	1460	2840	3150	3030	2280	2220	2150	1550	1140	1770	1890	1150
27	2270	2140	5550	2920	2050	1910	2420	1470	1140	1730	2250	1110
28	3990	2280	5930	3330	2340	1580	2590	1400	1140	1710	2410	1110
29	1790	2910	4780	4920	---	1570	2610	1400	1210	1690	2470	1110
30	1480	6570	3750	6310	---	1550	2710	1400	1570	1660	2450	1090
31	1430	---	3080	10600	---	1510	---	1400	---	1650	2440	---
TOTAL	43620	62330	132710	172040	199600	75570	101130	98010	40770	52460	71150	54220
MEAN	1407	2078	4281	5550	7129	2438	3371	3162	1359	1692	2295	1807
MAX	3990	6570	11800	18000	14900	3910	7710	6960	2640	2380	2710	2440
MIN	1100	1400	1870	1110	2050	1090	1510	1400	1090	1330	1860	1090
AC-FT	86520	123600	263200	341200	395900	149900	200600	194400	80870	104100	141100	107500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995
MEAN	1174	2500	2905	3284	2727	2986
MAX	1407	4450	4698	5550	7129	6880
(WY)	1995	1992	1992	1995	1995	1993
MIN	683	1363	1249	1181	1216	1408
(WY)	1990	1990	1990	1992	1993	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1990 - 1995

ANNUAL TOTAL	716780	1103610	2293
ANNUAL MEAN	1964	3024	3029
HIGHEST ANNUAL MEAN			1653
LOWEST ANNUAL MEAN			1993
HIGHEST DAILY MEAN	11800	18000	20200
LOWEST DAILY MEAN	1070	1090	499
ANNUAL SEVEN-DAY MINIMUM	1080	1110	516
ANNUAL RUNOFF (AC-FT)	1422000	2189000	1661000
10 PERCENT EXCEEDS	4040	6070	4680
50 PERCENT EXCEEDS	1390	2140	1470
90 PERCENT EXCEEDS	1110	1160	894

e Estimated

WILLAMETTE RIVER BASIN

219

14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR

LOCATION.--Lat 44°05'34", long 122°57'20", in SE 1/4 NW 1/4 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.

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. WDR OR-86-2: 1985(m).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 442.47 ft above sea level. Oct. 1, 1935, to Sept. 30, 1952, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Many diversions for irrigation upstream from station. Continuous water-quality records for the period October 1963 to September 1969 and April 1983 to September 1984 have been collected at this location.

AVERAGE DISCHARGE.--49 years (water years 1936-52, 1963-95), 519 ft³/s, 39.83 in/yr, 375,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s Dec. 22, 1964, gage height, 22.60 ft; minimum discharge, 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 greater than base discharge 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)
Jan. 14	0530	*7,790	*16.87	Feb. 1	2400	4,160	(a)11.74

Minimum discharge, 15 ft³/s Sept. 24, but may have been lower during period of missing record.

(a) May have been higher during period of missing record Feb. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e32	1400	2860	639	e3300	471	398	630	199	99	43	28
2	e26	746	2330	585	e3300	445	367	1860	192	95	41	27
3	e24	450	2000	546	e2100	426	348	1420	184	97	40	28
4	e24	620	1520	511	e1600	471	344	1090	178	94	39	32
5	e23	964	1210	487	e1300	562	355	e910	201	89	37	32
6	e22	621	1090	502	e1100	481	348	e840	222	90	35	34
7	e22	546	1140	510	e930	440	465	e750	220	99	41	32
8	e22	436	980	505	e780	431	813	e660	183	95	50	31
9	e22	575	862	964	e700	522	940	e610	164	96	42	28
10	e22	539	810	1460	641	578	758	e570	156	108	38	26
11	e23	435	865	1340	588	578	689	e980	175	87	48	24
12	e23	433	989	1470	666	564	639	e1070	151	81	42	22
13	e24	390	857	3240	721	633	791	e860	146	77	38	22
14	e38	348	811	6690	613	732	882	e720	197	73	36	21
15	e130	328	907	e4000	586	782	804	e600	296	70	34	21
16	e62	511	1050	e2800	603	698	709	e520	221	68	38	23
17	e43	783	1400	e2400	1450	627	643	e480	193	65	59	27
18	e34	655	1430	2390	2690	689	614	e440	207	61	71	27
19	e33	552	1330	1980	e1700	716	551	e400	240	61	48	25
20	e30	1010	1160	1630	e1300	930	725	e360	233	62	42	23
21	e34	848	1010	1370	e1100	938	807	e340	213	60	38	22
22	e62	680	877	1170	e900	859	708	e330	193	57	35	18
23	e41	741	782	1020	796	759	629	312	171	57	34	17
24	e33	842	716	885	709	696	567	298	156	55	32	18
25	e32	1170	670	779	646	636	517	284	144	52	31	26
26	e36	1190	673	703	591	582	479	267	134	51	29	48
27	e740	1140	882	662	545	541	501	255	124	55	29	73
28	e1200	1120	977	733	505	502	550	249	115	51	27	97
29	e360	1050	887	742	---	467	526	233	108	48	e30	139
30	e150	1300	787	922	---	439	546	217	102	46	e31	85
31	e130	---	705	e2100	---	413	---	208	---	45	30	---
TOTAL	3497	22423	34567	45735	32460	18608	18013	18763	5418	2244	1208	1076
MEAN	113	747	1115	1475	1159	600	600	605	181	72.4	39.0	35.9
MAX	1200	1400	2860	6690	3300	938	940	1860	296	108	71	139
MIN	22	328	670	487	505	413	344	208	102	45	27	17
AC-FT	6940	44480	68560	90720	64380	36910	35730	37220	10750	4450	2400	2130
CFSM	.64	4.22	6.30	8.34	6.55	3.39	3.39	3.42	1.02	.41	.22	.20
IN.	.73	4.71	7.26	9.61	6.82	3.91	3.79	3.94	1.14	.47	.25	.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1995, BY WATER YEAR (WY)

MEAN	113	596	1082	1200	1092	867	592	353	204	77.4	38.9	40.7
MAX	719	1653	3197	2464	2379	1975	1545	759	752	190	91.4	111
(WY)	1951	1951	1965	1965	1986	1972	1937	1991	1984	1983	1968	1968
MIN	19.2	26.5	52.6	84.0	126	281	242	118	54.3	34.3	14.7	18.9
(WY)	1988	1937	1977	1977	1977	1965	1942	1966	1966	1940	1966	1967

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1936 - 1995
ANNUAL TOTAL	140477	204012	
ANNUAL MEAN	385	559	519
HIGHEST ANNUAL MEAN			847
LOWEST ANNUAL MEAN			164
HIGHEST DAILY MEAN	2860	6690	11500
LOWEST DAILY MEAN	18	17	9.6
ANNUAL SEVEN-DAY MINIMUM	19	21	11
ANNUAL RUNOFF (AC-FT)	278600	404700	375900
ANNUAL RUNOFF (CFSM)	2.17	3.16	2.93
ANNUAL RUNOFF (INCHES)	29.52	42.88	39.83
10 PERCENT EXCEEDS	987	1180	1320
50 PERCENT EXCEEDS	226	445	251
90 PERCENT EXCEEDS	24	30	30

e Estimated

WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR

LOCATION.--Lat 44°16'14", long 123°10'21", in NW 1/4 NE 1/4 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.

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 sea level. 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.--No estimated daily discharges. Records good. Flow regulated by 8 reservoirs upstream from station. Many small diversions upstream from station for irrigation. Continuous water-quality records for the period June 1961 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--51 years (water years 1945-95), 11,720 ft³/s, 8,491,000 acre-ft/yr.
27 years (water years 1969-95), 11,170 ft³/s, 8,095,000 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 discharge, 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, 63,200 ft³/s Jan. 14, gage height, 13.14 ft; minimum discharge, 3,630 ft³/s Oct. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5450	7720	29100	11800	31100	6650	6020	11300	6160	5020	4800	5840
2	5430	8860	32300	11000	40800	6440	5870	20900	5960	4930	4930	5700
3	5390	7200	29600	9640	41000	6270	5670	28300	5900	4880	5010	5610
4	5380	6280	25200	8400	42000	6300	5470	29400	5860	4910	5010	5630
5	5320	11100	22800	7920	39300	6750	5640	22400	5990	4830	4970	5640
6	5340	9420	17600	7380	32000	6510	5830	19700	6540	4780	5020	6040
7	5360	8340	16200	7210	22000	6210	6250	18100	6900	4810	5010	6650
8	5420	7420	14900	7270	17900	6010	8400	16300	7400	4750	5220	6730
9	5460	7530	13700	9360	15100	6680	10100	14500	6990	4880	5200	6710
10	5370	8490	12300	19800	13900	7750	8770	13200	6520	5400	5170	6690
11	5340	8020	11400	21900	11400	7880	9940	13200	6440	5590	5250	6650
12	5290	7040	11900	23400	10900	7790	9720	16000	6330	5260	5230	6460
13	5070	6760	11400	29100	12300	7330	11400	17500	6150	4810	5190	6440
14	5050	6480	10100	57000	12000	7380	16400	15500	6230	4670	5180	6460
15	4690	6260	9580	41400	11600	9720	16100	12500	7640	4640	5370	6430
16	4220	6280	10100	48900	13800	10400	14900	10500	8150	4570	5430	6470
17	4060	8850	14000	43100	26100	8960	13500	9860	7580	4550	5570	6560
18	4030	9890	17200	41300	33300	8560	12000	9430	7420	4510	5720	6550
19	3890	8510	17200	39200	29700	10200	10400	9110	9220	4480	5620	6520
20	3840	9560	16400	35100	21700	11300	10400	8510	11200	4690	5550	6620
21	3870	11200	16400	31700	17200	13300	11500	8080	11000	4910	5470	6630
22	3930	9540	15000	28800	11800	12800	10500	7900	9590	4920	5480	6600
23	3870	8400	13100	25000	9410	10800	9560	8190	8620	4910	5260	6670
24	3840	9330	12600	21100	8510	9760	9160	7880	7460	4840	5200	6720
25	3700	11900	12000	17500	8020	8870	9020	7270	6960	4830	5300	6830
26	3790	14100	11900	14400	7540	8180	9240	7000	6580	4790	5350	6970
27	4200	12200	14000	13800	7110	7680	9450	6940	5370	4760	5470	7120
28	8390	12400	17500	13900	6910	6850	9860	6860	5120	4710	5730	7360
29	7140	13700	16900	16700	---	6510	10200	6720	5020	4720	5880	7660
30	5550	15300	14300	21100	---	6300	11600	6660	5040	4670	5850	7480
31	5010	---	13100	27100	---	6120	---	6370	---	4660	5860	---
TOTAL	152690	278080	499780	711280	554400	252260	292870	396080	211340	149680	165290	196440
MEAN	4925	9269	16120	22940	19800	8137	9762	12780	7045	4828	5332	6548
MAX	8390	15300	32300	57000	42000	13300	16400	29400	11200	5590	5880	7660
MIN	3700	6260	9580	7210	6910	6010	5470	6370	5020	4480	4800	5610
AC-FT	302900	551600	991300	1411000	1100000	500400	580900	785600	419200	296900	327900	389600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	MEAN	7740	14180	20490	19620	14170	12820	10880	9678	7641	4843	5295	6818
MAX	10970	30850	42980	36750	26870	36070	21680	16680	16150	6283	7117	8986	
(WY)	1985	1985	1978	1971	1986	1972	1993	1993	1984	1969	1971	1972	
MIN	4203	4924	3848	3695	2859	5168	4823	4009	3658	3883	4249	4305	
(WY)	1993	1988	1977	1977	1977	1992	1977	1987	1987	1978	1987	1992	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1969 - 1995

ANNUAL TOTAL	2544060	3860190	11170
ANNUAL MEAN	6970	10580	17800
HIGHEST ANNUAL MEAN			1972
LOWEST ANNUAL MEAN			5233
HIGHEST DAILY MEAN	32300	Dec 2	57000
LOWEST DAILY MEAN	3680	Jun 28	3700
ANNUAL SEVEN-DAY MINIMUM	3760	Jun 25	3830
ANNUAL RUNOFF (AC-FT)	5046000	7657000	8095000
10 PERCENT EXCEEDS	13100	20200	23400
50 PERCENT EXCEEDS	5260	7420	7820
90 PERCENT EXCEEDS	3930	4900	4500

WILLAMETTE RIVER BASIN

221

14166500 LONG TOM RIVER NEAR NOTI, OR

LOCATION.--Lat 44°03'00", long 123°25'30", in SE 1/4 NW 1/4 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 above sea level (levels by National Weather Service). Prior to Nov. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Slight regulation caused by logpond upstream from Noti. No diversion upstream from station.

AVERAGE DISCHARGE.--60 years (water years 1936-95), 225 ft³/s, 34.24 in/yr, 163,000 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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. 14	---	*4,600	*a17.64	Feb. 18	0530	1,860	12.56
Feb. 1	0200	2,240	13.74				

Minimum discharge, 7.3 ft³/s Oct. 6.
a From inside high-water mark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	e650	e1400	e340	2020	285	274	230	94	41	17	15
2	15	e340	e900	e300	1500	272	259	282	94	42	15	14
3	11	124	e700	e260	1080	260	232	252	92	41	14	16
4	8.8	e300	e500	e240	782	286	239	235	89	40	15	17
5	8.2	e400	e400	e220	641	435	239	225	85	40	13	18
6	7.7	177	e340	e200	553	372	213	214	83	40	14	25
7	8.4	138	e340	e220	487	323	270	203	82	40	14	23
8	9.4	108	e380	e260	437	304	436	195	81	39	16	21
9	10	286	e340	e950	393	446	686	189	79	43	16	19
10	11	300	e300	e1600	360	680	557	185	77	52	14	17
11	11	189	e320	e1300	336	609	444	199	75	40	14	16
12	11	147	e380	e1500	338	495	378	208	73	37	14	15
13	13	119	e340	e3000	391	474	383	195	70	36	14	12
14	15	100	e300	e4200	340	556	364	182	69	40	13	13
15	19	93	e340	e3400	328	595	334	171	72	35	13	14
16	20	128	e550	e2600	399	522	307	164	74	33	13	14
17	19	e320	e1500	e1700	774	451	287	158	74	27	19	13
18	33	e300	e950	e1400	1660	431	275	150	74	28	29	18
19	26	e260	e700	e1300	1080	484	262	141	73	27	21	13
20	17	e320	e550	e800	755	629	323	138	72	28	18	11
21	19	e300	e480	e600	612	914	346	133	72	33	18	10
22	30	185	e400	e500	522	942	309	130	68	33	16	13
23	23	e250	e340	e440	461	718	282	126	63	26	15	10
24	20	e320	e300	e380	416	584	260	123	60	27	15	11
25	20	e480	e280	e340	379	489	243	118	56	26	14	14
26	25	e550	e400	e400	349	423	229	115	53	24	13	19
27	157	e500	e1000	377	324	376	225	111	50	24	15	34
28	203	e480	e850	439	303	355	233	108	47	22	15	42
29	80	e420	e700	512	---	320	230	104	43	20	15	39
30	53	e650	e500	589	---	314	221	102	42	19	17	35
31	62	---	e420	1400	---	288	---	99	---	18	17	---
TOTAL	987.5	8934	17200	31767	18020	14632	9340	5185	2136	1021	486	551
MEAN	31.9	298	555	1025	644	472	311	167	71.2	32.9	15.7	18.4
MAX	203	650	1500	4200	2020	942	686	282	94	52	29	42
MIN	7.7	93	280	200	303	260	213	99	42	18	13	10
AC-FT	1960	17720	34120	63010	35740	29020	18530	10280	4240	2030	964	1090
CFSM	.36	3.33	6.21	11.5	7.21	5.29	3.49	1.87	.80	.37	.18	.21
IN.	.41	3.72	7.17	13.23	7.51	6.10	3.89	2.16	.89	.43	.20	.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1995, BY WATER YEAR (WY)

MEAN	39.6	200	448	568	541	410	254	127	65.6	30.2	16.8	17.3
MAX	300	708	1425	1260	1093	923	684	340	164	65.2	35.5	31.4
(WY)	1948	1974	1956	1949	1938	1937	1963	1937	1937	1937	1993	1978
MIN	8.00	16.6	23.8	25.2	62.5	131	57.2	54.6	24.7	6.20	3.61	7.42
(WY)	1988	1937	1977	1977	1977	1992	1977	1977	1977	1977	1977	1967

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1936 - 1995

ANNUAL TOTAL	60102.9	110259.5	225
ANNUAL MEAN	165	302	424
HIGHEST ANNUAL MEAN			45.5
LOWEST ANNUAL MEAN			5850
HIGHEST DAILY MEAN	1500	Dec 17	4200
LOWEST DAILY MEAN	4.9	Sep 23	7.7
ANNUAL SEVEN-DAY MINIMUM	5.4	Sep 21	9.1
ANNUAL RUNOFF (AC-FT)	119200	218700	163000
ANNUAL RUNOFF (CFSM)	1.84	3.38	2.52
ANNUAL RUNOFF (INCHES)	25.04	45.93	34.24
10 PERCENT EXCEEDS	381	650	568
50 PERCENT EXCEEDS	102	189	92
90 PERCENT EXCEEDS	8.7	14	15

e Estimated

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 sea level (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 (new capacity table put into use Oct. 1, 1992 based on Dec. 1992 resurvey), 107,400 acre-ft at elevation 375.1 ft, maximum pool elevation. Usable capacity, 93,350 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 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 contents since first filling in 1942, 163 acre-ft Nov. 11, 1950, elevation, 344.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 93,440 acre-ft June 15, elevation, 373.51 ft; minimum contents, 2,860 acre-ft Dec. 24, elevation, 352.89 ft.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

349	439	356	6,810	364	30,560	372	81,180
350	835	358	10,680	366	40,480	374	97,590
352	2,090	360	15,830	368	52,350	375	106,400
354	4,030	362	22,410	370	65,980		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370.68	362.09	354.47	353.26	359.66	365.76	371.63	373.29	373.45	373.30	372.67	371.90
2	370.63	361.65	354.99	353.29	360.42	365.90	371.71	373.24	373.45	373.27	372.64	371.87
3	370.58	361.14	354.85	353.38	360.53	366.05	371.78	373.27	373.44	373.26	372.60	371.85
4	370.52	360.67	354.13	353.38	360.24	366.29	371.85	373.26	373.44	373.25	372.58	371.83
5	370.44	360.03	353.62	353.37	359.96	366.63	371.93	373.26	373.43	373.24	372.55	371.82
6	370.24	359.45	353.76	353.45	360.12	366.84	372.01	373.27	373.40	373.22	372.51	371.81
7	369.98	358.84	354.18	353.55	360.38	367.01	372.21	373.26	373.40	373.21	372.49	371.78
8	369.71	358.33	353.99	353.80	360.59	367.20	372.60	373.25	373.41	373.22	372.46	371.76
9	369.44	357.93	353.60	355.56	360.80	367.58	372.99	373.26	373.39	373.23	372.44	371.75
10	369.16	357.42	353.32	357.30	361.08	368.03	373.13	373.28	373.40	373.22	372.42	371.73
11	368.88	356.73	353.22	358.06	361.39	368.41	373.08	373.29	373.40	373.20	372.39	371.71
12	368.57	355.91	353.30	358.57	361.76	368.72	373.10	373.27	373.39	373.18	372.36	371.69
13	368.28	354.92	353.23	361.63	362.20	369.09	373.14	373.26	373.42	373.17	372.33	371.67
14	367.97	353.60	353.08	366.30	362.56	369.42	373.17	373.25	373.50	373.14	372.31	371.65
15	367.66	353.57	353.21	368.08	362.69	369.53	373.16	373.27	373.47	373.12	372.28	371.62
16	367.35	353.88	353.79	368.98	362.33	369.70	373.17	373.29	373.46	373.10	372.26	371.60
17	367.02	353.94	354.06	369.15	362.26	369.86	373.18	373.32	373.47	373.09	372.26	371.57
18	366.68	353.95	354.33	368.99	362.71	369.98	373.19	373.34	373.45	373.05	372.24	371.55
19	366.38	353.80	353.97	368.67	362.95	370.05	373.22	373.37	373.46	373.04	372.22	371.53
20	366.08	353.78	353.29	368.19	363.28	370.26	373.20	373.39	373.45	373.01	372.20	371.48
21	365.77	353.64	353.17	367.59	363.74	370.42	373.19	373.41	373.46	372.98	372.17	371.45
22	365.45	353.45	353.05	366.89	364.18	370.50	373.20	373.42	373.46	372.96	372.15	371.43
23	365.10	353.69	352.90	366.07	364.54	370.60	373.20	373.42	373.45	372.93	372.12	371.40
24	364.73	353.94	353.32	365.14	364.82	370.71	373.20	373.44	373.44	372.91	372.08	371.38
25	364.38	354.21	353.73	364.12	365.07	370.83	373.22	373.44	373.43	372.88	372.06	371.37
26	364.06	354.09	354.17	362.95	365.29	370.94	373.23	373.46	373.39	372.85	372.03	371.38
27	363.90	353.76	354.38	361.63	365.47	371.08	373.28	373.45	373.36	372.83	372.01	371.37
28	363.42	353.50	354.07	360.49	365.63	371.21	373.26	373.46	373.33	372.80	371.99	371.36
29	363.04	353.50	354.04	359.21	---	371.33	373.25	373.46	373.33	372.76	371.96	371.36
30	362.61	353.88	353.55	358.11	---	371.44	373.24	373.46	373.31	372.71	371.94	371.32
31	362.42	---	353.34	358.61	---	371.54	---	373.45	---	372.69	371.92	---
MAX	370.68	362.09	354.99	369.15	365.63	371.54	373.28	373.46	373.50	373.30	372.67	371.90
MIN	362.42	353.45	352.90	353.26	359.66	365.76	371.63	373.24	373.31	372.69	371.92	371.32
(†)	23980	3890	3310	12100	38500	77590	91180	92930	91760	86670	80550	75890
(‡)	-47100	-20100	-580	+8790	+26400	+39090	+13590	+1750	-1170	-5090	-6120	-4660

CAL YR 1994 MAX 373.50 MIN 352.90 AC-FT‡ -2680

WTR YR 1995 MAX 373.50 MIN 352.90 AC-FT‡ +4810

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

‡ Change in contents, in acre-feet.

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LOCATION.--Lat 44°07'25", long 123°17'55", in SW 1/4 NE 1/4 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.

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." Prior to October 1985, published figures included diversion from Fern Ridge Reservoir into Coyote Creek channel (station 14169001).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 332.00 ft above sea level (levels by Corps of Engineers). Prior to Sept. 21, 1939, nonrecording gage and Sept. 21, 1939, to Sept. 30, 1943, water-stage recorder at site 2.5 mi downstream at datum 11.09 ft lower.

AVERAGE DISCHARGE.--52 years (water years 1944-95), 507 ft³/s, 367,300 acre-ft/yr (river only).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,680 ft³/s Jan. 17, gage height, 8.77 ft; minimum discharge, 31 ft³/s Feb. 10.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	1340	1410	712	2330	54	55	613	52	42	58	56
2	49	1220	1460	580	2510	54	56	882	53	42	58	56
3	139	1110	1460	486	2290	55	56	541	53	42	58	56
4	229	1260	1440	486	2070	56	56	706	53	42	58	54
5	264	1400	1120	486	1640	56	56	494	69	42	59	52
6	686	1200	806	487	876	56	56	379	249	42	59	53
7	887	1060	912	630	640	56	56	435	56	42	58	52
8	870	955	1030	783	559	58	57	424	55	42	58	53
9	883	984	982	1340	409	57	58	334	56	42	58	53
10	883	1090	852	1870	192	58	702	319	56	42	58	51
11	871	1070	816	2300	49	58	1140	523	56	36	58	42
12	900	1050	760	2360	50	58	935	561	56	35	58	36
13	903	1020	758	1450	51	59	873	424	56	42	58	46
14	895	989	753	75	51	439	851	326	92	58	58	59
15	886	190	750	1770	535	855	814	141	353	58	61	63
16	875	220	768	2350	1460	564	710	124	194	58	61	63
17	888	520	1360	3340	2130	396	622	70	86	58	62	63
18	926	603	1510	3120	1900	728	619	53	120	57	56	63
19	906	619	1490	3080	1790	837	616	53	168	57	51	63
20	873	619	1360	3110	937	1030	926	53	144	57	51	63
21	868	593	992	3110	292	1120	886	53	74	58	51	63
22	859	510	853	2950	61	1260	674	53	57	61	52	63
23	908	523	782	3190	61	956	629	53	57	65	55	63
24	917	633	397	3080	61	771	518	53	58	65	61	63
25	906	883	339	3100	61	551	365	53	58	65	61	63
26	899	1110	433	3070	61	355	299	53	58	65	61	63
27	926	1040	870	3000	59	111	376	53	58	65	61	63
28	1340	902	1260	2870	54	54	613	53	69	63	58	63
29	989	728	1010	2800	---	54	619	53	69	58	56	63
30	959	689	1070	2780	---	54	479	52	48	58	56	145
31	954	---	854	2230	---	54	---	53	---	58	56	---
TOTAL	24387	26130	30657	62995	23179	10924	14772	8037	2683	1617	1784	1809
MEAN	787	871	989	2032	828	352	492	259	89.4	52.2	57.5	60.3
MAX	1340	1400	1510	3340	2510	1260	1140	882	353	65	62	145
MIN	49	190	339	75	49	54	55	52	48	35	51	36
AC-FT	48370	51830	60810	125000	45980	21670	29300	15940	5320	3210	3540	3590
CAL YR 1994	TOTAL 108613			MEAN 298	MAX 1510	MIN 25	AC-FT 215400					
WTR YR 1995	TOTAL 208974			MEAN 573	MAX 3340	MIN 35	AC-FT 414500					

WILLAMETTE RIVER BASIN

14170000 LONG TOM RIVER AT MONROE, OR

LOCATION.--Lat 44°18'47", long 123°17'43", in NE 1/4 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 sea level. Prior to Nov. 24, 1944, nonrecording gage at various sites ranging from present site to 1.5 mi downstream at different datums.

REMARKS.--No estimated daily discharges. Records good except for flows below 100 ft³/s, which are fair. Flow regulated since 1941 by Fern Ridge Lake (station 14168000). Several small diversions upstream from station.

AVERAGE DISCHARGE.--18 years (water years 1922-25, 1928-41), 689 ft³/s, 499,200 acre-ft/yr.
54 years (water years 1942-95), 760 ft³/s, 550,300 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 discharge observed prior to regulation, 7 ft³/s Sept. 29, Oct. 1, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,280 ft³/s Jan. 14, gage height, 8.76 ft; minimum discharge, 25 ft³/s Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	1510	2460	844	4100	240	220	608	62	42	40	38
2	54	1510	2300	748	3880	229	210	1170	61	37	40	40
3	56	1190	2170	577	3380	217	202	768	61	36	37	44
4	184	1300	1910	559	2910	279	200	722	66	36	37	44
5	172	1760	1600	548	2520	518	199	714	71	37	37	41
6	448	1410	988	545	1570	339	199	449	209	36	36	44
7	866	1200	1400	684	910	264	272	506	106	34	38	46
8	868	1030	1390	1030	843	270	601	496	69	35	39	45
9	878	1120	1270	2680	646	694	703	435	63	46	38	45
10	901	1230	1020	3600	527	789	764	406	64	58	42	45
11	892	1190	1050	3530	278	608	1590	566	77	50	42	41
12	917	1140	1070	3650	272	457	1280	676	67	38	42	34
13	951	1090	933	4890	366	567	1190	569	60	32	43	28
14	952	1030	891	5340	311	840	1170	442	81	34	40	30
15	936	545	987	4270	567	1340	1080	296	342	41	37	39
16	921	226	1170	4130	1550	995	930	239	246	42	40	44
17	932	591	2510	4250	3620	688	743	202	147	38	44	46
18	933	666	2440	4280	3750	954	722	147	118	36	50	46
19	873	644	2180	4170	2980	1360	724	137	180	32	43	45
20	801	716	1930	3980	1900	1680	1180	130	174	33	41	44
21	792	675	1460	3850	926	2020	1240	117	137	32	36	57
22	781	548	1140	3710	460	2030	868	110	76	33	33	59
23	821	605	979	3690	398	1570	724	103	64	40	33	48
24	866	770	679	3570	357	1180	669	89	62	41	33	51
25	849	1220	492	3560	327	870	492	58	65	39	38	54
26	839	1490	579	3480	302	647	458	76	60	39	39	57
27	895	1450	1320	3420	276	411	415	69	52	43	41	63
28	1370	1220	1870	3670	254	274	669	76	47	44	40	70
29	998	942	1560	3540	---	253	704	77	58	40	37	72
30	877	852	1310	3750	---	237	646	68	50	40	38	102
31	905	---	1210	4460	---	226	---	62	---	40	38	---
TOTAL	23587	30870	44268	95005	40180	23046	21064	10583	2995	1204	1212	1462
MEAN	761	1029	1428	3065	1435	743	702	341	99.8	38.8	39.1	48.7
MAX	1370	1760	2510	5340	4100	2030	1590	1170	342	58	50	102
MIN	54	226	492	545	254	217	199	58	47	32	33	28
AC-FT	46780	61230	87810	188400	79700	45710	41780	20990	5940	2390	2400	2900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1995, BY WATER YEAR (WY)

	MEAN	760	935	1720	2110	1580	901	481	244	95.4	44.2	75.4	201
MAX	1895	3437	5355	6222	4032	2761	2277	1193	697	148	524	960	
(WY)	1948	1951	1956	1956	1961	1957	1963	1963	1993	1993	1951	1955	
MIN	27.1	91.5	55.5	43.5	44.1	136	54.5	50.3	28.6	23.0	20.0	12.4	
(WY)	1942	1953	1977	1977	1977	1978	1977	1987	1987	1965	1944	1943	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1942 - 1995

ANNUAL TOTAL	153462	295476	760
ANNUAL MEAN	420	810	1517
HIGHEST ANNUAL MEAN			177
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	2510	5340	16400
LOWEST DAILY MEAN	22	28	.00
ANNUAL SEVEN-DAY MINIMUM	32	35	8.4
ANNUAL RUNOFF (AC-FT)	304400	586100	550300
10 PERCENT EXCEEDS	1190	2170	2320
50 PERCENT EXCEEDS	175	460	231
90 PERCENT EXCEEDS	35	39	36

14174000 WILLAMETTE RIVER AT ALBANY, OR

LOCATION.--Lat 44°38'20", long 123°06'20", in SW 1/4 sec.6, T.11 S., R.3 W., Linn County, Hydrologic Unit 17090003, on right bank 5 ft upstream from bridge on U.S. Highway 20 (Ellsworth Street) in Albany, 0.2 mi downstream from Calapooia River, and at mile 119.31.

DRAINAGE AREA.--4,840 mi², approximately.

PERIOD OF RECORD.--November 1878 to April 1888 (fragmentary), January to June 1892, November 1892 to September 1894, December 1894 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 694: Drainage area. WSP 904: 1939. WSP 964: 1881, 1890, 1894, 1897, 1901, 1903, 1908, 1910, 1916, 1923, 1927, 1932(M). WSP 984: 1916. WSP 1248: 1895, 1902, 1907, 1915(M), 1917(M), 1918-19, 1934(M). WSP 1318 (monthly and annual figures only): 1894, 1897, 1901-3, 1907-8, 1910, 1916, 1918-19, 1923, 1927.

GAGE.--Water-stage recorder. Datum of gage is 167.18 ft above sea level. 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. Discharges for period June 25 to August 2 computed from data obtained through U.S. Army Corps of Engineers Columbia River Operational Hydromet System (CROHMS) system. Flow regulated by nine reservoirs upstream from station. 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.--46 years (water years 1896-41), 13,530 ft³/s, 37.96 in/yr, 9,802,000 acre-ft/yr.
27 years (water years 1969-95), 13,870 ft³/s, 38.95 in/yr, 10,050,000 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 discharge, 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, 81,300 ft³/s Jan. 15, gage height, 23.79 ft; minimum discharge, 4,710 ft³/s Oct. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5950	10500	29500	16500	44400	9310	7970	15200	7060	e5580	5070	6170
2	5890	15800	41300	15000	47300	8870	7770	18400	6850	5510	5310	6150
3	5860	12400	41000	13500	52000	8530	7440	29300	6650	5410	5370	5970
4	5870	10000	35800	11900	49500	8390	7150	30400	6620	5370	5400	5960
5	5890	13500	30000	10800	47300	9290	7050	28300	6660	5370	5390	5980
6	5910	15200	25700	10300	42600	9410	7200	23600	6980	5280	5400	6100
7	6280	12600	23400	10200	32700	8760	7900	21200	7580	5270	5400	6640
8	6550	10900	22100	10900	24600	8340	10600	19600	8080	5270	5530	7000
9	6620	10800	19700	15600	20700	11100	14600	17800	7920	5390	5640	7030
10	6590	12400	17800	29600	18200	14200	13900	16100	7510	5640	5590	7030
11	6540	12300	16400	35400	16100	13900	13600	15400	7180	6080	5650	7040
12	6520	10700	17600	34800	14100	13100	14400	17000	7060	6120	5680	6940
13	6410	9890	16800	41400	14800	13100	15400	19500	6890	5580	5660	6760
14	6340	9450	15100	58400	15600	14400	18700	18700	6830	5250	5630	6730
15	6290	8900	14000	77900	15200	15300	21000	16000	7610	5160	5640	6730
16	5610	8430	15000	74100	17000	16400	19300	13100	9310	5130	5800	6720
17	5370	11000	21600	65300	25700	14300	17800	11900	8980	5050	5930	6820
18	5270	14200	26400	56800	47100	13100	15900	11100	8660	5000	6160	6860
19	5140	12700	26100	52000	48100	15600	14500	10700	9050	4950	6160	6830
20	4920	12000	23700	47800	39000	18000	13500	10200	11700	5000	6080	6820
21	4890	15200	23500	42400	28400	21200	15700	9580	12100	5220	5970	6880
22	4900	13500	21500	38100	21100	21000	15400	9190	11400	5400	5890	6880
23	4950	12100	19100	34200	16000	18700	13300	9180	10200	5420	5820	6850
24	4920	12500	17400	30300	13600	16000	12400	9150	9040	5400	5560	6920
25	4880	15300	16000	26300	12200	14300	11500	8710	8120	5340	5540	7010
26	4820	20100	15600	22300	11300	12600	11400	8170	7690	5270	5670	7160
27	5540	18800	18400	20500	10400	11300	11600	7960	6820	5290	5670	7400
28	8420	17500	22300	20700	9780	10200	12400	7930	5980	5220	5920	7780
29	11000	17600	23600	23800	---	9200	13000	7760	5690	5180	6160	7930
30	8030	19600	20600	27100	---	8650	14700	7640	5620	5170	6210	8150
31	7180	---	18400	35300	---	8240	---	7440	---	5120	6190	---
TOTAL	189350	395870	695400	1009200	754780	394790	387080	456210	237840	165440	177090	205240
MEAN	6108	13200	22430	32550	26960	12740	12900	14720	7928	5337	5713	6841
MAX	11000	20100	41300	77900	52000	21200	21000	30400	12100	6120	6210	8150
MIN	4820	8430	14000	10200	9780	8240	7050	7440	5620	4950	5070	5960
AC-FT	375600	785200	1379000	2002000	1497000	783100	767800	904900	471800	328200	351300	407100
CFSM	1.26	2.73	4.63	6.73	5.57	2.63	2.67	3.04	1.64	1.10	1.18	1.41
IN.	1.46	3.04	5.34	7.76	5.80	3.03	2.98	3.51	1.83	1.27	1.36	1.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	MEAN	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	8734	16680	26870	26210	20030	17080	13740	11000	8517	5277	5553	7048																
MAX	11780	40850	55390	45070	38630	43270	26860	18930	18460	7333	7313	8985																
(WY)	1985	1985	1982	1971	1986	1972	1993	1993	1993	1969	1971	1972																
MIN	4915	5425	4150	3901	3208	6808	5630	4733	4091	4084	4375	4347																
(WY)	1993	1988	1977	1977	1977	1978	1977	1973	1987	1978	1992	1992																

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1969 - 1995
ANNUAL TOTAL	3315890	5068290	
ANNUAL MEAN	9085	13890	13870
HIGHEST ANNUAL MEAN			22550
LOWEST ANNUAL MEAN			5831
HIGHEST DAILY MEAN	41300	Dec 2	77900
LOWEST DAILY MEAN	4170	Jun 30	4820
ANNUAL SEVEN-DAY MINIMUM	4270	Jun 26	4900
ANNUAL RUNOFF (AC-FT)	6577000	10050000	10050000
ANNUAL RUNOFF (CFSM)	1.88	2.87	2.87
ANNUAL RUNOFF (INCHES)	25.49	38.95	38.95
10 PERCENT EXCEEDS	18600	26700	31500
50 PERCENT EXCEEDS	5910	10000	9030
90 PERCENT EXCEEDS	4730	5400	4930

e Estimated

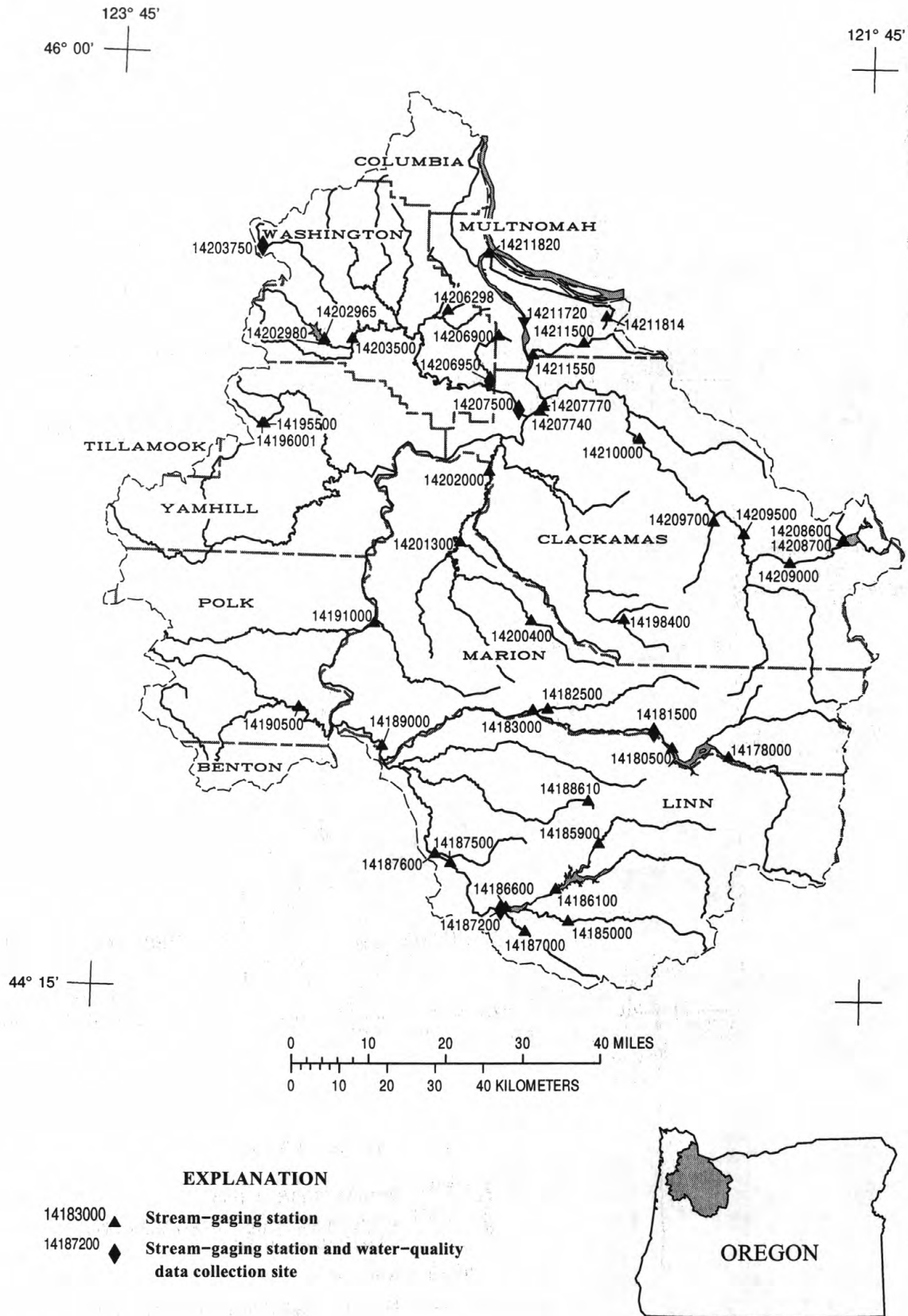


Figure 24. Location of surface-water and water-quality stations in the Willamette River Basin, downstream from the Luckiamute River.

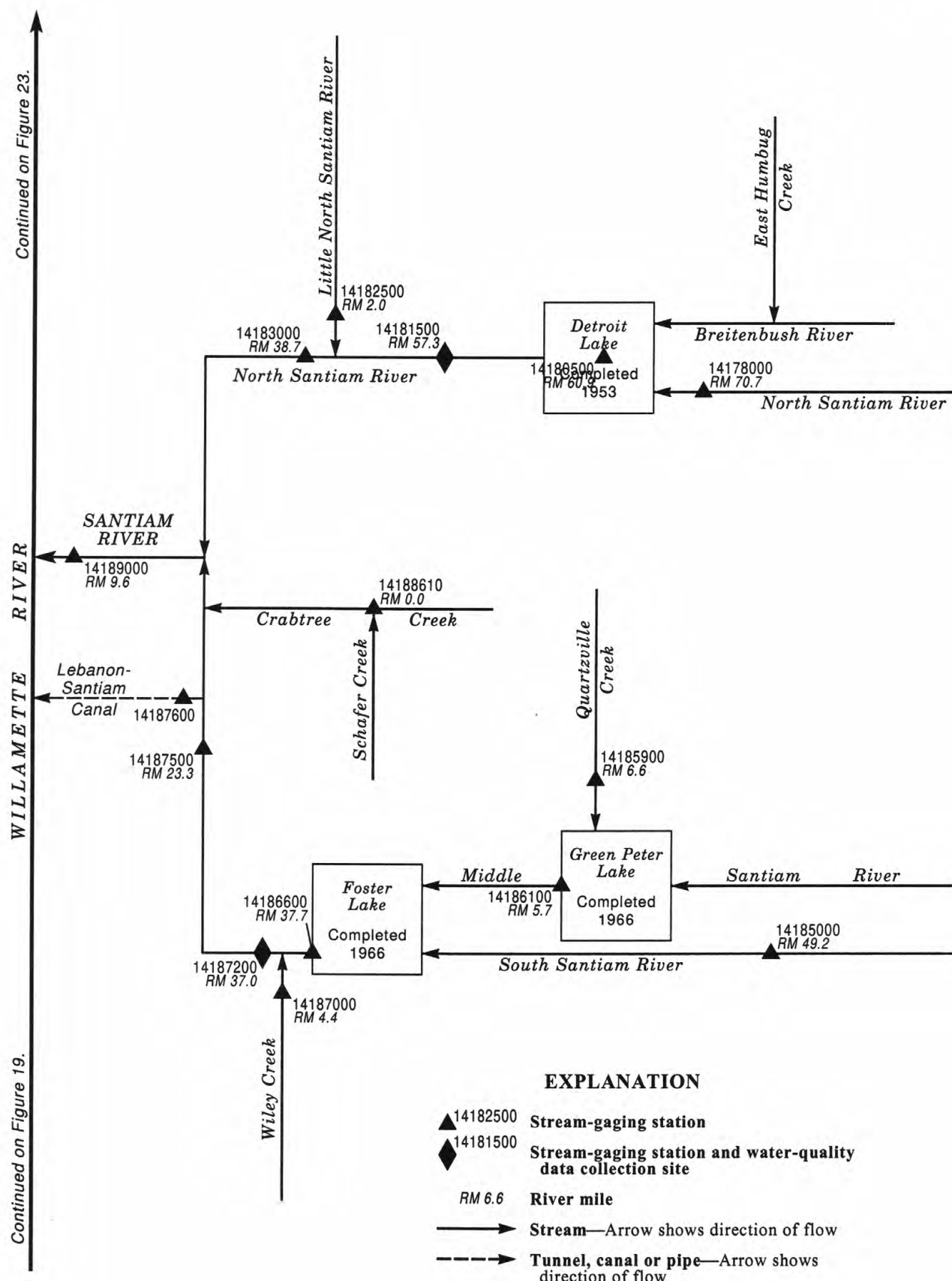


Figure 25. Schematic diagram showing gaging stations and diversions in the Santiam River Basin.

WILLAMETTE RIVER BASIN

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14180500 DETROIT LAKE NEAR DETROIT, OR

LOCATION.--Lat 44°43'20", long 122°14'55", in SW 1/4 NW 1/4 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 sea level (levels by Corps of Engineers).

REMARKS.--Lake elevation data for period Dec. 13 to Mar. 23 obtained through U.S. Army Corps of Engineers Columbia River Operational Hydromet System (CROHMS) database. 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.--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 contents, 115,500 acre-ft Jan. 30, 1969, elevation, 1,425.37 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 441,500 acre-ft July 10, elevation, 1,565.10 ft; minimum contents, 155,100 acre-ft Dec. 15, elevation, 1,450.42 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

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1538.41	1515.59	1477.32	1453.85	1520.68	1516.97	1540.41	1561.95	1563.87	1564.60	1562.79	1558.50
2	1537.34	1511.32	1478.30	1453.02	1526.52	1517.57	1540.84	1563.09	1563.85	1564.63	1562.67	1558.27
3	1536.23	1505.50	1477.53	1451.92	1524.25	1518.33	1541.24	1563.03	1563.70	1564.68	1562.55	1558.02
4	1535.10	1500.65	1475.79	1451.68	1520.40	1519.08	1541.72	1562.88	1563.62	1564.73	1562.43	1557.79
5	1533.89	1495.80	1473.45	1451.33	1515.62	1519.74	1542.32	1562.69	1563.64	1564.71	1562.28	1557.56
6	1532.55	1493.81	1470.85	1451.44	1510.10	1520.21	1543.03	1562.35	1563.80	1564.78	1562.18	1557.33
7	1531.15	1492.68	1467.86	1451.61	1505.19	1520.68	1544.28	1561.85	1563.84	1564.79	1562.14	1557.10
8	1529.75	1491.79	1464.45	1451.84	1502.18	1521.29	1545.70	1562.05	1563.67	1564.71	1562.03	1556.87
9	1528.30	1491.71	1460.81	1453.83	1500.58	1522.48	1546.90	1562.46	1563.43	1564.83	1561.89	1556.62
10	1526.92	1491.26	1458.14	1455.87	1498.90	1524.14	1547.91	1562.84	1563.36	1564.84	1561.78	1556.36
11	1525.48	1490.47	1455.50	1457.07	1498.44	1525.69	1548.94	1563.56	1563.23	1564.66	1561.66	1556.11
12	1524.08	1489.58	1453.36	1458.95	1498.06	1527.23	1550.27	1563.57	1563.10	1564.46	1561.53	1555.85
13	1522.58	1488.53	1451.47	1470.20	1497.35	1528.91	1552.29	1562.89	1563.11	1564.40	1561.38	1555.59
14	1521.28	1487.33	1450.54	1485.34	1496.47	1530.46	1553.27	1562.60	1563.37	1564.32	1561.23	1555.32
15	1519.88	1486.09	1450.72	1490.97	1495.57	1531.42	1553.42	1562.76	1563.90	1564.28	1561.13	1555.05
16	1518.38	1485.11	1452.79	1492.33	1494.24	1531.90	1553.35	1562.94	1564.28	1564.25	1560.95	1554.79
17	1516.86	1483.06	1459.00	1492.41	1500.26	1532.06	1553.43	1563.06	1564.36	1564.19	1560.89	1554.53
18	1515.40	1480.70	1464.22	1492.18	1507.74	1532.99	1553.87	1563.14	1564.54	1564.10	1560.77	1554.07
19	1513.87	1478.95	1466.66	1491.74	1513.64	1534.17	1554.38	1563.14	1564.46	1564.03	1560.63	1553.12
20	1512.32	1477.92	1467.54	1490.68	1517.18	1535.46	1555.12	1563.21	1564.35	1563.98	1560.48	1551.70
21	1510.77	1476.47	1466.52	1489.22	1517.99	1536.21	1555.77	1563.27	1564.21	1563.84	1560.32	1550.23
22	1509.15	1474.81	1464.94	1487.42	1517.97	1535.81	1556.38	1563.32	1564.01	1563.81	1560.16	1548.69
23	1507.47	1473.39	1462.95	1485.34	1517.81	1535.88	1556.95	1563.43	1563.85	1563.74	1559.98	1547.14
24	1506.53	1471.84	1460.55	1483.00	1517.47	1535.82	1557.55	1563.51	1563.84	1563.69	1559.81	1545.61
25	1505.12	1471.32	1457.91	1481.54	1517.24	1536.18	1558.20	1563.63	1563.91	1563.55	1559.67	1544.06
26	1504.10	1470.16	1457.10	1480.64	1516.74	1536.85	1558.82	1563.70	1564.03	1563.48	1559.50	1542.56
27	1507.83	1468.87	1461.08	1479.69	1516.45	1537.57	1559.55	1563.77	1564.19	1563.41	1559.31	1541.24
28	1509.28	1467.39	1461.60	1479.51	1516.55	1538.26	1560.29	1563.80	1564.32	1563.26	1559.14	1539.95
29	1509.01	1465.78	1460.56	1480.69	---	1538.80	1560.74	1563.85	1564.44	1563.17	1559.00	1538.60
30	1508.20	1471.06	1458.53	1484.33	---	1539.35	1561.17	1563.87	1564.53	1563.06	1558.87	1537.12
31	1512.36	---	1455.81	1501.61	---	1539.88	---	1563.90	---	1562.95	1558.69	---
MAX	1538.41	1515.59	1478.30	1501.61	1526.52	1539.88	1561.17	1563.90	1564.54	1564.84	1562.79	1558.50
MIN	1504.10	1465.78	1450.54	1451.33	1494.24	1516.97	1540.41	1561.85	1563.10	1562.95	1558.69	1537.12
(†)	284600	193200	164600	258400	295300	359900	428000	437400	439600	434100	419500	351800
(‡)	-73700	-91400	-28600	+93800	+36900	+64600	+68100	+9400	+2200	-5500	-14600	-67700

CAL YR 1994 MAX 1565.27 MIN 1450.54 AC-FT# +7100
WTR YR 1995 MAX 1564.84 MIN 1450.54 AC-FT# -6500

† 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 NE 1/4 NE 1/4 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 sea level (Federal Highway Administration bench mark). See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1953 by Detroit Lake (station 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft. No diversion upstream from station. Discharges for period May 28 to June 6 computed from data obtained through U.S. Corps of Engineers Columbia River Operational Hydromet System (CROHMS).

AVERAGE DISCHARGE.--67 years (water years 1910-19, 1939-95), 2,294 ft³/s, 68.77 in/yr, 1,662,000 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 discharge, 19 ft³/s Aug. 21, 1963; minimum daily, 395 ft³/s Mar. 25, 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,500 ft³/s Feb. 5, gage height, 8.31 ft; minimum discharge, 562 ft³/s Nov. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2120	4930	3900	4270	1340	1790	1000	1620	1580	1050	931	906
2	2060	9630	5210	3000	6550	1330	1010	3170	1540	1030	929	1000
3	2070	10100	5050	3000	12000	1060	1070	4160	1530	1050	922	1020
4	2110	8760	5010	2010	12100	1040	1100	4090	1590	1060	923	1020
5	2130	7870	4990	2010	12300	1040	1070	4150	1590	1040	919	1010
6	2530	4320	5020	1580	12200	1050	1050	4210	1590	1020	909	1010
7	2500	3120	5050	1540	10400	1040	1080	4180	1760	1070	924	1010
8	2470	2810	5080	1540	7150	1050	1080	2830	1890	1210	932	1010
9	2440	2920	5080	1970	4980	1060	1090	2040	1840	1250	919	1020
10	2480	2880	4000	2590	4740	1090	1080	1960	1540	1280	931	1020
11	2450	2830	3900	3000	3140	1090	1080	1960	1560	1380	921	1000
12	2520	2840	3370	3050	3160	1090	1090	3110	1520	1440	919	1000
13	2460	2850	3060	2170	3110	1550	1430	4060	1250	1150	916	1020
14	2540	2900	2030	1230	3060	2360	2460	3080	1130	1020	932	1020
15	2600	2800	1340	3510	3130	3040	2980	2080	1060	987	924	1020
16	2580	2770	1120	4930	3450	3170	3030	2070	1050	974	925	1020
17	2530	3810	2070	4850	3400	2970	2460	2080	1550	1010	932	1020
18	2450	3790	1850	4880	3220	3080	1650	2060	1550	1020	934	1360
19	2490	3140	2890	4840	4990	3160	1500	2040	1960	1020	935	2230
20	2530	3250	4100	4820	4670	3240	1090	1850	2070	1030	935	2940
21	2620	3180	5240	4800	5710	3340	1080	1870	2110	1010	923	3030
22	2650	3120	5280	4710	5380	4270	1080	1850	2120	950	909	3100
23	2670	3200	5170	4820	4630	3080	1080	1690	1890	944	905	3090
24	2160	3210	5290	4770	4440	3000	1080	1690	1510	945	922	3020
25	2100	3110	5270	3690	3860	2000	1090	1520	1340	968	917	3260
26	2150	3190	5260	3100	3860	1240	1090	1580	1180	937	902	3090
27	2820	3260	4070	3030	3350	1000	1100	1570	1050	914	909	3160
28	2890	3230	5440	3150	2480	1060	1090	1580	1020	915	904	3170
29	2650	4260	5360	3200	---	1040	1520	1570	999	933	893	3160
30	2660	1920	5320	3280	---	1050	1610	1580	1020	940	898	3300
31	1990	---	5350	1830	---	1020	---	1590	---	937	907	---
TOTAL	75420	120000	131170	101170	152800	58400	41220	74890	45389	32484	28501	55036
MEAN	2433	4000	4231	3264	5457	1884	1374	2416	1513	1048	919	1835
MAX	2890	10100	5440	4930	12300	4270	3030	4210	2120	1440	935	3300
MIN	1990	1920	1120	1230	1340	1000	1000	1520	999	914	893	906
AC-FT	149600	238000	260200	200700	303100	115800	81760	148500	90030	64430	56530	109200
MEAN†	1234	2464	3766	4789	6123	2933	2520	2567	1550	958	682	698
CFSM†	2.72	5.44	8.31	10.57	13.52	6.48	5.56	5.67	3.42	2.12	1.51	1.54
IN.†	3.14	6.07	9.59	12.19	14.07	7.47	6.20	6.54	3.82	2.44	1.74	1.72
AC-FT†	75900	146600	231600	294500	340000	180400	149900	157900	92230	58930	41930	41500

CAL YR 1994 TOTAL 679401 MEAN 1861 MAX 10100 MIN 846 AC-FT 1348000 MEAN† 1871 CFSM† 4.13 IN.† 56.08 AC-FT† 1355000
WTR YR 1995 TOTAL 916480 MEAN 2511 MAX 12300 MIN 893 AC-FT 1818000 MEAN† 2502 CFSM† 5.52 IN.† 75.00 AC-FT† 1812000

† Adjusted for change in contents, in Detroit Lake.

WILLAMETTE RIVER BASIN

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14181500 NORTH SANTIAM RIVER AT NIAGARA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: January 1953 to current year.

INSTRUMENTATION.--Temperature recorder since January 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 16.5°C July 28, 29, 1958; minimum, 1.0°C Jan. 30 to Feb. 4, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 14.0°C several days in October; minimum, 4.5°C many days in January, February and March.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	6.5	6.0	6.0	5.5	5.5	5.5	5.5	5.5	5.5	6.0	6.0	6.0
2	6.5	5.0	5.5	5.5	5.5	5.5	6.0	5.5	5.5	6.0	5.5	6.0
3	5.0	5.0	5.0	5.5	5.5	5.5	6.0	5.5	6.0	6.0	5.5	6.0
4	5.5	5.0	5.5	5.5	5.5	5.5	6.0	6.0	6.0	6.0	5.5	5.5
5	5.5	5.5	5.5	5.5	5.0	5.5	6.0	5.5	6.0	6.0	5.5	5.5
6	5.5	5.5	5.5	5.0	5.0	5.0	6.0	5.5	5.5	6.0	5.5	5.5
7	5.5	5.5	5.5	5.0	4.5	5.0	5.5	5.5	5.5	6.0	5.5	6.0
8	5.5	5.5	5.5	5.5	5.0	5.0	5.5	5.5	5.5	6.0	5.5	6.0
9	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	6.0	6.0	6.0
10	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	6.0	6.0	6.0
11	5.5	5.0	5.5	5.5	5.5	5.5	6.0	5.5	5.5	6.5	6.0	6.0
12	5.0	5.0	5.0	5.5	5.5	5.5	6.0	6.0	6.0	6.0	6.0	6.0
13	5.0	4.5	4.5	5.5	5.0	5.0	6.0	5.5	5.5	6.0	5.5	6.0
14	5.0	4.5	5.0	5.5	5.0	5.5	5.5	5.5	5.5	6.5	5.5	6.0
15	5.0	5.0	5.0	5.5	5.0	5.0	6.0	5.5	5.5	6.5	6.5	6.5
16	5.0	5.0	5.0	5.5	4.5	5.0	6.0	5.5	6.0	7.0	6.5	6.5
17	5.0	5.0	5.0	6.0	5.5	5.5	5.5	5.0	5.5	7.0	6.5	6.5
18	5.5	5.0	5.0	6.0	5.0	5.5	5.5	5.0	5.0	6.5	6.0	6.5
19	5.0	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5	6.5	6.5	6.5
20	5.5	5.0	5.0	5.5	5.0	5.0	6.0	5.5	5.5	7.0	6.5	7.0
21	5.0	4.5	5.0	5.5	5.0	5.0	6.0	6.0	6.0	7.0	7.0	7.0
22	5.0	4.5	4.5	5.5	5.0	5.0	6.0	6.0	6.0	7.0	7.0	7.0
23	5.5	5.0	5.0	5.5	5.0	5.5	6.5	6.0	6.0	7.5	7.0	7.0
24	5.5	5.0	5.0	5.0	5.0	5.0	6.5	6.0	6.0	7.0	7.0	7.0
25	5.0	4.5	4.5	5.0	5.0	5.0	6.5	6.0	6.0	7.5	7.0	7.0
26	5.0	5.0	5.0	5.0	5.0	5.0	6.5	6.0	6.0	7.5	7.0	7.5
27	5.5	5.0	5.0	5.5	5.0	5.5	6.5	6.0	6.0	7.5	7.5	7.5
28	5.5	5.5	5.5	6.0	5.5	5.5	6.0	6.0	6.0	8.0	7.5	7.5
29	---	---	---	6.0	5.5	6.0	6.0	6.0	6.0	8.0	7.0	7.5
30	---	---	---	6.5	6.0	6.0	6.0	5.5	6.0	7.5	7.5	7.5
31	---	---	---	6.0	5.5	6.0	---	---	---	8.0	7.5	7.5
MONTH	6.5	4.5	5.0	6.5	4.5	5.5	6.5	5.0	5.5	8.0	5.5	6.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	8.0	7.5	7.5	9.0	8.5	9.0	9.5	9.0	9.0	10.5	10.0	10.0
2	7.5	7.5	7.5	9.0	8.0	8.5	9.5	9.0	9.0	10.0	10.0	10.0
3	7.5	7.5	7.5	8.5	8.0	8.0	9.5	9.0	9.5	10.0	10.0	10.0
4	7.5	7.5	7.5	8.0	8.0	8.0	10.0	9.0	9.5	10.0	10.0	10.0
5	7.5	7.0	7.5	8.5	8.0	8.5	9.5	9.0	9.5	10.0	10.0	10.0
6	7.0	7.0	7.0	8.5	8.0	8.0	9.5	9.5	9.5	10.5	9.5	10.0
7	7.5	7.0	7.0	8.5	8.0	8.0	9.5	9.0	9.5	10.0	10.0	10.0
8	7.5	7.0	7.5	8.5	8.0	8.5	9.5	9.0	9.0	10.5	10.0	10.0
9	7.5	7.5	7.5	8.5	8.0	8.0	10.0	9.0	9.5	11.0	10.5	10.5
10	7.5	7.5	7.5	8.0	8.0	8.0	9.5	9.0	9.0	11.0	10.5	10.5
11	7.5	7.5	7.5	8.5	8.0	8.0	9.5	9.0	9.0	11.0	10.5	10.5
12	8.0	7.5	7.5	8.5	8.0	8.5	9.5	9.0	9.5	11.0	10.5	10.5
13	8.0	7.5	7.5	8.5	8.0	8.5	10.0	9.0	9.5	11.0	10.5	10.5
14	7.5	7.5	7.5	9.0	8.0	8.5	10.0	9.0	9.5	11.0	10.5	10.5
15	8.0	7.5	7.5	9.0	8.5	8.5	9.5	9.0	9.5	10.5	10.5	10.5
16	8.0	7.5	7.5	9.5	8.5	9.0	9.5	9.5	9.5	10.5	10.5	10.5
17	8.0	7.5	7.5	9.5	8.5	9.0	9.5	9.5	9.5	10.5	10.5	10.5
18	7.5	7.5	7.5	9.5	8.5	9.0	10.0	9.5	9.5	10.5	10.5	10.5
19	7.5	7.5	7.5	9.5	9.0	9.0	10.0	9.5	10.0	11.0	10.5	10.5
20	7.5	7.5	7.5	9.0	9.0	9.0	10.0	9.5	10.0	11.0	10.5	10.5
21	7.5	7.5	7.5	9.0	9.0	9.0	10.0	9.5	10.0	12.0	10.5	11.0
22	8.0	7.5	7.5	9.5	9.0	9.0	10.0	9.5	10.0	12.0	11.0	11.0
23	8.0	7.5	8.0	9.5	9.0	9.0	9.5	9.5	9.5	11.5	11.0	11.5
24	8.5	8.0	8.0	9.5	9.0	9.5	10.0	9.5	9.5	12.0	11.0	11.5
25	8.5	8.0	8.5	9.5	9.0	9.5	10.0	9.5	10.0	12.0	11.0	11.5
26	8.5	7.5	8.0	9.5	9.0	9.0	10.0	9.5	9.5	12.0	11.5	11.5
27	8.5	8.0	8.5	9.5	8.5	9.0	10.0	9.5	10.0	12.5	11.5	12.0
28	9.0	8.0	8.5	9.5	9.0	9.5	10.0	9.5	9.5	12.5	12.0	12.0
29	9.0	8.5	9.0	9.0	9.0	9.0	10.0	9.5	10.0	12.5	12.5	12.5
30	9.5	9.0	9.0	9.5	9.0	9.5	10.0	9.5	10.0	12.5	12.5	12.5
31	---	---	---	10.0	9.0	9.5	10.5	10.0	10.0	---	---	---
MONTH	9.5	7.0	7.5	10.0	8.0	8.5	10.5	9.0	9.5	12.5	9.5	11.0
YEAR	14.0	4.5	7.5									

14182500 LITTLE NORTH SANTIAM RIVER NEAR MEHAMA, OR

LOCATION.--Lat 44°47'30", long 122°34'40", in NW 1/4 sec.16, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on left bank 2.0 mi east of Mehama, and at mile 2.0.

DRAINAGE AREA.--112 mi² at cableway 1.2 mi downstream where all discharge measurements are made.

PERIOD OF RECORD.--October 1931 to current year. Records for July to September 1924 and July to September 1931 at site 4 mi upstream not equivalent as a result of differences in drainage areas.

REVISED RECORDS.--WSP 754: 1932. WSP 1218: 1934, 1936, 1949-50. WSP 1935: Maximum only, 1932-34, 1936, 1938, 1943, 1945-49, 1950(M,P), 1951-53(M), 1954(M,P), 1955(M), 1956(M,P), 1957(M), 1958-59(M,P). WSP 2135: Drainage area.

GAGE.--Water stage recorder. Datum of gage is 655.41 ft above sea level. Prior to June 12, 1948, nonrecording gage at about same site and datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station. Records herein are for measuring site. Continuous water-quality records for the period May 1985 to September 1986 have been collected at this location.

AVERAGE DISCHARGE.--64 years (water years 1932-95), 746 ft³/s, 90.51 in/yr, 540,500 acre-ft/yr.

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 discharge, 13 ft³/s Aug. 30, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 8,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	1400	8,280	9.46	Nov. 30	2230	10,400	10.19
Oct. 31	1930	*19,000	*12.48	Feb. 17	2130	11,900	10.67

Minimum discharge, 18 ft³/s Oct. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	4510	4860	675	5580	389	399	645	191	149	48	34
2	26	1820	2400	573	3210	343	369	1870	178	139	47	33
3	23	1160	1630	496	1810	313	335	1410	167	135	46	33
4	21	1450	1160	433	1400	373	348	1000	158	131	44	34
5	19	1360	899	389	1180	341	367	856	201	122	43	34
6	19	1070	763	364	979	301	432	836	264	119	42	36
7	19	946	651	354	813	286	654	794	585	121	66	42
8	19	767	546	359	675	331	1030	705	391	115	67	44
9	19	1110	532	760	569	814	957	643	297	127	53	38
10	19	1010	502	1230	490	1220	803	612	253	152	52	34
11	19	775	530	1100	467	988	923	867	245	119	64	32
12	19	702	590	1250	502	845	1060	999	213	108	52	30
13	19	681	523	4080	434	907	1790	854	199	101	48	29
14	41	650	479	4790	382	1260	1320	705	226	95	45	28
15	79	577	489	2530	370	1290	999	632	368	90	45	28
16	57	652	1110	1880	377	985	797	595	371	86	47	28
17	41	629	3550	1440	5010	740	675	528	322	80	67	28
18	35	526	2400	1870	4910	975	623	466	460	76	87	28
19	31	521	1750	1680	4670	1570	558	418	550	74	63	28
20	30	1730	1670	1270	2670	1420	595	384	608	71	53	27
21	121	1030	1510	1000	1750	1200	600	370	597	68	49	25
22	129	774	1260	814	1250	939	567	353	484	64	45	23
23	79	783	1090	689	956	756	556	330	395	63	43	23
24	61	988	1000	606	819	660	582	313	328	61	43	23
25	52	1360	911	539	701	570	585	292	280	59	41	32
26	70	1060	2420	501	598	503	540	274	246	57	39	35
27	5510	972	3850	543	515	460	536	257	217	60	38	125
28	2740	916	2270	921	442	434	549	244	193	57	37	352
29	1200	1310	1480	1640	---	426	514	231	174	53	38	434
30	689	4750	1070	2090	---	408	526	220	161	51	38	612
31	7420	---	824	5970	---	401	---	205	---	49	36	---
TOTAL	18656	36589	44719	42836	43529	22448	20589	18908	9322	2852	1526	2332
MEAN	602	1220	1443	1382	1555	724	686	610	311	92.0	49.2	77.7
MAX	7420	4750	4860	5970	5580	1570	1790	1870	608	152	87	612
MIN	19	521	479	354	370	286	335	205	158	49	36	23
AC-FT	37000	72570	88700	84970	86340	44530	40840	37500	18490	5660	3030	4630
CFSM	5.37	10.9	12.9	12.3	13.9	6.47	6.13	5.45	2.77	.82	.44	.69
IN.	6.20	12.15	14.85	14.23	14.46	7.46	6.84	6.28	3.10	.95	.51	.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1995, BY WATER YEAR (WY)

MEAN	386	1124	1420	1321	1177	1024	979	788	459	132	64.3	107
MAX	1594	3121	3680	3615	2581	2645	1712	1439	1684	547	432	490
(WY)	1948	1943	1965	1953	1932	1937	1949	1933	1983	1968	1959	1959
MIN	17.3	25.7	193	218	260	226	268	211	53.5	32.3	19.2	24.3
(WY)	1988	1937	1977	1937	1977	1992	1941	1992	1992	1992	1961	1987

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1932 - 1995
ANNUAL TOTAL	236824	264306	
ANNUAL MEAN	649	724	746
HIGHEST ANNUAL MEAN			1146
LOWEST ANNUAL MEAN			400
HIGHEST DAILY MEAN	7420	7420	21900
LOWEST DAILY MEAN	19	19	13
ANNUAL SEVEN-DAY MINIMUM	19	19	15
ANNUAL RUNOFF (AC-FT)	469700	524300	540500
ANNUAL RUNOFF (CFSM)	5.79	6.47	6.66
ANNUAL RUNOFF (INCHES)	78.66	87.79	90.51
10 PERCENT EXCEEDS	1650	1590	1670
50 PERCENT EXCEEDS	326	460	461
90 PERCENT EXCEEDS	30	35	42

WILLAMETTE RIVER BASIN

14183000 NORTH SANTIAM RIVER AT MEHAMA, OR

LOCATION.--Lat 44°47'20", long 122°37'00", in NW 1/4 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 above sea level. Prior to June 15, 1933, nonrecording gage at site 100 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1953 by Detroit Lake (station 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft. No diversion upstream from station. All records given herein are for measuring site. Continuous water-quality records for the period April 1985 to September 1986 have been collected at this location.

AVERAGE DISCHARGE.--79 years (water years 1906, 1911-14, 1922-95), 3,327 ft³/s, 2,400,000 acre-ft/yr.
42 years (water years 1954-95), 3,392 ft³/s, 2,457.00 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, 20,700 ft³/s Oct. 31, gage height, 9.24 ft; minimum discharge, 954 ft³/s Aug. 29, 30, Sept. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	11700	11800	5600	10100	2640	1770	2580	1890	1270	1000	952
2	2020	12600	9780	3900	11300	2100	1730	5510	1850	1240	1000	1030
3	2020	12100	8000	3760	15300	1770	1710	6290	1800	1260	999	1060
4	2030	11600	7080	2840	15100	1820	1790	5660	1860	1260	994	1060
5	2070	10500	6600	2640	14700	1790	1780	5600	1930	1230	982	1050
6	2370	6310	6410	2280	14300	1730	1830	5680	2010	1230	981	1050
7	2370	4770	6220	2200	12500	1690	2150	5570	2510	1230	1020	1060
8	2340	4000	6090	2190	8850	1740	2700	4320	2450	1340	1040	1070
9	2320	4760	6110	3150	6360	2330	2720	3110	2290	1410	998	1050
10	2370	4500	4950	4550	5720	2910	2480	2980	1970	1450	1010	1060
11	2290	4050	4860	4700	4240	2630	2560	3330	1950	1480	1020	1040
12	2380	3970	4550	5000	4130	2470	2740	4460	1890	1530	999	1030
13	2310	3910	4000	8880	3960	2910	4030	5490	1660	1340	984	1050
14	2490	3890	3080	9950	3810	4320	4480	4470	1620	1170	993	1050
15	2560	3750	2410	7940	3880	4960	4550	3110	1680	1140	995	1040
16	2490	3880	2860	8510	4020	4790	4360	2980	1660	1110	999	1050
17	2470	4770	7330	7550	11700	4240	3750	2890	1960	1120	1050	1060
18	2330	4700	5710	8150	11900	4730	2790	2770	2200	1140	1060	1280
19	2340	4110	5430	7680	12600	5590	2510	2700	2580	1120	1030	2100
20	2340	5930	6350	6990	9350	5630	2250	2450	2750	1130	1010	2750
21	2530	4840	7550	6490	8600	5430	2160	2430	2740	1120	1000	2920
22	2640	4380	7170	6090	7730	5870	2080	2370	2600	1060	971	3010
23	2570	4480	6900	6010	6380	4620	2040	2220	2340	1040	968	3000
24	2230	4780	6860	5780	5900	4250	2060	2180	1960	1040	987	2990
25	2010	5350	6640	4730	5190	3200	2060	1990	1710	1060	978	3150
26	2110	5020	8750	4000	4930	2330	2000	2000	1520	1040	959	3050
27	9620	5040	9510	3860	4380	1940	2020	1970	1380	1010	963	3230
28	6660	4950	8960	4460	3360	1920	2020	1970	1310	999	966	3510
29	4020	6400	7620	5460	---	1860	2270	1940	1270	1010	952	3590
30	3380	9830	7030	6280	---	1830	2400	1930	1260	1020	951	3920
31	10200	---	6730	11000	---	1790	---	1910	---	1010	960	---
TOTAL	93940	180870	203340	172620	230290	97830	75790	104860	58600	36609	30819	56262
MEAN	3030	6029	6559	5568	8225	3156	2526	3383	1953	1181	994	1875
MAX	10200	12600	11800	11000	15300	5870	4550	6290	2750	1530	1060	3920
MIN	2010	3750	2410	2190	3360	1690	1710	1910	1260	999	951	952
AC-FT	186300	358800	403300	342400	456800	194000	150300	208000	116200	72610	61130	111600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1995, BY WATER YEAR (WY)

MEAN	2901	5223	6115	5364	3993	3309	3264	3461	2523	1376	1249	1964
MAX	5109	9857	14300	11430	9197	10890	6128	5897	5521	2528	1833	2800
(WY)	1960	1974	1978	1956	1961	1972	1993	1960	1955	1983	1968	1959
MIN	1796	1545	1183	1212	1048	1467	1624	1136	956	757	699	996
(WY)	1988	1994	1977	1977	1977	1992	1973	1973	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1954 - 1995

ANNUAL TOTAL	1029901		1341830				
ANNUAL MEAN	2822		3676			3392	
HIGHEST ANNUAL MEAN						5255	1974
LOWEST ANNUAL MEAN						1743	1977
HIGHEST DAILY MEAN	12600	Nov 2	15300	Feb 3		36200	Dec 22 1964
LOWEST DAILY MEAN	963	Aug 25	951	Aug 30		682	Aug 1 1992
ANNUAL SEVEN-DAY MINIMUM	970	Aug 24	958	Aug 26		693	Aug 16 1992
ANNUAL RUNOFF (AC-FT)	2043000		2662000			2457000	
10 PERCENT EXCEEDS	6620		7580			6830	
50 PERCENT EXCEEDS	1860		2560			2400	
90 PERCENT EXCEEDS	996		1040			1170	

14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR

LOCATION.--Lat 44°23'31", long 122°29'47", in NW 1/4 SW 1/4 sec.31, T.13 S., R.3 E., Linn County, Hydrologic Unit 17090006, on left bank, 0.2 mi upstream from Mouse Creek, 0.8 mi southwest of Cascadia, and at mile 49.2.

DRAINAGE AREA.--174 mi².

PERIOD OF RECORD.--September 1935 to current year. Monthly discharge only September 1935, published in WSP 1318.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 775 ft above sea level, from topographic map. Prior to Sept. 26, 1989, at site 0.7 mi downstream at datum 759.88 above sea level. Prior to Nov. 1, 1935, nonrecording gage at site 0.7 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station. Continuous water-quality records for the period June 1962 to September 1967 and February 1969 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--60 years (water years 1936-95), 807 ft³/s, 63.04 in/yr, 584,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft³/s Dec. 22, 1964, gage height, 19.68 ft, site and datum then in use; minimum discharge, 23 ft³/s Dec. 1, 2, 1936, site then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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. 1	0030	8,120	9.12	Feb. 1	1730	9,780	9.92
Jan. 13	2300	*11,800	*10.89	Feb. 18	0100	6,200	8.11

Minimum daily discharge, 26 ft³/s Oct. 5-9, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e37	2490	5810	865	7650	558	525	1430	265	257	91	62
2	e33	1140	3180	747	5000	508	485	4330	252	243	89	60
3	e30	726	2100	656	2730	495	463	2470	239	239	86	60
4	e27	1320	1480	585	2070	515	484	1900	229	227	84	61
5	e26	1230	1140	541	1680	544	546	1800	325	213	81	61
6	e26	923	959	527	1390	485	646	1700	426	222	79	60
7	e26	816	829	528	1170	456	968	1530	628	216	109	61
8	e26	639	700	583	995	497	1300	1310	438	210	110	61
9	e26	1230	657	1720	848	957	1350	1140	357	266	92	59
10	e27	997	629	2100	748	1300	1210	1080	321	265	93	56
11	e27	725	649	1890	704	1210	1200	1370	323	212	112	55
12	e26	656	703	1950	732	1070	1380	1450	281	195	92	53
13	e60	617	625	5880	657	1180	2420	1270	278	181	85	52
14	e120	553	568	8210	572	e1600	2040	1070	397	172	80	51
15	e210	499	572	3900	531	e1800	1630	932	667	162	77	50
16	e95	589	1430	2570	516	1390	1310	850	539	155	79	51
17	e72	598	2690	1900	2700	1110	1120	770	487	147	112	53
18	e59	491	2500	2030	4490	1340	1010	683	636	141	125	53
19	54	516	1980	1820	3050	1640	907	615	856	138	95	51
20	50	1980	1740	1460	2320	1920	995	569	1030	138	84	49
21	71	1120	1470	1190	1720	1680	1000	532	874	131	78	46
22	92	797	1310	1010	1350	1330	957	496	722	125	73	45
23	68	915	1180	876	1120	1090	918	464	598	122	72	44
24	59	1170	1100	782	992	945	932	442	510	117	72	44
25	53	1640	999	704	884	830	923	413	447	114	69	69
26	62	1190	1650	683	779	743	862	385	399	110	67	82
27	1570	1060	2990	669	696	678	919	358	358	112	65	167
28	1630	1080	2290	868	622	628	973	335	321	105	64	311
29	639	2110	1640	1250	---	587	997	317	297	100	69	459
30	395	4630	1270	1910	---	551	1080	300	276	97	67	307
31	800	---	1030	5420	---	526	---	282	---	95	64	---
TOTAL	6496	34447	47870	55824	48716	30203	31550	32593	13776	5227	2615	2693
MEAN	210	1148	1544	1801	1740	974	1052	1051	459	169	84.4	89.8
MAX	1630	4630	5810	8210	7650	1920	2420	4330	1030	266	125	459
MIN	26	491	568	527	516	456	463	282	229	95	64	44
AC-FT	12880	68330	94950	110700	96630	59910	62580	64650	27320	10370	5190	5340
CFSM	1.20	6.60	8.87	10.3	10.0	5.60	6.04	6.04	2.64	.97	.48	.52
IN.	1.39	7.36	10.23	11.93	10.42	6.46	6.75	6.97	2.95	1.12	.56	.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1995, BY WATER YEAR (WY)

	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
MEAN	291	1083	1479	1421	1356	1164	1139	920	524	169	81.3	96.2								
MAX	1296	2441	4319	3278	3260	2913	2052	1639	1261	466	222	318								
(WY)	1951	1943	1965	1953	1961	1972	1937	1960	1937	1983	1968	1959								
MIN	31.6	27.6	82.3	107	130	324	356	282	101	54.2	35.9	40.9								
(WY)	1988	1937	1977	1977	1977	1941	1941	1987	1992	1940	1992	1987								

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1936 - 1995

	1994	1995	1936-1995
ANNUAL TOTAL	238635	312010	807
ANNUAL MEAN	654	855	1280
HIGHEST ANNUAL MEAN			359
LOWEST ANNUAL MEAN			23000
HIGHEST DAILY MEAN	5810	8210	23
LOWEST DAILY MEAN	26	26	24
ANNUAL SEVEN-DAY MINIMUM	26	26	24
ANNUAL RUNOFF (AC-FT)	473300	618900	584900
ANNUAL RUNOFF (CFSM)	3.76	4.91	4.64
ANNUAL RUNOFF (INCHES)	51.02	66.71	63.04
10 PERCENT EXCEEDS	1640	1890	1790
50 PERCENT EXCEEDS	416	587	500
90 PERCENT EXCEEDS	46	60	62

e Estimated

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.

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. Elevation of gage is 1,050 ft above sea level, from topographic map. Aug. 13, 1963, to Dec. 22, 1964, water-stage recorder on left bank at present datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station. Continuous water-quality records for the period August 1963 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--31 years (water years 1964, 1966-95), 643 ft³/s, 88.05 in/yr, 465,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s Jan. 20, 1972, gage height, 16.38 ft; minimum discharge, 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 greater than base discharge 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)
Oct. 27	1230	6,540	11.07	Jan. 13	2330	8,060	11.80
Nov. 1	0300	5,650	10.59	Jan. 31	1130	*10,100	*12.67
Dec. 26	2300	5,870	10.71	Feb. 17	1900	10,100	12.65

Minimum discharge, 18 ft³/s Oct. 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	3230	1560	601	6590	264	392	792	143	148	61	70
2	23	1350	1690	508	3130	242	367	2490	118	142	60	52
3	21	799	1390	442	1460	233	344	1430	115	134	62	47
4	20	1250	936	394	1000	279	365	986	111	131	57	50
5	20	1040	712	361	756	261	399	866	142	121	55	51
6	19	831	599	340	576	239	481	814	204	121	56	51
7	19	730	511	360	449	234	884	778	339	126	68	54
8	20	588	429	454	356	306	1270	653	226	119	76	56
9	19	1410	399	1600	287	920	1100	574	182	128	64	53
10	19	967	372	1680	240	1060	901	547	156	156	54	52
11	19	661	393	1340	229	893	936	985	156	123	63	50
12	18	570	440	1720	271	843	1130	1130	140	116	57	49
13	18	549	379	5150	225	1230	1620	960	128	107	53	48
14	59	503	358	5400	187	1510	1490	724	172	102	52	48
15	105	450	389	2900	173	1430	1140	602	324	93	51	46
16	54	515	1480	1820	169	1100	880	533	385	92	52	43
17	39	443	1560	1260	5210	826	737	469	342	88	67	46
18	33	369	1430	1560	4440	1260	676	408	339	85	78	46
19	30	408	1360	1660	3150	1560	625	366	481	84	61	44
20	27	1420	1330	1180	1890	1780	679	339	518	83	55	43
21	85	733	1290	905	1150	1440	717	312	464	79	49	43
22	73	534	1200	726	790	1080	683	294	375	79	48	40
23	47	602	1070	618	590	833	678	274	318	77	46	40
24	40	877	992	549	505	690	685	262	275	75	46	41
25	35	1470	896	493	431	585	648	249	240	75	45	53
26	212	879	2750	487	371	518	579	230	217	76	47	64
27	4280	704	3970	555	328	484	558	216	191	78	47	232
28	2050	624	2360	1040	292	460	602	205	172	70	47	569
29	814	1280	1430	1660	---	440	611	194	160	67	51	523
30	467	1970	994	2850	---	415	598	192	156	63	48	411
31	2160	---	744	7800	---	400	---	177	---	63	58	---
TOTAL	10871	27756	35413	48413	35245	23815	22775	19051	7289	3101	1734	3015
MEAN	351	925	1142	1562	1259	768	759	615	243	100	55.9	100
MAX	4280	3230	3970	7800	6590	1780	1620	2490	518	156	78	569
MIN	18	369	358	340	169	233	344	177	111	63	45	40
AC-FT	21560	55050	70240	96030	69910	47240	45170	37790	14460	6150	3440	5980
CFSM	3.54	9.33	11.5	15.7	12.7	7.74	7.65	6.20	2.45	1.01	.56	1.01
IN.	4.08	10.41	13.28	18.15	13.22	8.93	8.54	7.14	2.73	1.16	.65	1.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1995, BY WATER YEAR (WY)

	244	985	1216	1253	1071	943	846	600	326	101	59.7	87.8
MEAN	753	2224	2897	2450	2441	2018	1600	1114	817	336	240	268
(WY)	1968	1974	1974	1970	1982	1972	1993	1971	1984	1983	1968	1971
MIN	20.8	57.6	110	157	208	204	382	182	63.1	36.8	20.9	28.0
(WY)	1988	1994	1977	1977	1977	1992	1968	1992	1992	1992	1992	1987

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1964 - 1995

ANNUAL TOTAL	191865	238478	643
ANNUAL MEAN	526	653	1113
HIGHEST ANNUAL MEAN			1974
LOWEST ANNUAL MEAN			311
HIGHEST DAILY MEAN	5200	7800	14900
LOWEST DAILY MEAN	18	18	14
ANNUAL SEVEN-DAY MINIMUM	19	19	14
ANNUAL RUNOFF (AC-FT)	380600	473000	465700
ANNUAL RUNOFF (CFSM)	5.30	6.59	6.48
ANNUAL RUNOFF (INCHES)	71.95	89.43	88.05
10 PERCENT EXCEEDS	1420	1470	1480
50 PERCENT EXCEEDS	267	375	356
90 PERCENT EXCEEDS	29	47	39

WILLAMETTE RIVER BASIN

237

14186100 GREEN PETER LAKE NEAR FOSTER, OR

LOCATION.--Lat 44°27'10", long 122°32'40", in NE 1/4 SE 1/4 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 sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by concrete, gravity-type dam with ogee spillway completed in 1966 by Corps of Engineers; controlled storage began Oct. 6, 1966. Total capacity, 428,100 acre-ft, 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, 426,700 acre-ft April 29, 1990, elevation, 1,014.61 ft; minimum contents, 116,900 acre-ft Dec. 15, 1972, elevation, 899.20 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 415,900 acre-ft May 21, elevation, 1,011.68 ft; minimum contents, 162,500 acre-ft Jan. 13, elevation, 923.29 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	1,015	428,100

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	964.44	965.63	959.96	934.73	958.53	970.72	991.39	1008.69	1006.32	1010.42	1004.23	996.62
2	965.56	963.89	959.50	932.20	962.91	971.12	991.88	1009.30	1006.27	1010.35	1004.03	996.33
3	964.69	960.10	956.48	929.37	962.48	971.79	992.35	1008.55	1006.14	1010.26	1003.81	996.05
4	963.72	957.02	951.95	926.89	959.85	972.45	992.88	1008.05	1006.06	1010.17	1003.78	995.77
5	962.75	955.38	950.54	925.34	956.62	972.96	993.46	1007.41	1006.04	1009.99	1003.52	995.01
6	961.79	953.95	948.82	923.70	954.61	973.38	994.06	1007.31	1006.42	1009.91	1003.33	994.22
7	960.81	953.57	946.90	923.58	953.82	973.80	994.06	1007.11	1006.66	1009.86	1003.10	993.45
8	959.83	953.30	944.64	923.69	953.90	974.15	996.65	1006.76	1006.84	1009.78	1002.87	992.64
9	958.83	953.78	942.36	925.22	953.76	975.13	997.96	1007.18	1006.94	1009.74	1002.61	991.85
10	957.82	953.88	940.55	925.78	953.53	976.31	998.72	1007.54	1007.10	1009.69	1002.38	991.05
11	956.81	953.53	938.87	924.35	953.53	977.64	999.31	1008.42	1007.13	1009.58	1002.13	990.24
12	955.86	953.04	938.02	923.31	953.77	978.93	1000.18	1008.38	1007.01	1009.42	1001.88	989.42
13	954.92	952.56	937.01	930.53	952.84	980.33	1001.85	1008.08	1006.91	1009.25	1001.62	988.60
14	954.13	952.08	935.96	941.32	951.75	981.68	1002.33	1008.07	1007.05	1009.05	1001.36	987.76
15	954.00	951.37	934.97	944.43	950.64	982.58	1002.21	1008.66	1007.51	1008.79	1001.10	986.91
16	953.75	950.97	936.10	944.89	949.16	983.08	1001.84	1009.40	1007.81	1008.62	1000.86	986.08
17	953.49	949.98	940.35	944.45	954.56	983.29	1002.05	1010.01	1008.19	1008.45	1000.65	985.55
18	953.33	948.80	941.87	944.24	959.37	984.04	1002.55	1010.50	1008.57	1008.22	1000.42	984.35
19	953.18	948.10	942.01	943.85	962.58	985.06	1003.23	1010.83	1009.30	1008.00	1000.16	983.49
20	953.04	949.20	942.39	942.84	963.76	986.46	1004.24	1011.30	1009.97	1007.75	999.91	982.63
21	953.03	949.35	942.30	941.30	963.75	987.36	1005.17	1011.37	1009.90	1007.50	999.64	981.76
22	952.94	949.15	941.12	939.44	964.43	987.45	1005.66	1010.36	1010.01	1007.26	999.38	980.85
23	952.83	949.15	939.63	937.27	965.14	987.64	1006.13	1009.33	1010.17	1006.99	999.10	979.95
24	952.72	948.98	938.00	935.76	966.02	987.69	1006.57	1008.27	1010.35	1006.73	998.83	979.09
25	952.60	949.58	932.19	935.08	967.25	987.82	1006.90	1007.17	1010.49	1006.47	998.54	978.29
26	952.75	949.46	936.95	934.35	968.29	988.05	1007.16	1006.08	1010.61	1006.22	998.27	977.48
27	959.77	949.21	939.98	933.70	969.20	988.40	1007.48	1006.18	1010.69	1005.92	997.99	976.88
28	961.34	948.80	940.82	933.76	970.01	989.07	1007.78	1006.26	1010.74	1005.64	997.73	976.72
29	960.83	949.52	940.22	934.75	---	989.70	1007.96	1006.32	1010.59	1005.36	997.47	976.44
30	959.93	954.55	938.84	936.50	---	990.28	1008.09	1006.36	1010.49	1005.09	997.20	975.77
31	963.14	---	936.97	946.65	---	990.85	---	1006.35	---	1004.77	996.91	---
MAX	965.56	965.63	959.96	946.65	970.01	990.85	1008.09	1011.37	1010.74	1010.42	1004.23	996.62
MIN	952.60	948.10	932.19	923.31	949.16	970.72	991.39	1006.08	1006.04	1004.77	996.91	975.77
(†)	259900	236400	192800	216100	279600	344200	403000	396800	411600	391200	364300	296800
(†)	-11800	-23500	-43600	+23300	+63500	+64600	+58800	-6200	+14800	-20400	-26900	-67500

CAL YR 1994 MAX 1011.04 MIN 924.72 AC-FT† +31100

WTR YR 1995 MAX 1011.37 MIN 923.31 AC-FT† +25100

† 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 NW 1/4 NE 1/4 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 sea level (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, 60,350 acre-ft Apr. 28, 1990, elevation, 640.66 ft; minimum contents, 26,590 acre-ft Nov. 15, 16, 1971, elevation, 607.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 57,300 acre-ft Aug. 2, elevation, 638.18 ft; minimum contents, 29,410 acre-ft Jan. 8, elevation, 611.13 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 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	637.40	619.19	613.33	613.17	615.83	619.44	622.68	615.21	636.90	636.99	637.81	636.86
2	636.97	615.30	613.11	613.17	614.75	619.73	622.21	619.93	636.87	636.97	637.69	636.81
3	636.70	613.92	613.15	613.25	613.96	619.37	621.68	616.50	637.02	636.91	637.57	636.79
4	636.71	614.53	613.46	613.59	615.13	619.73	621.23	614.63	637.14	636.87	636.95	636.75
5	636.85	613.71	613.11	613.83	615.45	620.11	620.45	614.55	637.45	637.02	636.95	636.97
6	637.05	613.67	613.48	614.20	615.45	620.27	619.38	614.81	636.97	636.95	636.91	637.19
7	637.27	613.20	613.53	612.15	615.59	619.85	619.38	614.69	637.47	636.89	637.00	637.39
8	637.39	613.62	613.40	612.60	615.13	619.43	619.06	614.65	637.38	636.83	637.04	637.62
9	637.44	614.08	613.18	614.01	615.77	620.05	618.99	614.26	637.26	636.84	637.05	637.54
10	637.49	613.44	612.99	613.03	616.32	621.41	617.77	614.49	636.87	636.88	637.08	637.30
11	637.54	612.61	612.78	613.12	616.53	622.53	615.83	614.70	636.77	636.80	637.13	637.15
12	637.27	613.24	612.93	613.25	617.10	623.42	614.77	614.55	637.01	636.79	637.13	637.09
13	637.04	613.39	614.16	614.79	617.61	623.87	614.37	614.45	637.27	636.77	637.15	637.08
14	637.25	612.99	614.25	614.89	617.67	624.24	614.50	614.45	637.40	636.84	637.15	637.09
15	635.99	613.61	614.14	612.99	617.84	625.61	614.61	614.17	637.36	637.02	637.13	637.09
16	634.66	614.35	614.57	613.03	617.01	625.79	614.53	614.27	637.35	636.95	637.14	637.09
17	633.67	614.35	614.31	614.19	617.54	625.34	614.49	614.31	636.99	636.86	637.17	636.18
18	632.58	614.02	613.51	613.11	617.72	625.52	614.71	614.07	637.21	636.89	637.25	637.28
19	631.50	613.41	611.27	613.15	617.14	626.24	614.51	614.59	637.48	636.93	637.26	637.26
20	630.37	615.23	613.51	613.05	617.21	626.73	614.54	614.25	637.54	636.98	637.27	637.29
21	629.31	614.50	613.73	613.09	618.98	626.76	614.61	615.11	637.37	636.98	637.24	637.27
22	628.25	614.15	613.41	613.07	619.19	626.80	614.46	620.30	637.13	636.98	637.21	637.27
23	627.15	613.65	613.17	613.13	619.30	626.40	614.38	624.83	636.91	636.98	637.19	637.27
24	625.93	614.61	613.09	613.21	619.42	625.78	614.48	629.55	637.01	636.95	637.15	637.30
25	625.14	613.67	613.21	613.21	619.63	624.29	614.41	633.74	637.03	636.94	637.11	637.41
26	624.41	613.29	613.39	613.86	619.71	623.97	614.25	637.33	636.96	636.90	637.08	637.57
27	624.83	613.74	613.17	612.91	619.73	624.07	614.79	637.35	636.83	637.03	637.02	637.23
28	624.60	614.28	612.03	614.03	619.67	623.95	614.35	637.28	636.57	636.97	637.00	636.81
29	623.31	613.13	612.63	615.02	---	623.71	614.74	637.18	636.91	636.92	636.97	637.45
30	623.09	613.37	613.01	615.39	---	623.41	614.66	637.01	636.99	636.87	636.91	636.88
31	622.47	---	613.30	616.02	---	623.07	---	637.00	---	636.93	636.91	---
MEAN	632.18	614.01	613.30	613.60	617.23	623.25	616.49	620.78	637.11	636.92	637.15	637.14
MAX	637.54	619.19	614.57	616.02	619.73	626.80	622.68	637.35	637.54	637.03	637.81	637.62
MIN	622.47	612.61	611.27	612.15	613.96	619.37	614.25	614.07	636.57	636.77	636.91	636.18
(†)	39990	31400	31340	33810	37250	40590	32560	55870	55860	55790	55760	55730
(†)	-16760	-8590	-60	+2470	+3440	+3340	-8030	+23310	-10	-70	-30	-30

CAL YR 1994 MEAN 624.47 MAX 637.77 MIN 611.27 AC-FT† +160
WTR YR 1995 MEAN 624.98 MAX 637.81 MIN 611.27 AC-FT† -1020

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

† Change in contents, in acre-feet.

14187000 WILEY CREEK NEAR FOSTER, OR

LOCATION.--Lat 44°22'20", long 122°37'20", in NE 1/4 NE 1/4 sec.12, T.14 S., R.1 E., Linn County, Hydrologic Unit 17090006, on right bank 0.5 mi downstream from Little Wiley Creek, 3.5 mi southeast of Foster, and at mile 4.4.

DRAINAGE AREA.--51.8 mi².

PERIOD OF RECORD.--October 1947 to July 1973, July 1988 to current year.

REVISED RECORDS.--WDR OR-90-2: 1989 (M), WDR OR-93-1: 1992.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 920 ft above sea level, from topographic map. Prior to April 6, 1965, water-stage recorder at present site at datum of 718.08 ft above sea level (Corps of Engineers bench mark). Apr. 6, 1965, to July 1973, water-stage recorder at present site at datum 2.00 ft lower than previous datum.

REMARKS.--Records good. Discharge for period Feb. 4 to March 15 and March 26 to June 2 computed from data obtained through U.S. Army Corps of Engineers Columbia River Operational Hydromet System (CROHMS) database. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--32 years (water years 1948-72, 1989-95), 212 ft³/s, 55.70 in/yr, 153,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,640 ft³/s Jan. 21, 1972, gage height, 9.28 ft, from rating curve extended above 3,700 ft³/s; maximum gage height, 11.80 ft, Dec. 21, 1964 (backwater from debris), datum then in use; minimum discharge, 2.9 ft³/s August 28-31, 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Jan. 13	2300	*3,120	*6.42	No other peak greater than base discharge.			
Minimum discharge, 6.4 ft ³ /s Sept. 23-26.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	805	1330	182	1410	118	151	343	62	48	15	11
2	8.6	332	907	159	1140	108	136	1040	54	46	14	10
3	8.0	198	628	141	629	107	126	597	49	46	14	10
4	7.4	423	425	128	409	142	113	424	48	44	14	11
5	7.0	396	316	120	333	151	122	349	71	41	14	11
6	6.8	275	265	126	294	130	133	325	88	43	13	12
7	6.7	229	235	129	213	120	222	296	109	44	21	11
8	6.9	190	203	145	185	131	384	267	75	43	23	11
9	6.9	421	184	497	162	223	424	255	62	60	17	11
10	6.7	308	178	571	145	233	337	238	59	53	17	9.4
11	6.7	221	203	512	139	225	299	306	63	42	21	9.3
12	6.7	204	236	550	168	214	336	332	53	36	18	9.2
13	6.7	176	190	1550	164	246	518	296	54	34	16	8.8
14	35	153	169	2100	139	334	502	252	89	32	e13	8.2
15	38	141	176	1130	133	384	417	220	161	30	e9.0	8.0
16	17	182	434	767	137	303	328	197	124	28	e10	7.9
17	13	216	717	555	918	248	286	179	111	27	e21	7.9
18	11	171	702	581	1260	287	247	161	123	24	25	7.9
19	10	178	568	518	680	317	228	150	160	24	18	8.3
20	9.8	606	461	415	455	471	e210	138	188	24	16	8.3
21	14	337	362	339	335	458	e210	124	161	23	14	7.6
22	16	241	300	282	267	356	e190	117	136	22	13	6.7
23	13	279	260	248	224	298	e170	112	116	23	12	6.5
24	11	342	233	224	193	273	e180	104	100	21	13	6.4
25	10	578	214	196	172	249	177	93	88	20	12	6.4
26	14	396	252	185	154	219	160	85	78	20	11	12
27	479	334	403	179	138	207	174	81	70	21	11	44
28	345	291	401	188	127	190	184	83	61	19	11	68
29	135	363	315	215	---	171	195	76	55	17	11	86
30	85	851	255	308	---	164	200	69	51	17	11	56
31	240	---	213	942	---	142	---	66	---	16	11	---
TOTAL	1590.9	9837	11735	14182	10723	7219	7359	7375	2719	988	459.0	490.8
MEAN	51.3	328	379	457	383	233	245	238	90.6	31.9	14.8	16.4
MAX	479	851	1330	2100	1410	471	518	1040	188	60	25	86
MIN	6.7	141	169	120	127	107	113	66	48	16	9.0	6.4
AC-FT	3160	19510	23280	28130	21270	14320	14600	14630	5390	1960	910	974
CFSM	.99	6.33	7.31	8.83	7.39	4.50	4.74	4.59	1.75	.62	.29	.32
IN.	1.14	7.06	8.43	10.18	7.70	5.18	5.28	5.30	1.95	.71	.33	.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1995, BY WATER YEAR (WY)

	MEAN	84.0	268	390	444	377	343	271	186	90.2	32.9	17.4	19.1
MAX	397	620	1107	842	944	625	490	353	286	75.9	53.4	67.8	
(WY)	1951	1951	1965	1953	1961	1972	1955	1963	1993	1969	1968	1968	
MIN	8.08	15.7	109	82.1	112	85.0	133	62.8	20.2	11.8	4.40	5.15	
(WY)	1989	1953	1960	1963	1973	1992	1968	1973	1992	1992	1992	1992	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1948 - 1995

ANNUAL TOTAL	55380.2	74677.7	212
ANNUAL MEAN	152	205	318
HIGHEST ANNUAL MEAN			1956
LOWEST ANNUAL MEAN			1994
HIGHEST DAILY MEAN	1330	Dec 1	6410
LOWEST DAILY MEAN	6.1	Sep 24	2.9
ANNUAL SEVEN-DAY MINIMUM	6.4	Sep 22	3.0
ANNUAL RUNOFF (AC-FT)	109800	148100	153800
ANNUAL RUNOFF (CFSM)	2.93	3.95	4.10
ANNUAL RUNOFF (INCHES)	39.77	53.63	55.70
10 PERCENT EXCEEDS	390	456	485
50 PERCENT EXCEEDS	87	142	118
90 PERCENT EXCEEDS	8.1	11	12

e Estimated

WILLAMETTE RIVER BASIN

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR

LOCATION.--Lat 44°24'45", long 122°41'15", in SE 1/4 NE 1/4 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. Elevation of gage is 560 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since October 1966 by Green Peter Lake (station 14186100) and since December 1966 by Foster Lake (station 14186600). No diversion upstream from station.

AVERAGE DISCHARGE.--22 years (water years 1974-95), 2,768 ft³/s, 67.49 in/yr, 2,005,000 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft³/s Apr. 28, 1990, gage height, 16.75 ft; minimum discharge, 410 ft³/s June 3, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,000 ft³/s Jan. 13, 14, gage height, 13.14 ft; minimum discharge, 581 ft³/s May 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1620	10400	12700	5940	10800	949	976	2890	967	895	759	752
2	1660	10000	12800	5780	11100	948	973	8810	950	892	754	753
3	1590	9710	12500	5680	10600	942	966	10700	947	895	757	754
4	1480	10100	12300	4970	10500	975	938	7570	950	893	749	753
5	1430	7770	6440	3620	10300	979	1180	6360	973	887	750	1430
6	1380	5810	5860	3580	7720	956	1580	4910	988	885	754	1470
7	1410	4180	5800	2950	5120	1140	1680	4720	1010	901	762	1470
8	1440	2790	5750	1830	3310	1440	1880	4410	968	890	765	1480
9	1510	3550	5700	3000	2760	1540	2130	2780	957	910	753	1660
10	1510	3770	4800	6450	2500	1550	3030	2440	959	896	756	1750
11	1510	3640	4790	7580	2240	1100	3770	2750	967	890	759	1680
12	1590	2990	3780	7720	2130	1060	3540	4710	957	885	754	1620
13	1560	2970	3030	10900	3480	1660	4580	4730	948	884	750	1610
14	1490	2900	3320	12300	3530	2720	5220	3520	988	879	750	1610
15	1460	2700	3520	10700	3520	3450	5170	1980	1070	874	753	1610
16	1390	2780	4390	8830	4260	3530	4760	1250	1030	876	753	1610
17	1140	3810	6830	7130	8080	3480	3160	1160	1010	875	760	1610
18	1020	3810	8680	8340	11200	3410	2210	1340	1020	863	762	1610
19	1010	3720	8600	7420	9070	3570	1790	1080	1070	858	754	1610
20	1010	4390	5340	6880	7510	3750	1470	1060	1430	864	753	1610
21	1000	4090	5610	6410	5870	3920	1460	1040	2530	865	752	1610
22	1010	3270	6560	6150	3990	4400	2210	1040	1880	867	750	1620
23	1000	3530	6380	5940	2900	3480	2090	1020	1490	867	753	1620
24	1000	3950	6170	4760	2120	3520	1980	766	1030	866	753	1630
25	809	5730	5970	3400	1190	3250	2170	997	987	865	753	1630
26	805	4770	6630	3030	1080	2310	2200	992	971	866	754	1630
27	2210	4130	8640	3750	1010	1620	1980	982	968	867	754	2030
28	4870	4090	8300	2940	956	1020	2520	983	954	869	753	2300
29	4350	6540	6650	3550	---	1000	2410	982	951	864	754	1820
30	3240	10500	6280	5490	---	992	2720	974	945	867	753	2690
31	4230	---	5920	10000	---	978	---	970	---	869	754	---
TOTAL	52734	152390	210040	187020	148846	65639	72743	89916	32865	27224	23390	47032
MEAN	1701	5080	6775	6033	5316	2117	2425	2901	1095	878	755	1568
MAX	4870	10500	12800	12300	11200	4400	5220	10700	2530	910	765	2690
MIN	805	2700	3030	1830	956	942	938	766	945	858	749	752
AC-FT	104600	302300	416600	371000	295200	130200	144300	178300	65190	54000	46390	93290
MEAN†	1236	4542	6063	6452	6521	3221	3280	3177	1344	545	316	433
CFSM†	2.22	8.15	10.89	11.58	11.71	5.78	5.89	5.70	2.41	0.98	0.57	0.78
IN.†	2.56	9.10	12.55	13.36	12.19	6.67	6.57	6.58	2.69	1.13	0.66	0.87
AC-FT†	76040	270200	372900	396800	362100	198100	195100	195400	79980	33530	19460	25760

CAL YR 1994 TOTAL 869365 MEAN 2382 MAX 12800 MIN 601 AC-FT 1724000 MEAN† 2424 CFSM† 4.35 IN.† 59.08 AC-FT† 1755000
WTR YR 1995 TOTAL 1109839 MEAN 3041 MAX 12800 MIN 749 AC-FT 2201000 MEAN† 3073 CFSM† 5.52 IN.† 74.90 AC-FT† 2225000

† Adjusted for change in contents in Green Peter Lake and Foster Lake.

WILLAMETTE RIVER BASIN

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14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1973 to current year.

INSTRUMENTATION.--Temperature recorder since July 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 15.5°C at times in 1975, 1978, 1981, 1987, 1990, 1993; minimum recorded, 2.5°C Dec. 30, 31, 1978, Feb. 1, 1980, Feb. 7, 1985.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.0°C June 28, July 19, 20, Aug. 3; minimum, 5.0°C Jan. 5, Feb. 14.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

WILLAMETTE RIVER BASIN

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

WILLAMETTE RIVER BASIN

243

14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR

LOCATION.--Lat 44°29'55", long 122°49'20", in SW 1/4 NW 1/4 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.

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 above sea level. 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.--No estimated daily discharges. Records good. Flow regulated since October 1966 by Green Peter Lake (station 14186100) and since December 1966 by Foster Lake (station 14186600). Some diversion upstream from station. Continuous water-quality records for the period October 1963 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--73 years (water years 1906, 1924-95), 2,906 ft³/s, 2,105,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,200 ft³/s Dec. 22, 1964, gage height, 24.50 ft; minimum discharge, 61 ft³/s Oct. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,200 ft³/s Jan. 14, gage height, 9.71 ft; minimum discharge, 651 ft³/s May 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1670	10600	12700	5880	11300	1130	1160	3010	1040	934	773	721
2	1760	9810	12800	5740	11200	1110	1140	8100	1020	915	735	720
3	1690	9410	12400	5620	10500	1100	1120	10400	1010	912	735	727
4	1590	9900	12000	5180	10200	1200	1100	7820	1020	907	734	724
5	1530	8210	7080	3740	9980	1240	1230	6270	1060	903	729	1270
6	1450	5930	6090	3700	8010	1170	1740	5050	1080	902	738	1470
7	1480	4630	5990	3230	5360	1250	1900	4770	1110	916	749	1470
8	1500	2990	5840	2230	3640	1640	2160	4430	1040	905	755	1480
9	1590	3690	5760	3040	3090	1820	2420	3110	1020	929	739	1610
10	1590	3880	5040	6350	2730	1870	3010	2520	1020	924	747	1770
11	1590	3840	5000	7650	2500	1470	3890	2890	1040	906	756	1700
12	1670	3180	4310	7730	2410	1330	3750	4400	1010	891	741	1640
13	1660	3110	3260	11100	3470	1780	4480	4870	1000	890	741	1620
14	1600	3050	3490	13800	3660	2910	5220	3820	1060	884	733	1600
15	1580	2830	3730	11500	3630	3580	5140	2290	1200	875	736	1610
16	1510	3050	4420	9400	4130	3700	4840	1410	1140	875	742	1610
17	1230	4050	6520	7490	7470	3630	3620	1350	1090	871	749	1610
18	1090	4060	8610	8820	11100	3730	2540	1500	1110	863	756	1610
19	1050	3920	8570	7700	9080	3840	2040	1220	1150	857	741	1610
20	1050	4760	5740	7070	7470	4090	1790	1170	1500	856	740	1620
21	1050	4390	5420	6550	6170	4120	1740	1150	2490	855	733	1610
22	1050	3620	6470	6230	4160	4580	2340	1130	2120	856	733	1630
23	1050	3730	6310	5990	3320	3810	2320	1110	1650	856	732	1630
24	1040	4200	6080	5040	2390	3680	2190	850	1150	853	734	1640
25	873	5760	5920	3810	1600	3520	2320	1080	1040	854	734	1660
26	833	5280	6250	3250	1320	2640	2350	1070	1010	853	736	1660
27	1910	4430	8560	3850	1240	2060	2220	1060	1010	856	738	1920
28	4700	4370	8180	3330	1150	1260	2670	1050	990	854	736	2380
29	4600	6030	6780	3670	---	1220	2670	1050	977	857	738	1960
30	3310	10400	6270	5150	---	1190	2880	1040	969	855	734	2570
31	3830	---	5930	9730	---	1170	---	1030	---	857	726	---
TOTAL	54126	157110	211520	193570	152280	72840	77990	92020	35126	27321	22943	46852
MEAN	1746	5237	6823	6244	5439	2350	2600	2968	1171	881	740	1562
MAX	4700	10600	12800	13800	11300	4580	5220	10400	2490	934	773	2570
MIN	833	2830	3260	2230	1150	1100	1100	850	969	853	726	720
AC-FT	107400	311600	419500	383900	302000	144500	154700	182500	69670	54190	45510	92930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1995, BY WATER YEAR (WY)

	MEAN	1515	4286	5621	5266	4707	3947	3602	2709	1663	637	466	731
MAX	5530	10340	15470	12220	12070	10530	7935	5875	5906	1526	1239	2769	
(WY)	1969	1907	1965	1953	1961	1932	1937	1933	1933	1983	1969	1968	
MIN	143	111	1068	713	597	865	1056	792	437	176	126	144	
(WY)	1926	1930	1945	1977	1977	1992	1926	1987	1940	1926	1940	1965	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1905 - 1995

ANNUAL TOTAL	906402	1143698											
ANNUAL MEAN	2483	3133											
HIGHEST ANNUAL MEAN										2906			
LOWEST ANNUAL MEAN										4666			1974
HIGHEST DAILY MEAN	12800	Dec 2	13800	Jan 14	77000	Dec 22	1964			1407			1977
LOWEST DAILY MEAN	564	May 25	720	Sep 2	67	Oct 8	1966			1407			1977
ANNUAL SEVEN-DAY MINIMUM	632	Aug 22	727	Aug 29	75	Oct 7	1966			1407			1977
ANNUAL RUNOFF (AC-FT)	1798000		2269000		2105000								
10 PERCENT EXCEEDS	6310		7470		6700								
50 PERCENT EXCEEDS	1340		1770		1770								
90 PERCENT EXCEEDS	697		843		265								

WILLAMETTE RIVER BASIN

14187600 LEBANON SANTIAM CANAL NEAR LEBANON, OR

LOCATION.--Lat 44°30'54", long 122°51'49", in SW 1/4 NW 1/4 sec.19, T.12 S., R.1 W., Linn County, Hydrologic Unit 17090006, near right bank, on downstream side of bridge on Headgate Road, 2.2 mi east of Lebanon.

PERIOD OF RECORD.--May 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 370 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow completely regulated.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 191 ft³/s Mar. 8, 1994; minimum daily discharge, 25 ft³/s Jan. 18, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	75	82	90	e79	91	96	115	129	e140	141	142
2	141	94	91	89	e92	90	95	129	e125	e140	140	143
3	141	106	90	98	e95	88	94	113	e125	139	140	143
4	140	83	88	104	e102	90	93	106	e125	139	143	143
5	144	84	86	95	e102	92	98	110	e125	140	150	149
6	145	104	94	93	e104	89	111	113	113	140	150	143
7	142	97	94	86	e116	91	105	112	124	140	151	143
8	139	84	93	77	e119	98	112	110	137	140	151	143
9	141	94	92	81	e112	84	119	107	136	142	151	145
10	141	102	88	87	e106	85	111	110	136	141	149	147
11	141	102	88	80	e102	79	106	119	137	141	144	147
12	142	97	88	80	e79	77	100	123	136	141	144	145
13	143	96	83	e69	e58	85	e110	107	136	140	143	124
14	145	96	91	e75	e69	99	e115	100	133	140	143	115
15	144	73	102	e70	e57	97	113	86	131	141	143	142
16	143	81	96	e60	e65	104	112	87	130	141	144	142
17	136	108	88	e65	e65	109	104	99	129	141	144	142
18	119	97	94	e70	e60	105	e100	102	129	141	144	142
19	106	95	93	e76	e75	104	e95	90	129	141	143	142
20	141	102	84	e55	e75	78	97	88	135	141	144	141
21	141	99	87	e98	e80	76	100	87	137	142	145	141
22	140	95	93	e97	e90	98	114	88	125	142	145	141
23	140	93	90	e61	114	98	115	86	127	142	146	141
24	139	87	89	e108	101	102	91	96	123	142	146	141
25	134	94	88	e101	88	107	65	127	121	142	142	142
26	134	92	89	e120	82	98	106	128	129	142	142	140
27	131	87	96	e123	88	95	105	128	e140	143	142	140
28	118	87	97	e110	92	86	111	128	e140	143	142	136
29	106	89	94	e93	---	90	111	128	e135	143	143	123
30	99	86	92	e79	---	97	114	129	e140	143	143	128
31	98	---	90	e65	---	96	---	130	---	144	143	---
TOTAL	4154	2779	2810	2655	2467	2878	3118	3381	3917	4377	4481	4196
MEAN	134	92.6	90.6	85.6	88.1	92.8	104	109	131	141	145	140
MAX	145	108	102	123	119	109	119	130	140	144	151	149
MIN	98	73	82	55	57	76	65	86	113	139	140	115
AC-FT	8240	5510	5570	5270	4890	5710	6180	6710	7770	8680	8890	8320

CAL YR 1994 TOTAL 47017 MEAN 129 MAX 191 MIN 25 AC-FT 93260
WTR YR 1995 TOTAL 41213 MEAN 113 MAX 151 MIN 55 AC-FT 81750

e Estimated

WILLAMETTE RIVER BASIN

245

14188610 SCHAFER CREEK NEAR LACOMB, OR

LOCATION.--Lat 44°37'11", long 122°27'53", in NE 1/4 SE 1/4 sec.8, T.11 S., R.3 E., Linn County, Hydrologic Unit 17090006, on right bank, 40 ft upstream from Crabtree Creek, and 8.0 mi east of LaComb.

DRAINAGE AREA.--1.03 mi².

PERIOD OF RECORD.--July 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,900 ft above sea level, from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--2 years (water years 1994-95), 7.71 ft³/s, 101.67 in/yr, 5,580 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 170 ft³/s Oct. 31, 1994, gage height, 6.52 ft; minimum discharge, 0.09 ft³/s Sept. 30, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 170 ft³/s Oct. 31, gage height, 6.52 ft; minimum discharge, 0.15 ft³/s Oct. 9-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	50	74	3.7	113	3.0	3.3	18	1.3	1.3	.37	.28
2	.20	14	23	2.9	48	2.5	3.0	50	1.2	1.2	.36	.28
3	.18	7.3	10	2.4	20	2.3	3.2	20	1.1	1.1	.35	.27
4	.18	9.0	6.2	2.1	18	2.2	4.2	11	1.1	1.1	.34	.26
5	.17	8.3	4.4	1.8	15	1.9	5.1	9.5	2.1	.99	.32	.27
6	.17	7.4	3.5	1.7	e11	1.7	5.9	9.3	3.2	.99	.36	.27
7	.17	6.2	2.8	2.0	e8.0	1.6	16	8.3	4.4	.97	.71	.29
8	.16	5.8	2.3	3.6	e6.0	2.2	14	7.1	3.2	.95	.57	.28
9	.16	28	2.1	35	e4.6	12	9.0	6.4	2.5	1.2	.49	.27
10	.15	14	1.9	32	e3.6	19	7.1	6.6	2.2	1.2	.47	.27
11	.16	7.8	1.9	23	e3.2	17	11	14	2.2	1.1	.49	.26
12	.16	5.4	1.8	30	e3.4	13	20	15	1.9	.98	.43	.26
13	.16	4.2	1.6	85	e3.0	26	35	12	1.8	.91	.40	.25
14	1.0	3.6	1.5	91	e2.6	29	15	9.0	2.4	.86	.38	.24
15	.92	3.2	1.7	33	e2.4	20	8.8	7.9	4.3	.80	.38	.24
16	.66	2.9	10	14	e2.6	12	6.1	6.6	4.0	.74	.41	.24
17	.55	2.5	36	8.1	e80	8.1	5.0	5.3	4.4	.68	.62	.25
18	.49	2.1	36	16	e85	23	4.4	4.2	6.9	.63	.57	.25
19	.44	4.9	21	15	e70	20	3.8	3.6	9.6	.60	.51	.25
20	.42	22	18	9.6	e42	28	3.8	3.6	9.3	.56	.46	.25
21	1.6	9.7	17	6.8	e26	14	3.7	3.5	8.2	.53	.41	.24
22	1.2	6.0	13	5.0	e16	8.3	4.1	3.4	6.3	.51	.38	.24
23	.90	5.7	11	4.1	e12	5.4	5.9	3.1	4.8	.50	.37	.24
24	.76	8.5	9.8	3.6	e8.5	4.0	9.4	2.8	3.6	.48	.35	.24
25	.68	14	8.8	3.4	6.8	3.1	9.4	2.6	2.9	.46	.34	.66
26	2.4	8.9	51	3.6	5.5	2.5	8.4	2.3	2.4	.46	.31	.69
27	89	6.2	66	5.3	4.6	2.2	8.4	2.0	2.1	.45	.30	2.6
28	39	4.3	33	12	3.7	2.0	9.5	1.9	1.8	.43	.30	7.8
29	15	31	14	23	---	2.1	8.9	1.8	1.5	.41	.33	9.5
30	7.9	86	7.6	46	---	2.3	8.0	1.5	1.4	.39	.29	13
31	61	---	5.0	110	---	2.7	---	1.4	---	.38	.29	---
TOTAL	226.15	388.9	495.9	634.7	624.5	293.1	259.4	253.7	104.1	23.86	12.66	40.44
MEAN	7.30	13.0	16.0	20.5	22.3	9.45	8.65	8.18	3.47	.77	.41	1.35
MAX	89	86	74	110	113	29	35	50	9.6	1.3	.71	13
MIN	.15	2.1	1.5	1.7	2.4	1.6	3.0	1.4	1.1	.38	.29	.24
AC-FT	449	771	984	1260	1240	581	515	503	206	47	25	80
CFSM	7.08	12.6	15.5	19.9	21.7	9.18	8.39	7.95	3.37	.75	.40	1.31
IN.	8.17	14.05	17.91	22.92	22.55	10.59	9.37	9.16	3.76	.86	.46	1.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	MEAN	3.81	6.97	14.5	18.2	15.8	11.0	10.2	6.01	4.84	.63	.28	.79
MAX	7.30	13.0	16.0	20.5	22.3	12.6	11.8	8.18	6.21	.77	.41	1.35	
(WY)	1995	1995	1995	1995	1995	1994	1994	1995	1994	1995	1995	1995	
MIN	.33	.97	12.9	16.0	9.22	9.45	8.65	3.84	3.47	.49	.16	.23	
(WY)	1994	1994	1994	1994	1994	1995	1995	1994	1995	1994	1994	1994	1994

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1994 - 1995

ANNUAL TOTAL	2939.36	3357.41	
ANNUAL MEAN	8.05	9.20	7.71
HIGHEST ANNUAL MEAN			9.20
LOWEST ANNUAL MEAN			6.22
HIGHEST DAILY MEAN	89	Oct 27	113
LOWEST DAILY MEAN	.12	Aug 28	.15
ANNUAL SEVEN-DAY MINIMUM	.12	Aug 27	.16
ANNUAL RUNOFF (AC-FT)	5830	6660	5580
ANNUAL RUNOFF (CFSM)	7.82	8.93	7.48
ANNUAL RUNOFF (INCHES)	106.16	121.26	101.67
10 PERCENT EXCEEDS	22	23	20
50 PERCENT EXCEEDS	2.5	3.2	2.3
90 PERCENT EXCEEDS	.17	.29	.21

e Estimated

WILLAMETTE RIVER BASIN

14189000 SANTIAM RIVER AT JEFFERSON, OR

LOCATION.--Lat 44°42'55", long 123°00'40", in SE 1/4 sec.11, T.10 S., R.3 W., Marion County, Hydrologic Unit 17090005, on right bank 350 ft upstream from Southern Pacific railroad bridge at Jefferson, 2.1 mi downstream from confluence of North and South Santiam Rivers, and at mile 9.62.

DRAINAGE AREA.--1,790 mi², approximately.

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, WDR OR-93-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 199.63 ft above sea level. Prior to Sept. 22, 1940, nonrecording gages at sites within 350 ft downstream at datum 3.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1953 by Detroit Lake (station 14180500), since 1966 by Green Peter Lake (station 14186100) and by Foster Lake (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 town of West Stayton; some return flow reaches North Santiam River upstream from station. Albany power canal diverts from South Santiam River at Lebanon; return flow reaches Willamette River at Albany. Continuous water-quality records for the period October 1963 to September 1987 have been collected at this location. Periodic suspended sediment data are available for the period October 1991 to September 1993.

AVERAGE DISCHARGE.--65 years (water years 1908-16, 1940-95), 7,649 ft³/s, 5,542,000 acre-ft/yr (unadjusted). 27 years (water years 1967-95), 7,504 ft³/s, 5,436,000 acre-ft/yr (regulated).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft³/s Dec. 22, 1964, gage height, 24.22 ft; minimum discharge 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, 51,600 ft³/s Feb. 18, gage height, 15.61 ft; minimum discharge, 1,130 ft³/s Aug. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3330	34900	38100	13600	31200	5200	3790	6970	2880	2140	1310	1240
2	3470	27300	31200	11200	30600	4470	3680	13500	2800	2090	1210	1240
3	3440	24400	26700	10700	30200	3960	3550	19900	2740	2110	1210	1370
4	3400	24600	23200	9840	28500	4130	3560	16700	2750	2100	1180	1420
5	3350	24200	18200	7740	27100	4410	3590	13800	2890	2080	1150	1700
6	3430	16300	15200	7310	25300	4020	4070	12700	3150	2030	1170	2240
7	3630	13000	15200	6960	20200	3820	4730	11800	3520	2030	1240	2280
8	3600	9190	14300	6030	14700	4200	6410	10800	3510	2140	1360	2330
9	3630	11000	13700	7750	11700	5790	7060	8140	3290	2340	1280	2340
10	3660	11200	12400	14200	9810	6990	6830	6750	3020	2520	1260	2540
11	3700	10100	11900	15700	8560	6520	7950	7440	2970	2400	1460	2500
12	3770	9160	12000	16100	7930	5710	8260	9560	2850	2400	1390	2410
13	3760	8750	9400	24500	8760	6140	10400	12200	2700	2290	1340	2390
14	3840	8490	8620	43600	8850	9360	12100	10600	2680	1940	1310	2400
15	3970	8140	8250	32000	8810	10700	11700	7190	2970	1830	1280	2370
16	3890	8970	9250	27100	9070	10600	11100	5660	3010	1790	1310	2400
17	3680	11400	16500	20700	19300	9710	9780	5180	3040	1720	1480	2410
18	3430	11300	18700	22000	41400	10200	7370	5000	3440	1670	1600	2420
19	3370	10100	17100	20200	29700	12100	6070	4540	3690	1620	1500	3050
20	3330	13400	15400	17700	23200	12700	5800	4220	4530	1610	1440	3660
21	3440	12200	15100	15900	18500	12500	5490	4010	5230	1600	1370	3970
22	3630	10400	15700	14700	15400	12700	5540	3890	5230	1560	1260	4090
23	3650	10300	15100	14000	12400	11200	5560	3680	4550	1510	1240	4110
24	3460	11800	14400	12800	10500	9760	5330	3470	3690	1510	1250	4150
25	2910	14200	14100	10800	9100	8890	5360	3200	3150	1460	1260	4280
26	2950	14700	15000	8980	7970	6980	5230	3170	2880	1460	1240	4420
27	9840	12400	23100	9050	7380	5780	5250	3110	2640	1470	1230	4590
28	15700	12200	21300	9360	6050	4450	5830	3080	2470	1420	1250	5700
29	10700	13200	17700	11100	---	4210	6130	3050	2360	1390	1250	5920
30	7730	24000	15600	12800	---	4010	6650	2960	2230	1420	1250	6160
31	10300	---	14400	24600	---	3860	---	2910	---	1420	1250	---
TOTAL	145890	431300	516820	479020	482190	225070	194170	229180	96860	57070	40330	92100
MEAN	4706	14380	16670	15450	17220	7260	6472	7393	3229	1841	1301	3070
MAX	15700	34900	38100	43600	41400	12700	12100	19900	5230	2520	1600	6160
MIN	2910	8140	8250	6030	6050	3820	3550	2910	2230	1390	1150	1240
AC-FT	289400	855500	1025000	950100	956400	446400	385100	454600	192100	113200	79990	182700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	4930	11540	15290	14040	10430	8816	7539	6460	4426	1904	1665	3157
MEAN	4930	11540	15290	14040	10430	8816	7539	6460	4426	1904	1665	3157
MAX	11890	26850	31700	24520	21250	25700	16150	11270	11150	4825	2883	5325
(WY)	1969	1974	1978	1974	1982	1972	1993	1984	1984	1983	1968	1968
MIN	2490	2882	2420	2178	1897	3245	3874	2115	1287	958	1004	1553
(WY)	1988	1988	1977	1977	1977	1992	1968	1973	1992	1992	1994	1967

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1967 - 1995
ANNUAL TOTAL	2315469	2990000	
ANNUAL MEAN	6344	8192	7504
HIGHEST ANNUAL MEAN			12310
LOWEST ANNUAL MEAN			3512
HIGHEST DAILY MEAN	38100	Dec 1	78800
LOWEST DAILY MEAN	945	Aug 27	764
ANNUAL SEVEN-DAY MINIMUM	974	Aug 23	794
ANNUAL RUNOFF (AC-FT)	4593000	5931000	5436000
10 PERCENT EXCEEDS	15300	17700	16500
50 PERCENT EXCEEDS	3550	5360	4870
90 PERCENT EXCEEDS	1160	1460	1550

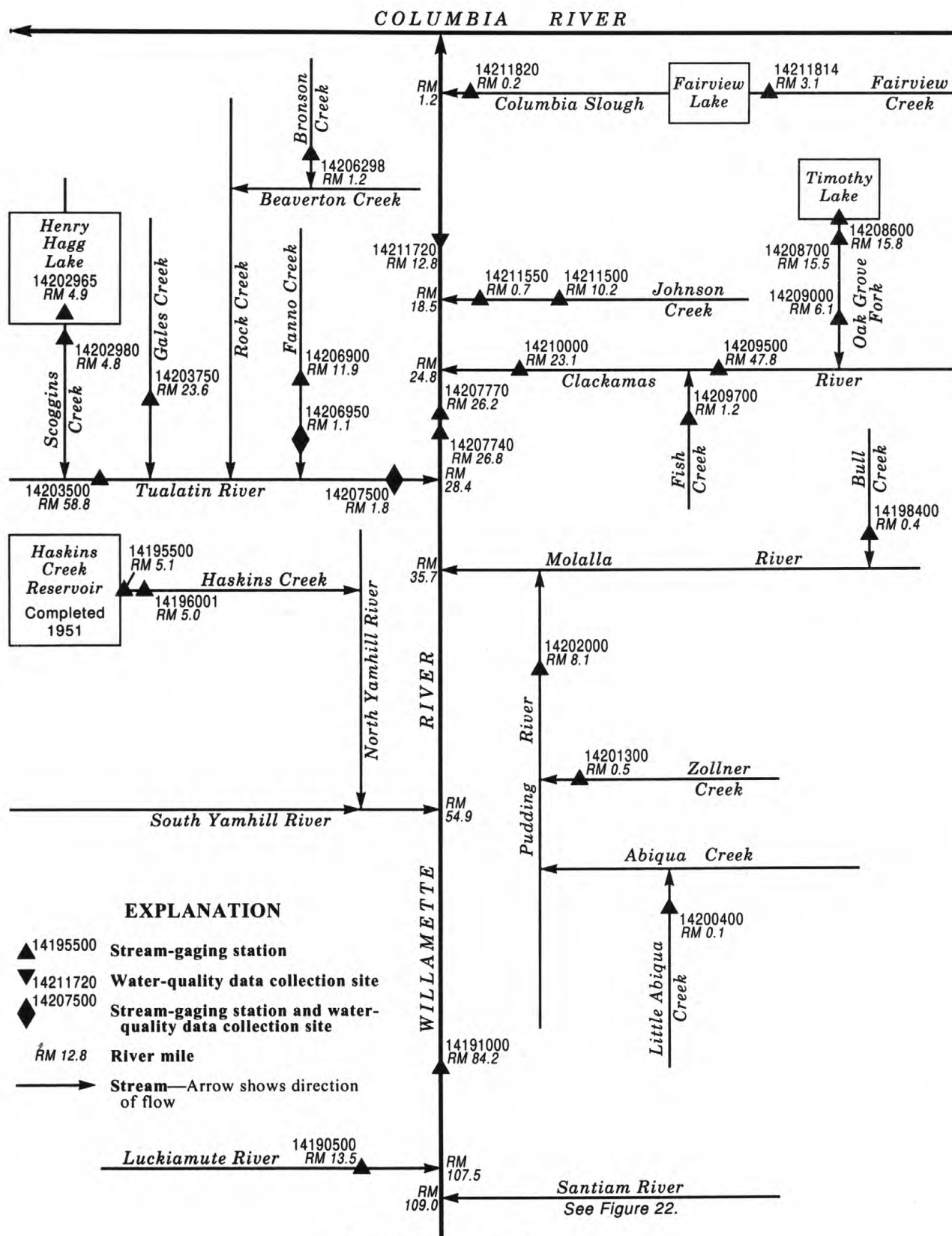


Figure 26. Schematic diagram showing gaging stations in the Willamette River Basin, from the Luckiamute River downstream to the mouth.

14190500 LUCKIAMUTE RIVER NEAR SUVER, OR

LOCATION.--Lat 44°47'00", long 123°14'00", in SW 1/4 SW 1/4 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 above sea level. Aug. 18, 1905, to Oct. 31, 1911, nonrecording gage at present site at different datum, Aug. 20 to Oct. 15, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some diurnal fluctuation during periods of low flow caused by millpond upstream from station. A few small diversions for irrigation upstream from station. Continuous water-quality records for the period October 1963 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--61 years (water years 1906-11, 1941-95), 877 ft³/s, 49.64 in/yr, 635,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s Dec. 22, 1964, gage height, 34.52 ft; minimum discharge, 0.65 ft³/s Aug. 13, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Dec. 1	1930	7,890	27.50	Feb. 1	1100	7,870	27.49
Jan. 14	2100	8,830	28.11	Feb. 18	1030	*9,000	*28.19

Minimum discharge, 17 ft³/s Sept. 22-24

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	3110	6200	1660	7390	887	763	780	206	104	39	39
2	34	2510	6570	1430	5760	803	709	864	193	107	38	32
3	33	1340	4630	1260	3790	732	660	752	188	109	38	33
4	28	1160	3050	1130	2650	723	623	704	189	105	38	38
5	26	1540	2170	1020	2050	818	603	665	198	107	37	41
6	25	1160	1780	942	1690	697	562	615	213	98	34	48
7	26	950	1800	959	1440	629	767	572	201	94	41	54
8	27	786	1620	999	1240	632	1400	539	185	91	49	54
9	27	1350	1580	1710	1080	1390	1490	504	171	95	45	47
10	28	1590	1640	3220	966	1940	1270	493	164	100	40	42
11	27	1190	1700	2830	874	1780	1130	580	183	89	42	39
12	30	992	2090	2920	828	1720	1060	599	173	85	44	33
13	28	853	1820	4470	854	1880	1320	558	166	82	43	31
14	32	765	1580	7930	741	2370	1160	504	185	80	43	30
15	45	764	1560	8080	838	2180	1060	466	232	77	33	26
16	56	958	2100	6520	1340	1830	952	437	230	77	33	24
17	46	1410	4460	4610	2990	1530	865	419	196	77	52	29
18	41	1380	5710	3650	8140	1460	829	394	206	e75	87	34
19	38	1130	4090	3400	7310	1640	785	373	230	e70	66	31
20	36	1630	3250	2760	7680	2140	884	356	234	e65	53	29
21	37	1510	3500	2180	4920	2770	935	339	208	e65	48	24
22	75	1230	2930	1790	3110	2940	841	321	189	e65	36	19
23	60	1220	2310	1520	2220	2400	774	306	176	e70	34	17
24	48	1320	1900	1310	1780	1920	713	292	160	e65	34	19
25	43	1540	1600	1150	1490	1600	657	281	147	56	31	25
26	47	1750	1820	1030	1280	1380	612	267	140	53	30	29
27	1320	1690	4840	957	1120	1210	594	254	129	50	35	65
28	1850	1760	5460	1360	989	1080	653	248	120	52	36	170
29	735	1690	3610	2290	---	972	709	241	112	46	33	176
30	452	2820	2510	2520	---	887	886	226	107	50	47	182
31	612	---	1980	4120	---	817	---	215	---	53	49	---
TOTAL	5947	43098	91860	81727	76560	45757	26266	14164	5431	2412	1308	1460
MEAN	192	1437	2963	2636	2734	1476	876	457	181	77.8	42.2	48.7
MAX	1850	3110	6570	8080	8140	2940	1490	864	234	109	87	182
MIN	25	764	1560	942	741	629	562	215	107	46	30	17
AC-FT	11800	85480	182200	162100	151900	90760	52100	28090	10770	4780	2590	2900
CFSM	.80	5.99	12.3	11.0	11.4	6.15	3.65	1.90	.75	.32	.18	.20
IN.	.92	6.68	14.24	12.67	11.87	7.09	4.07	2.20	.84	.37	.20	.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1995, BY WATER YEAR (WY)

MEAN	175	1055	2024	2225	2022	1428	856	418	201	79.8	42.6	52.8
MAX	1241	4574	5112	4727	4769	3002	1847	1026	512	184	85.0	190
(WY)	1948	1910	1965	1956	1949	1961	1955	1963	1984	1906	1906	1959
MIN	20.2	49.4	106	151	253	391	312	190	74.3	30.0	9.45	17.0
(WY)	1953	1994	1977	1977	1977	1941	1977	1966	1992	1967	1967	1967

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1906 - 1995
ANNUAL TOTAL	309467	395990	
ANNUAL MEAN	848	1085	
HIGHEST ANNUAL MEAN			1464
LOWEST ANNUAL MEAN			230
HIGHEST DAILY MEAN	8900	Feb 25	25200
LOWEST DAILY MEAN	20	Sep 1	2.6
ANNUAL SEVEN-DAY MINIMUM	22	Aug 28	4.3
ANNUAL RUNOFF (AC-FT)	613800	785400	635200
ANNUAL RUNOFF (CFSM)	3.53	4.52	3.65
ANNUAL RUNOFF (INCHES)	47.97	61.38	49.64
10 PERCENT EXCEEDS	1990	2790	2300
50 PERCENT EXCEEDS	359	632	345
90 PERCENT EXCEEDS	29	34	36

e Estimated

WILLAMETTE RIVER BASIN

249

14191000 WILLAMETTE RIVER AT SALEM, OR

LOCATION.--Lat 44°56'40", long 123°02'30", in SE 1/4 SW 1/4 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.

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 above sea level. 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.--Records good. Flow regulated by 12 reservoirs upstream from station (see elsewhere in this report). Many small diversions for irrigation upstream from station; part of flow of Salem Canal, which diverts water from North Santiam River, returns to Willamette River downstream from station, through Mill Creek at Salem.

AVERAGE DISCHARGE.--79 years (water years 1909-15, 1924-95), 23,060 ft³/s, 43.04 in/yr, 16,710,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348,000 ft³/s Jan. 8, 1923, gage height, 38.3 ft, present datum; minimum discharge, 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, 125,000 ft³/s Jan. 16, gage height, 25.34 ft; minimum discharge, 6,330 ft³/s Aug. 2, gage height, 5.12 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8940	39700	63800	35400	78600	17600	13600	24000	10500	7910	6420	7390
2	8900	47700	76700	31100	85100	16000	13200	28100	10200	7780	6410	7350
3	8840	42300	76900	28100	85400	14800	12600	46000	9850	7700	6480	7320
4	8830	37000	68500	25500	83300	14300	12200	49600	9730	7590	6520	7330
5	8850	40400	57800	21900	77900	15300	11900	45600	9860	7580	6490	7340
6	8790	37900	47900	20000	73000	15700	12100	39900	10200	7440	6470	7900
7	9230	30400	44200	19300	62200	14600	13300	35800	11100	7350	6600	8360
8	9610	23900	42200	19200	47800	14100	18000	33400	11700	7370	6670	8880
9	9770	22900	38600	23800	38500	18100	23300	29000	11700	7600	6850	8980
10	9840	27100	35800	44800	32300	25000	24000	25000	11100	7960	6820	9090
11	9850	25700	32800	56400	29100	25300	23100	24000	10600	8300	6940	9170
12	9830	22900	34800	57200	25000	23300	24800	26300	10400	8420	7000	9010
13	9870	20700	31800	67200	25300	23100	27100	32100	10000	8060	6960	8780
14	9800	19700	28500	92700	26900	27900	31900	32000	9860	7390	6910	8730
15	9920	18800	26200	115000	26200	30500	35300	26600	10400	7080	6830	8710
16	9560	18700	27300	122000	28300	31500	33800	21200	12200	6960	6980	8700
17	8940	23400	41300	108000	41200	28900	30900	18600	12300	6850	7260	8810
18	8560	28600	53000	91000	82800	26500	26600	17400	12300	6660	7530	8920
19	8260	26500	52500	81400	93300	30500	23300	16500	12600	6560	7680	9100
20	8050	26900	48600	73600	82300	34600	21500	15600	15100	6480	7540	9820
21	7960	30700	46100	65500	63300	39100	22700	14600	17300	6580	7370	10400
22	8110	28200	45000	58900	49300	39800	23000	14000	17700	6800	7150	10500
23	8190	25000	41100	53800	37200	37300	21200	13600	15700	6860	7070	10600
24	8130	26700	37300	48700	30400	31200	19600	13400	13800	6890	6820	10700
25	7670	30600	34900	42900	26600	28000	18500	12800	12000	6770	6780	10800
26	7500	38200	33900	36600	23400	23900	17900	12100	11000	6660	6810	11300
27	10800	36400	46400	33000	21500	20600	18000	11700	10200	6660	6870	11600
28	25700	34200	51700	33400	19300	18000	19300	11500	8870	6620	7040	12800
29	24500	32900	51000	39400	---	16000	20300	11400	8330	6520	7330	13800
30	18100	43200	44300	44500	---	14900	22800	11200	8030	6510	7430	13800
31	15600	---	38900	59600	---	14100	---	10900	---	6530	7420	---
TOTAL	326500	907300	1399800	1649900	1395500	730500	635800	723900	344630	222440	215450	285990
MEAN	10530	30240	45150	53220	49840	23560	21190	23350	11490	7175	6950	9533
MAX	25700	47700	76900	122000	93300	39800	35300	49600	17700	8420	7680	13800
MIN	7500	18700	26200	19200	19300	14100	11900	10900	8030	6480	6410	7320
AC-FT	647600	1800000	2777000	3273000	2768000	1449000	1261000	1436000	683600	441200	427300	567300
CFSM	1.45	4.15	6.20	7.31	6.85	3.24	2.91	3.21	1.58	.99	.95	1.31
IN.	1.67	4.64	7.15	8.43	7.13	3.73	3.25	3.70	1.76	1.14	1.10	1.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

MEAN	13690	29510	46400	44470	33910	28890	23330	18460	13630	7493	7274	10110
MAX	24390	70400	91780	78420	62870	73670	46440	31280	30910	12410	9540	13340
(WY)	1969	1974	1978	1974	1986	1972	1993	1993	1984	1983	1971	1978
MIN	7935	8444	6780	6377	5313	11270	10260	7701	5657	5737	5734	6155
(WY)	1988	1988	1977	1977	1977	1992	1977	1973	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1969 - 1995
ANNUAL TOTAL	6188130	8837710	
ANNUAL MEAN	16950	24210	23060
HIGHEST ANNUAL MEAN			37960
LOWEST ANNUAL MEAN			9792
HIGHEST DAILY MEAN	76900	Dec 3	199000
LOWEST DAILY MEAN	5750	Jul 1	4140
ANNUAL SEVEN-DAY MINIMUM	5840	Jul 11	4340
ANNUAL RUNOFF (AC-FT)	12270000	17530000	16710000
ANNUAL RUNOFF (CFSM)	2.33	3.33	3.17
ANNUAL RUNOFF (INCHES)	31.62	45.16	43.04
10 PERCENT EXCEEDS	40200	48900	52600
50 PERCENT EXCEEDS	9770	17900	14800
90 PERCENT EXCEEDS	6090	7020	6720

WILLAMETTE RIVER BASIN

14194150 SOUTH YAMHILL RIVER AT MCMINNVILLE, OR

LOCATION.--Lat 45°12'21", long 123°10'53", in SE 1/4 sec. 21, T.4 S., R.4 W., Yamhill County, Hydrologic Unit 17090008, on left bank 0.3 mi downstream from Cozine Creek, at Highway 18 McMinnville Spur bridge, in McMinnville, and at mile 5.6.

DRAINAGE AREA.--528 mi².

PERIOD OF RECORD.--October 1994 to September 1995.

GAGE.--Water-stage recorder. Datum of gage is 80 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Many small diversions for irrigation upstream from station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,300 ft³/s Jan. 16, gage height, 44.02 ft; minimum discharge, 12 ft³/s Oct. 12, but may have been lower during period of no gage height, Oct. 5-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e28	4090	8480	3120	10200	1640	1450	1050	282	105	31	51
2	e33	5580	10500	2540	11000	1490	1340	1150	266	104	27	43
3	e30	3290	9770	2140	8950	1370	1230	1120	251	106	24	38
4	e26	2090	7350	1860	6010	1300	1150	1050	242	107	21	34
5	e21	2580	4660	1650	4230	1450	1100	994	253	113	22	40
6	e17	2080	3200	1490	3340	1350	1020	936	300	101	21	43
7	e14	1740	2620	1450	2750	1200	1210	846	313	98	25	51
8	e12	1440	2480	1680	2260	1150	2430	777	279	99	21	59
9	e14	2100	2530	3150	1920	2760	3010	744	244	124	41	60
10	e15	3550	2880	7080	1700	5830	2800	720	220	116	48	53
11	e17	2570	2780	7510	1540	5950	2430	776	221	100	39	43
12	e21	1950	3740	6480	1460	5310	2180	955	251	95	33	37
13	e24	1650	3700	7360	1610	4920	2680	887	226	89	37	31
14	e33	1480	3090	9830	1430	6500	2760	800	283	79	32	26
15	e48	1380	2960	12300	1380	7150	2500	725	339	75	30	23
16	e90	1950	3860	13200	2220	5940	2180	661	392	77	30	26
17	e70	3250	7130	11900	4260	4390	1920	620	335	70	31	25
18	52	3460	10100	9470	9430	3470	1770	583	294	62	39	24
19	42	2750	10000	8370	11700	3310	1660	550	346	53	67	23
20	38	3020	8690	7280	12200	4190	1640	518	342	45	59	25
21	39	3400	9050	5380	10900	5880	1840	481	312	43	45	24
22	38	2660	8970	3940	7550	6310	1680	448	296	40	33	23
23	99	2250	7070	3100	4600	5410	1530	425	269	45	27	20
24	73	2370	4720	2570	3350	4210	1390	415	235	48	23	19
25	57	2630	3370	2190	2760	3370	1240	402	205	47	21	24
26	84	3650	3170	1930	2370	2820	1120	388	184	48	23	22
27	951	3470	6710	1750	2080	2430	1060	355	164	43	28	42
28	3490	3650	9480	1770	1830	2140	1140	338	142	42	32	148
29	1550	3560	8910	3650	---	1910	1080	326	125	43	31	235
30	820	4770	6520	4730	---	1730	1090	317	111	41	31	195
31	774	---	4260	7200	---	1580	---	299	---	37	45	---
TOTAL	8620	84410	182750	158070	135030	108460	51630	20656	7722	2295	1017	1507
MEAN	278	2814	5895	5099	4822	3499	1721	666	257	74.0	32.8	50.2
MAX	3490	5580	10500	13200	12200	7150	3010	1150	392	124	67	235
MIN	12	1380	2480	1450	1380	1150	1020	299	111	37	21	19
AC-FT	17100	167400	362500	313500	267800	215100	102400	40970	15320	4550	2020	2990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1995, BY WATER YEAR (WY)

	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
MEAN	278	2814	5895	5099	4822	3499	1721	666	257	74.0	32.8	50.2
MAX	278	2814	5895	5099	4822	3499	1721	666	257	74.0	32.8	50.2
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	278	2814	5895	5099	4822	3499	1721	666	257	74.0	32.8	50.2
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995

SUMMARY STATISTICS

FOR 1995 WATER YEAR

ANNUAL TOTAL	762167
ANNUAL MEAN	2088
HIGHEST DAILY MEAN	13200
LOWEST DAILY MEAN	12
ANNUAL SEVEN-DAY MINIMUM	16
ANNUAL RUNOFF (AC-FT)	1512000
10 PERCENT EXCEEDS	6490
50 PERCENT EXCEEDS	1080
90 PERCENT EXCEEDS	29

e Estimated

WILLAMETTE RIVER BASIN

251

14195500 HASKINS CREEK RESERVOIR NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'43", long 123°21'23", in SW 1/4 NW 1/4 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 sea level (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 815.0 ft elevation. Capacity of reservoir (based on May 1992 resurvey, new capacity table put into use Oct. 1, 1991), 721 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. Water is used for municipal supply of city of McMinnville.

COOPERATION.--Elevation and capacity table furnished by city of McMinnville Water and Light department. Elevations based on once-daily staff gage readings.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed contents, 748 acre-ft Nov. 17, 1954, elevation, 815.65 ft, present datum; no contents at times during winter months.

EXTREMES FOR CURRENT YEAR.--Maximum observed contents, 721 acre-ft many days during the year, elevation, 815.0 ft; minimum observed contents, 470 acre-ft Aug. 6, 8, elevation, 802.8 ft.

MONTHEND ELEVATIONS AND CONTENTS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	806.0	528	-
Oct. 31.....	815.0	721	+193
Nov. 30.....	815.0	721	0
Dec. 31.....	815.0	721	0
CAL YR 1994.....	-	-	0
Jan. 31.....	815.0	721	0
Feb. 28.....	815.0	721	0
Mar. 31.....	810.3	613	-108
Apr. 30.....	a815.0	721	+108
May 31.....	814.8	714	-7
June 30.....	810.4	615	-99
July 31.....	804.5	500	-115
Aug. 31.....	a803.3	479	-21
Sept.30.....	a806.8	543	+64
WTR YR 1995.....	-	-	+15

a Interpolated.

WILLAMETTE RIVER BASIN

14196001 HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNIVILLE, OR

LOCATION.--Lat 45°18'39", long 123°21'06", in SE 1/4 NW 1/4 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. Elevation of gage is 707 ft above sea level, topographic survey of 1955. Prior to Aug. 5, 1952, water-stage recorder at site 600 ft upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. All records given herein include flow in pipeline which diverts 600 ft upstream from station for municipal supply of McMinnville. Flow regulated by Haskins Creek Reservoir (station 14195500). 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.--44 years (water years 1952-95), 30.5 ft³/s, 60.03 in/yr, 22,100 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 discharge, 515 ft³/s Jan. 21, 1972; minimum daily, 0.10 ft³/s Oct. 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 225 ft³/s Dec. 17; minimum daily, 4.8 ft³/s Oct. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	87	186	53	135	37	6.5	28	11	14	13	9.4
2	8.9	57	112	47	100	35	12	27	11	14	14	10
3	9.3	32	74	41	82	33	30	27	11	14	14	10
4	9.5	45	57	37	68	36	28	24	10	10	14	10
5	9.5	32	53	37	60	33	27	26	11	9.8	15	10
6	9.5	32	45	30	48	31	27	24	10	10	16	8.2
7	9.4	26	40	37	43	29	45	22	8.4	12	12	7.5
8	9.5	32	38	43	43	41	53	22	8.4	12	11	7.2
9	9.3	50	49	106	41	76	48	21	9.8	11	11	8.4
10	8.5	38	42	94	35	78	45	22	10	11	12	8.8
11	7.7	32	50	83	37	72	37	24	11	11	12	11
12	7.1	31	51	82	35	65	40	22	12	9.4	11	11
13	7.9	29	45	108	34	89	44	21	11	11	10	10
14	7.8	25	45	146	31	96	37	20	8.7	13	9.9	11
15	6.8	30	54	143	39	86	31	19	11	13	11	12
16	6.6	39	111	117	39	71	36	18	13	13	11	11
17	6.6	36	225	95	150	60	34	17	9.9	13	11	12
18	6.8	33	137	111	110	58	34	16	8.7	15	11	8.4
19	7.0	36	131	95	183	59	33	16	9.1	16	9.6	10
20	7.1	47	196	84	121	87	38	16	11	15	9.6	10
21	7.4	36	147	74	96	86	37	15	10	14	12	10
22	6.5	34	106	58	66	76	35	14	8.6	14	15	12
23	5.8	35	86	52	65	68	33	13	7.5	12	15	12
24	5.7	37	70	43	53	60	31	13	8.9	11	12	13
25	5.4	47	59	46	47	56	30	12	10	13	12	12
26	4.8	42	122	40	48	55	28	12	13	14	10	10
27	5.6	47	197	34	40	54	29	12	13	14	11	8.3
28	16	45	127	57	39	55	27	12	13	13	12	8.0
29	11	56	101	67	---	55	28	11	14	13	12	7.7
30	9.2	207	78	105	---	40	28	12	14	13	10	7.7
31	103	---	70	158	---	7.0	---	12	---	13	9.5	---
TOTAL	342.4	1355	2904	2323	1888	1784.0	991.5	570	318.0	391.2	368.6	296.6
MEAN	11.0	45.2	93.7	74.9	67.4	57.5	33.0	18.4	10.6	12.6	11.9	9.89
MAX	103	207	225	158	183	96	53	28	14	16	16	13
MIN	4.8	25	38	30	31	7.0	6.5	11	7.5	9.4	9.5	7.2
AC-FT	679	2690	5760	4610	3740	3540	1970	1130	631	776	731	588
MEAN†	9.66	45.2	93.7	75.0	67.3	55.8	34.9	18.3	8.94	5.38	4.05	4.67
CFSM†	1.40	6.55	13.6	10.9	9.76	8.09	5.06	2.65	1.30	0.78	0.59	0.68
IN.†	1.61	7.31	15.7	12.5	10.2	9.33	5.65	3.05	1.45	0.90	0.68	0.76
AC-FT†	594	2690	5760	4610	3740	3432	2078	1123	532	331	249	278

CAL YR 1994 TOTAL 11059.1 MEAN 30.3 MAX 225 MIN 4.8 AC-FT 21940 MEAN† 28.0 CFSM† 4.05 IN.† 55.0 AC-FT† 20249
WTR YR 1995 TOTAL 13532.3 MEAN 37.1 MAX 225 MIN 4.8 AC-FT 26840 MEAN† 35.1 CFSM† 5.09 IN.† 69.1 AC-FT† 25412

† Adjusted for change in contents in Haskins Creek Reservoir and diversion from McGuire Lake.

WILLAMETTE RIVER BASIN

253

14198400 BULL CREEK NEAR WILHOIT, OR

LOCATION.--Lat 44°57'42", long 122°22'59", in NW 1/4 SE 1/4 sec.13, T.7 S., R.3 E., Clackamas County, Hydrologic Unit 17090009, on left bank 0.5 mi upstream from mouth, and 11 mi southeast of Wilhoit and at mile 0.43.

DRAINAGE AREA.--0.43 mi².

PERIOD OF RECORD.--April 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,680 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion.

AVERAGE DISCHARGE.--2 years (water years 1994-95), 1.31 ft³/s, 41.31 in/yr, 947 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42 ft³/s Feb. 17, 1995, gage height, 6.42 ft; minimum discharge, 0.02 ft³/s Sept. 25-28, 1994 Sept. 21-24, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42 ft³/s Feb. 17, gage height, 6.24 ft; minimum discharge, 0.02 ft³/s Sept. 21-24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	9.2	17	1.6	15	.76	1.1	1.7	.45	.39	.12	.05
2	.04	5.1	8.6	1.4	9.8	.71	1.0	3.1	.44	.37	.12	.05
3	.04	3.2	5.7	1.3	5.3	.70	.94	4.1	.43	.36	.12	.06
4	.04	4.7	4.1	1.2	3.5	.71	.90	3.4	.43	.35	.12	.07
5	.04	5.3	3.0	1.1	2.5	.65	.88	3.0	.50	.33	.11	.06
6	.04	4.2	2.2	1.1	1.9	.59	.85	3.9	.68	.34	.11	.07
7	.04	3.8	1.7	1.1	1.5	.55	1.3	4.2	.79	.32	.15	.12
8	.04	3.4	1.4	1.2	1.3	.81	1.8	3.5	.58	.30	.12	.08
9	.03	7.6	1.2	6.2	1.2	1.9	2.5	2.7	.51	.38	.11	.06
10	.04	6.1	1.2	7.5	1.1	2.6	3.3	2.2	.49	.34	.13	.05
11	.04	4.2	1.9	5.1	1.1	2.3	3.0	2.1	.46	.29	.12	.04
12	.04	3.1	3.3	5.2	1.1	1.9	3.4	2.1	.44	.28	.10	.04
13	.03	2.6	2.7	10	.99	2.2	6.3	1.9	.45	.24	.09	.03
14	.22	2.5	2.2	15	.92	4.0	5.8	1.6	.52	.24	.08	.03
15	.20	2.4	2.0	10	.93	4.5	4.6	1.4	.76	.23	.10	.03
16	.11	2.4	5.5	7.5	1.1	3.5	3.6	1.2	.73	.22	.10	.04
17	.09	2.3	11	5.4	21	2.5	2.7	1.1	.76	.21	.14	.05
18	.09	2.0	8.0	5.2	21	2.6	2.3	.98	.88	.20	.12	.04
19	.06	2.8	5.6	5.8	8.1	3.8	2.2	.90	1.0	.19	.10	.04
20	.06	8.4	4.3	4.4	4.9	7.8	2.1	.83	1.2	.18	.09	.03
21	.19	5.9	3.5	3.3	3.5	6.8	1.9	.77	1.7	.18	.07	.02
22	.10	4.3	2.9	2.5	2.5	4.7	1.8	.70	1.7	.18	.07	.02
23	.06	3.8	2.4	1.9	1.9	3.6	1.6	.67	1.3	.18	.08	.02
24	.05	4.1	2.0	1.6	1.6	2.6	1.4	.64	1.0	.17	.07	.02
25	.06	5.5	1.7	1.4	1.3	2.1	1.2	.60	.83	.15	.07	.06
26	.44	5.0	2.0	1.3	1.1	1.9	1.1	.57	.69	.16	.06	.05
27	4.3	4.3	3.0	1.2	.93	1.7	1.2	.55	.59	.16	.06	.33
28	2.9	3.8	3.2	1.3	.83	1.5	1.1	.53	.52	.14	.06	.49
29	1.4	3.9	2.8	1.6	---	1.5	1.1	.51	.47	.14	.07	.51
30	.95	11	2.3	3.1	---	1.4	1.3	.48	.43	.14	.06	.77
31	4.7	---	1.9	10	---	1.3	---	.46	---	.12	.06	---
TOTAL	16.49	136.9	120.3	126.5	117.90	74.18	64.27	52.39	21.73	7.48	2.98	3.33
MEAN	.53	4.56	3.88	4.08	4.21	2.39	2.14	1.69	.72	.24	.096	.11
MAX	4.7	11	17	15	21	7.8	6.3	4.2	1.7	.39	.15	.77
MIN	.03	2.0	1.2	1.1	.83	.55	.85	.46	.43	.12	.06	.02
AC-FT	33	272	239	251	234	147	127	104	43	15	5.9	6.6
CFSM	1.24	10.6	9.02	9.49	9.79	5.56	4.98	3.93	1.68	.56	.22	.26
IN.	1.43	11.84	10.41	10.94	10.20	6.42	5.56	4.53	1.88	.65	.26	.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995
MEAN	.31	2.34	2.39	2.67	2.74	1.77	1.54	1.00	.65	.22	.074	.093
MAX	.53	4.56	3.88	4.08	4.21	2.39	2.14	1.69	.72	.24	.096	.11
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	.087	.13	.91	1.25	1.27	1.14	.95	.32	.58	.20	.052	.076
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1994 - 1995

ANNUAL TOTAL	449.00	744.45	
ANNUAL MEAN	1.23	2.04	1.31
HIGHEST ANNUAL MEAN			2.04
LOWEST ANNUAL MEAN			.58
HIGHEST DAILY MEAN	17 Dec 1	21 Feb 17	21 Feb 17 1995
LOWEST DAILY MEAN	.02 Sep 26	.02 Sep 21	.02 Sep 26 1994
ANNUAL SEVEN-DAY MINIMUM	.03 Sep 22	.03 Sep 18	.03 Sep 22 1994
ANNUAL RUNOFF (AC-FT)	891	1480	947
ANNUAL RUNOFF (CFSM)	2.86	4.74	3.04
ANNUAL RUNOFF (INCHES)	38.84	64.40	41.31
10 PERCENT EXCEEDS	3.4	5.1	3.5
50 PERCENT EXCEEDS	.49	1.1	.50
90 PERCENT EXCEEDS	.05	.06	.05

WILLAMETTE RIVER BASIN

14200400 LITTLE ABIQUA CREEK NEAR SCOTTS MILLS, OR

LOCATION.--Lat 44°57'21", long 122°37'38", in SW 1/4 SE 1/4 sec.13, T.7 S., R.1 E, Marion County, Hydrologic Unit 17090009, on left bank, 4 mi south of Scotts Mills, and 0.1 mi upstream from mouth.

DRAINAGE AREA.--9.81 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 800 ft above sea level, from topographic map.

REMARKS.--Records poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--2 years, 30.2 ft³/s, 41.02 in/yr, 21,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 312 ft³/s Feb. 17, 1995, gage height, 4.64 ft; minimum discharge, 1.9 ft³/s Oct. 2-4, 1993.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 30	1800	303	4.62	Feb. 17	2230	(a)	*5.29
Feb. 17	2230	*312	4.64				

Minimum discharge, 2.3 ft³/s several days in October, but may have been less during period of missing record in September.

(a) From crest-stage gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	e185	218	e24	171	43	e26	34	11	7.7	e4.0	e2.8
2	2.6	e120	184	e22	137	38	e25	42	11	7.7	e3.8	e2.8
3	2.5	e90	138	e18	106	34	e24	43	10	8.0	e3.6	e2.6
4	2.4	e120	104	e16	86	38	e25	40	11	7.7	e3.6	e2.6
5	2.4	e90	82	e14	75	35	e26	45	17	7.1	e3.4	e2.6
6	2.4	e70	70	e14	65	29	e28	41	16	7.8	e3.4	e3.0
7	2.4	e60	58	e14	56	26	e40	39	14	7.8	e4.8	e6.5
8	2.4	e55	48	20	50	29	e54	36	11	7.7	e6.5	e4.0
9	2.4	e90	44	40	44	42	e48	33	10	15	e5.8	e3.6
10	2.3	e70	42	42	39	43	e46	32	10	12	e4.6	e3.4
11	2.4	e60	50	40	37	39	e52	40	10	8.2	e4.2	e3.4
12	2.4	e55	51	67	43	35	e60	38	9.4	7.1	e4.0	e3.2
13	2.4	e50	43	128	37	42	e110	34	10	e6.0	e3.8	e3.2
14	8.6	e46	42	e200	32	48	e88	30	12	e6.0	e3.8	e3.2
15	7.7	e50	45	e170	34	46	e68	28	15	e5.8	e3.6	e3.2
16	3.7	e52	89	e140	37	42	e58	27	14	e5.6	e3.8	e3.0
17	3.1	e48	120	e110	166	39	e48	26	14	e5.4	e4.6	e3.0
18	3.0	e43	108	e85	221	53	e44	24	19	e5.2	e4.4	e3.0
19	2.9	e70	87	e110	209	54	e40	22	18	e5.2	e4.0	e3.0
20	2.9	e150	74	e90	171	e46	42	21	19	e5.2	e3.8	e3.0
21	e9.0	e120	69	e75	143	e42	36	20	17	e5.0	e3.4	e3.0
22	e6.4	e80	55	e60	122	e36	33	18	15	e5.0	e3.4	e2.8
23	e5.4	e70	49	e50	104	e34	30	17	13	e4.8	e3.4	e2.8
24	e4.6	e90	43	e45	88	e32	28	17	12	e4.8	e3.2	e2.8
25	e4.0	e110	38	e40	75	e30	26	16	11	e4.6	e3.2	e2.8
26	e30	86	e80	37	65	e28	25	15	10	e4.6	e3.2	e3.0
27	e180	91	e120	36	55	e27	28	14	9.4	e4.4	e3.0	e6.0
28	e140	84	e70	36	48	e26	25	14	8.8	e4.4	e3.0	e12
29	e90	91	e50	41	---	e26	25	13	8.2	e4.2	e3.0	e16
30	e60	166	e36	49	---	e25	25	12	7.9	e4.2	e2.8	e30
31	e190	---	e30	125	---	e25	---	12	---	e4.0	e2.8	---
TOTAL	783.1	2562	2337	1958	2516	1132	1233	843	373.7	198.2	117.9	146.3
MEAN	25.3	85.4	75.4	63.2	89.9	36.5	41.1	27.2	12.5	6.39	3.80	4.88
MAX	190	185	218	200	221	54	110	45	19	15	6.5	30
MIN	2.3	43	30	14	32	25	24	12	7.9	4.0	2.8	2.6
AC-FT	1550	5080	4640	3880	4990	2250	2450	1670	741	393	234	290
CFSM	2.53	8.54	7.54	6.32	8.99	3.65	4.11	2.72	1.25	.64	.38	.49
IN.	2.91	9.53	8.69	7.28	9.36	4.21	4.59	3.14	1.39	.74	.44	.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995
MEAN	14.2	45.2	51.4	56.9	70.2	41.2	39.5	20.0	13.7	6.13	3.19	3.96
MAX	25.3	85.4	75.4	63.2	89.9	46.0	41.1	27.2	15.0	6.39	3.80	4.88
(WY)	1995	1995	1995	1994	1994	1994	1995	1995	1994	1995	1995	1995
MIN	3.06	5.09	27.4	50.5	50.6	36.5	37.8	12.7	12.5	5.87	2.57	3.05
(WY)	1994	1994	1994	1994	1994	1995	1994	1994	1995	1994	1994	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1994 - 1995

ANNUAL TOTAL	12421.8	14200.2	30.2
ANNUAL MEAN	34.0	38.9	38.9
HIGHEST ANNUAL MEAN			21.5
LOWEST ANNUAL MEAN			21.5
HIGHEST DAILY MEAN	241	221	241
LOWEST DAILY MEAN	2.1	2.3	1.9
ANNUAL SEVEN-DAY MINIMUM	2.1	2.4	2.1
ANNUAL RUNOFF (AC-FT)	24640	28170	21870
ANNUAL RUNOFF (CFSM)	3.40	3.89	3.02
ANNUAL RUNOFF (INCHES)	46.21	52.82	41.02
10 PERCENT EXCEEDS	87	91	75
50 PERCENT EXCEEDS	18	26	15
90 PERCENT EXCEEDS	2.4	3.0	2.8

e Estimated

WILLAMETTE RIVER BASIN

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14200400 LITTLE ABIQUA CREEK NEAR SCOTTS MILLS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1993 to current year.

WATER TEMPERATURE: July 1993 to current year.

INSTRUMENTATION.--Water-quality monitor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 63 microsiemens Sept. 29, 30, 1993; minimum recorded, 13 microsiemens Nov. 30, 1994.

WATER TEMPERATURE: Maximum, 19.0°C July 23, 1994, minimum, 0.0°C Nov. 24-26, 1993.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 59 microsiemens Oct. 24, 25; minimum recorded, 13 microsiemens Nov. 30, but may have been less during periods of missing record.

WATER TEMPERATURE: Maximum recorded, 17.0°C June 30, but may have been higher during period of missing record July 13 to Sept. 30; minimum recorded, 3.5°C Jan. 4, but may have been lower during period of missing record Feb. 12 to Apr. 19.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	---	---	---	16	15	16	28	28	28
2	---	---	---	---	---	---	17	16	16	29	28	28
3	---	---	---	---	---	---	19	17	18	31	29	29
4	---	---	---	---	---	---	22	19	20	31	30	31
5	---	---	---	---	---	---	22	22	22	32	31	31
6	---	---	---	---	---	---	24	22	23	32	31	32
7	55	54	55	---	---	---	26	24	24	33	32	32
8	55	54	55	---	---	---	27	26	26	33	32	33
9	55	54	55	---	---	---	27	27	27	33	27	30
10	58	55	56	---	---	---	28	26	27	32	30	31
11	58	53	55	---	---	---	28	23	26	32	31	31
12	55	53	54	---	---	---	27	24	26	32	23	28
13	55	54	54	---	---	---	28	27	28	25	24	24
14	55	44	50	---	---	---	28	27	28	24	23	24
15	53	46	50	---	---	---	27	25	27	24	23	24
16	56	53	54	---	---	---	25	17	20	26	24	25
17	57	55	56	---	---	---	21	16	19	26	25	26
18	57	56	57	---	---	---	21	20	20	26	25	25
19	58	57	57	28	16	25	23	21	22	27	26	26
20	58	57	58	19	16	17	23	22	23	28	27	27
21	58	48	52	22	19	20	24	22	23	28	28	28
22	56	52	54	22	22	22	26	24	24	28	28	28
23	58	56	57	22	20	21	27	25	26	29	28	29
24	59	57	58	21	16	19	27	27	27	30	29	29
25	59	57	58	21	16	18	28	27	27	30	29	30
26	58	44	54	20	18	19	28	23	26	30	29	30
27	44	29	32	20	17	19	25	22	24	31	30	30
28	31	29	30	21	19	21	25	23	24	31	30	31
29	32	31	31	21	17	19	26	25	25	31	29	30
30	32	32	32	18	13	16	27	26	26	31	29	30
31	33	23	28	---	---	---	28	27	27	30	24	26
MONTH	---	---	---	---	---	---	28	15	24	33	23	29

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

WILLAMETTE RIVER BASIN

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14200400 LITTLE ABIQUA CREEK NEAR SCOTTS MILLS, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

WILLAMETTE RIVER BASIN

14200400 LITTLE ABIQUA CREEK NEAR SCOTTS MILLS, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

WILLAMETTE RIVER BASIN

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14201300 ZOLLNER CREEK NEAR MOUNT ANGEL, OR

LOCATION.--Lat 45°06'02", long 122°49'14", in SW 1/4 SW 1/4 sec. 28, T.5 S., R.1 W., Marion County, Hydrologic Unit 17090009, downstream on left bank corner of Monitor-McKee Road bridge, 2.3 mi north-northwest of Mount Angel.

DRAINAGE AREA.--15.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 120 ft above sea level, from topographic map.

REMARKS.--Records poor. Flows subject to backwater from the Pudding River (14202000). Many diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--2 years (water years 1994-95), 20.3 ft³/s, 18.38 in/yr, 14,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 832 ft³/s Nov. 1, 1994, gage height 13.13 ft; maximum gage height, 15.05 ft, Jan. 16, 1995 (backwater from Pudding River); minimum discharge, 0.02 ft³/s Sept. 22, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 832 ft³/s Nov. 1, gage height 13.13 ft; maximum gage height, 15.05 ft, Jan. 16, (backwater from Pudding River); minimum discharge, 0.09 ft³/s Oct. 6, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	e510	e320	20	e140	18	7.4	7.0	3.0	.50	.30	.57
2	.33	e140	e120	15	e100	15	7.0	8.1	2.2	.93	.32	.51
3	.62	e110	e75	13	e50	14	6.8	8.6	1.4	1.1	.36	.46
4	.71	e85	e55	12	e30	17	8.0	7.0	1.8	2.3	.60	.52
5	.25	e110	e48	11	e22	20	6.6	e8.0	4.1	1.9	.57	.56
6	.11	e60	e44	9.8	e18	12	6.0	e7.5	2.8	1.6	.70	.61
7	.23	e40	e40	12	e16	12	6.0	6.6	2.0	1.2	.66	.65
8	1.6	e35	e36	15	e15	16	10	6.4	1.8	.86	.49	.56
9	2.2	58	e32	73	14	33	8.1	6.0	1.8	1.4	.38	.82
10	1.5	63	30	e90	12	56	7.1	5.4	1.6	1.6	.58	1.5
11	1.7	38	34	e30	11	37	7.2	6.6	1.7	2.1	.94	1.4
12	2.9	28	51	e50	12	24	10	6.7	1.7	1.9	2.0	.97
13	3.1	23	35	e260	16	39	38	5.3	1.8	1.7	1.9	.92
14	4.3	21	29	e350	12	70	20	4.9	2.8	1.6	2.0	.86
15	7.4	23	25	e150	15	71	15	4.8	4.8	1.5	1.6	.72
16	5.3	28	30	e100	20	36	11	4.6	3.3	.92	1.0	.54
17	5.5	77	e150	e70	316	25	9.6	4.4	2.9	1.1	1.8	.50
18	5.3	67	e95	e70	e130	33	8.7	4.1	3.3	1.5	1.6	.58
19	6.3	37	e50	e42	e120	54	8.4	3.9	3.8	1.3	.74	.62
20	6.7	57	e40	e30	e60	84	8.5	3.9	3.9	.62	.52	.63
21	7.7	45	e90	e24	e38	78	6.7	3.6	5.1	.51	.59	.57
22	9.5	33	e44	e20	e34	50	6.5	3.5	3.1	.42	.85	.55
23	10	41	e32	e18	e32	31	6.7	3.2	3.2	.49	.55	.49
24	11	46	e28	e16	e30	23	6.3	2.9	2.2	.57	.53	.47
25	13	e110	25	e14	e28	17	5.9	2.6	2.3	.95	.32	.55
26	17	e60	46	12	e22	15	5.8	2.4	2.4	1.1	.20	.88
27	164	e35	e160	10	18	13	6.5	2.1	2.7	.92	.17	2.8
28	e110	e40	e60	15	19	11	6.3	2.5	1.7	.63	.20	3.7
29	e32	e40	e34	33	---	9.9	5.5	2.6	1.9	.51	.53	3.6
30	17	61	e28	91	---	9.1	5.8	2.4	.96	.72	.90	2.0
31	74	---	e24	e270	---	8.1	---	3.0	---	.37	.75	---
TOTAL	521.60	2121	1910	1945.8	1350	951.1	271.4	150.6	78.06	34.82	24.65	30.11
MEAN	16.8	70.7	61.6	62.8	48.2	30.7	9.05	4.86	2.60	1.12	.80	1.00
MAX	164	510	320	350	316	84	38	8.6	5.1	2.3	2.0	3.7
MIN	.11	21	24	9.8	11	8.1	5.5	2.1	.96	.37	.17	.46
AC-FT	1030	4210	3790	3860	2680	1890	538	299	155	.69	.49	.60
CFSM	1.12	4.71	4.11	4.18	3.21	2.05	.60	.32	.17	.07	.05	.07
IN.	1.29	5.26	4.74	4.83	3.35	2.36	.67	.37	.19	.09	.06	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995
MEAN	9.25	36.3	48.6	57.1	51.9	23.3	10.1	3.46	3.68	.68	.54	.65
MAX	16.8	70.7	61.6	62.8	55.5	30.7	11.2	4.86	4.75	1.12	.80	1.00
(WY)	1995	1995	1995	1995	1994	1995	1994	1995	1994	1995	1995	1995
MIN	1.67	1.89	35.6	51.4	48.2	16.0	9.05	2.05	2.60	.24	.28	.29
(WY)	1994	1994	1994	1994	1995	1994	1995	1994	1995	1994	1994	1994

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1994 - 1995

	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995
ANNUAL TOTAL	8763.56	9389.14								
ANNUAL MEAN	24.0	25.7								
HIGHEST ANNUAL MEAN										
LOWEST ANNUAL MEAN										
HIGHEST DAILY MEAN	510	510	Nov 1	Nov 1						
LOWEST DAILY MEAN	.04	.11	Sep 21	Oct 6						
ANNUAL SEVEN-DAY MINIMUM	.08	.36	Aug 24	Aug 23						
ANNUAL RUNOFF (AC-FT)	17380	18620								
ANNUAL RUNOFF (CFSM)	1.60	1.71								
ANNUAL RUNOFF (INCHES)	21.73	23.29								
10 PERCENT EXCEEDS	61	68								
50 PERCENT EXCEEDS	6.7	7.0								
90 PERCENT EXCEEDS	.16	.57								

e Estimated

WILLAMETTE RIVER BASIN

14201300 ZOLLNER CREEK NEAR MOUNT ANGEL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1993 to current year.

WATER TEMPERATURE: July 1993 to current year.

INSTRUMENTATION.--Water-quality monitor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 610 microsiemens Oct. 23, 1993; minimum recorded, 105 microsiemens Feb. 17, 1995.

WATER TEMPERATURE: Maximum, 24.5°C July 21-23, 1994; minimum, 0.5°C Nov. 25, 26, 1993.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 564 microsiemens Oct. 15; minimum recorded, 105 microsiemens Feb. 17, but may have been lower during period of missing record.

WATER TEMPERATURE: Maximum, 23.0°C July 20; minimum, 3.5°C Feb. 14.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	479	457	466	375	262	302	332	277	299	---	---	---
2	487	477	482	439	375	416	357	332	350	---	---	---
3	489	484	487	445	432	440	358	346	350	---	---	---
4	496	486	491	433	402	424	363	351	356	---	---	---
5	496	490	493	427	387	406	364	353	360	---	---	---
6	501	493	496	432	418	425	353	305	323	---	---	---
7	502	496	500	437	412	419	348	311	340	---	---	---
8	497	448	472	460	432	442	367	347	359	---	---	---
9	493	478	485	468	421	437	---	357	---	---	---	---
10	501	480	492	446	427	440	---	---	---	---	---	---
11	505	499	502	458	440	445	---	---	---	---	---	---
12	503	485	494	457	425	436	---	---	---	---	---	---
13	503	494	499	425	413	417	---	---	---	---	---	---
14	502	466	490	418	412	413	---	---	---	---	---	---
15	564	448	491	428	416	422	---	---	---	---	---	---
16	531	483	510	438	399	420	---	---	---	---	---	---
17	535	524	530	438	399	415	---	---	---	---	---	---
18	533	523	527	439	415	427	---	---	---	---	---	---
19	538	531	534	446	424	438	---	---	---	---	---	---
20	545	535	539	431	408	421	---	---	---	---	---	---
21	542	535	538	413	397	406	---	---	---	---	---	---
22	537	516	525	413	398	408	---	---	---	---	---	---
23	518	504	511	421	396	408	---	---	---	---	---	---
24	542	511	521	401	381	388	---	---	---	---	---	---
25	546	522	536	409	377	390	---	---	---	---	---	---
26	529	358	506	414	385	403	---	---	---	297	287	291
27	464	259	315	412	392	404	---	---	---	289	284	287
28	466	335	425	401	391	395	---	---	---	286	268	278
29	509	428	481	403	386	392	---	---	---	281	265	273
30	519	433	508	394	329	382	---	---	---	271	224	248
31	504	300	427	---	---	---	---	---	---	236	186	208
MONTH	564	259	493	468	262	413	---	---	---	---	---	---

WILLAMETTE RIVER BASIN

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14201300 ZOLLNER CREEK NEAR MOUNT ANGEL, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	223	191	208	281	268	275	316	301	308	334	321	331
2	223	177	203	283	280	281	318	310	314	331	328	329
3	244	223	233	285	281	283	322	297	308	330	326	328
4	254	243	249	297	283	291	323	311	318	329	320	325
5	264	254	259	290	277	285	336	317	332	---	285	---
6	268	263	266	290	277	283	319	285	298	296	---	---
7	281	250	263	293	282	290	301	243	289	328	317	323
8	303	275	290	299	286	294	268	243	258	317	307	312
9	296	287	291	288	266	273	288	256	279	309	304	306
10	297	290	295	277	242	253	288	280	285	309	305	307
11	292	289	290	273	252	265	288	279	282	321	309	317
12	293	281	290	281	273	276	293	273	289	324	320	322
13	284	279	282	281	262	274	303	276	289	325	322	324
14	288	281	286	271	250	263	284	277	280	325	316	320
15	288	283	286	272	249	260	295	284	289	317	309	313
16	289	283	286	284	272	279	301	293	299	309	303	306
17	287	105	198	290	283	287	301	298	300	334	307	329
18	197	107	157	288	251	281	308	298	303	360	330	348
19	216	197	211	266	243	251	318	305	314	349	340	345
20	218	208	211	271	225	251	315	298	305	352	345	349
21	237	218	227	270	236	256	308	302	305	364	348	355
22	244	236	240	283	269	276	307	301	304	354	342	346
23	253	244	248	283	277	280	306	302	304	364	354	359
24	266	253	258	284	274	278	308	304	306	371	362	367
25	280	265	272	280	278	279	327	306	319	373	364	370
26	283	270	275	282	277	279	333	326	328	373	364	368
27	271	265	267	284	279	281	333	327	330	372	362	366
28	275	267	271	305	282	290	333	327	331	---	---	---
29	---	---	---	304	289	294	339	316	330	---	---	---
30	---	---	---	314	296	303	333	299	322	---	---	---
31	---	---	---	315	304	310	---	---	---	---	---	---
MONTH	303	105	254	315	225	278	339	243	304	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	411	394	403	384	374	379	437	420	430	371	365	368
2	410	395	403	375	360	366	423	409	416	373	363	367
3	404	392	398	375	361	366	412	397	405	366	359	362
4	403	383	391	378	339	368	405	397	400	368	356	364
5	407	344	387	426	374	396	398	383	389	372	358	365
6	407	385	394	428	412	423	395	383	387	372	353	361
7	389	371	380	424	412	419	384	375	379	359	300	332
8	388	371	376	423	408	416	389	377	383	362	337	355
9	397	383	389	414	297	377	388	382	385	360	339	353
10	398	377	390	399	367	391	395	383	388	352	335	344
11	389	344	373	398	365	381	386	311	355	373	349	360
12	376	364	371	389	382	386	443	368	408	391	373	381
13	377	347	369	389	383	384	398	378	388	410	390	400
14	357	315	346	397	384	389	427	394	404	431	410	418
15	359	303	338	425	397	411	480	427	458	444	431	440
16	359	337	346	425	419	421	482	467	476	456	443	450
17	369	353	362	433	412	419	467	395	435	446	433	440
18	367	347	358	433	422	426	481	443	464	434	426	430
19	363	272	349	446	428	435	482	462	473	429	424	427
20	354	314	340	465	445	453	465	457	460	431	411	424
21	368	342	358	472	462	467	458	446	454	412	400	407
22	390	368	377	466	456	461	446	431	439	403	394	398
23	387	373	378	458	445	452	434	416	427	402	393	397
24	379	370	375	451	444	448	420	413	417	397	385	390
25	379	371	373	451	441	446	430	416	424	389	373	384
26	379	370	375	451	429	438	435	428	431	398	358	379
27	390	375	381	445	424	436	430	416	424	398	324	364
28	387	375	378	430	420	425	418	406	414	412	341	372
29	385	375	378	430	421	426	408	347	383	438	388	416
30	387	382	385	430	421	426	400	350	377	478	438	459
31	---	---	---	442	430	437	402	369	389	---	---	---
MONTH	411	272	374	472	297	415	482	311	415	478	300	390

WILLAMETTE RIVER BASIN

14201300 ZOLLNER CREEK NEAR MOUNT ANGEL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

WILLAMETTE RIVER BASIN

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14201300 ZOLLNER CREEK NEAR MOUNT ANGEL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.5	16.5	18.0	22.5	19.0	20.5	21.5	17.0	19.0	18.5	15.5	17.0
2	19.0	16.5	18.0	20.5	18.5	19.5	21.0	17.5	19.5	18.0	16.5	17.0
3	18.5	16.5	17.5	19.0	18.0	18.5	21.0	17.5	19.5	17.5	16.5	17.0
4	17.0	16.5	17.0	20.5	18.0	19.0	21.5	18.5	20.0	17.5	16.0	16.5
5	16.5	14.5	15.5	20.5	18.5	19.5	21.5	19.0	20.0	17.5	16.0	16.5
6	15.5	14.0	14.0	19.5	18.0	18.5	20.5	19.0	19.5	16.5	16.0	16.5
7	16.0	13.5	14.5	19.0	18.0	18.5	19.0	17.5	18.0	16.5	15.5	16.0
8	17.5	14.5	16.0	20.5	18.5	19.5	19.0	16.5	17.5	18.0	15.0	16.5
9	18.0	15.5	17.0	20.5	18.0	19.5	19.0	16.0	17.5	18.5	15.5	17.0
10	18.0	16.0	17.0	18.5	17.0	18.0	18.5	16.5	17.5	18.0	17.0	17.0
11	16.5	14.5	15.5	19.0	17.0	18.0	19.0	16.5	17.5	18.5	17.0	17.5
12	16.5	15.5	15.5	19.0	17.0	18.0	18.0	17.5	17.5	18.0	16.5	17.0
13	16.0	15.0	15.0	19.0	17.0	18.0	17.5	15.5	16.5	18.0	16.0	17.0
14	15.5	14.5	15.0	18.5	18.0	18.5	18.0	15.5	16.5	18.5	16.0	17.0
15	16.0	15.0	15.5	19.5	17.5	18.5	18.0	17.5	17.5	18.0	17.0	17.5
16	15.5	14.5	15.0	21.0	18.5	19.5	17.5	16.0	17.0	17.5	16.5	17.0
17	16.0	14.5	15.0	21.5	19.0	20.5	16.5	15.5	16.0	17.5	16.5	17.0
18	15.5	14.5	15.0	22.0	20.0	21.0	16.5	14.5	15.5	18.0	16.0	16.5
19	15.5	14.0	14.5	22.5	20.5	21.5	17.5	15.5	16.0	17.5	15.0	16.0
20	15.5	14.0	14.5	23.0	21.0	22.0	19.0	15.5	17.0	18.0	15.0	16.5
21	15.5	14.5	15.0	22.5	20.0	21.0	19.0	16.0	17.5	17.5	14.5	16.0
22	18.0	14.5	16.0	21.0	19.0	20.0	18.5	16.5	17.5	16.5	13.5	15.0
23	19.5	16.0	17.5	20.0	19.0	19.5	18.0	16.5	17.0	16.0	13.0	14.5
24	20.0	17.0	18.5	21.0	18.5	19.5	17.5	15.0	16.0	15.5	13.5	14.5
25	20.5	17.5	19.0	20.5	18.5	19.5	17.5	14.5	16.0	16.5	15.0	15.5
26	20.5	17.5	19.0	20.0	19.0	19.0	17.0	14.0	15.5	15.5	15.0	15.5
27	20.5	17.5	19.0	21.0	19.0	19.5	17.0	14.0	15.5	15.5	15.0	15.5
28	20.5	18.0	19.5	21.5	19.0	20.0	17.0	15.0	16.0	15.5	15.0	15.5
29	21.5	18.5	20.0	20.0	17.5	18.5	17.5	16.0	16.5	15.5	15.0	15.5
30	22.0	19.5	20.5	18.5	15.5	17.0	17.5	15.0	16.5	15.5	15.0	15.5
31	---	---	---	21.0	16.5	18.5	18.0	15.5	16.5	---	---	---
MONTH	22.0	13.5	16.5	23.0	15.5	19.5	21.5	14.0	17.5	18.5	13.0	16.5

WILLAMETTE RIVER BASIN

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14202000 PUDDING RIVER AT AURORA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1993 to current year.

WATER TEMPERATURE: August 1993 to current year.

INSTRUMENTATION.--Water-quality monitor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 270 microsiemens Sept. 5, 6, 1994; minimum, 53 microsiemens June 16, 17, 1994.

WATER TEMPERATURE: Maximum, 28.0°C July 22, 23, 1994; minimum, 0.5°C Nov. 26, 27, 1993.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 236 microsiemens Oct. 1; minimum recorded, 54 microsiemens Feb. 19.

WATER TEMPERATURE: Maximum, 26.0°C July 20; minimum, 3.5°C Jan. 4-6.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	236	224	230	131	93	107	88	68	76	94	89	92
2	229	219	223	101	86	90	72	66	67	94	92	93
3	221	217	220	92	88	90	69	67	67	92	91	91
4	218	209	212	96	89	91	72	68	70	93	91	92
5	216	208	212	103	91	98	84	72	76	95	92	94
6	215	204	207	101	93	96	95	84	90	95	93	94
7	206	198	203	94	90	92	98	95	96	96	94	95
8	206	199	203	97	92	94	104	98	101	99	96	98
9	206	200	203	102	97	100	111	104	108	112	98	102
10	212	203	207	98	73	86	112	109	110	117	108	112
11	219	210	214	86	73	78	109	103	105	111	103	108
12	215	212	213	91	85	88	109	104	106	104	100	101
13	217	210	214	91	86	89	108	99	102	101	86	96
14	223	217	221	87	86	87	102	100	100	86	78	79
15	225	221	223	90	86	87	102	99	101	78	69	72
16	223	210	216	95	90	92	99	93	96	69	67	68
17	214	193	207	109	95	99	93	68	84	68	65	66
18	193	182	187	121	109	117	68	58	62	69	64	65
19	198	186	194	119	110	114	67	63	65	71	69	70
20	186	173	180	110	103	108	75	67	69	76	70	73
21	186	168	175	104	79	90	91	75	82	82	76	79
22	185	176	181	88	84	87	94	91	92	89	82	86
23	197	179	186	96	88	92	96	94	95	94	89	92
24	188	167	179	101	94	98	99	96	97	99	94	97
25	179	153	162	105	92	96	101	99	100	100	98	99
26	153	134	142	105	92	96	99	97	97	106	98	102
27	185	109	143	97	94	96	98	74	91	105	100	104
28	121	97	107	97	88	93	74	69	72	100	93	96
29	102	85	93	91	88	89	80	72	75	97	92	95
30	117	86	106	92	88	91	87	80	85	93	86	89
31	106	91	102	---	---	---	89	85	87	99	82	93
MONTH	236	85	186	131	73	94	112	58	88	117	64	90

WILLAMETTE RIVER BASIN

14202000 PUDDING RIVER AT AURORA, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	85	61	72	100	96	97	92	90	91	91	86	88
2	69	62	64	99	96	97	92	89	91	90	86	88
3	62	60	61	99	95	97	92	90	91	86	---	---
4	69	62	64	102	96	98	95	92	93	---	---	---
5	82	69	76	102	97	99	99	94	98	---	---	---
6	88	82	85	98	94	96	99	96	98	---	---	---
7	95	88	91	99	95	97	100	97	98	---	---	---
8	97	94	95	104	98	100	99	94	96	---	---	---
9	100	96	98	108	101	105	95	84	89	---	---	---
10	99	98	99	108	100	104	84	74	78	77	74	75
11	99	97	98	100	94	97	78	74	76	79	77	78
12	99	97	98	96	93	95	78	72	75	82	72	79
13	99	97	98	97	93	94	84	72	79	75	71	73
14	97	93	95	101	97	100	85	---	---	75	72	73
15	103	96	99	100	97	99	---	---	---	75	72	73
16	107	103	106	97	93	95	---	---	---	77	74	76
17	106	90	102	97	93	96	---	---	---	79	76	78
18	90	56	72	98	97	97	---	---	---	81	79	80
19	58	54	56	97	87	94	79	77	78	83	79	81
20	61	57	59	87	79	83	84	78	82	86	82	84
21	59	57	58	88	80	84	---	---	---	88	86	87
22	68	59	63	83	80	82	---	---	---	89	86	88
23	76	68	72	84	81	83	---	---	---	92	87	90
24	83	76	79	86	83	85	---	---	---	95	90	93
25	88	83	86	87	85	86	87	83	86	96	93	95
26	92	88	90	87	85	86	88	86	87	100	95	97
27	96	91	93	90	87	89	90	87	88	100	96	98
28	100	96	98	93	89	91	92	90	91	101	97	99
29	---	---	---	95	93	94	92	87	88	102	98	100
30	---	---	---	95	93	94	91	88	90	102	98	101
31	---	---	---	95	90	93	---	---	---	105	100	102
MONTH	107	54	83	108	79	94	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	108	101	104	112	108	110	179	170	176	175	168	171
2	112	105	109	111	104	110	182	174	180	171	162	167
3	114	107	111	114	104	111	187	178	183	172	165	170
4	120	111	114	116	107	113	183	177	181	184	170	178
5	121	113	117	122	110	118	184	177	181	181	171	177
6	118	112	115	121	111	117	191	181	187	178	168	173
7	113	101	106	129	115	121	198	186	193	176	168	172
8	101	94	97	135	127	131	212	194	198	184	173	178
9	96	90	92	133	125	128	220	208	213	188	175	180
10	101	90	93	136	125	130	210	189	202	189	172	178
11	107	98	102	127	110	118	189	165	174	181	173	176
12	106	99	103	113	100	107	167	153	158	183	177	180
13	103	100	102	109	100	105	159	154	156	184	176	181
14	108	101	104	116	109	112	160	150	155	190	181	187
15	114	104	109	122	113	118	161	154	158	197	184	191
16	115	110	112	130	120	124	155	147	151	200	195	197
17	111	105	107	132	124	128	152	143	147	203	200	201
18	109	103	106	135	125	131	156	145	151	212	201	207
19	106	93	98	136	131	134	162	150	156	223	209	217
20	93	79	86	143	134	139	150	138	143	230	219	223
21	81	74	79	150	140	144	144	134	138	230	221	225
22	77	74	75	157	150	153	138	132	136	222	213	217
23	80	75	78	163	157	160	142	134	140	222	217	219
24	84	79	82	166	161	164	154	141	147	222	209	218
25	89	81	85	166	160	164	161	154	157	214	207	210
26	94	88	91	166	155	161	171	161	167	215	209	213
27	96	90	93	162	152	158	174	168	171	215	210	214
28	99	93	97	161	155	158	179	169	175	216	197	208
29	104	98	100	168	158	164	178	168	174	201	166	181
30	109	104	107	174	165	169	176	167	171	173	134	147
31	---	---	---	175	166	171	173	169	171	---	---	---
MONTH	121	74	99	175	100	135	220	132	167	230	134	192

WILLAMETTE RIVER BASIN

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14202000 PUDDING RIVER AT AURORA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

WILLAMETTE RIVER BASIN

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14202965 HENRY HAGG LAKE NEAR GASTON, OR

LOCATION.--Lat 45°28'25", long 123°11'51", in SE 1/4 NE 1/4 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 sea level.

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.--Daily elevations at 0800 and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 53,730 acre-ft Apr. 30, 1988, elevation, 303.58 ft; minimum contents observed since first filling, 808 acre-ft Oct. 31, 1975, elevation, 237.21 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 57,720 acre-ft May 18, elevation, 303.57 ft; minimum contents observed, 17,740 acre-ft Oct. 28, elevation, 265.55 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	270.99	22,040	-
Oct. 31.....	266.29	18,310	-3,730
Nov. 30.....	275.04	25,440	+7,130
Dec. 31.....	299.27	48,940	+23,500
CAL YR 1994.....	-	-	+20,260
Jan. 31.....	292.93	42,260	-6,680
Feb. 28.....	297.77	47,330	+5,070
Mar. 31.....	301.55	51,450	+4,130
Apr. 30.....	303.47	53,600	+2,150
May 31.....	303.50	53,640	+40
June 30.....	301.76	51,680	-1,960
July 31.....	294.33	43,700	-7,980
Aug. 31.....	282.68	32,270	-11,430
Sept.30.....	274.60	25,060	-7,210
WTR YR 1995.....	-	-	+3,020

WILLAMETTE RIVER BASIN

14202980 SCOGGINS CREEK BELOW HENRY HAGG LAKE, NEAR GASTON, OR

LOCATION.--Lat 45°28'10", long 123°11'56", in SE 1/4 NE 1/4 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 above sea level.

REMARKS.--No estimated daily discharges. 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.--20 years (water years 1976-95), 101 ft³/s, 73,180 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,050 ft³/s Apr. 5, 1991, gage height, 18.01 ft; minimum discharge, 1.4 ft³/s Nov. 16, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft³/s Jan. 25, gage height, 12.56 ft; minimum discharge, 8.7 ft³/s Feb. 2, gage height, 3.33 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	22	17	621	11	69	31	78	39	143	164	152
2	90	22	12	627	9.0	54	31	88	57	143	163	155
3	90	22	12	606	122	11	33	73	70	125	163	155
4	90	23	12	664	232	12	34	65	69	113	172	155
5	96	22	12	789	345	12	72	72	69	113	178	142
6	100	22	12	841	552	12	92	77	57	113	178	134
7	100	22	102	810	640	12	150	77	44	109	200	134
8	100	23	69	691	674	89	185	63	41	107	236	128
9	100	23	65	283	748	177	185	46	57	107	226	122
10	97	81	97	13	772	181	185	51	70	101	225	122
11	91	142	99	13	753	181	127	81	70	98	225	122
12	89	142	243	17	684	179	181	77	70	106	225	143
13	89	84	382	12	283	196	200	67	57	111	224	170
14	86	22	405	13	11	214	94	67	43	119	217	173
15	83	22	402	13	294	212	61	48	21	132	208	158
16	83	22	276	13	520	378	61	40	14	132	207	146
17	83	22	13	213	221	556	61	32	14	150	199	146
18	78	22	12	447	12	610	61	47	14	171	190	136
19	74	22	12	537	13	593	61	66	14	171	187	122
20	74	22	12	892	13	311	61	29	14	170	187	119
21	74	22	11	1000	13	294	62	29	14	170	171	124
22	74	22	10	974	49	294	62	33	14	170	181	127
23	74	22	10	987	77	292	62	38	48	169	183	115
24	74	22	187	1000	118	200	62	35	84	151	174	122
25	72	23	381	1010	145	126	63	25	90	140	174	127
26	67	22	183	769	144	126	63	28	118	130	173	111
27	39	23	9.8	585	99	114	47	35	134	134	173	82
28	22	23	9.5	566	69	98	53	35	136	149	173	39
29	22	23	14	239	---	82	63	35	147	153	164	19
30	22	25	90	13	---	57	63	37	144	153	157	19
31	23	---	397	14	---	38	---	39	---	153	153	---
TOTAL	2346	1031	3568.3	15272	7623.0	5780	2566	1613	1833	4206	5850	3719
MEAN	75.7	34.4	115	493	272	186	85.5	52.0	61.1	136	189	124
MAX	100	142	405	1010	772	610	200	88	147	171	236	173
MIN	22	22	9.5	12	9.0	11	31	25	14	98	153	19
AC-FT	4650	2040	7080	30290	15120	11460	5090	3200	3640	8340	11600	7380

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1995, BY WATER YEAR (WY)

	MEAN	97.2	72.3	122	133	83.9	118	78.9	55.4	58.4	120	144	125
MAX	155	233	433	493	303	326	261	98.7	121	201	190	206	
(WY)	1980	1985	1978	1995	1982	1983	1991	1984	1992	1994	1991	1993	
MIN	26.2	16.7	10.9	9.85	9.50	10.8	12.0	19.9	14.3	52.3	83.4	72.9	
(WY)	1978	1988	1991	1992	1977	1977	1985	1977	1977	1993	1977	1977	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1976 - 1995

ANNUAL TOTAL	33562.3	55407.3	
ANNUAL MEAN	92.0	152	
HIGHEST ANNUAL MEAN			101
LOWEST ANNUAL MEAN			172
HIGHEST DAILY MEAN	405	1010	1610
LOWEST DAILY MEAN	9.5	9.0	5.3
ANNUAL SEVEN-DAY MINIMUM	11	11	5.8
ANNUAL RUNOFF (AC-FT)	66570	109900	73180
10 PERCENT EXCEEDS	205	358	203
50 PERCENT EXCEEDS	74	91	75
90 PERCENT EXCEEDS	12	14	13

WILLAMETTE RIVER BASIN

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14203500 TUALATIN RIVER NEAR DILLEY, OR

LOCATION.--Lat 45°28'30", long 123°07'23", in NE 1/4 NW 1/4 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 58.8.

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 above sea level. 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 upstream from station and regulation by Henry Hagg Lake since January 1975. Diversions upstream from 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. Continuous water-quality records for the period November 1963 to September 1968 have been collected at this location.

AVERAGE DISCHARGE.--56 years (water years 1940-95, 381 ft³/s, 276,000 acre-ft/yr, adjusted.
20 years (water years 1976-95), 321 ft³/s, 232,200 acre-ft/yr, regulated.

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 discharge, 0.08 ft³/s Sept. 3, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,750 ft³/s Dec. 27, gage height, 17.72 ft; minimum discharge, 50 ft³/s Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	573	2340	1270	e2460	370	265	223	75	165	157	153
2	107	440	1830	1270	e1890	335	244	244	81	166	162	158
3	110	249	1250	1150	1270	263	228	226	117	161	159	159
4	106	237	797	1050	1120	261	219	208	118	144	167	162
5	109	265	603	1080	945	256	233	220	129	143	174	156
6	115	198	491	1160	1010	229	256	219	127	141	177	147
7	114	163	451	1210	1160	212	368	210	109	141	186	148
8	111	144	446	1230	1110	263	496	197	99	136	229	145
9	111	312	442	1450	1100	575	521	169	100	139	211	133
10	109	313	509	1490	1120	816	503	169	116	140	213	131
11	104	329	525	1210	1090	870	467	214	126	132	219	129
12	99	300	701	1000	1000	770	445	214	125	133	219	141
13	99	252	843	1220	830	819	518	190	121	134	220	170
14	100	153	868	2010	426	1170	444	179	114	132	214	175
15	100	177	869	2320	433	1190	373	160	114	149	199	165
16	98	252	1050	1930	714	1020	338	140	100	147	199	148
17	97	323	1970	1470	1430	1130	312	135	87	153	198	150
18	94	281	2200	2020	1740	1180	297	123	86	172	190	147
19	87	243	1760	1920	2060	1150	280	163	105	171	187	134
20	87	403	1940	2050	2150	1180	316	117	97	170	188	127
21	96	358	2200	2050	1390	1150	301	111	87	170	178	133
22	99	285	1650	1940	905	1070	283	107	81	172	174	136
23	94	274	1100	1800	742	914	266	109	90	174	184	128
24	92	272	855	1730	651	770	250	107	129	164	175	129
25	91	357	957	1640	604	611	237	96	132	149	175	139
26	99	360	1160	1500	552	541	225	90	146	142	173	134
27	308	358	2430	1090	493	492	212	98	172	141	173	128
28	161	382	2280	1050	416	442	214	96	162	153	172	96
29	83	398	1630	1400	---	398	219	92	172	155	166	52
30	64	662	1080	1220	---	344	215	87	170	155	162	54
31	224	---	1030	2140	---	297	---	83	---	154	158	---
TOTAL	3480	9313	38257	47070	30811	21088	9545	4796	3487	4698	5758	4107
MEAN	112	310	1234	1518	1100	680	318	155	116	152	186	137
MAX	308	662	2430	2320	2460	1190	521	244	172	174	229	175
MTN	64	144	442	1000	416	212	212	83	75	132	157	52
AC-FT	6900	18470	75880	93360	61110	41830	18930	9510	6920	9320	11420	8150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1995, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	142	285	607	657	614	515	341	158	108	135	153	145								
MAX	230	881	1596	1518	1215	1086	974	338	183	195	199	229								
(WY)	1983	1985	1978	1995	1983	1983	1991	1984	1984	1985	1981	1978								
MIN	71.8	47.2	41.1	31.8	62.0	165	99.8	80.8	65.9	91.0	93.0	82.6								
(WY)	1978	1988	1977	1977	1977	1992	1977	1977	1979	1977	1977	1985								

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1976 - 1995

	1994	1995	1976-1995
ANNUAL TOTAL	121224	182410	321
ANNUAL MEAN	332	500	529
HIGHEST ANNUAL MEAN			104
LOWEST ANNUAL MEAN			5170
HIGHEST DAILY MEAN	2430	2460	22
LOWEST DAILY MEAN	57	52	23
ANNUAL SEVEN-DAY MINIMUM	64	87	23
ANNUAL RUNOFF (AC-FT)	240400	361800	232200
10 PERCENT EXCEEDS	727	1270	787
50 PERCENT EXCEEDS	186	219	168
90 PERCENT EXCEEDS	84	100	80

e Estimated

WILLAMETTE RIVER BASIN

14203750 GALES CREEK NEAR GLENWOOD, OR

LOCATION.--Lat 45°38'37", long 123°22'09", in NE 1/4 SE 1/4 sec.24, T.2 N., R.6 W., Washington County, Hydrologic Unit 17090010, on left bank, 300 ft upstream from bridge over Gales Creek at Forest Park campground, and 4.7 mi west of Glenwood, and at mile 23.6.

DRAINAGE AREA.--7.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 920 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--2 years (water years 1994-95), 32.9 ft³/s, 61.17 in/yr, 23,810 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 703 ft³/s Jan. 31, 1995, but may have been higher during period of missing record Oct. 3 to Dec. 28, gage height, 3.48 ft; minimum discharge, 1.4 ft³/s Sept. 25-27, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 703 ft³/s Jan. 31, gage height, 3.48 ft, but may have been higher during period of missing record Oct. 3 to Dec. 28; minimum discharge, 1.5 ft³/s Oct. 2, 3, but may have been lower during period of missing record Oct. 4-13, Sept. 20-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	e120	e470	88	214	43	40	27	10	5.2	e3.2	e2.2
2	1.8	e70	e300	75	151	41	38	26	10	5.1	e2.9	e2.3
3	1.7	e55	e200	67	116	38	36	25	10	5.3	e2.7	e2.6
4	e1.7	e45	e120	61	92	39	35	25	9.9	5.2	e2.4	e3.0
5	e1.7	e39	e74	56	76	36	33	25	11	5.0	e2.3	e3.6
6	e1.7	e34	e54	51	64	33	32	23	10	5.0	e2.4	e4.0
7	e1.7	e32	e40	50	57	33	40	23	9.8	5.1	e3.0	e4.5
8	e1.7	e38	e35	51	51	36	47	22	9.3	4.9	e2.7	e3.8
9	e1.7	e46	e36	67	47	61	48	22	8.9	5.5	e2.6	e3.4
10	e1.7	e45	e40	74	45	86	47	22	9.2	5.3	e2.5	e3.0
11	e1.7	e38	e49	75	42	77	47	24	9.1	5.0	e3.5	e2.6
12	e1.7	e33	e66	79	41	69	46	22	9.2	4.8	e3.4	e2.2
13	e1.8	e29	e62	108	38	82	47	21	9.7	4.7	e3.1	e1.9
14	e3.0	e26	e58	164	36	99	48	20	11	4.8	e2.9	e1.7
15	e2.2	e26	e60	167	38	99	47	19	12	4.7	e2.9	e1.6
16	e1.9	e28	e150	127	43	87	45	18	10	4.7	e3.0	e1.7
17	e1.8	e28	e250	104	168	75	42	18	9.6	e4.2	e3.6	e1.8
18	e1.8	e26	e170	121	153	75	41	18	9.1	e4.0	e3.4	e1.9
19	e1.8	e38	e120	123	214	76	39	17	8.9	e3.9	e3.2	e1.7
20	e2.2	e60	e180	104	172	88	41	17	8.6	e3.6	e3.0	e1.6
21	e4.0	e52	e170	89	127	90	39	16	8.5	e3.6	e2.5	e1.6
22	e3.0	e43	e150	75	100	84	37	16	8.3	e3.7	e2.3	e1.6
23	e2.3	e40	e120	67	80	72	36	15	7.8	e3.9	e2.3	e1.6
24	e2.1	e39	e96	60	67	62	34	14	7.3	e4.0	e2.6	e1.6
25	e7.0	e38	e80	55	59	57	33	13	6.9	e3.7	e2.3	e1.8
26	e20	e39	e200	51	53	53	31	13	6.5	e3.5	e2.2	e2.2
27	e50	e40	e400	48	49	49	31	13	6.2	e3.7	e2.2	e2.6
28	e36	e60	e310	61	45	47	30	12	5.8	e3.5	e2.5	e2.5
29	e28	e250	191	97	---	45	28	12	5.4	e3.5	e2.3	3.3
30	e23	e450	134	155	---	44	27	11	5.2	e3.6	e2.5	3.5
31	e100	---	105	329	---	42	---	11	---	e3.5	e2.3	---
TOTAL	312.5	1907	4490	2899	2438	1918	1165	580	263.2	136.2	84.7	73.4
MEAN	10.1	63.6	145	93.5	87.1	61.9	38.8	18.7	8.77	4.39	2.73	2.45
MAX	100	450	470	329	214	99	48	27	12	5.5	3.6	4.5
MIN	1.7	26	35	48	36	33	27	11	5.2	3.5	2.2	1.6
AC-FT	620	3780	8910	5750	4840	3800	2310	1150	522	270	168	146
CFSM	1.38	8.71	19.8	12.8	11.9	8.48	5.32	2.56	1.20	.60	.37	.34
IN.	1.59	9.72	22.88	14.77	12.42	9.77	5.94	2.96	1.34	.69	.43	.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	MEAN	6.24	33.4	88.3	72.1	71.8	57.5	34.4	14.7	8.56	4.42	2.74	2.35
MAX	10.1	63.6	145	93.5	87.1	61.9	38.8	18.7	8.77	4.45	2.75	2.45	
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1994	1994	1995	
MIN	2.40	3.17	31.7	50.6	56.5	53.1	30.1	10.6	8.36	4.39	2.73	2.26	
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1995	1995	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1994 - 1995

ANNUAL TOTAL	13283.0	16267.0	
ANNUAL MEAN	36.4	44.6	
HIGHEST ANNUAL MEAN			32.9
LOWEST ANNUAL MEAN			44.6
HIGHEST DAILY MEAN	470	470	21.2
LOWEST DAILY MEAN	1.6	1.6	1995
ANNUAL SEVEN-DAY MINIMUM	1.7	1.6	1994
ANNUAL RUNOFF (AC-FT)	26350	32270	23810
ANNUAL RUNOFF (CFSM)	4.99	6.11	4.50
ANNUAL RUNOFF (INCHES)	67.69	82.89	61.17
10 PERCENT EXCEEDS	92	106	82
50 PERCENT EXCEEDS	14	27	12
90 PERCENT EXCEEDS	2.2	2.2	2.3

e Estimated

WILLAMETTE RIVER BASIN

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14203750 GALES CREEK NEAR GLENWOOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1993 to current year.

INSTRUMENTATION.--Water-quality monitor.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 14.5°C July 21-23, 1994, July 18-20, Aug. 4, 1995, minimum recorded, 1.5°C Feb. 15, 1995.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 14.5°C July 18-20, Aug. 4, minimum recorded, 1.5°C Feb. 15.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

WILLAMETTE RIVER BASIN

14203750 GALES CREEK NEAR GLENWOOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

WILLAMETTE RIVER BASIN

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14206298 BRONSON CREEK AT 185TH AVENUE, NEAR ALOHA, OR

LOCATION.--Lat 45°31'57", long 122°51'59", in NE 1/4 NE 1/4 sec.36, T.1 N., R.2 W., Washington County, Hydrologic Unit 17090010, on left bank at 185th Avenue bridge, near Aloha, and at mile 1.48.

DRAINAGE AREA.--4.15 mi².

PERIOD OF RECORD.--May 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 160 ft above sea level, from topographic map.

REMARKS.--Records poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--1 year (water year 1995), 6.14 ft³, 20.10 in/yr, 4,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85 ft³/s Nov. 1, 1994, gage height, 8.52 ft; minimum discharge, 0.02 ft³/s Aug. 30 to Sept. 3, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 85 ft³/s Nov. 1, gage height, 8.52 ft; minimum discharge, 0.05 ft³/s Oct. 5, Sept. 20-23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	44	30	4.6	24	4.2	e3.7	7.0	1.1	.83	.60	.27
2	.11	8.5	9.8	4.2	19	3.9	e3.4	7.1	1.1	.95	.59	.20
3	.08	4.6	6.7	3.8	11	3.6	e3.1	4.7	1.1	1.1	.67	.18
4	.07	6.2	5.1	3.6	8.6	e13	e5.0	3.9	1.4	1.1	.64	.24
5	.07	4.7	4.4	3.5	6.8	e13	e3.5	6.6	6.3	1.1	.73	.86
6	.08	4.2	4.4	3.4	6.0	e8.5	e3.4	4.6	3.5	1.1	.72	.82
7	.08	3.8	4.9	4.7	5.3	e7.0	e14	3.4	1.8	1.2	.67	.75
8	.07	4.7	4.2	4.7	4.8	e11	e11	3.1	1.4	1.1	.69	.52
9	.09	8.6	6.6	34	4.2	e26	e10	2.9	1.2	8.0	.66	.35
10	.11	5.9	7.0	25	3.8	e16	e7.5	3.0	1.3	3.7	1.4	.28
11	.11	4.0	14	15	3.8	e11	e7.6	8.5	1.4	2.0	2.1	.26
12	.11	3.7	16	21	7.7	e10	e9.0	4.5	1.4	1.7	1.2	.18
13	.20	3.1	6.8	34	6.2	e23	e12	3.4	1.5	1.5	.80	.16
14	.20	2.7	5.8	46	4.6	20	e8.0	2.6	3.4	1.5	.69	.16
15	.12	5.2	5.9	33	11	13	e6.2	2.3	9.6	1.4	.65	.17
16	.10	10	16	25	14	8.6	e5.0	2.2	3.5	1.4	.76	.16
17	.11	11	41	16	42	7.2	e5.1	2.1	2.4	1.2	1.8	.17
18	.11	5.7	17	15	24	11	e5.4	1.9	2.7	1.2	1.6	.17
19	.11	6.9	8.6	12	51	9.1	e5.0	1.8	2.5	1.3	.82	.17
20	.11	9.3	13	9.0	26	22	e9.0	1.7	2.6	1.3	.63	.12
21	.16	5.2	14	7.5	15	15	e7.0	1.8	1.9	1.1	.55	.11
22	.16	4.3	7.7	6.5	11	11	e5.5	1.6	1.5	1.1	.46	.10
23	.13	5.5	6.2	5.5	9.7	8.2	e4.5	1.4	1.5	1.1	.44	.07
24	.12	5.7	5.4	5.1	8.0	7.3	e4.0	1.5	1.5	1.0	.39	.06
25	.17	8.5	5.6	4.7	7.0	5.7	e3.6	1.5	1.4	.92	.42	.08
26	11	7.6	19	4.2	6.2	4.9	3.0	1.3	1.3	.93	.41	.44
27	51	7.3	41	3.9	5.3	e4.6	3.6	1.2	1.3	.92	.38	3.9
28	9.6	5.8	10	8.6	4.7	e4.0	9.3	1.0	1.1	.87	.40	3.1
29	4.2	5.7	6.9	12	---	e3.7	6.3	1.0	.91	.79	.40	2.7
30	3.5	33	6.0	21	---	e3.5	3.9	1.1	.83	.73	.43	2.9
31	35	---	5.2	33	---	e3.5	---	1.2	---	.65	.38	---
TOTAL	117.20	245.4	354.2	429.5	350.7	312.5	187.6	91.9	64.44	44.79	23.08	19.65
MEAN	3.78	8.18	11.4	13.9	12.5	10.1	6.25	2.96	2.15	1.44	.74	.65
MAX	51	44	41	46	51	26	14	8.5	9.6	8.0	2.1	3.9
MIN	.07	2.7	4.2	3.4	3.8	3.5	3.0	1.0	.83	.65	.38	.06
AC-FT	232	487	703	852	696	620	372	182	128	89	46	39
CFSM	.91	1.97	2.75	3.34	3.02	2.43	1.51	.71	.52	.35	.18	.16
IN.	1.05	2.20	3.17	3.85	3.14	2.80	1.68	.82	.58	.40	.21	.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	1994	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
MEAN	3.78	8.18	11.4	13.9	12.5	10.1	6.25	1.90	1.50	.85	.42	.45
MAX	3.78	8.18	11.4	13.9	12.5	10.1	6.25	2.96	2.15	1.44	.74	.65
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	3.78	8.18	11.4	13.9	12.5	10.1	6.25	.84	.86	.25	.095	.25
(WY)	1995	1995	1995	1995	1995	1995	1995	1994	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1995 WATER YEAR

WATER YEARS 1994 - 1995

ANNUAL TOTAL	2240.96		
ANNUAL MEAN	6.14	6.14	
HIGHEST ANNUAL MEAN		6.14	1995
LOWEST ANNUAL MEAN		6.14	1995
HIGHEST DAILY MEAN	51	51	Oct 27 1994
LOWEST DAILY MEAN	.06	.02	Aug 31 1994
ANNUAL SEVEN-DAY MINIMUM	.08	.03	Aug 27 1994
ANNUAL RUNOFF (AC-FT)	4440	4450	
ANNUAL RUNOFF (CFSM)	1.48	1.48	
ANNUAL RUNOFF (INCHES)	20.09	20.10	
10 PERCENT EXCEEDS	14	11	
50 PERCENT EXCEEDS	3.7	1.3	
90 PERCENT EXCEEDS	.18	.11	

e Estimated

WILLAMETTE RIVER BASIN

14206900 FANNO CREEK AT 56TH AVENUE, PORTLAND, OR

LOCATION.--Lat 45°29'17", long 122°44'01", in NE 1/4 NW 1/4 sec.18, T.1 S., R.1 E., Multnomah County, Hydrologic Unit 17090010, on bridge at SW 56th Ave., in Portland, and at mile 11.9.

DRAINAGE AREA.--2.37 mi².

PERIOD OF RECORD.--Annual maximums, 1975-77. October 1990 to current year.

REVISED RECORDS.--WDR OR-92-1: 1991, 1991(m).

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above sea level, from topographic map.

REMARKS.--Records poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--5 years (water years 1991-95), 2.57 ft³/s, 14.71 in/yr, 1,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 237 ft³/s Feb. 12, 1975, gage height, 15.32 ft, at different datum; minimum discharge, 0.07 ft³/s many days in October 1991 and September 1992.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 30	1645	*182	*11.26	No other peak greater than base discharge.			
Minimum discharge, 0.12 ft ³ /s Oct. 7-9.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	22	14	2.3	17	2.1	1.8	7.1	.77	.86	.32	.33
2	.16	1.9	7.2	2.2	6.5	2.0	1.7	3.1	.77	1.2	.32	.31
3	.13	1.0	3.4	2.1	4.3	1.9	1.6	1.9	.78	.71	.33	1.2
4	.13	5.6	2.7	2.0	3.6	4.7	2.8	2.8	2.2	.66	.33	.46
5	.13	1.1	2.2	1.9	3.0	3.9	1.7	3.5	3.1	.67	.33	.98
6	.13	1.6	2.6	1.8	2.6	2.0	2.2	2.0	1.2	.86	.47	.67
7	.13	.83	3.0	4.4	2.5	1.7	9.2	1.7	.94	.77	.44	.41
8	.12	3.4	2.2	2.6	2.3	7.5	8.5	1.6	.85	.73	.35	.36
9	.13	5.5	5.9	22	2.1	15	3.3	1.5	.79	12	.35	.35
10	.13	1.0	6.0	14	1.9	5.9	2.5	1.7	1.4	.76	2.1	.33
11	.13	1.1	23	8.6	2.2	5.5	3.0	6.1	.91	.62	.44	.31
12	.13	1.2	6.4	17	5.3	3.5	7.8	1.9	.91	.52	.35	.31
13	.15	.71	3.6	25	2.6	9.5	6.8	1.6	1.4	.44	.35	.31
14	.72	.63	4.7	23	2.4	7.9	3.2	1.3	2.8	.44	.34	.31
15	.13	3.9	7.8	19	13	3.5	2.5	1.3	6.6	.44	.36	.31
16	.13	9.3	33	7.9	16	3.0	2.1	1.2	1.3	.41	.90	.31
17	.14	5.0	25	7.6	55	2.9	3.4	1.1	1.2	.39	3.0	.32
18	.15	1.2	9.8	7.8	e12	4.8	2.1	1.1	1.4	.39	.49	.31
19	.16	7.8	4.9	4.2	38	4.0	4.3	1.1	4.1	.39	.41	.30
20	.25	2.3	11	3.5	8.3	14	5.3	1.0	1.4	.39	.40	.28
21	.36	1.2	6.7	3.0	5.8	7.9	2.4	1.0	1.1	.39	.37	.27
22	.19	1.0	3.7	2.6	4.4	4.5	2.0	.98	.97	.39	.36	.28
23	.19	2.6	3.1	2.4	3.7	3.2	1.8	.93	.90	.41	.37	.30
24	.18	3.7	2.5	2.2	3.2	3.2	1.6	.93	.87	.39	.38	.33
25	.46	6.2	5.7	2.1	2.9	2.5	1.5	.94	.86	.37	.36	2.4
26	28	2.2	30	2.3	2.6	2.3	1.5	.88	.86	.37	.35	2.0
27	44	2.5	14	2.0	2.3	2.2	2.8	.89	.86	.37	.33	4.1
28	2.8	1.3	5.3	8.1	2.2	2.1	3.4	.85	.86	.31	.53	1.5
29	.69	1.6	3.5	6.5	---	2.0	3.4	.82	.86	.31	1.4	.95
30	2.1	44	2.9	18	---	1.9	2.9	.80	.86	.31	.40	1.8
31	45	---	2.5	26	---	2.0	---	.78	---	.30	.36	---
TOTAL	127.38	143.37	258.3	254.1	227.7	139.1	99.1	54.40	43.82	27.57	17.59	22.40
MEAN	4.11	4.78	8.33	8.20	8.13	4.49	3.30	1.75	1.46	.89	.57	.75
MAX	45	44	33	26	55	15	9.2	7.1	6.6	12	3.0	4.1
MIN	.12	.63	2.2	1.8	1.9	1.7	1.5	.78	.77	.30	.32	.27
AC-FT	253	284	512	504	452	276	197	108	87	55	35	44
CFSM	1.73	2.02	3.52	3.46	3.43	1.89	1.39	.74	.62	.38	.24	.32
IN.	2.00	2.25	4.05	3.99	3.57	2.18	1.56	.85	.69	.43	.28	.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1995, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995
MEAN	1.60	2.90	4.59	4.76	5.76
MAX	4.11	4.78	8.33	8.20	8.13
(WY)	1995	1995	1995	1995	1993
MIN	.60	1.06	3.29	3.02	1.54
(WY)	1992	1994	1991	1994	1993

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1991 - 1995
ANNUAL TOTAL	1002.51	1414.83	
ANNUAL MEAN	2.75	3.88	2.57
HIGHEST ANNUAL MEAN			3.88
LOWEST ANNUAL MEAN			1.75
HIGHEST DAILY MEAN	91	55	91
LOWEST DAILY MEAN	.10	.12	.07
ANNUAL SEVEN-DAY MINIMUM	.10	.13	.07
ANNUAL RUNOFF (AC-FT)	1990	2810	1860
ANNUAL RUNOFF (CFSM)	1.16	1.64	1.08
ANNUAL RUNOFF (INCHES)	15.74	22.21	14.71
10 PERCENT EXCEEDS	5.9	8.2	5.9
50 PERCENT EXCEEDS	.83	1.8	1.1
90 PERCENT EXCEEDS	.16	.31	.18

e Estimated

WILLAMETTE RIVER BASIN

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14206950 FANNO CREEK AT DURHAM, OR

LOCATION.--Lat 45°24'13", long 122°45'13", in NE 1/4 NW 1/4 sec.13, T.2 S., R.1 W., Washington County, Hydrologic Unit 17090010, on left bank under Durham Road bridge, at Durham, and at mile 1.13.

DRAINAGE AREA.--31.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September to November 1966, September 1972 to September 1977 (discharge measurements only), October 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 116.83 ft above sea level (levels by Corps of Engineers).

REMARKS.--Records good except for those below 5 ft³/s and estimated daily discharges, which are fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--2 years (water years 1994-95), 42.6 ft³/s, 18.39 in/yr, 30,890 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft³/s Oct. 27, 1994, gage height, 9.30 ft (from outside high-water mark); minimum discharge, 1.2 ft³/s, Oct. 1, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s Oct. 27, gage height, 9.30 ft (from outside high-water mark); minimum discharge, 1.8 ft³/s Oct. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.5	627	408	37	240	31	28	77	11	8.8	3.4	5.7
2	e2.3	134	145	33	146	27	26	80	11	12	3.5	5.1
3	e2.2	47	74	30	82	26	25	37	11	16	5.3	6.5
4	2.1	110	51	27	64	62	35	38	12	15	6.0	12
5	2.0	54	42	26	55	61	28	68	54	12	5.7	8.4
6	e2.0	44	42	29	46	33	26	38	30	10	6.7	10
7	e2.0	35	54	55	42	28	124	31	18	12	8.7	10
8	e2.0	35	38	45	36	82	100	28	13	13	8.4	6.8
9	e2.0	105	61	223	33	205	82	25	12	75	6.5	6.0
10	e2.0	38	68	235	30	141	43	25	15	43	16	5.9
11	e2.0	28	133	143	30	108	44	59	19	18	22	5.2
12	3.6	37	164	194	67	64	72	40	13	13	8.5	4.0
13	4.3	26	62	288	53	140	110	28	17	11	6.7	3.2
14	13	22	58	315	45	136	54	e22	38	10	6.7	3.3
15	7.9	57	67	236	132	78	44	e19	112	10	5.9	3.3
16	3.9	114	198	169	161	59	35	18	30	10	11	3.6
17	3.7	108	342	108	553	51	38	19	22	9.8	48	3.4
18	3.3	44	205	115	293	86	43	17	19	9.1	15	4.0
19	3.3	50	100	83	355	52	40	15	57	8.0	8.2	3.6
20	3.2	103	115	62	205	173	94	14	31	7.2	6.8	3.4
21	9.2	41	156	53	103	120	63	14	22	6.9	5.9	3.1
22	6.0	31	73	45	76	87	36	14	18	6.6	5.3	2.6
23	3.8	46	59	40	62	59	31	13	15	6.8	4.9	2.7
24	3.5	51	53	36	51	55	29	13	13	6.8	4.7	3.2
25	5.3	116	62	33	44	42	26	12	12	7.6	4.7	8.0
26	100	71	156	33	39	37	25	12	11	7.3	5.0	15
27	e840	73	289	33	37	34	36	11	11	6.6	3.7	45
28	191	46	112	100	33	32	42	10	12	5.4	4.3	43
29	38	39	66	123	---	30	36	10	11	4.7	21	25
30	28	303	54	213	---	54	9.4	9.3	4.0	11	29	---
31	249	---	43	359	---	27	---	12	---	4.0	6.9	---
TOTAL	1543.1	2635	3550	3521	3113	2195	1469	828.4	679.3	389.6	286.4	290.0
MEAN	49.8	87.8	115	114	111	70.8	49.0	26.7	22.6	12.6	9.24	9.67
MAX	840	627	408	359	553	206	124	80	112	75	48	45
MIN	2.0	22	38	26	30	26	25	9.4	9.3	4.0	3.4	2.6
AC-FT	3060	5230	7040	6980	6170	4350	2910	1640	1350	773	568	575
CFSM	1.58	2.79	3.64	3.61	3.53	2.25	1.55	.85	.72	.40	.29	.31
IN.	1.82	3.11	4.19	4.16	3.68	2.59	1.73	.98	.80	.46	.34	.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	MEAN	29.2	49.1	89.4	88.5	101	56.3	41.9	20.1	16.5	8.38	6.53	8.36
MAX	49.8	87.8	115	114	111	70.8	49.0	26.7	22.6	12.6	9.24	9.67	
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	
MIN	8.53	10.3	64.2	63.5	91.5	41.8	34.9	13.5	10.3	4.20	3.83	7.06	
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1994 - 1995

	ANNUAL TOTAL	15786.7	20499.8	
ANNUAL MEAN		43.3	56.2	42.6
HIGHEST ANNUAL MEAN				56.2
LOWEST ANNUAL MEAN				29.1
HIGHEST DAILY MEAN	840	Oct 27	840	Oct 27 1994
LOWEST DAILY MEAN	1.5	Aug 27	2.0	Oct 5 1993
ANNUAL SEVEN-DAY MINIMUM	1.9	Aug 24	2.0	Oct 5 1994
ANNUAL RUNOFF (AC-FT)	31310		40660	30890
ANNUAL RUNOFF (CFSM)	1.37		1.78	1.35
ANNUAL RUNOFF (INCHES)	18.64		24.21	18.39
10 PERCENT EXCEEDS	108		135	108
50 PERCENT EXCEEDS	17		30	18
90 PERCENT EXCEEDS	2.8		4.0	3.3

e Estimated

WILLAMETTE RIVER BASIN

14206950 FANNO CREEK AT DURHAM, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1993 to current year.

WATER TEMPERATURE: October 1993 to current year.

INSTRUMENTATION.--Water-quality monitor.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 406 microsiemens Oct. 23, 1994; minimum, 47 microsiemens Dec. 1, 1994.

WATER TEMPERATURE: Maximum, 24.0°C July 19, 20, 1995; minimum, 0.5°C Nov. 25, 26, 1993.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 406 microsiemens Oct. 23; minimum, 47 microsiemens Dec. 1.

WATER TEMPERATURE: Maximum, 24.0°C July 19, 20; minimum, 1.5°C Jan. 3-5.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	286	264	283	186	119	131	76	47	60	173	169	172
2	289	285	287	148	129	138	93	76	87	178	172	174
3	288	284	286	---	---	---	107	93	100	179	177	178
4	288	283	286	---	---	---	123	107	114	182	179	180
5	305	282	291	---	---	---	151	123	137	185	181	182
6	329	280	302	---	---	---	170	151	160	188	184	187
7	314	286	297	---	---	---	169	154	159	186	153	166
8	293	286	289	---	---	---	177	155	164	153	151	152
9	295	286	292	166	120	143	190	168	180	154	77	112
10	298	291	295	132	126	128	170	164	167	102	79	91
11	298	287	294	143	132	138	168	133	159	119	102	111
12	299	282	294	152	143	147	147	135	140	118	101	109
13	318	219	308	156	150	154	159	145	150	102	83	91
14	296	229	269	159	155	157	190	159	173	97	93	95
15	274	251	260	171	157	166	191	140	179	109	95	105
16	259	256	258	170	110	152	178	122	151	115	104	108
17	275	257	265	110	98	102	170	98	133	139	115	128
18	294	275	284	108	102	105	137	101	115	153	139	147
19	302	293	299	---	---	---	154	137	147	153	144	147
20	297	280	292	---	---	---	156	103	138	152	144	148
21	281	255	268	---	---	---	139	98	115	159	152	156
22	310	272	282	---	---	---	164	139	154	167	159	163
23	406	310	376	---	---	---	172	164	168	175	167	171
24	398	377	387	---	---	---	177	156	172	181	175	178
25	377	156	356	---	---	---	176	143	163	188	181	185
26	295	66	201	---	---	---	143	79	118	198	188	193
27	165	62	85	---	---	---	114	79	91	208	198	203
28	184	119	162	---	---	---	138	114	126	215	190	207
29	223	184	203	---	---	---	155	138	148	192	148	168
30	277	223	256	---	---	---	163	155	160	149	104	125
31	276	163	221	---	---	---	169	162	166	122	86	103
MONTH	406	62	275	---	---	---	191	47	142	215	77	150

WILLAMETTE RIVER BASIN

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14206950 FANNO CREEK AT DURHAM, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	149	101	122	227	216	220	215	209	211	---	---	---
2	157	135	142	232	226	228	215	209	211	---	---	---
3	188	157	174	229	225	227	229	213	220	---	---	---
4	217	188	202	242	121	194	236	218	229	---	---	---
5	222	210	216	168	146	158	223	217	219	---	---	---
6	236	221	230	192	168	180	231	222	227	---	---	---
7	247	236	241	236	192	206	230	154	196	---	---	---
8	257	247	253	240	132	186	---	---	---	---	---	---
9	267	256	263	132	117	124	---	---	---	219	208	211
10	273	267	270	160	128	141	---	---	---	219	189	214
11	274	270	272	185	160	173	---	---	---	193	115	163
12	276	271	273	199	185	192	---	---	---	181	133	160
13	276	273	274	201	187	195	---	---	---	197	132	177
14	279	274	277	235	201	220	---	---	---	210	197	204
15	304	278	289	224	214	219	---	---	---	214	209	211
16	302	260	277	229	218	223	---	---	---	214	210	212
17	261	171	210	230	222	227	---	---	---	212	206	210
18	180	128	142	226	202	213	---	---	---	215	211	213
19	148	127	138	211	202	207	---	---	---	222	213	218
20	151	127	141	202	175	184	---	---	---	230	222	225
21	172	151	160	182	170	175	---	---	---	231	223	228
22	201	172	192	175	170	172	---	---	---	234	229	232
23	206	201	203	178	172	176	---	---	---	239	228	236
24	219	205	212	182	176	179	---	---	---	239	231	236
25	230	219	225	190	181	185	---	---	---	239	226	232
26	235	230	232	197	189	193	---	---	---	235	228	232
27	242	234	238	206	196	202	---	---	---	239	230	236
28	244	223	235	214	206	211	---	---	---	239	232	236
29	---	---	---	214	209	211	---	---	---	239	235	238
30	---	---	---	219	213	215	---	---	---	241	229	235
31	---	---	---	220	214	218	---	---	---	241	225	236
MONTH	304	101	218	242	117	195	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	233	142	181	241	232	237	263	251	256	240	228	234
2	219	174	201	247	227	237	258	231	253	242	233	240
3	238	217	233	234	219	227	259	242	253	244	197	241
4	238	188	227	220	191	210	259	253	256	241	171	216
5	218	111	165	227	215	221	263	256	259	240	216	225
6	192	122	163	227	224	226	264	245	258	229	210	219
7	212	192	204	231	224	226	254	243	250	215	192	204
8	223	212	217	234	217	230	253	248	251	219	193	207
9	230	213	223	236	102	170	257	242	250	229	218	225
10	229	190	216	178	110	146	264	185	245	243	229	238
11	204	190	197	202	178	193	215	168	187	249	239	244
12	206	178	197	207	196	204	230	199	215	259	248	256
13	205	178	195	219	204	212	243	227	237	262	251	258
14	208	122	175	224	213	220	252	243	248	272	249	262
15	155	66	115	226	211	223	261	243	252	261	252	258
16	174	141	158	229	213	224	257	130	224	261	253	258
17	187	169	180	234	219	227	190	111	149	271	257	265
18	192	181	187	235	223	230	203	173	192	279	268	273
19	191	94	145	238	229	235	215	200	206	272	256	265
20	169	126	151	248	235	243	230	215	222	287	257	265
21	184	169	176	260	247	255	234	228	231	289	262	276
22	193	183	188	263	241	256	238	232	235	264	254	262
23	203	193	200	253	242	248	236	229	234	266	260	264
24	217	202	210	252	245	250	241	232	237	274	263	270
25	222	211	216	251	240	248	248	235	243	275	153	239
26	225	218	221	251	241	247	252	243	247	293	168	249
27	226	220	223	255	247	252	254	245	250	186	135	157
28	228	217	222	255	249	252	258	226	253	158	107	134
29	224	215	219	258	248	253	251	154	200	172	120	152
30	232	222	226	255	243	251	218	196	211	173	123	149
31	---	---	---	261	247	255	234	216	226	---	---	---
MONTH	238	66	194	263	102	229	264	111	233	293	107	233

WILLAMETTE RIVER BASIN

14206950 FANNO CREEK AT DURHAM, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	17.5	16.5	17.0	11.0	10.0	10.5	9.0	8.5	9.0	4.0	3.5	3.5
2	17.0	15.0	16.0	10.0	9.5	10.0	8.5	8.0	8.0	3.5	2.0	3.0
3	15.0	13.5	14.0	10.0	9.0	9.0	8.0	6.5	7.0	2.0	1.5	2.0
4	14.0	13.5	13.5	9.0	8.5	8.5	6.5	4.5	5.5	2.0	1.5	1.5
5	13.5	12.5	13.0	9.0	9.0	9.0	4.5	3.5	4.0	2.5	1.5	2.0
6	14.0	13.0	13.5	9.0	8.5	8.5	4.0	3.5	3.5	3.0	2.5	3.0
7	13.5	13.0	13.0	8.5	8.5	8.5	5.0	4.0	4.5	4.0	3.0	3.5
8	13.0	12.5	13.0	8.5	8.5	8.5	5.5	5.0	5.0	6.0	4.0	5.0
9	13.5	12.5	13.0	9.0	8.5	8.5	6.0	5.0	5.5	7.0	6.0	6.5
10	13.0	12.5	12.5	9.0	8.5	8.5	6.0	5.5	6.0	8.0	7.0	7.5
11	12.5	11.5	12.0	8.5	8.5	8.5	6.0	6.0	6.0	8.0	7.5	8.0
12	11.5	11.0	11.5	8.5	8.0	8.5	6.0	5.5	6.0	8.0	7.5	7.5
13	11.5	10.0	10.5	8.5	8.5	8.5	6.0	5.0	5.5	8.5	8.0	8.0
14	11.5	11.5	11.5	8.5	8.0	8.5	5.5	5.0	5.5	9.0	8.0	8.5
15	12.0	11.0	11.0	8.5	8.0	8.5	7.0	5.5	6.0	8.5	8.0	8.5
16	11.5	10.0	10.5	8.5	7.5	8.0	8.5	7.0	7.5	8.0	7.5	8.0
17	10.5	9.5	10.0	7.5	7.0	7.0	9.5	8.5	9.0	7.5	7.0	7.5
18	10.0	9.0	9.5	7.0	6.0	6.5	9.5	9.0	9.0	8.5	7.5	8.0
19	10.0	9.0	9.5	6.5	6.0	6.0	9.0	8.5	9.0	8.0	7.0	7.5
20	11.5	10.0	10.5	6.5	6.0	6.5	10.0	9.0	9.5	7.5	7.0	7.5
21	12.0	11.5	11.5	6.5	6.0	6.0	9.5	9.0	9.0	7.5	6.5	7.0
22	12.0	10.5	11.0	6.0	5.5	6.0	9.0	8.5	9.0	6.5	6.0	6.0
23	11.5	10.5	11.0	6.5	5.5	6.0	8.5	8.0	8.5	6.0	5.5	6.0
24	11.0	10.5	11.0	7.5	6.5	7.0	8.0	7.5	8.0	6.0	5.5	6.0
25	13.0	10.0	10.5	7.5	7.0	7.5	8.0	7.0	7.5	6.0	6.0	6.0
26	14.0	12.0	12.5	7.0	6.5	7.0	9.5	7.5	8.5	7.0	6.0	6.5
27	13.5	12.5	13.0	7.0	6.5	7.0	10.0	9.5	10.0	7.5	7.0	7.5
28	12.5	12.0	12.5	7.0	6.5	7.0	9.5	8.0	9.0	7.5	7.5	7.5
29	12.5	11.0	11.5	8.0	7.0	7.5	8.0	6.0	6.5	9.0	7.5	8.0
30	11.0	11.0	11.0	9.5	8.0	9.0	6.0	5.0	5.5	10.5	9.0	10.0
31	11.5	11.0	11.0	---	---	---	5.0	4.0	4.5	12.0	10.5	11.5
MONTH	17.5	9.0	12.0	11.0	5.5	8.0	10.0	3.5	7.0	12.0	1.5	6.5

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

WILLAMETTE RIVER BASIN

14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR

WATER-QUALITY RECORDS

LOCATION.--45°21'24", long 122°41'02", in SE 1/4 NE 1/4 sec.33 T.2 S.. R. 1 E., Clackamas County, Hydrologic Unit 17090010, on left bank, mounted to the fish ladder at the Lake Oswego Dam, and at mile 3.4.

DRAINAGE AREA.--706 mi², at gage 1.6 mi downstream.

PERIOD OF RECORD.--May 1991 to September 1995.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1993 to September 1995.

pH: May 1993 to September 1995.

WATER TEMPERATURE: October 1993 to September 1995.

DISSOLVED OXYGEN: May 1993 to September 1995.

AIR TEMPERATURE: May 1993 to September 1995.

INSTRUMENTATION.--Water-quality monitor since May 1991. Electronic data logger with 60 minute recording interval.

REMARKS.--Continuous data for period May 1991 to September 1993 published in USGS Open-File Report 96-173, "Water-quality, Streamflow, and Meteorological Data for the Tualatin River Basin, Oregon, 1991-93".

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 365 microsiemens July 7, 1995; minimum recorded, 75 microsiemens Feb. 23, 1995.

pH: Maximum recorded, 9.0 units June 29, 30, 1995; minimum recorded, 6.2 units Oct. 18, 19, 1993.

WATER TEMPERATURE: Maximum recorded, 27.0°C July 22, 1994; minimum recorded, 3.0°C Feb. 8, 9, 1994.

DISSOLVED OXYGEN: Maximum recorded, 17.9 mg/L July 13, 1994; minimum recorded, 5.4 mg/L Oct. 5, 1994.

AIR TEMPERATURE: Maximum recorded, 40.8°C July 17, 1995; minimum recorded, -4.1°C Nov. 24, 1993.

EXTREMES FOR 1994 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 286 microsiemens Sept. 2; minimum recorded, 90 microsiemens Mar. 2.

pH: Maximum recorded, 8.8 units June 11, 22; minimum recorded, 6.2 units Feb. 28.

WATER TEMPERATURE: Maximum recorded, 27.0°C July 22; minimum recorded, 3.0°C Feb. 8, 9.

DISSOLVED OXYGEN: Maximum recorded, 17.9 mg/L July 13; minimum recorded, 5.7 mg/L Oct. 19, Sept. 13.

AIR TEMPERATURE: Maximum recorded, 40.4°C July 19; minimum recorded, -4.1°C Nov. 24.

EXTREMES FOR 1995 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 365 microsiemens July 7; minimum recorded, 75 microsiemens Feb. 23.

pH: Maximum recorded, 9.0 units June 29, 30; minimum recorded, 6.6 units several days February to March.

WATER TEMPERATURE: Maximum recorded, 26.5°C July 19; minimum recorded, 3.5°C Jan. 4-7.

DISSOLVED OXYGEN: Maximum recorded, 16.8 mg/L June 29; minimum recorded, 5.4 mg/L Oct. 5.

AIR TEMPERATURE: Maximum recorded, 40.8°C July 17; minimum recorded, -0.4°C Nov. 8.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	243	225	234	243	235	239	207	157	197	192	150	172
2	257	241	247	245	238	243	157	124	138	169	148	156
3	263	254	258	240	229	236	192	155	183	157	113	135
4	259	244	251	230	225	228	178	142	157	118	110	114
5	245	239	243	230	224	227	143	134	140	118	112	114
6	239	232	236	231	221	226	142	130	137	115	113	114
7	237	210	230	230	222	226	169	134	151	113	106	110
8	255	237	242	234	223	228	180	159	169	106	102	103
9	272	255	264	243	224	234	173	160	165	109	103	105
10	273	269	271	242	222	233	176	133	155	110	108	109
11	269	250	262	223	214	220	133	117	123	115	110	112
12	254	225	242	227	216	222	127	119	123	119	113	116
13	226	214	220	233	221	227	127	115	120	120	112	116
14	220	215	216	231	221	227	117	114	116	117	111	114
15	221	204	218	229	220	224	127	117	121	120	113	116
16	210	187	199	232	215	223	134	127	131	123	116	119
17	211	174	193	229	216	221	141	132	136	123	118	121
18	196	164	181	224	213	217	149	139	143	129	121	124
19	216	183	201	218	212	215	154	145	148	132	123	127
20	214	201	206	226	216	220	156	147	152	136	127	131
21	214	203	206	223	212	216	161	151	158	139	127	132
22	221	214	218	214	207	211	167	158	164	142	134	139
23	226	221	224	220	206	212	170	162	168	148	138	145
24	236	226	232	226	199	212	175	166	172	148	138	144
25	242	236	239	225	203	215	179	168	174	151	141	146
26	236	230	233	230	222	226	178	168	174	150	138	143
27	231	221	225	228	220	225	183	170	177	148	140	144
28	226	222	224	227	213	219	183	175	179	151	135	141
29	226	221	224	219	208	214	191	181	186	151	134	141
30	232	224	228	214	202	208	193	182	188	144	135	141
31	236	231	233	---	---	---	197	181	189	146	135	141
MONTH	273	164	229	245	199	223	207	114	156	192	102	129

WILLAMETTE RIVER BASIN
14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued
SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	150	139	145	94	91	93	137	125	131	154	139	148
2	150	141	146	92	90	91	138	128	134	151	143	148
3	153	145	149	93	90	92	144	133	140	157	149	150
4	154	147	151	97	93	95	143	133	139	157	151	156
5	158	147	155	99	95	97	144	136	140	158	153	162
6	163	150	157	98	94	96	150	135	142	190	145	165
7	162	150	157	101	96	98	153	139	146	159	143	153
8	160	148	155	104	100	102	152	141	147	172	150	162
9	164	147	158	108	104	106	155	135	140	169	141	154
10	167	151	161	114	107	111	157	122	130	154	141	149
11	171	155	165	121	112	116	135	108	118	156	149	153
12	177	159	170	127	118	121	133	106	109	159	153	162
13	182	167	175	128	120	123	135	106	110	173	159	178
14	173	158	165	131	121	126	121	113	116	162	152	168
15	164	154	159	136	125	130	126	117	121	189	160	185
16	170	154	163	141	129	135	135	120	124	200	182	192
17	159	127	141	141	134	138	137	124	132	159	151	156
18	132	123	130	144	133	140	140	126	134	155	152	157
19	123	114	118	151	136	142	143	149	159	204	197	200
20	114	107	110	151	131	140	146	138	142	201	194	197
21	113	107	110	141	124	132	151	144	147	210	196	203
22	121	111	115	128	116	122	157	144	151	207	196	202
23	120	111	116	127	113	122	158	145	154	203	196	200
24	112	93	100	113	108	111	164	149	159	204	197	200
25	103	99	100	114	106	111	167	149	160	208	202	204
26	104	95	99	122	111	115	164	149	158	205	201	203
27	96	94	95	120	113	117	168	145	160	225	204	213
28	95	93	94	121	115	117	174	152	165	230	222	225
29	---	---	---	126	116	121	174	157	169	234	225	229
30	---	---	---	129	119	124	172	150	164	235	226	230
31	---	---	---	133	123	128	---	---	---	234	225	230
MONTH	182	93	138	151	90	117	174	106	141	235	139	187

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	228	223	225	---	---	---	---	---	---	285	277	281
2	224	217	219	---	---	---	---	---	---	286	283	284
3	234	219	225	---	---	---	---	---	---	283	278	280
4	242	234	236	---	---	---	---	---	---	278	269	276
5	246	242	244	---	---	---	---	---	---	269	262	264
6	249	245	247	---	---	---	---	---	---	265	257	262
7	260	246	252	---	---	---	---	---	---	263	256	260
8	253	230	241	---	---	---	---	---	---	261	256	258
9	231	220	224	---	---	---	---	---	---	266	258	262
10	233	223	228	---	---	---	---	---	---	272	263	266
11	236	231	235	---	---	---	---	---	---	272	262	268
12	242	233	238	---	---	---	---	---	---	273	257	267
13	250	239	243	---	---	---	---	---	---	265	257	263
14	252	245	249	---	---	---	---	---	---	261	255	259
15	257	251	255	---	---	---	---	---	---	255	248	252
16	253	244	251	---	---	---	---	---	---	248	241	246
17	245	239	242	---	---	---	---	---	---	249	243	245
18	239	229	233	---	---	---	---	---	---	263	248	255
19	229	224	226	---	---	---	---	---	---	274	260	267
20	---	---	---	---	---	---	---	---	---	279	273	275
21	---	---	---	244	237	241	---	---	---	278	264	270
22	---	---	---	243	236	239	---	---	---	265	260	262
23	---	---	---	247	240	244	---	---	---	262	256	260
24	---	---	---	250	245	248	270	266	268	262	261	262
25	---	---	---	253	245	249	266	263	265	264	262	263
26	---	---	---	263	247	254	269	264	266	265	264	264
27	---	---	---	263	251	258	274	267	270	269	264	267
28	---	---	---	252	243	249	273	269	271	273	268	270
29	---	---	---	247	244	246	269	265	268	277	273	276
30	---	---	---	252	244	248	272	266	269	277	276	277
31	---	---	---	263	251	256	279	271	274	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	286	241	265

WILLAMETTE RIVER BASIN

14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.6	6.7	7.1	6.9	7.4	7.2	7.2	7.0	7.3	7.3	7.1	7.0
2	7.0	6.9	7.0	6.9	7.3	7.2	7.1	7.0	7.4	7.3	7.0	7.0
3	7.0	6.8	7.0	7.0	7.4	7.3	7.1	6.9	7.4	7.3	7.0	6.9
4	6.9	6.6	7.0	7.0	7.3	6.9	6.9	6.8	7.4	7.3	7.0	6.9
5	6.8	6.4	7.0	7.0	7.1	6.9	6.9	6.8	7.4	7.4	7.0	7.0
6	6.6	6.4	7.0	7.0	7.0	6.9	6.9	6.8	7.4	7.3	7.0	7.0
7	6.8	6.3	7.1	7.0	7.1	6.8	6.9	6.8	7.3	7.3	7.0	7.0
8	6.5	6.4	7.1	7.1	7.1	7.1	6.9	6.8	7.3	7.3	7.0	7.0
9	6.6	6.4	7.1	7.0	7.2	7.1	6.9	6.8	7.3	7.3	7.0	6.8
10	6.6	6.5	7.1	7.1	7.2	7.1	6.9	6.8	7.4	7.3	6.8	6.8
11	6.7	6.6	7.1	7.1	7.1	7.0	6.9	6.8	7.4	7.4	6.8	6.8
12	7.2	6.7	7.1	7.1	7.0	7.0	6.8	6.8	7.4	7.4	6.8	6.8
13	7.2	6.9	7.1	7.1	7.0	7.0	7.0	6.8	7.4	7.3	6.8	6.7
14	7.2	6.9	7.1	7.1	7.0	6.9	7.0	7.0	7.4	7.3	6.8	6.8
15	7.2	6.6	7.2	7.1	7.0	6.9	7.0	7.0	7.4	7.3	6.8	6.7
16	6.6	6.3	7.2	7.2	6.9	6.9	7.0	7.0	7.3	7.3	6.8	6.7
17	6.4	6.3	7.2	7.2	6.9	6.9	7.1	7.0	7.3	7.2	6.8	6.7
18	6.3	6.2	7.2	7.2	6.9	6.9	7.1	7.1	7.4	7.3	6.9	6.8
19	7.1	6.2	7.2	7.2	7.0	6.9	7.2	7.1	7.4	7.3	6.9	6.8
20	7.1	7.1	7.2	7.2	7.1	7.0	7.2	7.2	7.3	7.3	6.9	6.7
21	7.1	7.0	7.2	7.2	7.2	7.1	7.2	7.2	7.3	7.3	6.8	6.7
22	7.0	6.9	7.2	7.2	7.2	7.2	7.2	7.1	7.3	7.2	6.7	6.6
23	7.0	7.0	7.3	7.2	7.2	7.2	7.1	7.1	7.2	7.1	6.7	6.7
24	7.1	7.0	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.1	6.7	6.6
25	7.1	7.0	7.4	7.3	7.2	7.2	7.3	7.1	7.2	7.1	7.1	6.7
26	7.1	7.0	7.4	7.4	7.2	7.2	7.3	7.3	7.1	7.1	7.1	7.1
27	7.0	7.0	7.5	7.4	7.2	7.2	7.3	7.3	7.1	7.0	7.1	7.1
28	7.1	7.0	7.5	7.4	7.3	7.2	7.3	7.3	7.1	7.0	7.1	7.0
29	7.1	7.0	7.4	7.2	7.2	7.2	7.3	7.3	---	---	7.0	6.9
30	7.1	7.0	7.4	7.2	7.2	7.2	7.3	7.3	---	---	6.9	6.9
31	7.1	7.0	---	---	7.2	7.2	7.3	7.3	---	---	6.9	6.9
MONTH	7.6	6.2	7.5	6.9	7.4	6.8	7.3	6.8	7.4	7.0	7.1	6.6
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.9	6.9	7.2	7.1	7.5	7.2	7.9	7.5	---	---	7.1	6.9
2	6.9	6.8	7.1	7.1	7.4	7.2	7.8	7.4	---	---	7.0	6.9
3	6.9	6.9	7.2	7.1	7.5	7.3	7.7	7.4	---	---	7.0	6.8
4	6.9	6.9	7.1	7.1	7.5	7.3	7.4	7.3	---	---	7.1	6.9
5	6.9	6.9	7.3	7.1	7.4	7.2	7.6	7.1	---	---	7.1	6.9
6	6.9	6.8	7.3	6.9	7.4	7.3	7.4	7.1	---	---	7.0	6.9
7	6.8	6.8	7.3	7.3	7.5	7.3	7.8	7.3	---	---	7.1	6.9
8	6.8	6.8	7.4	7.3	7.5	7.3	8.3	7.5	---	---	7.0	6.9
9	6.9	6.8	7.4	7.3	7.5	7.3	8.4	7.5	---	---	7.0	6.8
10	6.9	6.9	7.3	7.3	8.0	7.3	8.4	7.5	---	---	7.1	6.9
11	6.9	6.9	7.3	7.2	8.8	7.6	8.6	7.5	---	---	7.1	7.0
12	6.9	6.9	7.3	7.2	8.6	7.6	8.5	7.7	---	---	7.1	7.0
13	6.9	6.9	7.4	7.2	7.8	7.4	8.6	7.7	---	---	7.0	6.9
14	6.9	6.8	7.4	7.3	7.6	7.3	8.4	7.6	---	---	7.1	7.0
15	6.8	6.8	7.4	7.3	7.5	7.2	8.1	7.5	---	---	7.3	7.0
16	6.8	6.7	7.3	7.3	7.9	7.3	8.0	7.3	---	---	7.3	7.1
17	6.7	6.7	7.3	7.2	7.6	7.4	7.8	7.1	---	---	7.4	7.0
18	6.8	6.6	7.2	7.1	7.8	7.3	8.0	7.3	---	---	7.4	7.1
19	6.8	6.7	7.1	7.1	7.7	7.3	8.1	7.3	---	---	7.4	7.1
20	6.8	6.6	7.1	7.1	8.7	7.5	8.0	7.4	---	---	7.4	7.1
21	6.7	6.6	7.2	7.1	8.7	7.9	7.8	7.3	---	---	7.7	7.1
22	6.6	6.5	7.3	7.1	8.8	8.0	7.6	7.4	---	---	7.6	7.3
23	6.6	6.5	7.4	7.2	8.5	8.0	7.6	7.2	7.4	7.0	7.4	7.2
24	6.7	6.6	7.4	7.2	8.5	7.5	7.5	7.2	7.3	7.0	7.4	7.2
25	6.7	6.6	7.7	7.3	8.3	7.5	7.5	7.2	7.4	7.1	7.5	7.3
26	6.7	6.6	7.6	7.3	8.5	7.5	7.5	7.2	7.4	7.1	7.4	7.3
27	6.6	6.6	7.4	7.2	8.5	7.5	7.6	7.3	7.3	7.0	7.4	7.2
28	6.7	6.6	7.3	7.2	8.7	7.7	8.0	7.2	7.5	7.0	7.4	7.3
29	7.2	6.6	7.4	7.2	8.4	7.8	8.3	7.2	7.5	7.0	7.4	7.2
30	7.2	7.1	7.9	7.3	8.2	7.6	8.5	7.3	7.3	7.0	7.3	7.1
31	---	---	7.5	7.2	---	---	8.6	7.3	7.2	7.0	---	---
MONTH	7.2	6.5	7.9	6.9	8.8	7.2	8.6	7.1	---	---	7.7	6.8

WILLAMETTE RIVER BASIN

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14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

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

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

WILLAMETTE RIVER BASIN

14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	17.5	16.5	17.0	20.5	20.0	20.5	---	---	---	21.0	19.5	20.0
2	17.0	16.5	17.0	20.5	19.5	20.0	---	---	---	20.5	19.0	19.5
3	17.5	16.5	17.0	20.5	19.5	19.5	---	---	---	19.5	19.0	19.5
4	17.0	16.5	17.0	19.5	19.0	19.0	---	---	---	20.0	19.0	19.5
5	17.0	16.5	17.0	19.5	18.5	19.0	---	---	---	20.5	18.5	19.5
6	17.0	16.5	16.5	20.5	18.5	19.0	---	---	---	20.5	18.5	19.0
7	17.0	16.0	16.5	23.0	18.5	20.0	---	---	---	20.0	18.5	19.0
8	17.0	16.0	16.5	23.0	19.5	21.0	---	---	---	19.0	19.0	19.0
9	17.0	16.0	16.5	24.0	20.0	21.5	---	---	---	19.0	18.5	18.5
10	18.5	16.5	17.5	24.0	20.0	21.5	---	---	---	18.5	18.0	18.5
11	20.5	17.5	18.5	24.0	20.0	21.5	---	---	---	18.5	17.5	18.0
12	19.5	18.0	18.5	23.5	20.5	21.5	---	---	---	18.0	17.5	17.5
13	18.5	17.5	18.0	23.5	20.5	22.0	---	---	---	18.0	17.0	17.5
14	18.0	17.0	17.5	23.0	20.5	21.5	---	---	---	18.0	17.5	17.5
15	17.5	17.0	17.0	22.0	20.5	21.0	---	---	---	19.0	17.5	18.0
16	18.0	17.0	17.0	23.0	20.5	21.5	---	---	---	20.5	17.5	18.5
17	18.0	17.0	17.5	23.0	20.5	21.5	---	---	---	20.0	18.0	18.5
18	18.5	17.5	17.5	23.5	21.0	22.0	---	---	---	20.0	18.0	19.0
19	20.0	17.5	18.0	24.5	21.0	22.5	---	---	---	19.5	18.0	19.0
20	21.5	18.0	19.5	25.5	22.0	23.5	---	---	---	20.0	18.0	19.0
21	22.5	19.5	20.5	26.0	23.0	24.5	---	---	---	20.5	18.5	19.0
22	22.0	19.5	20.5	27.0	23.5	24.5	---	---	---	20.0	18.5	19.0
23	20.5	19.5	20.0	26.5	23.5	24.5	20.5	19.0	19.5	19.5	18.5	19.0
24	21.5	19.0	20.0	24.5	23.5	24.0	20.5	18.0	19.5	19.0	18.5	18.5
25	20.0	19.0	19.5	25.0	23.0	23.5	21.5	19.0	20.0	19.5	18.0	18.5
26	20.0	18.5	19.0	25.0	22.5	23.5	21.0	19.0	19.5	19.0	18.5	18.5
27	21.5	18.5	20.0	25.5	22.5	23.5	22.5	19.0	20.5	19.0	18.0	18.5
28	23.5	19.0	20.5	25.5	22.5	23.5	21.0	20.0	20.5	18.5	18.5	18.5
29	22.5	20.0	21.0	24.0	22.5	23.0	21.0	20.0	20.5	18.5	18.5	18.5
30	22.5	19.5	21.0	24.5	22.0	23.0	21.5	19.5	20.0	18.5	18.0	18.0
31	---	---	---	25.5	22.0	23.0	22.0	19.5	20.5	---	---	---
MONTH	23.5	16.0	18.5	27.0	18.5	22.0	---	---	---	21.0	17.0	18.5

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	13.7	8.4	10.4	6.7	6.2	6.4	9.4	8.7	9.1	10.9	10.4	10.7
2	10.5	7.8	8.8	6.7	6.1	6.3	9.5	9.3	9.4	10.6	10.4	10.5
3	9.6	6.9	7.9	6.9	6.3	6.5	9.5	9.0	9.3	10.5	10.2	10.3
4	10.6	5.9	7.9	7.2	6.6	6.8	9.2	8.9	9.0	10.2	9.9	10.0
5	10.4	6.1	7.1	7.4	6.7	7.0	9.3	9.1	9.2	9.9	9.8	9.9
6	8.0	6.1	7.2	7.2	6.6	6.9	9.1	8.8	9.0	9.9	9.8	9.8
7	8.0	6.0	6.9	7.2	6.8	7.0	8.9	8.7	8.8	10.0	9.8	10.0
8	7.7	5.8	6.6	7.6	7.0	7.3	9.1	8.7	8.9	10.1	10.0	10.1
9	7.8	6.2	7.0	7.6	7.2	7.4	9.6	9.0	9.2	10.1	10.0	10.0
10	7.2	6.4	6.9	7.7	7.2	7.4	9.6	9.4	9.5	10.0	9.9	10.0
11	7.6	6.9	7.3	7.8	7.4	7.6	9.4	9.3	9.3	9.9	9.8	9.9
12	7.3	6.8	7.1	7.7	7.5	7.7	9.3	9.1	9.2	9.9	9.8	9.8
13	7.9	6.9	7.2	7.7	7.4	7.5	9.3	9.0	9.2	10.1	9.8	9.9
14	7.5	6.8	7.0	7.5	7.3	7.4	9.6	9.3	9.4	9.9	9.7	9.8
15	6.9	6.5	6.7	7.5	7.3	7.4	9.5	9.2	9.4	9.7	9.6	9.7
16	6.8	6.4	6.6	7.6	7.4	7.5	9.4	9.3	9.3	9.6	9.5	9.6
17	6.7	6.4	6.5	7.9	7.6	7.8	9.3	9.1	9.2	9.8	9.6	9.7
18	6.8	6.5	6.6	8.0	7.8	7.9	9.4	9.1	9.2	9.9	9.8	9.9
19	7.0	5.7	6.4	8.0	7.9	7.9	9.9	9.4	9.6	10.0	9.9	10.0
20	6.1	5.7	5.9	7.9	7.8	7.9	10.4	9.9	10.1	10.2	10.0	10.1
21	6.1	5.8	5.9	8.0	7.7	7.8	10.7	10.4	10.5	10.4	10.2	10.3
22	6.3	5.9	6.1	8.1	7.7	7.9	10.9	10.7	10.8	10.3	10.1	10.2
23	6.5	6.2	6.4	8.1	7.9	8.0	10.9	10.8	10.9	10.2	10.1	10.1
24	6.8	6.2	6.4	8.6	8.0	8.2	10.9	10.8	10.8	10.1	9.9	10.0
25	7.1	6.4	6.7	8.5	8.2	8.3	10.9	10.7	10.8	9.9	9.5	9.7
26	7.5	6.4	6.7	8.5	8.3	8.4	10.9	10.7	10.8	9.6	9.4	9.5
27	6.7	6.1	6.4	8.7	8.5	8.6	10.8	10.7	10.8	9.7	9.1	9.4
28	6.6	6.0	6.3	8.7	8.4	8.5	10.8	10.7	10.7	10.0	9.2	9.7
29	6.4	5.8	6.1	8.7	8.5	8.6	10.7	10.6	10.6	10.3	9.5	10.0
30	6.6	6.0	6.3	8.7	8.5	8.6	10.9	10.7	10.8	10.4	10.2	10.3
31	6.6	6.1	6.3	---	---	---	11.0	10.7	10.9	10.5	10.3	10.4
MONTH	13.7	5.7	6.9	8.7	6.1	7.6	11.0	8.7	9.8	10.9	9.1	10.0

WILLAMETTE RIVER BASIN

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14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	10.6	10.4	10.5	9.9	9.6	9.8	8.9	8.6	8.8	8.3	7.5	7.9
2	10.7	10.5	10.6	9.6	9.3	9.5	8.8	8.6	8.7	8.4	7.7	8.0
3	10.6	10.5	10.6	9.3	9.2	9.3	8.9	8.6	8.7	8.4	7.6	8.0
4	10.7	10.5	10.6	9.2	8.9	9.0	9.0	8.7	8.9	7.9	7.5	7.6
5	10.7	10.5	10.6	9.1	9.0	9.1	9.0	8.6	8.8	8.4	7.8	8.1
6	10.7	10.5	10.6	9.5	9.1	9.3	8.7	8.4	8.6	8.4	8.1	8.3
7	10.7	10.6	10.6	9.9	9.5	9.7	8.8	8.5	8.7	8.5	8.1	8.3
8	10.8	10.6	10.7	10.0	9.8	10.0	8.7	8.5	8.6	9.0	8.1	8.4
9	10.9	10.6	10.7	10.0	9.9	10.0	9.3	8.7	9.0	9.3	8.2	8.6
10	10.9	10.4	10.6	9.9	9.8	9.8	9.4	9.2	9.3	8.8	8.0	8.3
11	10.6	10.2	10.4	9.8	9.7	9.7	9.7	9.4	9.6	8.5	7.9	8.2
12	10.3	10.0	10.2	9.7	9.4	9.6	9.9	9.7	9.8	8.9	8.0	8.4
13	10.2	10.0	10.1	9.6	9.4	9.5	10.0	9.7	9.9	10.3	8.7	9.3
14	10.3	10.1	10.2	9.7	9.4	9.6	9.9	9.7	9.8	9.9	9.3	9.6
15	10.3	10.0	10.2	9.7	9.3	9.5	9.9	9.5	9.7	9.8	9.3	9.6
16	10.2	9.9	10.0	9.4	9.1	9.3	10.1	9.4	9.8	10.2	9.2	9.7
17	10.1	10.0	10.1	9.1	8.9	9.0	10.0	9.6	9.8	9.9	8.4	9.0
18	10.0	9.9	10.0	9.0	8.8	8.9	10.3	9.5	9.8	8.5	7.3	7.8
19	10.2	10.0	10.1	9.1	8.9	8.9	10.1	9.3	9.5	7.8	7.3	7.6
20	10.4	10.1	10.2	9.4	8.9	9.1	9.4	9.0	9.1	7.7	7.0	7.3
21	10.4	10.1	10.3	9.7	9.2	9.5	9.1	8.6	8.8	7.4	6.5	6.9
22	10.3	10.0	10.2	10.1	9.7	9.9	8.7	8.3	8.5	7.6	6.3	6.8
23	10.4	10.0	10.2	10.4	10.0	10.2	8.6	8.1	8.4	9.0	6.6	7.3
24	10.6	10.3	10.5	10.5	10.3	10.4	8.2	7.9	8.1	10.3	7.5	8.2
25	10.3	10.0	10.2	10.6	10.4	10.5	8.2	8.0	8.1	12.6	8.8	10.1
26	10.2	10.0	10.1	10.8	9.7	10.2	8.2	7.8	8.0	11.5	8.7	9.8
27	10.1	10.0	10.1	10.0	9.6	9.8	8.2	7.7	7.9	11.2	8.9	10.0
28	10.1	9.9	10.0	9.9	9.7	9.8	8.1	7.7	8.0	9.9	8.5	9.1
29	---	---	---	9.9	9.5	9.7	8.9	7.7	8.0	10.8	8.6	9.9
30	---	---	---	9.6	9.3	9.4	8.3	7.6	8.0	13.1	9.7	10.8
31	---	---	---	9.3	8.8	9.0	---	---	---	11.5	9.6	10.8
MONTH	10.9	9.9	10.3	10.8	8.8	9.6	10.3	7.6	8.9	13.1	6.3	8.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	11.0	9.6	10.0	12.2	9.8	11.2	---	---	---	9.7	7.9	8.9
2	10.8	9.3	9.9	11.8	9.3	10.1	---	---	---	8.6	7.5	8.0
3	12.1	9.8	10.4	11.4	9.0	9.8	---	---	---	8.4	6.9	7.6
4	11.1	9.4	10.0	9.4	7.8	8.6	---	---	---	9.1	7.1	7.8
5	10.2	8.0	9.6	9.0	7.1	8.5	---	---	---	9.4	6.8	8.0
6	10.0	7.8	8.9	10.5	7.1	9.0	---	---	---	9.0	7.5	8.1
7	12.0	9.1	10.4	12.5	9.5	10.8	---	---	---	9.5	7.8	8.5
8	12.1	10.2	10.9	14.6	11.3	12.7	---	---	---	9.0	7.7	8.5
9	12.0	9.6	10.5	15.5	12.4	13.7	---	---	---	8.6	6.4	7.7
10	13.5	10.2	11.7	15.3	12.0	13.5	---	---	---	8.2	6.4	7.4
11	15.6	12.5	13.9	17.2	13.0	14.9	---	---	---	8.3	6.7	7.7
12	15.7	11.8	14.0	17.7	14.3	15.9	---	---	---	8.1	7.2	7.7
13	12.4	10.3	11.3	17.9	14.7	16.2	---	---	---	7.5	5.7	6.7
14	11.6	9.6	10.9	16.7	14.8	15.9	---	---	---	6.6	5.9	6.2
15	10.3	8.9	9.7	16.2	14.2	15.3	---	---	---	8.7	6.2	7.3
16	12.0	8.5	10.0	15.8	13.8	14.8	---	---	---	8.7	6.3	7.5
17	11.4	9.3	10.4	16.0	13.6	14.9	---	---	---	9.4	6.4	7.9
18	12.2	9.0	9.9	16.2	14.0	15.2	---	---	---	10.0	7.4	8.8
19	11.2	8.5	9.9	15.5	13.5	14.3	---	---	---	9.2	6.8	8.2
20	15.5	10.4	12.5	13.9	11.7	12.6	---	---	---	8.8	6.7	7.8
21	15.8	12.3	13.8	12.7	11.6	12.1	---	---	---	10.7	6.4	8.4
22	16.9	12.6	14.3	11.6	9.3	10.0	---	---	---	9.9	6.9	8.4
23	14.7	12.5	13.7	9.6	8.1	8.8	13.9	8.2	11.2	8.8	6.9	7.8
24	15.1	10.8	12.7	9.4	7.6	8.4	11.1	7.9	8.9	---	---	---
25	13.9	10.7	12.2	8.8	7.0	7.7	10.9	8.6	9.4	---	---	---
26	14.9	10.8	12.4	8.8	6.5	7.5	10.0	7.8	8.8	---	---	---
27	15.1	10.5	12.7	9.9	6.7	8.1	10.4	7.6	8.9	---	---	---
28	15.1	11.7	13.5	11.2	7.2	9.0	11.3	7.8	9.5	---	---	---
29	14.5	12.3	13.3	12.2	7.7	9.4	11.9	8.2	10.0	---	---	---
30	13.1	10.8	12.0	13.1	7.6	9.6	11.0	8.4	9.3	---	---	---
31	---	---	---	14.1	7.9	10.5	10.8	8.0	9.3	---	---	---
MONTH	16.9	7.8	11.5	17.9	6.5	11.6	---	---	---	---	---	---

WILLAMETTE RIVER BASIN

14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

TEMPERATURE, AIR, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	23.7	8.7	14.6	13.1	3.1	7.2	12.5	7.1	9.8	10.5	5.8	7.9
2	22.6	9.1	14.9	12.6	2.9	6.8	8.7	6.7	7.8	11.5	5.8	8.7
3	25.0	9.7	15.6	14.9	6.1	10.7	12.0	7.8	9.8	12.3	8.3	9.8
4	22.7	11.7	15.4	12.4	6.1	8.6	10.0	1.8	5.7	10.7	6.6	8.9
5	16.5	10.1	13.1	14.9	4.6	7.9	6.0	.6	2.6	8.9	6.2	7.1
6	13.8	11.4	12.4	13.1	1.0	5.7	6.0	1.5	3.6	8.4	1.7	5.8
7	15.8	9.1	12.4	10.4	.8	4.6	8.6	6.0	7.4	6.8	.4	3.3
8	19.4	6.1	11.7	10.2	.7	4.1	8.2	6.3	7.2	9.8	6.8	8.2
9	24.0	8.3	15.3	10.8	2.4	5.2	10.4	6.5	8.2	9.9	7.6	8.7
10	20.2	9.2	13.7	12.6	2.4	6.5	14.3	7.2	9.4	9.6	5.2	7.2
11	17.1	10.1	13.5	9.6	1.0	5.4	8.6	4.3	7.0	10.7	8.2	9.1
12	17.3	13.0	14.7	9.1	4.3	7.0	8.2	3.8	5.7	9.9	8.1	8.9
13	18.7	12.3	14.4	10.6	1.6	6.8	10.2	5.3	7.2	10.7	8.2	9.5
14	14.6	12.1	13.3	7.8	.2	2.8	8.5	6.5	7.3	9.8	6.7	7.9
15	15.1	10.2	13.4	8.5	.2	4.3	8.1	5.1	6.8	10.9	4.9	8.3
16	13.3	9.0	11.1	8.1	5.9	6.6	5.5	.9	2.9	10.6	2.2	6.2
17	14.0	7.7	10.5	8.7	2.7	6.7	5.8	-.5	2.2	5.5	1.2	3.6
18	14.5	6.3	9.8	8.2	2.5	5.1	4.9	.2	2.3	4.0	2.0	3.1
19	16.9	8.2	11.5	7.2	3.6	5.3	5.9	.4	2.6	3.4	2.0	2.4
20	19.0	6.8	12.2	4.2	3.2	3.5	5.1	-.8	1.8	4.5	1.2	2.3
21	16.8	9.2	12.5	7.9	2.7	4.9	6.4	-.3	2.7	8.2	1.4	4.8
22	16.7	7.0	11.2	4.4	.0	2.5	2.7	-2.3	.1	10.0	6.2	8.2
23	18.8	7.4	12.7	1.1	-3.4	-.7	3.9	-1.1	.5	10.9	6.9	8.2
24	15.1	7.3	10.7	1.8	-4.1	-1.7	.6	-2.4	-1.1	7.6	2.1	6.2
25	16.7	5.1	10.0	2.3	-2.5	-.6	.2	-2.8	-1.5	4.7	1.4	3.5
26	20.9	8.6	13.4	3.8	-2.3	.3	2.0	-1.3	-.3	3.6	2.4	3.3
27	17.7	6.0	10.5	3.8	.1	1.4	3.8	-1.4	.2	4.9	3.2	3.9
28	18.9	7.6	11.8	5.0	.9	2.6	4.6	-1.9	1.0	9.5	1.9	4.8
29	20.3	10.5	13.7	7.6	1.9	4.7	5.2	.1	2.1	9.0	-.9	2.9
30	19.1	5.9	11.3	9.4	2.7	6.3	8.0	.3	3.5	10.7	-.4	4.0
31	14.0	6.5	11.1	---	---	---	8.0	6.6	7.2	9.2	.6	3.9
MONTH	25.0	5.1	12.7	14.9	-4.1	4.7	14.3	-2.8	4.2	12.3	-.9	6.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	10.3	-1.3	3.0	17.8	8.4	12.1	14.4	7.0	10.2	15.8	4.2	10.1
2	8.1	-2.8	1.0	12.3	9.1	10.7	14.2	6.0	10.0	14.6	7.6	10.3
3	8.0	-3.3	.7	16.4	9.6	12.0	12.7	6.4	9.0	13.7	6.8	10.7
4	6.3	-1.7	.9	13.3	4.3	9.4	14.6	5.8	9.2	17.1	11.5	14.0
5	7.7	-3.6	.5	12.3	.2	5.3	10.4	3.8	6.9	25.5	10.1	16.0
6	8.1	-3.1	1.5	14.2	.5	6.0	9.4	6.5	7.9	28.0	11.7	18.2
7	4.5	-1.1	2.4	14.2	2.8	7.2	11.5	6.5	8.6	27.8	11.0	17.9
8	5.0	-2.9	.5	14.6	3.8	7.6	11.2	7.3	9.3	23.0	11.6	15.3
9	7.8	.7	4.3	15.2	3.2	8.1	11.8	6.5	9.2	22.5	9.8	15.2
10	7.4	.8	3.0	12.6	5.8	9.3	13.4	6.6	9.8	27.2	8.6	16.5
11	8.1	1.4	4.2	13.1	2.7	6.9	18.7	3.7	10.9	22.0	12.7	16.2
12	8.3	.0	4.5	18.9	.7	8.4	14.4	5.1	10.0	20.0	10.5	14.8
13	9.0	3.5	6.3	17.8	5.1	10.1	11.3	3.3	7.5	19.8	7.2	12.9
14	10.4	2.3	5.6	17.3	3.6	9.6	16.7	3.5	8.6	17.3	8.0	12.7
15	10.5	5.6	7.9	12.8	4.2	9.0	22.5	4.3	11.9	14.5	10.2	11.8
16	8.9	5.7	7.2	10.2	6.6	8.0	22.0	7.9	14.3	14.6	9.3	11.3
17	7.8	4.3	6.6	9.9	6.1	7.8	22.2	9.8	14.9	14.0	8.9	10.9
18	6.9	3.6	4.6	8.5	2.9	6.1	21.7	10.8	15.7	18.1	9.9	12.7
19	9.0	3.4	5.5	8.6	2.9	5.1	19.8	9.8	13.9	16.5	9.9	12.4
20	8.1	.9	4.7	8.8	3.3	5.8	21.9	7.4	13.8	13.7	11.1	12.2
21	5.8	3.2	4.4	6.8	2.2	4.1	18.4	8.7	13.1	18.3	11.4	13.7
22	7.7	3.5	5.6	4.7	1.3	2.7	16.8	5.0	10.7	23.0	11.1	15.3
23	8.9	6.6	7.5	9.8	1.3	5.2	15.9	6.0	10.4	25.4	9.9	16.5
24	7.5	2.0	3.1	17.3	4.7	9.4	15.4	7.6	10.4	26.9	11.0	17.4
25	7.6	3.2	5.3	19.3	2.9	9.5	19.2	7.5	12.0	19.6	12.1	15.7
26	10.0	4.5	6.9	22.1	4.3	11.0	14.2	6.9	10.8	16.9	8.7	12.9
27	10.6	6.3	8.8	23.6	5.4	12.3	15.8	8.1	11.6	15.9	7.2	11.8
28	12.4	9.2	10.9	22.7	4.3	12.3	20.3	7.8	12.5	12.7	9.1	10.7
29	---	---	---	21.8	4.4	12.4	15.1	9.2	11.7	15.7	10.0	12.0
30	---	---	---	13.9	9.3	11.4	16.3	7.5	10.4	23.7	7.3	14.2
31	---	---	---	11.3	9.0	9.9	---	---	---	17.1	11.1	13.9
MONTH	12.4	-3.6	4.5	23.6	.2	8.5	22.5	3.3	10.8	28.0	4.2	13.7

WILLAMETTE RIVER BASIN

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14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

TEMPERATURE, AIR, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.2	8.6	12.6	18.3	11.3	15.3	---	---	---	26.5	8.7	15.9
2	19.3	8.0	13.6	20.8	12.1	15.8	---	---	---	22.8	7.3	14.5
3	18.0	7.6	13.4	21.0	11.0	15.0	---	---	---	18.9	13.4	15.7
4	18.4	12.2	14.4	16.8	9.5	13.5	---	---	---	26.4	11.2	16.5
5	15.0	10.5	12.9	21.1	10.8	14.6	---	---	---	32.5	11.7	18.7
6	13.0	10.0	11.5	29.0	9.1	16.9	---	---	---	31.2	10.9	18.7
7	14.6	8.6	11.3	34.3	13.4	20.9	---	---	---	28.2	10.8	17.8
8	19.9	7.5	13.4	32.9	12.2	19.9	---	---	---	17.0	12.8	15.2
9	23.5	10.2	15.7	32.0	9.5	18.5	---	---	---	18.3	11.4	13.8
10	26.2	11.5	17.7	32.7	8.6	17.8	---	---	---	16.3	11.6	13.5
11	22.9	12.8	17.9	33.9	9.0	18.9	---	---	---	20.4	10.7	14.3
12	19.6	13.9	16.1	33.7	9.4	19.0	---	---	---	24.4	8.0	13.8
13	14.9	10.2	11.8	33.8	10.9	19.6	---	---	---	23.1	7.7	14.4
14	13.7	9.4	10.9	30.8	10.6	18.0	---	---	---	22.3	12.7	17.1
15	17.1	9.2	12.2	31.6	14.7	19.3	---	---	---	27.7	11.5	17.5
16	21.5	10.7	14.5	35.3	13.8	21.1	---	---	---	32.0	13.6	20.5
17	17.8	9.7	13.5	34.3	12.1	20.6	---	---	---	29.6	13.5	19.9
18	19.6	10.3	13.8	32.8	13.6	20.5	---	---	---	27.9	12.7	18.3
19	25.9	7.7	15.4	40.4	13.7	23.6	---	---	---	28.0	11.5	17.9
20	26.8	10.9	17.9	39.6	16.0	24.6	---	---	---	28.2	12.6	18.6
21	25.2	11.5	17.4	39.1	16.9	25.3	---	---	---	---	---	---
22	22.6	12.4	16.4	34.7	18.6	24.8	---	---	---	33.7	14.4	21.4
23	19.3	12.3	14.9	38.2	17.1	24.3	28.3	11.2	17.8	29.6	10.8	18.1
24	22.4	8.9	14.7	22.1	15.5	19.0	24.6	9.3	16.3	24.1	10.7	16.0
25	18.8	9.8	14.5	32.4	14.4	20.2	29.2	10.4	17.3	26.0	10.5	16.7
26	19.9	12.4	15.5	33.9	12.2	20.4	30.5	11.0	18.0	25.5	13.0	17.3
27	27.8	10.6	17.4	36.3	13.3	21.9	35.3	10.4	20.1	27.7	10.6	17.5
28	27.9	11.5	18.4	34.1	13.7	21.0	24.3	14.5	19.2	20.9	14.1	16.9
29	24.3	11.7	17.0	24.9	12.8	18.8	26.7	13.7	18.4	17.1	14.7	15.8
30	24.6	10.3	16.5	28.3	11.1	18.3	31.8	9.9	18.0	19.6	14.8	16.8
31	---	---	---	34.1	10.1	19.2	30.1	11.6	18.5	---	---	---
MONTH	27.9	7.5	14.8	40.4	8.6	19.6	---	---	---	---	---	---

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	281	276	279	---	---	---	114	100	105	82	78	79
2	291	281	286	---	---	---	121	101	107	84	81	83
3	293	290	292	---	---	---	103	88	94	88	84	85
4	292	285	289	---	---	---	88	84	86	91	88	89
5	285	279	281	---	---	---	85	82	83	95	91	92
6	281	277	278	---	---	---	88	83	85	96	93	94
7	289	279	285	---	---	---	96	88	92	99	95	97
8	293	289	291	---	---	---	102	95	98	99	95	97
9	293	291	292	---	---	---	111	102	106	101	98	100
10	293	290	292	---	---	---	119	110	113	101	95	98
11	291	289	290	---	---	---	121	119	120	100	95	98
12	294	284	288	---	---	---	119	112	115	95	92	94
13	294	290	293	---	---	---	117	112	114	92	89	91
14	298	291	295	---	---	---	114	98	104	94	91	92
15	308	298	303	---	---	---	98	93	95	93	89	91
16	311	307	309	156	148	152	98	95	96	89	87	88
17	310	308	309	154	143	149	103	96	98	88	84	85
18	308	300	303	161	151	157	105	97	101	84	82	83
19	300	295	297	151	140	144	99	91	95	85	81	83
20	310	293	301	142	131	135	91	83	86	85	83	85
21	317	310	314	154	133	138	86	83	84	86	83	85
22	316	310	313	145	139	143	88	85	86	85	83	84
23	310	308	309	139	124	131	88	83	85	86	83	85
24	308	301	304	138	127	132	84	81	83	88	85	87
25	301	297	299	138	130	134	87	82	84	91	88	89
26	299	294	298	138	129	134	90	85	87	92	89	90
27	---	---	---	137	131	134	93	89	90	94	91	92
28	---	---	---	136	123	128	97	93	95	100	92	95
29	---	---	---	126	120	122	93	88	91	102	95	97
30	---	---	---	125	101	117	88	78	82	104	101	103
31	---	---	---	---	---	---	79	76	77	103	96	98
MONTH	---	---	---	---	---	---	121	76	95	104	78	91
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	96	90	93	104	94	100	---	---	---	160	145	154
2	90	84	87	109	104	106	---	---	---	151	141	147
3	84	81	82	118	109	113	---	---	---	150	142	146
4	81	78	80	131	113	120	---	---	---	154	146	151
5	80	78	79	130	121	124	---	---	---	153	144	150
6	82	78	80	130	119	124	---	---	---	151	139	147
7	85	81	83	128	120	123	---	---	---	154	141	149
8	88	84	86	131	119	124	---	---	---	159	140	151
9	92	88	90	135	123	129	---	---	---	150	137	144
10	93	89	91	134	119	126	---	---	---	153	143	147
11	97	92	93	125	100	110	---	---	---	159	150	153
12	100	96	97	100	96	97	---	---	---	159	145	152
13	99	95	97	96	91	94	---	---	---	159	149	152
14	103	98	101	101	89	93	---	---	---	172	157	166
15	106	100	103	101	88	94	---	---	---	166	151	160
16	114	105	110	94	86	90	---	---	---	162	155	159
17	116	100	109	91	85	89	---	---	---	168	160	165
18	100	93	96	89	87	88	---	---	---	177	160	171
19	97	83	91	92	86	88	---	---	---	180	157	173
20	86	82	84	92	91	92	---	---	---	189	164	180
21	87	80	83	99	90	94	---	---	---	195	175	188
22	81	77	78	101	93	97	---	---	---	196	179	189
23	78	75	77	94	88	92	---	---	---	198	185	193
24	82	78	80	92	89	91	---	---	---	196	183	190
25	87	82	84	93	89	91	---	---	---	199	181	191
26	89	85	87	94	89	92	---	---	---	205	182	193
27	93	87	90	97	93	95	143	133	139	207	190	200
28	98	92	94	103	97	100	152	139	146	198	189	194
29	---	---	---	106	99	103	149	138	145	210	194	201
30	---	---	---	---	---	---	155	144	150	---	---	---
31	---	---	---	---	---	---	---	---	---	221	210	216
MONTH	116	75	89	---	---	---	---	---	---	---	---	---

WILLAMETTE RIVER BASIN

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14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	217	199	208	283	258	271	311	297	303	255	252	253
2	---	---	---	298	282	291	320	308	314	255	252	253
3	---	---	---	296	256	278	319	303	315	255	247	251
4	---	---	---	303	283	290	322	314	319	262	254	258
5	---	---	---	314	287	302	320	306	315	279	262	270
6	242	213	226	325	273	297	308	302	305	281	278	280
7	235	209	220	---	---	---	304	301	302	278	273	275
8	239	228	234	264	255	257	304	293	301	275	267	272
9	252	239	244	284	264	275	311	300	304	268	264	266
10	257	236	250	287	267	279	313	307	311	266	262	263
11	257	230	244	274	240	254	315	309	311	272	266	267
12	248	226	237	263	247	254	311	299	307	274	254	267
13	247	217	232	---	---	---	299	283	292	280	266	276
14	230	210	217	---	---	---	295	278	284	279	258	270
15	226	212	220	---	---	---	302	292	297	272	251	263
16	220	195	205	---	---	---	302	281	295	274	253	271
17	219	211	215	---	---	---	283	258	268	281	274	278
18	217	195	205	---	---	---	260	240	248	280	278	279
19	232	211	220	---	---	---	249	236	242	278	265	271
20	233	213	221	---	---	---	249	243	248	265	259	262
21	213	193	200	---	---	---	243	229	233	261	258	259
22	198	188	194	274	261	267	230	225	227	259	256	258
23	214	198	204	281	270	276	229	225	227	267	259	262
24	226	204	217	288	277	285	226	223	225	275	267	272
25	230	225	227	---	---	---	230	222	225	283	275	278
26	241	229	236	---	---	---	239	230	233	287	283	285
27	239	227	235	---	---	---	254	239	247	286	266	279
28	234	221	230	---	---	---	262	254	258	270	252	261
29	241	228	234	291	287	289	264	260	263	258	237	250
30	259	237	247	295	288	291	263	256	260	238	233	236
31	---	---	---	306	293	297	258	255	257	---	---	---
MONTH	---	---	---	---	---	---	322	222	275	287	233	266

WILLAMETTE RIVER BASIN

14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.2	7.1	---	---	6.9	6.9	6.8	6.7	6.9	6.9	6.6	6.6
2	7.2	7.0	---	---	6.9	6.8	6.8	6.8	6.9	6.8	6.7	6.6
3	7.2	7.1	---	---	6.8	6.8	6.9	6.8	6.9	6.8	6.7	6.7
4	7.2	7.1	---	---	6.8	6.8	6.9	6.9	6.8	6.8	6.7	6.7
5	7.2	7.1	---	---	6.8	6.8	6.9	6.9	6.8	6.8	6.7	6.7
6	7.3	7.1	---	---	6.8	6.7	6.9	6.9	6.8	6.7	6.9	6.7
7	7.3	7.1	---	---	6.8	6.8	6.9	6.9	6.7	6.7	6.9	6.9
8	7.3	7.2	---	---	6.8	6.7	6.9	6.9	6.7	6.7	6.9	6.9
9	7.3	7.2	---	---	6.9	6.8	6.9	6.9	6.8	6.7	6.9	6.9
10	7.3	7.2	---	---	6.9	6.9	6.9	6.9	6.8	6.7	6.9	6.9
11	7.3	7.2	---	---	7.0	6.9	6.9	6.8	6.8	6.7	6.9	6.9
12	7.3	7.2	---	---	7.0	6.9	6.9	6.8	6.8	6.7	6.9	6.9
13	7.3	7.2	---	---	7.0	6.9	6.8	6.8	6.8	6.8	6.9	6.9
14	7.3	7.2	---	---	7.0	6.9	6.8	6.8	6.8	6.7	6.9	6.9
15	7.3	7.3	---	---	6.9	6.9	6.8	6.8	6.7	6.7	7.2	6.9
16	7.3	7.0	7.1	7.1	6.9	6.9	6.8	6.8	6.7	6.6	7.2	6.7
17	7.2	7.1	7.1	7.1	6.9	6.8	6.8	6.8	6.7	6.7	6.8	6.7
18	7.3	7.1	7.2	7.1	6.9	6.8	7.0	6.8	6.7	6.6	6.8	6.8
19	---	---	7.2	7.1	6.8	6.8	7.0	7.0	6.7	6.6	6.8	6.8
20	---	---	7.1	7.0	6.8	6.8	7.0	6.9	6.6	6.6	6.8	6.8
21	---	---	7.0	7.0	6.8	6.7	7.0	6.9	6.6	6.6	6.8	6.8
22	---	---	7.1	7.0	6.8	6.8	7.0	7.0	6.6	6.6	6.8	6.8
23	---	---	7.1	7.1	6.8	6.7	7.0	6.9	6.6	6.6	6.8	6.8
24	---	---	7.1	7.1	6.7	6.7	6.9	6.9	6.6	6.6	6.8	6.8
25	---	---	7.1	7.1	6.7	6.7	6.9	6.9	6.7	6.6	6.8	6.8
26	---	---	7.1	7.1	6.8	6.7	6.9	6.9	6.7	6.6	6.8	6.8
27	---	---	7.2	7.1	6.8	6.8	6.9	6.9	6.7	6.6	6.9	6.8
28	---	---	7.2	7.0	6.8	6.8	6.9	6.9	6.6	6.6	6.9	6.9
29	---	---	7.0	7.0	6.8	6.8	6.9	6.9	---	---	7.2	6.9
30	---	---	7.0	6.9	6.8	6.7	6.9	6.9	---	---	---	---
31	---	---	---	---	6.7	6.7	6.9	6.9	---	---	---	---
MONTH	---	---	---	---	7.0	6.7	7.0	6.7	6.9	6.6	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.2	7.1	7.4	7.1	8.6	7.7	8.5	7.3	7.2	7.0
2	---	---	7.2	7.1	7.3	7.0	8.2	7.7	8.3	7.3	7.1	7.0
3	---	---	7.2	7.2	7.1	6.9	7.9	7.4	8.7	7.4	7.1	7.0
4	---	---	7.2	7.2	7.2	6.9	7.7	7.4	8.8	7.7	7.1	6.9
5	---	---	7.2	7.2	7.3	6.9	7.8	7.6	8.8	7.8	7.1	6.9
6	---	---	7.2	7.1	7.3	7.1	7.7	7.3	8.8	7.8	7.0	6.9
7	---	---	7.1	7.1	7.2	7.0	8.2	7.2	8.3	7.5	6.9	6.9
8	---	---	7.2	7.1	7.3	7.1	8.6	7.1	7.8	7.3	6.9	6.9
9	---	---	7.1	7.1	7.2	7.1	8.3	7.1	7.7	7.3	7.0	6.9
10	---	---	7.1	7.0	7.1	7.0	7.1	7.0	7.4	7.3	7.1	6.9
11	---	---	7.1	7.0	7.1	7.1	7.0	6.8	7.4	7.3	7.1	7.0
12	---	---	7.1	7.1	7.1	7.0	7.1	6.9	---	---	7.2	7.0
13	---	---	7.1	7.1	7.0	7.0	7.3	7.0	---	---	7.2	7.1
14	---	---	7.1	7.1	7.2	6.9	7.2	7.1	---	---	7.2	7.1
15	---	---	7.1	7.1	7.3	7.2	7.6	7.1	---	---	7.2	7.1
16	---	---	7.1	7.0	7.2	7.1	7.8	7.1	---	---	7.1	7.0
17	---	---	7.0	7.0	7.2	7.2	7.6	7.0	---	---	7.0	7.0
18	---	---	7.1	7.0	7.2	7.2	7.8	6.9	7.1	7.0	7.1	7.0
19	---	---	7.1	7.0	7.2	7.2	7.7	7.2	7.1	7.0	7.1	7.0
20	---	---	7.0	7.0	7.2	7.2	7.9	7.4	7.1	7.0	7.1	7.0
21	---	---	7.1	7.0	7.2	7.1	8.5	7.6	7.0	6.9	7.2	7.1
22	---	---	7.2	7.1	7.1	7.0	8.4	7.4	6.9	6.9	7.2	7.1
23	---	---	7.2	7.1	7.1	7.0	7.6	7.1	7.0	6.9	7.1	7.1
24	---	---	7.1	7.0	7.4	7.1	7.6	7.1	7.2	6.9	7.2	7.1
25	---	---	7.1	7.0	7.6	7.2	7.5	7.1	7.0	6.9	7.2	7.1
26	---	---	7.1	7.0	7.7	7.3	7.6	7.2	7.2	6.9	7.2	7.1
27	7.1	7.1	7.2	7.0	7.8	7.3	7.9	7.2	7.2	6.9	7.1	7.1
28	7.1	7.1	7.3	7.0	8.6	7.4	8.0	7.2	7.2	7.0	7.2	7.1
29	7.1	7.1	7.2	7.0	9.0	7.5	7.7	7.3	7.1	7.0	7.2	7.0
30	7.2	7.1	---	---	9.0	7.7	7.9	7.2	7.1	7.0	7.1	7.0
31	---	---	7.3	7.1	---	---	8.2	7.2	7.2	7.0	---	---
MONTH	---	---	---	---	9.0	6.9	8.6	6.8	---	---	7.2	6.9

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

WILLAMETTE RIVER BASIN

14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	20.5	19.5	20.0	25.0	21.5	22.0	23.5	21.5	22.0	19.5	18.5	19.0
2	20.5	19.5	20.0	23.0	22.0	22.0	23.5	21.5	22.0	19.0	18.5	19.0
3	21.0	18.5	19.5	22.0	21.5	22.0	24.0	21.5	22.5	19.0	19.0	19.0
4	20.0	19.0	19.5	22.0	21.5	21.5	24.5	22.0	23.0	19.0	18.5	19.0
5	20.0	19.0	19.5	22.0	21.5	21.5	24.5	22.0	23.0	18.5	18.5	18.5
6	19.5	18.0	18.5	21.5	21.5	21.5	23.0	21.5	22.0	18.5	18.5	18.5
7	18.5	17.0	18.0	23.0	21.0	21.5	22.0	21.5	21.5	18.5	18.0	18.5
8	19.5	18.0	18.5	24.0	21.0	22.5	22.5	21.0	21.5	18.5	18.5	18.5
9	19.5	18.5	19.0	23.0	21.5	22.0	23.0	20.5	21.0	18.5	18.0	18.5
10	19.0	18.5	19.0	21.5	20.5	21.0	21.0	21.0	21.0	19.0	18.5	19.0
11	19.0	18.0	18.5	21.0	20.0	20.5	21.0	20.5	21.0	19.5	19.0	19.0
12	18.0	18.0	18.0	21.5	20.5	20.5	21.0	20.5	20.5	20.0	19.0	19.5
13	18.0	17.5	18.0	21.5	20.5	20.5	20.5	20.0	20.5	19.5	19.0	19.5
14	17.5	17.0	17.0	21.0	20.5	20.5	20.5	20.0	20.0	20.0	19.0	19.5
15	17.5	17.0	17.0	22.0	20.0	21.0	21.0	20.0	20.5	19.5	19.5	19.5
16	17.0	16.5	17.0	24.0	20.5	21.5	20.5	19.5	20.0	19.5	19.0	19.5
17	17.0	16.5	17.0	24.5	21.0	22.0	19.5	19.0	19.5	19.5	19.0	19.0
18	16.5	16.0	16.5	25.5	21.5	23.0	19.5	18.5	19.0	19.0	18.5	19.0
19	16.0	16.0	16.0	26.5	22.0	24.0	18.5	18.5	18.5	19.0	18.5	18.5
20	16.0	16.0	16.0	26.0	22.0	24.0	18.5	18.5	18.5	19.0	18.5	18.5
21	16.0	15.5	16.0	26.0	23.0	24.0	19.0	18.5	18.5	19.0	18.5	18.5
22	16.5	15.5	16.0	24.0	23.0	23.5	19.0	18.5	19.0	18.5	18.5	18.5
23	18.0	16.0	17.0	23.5	22.0	23.0	19.0	19.0	19.0	18.5	18.0	18.5
24	19.5	17.0	18.0	24.0	22.0	22.5	19.5	18.5	19.0	18.5	18.0	18.0
25	20.0	18.5	19.0	25.0	22.0	22.5	19.5	18.5	18.5	19.0	18.0	18.5
26	21.5	19.0	19.5	23.5	22.0	22.5	19.5	18.0	18.5	18.5	18.0	18.0
27	21.5	19.5	20.0	24.5	22.0	23.0	19.5	18.5	18.5	18.0	18.0	18.0
28	22.5	19.5	21.0	24.0	21.5	23.0	19.0	18.0	18.5	18.0	17.5	18.0
29	24.0	20.0	21.5	22.5	21.5	22.0	19.0	18.5	18.5	17.5	17.0	17.5
30	25.5	20.5	22.0	23.5	21.0	22.0	19.0	18.5	19.0	17.5	17.0	17.0
31	---	---	---	23.5	21.0	22.0	19.0	18.5	19.0	---	---	---
MONTH	25.5	15.5	18.5	26.5	20.0	22.0	24.5	18.0	20.0	20.0	17.0	18.5

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.5	6.5	7.2	9.6	6.2	7.8	9.9	9.4	9.6	9.7	9.0	9.4
2	8.2	6.3	7.3	---	---	---	9.4	8.7	9.0	9.8	9.4	9.6
3	7.8	6.0	6.9	---	---	---	9.2	8.6	8.9	10.1	9.2	9.8
4	7.1	5.6	6.4	---	---	---	9.4	9.2	9.3	10.0	9.1	9.8
5	7.0	5.4	6.2	---	---	---	9.9	9.4	9.6	10.0	9.5	9.7
6	8.7	6.3	7.3	---	---	---	10.3	9.9	10.1	9.9	9.6	9.7
7	8.5	6.9	7.6	---	---	---	10.5	10.3	10.5	10.0	9.3	9.8
8	8.1	6.7	7.4	---	---	---	10.6	10.4	10.5	10.0	9.7	9.8
9	8.2	6.6	7.5	---	---	---	10.6	10.4	10.5	9.9	9.2	9.7
10	8.3	7.0	7.4	---	---	---	10.4	10.2	10.3	9.5	8.7	9.2
11	8.1	7.0	7.4	---	---	---	10.4	10.1	10.3	9.1	8.5	8.8
12	8.6	7.2	7.7	---	---	---	10.4	10.2	10.3	9.0	8.5	8.8
13	8.1	6.9	7.4	---	---	---	10.4	10.3	10.3	9.0	8.1	8.7
14	7.8	6.9	7.4	---	---	---	10.4	9.6	10.0	8.4	8.0	8.3
15	8.7	7.6	8.1	---	---	---	10.1	9.6	9.9	8.4	8.0	8.1
16	9.5	8.1	8.6	9.4	9.2	9.3	9.9	9.1	9.7	8.7	7.8	8.2
17	9.1	8.4	8.8	9.3	9.2	9.3	9.5	8.6	9.0	8.5	7.9	8.2
18	9.8	8.5	9.2	9.4	9.1	9.2	9.4	8.4	8.9	9.3	7.5	8.4
19	11.1	9.3	10.2	9.8	9.4	9.6	9.4	8.5	8.9	9.8	9.1	9.5
20	11.1	9.7	10.2	10.0	9.8	9.9	9.7	8.3	9.1	10.0	9.2	9.6
21	10.7	9.3	9.8	10.3	10.0	10.2	9.0	8.3	8.5	10.2	9.4	10.0
22	11.1	9.4	10.1	10.3	10.1	10.1	8.4	7.6	7.9	10.1	9.3	9.9
23	10.2	8.7	9.5	10.2	9.8	10.0	8.2	7.7	8.0	10.5	9.6	10.1
24	9.3	7.5	8.6	10.2	9.8	10.0	8.1	7.6	7.9	11.6	10.1	10.9
25	8.5	7.4	7.9	10.2	10.0	10.1	8.3	7.9	8.2	---	---	---
26	7.8	6.9	7.2	10.1	9.8	10.0	8.3	8.0	8.2	---	---	---
27	8.3	7.5	8.1	9.8	9.7	9.8	8.5	7.9	8.2	---	---	---
28	8.3	7.6	7.9	10.1	9.7	9.9	8.6	8.2	8.3	---	---	---
29	7.7	6.3	7.2	10.2	10.0	10.1	8.7	8.0	8.5	---	---	---
30	8.1	6.3	6.9	10.2	9.9	10.1	8.8	8.3	8.6	---	---	---
31	8.3	6.2	7.3	---	---	---	9.1	8.5	8.9	---	---	---
MONTH	11.1	5.4	8.0	---	---	---	10.6	7.6	9.2	---	---	---

WILLAMETTE RIVER BASIN

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14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	8.9	8.6	8.8	---	---	---	8.6	8.4	8.5
2	---	---	---	9.2	8.8	9.0	---	---	---	8.5	8.2	8.4
3	8.1	7.4	7.8	9.1	8.9	9.0	---	---	---	8.6	8.3	8.5
4	8.1	7.7	7.9	9.3	9.1	9.2	---	---	---	8.7	8.3	8.5
5	8.1	6.6	7.6	9.3	8.9	9.1	---	---	---	8.4	8.2	8.3
6	8.3	7.7	8.0	9.3	9.0	9.1	---	---	---	8.6	8.4	8.5
7	8.1	7.2	7.7	9.3	8.9	9.1	---	---	---	8.7	8.5	8.6
8	8.8	7.8	8.3	9.0	8.7	8.9	---	---	---	8.7	8.4	8.6
9	8.8	8.0	8.3	9.0	8.8	9.0	---	---	---	8.8	8.6	8.7
10	8.8	8.3	8.6	8.9	8.4	8.5	---	---	---	8.8	8.4	8.6
11	8.8	7.9	8.4	8.7	8.4	8.6	---	---	---	8.7	8.5	8.6
12	8.9	8.4	8.7	8.7	8.5	8.6	---	---	---	8.8	8.7	8.7
13	9.2	8.5	8.8	9.0	8.7	8.9	---	---	---	8.9	8.6	8.7
14	9.5	8.1	8.7	9.0	8.6	8.8	---	---	---	8.7	8.4	8.5
15	9.9	9.0	9.5	10.2	8.3	9.3	---	---	---	9.0	8.6	8.8
16	10.0	9.5	9.8	10.0	8.3	9.0	---	---	---	9.0	8.7	8.9
17	9.8	9.4	9.7	8.6	8.2	8.5	---	---	---	9.0	8.5	8.7
18	9.6	9.3	9.4	8.5	8.2	8.4	---	---	---	8.8	8.6	8.7
19	9.4	8.5	9.0	8.6	8.2	8.5	---	---	---	8.7	8.4	8.5
20	8.9	8.2	8.5	8.5	8.0	8.2	---	---	---	8.4	8.1	8.3
21	8.4	8.0	8.1	8.4	7.9	8.1	---	---	---	9.0	8.3	8.7
22	8.4	7.8	8.1	8.1	7.8	8.0	---	---	---	9.8	8.7	9.2
23	8.4	8.0	8.2	8.6	8.0	8.3	---	---	---	10.1	8.7	9.2
24	8.3	7.6	8.0	9.0	8.4	8.7	---	---	---	9.7	8.6	9.1
25	8.3	7.8	8.1	9.1	8.7	8.9	---	---	---	9.5	8.3	8.8
26	8.7	7.9	8.3	9.2	8.7	9.0	---	---	---	9.8	8.4	9.0
27	8.8	8.4	8.6	9.2	9.0	9.1	8.7	8.4	8.6	10.8	9.0	9.6
28	8.7	8.3	8.6	9.3	8.9	9.1	8.6	8.3	8.4	11.0	9.2	9.8
29	---	---	---	10.4	8.9	9.8	8.7	8.3	8.5	10.5	9.0	9.6
30	---	---	---	---	---	---	8.7	8.4	8.5	---	---	---
31	---	---	---	---	---	---	---	---	---	10.7	9.0	9.7
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	11.2	9.0	10.0	15.6	12.6	13.7	16.6	9.9	12.5	9.8	8.0	8.9
2	11.1	9.1	9.7	13.9	12.2	12.8	15.6	11.2	13.2	9.9	8.8	9.3
3	11.1	9.6	10.2	12.6	10.2	11.5	15.4	11.3	13.3	9.5	8.0	8.8
4	11.1	9.0	9.9	11.5	10.1	10.7	14.8	11.1	13.2	9.5	7.6	8.5
5	10.4	9.2	9.6	11.6	10.6	11.2	14.6	11.2	13.1	8.4	6.9	7.7
6	9.5	8.1	8.9	11.4	9.2	10.6	14.3	11.0	12.4	7.5	6.4	7.1
7	8.8	7.4	8.1	13.7	9.1	10.4	12.6	9.7	10.8	7.0	5.8	6.4
8	9.5	8.1	8.7	15.0	8.7	12.0	11.0	7.5	9.1	6.8	5.8	6.4
9	9.4	8.1	8.6	14.0	8.4	11.4	10.6	7.2	8.5	7.2	6.3	6.7
10	9.5	8.6	9.0	8.5	6.4	7.7	9.2	7.3	8.5	7.7	6.6	7.2
11	9.3	8.7	9.0	8.0	5.8	6.7	8.7	7.4	8.0	8.2	7.1	7.5
12	8.8	7.6	8.1	8.9	7.3	7.9	7.8	6.6	7.4	8.1	7.2	7.7
13	8.2	7.6	8.0	9.8	7.7	8.5	6.8	6.3	6.5	8.7	7.6	8.0
14	8.7	7.5	8.0	10.2	8.5	9.2	6.7	6.1	6.4	9.2	7.5	8.2
15	9.3	8.2	8.6	11.0	8.9	9.7	8.0	6.4	7.1	8.8	7.2	8.0
16	8.2	7.6	7.8	11.0	9.2	9.8	7.8	6.6	7.0	8.2	6.6	7.8
17	8.2	7.7	7.9	10.0	8.3	9.4	7.6	6.6	7.0	7.3	6.1	6.7
18	8.2	7.7	8.0	12.4	9.5	10.4	7.9	7.0	7.4	7.7	6.1	6.9
19	8.1	7.6	7.9	11.7	9.3	10.2	7.6	6.1	6.8	7.6	6.3	7.0
20	7.8	7.3	7.7	11.7	9.5	10.3	7.3	6.1	6.8	7.6	6.6	7.1
21	7.3	7.0	7.1	14.4	10.1	12.1	7.2	6.3	6.7	8.1	6.9	7.5
22	7.9	6.8	7.4	13.7	10.5	11.8	7.9	6.8	7.4	7.7	6.8	7.3
23	8.7	7.6	8.1	11.5	8.7	10.2	8.5	7.3	7.8	7.8	6.9	7.2
24	10.8	8.3	9.2	11.8	8.7	10.0	10.6	7.8	9.0	8.0	7.0	7.4
25	12.0	9.6	10.6	10.6	8.5	9.4	9.4	7.2	8.3	7.8	6.9	7.2
26	12.8	10.7	11.4	10.7	8.6	9.3	10.9	8.0	9.2	8.0	6.2	7.3
27	12.9	10.9	11.8	11.1	8.4	9.5	12.5	8.4	9.9	7.6	6.2	7.0
28	14.9	11.1	12.5	12.6	8.4	10.3	10.3	8.3	9.1	7.7	7.1	7.4
29	16.8	11.7	13.6	11.4	9.3	10.5	9.5	8.5	9.1	7.2	6.7	6.9
30	14.6	10.7	12.8	12.4	8.9	10.6	9.8	8.3	8.9	7.3	6.9	7.1
31	---	---	---	13.8	9.2	11.5	9.7	8.1	8.9	---	---	---
MONTH	16.8	6.8	9.3	15.6	5.8	10.3	16.6	6.1	9.0	9.9	5.8	7.5

WILLAMETTE RIVER BASIN

14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

TEMPERATURE, AIR, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

WILLAMETTE RIVER BASIN

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14207200 TUALATIN RIVER AT OSWEGO DAM, NEAR WEST LINN, OR--Continued

TEMPERATURE, AIR, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	35.2	15.9	22.8	36.6	14.9	22.3	31.6	12.6	19.6
2	---	---	---	23.3	16.3	19.0	32.4	15.0	20.6	24.5	15.5	18.1
3	---	---	---	22.7	16.2	19.1	34.8	14.4	21.8	21.0	15.7	17.7
4	---	---	---	28.9	16.5	20.4	35.5	16.8	23.6	31.9	14.2	18.7
5	---	---	---	27.5	15.5	20.2	31.7	15.5	20.9	24.0	14.1	17.1
6	15.0	9.7	12.3	22.8	14.6	18.1	24.4	14.3	19.2	19.7	13.5	16.5
7	27.2	11.5	16.6	29.6	15.0	20.1	20.1	13.0	15.6	23.1	14.5	17.1
8	32.2	10.2	18.5	36.9	16.7	23.1	23.3	13.5	16.8	31.9	14.5	19.4
9	33.0	11.8	19.2	20.5	13.1	17.9	27.4	11.4	17.8	34.1	14.7	21.0
10	18.7	10.4	15.2	21.4	11.8	16.1	21.6	16.0	17.6	37.6	13.8	21.0
11	28.8	8.7	15.7	23.5	12.9	17.1	27.7	15.8	19.0	32.8	14.4	19.4
12	21.9	11.7	15.4	24.6	11.7	16.9	26.5	12.5	17.7	34.1	12.9	19.8
13	17.2	11.7	14.2	28.4	12.0	17.9	30.2	9.8	17.3	35.3	12.3	20.1
14	18.3	12.4	14.1	28.0	15.4	20.1	34.5	11.5	19.7	39.1	14.1	21.6
15	16.7	11.9	14.1	32.2	12.6	20.3	23.2	14.5	17.3	34.1	14.1	19.5
16	16.7	11.8	13.7	36.6	14.9	23.3	21.2	12.2	15.0	20.4	15.0	17.7
17	19.0	11.1	13.5	40.8	17.3	26.1	18.7	11.1	14.0	21.2	14.1	18.2
18	15.5	10.5	12.3	33.9	17.8	24.4	26.2	11.5	15.5	28.9	11.7	17.6
19	16.4	10.9	13.1	37.1	18.9	25.1	26.4	9.7	16.3	32.3	11.2	18.2
20	15.1	11.6	13.2	39.6	17.8	24.5	31.7	12.0	18.6	35.8	14.3	21.1
21	17.0	11.4	13.8	34.0	16.5	22.1	30.0	12.5	18.3	31.9	14.4	20.7
22	24.9	9.8	15.7	29.2	18.0	21.4	36.2	11.6	19.4	35.0	11.7	19.4
23	27.4	11.9	18.0	25.4	18.0	21.0	28.6	12.2	17.6	37.8	9.3	17.5
24	29.0	13.5	19.0	30.4	16.1	21.3	28.6	9.3	16.3	33.8	11.2	18.1
25	31.7	12.4	20.1	36.8	13.4	21.0	36.5	9.5	18.3	30.9	13.7	17.4
26	33.9	12.0	20.1	26.1	16.9	20.2	35.1	10.0	18.0	20.5	12.4	15.6
27	34.5	13.3	22.0	33.3	16.2	21.7	30.7	11.5	18.9	18.0	14.1	15.5
28	36.6	13.4	22.9	27.9	14.6	20.2	29.3	9.5	17.9	17.8	12.9	14.4
29	38.1	14.0	24.1	30.5	11.3	18.1	22.5	13.2	16.5	17.7	12.5	14.4
30	39.7	16.7	25.4	30.8	10.3	18.7	27.7	12.6	17.4	18.9	9.9	14.1
31	---	---	---	35.5	14.5	22.4	29.6	12.4	18.1	---	---	---
MONTH	---	---	---	40.8	10.3	20.7	36.6	9.3	18.2	39.1	9.3	18.2

WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR
(National stream quality accounting network station)

LOCATION---Lat 45°21'03", long 122°40'30", in 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 above sea level (levels by Corps of Engineers). Prior to June 12, 1941, nonrecording gage at datum 1.02 ft higher.

REMARKS---No estimated daily discharges. Water-discharge records good. October 1951 to September 1970, records published for this station included the daily flow in Oswego Canal, which diverts at point 5.0 mi upstream from station for development of power between outlet of Lake Oswego and Willamette River. Adjustment for diversion to Lake Oswego provided by Oregon Water Resources Department since October 1, 1991. 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 upstream from station for irrigation.

AVERAGE DISCHARGE---67 years (water years 1929-95), 1,490 ft³/s, 28.66 in/yr, 1,080,000 acre-ft/yr, adjusted for diversion in Oswego Canal.

EXTREMES FOR PERIOD OF RECORD---Maximum discharge, 23,300 ft³/s Dec. 23, 1933, gage height, 17.72 ft; minimum daily discharge, 0.20 ft³/s July 30 to Aug. 2, 1966.

EXTREMES FOR CURRENT YEAR---Maximum discharge, 6,730 ft³/s Jan. 18, gage height, 9.92 ft; minimum discharge, 60 ft³/s Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	2120	3910	5840	5450	3450	1610	1100	273	204	141	150
2	115	2630	4130	5500	5650	2800	1430	1150	256	191	150	138
3	114	2390	4080	5040	5980	2200	1300	1160	239	191	124	129
4	117	1840	4100	4530	6360	1820	1210	1120	237	211	112	133
5	114	1390	4200	4030	6490	1710	1150	1100	302	212	104	147
6	101	1250	4170	3530	6300	1650	1080	1120	369	195	104	160
7	95	1070	4000	3200	5860	1490	1240	1110	367	177	117	197
8	94	881	3610	2940	5330	1400	1560	1050	348	167	128	213
9	97	915	3230	3160	4780	1870	1910	986	322	206	137	205
10	102	1080	2920	4070	4240	2810	2030	916	298	324	149	192
11	104	1280	2910	4410	3740	3310	2000	926	275	372	163	178
12	103	1210	3250	4720	3390	3390	2000	1000	283	325	188	166
13	104	1060	3320	5290	3150	3560	2190	1030	302	261	210	152
14	109	920	3270	5850	2880	3840	2170	927	325	223	213	143
15	111	830	3250	6210	2670	3990	2100	844	469	195	219	147
16	97	920	3590	6410	2660	4040	1920	769	502	182	214	154
17	63	1290	4460	6490	4140	4070	1730	703	479	187	224	156
18	97	1630	4770	6670	4890	4160	1620	651	415	173	228	158
19	131	1650	4800	6650	5390	4060	1540	609	420	153	234	162
20	122	1620	5060	6450	5700	4250	1580	586	430	145	210	159
21	118	1670	5560	6190	5910	4310	1630	558	415	144	195	149
22	112	1700	5750	5880	6250	4310	1620	503	366	142	185	136
23	112	1560	5970	5550	6450	4240	1480	463	323	143	166	130
24	114	1430	6050	5190	6380	4110	1360	443	281	158	146	127
25	118	1560	5940	4810	5990	3920	1250	416	248	159	133	121
26	173	1720	5840	4400	5430	3680	1150	385	250	148	125	131
27	1480	1880	6070	4000	4810	3390	1080	351	245	139	127	178
28	1700	1870	5800	3720	4130	3030	1070	324	223	114	132	268
29	1370	1900	5760	3720	---	2610	1070	324	208	93	151	279
30	754	2370	5900	4030	---	2190	1110	320	207	98	159	250
31	972	---	5990	5030	---	1840	---	300	---	110	161	---
TOTAL	9126	45636	141660	153510	140400	97500	46190	23244	9677	5742	5049	5008
MEAN	294	1521	4570	4952	5014	3145	1540	750	323	185	163	167
MAX	1700	2630	6070	6670	6490	4310	2190	1160	502	372	234	279
MIN	63	830	2910	2940	2660	1400	1070	300	207	93	104	121
AC-FT	18100	90520	281000	304500	278500	193400	91620	46100	19190	11390	10010	9930
MEAN†	339	1577	4616	4961	5027	3187	1571	788	356	218	214	216
CFSM†	0.48	2.23	6.54	7.03	7.12	4.51	2.23	1.12	0.50	0.31	0.30	0.31
IN.†	0.55	2.49	7.54	8.10	7.41	5.21	2.48	1.29	0.56	0.36	0.35	0.34
AC-FT†	20850	93810	283900	305100	279100	196000	93470	48480	21150	13380	13150	12820

CAL YR 1994 TOTAL 465445 MEAN 1275 MAX 6070 MIN 63 AC-FT 923200 MEAN† 1324 CFSM† 1.88 IN.† 25.46 AC-FT† 958800
WTR YR 1995 TOTAL 682742 MEAN 1871 MAX 6670 MIN 63 AC-FT 1354000 MEAN† 1907 CFSM† 2.70 IN.† 36.68 AC-FT† 1381000

† Adjusted for diversion in Oswego Canal.

WILLAMETTE RIVER BASIN

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14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to September 1981.

WATER TEMPERATURE: October 1975 to September 1981.

REMARKS.--Some samples were analyzed by different methods and may have data with different levels of detection.

WATER-QUALITY DATA

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH WATER WHOLE FIELD (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	BAROMETRIC PRESSURE (MM HG)	OXYGEN, DIS-SOLVED (PER CENT SATURATION)	COLIFORM, FECA, UM-MF (COLS./100 ML)	STREPTOCOCCI, FECA, KF AGAR (COLS. PER 100 ML)
OCT 1994											
28...	1610	1690	163	6.9	12.5	--	7.9	--	--	--	--
NOV 04...	0857	1890	112	6.8	9.0	23	8.9	749	79	250	K1000
DEC 05...	0910	4200	82	7.0	6.0	--	10.0	758	80	--	--
JAN 1995											
23...	1000	5590	85	7.2	6.5	14	10.7	753	88	K33	120
MAR 08...	1130	1380	121	7.0	7.5	--	10.3	747	87	--	--
MAY 26...	1130	387	193	7.4	18.0	--	9.5	759	100	--	--
AUG 15...	0930	201	280	7.1	20.5	--	6.7	754	75	--	--
SEP 25...	0910	116	255	7.1	18.5	1.2	7.9	756	84	47	320

DATE	ENTEROCOCCI ME, MF WATER TOTAL (COL / 100 ML)	HARDNESS, TOTAL (MG/L AS CaCO3)	CALCIUM, DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY, DIS IT FIELD (MG/L AS CaCO3)	BICARBONATE, DIS IT FIELD (MG/L AS HCO3)	CARBONATE, DIS IT FIELD (MG/L AS CO)
OCT 1994											
28...	--	50	14	3.7	12	32	0.7	3.3	38	46	0
NOV 04...	--	36	9.7	2.9	6.2	26	0.4	2.0	28	34	0
DEC 05...	--	28	7.2	2.4	4.9	26	0.4	1.6	28	34	0
JAN 1995											
23...	K19	28	7.3	2.3	4.6	26	0.4	1.0	25	30	0
MAR 08...	--	42	11	3.5	7.7	28	0.5	1.4	42	51	0
MAY 26...	--	63	18	4.5	13	30	0.7	2.1	56	69	0
AUG 15...	--	76	22	5.2	22	37	1	3.9	62	76	0
SEP 25...	--	71	21	4.6	21	37	1	3.8	57	70	0

DATE	SULFATE, DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1994											
28...	12	12	0.2	17	113	103	0.15	0.14	0.02	0.4	0.7
NOV 04...	7.9	6.7	<0.1	16	91	79	0.12	0.08	0.02	--	0.6
DEC 05...	3.9	4.9	<0.1	17	76	68	0.10	0.24	0.02	0.4	0.6
JAN 1995											
23...	2.8	4.6	0.1	18	72	62	0.10	0.15	0.02	0.3	0.4
MAR 08...	5.3	7.1	<0.1	21	92	90	0.13	0.56	0.04	0.7	0.8
MAY 26...	13	11	0.2	22	127	125	0.17	0.02	0.01	<0.2	0.2
AUG 15...	29	18	0.5	21	175	169	0.24	0.18	0.04	0.4	0.7
SEP 25...	24	17	0.4	20	172	156	0.23	0.06	0.02	--	0.5

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

WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

WATER-QUALITY DATA

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM, DIS- SOLVED (UG/L AS LI)
OCT 1994											
28...	1.2	0.20	0.09	0.07	5.1	--	--	--	--	300	--
NOV											
04...	2.1	0.16	0.07	0.05	--	--	340	17	<3	490	<4
DEC											
05...	2.0	0.14	0.09	0.06	3.4	2.0	--	--	--	300	--
JAN 1995											
23...	1.4	0.08	0.03	0.05	1.9	1.1	110	15	<3	190	<4
MAR											
08...	1.4	0.13	0.08	0.08	2.4	0.8	--	--	--	290	--
MAY											
26...	1.6	0.09	0.09	0.01	2.3	1.3	--	--	--	280	--
AUG											
15...	2.2	0.06	0.03	0.02	3.5	1.2	--	--	--	26	--
SEP											
25...	2.2	0.07	0.04	0.03	--	--	20	17	<3	18	<4

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	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)	PER- THANE TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L)
OCT 1994											
28...	130	--	--	--	--	--	--	<0.1	<0.001	0.002	<0.1
NOV											
04...	96	<10	5	<1	<1	50	<6	--	--	--	--
DEC											
05...	61	--	--	--	--	--	--	--	--	--	--
JAN 1995											
23...	19	<10	<1	<1	<1	43	<6	--	--	--	--
MAR											
08...	66	--	--	--	--	--	--	--	--	--	--
MAY											
26...	87	--	--	--	--	--	--	--	--	--	--
AUG											
15...	79	--	--	--	--	--	--	--	--	--	--
SEP											
25...	22	20	2	<1	<1	69	<6	--	--	--	--

DATE	P,P'- DDD UNFILTR RECOVER (UG/L)	DDE, TOTAL (UG/L)	P,P'- DDT UNFILTR RECOVER (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, I TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	TOX- APHENE, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	PCB, TOTAL (UG/L)
OCT 1994											
28...	<0.001	0.001	0.002	0.001	<0.001	<0.001	<1	<0.001	<0.001	<0.01	<0.1
NOV											
04...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
JAN 1995											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
15...	--	--	--	--	--	--	--	--	--	--	--
SEP											
25...	--	--	--	--	--	--	--	--	--	--	--

DATE	PCNS UNFILTR RECOVER (UG/L)	MIREX, TOTAL (UG/L)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC PERCENT	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT	PROP- CHLOR, WATER, DISS, REC (UG/L)	BUTYL- ATE, WATER, DISS, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L)	CYANA- ZINE, WATER, DISS, REC (UG/L)
OCT 1994											
28...	<0.1	<0.01	100	106	100	<0.007	<0.002	0.110	0.024	E0.004	<0.004
NOV											
04...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	60	99.2	90	<0.007	<0.002	0.180	E0.006	E0.008	<0.004
JAN 1995											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
26...	--	--	100	106	111	<0.015	<0.008	0.049	<0.008	E0.009	<0.013
AUG											
15...	--	--	--	--	--	--	--	--	--	--	--
SEP											
25...	--	--	--	--	--	--	--	--	--	--	--

E Estimated.

WILLAMETTE RIVER BASIN

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14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

WATER-QUALITY DATA

DATE	FONOFOS WATER DISS REC (UG/L)	ALPHA BHC DIS- SOLVED (UG/L)	P, P' DDE DISSOLV (UG/L)	CHLOR- PYRIFOS DIS- SOLVED (UG/L)	LINDANE DIS- SOLVED (UG/L)	DI- ELDRIN DIS- SOLVED (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	DI- AZINON, DIS- SOLVED (UG/L)	ATRA- ZINE, WATER, DISS, REC (UG/L)
OCT 1994 28...	E0.002	<0.002	<0.006	0.007	<0.004	<0.001	0.024	E0.009	<0.006	0.031	E0.014
NOV 04...	--	--	--	--	--	--	--	--	--	--	--
DEC 05...	<0.003	<0.002	<0.006	<0.004	<0.004	<0.001	0.075	<0.005	<0.006	E0.005	0.160
JAN 1995 23...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
MAY 26...	<0.008	<0.007	<0.010	<0.005	<0.011	<0.008	E0.008	<0.014	<0.022	<0.008	0.031
AUG 15...	--	--	--	--	--	--	--	--	--	--	--
SEP 25...	--	--	--	--	--	--	--	--	--	--	--
DATE	ALA- CHLOR, WATER, DISS, REC, (UG/L)	ACETO- CHLOR, WATER FLTRD REC (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L)
OCT 1994 28...	<0.002	<0.009	E0.010	<0.003	E0.005	<0.004	<0.002	<0.007	<0.002	<0.002	<0.002
NOV 04...	--	--	--	--	--	--	--	--	--	--	--
DEC 05...	<0.002	<0.000	<0.004	<0.003	<0.002	<0.004	<0.002	<0.007	<0.002	<0.002	<0.002
JAN 1995 23...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
MAY 26...	<0.009	<0.009	<0.012	<0.006	<0.012	<0.013	<0.011	E0.018	<0.039	<0.035	E0.005
AUG 15...	--	--	--	--	--	--	--	--	--	--	--
SEP 25...	--	--	--	--	--	--	--	--	--	--	--
DATE	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)
OCT 1994 28...	<0.004	0.037	<0.003	0.016	<0.002	E0.032	<0.007	<0.018	<0.017	<0.001	<0.004
NOV 04...	--	--	--	--	--	--	--	--	--	--	--
DEC 05...	<0.004	E0.007	<0.003	<0.003	<0.002	<0.003	<0.007	0.021	<0.017	E0.005	<0.004
JAN 1995 23...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
MAY 26...	<0.009	E0.007	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.060	<0.008	<0.016
AUG 15...	--	--	--	--	--	--	--	--	--	--	--
SEP 25...	--	--	--	--	--	--	--	--	--	--	--
DATE	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- FARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1994 28...	E0.130	<0.002	E0.001	E0.011	0.013	<0.013	<0.001	<0.005	48	219	95
NOV 04...	--	--	--	--	--	--	--	--	31	158	96
DEC 05...	<0.003	<0.002	<0.002	<0.004	0.014	<0.013	<0.001	<0.005	51	578	97
JAN 1995 23...	--	--	--	--	--	--	--	--	21	317	86
MAR 08...	--	--	--	--	--	--	--	--	12	45	--
MAY 26...	E0.011	<0.008	<0.004	<0.018	<0.010	<0.006	<0.038	<0.016	8	8.4	86
AUG 15...	--	--	--	--	--	--	--	--	7	3.8	90
SEP 25...	--	--	--	--	--	--	--	--	6	1.9	95

E Estimated.

WILLAMETTE RIVER BASIN

14207740 WILLAMETTE RIVER ABOVE FALLS, AT OREGON CITY, OR

LOCATION.--Lat 45°20'55", long 122°37'08", in SW 1/4 SW 1/4 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 sea level.

REMARKS.--Flow regulated by many reservoirs upstream. Gage height elevations possibly affected by Portland General Electric powerplant operations throughout the year and by Army Corps of Engineers locks operation during summer months.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 64.79 ft Dec. 17, 1977; minimum, 52.51 ft July 12, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 62.78 ft Jan. 16; minimum, 53.29 ft July 7, 8.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55.22	57.66	59.49	57.62	60.51	55.68	54.93	55.75	53.94	53.45	54.64	54.86
2	55.21	58.66	60.31	57.23	61.13	55.41	54.81	55.94	53.87	53.41	54.60	54.83
3	55.22	58.31	60.48	56.85	61.18	55.15	54.71	56.88	53.82	53.40	54.67	54.82
4	55.21	57.71	60.19	56.55	60.95	54.99	54.59	57.71	53.78	53.39	54.70	54.82
5	55.21	57.63	59.52	56.23	60.58	55.02	54.58	57.64	53.81	53.36	54.63	54.82
6	55.19	57.65	58.74	55.89	60.17	55.10	54.60	57.32	53.85	53.33	54.60	54.88
7	55.21	57.11	58.10	55.74	59.71	54.98	54.69	56.94	53.99	53.30	54.61	55.01
8	55.29	56.70	57.86	55.71	58.79	54.85	55.20	56.69	54.10	53.31	54.66	55.12
9	55.34	56.22	57.58	56.02	57.84	55.25	55.92	56.41	54.11	53.38	54.69	55.19
10	55.35	56.62	57.36	57.71	57.20	56.42	56.21	56.03	54.02	53.47	54.69	55.20
11	55.37	56.64	57.13	58.91	56.79	56.84	56.07	55.80	53.93	53.54	54.71	55.22
12	55.37	56.37	57.24	59.17	56.41	56.67	56.11	55.88	53.87	54.16	54.73	55.21
13	55.38	56.06	57.26	59.67	56.22	56.51	56.37	56.21	53.82	55.09	54.75	55.18
14	55.47	55.86	56.91	60.85	---	56.93	56.72	56.48	53.79	54.97	55.22	55.15
15	55.41	55.75	56.67	61.82	---	57.34	56.99	56.24	53.85	54.83	55.61	55.13
16	55.38	55.75	56.76	62.54	---	57.33	56.98	55.70	54.01	54.76	55.62	55.11
17	55.29	56.17	57.85	62.66	---	57.11	56.73	55.27	54.20	54.76	55.64	55.11
18	55.21	56.67	59.07	62.09	---	56.76	56.43	55.06	54.16	54.72	55.48	55.17
19	55.15	56.72	59.33	61.40	---	56.80	56.07	54.94	54.23	54.60	54.98	55.17
20	55.11	56.63	59.10	60.74	---	57.27	55.86	54.82	54.38	54.57	54.94	55.25
21	55.06	56.97	58.91	60.10	---	57.77	55.83	54.68	54.76	54.63	54.97	55.34
22	55.07	56.90	58.85	59.46	---	57.98	55.92	54.56	54.90	54.69	54.87	55.40
23	55.12	56.54	58.47	58.94	---	57.84	55.82	54.46	54.76	54.75	54.78	55.40
24	55.13	56.50	57.99	58.49	---	57.34	55.58	54.41	54.50	54.78	54.74	55.40
25	55.28	56.79	57.61	58.04	---	56.87	55.39	54.36	54.22	54.79	54.67	55.43
26	55.07	57.36	57.44	57.54	---	56.50	55.24	54.25	54.02	54.74	54.63	55.47
27	55.88	57.60	58.31	57.07	---	56.13	55.18	54.15	53.89	54.72	54.68	55.55
28	57.10	57.40	59.11	56.92	---	55.82	55.26	54.10	53.72	54.71	54.71	55.67
29	57.13	57.27	59.13	57.39	---	55.50	55.39	54.10	53.56	54.65	54.79	55.87
30	56.52	57.71	58.71	58.00	---	55.26	55.56	54.07	53.51	54.62	54.86	55.89
31	56.10	---	58.08	59.13	---	55.07	---	54.02	---	54.64	54.85	---
MEAN	55.45	56.93	58.37	58.60	---	56.27	55.66	55.51	54.05	54.24	54.86	55.22
MAX	57.13	58.66	60.48	62.66	---	57.98	56.99	57.71	54.90	55.09	55.64	55.89
MIN	55.06	55.75	56.67	55.71	---	54.85	54.58	54.02	53.51	53.30	54.60	54.82

WILLAMETTE RIVER BASIN

303

14207770 WILLAMETTE RIVER BELOW FALLS, AT OREGON CITY, OR

LOCATION.--Lat 45°21'28", long 122°36'35", in NE 1/4 NW 1/4 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 sea level (Oregon State Highway Division bench mark).

REMARKS.--Flow regulated by many reservoirs upstream. Gage out of operation during period October 1993 to January 1994 and July to September 1994. Fragmentary record for this period available in files of the Portland field office.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 32.18 ft Feb. 21, 1982; minimum, 1.55 ft Sept. 7, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 24.48 ft Jan. 17, but may have been higher during periods of missing record; minimum recorded, 2.48 ft Sept. 18, but may have been lower during periods of missing record.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	14.51	9.94	13.01	19.04	15.26	17.95	12.93	11.87	12.53
2	---	---	---	15.21	14.41	14.70	19.88	18.96	19.41	11.97	11.00	11.52
3	---	---	---	14.41	13.00	13.77	19.71	19.20	19.48	11.74	10.44	10.93
4	---	---	---	13.48	11.87	12.59	19.22	17.76	18.47	11.06	10.20	10.60
5	---	---	---	13.15	11.83	12.32	17.76	16.17	16.78	10.48	9.58	10.20
6	---	---	---	12.69	11.60	12.14	16.24	14.44	14.97	9.62	8.38	9.02
7	---	---	---	11.78	9.89	10.73	14.50	13.13	13.68	9.34	8.18	8.70
8	---	---	---	10.40	8.60	9.33	---	---	---	9.50	7.98	8.59
9	---	---	---	9.97	8.11	8.96	---	---	---	10.59	7.80	9.16
10	---	---	---	10.15	9.09	9.56	---	---	---	14.21	10.59	12.65
11	---	---	---	9.76	8.69	9.13	---	---	---	15.79	14.21	15.23
12	---	---	---	9.35	7.82	8.61	---	---	---	16.32	15.57	15.94
13	---	---	---	8.58	7.04	7.77	11.78	---	---	19.75	16.32	17.77
14	---	---	---	8.70	6.88	7.62	---	---	---	22.67	19.75	21.44
15	---	---	---	9.00	6.91	7.74	---	---	---	23.94	22.64	23.17
16	---	---	---	9.25	7.17	8.04	---	---	---	24.33	23.88	24.16
17	---	---	---	9.90	7.63	8.54	15.26	11.26	13.40	24.48	24.04	24.25
18	---	---	---	10.43	8.84	9.49	---	15.29	---	24.08	22.49	23.20
19	---	---	---	10.02	8.84	9.41	---	---	---	22.49	21.05	21.61
20	---	3.28	---	10.15	8.53	9.28	---	---	---	21.05	19.27	20.01
21	6.82	3.55	4.87	10.63	9.30	9.88	---	---	---	19.27	17.60	18.27
22	6.79	3.25	4.72	10.14	9.27	9.70	---	---	---	17.60	16.03	16.59
23	---	3.29	---	9.62	8.72	9.17	---	13.91	---	16.06	14.90	15.34
24	6.17	---	---	9.67	8.44	9.01	13.95	12.54	13.13	15.01	13.76	14.30
25	6.12	3.19	4.41	10.46	8.86	9.60	12.54	11.43	11.92	13.78	12.59	13.27
26	6.51	3.06	4.60	11.41	10.19	10.78	12.22	11.04	11.64	12.82	11.65	12.33
27	9.12	4.83	6.90	11.93	10.94	11.34	15.93	12.22	14.38	12.09	11.07	11.57
28	10.05	8.68	9.42	11.57	10.51	11.00	---	---	---	11.32	10.67	11.02
29	9.94	8.03	8.87	11.83	10.32	11.01	---	---	---	13.73	11.13	12.32
30	8.48	6.14	7.45	15.26	11.02	12.63	15.79	14.28	15.14	15.04	12.98	13.90
31	9.94	5.44	7.39	---	---	---	14.28	12.93	13.56	20.72	15.04	17.47
MONTH	---	---	---	15.26	6.88	10.23	---	---	---	24.48	7.80	15.07

WILLAMETTE RIVER BASIN

14207770 WILLAMETTE RIVER BELOW FALLS, AT OREGON CITY, OR--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	23.30	20.72	22.00	10.82	---	---	8.25	6.84	7.49	11.06	10.29	10.68
2	23.48	22.99	23.28	10.38	---	---	8.36	6.46	7.11	11.69	10.43	11.02
3	23.00	22.03	22.50	10.58	9.26	9.86	7.80	6.27	6.87	13.77	11.69	12.59
4	22.03	20.81	21.33	10.07	9.25	9.80	7.49	6.09	6.70	14.29	13.77	14.00
5	20.81	19.16	19.93	9.25	8.46	8.86	7.36	6.28	6.69	---	13.59	---
6	19.16	18.08	18.51	---	---	---	7.71	6.51	6.99	13.68	13.00	13.41
7	18.08	16.69	17.40	---	---	---	7.95	6.70	7.24	13.00	11.97	12.50
8	16.69	14.51	15.65	---	7.05	---	8.40	7.58	7.93	12.05	11.65	11.88
9	14.51	12.42	13.41	9.07	8.19	8.69	8.95	7.90	8.59	11.90	11.43	11.77
10	12.42	11.21	11.78	10.84	9.06	10.37	9.37	8.52	9.06	11.67	10.99	11.27
11	11.48	10.75	11.16	11.44	10.79	11.08	9.43	8.69	9.09	11.50	10.94	11.22
12	11.01	9.59	10.53	11.03	10.44	10.78	10.03	8.67	9.40	12.31	11.36	11.99
13	10.60	9.33	9.82	11.24	10.20	10.68	11.06	9.40	10.26	12.57	11.81	12.17
14	11.03	9.88	10.38	12.74	10.79	11.75	11.65	10.64	11.21	12.69	11.86	12.17
15	11.34	10.15	10.74	13.08	12.16	12.61	12.18	11.33	11.81	12.49	11.21	11.79
16	11.39	10.54	10.95	12.75	11.89	12.33	12.05	11.31	11.69	11.86	10.72	11.28
17	17.60	11.39	13.63	12.86	11.67	12.23	11.58	10.74	11.12	11.76	10.60	11.09
18	21.51	17.60	19.86	12.17	10.96	11.51	11.32	10.50	10.86	11.72	10.98	11.27
19	---	---	---	12.17	11.29	11.72	11.02	9.53	10.28	11.80	11.01	11.41
20	---	---	---	13.68	11.91	12.75	10.23	9.21	9.61	11.42	10.70	11.15
21	22.81	20.41	21.91	14.28	13.19	13.77	9.71	9.02	9.39	10.89	9.30	10.12
22	20.41	17.48	18.81	14.42	13.91	14.13	9.85	8.63	9.40	9.70	8.73	9.11
23	17.48	14.77	16.21	14.37	13.73	14.06	9.22	7.47	8.50	9.61	8.73	9.28
24	14.77	12.84	13.87	14.08	12.74	13.42	8.63	7.47	8.17	9.61	9.16	9.49
25	12.88	11.93	12.60	12.80	11.31	12.24	9.21	7.80	8.56	9.57	8.95	9.30
26	12.00	11.03	11.62	11.51	10.48	11.14	9.48	8.13	8.75	10.30	9.43	9.84
27	11.12	10.58	10.85	10.77	9.89	10.40	9.51	8.24	8.75	10.53	9.40	9.96
28	11.23	10.40	10.79	10.17	8.62	9.48	10.21	8.89	9.65	9.43	8.18	8.85
29	---	---	---	9.14	8.07	8.61	10.74	9.78	10.19	8.29	7.64	7.95
30	---	---	---	9.36	7.57	8.27	11.16	10.28	10.63	8.85	7.78	8.16
31	---	---	---	8.34	7.19	7.79	---	---	---	9.65	8.79	9.15
MONTH	---	---	---	---	---	---	12.18	6.09	9.07	---	7.64	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	9.96	9.29	9.62	9.77	8.78	9.38	7.53	4.87	6.01	7.11	3.88	5.32
2	9.97	9.60	9.79	9.18	8.25	8.59	7.43	4.43	5.68	6.96	3.29	4.61
3	10.03	9.40	9.77	8.83	7.17	8.09	7.22	4.01	5.40	6.64	3.16	4.40
4	9.75	9.30	9.57	7.79	6.77	7.29	7.30	4.26	5.33	6.53	2.78	4.30
5	9.43	8.92	9.27	7.29	6.29	6.83	7.36	4.32	5.40	6.73	2.84	4.55
6	9.55	8.73	9.04	8.13	6.39	7.00	7.41	3.83	5.24	6.76	2.89	4.65
7	9.58	8.86	9.37	8.54	7.12	7.63	7.60	3.96	5.57	6.54	3.07	4.74
8	9.80	9.12	9.35	8.05	7.28	7.75	7.65	3.96	5.48	6.71	3.35	4.97
9	9.59	9.19	9.39	8.26	6.87	7.58	7.76	3.90	5.82	6.98	3.45	5.05
10	10.11	9.29	9.64	7.95	6.32	7.47	8.49	4.83	6.28	6.49	3.18	4.82
11	10.48	9.43	9.94	8.41	6.14	7.62	8.50	4.92	6.42	6.97	3.40	4.96
12	10.21	9.61	9.96	9.73	7.01	8.02	8.30	5.15	6.47	6.89	3.56	5.08
13	11.19	9.75	10.25	9.14	6.90	7.70	7.86	4.48	6.07	6.82	3.46	4.88
14	11.52	9.98	10.61	8.89	7.07	7.85	7.20	3.89	5.46	6.96	3.77	4.97
15	11.49	10.37	10.99	8.86	6.41	7.61	7.53	4.37	5.58	6.66	3.82	4.94
16	11.31	10.55	10.99	8.08	5.69	6.76	7.22	3.99	5.45	6.15	3.46	4.47
17	10.97	9.56	10.39	7.78	5.48	6.48	6.85	4.11	5.26	5.82	3.02	3.94
18	9.94	8.80	9.39	7.91	5.33	6.34	6.74	3.82	4.88	5.23	2.48	3.83
19	9.52	8.60	8.91	---	---	---	6.41	3.49	4.49	5.62	2.84	4.12
20	9.58	9.18	9.41	---	5.33	---	6.21	3.69	4.56	6.07	3.26	4.49
21	9.86	9.45	9.74	7.59	4.87	5.79	6.46	3.37	4.70	6.00	3.28	4.56
22	10.24	9.58	9.85	7.32	4.64	5.62	6.61	3.65	5.00	6.53	3.38	4.85
23	10.39	9.58	9.97	7.36	4.69	5.65	7.22	4.13	5.38	6.85	3.63	5.21
24	10.36	9.65	9.99	7.46	4.70	5.83	7.14	4.03	5.32	6.91	3.59	5.20
25	10.33	9.41	9.82	7.76	5.11	6.28	7.32	4.23	5.56	7.54	3.86	5.46
26	9.89	8.99	9.42	8.32	5.75	6.70	7.35	3.80	5.35	7.64	4.25	5.73
27	9.88	9.06	9.39	8.15	5.11	6.30	7.32	3.64	5.25	8.04	4.63	6.07
28	9.99	8.80	9.30	8.20	5.34	6.81	7.42	4.14	5.58	8.06	4.84	6.14
29	9.30	8.44	8.79	8.12	5.40	6.66	7.63	4.24	5.55	7.88	4.94	6.11
30	9.89	9.08	9.44	7.39	4.84	5.96	7.77	4.24	5.61	8.04	4.99	6.20
31	---	---	---	7.60	5.00	6.07	7.63	4.10	5.57	---	---	---
MONTH	11.52	8.44	9.71	---	---	---	8.50	3.37	5.47	8.06	2.48	4.95

WILLAMETTE RIVER BASIN

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14208600 TIMOTHY LAKE NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'35", in NE 1/4 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 sea level (levels by Portland General Electric Co.).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway built by Portland General Electric Co. Usable storage began May 28, 1956. Capacity, 65,710 acre-ft 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 contents observed, 16,010 acre-ft Feb. 24, 1957, elevation, 3,144.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 68,350 acre-ft June 7, elevation, 3,191.89 ft; minimum contents observed, 52,810 acre-ft Dec. 17, elevation, 3,180.11 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	3,190.44	66,320	-
Oct. 31.....	3,188.55	63,730	-2,590
Nov. 30.....	3,182.67	56,030	-7,700
Dec. 31.....	3,181.74	54,850	-1,180
CAL YR 1994.....	-	-	+2,160
Jan. 31.....	3,182.75	56,130	+1,280
Feb. 28.....	3,190.75	66,750	+10,620
Mar. 31.....	3,189.68	65,270	-1,480
Apr. 30.....	3,190.40	66,270	+1,000
May 31.....	3,191.52	67,830	+1,560
June 30.....	3,191.76	68,170	+340
July 31.....	3,191.73	68,130	-40
Aug. 31.....	3,191.73	68,130	0
Sept.30.....	3,191.14	67,300	-830
WTR YR 1995.....	-	-	+980

WILLAMETTE RIVER BASIN

14208700 OAK GROVE FORK NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'50", in NE 1/4 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 above sea level (Portland General Electric Co. bench mark).

REMARKS.--Records good. Flow regulated since 1956 by Timothy Lake (station 14208600). No diversion upstream from station. Gage height record for period June 1 to August 3 furnished by Portland General Electric.

AVERAGE DISCHARGE.--39 years (water years 1957-95), 128 ft³/s, 31.95 in/yr, 92,740 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 discharge, 3.7 ft³/s Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 515 ft³/s Feb. 28, Mar. 1-3, gage height, 2.75 ft; minimum discharge, 40 ft³/s Oct. 6-8, June 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	44	48	43	53	515	243	138	121	83	70	66
2	52	164	46	43	52	513	251	60	108	111	75	68
3	42	324	56	188	49	479	243	95	41	131	76	68
4	41	368	121	206	48	408	230	110	41	104	76	66
5	41	372	236	236	47	408	217	120	79	86	75	69
6	41	396	289	274	47	341	183	130	238	90	72	70
7	41	406	319	285	46	300	158	141	251	105	78	70
8	42	417	341	286	45	228	158	171	223	105	76	72
9	41	380	342	239	70	150	185	199	74	157	79	72
10	41	409	364	218	98	145	206	204	140	118	82	70
11	42	417	369	222	91	153	203	232	134	79	88	70
12	42	413	382	161	116	158	172	234	91	82	84	67
13	42	424	385	46	150	109	97	233	125	75	74	66
14	42	214	373	48	161	80	136	193	155	84	70	66
15	42	102	393	46	170	87	154	181	193	90	70	66
16	42	118	281	45	200	116	180	182	142	90	75	66
17	42	152	99	45	75	184	190	175	128	89	89	65
18	43	100	44	44	49	169	202	158	123	76	88	65
19	43	92	44	44	53	112	200	161	101	78	90	65
20	43	92	43	44	51	305	206	156	98	82	84	66
21	43	84	43	108	51	221	231	155	111	84	74	71
22	43	70	43	182	50	186	246	141	104	87	61	77
23	170	129	43	209	54	364	244	134	104	78	62	77
24	344	383	159	232	105	488	237	136	104	69	69	77
25	357	377	195	251	140	488	226	140	240	68	71	79
26	354	394	141	266	140	488	225	141	111	76	71	79
27	116	406	44	282	349	287	170	146	91	81	67	131
28	126	269	44	238	510	218	146	138	91	85	68	230
29	353	260	44	209	---	222	161	119	77	85	70	250
30	379	130	43	85	---	231	166	119	77	81	72	252
31	230	---	43	51	---	233	---	122	---	74	70	---
TOTAL	3443	7906	5417	4876	3070	8386	5866	4764	3716	2783	2326	2676
MEAN	111	264	175	157	110	271	196	154	124	89.8	75.0	89.2
MAX	379	424	393	286	510	515	251	234	251	157	90	252
MIN	41	44	43	43	45	80	97	60	41	68	61	65
AC-FT	6830	15680	10740	9670	6090	16630	11640	9450	7370	5520	4610	5310
MEAN†	69.0	134	155	178	301	246	212	179	130	89.1	75.0	75.3
CFSM†	1.27	2.47	2.86	3.27	5.53	4.53	3.91	3.29	2.38	1.64	1.38	1.38
IN.†	1.46	2.75	3.30	3.77	5.76	5.22	4.36	3.79	2.66	1.89	1.59	1.54
CFSM†	4240	7980	9560	10950	16710	15150	12640	11010	7710	5480	4610	4480

CAL YR 1994 TOTAL 33138 MEAN 90.8 MAX 424 MIN 36 AC-FT 65730 MEAN† 91.8 CFSM† 1.69 IN.† 22.92 AC-FT† 66470
WTR YR 1995 TOTAL 55229 MEAN 151 MAX 515 MIN 41 AC-FT 109500 MEAN† 153 CFSM† 2.81 IN.† 38.09 AC-FT† 110500

e Estimated

† Adjusted for change in contents in Timothy Lake.

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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.

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.

GAGE.--Water-stage recorder. Datum of gage is 2,052.31 ft above sea level. 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.

AVERAGE DISCHARGE.--86 years (water years 1910-95), 492 ft³/s, 356,500 acre-ft/yr (unadjusted).
39 years (water years 1957-95), 470 ft³/s, 340,600 acre-ft/yr (regulated).

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 discharge, 161 ft³/s Sept. 16, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,460 ft³/s Feb. 1, gage height, 3.69 ft; minimum discharge, 178 ft³/s Oct. 10, 11.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	263	462	836	395	1360	976	624	639	420	319	276	264
2	239	602	607	374	1160	949	626	629	402	349	280	266
3	214	634	501	522	932	914	627	634	312	381	280	266
4	212	657	507	539	823	830	629	635	308	343	283	263
5	213	637	588	550	749	810	634	631	374	322	282	266
6	211	640	628	575	688	744	607	637	612	331	280	271
7	210	641	628	576	641	676	632	635	651	344	298	280
8	210	647	634	577	608	636	625	647	562	346	291	273
9	210	641	628	583	592	613	629	677	371	441	289	271
10	209	643	635	586	597	613	625	672	446	375	294	267
11	211	639	633	581	589	614	633	710	435	316	300	264
12	210	644	636	575	591	611	640	697	371	313	295	261
13	212	628	632	745	598	613	623	679	411	301	282	258
14	227	436	614	1050	597	607	626	632	462	308	275	259
15	230	325	637	837	594	607	624	612	539	313	276	259
16	215	335	630	689	605	612	627	621	454	311	280	258
17	213	377	537	603	803	654	627	605	425	307	306	257
18	213	305	455	578	897	760	630	570	416	292	297	256
19	210	304	427	547	1040	696	614	552	391	292	299	257
20	210	334	425	501	953	913	626	545	395	293	291	258
21	220	298	418	541	854	818	632	541	402	296	279	262
22	214	272	405	613	782	711	634	517	383	299	263	271
23	292	318	393	614	719	819	634	498	376	289	263	270
24	523	603	513	616	755	930	635	496	371	278	270	269
25	510	616	545	617	779	908	630	496	366	266	273	271
26	619	623	568	618	748	884	640	488	361	284	272	272
27	582	632	610	619	848	733	638	483	342	300	268	354
28	465	513	567	619	1000	624	624	467	340	295	268	459
29	594	541	499	616	---	619	635	437	319	292	271	477
30	620	705	453	586	---	625	628	431	317	288	272	482
31	868	---	419	1080	---	624	---	429	---	281	270	---
TOTAL	9849	15652	17208	19122	21902	22743	18858	17942	12334	9765	8723	8661
MEAN	318	522	555	617	782	734	629	579	411	315	281	289
MAX	868	705	836	1080	1360	976	640	710	651	441	306	482
MIN	209	272	393	374	589	607	607	429	308	266	263	256
AC - FT	19540	31050	34130	37930	43440	45110	37400	35590	24460	19370	17300	17180

MEAN	384	496	557	564	563	562	558	573	436	321	299	335
MAX	517	613	1047	1036	959	1377	825	1104	1126	517	429	516
(WY)	1975	1969	1965	1974	1982	1972	1974	1971	1974	1974	1974	1960
MIN	236	288	265	255	250	327	311	279	248	228	218	215
(WY)	1982	1988	1994	1977	1977	1977	1978	1994	1994	1994	1994	1994

ANNUAL TOTAL	127415		182759		
ANNUAL MEAN	349		501		470
HIGHEST ANNUAL MEAN					709
LOWEST ANNUAL MEAN					319
HIGHEST DAILY MEAN	868	Oct 31	1360	Feb 1	3640
LOWEST DAILY MEAN	209	Oct 10	209	Oct 10	208
ANNUAL SEVEN-DAY MINIMUM	210	Oct 6	210	Oct 6	210
ANNUAL RUNOFF (AC-FT)	252700		362500		340600
10 PERCENT EXCEEDS	606		725		658
50 PERCENT EXCEEDS	274		537		458
90 PERCENT EXCEEDS	216		264		268

WILLAMETTE RIVER BASIN

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14209700 FISH CREEK NEAR THREE LYNX, OR

LOCATION.--Lat 45°08'52", long 122°09'07", in NE 1/4 SE 1/4 sec.11, T.5 S., R.5 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank, 0.7 mi upstream from Clackamas River, and at mile 1.15.

DRAINAGE AREA.--45.2 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 940 ft above sea level, from topographic map.

REMARKS.--Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--6 years (water years 1990-95), 188 ft³/s, 56.49 in/yr, 136,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,830 ft³/s Dec. 6, 1991, gage height, 9.34 ft; minimum discharge, 6.0 ft³/s Sept. 1, 2, 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	1230	2,740	8.93	Jan. 14	0330	2,700	8.89
Oct. 31	2330	*3,230	*9.36	Feb. 1	0030	2,970	9.14
Nov. 30	2030	3,120	9.27	Feb. 17	1700	3,120	9.27

Minimum discharge, 9.3 ft³/s Oct. 5, 9, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	1410	1710	243	2090	165	153	259	62	58	20	14
2	11	640	835	210	1140	146	144	543	59	55	20	14
3	10	394	560	183	707	138	137	472	57	54	19	14
4	9.8	612	396	163	543	142	144	354	55	52	19	14
5	9.6	501	306	149	457	130	155	295	78	49	18	13
6	9.6	360	256	139	394	117	172	270	152	49	18	15
7	9.6	300	218	139	335	111	272	248	278	48	26	22
8	9.6	249	186	144	282	136	338	222	188	47	25	20
9	9.6	437	193	402	242	362	299	208	145	55	21	17
10	9.5	347	184	495	213	453	273	198	123	56	20	15
11	9.9	266	178	445	203	413	316	211	110	47	22	15
12	9.6	248	175	562	191	358	381	220	94	43	20	14
13	9.6	241	158	1580	165	412	644	203	89	40	19	13
14	27	224	145	1920	153	543	499	182	100	39	18	13
15	30	203	138	978	153	513	391	172	187	37	18	12
16	23	219	490	703	154	394	313	166	170	35	19	12
17	19	197	1050	533	1650	310	262	152	149	33	26	13
18	17	164	865	700	1550	382	241	135	155	31	25	13
19	15	267	659	601	1310	531	218	120	152	30	21	12
20	15	762	646	441	914	619	222	111	161	29	20	12
21	49	406	583	344	648	501	210	106	170	27	18	11
22	41	287	462	280	478	390	196	101	156	26	17	11
23	29	338	393	238	377	311	187	95	136	26	17	11
24	24	401	352	208	328	265	189	88	117	25	17	11
25	21	511	321	185	286	225	194	83	103	24	16	12
26	55	381	684	171	249	201	188	77	91	25	15	12
27	1790	326	1040	163	217	185	209	72	80	25	15	40
28	880	291	738	248	189	175	e215	71	72	23	15	57
29	384	568	503	440	---	167	e215	69	66	22	15	61
30	240	1680	375	753	---	159	217	68	61	22	15	90
31	1420	---	294	2040	---	154	---	65	---	21	14	---
TOTAL	5207.4	13230	15093	15800	15618	9108	7594	5636	3616	1153	588	603
MEAN	168	441	487	510	558	294	253	182	121	37.2	19.0	20.1
MAX	1790	1680	1710	2040	2090	619	644	543	278	58	26	90
MIN	9.5	164	138	139	153	111	137	65	55	21	14	11
AC-FT	10330	26240	29940	31340	30980	18070	15060	11180	7170	2290	1170	1200
CFSM	3.72	9.76	10.8	11.3	12.3	6.50	5.60	4.02	2.67	.82	.42	.44
IN.	4.29	10.89	12.42	13.00	12.85	7.50	6.25	4.64	2.98	.95	.48	.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

MEAN	62.2	286	309	340	318	277	315	172	118	36.1	18.0	14.3
MAX	168	441	487	510	558	516	447	274	195	62.8	31.4	20.1
(WY)	1995	1995	1995	1995	1995	1993	1993	1991	1993	1993	1993	1995
MIN	15.3	26.7	216	187	110	87.0	234	68.0	20.9	13.6	8.20	11.6
(WY)	1994	1994	1991	1993	1993	1992	1994	1992	1992	1992	1992	1991

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1990 - 1995
ANNUAL TOTAL	73138.2	93246.4	
ANNUAL MEAN	200	255	188
HIGHEST ANNUAL MEAN			255
LOWEST ANNUAL MEAN			133
HIGHEST DAILY MEAN	1790	2090	2400
LOWEST DAILY MEAN	9.5	9.5	6.1
ANNUAL SEVEN-DAY MINIMUM	9.6	9.6	6.4
ANNUAL RUNOFF (AC-FT)	145100	185000	136100
ANNUAL RUNOFF (CFSM)	4.43	5.65	4.16
ANNUAL RUNOFF (INCHES)	60.19	76.74	56.49
10 PERCENT EXCEEDS	528	574	440
50 PERCENT EXCEEDS	99	163	110
90 PERCENT EXCEEDS	12	15	13

e Estimated

WILLAMETTE RIVER BASIN

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 286.93 ft above sea level (levels by Portland General Electric Co.). See WSP 1738 for history of changes prior to Oct. 1, 1957. Oct. 1, 1957, to Feb. 16, 1965, water-stage recorder at same site at datum 12.00 ft higher. Feb. 17, 1965 to Sept. 30, 1991, water-stage recorder at same site at datum 10 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Discharges for period Nov. 18 to Dec. 1 computed from data obtained through U.S. Army Corps of Engineers Columbia River Operational Hydromet System (CROHMS) database. 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 (station 14208600). Two small diversions upstream from station for Oregon City and Estacada municipal water supply.

AVERAGE DISCHARGE.--87 years, 2,722 ft³/s, 55.09 in/yr, 1,972,000 acre-ft/yr.
37 years (water years 1959-95), 2,766 ft³/s, 56.00 in/yr, 2,004,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,900 ft³/s Dec. 22, 1964, gage height, 28.36 ft (present datum); minimum discharge, 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 discharges greater than base discharge 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)
Dec. 1	0200	18,300	18.92	Jan. 31	2130	*26,000	*20.83
Jan. 14	0730	20,100	19.41	Feb. 17	2300	19,700	19.29

Minimum daily discharge, 600 ft³/s Oct. 1-12, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e600	e14000	14000	3220	20800	3540	2700	3420	1750	1420	918	814
2	e600	e8000	8350	2890	14700	3300	2610	5010	1750	1400	927	800
3	e600	e6000	5900	2750	9200	3170	2560	5030	1560	1480	915	807
4	e600	e5500	4540	2560	7170	3090	2600	4290	1550	1280	928	939
5	e600	e4800	3780	2450	6160	2970	2710	4190	1710	1340	902	822
6	e600	e4000	3310	2380	5390	2760	2910	4100	2340	1310	898	862
7	e600	e3800	3060	2350	4760	2490	3310	3950	3240	1360	1070	1040
8	e600	e3200	2780	2310	4250	2590	3880	3700	2470	1220	1010	882
9	e600	e3800	2660	3400	3830	3850	3620	3560	2020	1600	940	827
10	e600	e3400	2680	4340	3520	4560	3440	3480	1920	1670	957	836
11	e600	2730	2480	4140	3390	4370	3500	3670	1930	1160	969	820
12	e600	2910	2430	4580	3390	4150	3720	3650	1720	1350	928	786
13	e650	2710	2300	10600	3100	4200	5570	3450	1670	1150	921	817
14	e700	2640	2150	17400	2930	5260	5180	3180	1860	1110	899	781
15	e800	2220	2310	10900	3180	5520	4520	3020	2780	1130	897	789
16	e750	2250	3250	7780	2820	4640	4000	3070	2440	1150	900	770
17	e650	2430	8050	6110	9110	4130	3560	2990	2180	1120	937	797
18	e650	2000	7890	6240	14400	4520	3470	2810	2220	1100	1020	786
19	e650	2050	6190	5960	13300	6080	3250	2660	2330	1110	908	780
20	e600	4310	5770	5010	10900	6050	3260	2520	2470	1070	912	753
21	e750	3180	5470	4290	8270	5690	3140	2500	2590	1030	894	784
22	e750	2600	4720	3820	6710	4890	3020	2460	2390	1020	810	750
23	e800	2760	4160	3490	5600	4280	2950	2340	2150	1040	881	743
24	e1000	3270	3870	3030	5050	4080	2940	2310	1960	978	856	773
25	e1000	3940	3600	3010	4690	3690	2990	2240	1820	996	799	836
26	e1200	3520	4580	2810	4250	3370	2960	2160	1810	972	828	806
27	e11000	3240	8760	2750	3920	3190	3110	2100	1610	987	821	1040
28	e7000	3410	7310	3090	3810	2930	3280	2000	1510	992	831	1580
29	e5000	3370	5520	4200	---	2840	3230	1880	1460	967	841	1360
30	e4400	7640	4360	6250	---	2760	3280	1890	1410	968	863	1390
31	e7500	---	3720	17400	---	2720	---	1830	---	938	819	---
TOTAL	53050	119680	149950	161510	188600	121680	101270	95460	60620	36418	27999	26570
MEAN	1711	3989	4837	5210	6736	3925	3376	3079	2021	1175	903	886
MAX	11000	14000	14000	17400	20800	6080	5570	5030	3240	1670	1070	1580
MIN	600	2000	2150	2310	2820	2490	2560	1830	1410	938	799	743
AC - FT	105200	237400	297400	320400	374100	241400	200900	189300	120200	72240	55540	527000
CFSM	2.55	5.95	7.21	7.76	10.0	5.85	5.03	4.59	3.01	1.75	1.35	1.32
IN.	2.94	6.64	8.31	8.95	10.46	6.75	5.61	5.29	3.36	2.02	1.55	1.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1995, BY WATER YEAR (WY)

MEAN	1306	3202	4370	4441	4156	3654	3610	3389	2190	1144	876	937
MAX	2712	6263	11170	8821	8938	8921	5296	6396	5143	2018	1208	1602
(WY)	1969	1974	1965	1974	1982	1973	1993	1969	1974	1974	1959	
MIN	725	806	1030	1036	977	1850	1867	1456	882	763	659	613
(WY)	1989	1988	1977	1977	1977	1982	1967	1992	1992	1992	1992	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1959 - 1995
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ANNUAL TOTAL	839448			1142807					
ANNUAL MEAN	2300			3131			2766		
HIGHEST ANNUAL MEAN							4407		1974
LOWEST ANNUAL MEAN							1454		1977
HIGHEST DAILY MEAN	14000	Nov	1	20800	Feb	1	57200	Dec	22 1964
LOWEST DAILY MEAN	560	Sep	7	600	Oct	1	285	Oct	4 1958
ANNUAL SEVEN-DAY MINIMUM	600	Sep	2	600	Oct	1	507	Oct	3 1958
ANNUAL RUNOFF (AC-FT)	1665000			2267000			2004000		
ANNUAL RUNOFF (CFSM)	3.43			4.67			4.12		
ANNUAL RUNOFF (INCHES)	46.54			63.36			56.00		
10 PERCENT EXCEEDS	4810			5920			5210		
50 PERCENT EXCEEDS	1590			2680			2160		
90 PERCENT EXCEEDS	625			800			780		

e Estimated

LOCATION.--Lat 45°28'40", long 122°30'24", in lot 2, SW 1/4 sec.13, T.1 S., R.2 E., Multnomah County, Hydrologic Unit 17090012, on right bank 0.3 mi southwest of Sycamore station, 2.5 mi east of city limits of Portland, and at mile 10.2.

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 228.47 ft above sea level.

REMARKS.--Records good except for the period Feb. 19 to May 19, which are poor. Since January 1980, on occasional overflow from the Powell Butte Reservoir enters Johnson Creek at Circle Avenue, mile 11.6. Slight diurnal fluctuation at low flow caused by recreational ponds upstream. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--55 years (water years 1941-95), 53.1 ft³/s, 27.21 in/yr, 38,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,620 ft³/s Dec. 22, 1964, gage height, 14.68 ft; minimum discharge, 0.08 ft³/s Aug. 21, 1966.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	0900	682	9.12	Jan. 13	1230	532	7.92
Nov. 1	0430	*1,300	*12.26	Jan. 31	1530	625	8.67
Nov. 30	2030	794	9.83	Feb. 17	1500	938	10.66
Dec. 16	2400	604	8.51				

Minimum discharge, 0.76 ft³/s Oct. 10-12, 19, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	801	444	50	381	28	19	80	4.2	3.7	1.5	2.4
2	1.2	211	276	44	234	25	17	97	3.9	4.9	1.6	2.0
3	1.3	101	182	37	143	22	15	58	3.7	4.6	1.5	1.8
4	1.2	161	117	33	98	28	15	46	8.6	4.4	1.5	2.1
5	1.3	115	78	29	71	35	12	66	33	3.9	1.5	2.3
6	1.0	84	63	27	56	24	12	50	13	4.7	3.2	3.5
7	1.2	63	70	35	46	21	44	43	7.5	3.9	11	5.2
8	1.1	58	59	40	39	39	63	37	5.7	3.7	3.3	3.9
9	1.1	151	99	163	34	119	75	31	4.9	28	2.4	2.8
10	.89	77	95	227	30	96	41	25	4.5	18	3.4	2.2
11	.76	56	165	178	40	96	43	48	5.0	6.2	10	1.9
12	1.6	71	188	240	92	67	83	35	4.4	4.8	3.6	1.6
13	1.4	51	105	436	72	116	134	25	5.9	3.9	2.8	1.6
14	7.7	44	84	387	59	169	115	20	8.0	3.3	2.3	1.6
15	4.4	55	84	315	184	110	112	18	19	3.0	2.3	1.8
16	1.7	126	e370	275	279	77	65	16	9.3	3.0	7.0	1.7
17	1.4	201	394	190	721	59	55	14	8.8	3.3	36	1.9
18	.91	104	215	189	330	88	56	13	7.3	2.4	15	1.8
19	.85	83	147	134	520	99	47	12	29	2.3	5.0	1.8
20	.86	132	129	100	246	144	67	10	25	2.2	3.5	1.7
21	4.5	73	170	76	160	117	42	9.2	12	2.0	3.0	2.0
22	3.4	56	104	61	110	114	34	8.8	8.6	2.3	2.7	2.6
23	1.7	70	82	52	81	78	31	7.5	7.1	2.3	2.5	3.4
24	1.3	94	66	45	62	79	28	6.7	6.1	2.2	2.5	3.2
25	1.2	197	70	38	51	61	23	6.8	5.7	2.0	2.4	8.8
26	69	139	193	35	43	50	18	5.8	5.3	1.8	2.2	4.3
27	500	127	254	43	37	42	24	5.3	4.9	1.8	2.1	33
28	125	89	154	83	32	36	27	5.1	4.6	1.8	2.0	42
29	46	83	101	135	---	29	23	5.1	4.5	1.8	4.8	26
30	32	309	78	245	---	22	36	5.1	4.1	1.7	3.2	20
31	274	---	60	492	---	20	---	4.6	---	1.5	2.7	---
TOTAL	1091.47	3982	4696	4434	4251	2110	1376	814.0	273.6	135.4	148.5	190.9
MEAN	35.2	133	151	143	152	68.1	45.9	26.3	9.12	4.37	4.79	6.36
MAX	500	801	444	492	721	169	134	97	33	28	36	42
MIN	.76	44	59	27	30	20	12	4.6	3.7	1.5	1.5	1.6
AC-FT	2160	7900	9310	8790	8430	4190	2730	1610	543	269	295	379
CFSM	1.33	5.01	5.72	5.40	5.73	2.57	1.73	.99	.34	.16	.18	.24
IN.	1.53	5.59	6.59	6.22	5.97	2.96	1.93	1.14	.38	.19	.21	.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1995, BY WATER YEAR (WY)

MEAN	10.3	69.7	124	139	118	84.8	49.2	25.4	11.2	3.09	1.93	2.84
MAX	65.4	239	302	308	320	196	130	90.1	63.5	30.0	8.04	11.4
(WY)	1969	1951	1965	1970	1949	1957	1955	1963	1984	1983	1968	1972
MIN	1.29	1.56	4.34	9.01	16.0	18.1	9.46	3.32	1.46	.64	.44	.55
(WY)	1966	1953	1977	1977	1977	1992	1942	1966	1966	1973	1970	1967

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1941 - 1995
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ANNUAL TOTAL	20584.71		23502.87					
ANNUAL MEAN	56.4		64.4			53.1		
HIGHEST ANNUAL MEAN						91.3		1974
LOWEST ANNUAL MEAN						15.6		1977
HIGHEST DAILY MEAN	1430	Feb 24	801	Nov 1		2150	Dec 22	1964
LOWEST DAILY MEAN		.76 Oct 11		.76 Oct 11			Aug 7	1973
ANNUAL SEVEN-DAY MINIMUM		.95 Aug 27		1.0 Oct 5		.11	Aug 5	1973
ANNUAL RUNOFF (AC-FT)	40830		46620			38450		
ANNUAL RUNOFF (CFSM)		2.13		2.43			2.00	
ANNUAL RUNOFF (INCHES)		28.90		32.99			27.21	
10 PERCENT EXCEEDS	141		169			145		
50 PERCENT EXCEEDS	14		28			14		
90 PERCENT EXCEEDS	1.2		1.8			1.1		

e Estimated

WILLAMETTE RIVER BASIN

14211550 JOHNSON CREEK AT MILWAUKIE, OR

LOCATION.--Lat 45°27'11", long 122°38'31", in NE 1/4 SE 1/4 sec.26, T.1 S., R.1 E., Clackamas County, Hydrologic Unit 17090012, on the right bank upstream side of the Milport Road bridge, in the city limits of Milwaukie, and at mile 0.7.

DRAINAGE AREA.--51.8 mi².

PERIOD OF RECORD.--April 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is sea level, from State of Oregon.

REMARKS.--Records good except for estimated daily discharges, which are fair. Small diversions for irrigation upstream from station. Significant portion of summer flow is from Crystal Springs, through Crystal Springs Creek, which enters 0.5 mi upstream from gage.

AVERAGE DISCHARGE.--6 years (water years 1990-95), 66.8 ft³/s, 17.52 in/yr, 48,380 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,730 ft³/s Feb. 24, 1994, gage height 29.41 ft; minimum discharge, 10 ft³/s July 1, 3-5, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 27	1230	956	28.02	Dec. 17	0330	821	27.58
Nov. 1	0830	*1,400	*28.91	Jan. 31	1900	903	27.76
Nov. 30	2400	1,020	28.15	Feb. 17	1730	1,270	28.54

Minimum discharge, 13 ft³/s several days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	1020	606	73	536	50	42	106	22	19	16	18
2	14	258	283	62	318	47	e41	148	20	20	16	17
3	14	142	186	54	182	44	e36	99	20	22	16	17
4	14	170	122	50	131	55	e38	82	23	23	16	19
5	14	142	89	47	101	64	e30	e120	62	21	16	18
6	13	112	77	43	85	48	e28	e98	41	20	18	20
7	14	96	80	52	73	43	76	e82	28	22	27	20
8	14	85	71	56	63	68	101	e71	24	20	22	21
9	14	164	103	184	55	168	124	e61	e21	44	18	19
10	15	108	108	271	50	142	79	e47	e21	51	19	18
11	14	89	183	199	54	141	80	e81	e22	26	28	17
12	14	98	221	264	125	106	122	77	e21	23	22	17
13	14	82	125	587	102	153	206	61	e21	21	19	17
14	20	70	104	532	86	220	e150	50	e26	20	18	16
15	19	81	106	389	221	150	e190	46	e39	19	18	17
16	16	128	491	362	359	112	e110	39	32	19	23	17
17	14	208	573	217	1010	91	e83	37	27	19	59	17
18	14	123	269	227	522	117	e90	33	28	19	45	17
19	13	105	174	161	751	143	e71	32	28	18	24	17
20	13	141	156	125	355	190	e110	30	69	17	21	17
21	16	98	210	100	206	152	81	29	34	17	20	16
22	16	84	135	84	150	154	67	28	29	17	19	15
23	15	94	109	73	117	113	58	28	26	18	18	16
24	15	114	91	63	96	109	53	25	25	17	18	16
25	15	206	90	56	83	92	48	25	23	17	17	23
26	82	151	217	52	72	77	43	24	e22	16	17	24
27	786	136	359	61	63	68	47	23	e21	17	17	38
28	190	110	193	98	56	59	55	23	e20	16	17	69
29	58	101	134	164	---	54	49	23	19	16	21	56
30	37	361	105	314	---	50	76	22	19	18	20	42
31	326	---	86	657	---	45	---	22	---	17	19	---
TOTAL	1848	4877	5856	5677	6022	3125	2384	1672	833	649	664	671
MEAN	59.6	163	189	183	215	101	79.5	53.9	27.8	20.9	21.4	22.4
MAX	786	1020	606	657	1010	220	206	148	69	51	59	69
MIN	13	70	71	43	50	43	28	22	19	16	16	15
AC-FT	3670	9670	11620	11260	11940	6200	4730	3320	1650	1290	1320	1330
CFSM	1.15	3.14	3.65	3.54	4.15	1.95	1.53	1.04	.54	.40	.41	.43
IN.	1.33	3.50	4.21	4.08	4.32	2.24	1.71	1.20	.60	.47	.48	.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1990	1991	1992	1993	1994	1995
MEAN	30.1	71.7	113	141	149	83.9	81.3	50.5	31.3	19.4	17.8	17.6
MAX	59.6	163	189	183	215	114	137	91.3	47.9	21.5	21.4	22.4
(WY)	1995	1995	1995	1990	1995	1993	1993	1991	1993	1993	1995	1995
MIN	16.8	18.5	68.7	106	34.0	44.1	50.4	22.2	16.7	14.1	14.8	15.9
(WY)	1994	1994	1994	1992	1993	1992	1990	1994	1992	1994	1994	1993

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1990 - 1995
ANNUAL TOTAL	29409	34278	
ANNUAL MEAN	80.6	93.9	66.8
HIGHEST ANNUAL MEAN			93.9
LOWEST ANNUAL MEAN			54.9
HIGHEST DAILY MEAN	1600	1020	1600
LOWEST DAILY MEAN	10	13	10
ANNUAL SEVEN-DAY MINIMUM	11	14	11
ANNUAL RUNOFF (AC-FT)	58330	67990	48380
ANNUAL RUNOFF (CFSM)	1.56	1.81	1.29
ANNUAL RUNOFF (INCHES)	21.12	24.62	17.52
10 PERCENT EXCEEDS	174	206	146
50 PERCENT EXCEEDS	27	51	33
90 PERCENT EXCEEDS	14	17	15

e Estimated

WILLAMETTE RIVER BASIN

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14211720 WILLAMETTE RIVER AT PORTLAND, OR
(National stream quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 45°31'07", long 122°40'00", in NW 1/4 NE 1/4 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.

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1975 to September 1981.

WATER TEMPERATURE: November 1975 to September 1981.

WATER-QUALITY DATA

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ENTERO- COCCI ME, MF WATER TOTAL (COL / 100 ML) (31649)	
OCT 1994													
25...	1300	E9670	88	7.2	13.0	--	9.6	757	93	K13	K21	20	
29...	1230	E46700	79	7.2	12.0	--	11.4	765	106	--	--	--	
NOV													
03...	0956	E80800	59	7.0	9.5	33	12.6	766	109	M1	K1100	K520	
DEC													
02...	1040	108000	57	7.0	8.0	--	13.5	758	115	110	--	K100	
JAN 1995													
24...	1000	E79100	65	7.2	6.5	16	13.9	751	114	K85	240	48	
MAR													
06...	1100	E26500	90	7.2	7.5	1.0	12.0	753	101	K60	140	--	
MAY													
11...	0926	E33900	60	7.2	12.0	3.2	11.5	754	107	120	58	--	
JUN													
21...	0926	E20200	80	7.4	15.5	3.5	9.6	765	95	200	120	--	
AUG													
09...	1210	E8060	95	7.3	22.0	2.7	8.0	754	93	--	--	--	
SEP													
26...	1300	E12000	73	7.2	17.5	2.5	9.0	754	95	--	--	--	
26...	1310	E12000	73	7.2	17.5	2.7	9.0	754	95	130	42	--	
DATE		HARD- NESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM, DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY, DIS IT FIELD (MG/L AS CACO3) (39086)	BICAR- BONATE, DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE, DIS IT FIELD (MG/L AS CO3) (00452)	SULFATE, DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	
OCT 1994													
25...	26	6.8	2.1	7.3	37	0.6	1.0	29	35	0	3.6	5.5	
29...	25	6.5	2.1	6.0	33	0.5	1.2	24	29	0	4.3	5.3	
NOV													
03...	20	5.2	1.6	3.5	27	0.3	1.1	15	18	0	2.7	3.8	
DEC													
02...	19	5.0	1.6	3.4	27	0.3	0.9	23	28	0	2.8	3.4	
JAN 1995													
24...	21	5.6	1.8	3.5	26	0.3	0.6	20	24	0	2.0	3.2	
MAR													
06...	30	7.9	2.6	5.3	27	0.4	0.9	32	39	0	3.7	4.7	
MAY													
11...	21	5.6	1.8	4.0	28	0.4	0.6	23	27	0	1.7	2.9	
JUN													
21...	23	6.1	2.0	5.3	32	0.5	0.8	26	31	0	3.2	4.2	
AUG													
09...	27	7.0	2.2	8.0	38	0.7	1.1	29	35	0	5.5	6.3	
SEP													
26...	23	6.0	1.9	6.2	36	0.6	1.0	24	30	0	2.8	4.4	
26...	23	6.2	1.9	6.4	36	0.6	1.0	24	30	0	2.7	4.6	
DATE		FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)
OCT 1994													
25...	<0.1	16	64	61	0.09	0.08	0.01	<0.2	<0.2	0.28	0.07	0.05	
29...	<0.1	14	64	57	0.09	0.06	0.01	0.2	0.4	0.74	0.14	0.07	
NOV													
03...	<0.1	13	54	45	0.07	0.04	0.01	<0.2	0.5	1.10	0.14	0.05	
DEC													
02...	<0.1	13	49	48	0.07	0.04	0.01	<0.2	0.5	0.94	0.17	0.03	
JAN 1995													
24...	<0.1	16	60	49	0.08	0.06	0.01	<0.2	<0.2	0.81	0.06	0.02	
MAR													
06...	<0.1	18	75	67	0.10	0.11	0.02	0.2	0.2	1.00	0.09	0.04	
MAY													
11...	<0.1	15	48	47	0.06	0.05	0.02	<0.2	<0.2	0.33	0.04	0.03	
JUN													
21...	<0.1	15	65	54	0.09	0.07	0.01	--	0.4	0.34	0.04	0.03	
AUG													
09...	<0.1	17	71	66	0.10	0.07	0.01	<0.2	0.2	0.37	0.05	0.04	
SEP													
26...	<0.1	15	58	54	0.08	0.06	0.01	<0.2	<0.2	0.26	0.07	0.05	
26...	0.1	15	58	54	0.08	0.06	0.02	--	<0.2	0.27	0.06	0.05	

E - Estimated.

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

WILLAMETTE RIVER BASIN

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WATER-QUALITY DATA

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC, DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM, DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
OCT 1994												
25...	0.062	1.8	--	30	<1	<1	5	<1	<1	<1	<1	5
29...	0.060	3.4	1.1	90	<1	<1	8	<1	<1	<1	<1	<1
NOV												
03...	0.034	3.8	2.4	160	<1	<1	7	<1	<1	<1	<1	2
DEC												
02...	0.034	2.5	3.3	--	--	--	--	--	--	--	--	--
JAN 1995												
24...	0.030	1.8	0.9	130	--	--	6	--	--	--	<3	--
MAR												
06...	0.050	1.5	0.7	--	--	--	--	--	--	--	--	--
MAY												
11...	0.030	1.4	0.4	40	--	--	6	--	--	--	<3	--
JUN												
21...	0.030	--	--	--	--	--	--	--	--	--	--	--
AUG												
09...	0.050	1.5	0.7	10	--	--	5	--	--	--	<3	--
SEP												
26...	0.050	1.3	0.5	20	--	<1	4	<0.5	<1	<5	<3	3
26...	0.050	--	--	40	--	--	4	--	--	--	<3	--

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM, DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY, DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM, NATURAL 2 SIGMA DISS, WATER, (UG/L) (75990)
OCT 1994												
25...	70	<1	--	10	<0.1	<1	1	<1	<1	--	<1	--
29...	170	<1	--	8	--	<1	<1	<1	<1	--	<1	--
NOV												
03...	290	<1	<4	10	<0.1	<1	<1	<1	<1	33	<1	--
DEC												
02...	180	--	--	16	--	--	--	--	--	--	--	--
JAN 1995												
24...	120	--	<4	9	--	<10	1	<1	<1	34	0.02	<1
MAR												
06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
11...	76	--	<4	13	--	<10	<1	<1	<1	34	--	--
JUN												
21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
09...	39	--	<4	1	--	10	<1	<1	<1	41	--	--
SEP												
26...	45	<1	<4	3	--	<10	<1	<1	<1	33	--	--
26...	47	--	<4	3	--	<10	<1	<1	<1	34	0.02	<1

DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	RA-226, 2 SIGMA DISS, WATER, (PCI/L) (76001)	PER- THANE, TOTAL (UG/L) (39034)	ALDRIN, TOTAL (UG/L) (39330)	LINDANE, TOTAL (UG/L) (39340)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L) (39350)	P,P'- DDD UNFILT RECOVER (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	P,P'- DDT, UNFILT RECOVER (UG/L) (39370)	DI- ELDRIN, TOTAL (UG/L) (39380)
OCT 1994												
25...	--	<1	--	--	--	<0.001	0.007	<0.1	<0.001	<0.001	0.001	<0.001
29...	--	1	--	--	<0.1	<0.001	0.007	<0.1	<0.001	<0.001	0.001	<0.001
NOV												
03...	<6	2	--	--	<0.1	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001
DEC												
02...	--	--	--	--	<0.1	<0.001	<0.001	<0.1	<0.001	<0.001	<0.001	<0.001
JAN 1995												
24...	<6	--	0.11	0.03	--	--	--	--	--	--	--	--
MAR												
06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
11...	<6	--	--	--	--	--	--	--	--	--	--	--
JUN												
21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
09...	<6	--	--	--	--	--	--	--	--	--	--	--
SEP												
26...	<6	4	--	--	--	--	--	--	--	--	--	--
26...	<6	--	0.02	0.01	--	--	--	--	--	--	--	--

WATER-QUALITY DATA

[illegible]

WILLAMETTE RIVER BASIN

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WATER-QUALITY DATA

DATE	ETHAL- FLUR- ALIN, WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE, WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TER- BACIL, WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	LIN- URON, WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL PARA- THION, WAT FLT 0.7 U GF, REC (UG/L) (82667)	EPTC, WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB- ULATE, WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	TEBU- THIURON, WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL- INATE, WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO- PROP, WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN- FLUR- ALIN, WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO- FURAN, WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
OCT 1994												
25...	<0.004	<0.002	<0.007	<0.002	<0.006	<0.002	<0.004	<0.010	<0.004	<0.003	<0.002	<0.003
29...	<0.004	<0.002	E0.017	<0.002	<0.006	<0.002	<0.004	E0.007	<0.004	0.015	<0.002	E0.181
NOV 03...	<0.004	<0.002	E0.027	<0.002	<0.006	<0.002	<0.004	<0.010	<0.004	0.023	<0.002	E0.087
DEC 02...	<0.004	<0.002	E0.010	<0.002	<0.006	0.004	<0.004	E0.003	<0.004	0.005	<0.002	<0.003
JAN 1995 24...	<0.004	<0.002	E0.015	<0.002	<0.006	<0.002	<0.004	<0.010	<0.004	<0.003	<0.002	<0.003
MAR 06...	<0.004	<0.002	E0.007	<0.002	<0.006	<0.002	<0.004	<0.010	<0.004	<0.003	<0.002	<0.003
MAY 11...	<0.004	<0.002	E0.007	<0.002	<0.006	0.007	<0.004	E0.007	<0.004	<0.003	<0.002	<0.003
JUN 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	<0.004	<0.002	E0.095	<0.002	<0.006	<0.002	<0.004	<0.010	<0.004	<0.003	<0.002	<0.003
SEP 26...	<0.004	<0.002	<0.100	<0.002	<0.006	<0.002	<0.004	<0.010	<0.004	<0.003	<0.002	<0.003
26...	--	--	--	--	--	--	--	--	--	--	--	--
DATE	TER- BUFOS, WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON- AMIDE, WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL- FOTON, WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	TRIAL- LATE, WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO- PANIL, WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	CAR- BARYL, WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO- BENCARB, WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA, WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI- METH- ALIN, WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP- AMIDE, WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO- PARGITE, WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN- PHOS, WAT FLT 0.7 U GF, REC (UG/L) (82686)
OCT 1994												
25...	<0.013	<0.003	<0.017	<0.001	<0.004	<0.003	<0.002	<0.002	<0.004	<0.003	<0.013	<0.001
29...	<0.013	<0.003	<0.017	<0.001	<0.004	E0.006	<0.002	0.004	<0.004	0.021	<0.013	<0.001
NOV 03...	<0.013	<0.003	<0.017	<0.001	<0.004	<0.003	<0.002	<0.002	<0.004	0.028	<0.013	<0.001
DEC 02...	<0.013	0.018	<0.017	E0.008	<0.004	<0.003	<0.002	E0.001	<0.004	0.006	<0.013	<0.001
JAN 1995 24...	<0.013	0.010	<0.017	<0.001	<0.004	<0.003	<0.002	<0.002	<0.004	<0.003	<0.013	<0.001
MAR 06...	<0.013	E0.004	<0.017	<0.001	<0.004	<0.003	<0.002	<0.002	<0.004	<0.003	<0.013	<0.001
MAY 11...	<0.013	<0.003	<0.017	<0.001	<0.004	<0.003	<0.002	E0.001	<0.004	<0.003	<0.013	<0.001
JUN 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	<0.013	<0.003	<0.017	<0.001	<0.004	<0.003	<0.002	<0.002	<0.004	<0.003	<0.013	<0.001
SEP 26...	<0.013	<0.003	<0.017	<0.001	<0.004	<0.003	<0.002	<0.002	<0.004	<0.003	<0.013	<0.001
26...	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PER- METHRIN CIS, WAT FLT 0.7 U GF, REC (UG/L) (82687)	AN- TIMONY, SED. SUSP. (UG/G) (29816)	ARSENIC, SED. SUSP. (UG/G) (29818)	BARIUM, SED. SUSP. (UG/G) (29820)	BERYL- LIUM, SED. SUSP. (UG/G) (29822)	CADMIUM, SED. SUSP. (UG/G) (29826)	CHRO- MIUM, SED. SUSP. (UG/G) (29829)	COPPER, SED. SUSP. (UG/G) (29832)	GOLD, SEDI- MENT SUSP. (UG/G) (82170)	LEAD, SED. SUSP. (UG/G) (29836)	MAN- GANESE, SED. SUSP. (UG/G) (29839)	MERCURY, SED. SUSP. (UG/G) (29841)
OCT 1994												
25...	<0.005	--	--	--	--	--	--	--	--	--	--	--
29...	<0.005	--	--	--	--	--	--	--	--	--	--	--
NOV 03...	<0.005	1	8	500	3	0.3	72	62	<20	33	1900	0.11
DEC 02...	<0.005	--	--	--	--	--	--	--	--	--	--	--
JAN 1995 24...	<0.005	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	<0.005	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	<0.005	--	--	--	--	--	--	--	--	--	--	--
JUN 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	<0.005	--	--	--	--	--	--	--	--	--	--	--
SEP 26...	<0.005	0.8	8.6	380	1.4	0.5	--	51	0.7	120	3100	--
26...	--	--	--	--	--	--	--	--	--	--	--	--

E - Estimated.

WILLAMETTE RIVER BASIN

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WATER-QUALITY DATA

DATE	MOLYB- DENUM, SED. SUSP. (UG/G) (29843)	NICKEL, SED. SUSP. (UG/G) (29845)	SELE- NIUM, SED. SUSP. (UG/G) (29847)	SILVER, SED. SUSP. (UG/G) (29850)	VANA- DIUM, SED. SUSP. (UG/G) (29853)	ZINC, SED. SUSP. (UG/G) (29855)	ALUM- INUM, SED. SUS PERCENT (30221)	CALCIUM, SED. SUSP. PERCENT (30240)	IRON, SEDI- MENT SUSP. PERCENT (30269)	MAGNES- IUM, SEDI- MENT SUSP. PERCENT (30277)	PHOS- PHORUS, SEDI- MENT SUSP. PERCENT (30292)	POTAS- SIUM, SEDI- MENT SUSP. PERCENT (30294)
OCT 1994												
25...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 03...	1	38	0.4	0.33	170	120	8.8	1.9	6.1	1.1	0.15	0.94
DEC 02...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 1995 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 26...	--	--	0.5	0.70	140	220	8.1	--	5.4	--	0.24	--
26...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	SODIUM, SEDI- MENT SUSP. PERCENT (30304)	TITA- NIUM, SEDI- MENT SUSP. PERCENT (30317)	BISMUTH, SEDI- MENT SUSP. (UG/G) (35030)	COBALT, SEDI- MENT SUSP. (UG/G) (35031)	EURO- PIUM, SEDI- MENT SUSP. (UG/G) (35032)	GALLIUM, SEDI- MENT SUSP. (UG/G) (35033)	HOLMIUM, SEDI- MENT SUSP. (UG/G) (35035)	LANTHA- NIUM, SEDI- MENT SUSP. (UG/G) (35036)	NEODYM- IUM, SEDI- MENT SUSP. (UG/G) (35037)	NIIOBIUM, SEDI- MENT SUSP. (UG/G) (35038)	SCAN- DIUM, SEDI- MENT SUSP. (UG/G) (35039)	STRON- TIUM, SEDI- MENT SUSP. (UG/G) (35040)
OCT 1994												
25...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 03...	1.2	0.76	<20	28	<4	14	<8	24	23	10	23	260
DEC 02...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 1995 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 26...	--	0.67	--	25	--	--	--	--	--	--	--	190
26...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TANTA- LUM, SEDI- MENT SUSP. (UG/G) (35042)	THORIUM, SEDI- MENT SUSP. (UG/G) (35043)	TIN, SEDI- MENT SUSP. (UG/G) (35044)	URANIUM, SEDI- MENT SUSP. (UG/G) (35046)	YTTRIUM, SEDI- MENT SUSP. (UG/G) (35047)	YTTER- BIUM, SEDI- MENT SUSP. (UG/G) (35048)	LITHIUM, SEDI- MENT SUSP. (UG/G) (35050)	CERIUM, SEDI- MENT SUSP. (UG/G) (35051)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1994											
25...	--	--	--	--	--	--	--	--	7	E183	100
29...	--	--	--	--	--	--	--	--	30	E3780	100
NOV 03...	<80	6	<10	2	30	3	28	46	81	E17700	96
DEC 02...	--	--	--	--	--	--	--	--	120	E35000	88
JAN 1995 24...	--	--	--	--	--	--	--	--	23	E4910	94
MAR 06...	--	--	--	--	--	--	--	--	5	E358	98
MAY 11...	--	--	--	--	--	--	--	--	7	E641	94
JUN 21...	--	--	--	--	--	--	--	--	8	E436	98
AUG 09...	--	--	--	--	--	--	--	--	8	E174	93
SEP 26...	--	--	--	<50	--	--	--	--	7	E227	99
26...	--	--	--	--	--	--	--	--	7	E227	99

E - Estimated.

WILLAMETTE RIVER BASIN

14211814 FAIRVIEW CREEK AT GLISAN STREET, NEAR GRESHAM, OR

LOCATION.--Lat 45°31'40", long 122°26'51", in Land Grant parcel number 58, T.1 N., R.3 E., Multnomah County, Hydrologic Unit 17090012, on right bank at upstream side of culvert on Glisan St., 0.4 mi east of the intersection of 202nd Ave. and Glisan St., 1.7 mi northwest of Gresham City Hall, and at mile 3.05.

DRAINAGE AREA.--4.94 mi².

PERIOD OF RECORD.--May 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 205 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion. High flows affected to an unknown degree by two small ponds just upstream from station.

AVERAGE DISCHARGE.--3 years (water years 1993-95), 4.06 ft³/s, 11.16 in/yr, 2,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72 ft³/s Nov. 1, 1994, gage height, 6.34 ft; minimum discharge, 0.24 ft³/s Sept. 15, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 72 ft³/s Nov. 1, gage height, 6.34 ft; minimum discharge, 0.24 ft³/s Sept. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.70	38	20	3.9	21	5.4	4.0	7.1	2.9	2.4	1.7	.81
2	e.60	13	10	3.6	15	5.2	4.1	8.9	2.9	2.6	1.8	.67
3	e.60	7.1	7.0	3.4	8.5	6.0	4.0	5.6	2.8	2.6	1.7	.65
4	e.60	9.8	5.4	3.2	6.9	7.6	4.1	4.6	3.0	2.4	1.6	.59
5	e.60	8.0	4.8	3.0	6.2	8.3	4.2	5.7	8.4	2.4	1.6	.60
6	e.50	5.5	4.7	3.0	5.8	6.1	3.9	4.8	6.3	2.6	1.5	.94
7	e.60	5.1	5.1	3.8	5.5	4.9	7.4	4.2	3.8	2.7	3.1	1.4
8	e.50	4.8	4.8	5.1	5.2	7.3	9.0	4.0	3.0	2.5	2.9	1.1
9	e.50	9.9	6.3	12	4.7	16	7.9	4.1	2.8	4.0	2.0	.84
10	e.40	6.3	6.5	17	4.4	13	5.0	4.1	2.8	6.9	1.7	.66
11	e.40	4.5	7.4	11	5.2	11	5.1	5.4	2.8	3.4	3.6	.57
12	e.70	5.1	9.9	12	8.8	8.1	6.2	5.7	2.7	2.6	2.3	.57
13	e.60	4.4	5.7	23	6.9	10	11	4.9	3.1	2.4	1.6	.48
14	e3.0	3.8	4.9	24	5.7	14	7.2	4.1	3.6	2.3	1.2	.51
15	e2.0	4.2	6.2	19	9.2	8.6	9.2	3.8	5.1	2.3	1.1	.43
16	e.80	5.9	16	16	14	6.5	5.7	3.7	4.2	2.1	1.1	.49
17	e.60	8.6	20	10	30	5.8	4.9	3.6	3.2	2.2	5.1	.65
18	e.50	5.3	12	12	22	7.9	5.3	3.4	3.2	2.2	3.6	.75
19	e.40	4.4	8.2	9.3	29	9.4	4.8	3.4	3.4	2.1	2.1	.60
20	e.40	6.6	7.7	8.0	20	12	6.4	3.4	6.1	2.0	1.4	.73
21	e2.0	4.7	11	7.0	13	9.2	5.2	3.3	3.8	2.0	1.1	.69
22	e1.0	3.8	7.0	6.3	10	8.2	4.2	3.2	3.0	2.0	.78	.47
23	e.40	4.7	5.5	5.9	9.1	6.0	4.0	3.1	2.8	2.0	.85	.43
24	e.30	5.7	5.6	5.5	8.3	5.5	3.9	3.1	2.7	2.0	.83	.45
25	e.30	9.4	6.8	5.1	7.7	5.2	3.9	3.1	2.6	2.0	.77	1.5
26	e9.0	6.8	12	4.7	6.9	4.7	4.3	3.1	2.6	1.9	.69	1.6
27	e6.0	6.1	17	6.5	6.2	4.4	4.6	3.0	2.5	1.8	.66	3.1
28	e14	5.2	8.2	7.3	5.5	4.3	6.1	2.9	2.5	1.7	.73	3.6
29	7.6	4.9	5.7	10	---	4.1	5.9	2.9	2.4	1.7	1.5	2.7
30	5.3	14	4.6	15	---	4.1	6.8	2.9	2.4	1.6	1.3	2.1
31	21	---	4.2	22	---	4.0	---	2.9	---	1.6	1.0	---
TOTAL	135.90	225.6	260.2	297.6	300.7	232.8	168.3	128.0	103.4	75.0	52.91	30.68
MEAN	4.38	7.52	8.39	9.60	10.7	7.51	5.61	4.13	3.45	2.42	1.71	1.02
MAX	60	38	20	24	30	16	11	8.9	8.4	6.9	5.1	3.6
MIN	.30	3.8	4.2	3.0	4.4	4.0	3.9	2.9	2.4	1.6	.66	.43
AC-FT	270	447	516	590	596	462	334	254	205	149	105	61
CFSM	.89	1.52	1.70	1.94	2.17	1.52	1.14	.84	.70	.49	.35	.21
IN.	1.02	1.70	1.96	2.24	2.26	1.75	1.27	.96	.78	.56	.40	.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1995, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	2.35	4.36	6.17	6.97	6.88	5.89	5.14	3.74	3.03	2.12	1.30	.92
MAX	4.38	7.52	8.39	9.60	10.7	7.51	6.18	4.63	3.50	2.90	1.71	1.02
(WY)	1995	1995	1995	1995	1995	1995	1993	1993	1993	1993	1995	1995
MIN	1.18	1.42	4.39	5.27	2.54	4.74	3.64	2.47	2.15	1.04	.53	.78
(WY)	1994	1994	1994	1993	1993	1993	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1993 - 1995

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
ANNUAL TOTAL	1505.30	2011.09										
ANNUAL MEAN	4.12	5.51										
HIGHEST ANNUAL MEAN			4.06									
LOWEST ANNUAL MEAN			5.51									
HIGHEST DAILY MEAN	60	Oct 27	3.01									
LOWEST DAILY MEAN	.30	Oct 24	60	Oct 27								
ANNUAL SEVEN-DAY MINIMUM	.46	Aug 27	.30	Oct 24								
ANNUAL RUNOFF (AC-FT)	2990		.50	Oct 5								
ANNUAL RUNOFF (CFSM)	.83		2940									
ANNUAL RUNOFF (INCHES)	11.34		1.12									
10 PERCENT EXCEEDS	8.5		15.14									
50 PERCENT EXCEEDS	2.8		11									
90 PERCENT EXCEEDS	.50		4.2									
			.69									

e Estimated

WILLAMETTE RIVER BASIN

319

14211820 COLUMBIA SLOUGH AT PORTLAND, OR

LOCATION.--Lat 45°32'38", long 122°45'49", in NE 1/4 SE 1/4 sec.23, T.2 N., R.1 W., Multnomah County, Hydrologic Unit 17090012, on right bank, 0.25 mi upstream from mouth, and 1.25 mi upstream from confluence of Willamette and Columbia Rivers.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Acoustic velocity meter with water-stage and velocity-index recorder. Datum of gage is 1.53 ft above sea level.

REMARKS.--Records fair due to large positive and negative flows, except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 560 ft³/s Oct 27, 1994, maximum gage height, 13.16 ft May 18, 1993; minimum daily discharge, -231 ft³/s Mar. 26, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 560 ft³/s Oct. 27; maximum gage height, 13.12 ft Feb. 2; minimum daily discharge, -193 ft³/s Jan. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	276	43	135	-93	130	156	111	62	181	108	164
2	36	194	210	109	132	49	2.7	86	73	50	108	195
3	19	126	218	-42	254	116	116	-51	79	198	147	172
4	---	108	226	131	265	252	159	65	137	60	117	159
5	---	130	37	104	340	187	100	73	148	185	153	124
6	---	149	96	104	209	129	146	140	135	53	156	82
7	---	146	198	191	24	191	190	214	73	113	123	60
8	---	184	214	177	---	181	264	112	86	86	95	46
9	---	86	247	146	---	199	159	73	87	268	22	81
10	---	291	222	91	---	160	108	156	32	183	52	77
11	---	197	326	136	---	269	64	15	49	-3.4	42	8.0
12	---	198	108	125	---	122	72	64	36	66	39	90
13	---	173	140	78	---	161	100	157	22	74	152	86
14	64	29	109	38	---	74	27	90	47	e70	96	54
15	13	59	83	155	53	178	52	105	36	e80	44	146
16	36	95	187	212	93	144	128	4.6	88	86	136	182
17	75	150	108	143	134	158	77	-10	196	106	181	178
18	46	104	170	193	30	66	-41	34	159	115	219	100
19	15	212	68	133	102	183	220	e120	196	122	177	103
20	.39	151	167	284	75	100	162	e180	107	191	124	70
21	53	57	259	204	326	120	218	259	108	215	134	59
22	9.2	106	138	188	241	111	252	174	162	165	59	7.4
23	95	109	165	60	261	53	289	62	51	66	84	44
24	39	172	218	210	308	234	e200	76	26	24	64	49
25	27	164	254	211	164	328	e130	59	132	-13	e50	6.6
26	139	192	158	74	159	164	36	-10	115	69	e40	70
27	560	162	-116	77	51	102	-34	134	56	96	25	73
28	306	125	243	210	96	263	-29	219	111	-58	42	102
29	252	-15	101	-9.1	---	164	35	78	20	184	39	110
30	200	35	156	110	---	58	101	-22	-40	63	54	85
31	114	---	138	-193	---	150	---	27	---	27	96	---
TOTAL	---	4165	4891	3784.9	---	4796	3459.7	2794.6	2589	3121.6	2978	2783.0
MEAN	---	139	158	122	---	155	115	90.1	86.3	101	96.1	92.8
MAX	---	291	326	284	---	328	289	259	196	268	219	195
MIN	---	-15	-116	-193	---	49	-41	-51	-40	-58	22	6.6
AC-FT	---	8260	9700	7510	---	9510	6860	5540	5140	6190	5910	5520

e Estimated

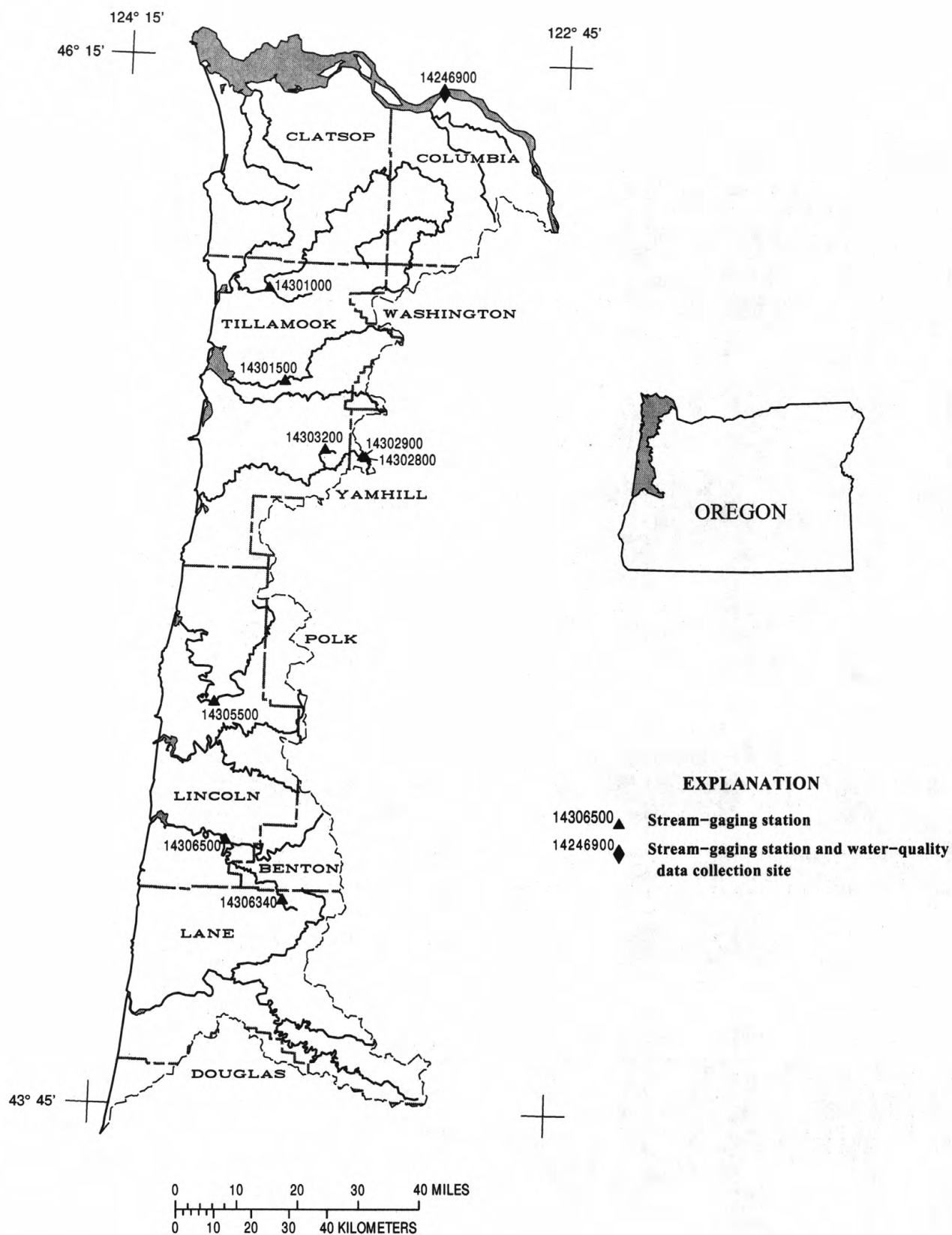


Figure 27. Location of surface-water and water-quality stations in the Oregon Coastal Drainages north of the Siuslaw River Basin and in the lower Columbia River.

COLUMBIA RIVER MAIN STEM

321

14246900 COLUMBIA RIVER AT BEAVER ARMY TERMINAL, NEAR QUINCY, OR

LOCATION.--Lat 46°10'55", long 123°10'50", in NE 1/4 sec.16, T.8 N., R.4 W., Columbia County, Hydrologic Unit 17080003, on left bank, 0.7 mi downstream from Crims Island, 3.0 mi northwest of Quincy, and at mile 53.8.

DRAINAGE AREA.--256,900 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1968 to June 1970, June 1991 to current year.

GAGE.--Acoustic velocity meter with water-stage and velocity index recorder. Datum of gage is 0.52 ft above sea level. May 1968 to June 1970 water-stage recorder with auxillary water-stage recorder 5.6 miles downstream, at datum 10.00 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by many reservoirs on Columbia River and in tributary basins. Flows affected by tide which can cause reverse direction during tidal cycle when mean daily flows are less than 250,000 ft³/s. Mean discharge values are based on a 24 hour day, not a tidal cycle.

AVERAGE DISCHARGE.--5 years (water years 1969, 1992-95), 213,400 ft³/s, 154,600,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 581,000 ft³/s Jan. 28, 1970; minimum daily discharge, 73,700 ft³/s Sept. 7, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 415,000 ft³/s Feb. 4; maximum gage height, 9.38 ft Jan. 31; minimum daily discharge, 79,900 ft³/s Sept. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e108000	e180000	e230000	e250000	e310000	e270000	e190000	e290000	308000	295000	e180000	142000
2	e104000	e175000	e255000	e215000	e365000	e275000	e170000	e275000	316000	274000	e185000	122000
3	e82000	e205000	e270000	e215000	e385000	e275000	e185000	e305000	319000	269000	e190000	121000
4	e105000	e235000	e275000	e235000	415000	e255000	e180000	e305000	316000	241000	e160000	120000
5	e86000	e195000	e255000	e220000	374000	e230000	e185000	e305000	312000	236000	e160000	129000
6	e84000	e190000	e280000	e210000	332000	e215000	e220000	e330000	302000	e245000	e160000	125000
7	e86000	e165000	e265000	e200000	323000	e235000	e200000	e330000	311000	e245000	e140000	112000
8	e92000	e175000	e235000	e205000	e320000	e230000	e215000	e305000	305000	e260000	e140000	113000
9	e96000	e185000	e230000	e155000	e320000	e220000	e190000	e325000	309000	e265000	e155000	111000
10	e98000	e165000	e215000	e215000	e260000	e215000	e195000	322000	310000	e215000	e175000	79900
11	e100000	e170000	e210000	255000	e275000	e225000	e215000	315000	308000	e210000	e165000	99000
12	e115000	e170000	e175000	269000	e250000	e225000	e215000	e330000	305000	e235000	e155000	118000
13	e125000	e140000	e210000	296000	e225000	e235000	e235000	e315000	303000	e225000	e165000	118000
14	e120000	e145000	e210000	337000	e260000	e230000	e220000	313000	305000	e225000	e140000	124000
15	135000	e150000	e210000	e315000	e250000	e240000	e250000	301000	315000	e235000	e145000	139000
16	e145000	e165000	e225000	e330000	e270000	e220000	e250000	292000	324000	e195000	e160000	137000
17	132000	e150000	e215000	e360000	e270000	e250000	e235000	311000	317000	e196000	e155000	126000
18	e100000	e175000	268000	e375000	e290000	e240000	e250000	334000	293000	e195000	e150000	122000
19	101000	e190000	e205000	e350000	e355000	e244000	e265000	354000	282000	e205000	e155000	131000
20	109000	e160000	e270000	e310000	e395000	e235000	e230000	346000	298000	e205000	e140000	148000
21	119000	e130000	e250000	e285000	e405000	e245000	e245000	318000	311000	e190000	e140000	142000
22	119000	e180000	e235000	e270000	e350000	e265000	e225000	291000	310000	e188000	e140000	117000
23	120000	e195000	e245000	e255000	e370000	e285000	e230000	300000	317000	e170000	e160000	112000
24	115000	e180000	e235000	e250000	e330000	e340000	e185000	310000	317000	e175000	154000	104000
25	117000	e140000	e205000	e240000	325000	e310000	e225000	301000	315000	e190000	156000	105000
26	112000	e160000	e180000	e240000	e280000	e295000	e245000	314000	304000	e200000	146000	117000
27	e115000	e160000	e225000	242000	e265000	e290000	e235000	322000	300000	e195000	125000	122000
28	e145000	e155000	e235000	234000	e280000	e265000	e265000	289000	299000	e195000	141000	131000
29	e160000	e200000	e240000	203000	---	e230000	e285000	258000	285000	e230000	143000	138000
30	e160000	e215000	e265000	231000	---	e225000	e295000	270000	293000	e165000	144000	148000
31	e145000	---	e265000	289000	---	e210000	---	291000	---	e200000	147000	---
TOTAL	3550000	5200000	7288000	8056000	8854000	7719000	6730000	9567000	9209000	6769000	4771000	3672900
MEAN	114500	173300	235100	259900	316200	249000	224300	308600	307000	218400	153900	122400
MAX	160000	235000	280000	375000	415000	340000	295000	354000	324000	295000	190000	148000
MIN	82000	130000	175000	155000	225000	210000	170000	258000	282000	165000	125000	79900
AC-FT	7041000	10310000	14460000	15980000	17560000	15310000	13350000	18980000	18270000	13430000	9463000	7285000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	135700	181300	225900	254200	239800	222200	249700	323800	298600	203600	142300	118800															
MAX	166700	248000	271400	334200	316200	249000	406500	469600	392100	265000	184500	146100															
(WY)	1969	1969	1969	1970	1971	1972	1972	1973	1974	1975	1976	1977															
MIN	114500	136100	175400	199100	191100	196700	196200	234800	203900	139500	107100	92400															
(WY)	1995	1994	1994	1994	1993	1992	1992	1994	1992	1992	1994	1994															

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1969 - 1995
ANNUAL TOTAL	65080600	81385900	
ANNUAL MEAN	178300	223000	213400
HIGHEST ANNUAL MEAN			271800
LOWEST ANNUAL MEAN			171100
HIGHEST DAILY MEAN	298000	Feb 26	581000
LOWEST DAILY MEAN	73700	Sep 7	73700
ANNUAL SEVEN-DAY MINIMUM	81400	Sep 5	81400
ANNUAL RUNOFF (AC-FT)	129100000		154600000
10 PERCENT EXCEEDS	237000		330000
50 PERCENT EXCEEDS	185000		202000
90 PERCENT EXCEEDS	96900		121000

e Estimated

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD. --

SPECIFIC CONDUCTANCE: October 1993 to current year.

WATER TEMPERATURE: August 1967 to September 1970. October 1993 to current year.

INSTRUMENTATION.--Temperature recorder August 1967 to September 1970. Temperature and specific conductance recorders from October 1992 to current year.

REMARKS.--Since February, 1994, specific conductance and temperature sensors located on right bank. Prior to that time sensors were located on left bank. It was determined that daily record collected prior to February 1994 is not representative of the cross section due to a seasonal influence from several upstream sloughs.

EXTREMES FOR PERIOD OF RECORD. --

SPECIFIC CONDUCTANCE: Maximum recorded, 188 microsiemens Feb. 5, 1994, but may have been higher during periods of missing record; minimum recorded, 82 microsiemens Dec. 27-29, 1994, but may have been lower during periods of missing record.

WATER TEMPERATURE: Maximum, 23.5°C Aug. 21, 22, 1967; minimum, 0.0°C Jan. 31, Feb. 1, 1969.

EXTREMES FOR CURRENT YEAR. - -

SPECIFIC CONDUCTANCE: Maximum recorded, 160 microsiemens Sept. 6; minimum recorded, 82 microsiemens Dec. 27-29, but may have been lower during period of missing record.

WATER TEMPERATURE: Maximum, 22.0°C Aug. 5, 6; minimum, 4.0°C Jan. 4-8, Feb. 15.

WATER-QUALITY DATA

DATE	HARD- NESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM, DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY, DIS IT FIELD (MG/L AS CACO3) (39086)	BICAR- BONATE, DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE, DIS IT FIELD (MG/L AS CO3) (00452)	SULFATE, DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 1994												
27...	56	15	4.4	7.4	22	0.4	1.2	51	62	0	11	5.2
NOV												
10...	48	13	3.8	6.8	23	0.4	1.3	44	53	0	10	5.7
DEC												
08...	49	13	3.9	6.3	22	0.4	1.1	56	69	0	10	5.6
JAN 1995												
25...	51	14	3.8	5.8	20	0.4	0.9	47	58	0	7.2	4.7
MAR												
07...	59	16	4.7	7.4	21	0.4	1.5	54	66	0	9.5	5.2
MAY												
10...	54	15	4.1	6.0	19	0.4	1.2	56	68	0	7.9	3.6
JUN												
20...	43	12	3.2	5.4	21	0.4	1.0	43	52	0	7.3	3.6
SEP												
27...	56	15	4.5	7.2	21	0.4	1.2	49	60	0	9.1	5.0
27...	56	15	4.5	7.2	21	0.4	1.2	49	60	0	9.3	5.0

E - Estimated.

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

WATER-QUALITY DATA

[illegible]

WATER-QUALITY DATA

DATE	DEETHYL	CYANA-	FONOFOS,	ALPHA	P, P'	CHLOR-	LINDANE,	DI-	METO-	MALA-	PARA-
	ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	ZINE, WATER, DISS, REC (UG/L) (04041)	WATER DISS REC (UG/L) (04095)	BHC DIS- SOLVED (UG/L) (34253)	DDE DISSOLV (UG/L) (34653)	PYRIFOS, DIS- SOLVED (UG/L) (38933)	DIS- SOLVED (UG/L) (39341)	ELDRIN, DIS- SOLVED (UG/L) (39381)	LACHLOR, WATER DISSOLV (UG/L) (39415)	THION, DIS- SOLVED (UG/L) (39532)	THION, DIS- SOLVED (UG/L) (39542)
OCT 1994											
27...	<0.002	<0.004	<0.003	<0.002	<0.006	<0.004	<0.004	<0.001	<0.002	<0.005	<0.004
NOV 10...	--	--	--	--	--	--	--	--	--	--	--
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 1995											
25...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 20...	--	--	--	--	--	--	--	--	--	--	--
SEP 27...	<0.002	<0.004	<0.003	<0.002	<0.006	<0.004	<0.004	<0.001	0.003	<0.005	<0.004
27...	--	--	--	--	--	--	--	--	--	--	--
DATE	DI- AZINON, DIS- SOLVED (UG/L) (39572)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	METRI- BUZIN, SENCOR WATER DISSOLV (UG/L) (82630)	2,6-DI- ETHYL ANILINE, WAT FLT 0.7 U GF, REC (UG/L) (82660)	TRI- FLUR- ALIN, WAT FLT 0.7 U GF, REC (UG/L) (82661)	ETHAL- FLUR- ALIN, WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE, WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TER- BACIL, WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	LIN- URON, WATER FLTRD 0.7 U GF, REC (UG/L) (82666)
OCT 1994											
27...	<0.002	<0.001	<0.002	<0.002	<0.004	<0.003	<0.002	<0.004	<0.002	<0.007	<0.002
NOV 10...	--	--	--	--	--	--	--	--	--	--	--
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 1995											
25...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 20...	--	--	--	--	--	--	--	--	--	--	--
SEP 27...	<0.002	0.005	<0.002	<0.002	<0.004	<0.003	<0.002	<0.004	<0.002	<0.007	<0.002
27...	--	--	--	--	--	--	--	--	--	--	--
DATE	METHYL, PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	EPTC, WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB- ULATE, WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	TEBU- THIURON, WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL- INATE, WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO- PROP, WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN- FLUR- ALIN, WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO- FURAN, WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BUFOS, WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON- AMIDE, WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL- FOTON, WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
OCT 1994											
27...	<0.006	<0.002	<0.004	<0.010	<0.004	<0.003	<0.002	<0.003	<0.013	<0.003	<0.017
NOV 10...	--	--	--	--	--	--	--	--	--	--	--
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 1995											
25...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 20...	--	--	--	--	--	--	--	--	--	--	--
SEP 27...	<0.006	<0.002	<0.004	<0.010	<0.004	<0.003	<0.002	<0.003	<0.013	<0.003	<0.017
27...	--	--	--	--	--	--	--	--	--	--	--
DATE	TRIAL- LATE, WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO- PANIL, WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	CAR- BARYL, WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO- BENCARB, WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA, WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI- METH- ALIN, WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP- AMIDE, WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO- PARGITE, WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN- PHOS, WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER- METHRIN, CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	AN- TIMONY, SED. SUSP. (UG/G) (29816)
OCT 1994											
27...	<0.001	<0.004	<0.003	<0.002	<0.002	<0.004	<0.003	<0.013	<0.001	<0.005	1.5
NOV 10...	--	--	--	--	--	--	--	--	--	--	--
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 1995											
25...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 20...	--	--	--	--	--	--	--	--	--	--	--
SEP 27...	<0.001	<0.004	<0.003	<0.002	<0.002	<0.004	<0.003	<0.013	<0.001	<0.005	1.3
27...	--	--	--	--	--	--	--	--	--	--	--

14246900 COLUMBIA RIVER AT BEAVER ARMY TERMINAL, NEAR QUINCY, OR--Continued

WATER-QUALITY DATA

DATE	ARSENIC, SED. SUSP. (UG/G) (29818)	BARIUM, SED. SUSP. (UG/G) (29820)	BERYL- LIUM, SED. SUSP. (UG/G) (29822)	CADMIUM, SED. SUSP. (UG/G) (29826)	CHRO- MIUM, SED. SUSP. (UG/G) (29829)	COPPER, SED. SUSP. (UG/G) (29832)	GOLD, SEDI- MENT SUSP. (UG/G) (82170)	LEAD, SED. SUSP. (UG/G) (29836)	MAN- GANESE, SED. SUSP. (UG/G) (29839)	MERCURY, SED. SUSP. (UG/G) (29841)	MOLYB- DENUM, SED. SUSP. (UG/G) (29843)
OCT 1994											
27...	11	550		3.1	67	260	<10	50	2000	0.16	0.9
NOV											
10...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
JAN 1995											
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	--	--	--	--	--	--	--	--	--	--	--
MAY											
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
20...	--	--	--	--	--	--	--	--	--	--	--
SEP											
27...	9.7	500	1.5	1.4	--	50	<0.5	85	1500	0.13	--
27...	--	--	--	--	--	--	--	--	--	--	--

DATE	NICKEL, SED. SUSP. (UG/G) (29845)	SILVER, SED. SUSP. (UG/G) (29850)	VANA- DIUM, SED. SUSP. (UG/G) (29853)	ZINC, SED. SUSP. (UG/G) (29855)	ALUM- INUM, SED. SUS PERCENT (30221)	CALCIUM, SED. SUSP. PERCENT (30240)	IRON, SEDI- MENT SUSP. PERCENT (30269)	MAGNES- IUM, SEDI- MENT SUSP. PERCENT (30277)	PHOS- PHORUS, SEDI- MENT SUSP. PERCENT (30292)	POTAS- SIUM, SEDI- MENT SUSP. PERCENT (30294)	SODIUM, SEDI- MENT SUSP. PERCENT (30304)
OCT 1994											
27...	38	0.43	150	270	7.5	2.0	5.4	1.0	0.18	1.0	1.2
NOV											
10...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
JAN 1995											
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	--	--	--	--	--	--	--	--	--	--	--
MAY											
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
20...	--	--	--	--	--	--	--	--	--	--	--
SEP											
27...	--	<0.5	100	220	7.2	--	4.2	--	0.16	--	--
27...	--	--	--	--	--	--	--	--	--	--	--

DATE	TITA- NIUM, SEDI- MENT SUSP. PERCENT (30317)	BISMUTH, SEDI- MENT SUSP. (UG/G) (35030)	COBALT, SEDI- MENT SUSP. (UG/G) (35031)	EURO- PIUM, SEDI- MENT SUSP. (UG/G) (35032)	GALLIUM, SEDI- MENT SUSP. (UG/G) (35033)	HOLMIUM, SEDI- MENT SUSP. (UG/G) (35035)	LANTHA- NIUM, SEDI- MENT SUSP. (UG/G) (35036)	NEODYM- IUM, SEDI- MENT SUSP. (UG/G) (35037)	NIOBIUM, SEDI- MENT SUSP. (UG/G) (35038)	SCAN- DIUM, SEDI- MENT SUSP. (UG/G) (35039)	STRON- TIUM, SEDI- MENT SUSP. (UG/G) (35040)
OCT 1994											
27...	0.63	<20	26	<4	13	<7	27	25	8	17	250
NOV											
10...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
JAN 1995											
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	--	--	--	--	--	--	--	--	--	--	--
MAY											
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
20...	--	--	--	--	--	--	--	--	--	--	--
SEP											
27...	.49	--	17	--	--	--	--	--	--	--	240
27...	--	--	--	--	--	--	--	--	--	--	--

DATE	TANTA- LUM, SEDI- MENT SUSP. (UG/G) (35042)	THORIUM, SEDI- MENT SUSP. (UG/G) (35043)	TIN, SEDI- MENT SUSP. (UG/G) (35044)	URANIUM, SEDI- MENT SUSP. (UG/G) (35046)	YTTRIUM, SEDI- MENT SUSP. (UG/G) (35047)	YTTER- BIUM SEDI- MENT SUSP. (UG/G) (35048)	LITHIUM, SEDI- MENT SUSP. (UG/G) (35050)	CERIUM, SEDI- MENT SUSP. (UG/G) (35051)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 1994											
27...	<70	5.6	<9	3.2	26	3	27	52	9	E2790	E97
NOV											
10...	--	--	--	--	--	--	--	--	14	E6240	95
DEC											
08...	--	--	--	--	--	--	--	--	21	E13300	83
JAN 1995											
25...	--	--	--	--	--	--	--	--	16	E10400	98
MAR											
07...	--	--	--	--	--	--	--	--	18	E11400	67
MAY											
10...	--	--	--	--	--	--	--	--	16	13900	91
JUN											
20...	--	--	--	--	--	--	--	--	14	11300	94
SEP											
27...	--	--	--	<50	--	--	23	--	13	4280	89
27...	--	--	--	--	--	--	--	--	--	--	--

E - Estimated.

COLUMBIA RIVER MAIN STEM

14246900 COLUMBIA RIVER AT BEAVER ARMY TERMINAL, NEAR QUINCY, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	149	145	147	129	107	115	---	---	---	110	98	104
2	150	144	147	120	104	114	---	---	---	114	106	109
3	145	142	144	106	101	103	---	---	---	119	107	112
4	146	143	145	117	104	108	---	---	---	124	115	119
5	147	142	144	119	111	116	---	---	---	129	122	125
6	148	145	146	118	113	117	---	---	---	125	119	122
7	148	145	147	120	111	117	---	---	---	128	123	126
8	151	144	148	123	114	120	---	---	---	136	127	132
9	146	144	145	132	123	128	130	126	128	142	132	137
10	148	145	146	136	131	134	135	125	129	141	131	136
11	151	145	147	144	135	139	133	126	131	138	123	132
12	149	143	146	145	132	137	133	123	128	127	120	124
13	148	143	146	142	132	137	130	121	126	134	122	127
14	149	145	147	149	131	137	134	127	131	132	121	125
15	150	146	148	159	134	141	138	130	134	127	109	115
16	156	144	148	158	139	145	139	134	137	111	106	108
17	156	148	151	145	137	141	139	127	135	107	99	103
18	152	145	148	141	136	139	127	103	115	104	94	100
19	152	147	149	144	137	142	106	96	102	105	99	102
20	149	147	148	140	132	136	98	91	94	110	102	106
21	149	143	146	145	129	136	97	88	92	110	102	107
22	154	145	150	146	135	140	99	91	95	110	104	107
23	154	145	148	141	134	138	104	95	100	111	105	109
24	149	145	147	143	132	138	107	101	103	120	111	115
25	154	148	151	144	134	141	109	98	103	127	120	124
26	154	146	151	139	128	135	107	95	102	130	120	125
27	152	141	148	---	---	---	95	82	89	135	127	131
28	144	138	142	---	---	---	90	82	86	144	132	139
29	139	128	133	---	---	---	89	82	85	143	137	140
30	130	125	127	---	---	---	99	86	91	141	134	138
31	129	115	124	---	---	---	103	96	100	138	125	133
MONTH	156	115	145	---	---	---	---	---	---	144	94	120

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	125	117	121	151	147	149	145	141	143	157	152	154
2	125	116	120	153	146	149	151	144	148	158	144	151
3	116	111	114	152	146	149	151	145	148	149	139	144
4	118	113	115	151	146	149	153	146	149	147	136	141
5	117	115	116	152	146	148	155	150	153	138	132	135
6	117	110	113	151	139	144	155	149	152	137	131	133
7	117	108	112	147	141	144	155	150	153	140	131	135
8	126	117	122	145	136	141	157	153	155	135	130	132
9	132	123	125	140	134	137	157	151	154	140	134	138
10	133	128	130	141	132	138	151	145	148	139	136	138
11	137	132	133	135	128	131	152	144	147	139	133	137
12	150	137	145	129	123	126	154	141	146	142	134	138
13	144	135	141	131	122	127	154	139	145	139	132	135
14	147	137	141	132	125	129	143	133	138	141	133	138
15	153	144	147	132	127	128	139	133	137	138	131	134
16	152	145	149	130	119	125	139	130	135	139	131	135
17	156	144	148	130	122	127	141	130	135	135	131	133
18	157	145	153	132	127	129	139	130	135	141	133	138
19	148	110	127	136	130	134	144	132	139	136	127	132
20	111	98	105	139	133	135	139	130	135	132	126	129
21	107	97	100	140	128	134	135	130	133	131	125	127
22	110	101	106	135	123	130	137	134	136	127	124	126
23	121	107	113	137	127	131	147	136	141	130	125	127
24	127	121	124	134	128	132	138	132	136	129	123	126
25	139	127	132	136	133	135	143	133	140	127	122	124
26	145	139	141	141	135	138	149	141	146	126	122	123
27	151	142	145	144	135	139	154	143	148	126	122	124
28	150	146	148	144	137	141	155	147	151	127	121	124
29	---	---	---	140	133	137	156	150	153	126	122	124
30	---	---	---	142	136	139	156	152	154	127	121	124
31	---	---	---	141	136	138	---	---	---	125	121	123
MONTH	157	97	128	153	119	137	157	130	144	158	121	133

COLUMBIA RIVER MAIN STEM

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14246900 COLUMBIA RIVER AT BEAVER ARMY TERMINAL, NEAR QUINCY, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	129	124	125	134	129	130	142	135	139	155	147	150
2	127	124	126	131	125	129	142	135	139	154	146	150
3	131	124	127	127	123	126	143	137	140	155	145	150
4	131	125	127	127	124	125	148	138	142	151	145	149
5	127	124	125	126	123	124	143	137	140	155	149	153
6	127	121	124	129	122	124	147	139	143	160	150	154
7	123	121	122	126	123	125	142	139	140	153	150	152
8	127	121	123	126	122	124	149	139	143	158	148	152
9	127	123	125	126	122	124	150	142	145	158	148	154
10	126	122	124	126	122	124	149	141	145	154	147	151
11	124	120	122	133	121	126	150	144	147	158	152	155
12	128	119	123	129	124	126	148	140	144	159	152	156
13	126	119	121	130	126	128	145	139	141	159	150	155
14	125	121	123	131	125	128	146	142	144	156	148	151
15	129	124	127	130	126	128	149	141	145	149	145	146
16	128	122	125	133	129	131	149	144	147	155	143	147
17	127	120	124	134	131	132	154	144	148	154	140	146
18	126	116	119	139	131	134	148	144	147	155	146	149
19	118	113	116	138	131	134	158	145	153	155	144	149
20	118	113	115	133	130	131	153	148	150	153	147	151
21	118	109	113	134	129	131	159	148	154	158	146	151
22	118	109	115	132	129	131	156	148	151	152	146	149
23	118	111	115	134	129	132	151	146	148	155	146	150
24	119	117	118	136	133	135	154	147	150	149	143	146
25	124	118	121	140	135	137	158	146	150	149	146	148
26	130	123	125	140	135	138	156	146	152	149	142	145
27	131	126	129	141	137	139	154	146	150	146	143	145
28	135	129	131	141	134	138	154	146	150	146	142	143
29	133	130	131	139	135	137	156	149	153	146	142	144
30	137	132	134	139	135	137	152	144	148	150	142	146
31	---	---	---	139	135	137	153	143	149	---	---	---
MONTH	137	109	123	141	121	130	159	135	146	160	140	150

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

14301000 NEHALEM RIVER NEAR FOSS, OR

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 19,000 ft³/s and maximum (*):

Minimum discharge, 60 ft³/s Oct. 5, 10-13.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	14400	17700	5160	16600	2210	2060	1590	458	265	136	107
2	65	9680	16200	4130	11100	2000	1880	1770	445	257	132	99
3	65	6250	10900	3410	7650	1820	1720	1870	438	260	128	98
4	63	5130	7910	2900	6030	1850	1610	1770	430	264	122	98
5	62	4630	6170	2530	4890	1940	1500	1670	463	258	116	103
6	64	4020	5040	2260	4030	1830	1400	1560	499	256	121	114
7	67	3490	4270	2100	3390	1650	1740	1450	495	253	161	126
8	64	3180	3770	2280	2930	1730	2720	1350	462	247	179	143
9	62	4570	5530	3180	2570	4210	3310	1270	427	242	158	148
10	62	4610	6270	4580	2280	7530	3320	1250	409	245	145	131
11	60	3950	6340	5200	2080	7740	3200	1310	413	265	163	123
12	60	3500	6290	4880	2030	7540	3030	1290	409	264	161	111
13	62	3220	5940	5280	1910	7740	3230	1200	432	245	149	101
14	85	2910	5140	7480	1710	9080	3400	1100	445	236	140	95
15	107	2830	4930	9370	1870	9020	3710	1020	520	222	138	90
16	106	3530	7630	8550	2220	7510	3600	962	519	210	135	86
17	103	4580	18800	6890	8300	6020	3260	917	497	202	197	85
18	95	4680	17300	8130	9860	5190	3060	874	491	190	200	85
19	96	4370	17000	8500	17000	5460	2830	832	507	177	188	85
20	108	5990	28400	7160	16200	6640	2900	787	523	167	167	85
21	227	5710	24700	5840	10600	7730	2970	749	533	160	153	81
22	288	4740	17500	4730	7440	8370	2750	713	499	158	138	77
23	219	4200	10000	3890	5770	7320	2520	678	459	161	126	76
24	180	3760	7130	3270	4660	6000	2310	646	416	167	117	76
25	186	3690	5740	2820	3860	4950	2100	619	382	168	111	87
26	1270	3700	9880	2500	3300	4140	1920	597	356	168	106	97
27	6060	4010	23100	2220	2870	3530	1780	570	333	168	102	154
28	4490	4350	19400	2280	2500	3090	1690	546	312	163	100	383
29	2780	5630	13100	3790	---	2740	1680	525	295	156	102	382
30	1870	14100	8460	6340	---	2460	1680	497	277	148	109	397
31	9090	---	6510	16100	---	2240	---	476	---	143	110	---
TOTAL	28180	153410	347050	157750	165650	151320	74880	32458	13144	6485	4310	3923
MEAN	909	5114	11200	5089	5916	4881	2496	1047	438	209	139	131
MAX	9090	14400	28400	16100	17000	9080	3710	1870	533	265	200	397
MIN	60	2830	3770	2100	1710	1650	1400	476	277	143	100	76
AC-FT	55900	304300	688400	312900	32							

MEAN	772	3615	6041	6130	5708	4269	2702	1227	603	270	147	206
MAX	2948	9256	11390	12450	12490	8696	6124	3028	1591	747	314	877
(WY)	1948	1974	1956	1971	1949	1956	1991	1948	1968	1983	1968	1959
MIN	69.9	154	599	596	1066	1171	1149	520	250	137	62.5	63.6
(WY)	1953	1994	1977	1977	1977	1992	1941	1989	1992	1967	1967	1967

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1940 - 1995	
ANNUAL TOTAL	990128		1138560			
ANNUAL MEAN	2713		3119		2627	
HIGHEST ANNUAL MEAN					4235	1974
LOWEST ANNUAL MEAN					1063	1977
HIGHEST DAILY MEAN	28400	Dec 20	28400	Dec 20	42400	Jan 9 1990
LOWEST DAILY MEAN	60	Sep 29	60	Oct 11	36	Aug 29 1967
ANNUAL SEVEN-DAY MINIMUM	62	Oct 7	62	Oct 7	38	Aug 26 1967
ANNUAL RUNOFF (AC-FT)	1964000		2258000		1903000	
ANNUAL RUNOFF (CFSM)	4.07		4.68		3.94	
ANNUAL RUNOFF (INCHES)	55.22		63.50		53.52	
10 PERCENT EXCEEDS	6690		7740		7130	
50 PERCENT EXCEEDS	845		1690		1110	
90 PERCENT EXCEEDS	101		103		124	

WILSON RIVER BASIN

14301500 WILSON RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°29'05", long 123°41'20", in SW 1/4 SE 1/4 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 and crest-stage gage. Datum of gage is 71.89 ft above sea level. 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 fair. No regulation. Small diversions for domestic use upstream from station.

AVERAGE DISCHARGE.--65 years (water years 1915, 1932-95), 1,161 ft³/s, 98.02 in/yr, 841,400 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 greater than base discharge 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)
Oct. 31	1430	12,600	12.55	Dec. 27	0530	18,000	14.07
Nov. 30	1930	*20,000	*14.53	Jan. 31	1400	15,200	13.34
Dec. 17	0930	15,800	13.51	Feb. 19	1030	12,500	12.52
Dec. 20	0900	13,300	12.77				

Minimum discharge, 50 ft³/s Sept. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	6880	9630	1690	7990	755	745	523	218	143	80	65
2	59	3390	5390	1410	4680	689	680	649	211	140	78	62
3	56	e2100	3510	1210	3100	637	625	635	206	145	77	62
4	55	e1850	2520	1060	2260	684	591	598	206	145	75	64
5	53	e1700	1960	956	1740	632	547	615	239	138	74	71
6	53	e1540	1660	872	1430	566	522	566	231	136	85	73
7	53	e1430	1430	824	1190	529	842	532	211	135	132	79
8	52	e1300	1310	914	1030	621	1370	499	197	131	109	73
9	52	e1800	2520	1500	913	2040	1380	477	189	130	94	68
10	52	e1850	2440	1860	814	3160	1220	497	194	135	90	64
11	51	e1740	2470	1840	749	2450	1200	657	204	126	101	62
12	51	e1540	2360	1910	753	2190	1150	631	189	120	94	60
13	53	e1380	1980	2890	655	2700	1220	584	216	115	85	59
14	81	e1270	1780	4430	591	2960	1240	533	222	114	81	58
15	74	e1200	1940	4310	777	2620	1190	490	259	112	79	57
16	64	e1400	5670	3190	968	2060	1060	464	254	108	79	57
17	60	e1800	13000	2530	6750	1650	975	438	245	103	103	58
18	58	e2100	7250	3950	4630	1640	940	413	279	99	94	59
19	57	e2000	6530	3650	11500	1920	875	390	286	96	84	e56
20	75	e2500	12100	2540	7030	2520	1050	369	267	93	78	e54
21	216	e2100	7790	1900	3720	2840	1050	349	250	93	74	e52
22	136	e1800	4360	1520	2460	2540	978	332	233	99	72	50
23	105	1590	2950	1270	1840	2040	890	315	216	98	70	51
24	89	1500	2230	1090	1480	1690	808	302	202	97	68	53
25	88	1700	1910	958	1240	1420	731	289	190	93	67	60
26	1580	1590	5980	860	1070	1230	667	275	179	101	66	71
27	4170	1750	13800	772	933	1100	633	264	169	103	66	196
28	1930	1860	7160	1040	828	1000	599	254	160	95	65	267
29	1100	3390	4120	2150	---	926	557	243	153	90	66	266
30	805	11800	2820	3810	---	855	530	233	147	87	70	349
31	7050	---	2120	11300	---	798	---	225	84	67	67	---
TOTAL	18440	69850	142690	70206	73121	49462	26865	13641	6422	3504	2523	2676
MEAN	595	2328	4603	2265	2611	1596	895	440	214	113	81.4	89.2
MAX	7050	11800	13800	11300	11500	3160	1380	657	286	145	132	349
MIN	51	1200	1310	772	591	529	522	225	147	84	65	50
AC-FT	36580	138500	283000	139300	145000	98110	53290	27060	12740	6950	5000	5310
CFSM	3.69	14.5	28.6	14.1	16.2	9.91	5.56	2.73	1.33	.70	.51	.55
IN.	4.26	16.14	32.97	16.22	16.90	11.43	6.21	3.15	1.48	.81	.58	.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1995, BY WATER YEAR (WY)

	556	1832	2615	2483	2181	1768	1176	609	336	168	106	154
MEAN	556	1832	2615	2483	2181	1768	1176	609	336	168	106	154
MAX	2230	3975	7988	5776	4619	3637	2622	1391	876	514	240	780
(WY)	1948	1935	1934	1953	1961	1956	1991	1933	1933	1983	1968	1959
MIN	43.5	87.2	378	344	634	406	426	202	131	76.5	44.3	40.1
(WY)	1988	1937	1977	1977	1993	1992	1939	1992	1992	1992	1967	1967

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1915 - 1995

ANNUAL TOTAL	467600		479400									
ANNUAL MEAN	1281		1313							1161		
HIGHEST ANNUAL MEAN										1698		1974
LOWEST ANNUAL MEAN										524		1977
HIGHEST DAILY MEAN	13800	Dec 27	13800	Dec 27						27500	Dec 22	1933
LOWEST DAILY MEAN	51	Oct 11	50	Sep 22						34	Sep 1	1967
ANNUAL SEVEN-DAY MINIMUM	52	Oct 6	52	Oct 6						35	Aug 30	1967
ANNUAL RUNOFF (AC-FT)	927500		950900							841400		
ANNUAL RUNOFF (CFSM)	7.96		8.16							7.21		
ANNUAL RUNOFF (INCHES)	108.04		110.77							98.02		
10 PERCENT EXCEEDS	3210		3020							2840		
50 PERCENT EXCEEDS	493		615							560		
90 PERCENT EXCEEDS	68		65							87		

e Estimated

NESTUCCA RIVER BASIN

331

14302800 MCGUIRE LAKE NEAR FAIRDALE, OR

LOCATION.--Lat 45°18'30", long 123°24'30", in NW 1/4 SE 1/4 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 sea level.

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. Elevations based on once-daily staff gage readings.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed contents, 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 observed contents, 3,840 acre-ft Dec. 19, elevation, 1,865.5 ft; minimum observed contents, 1,770 Oct. 25, elevation, 1,847.3 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	1,851.4	2,150	-
Oct. 31.....	1,849.1	1,930	-220
Nov. 30.....	1,857.6	2,800	+870
Dec. 31.....	a1,864.2	3,660	+860
CAL YR 1994.....	-	-	+3,560
Jan. 31.....	1,857.9	2,840	-820
Feb. 28.....	1,850.2	2,030	-810
Mar. 31.....	1,864.7	3,730	+1,700
Apr. 30.....	a1,865.0	3,770	+40
May 31.....	1,865.0	3,770	0
June 30.....	1,865.0	3,770	0
July 31.....	1,862.5	3,420	-350
Aug. 31.....	a1,858.7	2,930	-490
Sept.30.....	a1,855.5	2,560	-370
WTR YR 1995.....	-	-	+410

a Interpolated.

NESTUCCA RIVER BASIN

14302900 NESTUCCA RIVER NEAR FAIRDALE, OR

LOCATION.--Lat 45°18'40", long 123°25'05", in SW 1/4 NW 1/4 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 above sea level (levels by city of McMinnville).

REMARKS.--Records fair. Flow regulated since March 1969 by McGuire Lake about 1 mi upstream from gage (station 14302800). During winter months lake is empty except when inflow exceeds capacity of outlet tunnel.

AVERAGE DISCHARGE.--35 years (water years 1961-95), 30.6 ft³/s, 67.24 in/yr, 22,170 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 discharge, 0.41 ft³/s Sept. 11, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 358 ft³/s Dec. 20, gage height, 5.69 ft; minimum discharge, 0.64 ft³/s Sept. 23, 24, but may have been less during period of missing record Aug. 24-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	88	130	80	159	11	13	24	5.6	2.3	e.90	e1.0
2	3.0	50	85	76	119	9.7	13	24	5.2	2.3	e.90	e1.0
3	3.0	34	57	73	100	8.7	15	22	5.2	2.6	e.90	e.90
4	3.0	40	43	70	89	11	18	22	5.2	2.6	e.80	e1.0
5	3.0	32	35	68	81	9.7	19	24	8.1	2.6	e.80	e1.2
6	3.0	29	30	67	76	8.3	20	21	7.4	2.6	e.80	e1.3
7	3.0	26	27	70	72	7.5	62	20	6.2	2.7	e.90	e1.4
8	3.0	29	26	78	69	18	86	19	5.5	2.7	e1.0	e1.2
9	3.0	53	40	123	66	53	82	18	5.0	4.0	e.90	e1.0
10	3.1	40	34	117	63	52	67	20	5.3	3.7	e.90	e.90
11	3.2	33	42	107	62	46	56	27	5.5	3.2	e.90	e.90
12	3.0	31	42	114	63	38	53	22	5.4	1.8	e.90	e.90
13	3.1	28	36	139	61	68	49	20	6.7	1.6	e.90	.90
14	4.1	25	34	181	59	72	46	18	7.3	1.6	e.80	.90
15	4.0	31	44	165	66	55	41	17	9.9	1.5	e.80	.85
16	3.6	34	110	127	71	39	36	15	7.6	1.4	e.80	.90
17	3.4	31	275	107	180	30	33	13	7.1	1.3	e.90	.93
18	3.4	27	193	127	130	31	34	13	7.3	1.3	e.90	.93
19	3.2	36	193	115	190	32	33	12	6.8	1.3	e.80	.85
20	3.7	45	322	99	127	55	47	11	6.2	e1.2	e.80	.86
21	6.2	36	220	88	98	50	42	10	5.6	e1.2	e.80	.88
22	4.2	31	133	81	83	40	37	9.6	5.3	e1.2	e.80	.88
23	3.8	34	100	76	75	33	33	8.8	4.8	e1.2	e.80	.85
24	3.6	34	89	72	69	28	29	8.6	4.4	e1.2	e.70	.85
25	3.6	49	85	70	65	24	27	8.0	4.0	e1.2	e.70	.99
26	26	40	133	68	62	22	24	7.6	3.7	e1.3	e.60	1.6
27	61	41	200	67	44	20	26	7.4	3.3	e1.3	e.60	8.1
28	28	38	144	88	12	18	25	7.1	2.9	e1.2	e.60	3.0
29	21	63	110	100	---	17	26	6.6	2.6	e1.2	e1.1	2.8
30	18	148	94	130	---	16	24	6.2	2.4	e1.1	e1.1	3.0
31	80	---	86	200	---	15	---	5.8	---	e1.0	e1.0	---
TOTAL	320.2	1256	3192	3143	2411	937.9	1116	467.7	167.5	57.4	26.10	42.77
MEAN	10.3	41.9	103	101	86.1	30.3	37.2	15.1	5.58	1.85	.84	1.43
MAX	80	148	322	200	190	72	86	27	9.9	4.0	1.1	8.1
MIN	3.0	25	26	67	12	7.5	13	5.8	2.4	1.0	.60	.85
AC-FT	635	2490	6330	6230	4780	1860	2210	928	332	114	52	85
MEAN†	6.75	56.5	117	88.0	71.5	57.9	37.8	15.1	5.58	-3.84	-7.12	-4.79
CFSM†	1.09	9.14	18.9	14.2	11.6	9.37	6.12	2.44	0.90	-0.62	-1.15	-0.78
IN.†	1.26	10.2	21.8	16.4	12.0	10.8	6.83	2.82	1.01	-0.72	-1.33	-0.86
AC-FT†	415	3360	7190	5410	3970	3560	2250	928	332	-236	-438	-285

CAL YR 1994 TOTAL 9006.08 MEAN 24.7 MAX 322 MIN .81 AC-FT 17860 MEAN† 29.6 CFSM† 4.79 IN.† 64.99 AC-FT† 21420
WTR YR 1995 TOTAL 13137.57 MEAN 36.0 MAX 322 MIN .60 AC-FT 26060 MEAN† 36.6 CFSM† 5.92 IN.† 80.31 AC-FT† 26470

e Estimated

† Adjusted for storage and diversion from McGuire Lake.

Note - Negative values shown for adjusted values during summer period are a result of evaporation exceeding inflows to McGuire Lake coupled with the inability to estimate low streamflow.

NESTUCCA RIVER BASIN

333

14303200 TUCCA CREEK NEAR BLAINE, OR

LOCATION.--Lat 45°19'28", long 123°32'43", in SE 1/4 NW 1/4 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. Elevation of gage is 1,400 ft above sea level, from topographic map.

REMARKS.--No estimated dailly discharges. Records good.

AVERAGE DISCHARGE.--12 years (water years 1984-95), 14.9 ft³/s, 65.32 in/yr, 10,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266 ft³/s Dec. 9, 1987, gage height, 3.66 ft; minimum discharge, 0.46 ft³/s Sept. 30, Oct. 1, 2, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge 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. 30	2400	*236	*3.48	Dec. 27	0500	201	3.26
Dec. 17	0600	189	3.18				

Minimum discharge, 0.92 ft³/s Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	110	178	30	100	14	15	11	4.6	3.0	1.7	1.4
2	1.1	60	104	25	73	13	14	11	4.5	2.9	1.7	1.4
3	1.1	39	65	21	53	12	13	11	4.3	3.1	1.6	1.4
4	1.1	35	43	18	40	12	12	10	4.4	3.0	1.6	1.4
5	1.1	30	32	16	31	11	11	9.9	5.0	2.9	1.6	1.5
6	1.1	27	26	15	26	9.8	11	9.5	4.6	2.9	1.8	1.6
7	1.0	23	22	14	22	9.4	15	9.4	4.3	2.9	2.1	1.8
8	1.0	22	19	15	19	12	21	9.2	4.1	2.8	1.8	1.6
9	1.0	39	32	22	17	25	23	9.0	3.8	2.8	1.6	1.4
10	1.0	38	32	24	15	34	25	9.0	4.1	2.8	1.7	1.4
11	1.0	31	34	25	14	35	25	10	4.1	2.7	1.8	1.3
12	1.0	27	36	25	14	33	25	9.4	4.1	2.6	1.6	1.3
13	1.1	23	33	32	12	40	24	9.0	4.4	2.5	1.6	1.3
14	2.5	20	29	58	11	50	24	8.7	4.3	2.5	1.6	1.2
15	1.8	21	29	82	14	51	23	8.4	4.9	2.4	1.6	1.2
16	1.3	23	56	71	17	42	22	8.2	4.4	2.3	1.7	1.3
17	1.2	23	168	56	70	34	21	7.9	4.2	2.2	3.4	1.4
18	1.2	22	110	57	80	33	20	7.6	4.5	2.1	2.1	1.4
19	1.1	28	83	59	159	34	19	7.3	4.5	2.1	1.8	1.3
20	1.3	47	123	47	120	48	22	6.9	4.4	2.0	1.6	1.3
21	3.1	42	117	37	68	53	23	6.5	4.3	2.0	1.6	1.2
22	1.8	33	75	29	44	46	23	6.2	4.1	2.1	1.5	1.2
23	1.4	31	47	25	33	39	22	6.0	3.8	2.1	1.4	1.2
24	1.3	27	34	21	27	33	19	5.8	3.7	2.1	1.4	1.2
25	1.3	31	28	18	23	29	17	5.6	3.6	2.0	1.4	1.5
26	1.3	30	78	16	19	25	16	5.3	3.5	2.1	1.4	1.9
27	37	31	181	14	17	23	15	5.3	3.4	2.1	1.4	4.5
28	21	31	118	16	15	21	14	5.1	3.2	2.0	1.4	3.9
29	14	58	76	19	---	19	13	4.9	3.1	2.0	1.6	4.8
30	12	161	50	29	---	17	12	4.7	3.0	1.9	1.6	4.7
31	73	---	37	86	---	16	---	4.7	---	1.7	1.4	---
TOTAL	203.0	1163	2095	1022	1153	873.2	559	242.5	123.2	74.6	52.1	54.0
MEAN	6.55	38.8	67.6	33.0	41.2	28.2	18.6	7.82	4.11	2.41	1.68	1.80
MAX	73	161	181	86	159	53	25	11	5.0	3.1	3.4	4.8
MIN	1.0	20	19	14	11	9.4	11	4.7	3.0	1.7	1.4	1.2
AC-FT	403	2310	4160	2030	2290	1730	1110	481	244	148	103	107
CFSM	2.12	12.5	21.9	10.7	13.3	9.12	6.03	2.53	1.33	.78	.54	.58
IN.	2.44	14.00	25.22	12.30	13.88	10.51	6.73	2.92	1.48	.90	.63	.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	3.62	27.0	27.7	29.7	28.6	23.3	17.2	9.51	6.42	2.90	1.70	1.57
MAX	8.96	50.1	67.6	48.0	53.5	39.9	33.4	18.7	12.0	4.47	2.30	2.48
(WY)	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985
MIN	.95	1.76	15.9	12.2	10.3	6.59	9.28	4.02	2.40	1.65	1.11	.91
(WY)	1988	1994	1987	1985	1993	1992	1990	1989	1992	1992	1986	1987

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1984 - 1995

ANNUAL TOTAL	6796.8	7614.6	
ANNUAL MEAN	18.6	20.9	
HIGHEST ANNUAL MEAN			14.9
LOWEST ANNUAL MEAN			20.9
HIGHEST DAILY MEAN	181	181	10.5
LOWEST DAILY MEAN	1.0	1.0	218
ANNUAL SEVEN-DAY MINIMUM	1.0	1.0	.55
ANNUAL RUNOFF (AC-FT)	13480	15100	.63
ANNUAL RUNOFF (CFSM)	6.03	6.75	10760
ANNUAL RUNOFF (INCHES)	81.83	91.67	4.81
10 PERCENT EXCEEDS	42	50	65.32
50 PERCENT EXCEEDS	7.1	11	35
90 PERCENT EXCEEDS	1.4	1.4	7.9
			1.3

14305500 SILETZ RIVER AT SILETZ, OR

LOCATION.--Lat 44°42'55", long 123°53'10", in NW 1/4 SW 1/4 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.

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 sea level. Oct. 1, 1905, to Sept 30, 1938, nonrecording gage at various sites within 2.5 mi downstream at different datums.

REMARKS.--No estimated daily discharges. Records good. Slight regulation from logponds. Small diversions upstream from station for irrigation. Continuous water-quality records for the period February 1972 to September 1985 have been collected at this location.

AVERAGE DISCHARGE.--76 years (water years 1906-11, 1926-95), 1,502 ft³/s, 101.04 in/yr, 1,088,000 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 discharge, 51 ft³/s Dec. 6, 7, 1929.

EXTREMES FOR PERIOD OF RECORD (1938-95).--Maximum discharge, 32,200 ft³/s Jan. 28, 1965, gage height, 27.32 ft, present site and datum; minimum discharge, 47 ft³/s Oct. 20, 21, 29, 1987.

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)
Nov. 30	2100	16,800	16.76	Jan. 31	1730	14,300	15.03
Dec. 17	0630	15,700	15.96	Feb. 17	1800	15,900	16.11
Dec. 27	0330	17,500	17.21	Feb. 19	1130	*18,800	*18.06

Minimum discharge, 63 ft³/s several days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	8190	11500	2070	9670	1040	1020	817	357	287	133	108
2	75	4010	6610	1720	6170	949	935	877	346	281	130	98
3	70	2440	4430	1480	4170	879	867	831	337	279	129	96
4	66	2490	3210	1300	3040	887	833	798	331	280	125	100
5	63	2350	2490	1160	2360	881	782	757	375	269	121	142
6	63	1950	2130	1060	1920	788	740	721	420	256	122	140
7	63	1600	1890	1060	1620	729	1210	688	378	252	187	127
8	63	1400	1690	1130	1400	872	1860	655	336	244	176	115
9	63	3490	2870	2800	1240	2750	2030	632	315	238	147	104
10	63	2750	2830	3210	1110	3520	1780	659	321	237	134	95
11	63	2090	2990	2910	1030	3310	1760	872	342	228	144	93
12	63	1830	3070	3750	1070	3050	1730	992	309	216	137	89
13	63	1620	2540	7080	1020	3550	2150	942	342	210	126	85
14	94	1440	2230	9220	884	3920	1990	851	389	205	118	84
15	152	1460	2330	7880	1150	3460	1780	779	458	199	117	84
16	114	1630	5450	6150	1680	2720	1550	744	400	193	123	82
17	90	1920	13200	4640	10000	2200	1420	696	406	186	278	83
18	81	1760	7490	6510	9770	2180	1340	649	574	177	212	85
19	77	1770	5290	5610	15500	2320	1210	613	646	173	153	84
20	75	3290	7770	3940	9310	3410	1440	583	612	169	129	81
21	207	2450	7080	2910	5210	3940	1460	550	558	167	116	75
22	199	1960	4750	2280	3460	3700	1370	527	503	170	107	70
23	128	2040	3380	1880	2580	2970	1250	502	460	172	101	69
24	106	1870	2620	1590	2060	2440	1140	483	426	170	94	71
25	98	2610	2200	1400	1720	2010	1040	466	395	165	91	97
26	319	2560	6100	1290	1480	1710	959	446	373	164	88	147
27	8790	2920	13300	1200	1290	1500	925	429	349	170	87	672
28	3830	2890	7390	1800	1150	1350	946	415	324	161	86	974
29	1760	4340	4780	2580	---	1230	883	399	304	150	134	950
30	1180	10100	3410	4430	---	1140	837	382	292	142	177	947
31	4300	---	2590	11000	---	1060	---	370	---	139	127	---
TOTAL	22456	83220	149610	107040	103064	66465	39237	20125	11978	6349	4149	6047
MEAN	724	2774	4826	3453	3681	2144	1308	649	399	205	134	202
MAX	8790	10100	13300	11000	15500	3940	2150	992	646	287	278	974
MIN	63	1400	1690	1060	884	729	740	370	292	139	86	69
AC-FT	44540	165100	296800	212300	204400	131800	77830	39920	23760	12590	8230	11990
CFSM	3.59	13.7	23.9	17.1	18.2	10.6	6.47	3.21	1.98	1.01	.66	1.00
IN.	4.14	15.33	27.55	19.71	18.98	12.24	7.23	3.71	2.21	1.17	.76	1.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1995, BY WATER YEAR (WY)

	708	2403	3281	3245	2922	2234	1497	832	496	225	131	197
MEAN	708	2403	3281	3245	2922	2234	1497	832	496	225	131	197
MAX	3412	6207	7828	7664	6055	4560	3560	2579	1602	602	419	1138
(WY)	1927	1907	1934	1953	1949	1932	1937	1933	1906	1910	1968	1959
MIN	50.1	72.4	401	518	752	557	387	233	144	99.7	64.5	58.6
(WY)	1988	1930	1977	1977	1973	1941	1926	1939	1928	1992	1992	1965

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1906 - 1995
ANNUAL TOTAL	546797	619740	
ANNUAL MEAN	1498	1698	1502
HIGHEST ANNUAL MEAN			2337
LOWEST ANNUAL MEAN			660
HIGHEST DAILY MEAN	15100	Feb 24	30700
LOWEST DAILY MEAN	63	Oct 5	47
ANNUAL SEVEN-DAY MINIMUM	63	Oct 5	48
ANNUAL RUNOFF (AC-FT)	1085000	1229000	1088000
ANNUAL RUNOFF (CFSM)	7.42	8.41	7.44
ANNUAL RUNOFF (INCHES)	100.70	114.13	101.04
10 PERCENT EXCEEDS	3700	4070	3790
50 PERCENT EXCEEDS	597	879	750
90 PERCENT EXCEEDS	90	94	104

14306340 EAST FORK LOBSTER CREEK NEAR ALSEA, OR

LOCATION.--Lat 44°14'53", long 123°38'07", in NE 1/4 SE 1/4 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.

REVISED RECORDS.--WDR OR-87-2: 1984(M,P), 1985(M,P), 1986(M,P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 680 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and those below 10 ft³/s, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--12 years (water years 1984-95), 21.8 ft³/s, 52.07 in/yr, 15,830 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 652 ft³/s Nov. 2, 1984, gage height, 3.81 ft, from rating curve extended above 260 ft³/s; maximum gage height, 3.86 ft, Dec. 9, 1987, from crest-stage gage; minimum discharge, 0.17 ft³/s Sept. 27, 28, Oct. 2, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 30	1830	361	3.31	Jan. 14	0100	420	3.43
Dec. 16	2330	*551	*3.66	Jan. 31	1500	385	3.36

Minimum discharge, 0.62 ft³/s Aug. 14-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	117	178	37	207	16	e24	21	5.2	2.6	.88	1.2
2	.96	48	108	32	129	14	e22	36	5.1	2.5	.83	.90
3	.80	33	76	30	77	13	e20	30	4.8	2.6	.80	.90
4	.74	52	55	27	54	16	e20	23	4.8	2.6	.78	1.1
5	.70	50	44	24	42	17	e19	19	4.8	2.4	.75	2.0
6	.70	37	39	24	34	17	e18	18	5.3	2.3	.72	2.3
7	.70	33	37	26	29	16	e26	16	5.3	2.3	1.1	1.9
8	.70	31	35	32	24	20	50	15	4.5	2.0	1.2	1.6
9	.70	88	33	131	21	70	68	14	4.2	2.0	.97	1.5
10	.70	55	33	104	18	71	46	13	4.6	2.0	.86	1.3
11	.70	40	44	96	17	55	37	17	4.7	2.0	1.0	1.3
12	.70	34	51	134	19	48	39	16	4.2	1.9	.88	1.2
13	.71	31	39	316	19	64	57	16	4.5	1.8	.76	.90
14	.99	27	35	298	17	70	54	14	6.3	1.8	.70	.90
15	1.1	27	46	225	19	59	45	13	8.2	1.7	.67	.90
16	1.1	37	146	141	32	48	37	13	6.3	1.7	.86	1.2
17	1.1	51	266	87	210	39	31	12	5.5	1.5	1.6	1.5
18	1.1	42	125	92	181	46	28	11	6.8	1.4	1.6	1.5
19	1.1	36	82	e70	168	56	24	10	7.5	1.4	.99	1.5
20	1.0	61	57	e55	103	86	32	9.4	8.0	1.3	.88	1.5
21	1.2	45	50	e44	65	87	35	8.9	7.0	1.4	.78	1.4
22	1.3	37	43	e38	48	77	29	8.4	6.1	1.4	.70	1.4
23	1.2	38	37	e32	37	e65	23	8.0	5.1	1.5	.79	1.4
24	1.1	44	33	28	30	e50	20	7.9	4.8	1.5	.90	1.4
25	1.2	71	30	24	25	e44	17	7.4	4.4	1.4	.82	1.7
26	6.1	60	60	23	22	e38	16	6.7	3.9	1.4	.90	2.1
27	78	62	116	22	20	e32	16	6.6	3.5	1.4	.90	7.5
28	28	60	95	41	17	e30	16	6.2	3.1	1.3	.90	5.7
29	13	56	70	47	---	e26	16	5.5	2.8	1.2	.99	5.5
30	11	155	52	95	---	e24	15	5.5	2.7	1.0	1.4	3.7
31	72	---	44	287	---	e22	---	5.2	---	.90	1.5	---
TOTAL	231.50	1558	2159	2662	1684	1336	900	412.7	154.0	54.20	29.41	58.90
MEAN	7.47	51.9	69.6	85.9	60.1	43.1	30.0	13.3	5.13	1.75	.95	1.96
MAX	78	155	266	316	210	87	68	36	8.2	2.6	1.6	7.5
MIN	.70	27	30	22	17	13	15	5.2	2.7	.90	.67	.90
AC-FT	459	3090	4280	5280	3340	2650	1790	819	305	108	58	117
CFSM	1.31	9.11	12.2	15.1	10.6	7.56	5.26	2.34	.90	.31	.17	.34
IN.	1.51	10.17	14.09	17.37	10.99	8.72	5.87	2.69	1.01	.35	.19	.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1995, BY WATER YEAR (WY)

	MEAN	3.38	38.3	39.9	48.0	46.8	35.1	24.8	13.4	9.26	2.50	1.24	1.22
MAX	9.39	115	69.6	85.9	96.5	62.1	49.5	27.8	21.3	3.88	1.82	2.05	
(WY)	1985	1985	1995	1995	1986	1989	1993	1984	1985	1984	1990	1986	
MIN	.39	1.41	17.6	16.0	13.4	11.5	10.4	5.99	1.83	1.40	.52	.66	
(WY)	1988	1994	1990	1985	1993	1992	1987	1994	1992	1992	1992	1987	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1984 - 1995

ANNUAL TOTAL	8814.12	11239.71	
ANNUAL MEAN	24.1	30.8	21.8
HIGHEST ANNUAL MEAN			30.8
LOWEST ANNUAL MEAN			16.2
HIGHEST DAILY MEAN	266	316	546
LOWEST DAILY MEAN	.48	.67	.25
ANNUAL SEVEN-DAY MINIMUM	.53	.70	.29
ANNUAL RUNOFF (AC-FT)	17480	22290	15830
ANNUAL RUNOFF (CFSM)	4.24	5.40	3.83
ANNUAL RUNOFF (INCHES)	57.52	73.35	52.07
10 PERCENT EXCEEDS	58	71	53
50 PERCENT EXCEEDS	11	16	10
90 PERCENT EXCEEDS	.70	.90	.90
e Estimated			

LOCATION.--Lat 44°23'10", long 123°49'50", in NW 1/4 NW 1/4 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.

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 48.16 ft above sea level. Prior to Nov. 16, 1939, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. No regulation. Diversion for irrigation upstream from station. Continuous water-quality records for the period October 1979 to September 1981 have been collected at this location.

AVERAGE DISCHARGE.--56 years (water years 1940-95), 1,462 ft³/s, 59.49 in/yr, 1,059,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft³/s Dec. 22, 1964, gage height, 27.44 ft; minimum discharge, 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 greater than base discharge 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. 17	0800	13,600	14.99	Jan. 31	2100	13,200	14.76
Jan. 14	0830	*16,600	*16.73	Feb. 17	2330	15,000	15.81

Minimum discharge, 58 ft³/s Oct. 7-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	5670	9280	2280	10100	1360	1380	1220	445	250	130	94
2	73	2610	6050	1970	6850	1260	1260	1690	433	244	126	87
3	69	1550	4700	1750	4880	1190	1170	1630	419	244	121	84
4	63	1630	3550	1580	3750	1270	1110	1440	410	243	118	86
5	60	2180	2820	1440	3040	1390	1060	1280	440	238	114	103
6	60	1550	2500	1320	2540	1240	998	1180	464	231	112	126
7	59	1240	2530	1390	2190	1140	1410	1090	448	227	128	115
8	58	1050	2480	1540	1920	1210	2630	1020	404	223	135	101
9	58	3740	2320	5050	1700	3370	3630	961	377	216	128	94
10	58	3030	2200	6390	1540	4790	2840	944	384	218	118	88
11	58	1940	2390	5190	1430	4210	2320	1030	430	212	118	84
12	58	1540	3070	6650	1500	4060	2220	1060	374	202	118	81
13	59	1250	2590	12100	1560	4990	3020	1030	373	195	110	80
14	74	1060	2250	15500	1350	5710	2860	939	424	191	106	77
15	93	1040	2280	13900	1420	4660	2510	872	536	188	104	75
16	87	1320	3740	10300	1890	3710	2170	836	460	184	101	74
17	77	2120	11200	6840	7570	3050	1910	798	402	178	111	74
18	72	1970	7370	6500	11000	2950	1760	754	466	171	125	77
19	71	1640	5350	6210	8540	3280	1590	718	519	165	119	78
20	70	2560	4210	4750	6680	4720	1810	690	523	160	107	78
21	82	2150	4060	3740	4670	5880	1930	661	469	155	99	75
22	98	1710	3390	3080	3570	5770	1740	634	414	156	94	70
23	87	1710	2850	2600	2900	4520	1560	608	378	159	91	66
24	78	1810	2450	2240	2430	3630	1410	589	350	162	89	64
25	75	2940	2140	1980	2090	2990	1290	570	327	160	85	65
26	119	3300	2640	1830	1850	2540	1190	549	309	153	83	75
27	3170	3150	6170	1710	1650	2200	1140	529	296	151	81	400
28	2170	3090	5050	2180	1490	1950	1180	513	279	148	81	480
29	837	2780	4060	2970	---	1770	1220	500	264	141	92	368
30	523	4280	3280	4530	---	1610	1210	477	254	137	124	266
31	1130	---	2700	10000	---	1480	---	460	---	133	108	---
TOTAL	9724	67610	121670	149510	102100	93900	53528	27272	12071	5835	3376	3685
MEAN	314	2254	3925	4823	3646	3029	1784	880	402	188	109	123
MAX	3170	5670	11200	15500	11000	5880	3630	1690	536	250	135	480
MIN	58	1040	2140	1320	1350	1140	998	460	254	133	81	64
AC-FT	19290	134100	241300	296600	202500	186300	106200	54090	23940	11570	6700	7310
CFSM	.94	6.75	11.8	14.4	10.9	9.07	5.34	2.63	1.20	.56	.33	.37
IN.	1.08	7.53	13.55	16.65	11.37	10.46	5.96	3.04	1.34	.65	.38	.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1995, BY WATER YEAR (WY)

MEAN	367	1733	3200	3500	3205	2480	1507	797	407	191	118	129
MAX	2521	6058	7419	7874	6586	5144	3203	1848	1053	363	234	452
(WY)	1948	1974	1965	1953	1949	1961	1963	1963	1993	1983	1968	1941
MIN	62.0	108	182	211	607	604	550	331	178	116	65.6	60.1
(WY)	1988	1994	1977	1977	1977	1941	1977	1966	1966	1992	1966	1965

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1940 - 1995
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ANNUAL TOTAL	416476		650281			
ANNUAL MEAN	1141		1782		1462	
HIGHEST ANNUAL MEAN					2541	1974
LOWEST ANNUAL MEAN					431	1977
HIGHEST DAILY MEAN	11200	Dec 17	15500	Jan 14	36100	Dec 22 1964
LOWEST DAILY MEAN	58	Oct 8	58	Oct 8	47	Sep 26 1965
ANNUAL SEVEN-DAY MINIMUM	58	Oct 7	58	Oct 7	51	Sep 25 1965
ANNUAL RUNOFF (AC-FT)	826100		1290000		1059000	
ANNUAL RUNOFF (CFSM)	3.42		5.33		4.38	
ANNUAL RUNOFF (INCHES)	46.39		72.43		59.49	
10 PERCENT EXCEEDS	2900		4660		3750	
50 PERCENT EXCEEDS	543		1140		640	
90 PERCENT EXCEEDS	74		81		97	

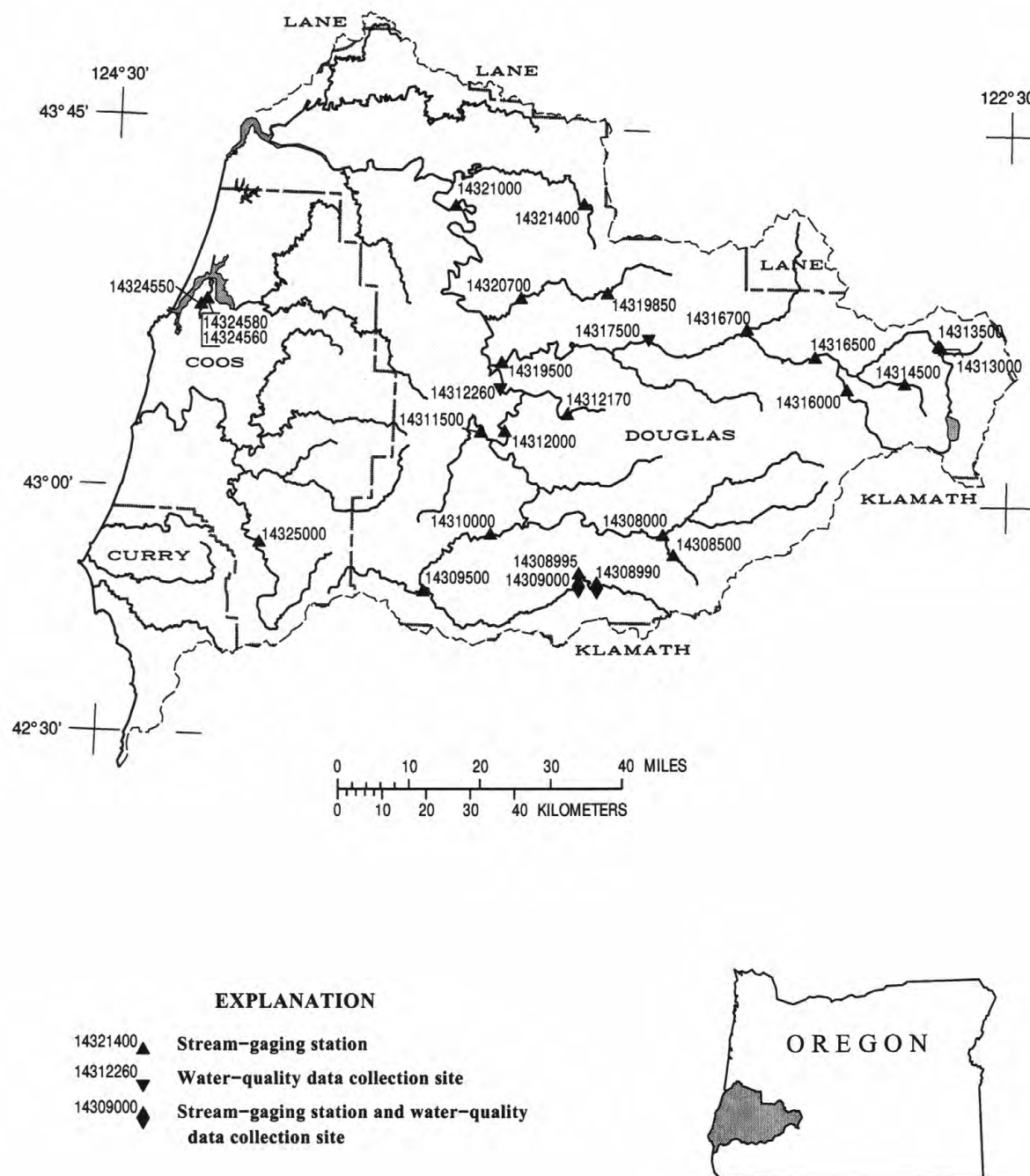


Figure 28. Location of surface-water and water-quality stations in the Umpqua, Coos and Coquille River Basins.

PACIFIC OCEAN

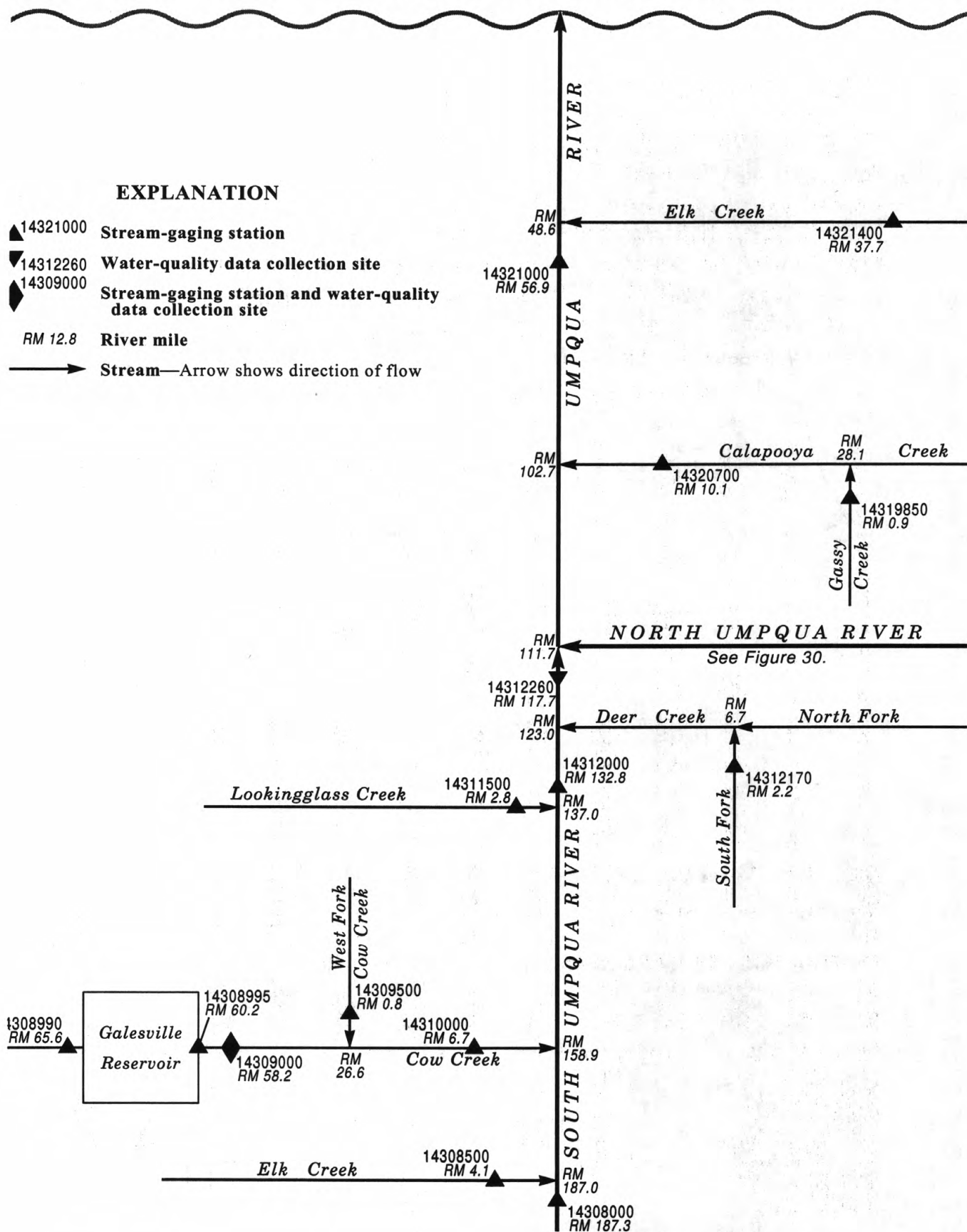


Figure 29. Schematic diagram showing gaging stations in the Umpqua and the South Fork Umpqua River Basins.

UMPQUA RIVER BASIN

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14308000 SOUTH UMPQUA RIVER AT TILLER, OR

LOCATION.--Lat 42°55'50", long 122°56'50", in NE 1/4 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 and crest-stage gage. Datum of gage is 991.8 ft above sea level (river-profile survey). Prior to Oct. 1, 1939, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. No regulation. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--57 years, (water years 1911, 1940-95), 1,010 ft³/s, 30.58 in/yr, 732,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,200 ft³/s Dec. 22, 1964, gage height, 25.72 ft; minimum discharge observed, 20 ft³/s Sept. 3, 4, 1911.

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. 1	0800	8,180	9.29	Jan. 14	1330	8,760	9.62
Jan. 9	1000	*14,300	*12.38	Feb. 1	2000	9,170	9.85

Minimum discharge, 37 ft³/s Oct. 11-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	157	6770	916	7480	789	846	1960	485	341	122	72
2	50	291	4000	781	6110	730	780	2880	522	315	118	69
3	45	189	2430	690	3660	768	725	2550	457	292	115	68
4	42	310	1630	627	2850	757	696	2200	421	274	113	67
5	40	1040	1180	605	2370	768	734	2150	444	255	111	67
6	39	555	946	845	2000	723	1020	1970	548	252	107	66
7	39	496	771	947	1710	674	1540	1850	824	253	108	65
8	39	310	643	1750	1460	655	1920	1620	712	259	115	65
9	39	536	556	9150	1240	1660	2040	1400	576	410	107	65
10	38	679	508	7900	1080	2470	1930	1300	511	608	104	64
11	37	361	499	5130	961	2640	1930	1390	539	387	104	62
12	37	271	546	4560	920	1940	2060	1540	479	327	103	61
13	37	242	536	5570	964	1840	4490	1390	435	292	99	60
14	51	208	523	7680	849	1990	3850	1210	499	261	95	59
15	130	191	645	5950	755	3180	2780	1090	1500	239	93	58
16	100	531	1010	4020	696	2580	2160	1010	1250	224	91	58
17	68	673	1730	2820	1260	1980	1860	935	932	212	91	58
18	57	463	2970	2530	3720	2610	1960	880	951	200	95	57
19	53	318	2430	2670	2510	3160	1730	819	1510	203	91	56
20	50	1110	2040	2270	2020	3720	2070	786	1790	197	88	56
21	49	1110	1760	1890	1700	3120	2210	768	1430	182	84	55
22	54	646	1560	1600	1460	2470	2130	747	1130	171	82	53
23	58	484	1420	1400	1300	2010	2020	709	921	164	79	52
24	52	953	1380	1280	1220	1680	1880	675	779	158	79	52
25	49	2580	1280	1160	1140	1430	1670	721	676	153	79	57
26	47	1440	1230	1050	1020	1250	1440	640	591	150	77	82
27	49	1060	2040	971	935	1130	1420	598	518	145	76	81
28	380	1160	2240	1190	856	1060	1620	570	458	140	75	91
29	196	1210	1730	1670	---	988	1630	547	407	133	74	146
30	112	3890	1350	2400	---	912	1830	532	369	128	73	129
31	87	---	1090	4840	---	848	---	510	---	126	72	---
TOTAL	2185	23464	49443	86862	54246	52532	54971	37947	22664	7451	2920	2051
MEAN	70.5	782	1595	2802	1937	1695	1832	1224	755	240	94.2	68.4
MAX	380	3890	6770	9150	7480	3720	4490	2880	1790	608	122	146
MIN	37	157	499	605	696	655	696	510	369	126	72	52
AC-FT	4330	46540	98070	172300	107600	104200	109000	75270	44950	14780	5790	4070
CFSM	.16	1.74	3.55	6.24	4.31	3.77	4.08	2.73	1.68	.54	.21	.15
IN.	.18	1.94	4.10	7.20	4.49	4.35	4.55	3.14	1.88	.62	.24	.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1995, BY WATER YEAR (WY)

MEAN	195	1041	1917	2027	1967	1734	1397	1053	523	156	77.7	75.7
MAX	1791	3976	7480	4513	4907	4776	2756	2093	1643	301	206	364
(WY)	1951	1974	1965	1972	1986	1972	1993	1963	1953	1953	1976	1986
MIN	34.5	48.2	66.6	89.6	95.1	328	433	231	108	49.5	29.9	38.9
(WY)	1988	1940	1977	1977	1977	1992	1968	1992	1992	1940	1940	1992

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1911 - 1995
ANNUAL TOTAL	211562	396736	
ANNUAL MEAN	580	1087	1010
HIGHEST ANNUAL MEAN			1762
LOWEST ANNUAL MEAN			268
HIGHEST DAILY MEAN	6770	9150	36500
LOWEST DAILY MEAN	30	37	20
ANNUAL SEVEN-DAY MINIMUM	31	38	26
ANNUAL RUNOFF (AC-FT)	419600	786900	732000
ANNUAL RUNOFF (CFSM)	1.29	2.42	2.25
ANNUAL RUNOFF (INCHES)	17.53	32.87	30.58
10 PERCENT EXCEEDS	1490	2470	2390
50 PERCENT EXCEEDS	322	696	506
90 PERCENT EXCEEDS	39	61	58

UMPOUA RIVER BASIN

14308500 ELK CREEK NEAR DREW. OR

LOCATION.--Lat 42°53'25", long 122°55'00", in SW 1/4 sec.11, T.31 S., R.2 W., Douglas County, Hydrologic Unit 17100302, on right bank 100 ft downstream from Dixon Creek, 0.1 mi upstream from Drew Creek, 1.3 mi northwest of Drew, 3.3 mi southeast of Tiller, and at mile 4.1.

DRAINAGE AREA. - - 54.4 mi².

PERIOD OF RECORD.--September 1954 to September 1982, October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,279.25 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. No regulation. Several diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--37 years (water years 1955-82, 1987-95), 76.8 ft³/s, 19.19 in/yr, 55,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,120 ft³/s Jan. 9, 1995, gage height, 11.09 ft, from rating curve extended above 2,900 ft³/s on basis of slope-area measurement at gage height 10.34 ft; no flow at times several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 11.8 ft, from floodmarks, probably for flood in January or November 1953, discharge, about 11,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Jan. 9	0830	*9,120	*11.09	Mar. 20	0730	1,610	6.64
Jan. 14	1030	1,780	6.83				

Minimum discharge, 0.29 ft³/s Sept. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	13	337	62	427	31	85	183	13	9.6	1.7	.67
2	.60	16	239	51	356	30	75	229	13	8.8	1.6	.68
3	.57	10	160	44	213	36	66	183	13	8.2	1.7	.67
4	.57	25	111	37	155	37	56	146	12	7.5	1.5	.73
5	.57	54	82	37	120	39	54	130	14	7.1	1.4	.93
6	.57	19	69	45	98	37	57	128	17	7.4	1.3	.80
7	.57	14	55	69	84	34	114	138	27	7.6	1.5	.63
8	.58	9.2	44	334	73	39	155	114	22	9.7	1.9	.69
9	.60	56	37	2950	62	417	187	93	18	13	1.8	.61
10	.62	44	33	1250	54	386	162	80	16	12	1.7	.62
11	.67	20	33	653	48	309	172	75	18	8.8	1.8	.58
12	.72	16	38	781	45	187	178	89	15	7.7	1.6	.57
13	.75	16	33	845	47	287	405	74	14	6.8	1.4	.50
14	1.3	12	37	1350	42	364	372	63	21	5.9	1.3	.58
15	2.6	11	52	913	37	452	253	54	47	5.4	1.2	.50
16	2.3	65	108	451	35	262	183	48	42	4.9	1.2	.55
17	1.7	92	158	274	72	176	155	43	37	4.4	1.3	.69
18	1.4	54	234	217	152	308	175	38	34	4.1	1.4	.71
19	1.1	38	181	175	110	267	150	35	33	4.2	1.3	.61
20	.95	154	142	142	86	980	208	32	52	4.1	.97	.62
21	.96	103	114	117	72	473	219	29	49	3.6	1.1	.58
22	1.1	62	95	99	61	300	188	27	38	3.3	1.1	.50
23	1.1	50	87	100	54	213	161	24	29	3.2	.98	.46
24	1.0	157	87	93	48	179	135	23	24	3.1	.94	.34
25	1.0	407	89	82	43	162	109	22	20	3.0	1.0	.69
26	1.0	159	82	74	39	133	89	20	18	3.1	.99	1.5
27	1.7	142	109	72	36	114	101	18	15	2.7	.98	2.0
28	7.8	143	155	71	33	102	109	17	13	2.3	.76	2.1
29	6.4	133	117	76	---	93	118	16	11	2.0	.70	2.6
30	3.7	267	90	120	---	84	137	15	9.9	2.0	.69	2.5
31	2.6	---	74	288	---	76	---	14	---	2.0	.66	---
TOTAL	47.73	2361.2	3282	11872	2702	6607	4628	2200	704.9	177.5	39.47	26.21
MEAN	1.54	78.7	106	383	96.5	213	154	71.0	23.5	5.73	1.27	.87
MAX	7.8	407	337	2950	427	980	405	229	52	13	1.9	2.6
MIN	.57	9.2	33	37	33	30	54	14	9.9	2.0	.66	.34
AC-FT	95	4680	6510	23550	5360	13100	9180	4360	1400	352	78	52
CFSM	.03	1.45	1.95	7.04	1.77	3.92	2.84	1.30	.43	.11	.02	.02
IN.	.03	1.61	2.24	8.12	1.85	4.52	3.16	1.50	.48	.12	.03	.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1995, BY WATER YEAR (WY)

MEAN	7.22	66.4	159	206	156	156	98.9	50.7	18.4	3.99	1.55	1.81
MAX	62.8	449	651	644	382	356	193	164	106	10.8	10.2	18.7
(WY)	1963	1974	1965	1974	1958	1974	1956	1963	1993	1978	1976	1978
MIN	.62	1.89	3.11	4.94	5.05	15.0	20.1	6.94	1.96	.52	.008	.043
(WY)	1988	1994	1977	1977	1977	1992	1990	1987	1987	1994	1992	1992

SUMMARY STATISTICS

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1955 - 1995	
ANNUAL TOTAL	12142.79		34648.01			
ANNUAL MEAN	33.3		94.9		76.8	
HIGHEST ANNUAL MEAN					180	1974
LOWEST ANNUAL MEAN					16.0	1977
HIGHEST DAILY MEAN	407	Nov 25	2950	Jan 9	6670	Jan 15 1974
LOWEST DAILY MEAN	.00	Aug 2	.34	Sep 24	.00	Sep 4 1974
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 8	.54	Sep 19	.00	Sep 16 1974
ANNUAL RUNOFF (AC-FT)	24090		68720		55660	
ANNUAL RUNOFF (CFSM)	.61		1.74		1.41	
ANNUAL RUNOFF (INCHES)	8.30		23.69		19.19	
10 PERCENT EXCEEDS	92		215		189	
50 PERCENT EXCEEDS	14		37		19	
90 PERCENT EXCEEDS	.00		.72		.87	

14308990 COW CREEK ABOVE GALESVILLE RESERVOIR, NEAR AZALEA, OR

LOCATION.--Lat 42°49'24", long 123°07'29", in SW 1/4 NW 1/4 sec.1, T.32 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on left bank, about 600 ft upstream from bridge on Houck Ranch Road (BLM), 1.1 mi downstream from Sugar Creek, 3.2 mi south of Galesville Dam, 6.9 mi northeast of Azalea, and at mile 65.6

DRAINAGE AREA.--64.7 mi².

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,900 ft above sea level, from topographic map.

REMARKS.--Records good. No regulation or diversion upstream from station. Continuous water-quality records for the period November 1985 to September 1989 have been collected at this location.

AVERAGE DISCHARGE.--10 years (water years 1986-95), 64.5 ft³/s, 13.55 in/yr, 46,730 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 6,980 ft³/s Jan. 9, 1995, gage height 12.04 ft, from rating curve extended above 2,450 ft³/s; maximum gage height 12.30 ft Jan. 9, 1995 (from outside highwater mark); minimum discharge, 3.5 ft³/s Dec. 26, 1989, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1927 occurred Jan. 15, 1974. Stage and discharge not known at this site, but was 10,600 ft³/s at site 7.4 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 9	1000	*6,980	12.04	Jan. 14	1100	2,230	6.74
Jan. 9	1000	(a)	*12.30	Mar. 20	0800	1,730	5.94
Jan. 12	0630	1,100	4.74				

Minimum discharge, 5.5 ft³/s Oct. 5.
a From outside highwater mark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	e21	402	73	499	68	185	244	42	28	15	11
2	6.7	e50	254	65	425	67	159	248	41	27	14	11
3	6.5	17	163	58	282	74	139	205	40	26	14	10
4	6.0	40	106	52	223	70	129	182	38	26	13	11
5	5.9	92	81	50	196	72	e125	173	42	25	13	11
6	5.8	31	66	52	165	69	138	187	46	26	13	11
7	5.9	25	54	78	149	66	207	182	64	26	14	11
8	6.1	19	44	385	133	74	229	163	48	27	15	11
9	6.0	119	40	3070	120	424	231	153	42	44	13	11
10	5.8	54	37	1510	106	366	215	142	40	33	13	11
11	5.9	29	39	831	97	282	215	134	44	29	14	10
12	6.1	25	43	940	95	211	225	129	39	27	13	10
13	5.9	22	39	978	97	307	337	117	37	26	13	10
14	8.4	18	39	1670	89	428	330	106	48	24	12	9.8
15	14	26	45	983	80	493	274	97	60	24	12	9.6
16	10	74	118	544	75	e318	226	91	50	23	12	9.7
17	8.2	65	206	371	144	242	211	85	48	22	12	10
18	7.5	44	310	306	244	338	226	80	51	21	13	10
19	7.0	31	215	273	166	295	194	75	48	21	12	10
20	6.8	51	160	228	e136	e920	235	71	58	20	11	10
21	6.7	55	131	193	e116	523	226	67	51	20	11	9.9
22	6.8	40	112	171	e107	409	206	64	46	19	11	9.5
23	7.0	33	101	163	e97	325	187	61	42	19	11	8.9
24	6.7	85	99	148	90	275	171	58	39	19	11	9.0
25	6.7	356	103	135	83	251	152	57	37	18	11	12
26	6.7	116	96	127	78	220	137	53	36	19	11	15
27	7.3	83	124	127	73	206	155	51	34	18	11	13
28	23	90	175	125	70	199	150	49	32	17	11	14
29	12	75	137	130	---	187	155	47	30	16	11	16
30	8.0	174	103	195	---	181	162	45	29	16	11	16
31	8.3	---	85	386	---	166	---	43	---	16	11	---
TOTAL	240.6	1960	3727	14417	4235	8126	5931	3459	1302	722	382	331.4
MEAN	7.76	65.3	120	465	151	262	198	112	43.4	23.3	12.3	11.0
MAX	23	356	402	3070	499	920	337	248	64	44	15	16
MIN	5.8	17	37	50	70	66	125	43	29	16	11	8.9
AC-FT	477	3890	7390	28600	8400	16120	11760	6860	2580	1430	758	657
CFSM	.12	1.01	1.86	7.19	2.34	4.05	3.06	1.72	.67	.36	.19	.17
IN.	.14	1.13	2.14	8.29	2.43	4.67	3.41	1.99	.75	.42	.22	.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1995, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	11.0	39.6	69.1	154	142	153	87.0	56.1	32.5	14.9
MAX	17.1	102	155	465	408	315	200	112	81.6	24.3
(WY)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
MIN	6.41	12.2	18.2	45.2	51.1	34.2	32.5	20.8	12.7	7.03
(WY)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1986 - 1995

ANNUAL TOTAL	13144.1	44833.0	64.5
ANNUAL MEAN	36.0	123	123
HIGHEST ANNUAL MEAN			26.6
LOWEST ANNUAL MEAN			26.6
HIGHEST DAILY MEAN	402	3070	3070
LOWEST DAILY MEAN	4.2	5.8	4.2
ANNUAL SEVEN-DAY MINIMUM	4.5	5.9	4.5
ANNUAL RUNOFF (AC-FT)	26070	88930	46730
ANNUAL RUNOFF (CFSM)	.56	1.90	1.00
ANNUAL RUNOFF (INCHES)	7.56	25.78	13.55
10 PERCENT EXCEEDS	82	262	153
50 PERCENT EXCEEDS	24	52	28
90 PERCENT EXCEEDS	5.2	10	7.3

e Estimated

UMPUA RIVER BASIN

14308995 GALESVILLE RESERVOIR NEAR AZALEA, OR

LOCATION.--Lat 42°50'56", long 123°10'40", in NE 1/4 sec.28, T.31 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on the upstream face of Galesville dam to the right side of the spillway section, 1.2 mi downstream from McGinnis Creek, 5.6 mi northeast of Azalea, and at mile 60.2.

DRAINAGE AREA.--74.3 mi².

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Douglas County).

REMARKS.--Reservoir is formed by a roller compacted concrete dam; storage began Oct. 7, 1985. Capacity, 42,220 acre-ft between elevations 1,780.0 ft (bottom of evacuation outlet) and 1,881.5 ft (crest of spillway). Dead storage, 1,800 acre-ft below elevation 1,780.0 ft. Reservoir is used for irrigation, power generation, flood control, and recreation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Douglas County Water Resources Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 41,790 acre-ft May 9, 10, 1993, elevation, 1,881.36 ft; minimum contents, 7,240 acre-ft Jan. 9, 10, 1991, elevation, 1,805.03 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,760 acre-ft May 5, elevation, 1,879.73 ft; minimum contents, 8,050 acre-ft Nov. 15, elevation, 1,807.86 ft.

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

1,780	1,800	1,820	11,960	1,860	29,480
1,790	3,590	1,830	15,660	1,870	34,970
1,800	5,890	1,840	19,820	1,880	40,930
1,810	8,700	1,850	24,420	1,885	44,130

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1815.38	1809.25	1813.90	1822.20	1845.10	1851.88	1874.57	1879.32	1877.51	1876.45	1869.76	1860.40
2	1815.16	1809.10	1815.05	1822.22	1845.31	1851.90	1874.83	1879.58	1877.46	1876.29	1869.48	1860.07
3	1814.93	1808.93	1815.64	1822.21	1845.91	1851.96	1875.03	1879.64	1877.42	1876.13	1869.19	1859.74
4	1814.72	1808.90	1815.93	1822.17	1846.55	1851.99	1875.18	1879.63	1877.38	1875.97	1868.90	1859.41
5	1814.49	1808.82	1816.08	1822.15	1847.11	1852.03	1875.34	1879.72	1877.35	1875.81	1868.61	1859.07
6	1814.28	1808.69	1816.15	1822.13	1847.55	1852.05	1875.50	1879.72	1877.39	1875.65	1868.32	1858.75
7	1814.06	1808.59	1816.14	1822.23	1847.92	1852.04	1875.84	1879.71	1877.45	1875.48	1868.03	1858.40
8	1813.85	1808.45	1816.07	1823.77	1848.21	1852.11	1876.19	1879.62	1877.46	1875.34	1867.75	1858.07
9	1813.64	1808.41	1815.97	1838.65	1848.42	1853.69	1876.44	1879.52	1877.43	1875.22	1867.45	1857.74
10	1813.41	1808.41	1815.88	1845.50	1848.60	1855.00	1876.73	1879.34	1877.41	1875.05	1867.17	1857.41
11	1813.19	1808.30	1815.80	1848.90	1848.74	1855.96	1876.95	1879.20	1877.40	1874.87	1866.90	1857.06
12	1812.97	1808.24	1815.73	1852.01	1848.91	1856.59	1877.17	1879.07	1877.36	1874.68	1866.60	1856.72
13	1812.75	1808.12	1815.62	1855.47	1849.06	1857.58	1877.67	1878.84	1877.33	1874.48	1866.31	1856.37
14	1812.61	1808.01	1815.49	1861.18	1849.15	1859.04	1878.08	1878.64	1877.38	1874.25	1866.02	1856.01
15	1812.46	1807.89	1815.44	1863.13	1849.22	1860.74	1878.31	1878.38	1877.42	1874.02	1865.72	1855.65
16	1812.26	1808.11	1815.73	1862.81	1849.24	1861.78	1878.40	1878.17	1877.43	1873.78	1865.42	1855.29
17	1812.06	1808.23	1816.49	1861.88	1849.58	1862.52	1878.46	1878.00	1877.45	1873.55	1865.13	1854.93
18	1811.85	1808.19	1817.80	1860.66	1850.26	1863.59	1878.67	1877.89	1877.47	1873.32	1864.84	1854.58
19	1811.64	1808.16	1818.59	1859.42	1850.68	1864.49	1878.74	1877.83	1877.49	1873.08	1864.54	1854.21
20	1811.41	1808.14	1819.12	1857.84	1850.98	1867.96	1878.97	1877.80	1877.50	1872.84	1864.25	1853.85
21	1811.20	1808.18	1819.46	1856.01	1851.22	1869.43	1879.24	1877.77	1877.47	1872.58	1863.94	1853.48
22	1810.98	1808.15	1819.71	1854.10	1851.40	1870.19	1879.34	1877.74	1877.43	1872.33	1863.64	1853.12
23	1810.77	1808.11	1819.91	1852.00	1851.54	1870.65	1879.36	1877.73	1877.37	1872.08	1863.33	1852.77
24	1810.55	1808.34	1820.15	1849.04	1851.65	1871.26	1879.35	1877.72	1877.29	1871.83	1863.01	1852.45
25	1810.32	1810.18	1820.36	1846.04	1851.74	1871.87	1879.34	1877.72	1877.21	1871.57	1862.68	1852.19
26	1810.08	1810.60	1820.54	1845.46	1851.80	1872.35	1879.27	1877.71	1877.11	1871.33	1862.36	1851.94
27	1809.97	1810.82	1820.91	1845.26	1851.84	1872.77	1879.25	1877.70	1877.01	1871.08	1862.03	1851.71
28	1809.85	1811.07	1821.47	1845.05	1851.86	1873.19	1879.16	1877.69	1876.90	1870.82	1861.70	1851.51
29	1809.68	1811.24	1821.80	1844.86	---	1873.59	1879.10	1877.67	1876.75	1870.54	1861.38	1851.34
30	1809.48	1811.96	1822.00	1844.74	---	1873.93	1879.10	1877.64	1876.60	1870.28	1861.05	1851.18
31	1809.21	---	1822.13	1844.85	---	1874.25	---	1877.60	---	1870.02	1860.73	---
MAX	1815.38	1811.96	1822.13	1863.13	1851.86	1874.25	1879.36	1879.72	1877.51	1876.45	1869.76	1860.40
MIN	1809.21	1807.89	1813.90	1822.13	1845.10	1851.88	1874.57	1877.60	1876.60	1870.02	1860.73	1851.18
(†)	8460	9300	12700	22000	25330	37440	40370	39450	38840	34980	29860	24990
(‡)	-2000	+840	+3400	+9300	+3330	+12110	+2930	-920	-610	-3860	-5120	-4870

CAL YR 1994 MAX 1842.85 MIN 1807.89 AC-FT† -7590
WTR YR 1995 MAX 1879.72 MIN 1807.89 AC-FT† +14530

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

UMPQUA RIVER BASIN

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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.

WATER-DISCHARGE RECORDS

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 above sea level (Douglas County Road Department bench mark). Prior to July 19, 1949, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow regulated since Oct. 7, 1985 by Galesville Reservoir (station 14308995). Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--65 years (water years 1930-31, 1933-95), 106 ft³/s, 18.45 in/yr, 76,800 acre-ft/yr, adjusted for storage.

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 discharge, 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.--Maximum discharge, 1,060 ft³/s Jan. 24, gage height, 6.38 ft; minimum discharge, 31 ft³/s Mar. 20, result of regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	58	75	e65	e429	71	91	204	70	73	86	94
2	39	66	69	e65	e367	71	91	189	53	73	87	94
3	38	46	70	e64	e159	72	93	204	51	72	89	94
4	39	55	66	e65	e83	72	92	210	50	72	89	94
5	39	116	65	e64	e67	72	89	169	56	71	89	92
6	39	58	66	e65	e66	72	89	204	51	70	89	92
7	39	42	64	65	e66	71	102	206	50	73	90	92
8	38	40	66	70	e67	72	148	206	49	77	90	91
9	39	121	64	205	e66	78	191	206	48	78	90	93
10	39	64	63	162	e67	84	151	205	48	79	89	92
11	39	50	63	122	e69	78	173	204	49	79	90	90
12	39	39	63	258	e67	77	187	178	49	80	91	92
13	39	39	63	169	e68	77	204	199	50	82	91	93
14	40	39	62	280	e69	83	219	174	52	85	90	93
15	40	44	62	574	e66	90	225	184	51	89	89	93
16	40	66	62	739	e73	82	222	167	51	89	89	93
17	39	73	62	720	e80	81	223	145	51	89	88	93
18	39	61	62	721	e74	80	187	123	52	89	87	93
19	39	44	62	676	e73	80	207	102	59	89	87	94
20	40	65	62	709	e71	106	192	90	64	89	86	94
21	39	61	62	723	e71	174	171	85	65	89	88	94
22	39	51	62	712	e71	229	201	79	66	89	90	92
23	39	48	65	731	e71	223	201	73	65	89	88	90
24	39	66	67	900	71	146	192	67	65	89	91	87
25	39	79	e68	866	71	112	171	64	64	89	94	81
26	41	68	e68	294	71	112	174	61	63	89	94	76
27	43	66	e70	178	71	109	191	59	63	88	94	70
28	44	66	e71	179	71	100	200	59	68	88	94	65
29	43	64	e70	178	---	91	203	58	72	87	94	58
30	42	67	e72	231	---	91	181	58	73	87	94	53
31	42	---	e67	e353	---	91	---	57	---	87	94	---
TOTAL	1233	1822	2033	11203	2715	3047	5061	4289	1718	2569	2791	2622
MEAN	39.8	60.7	65.6	361	97.0	98.3	169	138	57.3	82.9	90.0	87.4
MAX	44	121	75	900	429	229	225	210	73	89	94	94
MIN	38	39	62	64	66	71	89	57	48	70	86	53
AC-FT	2450	3610	4030	22220	5390	6040	10040	8510	3410	5100	5540	5200
MEAN†	7.32	74.8	121	513	157	295	218	123	47.1	20.2	6.83	5.55
CFSM†	0.09	0.96	1.55	6.58	2.01	3.78	2.79	1.58	0.60	0.26	0.09	0.07
IN.†	0.11	1.07	1.79	7.58	2.10	4.36	3.12	1.82	0.67	0.30	0.10	0.08
AC-FT†	450	4450	7430	31520	8720	18150	12970	7590	2800	1240	420	330

CAL YR 1994 TOTAL 17655 MEAN 48.4 MAX 121 MIN 34 AC-FT 35020 MEAN† 37.9 CFSM† 0.49 IN.† 6.60 AC-FT† 27430
WTR YR 1995 TOTAL 41103 MEAN 113 MAX 900 MIN 38 AC-FT 81530 MEAN† 133 CFSM† 1.71 IN.† 23.10 AC-FT† 96060

e Estimated

† Adjusted for change in contents in Galesville Reservoir.

UMPQUA RIVER BASIN
14309000 COW CREEK NEAR AZALEA, OR--Continued
WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: November 1985 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1985.

EXTREMES FOR PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: Maximum recorded, 15.1 mg/L Feb. 7, 1989, caused by operation of bypass valve at dam; minimum, 0.9 mg/L July 30, 1988.

EXTREMES FOR CURRENT YEAR.--

DISSOLVED OXYGEN: Maximum recorded, 11.4 mg/L Apr. 3; minimum recorded, 1.6 mg/L Feb. 2, may have been caused by manipulation of release gate at dam.

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	9.0	7.8	8.2	7.7	7.6	7.6	9.8	9.4	9.6
2	---	---	---	8.6	8.1	8.3	7.8	7.6	7.7	9.9	9.5	9.7
3	---	---	---	9.6	8.5	9.1	7.9	7.6	7.8	9.9	9.6	9.7
4	---	---	---	---	---	---	8.0	7.6	7.8	10.0	9.6	9.8
5	---	---	---	---	---	---	8.0	7.8	7.9	10.0	9.7	9.9
6	---	---	---	---	---	---	8.1	7.8	7.9	10.1	9.8	9.9
7	---	---	---	---	---	---	8.1	7.8	8.0	10.2	9.9	10.1
8	---	---	---	---	---	---	8.2	7.9	8.0	10.3	10.0	10.1
9	---	---	---	---	---	---	8.3	7.9	8.1	10.2	10.0	10.1
10	---	---	---	---	---	---	8.3	7.9	8.1	10.2	10.1	10.1
11	---	---	---	---	---	---	8.3	8.1	8.2	10.3	10.0	10.1
12	---	---	---	---	---	---	8.4	8.0	8.3	10.3	9.4	10.1
13	---	---	---	---	---	---	8.5	8.0	8.3	10.3	10.0	10.1
14	---	---	---	---	---	---	8.5	8.3	8.4	10.2	10.0	10.1
15	---	---	---	---	---	---	8.6	8.4	8.5	10.2	8.9	10.0
16	---	---	---	9.5	8.2	8.7	8.6	8.4	8.5	10.3	10.0	10.1
17	---	---	---	9.3	8.8	9.0	8.7	8.5	8.6	10.2	10.0	10.1
18	---	---	---	9.0	8.6	8.8	8.7	8.5	8.6	10.4	10.0	10.2
19	---	---	---	8.8	8.4	8.6	8.8	8.5	8.7	10.6	10.3	10.4
20	---	---	---	8.7	8.3	8.5	8.9	8.6	8.8	10.7	10.4	10.6
21	---	---	---	8.5	8.2	8.3	8.9	8.8	8.8	10.8	10.5	10.7
22	---	---	---	8.4	8.1	8.2	9.1	8.7	9.0	10.9	10.6	10.8
23	---	---	---	8.3	8.0	8.1	9.2	8.9	9.0	11.0	10.7	10.8
24	---	---	---	8.1	7.9	8.0	9.2	8.9	9.1	11.2	10.9	11.1
25	---	---	---	8.0	7.8	7.9	9.3	9.0	9.1	11.2	10.8	11.0
26	7.5	6.5	6.6	7.9	7.7	7.8	9.3	9.1	9.2	11.1	10.8	10.9
27	6.9	6.7	6.7	7.8	7.5	7.7	9.4	9.1	9.2	11.1	10.6	10.8
28	6.8	6.6	6.7	7.8	7.4	7.6	9.4	9.2	9.3	10.9	10.6	10.7
29	6.9	6.7	6.8	7.8	7.5	7.6	9.6	9.3	9.4	10.7	10.4	10.6
30	7.0	6.5	6.8	7.8	7.5	7.6	9.7	9.3	9.5	10.7	10.3	10.5
31	7.8	7.0	7.4	---	---	---	9.8	9.4	9.6	10.5	10.2	10.4
MONTH	---	---	---	---	---	---	9.8	7.6	8.5	11.2	8.9	10.3

UMPQUA RIVER BASIN

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14309000 COW CREEK NEAR AZALIA, OR--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	10.4	10.1	10.3	9.8	9.2	9.4	11.3	10.8	11.0	---	---	---
2	10.4	1.6	9.9	9.6	9.3	9.4	11.3	10.9	11.1	---	---	---
3	10.3	10.0	10.1	9.6	9.4	9.5	11.4	10.9	11.2	---	---	---
4	10.2	9.9	10.0	9.6	9.4	9.5	11.2	10.0	11.0	---	---	---
5	10.0	9.8	9.9	9.5	9.3	9.4	11.2	10.8	11.0	---	---	---
6	9.9	9.6	9.8	---	---	---	10.9	9.7	10.1	---	---	---
7	9.8	9.6	9.7	---	---	---	10.1	9.4	9.9	---	---	---
8	10.0	9.5	9.8	---	---	---	10.0	9.4	9.6	---	---	---
9	10.0	9.3	9.8	---	---	---	9.6	9.4	9.5	---	---	---
10	10.0	9.5	9.8	---	---	---	9.6	9.1	9.4	---	---	---
11	10.0	9.6	9.8	---	---	---	9.5	9.2	9.4	---	---	---
12	10.0	9.6	9.8	---	---	---	9.4	8.9	9.2	---	---	---
13	9.9	9.5	9.7	---	---	---	9.4	8.9	9.1	7.7	6.8	7.2
14	9.7	9.5	9.6	---	---	---	9.1	8.8	9.0	8.0	7.3	7.7
15	9.8	9.4	9.6	---	---	---	8.9	8.7	8.8	8.2	7.4	7.8
16	9.9	9.4	9.6	---	---	---	9.2	8.5	8.7	8.1	7.7	7.9
17	9.8	9.6	9.7	---	---	---	8.8	8.5	8.6	8.4	7.8	8.1
18	9.9	9.6	9.7	---	---	---	8.6	8.2	8.5	8.6	7.9	8.2
19	9.9	9.3	9.6	---	---	---	8.6	7.9	8.2	9.0	3.5	8.1
20	9.8	9.5	9.7	---	---	---	8.1	7.9	8.0	9.0	8.2	8.5
21	9.9	9.6	9.7	9.7	9.4	9.6	8.1	7.8	7.9	9.3	8.4	8.8
22	9.8	9.4	9.7	9.8	9.4	9.6	8.1	7.7	7.9	9.8	4.7	8.6
23	10.0	9.5	9.8	9.8	9.5	9.6	8.0	7.7	7.9	9.5	8.6	9.1
24	10.2	9.7	10.0	9.9	9.6	9.8	---	---	---	---	---	---
25	10.3	9.2	10.1	10.7	9.7	10.2	---	---	---	---	---	---
26	9.4	9.1	9.3	10.7	9.6	10.2	---	---	---	---	---	---
27	9.5	9.2	9.4	10.8	10.2	10.6	---	---	---	---	---	---
28	9.5	9.1	9.3	11.0	10.6	10.8	---	---	---	---	---	---
29	---	---	---	11.1	10.6	10.8	---	---	---	---	---	---
30	---	---	---	11.1	10.6	10.8	---	---	---	---	---	---
31	---	---	---	11.2	9.7	10.9	---	---	---	---	---	---
MONTH	10.4	1.6	9.8	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	---	---	---	8.9	5.7	8.4	7.3	6.4	6.8	7.0	6.2	6.5
2	---	---	---	8.9	4.6	8.4	7.2	4.8	6.7	6.8	6.1	6.4
3	---	---	---	8.9	5.2	8.5	7.1	6.4	6.7	6.6	6.1	6.3
4	---	---	---	9.2	5.7	8.7	6.9	5.7	6.6	6.5	6.0	6.2
5	---	---	---	9.0	5.6	8.1	7.0	6.3	6.6	6.5	2.5	6.0
6	---	---	---	7.5	7.0	7.2	7.0	6.3	6.6	6.3	5.9	6.1
7	7.2	6.3	6.7	7.5	6.9	7.2	6.9	6.4	6.6	6.3	3.4	5.9
8	7.7	6.7	7.1	7.7	3.9	7.0	6.9	2.5	6.3	7.4	5.7	6.1
9	8.0	7.1	7.6	7.2	6.8	7.0	7.8	6.2	6.9	6.2	3.2	5.7
10	8.1	7.6	7.8	7.1	3.2	6.6	7.3	7.0	7.2	6.2	2.3	5.7
11	8.5	7.8	8.1	7.0	6.6	6.8	7.9	7.0	7.3	6.1	2.5	5.6
12	8.7	8.0	8.3	7.0	2.7	6.4	7.7	7.0	7.4	5.9	4.5	5.6
13	8.5	8.0	8.3	6.8	4.3	6.5	7.7	7.0	7.4	5.9	5.0	5.5
14	8.6	8.3	8.4	7.1	4.9	6.4	7.9	5.1	7.3	5.9	3.6	5.5
15	9.0	8.4	8.7	6.6	4.2	6.2	7.7	7.2	7.4	6.1	5.4	5.7
16	9.2	8.7	8.9	6.5	3.2	6.2	7.5	7.1	7.3	6.1	5.7	5.9
17	9.4	8.8	9.1	6.7	5.8	6.4	7.5	7.1	7.3	6.2	3.1	5.8
18	9.4	9.0	9.2	6.5	4.8	6.2	7.7	4.7	7.2	6.3	5.5	6.0
19	9.6	9.1	9.3	6.4	4.9	6.2	7.7	2.6	7.1	6.3	4.0	6.0
20	9.8	4.4	8.8	6.9	3.2	6.3	7.8	6.1	7.3	6.3	5.4	6.0
21	9.6	9.0	9.3	7.3	6.5	6.8	8.3	7.0	7.7	6.5	4.7	6.1
22	9.5	5.3	8.9	7.4	6.8	7.0	7.6	4.7	7.2	6.6	3.4	6.1
23	9.5	6.1	8.4	7.3	4.8	6.9	7.6	7.1	7.3	6.7	3.8	6.2
24	8.2	7.2	7.7	7.2	2.0	6.7	7.6	5.8	7.2	6.5	5.4	6.3
25	8.3	7.5	7.8	7.1	4.3	6.7	7.6	7.0	7.3	6.5	5.6	6.3
26	8.3	4.8	7.7	7.2	5.3	6.8	7.6	5.4	7.2	6.4	3.5	6.0
27	8.6	5.2	7.9	7.1	5.0	6.7	7.6	5.8	7.2	6.2	5.0	5.9
28	8.6	3.1	7.8	7.2	6.5	6.8	7.6	5.8	7.2	6.1	5.7	5.9
29	8.7	6.1	8.2	6.8	6.4	6.6	7.5	2.8	7.0	6.3	5.9	6.1
30	9.1	6.8	8.4	7.0	6.3	6.6	7.4	6.0	7.2	6.5	6.1	6.3
31	---	---	---	7.3	2.3	6.5	7.4	6.3	6.9	---	---	---
MONTH	---	---	---	9.2	2.0	6.9	8.3	2.5	7.1	7.4	2.3	6.0

UMPQUA RIVER BASIN

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14310000 COW CREEK NEAR RIDDLE, OR

LOCATION.--Lat 42°55'25", long 123°25'40", in NE 1/4 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 above sea level.

REMARKS.--No estimated daily discharges. Records good. Regulated since Oct. 7, 1985 by Galesville Reservoir (station 14308995). Many small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--31 years (water years 1955-85), 903 ft³/s, 654,200 acre-ft/yr.
10 years (water years 1986-95), 556 ft³/s, 402,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,400 ft³/s Jan. 15, 1974, gage height, 28.17 ft; minimum discharge, 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.--Maximum discharge, 34,400 ft³/s Jan. 9, gage height, 26.22 ft; minimum discharge, 50 ft³/s Oct. 4, 5, 11-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	138	3060	550	3950	491	1220	909	218	148	112	108
2	58	288	2430	510	3750	483	1060	1230	221	146	112	107
3	54	215	1740	472	2520	511	955	1170	208	143	110	107
4	52	175	1280	441	1730	479	897	1050	199	141	113	107
5	51	525	946	429	1340	538	862	953	203	141	112	107
6	52	369	765	516	1100	552	815	866	229	139	110	109
7	52	220	655	759	954	521	1030	853	234	143	112	109
8	52	158	581	3910	853	536	2320	809	236	142	112	107
9	52	850	534	21000	757	4470	3210	764	209	148	112	104
10	52	824	501	12600	676	5590	2590	731	196	154	113	103
11	51	371	498	10500	629	4370	2130	697	199	150	119	102
12	51	265	861	9880	616	3110	1870	677	189	145	118	102
13	51	238	886	8810	688	2760	2370	630	179	141	116	100
14	59	194	780	11100	642	3470	2330	618	202	141	112	107
15	80	198	866	8300	579	3740	2020	558	272	140	109	106
16	84	1630	1380	5740	552	2630	1690	540	254	139	110	106
17	70	2850	2140	3770	1170	1910	1420	507	223	138	113	107
18	64	1440	2490	3140	3020	1650	1290	461	219	133	116	107
19	62	714	2490	3110	1810	1600	1150	421	224	139	112	106
20	60	836	1690	2720	1310	6430	1300	393	233	148	109	105
21	59	1030	1240	2290	1060	5570	1630	366	248	143	107	106
22	62	681	982	1980	899	4160	1500	345	227	133	104	105
23	62	497	806	1750	793	3220	1330	321	210	131	105	103
24	62	457	700	1650	709	2520	1160	303	195	127	103	101
25	61	2490	614	1760	642	2140	1020	290	184	126	102	104
26	60	1980	549	1510	593	1860	897	277	175	130	107	107
27	65	1240	556	1270	547	1680	866	263	163	132	107	104
28	125	1370	767	1190	516	1650	851	247	156	122	107	105
29	124	1120	750	1220	---	1630	825	239	151	118	109	105
30	88	1340	672	2150	---	1540	807	230	152	115	110	105
31	78	---	598	3430	---	1400	---	221	---	112	107	---
TOTAL	2017	24703	34807	128457	34405	73211	43415	17939	6208	4248	3420	3161
MEAN	65.1	823	1123	4144	1229	2362	1447	579	207	137	110	105
MAX	125	2850	3060	21000	3950	6430	3210	1230	272	154	119	109
MTN	51	138	498	429	516	479	807	221	151	112	102	100
AC-FT	4000	49000	69040	254800	68240	145200	86110	35580	12310	8430	6780	6270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1995, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	90.0	398	755	1551	1289	1186	677	325	177	95.8
MAX	162	956	1532	4144	3226	2362	1833	579	380	140
(WY)	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
MIN	55.4	88.5	210	577	439	282	194	147	81.0	49.3
(WY)	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1986 - 1995
ANNUAL TOTAL	134094	375991	
ANNUAL MEAN	367	1030	556
HIGHEST ANNUAL MEAN			1030
LOWEST ANNUAL MEAN			270
HIGHEST DAILY MEAN	3060	Dec 1	21000
LOWEST DAILY MEAN	34	Sep 24	51
ANNUAL SEVEN-DAY MINIMUM	35	Sep 22	52
ANNUAL RUNOFF (AC-FT)	266000		745800
10 PERCENT EXCEEDS	1010		2490
50 PERCENT EXCEEDS	181		472
90 PERCENT EXCEEDS	43		103

UMPQUA RIVER BASIN

14311500 LOOKINGGLASS CREEK AT BROCKWAY, OR

LOCATION.--Lat 43°07'50", long 123°27'50", in SE 1/4 SE 1/4 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.

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 2135: Drainage area (former site).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 540 ft above sea level, 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 below 1 ft³/s, which are fair. Some regulation since January 1980 by Ben Irving Reservoir 17 mi upstream on Berry Creek, capacity, 11,200 acre-ft. Many diversions by pumping for irrigation upstream from 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; 15 years (water years 1981-95), 207 ft³/s, 150,200 acre-ft/yr. Data for the 1980 water year not included due to construction and initial filling of Ben Irving Reservoir.

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, and Aug. 6, 7, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,100 ft³/s Jan. 9, gage height, 15.65 ft; minimum discharge, 0.17 ft³/s July 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	13	898	180	741	e115	175	212	28	4.5	9.0	6.5
2	26	12	632	175	711	107	153	254	26	3.8	7.9	6.2
3	26	19	562	158	e600	115	137	242	26	3.0	6.9	7.9
4	25	24	408	146	e510	110	124	226	25	3.3	5.5	7.7
5	24	122	298	150	e440	167	126	210	26	4.3	7.3	7.4
6	25	57	280	234	e360	162	116	197	29	3.3	6.9	8.2
7	25	35	338	282	e300	149	140	173	29	2.2	6.5	8.2
8	25	24	325	784	e260	162	470	155	25	1.9	7.5	7.2
9	25	53	269	5990	e225	385	1150	143	23	1.6	7.3	8.7
10	23	105	224	3630	e200	924	776	129	22	2.8	8.3	7.4
11	24	56	201	4180	e180	741	555	130	22	5.1	8.8	6.4
12	24	39	232	3070	e170	585	436	126	18	4.5	8.9	7.1
13	24	32	215	3570	e180	532	416	110	16	2.5	8.5	7.4
14	25	26	208	3980	e165	561	405	96	24	1.6	6.0	6.6
15	27	22	202	2760	e150	586	385	86	43	.60	5.7	4.0
16	27	79	224	1980	e140	484	348	79	33	.72	6.2	6.9
17	27	583	225	1280	e260	394	298	73	26	.87	5.9	9.1
18	26	377	323	1020	e540	386	269	67	26	.38	7.5	8.5
19	26	189	362	849	e475	346	248	62	28	12	7.8	7.7
20	25	277	294	688	e400	1330	406	58	28	27	7.4	7.1
21	25	292	263	544	e330	1340	542	55	25	18	6.9	8.0
22	25	179	216	439	e290	1270	461	51	22	13	6.0	7.3
23	25	128	187	364	e240	1020	366	48	19	14	6.1	5.2
24	25	136	166	305	e210	770	296	44	16	13	5.1	6.0
25	25	549	143	264	e190	607	243	43	15	11	6.8	8.2
26	17	495	147	240	e170	490	205	40	13	10	6.5	11
27	10	354	196	237	e150	401	202	38	11	8.6	8.0	12
28	15	377	233	255	e130	339	188	36	9.6	7.6	7.4	13
29	17	311	216	245	---	292	189	34	7.9	7.9	6.3	13
30	13	321	196	475	---	252	159	32	6.1	10	6.7	15
31	12	---	172	731	---	218	---	29	---	8.7	7.2	---
TOTAL	714	5286	8855	39205	8717	15340	9984	3278	667.6	207.77	218.8	244.9
MEAN	23.0	176	286	1265	311	495	333	106	22.3	6.70	7.06	8.16
MAX	27	583	898	5990	741	1340	1150	254	43	27	9.0	15
MIN	10	12	143	146	130	107	116	29	6.1	.38	5.1	4.0
AC-FT	1420	10480	17560	77760	17290	30430	19800	6500	1320	412	434	486

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1995, BY WATER YEAR (WY)

	MEAN	25.8	209	503	490	557	358	249	69.6	22.1	7.97	7.13	10.5
MAX	86.3	809	1961	1265	1544	965	826	149	73.1	21.9	13.0	23.3	
(WY)	1987	1985	1982	1995	1983	1983	1982	1988	1993	1983	1983	1986	
MIN	7.74	7.80	33.0	122	133	54.6	38.4	15.1	4.99	3.06	4.10	5.37	
(WY)	1988	1994	1990	1981	1988	1992	1990	1987	1994	1985	1982	1987	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1981 - 1995

ANNUAL TOTAL	36521.00	92718.07	207	1982
ANNUAL MEAN	100	254	451	1994
HIGHEST ANNUAL MEAN			70.6	1994
LOWEST ANNUAL MEAN			9670	Feb 18 1983
HIGHEST DAILY MEAN	898	Dec 1		
LOWEST DAILY MEAN	.30	Jun 30	.03	Jul 16 1985
ANNUAL SEVEN-DAY MINIMUM	2.7	Jun 24	.17	Jul 11 1985
ANNUAL RUNOFF (AC-FT)	72440		150200	
10 PERCENT EXCEEDS	303		557	
50 PERCENT EXCEEDS	27		41	
90 PERCENT EXCEEDS	5.5		5.3	

e Estimated

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 and crest-stage gage. Datum of gage is 462.52 ft above sea level (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 above sea level (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 upstream from station.

AVERAGE DISCHARGE.--61 years (water years 1907-11, 1924-26, 1943-95), 2,748 ft³/s, 22.36 in/yr, 1,991,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft³/s Dec. 23, 1964, gage height, 34.28 ft; minimum discharge, 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, 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 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)
Jan. 9	unknown	*62,300	a*25.08	Jan. 14	1800	31,400	16.72

Minimum discharge, 122 ft³/s Oct. 11, 13.
a From crest-stage gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	275	10500	2340	12200	1810	3060	4050	1030	610	e360	173
2	212	542	8040	2080	13700	1700	2790	5340	987	574	e340	170
3	172	696	6370	1850	9050	1760	2520	5630	1010	555	e320	169
4	151	574	4820	1680	6520	1820	2340	4800	925	531	e300	171
5	139	1630	3550	1590	5300	1880	2270	4530	913	503	e290	168
6	132	1570	2920	1760	4430	1970	2350	4280	1010	492	e280	167
7	130	1050	2560	2260	3790	1850	2710	4150	1210	482	e260	170
8	129	851	2260	5110	3320	1780	5280	3780	1490	473	e240	170
9	126	781	1970	e40000	2890	4600	8820	3360	1240	484	230	167
10	127	2280	1760	e35000	2560	11500	7400	3100	1080	648	232	169
11	124	1380	1660	e29000	2340	9640	6280	2910	1030	788	241	164
12	127	913	1930	24900	2210	7470	5850	3110	1030	611	241	156
13	126	783	2160	22400	2450	6160	7620	2990	946	550	237	150
14	139	687	2000	30000	2360	6820	9260	2740	970	507	226	148
15	168	590	2060	24900	2130	9470	7490	2460	1380	466	207	151
16	230	1290	2430	e18200	1960	8010	6160	2290	2360	445	197	152
17	295	4780	3800	e13100	2210	6040	5090	2160	1810	428	195	164
18	233	3690	5530	e9700	8080	5380	4930	2000	1610	405	201	168
19	200	2040	6710	8860	6450	6620	4560	1860	1810	414	208	161
20	182	2160	5000	7770	4900	13300	4940	1750	2590	479	205	161
21	176	3870	4140	6510	4020	14700	6170	1670	e2310	463	196	160
22	175	2520	3470	5500	3380	10800	5790	1600	1810	430	185	159
23	177	1790	3020	4790	2940	8580	5220	1540	1500	410	177	151
24	181	1670	2770	4310	2660	6860	4670	1460	1280	403	174	150
25	187	5810	2670	4110	2490	5900	4110	1420	1120	390	171	158
26	176	5940	2400	3740	2290	5130	3580	1330	995	389	173	175
27	159	3770	2840	3330	2090	4520	3320	1220	890	403	182	200
28	206	3910	3940	3090	1930	4170	3540	1160	791	405	183	235
29	554	3480	3790	3650	---	3950	3520	1110	724	401	184	237
30	423	5410	3130	4710	---	3650	3780	1080	660	393	182	288
31	292	---	2650	8520	---	3340	---	1050	---	386	181	---
TOTAL	6069	66732	112850	334760	120650	181180	145420	81930	38511	14918	6998	5182
MEAN	196	2224	3640	10800	4309	5845	4847	2643	1284	481	226	173
MAX	554	5940	10500	40000	13700	14700	9260	5630	2590	788	360	288
MIN	124	275	1660	1590	1930	1700	2270	1050	660	386	171	148
AC-FT	12040	132400	223800	664000	239300	359400	288400	162500	76390	29590	13880	10280
CFSM	.12	1.33	2.18	6.47	2.58	3.50	2.90	1.58	.77	.29	.14	.10
IN.	.14	1.49	2.51	7.46	2.69	4.04	3.24	1.83	.86	.33	.16	.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1995, BY WATER YEAR (WY)

	MEAN	467	2724	5437	6783	6228	4770	3213	1936	891	267	136	148
MAX	6045	13590	19540	16010	15370	10950	7378	6909	3312	576	392	587	
(WY)	1951	1974	1956	1956	1958	1974	1963	1963	1953	1953	1993	1986	
MIN	103	190	184	262	341	882	589	446	142	52.6	40.2	69.3	
(WY)	1988	1953	1977	1977	1977	1992	1926	1926	1926	1926	1973	1967	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1906 - 1995
ANNUAL TOTAL	474682	1115200	
ANNUAL MEAN	1300	3055	2748
HIGHEST ANNUAL MEAN			5567
LOWEST ANNUAL MEAN			562
HIGHEST DAILY MEAN	10500	Dec 1	40000
LOWEST DAILY MEAN	62	Aug 27	124
ANNUAL SEVEN-DAY MINIMUM	65	Aug 25	127
ANNUAL RUNOFF (AC-FT)	941500	2212000	1991000
ANNUAL RUNOFF (CFSM)	.78	1.83	1.65
ANNUAL RUNOFF (INCHES)	10.57	24.84	22.36
10 PERCENT EXCEEDS	3670	6660	6680
50 PERCENT EXCEEDS	730	1780	1080
90 PERCENT EXCEEDS	79	171	112

e Estimated

UMPQUA RIVER BASIN

14312170 SOUTH FORK DEER CREEK NEAR DIXONVILLE, OR

LOCATION.--Lat 43°10'16", long 123°13'23", in NW 1/4 NW 1/4 sec.6, T.28 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on left bank, 900 ft upstream from bridge on Douglas County Road Number 83, 2.6 mi southeast of Dixonville, and 2.2 mi upstream from confluence of north and south forks.

DRAINAGE AREA.--15.2 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 700 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good except those below 5 ft³/s, which are fair. No regulation. Minor diversion for irrigation upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years (water years 1990-95), 16.4 ft³/s, 14.62 in/yr, 11,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 755 ft³/s Jan. 14, 1995, gage height, 4.17 ft; minimum discharge, 0.25 ft³/s Oct. 19-21, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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. 9	1130	514	3.79	Jan. 14	0800	*755	*4.17
Jan. 11	0800	629	3.99	Mar. 20	0730	228	3.07

Minimum discharge, 0.25 ft³/s, Oct. 19-21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	15	105	18	45	10	16	51	6.0	4.9	2.2	1.4
2	.54	12	77	16	53	10	14	57	5.9	4.8	2.1	1.4
3	.49	10	78	15	39	14	12	45	5.7	4.6	2.0	1.4
4	.50	28	53	13	30	14	12	61	5.6	4.4	1.9	1.5
5	.49	30	39	15	25	17	13	77	6.7	4.3	1.8	1.4
6	.49	13	41	18	22	16	14	65	7.5	4.5	1.8	1.4
7	.49	9.4	35	19	20	14	18	52	7.9	4.3	2.0	1.4
8	.49	7.4	30	38	18	14	48	40	6.5	4.4	1.9	1.3
9	.49	33	25	260	16	15	69	34	5.9	5.6	1.8	1.3
10	.48	20	24	248	14	15	50	30	5.9	4.8	2.4	1.2
11	.49	13	32	305	13	16	40	33	6.2	4.4	2.6	1.2
12	.48	16	39	200	15	16	33	31	5.5	4.2	1.8	1.2
13	.48	14	30	249	20	18	57	27	5.5	4.0	1.7	1.1
14	.91	11	34	450	18	37	78	23	9.2	3.8	1.6	1.1
15	.63	12	35	183	16	97	58	20	15	3.8	1.6	1.2
16	.48	41	33	107	15	57	42	18	11	3.7	1.6	1.4
17	.39	100	30	81	39	39	33	17	10	3.6	1.7	1.5
18	.36	54	40	77	55	42	31	14	13	3.7	1.7	1.4
19	.30	31	31	62	39	39	30	13	18	5.4	1.5	1.3
20	.25	62	26	50	29	140	57	12	20	5.5	1.4	1.3
21	.39	43	22	39	24	87	66	11	16	4.1	1.3	1.3
22	.45	28	19	32	21	61	50	9.9	12	3.9	1.3	1.3
23	.41	22	17	27	19	45	36	9.4	9.8	3.7	1.5	1.3
24	.33	24	17	23	17	42	29	8.9	8.5	3.5	1.6	1.4
25	.35	75	16	21	15	39	24	8.6	7.8	3.1	1.5	2.3
26	.63	51	16	20	13	33	21	7.9	7.2	3.0	1.4	2.2
27	5.2	57	27	18	12	28	26	7.5	6.7	2.7	1.4	2.3
28	13	56	34	20	11	24	23	7.2	6.1	2.5	1.4	3.3
29	3.8	44	29	18	---	21	30	6.8	5.4	2.4	1.5	3.2
30	2.8	48	24	20	---	18	40	6.5	5.2	2.5	1.5	2.5
31	3.1	---	20	28	---	16	---	6.2	---	2.3	1.5	---
TOTAL	40.23	979.8	1078	2690	673	1054	1070	809.9	261.7	122.4	53.0	47.5
MEAN	1.30	32.7	34.8	86.8	24.0	34.0	35.7	26.1	8.72	3.95	1.71	1.58
MAX	13	100	105	450	55	140	78	77	20	5.6	2.6	3.3
MIN	.25	7.4	16	13	11	10	12	6.2	5.2	2.3	1.3	1.1
AC-FT	80	1940	2140	5340	1330	2090	2120	1610	519	243	105	94
CFSM	.09	2.14	2.28	5.70	1.58	2.23	2.34	1.72	.57	.26	.11	.10
IN.	.10	2.39	2.63	6.57	1.64	2.57	2.61	1.98	.64	.30	.13	.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995
MEAN	2.12	14.7	28.7	39.4	26.8	27.3
MAX	3.31	32.7	70.4	86.8	46.5	54.5
(WY)	1991	1995	1993	1995	1990	1991
MIN	1.25	1.87	2.98	14.5	14.8	6.25
(WY)	1994	1994	1990	1992	1992	1990

SUMMARY STATISTICS FOR 1994 CALENDAR YEAR FOR 1995 WATER YEAR WATER YEARS 1990 - 1995

ANNUAL TOTAL	4334.48	8879.53	
ANNUAL MEAN	11.9	24.3	16.4
HIGHEST ANNUAL MEAN			29.5
LOWEST ANNUAL MEAN			7.93
HIGHEST DAILY MEAN	105	450	450
LOWEST DAILY MEAN	.25	.25	.25
ANNUAL SEVEN-DAY MINIMUM	.35	.35	.35
ANNUAL RUNOFF (AC-FT)	8600	17610	11870
ANNUAL RUNOFF (CFSM)	.78	1.60	1.08
ANNUAL RUNOFF (INCHES)	10.59	21.69	14.62
10 PERCENT EXCEEDS	35	53	42
50 PERCENT EXCEEDS	5.9	14	6.2
90 PERCENT EXCEEDS	.67	1.3	1.1

UMPQUA RIVER BASIN

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14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

LOCATION.--Lat 43°13'23", long 123°24'48", in SW 1/4 NE 1/4 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 September 1995 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1970 to September 1995 (discontinued).

pH: August 1971 to September 1995 (discontinued).

WATER TEMPERATURE: October 1970 to September 1995 (discontinued).

DISSOLVED OXYGEN: October 1970 to September 1995 (discontinued).

INSTRUMENTATION.--Water-quality monitor from October 1970 to September 1995 (discontinued).

REMARKS.--Water-discharge records for South Umpqua River near Brockway (station 14312000) are used for computation of weighted averages or suspended-sediment loads. Some samples were analyzed by different methods and may have data with different levels of detection.

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.

WATER TEMPERATURE: Maximum, 35.0°C July 16, 1976; minimum, 0.0°C on several days in water years 1973, 1974, 1989, 1991.

DISSOLVED OXYGEN: Maximum, 18.5 mg/L Aug. 24, 1986; minimum, 0.2 mg/L Sept. 25, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 201 microsiemens Oct. 2; minimum recorded, 66 microsiemens Dec. 2.

pH: Maximum recorded, 9.0 units Aug. 24-26; minimum recorded, 6.6 units several days in January, but may have been lower during periods of no record.

WATER TEMPERATURE: Maximum, 29.0°C Aug. 4, 5; minimum recorded, 4.0°C Dec. 31, Jan. 1, 2, 4, but may have been lower during period of no record.

DISSOLVED OXYGEN: Maximum recorded, 13.4 mg/L Sept. 10, 13; minimum recorded, 6.3 mg/L Oct. 1.

WATER-QUALITY DATA

		DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
DATE	TIME									
FEB 1995										
22...	1300	3310	89	7.2	10.5	4.5	12.1	759	109	K18
JUN										
05...	1500	904	117	7.5	20.5	0.40	10.0	760	111	26
AUG										
08...	1230	378	150	8.6	24.5	0.50	9.6	759	116	--
DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS, TOTAL (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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY, DIS IT FIELD (MG/L AS CACO3)	BICAR- BONATE, DIS IT FIELD (MG/L AS HCO)
FEB 1995										
22...	K13	35	8	3.6	4.0	20	0.3	0.5	34	42
JUN										
05...	K12	47	11	4.6	5.5	20	0.4	0.7	43	52
AUG										
08...	--	57	13	5.9	8.2	23	0.5	1.1	54	53
DATE	CAR- BONATE, DIS IT FIELD (MG/L AS CO3)	SULFATE, DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	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 AC-FT)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
FEB 1995										
22...	0	2.7	3.0	<0.1	16	68	59	0.09	0.03	<0.01
JUN										
05...	0	4.7	7.5	<0.1	15	72	76	0.10	0.08	0.02
AUG										
08...	6	6.1	8.8	<0.1	11	87	86	0.12	0.02	0.03

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

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

WATER-QUALITY DATA

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM, DIS- SOLVED (UG/L AS LI)
FEB 1995 22...	<0.2	0.09	0.01	0.02	0.01	70	9	<3	75	<4
JUN 05...	<0.2	0.12	0.02	0.03	0.04	80	12	<3	75	<4
AUG 08...	0.3	0.13	0.07	0.07	0.08	70	13	<3	32	<4

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	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)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB 1995 22...	6	<10	<1	<1	<1	60	<6	7	63
JUN 05...	6	<10	1	<1	<1	85	<6	2	4.9
AUG 08...	5	<10	2	<2	<1	110	<6	1	1.0

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	198	189	193	197	179	189	87	68	79	97	91	93
2	201	197	199	194	176	185	73	66	68	101	96	99
3	198	191	194	189	178	181	81	73	78	104	101	102
4	193	185	190	178	158	171	86	81	84	107	103	105
5	191	185	188	181	157	170	92	86	89	110	106	108
6	197	187	191	---	---	---	99	92	96	114	109	113
7	197	188	193	---	---	---	103	99	102	113	108	111
8	199	190	194	---	---	---	107	103	105	108	95	104
9	199	189	194	---	---	---	110	107	108	---	---	---
10	197	190	194	---	---	---	114	110	112	---	---	---
11	199	191	195	---	---	---	117	113	115	---	---	---
12	198	191	195	---	---	---	120	117	118	117	101	106
13	198	189	194	---	---	---	118	112	115	105	90	100
14	196	188	193	---	---	---	112	108	109	102	84	96
15	194	186	190	139	134	136	111	109	110	100	91	97
16	194	185	189	144	137	140	111	108	110	104	98	100
17	195	187	191	144	112	131	108	92	101	108	103	105
18	188	184	186	112	103	106	92	83	87	110	105	107
19	191	184	188	114	106	110	83	73	76	---	---	---
20	194	186	190	124	114	120	81	74	78	---	---	---
21	197	191	194	125	104	117	85	81	83	---	---	---
22	197	189	194	104	99	100	87	85	86	---	---	---
23	196	188	192	109	102	105	90	87	88	---	---	---
24	196	189	192	117	109	113	90	88	89	---	---	---
25	196	189	192	121	93	113	90	90	90	115	113	114
26	193	187	191	93	80	83	94	90	91	---	---	---
27	193	189	191	95	84	89	96	94	94	---	---	---
28	192	179	183	98	95	97	96	84	89	---	---	---
29	198	180	187	97	94	96	84	83	83	---	---	---
30	195	188	191	97	87	95	88	84	86	---	---	---
31	197	191	193	---	---	---	91	87	89	---	---	---
MONTH	201	179	192	---	---	---	120	66	94	---	---	---

UMPQUA RIVER BASIN

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14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	103	101	102	96	94	96	104	93	98
2	---	---	---	106	103	104	98	96	97	99	92	96
3	---	---	---	110	105	108	100	97	99	92	83	86
4	---	---	---	111	109	110	102	100	101	90	84	86
5	---	---	---	113	110	111	104	102	103	91	89	90
6	---	---	---	111	110	110	105	104	104	91	90	90
7	---	---	---	110	109	110	105	101	104	92	90	91
8	111	103	106	112	110	111	101	90	96	92	90	91
9	108	104	106	112	100	110	90	83	86	95	91	93
10	107	105	106	100	70	74	85	83	84	97	94	96
11	---	---	---	73	71	72	87	85	86	100	97	99
12	---	---	---	76	71	73	88	87	88	100	97	99
13	---	---	---	82	76	80	88	79	86	97	95	96
14	---	---	---	83	80	81	79	74	76	97	95	96
15	---	---	---	84	77	80	81	77	79	99	96	98
16	---	---	---	80	77	78	84	81	83	101	99	100
17	---	---	---	85	80	83	88	84	86	103	100	102
18	---	---	---	92	85	89	90	88	89	104	102	103
19	---	---	---	91	80	85	90	88	89	105	103	104
20	---	---	---	92	72	83	97	90	94	106	104	105
21	---	---	---	76	71	74	96	87	91	108	105	106
22	---	---	---	79	76	78	88	86	87	108	106	107
23	---	---	---	82	79	80	88	86	87	109	106	108
24	---	---	---	86	82	84	89	88	88	110	107	109
25	---	---	---	88	86	87	91	89	90	111	108	109
26	---	---	---	90	88	89	92	90	91	111	108	110
27	---	---	---	93	90	91	100	92	95	111	108	109
28	---	---	---	94	92	93	100	97	99	112	108	110
29	---	---	---	94	93	93	98	96	97	114	111	112
30	---	---	---	93	92	93	98	95	96	115	111	113
31	---	---	---	95	93	94	---	---	---	115	112	114
MONTH	---	---	---	113	70	91	105	74	92	115	83	101

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	116	112	115	119	115	117	148	143	146	159	152	156
2	117	113	115	120	117	119	150	143	147	158	152	155
3	117	113	115	122	119	120	151	144	148	157	151	154
4	117	114	116	125	120	122	152	141	144	157	150	154
5	118	114	117	127	122	124	145	137	141	158	152	156
6	120	116	119	129	123	126	154	137	144	159	152	155
7	120	117	119	131	126	128	155	134	145	159	150	155
8	120	114	117	133	127	130	155	149	152	157	150	154
9	116	109	112	133	129	132	158	150	154	158	151	154
10	111	108	109	134	131	133	158	151	154	158	150	154
11	112	109	111	134	127	130	155	150	153	158	149	154
12	114	110	112	130	126	128	155	149	152	159	150	154
13	117	112	115	127	121	123	154	148	151	160	151	156
14	121	115	117	125	120	123	156	148	152	159	151	156
15	125	120	122	124	120	122	155	149	152	160	154	158
16	122	108	116	126	120	123	156	148	152	161	155	158
17	108	98	101	130	122	126	156	148	152	161	155	159
18	99	97	98	133	126	129	159	150	155	162	156	160
19	104	99	102	130	128	131	159	151	155	163	157	161
20	104	96	101	135	131	134	157	150	154	163	155	160
21	96	87	90	137	133	135	158	149	154	162	155	159
22	90	87	89	138	133	135	159	151	156	161	155	159
23	93	90	92	141	135	137	159	152	156	161	154	158
24	98	93	95	143	137	140	160	151	156	161	154	158
25	103	98	100	143	137	140	160	152	157	161	155	158
26	105	101	103	144	139	142	160	151	156	161	156	159
27	108	103	106	145	140	143	158	149	154	160	154	157
28	111	107	109	145	140	143	160	150	155	162	157	159
29	115	109	112	146	140	143	158	151	155	161	158	160
30	117	113	115	146	140	143	159	152	156	161	155	158
31	---	---	---	148	141	144	160	152	156	---	---	---
MONTH	125	87	109	148	115	131	160	134	152	163	149	157

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	8.2	7.1	7.6	7.4	7.2	7.0	7.5	7.4	---	---	7.6	7.4
2	7.9	7.2	7.6	7.4	7.1	7.0	7.5	7.4	---	---	7.6	7.4
3	8.1	7.3	7.6	7.4	7.2	7.1	7.5	7.4	---	---	7.6	7.5
4	8.2	7.2	7.5	7.3	7.3	7.2	7.6	7.5	---	---	7.7	7.5
5	8.3	7.2	7.4	7.3	7.3	7.3	7.6	7.5	---	---	7.7	7.5
6	8.4	7.2	---	---	7.4	7.3	7.6	7.5	---	---	7.7	7.5
7	8.4	7.3	---	---	7.4	7.3	7.5	7.4	---	---	7.7	7.5
8	8.5	7.3	---	---	7.4	7.3	7.5	7.3	6.9	6.8	7.7	7.5
9	8.6	7.3	---	---	7.4	7.3	---	---	7.0	6.9	7.7	7.5
10	8.4	7.3	---	---	7.4	7.4	---	---	7.1	7.0	7.5	7.2
11	8.6	7.3	---	---	7.5	7.4	---	---	---	---	7.3	7.3
12	8.7	7.3	---	---	7.5	7.4	6.6	6.6	---	---	7.3	7.3
13	8.6	7.4	---	---	7.5	7.4	6.7	6.6	---	---	7.4	7.3
14	8.4	7.3	---	---	7.4	7.4	6.7	6.6	---	---	7.4	7.4
15	8.4	7.3	7.6	7.4	7.4	7.4	6.6	6.6	---	---	7.4	7.2
16	8.4	7.4	7.6	7.5	7.4	7.4	6.6	6.6	---	---	7.4	7.3
17	8.3	7.4	7.5	7.3	7.4	7.3	6.7	6.6	---	---	7.4	7.3
18	8.3	7.5	7.4	7.3	7.3	7.2	---	---	---	---	7.5	7.4
19	8.3	7.4	7.4	7.4	7.2	7.2	---	---	---	---	7.4	7.4
20	8.4	7.4	7.5	7.4	7.3	7.2	---	---	---	---	7.4	7.3
21	8.3	7.4	7.5	7.4	7.4	7.3	---	---	---	---	7.3	7.3
22	8.3	7.4	7.4	7.4	7.4	7.3	---	---	---	---	7.4	7.3
23	8.2	7.4	7.5	7.4	7.4	7.3	---	---	---	---	7.4	7.4
24	8.4	7.4	7.5	7.4	7.5	7.4	---	---	---	---	7.4	7.4
25	8.4	7.4	7.5	7.3	7.5	7.4	6.9	6.8	---	---	7.4	7.4
26	8.4	7.3	7.3	7.3	7.4	7.4	---	---	---	---	7.4	7.4
27	7.8	7.3	7.4	7.3	7.4	7.3	---	---	---	---	7.5	7.4
28	7.9	7.2	7.4	7.4	7.4	7.3	---	---	---	---	7.5	7.4
29	7.6	7.3	7.4	7.3	7.4	7.3	---	---	---	---	7.5	7.4
30	7.8	7.5	7.3	7.2	7.4	7.3	---	---	---	---	7.5	7.4
31	8.0	7.4	---	---	7.5	7.4	---	---	---	---	7.5	7.4
MONTH	8.7	7.1	---	---	7.5	7.0	---	---	---	---	7.7	7.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	7.6	7.5	7.5	7.4	7.6	7.3	8.2	7.3	8.8	7.1	8.8	7.0
2	7.6	7.4	7.6	7.4	7.7	7.4	8.2	7.3	8.8	7.1	8.7	7.0
3	7.6	7.4	7.5	7.4	7.7	7.4	8.3	7.2	8.8	7.1	8.7	7.0
4	7.7	7.4	7.6	7.4	7.7	7.4	8.3	7.2	8.7	7.0	8.8	7.1
5	7.7	7.5	7.6	7.4	7.7	7.4	8.3	7.2	8.6	7.0	8.8	7.1
6	7.8	7.5	7.6	7.4	7.7	7.4	8.3	7.2	8.7	7.0	8.7	7.1
7	7.8	7.5	7.7	7.4	7.7	7.5	8.4	7.2	8.6	7.0	8.6	7.1
8	7.6	7.4	7.7	7.4	7.8	7.5	8.4	7.2	8.8	7.1	8.7	7.1
9	7.4	7.3	7.6	7.4	7.8	7.5	8.3	7.2	8.8	7.1	8.7	7.1
10	7.4	7.4	7.7	7.4	7.6	7.4	8.3	7.2	8.5	7.1	8.8	7.0
11	7.4	7.4	7.8	7.4	7.7	7.4	8.0	7.3	8.6	7.1	8.8	7.1
12	7.4	7.4	7.9	7.5	7.8	7.5	8.2	7.4	8.7	7.1	8.8	7.1
13	7.4	7.4	7.9	7.5	7.8	7.4	8.3	7.3	8.7	7.1	8.7	7.0
14	7.4	7.3	7.9	7.4	7.7	7.4	8.4	7.2	8.7	7.1	8.8	7.0
15	7.4	7.4	7.9	7.4	7.7	7.4	8.4	7.2	8.6	7.1	8.5	7.1
16	7.5	7.4	7.8	7.5	7.7	7.4	8.4	7.2	8.6	7.1	8.3	7.1
17	7.5	7.1	7.9	7.5	7.6	7.3	8.5	7.1	8.6	7.1	8.5	7.1
18	7.6	7.4	8.0	7.5	7.6	7.4	8.0	7.1	8.8	7.1	8.6	7.1
19	7.6	7.4	8.0	7.6	7.7	7.4	8.4	7.1	8.8	7.1	8.6	7.1
20	7.5	7.5	7.9	7.5	7.7	7.4	8.3	7.1	8.8	7.1	8.6	7.1
21	7.5	7.4	7.9	7.5	7.6	7.3	8.3	7.1	8.8	7.1	8.7	7.1
22	7.5	7.4	7.8	7.6	7.7	7.3	8.3	7.1	8.8	7.1	8.7	7.1
23	7.6	7.4	7.8	7.5	7.7	7.3	8.4	7.1	8.8	7.0	8.7	7.1
24	7.6	7.4	7.8	7.4	7.7	7.3	8.4	7.0	9.0	7.1	8.7	7.1
25	7.7	7.4	7.7	7.4	7.8	7.3	8.4	7.0	9.0	7.1	8.4	7.1
26	7.7	7.4	7.6	7.4	7.9	7.4	8.5	7.0	9.0	7.1	8.2	7.1
27	7.6	7.4	7.6	7.3	8.0	7.4	8.7	7.1	8.9	7.1	8.3	7.1
28	7.8	7.4	7.6	7.3	8.0	7.4	8.7	7.2	8.7	7.1	8.1	7.1
29	7.7	7.5	7.6	7.3	8.1	7.3	8.7	7.2	8.7	7.1	8.0	7.2
30	7.8	7.5	7.6	7.3	8.2	7.3	8.8	7.2	8.7	7.1	8.0	7.2
31	---	---	7.6	7.3	---	---	8.8	7.2	8.8	7.1	---	---
MONTH	7.8	7.1	8.0	7.3	8.2	7.3	8.8	7.0	9.0	7.0	8.8	7.0

UMPQUA RIVER BASIN

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14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.0	22.0	22.5	27.5	24.5	25.5	27.5	23.0	25.0	25.0	21.5	23.5
2	23.0	22.0	22.5	26.5	24.5	25.5	28.0	24.0	26.0	24.5	22.0	23.0
3	22.5	21.5	22.0	26.5	24.5	25.0	28.0	24.5	26.5	23.5	21.5	22.5
4	22.0	20.0	21.0	26.5	24.0	25.0	29.0	25.0	27.0	24.0	21.0	22.5
5	20.0	18.5	19.5	27.0	24.0	25.0	29.0	25.0	27.0	23.5	21.0	22.0
6	18.5	17.5	18.0	26.0	24.0	24.5	28.5	24.5	26.5	23.5	21.0	22.0
7	18.0	17.0	17.5	26.0	23.0	24.5	27.0	23.5	25.5	23.5	21.0	22.0
8	19.0	17.0	18.0	26.5	23.0	24.5	26.0	22.5	24.0	24.5	20.5	22.5
9	20.0	17.5	19.0	25.5	23.5	24.5	26.0	22.0	24.0	24.5	21.0	23.0
10	20.0	18.0	18.5	24.5	22.5	23.5	24.0	22.5	23.0	24.5	21.0	23.0
11	19.0	17.5	18.5	23.5	22.5	23.0	25.0	21.5	23.0	25.0	21.0	23.0
12	19.5	18.5	19.0	23.5	22.0	23.0	24.5	21.0	23.0	25.5	21.5	23.5
13	19.5	17.5	18.5	24.0	21.5	22.5	25.0	21.5	23.0	26.0	21.5	24.0
14	18.0	17.0	17.5	25.0	21.5	23.0	25.5	21.5	23.5	26.0	22.0	23.5
15	18.5	17.0	17.5	25.5	22.0	23.5	24.0	22.0	23.0	23.0	21.5	22.5
16	18.5	17.0	17.5	26.5	22.5	24.5	23.0	21.5	22.0	22.0	21.5	22.0
17	17.0	16.0	16.5	28.0	23.5	25.5	23.0	21.0	22.0	22.0	21.0	21.5
18	16.5	15.5	16.0	26.5	25.0	26.0	23.5	19.5	21.5	23.5	20.5	21.5
19	16.5	15.0	16.0	28.0	24.5	25.5	24.0	20.0	22.0	23.5	20.0	21.5
20	16.0	15.0	15.5	28.0	24.5	26.0	25.0	20.5	23.0	23.5	20.5	22.0
21	16.0	14.5	15.0	27.5	25.0	26.0	25.0	21.5	23.5	23.5	20.5	22.0
22	17.5	15.0	16.0	26.5	24.0	25.0	25.5	21.5	23.5	23.5	20.0	22.0
23	20.0	17.0	18.5	26.5	23.5	25.0	25.0	22.5	23.5	23.5	20.0	21.5
24	22.0	19.0	20.5	26.5	23.5	24.5	24.5	21.5	23.0	23.0	20.5	21.5
25	23.0	20.5	22.0	26.5	23.0	24.5	24.5	21.0	22.5	22.0	20.5	21.0
26	23.5	22.0	23.0	26.5	23.5	25.0	24.5	20.0	22.5	20.5	19.5	20.0
27	24.0	22.5	23.5	28.0	24.0	25.5	24.0	20.5	22.5	21.0	19.5	20.0
28	25.0	23.5	24.0	28.0	24.0	26.0	24.0	21.5	22.5	20.0	19.0	19.5
29	26.0	23.5	24.5	26.5	23.5	25.0	23.5	21.0	22.0	19.0	18.5	19.0
30	26.5	24.0	25.0	26.0	23.0	24.5	23.5	21.5	22.5	19.5	18.0	18.5
31	---	---	---	26.5	22.5	24.5	24.5	21.0	22.5	---	---	---
MONTH	26.5	14.5	19.5	28.0	21.5	24.5	29.0	19.5	23.5	26.0	18.0	22.0

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

[illegible]

UMPQUA RIVER BASIN

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14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	10.9	9.9	10.5	---	---	---	11.3	10.7	11.0
2	---	---	---	10.4	9.7	10.1	---	---	---	11.3	10.5	10.8
3	---	---	---	10.2	9.5	9.8	---	---	---	11.5	10.3	10.9
4	---	---	---	10.5	9.8	10.1	10.5	9.6	9.9	11.1	10.5	10.8
5	---	---	---	11.1	10.1	10.5	10.1	9.7	9.9	10.8	10.2	10.5
6	---	---	---	10.6	9.4	10.0	10.7	9.5	9.9	10.8	10.3	10.5
7	11.0	---	---	10.5	9.5	9.9	10.1	9.7	9.9	11.4	10.1	10.6
8	10.9	9.9	10.3	10.6	10.1	10.4	9.7	9.4	9.5	11.6	10.2	10.8
9	10.1	9.3	9.6	10.9	10.3	10.5	10.4	9.3	9.7	11.2	10.6	10.9
10	10.0	9.1	9.4	10.6	10.3	10.4	10.7	9.5	9.9	11.2	10.5	10.8
11	---	---	---	11.0	10.4	10.6	11.0	10.0	10.3	10.8	10.3	10.6
12	---	---	---	11.1	10.5	10.7	11.0	10.4	10.7	11.4	10.1	10.6
13	---	---	---	11.2	10.6	10.9	10.8	10.3	10.5	11.3	10.1	10.6
14	---	---	---	12.1	10.9	11.1	11.0	10.0	10.5	11.8	10.2	10.9
15	---	---	---	11.3	10.6	10.9	10.9	10.1	10.5	11.3	10.4	10.8
16	---	---	---	11.6	10.6	11.0	11.9	10.2	10.8	10.9	10.3	10.6
17	---	---	---	11.2	10.5	10.9	11.2	10.7	10.9	11.0	10.3	10.6
18	---	---	---	11.2	10.6	10.8	11.5	10.3	10.8	10.9	9.8	10.3
19	---	---	---	10.7	10.4	10.6	11.4	10.2	10.7	11.3	9.8	10.4
20	---	---	---	11.9	10.5	11.2	11.0	10.1	10.6	11.4	9.9	10.5
21	---	---	---	11.4	10.5	11.2	12.2	10.2	11.0	11.1	10.1	10.5
22	---	---	---	11.4	10.4	11.0	12.6	10.2	11.1	10.9	9.8	10.3
23	---	---	---	11.4	10.8	11.0	13.0	10.5	11.5	10.9	9.6	10.3
24	---	---	---	---	---	---	13.0	10.6	11.7	10.9	9.8	10.3
25	---	---	---	---	---	---	12.4	10.7	11.4	11.1	10.1	10.5
26	---	---	---	---	---	---	11.6	10.2	10.9	11.0	9.9	10.4
27	---	---	---	---	---	---	11.1	10.5	10.7	10.9	10.0	10.3
28	11.8	---	---	---	---	---	11.4	10.4	10.8	11.2	10.0	10.4
29	---	---	---	---	---	---	11.3	10.5	10.8	11.1	10.1	10.5
30	---	---	---	---	---	---	11.6	10.3	10.9	11.2	9.9	10.3
31	---	---	---	---	---	---	---	---	---	11.2	10.0	10.4
MONTH	---	---	---	---	---	---	---	---	---	11.8	9.6	10.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	10.8	9.7	10.2	---	---	---	9.3	8.5	8.8	13.1	12.3	12.6
2	10.6	9.7	10.0	---	---	---	9.2	8.7	8.9	13.0	12.2	12.5
3	10.8	9.5	10.0	---	---	---	9.4	8.8	9.0	12.8	12.2	12.5
4	---	---	---	---	---	---	9.4	8.9	9.1	13.1	12.2	12.6
5	---	---	---	---	---	---	9.5	9.0	9.3	13.0	12.3	12.6
6	---	---	---	---	---	---	9.7	9.1	9.3	13.0	12.4	12.7
7	9.3	8.6	8.8	9.5	7.5	8.9	9.6	9.2	9.4	13.0	12.4	12.6
8	9.5	8.6	9.0	9.5	7.4	8.2	10.2	9.2	9.7	13.1	12.5	12.7
9	9.4	8.8	9.0	9.1	7.5	8.4	10.4	9.6	9.9	13.3	12.5	12.8
10	9.2	8.9	9.0	9.1	8.1	8.4	10.3	9.8	10.0	13.4	12.6	12.9
11	9.5	8.8	9.0	8.6	7.6	8.0	10.7	9.8	10.1	13.3	12.5	12.9
12	9.6	8.8	9.1	7.8	7.4	7.6	10.8	10.0	10.3	13.3	12.6	12.9
13	9.3	8.9	9.1	7.9	7.4	7.6	10.9	10.2	10.5	13.4	12.6	12.9
14	---	---	---	8.0	7.5	7.7	11.1	10.3	10.6	13.3	12.7	12.9
15	---	---	---	7.9	7.5	7.7	11.1	10.6	10.8	13.0	12.4	12.6
16	---	---	---	8.1	7.6	7.8	11.0	10.6	10.8	12.6	12.1	12.4
17	---	---	---	8.2	7.6	7.8	11.2	10.7	11.0	12.5	12.0	12.2
18	---	---	---	7.9	7.6	7.8	11.6	10.9	11.2	12.4	11.8	12.0
19	---	---	---	9.0	7.6	8.0	12.0	11.1	11.4	12.2	11.6	11.8
20	---	---	---	8.2	7.8	8.0	12.1	11.3	11.6	12.5	11.3	11.7
21	---	---	---	8.8	7.8	8.0	12.2	11.4	11.7	11.9	11.2	11.4
22	---	---	---	8.4	7.9	8.1	12.3	11.4	11.8	11.6	10.9	11.2
23	---	---	---	8.7	8.2	8.4	12.4	11.6	11.9	11.3	10.7	10.9
24	---	---	---	9.2	8.2	8.6	12.3	11.7	12.0	11.7	10.2	10.8
25	---	---	---	9.1	8.5	8.8	12.5	11.9	12.1	10.7	10.3	10.5
26	---	---	---	9.0	8.0	8.4	12.7	12.0	12.3	10.8	10.5	10.6
27	---	---	---	9.4	8.0	8.5	12.8	12.2	12.4	10.9	10.5	10.7
28	---	---	---	8.7	8.0	8.3	12.7	12.3	12.5	10.9	10.5	10.7
29	---	---	---	8.6	8.0	8.3	12.8	12.1	12.4	10.9	10.6	10.8
30	---	---	---	8.9	8.2	8.5	12.9	12.2	12.5	11.1	10.6	10.8
31	---	---	---	9.1	8.3	8.7	13.1	12.2	12.6	---	---	---
MONTH	---	---	---	---	---	---	13.1	8.5	10.8	13.4	10.2	12.0

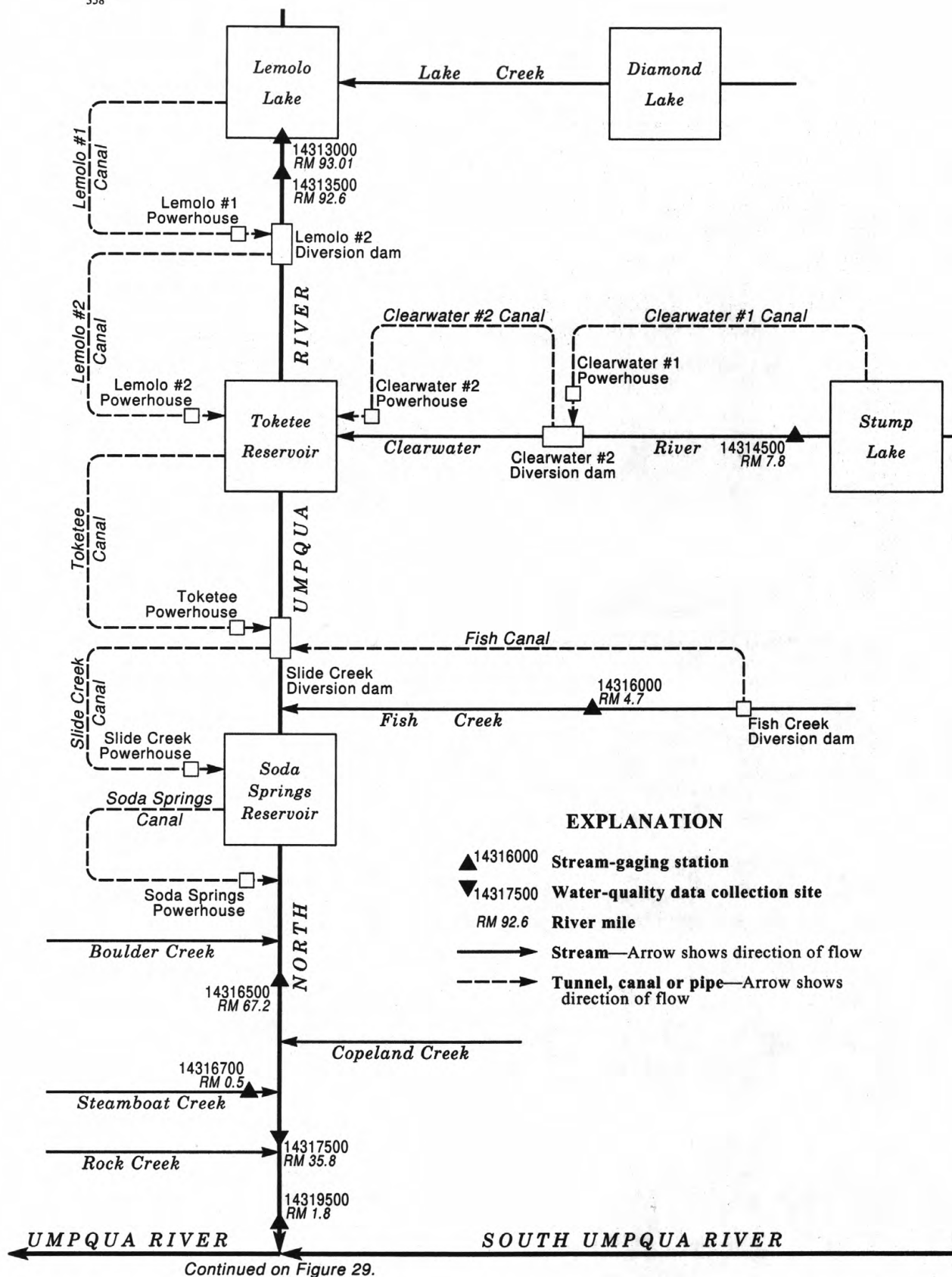


Figure 30. Schematic diagram showing gaging stations and diversions in the North Umpqua River Basin.

UMPQUA RIVER BASIN

359

14313000 LEMOLO LAKE NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°19'10", long 122°11'20", in SE 1/4 NW 1/4 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 sea level (levels by Pacific Power).

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.

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, 13,350 acre-ft July 8, 9, elevation, 4,148.00 ft; minimum observed, 5,550 acre-ft Dec. 25, elevation, 4,125.00 ft.

MONTHEND ELEVATION AND CONTENTS AT 0900, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	4,143.40	11,500	--
Oct. 31.....	4,136.20	8,950	-2,550
Nov. 30.....	4,129.00	6,690	-2,260
Dec. 31.....	4,129.90	6,960	+270
CAL YR 1994.....	--	--	+1,490
Jan. 31.....	4,134.60	8,420	+1,460
Feb. 28.....	4,135.60	8,750	+330
Mar. 31.....	4,132.90	7,880	-870
Apr. 30.....	4,141.30	10,710	+2,830
May 31.....	4,146.50	12,720	+2,010
June 30.....	4,147.30	13,060	+340
July 31.....	4,147.50	13,140	+80
Aug. 31.....	4,146.65	12,790	-350
Sept.30.....	4,137.80	9,480	-3,310
WTR YR 1995.....	--	--	-2,020

UMPQUA RIVER BASIN

14313500 NORTH UMPQUA RIVER BELOW LEMOLO LAKE, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°19'20", long 122°11'40", in NW 1/4 NW 1/4 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. WDR OR-75-1: 1964(M).

GAGE.--Water-stage recorder. Elevation of gage is 4,025 ft above sea level, 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.--No estimated daily discharges. Records excellent. Flow regulated since 1954 by Lemolo Lake (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 upstream from station for power generation with return flow 4.3 mi downstream.

AVERAGE DISCHARGE.--55 years (water years 1928-45, 1947-83), 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 discharge, 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, 303 ft³/s Oct. 5, 6, gage height, 5.85 ft; minimum discharge, 32 ft³/s Dec. 26-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	36	34	33	42	37	37	41	40	40	43	39
2	36	35	34	33	43	37	37	43	40	40	44	39
3	166	35	34	33	41	37	37	42	40	41	44	39
4	264	35	34	34	41	38	36	43	40	41	43	39
5	292	35	34	34	40	37	37	43	40	41	42	39
6	299	35	34	34	40	37	37	43	40	41	41	39
7	299	35	34	34	40	37	37	43	40	41	41	39
8	277	35	33	34	40	37	38	42	40	41	40	38
9	255	35	33	34	39	37	38	42	40	41	40	38
10	244	34	33	34	39	37	38	43	40	41	40	38
11	245	34	33	34	38	37	39	43	39	40	40	38
12	245	34	33	35	38	36	39	42	39	40	40	38
13	265	34	33	35	38	36	39	41	39	40	40	38
14	184	34	33	36	38	37	40	41	39	40	40	38
15	36	34	33	36	38	36	40	41	39	40	40	38
16	37	34	33	36	37	36	40	41	39	39	40	38
17	37	34	33	36	38	36	40	42	39	39	40	38
18	37	33	33	36	38	37	40	42	39	39	40	38
19	37	33	32	36	38	38	40	43	40	39	40	37
20	37	33	32	36	38	38	40	43	40	39	40	37
21	37	34	32	35	38	38	40	43	40	39	40	37
22	36	34	32	35	38	38	40	43	40	39	40	37
23	36	34	32	35	38	38	40	42	40	39	39	37
24	36	34	32	35	38	38	40	42	40	39	39	37
25	36	34	32	35	38	38	40	41	40	39	39	37
26	36	34	32	35	38	38	40	40	40	39	39	37
27	36	34	32	35	38	38	40	40	40	39	39	37
28	36	34	32	35	38	38	40	40	40	39	39	37
29	36	34	32	35	38	38	40	40	40	39	39	36
30	36	34	32	35	38	38	40	40	40	39	39	36
31	35	---	32	37	---	37	---	40	---	41	39	---
TOTAL	3724	1027	1017	1080	1088	1153	1170	1295	1192	1235	1249	1133
MEAN	120	34.2	32.8	34.8	38.9	37.2	39.0	41.8	39.7	39.8	40.3	37.8
MAX	299	36	34	37	43	38	41	43	40	41	44	39
MIN	35	33	32	33	37	36	36	40	39	39	39	36
AC-FT	7390	2040	2020	2140	2160	2290	2320	2570	2360	2450	2480	2250

CAL YR 1994 TOTAL 19561 MEAN 53.6 MAX 299 MIN 32 AC-FT 38800
WTR YR 1995 TOTAL 16363 MEAN 44.8 MAX 299 MIN 32 AC-FT 32460

UMPQUA RIVER BASIN

361

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 above sea level (levels by Pacific Power & Light Co.). Prior to Dec. 1, 1953, at two sites about 0.4 mi downstream at different datums.

REMARKS.--No estimated daily discharges. Records good. Records after September 1983 do not include flow in Clearwater No. 1 power canal, completed in June 1953, which diverts 900 ft upstream from station for generation of power and returns water to Clearwater River 2.5 mi downstream from station.

AVERAGE DISCHARGE.--55 years (water 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, 141 ft³/s Aug. 22, gage height, 4.05 ft; minimum discharge, 5.2 ft³/s Oct. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	7.0	8.5	6.5	80	6.7	6.8	6.2	8.3	7.7	6.7	6.9
2	5.8	6.6	6.0	6.4	75	7.0	6.3	7.2	8.1	7.6	6.8	6.8
3	6.2	6.3	6.0	6.3	28	7.1	6.2	10	8.1	7.4	7.0	6.7
4	6.5	6.1	5.6	6.5	7.4	7.0	6.3	24	8.2	7.4	7.0	6.7
5	7.2	6.0	5.6	7.1	7.0	6.9	7.0	24	8.4	7.4	7.0	6.7
6	7.3	5.9	6.0	7.2	6.7	6.7	8.2	19	8.2	7.6	7.2	6.7
7	7.2	5.8	6.3	7.4	6.7	6.7	19	13	8.0	7.4	7.4	6.7
8	7.0	5.9	6.3	7.8	6.6	6.9	17	6.6	7.9	7.5	7.4	6.7
9	6.3	6.6	6.1	11	6.8	8.4	11	6.5	7.9	8.7	7.3	6.7
10	6.1	6.5	5.8	6.7	6.7	8.2	8.2	8.5	7.9	8.5	7.8	6.7
11	6.2	6.3	6.2	6.3	6.7	7.7	8.2	20	8.0	7.6	8.9	7.0
12	6.9	6.2	6.3	6.1	6.6	7.3	13	16	8.0	7.4	9.7	7.1
13	7.1	5.8	105	6.4	6.2	7.2	20	13	7.9	7.3	9.9	7.2
14	8.1	5.8	76	7.4	6.2	7.8	6.6	9.5	8.0	7.2	71	7.2
15	6.2	6.2	31	6.8	6.5	11	6.3	8.4	8.4	7.2	138	7.2
16	5.5	6.4	14	6.2	6.5	12	6.3	9.0	8.0	7.1	138	7.2
17	6.1	6.4	7.3	6.1	7.0	9.9	6.3	10	8.0	7.1	139	7.2
18	6.9	6.0	7.4	6.4	7.2	41	6.2	8.9	8.4	7.1	137	7.2
19	7.0	6.0	7.2	6.7	7.0	23	6.3	6.3	8.3	7.2	137	7.1
20	7.0	6.2	7.6	6.5	7.0	13	6.7	6.5	8.1	7.0	136	7.2
21	6.8	6.1	7.5	6.5	7.0	8.0	6.7	6.5	7.9	7.0	136	7.2
22	6.1	6.0	7.3	6.3	6.8	9.6	6.7	9.3	7.8	7.0	135	7.2
23	5.8	5.9	6.7	6.3	6.5	10	6.7	18	7.9	7.0	82	7.0
24	6.1	5.8	6.6	6.3	6.5	7.9	6.7	18	8.0	6.9	7.4	7.0
25	6.7	6.0	6.5	6.5	6.5	7.3	6.7	20	8.1	6.9	7.2	7.3
26	6.7	5.8	6.6	6.4	6.5	6.7	6.8	14	8.1	6.9	7.0	7.2
27	8.1	5.8	6.9	6.1	6.5	5.8	7.0	8.1	8.0	6.7	7.1	7.4
28	13	5.8	7.2	6.3	6.5	6.3	6.4	8.1	7.9	6.7	6.9	7.9
29	5.4	6.2	7.2	7.1	---	6.7	6.3	8.2	7.8	6.7	7.0	7.9
30	5.7	7.3	7.0	9.1	---	6.8	6.0	8.4	7.8	6.7	6.9	7.4
31	6.3	---	6.7	27	---	6.9	---	8.4	---	6.7	7.0	---
TOTAL	209.4	184.7	463.1	231.7	350.6	293.5	247.9	359.6	241.4	224.6	1405.6	212.4
MEAN	6.75	6.16	14.9	7.47	12.5	9.47	8.26	11.6	8.05	7.25	45.3	7.08
MAX	13	7.3	105	27	80	41	20	24	8.4	8.7	139	7.9
MIN	5.4	5.8	5.6	6.1	6.2	5.8	6.0	6.2	7.8	6.7	6.7	6.7
AC-FT	415	366	919	460	695	582	492	713	479	445	2790	421

CAL YR 1994 TOTAL 4496.7 MEAN 12.3 MAX 120 MIN 5.4 AC-FT 8920
WTR YR 1995 TOTAL 4424.5 MEAN 12.1 MAX 139 MIN 5.4 AC-FT 8780

UMPQUA RIVER BASIN

14316000 FISH CREEK AT BIG CAMAS RANGER STATION, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°13'50", long 122°26'45", in SE 1/4 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 above sea level (levels by Pacific Power & Light Co.). Prior to July 10, 1951, water-stage recorder and July 10 to Aug. 10, 1951, nonrecording gage at site 1,000 ft 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.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Records given herein do not include flow in Fish Creek power canal (diversion began June 18, 1952), which diverts water 2 mi upstream from station for power generation at Fish Creek powerplant; diversion discharged to North Umpqua River 600 ft downstream from Toketee powerplant.

AVERAGE DISCHARGE.--36 years (water 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 discharge, 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, 3,220 ft³/s Feb. 1, gage height, 7.76 ft; minimum discharge, 8.7 ft³/s Oct. 20, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	30	206	37	2450	122	75	328	206	44	122	21
2	17	15	76	39	1490	101	129	513	193	41	119	20
3	16	16	41	42	781	97	121	404	165	35	117	19
4	16	34	38	43	600	78	75	385	147	29	102	18
5	16	30	48	44	494	63	156	358	159	28	63	16
6	15	19	33	41	401	47	206	327	132	29	24	15
7	15	14	31	47	330	40	371	313	140	28	32	15
8	15	15	40	97	259	45	340	293	119	26	25	15
9	15	44	34	665	200	345	266	262	101	92	27	16
10	14	31	33	669	158	477	211	276	100	70	30	16
11	15	19	32	463	129	481	204	309	115	40	33	17
12	15	17	29	379	110	369	272	257	93	36	27	23
13	15	15	28	594	90	346	480	216	79	31	25	15
14	24	16	32	798	67	416	364	191	109	29	24	16
15	23	18	30	523	52	429	287	187	210	27	24	18
16	14	21	48	351	43	351	230	195	138	27	24	16
17	12	20	108	247	211	289	198	202	124	85	25	13
18	11	17	131	184	451	585	172	204	189	156	24	13
19	9.4	23	88	133	389	545	149	195	255	176	24	14
20	10	25	77	96	351	570	144	216	255	173	25	15
21	14	19	60	71	302	444	127	239	208	163	26	15
22	15	40	46	54	258	355	129	236	170	156	27	15
23	13	50	42	45	235	275	135	227	146	153	24	15
24	12	28	41	39	231	213	164	214	129	148	22	14
25	13	43	37	38	216	169	184	202	115	153	23	29
26	16	21	55	41	187	139	179	194	101	157	23	19
27	42	17	118	41	167	118	207	191	85	142	23	17
28	99	17	90	91	144	103	245	188	69	135	22	37
29	18	20	58	165	---	90	240	196	56	133	22	13
30	12	89	44	524	---	82	225	202	48	129	22	12
31	12	---	39	1420	---	76	---	199	---	125	22	---
TOTAL	572.4	783	1813	8021	10796	7860	6285	7919	4156	2796	1172	517
MEAN	18.5	26.1	58.5	259	386	254	209	255	139	90.2	37.8	17.2
MAX	99	89	206	1420	2450	585	480	513	255	176	122	37
MIN	9.4	14	28	37	43	40	75	187	48	26	22	12
AC-FT	1140	1550	3600	15910	21410	15590	12470	15710	8240	5550	2320	1030
CFSM	.27	.38	.85	3.76	5.60	3.69	3.05	3.71	2.01	1.31	.55	.25
IN.	.31	.42	.98	4.34	5.84	4.25	3.40	4.28	2.25	1.51	.63	.28

CAL YR 1994 TOTAL 15511.9 MEAN 42.5 MAX 240 MIN 9.4 AC-FT 30770 CFSM .62 IN. 8.39
WTR YR 1995 TOTAL 52690.4 MEAN 144 MAX 2450 MIN 9.4 AC-FT 104500 CFSM 2.10 IN. 28.49

UMPQUA RIVER BASIN

363

14316500 NORTH UMPQUA RIVER ABOVE COPELAND CREEK, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°17'45", long 122°32'10", in NW 1/4 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. Elevation of gage is 1,580 ft above sea level, from river-profile map. Prior to Aug. 1, 1976, on right bank at same datum.

REMARKS.--No estimated daily discharges. Records excellent. Considerable fluctuation caused by powerplants upstream; flow slightly regulated by Diamond Lake and by Lemolo Lake (station 14313000). No diversion upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years (water years 1950-95), 1,457 ft³/s, 1,056,000 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 discharge, 345 ft³/s July 24, 1992; minimum daily, 565 ft³/s Sept. 13, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,780 ft³/s Feb. 1, gage height, 10.72 ft; minimum discharge, 599 ft³/ many days in September.

 DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	635	746	1890	846	6270	1560	1430	1980	1550	1140	812	754
2	633	738	1450	749	5100	1500	1420	2680	1590	1110	864	732
3	625	721	1120	798	3510	1470	1440	2380	1460	1140	893	733
4	605	769	935	778	3090	1500	1370	2390	1480	1080	882	751
5	600	797	929	856	2740	1440	1410	2370	1500	1050	897	751
6	603	790	899	915	2500	1310	1600	2160	1510	1040	915	816
7	610	824	842	875	2250	1220	2020	2090	1530	1120	879	790
8	612	794	765	954	2010	1260	2220	2080	1490	1050	841	824
9	613	786	752	2060	1830	1750	1960	2020	1420	1310	768	825
10	612	807	797	2510	1730	2190	1910	1970	1380	1440	856	817
11	609	785	779	2060	1510	2280	1870	2080	1420	1260	826	789
12	609	770	777	1880	1600	2090	2180	2040	1380	1230	831	806
13	602	729	753	2700	1530	2060	2960	1980	1290	1070	829	754
14	619	705	768	3560	1400	2170	2670	1850	1260	1120	815	792
15	687	706	772	2720	1310	2330	2300	1760	1610	1110	801	828
16	673	731	843	2120	1310	2150	2040	1750	1470	1180	812	773
17	669	815	1070	1740	1780	2020	1880	1750	1350	1000	833	794
18	665	754	1420	1900	2710	2720	1770	1800	1350	973	821	732
19	647	716	1260	1590	2500	2880	1660	1750	1650	1070	814	792
20	653	752	1130	1480	2220	2690	1690	1730	1800	992	813	794
21	668	754	1190	1360	2030	2560	1630	1820	1670	962	798	767
22	671	735	1170	1340	1940	2280	1640	1820	1590	1010	780	764
23	670	744	1090	1280	1810	2030	1670	1770	1480	955	790	763
24	669	776	1110	1250	1860	1880	1790	1600	1430	953	766	766
25	672	921	1090	1170	1840	1740	1790	1600	1410	936	810	769
26	670	912	1050	1180	1710	1580	1740	1650	1380	947	789	806
27	690	781	1230	1220	1670	1550	1780	1610	1350	954	762	784
28	974	767	1190	1270	1630	1600	1870	1590	1240	942	774	808
29	769	793	1010	1560	---	1580	1920	1580	1160	843	742	837
30	735	1330	901	2230	---	1460	1900	1610	1130	831	757	895
31	720	---	877	4300	---	1410	---	1630	---	821	751	---
TOTAL	20489	23748	31859	51251	63390	58260	55530	58890	43330	32639	25321	23606
MEAN	661	792	1028	1653	2264	1879	1851	1900	1444	1053	817	787
MAX	974	1330	1890	4300	6270	2880	2960	2680	1800	1440	915	895
MIN	600	705	752	749	1310	1220	1370	1580	1130	821	742	732
AC-FT	40640	47100	63190	101700	125700	115600	110100	116800	85950	64740	50220	46820

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1995, BY WATER YEAR (WY)

	MEAN	927	1262	1721	1750	1796	1758	1852	1998	1652	1067	882	846
MAX	1568	2298	5163	3418	3254	4221	2876	3191	2933	1652	1178	1107	
(WY)	1951	1951	1965	1956	1958	1972	1952	1956	1974	1953	1972	1972	
MIN	661	754	803	788	670	873	1065	855	700	664	598	612	
(WY)	1995	1988	1977	1977	1977	1977	1968	1992	1992	1992	1992	1994	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1949 - 1995

ANNUAL TOTAL	326963		488313									
ANNUAL MEAN	896		1338							1457		
HIGHEST ANNUAL MEAN										2080		1956
LOWEST ANNUAL MEAN										897		1977
HIGHEST DAILY MEAN	1890	Dec 1	6270	Feb 1	24300	Dec 22	1964					
LOWEST DAILY MEAN	600	Oct 5	600	Oct 5	565	Sep 13	1959					
ANNUAL SEVEN-DAY MINIMUM	603	Sep 2	608	Oct 4	587	Sep 2	1992					
ANNUAL RUNOFF (AC-FT)	648500		968600		1056000							
10 PERCENT EXCEEDS	1240		2130		2380							
50 PERCENT EXCEEDS	838		1180		1220							
90 PERCENT EXCEEDS	606		733		760							

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 above sea level (levels by Federal Highway Administration). October 1955 to June 1956, nonrecording gage at site 100 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records excellent. No regulation or diversion upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years (water years 1957-95), 716 ft³/s, 42.84 in/yr, 518,500 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 discharge, 27 ft³/s Sept. 24-28, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Jan. 13	2130	*12,100	*11.38	Feb. 1	1900	8,120	9.25

Minimum discharge, 29 ft³/s Oct. 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	362	5650	591	6350	428	474	1380	226	203	85	52
2	38	365	2760	501	4440	392	430	2630	221	180	83	51
3	34	225	1690	440	2380	416	397	1950	205	170	82	50
4	32	902	1070	398	1760	445	384	1450	196	161	79	50
5	32	892	766	376	1390	529	445	1240	235	154	78	49
6	31	656	613	469	1120	505	640	1110	275	156	76	49
7	31	581	497	576	931	472	1250	1030	521	153	86	48
8	31	343	406	718	782	481	1810	875	398	152	86	48
9	31	866	358	2520	654	873	1620	751	300	404	80	48
10	31	728	337	3720	566	1150	1560	723	262	441	78	46
11	31	361	346	2770	511	1100	1570	1050	273	273	84	45
12	30	277	437	2850	533	928	1750	1340	232	232	77	45
13	29	248	448	7030	571	1130	3090	1160	211	201	74	44
14	56	224	434	7960	489	1310	2380	908	256	180	71	43
15	105	207	469	4310	434	2320	1700	753	558	166	70	42
16	77	402	1160	2920	400	1670	1280	658	482	155	69	42
17	54	412	2580	1910	2730	1160	1050	579	385	146	73	42
18	45	288	3000	1680	5140	2050	1010	520	642	139	77	42
19	41	230	2130	1960	2580	2370	922	467	1370	139	71	41
20	39	902	1810	1660	1740	2130	1210	440	1240	137	67	40
21	42	712	1490	1350	1280	1880	1450	420	866	124	64	39
22	50	433	1390	1140	1000	1470	1460	394	626	118	61	37
23	46	357	1190	1010	844	1150	1330	365	482	114	60	37
24	42	698	1120	937	757	925	1180	342	392	109	59	37
25	39	1840	996	826	669	777	977	327	332	105	58	58
26	43	959	1040	752	582	681	810	304	289	103	57	77
27	150	663	1940	779	522	632	752	286	255	100	55	75
28	798	622	1820	1080	471	615	851	271	228	97	55	102
29	203	750	1240	1550	---	586	1010	259	208	93	54	146
30	114	2880	923	2930	---	535	1220	252	197	89	53	122
31	86	---	721	5860	---	495	---	238	---	88	52	---
TOTAL	2454	19385	40831	63573	41626	31605	36012	24472	12363	5082	2174	1647
MEAN	79.2	646	1317	2051	1487	1020	789	412	164	70.1	54.9	54.9
MAX	798	2880	5650	7960	6350	2370	3090	2630	1370	441	86	146
MIN	29	207	337	376	400	392	384	238	196	88	52	37
AC-FT	4870	38450	80990	126100	82570	62690	71430	48540	24520	10080	4310	3270
CFSM	.35	2.85	5.80	9.03	6.55	4.49	5.29	3.48	1.82	.72	.31	.24
IN.	.40	3.18	6.69	10.42	6.82	5.18	5.90	4.01	2.03	.83	.36	.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1995, BY WATER YEAR (WY)

MEAN	162	865	1417	1466	1370	1250	978	614	279	98.1	60.3	66.4
MAX	536	2887	5391	3415	3195	2774	2017	1337	780	193	158	260
(WY)	1957	1974	1965	1970	1986	1972	1993	1963	1984	1983	1976	1986
MIN	31.5	56.5	62.5	108	142	211	287	165	87.5	56.6	35.9	34.8
(WY)	1988	1994	1977	1977	1977	1992	1968	1992	1992	1973	1994	1994

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1957 - 1995
ANNUAL TOTAL	167366	281224	
ANNUAL MEAN	459	770	716
HIGHEST ANNUAL MEAN			1253
LOWEST ANNUAL MEAN			239
HIGHEST DAILY MEAN	5650	7960	33000
LOWEST DAILY MEAN	27	29	27
ANNUAL SEVEN-DAY MINIMUM	28	31	28
ANNUAL RUNOFF (AC-FT)	332000	557800	518500
ANNUAL RUNOFF (CFSM)	2.02	3.39	3.15
ANNUAL RUNOFF (INCHES)	27.43	46.09	42.84
10 PERCENT EXCEEDS	1210	1810	1700
50 PERCENT EXCEEDS	230	434	328
90 PERCENT EXCEEDS	33	47	47

UMPQUA RIVER BASIN

365

14317500 NORTH UMPQUA RIVER ABOVE ROCK CREEK, NEAR GLIDE, OR.

LOCATION.--Lat 43'19'51", long 123'00'07", near line between SE 1/4 SW 1/4 sec.1, T.26 S., R.3 W., Douglas County, Hydrologic Unit 17100301, on right bank, 0.1 mi upstream from Rock Creek, 5.1 mi northeast of Glide, and at mile 35.8.

DRAINAGE AREA.--886 mi².

PERIOD OF RECORD.--November 1992 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1992 to current year.

pH: November 1992 to current year.

WATER TEMPERATURE: November 1992 to current year.

DISSOLVED OXYGEN: November 1992 to current year.

INSTRUMENTATION.--Water-quality monitor and data logger since November 1992.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 77 microsiemens Nov. 25, 1993; minimum recorded, 36 microsiemens

Apr. 2, 1993.

pH: Maximum, 8.5 units Sept. 15, 1993, July 31, Aug. 1, 1994, July 29, 1995; minimum recorded, 6.9 units May 24, 1993.

WATER TEMPERATURE: Maximum, 23.0°C July 21, 1994; minimum, 0.5°C Nov. 26, 1993.

DISSOLVED OXYGEN: Maximum, 14.7 mg/L Dec. 24, 1993; minimum, 6.5 mg/L May 28, 1995.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 72 microsiemens Oct. 15, 16; minimum recorded, 39 microsiemens Apr. 13.

pH: Maximum recorded, 8.5 units July 29; minimum recorded, 7.1 units Jan. 7, Mar. 20.

WATER TEMPERATURE: Maximum, 20.5°C Aug. 5; minimum recorded, 2.5°C Nov. 19, 22, 23, Dec. 30, 31.

DISSOLVED OXYGEN: Maximum recorded, 12.9 mg/L Mar. 6, 7; minimum recorded, 6.5 mg/L May 28.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	PH, WATER WHOLE FIELD (STAND- ARD UNITS)	BICAR- BONATE, WATER DIS IT FIELD (MG/L AS HCO3)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	
JUL 26...	1820	19.0	741	--	61	9.6	107	8.3	--	--	
27...	0915	12.5	741	1140	60	9.4	91	7.5	34	<0.002	
DATE		NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	
JUL 26...	--	--	--	--	--	--	--	--	--	--	
27...	<0.001	<0.2	<0.2	<0.005	0.032	0.027	0.024	0.8	1.6	24	
DATE		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)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)
JUL 26...	--	--	--	--	--	--	--	--	--	--	
27...	1	3	<1	<1	<1	<1	<1	<1	1	<1	
DATE		NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	ALKA- LINITY, DIS IT FIELD (MG/L AS CACO3		
JUL 26...	--	--	--	--	--	--	--	--	--	--	
27...	<1	<1	<1	<1	<1	9	<1	<1	28		

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
OCTOBER				NOVEMBER				DECEMBER				JANUARY			
1	69	68	69		66	63	64		---	---	---		52	49	51
2	71	68	69		66	63	64		---	---	---		52	51	52
3	71	68	69		64	63	64		---	---	---		53	51	52
4	69	69	69		65	51	62		---	---	---		54	52	53
5	70	68	69		56	51	53		---	---	---		54	54	54
6	70	69	69		57	56	56		---	---	---		54	52	53
7	69	68	69		57	56	56		---	---	---		52	52	52
8	69	68	68		59	57	58		---	---	---		52	50	51
9	69	68	69		59	54	58		---	---	---		---	---	---
10	69	68	68		55	52	53		---	---	---		---	---	---
11	69	68	68		58	55	57		---	---	---		---	---	---
12	69	68	69		59	58	59		---	---	---		---	---	---
13	69	68	69		61	59	60		---	---	---		---	---	---
14	69	67	68		61	60	61		---	---	---		---	---	---
15	72	68	70		62	61	61		---	---	---		---	---	---
16	72	69	71		61	58	60		---	---	---		---	---	---
17	69	68	68		58	57	57		---	---	---		---	---	---
18	68	68	68		59	58	59		---	---	---		---	---	---
19	69	67	68		61	59	60		---	---	---		---	---	---
20	69	67	68		60	51	55		---	---	---		---	---	---
21	69	67	68		55	52	53		---	---	---		---	---	---
22	69	67	68		57	55	56		---	---	---		---	---	---
23	70	68	69		58	57	58		---	---	---		---	---	---
24	68	67	68		57	53	56		---	---	---		---	---	---
25	69	67	68	---	---	---	---		---	---	---		---	---	---
26	68	67	67	---	---	---	---		---	---	---		---	---	---
27	68	65	67	---	---	---	---		---	---	---		---	---	---
28	68	60	64	---	---	---	---		---	---	---		---	---	---
29	62	60	61	---	---	---	---		---	---	---		---	---	---
30	65	62	64	---	---	---	---	48	46	47	---		---	---	---
31	66	65	66	---	---	---	---	49	48	49	---		---	---	---
MONTH	72	60	68	---	---	---	---	---	---	---	---		---	---	---

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
FEBRUARY				MARCH				APRIL				MAY			
1	---	---	---		---	---	---		---	---	---		---	---	---
2	---	---	---		---	---	---		---	---	---		43	41	42
3	---	---	---		---	---	---		---	---	---		42	41	41
4	---	---	---		---	---	---		---	---	---		43	42	43
5	---	---	---		---	---	---		---	---	---		44	43	43
6	---	---	---		---	---	---		---	---	---		44	43	44
7	---	---	---		---	---	---		---	---	---		45	43	44
8	---	---	---		---	---	---		---	---	---		46	44	45
9	---	---	---		---	---	---		---	---	---		46	45	45
10	---	---	---		---	---	---		---	---	---		46	45	45
11	---	---	---		---	---	---	45	44	45	---		45	44	44
12	---	---	---		---	---	---	45	43	44	---		44	43	43
13	---	---	---		---	---	---	44	39	40	---		44	43	44
14	---	---	---		---	---	---	43	40	41	---		46	44	45
15	---	---	---		---	---	---	---	---	---	---		47	46	46
16	---	---	---		---	---	---	---	---	---	---		47	46	47
17	---	---	---		---	---	---	---	---	---	---		47	46	47
18	---	---	---		---	---	---	---	---	---	---		47	46	47
19	---	---	---		---	---	---	---	---	---	---		47	46	46
20	---	---	---		---	---	---	---	---	---	---		47	46	47
21	---	---	---		---	---	---	---	---	---	---		47	46	47
22	---	---	---		---	---	---	---	---	---	---		47	46	46
23	---	---	---		---	---	---	---	---	---	---		46	46	46
24	---	---	---		---	---	---	---	---	---	---		46	46	46
25	---	---	---		---	---	---	---	---	---	---		47	46	46
26	---	---	---		---	---	---	---	---	---	---		47	46	46
27	---	---	---		---	---	---	46	45	45	---		47	47	47
28	---	---	---		---	---	---	45	44	44	---		51	45	48
29	---	---	---		---	---	---	45	44	44	---		52	47	48
30	---	---	---		---	---	---	44	43	44	---		49	48	48
31	---	---	---		---	---	---	---	---	---	---		48	48	48
MONTH	---	---	---	---	---	---	---	---	---	---	---		---	---	---

UMPQUA RIVER BASIN

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14317500 NORTH UMPQUA RIVER ABOVE ROCK CREEK, NEAR GLIDE, OR--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	48	47	48	---	---	---	62	62	62	65	64	65
2	---	---	---	---	---	---	63	62	63	65	64	65
3	---	---	---	---	---	---	64	62	63	65	64	65
4	---	---	---	---	---	---	64	62	63	66	64	65
5	---	---	---	---	---	---	63	61	62	66	64	65
6	---	---	---	---	---	---	63	62	62	66	64	65
7	49	48	48	58	57	57	63	61	62	66	64	65
8	48	47	48	57	57	57	63	61	62	65	64	65
9	49	48	48	58	57	58	63	61	62	65	64	65
10	50	49	49	58	54	56	63	62	62	65	64	65
11	50	50	50	56	54	55	63	61	62	66	64	65
12	50	49	50	56	55	56	63	61	62	66	65	66
13	51	49	50	56	56	56	63	61	62	66	65	65
14	50	50	50	58	56	57	63	61	62	66	65	66
15	51	48	49	58	57	58	64	61	62	66	65	65
16	48	47	48	58	57	58	62	60	61	66	65	65
17	50	48	49	58	58	58	62	60	61	66	65	66
18	50	46	48	60	58	59	62	60	61	66	65	66
19	46	44	45	60	59	60	63	62	63	66	65	66
20	45	44	44	60	58	59	64	62	63	65	65	65
21	---	---	---	61	60	61	64	62	63	65	65	65
22	---	---	---	61	60	60	64	63	64	65	65	65
23	---	---	---	60	59	60	64	63	64	65	65	65
24	---	---	---	61	60	61	64	63	64	66	65	65
25	---	---	---	61	60	61	65	63	64	66	65	65
26	---	---	---	61	61	61	64	63	64	66	65	66
27	---	---	---	62	61	61	64	62	63	65	65	65
28	---	---	---	62	61	62	64	63	64	66	65	65
29	---	---	---	63	61	62	65	63	64	66	64	65
30	---	---	---	63	61	62	65	64	64	65	64	65
31	---	---	---	63	61	62	65	64	64	---	---	---
MONTH	---	---	---	---	---	---	65	60	63	66	64	65

UMPQUA RIVER BASIN

14317500 NORTH UMPQUA RIVER ABOVE ROCK CREEK, NEAR GLIDE, OR--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	7.9	7.5	7.6	7.5	---	---	7.4	7.3	---	---	7.5	7.3
2	7.9	7.5	7.6	7.5	---	---	7.5	7.3	---	---	7.5	7.4
3	7.9	7.6	7.7	7.5	---	---	7.5	7.3	---	---	7.5	7.4
4	7.9	7.6	7.6	7.4	---	---	7.5	7.4	---	---	7.5	7.4
5	7.9	7.5	7.5	7.4	---	---	7.5	7.4	---	---	7.5	7.4
6	7.9	7.5	7.6	7.4	---	---	7.4	7.3	---	---	7.5	7.4
7	7.8	7.6	7.5	7.5	---	---	7.5	7.1	---	---	7.5	7.4
8	7.8	7.5	7.6	7.5	---	---	7.5	7.4	---	---	7.5	7.4
9	7.9	7.5	7.6	7.5	---	---	---	---	---	---	7.5	7.4
10	7.9	7.5	7.5	7.4	---	---	---	---	---	---	7.4	7.4
11	7.9	7.6	7.7	7.5	---	---	---	---	---	---	7.4	7.4
12	7.9	7.6	7.7	7.5	---	---	---	---	---	---	7.4	7.4
13	7.9	7.6	7.6	7.5	---	---	---	---	---	---	7.4	7.4
14	7.9	7.6	7.7	7.5	---	---	---	---	---	---	7.4	7.4
15	7.9	7.6	7.7	7.5	---	---	---	---	---	---	7.5	7.3
16	7.8	7.6	7.6	7.5	---	---	---	---	---	---	7.6	7.5
17	7.9	7.5	7.5	7.4	---	---	---	---	---	---	7.6	7.5
18	7.7	7.5	7.6	7.5	---	---	---	---	---	---	7.6	7.5
19	7.8	7.5	7.6	7.5	---	---	---	---	---	---	7.6	7.5
20	7.8	7.5	7.5	7.4	---	---	---	---	---	---	7.6	7.1
21	7.8	7.5	7.5	7.4	---	---	---	---	---	---	7.6	7.5
22	7.7	7.5	7.5	7.4	---	---	---	---	---	---	7.7	7.6
23	7.7	7.5	7.5	7.4	---	---	---	---	---	---	---	---
24	7.8	7.5	7.5	7.4	---	---	---	---	---	---	---	---
25	7.8	7.5	---	---	---	---	---	---	---	---	---	---
26	7.7	7.5	---	---	---	---	---	---	---	---	---	---
27	7.6	7.5	---	---	---	---	---	---	---	---	---	---
28	7.5	7.5	---	---	---	---	---	---	---	---	---	---
29	7.7	7.5	---	---	---	---	---	---	---	---	---	---
30	7.8	7.5	---	---	7.4	7.3	---	---	---	---	---	---
31	7.7	7.5	---	---	7.4	7.3	---	---	---	---	---	---
MONTH	7.9	7.5	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	---	---	7.5	7.3	7.6	7.4	---	---	8.3	7.5	8.2	7.5
2	---	---	7.4	7.3	7.5	7.4	---	---	8.3	7.5	8.2	7.5
3	---	---	7.4	7.3	7.5	7.3	---	---	8.3	7.5	8.3	7.5
4	7.9	7.7	7.4	7.3	7.6	7.4	---	---	8.2	7.5	8.3	7.6
5	7.8	7.7	7.5	7.4	7.6	7.4	---	---	8.2	7.5	8.3	7.6
6	7.8	7.6	7.5	7.4	7.7	7.3	---	---	8.4	7.5	8.2	7.6
7	7.6	7.5	7.5	7.4	7.7	7.4	8.1	7.4	8.4	7.5	8.3	7.6
8	7.6	7.4	7.5	7.3	7.7	7.4	8.1	7.4	8.3	7.6	8.1	7.6
9	7.5	7.4	7.5	7.3	7.7	7.3	7.9	7.4	8.3	7.6	8.1	7.5
10	7.5	7.3	7.6	7.3	7.6	7.3	7.9	7.5	8.2	7.6	8.1	7.6
11	7.5	7.4	7.6	7.5	7.7	7.4	8.0	7.4	8.3	7.6	8.1	7.5
12	7.5	7.3	7.6	7.5	7.7	7.4	8.0	7.4	8.3	7.6	8.1	7.5
13	7.4	7.4	7.6	7.5	7.8	7.3	8.0	7.4	8.3	7.6	8.1	7.5
14	7.5	7.4	7.6	7.5	7.8	7.4	7.9	7.4	8.2	7.5	8.1	7.5
15	---	---	7.6	7.5	7.7	7.4	8.0	7.4	8.3	7.5	8.1	7.5
16	---	---	7.7	7.5	7.7	7.3	8.0	7.4	8.4	7.6	8.1	7.5
17	---	---	7.7	7.5	7.7	7.4	8.0	7.3	8.3	7.6	8.2	7.6
18	---	---	7.7	7.6	7.7	7.4	7.9	7.3	8.2	7.6	8.1	7.5
19	---	---	7.6	7.5	7.6	7.4	8.0	7.4	8.1	7.6	8.0	7.5
20	---	---	7.6	7.5	7.6	7.4	8.1	7.4	8.1	7.5	8.0	7.5
21	---	---	7.6	7.5	7.7	7.4	8.1	7.4	8.1	7.5	8.1	7.5
22	---	---	7.7	7.5	---	---	8.2	7.4	8.2	7.5	8.0	7.6
23	---	---	7.7	7.5	---	---	8.2	7.4	8.3	7.5	8.0	7.6
24	---	---	7.7	7.5	---	---	8.3	7.4	8.3	7.6	8.1	7.6
25	---	---	7.6	7.5	---	---	8.3	7.5	8.2	7.6	8.2	7.6
26	---	---	7.7	7.5	---	---	8.3	7.6	8.2	7.6	8.1	7.6
27	7.5	7.4	7.6	7.4	---	---	8.2	7.6	8.2	7.6	8.2	7.6
28	7.5	7.4	7.5	7.2	---	---	8.3	7.6	8.3	7.5	8.2	7.6
29	7.4	7.3	7.5	7.3	---	---	8.5	7.6	8.2	7.6	8.3	7.6
30	7.5	7.3	7.6	7.3	---	---	8.4	7.6	8.2	7.5	8.0	7.6
31	---	---	7.6	7.4	---	---	8.2	7.6	8.2	7.5	---	---
MONTH	---	---	7.7	7.2	---	---	---	---	8.4	7.5	8.3	7.5

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

UMPQUA RIVER BASIN

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14317500 NORTH UMPQUA RIVER ABOVE ROCK CREEK, NEAR GLIDE, OR--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	12.1	11.7	11.9	---	---	---	11.5	11.2	11.4
2	---	---	---	12.1	11.7	11.9	---	---	---	---	---	---
3	---	---	---	12.3	11.9	12.1	---	---	---	12.3	11.5	11.9
4	---	---	---	12.6	12.2	12.3	12.2	11.8	12.0	11.8	11.5	11.7
5	---	---	---	12.8	12.2	12.5	12.0	11.6	11.8	11.8	11.3	11.6
6	---	---	---	12.9	12.5	12.7	12.1	11.6	11.8	11.8	11.3	11.6
7	---	---	---	12.9	12.4	12.7	11.9	11.6	11.7	11.5	10.5	11.3
8	---	---	---	12.6	12.2	12.4	12.5	11.6	12.0	11.0	10.0	10.6
9	---	---	---	12.3	11.6	12.0	12.6	11.8	12.3	11.5	10.8	11.2
10	---	---	---	12.2	11.9	12.0	12.7	11.8	12.2	11.5	10.5	11.0
11	---	---	---	12.4	11.9	12.2	12.0	11.5	11.8	10.9	9.9	10.5
12	---	---	---	12.2	11.9	12.0	11.9	11.4	11.7	10.2	8.4	9.5
13	---	---	---	12.4	11.8	12.1	11.9	10.4	11.1	9.8	8.4	9.0
14	---	---	---	12.2	11.6	12.0	10.9	9.4	10.4	9.7	8.1	9.0
15	---	---	---	12.3	10.5	11.7	---	---	---	9.6	8.5	8.7
16	---	---	---	10.7	7.9	9.1	---	---	---	8.7	8.1	8.5
17	---	---	---	8.8	7.7	8.2	---	---	---	9.2	8.1	8.5
18	---	---	---	10.5	7.7	9.0	---	---	---	9.4	8.1	8.7
19	---	---	---	10.5	9.6	10.0	---	---	---	9.7	7.8	8.7
20	---	---	---	11.8	9.4	10.9	---	---	---	9.0	7.8	8.5
21	---	---	---	11.6	9.8	11.1	---	---	---	9.2	7.9	8.6
22	---	---	---	10.4	8.9	9.6	---	---	---	11.3	8.2	10.5
23	---	---	---	---	---	---	---	---	---	11.3	9.6	10.5
24	---	---	---	---	---	---	---	---	---	10.5	9.1	9.9
25	---	---	---	---	---	---	---	---	---	9.7	8.0	8.9
26	---	---	---	---	---	---	---	---	---	9.1	7.8	8.5
27	---	---	---	---	---	---	11.9	11.2	11.6	8.5	7.0	8.0
28	---	---	---	---	---	---	12.0	11.6	11.8	8.2	6.5	7.3
29	---	---	---	---	---	---	11.9	11.5	11.7	7.6	6.6	7.1
30	---	---	---	---	---	---	11.9	11.2	11.7	8.3	6.7	7.6
31	---	---	---	---	---	---	---	---	---	8.5	7.3	7.9
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	8.4	7.1	7.7	---	---	---	8.9	8.3	8.6	9.9	9.2	9.6
2	---	---	---	---	---	---	8.6	8.1	8.4	9.8	9.1	9.4
3	---	---	---	---	---	---	8.6	8.2	8.4	9.7	9.3	9.5
4	---	---	---	---	---	---	8.6	8.1	8.3	9.9	9.3	9.6
5	---	---	---	---	---	---	8.7	8.2	8.4	9.9	9.5	9.7
6	---	---	---	---	---	---	9.4	8.7	9.0	10.1	9.7	9.9
7	12.2	9.6	11.2	10.2	9.8	10.0	9.6	9.2	9.4	10.2	9.8	10.1
8	11.7	10.8	11.4	10.3	9.6	10.0	9.7	9.1	9.4	10.4	9.7	10.1
9	11.3	10.5	11.0	10.3	9.6	10.0	9.5	9.0	9.3	10.2	9.7	9.9
10	11.0	10.5	10.7	10.8	10.0	10.4	9.5	9.1	9.3	10.4	9.7	10.1
11	11.2	10.3	10.8	10.4	9.6	10.1	9.5	8.8	9.2	10.4	9.8	10.1
12	11.1	10.1	10.7	10.2	9.6	9.9	9.3	8.8	9.1	10.1	9.5	9.9
13	11.1	10.2	10.7	10.4	9.7	10.0	9.5	8.9	9.2	10.2	9.7	10.0
14	11.0	10.3	10.7	10.0	9.3	9.7	9.6	9.1	9.4	10.2	9.7	10.0
15	10.9	10.6	10.7	9.6	9.2	9.4	9.4	9.1	9.2	10.2	9.6	9.9
16	11.2	10.6	10.9	9.4	8.9	9.1	9.6	9.1	9.3	9.9	9.8	9.9
17	11.0	10.5	10.8	9.2	8.6	8.9	9.8	9.4	9.6	10.1	9.6	9.8
18	11.1	10.5	10.8	9.2	8.5	8.9	10.0	9.4	9.7	9.8	9.3	9.6
19	11.2	10.8	11.1	9.3	8.9	9.1	9.8	9.2	9.6	10.0	9.5	9.7
20	11.4	10.8	11.1	9.4	8.8	9.1	9.8	9.3	9.6	10.0	9.5	9.8
21	---	---	---	9.0	8.7	8.9	9.7	9.1	9.5	9.9	9.6	9.7
22	---	---	---	9.1	8.8	8.9	9.6	9.0	9.3	9.9	9.6	9.8
23	---	---	---	9.1	8.7	8.9	9.5	9.1	9.3	10.1	9.7	9.9
24	---	---	---	9.1	8.8	9.0	9.7	9.2	9.5	10.2	9.9	10.1
25	---	---	---	9.4	8.9	9.2	9.7	9.3	9.5	10.2	10.0	10.1
26	---	---	---	9.4	9.1	9.3	9.9	9.3	9.6	10.5	10.0	10.3
27	---	---	---	9.4	8.8	9.2	9.9	9.5	9.7	10.7	10.3	10.5
28	---	---	---	9.0	8.6	8.8	9.7	9.2	9.5	10.8	10.4	10.6
29	---	---	---	8.9	8.6	8.7	9.9	9.4	9.6	10.9	10.6	10.7
30	---	---	---	9.2	8.6	8.9	9.9	9.5	9.7	10.9	10.6	10.7
31	---	---	---	9.1	8.4	8.8	10.0	9.4	9.8	---	---	---
MONTH	---	---	---	---	---	---	10.0	8.1	9.3	10.9	9.1	10.0

UMPQUA RIVER BASIN

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR

LOCATION.--Lat 43°16'20", long 123°24'40", in NW 1/4 NE 1/4 sec.33, T.26 S., R.6 W., Douglas County, Hydrologic Unit 17100301, on left bank 300 ft downstream from county bridge, 3.0 mi west of Winchester, and at mile 1.8.

DRAINAGE AREA.--1,344 mi².

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-65-1: 1954(M). WDR OR-72-1: 1965(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 372.97 ft above sea level (Douglas County Road Department bench mark). Oct. 1, 1908, to Dec. 31, 1913, and Oct. 1, 1923, to Sept. 30, 1929, nonrecording gage at site 4.8 mi upstream at different datums. Aug. 27, 1954, to Aug. 12, 1965, water-stage recorder on right bank at same datum.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation caused by upstream powerplants; slight regulation by Lemolo Lake and Diamond Lake. Several small diversions for irrigation upstream from station. Continuous water-quality records for water years 1967-69, 1971-91, have been collected at this site.

AVERAGE DISCHARGE.--52 years (water years 1909-13, 1924-29, 1955-95), 3,669 ft³/s, 37.09 in/yr, 2,658,000 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 discharge, 235 ft³/s Aug. 27, 1987, result of regulation at Winchester Dam 5.2 mi upstream.

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 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)
Dec. 1	1030	21,500	10.44	Jan. 14	0530	*32,800	*13.60
Jan. 9	2030	22,000	10.60	Feb. 2	0200	25,400	11.57

Minimum discharge, 700 ft³/s Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	871	1160	17200	3080	20500	2990	3150	6210	2480	1820	1040	895
2	785	2010	12100	2680	19800	2830	2980	10400	2340	1780	1030	893
3	764	1550	8170	2370	11600	2880	2870	9760	2420	1720	1080	847
4	752	1410	5540	2270	8660	3070	2770	7640	2250	1720	1100	868
5	720	5050	4130	2170	7110	3300	2710	7230	2330	1620	1080	876
6	710	2590	3640	2630	5990	3220	3300	6640	2650	1590	1120	869
7	705	2420	3200	2960	5220	2920	4190	6210	3080	1610	1110	965
8	717	1970	2760	3330	4440	2740	7650	5590	3170	1650	1110	911
9	727	1930	2370	11500	4040	3260	8540	5060	2690	1640	1040	957
10	731	3370	2240	18300	3610	5760	7260	4750	2460	2550	975	954
11	723	2090	2240	14900	3290	5860	6700	4990	2400	2150	1110	917
12	718	1690	2540	13000	3170	5220	7070	6000	2350	1870	1040	890
13	714	1610	2600	18200	3650	5130	10600	5720	2190	1790	1030	912
14	760	1450	2480	29600	3270	5420	11500	4980	2150	1550	1020	839
15	942	1360	2630	20100	2860	9750	8860	4420	3010	1590	987	911
16	1040	1700	3200	14300	2710	8040	6900	4020	3560	1590	982	911
17	908	3010	5690	9850	3790	6130	5730	3820	3000	1580	1020	877
18	859	2470	8140	8700	15900	7200	5790	3620	2960	1370	1060	888
19	835	1780	7800	8710	10200	10400	5310	3500	4950	1390	1030	796
20	808	3350	5990	7120	7530	10900	6190	3330	6260	1520	1010	895
21	813	4130	5260	5900	5750	10500	7130	3260	5170	1350	993	871
22	853	2700	4870	4980	5080	8140	6470	3260	4150	1300	953	828
23	866	2100	4300	4410	4340	6520	5960	3140	3480	1370	945	826
24	844	2790	4050	4030	4090	5570	5520	2990	3020	1250	941	832
25	828	6620	4010	3700	3890	4890	5100	2770	2740	1250	933	873
26	871	5370	3570	3430	3630	4270	4490	2810	2530	1240	998	938
27	949	3820	5390	3400	3330	3920	4350	2700	2370	1240	952	1030
28	2240	4130	6710	3420	3170	3770	4570	2640	2210	1230	910	1010
29	1860	3450	5410	4850	---	3660	4780	2550	2000	1170	950	1150
30	1150	7480	4250	7190	---	3420	5840	2490	1860	1070	886	1230
31	963	---	3540	14700	---	3150	---	2490	---	1060	911	---
TOTAL	28026	86560	156020	255780	180620	164830	174280	144990	88230	47630	31346	27459
MEAN	904	2885	5033	8251	6451	5317	5809	4677	2941	1536	1011	915
MAX	2240	7480	17200	29600	20500	10900	11500	10400	6260	2550	1120	1230
MIN	705	1160	2240	2170	2710	2740	2710	2490	1860	1060	886	796
AC-FT	55590	171700	309500	507300	358300	326900	345700	287600	175000	94470	62170	54460
CFSM	.67	2.15	3.74	6.14	4.80	3.96	4.32	3.48	2.19	1.14	.75	.68
IN.	.78	2.40	4.32	7.08	5.00	4.56	4.82	4.01	2.44	1.32	.87	.76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1995, BY WATER YEAR (WY)

MEAN	1347	4093	6056	6588	6153	5599	4793	3780	2455	1333	996	983
MAX	2752	12550	23640	15220	13250	12880	8881	7147	4992	2824	1578	1689
(WY)	1963	1974	1965	1965	1972	1972	1993	1963	1984	1913	1976	1986
MIN	683	931	1005	1125	1019	1681	1605	1401	913	717	635	708
(WY)	1988	1994	1977	1977	1977	1992	1926	1926	1926	1926	1992	1929

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1909 - 1995

ANNUAL TOTAL	840447	1385771										
ANNUAL MEAN	2303	3797										
HIGHEST ANNUAL MEAN									3669			
LOWEST ANNUAL MEAN									6116		1974	
HIGHEST DAILY MEAN	17200	Dec 1	29600	Jan 14	117000	Dec 23	1964					
LOWEST DAILY MEAN	549	Aug 22	705	Oct 7	549	Aug 22	1994					
ANNUAL SEVEN-DAY MINIMUM	667	Aug 11	719	Oct 6	600	Oct 1	1908					
ANNUAL RUNOFF (AC-FT)	1667000		2749000		2658000							
ANNUAL RUNOFF (CFSM)	1.71		2.82		2.73							
ANNUAL RUNOFF (INCHES)	23.26		38.36		37.09							
10 PERCENT EXCEEDS	5270		7640		7410							
50 PERCENT EXCEEDS	1690		2790		2400							
90 PERCENT EXCEEDS	713		887		880							

UMPQUA RIVER BASIN

373

14319850 GASSY CREEK NEAR NONPAREIL, OR

LOCATION.--Lat 43°25'02", long 123°07'14", in NW 1/4 NE 1/4 sec.12, T.25 S., R.4 W., Douglas County, Hydrologic Unit 17100303, on right bank 0.9 mi upstream from confluence with Calapooya Creek, and 4.2 mi northeast of community of Nonpareil.

DRAINAGE AREA.--9.19 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 790 ft above sea level, from topographic map.

REMARKS.--Records good. No diversion upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years (water years 1989-95), 12.6 ft³/s, 18.62 in/yr, 9,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft³/s Jan. 10, 1989, gage height, 3.61 ft, from rating curve extended above 340 ft³/s; no flow on many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 240 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	2000	*711	*4.04	Jan. 15	1330	272	3.01

No flow many days in October and September.

 DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	19	99	8.9	59	5.4	8.0	37	2.0	1.9	.27	.05
2	.00	16	63	7.5	56	4.9	6.8	113	1.9	1.7	.24	.04
3	.00	7.4	69	6.6	38	6.3	6.2	60	1.8	1.7	.20	.03
4	.00	26	e42	5.8	23	7.3	5.5	38	1.8	1.6	.17	.02
5	.00	29	e24	5.4	17	9.2	6.1	36	2.5	1.4	.16	.00
6	.00	14	22	7.9	14	9.5	6.8	37	4.6	1.5	.13	.02
7	.00	8.8	26	12	11	8.9	9.8	38	6.9	1.5	.16	.02
8	.00	6.3	23	14	9.7	8.2	50	30	5.5	1.4	.18	.00
9	.00	18	17	77	8.6	7.8	95	23	3.6	1.9	.19	.00
10	.00	18	13	154	7.6	7.1	52	21	3.0	1.9	.20	.00
11	.00	9.6	14	169	6.7	7.3	35	21	2.9	1.5	.27	.00
12	.00	7.7	20	123	8.4	6.6	29	25	2.4	1.3	.26	.00
13	.00	7.9	19	291	16	8.9	35	22	2.2	1.1	.22	.00
14	.03	6.8	17	346	16	13	52	17	4.9	1.0	.17	.00
15	.39	6.1	19	229	15	43	44	13	17	.92	.13	.00
16	.63	20	21	157	13	30	30	11	13	.88	.14	.00
17	.42	52	19	63	32	21	22	9.8	9.9	.79	.17	.00
18	.35	37	23	54	67	30	23	8.8	9.5	.65	.19	.00
19	.30	21	25	50	40	35	21	7.4	18	.76	.19	.06
20	.29	34	19	39	26	82	57	6.6	36	.66	.15	.03
21	.27	31	14	27	18	60	71	5.8	23	.66	.13	.02
22	.27	18	11	21	14	38	45	5.0	16	.60	.12	.00
23	.30	13	9.2	16	11	26	29	4.5	11	.62	.10	.00
24	.33	14	8.2	13	9.5	21	20	3.8	8.3	.65	.08	.00
25	.33	51	7.1	11	8.4	21	15	3.5	6.3	.62	.06	.02
26	.33	48	6.6	9.6	7.4	19	12	3.3	5.3	.57	.05	.21
27	2.7	48	8.1	9.8	6.5	16	12	2.8	4.1	.49	.05	.26
28	7.8	52	15	9.7	5.9	13	11	2.6	3.5	.43	.03	.46
29	2.7	35	16	9.9	---	11	14	2.6	2.9	.36	.02	.60
30	1.5	38	13	18	---	9.3	20	2.3	2.3	.29	.02	.56
31	1.1	---	11	46	---	7.9	---	2.1	---	.27	.04	---
TOTAL	20.04	712.6	713.2	2011.1	564.7	593.6	843.2	612.9	232.1	31.62	4.49	2.40
MEAN	.65	23.8	23.0	64.9	20.2	19.1	28.1	19.8	7.74	1.02	.14	.080
MAX	7.8	52	99	346	67	82	95	113	36	1.9	.27	.60
MIN	.00	6.1	6.6	5.4	5.9	4.9	5.5	2.1	1.8	.27	.02	.00
AC-FT	40	1410	1410	3990	1120	1180	1670	1220	460	63	8.9	4.8
CFSM	.07	2.58	2.50	7.06	2.19	2.08	3.06	2.15	.84	.11	.02	.01
IN.	.08	2.88	2.89	8.14	2.29	2.40	3.41	2.48	.94	.13	.02	.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1995, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1988	.63	12.9	20.8	33.0	20.9
1989	1.50	25.9	47.2	64.9	43.5
1990	.14	.62	2.93	10.8	11.6
1991	.63	12.9	20.8	33.0	20.9
1992	1.50	25.9	47.2	64.9	43.5
1993	.14	.62	2.93	10.8	11.6
1994	.63	12.9	20.8	33.0	20.9
1995	1.50	25.9	47.2	64.9	43.5

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1988 - 1995

ANNUAL TOTAL	3505.78	6341.95	
ANNUAL MEAN	9.60	17.4	12.6
HIGHEST ANNUAL MEAN			20.4
LOWEST ANNUAL MEAN			6.47
HIGHEST DAILY MEAN	99	346	450
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	6950	12580	9120
ANNUAL RUNOFF (CFSM)	1.05	1.89	1.37
ANNUAL RUNOFF (INCHES)	14.19	25.67	18.62
10 PERCENT EXCEEDS	28	42	37
50 PERCENT EXCEEDS	4.1	7.7	3.6
90 PERCENT EXCEEDS	.00	.03	.00

e Estimated

UMPQUA RIVER BASIN

14320700 CALAPOOYA CREEK NEAR OAKLAND, OR

LOCATION.--Lat 43°24'10", long 123°21'45", in NW 1/4 sec.13, T.25 S., R.6 W., Douglas County, Hydrologic Unit 17100303, near center of span on downstream side of highway bridge, 0.9 mi downstream from Williams Creek, 2.5 mi northwest of Sutherlin, 3.5 mi southwest of Oakland, and at mile 10.1

DRAINAGE AREA.--210 mi².

PERIOD OF RECORD.--October 1955 to September 1973, October 1986 to current year. Records for the years 1974-86 are available at the Douglas County Water Resources Dept. in Roseburg.

GAGE.--Water-stage recorder. Datum of gage is 371.26 ft above sea level. Prior to June 22, 1968, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Diversion upstream from station for municipal supply of cities of Sutherlin and Oakland. Small diversions by pumping for irrigation upstream from station.

AVERAGE DISCHARGE.--27 years (water years 1956-73, 1987-95), 441 ft³/s, 28.55 in/yr, 319,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft³/s Nov. 23, 1961, gage height, 21.55 ft; no flow Sept. 9-11, 1966, Sept. 8, 1988, all or part of several days in August 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	0100	*11,100	*17.85	No other peak greater than base discharge.			
Minimum discharge, 1.1 ft ³ /s Sept. 24.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	143	2400	374	1890	219	302	618	87	66	12	5.7
2	18	187	1640	325	1680	202	262	1510	81	59	12	5.6
3	16	118	1380	286	1170	217	237	1240	77	57	11	4.8
4	15	127	970	256	890	231	218	941	74	55	12	4.5
5	14	314	701	245	707	338	225	825	85	53	10	5.4
6	12	191	681	313	577	308	237	753	108	50	8.0	4.6
7	11	169	831	374	491	271	307	708	162	52	6.6	6.3
8	10	125	698	493	422	258	950	608	145	48	9.0	6.5
9	6.8	202	553	3200	364	299	1930	520	109	51	9.8	5.2
10	6.1	248	464	3730	324	320	1240	494	94	61	9.1	4.8
11	6.0	152	444	3640	295	332	937	522	94	48	12	4.3
12	4.7	127	500	3240	309	305	826	684	84	43	14	3.4
13	4.1	133	434	5610	433	371	984	616	74	38	10	2.6
14	7.1	109	414	7340	378	513	1280	498	107	35	8.6	2.5
15	14	93	433	4600	330	979	1060	412	376	32	7.9	4.8
16	17	174	489	3100	302	803	815	361	272	30	8.2	6.9
17	13	462	539	1950	686	614	642	322	212	28	11	9.2
18	11	443	742	1610	1400	711	612	285	230	26	14	11
19	9.8	291	753	1450	996	684	531	252	322	29	14	9.6
20	9.2	429	610	1180	755	1640	1040	231	462	35	12	8.0
21	9.2	466	555	955	595	1450	1240	205	377	34	10	7.6
22	9.6	345	456	794	493	1110	944	185	287	30	7.5	5.8
23	12	277	396	660	420	857	724	169	221	28	4.0	4.8
24	11	326	361	561	365	749	572	155	179	27	3.4	2.0
25	11	772	350	485	327	670	464	145	148	26	6.2	4.2
26	11	835	344	442	293	569	389	133	124	25	5.5	15
27	15	841	437	440	262	492	402	121	105	22	6.2	27
28	150	943	763	458	237	431	382	112	93	19	4.5	31
29	74	711	651	449	---	380	401	104	81	17	5.7	49
30	41	948	535	723	---	339	457	99	72	15	5.2	53
31	32	---	438	1430	---	303	---	93	---	14	7.2	---
TOTAL	601.6	10701	20962	50713	17391	16965	20610	13921	4942	1153	276.6	315.1
MEAN	19.4	357	676	1636	621	547	687	449	165	37.2	8.92	10.5
MAX	150	948	2400	7340	1890	1640	1930	1510	462	66	14	53
MIN	4.1	93	344	245	237	202	218	93	72	14	3.4	2.0
AC-FT	1190	21230	41580	100600	34500	33650	40880	27610	9800	2290	549	625
CFSM	.09	1.70	3.22	7.79	2.96	2.61	3.27	2.14	.78	.18	.04	.05
IN.	.11	1.90	3.71	8.98	3.08	3.01	3.65	2.47	.88	.20	.05	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1995, BY WATER YEAR (WY)

	MEAN	59.3	446	1011	1146	881	829	489	283	115	28.4	11.3	13.4
MAX	329	1240	3856	2296	2229	1912	1342	912	595	73.1	41.9	35.0	
(WY)	1957	1962	1956	1956	1961	1961	1963	1963	1993	1993	1993	1971	
MIN	6.48	22.6	104	120	290	142	164	58.0	19.9	9.05	1.59	3.06	
(WY)	1988	1994	1990	1963	1973	1992	1987	1966	1992	1973	1994	1991	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1956 - 1995

ANNUAL TOTAL	91183.43	158551.3	
ANNUAL MEAN	250	434	441
HIGHEST ANNUAL MEAN			905
LOWEST ANNUAL MEAN			186
HIGHEST DAILY MEAN	2400	7340	15200
LOWEST DAILY MEAN	.00	2.0	.00
ANNUAL SEVEN-DAY MINIMUM	.50	3.9	.34
ANNUAL RUNOFF (AC-FT)	180900	314500	319700
ANNUAL RUNOFF (CFSM)	1.19	2.07	2.10
ANNUAL RUNOFF (INCHES)	16.15	28.09	28.55
10 PERCENT EXCEEDS	746	952	1140
50 PERCENT EXCEEDS	118	245	142
90 PERCENT EXCEEDS	2.5	7.4	8.4

UMPQUA RIVER BASIN

375

14321000 UMPQUA RIVER NEAR ELKTON, OR

LOCATION.--Lat 43°35'10", long 123°33'15", in NW 1/4 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.

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 above sea level. 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.--No estimated daily discharges. Records good. Regulation by powerplants on North Umpqua River ordinarily does not affect discharge at this station. Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--90 years (water years 1906-95), 7,340 ft³/s, 27.08 in/yr, 5,317,000 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 discharge observed, 640 ft³/s July 18, 1926.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least December 1861, 51.95 ft on Dec. 23, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Jan. 10	0530	*96,900	*27.97	Jan. 14	1200	88,400	26.42

Minimum discharge, 945 ft³/s Oct. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	1570	25000	6570	33900	5530	6900	10500	3370	2400	1290	999
2	1110	1830	29200	5850	40700	5190	6600	14100	3270	2300	1260	992
3	1060	2650	19500	5120	27000	5000	6040	17700	3090	2230	1240	986
4	1050	2570	14200	4620	18700	5350	5690	14300	3130	2150	1250	977
5	1010	4620	10300	4310	15100	5780	5430	12900	2970	2120	1260	969
6	977	5990	8370	4340	12600	6130	5430	12100	3050	2010	1250	992
7	959	4360	8010	5380	10900	5750	6400	11200	3470	1950	1250	984
8	951	3690	7170	6330	9570	5330	10200	10500	4170	1960	1260	1020
9	954	3200	6130	27300	8380	5350	20500	9460	4190	2040	1250	1010
10	961	3950	5270	81300	7450	13800	18300	8660	3560	2060	1230	1040
11	965	5380	4910	53900	6740	16300	15400	8220	3250	3030	1170	1040
12	967	3630	4880	51800	6220	14800	14200	9090	3140	2790	1250	1040
13	966	2810	5520	51000	6850	12400	15300	9560	3060	2350	1230	1010
14	984	2520	5440	83300	7180	12600	22500	8690	2940	2190	1210	1020
15	1010	2270	5380	64800	6460	17000	19200	7640	3230	1940	1200	966
16	1100	2160	5700	46300	5800	19000	15500	6850	4880	1940	1160	979
17	1280	4640	7770	29300	5910	14700	12700	6350	5340	1910	1130	1040
18	1260	9160	12400	22600	20100	12400	11400	5940	4490	1880	1140	989
19	1230	6220	16200	20800	21900	16400	11200	5600	4830	1700	1170	1020
20	1170	4580	13300	18700	15500	20000	11100	5280	7560	1720	1150	979
21	1120	8290	11100	15800	12300	31000	14500	4990	8270	1840	1140	995
22	1100	7600	9640	13200	10300	23000	14200	4850	6890	1710	1120	1000
23	1110	5420	8600	11400	9020	18500	12800	4710	5700	1630	1080	971
24	1130	4540	7680	10100	7990	15200	11500	4500	4830	1640	1040	967
25	1120	7300	7300	9280	7450	13000	10400	4250	4210	1560	1050	992
26	1110	15900	6960	8640	6950	11300	9300	4020	3780	1530	1010	1010
27	1170	10600	7100	8120	6360	9990	8380	4030	3430	1490	1040	1070
28	1270	9330	10600	7720	5880	9070	8720	3790	3150	1490	1030	1170
29	2600	9100	11300	8340	---	8570	8860	3690	2870	1470	1010	1200
30	2160	9300	9260	10800	---	8070	9500	3520	2600	1420	1020	1350
31	1760	---	7660	20000	---	7430	---	3430	---	1310	1000	---
TOTAL	36664	165180	311850	717020	353210	373940	348150	240420	122720	59760	35890	30777
MEAN	1183	5506	10060	23130	12610	12060	11600	7755	4091	1928	1158	1026
MAX	2600	15900	29200	83300	40700	31000	22500	17700	8270	3030	1290	1350
MIN	951	1570	4880	4310	5800	5000	5430	3430	2600	1310	1000	966
AC-FT	72720	327600	618600	1422000	700600	741700	690600	476900	243400	118500	71190	61050
CFSM	.32	1.49	2.73	6.28	3.43	3.28	3.15	2.11	1.11	.52	.31	.28
IN.	.37	1.67	3.15	7.24	3.57	3.78	3.52	2.43	1.24	.60	.36	.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1995, BY WATER YEAR (WY)

	1870	7008	13000	15640	14910	12240	9548	6425	3756	1725	1173	1192
MEAN	1870	7008	13000	15640	14910	12240	9548	6425	3756	1725	1173	1192
MAX	14200	29500	51220	34900	32800	27100	20480	15800	9526	5063	1867	3475
(WY)	1951	1974	1965	1956	1907	1972	1937	1921	1953	1913	1976	1920
MIN	857	832	1238	1440	1365	2909	2432	1934	1053	742	703	740
(WY)	1930	1930	1977	1977	1977	1992	1926	1934	1926	1926	1931	1931

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1906 - 1995
ANNUAL TOTAL	1496920	2795581	
ANNUAL MEAN	4101	7659	7340
HIGHEST ANNUAL MEAN			13360
LOWEST ANNUAL MEAN			2321
HIGHEST DAILY MEAN	29200	83300	260000
LOWEST DAILY MEAN	867	951	663
ANNUAL SEVEN-DAY MINIMUM	874	960	663
ANNUAL RUNOFF (AC-FT)	2969000	5545000	5317000
ANNUAL RUNOFF (CFSM)	1.11	2.08	1.99
ANNUAL RUNOFF (INCHES)	15.12	28.24	27.08
10 PERCENT EXCEEDS	9560	16000	17100
50 PERCENT EXCEEDS	2520	5120	3910
90 PERCENT EXCEEDS	958	1020	1050

UMPQUA RIVER BASIN

14321400 ELK CREEK NEAR ELKHEAD, OR

LOCATION.--Lat 43°35'45", long 123°11'35", in NW 1/4 SE 1/4 sec.5, T.23 S., R.4 W., Douglas County, Hydrologic Unit 17100303, on right bank downstream side of Milltown Hill Bridge, 1.5 mi upstream from Adams Creek, 4.0 mi north of Elkhead, and at mile 37.7.

DRAINAGE AREA.--28.7 mi².

PERIOD OF RECORD.--January to August 1968 (gage heights and discharge measurements only), September 1968 to June 1972, October 1986 to current year.

REVISED RECORDS.--WDR OR-93-OR-1: 1991-92, 1991-92 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 463.99 ft above sea level (Douglas County Highway Department bench mark). Prior to Sept. 1, 1968, nonrecording gage at site 20 ft upstream at datum 1.70 ft lower.

REMARKS.--No estimated daily discharges. Records for flows greater than 10 ft³/s good, those below fair.

AVERAGE DISCHARGE.--12 years (water years 1969-71, 1987-95), 46.0 ft³/s, 21.76 in/yr, 33,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,320 ft³/s Jan. 10, 1988, gage height, 6.77 ft, from crest-stage gage; maximum gage height, 7.86 ft Jan. 13, 1995, from crest-stage gage; minimum discharge, 0.15 ft³/s Aug. 28, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 820 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	2030	*1,380	*7.14	No other peak greater than base discharge.			
Minimum discharge, 0.56 ft ³ /s Oct. 6, 7.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	25	273	34	246	27	33	79	9.3	7.0	3.1	1.2
2	.86	17	168	30	199	25	29	160	8.8	6.6	3.1	1.2
3	.74	9.0	150	27	131	24	27	122	8.2	6.4	2.6	1.1
4	.70	37	101	25	99	25	25	94	8.4	5.9	2.2	1.1
5	.77	49	71	23	79	39	25	78	10	5.8	2.0	1.3
6	.72	21	70	28	66	36	24	69	12	5.8	2.0	1.3
7	.61	17	124	33	56	32	38	61	14	5.9	2.0	1.3
8	.63	13	98	42	49	30	133	53	11	5.8	2.0	1.2
9	.67	36	72	262	43	31	216	47	9.3	7.0	2.0	1.2
10	.63	29	57	393	38	33	138	42	8.9	6.8	2.0	1.2
11	.66	18	53	449	35	36	100	47	9.5	5.8	2.0	1.1
12	.63	17	57	388	37	34	80	47	8.7	5.2	2.0	1.1
13	.69	16	49	760	51	40	105	43	8.1	4.8	2.0	1.1
14	1.3	14	46	670	45	61	137	38	14	4.6	2.0	1.1
15	1.7	13	47	529	41	97	115	33	55	4.2	1.8	1.0
16	1.8	29	54	341	38	77	87	31	28	3.8	1.8	1.1
17	1.8	107	51	191	93	62	71	29	21	3.8	1.9	1.3
18	1.6	68	73	148	153	76	63	26	20	3.8	2.0	1.4
19	1.5	40	73	127	109	68	55	23	24	11	2.0	1.4
20	1.5	74	57	106	82	160	104	22	41	14	1.8	1.3
21	1.5	58	47	86	67	141	115	19	33	9.1	1.5	1.2
22	1.8	39	39	73	56	116	89	18	25	7.0	1.5	1.1
23	1.8	34	34	62	48	90	71	16	20	7.0	1.5	1.0
24	1.8	36	31	54	43	86	59	16	16	7.0	1.5	1.1
25	1.9	116	29	48	38	81	49	15	14	7.0	1.4	1.8
26	2.2	107	27	43	34	70	42	13	12	4.3	1.4	2.5
27	4.9	99	35	43	31	61	42	12	10	4.1	1.4	4.4
28	9.7	95	61	44	29	53	40	12	9.3	4.1	1.3	7.5
29	3.3	73	55	43	---	45	49	11	8.3	3.2	1.1	6.5
30	1.7	98	46	69	---	39	54	10	7.4	3.1	1.3	5.0
31	2.2	---	39	174	---	35	---	9.7	---	3.1	1.3	---
TOTAL	53.23	1404.0	2187	5345	2036	1830	2215	1295.7	484.2	183.0	57.5	56.1
MEAN	1.72	46.8	70.5	172	72.7	59.0	73.8	41.8	16.1	5.90	1.85	1.87
MAX	9.7	116	273	760	246	160	216	160	55	14	3.1	7.5
MIN	.61	9.0	27	23	29	24	24	9.7	7.4	3.1	1.1	1.0
AC-FT	106	2780	4340	10600	4040	3630	4390	2570	960	363	114	111
CFSM	.06	1.63	2.46	6.01	2.53	2.06	2.57	1.46	.56	.21	.06	.07
IN.	.07	1.82	2.83	6.93	2.64	2.37	2.87	1.68	.63	.24	.07	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1995, BY WATER YEAR (WY)

	5.29	52.0	104	142	88.3	83.9	57.7	29.3	15.4	4.18	1.82	1.88
MEAN	5.29	52.0	104	142	88.3	83.9	57.7	29.3	15.4	4.18	1.82	1.88
MAX	16.3	113	194	253	191	184	133	67.9	71.7	7.72	5.21	4.01
(WY)	1969	1969	1969	1970	1969	1972	1993	1991	1993	1993	1993	1971
MIN	1.51	3.66	15.6	35.4	31.1	19.2	21.0	8.16	3.27	1.61	.46	.43
(WY)	1988	1994	1990	1992	1988	1992	1987	1987	1992	1994	1994	1994

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1968 - 1995	
ANNUAL TOTAL	10504.32		17146.73			
ANNUAL MEAN	28.8		47.0		46.0	
HIGHEST ANNUAL MEAN					69.4	
LOWEST ANNUAL MEAN					22.3	
HIGHEST DAILY MEAN	273	Dec 1	760	Jan 13	1400	Jan 10 1988
LOWEST DAILY MEAN	.22	Sep 1	.61	Oct 7	.22	Sep 1 1994
ANNUAL SEVEN-DAY MINIMUM	.25	Aug 27	.65	Oct 7	.25	Aug 27 1994
ANNUAL RUNOFF (AC-FT)	20840		34010		33300	
ANNUAL RUNOFF (CFSM)	1.00		1.64		1.60	
ANNUAL RUNOFF (INCHES)	13.62		22.23		21.76	
10 PERCENT EXCEEDS	76		105		123	
50 PERCENT EXCEEDS	14		27		17	
90 PERCENT EXCEEDS	.43		1.3		1.4	

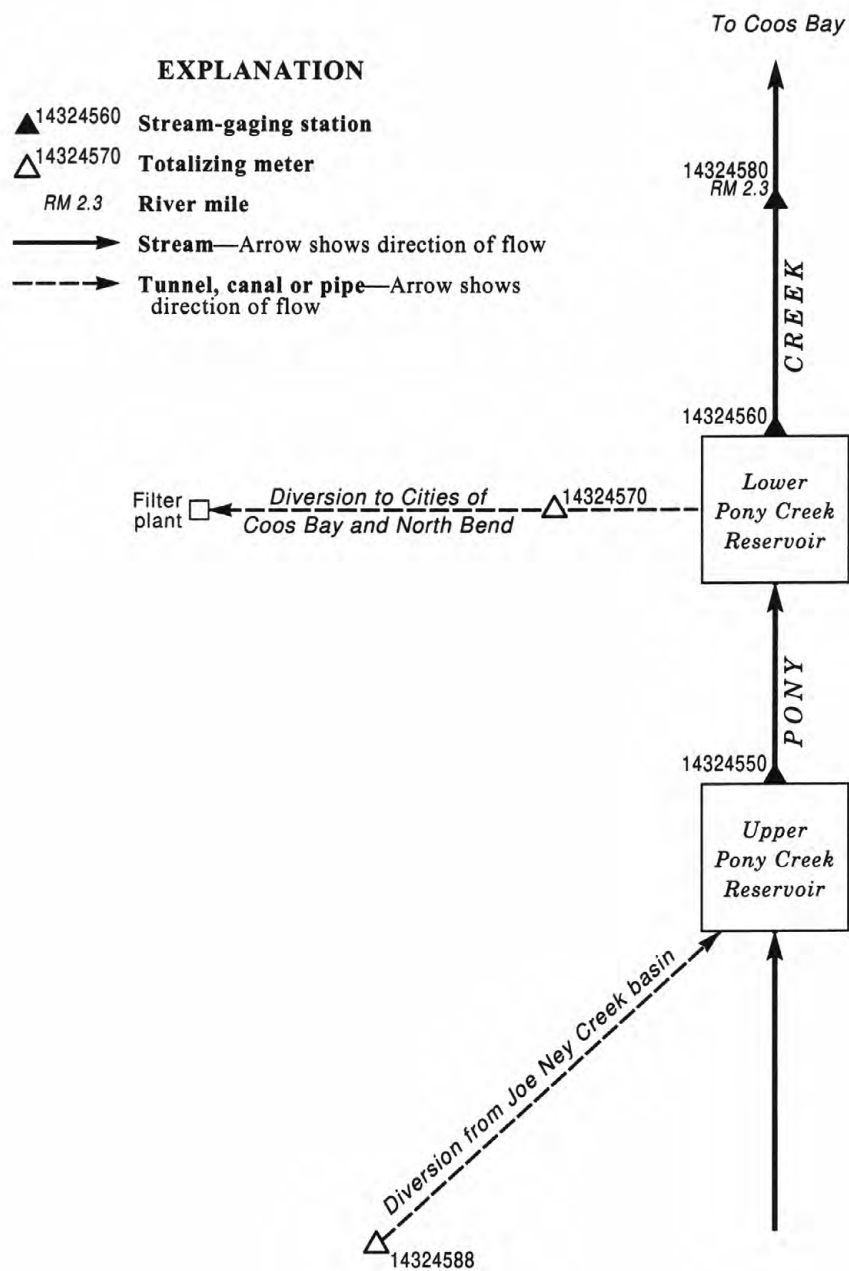


Figure 31. Schematic diagram showing gaging stations and diversions in the Pony Creek Basin.

14324580 PONY CREEK AT COOS BAY, OR

LOCATION.--Lat 43°22'44", long 124°14'29", in NE 1/4 NE 1/4 sec.28, T.25 S., R.13 W., Coos County, Hydrologic Unit 17100304, at spillway for Lower Pony Creek Reservoir, in Coos Bay, and at mile 2.3.

DRAINAGE AREA.--3.88 mi².

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

REVISED RECORDS.--WDR OR-93-1: Drainage Area.

GAGE.--Water-stage recorder. Datum of gage is sea level (Coos Bay-North Bend Water Board bench mark). Oct. 1, 1982 to September 30, 1987, gage at site 500 ft downstream at same datum. July 1975 to Sept. 30, 1982 and Oct. 1, 1987 to Sept. 30, 1992, at site 0.1 mi downstream, at datum 12.23 ft above sea level.

REMARKS.--Records good. Records prior to 1993 were computed for site at the lower end of culvert under Ocean Boulevard. Flow regulated by Upper and Lower Pony Creek Reservoirs (stations 14324550 and 14324560), diversion upstream from station from Lower Pony Creek Reservoir to municipal water supply of Coos Bay-North Bend (station 14323570) and diversion into the basin from Joe Ney Creek (station 14324590). Approximately 5.5 ft³/s is diverted to the Coos Bay-North Bend water treatment plant, maximum capacity, 10.8 ft³/s.

COOPERATION.--Data for diversion from Joe Ney Creek into Pony Creek (14324590), and diversion from Lower Pony Creek Reservoir to City of Coos Bay (14324570) provided by Coos Bay-North Bend Water Board.

AVERAGE DISCHARGE.--20 years (water years 1976-95), 9.74 ft³/s, 33.92 in/yr, 7,060 acre-ft/yr, adjusted for Joe Ney diversion into Pony Creek, Coos Bay-North Bend diversion, and change in contents in Upper and Lower Pony Creek Reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft³/s Dec. 6, 1981, gage height, 6.19 ft; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 109 ft³/s Jan. 14, gage height, 40.31 ft; minimum discharge, no flow many days during year.

MONTHLY DISCHARGE OF PONY CREEK, JOE NEY CREEK DIVERSION, PONY CREEK DIVERSION AND MONTHLY CHANGE IN CONTENTS OF RESERVOIRS NEAR COOS BAY, OR, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

	14324588 Diversion from Joe Ney Creek into Pony Creek (acre-feet)	14324580 Pony Creek at Coos Bay (acre-feet)	14324570 Diversion from Lower Pony Creek 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.....	-94.2	0	281.1	+20.5	-119.0	88.4	0.43
November.....	0	0	288.8	-24.0	+541.0	805.8	3.88
December.....	0	0	317.9	+66.8	+651.0	1,035.7	4.98
CAL YR 1994...	-203.5	986.4	4,018.3	+34.4	+54.0	4,889.6	23.51
January.....	0	1,440.0	309.1	+129.1	+377.0	2,255.2	10.84
February.....	0	849.3	276.0	-36.5	-39.0	1,049.8	5.05
March.....	0	1,239.1	296.2	+6.2	+9.0	1,550.5	7.46
April.....	0	791.0	326.0	+2.8	0	1,119.8	5.38
May.....	0	426.0	338.7	-27.4	-26.0	711.3	3.42
June.....	0	3.0	356.3	-61.6	-6.0	291.7	1.40
July.....	0	0	455.3	-27.0	-308.0	120.3	0.58
August.....	0	0	471.7	+45.2	-445.0	71.9	0.35
September.....	0	0	385.6	-0.7	-330.0	54.9	0.26
WTR YR 1995...	-94.2	4,752.4	4,102.7	+93.4	+305.0	9,159.3	44.05

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	46	4.0	9.0	17	.00	.00	.00	.00
2	.00	.00	.00	.00	47	3.6	8.1	25	.00	.00	.00	.00
3	.00	.00	.00	.00	36	3.7	7.1	22	.00	.00	.00	.00
4	.00	.00	.00	.00	27	4.1	6.9	19	.00	.00	.00	.00
5	.00	.00	.00	.00	22	5.9	6.7	18	.00	.00	.00	.00
6	.00	.00	.00	.00	18	5.4	5.8	15	.00	.00	.00	.00
7	.00	.00	.00	.00	15	4.1	11	13	.00	.00	.00	.00
8	.00	.00	.00	.00	13	7.7	22	12	.00	.00	.00	.00
9	.00	.00	.00	.00	12	36	23	9.8	.00	.00	.00	.00
10	.00	.00	.00	.00	9.9	47	18	8.9	.00	.00	.00	.00
11	.00	.00	.00	23	8.6	42	16	11	.00	.00	.00	.00
12	.00	.00	.00	55	11	34	18	11	.00	.00	.00	.00
13	.00	.00	.00	80	14	29	28	7.3	.00	.00	.00	.00
14	.00	.00	.00	100	11	32	27	5.5	.00	.00	.00	.00
15	.00	.00	.00	74	9.2	30	23	4.3	.00	.00	.00	.00
16	.00	.00	.00	55	8.9	24	19	4.1	.00	.00	.00	.00
17	.00	.00	.00	40	13	19	16	3.3	.00	.00	.00	.00
18	.00	.00	.00	33	19	17	14	2.9	.22	.00	.00	.00
19	.00	.00	.00	27	16	16	12	2.5	.89	.00	.00	.00
20	.00	.00	.00	22	13	23	12	1.4	.42	.00	.00	.00
21	.00	.00	.00	18	11	26	12	.95	.00	.00	.00	.00
22	.00	.00	.00	15	9.7	37	10	.63	.00	.00	.00	.00
23	.00	.00	.00	14	8.4	38	8.9	.17	.00	.00	.00	.00
24	.00	.00	.00	12	7.3	31	8.8	.00	.00	.00	.00	.00
25	.00	.00	.00	11	6.6	24	7.1	.00	.00	.00	.00	.00
26	.00	.00	.00	14	5.9	19	5.7	.00	.00	.00	.00	.00
27	.00	.00	.00	16	5.2	16	5.7	.00	.00	.00	.00	.00
28	.00	.00	.00	20	4.5	14	10	.00	.00	.00	.00	.00
29	.00	.00	.00	23	---	12	15	.00	.00	.00	.00	.00
30	.00	.00	.00	33	---	11	13	.00	.00	.00	.00	.00
31	.00	---	.00	43	---	9.2	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	728.00	428.2	624.7	398.8	214.75	1.53	0.00	0.00	0.00
MEAN	.000	.000	.000	23.5	15.3	20.2	13.3	6.93	.051	.000	.000	.000
MAX	.00	.00	.00	100	47	47	28	25	.89	.00	.00	.00
MIN	.00	.00	.00	.00	4.5	3.6	5.7	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	1440	849	1240	791	426	3.0	.00	.00	.00

CAL YR 1994 TOTAL 497.29 MEAN 1.36 MAX 29 MIN .00 AC-FT 986
WTR YR 1995 TOTAL 2395.98 MEAN 6.56 MAX 100 MIN .00 AC-FT 4750

14325000 SOUTH FORK COQUILLE RIVER AT POWERS, OR

LOCATION.--Lat 42°53'30", long 124°04'10", in SE 1/4 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 above sea level. Prior to Nov. 17, 1938, nonrecording gage at various sites within 1 mi of present site at different datums.

REMARKS.--No estimated daily discharges. Records good. No regulation. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--76 years (water years 1917-26, 1930-95), 776 ft³/s, 62.42 in/yr, 562,500 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 discharge, 6.4 ft³/s Oct. 10-12, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Jan. 9	1400	*24,100	*16.18	Jan. 31	1600	10,800	9.95
Jan. 13	1830	14,400	11.70				

Minimum discharge, 6.4 ft³/s Oct. 10-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	869	3930	773	7030	367	1590	1170	175	131	50	42
2	11	538	2660	655	4470	349	1410	2130	169	122	49	40
3	10	325	2450	569	2630	353	1330	1490	163	115	48	39
4	9.3	649	1660	502	1770	397	1370	1160	158	111	48	37
5	8.3	1190	1210	473	1310	621	1380	1020	169	108	47	37
6	7.8	550	1040	766	1050	525	1250	1100	183	102	47	36
7	7.4	372	968	1230	862	459	2290	1090	241	98	49	36
8	7.4	299	832	2880	729	676	3360	930	214	95	51	36
9	7.4	2650	706	15300	625	5730	2920	790	178	94	50	35
10	7.2	1250	652	9370	546	5210	2210	688	177	94	51	35
11	7.2	687	949	7640	486	4210	1790	685	211	89	52	35
12	7.3	561	1430	6730	509	2870	2130	683	176	85	51	34
13	7.5	452	1070	10600	664	2740	3400	709	164	82	51	32
14	10	364	1030	9860	592	4410	2770	607	191	76	51	31
15	25	933	1180	6780	507	3460	2100	531	507	74	50	31
16	24	2900	2960	4370	476	2300	1630	478	372	71	53	31
17	18	3550	4470	2750	2610	1660	1350	444	313	69	55	31
18	14	1900	3730	2510	3640	1620	1320	406	384	66	57	30
19	12	1180	2710	2810	2020	1640	1180	374	588	66	56	29
20	11	1650	1950	2080	1390	5080	1330	346	627	69	55	26
21	10	1380	1750	1540	1070	4010	1420	319	507	67	54	25
22	11	984	1420	1240	860	3530	1300	297	403	66	54	24
23	11	815	1150	1010	721	2810	1150	278	330	65	53	23
24	11	1020	1010	848	617	2410	1020	263	279	63	52	23
25	11	2880	993	752	541	1920	882	249	241	61	52	34
26	13	1860	1080	1140	481	1480	755	233	213	62	50	33
27	137	1440	1830	1530	434	1300	684	222	188	61	49	31
28	618	1350	2040	1670	398	1350	675	212	169	58	46	51
29	180	1130	1500	1720	---	1510	663	202	152	57	44	67
30	99	1500	1160	3950	---	1660	624	191	141	53	43	49
31	75	---	924	8100	---	1720	---	182	---	52	43	---
TOTAL	1400.8	37228	52444	112148	39038	68377	47283	19479	7983	2482	1561	1043
MEAN	45.2	1241	1692	3618	1394	2206	1576	628	266	80.1	50.4	34.8
MAX	618	3550	4470	15300	7030	5730	3400	2130	627	131	57	67
MIN	7.2	299	652	473	398	349	624	182	141	52	43	23
AC-FT	2780	73840	104000	222400	77430	135600	93790	38640	15830	4920	3100	2070
CFSM	.27	7.34	10.0	21.4	8.25	13.1	9.33	3.72	1.57	.47	.30	.21
IN.	.31	8.19	11.54	24.69	8.59	15.05	10.41	4.29	1.76	.55	.34	.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1995, BY WATER YEAR (WY)

	MEAN	203	1012	1680	1787	1621	1340	922	453	175	61.7	34.9	45.5
MAX	1945	4232	5361	4244	4151	3818	2451	1568	699	186	101	384	
(WY)	1951	1974	1965	1970	1958	1938	1963	1953	1937	1947	1947	1978	
MIN	11.1	15.8	44.1	97.3	209	330	203	78.3	50.8	27.7	17.4	12.1	
(WY)	1988	1937	1977	1977	1977	1934	1990	1939	1924	1926	1939	1987	

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1917 - 1995

ANNUAL TOTAL	191174.8	390466.8	776
ANNUAL MEAN	524	1070	1374
HIGHEST ANNUAL MEAN			237
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	4470	Dec 17	15300
LOWEST DAILY MEAN	7.2	Oct 10	7.2
ANNUAL SEVEN-DAY MINIMUM	7.3	Oct 7	7.3
ANNUAL RUNOFF (AC-FT)	379200	774500	562500
ANNUAL RUNOFF (CFSM)	3.10	6.33	4.59
ANNUAL RUNOFF (INCHES)	42.08	85.95	62.42
10 PERCENT EXCEEDS	1410	2760	1990
50 PERCENT EXCEEDS	278	507	259
90 PERCENT EXCEEDS	16	31	26

ELK RIVER BASIN

14327250 ELK RIVER ABOVE ANVIL CREEK, NEAR PORT ORFORD, OR

LOCATION.--Lat 42°44'14", long 124°24'16", in SW 1/4 SE 1/4 sec.6, T.33 S., R.14 W., Curry County, Hydrologic Unit 17100306, on left bank, 400 ft downstream from Oregon Fish and Wildlife Commission property, and at mile 11.0.

DRAINAGE AREA.--83.4 mi².

PERIOD OF RECORD.--October 1993 to current year. Operated by Oregon Water Resources Department January 1977 to September 1993.

GAGE.--Water-stage recorder. Elevation of gage is 504 ft above sea level.

REMARKS.--Records good. Slight regulation by fish hatchery 400 ft upstream from station.

AVERAGE DISCHARGE.--2 years (water years 1994-95), 497 ft³/s, 80.95 in/yr, 360,000 acre-ft/yr.EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s Jan. 13, 1995, gage height 11.39 ft; minimum discharge, 18 ft³/s Sept. 26, 1994.EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Jan. 9	1430	8,760	10.03	Jan. 31	1030	8,610	9.93
Jan. 13	unknown	*10,600	a*11.39				

Minimum discharge, 20 ft³/s Oct. 6, 7, 11, 13.

(a) From peak-stage indicator.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	680	2260	657	6300	329	732	968	200	216	85	54
2	27	351	1540	565	3710	316	635	1710	196	209	83	52
3	26	233	1600	500	2130	310	574	1020	193	202	81	51
4	25	570	1160	452	1510	333	544	768	193	192	80	52
5	24	863	883	435	1130	392	524	643	193	187	78	54
6	24	421	759	525	894	350	494	586	188	180	79	52
7	24	286	691	667	757	328	1140	532	200	176	88	50
8	24	252	613	1070	642	408	1580	479	187	171	78	49
9	23	1230	548	5630	559	1520	1390	442	179	171	75	49
10	23	682	574	3790	493	1670	1060	415	223	165	75	48
11	23	414	829	3450	449	1880	867	445	216	161	75	47
12	23	326	1190	3520	472	1410	1030	456	187	157	73	47
13	23	260	920	e7000	513	1210	1470	466	180	148	70	47
14	34	227	825	e5700	475	2080	1180	438	254	141	68	46
15	41	568	835	4070	439	1850	1030	403	433	135	67	45
16	31	1440	1760	2900	418	1340	923	374	306	128	67	46
17	28	1620	2930	1980	1840	1020	829	344	285	118	69	47
18	27	994	2220	1850	2660	1010	751	323	473	114	67	47
19	27	668	1640	2030	1430	1050	674	307	1050	111	63	46
20	26	895	1200	1500	978	2290	699	295	781	110	61	44
21	32	705	1090	1150	773	2100	710	283	538	108	60	44
22	32	531	909	961	641	2130	660	271	425	106	60	43
23	30	535	775	808	551	1820	581	261	358	104	59	43
24	29	732	786	700	483	1570	516	251	319	101	57	46
25	33	1530	744	651	437	1300	464	244	294	98	56	61
26	133	1090	1350	944	402	1050	426	235	275	99	55	55
27	467	911	2110	1170	373	919	421	228	260	96	55	76
28	535	840	1780	1320	350	914	464	222	245	92	56	124
29	181	724	1250	1340	---	929	430	215	234	90	60	100
30	121	1070	959	2870	---	886	405	211	223	88	56	73
31	110	---	776	6470	---	817	---	205	---	87	55	---
TOTAL	2234	21648	37506	66675	31809	35531	23203	14040	9288	4261	2111	1638
MEAN	72.1	722	1210	2151	1136	1146	773	453	310	137	68.1	54.6
MAX	535	1620	2930	7000	6300	2290	1580	1710	1050	216	88	124
MIN	23	227	548	435	350	310	405	205	179	87	55	43
AC-FT	4430	42940	74390	132200	63090	70480	46020	27850	18420	8450	4190	3250
CFSM	.86	8.65	14.5	25.8	13.6	13.7	9.27	5.43	3.71	1.65	.82	.65
IN.	1.00	9.66	16.73	29.74	14.19	15.85	10.35	6.26	4.14	1.90	.94	.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1995, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1994	58.3	72.1	1995	44.6	1994
1995	385	722	1995	47.5	1994
1996	981	1210	1995	752	1994
1997	1447	2151	1995	743	1994
1998	868	1136	1995	600	1994
1999	838	1146	1995	529	1994
2000	565	773	1995	358	1994
2001	376	453	1995	299	1994
2002	244	310	1995	179	1994
2003	111	137	1995	84.6	1994
2004	56.8	68.1	1995	45.5	1994
2005	45.2	54.6	1995	35.8	1994

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1994 - 1995

ANNUAL TOTAL	148077	249944	497
ANNUAL MEAN	406	685	685
HIGHEST ANNUAL MEAN			309
LOWEST ANNUAL MEAN			1995
HIGHEST DAILY MEAN	2930	Dec 17	7000
LOWEST DAILY MEAN	23	Oct 9	23
ANNUAL SEVEN-DAY MINIMUM	23	Oct 7	23
ANNUAL RUNOFF (AC-FT)	293700	495800	360000
ANNUAL RUNOFF (CFSM)	4.86	8.21	5.96
ANNUAL RUNOFF (INCHES)	66.05	111.49	80.95
10 PERCENT EXCEEDS	1080	1590	1200
50 PERCENT EXCEEDS	242	415	237
90 PERCENT EXCEEDS	33	47	39

e Estimated

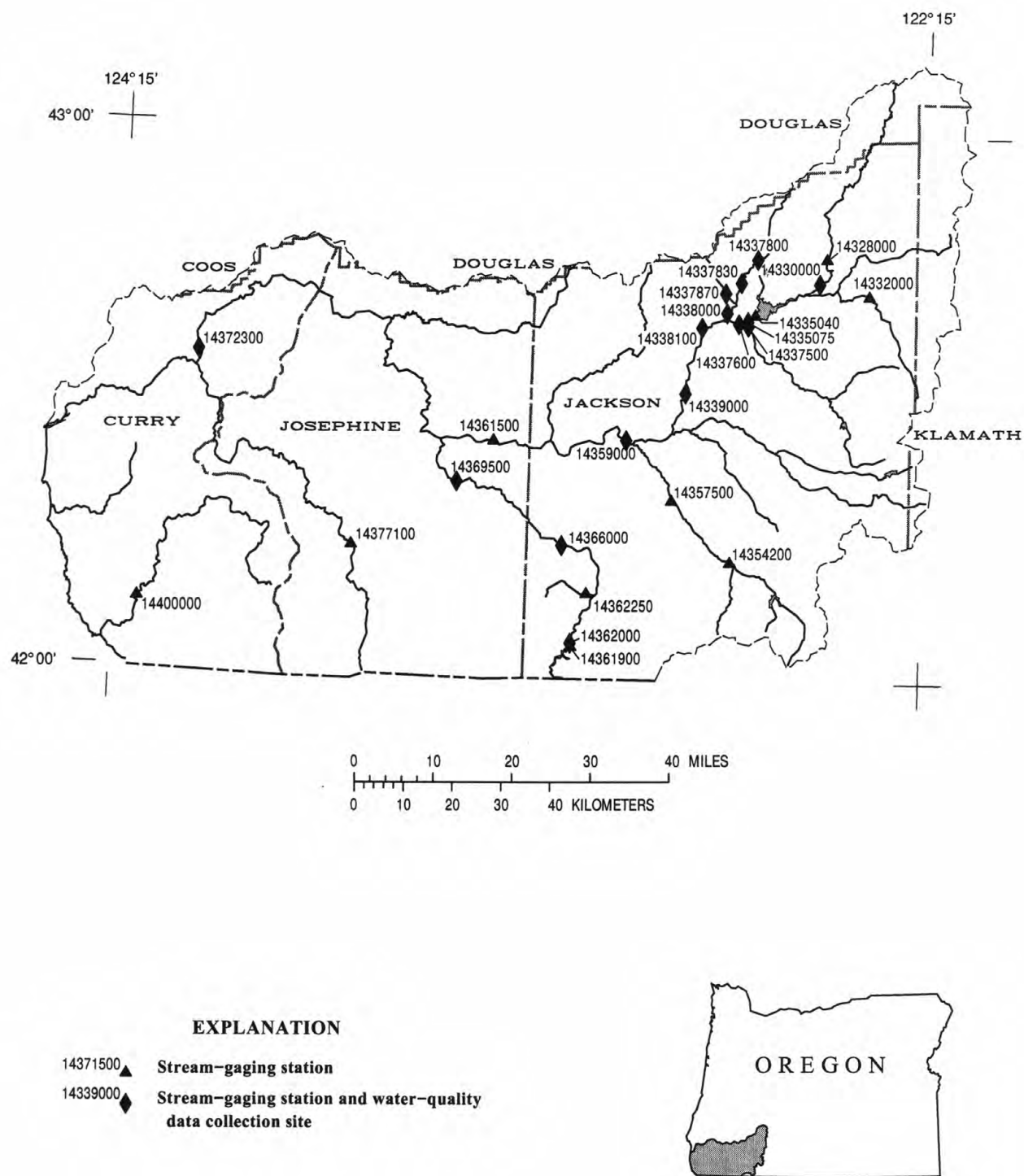


Figure 32. Location of surface-water and water-quality stations in the Rogue and Chetco River Basins.

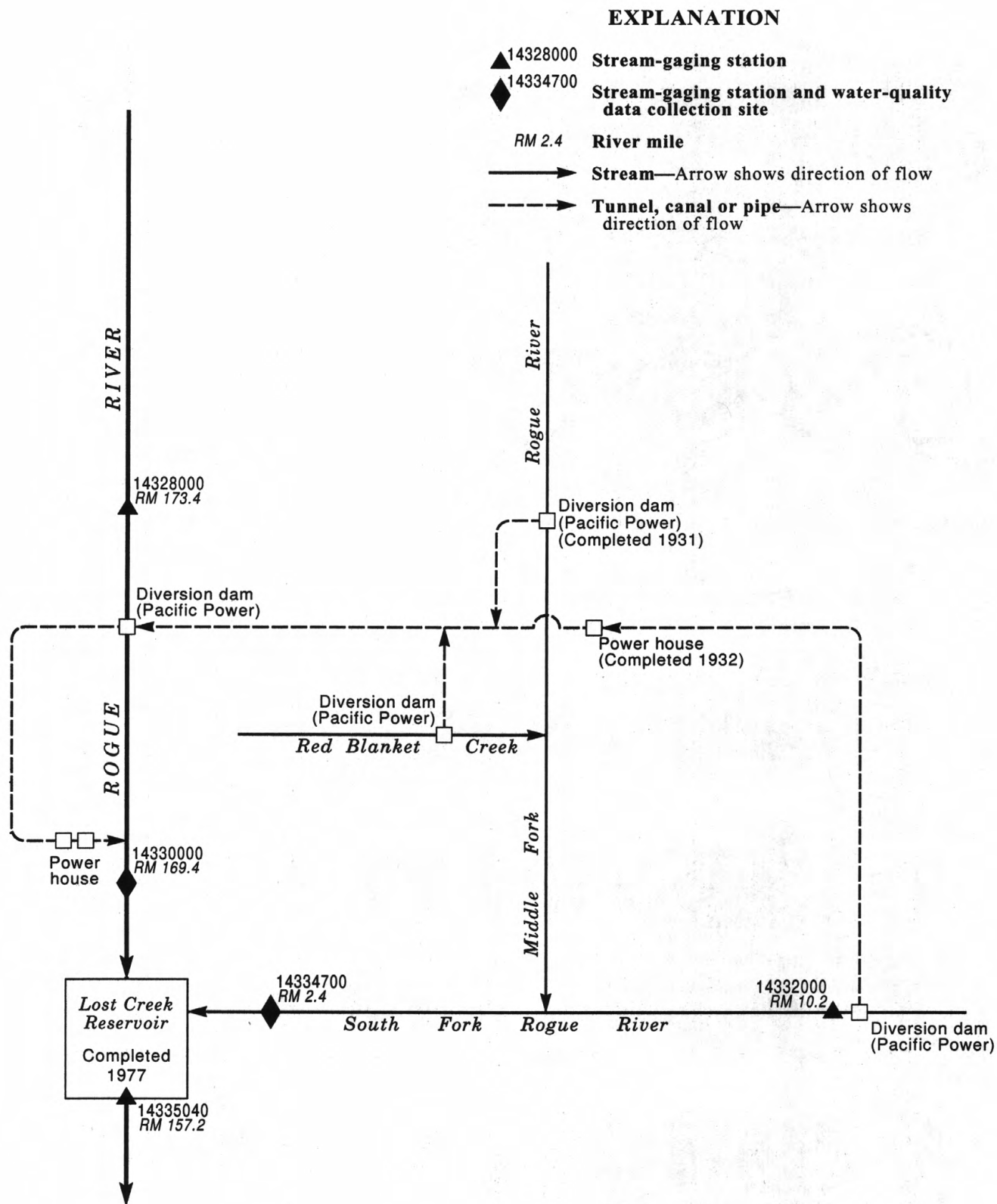


Figure 33. Schematic diagram showing gaging stations in the Rogue River Basin, upstream from Lost Creek Reservoir.

ROGUE RIVER BASIN

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14328000 ROGUE RIVER ABOVE PROSPECT, OR

LOCATION.--Lat 42°46'30", long 122°29'55", in SE 1/4 NE 1/4 sec.19, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, Rogue River National Forest, on left bank 1.4 mi 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, published as "near Prospect."

REVISED RECORDS.--WSP 1248: 1925, 1927(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,620 ft above sea level, from river-profile map. Prior to Feb. 17, 1912, nonrecording gage at several sites within a few hundred feet upstream at various datums.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--75 years (water years 1909-11, 1924-95), 813 ft³/s, 35.42 in/yr, 589,300 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 discharge, 200 ft³/s Nov. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Feb. 1	1800	*6,150	*5.94	No other peak greater than base discharge.			
Minimum discharge, 239 ft ³ /s Nov. 17.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	386	1050	504	5090	1160	895	1530	1160	739	510	446
2	312	376	830	473	4140	1090	882	1950	1130	721	505	442
3	306	339	609	455	2550	1080	886	1720	1040	705	499	441
4	304	357	483	441	2140	1010	946	1690	1000	689	494	441
5	304	352	419	436	1930	953	1050	1620	998	664	492	441
6	301	390	466	446	1750	864	1280	1480	959	678	487	437
7	299	356	444	457	1590	827	1760	1400	979	680	512	435
8	299	337	387	573	1440	820	1750	1400	915	676	511	435
9	299	382	394	1330	1290	1190	1440	1340	864	945	500	435
10	299	361	382	1770	1180	1690	1290	1360	844	988	496	432
11	299	339	384	1550	1090	1840	1250	1430	877	764	498	430
12	294	340	381	1450	1040	1540	1350	1350	839	764	493	427
13	290	334	370	1720	977	1530	1880	1250	809	768	487	424
14	329	327	357	2200	894	1650	1570	1180	871	695	482	424
15	384	330	373	1810	834	1860	1390	1210	1200	671	480	421
16	336	349	388	1340	784	1570	1250	1210	992	649	480	419
17	321	304	470	1090	891	1410	1180	1230	932	631	483	419
18	314	368	611	967	1460	1800	1130	1250	1010	623	486	419
19	309	380	599	859	1400	1910	1050	1200	1140	702	476	419
20	306	357	555	793	1430	1950	1040	1220	1130	630	470	419
21	306	337	531	739	1420	1770	977	1260	1030	605	465	415
22	318	336	518	698	1380	1520	990	1240	976	586	463	413
23	309	350	516	670	1360	1340	1010	1210	930	574	458	413
24	304	376	511	651	1400	1200	1100	1190	906	566	458	413
25	301	428	502	637	1390	1100	1180	1140	889	554	458	443
26	299	384	505	628	1310	1020	1180	1120	866	584	453	447
27	310	389	669	633	1260	977	1230	1100	834	554	452	474
28	562	364	660	780	1210	943	1340	1090	802	541	452	474
29	382	366	590	1050	---	918	1340	1090	772	530	452	492
30	338	649	527	1530	---	899	1350	1100	753	523	452	472
31	328	---	513	3050	---	897	---	1090	---	517	447	---
TOTAL	9983	11043	15994	31730	44630	40328	36966	40650	28447	20516	14851	13062
MEAN	322	368	516	1024	1594	1301	1232	1311	948	662	479	435
MAX	562	649	1050	3050	5090	1950	1880	1950	1200	988	512	492
MIN	290	304	357	436	784	820	882	1090	753	517	447	413
AC-FT	19800	21900	31720	62940	88520	79990	73320	80630	56420	40690	29460	25910
CFSM	1.03	1.18	1.65	3.28	5.11	4.17	3.95	4.20	3.04	2.12	1.54	1.40
IN.	1.19	1.32	1.91	3.78	5.32	4.81	4.41	4.85	3.39	2.45	1.77	1.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1995, BY WATER YEAR (WY)

	MEAN	450	690	894	899	951	987	1184	1335	971	544	437	417
MAX	957	2062	3368	2158	2092	2820	1888	2263	2564	1010	659	602	
(WY)	1951	1910	1965	1970	1958	1972	1966	1952	1933	1953	1976	1972	
MIN	256	292	313	292	325	480	649	456	335	253	222	230	
(WY)	1993	1932	1931	1937	1937	1977	1926	1992	1931	1931	1931	1931	

SUMMARY STATISTICS

	FOR 1994 CALENDAR YEAR				FOR 1995 WATER YEAR				WATER YEARS 1908 - 1995			
ANNUAL TOTAL	192560				308200				813			
ANNUAL MEAN	528				844				1268			
HIGHEST ANNUAL MEAN									411			
LOWEST ANNUAL MEAN									16000			
HIGHEST DAILY MEAN	1120				Mar 4				210			
LOWEST DAILY MEAN	290				Oct 13				210			
ANNUAL SEVEN-DAY MINIMUM	297				Sep 21				216			
ANNUAL RUNOFF (AC-FT)	381900				611300				589300			
ANNUAL RUNOFF (CFSM)	1.69				2.71				2.61			
ANNUAL RUNOFF (INCHES)	22.96				36.75				35.42			
10 PERCENT EXCEEDS	883				1470				1470			
50 PERCENT EXCEEDS	457				678				628			
90 PERCENT EXCEEDS	309				339				356			

ROGUE RIVER BASIN

14330000 ROGUE RIVER BELOW PROSPECT, OR

LOCATION.--Lat 42°43'50", long 122°30'55", in SE 1/4 NW 1/4 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 above sea level (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.--No estimated daily discharges. Records good. Fluctuations caused by powerplant 600 ft upstream from station. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--27 years, (water years 1969-95), 1,450 ft³/s, 1,050,000 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 discharge, 166 ft³/s Sept. 29, 1992, result of regulation by upstream diversion gates.

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 upstream from Prospect (station 14328000) and for station downstream from South Fork Rogue River near Prospect (station 14335000) after adjusting for estimated intervening tributary inflow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,060 ft³/s Feb. 1, gage height 6.03 ft; minimum discharge, 263 ft³/s Aug. 22, result of regulation by upstream diversion gates.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	661	707	1590	1010	5730	1780	1540	2270	1820	1410	870	953
2	650	744	1400	971	4730	1710	1530	2740	1790	1410	864	953
3	640	685	1170	936	3140	1710	1530	2510	1760	1370	855	946
4	631	708	1000	936	2800	1650	1580	2490	1710	1360	851	941
5	638	715	910	936	2570	1600	1690	2400	1660	1330	839	935
6	631	778	968	950	2400	1520	1910	2260	1600	1350	837	936
7	636	728	931	985	2180	1450	2450	2140	1630	1350	853	931
8	629	710	860	1110	2020	1450	2450	2150	1570	1340	836	935
9	629	768	867	1840	1850	1800	2110	2070	1590	1620	902	932
10	631	739	847	2410	1740	2390	1960	2100	1570	1610	1040	927
11	628	708	855	2160	1660	2580	1920	2180	1600	1440	1020	923
12	628	701	839	2050	1620	2240	2040	2100	1470	1440	1030	919
13	626	685	825	2350	1540	2240	2650	1980	1380	1450	1030	919
14	690	689	809	2890	1450	2350	2290	1900	1560	1360	1020	913
15	747	698	837	2460	1420	2630	2100	1940	1890	1330	1030	913
16	679	711	866	1920	1420	2320	1940	1950	1660	1310	1010	906
17	654	598	982	1690	1540	2110	1860	1960	1630	1280	1030	903
18	649	612	1170	1500	2100	2560	1820	1990	1700	1280	1030	901
19	643	666	1120	1390	2020	2670	1740	1950	1820	1360	1020	899
20	641	727	1070	1350	2050	2710	1750	1950	1830	1280	995	898
21	647	661	1050	1360	2050	2520	1670	1970	1720	1240	996	892
22	656	652	1030	1320	1990	2240	1680	1840	1660	1220	969	883
23	642	722	1030	1290	1980	2030	1700	1810	1610	1210	990	886
24	637	775	1020	1280	2020	1880	1780	1800	1580	1090	980	888
25	630	834	1010	1260	2010	1780	1860	1820	1550	942	988	924
26	636	776	1030	1240	1910	1690	1850	1860	1530	975	981	930
27	646	763	1210	1240	1850	1610	1910	1850	1490	938	974	964
28	913	751	1170	1390	1820	1600	2030	1840	1450	916	971	965
29	705	761	1100	1710	---	1570	2040	1830	1430	907	970	981
30	641	1070	1040	2240	---	1550	2060	1780	1430	888	964	957
31	606	---	1030	3690	---	1550	---	1790	---	881	957	---
TOTAL	20320	21842	31636	49864	61610	61490	57440	63220	48690	38887	29702	27753
MEAN	655	728	1021	1609	2200	1984	1915	2039	1623	1254	958	925
MAX	913	1070	1590	3690	5730	2710	2650	2740	1890	1620	1040	981
MIN	606	598	809	936	1420	1450	1530	1780	1380	881	836	883
AC-FT	40300	43320	62750	98910	122200	122000	113900	125400	96580	77130	58910	55050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1995, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	943	1221	1497	1627	1638	1820	1855	2021	1638	1195	1012	942															
MAX	1342	2100	2736	2894	2722	3627	2668	3282	2923	1660	1356	1267															
(WY)	1985	1974	1982	1974	1986	1972	1989	1971	1974	1971	1984	1984															
MIN	606	728	926	946	1045	1272	933	765	717	632	623																
(WY)	1993	1995	1991	1977	1977	1977	1992	1992	1992	1992	1992	1992															

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1969 - 1995

	1994	1995	1969-1995
ANNUAL TOTAL	357485	512454	1450
ANNUAL MEAN	979	1404	2053
HIGHEST ANNUAL MEAN			968
LOWEST ANNUAL MEAN			9780
HIGHEST DAILY MEAN	1820	Apr 20	Jan 16 1974
LOWEST DAILY MEAN	598	Nov 17	555 Oct 19 1992
ANNUAL SEVEN-DAY MINIMUM	614	Sep 21	560 Oct 14 1992
ANNUAL RUNOFF (AC-FT)	709100	1016000	1050000
10 PERCENT EXCEEDS	1480	2170	2220
50 PERCENT EXCEEDS	910	1340	1300
90 PERCENT EXCEEDS	632	695	827

ROGUE RIVER BASIN

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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 TEMPERATURE: 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. Automatic pumping sediment sampler November 1976 to April 1981.

REMARKS.--During low flows and warm weather, water temperatures may be influenced by return flows from hydroelectric plant 600 ft upstream.

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 TEMPERATURE: Maximum, 20.5°C July 20, 1979 (result of regulation); minimum, 0.0°C at times most years.

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 CONCENTRATION: 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 TEMPERATURE: Maximum, 15.5°C July 17, 27, 28, Aug. 4, 5; minimum, 1.5°C several days in November and December.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

ROGUE RIVER BASIN

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

ROGUE RIVER BASIN

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14332000 SOUTH FORK ROGUE RIVER NEAR PROSPECT, OR

LOCATION.--Lat 42°42'30", long 122°23'30", in SE 1/4 SW 1/4 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. Drainage area at site upstream from Imnaha Creek was 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 by combining flow of South Fork Rogue River above Imnaha Creek, near Prospect and Imnaha Creek near Prospect. Records for period October 1949 to September 1983 included flow of South Fork power canal.

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 above sea level, from topographic map. Prior to Sept. 10, 1965, at site 1,000 ft upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. All records given herein do not include flow in South Fork power canal (completed in March 1932) which diverts 1,500 ft³/s upstream from station and returns water to main stem 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 (includes flow of South Fork power canal).

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, 703 ft³/s Feb. 1, gage height, 4.08 ft; minimum discharge, 11 ft³/s Aug. 14-16, 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	44	14	597	52	26	183	211	34	12	13
2	13	15	26	13	546	48	23	281	148	27	12	13
3	12	13	15	14	345	45	21	236	125	22	13	13
4	12	19	15	16	273	36	23	243	120	20	13	13
5	13	23	22	16	231	29	29	254	124	18	13	13
6	13	17	15	16	198	22	65	219	102	19	13	14
7	13	14	14	15	171	20	93	225	108	17	15	14
8	12	13	14	15	142	19	93	200	95	16	12	13
9	12	15	14	20	113	31	63	186	78	76	12	13
10	12	13	15	30	93	57	47	233	77	65	11	13
11	12	13	15	19	80	74	54	267	86	33	11	13
12	12	14	15	19	71	64	65	215	80	58	12	12
13	12	14	14	35	63	68	113	178	72	59	11	12
14	16	14	14	97	46	78	86	149	109	33	11	12
15	17	15	14	63	33	98	75	155	258	22	11	12
16	13	15	15	32	25	86	69	167	153	18	22	13
17	13	15	16	20	34	77	69	165	128	16	12	15
18	13	15	16	18	105	196	64	173	188	18	11	15
19	12	15	17	16	90	208	55	171	215	16	13	15
20	12	17	20	14	84	180	58	177	188	16	17	14
21	12	15	17	13	80	147	49	204	140	15	16	14
22	12	17	14	13	73	123	54	228	117	15	16	14
23	12	15	14	14	70	102	58	200	104	15	16	14
24	13	20	14	14	74	86	72	184	97	14	15	13
25	14	21	14	14	73	75	84	167	89	14	13	14
26	13	17	14	14	67	62	87	160	79	13	14	15
27	14	16	16	13	62	49	107	161	70	13	15	15
28	29	15	16	15	58	40	135	161	58	14	14	15
29	15	17	15	18	---	35	180	169	47	13	14	17
30	13	40	15	54	---	30	160	215	40	13	14	14
31	13	---	14	221	---	27	---	218	---	13	14	---
TOTAL	417	499	513	905	3897	2264	2177	6144	3506	755	418	410
MEAN	13.5	16.6	16.5	29.2	139	73.0	72.6	198	117	24.4	13.5	13.7
MAX	29	40	44	221	597	208	180	281	258	76	22	17
MIN	12	13	14	13	25	19	21	149	40	13	11	12
AC-FT	827	990	1020	1800	7730	4490	4320	12190	6950	1500	829	813

CAL YR 1994 TOTAL 14190 MEAN 38.9 MAX 163 MIN 10 AC-FT 28150
WTR YR 1995 TOTAL 21905 MEAN 60.0 MAX 597 MIN 11 AC-FT 43450

ROGUE RIVER BASIN

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.--686 mi².

PERIOD OF RECORD.--February 1977 to current year.

REVISED RECORDS.--WDR OR-85-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (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, 465,800 acre-ft June 1, 2, 1988, elevation, 1,872.24 ft; minimum contents since first filling, 100,800 acre-ft Oct. 29, 1977, elevation, 1,720.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 465,000 acre-ft May 2, elevation, 1,872.00 ft; minimum contents, 210,100 acre-ft Oct. 27, elevation, 1,781.01 ft.

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

1,720	100,100	1,850	393,100
1,750	148,200	1,872	465,000
1,800	254,600	1,899	562,900

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1784.12	1781.13	1783.41	1790.45	1825.41	1854.43	1862.43	1871.76	1871.50	1865.89	1854.30	1830.38
2	1783.94	1781.16	1784.15	1790.59	1828.70	1854.97	1862.78	1871.88	1871.55	1865.31	1853.89	1829.29
3	1783.73	1781.12	1784.59	1790.76	1830.20	1855.53	1863.14	1871.39	1871.52	1864.69	1853.46	1828.18
4	1783.53	1781.23	1784.82	1791.02	1831.16	1855.99	1863.54	1870.90	1871.47	1864.06	1853.01	1827.08
5	1783.32	1781.30	1784.95	1791.33	1831.85	1856.38	1864.06	1870.33	1871.46	1863.39	1852.53	1825.96
6	1783.11	1781.35	1785.12	1791.66	1832.59	1856.69	1864.77	1870.00	1871.44	1862.76	1852.05	1824.85
7	1782.95	1781.35	1785.25	1792.00	1833.48	1856.97	1865.74	1869.89	1871.45	1862.15	1851.58	1823.88
8	1782.82	1781.31	1785.30	1792.48	1834.35	1857.24	1866.39	1869.79	1871.41	1861.56	1851.09	1823.04
9	1782.71	1781.46	1785.34	1793.81	1835.16	1857.91	1866.61	1869.66	1871.29	1861.24	1850.59	1822.20
10	1782.60	1781.48	1785.38	1795.69	1836.01	1858.67	1866.67	1869.73	1871.19	1860.87	1850.09	1821.35
11	1782.48	1781.44	1785.44	1797.27	1836.91	1859.16	1866.47	1869.93	1871.10	1860.38	1849.48	1820.66
12	1782.34	1781.38	1785.48	1798.84	1837.81	1859.41	1866.45	1870.02	1870.90	1860.05	1848.80	1820.12
13	1782.23	1781.30	1785.49	1800.74	1838.66	1859.12	1866.81	1869.99	1870.60	1859.84	1848.11	1819.59
14	1782.21	1781.20	1785.53	1803.38	1839.42	1858.32	1866.69	1869.92	1870.50	1859.69	1847.43	1819.06
15	1782.20	1781.14	1785.58	1805.51	1840.10	1857.73	1866.38	1869.94	1870.75	1859.52	1846.73	1818.53
16	1782.13	1781.22	1785.71	1806.98	1840.71	1857.25	1866.33	1870.00	1870.70	1859.32	1846.05	1818.00
17	1782.04	1781.19	1785.92	1808.14	1841.51	1857.59	1866.44	1870.05	1870.64	1859.09	1845.30	1817.45
18	1781.95	1781.11	1786.44	1809.12	1842.79	1858.83	1866.71	1870.12	1870.65	1858.85	1844.37	1816.90
19	1781.83	1781.08	1786.85	1809.94	1843.99	1859.22	1867.04	1870.14	1870.76	1858.66	1843.45	1816.44
20	1781.72	1781.18	1787.16	1810.65	1845.19	1859.61	1867.45	1870.14	1870.83	1858.41	1842.53	1816.12
21	1781.64	1781.17	1787.43	1811.28	1846.35	1859.79	1867.74	1870.20	1870.70	1858.13	1841.59	1815.95
22	1781.54	1781.10	1787.66	1811.86	1847.47	1859.73	1868.01	1870.18	1870.36	1857.83	1840.66	1815.86
23	1781.44	1781.07	1787.88	1812.38	1848.54	1859.55	1868.24	1870.08	1869.97	1857.52	1839.72	1815.75
24	1781.32	1781.20	1788.14	1812.90	1849.67	1859.52	1868.54	1870.23	1869.57	1857.19	1838.77	1815.65
25	1781.18	1781.43	1788.35	1813.40	1850.77	1859.68	1869.00	1870.44	1869.15	1856.87	1837.81	1815.60
26	1781.07	1781.52	1788.59	1813.86	1851.79	1859.94	1869.53	1870.65	1868.70	1856.59	1836.78	1815.53
27	1781.04	1781.60	1789.04	1814.32	1852.76	1860.29	1870.12	1870.86	1868.21	1856.24	1835.74	1815.47
28	1781.25	1781.65	1789.46	1814.92	1853.66	1860.74	1870.60	1871.05	1867.65	1855.87	1834.68	1815.44
29	1781.23	1781.78	1789.79	1815.76	---	1861.17	1871.03	1871.24	1867.08	1855.49	1833.62	1815.38
30	1781.14	1782.32	1790.04	1817.15	---	1861.60	1871.30	1871.37	1866.48	1855.10	1832.54	1815.27
31	1781.03	---	1790.26	1820.35	---	1862.02	---	1871.42	---	1854.70	1831.46	---
MAX	1784.12	1782.32	1790.26	1820.35	1853.66	1862.02	1871.30	1871.88	1871.55	1865.89	1854.30	1830.38
MIN	1781.03	1781.07	1783.41	1790.45	1825.41	1854.43	1862.43	1869.66	1866.48	1854.70	1831.46	1815.27
(†)	210140	213010	231180	307140	404560	431500	462600	463010	446290	407860	337960	293570
(‡)	-7260	+2870	+18170	+75960	+97420	+26940	+31100	+410	-16720	-38430	-69900	-44390
CAL YR 1994	MAX 1861.86	MIN 1781.03	AC-FT†	-53320								
WTR YR 1995	MAX 1871.88	MIN 1781.03	AC-FT†	+76170								

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

ROGUE RIVER BASIN

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14335075 ROGUE RIVER AT MCLEOD, OR

LOCATION.--Lat 42°39'35", long 122°41'30", in SW 1/4 NW 1/4 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.--689 mi².

PERIOD OF RECORD.--May 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to September 1981.

pH: November 1976 to September 1981.

WATER TEMPERATURE: November 1976 to current year.

DISSOLVED OXYGEN: November 1976 to September 1981.

SUSPENDED SEDIMENT DISCHARGE: October 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. Automatic pumping sediment sampler November 1976 to April 1981.

REMARKS.--Water-discharge records, obtained by subtracting Big Butte Creek near McLeod (station 14337500) from Rogue River near McLeod (station 14337600), were used for computation of daily sediment loads.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 76 microsiemens Nov. 11, 1977; minimum, 45 microsiemens Dec. 24, 25, 1977.

pH: Maximum, 9.2 units May 8, 9, 11, 12, 1981; minimum, 6.7 units Nov. 8-13, 1978.

WATER TEMPERATURE: Maximum, 15.5°C June 23, 1985, several days in July and August 1994; minimum, 0.5°C Jan. 9, 1977; minimum since full operation of Lost Creek Lake, 3.5°C several days in February 1979, February 1985, February and March 1989. The minimum may have been lower during period of missing record Feb. 1-20, 1985.

DISSOLVED OXYGEN: Maximum, 15.7 mg/L Jan. 8, 1977; minimum, 6.8 mg/L Aug. 20, 1977.

SEDIMENT CONCENTRATION: Maximum recorded daily mean, 75 mg/L Dec. 14, 1977; minimum daily, 0 mg/L many days.

SEDIMENT DISCHARGE: Maximum recorded daily, 1,570 tons Dec. 14, 1977; minimum daily, 0 tons many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 14.0°C Aug. 22-26; minimum, 5.0°C Dec. 30, Jan. 21, Feb. 13-16.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	8.0	7.0	7.5	7.5	7.0	7.5	6.0	5.5	5.5
2	---	---	---	8.0	7.0	7.5	7.0	7.0	7.0	6.0	5.5	5.5
3	---	---	---	8.0	7.0	7.5	7.0	6.5	7.0	5.5	5.5	5.5
4	---	---	---	7.5	7.5	7.5	7.0	6.5	6.5	6.0	5.5	5.5
5	---	---	---	8.0	7.5	7.5	7.0	6.5	6.5	6.0	5.5	6.0
6	---	---	---	7.5	7.5	7.5	7.0	6.5	6.5	6.0	5.5	5.5
7	---	---	---	8.0	7.5	7.5	7.0	6.5	6.5	5.5	5.5	5.5
8	---	---	---	7.5	7.5	7.5	7.0	6.5	6.5	6.0	5.5	5.5
9	---	---	---	8.0	7.5	7.5	7.0	6.5	6.5	6.0	5.5	6.0
10	---	---	---	8.0	7.5	7.5	6.5	6.5	6.5	6.0	5.5	5.5
11	---	---	---	7.5	7.5	7.5	6.5	6.5	6.5	5.5	5.5	5.5
12	---	---	---	8.0	7.5	7.5	7.0	6.5	6.5	5.5	5.5	5.5
13	---	---	---	8.0	7.5	7.5	7.0	6.5	6.5	5.5	5.5	5.5
14	---	---	---	8.0	7.5	7.5	6.5	6.5	6.5	6.0	5.5	5.5
15	---	---	---	8.0	7.5	7.5	7.0	6.0	6.5	6.0	5.5	5.5
16	---	---	---	8.0	7.5	7.5	6.0	6.0	6.0	6.0	5.5	5.5
17	---	---	---	7.5	7.0	7.5	6.0	6.0	6.0	5.5	5.5	5.5
18	---	---	---	7.5	7.0	7.5	6.0	6.0	6.0	6.0	5.5	5.5
19	---	---	---	7.5	7.0	7.5	6.0	5.5	6.0	6.0	5.5	5.5
20	---	---	---	7.5	7.0	7.5	6.0	5.5	6.0	5.5	5.5	5.5
21	---	---	---	7.5	7.0	7.5	6.0	5.5	6.0	6.0	5.0	5.5
22	---	---	---	7.5	7.0	7.0	6.0	5.5	5.5	5.5	5.5	5.5
23	---	---	---	7.5	7.0	7.5	6.0	5.5	5.5	6.0	5.5	5.5
24	---	---	---	7.5	7.0	7.5	6.0	5.5	5.5	6.0	5.5	5.5
25	---	---	---	7.5	7.0	7.5	6.0	5.5	6.0	6.0	5.5	5.5
26	---	---	---	7.5	7.0	7.0	6.0	5.5	6.0	6.0	5.5	5.5
27	8.5	7.5	8.0	7.5	7.0	7.0	6.0	5.5	5.5	5.5	5.5	5.5
28	8.0	7.0	7.5	7.5	7.0	7.0	6.0	5.5	5.5	5.5	5.5	5.5
29	8.0	7.0	7.5	7.0	7.0	7.0	6.0	5.5	5.5	6.0	5.5	5.5
30	8.0	7.0	7.5	7.5	7.0	7.0	5.5	5.0	5.5	6.0	5.5	6.0
31	8.0	7.5	7.5	---	---	---	5.5	5.5	5.5	6.0	5.5	6.0
MONTH	---	---	---	8.0	7.0	7.5	7.5	5.0	6.0	6.0	5.0	5.5

ROGUE RIVER BASIN

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

LOCATION.--Lat 42°39'05", long 122°41'25", in NE 1/4 NW 1/4 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.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is 1,525.95 ft above sea level. Oct. 9, 1945, to Sept. 30, 1957, nonrecording gage at site 260 ft downstream at datum 0.53 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Slight regulation by fish hatchery 600 ft upstream from station. Several diversions in the vicinity of Butte Falls, the two largest being the city of Medford diversion and Eagle Point Irrigation District Canal.

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 discharge, 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.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 14	1200	*1.600	*6.27				

Minimum discharge, 47 ft³/s Sept. 24.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	76	492	136	922	116	211	603	135	180	e64	63
2	91	66	373	124	689	118	193	680	132	113	e63	66
3	91	59	267	118	502	152	174	583	112	98	e62	68
4	90	87	178	112	406	148	163	590	103	95	e61	67
5	91	112	132	136	345	181	159	550	112	89	e60	66
6	90	77	123	169	303	153	180	494	131	88	e60	66
7	91	66	117	168	274	131	210	475	152	90	e72	68
8	91	61	104	181	249	128	299	422	132	99	e71	68
9	90	119	93	282	222	197	284	384	115	165	e70	69
10	90	115	88	378	201	248	241	394	108	190	e69	67
11	91	69	89	356	184	262	238	395	116	132	61	66
12	91	66	94	394	174	213	276	394	109	147	60	66
13	95	62	87	484	189	299	951	363	102	190	59	60
14	103	60	95	998	169	381	751	325	167	149	58	60
15	107	60	112	795	150	603	600	295	341	127	58	60
16	90	88	155	512	141	443	515	273	269	112	59	52
17	55	148	140	413	186	383	457	254	245	100	60	50
18	54	100	275	442	271	716	453	234	253	94	59	50
19	53	81	248	294	209	579	404	219	296	92	59	49
20	53	197	197	253	189	760	617	205	399	89	58	50
21	53	150	169	220	177	566	525	200	352	82	58	50
22	52	95	148	194	168	543	455	249	322	80	58	51
23	52	86	137	176	158	492	417	214	296	78	58	51
24	51	145	155	162	149	430	395	196	275	71	58	49
25	50	453	156	150	143	360	365	197	257	75	57	54
26	50	187	140	143	137	307	340	169	243	76	57	56
27	53	161	169	145	129	275	433	158	232	75	55	59
28	84	150	293	148	122	252	444	149	221	72	56	67
29	58	165	193	147	---	235	558	139	212	68	55	65
30	54	307	160	208	---	216	505	131	206	67	56	62
31	56	---	144	542	---	203	---	125	---	e65	56	---
TOTAL	2313	3668	5323	8980	7158	10090	11813	10059	6145	3248	1867	1795
MEAN	74.6	122	172	290	256	325	394	324	205	105	60.2	59.8
MAX	107	453	492	998	922	760	951	680	399	190	72	69
MIN	50	59	87	112	122	116	159	125	102	65	55	49
AC-FT	4590	7280	10560	17810	14200	20010	23430	19950	12190	6440	3700	3560

MEAN	124	192	377	451	459	493	368	235	139	80.3	67.4	69.9
MAX	330	535	1334	1325	1121	1362	723	492	450	148	121	106
(WY)	1951	1974	1956	1956	1982	1972	1951	1953	1953	1948	1956	1948
MIN	64.4	60.2	58.0	64.2	91.7	92.2	73.4	57.0	43.7	36.7	43.0	43.8
(WY)	1982	1988	1977	1977	1977	1992	1977	1968	1968	1968	1992	1988

ANNUAL TOTAL	32528		72459			
ANNUAL MEAN	89.1		199		254	
HIGHEST ANNUAL MEAN					501	1956
LOWEST ANNUAL MEAN					76.6	1992
HIGHEST DAILY MEAN	492	Dec 1	998	Jan 14	7190	Jan 22 1972
LOWEST DAILY MEAN	39	Aug 27	49	Sep 19	15	Jun 24 1977
ANNUAL SEVEN-DAY MINIMUM	40	Aug 26	50	Sep 18	30	Jun 23 1977
ANNUAL RUNOFF (AC-FT)	64520		143700		183900	
10 PERCENT EXCEEDS	148		443		568	
50 PERCENT EXCEEDS	75		145		140	
90 PERCENT EXCEEDS	45		58		56	

e Estimated

ROGUE RIVER BASIN

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1970 to current year.

INSTRUMENTATION.--Temperature recorder since August 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 24.0°C at times in 1973, 1977, 1979-81, 1990; minimum, 0.0°C at times most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 21.0°C July 17, Aug. 4, 5; minimum, 1.5°C Nov. 22, Dec. 30.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	14.0	10.5	12.0	9.0	7.5	8.5	7.0	6.0	6.5	5.0	3.5	4.0
2	13.5	10.0	11.5	8.0	6.5	7.0	6.5	5.5	6.0	4.5	3.0	4.0
3	11.5	8.5	10.0	7.0	5.5	6.5	5.5	4.0	5.0	5.0	4.0	4.5
4	11.5	7.5	9.5	7.0	6.0	6.5	4.0	3.0	3.5	5.0	4.0	4.5
5	11.5	8.0	9.5	8.0	6.5	7.0	4.0	2.0	3.0	6.0	5.0	5.5
6	11.0	7.5	9.5	7.5	6.5	7.0	5.0	3.5	4.5	6.0	5.0	5.5
7	11.5	7.0	9.0	7.5	5.5	6.5	5.5	4.0	5.0	6.5	5.5	6.0
8	11.5	7.5	9.5	6.0	4.5	5.0	4.5	3.0	3.5	7.5	6.0	6.5
9	11.0	8.5	10.0	7.0	6.0	6.5	4.5	3.0	3.5	8.0	7.0	7.5
10	11.5	8.5	10.0	6.0	4.5	5.5	4.5	3.0	3.5	8.0	7.0	7.5
11	11.5	8.5	9.5	5.5	4.5	5.0	5.0	4.0	4.5	7.0	6.0	6.5
12	10.5	8.5	9.5	7.0	5.5	6.0	5.5	4.5	5.0	7.0	6.0	6.5
13	10.0	7.0	8.5	7.0	5.0	6.0	5.5	4.0	5.0	7.5	6.5	7.0
14	10.5	9.0	9.5	6.0	4.0	5.0	4.5	3.5	4.0	7.5	6.5	7.0
15	10.0	8.0	9.0	7.5	5.5	6.5	5.0	4.0	4.5	7.0	6.0	6.5
16	9.5	6.5	8.0	7.0	4.0	5.5	6.0	5.0	5.5	6.0	5.0	5.5
17	10.0	6.5	8.0	4.0	3.0	3.5	7.0	6.0	6.5	5.0	4.0	4.5
18	10.0	6.5	8.5	4.0	2.5	3.0	7.0	6.0	6.5	6.0	4.5	5.5
19	10.0	7.0	8.5	4.0	2.5	3.5	6.5	5.5	6.0	6.0	5.0	5.5
20	10.5	7.5	9.0	5.0	4.0	4.5	6.0	4.5	5.5	6.0	4.5	5.5
21	10.5	8.0	9.0	4.5	2.5	3.5	6.0	4.5	5.0	6.0	4.5	5.0
22	10.0	7.0	8.5	3.5	1.5	2.5	5.0	3.5	4.0	6.5	5.0	5.5
23	9.5	6.5	8.0	4.5	2.5	3.5	4.5	3.5	4.0	7.0	6.0	6.5
24	9.5	6.0	8.0	5.5	4.0	4.5	6.0	4.5	5.5	7.0	5.0	6.0
25	9.5	6.5	8.0	5.0	3.5	4.0	6.0	5.0	5.5	7.0	5.5	6.5
26	10.5	8.5	9.5	5.0	3.5	4.0	6.5	5.5	6.0	6.5	5.5	6.0
27	12.0	9.5	10.5	4.5	3.5	4.0	6.5	5.5	6.0	6.5	5.5	6.0
28	11.0	8.5	10.0	5.5	4.0	5.0	6.0	4.5	5.5	7.0	6.5	6.5
29	8.5	6.0	7.5	5.5	4.5	5.0	4.5	2.5	3.5	8.5	7.0	8.0
30	8.0	5.0	6.5	7.0	5.0	6.0	3.0	1.5	2.5	9.5	8.0	9.0
31	9.5	7.0	8.0	---	---	---	4.0	2.0	3.0	10.0	9.0	9.0
MONTH	14.0	5.0	9.0	9.0	1.5	5.0	7.0	1.5	5.0	10.0	3.0	6.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

ROGUE RIVER BASIN

14337600 ROGUE RIVER NEAR MCLEOD, OR

LOCATION.--Lat 42°39'20", long 122°42'50", in SW 1/4 sec.33, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on left bank at Obstinat 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 and crest-stage gage. Datum of gage is 1,489.08 ft above sea level.

REMARKS.--Records good. Flow regulated since February 1977 by Lost Creek Lake (station 14335040). Diversions for irrigation upstream from station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--12 years (water years 1966-77), 2,176 ft³/s, 1,577,000 acre-ft/yr.
18 years (water years 1978-95), 1,945 ft³/s, 1,409,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s Mar. 3, 1972, gage height, 12.24 ft; minimum discharge, 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, 5,170 ft³/s Mar. 15, gage height, 4.64 ft; minimum discharge, 824 ft³/s Jan. 3-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1060	956	1390	1030	2440	1020	1430	2960	2400	2750	1830	2540
2	1060	928	1310	1020	3390	1350	1400	4300	2400	2630	1830	2530
3	1070	935	1180	967	3180	1390	1380	4900	2380	2620	1850	2540
4	1070	977	1080	824	3090	1410	1370	4910	2340	2620	1880	2540
5	1080	1000	1030	849	3030	1450	1350	4870	2290	2610	1900	2530
6	1080	954	1020	890	2820	1420	1400	4190	2230	2610	1900	2530
7	1040	941	1010	891	2090	1400	1610	3630	2200	2630	1900	2340
8	978	935	998	907	1800	1400	2340	3500	2140	2630	1920	2140
9	958	1000	989	1030	1600	1470	2500	3410	2140	2720	1910	2150
10	966	984	978	1120	1310	1960	2570	3120	2140	2780	1910	2150
11	976	934	981	1100	1080	2670	2960	3080	2140	2530	2020	1940
12	976	934	984	1140	958	2620	2970	3090	2250	2360	2140	1710
13	971	934	977	1230	947	3620	3970	3060	2380	2220	2140	1710
14	982	934	1000	1710	922	4820	4000	2920	2430	1910	2130	1700
15	982	934	1020	1550	897	5010	3840	2750	2580	1890	2130	1700
16	971	e980	1070	1270	904	4220	3110	2700	2530	1870	2120	1690
17	934	e1100	1040	1160	964	2600	2680	2690	2440	1880	2180	1710
18	933	e1000	1190	1200	1060	2230	2300	2670	2470	1880	2450	1710
19	935	967	1150	1070	991	3560	2100	2700	2530	1870	2440	1590
20	936	1090	1100	1030	963	3950	2180	2710	2670	1860	2430	1380
21	933	1040	1070	988	964	3770	2120	2710	2750	1850	2420	1190
22	931	979	1050	964	948	3730	2080	2940	2970	1850	2420	1100
23	932	965	1040	956	940	3560	2120	2960	2970	1850	2410	1110
24	938	1030	1050	900	920	2960	2090	2420	2920	1830	2410	1110
25	947	1360	1060	886	899	2410	1920	2220	2890	1810	2420	1120
26	936	1090	1030	916	896	2050	1750	2170	2880	1800	2500	1130
27	937	1060	1060	918	892	1790	1960	2160	2870	1850	2520	1140
28	973	1050	1190	920	898	1500	2250	2150	2850	1840	2520	1160
29	953	1050	1090	913	---	1480	2550	2150	2840	1830	2540	1180
30	949	1210	1060	966	---	1400	2770	2290	2830	1840	2540	1210
31	947	---	1050	1310	---	1410	---	2390	---	1830	2540	---
TOTAL	30334	30251	33247	32625	41793	75630	69070	94720	75850	67050	68250	52280
MEAN	979	1008	1072	1052	1493	2440	2302	3055	2528	2163	2202	1743
MAX	1080	1360	1390	1710	3390	5010	4000	4910	2970	2780	2540	2540
MIN	931	928	977	824	892	1020	1350	2150	2140	1800	1830	1100
AC-FT	60170	60000	65950	64710	82900	150000	137000	187900	150400	133000	135400	103700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1995, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	1259	1559	2062	1666	1613	1954	2295	2597	2331	2128	2152	1697						
MAX	1905	3544	5081	3061	3962	3556	3821	4022	3755	3024	2921	2195						
(WY)	1984	1985	1982	1980	1982	1986	1989	1984	1984	1984	1984	1983						
MIN	894	898	964	1049	844	843	864	1578	1658	1123	1761	1290						
(WY)	1993	1993	1993	1992	1988	1988	1994	1992	1992	1992	1994	1980						

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1978 - 1995
ANNUAL TOTAL	481201	671100	
ANNUAL MEAN	1318	1839	1945
HIGHEST ANNUAL MEAN			3114
LOWEST ANNUAL MEAN			1314
HIGHEST DAILY MEAN	3250	5010	13000
LOWEST DAILY MEAN	817	824	730
ANNUAL SEVEN-DAY MINIMUM	822	907	734
ANNUAL RUNOFF (AC-FT)	954500	1331000	1409000
10 PERCENT EXCEEDS	2040	2950	3040
50 PERCENT EXCEEDS	1120	1750	1810
90 PERCENT EXCEEDS	899	938	991

e Estimated

ROGUE RIVER BASIN

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14337600 ROGUE RIVER NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1970 to current year.

INSTRUMENTATION.--Temperature recorder since August 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: 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, 16.0°C July 30, 31, Aug. 1, 2, 1994; minimum, 3.0°C Feb. 2, 1979, Feb. 6, 7, 1989.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 13.5°C Aug. 20-26; minimum, 4.0°C Dec. 30.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

14337600 ROGUE RIVER NEAR MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

ROGUE RIVER BASIN

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14337800 ELK CREEK NEAR CASCADE GORGE, OR

LOCATION---Lat 42°46'25", long 122°40'15", in NW 1/4 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 above sea level (levels by Corps of Engineers).

REMARKS---No estimated daily discharges. Records good. No regulation. Some diversions upstream from station for irrigation.

AVERAGE DISCHARGE---22 years (water years 1974-95), 133 ft³/s, 22.89 in/yr, 96,170 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 discharge, 0.45 ft³/s Aug. 31, Sept. 1, 1992.

EXTREMES FOR CURRENT YEAR---Peak discharges greater than base discharge 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. 9	1030	1,690	5.77	Feb. 1	1700	*1,740	*5.82

Minimum discharge, 2.3 ft³/s Sept. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	33	714	115	1380	105	137	339	49	34	12	5.3
2	3.9	30	423	97	1010	96	126	409	51	32	11	4.9
3	3.4	19	229	86	566	109	118	344	44	30	10	5.1
4	2.8	43	145	78	425	107	112	289	40	29	9.8	5.5
5	2.8	83	105	78	349	100	114	244	41	27	9.6	5.1
6	2.7	50	85	112	290	92	136	219	48	28	9.2	4.7
7	2.7	33	70	156	247	88	238	203	75	29	9.4	4.5
8	3.0	23	58	341	214	89	287	183	63	38	10	4.7
9	2.9	70	51	1110	182	190	303	165	54	85	9.3	4.6
10	2.8	70	47	910	160	324	304	158	47	62	8.5	4.2
11	3.0	35	46	680	143	388	324	165	46	43	9.0	4.2
12	2.9	28	51	798	135	280	413	195	42	36	8.7	3.9
13	3.0	25	52	924	130	347	828	178	40	33	8.3	3.9
14	8.2	23	62	1180	117	413	574	159	54	29	8.0	3.6
15	17	23	84	947	105	465	410	143	150	27	7.9	3.6
16	9.2	70	207	564	98	357	322	130	108	25	7.8	3.6
17	6.7	57	355	368	149	275	276	119	91	22	8.3	4.0
18	5.7	37	720	308	266	424	271	110	88	21	8.1	4.0
19	5.2	30	455	302	236	416	244	100	102	22	7.4	3.7
20	4.9	92	333	270	213	574	275	93	143	21	6.9	3.3
21	4.7	93	274	233	194	524	271	88	129	19	6.4	2.6
22	5.3	56	237	202	177	424	258	80	106	18	6.2	2.6
23	5.1	42	218	184	163	345	245	76	86	17	5.9	2.9
24	4.9	93	226	174	155	281	234	71	73	16	6.2	3.3
25	4.5	248	216	162	144	236	210	67	62	16	5.9	5.0
26	4.5	128	208	149	132	205	185	63	55	15	6.0	7.0
27	5.0	88	302	145	122	189	187	58	48	14	5.9	7.2
28	24	78	329	148	114	175	203	55	42	13	5.6	8.7
29	14	123	241	174	---	165	214	51	37	13	6.0	13
30	9.5	463	179	287	---	154	236	48	36	13	5.8	11
31	7.9	---	140	734	---	142	---	45	---	12	5.7	---
TOTAL	186.8	2286	6862	12016	7616	8079	8055	4647	2050	839	244.8	149.7
MEAN	6.03	76.2	221	388	272	261	268	150	68.3	27.1	7.90	4.99
MAX	24	463	720	1180	1380	574	828	409	150	85	12	13
MIN	2.7	19	46	78	98	88	112	45	36	12	5.6	2.6
AC-FT	371	4530	13610	23830	15110	16020	15980	9220	4070	1660	486	297
CFSM	.08	.97	2.81	4.92	3.45	3.31	3.41	1.90	.87	.34	.10	.06
IN.	.09	1.08	3.24	5.67	3.60	3.81	3.80	2.19	.97	.40	.12	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1995, BY WATER YEAR (WY)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	12.6	129	256	268	293	259	195	118	48.7	12.7	5.32	6.24											
MAX	39.8	656	828	802	713	556	352	300	156	27.1	16.3	33.7											
(WY)	1980	1974	1982	1974	1986	1974	1993	1975	1993	1995	1976	1986											
MIN	2.47	7.76	8.00	11.3	11.2	34.1	54.5	18.3	7.10	3.57	.94	.91											
(WY)	1989	1994	1977	1977	1977	1992	1992	1992	1992	1992	1992	1992											

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1973 - 1995
ANNUAL TOTAL	24227.74	53031.3	
ANNUAL MEAN	66.4	145	133
HIGHEST ANNUAL MEAN			292
LOWEST ANNUAL MEAN			27.4
HIGHEST DAILY MEAN	720	1380	5200
LOWEST DAILY MEAN	.76	2.6	.52
ANNUAL SEVEN-DAY MINIMUM	.89	2.8	.60
ANNUAL RUNOFF (AC-FT)	48060	105200	96170
ANNUAL RUNOFF (CFSM)	.84	1.84	1.68
ANNUAL RUNOFF (INCHES)	11.44	25.04	22.89
10 PERCENT EXCEEDS	175	346	341
50 PERCENT EXCEEDS	28	78	48
90 PERCENT EXCEEDS	1.4	4.9	3.7

ROGUE RIVER BASIN

14337800 ELK CREEK NEAR CASCADE GORGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: 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 TEMPERATURE: Maximum recorded, 28.5°C July 29, 30, 1973, Aug. 9-11, 1981; minimum, 0.0°C at times during most winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 21.0°C Aug. 20-22, Sept. 2, 15, but may have been higher during period of missing record in July and August; minimum, 1.0°C Nov. 17, 22.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

ROGUE RIVER BASIN

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14337800 ELK CREEK NEAR CASCADE GORGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	9.0	5.5	7.0	10.5	6.0	8.0	---	---	---
2	---	---	---	8.0	6.0	7.0	11.0	4.5	7.0	---	---	---
3	---	---	---	7.0	6.0	6.5	12.5	5.5	8.5	---	---	---
4	---	---	---	7.5	5.5	6.0	12.0	6.5	9.0	---	---	---
5	---	---	---	7.5	3.5	5.5	10.0	8.0	9.0	---	---	---
6	---	---	---	8.0	2.0	4.0	10.0	7.5	8.5	---	---	---
7	---	---	---	7.0	2.0	4.5	8.5	7.0	8.0	---	---	---
8	7.0	5.0	6.0	6.5	5.0	5.5	7.0	4.5	5.5	---	---	---
9	7.0	4.5	5.5	7.5	6.0	6.5	8.0	5.0	6.0	---	---	---
10	7.0	4.5	5.5	7.0	6.0	6.5	8.0	5.5	6.5	---	---	---
11	7.0	4.5	5.5	8.0	6.5	7.0	8.5	6.5	7.5	---	---	---
12	6.0	4.5	5.5	8.0	6.5	7.0	8.5	7.0	7.5	---	---	---
13	5.0	3.5	4.5	8.0	6.5	7.5	7.5	6.5	6.5	---	---	---
14	4.5	3.0	3.5	8.0	7.0	7.5	7.5	6.0	6.5	---	---	---
15	5.0	2.5	3.5	8.5	6.5	7.5	6.5	5.5	6.0	---	---	---
16	4.5	2.0	3.5	9.0	6.0	7.5	8.5	5.0	6.5	---	---	---
17	5.5	4.0	4.5	9.0	6.5	8.0	7.0	5.5	6.0	---	---	---
18	7.0	5.5	6.5	8.5	7.0	8.0	7.0	5.0	5.5	---	---	---
19	9.0	6.5	7.5	8.0	6.5	7.5	8.0	4.5	6.0	---	---	---
20	8.5	6.0	7.0	7.5	6.5	7.0	7.0	5.0	6.0	---	---	---
21	9.0	6.0	7.0	7.0	6.0	6.5	9.0	5.0	6.5	---	---	---
22	9.0	5.5	7.0	7.0	5.5	6.0	10.0	5.5	7.5	---	---	---
23	9.5	5.5	7.5	7.0	5.5	6.0	11.0	6.0	8.0	---	---	---
24	10.0	6.0	7.5	7.5	5.0	6.0	11.5	6.5	8.5	---	---	---
25	9.0	5.5	7.0	7.5	5.0	5.5	11.5	6.5	8.5	---	---	---
26	9.5	6.0	7.5	8.5	4.0	6.0	10.5	6.5	8.5	16.0	---	---
27	10.0	5.5	7.5	9.0	4.0	6.0	9.0	6.0	7.5	16.5	11.0	13.5
28	10.0	5.0	7.0	9.5	4.5	6.5	---	---	---	17.5	11.0	14.0
29	---	---	---	9.5	4.5	6.5	---	---	---	18.0	11.5	14.5
30	---	---	---	10.5	4.5	7.0	---	---	---	17.5	12.5	15.0
31	---	---	---	8.0	5.5	7.0	---	---	---	18.5	13.0	15.5
MONTH	---	---	---	10.5	1.9	6.5	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	16.5	13.0	14.5	---	---	---	---	---	---	20.5	13.5	16.5
2	17.5	12.5	14.5	---	---	---	---	---	---	21.0	13.5	16.5
3	18.0	11.5	14.5	---	---	---	---	---	---	20.5	13.5	16.5
4	16.0	13.0	14.0	---	---	---	---	---	---	19.0	13.0	15.5
5	13.0	10.0	11.5	---	---	---	---	---	---	19.0	12.5	15.0
6	11.0	8.5	9.5	---	---	---	---	---	---	19.0	12.5	15.0
7	12.0	8.5	10.0	17.5	13.5	15.5	---	---	---	18.5	12.0	14.5
8	14.0	8.0	11.0	19.0	---	---	---	---	---	18.5	11.5	14.5
9	15.5	9.0	12.5	---	---	---	---	---	---	19.5	12.5	15.5
10	13.5	12.0	12.5	---	---	---	---	---	---	20.0	13.0	16.0
11	16.0	10.5	13.0	---	---	---	---	---	---	20.0	13.0	16.0
12	14.5	9.5	12.0	---	---	---	---	---	---	20.0	13.0	16.0
13	12.5	10.0	11.5	---	---	---	---	---	---	20.5	13.5	16.5
14	13.0	10.5	11.5	---	---	---	---	---	---	20.5	14.0	17.0
15	---	---	---	---	---	---	---	---	---	21.0	14.5	17.0
16	---	---	---	---	---	---	17.0	---	---	20.0	14.5	16.5
17	---	---	---	---	---	---	16.5	13.0	14.5	19.5	13.5	16.0
18	---	---	---	---	---	---	18.0	10.5	14.0	19.5	13.0	15.5
19	---	---	---	---	---	---	19.5	11.5	15.0	19.5	12.5	15.5
20	---	---	---	---	---	---	21.0	13.0	16.5	19.5	13.0	16.0
21	---	---	---	---	---	---	21.0	13.5	16.5	19.0	12.5	15.0
22	---	---	---	---	---	---	21.0	13.5	17.0	18.5	11.0	14.5
23	---	---	---	---	---	---	20.0	14.0	16.5	18.0	11.5	14.5
24	---	---	---	---	---	---	19.0	12.0	15.0	18.5	13.0	15.5
25	---	---	---	---	---	---	19.5	12.0	15.0	17.0	14.0	15.0
26	---	---	---	---	---	---	19.0	11.5	15.0	15.0	13.0	14.0
27	---	---	---	---	---	---	19.0	11.5	14.5	15.5	13.5	14.5
28	---	---	---	---	---	---	18.5	12.5	15.0	14.5	12.5	13.5
29	---	---	---	---	---	---	19.5	14.0	16.0	14.0	12.0	12.5
30	---	---	---	---	---	---	19.5	12.0	15.5	14.5	11.5	12.5
31	---	---	---	---	---	---	20.0	12.5	16.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	21.0	11.0	15.5

ROGUE RIVER BASIN

14337830 ELK CREEK BELOW ALCO CREEK, NEAR TRAIL, OR

LOCATION.--Lat 42°40'46", long 122°42'37", in NW 1/4 sec.4, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on Corps of Engineers' Land, on right bank 500 ft downstream from Alco Creek, and 7.5 mi northeast of Trail.

DRAINAGE AREA.--111 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1986 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder. Elevation of gage is 1,680 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation. Some diversions upstream from station for irrigation. Operated as a low-flow station only. Discharges above 450 ft³/s not published.

EXTREMES FOR PERIOD OF RECORD.--Minimum discharge recorded, 0.54 ft³/s Sept. 23, 1992, but may have been less during period of estimated discharge during that year.

EXTREMES FOR CURRENT YEAR.--Minimum daily discharge, 2.3 ft³/s Sept. 22, 23.DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.0	32	---	130	---	108	161	---	50	39	11	4.8
2	e4.0	38	---	106	---	101	148	---	54	37	11	4.4
3	e3.5	24	315	91	---	118	136	---	46	35	11	4.7
4	e3.0	40	198	81	---	117	126	357	43	33	11	4.6
5	e2.5	105	140	79	---	109	131	297	45	30	11	4.0
6	e2.5	63	108	118	331	101	165	264	52	30	10	4.1
7	e2.5	44	84	171	278	95	306	251	86	30	10	4.2
8	e2.5	31	68	---	238	95	376	223	75	36	10	4.8
9	e2.5	87	58	---	198	226	401	195	62	84	9.7	4.2
10	e2.5	93	52	---	173	---	413	184	54	72	9.1	4.1
11	e2.5	48	52	---	154	---	---	192	55	50	9.3	4.1
12	e2.5	36	57	---	145	360	---	229	48	43	6.8	3.9
13	e3.0	33	59	---	140	---	---	208	44	39	7.7	2.8
14	e6.0	30	69	---	125	---	---	184	59	34	7.6	2.9
15	e14	29	108	---	111	---	---	163	183	30	7.7	2.6
16	e11	83	277	---	101	---	---	146	135	28	7.7	2.5
17	e8.0	81	---	---	163	354	335	132	111	25	7.6	2.7
18	e7.0	55	---	391	357	---	330	119	105	23	7.9	2.7
19	e6.0	44	---	382	294	---	296	109	117	23	7.6	2.7
20	5.0	114	426	342	251	---	348	103	165	23	6.6	2.6
21	4.8	128	344	287	219	---	354	95	152	21	5.9	2.4
22	4.6	76	295	243	194	---	333	88	123	16	5.6	2.3
23	5.2	57	267	214	176	---	307	84	98	17	5.4	2.3
24	5.1	102	271	200	164	366	281	78	81	17	5.5	2.5
25	5.0	358	260	183	151	304	245	75	70	17	5.5	3.5
26	4.8	196	236	166	137	261	210	68	62	16	5.3	6.5
27	5.0	130	334	161	126	234	214	63	55	15	5.6	6.2
28	22	112	386	166	116	217	233	59	48	15	4.8	7.5
29	20	149	279	199	---	205	250	55	44	14	4.8	14
30	13	---	208	331	---	187	283	50	41	14	4.8	15
31	10	---	163	---	---	167	---	47	---	13	4.6	---
TOTAL	195.0	---	---	---	---	---	---	---	2363	919	238.1	135.6
MEAN	6.29	---	---	---	---	---	---	---	78.8	29.6	7.68	4.52
MAX	22	---	---	---	---	---	---	---	183	84	11	15
MIN	2.5	---	---	---	---	---	---	---	41	13	4.6	2.3
AC-FT	387	---	---	---	---	---	---	---	4690	1820	472	269
CFSM	.06	---	---	---	---	---	---	---	.71	.27	.07	.04
IN.	.07	---	---	---	---	---	---	---	.79	.31	.08	.05

e Estimated

ROGUE RIVER BASIN

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14337830 ELK CREEK BELOW ALCO CREEK, NEAR TRAIL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 1986 to current year.

INSTRUMENTATION.--Temperature recorder since April 1986.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 31.5°C June 22, 1992, but may have been higher during period of missing record in August 1992; minimum, 0.0°C at times during most winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 20.5°C June 27, 30, July 14, but may have been higher during period of missing record; minimum recorded, 1.5°C Nov. 16, 17, 19, 22, but may have been lower during period of missing record in December.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

ROGUE RIVER BASIN

14337830 ELK CREEK BELOW ALCO CREEK, NEAR TRAIL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

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 above sea level (Corps of Engineers bench mark).

REMARKS.--No estimated daily discharges. Records good. No regulation or diversions upstream from station.

AVERAGE DISCHARGE.--21 years (water years 1974-76, 1978-95), 18.7 ft³/s, 17.92 in/yr, 13,570 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, 0.18 ft³/s Aug. 17-19, 21, 1992 and Sept. 23, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 9	1130	*375	*2.83				
Minimum discharge, 0.55 ft ³ /s Oct. 5, Sept. 22.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	3.6	116	9.0	206	5.4	15	44	3.8	2.5	.93	.78
2	.70	2.7	55	7.3	143	5.3	13	54	3.8	2.2	.90	.76
3	.68	1.9	24	6.5	73	7.3	11	46	3.6	2.1	.88	.80
4	.64	5.6	13	5.9	43	7.2	10	34	3.6	2.1	.92	.85
5	.69	6.4	8.5	6.1	28	7.0	11	27	4.0	1.9	.86	.83
6	.72	4.3	6.8	8.7	19	6.8	14	26	4.9	2.1	.86	.83
7	.75	3.8	5.6	13	15	6.5	25	28	11	2.1	.96	.83
8	.75	3.1	4.9	45	12	6.9	38	23	8.0	2.4	1.0	.83
9	.65	9.5	4.4	215	10	28	46	18	5.7	3.2	.97	.77
10	.64	5.6	4.2	145	8.5	52	53	15	4.7	2.6	.94	.74
11	.64	3.6	4.4	96	7.6	64	63	15	4.7	2.1	1.1	.74
12	.65	3.1	4.9	119	7.1	39	69	16	4.2	2.0	1.0	.75
13	.67	3.0	4.9	149	7.2	51	158	15	3.9	1.9	.99	.71
14	1.2	2.7	5.6	176	6.4	89	103	13	6.2	1.8	.96	.68
15	1.4	3.0	7.1	158	5.9	106	72	11	24	1.6	.95	.65
16	.99	6.4	23	89	5.7	63	48	9.9	15	1.6	1.1	.72
17	.92	5.3	52	49	13	40	36	8.9	11	1.5	1.2	.79
18	.81	3.9	110	35	44	79	31	7.8	9.0	1.5	1.2	.77
19	.81	3.3	63	33	32	83	28	7.1	8.5	1.5	1.0	.77
20	.76	5.7	38	32	22	158	35	6.6	11	1.5	.98	.75
21	.75	6.1	30	30	16	118	38	6.2	12	1.3	.94	.72
22	.75	4.5	26	24	12	76	44	5.8	9.3	1.3	.91	.61
23	.70	4.2	23	23	10	53	37	5.4	6.7	1.3	.88	.71
24	.69	9.0	23	20	8.8	38	28	5.3	5.3	1.2	.96	.77
25	.69	37	22	16	7.8	31	21	5.3	4.5	1.2	.91	1.0
26	.69	15	17	13	6.9	28	17	4.6	4.0	1.2	.92	1.2
27	1.0	9.8	27	12	6.3	27	18	4.4	3.5	1.1	.90	1.2
28	2.1	8.7	42	12	5.9	25	20	4.2	3.0	1.1	.90	1.6
29	1.2	10	25	15	---	23	22	4.1	2.6	1.0	.91	1.7
30	1.1	45	16	27	---	20	30	3.9	2.5	1.1	.88	1.5
31	1.1	---	12	115	---	16	---	3.7	---	.99	.85	---
TOTAL	26.64	235.8	818.3	1704.5	782.1	1359.4	1154	478.2	204.0	52.99	29.66	26.36
MEAN	.86	7.86	26.4	55.0	27.9	43.9	38.5	15.4	6.80	1.71	.96	.88
MAX	2.1	45	116	215	206	158	158	54	24	3.2	1.2	1.7
MIN	.64	1.9	4.2	5.9	5.7	5.3	10	3.7	2.5	.99	.85	.61
AC-FT	53	468	1620	3380	1550	2700	2290	949	405	105	59	52
CFSM	.06	.55	1.86	3.87	1.97	3.09	2.71	1.09	.48	.12	.07	.06
IN.	.07	.62	2.14	4.47	2.05	3.56	3.02	1.25	.53	.14	.08	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1995, BY WATER YEAR (WY)

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	2.99	19.6	35.0	40.0	44.6	37.9	24.9	10.7	5.15	2.14	1.59	1.75										
MAX	7.27	102	104	140	100	124	52.4	28.2	17.2	4.94	4.29	4.44										
(WY)	1980	1974	1982	1974	1983	1974	1974	1979	1993	1983	1976	1986										
MIN	.75	1.70	3.45	6.53	9.47	3.18	4.54	1.67	.74	.31	.26	.36										
(WY)	1989	1994	1990	1992	1988	1992	1990	1992	1994	1994	1992	1994										

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1974 - 1995
ANNUAL TOTAL	2245.64	6871.95	
ANNUAL MEAN	6.15	18.8	
HIGHEST ANNUAL MEAN			18.7
LOWEST ANNUAL MEAN			49.8
HIGHEST DAILY MEAN			4.05
LOWEST DAILY MEAN			904
ANNUAL SEVEN-DAY MINIMUM	116 Dec 1	215 Jan 9	Jan 15 1974
ANNUAL RUNOFF (AC-FT)	.21 Sep 23	.61 Sep 22	Aug 18 1992
ANNUAL RUNOFF (CFSM)	.23 Sep 21	.68 Oct 7	Aug 15 1992
ANNUAL RUNOFF (INCHES)	4450	13630	13570
10 PERCENT EXCEEDS	.43	1.33	1.32
50 PERCENT EXCEEDS	5.88	18.00	17.92
90 PERCENT EXCEEDS	14	50	48
	2.7	5.9	5.1
	.28	.79	.96

ROGUE RIVER BASIN

14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1977 to current year.

INSTRUMENTATION.--Temperature recorder since August 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27.0°C Aug. 14, 1992; minimum, 0.0°C at times during most winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 21.0°C Aug. 5; minimum, 0.5°C Dec. 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	16.5	13.0	14.5	9.0	6.5	7.5	6.0	5.0	5.5	4.0	3.0	3.5
2	16.0	12.5	14.0	6.5	5.0	6.0	5.5	5.0	5.5	3.5	2.0	3.0
3	14.0	10.5	12.0	5.5	4.0	5.0	5.0	3.0	4.5	4.0	2.5	3.0
4	13.5	10.0	11.5	5.5	5.0	5.5	3.0	1.5	2.5	4.0	2.5	3.0
5	12.5	9.5	11.0	7.0	5.5	6.0	2.5	1.0	2.0	4.5	3.5	4.0
6	12.5	9.5	11.0	6.5	5.5	6.0	3.0	2.0	2.5	5.0	4.0	4.5
7	12.5	9.0	10.5	5.5	4.5	5.0	3.5	2.0	2.5	5.5	4.5	5.0
8	13.0	9.5	11.0	6.0	4.5	5.0	2.0	1.0	1.5	6.5	5.0	5.5
9	13.0	10.0	11.5	6.0	5.0	5.5	1.5	1.0	1.5	7.0	6.0	7.0
10	12.5	10.0	11.5	5.5	4.0	4.5	2.0	.5	1.5	7.0	6.5	7.0
11	12.5	9.5	11.0	5.5	4.5	5.0	2.5	2.0	2.0	7.0	6.5	6.5
12	11.5	9.5	10.5	6.0	5.5	5.5	3.5	2.0	2.5	7.5	6.5	7.0
13	10.5	8.0	9.5	5.5	5.0	5.5	3.0	1.5	2.5	7.5	7.0	7.5
14	11.5	10.0	10.5	5.5	5.0	5.0	2.5	1.5	2.0	7.5	6.5	7.0
15	10.0	8.5	9.0	6.5	5.0	6.0	3.5	2.5	3.0	7.0	6.0	6.5
16	9.0	6.5	8.0	5.0	1.5	3.5	4.5	3.5	4.0	6.5	5.0	6.0
17	9.5	7.0	8.5	2.5	1.5	2.0	5.5	4.5	5.0	5.0	4.5	4.5
18	9.5	7.5	8.5	3.5	2.5	3.0	6.0	5.0	5.5	5.5	4.5	5.0
19	10.0	8.0	9.0	3.5	3.0	3.0	6.0	5.0	5.5	6.0	4.5	5.0
20	9.5	7.5	9.0	4.0	3.0	3.5	5.5	4.5	5.0	6.0	4.5	5.5
21	10.0	8.5	9.0	3.5	2.0	2.5	5.0	4.0	5.0	5.5	4.5	5.0
22	9.0	7.0	8.5	2.5	1.5	2.0	4.5	3.5	4.0	6.0	4.5	5.5
23	8.5	6.5	8.0	3.0	2.5	3.0	5.0	4.0	4.5	7.0	5.5	6.0
24	8.5	6.5	7.5	4.0	3.0	3.5	5.5	4.5	5.0	6.5	5.0	6.0
25	9.0	7.0	8.0	4.5	3.0	4.0	5.5	4.5	5.0	6.5	5.0	6.0
26	10.0	9.0	9.5	4.5	4.0	4.5	5.5	4.5	5.0	6.5	5.0	6.0
27	11.0	10.0	10.5	5.0	4.0	4.5	6.0	4.5	5.0	6.0	4.5	5.5
28	10.5	8.0	9.5	6.0	5.0	5.5	5.0	4.0	5.0	7.0	6.0	6.5
29	8.0	6.5	7.0	6.0	5.5	6.0	4.0	3.0	3.5	8.0	6.5	7.0
30	7.0	5.0	6.0	5.5	4.5	5.0	3.0	2.0	2.5	8.5	7.5	8.0
31	8.5	6.5	7.5	---	---	---	4.0	2.0	3.0	8.5	7.5	8.0
MONTH	16.5	5.0	10.0	9.0	1.5	4.5	6.0	.5	3.5	8.5	2.0	5.5

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

LOCATION.--Lat 42°40'30", long 122°44'38", in NE 1/4 sec.30, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 3.7 mi northeast of Trail and at mile 1.2.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WDR OR-89-2: Drainage area. WDR OR-92-1: 1989(M), 1990(M), 1991(M).

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--50 years (water years 1946-95), 215 ft³/s, 156,100 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 ft/s on basis of slope-area measurement of peak flow, site and datum then in use; minimum discharge, 0.01 ft³/s Oct. 8, 1987, result of dam construction 1.3 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Feb. 1	1930	*2,480	*7.50				
Minimum discharge, 0.46 ft ³ /s Oct. 7.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	26	961	147	1960	118	188	460	51	40	9.7	3.6
2	3.9	41	636	122	1600	110	171	602	58	37	9.5	3.3
3	3.0	27	329	107	901	128	154	512	49	35	8.9	2.9
4	2.4	30	209	95	596	129	142	413	46	33	9.2	3.0
5	2.0	104	149	95	469	120	145	339	47	30	8.4	3.1
6	1.7	65	116	130	374	111	176	296	55	27	7.8	3.2
7	1.9	47	94	178	312	105	295	281	90	29	7.8	3.3
8	1.6	34	76	388	264	104	406	250	80	34	8.6	3.3
9	1.7	78	66	1470	221	229	459	218	65	65	8.6	2.9
10	1.8	96	60	1470	193	467	471	204	56	73	8.0	2.8
11	1.9	53	59	1130	177	633	498	208	56	50	8.2	2.6
12	2.2	40	66	1220	166	434	568	244	50	42	6.5	2.5
13	2.4	36	68	1410	159	518	1270	224	46	39	6.2	2.2
14	4.0	32	76	1730	140	652	1030	199	59	34	6.2	1.8
15	13	30	116	1570	124	855	660	178	184	30	6.2	1.6
16	14	78	266	998	112	590	486	159	145	27	6.5	1.5
17	11	87	459	574	162	423	392	143	115	24	6.4	1.5
18	7.9	61	921	446	409	630	384	127	108	21	7.3	1.7
19	6.7	48	642	437	341	733	341	117	115	22	6.6	1.6
20	5.9	101	433	402	288	945	404	107	167	22	5.4	1.5
21	5.4	129	351	336	247	988	412	100	158	20	4.7	1.5
22	5.1	81	299	283	217	775	391	94	126	16	4.3	1.4
23	5.7	62	266	248	198	570	357	88	102	16	4.0	1.3
24	5.6	92	268	230	183	441	321	81	85	16	3.8	1.4
25	5.3	345	262	212	169	360	276	79	72	16	4.0	2.0
26	4.6	202	229	194	152	307	238	71	64	15	3.6	4.8
27	4.8	133	326	187	138	274	241	67	56	15	3.8	5.9
28	15	114	399	190	127	253	262	62	50	14	3.7	8.0
29	20	132	301	220	---	241	278	58	43	12	3.7	12
30	13	520	226	349	---	216	323	53	41	13	3.8	14
31	11	---	180	900	---	196	---	50	---	12	3.7	---
TOTAL	189.5	2924	8909	17468	10399	12655	11739	6084	2439	879	195.1	102.2
MEAN	6.11	97.5	287	563	371	408	391	196	81.3	28.4	6.29	3.41
MAX	20	520	961	1730	1960	988	1270	602	184	73	9.7	14
MIN	1.6	26	59	95	112	104	142	50	41	12	3.6	1.3
AC - FT	376	5800	17670	34650	20630	25100	23280	12070	4840	1740	387	203

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1995, BY WATER YEAR (WY)

MEAN	31.8	187	422	507	499	428	285	160	59.4	14.7	6.46	7.21
MAX	404	1008	1851	1283	1131	1074	565	358	254	36.1	25.1	43.7
(WY)	1951	1974	1965	1965	1958	1972	1956	1975	1953	1953	1976	1986
MIN	3.17	8.92	13.1	19.8	23.1	45.4	65.8	21.6	7.42	1.39	.21	.60
(WY)	1953	1994	1977	1977	1977	1992	1968	1992	1992	1994	1994	1992

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1946 - 1995
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ANNUAL TOTAL	28887.93			73982.8					
ANNUAL MEAN	79.1			203			215		
HIGHEST ANNUAL MEAN							438		1974
LOWEST ANNUAL MEAN							41.7		1977
HIGHEST DAILY MEAN	961	Dec	1	1960	Feb	1	12200	Dec	22 1964
LOWEST DAILY MEAN	.12	Sep	1	1.3	Sep	23	.12	Sep	1 1994
ANNUAL SEVEN-DAY MINIMUM	.12	Sep	1	1.5	Sep	18	.12	Sep	1 1994
ANNUAL RUNOFF (AC-FT)	57300			146700			156100		
10 PERCENT EXCEEDS	213			504			547		
50 PERCENT EXCEEDS	35			95			67		
90 PERCENT EXCEEDS	.26			3.6			4.6		

ROGUE RIVER BASIN

407

14338000 ELK CREEK NEAR TRAIL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1973 to current year.

INSTRUMENTATION.--Temperature recorder since June 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 31.5°C July 17, 1979, Aug. 16, 18, 1992; minimum, 0.0°C at times during most winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 26.0°C Aug. 4, 5; minimum, 1.5°C Nov. 22.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
February				March			April			May		
1	8.5	7.5	8.0	9.0	7.0	8.0	10.5	7.5	8.5	11.5	9.0	10.0
2	8.0	7.0	7.5	8.0	7.0	7.5	10.0	6.0	8.0	10.5	8.5	9.5
3	8.5	7.0	7.5	7.5	7.0	7.5	11.5	7.0	9.0	11.5	7.5	9.5
4	8.0	6.5	7.5	7.5	6.0	7.0	11.0	8.5	10.0	11.0	9.0	10.0
5	8.0	6.5	7.5	7.0	5.5	6.5	11.0	9.5	10.0	10.0	8.5	9.0
6	7.5	6.0	7.0	6.5	3.5	5.0	10.5	8.0	9.5	9.5	8.0	9.0
7	7.5	6.5	7.0	6.0	3.5	5.0	10.0	8.0	9.0	12.0	7.5	9.5
8	7.0	5.5	6.5	6.5	5.5	6.0	8.0	5.5	6.5	12.0	8.0	10.0
9	6.5	4.5	6.0	8.0	6.5	7.5	8.5	5.5	6.5	11.0	9.0	10.0
10	6.5	4.5	5.5	7.5	6.0	7.0	8.5	5.5	7.0	11.0	9.5	10.0
11	6.5	5.0	6.0	9.0	6.5	7.5	10.0	7.0	8.5	11.0	9.0	10.0
12	6.0	5.5	6.0	8.5	6.5	7.5	9.0	7.5	8.5	11.0	7.5	9.0
13	5.5	4.5	5.0	8.5	7.0	7.5	8.0	7.0	7.5	10.5	8.0	9.5
14	4.5	3.5	4.0	8.5	7.5	8.0	9.0	6.0	7.5	13.5	8.0	10.5
15	4.5	3.0	4.0	9.0	7.0	8.0	7.5	5.5	6.5	12.5	10.0	11.5
16	4.0	2.5	3.5	9.5	6.5	8.0	9.0	5.5	7.0	12.5	10.5	11.5
17	5.5	4.0	5.0	9.5	6.5	8.0	7.5	6.0	7.0	15.0	10.5	12.0
18	7.5	5.5	6.5	9.0	8.0	8.5	8.5	5.5	7.0	14.5	10.5	12.5
19	9.5	7.0	8.0	8.5	7.0	7.5	8.0	5.0	6.5	15.5	10.5	13.0
20	8.5	6.5	7.5	8.0	7.0	7.5	8.5	5.5	7.0	16.0	12.0	14.0
21	9.0	6.5	7.5	7.5	6.5	7.0	10.5	5.5	7.5	16.0	13.5	15.0
22	9.0	6.5	7.5	7.0	5.5	6.5	11.5	6.0	8.5	17.0	13.0	15.0
23	9.0	6.0	7.5	7.0	5.5	6.0	12.0	7.0	9.5	17.0	13.5	15.5
24	9.0	6.5	8.0	8.0	5.5	6.5	12.5	7.5	10.0	16.5	13.5	15.0
25	8.5	6.5	7.5	7.5	5.0	6.5	12.5	8.0	10.0	16.5	12.5	14.5
26	9.0	7.0	8.0	8.5	4.5	6.5	11.5	8.0	10.0	17.0	13.5	15.5
27	9.0	6.5	8.0	9.0	4.5	7.0	10.5	8.5	9.5	18.0	14.5	16.0
28	9.0	6.0	7.5	9.5	5.0	7.0	10.0	8.0	9.0	18.5	15.0	17.0
29	---	---	---	9.5	5.5	7.5	10.5	8.5	9.5	19.5	15.5	17.5
30	---	---	---	10.0	5.5	8.0	11.0	7.0	9.0	19.5	16.5	18.0
31	---	---	---	9.0	6.5	7.5	---	---	---	20.5	17.0	18.5
MONTH	9.5	2.5	6.5	10.0	3.5	7.0	12.5	5.0	8.5	20.5	7.5	12.5
Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
June				July			August			September		
1	20.0	18.0	18.5	21.5	18.5	20.0	25.0	20.5	22.5	22.5	18.5	21.0
2	19.5	16.0	17.5	21.5	19.5	20.5	25.0	21.0	23.0	23.0	19.0	21.0
3	19.5	16.5	18.0	21.0	19.0	20.0	25.5	21.0	23.0	23.0	19.0	21.0
4	19.0	17.0	17.5	21.5	19.0	20.0	26.0	21.5	23.5	21.5	19.0	20.5
5	17.0	14.5	15.5	22.0	19.5	20.5	26.0	22.5	24.5	22.0	18.5	20.5
6	14.5	12.5	13.0	22.0	19.5	21.0	25.0	22.0	23.5	22.0	18.5	20.0
7	13.5	11.0	12.5	20.5	19.5	20.0	23.5	21.5	22.5	22.0	18.0	20.0
8	15.5	11.0	13.0	21.0	18.5	20.0	23.5	20.0	21.5	22.0	17.5	20.0
9	17.0	13.0	15.0	20.5	17.5	19.0	23.0	19.5	21.0	21.5	18.0	20.0
10	16.5	15.0	16.0	18.0	15.5	16.5	22.0	19.5	20.5	22.5	18.5	20.5
11	17.5	13.5	15.5	19.0	16.0	17.5	22.5	18.5	20.5	22.0	18.5	20.5
12	16.5	14.5	15.5	18.5	16.5	17.5	22.5	19.0	20.5	22.5	18.5	20.5
13	16.0	13.5	14.5	18.5	16.0	17.5	22.5	18.5	20.5	22.5	18.5	21.0
14	14.5	13.0	14.0	20.5	17.0	18.5	23.0	18.5	20.5	22.5	19.0	21.0
15	14.0	11.5	12.5	22.0	18.5	20.0	22.0	19.0	20.5	23.0	19.5	21.0
16	13.5	11.0	12.5	23.5	19.5	21.0	20.0	18.5	19.5	23.5	19.5	21.0
17	13.5	11.5	12.5	25.0	21.0	23.0	20.0	18.0	18.5	23.0	19.0	21.0
18	13.0	11.5	12.0	24.0	22.5	23.5	20.5	17.0	18.5	22.5	18.5	20.5
19	12.5	11.0	11.5	23.5	22.0	23.0	21.5	17.0	19.0	22.5	18.5	20.5
20	13.0	10.0	11.5	24.0	21.0	22.5	22.5	18.0	20.5	23.0	18.5	20.5
21	15.0	10.0	12.0	24.5	21.5	23.0	22.5	18.5	20.5	22.0	18.0	20.0
22	16.5	11.5	14.0	25.0	22.0	23.5	23.0	18.5	21.0	22.0	17.0	19.5
23	18.0	13.5	15.5	25.0	22.0	23.5	22.5	19.5	21.0	21.5	17.5	19.0
24	19.5	15.0	17.0	25.0	21.5	23.0	22.0	18.5	20.0	21.5	18.0	19.5
25	20.5	16.5	18.0	24.5	21.5	23.0	21.5	18.0	20.0	20.0	18.5	19.0
26	20.5	17.0	19.0	24.0	21.0	22.5	21.0	17.5	19.5	18.5	17.5	18.0
27	21.0	17.0	19.0	25.0	21.5	23.0	21.0	17.5	19.5	19.0	17.0	18.0
28	21.5	18.0	19.5	25.5	22.0	24.0	20.5	18.0	19.0	18.0	16.5	17.5
29	21.5	18.0	20.0	24.0	22.0	23.0	21.5	18.0	20.0	17.0	15.5	16.5
30	21.0	18.5	20.0	23.5	20.5	22.0	21.5	18.0	20.0	16.5	15.0	15.5
31	---	---	---	23.5	19.5	21.5	22.0	18.0	20.5	---	---	---
MONTH	21.5	10.0	15.5	25.5	15.5	21.0	26.0	17.0	21.0	23.5	15.0	20.0
YEAR	26.0	1.5	11.5									

ROGUE RIVER BASIN

409

14338100 ROGUE RIVER AT TRAIL, OR

LOCATION.--Lat 42°38'51", long 122°48'18", in NW 1/4 NE 1/4 sec.3, T.34 S., R.1 W., Jackson County, Hydrologic Unit 17100307, on right bank 0.2 mi upstream from Trail Creek, and at mile 148.9.

DRAINAGE AREA.--Not determined.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: March 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since March 1988.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 19.0°C July 27, 29, 1992; minimum, 2.0°C Feb. 5, 6, 1989, Feb. 14, 15, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.0°C several days in July and August; minimum, 3.5°C Dec. 30, 31.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.0	10.0	11.0	7.5	7.0	7.0	7.0	6.0	6.5	5.5	4.5	5.0
2	13.0	9.5	11.0	7.5	6.5	7.0	6.5	6.0	6.0	5.5	4.0	4.5
3	12.0	9.0	10.0	7.5	6.0	6.5	6.0	5.0	6.0	5.0	4.5	4.5
4	11.5	8.5	10.0	7.0	6.5	6.5	5.5	4.5	5.0	5.5	4.0	4.5
5	11.0	8.0	9.0	7.5	6.0	7.0	5.5	4.5	5.0	5.5	5.0	5.0
6	11.0	8.0	9.0	7.5	6.5	7.0	6.0	5.0	5.5	5.5	5.0	5.0
7	11.0	8.0	9.0	8.0	6.0	7.0	6.0	5.5	5.5	5.5	5.0	5.5
8	11.5	8.0	9.0	7.0	6.0	6.5	5.5	5.0	5.0	6.0	5.0	5.5
9	10.5	8.0	9.0	7.5	6.5	7.0	5.5	4.5	5.0	7.0	5.5	6.5
10	10.5	8.0	9.0	7.0	6.0	6.5	5.5	4.5	5.0	6.5	6.0	6.5
11	10.0	6.5	8.5	7.0	6.0	6.5	5.5	5.0	5.5	6.5	6.0	6.0
12	8.0	6.5	7.0	7.5	6.5	6.5	6.0	5.0	5.5	6.5	6.0	6.0
13	8.0	5.5	7.0	7.5	6.0	6.5	6.0	5.0	5.5	7.0	6.5	6.5
14	8.0	6.5	7.0	7.5	5.5	6.5	5.5	4.5	5.0	7.0	6.5	6.5
15	8.0	6.0	7.0	7.5	6.5	7.0	5.5	5.0	5.0	6.5	6.0	6.0
16	8.5	5.5	7.0	6.5	5.5	6.0	5.5	5.5	5.5	6.0	5.0	5.5
17	8.5	6.0	7.0	6.0	5.0	5.5	6.0	5.5	6.0	5.0	4.5	4.5
18	8.5	5.5	6.5	6.5	5.0	5.5	6.0	6.0	6.0	5.5	4.5	5.0
19	7.5	5.5	6.5	6.5	5.0	6.0	6.0	5.5	6.0	5.5	4.5	5.0
20	8.5	5.5	6.5	6.5	5.5	6.0	6.0	5.0	5.5	5.5	4.5	5.0
21	8.0	6.0	6.5	6.0	5.0	5.5	5.5	5.0	5.5	5.5	4.5	5.0
22	8.5	5.5	6.5	6.0	4.5	5.5	5.0	4.0	4.5	5.5	4.5	5.0
23	8.5	5.5	6.5	6.0	5.5	6.0	5.5	4.0	5.0	6.0	5.0	5.5
24	8.5	5.5	6.5	6.5	6.0	6.0	5.5	5.0	5.5	6.0	5.0	5.5
25	8.0	5.5	6.5	6.0	5.0	5.5	6.0	5.0	5.5	6.0	5.0	5.5
26	7.5	6.5	7.0	6.5	5.5	5.5	6.0	5.5	5.5	5.5	5.0	5.5
27	9.0	7.0	7.5	6.0	5.5	5.5	6.0	5.0	5.5	5.5	5.0	5.5
28	8.5	6.5	7.5	6.5	5.5	6.0	5.5	4.5	5.5	6.0	5.5	5.5
29	8.5	5.5	7.0	6.0	5.5	6.0	4.5	4.0	4.5	6.5	5.5	6.0
30	8.0	5.5	6.5	6.5	5.5	6.0	4.5	3.5	4.0	7.5	6.0	6.5
31	8.5	6.5	7.0	--	--	--	5.0	3.5	4.5	8.0	7.0	7.5
MONTH	13.0	5.5	8.0	8.0	4.5	6.5	7.0	3.5	5.5	8.0	4.0	5.5

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

LOCATION.--Lat 42°31'30", long 122°50'30", in SE 1/4 sec.17, T.35 S., R.1 W., Jackson County. Hydrologic Unit 17100307, on right bank 50 ft upstream from Dodge Bridge, 0.7 mi downstream from Reese Creek, 4.3 mi northwest of Eagle Point, and at mile 138.6.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is 1,271.99 ft above sea level. 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.

AVERAGE DISCHARGE.--39 years (water years 1939-77), 2,636 ft³/s, 1,910,000 acre-ft/yr, unregulated.
18 years (water years 1978-95), 2,257 ft³/s, 1,635,000 acre-ft/yr, regulated.

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 discharge, 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, 7,040 ft³/s Feb. 1, gage height, 5.24 ft; minimum discharge, 889 ft³/s Oct. 11.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	975	3030	1240	5230	1050	1720	3800	2360	2720	1730	2520
2	1040	955	2450	1180	5820	1430	1660	5180	2400	2570	1730	2530
3	1050	933	1810	1130	4580	1500	1620	5720	2350	2550	1730	2550
4	1050	969	1470	942	4000	1530	1580	5790	2310	2550	1770	2540
5	1050	1130	1290	950	3750	1550	1570	5500	2260	2550	1820	2530
6	1060	1020	1230	1060	3490	1530	1650	4850	2220	2540	1810	2530
7	1030	984	1180	1130	2640	1490	1950	4130	2200	2570	1800	2400
8	972	950	1140	1440	2220	1480	3050	3920	2140	2580	1830	2100
9	938	1080	1100	3850	1950	1750	3360	3820	2110	2700	1840	2110
10	935	1130	1080	3930	1620	2530	3290	3530	2100	2810	1830	2130
11	951	1010	1070	3070	1350	3640	3710	3470	2110	2560	1920	1980
12	948	1010	1100	3380	1200	3260	3780	3500	2160	2290	2070	1650
13	948	991	1090	3800	1170	4230	5980	3450	2360	2240	2080	1660
14	961	982	1120	5050	1120	6000	5600	3260	2420	1850	2070	1660
15	968	984	1230	4430	1070	6500	4910	2960	2740	1810	2060	1670
16	970	1070	1510	3010	1050	5390	4020	2860	2660	1780	2060	1660
17	930	1260	1720	2210	1140	3540	3370	2820	2520	1780	2090	1660
18	926	1140	2520	2080	1760	3550	2980	2770	2540	1770	2400	1670
19	950	1030	2230	1870	1530	3270	2670	2780	2580	1770	2410	1590
20	955	1210	1770	1720	1390	6110	2950	2790	2820	1780	2410	1380
21	938	1260	1580	1560	1320	5610	2840	2750	2840	1760	2410	1180
22	913	1100	1470	1450	1250	5130	2740	2990	3110	1740	2400	1040
23	911	1060	1410	1380	1200	4670	2710	3090	3050	1740	2390	1050
24	912	1130	1410	1320	1150	3830	2620	2510	2960	1740	2390	1060
25	923	2150	1430	1240	1110	3180	2400	2220	2910	1710	2400	1070
26	912	1500	1340	1240	1070	2620	2130	2150	2880	1700	2470	1080
27	919	1320	1460	1240	1050	2350	2370	2140	2850	1740	2510	1100
28	960	1290	1890	1240	1030	1910	2750	2130	2820	1740	2500	1120
29	959	1250	1570	1270	---	1890	3080	2110	2790	1730	2530	1150
30	941	1900	1400	1530	---	1740	3360	2200	2790	1740	2530	1190
31	933	---	1290	2930	---	1710	---	2340	---	1740	2530	---
TOTAL	29903	34773	47390	63872	57260	97410	88420	103530	76360	64850	66520	51560
MEAN	965	1159	1529	2060	2045	3142	2947	3340	2545	2092	2146	1719
MAX	1060	2150	3030	5050	5820	6500	5980	5790	3110	2810	2530	2550
MIN	911	933										

[illegible]

ANNUAL TOTAL	525143		781848				
ANNUAL MEAN	1439		2142			2257	
HIGHEST ANNUAL MEAN						3671	1984
LOWEST ANNUAL MEAN						1381	1992
HIGHEST DAILY MEAN	3410	Jun 11	6500	Mar 15		23000	Dec 15 1977
LOWEST DAILY MEAN	850	Mar 24	911	Oct 23		823	Feb 12 1981
ANNUAL SEVEN-DAY MINIMUM	863	Mar 23	918	Oct 21		842	Feb 7 1981
ANNUAL RUNOFF (AC-FT)	1042000		1551000			1635000	
10 PERCENT EXCEEDS	2130		3590			3680	
50 PERCENT EXCEEDS	1250		1820			1950	
90 PERCENT EXCEEDS	942		1010			1130	

ROGUE RIVER BASIN

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE:

Prior to construction of Lost Creek Dam and Lake: Maximum, 20.0°C July 27, 28, 1975; minimum, 0.0°C Jan. 6-8, 10, 11, 1974, Jan. 6-9, 1977.

After full operation of Lost Creek Dam and Lake: Maximum, 21.0°C July 26-29, 1992; minimum, 0.5°C Feb. 5, 6, 1989.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 17.0°C July 17; minimum, 3.0°C Dec. 30.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.0	10.5	12.5	9.0	7.5	8.0	7.0	6.5	7.0	6.0	4.5	5.0
2	13.5	10.0	12.0	8.0	7.0	7.5	7.0	6.0	6.5	5.5	4.0	5.0
3	13.0	9.5	11.5	8.0	6.5	7.5	6.5	5.0	6.0	5.5	4.5	5.0
4	13.0	9.5	11.5	8.0	7.0	7.5	5.5	4.5	5.0	5.5	4.5	5.0
5	12.0	8.5	10.5	8.5	7.0	7.5	5.5	4.0	5.0	6.0	5.0	5.5
6	12.0	8.5	10.5	8.0	7.0	7.5	6.5	5.0	6.0	6.0	5.5	6.0
7	12.0	8.5	10.5	8.5	6.5	7.5	6.5	5.5	6.0	6.0	5.5	6.0
8	12.5	8.5	10.5	7.0	6.0	7.0	6.0	5.0	5.5	7.0	6.0	6.5
9	11.5	9.0	10.5	8.0	7.0	7.5	6.0	5.0	5.5	7.5	6.5	7.0
10	11.5	9.0	10.5	7.0	6.5	7.0	6.0	4.5	5.5	7.5	7.0	7.5
11	12.0	9.0	10.5	7.0	6.5	7.0	6.0	5.5	6.0	7.0	6.5	7.0
12	9.5	7.5	8.5	8.0	6.5	7.5	6.5	5.5	6.0	7.0	6.5	7.0
13	9.5	6.5	8.0	8.5	6.5	7.0	7.0	5.0	6.0	7.5	7.0	7.0
14	9.5	8.0	8.5	7.5	5.5	6.5	6.0	5.0	5.5	7.5	7.0	7.5
15	9.0	7.0	8.0	8.5	7.0	7.5	6.0	5.5	5.5	7.5	6.0	7.0
16	9.5	6.0	8.0	7.0	6.0	6.5	6.5	6.0	6.0	6.5	5.5	6.0
17	9.5	6.5	8.0	6.0	5.5	5.5	7.0	6.0	6.5	5.5	4.5	5.0
18	9.5	6.5	8.0	6.5	5.0	5.5	7.0	6.5	6.5	6.0	5.0	5.5
19	9.0	6.5	8.0	6.5	5.0	6.0	6.5	6.0	6.5	6.0	5.0	5.5
20	9.5	6.5	8.0	7.5	5.5	6.5	6.5	5.0	6.0	5.5	5.0	5.0
21	9.5	7.0	8.0	6.5	5.0	5.5	6.5	5.5	6.0	6.0	4.5	5.5
22	9.5	6.5	8.0	6.0	4.0	5.0	6.0	4.5	5.0	6.0	5.0	5.5
23	9.0	6.0	8.0	6.5	5.0	5.5	5.5	4.5	5.0	6.5	5.5	6.0
24	9.0	6.0	8.0	7.0	6.0	6.5	6.5	5.5	6.0	6.0	5.0	5.5
25	9.0	6.5	8.0	6.5	5.5	6.0	6.5	5.5	6.0	6.5	5.0	6.0
26	9.0	7.5	8.5	6.5	5.5	6.0	6.5	6.0	6.0	6.0	5.0	5.5
27	10.0	8.0	9.0	6.0	5.5	6.0	6.5	6.0	6.5	6.0	5.0	5.5
28	10.0	8.0	9.0	7.0	6.0	6.5	6.5	5.0	6.0	6.5	5.5	6.0
29	8.5	6.0	7.5	6.5	6.0	6.0	5.0	4.0	4.5	7.0	6.0	6.5
30	9.0	6.0	7.5	7.0	6.0	6.5	4.5	3.0	4.0	8.0	7.0	7.5
31	9.5	7.0	8.5	---	---	---	5.0	3.5	4.5	8.5	7.5	8.0
MONTH	14.0	6.0	9.0	9.0	4.0	6.5	7.0	3.0	5.5	8.5	4.0	6.0

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 1994 TO SEPTEMBER 1995

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

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

ROGUE RIVER BASIN

14354200 BEAR CREEK BELOW ASHLAND CREEK, AT ASHLAND, OR

LOCATION.--Lat 42°12'58", long 122°43'16", in SE 1/4 SE 1/4 sec.32, T.38 S., R.1 E, Jackson County, Hydrologic Unit 17100308, on left bank, 0.1 mi downstream from Ashland Creek, and at mile 21.0.

DRAINAGE AREA.--168 mi².

PERIOD OF RECORD.--July 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,686.64 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1924 by Emigrant Lake. Water is diverted into basin from the Klamath River basin. Many diversions for irrigation and municipal use upstream from station.

AVERAGE DISCHARGE.--5 years (water years 1991-95) 45.7 ft³/s, 33,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,920 ft³/s May 16, 1991, gage height 3.92 ft; minimum discharge, 0.33 ft³/s Oct. 18, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 742 ft³/s May 4, gage height, 3.32 ft; minimum discharge, 2.7 ft³/s Oct 10, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	27	54	23	278	43	102	392	103	66	47	52
2	5.9	18	48	23	189	44	93	432	99	51	37	48
3	5.3	12	41	22	145	52	78	398	92	49	34	49
4	4.5	22	35	21	131	48	68	619	89	55	38	46
5	4.5	17	31	22	112	49	73	630	114	63	53	45
6	4.5	15	26	24	86	45	77	511	114	60	51	44
7	4.5	14	22	29	83	41	76	509	142	45	67	43
8	4.4	10	21	90	62	40	72	421	100	52	60	40
9	4.2	31	18	449	53	158	70	313	75	131	53	41
10	4.1	17	17	381	55	172	69	292	78	54	51	41
11	4.1	13	16	224	61	173	75	299	84	46	51	40
12	7.8	14	17	278	59	127	76	321	71	129	48	45
13	8.4	12	14	206	60	139	331	281	67	76	49	40
14	10	11	15	324	57	183	402	209	110	55	48	42
15	10	12	16	230	53	225	318	191	199	46	63	44
16	8.8	19	17	165	52	165	267	209	107	43	60	42
17	8.6	24	20	132	49	134	278	192	95	38	62	38
18	8.7	17	44	116	51	201	305	168	97	50	54	39
19	8.8	18	32	103	48	171	283	131	127	48	48	41
20	9.0	23	29	82	48	283	325	110	135	44	47	35
21	8.6	20	28	62	47	200	303	109	100	39	44	31
22	8.8	17	26	59	47	183	295	106	78	39	40	32
23	8.6	18	25	56	46	150	202	109	67	33	40	34
24	8.5	26	28	48	46	140	125	105	65	29	40	34
25	7.5	43	26	41	45	129	190	99	61	30	42	41
26	7.3	30	25	40	44	122	225	100	65	44	45	45
27	7.3	31	39	37	45	122	380	100	57	42	38	38
28	11	29	47	38	42	110	450	99	56	36	53	29
29	9.4	27	34	47	---	99	397	100	56	38	69	30
30	9.4	42	28	76	---	100	260	101	65	40	65	40
31	9.7	---	25	178	---	95	---	103	---	35	64	---
TOTAL	227.8	629	864	3626	2094	3943	6265	7759	2768	1606	1561	1209
MEAN	7.35	21.0	27.9	117	74.8	127	209	250	92.3	51.8	50.4	40.3
MAX	11	43	54	449	278	283	450	630	199	131	69	52
MIN	4.1	10	14	21	42	40	68	99	56	29	34	29
AC-FT	452	1250	1710	7190	4150	7820	12430	15390	5490	3190	3100	2400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1995, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995
MEAN	11.1	15.1	21.7	49.1	38.0	65.1
MAX	19.7	21.0	27.9	117	74.8	127
(WY)	1994	1995	1995	1995	1995	1995
MIN	4.93	9.70	14.4	18.5	16.9	13.6
(WY)	1991	1993	1991	1992	1992	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1990 - 1995

ANNUAL TOTAL	8809.6	32551.8	
ANNUAL MEAN	24.1	89.2	45.7
HIGHEST ANNUAL MEAN			89.2
LOWEST ANNUAL MEAN			22.0
HIGHEST DAILY MEAN	66	Jul 6	630
LOWEST DAILY MEAN	4.1	Oct 10	4.1
ANNUAL SEVEN-DAY MINIMUM	4.3	Oct 5	4.3
ANNUAL RUNOFF (AC-FT)	17470	64570	33090
10 PERCENT EXCEEDS	41	224	80
50 PERCENT EXCEEDS	21	49	30
90 PERCENT EXCEEDS	9.3	13	9.3

LOCATION.--Lat 42°19'28", long 122°51'55", in NW 1/4 sec.30, T.37 S., R.1 W., Jackson County, Hydrologic Unit 17100308, on left bank 300 ft upstream from 10th street Bridge, in Medford, and at mile 10.1.

PERIOD OF RECORD.--March 1915 to June 1920 (no low-flow records), October 1920 to September 1981, December 1983 to current year. Monthly discharge only for some periods. published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,343.27 ft above sea level. Prior to Sept. 19, 1991, at site 0.2 mi downstream, at datum 1.29 ft lower, Dec. 31, 1947, to Sept. 23, 1985, at datum 2.00 ft higher. See WSP 1738 for history of changes prior to Dec. 31, 1947.

AVERAGE DISCHARGE.--73 years (water years 1921-81, 1984-95). 108 ft³/s, 78,300 acre-ft/yr, unadjusted.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,390 ft³/s May 4, gage height, 6.30 ft; minimum discharge, 4.3 ft³/s Oct. 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	66	89	42	372	51	162	485	138	65	42	50
2	11	40	81	40	258	60	135	508	139	58	38	47
3	15	25	77	38	195	66	124	483	122	73	38	47
4	22	59	60	37	177	69	112	1100	107	47	36	51
5	14	61	51	39	161	68	115	841	135	51	40	50
6	12	31	46	39	128	56	125	653	134	49	42	50
7	12	31	41	43	125	56	121	591	169	45	58	53
8	11	23	38	96	112	63	160	504	120	54	53	52
9	11	81	35	545	92	212	136	381	82	181	44	49
10	9.8	43	33	570	88	217	128	361	84	114	44	58
11	10	31	32	355	96	244	150	350	102	66	48	56
12	11	30	31	374	94	176	165	368	94	121	47	49
13	14	27	31	281	95	177	424	327	86	100	58	50
14	18	24	30	687	90	199	602	250	153	63	67	47
15	20	23	31	417	85	301	436	213	281	48	70	50
16	16	33	35	266	83	207	362	222	164	46	75	52
17	16	50	33	206	82	173	355	214	134	44	78	60
18	16	38	69	182	82	258	421	201	127	39	73	60
19	15	33	57	161	80	234	377	163	145	48	64	58
20	15	53	48	141	77	400	435	145	188	42	65	56
21	15	41	45	108	75	276	395	175	121	38	62	54
22	14	35	42	101	73	244	357	163	105	37	61	55
23	15	36	41	99	72	199	286	154	91	36	61	52
24	14	61	47	88	65	201	193	161	90	32	53	54
25	14	151	44	76	55	179	230	148	88	27	53	61
26	14	81	40	72	50	152	285	145	85	47	62	72
27	15	68	59	69	49	155	433	138	66	44	44	75
28	23	66	116	69	48	151	547	131	52	38	42	62
29	16	60	67	74	---	140	533	132	42	36	58	71
30	16	70	52	101	---	141	388	126	44	43	59	74
31	17	---	45	226	---	143	---	139	---	44	59	---
TOTAL	454.8	1471	1546	5642	3059	5268	8692	9972	3492	1776	1687	1675
MEAN	14.7	49.0	49.9	182	109	170	290	322	116	57.3	54.4	55.8
MAX	23	151	116	687	372	400	602	1100	281	181	78	75
MIN	9.8	23	30	37	48	51	112	126	42	27	36	47
AC-FT	902	2920	3070	11190	6070	10450	17240	19780	6930	3520	3350	3320

MEAN	31.6	59.5	145	201	203	191	188	132	72.7	31.7	32.2	34.3
MAX	216	290	1137	1080	873	787	686	391	232	95.4	114	91.6
(WY)	1963	1985	1965	1965	1958	1957	1974	1963	1953	1971	1976	1971
MIN	4.74	8.23	17.3	13.2	11.5	13.7	4.88	1.46	2.12	.53	.39	.70
(WY)	1932	1937	1937	1937	1931	1931	1931	1931	1931	1924	1924	1931

WATER YEARS 1921 - 1995

ANNUAL TOTAL	11847.8			44734.8					
ANNUAL MEAN	32.5			123				108	
HIGHEST ANNUAL MEAN								304	1974
LOWEST ANNUAL MEAN								8.42	1931
HIGHEST DAILY MEAN	151	Nov 25		1100	May 4		7110		Dec 22 1964
LOWEST DAILY MEAN	9.8	Oct 10		9.8	Oct 10			.20	Jul 30 1922
ANNUAL SEVEN-DAY MINIMUM	11	Oct 6		11	Oct 6			.20	Jul 23 1924
ANNUAL RUNOFF (AC-FT)	23500			88730			78300		
10 PERCENT EXCEEDS	50			292			250		
50 PERCENT EXCEEDS	30			67			50		
90 PERCENT EXCEEDS	15			27			11		

ROGUE RIVER BASIN

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR

LOCATION.--Lat 42°26'15", long 122°59'10", in SW 1/4 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 above sea level. 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 except for estimated daily discharges, which are good. Flow regulated since February 1977 by Lost Creek Lake (station 14335040). Slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--72 years (water years 1906-77), 2,976 ft³/s, 2,156,000 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 discharge recorded, 418 ft³/s Sept. 19, 1968, as result of regulation, but may have been lower during periods of no record during water years 1931-34.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,500 ft³/s Jan. 14, gage height, 6.67 ft; minimum daily discharge, 880 ft³/s Oct. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e960	e1080	3440	1560	7820	1430	2450	5560	2610	2850	1800	2570
2	e950	e1060	3090	1480	7900	1820	2320	6650	2680	2680	1780	2560
3	e940	e1050	2340	1430	5950	1980	2230	7310	2610	2660	1780	2570
4	e940	e1070	1900	1250	5130	2030	2160	8410	2550	2640	1800	2590
5	e950	e1300	1610	1260	4760	2050	2120	8020	2540	2640	1850	2590
6	e960	e1120	e1450	1410	4420	1980	2260	6940	2570	2640	1850	2590
7	e950	e1080	e1400	1460	3490	1890	2420	5890	2650	2650	1870	2510
8	e930	e1050	e1350	1780	2950	1900	3790	5010	2550	2720	1890	2200
9	e900	e1350	1290	5450	2590	2360	4700	5080	2400	3090	1870	2210
10	e890	e1450	1250	6440	2250	3350	4180	4810	2350	3250	1870	2220
11	e900	e1200	1240	4850	1940	5070	4560	4680	2410	2850	1930	2150
12	e890	e1180	1270	4890	1740	4340	4650	4700	2410	2600	2130	1740
13	e890	e1150	1270	5320	1700	5130	8350	4510	2570	2720	2140	1740
14	e910	e1110	1270	8540	1630	7040	8510	4270	2760	2130	2160	1730
15	e910	e1100	1400	6940	1550	8830	6670	3870	3790	2010	2140	1760
16	e910	e1200	1660	4450	1500	6910	5570	3720	3430	1940	2150	1750
17	e890	e1380	1910	3150	1550	4810	4670	3640	3190	1940	2170	1760
18	e880	e1300	2770	2840	2340	5450	4510	3500	3280	1910	2430	1780
19	e900	e1350	2700	2520	2100	6620	3920	3390	3400	1940	2460	1730
20	e900	e1400	2110	2310	1900	8380	4500	3310	3750	1930	2450	1640
21	e900	e1450	1890	2070	1800	7770	4430	3300	3460	1890	2430	1420
22	e920	1340	1750	1890	1720	6740	4000	3510	3570	1880	2400	1150
23	e930	1240	1660	1780	1660	6080	3860	3580	3410	1860	2410	1100
24	e940	1430	1670	1690	1590	5140	3630	3120	3250	1850	2400	1100
25	e940	3120	1780	1570	1530	4350	3410	2700	3160	1810	2430	1100
26	e950	2240	1640	1550	1490	3570	3080	2600	3080	1810	2500	1100
27	e950	1890	1720	1540	1460	3250	3530	2540	2990	1830	2520	1100
28	e1000	1880	2820	1530	1430	2660	4380	2500	2930	1820	2510	1110
29	e1010	1650	2160	1590	---	2600	4950	2460	2860	1800	2550	1330
30	e1000	2440	1830	1910	---	2420	5130	2490	2850	1820	2580	1350
31	e1000	---	1660	3970	---	2360	---	2620	---	1840	2580	---
TOTAL	28890	42660	57300	90420	77890	130310	124940	134690	88060	70010	67830	54250
MEAN	932	1422	1848	2917	2782	4204	4165	4345	2935	2258	2188	1808
MAX	1010	3120	3440	8540	7900	8830	8510	8410	3790	3250	2580	2590
MIN	880	1050	1240	1250	1430	1430	2120	2460	2350	1800	1780	1100
AC-FT	57300	84620	113700	179300	154500	258500	247800	267200	174700	138900	134500	107600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1995, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	1425	2265	3640	2983	3275	3300	3388	3234	2592	2194	2218	1863						
MAX	2110	6184	10780	6006	8002	6151	5596	4968	4426	3161	3115	2508						
(WY)	1984	1985	1982	1980	1986	1989	1983	1983	1993	1984	1984	1983						
MIN	932	1089	1512	1446	1407	1111	1125	1605	1649	1117	1744	1434						
(WY)	1995	1988	1990	1992	1992	1992	1992	1992	1992	1992	1994	1980						

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1978 - 1995

	1994	1995	1978-1995
ANNUAL TOTAL	573100	967250	
ANNUAL MEAN	1570	2650	2695
HIGHEST ANNUAL MEAN			4532
LOWEST ANNUAL MEAN			1491
HIGHEST DAILY MEAN	3440	8830	35600
LOWEST DAILY MEAN	880	880	880
ANNUAL SEVEN-DAY MINIMUM	897	897	897
ANNUAL RUNOFF (AC-FT)	1137000	1919000	1953000
10 PERCENT EXCEEDS	2260	4910	4700
50 PERCENT EXCEEDS	1410	2170	2150
90 PERCENT EXCEEDS	1050	1080	1280

e Estimated

ROGUE RIVER BASIN

417

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 22.0°C July 25, 26, 1976; minimum, 0.0°C Jan. 7, 1974. Maximum since full operation of Lost Creek Lake, 21.5°C June 22, 23, 1992, July 20-22, 1994; minimum, 1.0°C Dec. 30, 1978, Jan. 30, 1980, Feb. 5, 6, 1989, Dec. 21, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 20.0°C July 17, 18; minimum, 4.5°C Dec. 30, 31.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

ROGUE RIVER BASIN

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR--Continued
 TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

14361500 ROGUE RIVER AT GRANTS PASS, OR

LOCATION.--Lat 42°25'50", long 123°19'00", in NW 1/4 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.

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 above sea level. 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.--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 upstream from station. Many diversions from Rogue River and tributaries upstream from station, the largest of which is at Savage Rapids Dam of Grants Pass Irrigation District, 5.5 mi upstream from station. Continuous water-quality records for the period August 1973 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--57 years (water years 1939-95), 3,361 ft³/s, 2,435,000 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 discharge, 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, 16,800 ft³/s Jan. 15, gage height, 8.96 ft; minimum discharge, 469 ft³/s Oct. 10, result of regulation at Savage Rapids Dam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	947	1290	4160	1860	9980	1510	3080	6440	3040	3080	1800	2840
2	916	1290	4400	1740	10400	1810	2920	7530	3180	2880	1760	2820
3	913	1180	3140	1660	7730	2080	2760	8420	3060	2820	1760	2820
4	921	1210	2550	1460	6420	2180	2620	9040	2990	2780	1790	2870
5	928	1810	2070	1370	5740	2160	2570	9120	2960	2780	1830	2870
6	938	1460	1860	1490	5250	2120	2690	8160	3020	2790	1850	2890
7	943	1280	1750	1660	4360	1980	2950	6950	3100	2790	1880	2780
8	906	1200	1640	1920	3600	1990	4360	6450	3160	2890	1910	2400
9	847	1530	1520	7060	3110	2470	6090	6040	2840	3130	1890	2340
10	744	1750	1460	12500	2720	3940	5350	5830	2770	3620	1870	2350
11	992	1400	1440	8650	2300	5660	5550	5540	2820	3200	1890	2300
12	1000	1300	1470	7840	2030	4990	5740	5570	e2790	2730	2140	1910
13	944	1260	1480	8260	1980	5460	8780	5340	2980	3000	2210	1790
14	981	1220	1480	10100	1880	7820	10300	4680	3160	2320	2260	1790
15	1030	1210	1650	13200	1760	10100	8130	4490	4250	2070	2320	1810
16	1050	1320	1950	8060	1670	8360	7010	4390	4120	1980	2290	1840
17	1350	1920	2520	5280	1760	6060	5710	4320	3770	1900	2330	1830
18	1400	1850	3550	4310	3010	6550	5540	4180	3850	2020	2540	1870
19	1030	1460	3830	3830	2680	e8300	4830	4020	e3910	2070	2680	1790
20	1020	1610	2830	3440	2340	e13000	5280	3940	e3600	2040	2690	1650
21	910	2010	2460	3030	2150	11100	5450	3880	3590	1980	2660	1420
22	998	1630	2240	2660	2020	9270	4870	4040	3780	1990	2620	1090
23	1020	1440	2080	2440	1920	8190	4640	4160	3650	1940	2600	1040
24	1020	1620	2020	2290	1830	6910	4370	3850	e2900	1920	2620	1090
25	1030	3740	2190	2080	1720	5890	4130	3210	e2800	1880	2640	1140
26	1030	3170	2000	1990	1650	4810	3730	3070	e3300	1810	2680	1220
27	1030	2360	2060	1970	1610	4360	3930	3020	3230	1820	2790	1270
28	1110	2400	3340	1940	1540	3660	5120	2890	3110	1830	2760	1290
29	1120	2040	2680	2000	---	3450	5560	2830	3050	1800	2790	1380
30	1100	2750	2230	2390	---	3190	6050	2770	3020	1810	2850	1420
31	1080	---	1990	4830	---	3030	---	3040	---	1830	2840	---
TOTAL	31248	51710	72040	133310	95160	162400	150110	157210	97800	73500	71540	57920
MEAN	1008	1724	2324	4300	3399	5239	5004	5071	3260	2371	2308	1931
MAX	1400	3740	4400	13200	10400	13000	10300	9120	4250	3620	2850	2890
MIN	744	1180	1440	1370	1540	1510	2570	2770	2770	1800	1760	1040
AC-FT	61980	102600	142900	264400	188700	322100	297700	311800	194000	145800	141900	114900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1995, BY WATER YEAR (WY)

MEAN	1487	2589	4364	3707	4192	3967	3892	3434	2634	2131	2156	1821
MAX	2282	7669	14030	7754	10960	8119	6843	5587	4572	3127	3080	2642
(WY)	1984	1985	1982	1980	1983	1983	1983	1984	1993	1984	1984	1983
MIN	1008	1160	1557	1575	1641	1099	1211	1857	1549	1059	1620	1333
(WY)	1995	1988	1990	1992	1992	1992	1994	1992	1992	1992	1994	1980

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1978 - 1995
ANNUAL TOTAL	598731	1153948	
ANNUAL MEAN	1640	3162	3026
HIGHEST ANNUAL MEAN			5276
LOWEST ANNUAL MEAN			1538
HIGHEST DAILY MEAN	4400	13200	50400
LOWEST DAILY MEAN	744	744	744
ANNUAL SEVEN-DAY MINIMUM	799	890	799
ANNUAL RUNOFF (AC-FT)	1188000	2289000	2192000
10 PERCENT EXCEEDS	2530	6050	5600
50 PERCENT EXCEEDS	1440	2600	2210
90 PERCENT EXCEEDS	1020	1210	1290

e Estimated

ROGUE RIVER BASIN

14361900 APPLEGATE LAKE NEAR COPPER, OR

LOCATION.--Lat 42°03'25", long 123°06'30", in SE 1/4 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.

PERIOD OF RECORD.--December 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (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, 82,280 acre-ft May 1, 1995, elevation, 1,987.08 ft; minimum contents since first filling, 7,230 acre-ft Jan. 11, 1991, elevation, 1,855.1 ft, from graph of gage readings furnished by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 82,280 acre-ft May 1, elevation, 1,987.08 ft; minimum contents, 12,130 acre-ft Nov. 24, elevation, 1,874.34 ft.

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

1,840.0	4,400	1,900.0	21,380	1,960.0	58,060
1,860.0	8,330	1,920.0	30,960	1,980.0	75,470
1,880.0	13,890	1,940.0	43,090	1,990.0	85,190

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1921.37	1889.79	1876.15	1886.57	1928.64	1942.60	1963.95	1987.03	1986.76	1986.92	1980.10	1962.28
2	1920.43	1888.95	1876.89	1886.74	1925.16	1943.81	1964.89	1986.66	1986.81	1986.90	1979.67	1961.54
3	1919.44	1888.03	1877.15	1886.90	1916.77	1944.98	1965.86	1985.82	1986.68	1986.90	1979.20	1960.79
4	1918.48	1887.43	1877.20	1887.01	1909.75	1945.91	1966.88	1985.02	1986.55	1986.91	1978.73	1960.03
5	1917.51	1886.91	1877.17	1887.14	1907.21	1946.67	1968.18	1984.77	1986.50	1986.91	1978.25	1959.27
6	1916.53	1886.06	1877.10	1887.28	1905.37	1947.31	1969.92	1984.89	1986.48	1986.89	1977.79	1958.53
7	1915.54	1885.16	1876.99	1888.01	1906.60	1947.85	1973.08	1985.00	1986.46	1986.88	1977.27	1957.84
8	1914.56	1884.25	1876.78	1891.94	1907.78	1948.82	1974.36	1985.08	1986.49	1986.86	1976.78	1957.23
9	1913.55	1884.11	1876.52	1909.43	1908.67	1955.55	1974.85	1985.09	1986.54	1986.84	1976.29	1956.61
10	1912.54	1883.37	1876.28	1920.22	1910.03	1958.84	1974.55	1985.17	1986.59	1986.77	1975.80	1955.99
11	1911.53	1882.66	1876.06	1921.00	1911.56	1957.96	1973.86	1985.20	1986.63	1986.68	1975.31	1955.39
12	1910.50	1881.95	1875.82	1913.64	1913.01	1955.60	1974.11	1985.12	1986.69	1986.60	1974.80	1954.83
13	1909.48	1881.18	1875.56	1906.33	1914.35	1953.74	1975.61	1985.07	1986.72	1986.45	1974.28	1954.26
14	1908.45	1880.37	1875.31	1904.55	1915.86	1955.02	1976.27	1985.04	1986.94	1986.22	1973.76	1953.69
15	1907.48	1879.79	1875.09	1896.05	1917.40	1954.24	1976.49	1985.17	1986.86	1985.98	1973.24	1953.12
16	1906.45	1879.18	1875.35	1888.18	1918.78	1952.19	1976.40	1985.34	1986.70	1985.72	1972.70	1952.55
17	1905.40	1878.62	1876.98	1890.87	1920.61	1951.05	1976.21	1985.51	1986.56	1985.43	1972.14	1951.96
18	1904.32	1877.94	1879.00	1889.74	1922.98	1954.64	1976.89	1985.55	1986.54	1985.17	1971.55	1951.36
19	1903.23	1877.18	1880.18	1889.18	1925.37	1956.22	1978.04	1985.49	1986.62	1984.86	1970.94	1950.68
20	1902.14	1876.63	1881.04	1889.45	1927.67	1960.53	1979.24	1985.60	1986.72	1984.54	1970.34	1949.87
21	1901.04	1876.02	1881.63	1889.88	1929.84	1959.57	1980.25	1985.48	1986.74	1984.21	1969.72	1948.96
22	1900.03	1875.29	1882.05	1890.04	1931.82	1957.06	1980.97	1985.40	1986.75	1983.91	1969.10	1948.00
23	1898.99	1874.60	1882.42	1890.21	1933.75	1955.50	1981.46	1985.30	1986.73	1983.57	1968.47	1947.02
24	1897.95	1874.58	1882.78	1890.35	1935.70	1956.09	1981.98	1985.55	1986.79	1983.20	1967.82	1946.05
25	1896.88	1875.37	1883.05	1890.50	1937.52	1956.74	1982.64	1986.18	1986.88	1982.87	1967.17	1945.09
26	1895.78	1875.30	1883.27	1890.74	1939.05	1957.73	1983.39	1986.70	1986.93	1982.53	1966.50	1944.11
27	1894.74	1875.12	1883.94	1890.83	1940.31	1958.79	1984.24	1986.70	1986.94	1982.14	1965.81	1943.11
28	1893.85	1874.91	1884.91	1891.49	1941.48	1959.97	1985.09	1986.64	1986.94	1981.75	1965.10	1942.10
29	1892.84	1874.65	1885.52	1893.31	---	1961.03	1986.04	1986.68	1986.91	1981.35	1964.41	1941.08
30	1891.70	1874.79	1885.96	1902.76	---	1962.00	1986.81	1986.75	1986.96	1980.93	1963.72	1940.05
31	1890.58	---	1886.27	1921.76	---	1962.96	---	1986.72	---	1980.53	1963.00	---
MAX	1921.37	1889.79	1886.27	1921.76	1941.48	1962.96	1986.81	1987.03	1986.96	1986.92	1980.10	1962.28
MIN	1890.58	1874.58	1875.09	1886.57	1905.37	1942.60	1963.95	1984.77	1986.46	1980.53	1963.00	1940.05
(†)	17590	12260	16010	31910	44110	60450	82020	81930	82160	75970	60480	43120
(‡)	-14470	-5330	+3750	+15900	+12200	+16340	+21570	-90	+230	-6190	-15490	-17360

CAL YR 1994 MAX 1955.84 MIN 1874.58 AC-FT† +2930
WTR YR 1995 MAX 1987.03 MIN 1874.58 AC-FT† +11060

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

ROGUE RIVER BASIN

421

14362000 APPLEGATE RIVER NEAR COPPER, OR

LOCATION.--Lat 42°03'50", long 123°06'37", in SW 1/4 NW 1/4 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 above sea level. Prior to Oct. 1, 1977, at site 0.6 mi upstream at datum 12.15 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since December 1980 by Applegate Lake (station 14361900). Some storage during winter in Squaw Lakes Reservoir, capacity, 1,100 acre-ft on Squaw Creek upstream from station. Diversions upstream from station from Carberry Creek for irrigation in Thompson Creek basin. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--57 years (water years 1939-95), 429 ft³/s, 310,800 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 discharge, 1.5 ft³/s Dec. 20, 1980, result of regulation at Applegate dam, 0.6 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,720 ft³/s Jan. 13, gage height, 8.61 ft; minimum discharge, 107 ft³/s Jan. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	234	132	119	4460	258	405	1210	946	336	301	364
2	291	224	133	121	4450	258	364	1520	909	304	301	364
3	292	221	135	121	4310	258	357	1550	917	282	319	362
4	291	223	135	120	3470	262	360	1490	836	259	321	366
5	290	221	127	121	2190	262	363	1170	747	250	320	364
6	288	221	115	121	1800	264	364	919	643	249	293	362
7	288	220	113	120	953	264	794	872	617	249	332	331
8	289	218	119	120	827	261	1040	887	538	249	309	298
9	288	218	119	132	744	295	1040	912	496	247	304	301
10	285	218	119	492	527	1340	1390	908	497	246	304	301
11	286	188	119	1880	414	2030	1510	908	503	246	307	287
12	285	187	119	3780	368	2480	1420	887	477	246	311	273
13	283	183	119	4580	346	2450	1280	825	449	277	311	270
14	282	183	119	4480	235	2450	1280	780	454	295	310	268
15	282	183	120	4150	164	2930	1290	768	736	295	310	273
16	281	183	119	2910	165	2950	1290	846	617	295	310	270
17	285	183	119	630	168	2360	1190	911	580	296	319	269
18	289	183	121	1080	169	1490	710	957	521	306	336	277
19	288	183	121	834	171	1610	434	954	465	310	337	308
20	287	183	123	581	172	1840	348	953	465	307	337	349
21	284	183	123	483	175	3000	359	1190	461	308	337	387
22	264	183	123	474	176	2990	451	1200	453	307	337	402
23	264	180	119	432	175	2960	575	1150	434	307	337	401
24	264	173	115	404	176	1330	613	925	398	305	342	399
25	263	159	115	368	176	812	581	709	382	303	345	399
26	261	152	115	369	200	659	542	715	382	301	356	394
27	260	138	116	355	255	502	545	973	382	301	359	400
28	261	129	117	325	256	462	545	979	373	301	355	406
29	258	127	117	327	---	460	548	946	344	301	350	407
30	258	126	117	335	---	462	563	942	316	301	350	407
31	255	---	117	1140	---	443	---	985	---	301	356	---
TOTAL	8552	5607	3740	31504	27692	40392	22551	30941	16338	8880	10116	10259
MEAN	276	187	121	1016	989	1303	752	998	545	286	326	342
MAX	292	234	135	4580	4460	3000	1510	1550	946	336	359	407
MIN	210	126	113	119	164	258	348	709	316	246	293	268
AC-FT	16960	11120	7420	62490	54930	80120	44730	61370	32410	17610	20070	20350
MEAN†	40.5	97.3	182	1275	1209	1569	1114	997	549	186	74.5	50.2
AC-FT†	2490	5790	11170	78390	67130	96460	66300	61280	32640	11420	4580	2990

CAL YR 1994 TOTAL 54549 MEAN 149 MAX 292 MIN 109 AC-FT 108200 MEAN† 153 AC-FT† 111130
WTR YR 1995 TOTAL 216572 MEAN 593 MAX 4580 MIN 113 AC-FT 429600 MEAN† 609 AC-FT† 440660

† Adjusted for change in contents of Applegate Lake.

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: September 1980 to September 1987.

pH: September 1980 to September 1987.

WATER TEMPERATURE: January 1977 to current year.

DISSOLVED OXYGEN: September 1980 to September 1987.

INSTRUMENTATION.--Water-quality monitor since September 1980.

REMARKS.--Temperatures are controlled by releases from Applegate Lake.

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 recorded, 7.1 units Oct. 8-10, 13, 16, 17, 1986.

WATER TEMPERATURE: 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, 15.2 mg/L Feb. 17, 18, 1986; minimum, 4.9 mg/L Sept. 28-30, 1981.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 17.0°C Sept. 4, but may have been higher during period July 25 to Sept. 1; minimum, 4.5°C Jan. 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

ROGUE RIVER BASIN

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14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

ROGUE RIVER BASIN

14362250 STAR GULCH NEAR RUCH, OR

LOCATION.--Lat 42°09'15", long 123°04'27", in NE 1/4 NE 1/4 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 above sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--12 years (water years 1984-95), 3.50 ft³/s, 2,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 226 ft³/s Mar. 20, 1995, gage height, 3.43 ft; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 9	1000	175	3.22	Mar. 13	0500	63	2.50
Jan. 14	1530	102	2.82	Mar. 20	---	*226	*3.43
Mar. 9	0030	79	2.65				

No flow many days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.3	3.8	1.3	30	2.7	e25	11	3.9	2.3	1.2	.60
2	.00	1.2	3.8	1.2	29	3.7	e23	11	4.0	2.2	1.1	.49
3	.00	.88	2.8	1.1	21	3.3	e21	10	3.7	2.1	1.1	.46
4	.00	1.5	2.1	1.0	16	3.2	e20	9.9	3.6	2.1	1.1	.49
5	.00	2.5	1.6	1.0	13	3.1	e18	9.5	3.8	2.1	1.0	.52
6	.00	1.4	1.4	1.1	11	2.9	e14	9.1	3.7	2.1	1.0	.53
7	.00	1.1	1.2	3.5	9.3	3.1	e24	8.5	3.9	2.1	1.1	.52
8	.00	1.1	1.0	19	8.5	22	e40	8.0	3.6	2.7	1.2	.52
9	.00	5.4	.93	108	7.3	68	e34	7.6	3.4	3.0	1.1	.51
10	.00	2.6	.87	84	6.5	50	e27	7.2	3.3	2.5	1.1	.46
11	.00	1.5	.89	59	5.9	35	e22	6.9	3.4	2.4	1.1	.44
12	.00	1.2	.93	60	5.6	34	e22	6.7	3.2	2.4	1.1	.42
13	.01	1.0	.87	41	5.6	e33	e35	6.7	3.1	2.3	1.0	.39
14	.06	.94	.85	75	5.0	e42	e32	6.3	3.6	2.1	.94	.36
15	.14	1.3	.96	68	4.4	e39	e29	6.1	3.7	1.9	.88	.36
16	.27	2.3	1.4	45	4.1	e28	e23	5.9	3.4	1.9	.91	.37
17	.27	3.2	1.7	29	4.1	e23	e19	5.6	3.4	1.7	.99	.38
18	.27	2.3	5.2	20	4.4	e22	e17	5.4	3.6	1.8	1.0	.40
19	.25	1.6	6.1	16	4.2	e21	e16	5.3	3.6	1.9	.92	.41
20	.24	1.4	4.2	13	4.1	e62	e15	5.1	3.9	1.8	.81	.40
21	.24	1.7	3.1	11	4.0	e44	15	5.0	3.3	1.7	.72	.38
22	.24	1.5	2.4	9.2	3.7	e37	14	4.9	3.0	1.8	.66	.35
23	.25	1.3	1.9	8.1	3.5	e29	12	4.7	2.9	1.7	.63	.33
24	.25	1.5	1.7	7.3	3.3	e26	12	4.6	2.8	1.6	.68	.34
25	.26	5.8	1.6	6.5	3.1	e25	11	4.4	2.7	1.8	.73	.43
26	.24	3.4	1.4	6.1	2.9	e24	10	4.3	2.5	2.0	.73	.56
27	.25	2.3	1.4	5.4	2.7	e24	10	4.2	2.5	1.7	.72	.57
28	.42	2.4	1.7	5.0	2.6	e28	9.6	4.1	2.4	1.5	.73	.58
29	.55	2.0	1.7	4.7	---	e29	9.6	4.0	2.3	1.4	.73	.58
30	.49	2.1	1.5	5.3	---	e30	9.0	3.9	2.2	1.4	.77	.56
31	.51	---	1.4	13	---	e28	---	3.8	---	1.3	.75	---
TOTAL	5.21	59.72	62.40	728.8	224.8	825.0	588.2	199.7	98.4	61.3	28.50	13.71
MEAN	.17	1.99	2.01	23.5	8.03	26.6	19.6	6.44	3.28	1.98	.92	.46
MAX	.55	5.8	6.1	108	30	68	40	11	4.0	3.0	1.2	.60
MIN	.00	.88	.85	1.0	2.6	2.7	9.0	3.8	2.2	1.3	.63	.33
AC-FT	10	118	124	1450	446	1640	1170	396	195	122	57	27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1995, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	.66	3.18	5.53	6.65	6.97	8.69	5.64	2.50	1.29	.75	.42	.41	
MAX	1.98	18.0	36.5	23.5	18.6	26.6	19.6	6.44	3.28	3.14	2.16	2.00	
(WY)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1983	1984	
MIN	.021	.23	.87	1.13	1.58	.95	1.00	.22	.012	.000	.000	.000	
(WY)	1993	1993	1990	1992	1992	1992	1994	1992	1992	1994	1988	1991	

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1983 - 1995
ANNUAL TOTAL	386.57	2895.74	
ANNUAL MEAN	1.06	7.93	3.50
HIGHEST ANNUAL MEAN			9.81
LOWEST ANNUAL MEAN			.60
HIGHEST DAILY MEAN	6.3 Feb 18	108 Jan 9	139 Dec 14 1983
LOWEST DAILY MEAN	.00 Jun 27	.00 Oct 1	.00 Aug 10 1987
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 27	.00 Oct 1	.00 Aug 21 1987
ANNUAL RUNOFF (AC-FT)	767	5740	2540
10 PERCENT EXCEEDS	2.4	24	7.9
50 PERCENT EXCEEDS	.87	2.6	1.2
90 PERCENT EXCEEDS	.00	.40	.03

e Estimated

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR

LOCATION.--Lat 42°14'30", long 123°08'20", in NE 1/4 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.

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 above sea level. Prior to Dec. 23, 1938, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since December 1980 by Applegate Lake (station 14361900). Many diversions for irrigation upstream from station. McDonald Creek Canal diverts from McDonald Creek upstream from station for irrigation in Bear Creek basin. Thompson Creek Irrigation Association ditch diverts upstream from station for irrigation in Thompson Creek basin. Fowler-Keeler and Berryman ditches divert upstream from station for irrigation downstream. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--42 years (water years 1939-80), 548 ft³/s, 397,000 acre-ft/yr; 14 years (water years 1982-95), 482 ft³/s, 349,400 acre-ft/yr.

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 discharge, 4.6 ft³/s Sept. 22-25, 1979. Minimum since first filling of Applegate Lake, 65 ft³/s Aug. 2, 1992.

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, 6,900 ft³/s Jan. 14, gage height, 8.11 ft; minimum discharge, 105 ft³/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	263	167	144	5910	357	626	1490	1220	410	299	339
2	247	235	170	143	5780	361	579	1960	1110	381	295	336
3	249	226	167	143	5560	367	542	1970	1110	355	302	334
4	262	236	164	140	3400	358	538	1950	1030	327	312	332
5	272	254	158	138	2760	356	538	1700	911	308	306	339
6	275	238	148	138	1750	351	547	1360	789	303	286	336
7	275	234	141	146	1120	349	739	1290	733	303	316	318
8	274	230	140	230	798	355	1340	1250	672	308	307	279
9	271	269	139	1190	807	786	1360	1260	594	318	291	281
10	272	250	139	1180	714	2210	1580	1230	590	307	291	281
11	272	215	141	2360	593	3210	1910	1200	593	299	293	276
12	273	199	139	4840	511	3260	1910	1170	574	297	295	254
13	271	197	138	5980	494	3220	1760	1080	532	309	296	250
14	276	197	137	6480	410	3540	1790	1000	548	328	297	250
15	281	198	137	5970	298	4140	1780	970	798	323	295	251
16	280	204	141	4110	295	3760	1740	1030	720	323	293	253
17	280	207	145	1010	295	2860	1670	1110	666	320	297	254
18	283	201	169	1370	295	2090	1110	1190	633	324	314	256
19	279	197	168	1080	293	2310	776	1180	564	335	315	272
20	277	201	161	788	285	4260	613	1190	585	326	317	314
21	276	199	157	636	287	4570	603	1440	559	324	314	347
22	261	194	153	625	287	4250	645	1500	538	320	311	371
23	254	197	149	573	288	3430	776	1470	528	317	310	370
24	253	208	143	509	290	1720	835	1190	493	315	314	370
25	251	222	143	456	290	1460	808	933	477	315	319	374
26	251	189	141	452	302	1070	744	881	475	319	321	375
27	258	170	143	434	357	904	774	1140	470	314	330	378
28	270	161	151	396	358	711	764	1220	460	309	330	384
29	263	156	147	399	---	691	770	1150	434	306	330	384
30	260	157	142	450	---	676	758	1160	389	304	332	384
31	258	---	141	1350	---	658	---	1180	---	301	333	---
TOTAL	8157	6304	4619	43860	34827	58640	30925	39844	19795	9948	9561	9542
MEAN	263	210	149	1415	1244	1892	1031	1285	660	321	308	318
MAX	283	269	170	6480	5910	4570	1910	1970	1220	410	333	384
MIN	133	156	137	138	285	349	538	881	389	297	286	250
AC-FT	16180	12500	9160	87000	69080	116300	61340	79030	39260	19730	18960	18930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1995, BY WATER YEAR (WY)

	MEAN	335	463	659	568	727	715	560	709	442	208	177	238
MAX	507	1261	3077	1415	2552	1892	1304	1705	1237	370	308	425	
(WY)	1983	1985	1982	1995	1983	1995	1982	1983	1983	1983	1995	1983	
MIN	218	195	149	142	148	142	139	160	119	86.5	74.5	83.8	
(WY)	1982	1988	1995	1991	1992	1992	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1982 - 1995

ANNUAL TOTAL	55816	276022	
ANNUAL MEAN	153	756	482
HIGHEST ANNUAL MEAN			1072
LOWEST ANNUAL MEAN			153
HIGHEST DAILY MEAN	283	Oct 18	6480
LOWEST DAILY MEAN	82	Aug 2	133
ANNUAL SEVEN-DAY MINIMUM	83	Jul 31	139
ANNUAL RUNOFF (AC-FT)	110700		547500
10 PERCENT EXCEEDS	245		1710
50 PERCENT EXCEEDS	147		332
90 PERCENT EXCEEDS	89		163
		Jan 14	72300
		Oct 1	67
		Dec 9	71
			349400
			1060
			260
			135

ROGUE RIVER BASIN

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 28.0°C July 29, 30, Aug. 3, 4, 1974; minimum, 0.0°C on several days during winter periods most years. Maximum since full operation of Applegate Lake, 25.5°C July 5, 1984, July 16, 19, 27, 1992; minimum, 0.0°C on several days during winter periods most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 22.0°C Aug. 4; minimum, 1.5°C Dec. 30.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.5	14.0	15.5	12.0	10.5	11.5	8.5	7.5	8.0	5.0	4.0	4.5
2	15.5	12.0	14.0	11.0	9.5	10.5	7.5	6.5	6.5	4.5	3.0	3.5
3	13.5	10.5	12.5	11.0	9.5	10.0	6.5	6.0	6.5	5.5	4.0	4.5
4	13.5	10.5	12.0	10.0	10.0	10.0	6.0	4.5	5.0	5.0	4.0	4.5
5	13.5	11.0	12.5	11.0	9.5	10.0	5.0	3.5	4.5	6.0	4.5	5.0
6	13.5	10.5	12.0	10.5	9.5	10.0	5.5	5.0	5.5	5.5	4.5	5.0
7	13.5	10.0	12.0	10.0	9.0	9.5	5.5	4.5	5.0	6.0	4.5	5.5
8	14.0	10.5	12.5	9.0	7.5	8.5	4.5	4.0	4.5	6.5	5.5	6.0
9	13.5	11.0	12.5	9.5	8.5	9.0	4.5	3.5	4.0	7.0	6.0	6.5
10	13.5	11.0	12.5	9.0	7.5	8.5	4.0	3.0	3.5	7.0	5.5	6.5
11	14.0	11.5	12.5	8.0	7.0	7.5	5.0	4.0	4.5	6.0	5.5	5.5
12	13.0	11.0	12.0	9.0	7.5	8.0	5.5	4.5	5.0	6.0	5.5	5.5
13	12.5	10.0	11.5	8.0	6.5	7.0	6.0	5.0	5.5	6.0	5.5	6.0
14	13.0	11.5	12.0	7.5	6.0	7.0	5.0	4.0	4.5	6.5	6.0	6.0
15	12.0	11.0	11.5	9.0	7.5	8.5	5.0	4.5	5.0	6.5	6.0	6.0
16	12.0	9.5	10.5	8.5	7.5	8.0	7.0	5.0	6.0	6.5	5.5	6.0
17	12.5	9.5	11.0	7.5	7.0	7.5	8.0	6.5	7.0	6.0	5.0	5.5
18	11.5	9.0	10.5	7.5	6.0	7.0	7.5	6.5	7.0	6.5	5.5	6.0
19	11.0	9.0	10.0	6.5	5.5	6.0	7.0	5.5	6.0	6.0	5.5	5.5
20	11.5	9.0	10.5	8.0	6.5	7.0	6.0	4.5	5.5	6.0	5.0	5.5
21	12.0	9.0	10.5	7.0	6.0	6.5	5.5	4.5	5.0	6.0	4.5	5.5
22	11.5	9.0	10.5	6.0	4.5	5.5	5.0	3.5	4.0	6.5	5.5	6.0
23	9.5	7.0	8.5	6.5	5.0	5.5	4.5	3.5	4.0	6.5	5.0	6.0
24	9.5	7.0	8.5	8.0	6.5	7.5	5.5	4.0	4.5	6.5	5.0	5.5
25	9.0	7.5	8.5	7.5	5.5	6.5	6.0	4.5	5.5	6.0	4.5	5.5
26	10.5	9.0	9.5	6.5	5.0	5.5	7.0	5.5	6.0	6.5	5.0	6.0
27	12.5	10.0	11.0	6.5	6.0	6.5	6.5	5.0	6.0	6.0	5.0	5.5
28	11.5	10.0	10.5	7.0	6.5	6.5	6.0	4.5	5.5	6.5	6.0	6.0
29	10.0	8.0	9.0	7.0	6.0	6.5	4.5	3.0	3.5	7.5	6.0	6.5
30	10.5	8.0	9.5	8.5	7.0	7.5	3.5	1.5	2.5	8.0	6.5	7.5
31	11.5	9.5	10.5	---	---	---	4.0	2.0	3.0	7.5	6.5	7.0
MONTH	17.5	7.0	11.0	12.0	4.5	8.0	8.5	1.5	5.0	8.0	3.0	5.5

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN			
	FEBRUARY				MARCH				APRIL				MAY		
1	7.0	6.5	6.5	8.0	6.5	7.5	9.5	6.5	8.0	10.5	8.0	9.0			
2	6.5	6.0	6.5	7.5	6.0	7.0	9.5	5.0	7.5	10.0	8.0	9.0			
3	7.0	6.5	6.5	8.0	6.5	7.0	10.5	6.0	8.5	10.5	7.5	8.5			
4	7.0	6.0	6.5	7.0	5.5	6.0	10.0	6.5	8.5	9.0	8.0	8.5			
5	7.0	6.0	6.5	7.5	5.5	6.5	9.0	7.0	8.0	9.0	8.0	8.5			
6	7.0	6.0	6.5	7.0	3.5	5.5	9.5	7.0	8.0	8.5	8.0	8.5			
7	7.0	6.5	6.5	7.0	4.0	5.5	9.0	6.5	8.0	11.5	8.0	9.5			
8	7.5	6.0	6.5	8.0	5.5	7.0	7.0	5.5	6.0	11.0	8.0	9.5			
9	7.5	5.5	6.5	7.5	6.5	7.0	8.0	5.5	6.5	10.5	8.5	9.5			
10	7.0	5.0	6.0	6.5	6.0	6.0	8.5	6.0	7.0	10.0	9.0	9.5			
11	7.0	5.0	6.0	7.0	6.0	6.5	8.5	6.5	7.5	10.5	9.0	9.5			
12	6.5	5.0	6.0	7.0	6.0	6.5	8.5	6.5	7.5	10.5	8.0	9.0			
13	6.0	5.0	5.5	7.5	6.0	6.5	7.5	6.5	7.0	11.0	8.5	9.5			
14	6.0	4.5	5.5	7.0	6.5	6.5	8.0	6.0	6.5	12.5	8.0	10.0			
15	6.0	3.5	5.0	7.5	6.5	7.0	7.0	5.5	6.5	12.5	8.5	10.5			
16	5.0	3.5	4.5	8.0	6.5	7.0	9.0	6.0	7.0	12.0	9.5	10.5			
17	6.5	5.0	6.0	8.0	6.5	7.0	8.0	6.0	7.0	13.0	9.5	11.0			
18	9.0	6.5	7.5	8.5	7.0	7.5	8.5	6.0	7.0	12.5	8.5	10.5			
19	9.0	6.5	7.5	7.5	6.5	7.0	8.5	6.0	7.0	13.0	8.5	10.5			
20	9.0	6.0	7.5	7.5	6.5	7.0	8.5	6.5	7.5	13.0	9.0	11.0			
21	9.0	6.0	7.5	7.5	6.5	7.0	10.5	6.0	8.0	12.0	9.5	10.5			
22	8.5	6.0	7.5	7.5	6.5	6.5	11.0	6.0	8.5	13.0	9.5	11.0			
23	9.0	6.0	7.5	7.0	6.0	6.5	11.5	6.5	9.0	13.0	9.5	11.0			
24	9.0	6.0	7.5	7.5	6.0	6.5	12.0	7.5	9.5	13.5	9.5	11.0			
25	8.5	6.0	7.0	7.5	5.5	6.5	11.5	7.0	9.0	14.0	9.5	11.5			
26	8.5	6.0	7.0	8.5	5.0	6.5	10.5	7.0	9.0	13.5	9.5	11.5			
27	8.5	5.5	7.0	8.5	5.0	6.5	10.5	8.0	9.0	14.0	10.0	11.5			
28	8.5	5.5	7.0	9.0	5.0	7.0	9.0	7.5	8.5	14.0	9.5	11.5			
29	---	---	---	9.0	5.5	7.0	10.5	7.5	9.0	14.5	10.0	12.0			
30	---	---	---	9.5	5.5	7.5	10.5	7.5	9.0	14.0	10.5	12.0			
31	---	---	---	7.5	6.0	7.0	---	---	---	14.5	10.5	12.0			
MONTH	9.0	3.5	6.5	9.5	3.5	6.5	12.0	5.0	8.0	14.5	7.5	10.0			
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN			
	JUNE				JULY				AUGUST				SEPTEMBER		
1	14.0	10.5	12.0	19.0	14.0	16.5	21.5	16.0	19.0	19.0	15.0	17.0			
2	14.0	10.5	12.0	19.5	14.5	17.0	21.5	16.5	19.5	19.0	14.5	17.0			
3	14.5	10.5	12.0	19.5	14.5	17.0	21.5	16.5	19.0	18.5	15.0	17.0			
4	13.5	10.5	12.0	19.5	14.5	17.0	22.0	16.0	19.0	18.5	14.0	16.5			
5	12.5	10.5	11.5	19.5	15.0	17.5	21.0	16.0	18.5	17.5	14.0	16.0			
6	12.0	10.0	10.5	18.5	15.0	17.0	20.5	15.5	18.5	17.5	13.0	15.5			
7	13.0	9.5	11.0	18.5	14.5	16.5	19.0	16.0	17.5	17.5	13.0	15.5			
8	14.5	9.5	12.0	19.5	15.0	17.5	19.0	14.0	16.5	18.0	13.0	15.5			
9	15.0	10.0	12.5	18.0	15.5	17.0	19.5	14.5	17.0	18.5	14.0	16.5			
10	13.0	11.5	12.5	18.0	14.5	16.0	18.5	15.5	17.0	19.0	14.5	17.0			
11	15.0	11.5	12.5	18.0	14.5	16.0	19.5	15.0	17.0	19.0	14.5	17.0			
12	14.5	10.0	12.5	17.0	14.5	16.0	19.5	14.5	17.0	19.0	15.0	17.0			
13	13.0	11.0	12.0	19.0	14.0	16.5	19.5	14.5	17.0	19.5	15.0	17.5			
14	13.5	11.0	12.0	19.5	14.0	17.0	19.5	14.5	17.0	19.0	15.5	17.5			
15	13.5	11.5	12.5	20.0	14.5	17.5	19.0	15.0	17.0	19.0	15.5	17.5			
16	13.5	11.5	12.5	21.0	15.0	18.0	18.0	15.0	16.5	18.5	15.0	16.5			
17	14.0	11.5	12.5	21.5	16.0	19.0	18.0	14.0	16.0	18.0	14.0	16.0			
18	13.5	12.0	13.0	20.5	16.5	18.5	19.0	13.5	16.0	18.0	14.0	16.0			
19	13.5	11.5	12.5	19.0	16.0	17.5	19.0	14.0	16.5	18.0	14.0	16.0			
20	14.0	11.5	12.5	20.5	15.5	18.0	20.0	14.5	17.5	17.5	14.0	16.0			
21	16.0	11.0	13.5	19.5	16.0	18.0	19.5	15.0	17.5	17.0	13.5	15.5			
22	17.0	11.5	14.0	20.5	15.5	18.0	19.5	15.0	17.5	17.0	13.5	15.0			
23	17.5	12.0	15.0	21.0	15.5	18.5	19.0	15.5	17.5	17.0	13.5	15.0			
24	18.5	13.0	15.5	21.0	15.5	18.5	19.0	14.5	17.0	17.0	14.0	15.5			
25	18.5	13.0	16.0	19.5	16.0	18.0	18.5	13.5	16.0	16.0	14.5	15.5			
26	18.5	13.5	16.0	20.5	15.5	18.0	18.0	14.0	16.0	16.0	13.5	14.5			
27	19.0	13.0	16.0	21.5	16.0	19.0	18.5	13.5	16.0	15.5	12.0	14.5			
28	19.0	14.0	16.5	21.5	16.5	19.0	18.0	14.0	16.0	12.0	10.0	11.0			
29	19.0	13.5	16.0	20.0	16.5	18.0	18.5	15.0	16.5	12.0	9.5	10.5			
30	18.0	14.0	16.5	20.0	14.5	17.5	18.5	14.0	16.5	12.5	9.0	10.5			
31	---	---	---	21.0	15.5	18.5	19.0	14.5	17.0	---	---	---			
MONTH	19.0	9.5	13.5	21.5	14.0	17.5	22.0	13.5	17.0	19.5	9.0	15.5			
YEAR	22.0	1.5	10.5												

ROGUE RIVER BASIN

14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR

LOCATION.--Lat 42°21'15", long 123°24'20", in SE 1/4 NE 1/4 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 above sea level (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.--No estimated daily discharges. Records good. Flow regulated since December 1980 by Applegate Lake (station 14361900). Many diversions for irrigation upstream from station. Wilderville ditch diverts up to 16 ft³/s 0.3 mi upstream and at the mouth of Jackson Creek. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--19 years (water years 1939-55, 1979, 1980), 717 ft³/s, 519,500 acre-ft/yr; 14 years (water years 1982-95), 668 ft³/s, 484,300 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 on basis of slope-area measurement of peak flow; minimum discharge, 0.78 ft³/s Aug. 22-24, 1979. Minimum since first filling of Applegate Lake, 34 ft³/s Aug. 4, 1992.

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, 10,700 ft³/s Jan. 9, gage height, 9.32 ft; minimum discharge, 110 ft³/s Oct. 1, 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	304	394	239	7060	495	1040	1520	1260	417	290	319
2	190	277	409	231	7490	508	946	2130	1180	396	282	317
3	234	266	360	223	6680	535	867	2140	1180	365	278	317
4	243	278	314	217	6110	508	830	2120	1130	342	290	313
5	249	341	282	221	3410	504	819	1960	995	317	293	317
6	251	294	260	221	3050	491	847	1540	898	304	284	322
7	254	274	239	239	1780	488	1030	1490	802	304	273	321
8	256	261	227	514	1440	498	2060	1420	760	303	296	284
9	256	358	219	5910	1290	1290	2040	1430	647	309	282	274
10	255	338	215	4700	1080	2820	1930	1400	641	319	278	274
11	254	283	214	3520	895	3520	2300	1390	651	309	278	274
12	257	252	220	5890	758	3700	2340	1350	636	304	274	259
13	257	239	218	7500	756	3800	2440	1280	579	304	276	249
14	259	233	214	9080	684	4190	2450	1200	589	319	278	246
15	269	243	218	8840	520	5230	2310	1150	794	315	277	243
16	267	282	255	6180	490	4690	2170	1150	822	310	280	243
17	270	320	342	2560	520	3570	2040	1230	746	308	284	248
18	281	288	498	1980	635	3260	1610	1280	734	303	290	247
19	278	261	499	1690	591	3340	1250	1280	648	323	300	248
20	274	267	389	1380	555	6900	1050	1290	670	329	302	276
21	271	286	335	1080	533	7060	978	1440	642	317	303	301
22	258	264	301	991	513	5930	945	1550	605	317	298	340
23	247	251	281	906	492	5140	1060	1540	586	317	293	350
24	245	273	267	833	488	2650	1110	1360	543	313	288	351
25	241	635	255	748	473	2220	1080	1120	511	317	290	359
26	246	440	243	727	461	1710	988	988	494	348	294	369
27	263	341	243	716	498	1470	1010	1090	487	335	307	379
28	284	324	270	669	499	1240	1010	1220	474	326	312	381
29	284	291	262	667	---	1180	1060	1190	450	307	308	388
30	275	319	248	884	---	1140	1040	1180	410	302	308	396
31	272	---	242	2020	---	1090	---	1170	---	302	319	---
TOTAL	7850	9083	8933	71576	49751	81167	42650	43598	21564	10001	9005	9205
MEAN	253	303	288	2309	1777	2618	1422	1406	719	323	290	307
MAX	284	635	499	9080	7490	7060	2450	2140	1260	417	319	396
MIN	110	233	214	217	461	488	819	988	410	302	273	243
AC-FT	15570	18020	17720	142000	98680	161000	84600	86480	42770	19840	17860	18260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1995, BY WATER YEAR (WY)

	364	654	1056	949	1234	1116	844	779	475	195	157	234
MEAN	364	654	1056	949	1234	1116	844	779	475	195	157	234
MAX	569	2099	4719	2309	4241	2715	2177	1916	1333	390	290	482
(WY)	1984	1985	1982	1995	1983	1983	1983	1983	1983	1983	1995	1983
MIN	253	239	196	209	263	230	173	166	98.4	53.5	39.3	66.0
(WY)	1995	1988	1991	1991	1994	1994	1994	1992	1992	1994	1992	1992

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1982 - 1995
ANNUAL TOTAL	68019	364383	
ANNUAL MEAN	186	998	668
HIGHEST ANNUAL MEAN			1546
LOWEST ANNUAL MEAN			192
HIGHEST DAILY MEAN	635	Nov 25	16200
LOWEST DAILY MEAN	35	Jul 20	35
ANNUAL SEVEN-DAY MINIMUM	42	Jul 16	37
ANNUAL RUNOFF (AC-FT)	134900	722800	484300
10 PERCENT EXCEEDS	294	2190	1500
50 PERCENT EXCEEDS	201	394	330
90 PERCENT EXCEEDS	51	248	131

ROGUE RIVER BASIN

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14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: September 1978 to current year.

INSTRUMENTATION.--Temperature recorder since September 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 29.0°C June 22, 1992; minimum, 0.0°C Feb. 6, 7, 1989.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.0°C Aug. 5; minimum, 4.5°C Dec. 5, 9, 10, 30, but may have been lower during period of missing record.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

ROGUE RIVER BASIN

14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

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

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LOCATION.--Lat 42°34'50", long 124°03'30", in NE 1/4 NW 1/4 sec.6, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100310, on left bank 0.8 mi upstream from Shasta Costa Creek, 1.5 mi north of Agness, 2.6 mi upstream from Illinois River, and at mile 29.7.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 113.81 ft above sea level (levels by U.S. Bureau of Public Roads).

AVERAGE DISCHARGE.--35 years (water years 1961-95), 5,764 ft³/s, 4,176,000 acre-ft/yr.
18 years (since operation began at Lost Creek Lake), 5,084 ft³/s, 3,683,000 acre-ft/yr.

EXTREMES FOR CURRENT YEAR. - Maximum discharge, 114,200 ft³/s Jan. 9, gage height, 25.75 ft; minimum discharge, 1,080 ft³/s Oct. 22.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	1860	8450	3480	25500	3420	7330	8850	4440	3760	2260	3100
2	1260	1970	9000	3220	28900	3410	6880	11400	4500	3670	2190	3070
3	1330	1780	7040	2990	21700	4030	6340	12200	4450	3450	2130	3040
4	1390	2030	5490	2800	17300	4120	6000	12000	4360	3400	2120	3080
5	1410	2660	4370	2640	14100	4230	5750	12700	4230	3340	2160	3120
6	1420	2610	3790	2860	11600	4170	5650	11400	4160	3310	2200	3120
7	1450	2010	3490	3760	10000	3970	6910	9860	4120	3320	2200	3120
8	1450	1810	3290	7390	7900	4090	10200	8910	4190	3360	2230	2910
9	1420	3230	2950	59300	6920	12000	13600	8320	3880	3460	2250	2580
10	1360	3350	2770	51000	6190	18000	12000	8020	3660	4200	2220	2580
11	1260	2610	2910	31600	5410	18400	11300	7660	3600	3500	2230	2580
12	1470	2110	3480	31800	4940	16400	11800	7530	3600	3200	2280	2440
13	1470	1910	3400	35500	4780	15200	13700	7340	3570	3400	2500	2050
14	1430	1790	3330	39400	4570	19100	17400	6950	3850	3200	2550	2020
15	1490	2010	3480	39700	4160	23000	14600	6080	4410	3000	2620	2000
16	1510	3550	4850	26700	3830	20200	12700	6120	5410	2800	2610	2030
17	1500	4810	7050	16900	5490	15600	10800	6010	4790	2700	2610	2060
18	1880	4190	7900	12200	9840	13000	9760	5930	4710	2600	2640	2100
19	1690	3110	8820	12100	8180	16400	8560	5820	4870	2570	2950	2130
20	1450	2990	6940	10400	6580	27000	8130	5710	5070	2650	2970	2030
21	1430	3250	5670	8670	5710	32700	8690	5630	5140	2550	2970	1910
22	1320	3100	4900	7450	5140	25500	7990	5820	4820	2470	2920	1760
23	1370	2720	4350	6630	4710	22200	7560	5950	4780	2450	2870	1510
24	1380	2960	3970	6020	4380	17300	7270	5830	4550	2440	2850	1550
25	1370	6950	3740	5560	4100	13900	6890	5120	4330	2390	2860	1640
26	1380	7920	3970	5600	3860	11700	6420	4530	4170	2460	2900	1700
27	1500	5330	4340	6070	3670	10100	6100	4390	4040	2350	2980	1830
28	1700	4750	4970	6310	3570	9360	7020	4510	3940	2340	3010	1920
29	1550	4350	5510	6430	---	8760	7370	4420	3790	2280	3010	1950
30	1510	4560	4430	9620	---	8430	8190	4300	3710	2240	3070	2060
31	1480	---	3830	16400	---	7860	---	4300	---	2260	3100	---
TOTAL	44930	98280	152480	480500	243030	413850	272910	223610	129140	91120	80460	68990
MEAN	1449	3276	4919	15500	8680	13350	9097	7213	4305	2939	2595	2300
MAX	1880	7920	9000	59300								

MEAN	1951	4637	8252	7920	9330	7829	6496	4828	3331	2359	2251	2079
MAX	3497	16650	29250	16570	30280	17750	15090	8158	6292	3446	3370	3187
(WY)	1983	1985	1982	1980	1983	1983	1982	1983	1993	1984	1984	1983
MIN	1421	1386	2124	2839	3071	2048	2083	2124	1821	1212	1671	1346
(WY)	1989	1988	1990	1992	1988	1992	1994	1992	1992	1994	1994	1980

WATER YEARS 1978 - 1995

ANNUAL TOTAL	938478		2299300				
ANNUAL MEAN	2571		6299			5084	
HIGHEST ANNUAL MEAN						9827	1983
LOWEST ANNUAL MEAN						2286	1992
HIGHEST DAILY MEAN	9000	Dec 2	59300	Jan 9	148000	Feb 18	1983
LOWEST DAILY MEAN	980	Sep 25	1260	Oct 2	979	Oct 8	1979
ANNUAL SEVEN-DAY MINIMUM	1020	Sep 23	1370	Oct 1	1020	Oct 4	1980
ANNUAL RUNOFF (AC-FT)	1861000		4561000		3683000		
10 PERCENT EXCEEDS	4550		12700		10300		
50 PERCENT EXCEEDS	2120		4040		2940		
90 PERCENT EXCEEDS	1200		1790		1630		

ROGUE RIVER BASIN

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1960 to September 1987, January 1995 to September 1995.

INSTRUMENTATION.--Temperature recorder from October 1960 to September 1987, January 1995 to September 1995.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: 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 TEMPERATURE: Maximum, 24.5°C Aug. 4, 5; minimum, 6.0°C Feb. 15, 16.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

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

LOWER ROGUE RIVER BASIN

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14372300 ROGUE RIVER NEAR AGNESS, OR--Continued
(National stream quality accounting network station)

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

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

ROGUE RIVER BASIN

14377100 ILLINOIS RIVER NEAR KERBY, OR

LOCATION.--Lat 42°13'55", long 123°39'45", in SE 1/4 SE 1/4 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 above sea level. 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.--No estimated daily discharges. Records good. No regulation. Diversions for irrigation upstream from station. Several observations of water temperature were obtained during the year.

AVERAGE DISCHARGE.--34 years (water years 1962-95), 1,233 ft³/s, 44.10 in/yr, 893,600 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 discharge, 12 ft³/s Aug. 24, 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 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)
Jan. 9	1430	*31,500	*28.20	Mar. 9	1630	11,900	17.26
Jan. 14	1200	14,500	19.05	Mar. 20	1000	16,400	20.24
Jan. 31	1630	18,400	21.49				

Minimum discharge, 17 ft³/s Oct. 6-11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	87	3700	1030	14100	915	2510	2450	664	284	99	42
2	31	184	2730	916	8760	976	2280	3120	644	261	94	43
3	28	125	2010	840	5290	1170	2130	2480	611	235	75	48
4	29	136	1480	763	3930	1120	2080	2070	575	225	73	48
5	24	804	1130	798	3180	1420	2120	1820	563	217	67	47
6	19	396	989	1330	2630	1320	2560	1610	536	211	77	47
7	18	297	938	2390	2270	1180	5250	1440	504	206	65	45
8	18	245	830	5520	2000	1430	6190	1310	476	206	59	46
9	18	1840	744	22100	1740	8360	4590	1240	446	212	55	45
10	18	1120	691	16700	1530	8220	3500	1250	440	215	58	45
11	18	620	802	10100	1370	7480	3080	1240	467	217	58	43
12	18	464	1360	9840	1290	5010	3230	1220	426	244	60	41
13	19	379	1120	10400	1490	5420	5740	1180	397	227	63	41
14	19	323	1080	13200	1340	7280	4360	1090	426	203	58	40
15	19	399	1250	10200	1190	6670	3370	1050	620	189	55	35
16	20	1330	3900	6340	1110	4440	2780	1030	526	177	56	37
17	20	1650	5400	4220	1870	3340	2370	1010	460	155	57	34
18	21	1030	4450	3570	3700	5510	2140	972	482	142	57	34
19	21	694	3280	3510	2660	5430	1910	921	614	149	54	36
20	22	1050	2370	2740	2160	12300	1980	920	779	162	50	36
21	22	1130	1840	2270	1860	8830	1880	928	632	147	48	35
22	22	781	1500	1960	1620	6610	1750	955	546	143	46	37
23	23	638	1260	1730	1460	4850	1640	902	496	137	44	34
24	23	1960	1130	1530	1360	3900	1590	862	460	134	44	39
25	24	4820	1010	1380	1250	3370	1520	822	427	131	47	44
26	28	2360	968	1530	1140	2990	1420	792	399	125	46	37
27	32	1790	1850	2000	1050	2810	1400	760	370	115	46	37
28	60	1820	2290	2630	976	2810	1620	734	341	108	46	37
29	88	1330	1660	2840	---	2820	2080	723	311	106	44	41
30	63	1830	1310	7390	---	2750	1880	710	287	105	45	45
31	65	---	1100	13600	---	2670	---	691	---	102	44	---
TOTAL	881	31632	56172	165367	74326	133401	80950	38302	14925	5490	1790	1219
MEAN	28.4	1054	1812	5334	2654	4303	2698	1236	497	177	57.7	40.6
MAX	88	4820	5400	22100	14100	12300	6190	3120	779	284	99	48
MIN	18	87	691	763	976	915	1400	691	287	102	44	34
AC-FT	1750	62740	111400	328000	147400	264600	160600	75970	29600	10890	3550	2420
CFSM	.07	2.77	4.77	14.0	6.99	11.3	7.10	3.25	1.31	.47	.15	.11
IN.	.09	3.10	5.50	16.19	7.28	13.06	7.92	3.75	1.46	.54	.18	.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1995, BY WATER YEAR (WY)

	230	1489	2499	2800	2450	2349	1583	891	365	95.9	46.7	65.4
MEAN	230	1489	2499	2800	2450	2349	1583	891	365	95.9	46.7	65.4
MAX	1771	6344	9242	7184	6686	4867	4518	2439	1214	280	116	358
(WY)	1963	1974	1965	1970	1986	1983	1982	1963	1993	1983	1976	1978
MIN	25.0	82.4	115	236	358	508	433	315	82.7	36.5	19.0	15.5
(WY)	1988	1988	1977	1977	1977	1988	1977	1992	1992	1987	1992	1992

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR	FOR 1995 WATER YEAR	WATER YEARS 1962 - 1995
ANNUAL TOTAL	224716	604455	1233
ANNUAL MEAN	616	1656	2372
HIGHEST ANNUAL MEAN			1974
LOWEST ANNUAL MEAN			275
HIGHEST DAILY MEAN	5400	22100	64000
LOWEST DAILY MEAN	14	18	13
ANNUAL SEVEN-DAY MINIMUM	15	18	14
ANNUAL RUNOFF (AC-FT)	445700	1199000	893600
ANNUAL RUNOFF (CFSM)	1.62	4.36	3.25
ANNUAL RUNOFF (INCHES)	22.00	59.17	44.10
10 PERCENT EXCEEDS	1660	4280	3020
50 PERCENT EXCEEDS	451	840	499
90 PERCENT EXCEEDS	20	37	37

14400000 CHETCO RIVER NEAR BROOKINGS, OR

LOCATION.--Lat 42°07'25", long 124°11'10", in SE 1/4 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 above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--26 years (water years 1970-95), 2,206 ft³/s, 110.62 in/yr, 1,598,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,800 ft³/s Jan. 16, 1971, gage height, 27.45 ft; minimum discharge, 42 ft³/s Oct. 14, 1987.

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)
Dec. 17	0230	20,600	13.44	Jan. 14	0330	27,200	15.98
Jan. 9	1130	*40,200	*19.85	Jan. 31	1330	38,000	19.25

Minimum discharge, 68 ft³/s Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	1150	9780	2460	27500	1670	3160	4280	448	449	173	108
2	83	976	6560	2150	17200	1670	2780	7070	436	427	168	106
3	78	588	5180	1910	12000	1750	2490	4920	423	406	165	103
4	75	1450	3860	1740	9360	1850	2390	3640	414	387	158	102
5	72	3130	3190	1760	7180	2270	2380	2860	422	372	153	103
6	73	1320	2870	2330	5720	2090	2670	2330	405	359	150	102
7	73	967	2580	4310	4760	1900	8170	1960	393	351	153	100
8	73	830	2230	9840	4100	2750	9650	1680	379	340	150	96
9	72	5690	1970	29700	3550	12700	7460	1510	365	336	144	93
10	72	2870	1920	22600	3140	12900	5680	1430	409	334	142	92
11	72	1680	2820	18300	2800	12900	4610	1570	460	317	147	92
12	71	1260	4480	19500	2690	10300	5430	1510	375	330	145	91
13	72	1000	3680	23500	2800	11300	9810	1350	355	311	139	89
14	81	847	3640	24500	2490	14900	6770	1190	495	292	132	87
15	91	1290	4270	17500	2300	12900	5110	1070	1270	277	129	88
16	89	3430	11400	13000	2190	9240	3990	995	746	265	128	89
17	81	4440	16600	10200	6920	6700	3240	915	598	255	130	90
18	77	2890	11200	10600	11800	8040	2780	848	812	248	132	90
19	74	2070	7850	11500	7930	7960	2390	796	2320	250	127	87
20	75	2700	5580	9220	5700	13700	2480	751	2130	248	120	82
21	74	2490	4380	7630	4480	11400	2270	712	1370	238	115	80
22	75	1710	3560	6760	3670	9710	2040	680	1040	234	113	79
23	76	1720	2930	5890	3140	7710	1840	644	858	230	111	78
24	75	3140	2670	5090	2700	6040	1670	612	755	226	110	79
25	73	7990	2310	4550	2410	4820	1520	587	673	221	107	85
26	94	4770	2870	6200	2160	3970	1380	559	614	222	107	93
27	536	3970	6070	7530	1970	3490	1440	541	560	215	106	146
28	1670	3610	6570	9310	1820	3410	2500	522	525	203	107	216
29	591	3060	4390	9610	---	3520	2940	503	493	194	116	188
30	346	4170	2970	16400	---	3530	2610	482	468	186	117	138
31	260	---	2790	30300	---	3450	---	465	---	178	112	---
TOTAL	5412	77208	153170	345890	164480	210540	113650	48982	21011	8901	4106	3072
MEAN	175	2574	4941	11160	5874	6792	3788	1580	700	287	132	102
MAX	1670	7990	16600	30300	27500	14900	9810	7070	2320	449	173	216
MIN	71	588	1920	1740	1820	1670	1380	465	355	178	106	78
AC-FT	10730	153100	303800	686100	326200	417600	225400	97160	41680	17660	8140	6090
CFSM	.64	9.50	18.2	41.2	21.7	25.1	14.0	5.83	2.58	1.06	.49	.38
IN.	.74	10.60	21.03	47.48	22.58	28.90	15.60	6.72	2.88	1.22	.56	.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1995, BY WATER YEAR (WY)

	MEAN	2540	1982	MIN	48.3	1988	3210	10230	1974	107	1994	4773	12770	1982	1977	4933	13150	11490	1986	479	1977	4424	7041	6956	1982	1979	1993	1983	1978	209	1531	1978	54.9	1987
(WY)	1982	1974	1982	1977	1977	1988	1977	1977	1988	1977	1977	1988	1977	1977	1988	1977	1977	1988	1977	1977	1988	1977	1977	1988	1977	1977	1988	1977	1977	1988	1977	1977	1988	1977

SUMMARY STATISTICS

FOR 1994 CALENDAR YEAR

FOR 1995 WATER YEAR

WATER YEARS 1970 - 1995

ANNUAL TOTAL	539584	1156422	2206
ANNUAL MEAN	1478	3168	3911
HIGHEST ANNUAL MEAN			1982
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	16600	30300	48500
LOWEST DAILY MEAN	71	71	44
ANNUAL SEVEN-DAY MINIMUM	72	72	46
ANNUAL RUNOFF (AC-FT)	1070000	2294000	1598000
ANNUAL RUNOFF (CFSM)	5.46	11.7	8.14
ANNUAL RUNOFF (INCHES)	74.07	158.74	110.62
10 PERCENT EXCEEDS	3890	9330	5780
50 PERCENT EXCEEDS	862	1450	752
90 PERCENT EXCEEDS	78	90	82

CHEMICAL QUALITY OF PRECIPITATION

SILVER LAKE BASIN

430701121040001 SILVER LAKE RANGER STATION, OR

LOCATION.--Lat 43°07'01", Long 121°04'00", in NE 1/4 SW 1/4 sec.21, T.28 S., R.14 E., Lake County, Hydrologic Unit 17120005, at Silver Lake Ranger Station, 0.5 mi south of State Highway 31, and 1 mi southwest of town of Silver Lake.

PERIOD OF RECORD.--August 1983 to current year (weekly composite).

INSTRUMENTATION.--The wet-deposition sample collector is an Aerochem Metrics Model 301 wet/dry deposition collector. Collector efficiency equals total precipitation collected in wet deposition collector divided by total precipitation collected in recording weighing-bucket gage. Refer to WDR OR-92-1 for further description of instrumentation.

REMARKS.--Inches of precipitation obtained from an on-site recording weighing-bucket gage. Samples are collected by Silver Lake Ranger Station personnel and analyzed by the Illinois State Water Survey Central Analytical Laboratory.

WATER-QUALITY DATA

DATE	TIME	TOTAL PRECIP- ITATION FOR DEFINED PERIOD (IN)	COL- LECTOR EFFI- CIENCY, WET DEPOS. PERCENT	SPEC. CONDUCT- TANCE, CK. SOL.* ATM DEP WET TOT (US/CM)	SPEC. CONDUCT- TANCE, FIELD ATM DEP WET TOT (US/CM)	SPEC. CONDUCT- TANCE, LAB ATM DEP WET TOT (US/CM)	PH, CK. SOL.* ATM DEP WET TOT (UNITS)	PH, FIELD ATM DEP WET TOT (UNITS)	PH, LAB ATM DEP WET TOT (UNITS)
OCT 1994									
11-18	1600	0.06	100	21.7	4.2	2.7	4.32	5.13	5.28
OCT 25-									
NOV 01	1440	0.66	100	22.1	2.9	1.8	4.35	5.28	5.42
NOV									
01-08	1525	0.13	59	21.6	3.7	3.5	4.34	5.17	5.25
NOV									
15-22	1550	0.20	74	22.3	3.1	2.6	4.35	5.20	5.46
NOV									
22-29	1615	0.13	89	22.3	5.5	3.2	4.34	5.03	5.30
NOV 29-									
DEC 06	1520	0.11	52	22.5	3.9	2.8	4.35	5.24	5.35
DEC									
13-20	1555	0.12	66	21.7	2.9	2.2	4.35	5.35	5.54
DEC									
20-27	1545	0.09	102	22.0	6.9	5.7	4.35	4.91	5.08
DEC 27 1994-									
JAN 03 1995	1530	0.02	56	--	--	4.2	--	--	6.12
JAN									
03-10	1610	0.37	95	21.6	2.9	2.1	4.32	5.34	5.49
JAN									
10-17	1555	0.46	90	21.5	2.9	2.5	4.35	5.30	5.34
JAN									
24-31	1550	0.34	101	22.5	3.2	2.4	4.35	5.08	5.34
JAN 31-									
FEB 07	1530	0.17	91	22.8	3.6	1.9	4.33	5.25	5.42
FEB									
07-14	1615	0.26	64	22.7	3.5	2.7	4.36	5.19	5.30
FEB									
14-21	1700	0.09	79	21.7	3.8	2.9	4.34	5.14	5.35
FEB									
21-28	1600	0.05	84	22.3	14.5	9.9	4.33	4.59	4.76
FEB 28-									
MAR 07	1550	0.95	88	19.2	3.0	2.2	4.35	5.32	5.44
MAR									
07-14	1550	0.40	96	22.3	3.4	2.7	4.31	5.22	5.36
MAR									
14-21	1545	0.46	88	23.3	3.5	2.5	4.34	5.21	5.36
MAR									
21-28	1455	0.13	72	22.8	1.6	2.8	4.35	5.06	5.48
MAR 28-									
APR 04	1540	0.04	96	--	--	6.1	--	--	5.00
APR									
04-11	1530	0.39	89	22.8	10.4	2.0	4.34	5.11	5.47
APR									
11-18	1540	0.38	101	21.8	5.1	3.9	4.36	5.09	5.44
APR									
18-25	1600	0.05	102	22.0	5.0	2.7	4.32	5.25	5.89
APR 25-									
MAY 02	1510	0.74	98	21.9	4.0	3.1	4.36	5.15	5.31
MAY									
02-09	1555	0.39	97	21.8	8.0	4.6	4.34	5.04	5.21
MAY									
09-16	1540	0.04	123	21.6	8.4	10.9	4.35	4.94	4.72
MAY									
16-23	1615	0.06	105	22.1	26.1	18.1	4.34	4.40	4.64
MAY									
23-30	1415	0.03	98	--	--	13.8	--	--	4.75
MAY 30-									
JUN 06	1545	0.35	100	22.1	9.8	10.9	4.40	5.10	5.07
JUN									
06-13	1510	0.30	101	21.9	4.8	4.9	4.36	5.20	5.05
JUN									
13-20	1325	1.18	100	22.3	4.8	2.8	4.34	5.04	5.30
JUL									
04-11	1600	0.01	246	--	--	26.0	--	--	4.33
JUL									
11-18	1611	0.04	100	21.1	36.2	20.6	4.40	4.33	4.83
JUL									
18-25	1540	0.68	95	21.6	10.0	10.3	4.40	4.89	4.77
SEP 26-									
OCT 03	1520	0.04	109	21.7	7.3	2.9	4.33	4.87	5.37

* Measurements of check solution (ck. sol.), with theoretical values of conductance 21.8 +/- 3uS/cm, pH 4.3 +/- 0.1, made prior to the corresponding sample measurement.

CHEMICAL QUALITY OF PRECIPITATION

437

SILVER LAKE BASIN

430701121040001 SILVER LAKE RANGER STATION, OR

WATER-QUALITY DATA

DATE	CALCIUM, ATM DEP WET DIS (MG/L)	MAG- NESIUM, ATM DEP WET DIS (MG/L)	SODIUM, ATM DEP WET DIS (MG/L)	POTAS- SIUM, ATM DEP WET DIS (MG/L)	SULFATE, ATM DEP WET DIS AS SO4 (MG/L)	CHLO- RIDE, ATM DEP WET DIS (MG/L)	NI- TROGEN AMMON., ATM DEP WET DIS AS NH4 (MG/L)	NI- TROGEN NITRATE, ATM DEP WET DIS AS NO3 (MG/L)	PHOS- PHORUS ORTHO, ATM DEP WET DIS AS PO4 (MG/L)
OCT 1994									
11-18	0.01	<0.003	0.031	0.012	0.06	0.05	<0.02	<0.03	<0.003
OCT 25-									
NOV 01	0.01	0.003	0.016	<0.003	0.03	<0.03	0.04	0.08	0.004
NOV 01-08	0.02	0.008	0.087	0.008	0.10	0.15	0.05	0.21	<0.003
NOV 15-22	0.01	0.004	0.062	0.008	0.04	0.11	0.03	<0.03	<0.003
NOV 22-29	0.01	<0.003	0.028	0.005	0.05	<0.03	0.05	0.41	<0.003
NOV 29-									
DEC 06	0.03	0.004	0.026	0.009	0.05	<0.03	0.07	0.20	0.007
DEC 13-20	0.05	0.016	0.075	<0.003	0.10	0.08	0.07	0.17	<0.003
DEC 20-27	0.01	0.004	0.027	0.003	0.33	0.07	0.19	0.63	<0.003
DEC 27 1994-									
JAN 03 1995	<0.06	<0.020	0.118	0.020	<0.20	<0.20	<0.13	<0.20	<0.020
JAN 03-10	0.01	<0.003	0.050	0.044	<0.03	0.07	0.02	0.17	<0.003
JAN 10-17	0.02	0.004	0.029	<0.003	0.05	0.04	<0.02	0.18	<0.003
JAN 24-31	0.02	<0.003	0.008	<0.003	0.03	<0.03	0.05	0.26	<0.003
JAN 31-									
FEB 07	0.01	<0.003	0.017	<0.003	0.03	<0.03	0.03	0.06	<0.003
FEB 07-14	0.01	0.003	0.040	0.006	0.06	0.04	0.03	0.20	<0.003
FEB 14-21	0.01	0.003	0.034	0.006	0.04	0.05	0.04	0.19	<0.003
FEB 21-28	0.08	0.009	0.097	0.008	0.42	0.14	0.12	1.17	<0.003
FEB 28-									
MAR 07	<0.01	<0.003	0.011	<0.003	0.04	<0.03	0.03	0.15	<0.003
MAR 07-14	0.01	<0.003	0.025	<0.003	0.04	0.04	<0.02	0.16	<0.003
MAR 14-21	0.01	<0.003	0.032	<0.003	0.03	0.04	0.03	0.17	<0.003
MAR 21-28	0.03	0.008	0.077	0.005	0.12	0.09	0.08	0.21	<0.003
MAR 28-									
APR 04	0.05	0.011	0.060	0.006	0.24	0.06	0.08	0.81	<0.003
APR 04-11	0.05	0.005	0.016	<0.003	0.07	<0.03	<0.02	0.05	<0.003
APR 11-18	0.09	0.017	0.035	0.016	0.27	0.06	0.11	0.41	<0.003
APR 18-25	0.24	0.028	0.095	<0.003	0.20	0.11	0.03	0.15	<0.003
APR 25-									
MAY 02	0.02	0.005	0.010	<0.003	0.10	<0.03	0.05	0.26	<0.003
MAY 02-09	0.06	0.008	0.079	0.010	0.42	0.03	0.18	0.38	<0.003
MAY 09-16	0.14	0.022	0.112	0.023	0.46	0.13	0.19	0.80	<0.003
MAY 16-23	0.27	0.058	0.235	0.061	1.38	0.18	0.46	2.28	<0.003
MAY 23-30	0.41	0.067	0.199	0.073	1.37	0.14	0.23	1.43	<0.003
MAY 30-									
JUN 06	0.36	0.066	0.109	0.130	0.88	0.12	0.32	1.57	<0.003
JUN 06-13	0.02	0.006	0.043	<0.003	0.17	0.04	0.06	0.53	<0.003
JUN 13-20	0.02	0.004	0.025	0.010	0.08	0.03	<0.02	0.14	<0.003
JUL 04-11	0.28	0.061	0.303	0.091	1.65	0.37	0.22	2.49	<0.008
JUL 11-18	0.41	0.075	0.144	0.234	1.59	0.28	0.96	3.37	0.006
JUL 18-25	0.06	0.018	0.094	0.039	0.63	0.10	0.36	1.06	<0.003
SEP 26-									
OCT 03	0.05	0.012	0.152	0.012	0.12	0.15	0.06	0.13	<0.003

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 1/4 SE 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 wet/dry deposition collector. Collector efficiency equals total precipitation collected in wet deposition collector divided by total precipitation collected in recording weighing-bucket gage. Refer to WDR OR-92-1 for further description of instrumentation.

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. Samples are collected by Bull Run Headworks Water Quality Laboratory personnel and analyzed by the Illinois Supply Central Analytical Laboratory.

WATER-QUALITY DATA

DATE	TIME	TOTAL PRECIP- ITATION, FOR DEFINED PERIOD (IN)	COL- LECTOR EFFI- CIENCY, WET DEPOS. PERCENT	SPEC. CONDUCT- TANCE, CK.SOL.* ATM DEP WET TOT (US/CM)	SPEC. CONDUCT- TANCE, FIELD ATM DEP WET TOT (US/CM)	SPEC. CONDUCT- TANCE, LAB ATM DEP WET TOT (US/CM)	PH, CK.SOL.* ATM DEP WET TOT (UNITS)	PH, FIELD ATM DEP WET TOT (UNITS)	PH, LAB ATM DEP WET TOT (UNITS)
OCT 1994									
11-18	1545	1.13	100	22.7	8.0	8.1	4.28	4.94	5.07
OCT 18-25	1525	0.87	102	22.9	8.4	7.7	4.26	5.08	5.38
OCT 25-NOV 01	1645	7.99	--	22.8	3.3	3.2	4.29	5.18	5.30
NOV 01-08	1705	2.42	99	22.5	3.8	3.2	4.30	5.16	5.21
NOV 08-15	1620	1.94	100	22.8	6.7	7.8	4.31	4.99	5.15
NOV 15-22	1700	2.76	92	22.5	11.3	12.9	4.29	5.07	5.15
NOV 22-29	1650	2.91	95	22.4	6.0	6.3	4.28	5.04	5.10
NOV 29-DEC 06	1615	3.25	81	22.9	4.5	2.8	4.29	5.18	5.34
DEC 13-20	1700	2.79	95	22.7	7.2	7.8	4.27	5.26	5.43
DEC 27 1994-JAN 03 1995	1735	0.36	107	21.8	8.6	9.0	4.27	5.20	5.41
JAN 03-10	1640	1.85	102	22.2	3.4	2.6	4.28	5.25	5.31
JAN 10-17	1745	4.39	96	22.2	3.2	2.2	4.31	5.20	5.39
JAN 17-24	1810	1.16	96	21.7	7.8	2.8	4.29	5.17	5.39
JAN 24-31	1705	2.80	101	22.7	3.0	2.1	4.30	5.30	5.37
JAN 31-FEB 07	1625	1.79	95	22.4	2.9	6.7	4.27	5.39	5.42
FEB 07-14	1645	1.60	95	22.0	10.2	8.5	4.34	4.97	5.22
FEB 14-21	1645	5.22	101	22.9	3.9	3.0	4.34	5.34	5.30
FEB 28-MAR 07	1820	0.89	104	22.8	7.3	7.5	4.28	5.26	5.20
MAR 07-14	1705	2.17	107	22.5	4.2	3.9	4.29	5.42	5.31
MAR 14-21	1640	1.38	112	22.3	4.8	4.2	4.30	5.32	5.49
MAR 21-28	1730	0.80	109	22.1	17.9	19.7	4.30	4.83	4.79
MAR 28-APR 04	1730	0.33	112	22.6	9.6	9.9	4.29	5.02	5.25
APR 04-11	1535	2.34	100	22.8	6.2	6.4	4.33	5.40	5.12
APR 11-18	1520	2.25	99	22.5	9.4	9.9	4.33	5.20	5.12
APR 18-25	1620	0.48	108	21.7	7.8	7.5	4.30	5.28	5.28
APR 25-MAY 02	1520	2.82	103	22.1	5.6	5.0	4.29	5.01	5.06
MAY 02-09	1645	0.80	105	20.8	8.1	8.0	4.33	5.27	5.19
MAY 09-16	1540	1.90	97	21.8	7.8	8.3	4.28	5.03	5.05
MAY 16-23	1600	0.90	102	21.8	28.0	30.7	4.23	4.51	4.62
JUN 23-30	1615	2.75	101	22.0	5.0	4.5	4.32	5.10	5.19
JUN 30-JUL 05	1520	0.14	113	21.5	9.8	9.5	4.30	4.80	4.86
JUL 05-12	1620	0.20	99	21.8	8.1	8.5	4.31	5.05	5.02
JUL 12-19	1515	1.33	95	22.1	27.8	7.8	4.31	4.90	4.84
JUL 19-26	1610	0.13	92	21.5	26.9	11.4	4.30	4.78	4.76
AUG 26-01	1550	1.03	101	21.3	11.1	9.5	4.28	5.18	5.54
AUG 01-08	1600	0.67	101	21.7	10.8	11.5	4.28	4.74	4.76
AUG 08-15	1450	0.85	103	22.3	7.7	8.2	4.34	5.78	5.02
AUG 15-22	1510	0.51	107	21.7	9.2	9.4	4.27	4.86	4.85
AUG 22-29	1515	0.25	104	22.0	10.4	11.1	4.31	5.08	5.02
SEP 29-05	1635	1.70	101	21.4	7.2	7.7	4.34	4.92	4.84
SEP 05-12	1555	0.42	100	21.5	11.2	9.0	4.33	4.94	5.28
SEP 12-19	1540	0.12	100	21.8	4.9	5.2	4.28	5.04	5.26
SEP 19-26									
SEP 26-OCT 03									

* Measurements of check solution (ck. sol.) with theoretical values of conductance 21.8 +/- 3uS/cm, pH 4.3 +/- 0.1, made prior to the corresponding sample measurement.
E Estimated.

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452650122091801 BULL RUN RESERVOIR NUMBER TWO. OR

DATE	CALCIUM,		MAG- NESIUM,		SODIUM,		POTAS- SIUM,		SULFATE,		CHLO- RIDE,		NI- TROGEN AMMON.,		NI- TROGEN NITRATE,		PHOS- PHORUS ORTHO,	
	ATM DEP	WET DIS	ATM DEP	WET DIS	ATM DEP	WET DIS	ATM DEP	WET DIS	ATM DEP	WET DIS	ATM DEP	WET DIS	ATM DEP	WET DIS	ATM DEP	WET DIS	ATM DEP	WET DIS
	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)
OCT 1994																		
11-18	0.04		0.054		0.455		0.041		0.46		0.83		0.110		0.39		<0.003	
OCT 18-25	0.08		0.068		0.564		0.045		0.51		0.96		0.170		0.42		<0.003	
OCT 25- NOV 01	<0.01		0.008		0.102		0.007		0.09		0.17		<0.020		0.11		<0.003	
NOV 01-08	0.01		0.013		0.125		0.008		0.13		0.22		0.020		0.16		<0.003	
NOV 08-15	0.03		0.045		0.385		0.022		0.35		0.71		0.070		0.33		<0.003	
NOV 15-22	0.06		0.149		1.57		0.051		0.50		2.36		0.040		0.30		<0.003	
NOV 22-29	0.01		0.032		0.300		0.011		0.23		0.54		0.020		0.30		0.003	
NOV 29- DEC 06	<0.01		0.015		0.140		0.005		0.08		0.25		0.030		0.06		0.005	
DEC 13-20	0.08		0.092		0.785		0.030		0.34		1.36		0.020		0.14		<0.003	
DEC 27 1994- JAN 03 1995	0.04		0.106		0.857		0.035		0.36		1.50		0.070		0.20		<0.003	
JAN 03-10	<0.01		0.006		0.054		<0.003		0.11		0.09		<0.020		0.11		<0.003	
JAN 10-17	<0.01		<0.003		0.053		0.004		0.05		0.09		0.020		0.10		<0.003	
JAN 17-24	0.01		0.003		0.023		<0.003		0.04		<0.03		<0.020		0.10		<0.003	
JAN 24-31	0.01		<0.003		0.033		0.003		0.07		0.06		<0.020		0.11		<0.003	
JAN 31- FEB 07	<0.01		0.004		0.063		0.004		0.06		0.10		0.030		0.06		<0.003	
FEB 07-14	0.04		0.072		0.573		0.033		0.54		1.00		0.220		0.58		<0.003	
FEB 14-21	<0.01		0.009		0.087		0.004		0.15		0.14		<0.020		0.16		<0.003	
FEB 28- MAR 07	0.05		0.044		0.396		0.026		0.44		0.70		0.190		0.59		<0.003	
MAR 07-14	0.01		0.023		0.209		0.015		0.13		0.35		0.030		0.14		<0.003	
MAR 14-21	0.02		0.033		0.281		0.015		0.19		0.48		0.060		0.19		0.004	
MAR 21-28	0.12		0.173		1.69		0.067		1.07		2.68		0.210		1.11		<0.003	
MAR 28- APR 04	0.08		0.057		0.506		0.030		0.78		0.89		0.390		0.85		<0.003	
APR 04-11	0.05		0.036		0.299		0.027		0.36		0.50		0.070		0.32		<0.003	
APR 11-18	0.09		0.076		0.590		0.043		0.75		1.18		0.160		0.50		<0.003	
APR 18-25	0.11		0.059		0.426		0.060		0.49		0.76		0.160		0.55		<0.003	
APR 25- MAY 02	0.03		0.010															

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to these events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

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 during water year 1995

Station name and number	Location and drainage area	Period of record	Date	Water year 1995 maximum		Period of record maximum		Date	Dis- charge (ft ³ /s)	Dis- charge (ft ³ /s)
				Gage height (ft)	Dis- charge (ft ³ /s)	Gage height (ft)	Dis- charge (ft ³ /s)			
NESTUCCA RIVER BASIN										
Walker Creek near Fairdale (14302850)	Lat 45°18'12", long 123°24'51", in SW 1/4 SW 1/4 sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, at culvert, 5.3 mi southwest of Fairdale, and at mile 0.5. Drainage area is 2.72 mi ² .	1992-95	12-20-94	4.43	229	12-20-94	4.43	229		

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Discharge measurements at miscellaneous sites during water year 1995

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
WILLIAMSON RIVER BASIN						
11492100 Williamson River	Upper Klamath Lake	Lat 42°57'13", long 121°40'22", in SW 1/4 SE 1/4 sec.20, T.30 S., R.9 E., Klamath County, Hydrologic Unit 18010201, at Military Crossing, on Klamath Marsh, and 13 mi northeast of Fuego, on road 676.	---	1992-94	10-17-94 10-25-94 12-21-94 1- 4-95 1-17-95 1-30-95 2-15-95 2-28-95 3-15-95 3-28-95 4- 3-95 4- 8-95 5- 4-95 5-23-95 6- 7-95 6-20-95 7- 6-95 7-27-95 8-15-95 9-11-95	no flow no flow 19 18 99 59 50 38 97 75 52 74 60 35 19 17 18 9.8 no flow no flow
DESCHUTES RIVER BASIN						
Paulina Creek	Little Deschutes	Lat 43°42'43", long 121°17'45", Deschutes County, Hydrologic Unit 17070302, and at mile 12.2.	---	1993	10- 6-94	13
Paulina Creek	.....do.....	Lat 43°42'54", long 121°19'05", Deschutes County, Hydrologic Unit 17070302, and at mile 11.0.	---	1993	10- 6-94	11
Paulina Creek	.....do.....	Lat 43°42'52", long 121°19'55", Deschutes County, Hydrologic Unit 17070302, at footbridge, and at mile 10.2.	---	1993	10- 6-94	10
Paulina Creek	.....do.....	Lat 43°42'47", long 121°20'32", Deschutes County, Hydrologic Unit 17070302, and at mile 9.7.	---	1993	10- 6-94	11
Paulina Creek	.....do.....	Lat 43°42'55", long 121°22'32", Deschutes County, Hydrologic Unit 17070302, at McKay Crossing, and at mile 7.9.	---	1993	10- 6-94	10
Paulina Creek	.....do.....	Lat 43°43'39", long 121°24'56", in SW 1/4 NW 1/4 sec.28, T.21 S., R.11 E., Deschutes County, Hydrologic Unit 17070302, 100 ft upstream from bridge, on Forest Service road 21, and 2.4 mi southeast of Highway 97.	---	1992-93	10- 6-94 6-20-95	9.4 18
SANDY RIVER BASIN						
14138700 Bull Run River at Upper Flume, near Brightwood	Sandy River	Lat 45°27'54", long 121°51'16", in NE 1/4 SW 1/4 sec.20, T.1 S., R.8 E., Multnomah County, Hydrologic Unit 17080001, at flume, 0.6 mi downstream from outlet structure, at Bull Run Lake, and 9.7 mi northeast of Brightwood.	---	1992-94	3-28-95 3-28-95 8-29-95	18 17 5.1
WILLAMETTE RIVER BASIN						
Willamette River	Columbia River	Lat 44°42'57", long 123°08'46", Marion County, Hydrologic Unit 17090003, upstream from Santiam River, and at mile 111.0.	---	---	6- 7-95 8-30-95	8,230 6,750
Willamette River	.....do.....	Lat 44°44'53", long 123°08'23", Marion County, Hydrologic Unit 17090003, upstream from Santiam River, and at mile 108.0.	---	1992-94	6- 7-95 8-30-95 9-21-95	7,780 6,280 6,960
Santiam River	Willamette River	Lat 44°44'50", long 123°03'46", Marion County, Hydrologic Unit 17090005, downstream from railroad bridge, and at mile 3.0.	---	1994	6- 9-95 8-30-95 9-21-95	3,330 1,220 3,800
Santiam River	.....do.....	Lat 44°45'28", long 123°06'38", Marion County, Hydrologic Unit 17090005, downstream from railroad bridge, and at mile 2.0.	---	1994	6- 9-95 8-30-95 9-21-95	3,340 1,220 3,800
Santiam River	.....do.....	Lat 44°45'10", long 123°07'20", Marion County, Hydrologic Unit 17090005, downstream from railroad bridge, and at mile 1.0.	---	1994	6- 9-95 8-30-95 9-21-95	3,240 1,310 3,800
Santiam River	.....do.....	Lat 44°45'08", long 123°07'54", Marion County, Hydrologic Unit 17090005, and 2.0 mi southeast of Buena Vista, and at mile 0.0.	---	1992-94	6- 9-95 8-30-95 9-21-95	3,130 1,075 3,600
Willamette River	Columbia River	Lat 44°53'31", long 123°08'48", Marion County, Hydrologic Unit 17090007, downstream from Santiam River, and at mile 107.5.	---	1994	6- 7-95 8-30-95	11,710 7,310

Discharge measurements at miscellaneous sites during water year 1995--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured	Measurements	
				previously (water years)	Date	Discharge (ft ³ /s)
WILLAMETTE RIVER BASIN--Continued						
Willamette River	Columbia River	Lat 44°46'04", long 123°08'46", Marion County, Hydrologic Unit 17090007, at Buena Vista boat ramp, and at mile 106.5.	---	1992-94	6- 7-95	12,020
					8-29-95	7,750
					9-21-95	10,990
Willamette River	.....do.....	Lat 44°46'37", long 123°08'18", Marion County, Hydrologic Unit 17090007, at Wells Island, and at mile 106.60.	---	---	6- 7-95	11,920
					8-29-95	7,850
Willamette River	.....do.....	Lat 44°47'24", long 123°07'42", Marion County, Hydrologic Unit 17090007, downstream from Wells Island, and at mile 105.0.	---	1994	6- 7-95	11,650
					8-29-95	7,880
					9-21-95	10,700
Willamette River	.....do.....	Lat 44°47'55", long 123°05'52", Marion County, Hydrologic Unit 17090007, downstream from Wells Island, and at mile 103.0.	---	---	6- 9-95	12,500
					8-29-95	7,980
Willamette River	.....do.....	Lat 44°49'33", long 123°07'22", Marion County, Hydrologic Unit 17090007, downstream from Wells Island, and at mile 100.0.	---	1992	6- 9-95	12,320
					8-29-95	7,840
Ead Creek	Yamhill River	Lat 45°06'36", long 123°41'48", in sec.29, T.5 S., R.8 W., Yamhill County, Hydrologic Unit 17090008.	---	---	8- 2-95	2.1
14207740 Willamette River abv Falls at Oregon City	Columbia River	Lat 45°20'55", long 122°37'08", in SW 1/4 SW 1/4 sec.31, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090007, 1.6 mi downstream from Tualatin River, and at mile 26.8.	---	---	12-16-92	a17,390
					9-22-93	a11,530
					2-16-95	36,040
					5-19-95	21,800
Agency Creek	.....do.....	Lat 45°07'50", long 123°39'40", in sec.22, T.5 S., R.8 W., Yamhill County, Hydrologic Unit 17090008.	---	---	9-25-95	12,270
					6- 7-95	16
Agency Creek	.....do.....	Lat 45°06'46", long 123°38'07", in sec.26, T.5 S., R.8 W., Yamhill County, Hydrologic Unit 17090008.	---	---	8- 1-95	5.2
Agency Creek	.....do.....	Lat 45°06'39", long 123°37'35", in sec.26, T.5 S., R.8 W., Yamhill County, Hydrologic Unit 17090008.	---	---	6- 7-95	18
Joe Creek	.....do.....	Lat 45°06'55", long 123°37'21", in sec.25, T.5 S., R.8 W., Yamhill County, Hydrologic Unit 17090008.	---	---	8- 1-95	0.25
Rogue River	.....do.....	Lat 45°02'51", long 123°41'30", in sec.17, T.6 S., R.8 W., Polk County, Hydrologic Unit 17090008.	---	---	8-22-95	1.0
Jackass Creek	.....do.....	Lat 45°02'37", long 123°40'06", in sec.21, T.6 S., R.8 W., Polk County, Hydrologic Unit 17090008.	---	---	8-23-95	0.47
Rock Creek	.....do.....	Lat 45°01'45", long 123°38'03", in sec.26, T.6 S., R.8 W., Polk County, Hydrologic Unit 17090008.	---	---	8-23-95	6.5
Rock Creek	.....do.....	Lat 45°03'24", long 123°37'07", in sec.13, T.6 S., R.8 W., Polk County, Hydrologic Unit 17090008.	---	---	6- 7-95	30
Cow Creek	.....do.....	Lat 45°02'48", long 123°36'58", in sec.13, T.6 S., R.8 W., Polk County, Hydrologic Unit 17090008.	---	---	7-28-95	0.47
Rowell Creek	.....do.....	Lat 45°02'06", long 123°34'29", in sec.20 T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008.	---	---	7-27-95	3.2
					8-29-95	3.8
Rowell Creek	.....do.....	Lat 45°03'35", long 123°32'06", in sec.58, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008.	---	---	6- 7-95	10
Cosper Creek	.....do.....	Lat 45°05'03", long 123°34'31", in sec.5, T.6 S., R.7 W., Yamhill County, Hydrologic Unit 17090008.	---	---	7-28-95	1.2
Cosper Creek	.....do.....	Lat 45°03'50", long 123°34'13", in sec.58, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008.	---	---	6- 7-95	5.7
Gold Creek	.....do.....	Lat 45°01'17", long 123°32'47", in sec.28, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008.	---	---	7-27-95	0.76
Gold Creek	.....do.....	Lat 45°01'30", long 123°32'52", in sec. 28, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008.	---	---	7-27-95	0.92
					9-26-95	0.66
Gold Creek	.....do.....	Lat 45°02'35", long 123°32'22", in sec.47, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008.	---	---	6- 7-95	4.7
Coast Creek	.....do.....	Lat 45°09'14", long 123°32'32", in sec.10, T.5 S., R.7 W., Yamhill County, Hydrologic Unit 17090008.	---	---	6- 8-95	6.8

a Not previously published.

Discharge measurements at miscellaneous sites during water year 1995--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured	Measurements	
				previously (water years)	Date	Discharge (ft ³ /s)
WILLAMETTE RIVER BASIN--Continued						
Canada Creek upstream from Coast Creek	.....do.....	Lat 45°09'18", long 123°32'16", in sec.10 T.5 S., R.7 W., Yamhill County, Hydrologic Unit 17090008.	---	---	6- 8-95	8.8
Molalla River	Willamette River	Lat 45°09'42', long 122°32'01", Clackamas County, Hydrologic Unit 17090009, at Highway 211 crossing, 2.2 mi northeast of Molalla, and at mile 18.6.	---	1992-93	8-16-95 9-22-95 9-25-95 9-26-95 9-27-95	70 33 41 49 93
Molalla River	.....do.....	Lat 45°10'48", long 122°33'15", Clackamas County, Hydrologic Unit 17090009, and at mile 17.2.	---	---	9-25-95	38
Oak Grove Fork	Clackamas River	Lat 45°04'51", long 121°53'06", in SW 1/4 NW 1/4 sec.6, T.6 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, 300 ft upstream from powerhouse, and at mile 9.4.	---	---	8- 1-95	115
Oak Grove Fork	.....do.....	Lat 45°06'24", long 121°49'00", in NE 1/4 SW 1/4 sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, downstream from Stone Creek, and at mile 14.8.	---	---	8- 1-95	45
NESTUCCA RIVER BASIN						
14302850 Walker Creek	Nestucca River	Lat 45°18'12", long 123°24'51", in SW 1/4 SW 1/4 sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, 5.3 mi southwest of Fairdale, and at mile 0.5.	2.72	1991-94	10-26-94 10-27-94 1- 4-95 1-31-95 4- 3-95 5-23-95 7-20-95	14 56 12 137 8.9 4.0 0.77
UMPQUA RIVER BASIN						
North Umpqua River, upstream from Lemolo Lake	Umpqua River	Lat 43°18'39", long 122°09'13", in SE 1/4 SE 1/4 sec.13, T.26 S., R.5 E., Douglas County, Hydrologic Unit 17100301 100 ft upstream from bridge at inlet campground, and at mile 95.3.	---	---	7-24-95	289
Lake Creek upstream from Lemolo Lake	.....do.....	Lat 43°17'50", long 122°10'47", in SW 1/4 SE 1/4 sec.23, T.26 S., R.5 E., Douglas County, Hydrologic Unit 17100301, 10 ft downstream from bridge, and at mile 0.1.	---	---	7-24-95	57
North Umpqua River downstream from Toketee Lake	.....do.....	Lat 43°15'52", long 122°25'13", in SE 1/4 NE 1/4 sec.35, T.26 S., R.3 E., Douglas County, Hydrologic Unit 17100301, downstream from Toketee Lake Dam, and at mile 75.7.	---	---	7-24-95	18
North Umpqua River downstream from Soda Springs Dam	.....do.....	Lat 43°18'13", long 122°29'44", in SW 1/4 SW 1/4 sec.17, T.26 S., R.3 E., Douglas County, Hydrologic Unit 17100301, 800 ft downstream from Soda Springs Dam, and at mile 69.7.	---	---	7-26-95	35
Copeland Creek at mouth	North Umpqua River	Lat 43°16'59", long 122°32'36", in NW 1/4 SE 1/4 sec.23, T.26 S. R.2 E., Douglas County, Hydrologic Unit 17100301, 500 ft upstream from mouth.	---	---	7-25-95	23
Calf Creek at mouth	.....do.....	Lat 43°17'28", long 122°37'09", in NE 1/4 SE 1/4 sec.19, T.26 S., R.2 E., Douglas County, Hydrologic Unit 17100301, 600 ft upstream from mouth.	---	---	7-25-95	7.8
Panther Creek at mouth	.....do.....	Lat 43°18'15", long 122°40'34", in NE 1/4 SE 1/4 sec.15, T.26 S., R.1 E., Douglas County, Hydrologic Unit 17100301, 150 ft upstream from mouth.	---	---	7-25-95	6.2
North Umpqua upstream from Apple Creek	Umpqua River	Lat 43°18'20", long 122°40'37", in NE 1/4 SE 1/4 sec.15, T.26S. R.1 E., Douglas County, Hydrologic Unit 17100301, on downstream side of bridge, and at mile 57.4.	---	---	7-24-95	927
North Umpqua at Mott Bridge	.....do.....	Lat 43°20'35", long 122°44'02", in NW 1/4 NW 1/4 sec. 5, T.26 S., R.1 E., Douglas County, Hydrologic Unit 17100301, on downstream side of bridge, and at mile 53.1.	---	---	7-24-95	979
Steamboat Creek upstream from Big Bend Creek	North Umpqua River	Lat 43°25'22", long 122°36'03", in SE 1/4 SW 1/4 sec. 5, T.25 S., R.2 E., Douglas County, Hydrologic Unit 17100301, 500 ft upstream from Big Bend Creek.	---	---	7-25-95	17
Wright Creek at mouth	.....do.....	Lat 43°19'09", long 122°48'26", in NE 1/4 SW 1/4 sec. 10, T.26 S., R.1 W., Douglas County, Hydrologic Unit 17100301, 500 ft upstream from mouth.	---	---	7-26-95	1.4
Susan Creek at mouth	.....do.....	Lat 45°17'48", long 122°54'28", in NW 1/4 NW 1/4 sec. 23, T.26 S., R.2 W., Douglas County, Hydrologic Unit 17100301, 150 ft upstream from mouth.	---	---	7-26-95	2.3

Discharge measurements at miscellaneous sites during water year 1995--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured	Measurements	
				previously (water years)	Date	Discharge (ft ³ /s)
UMPQUA RIVER BASIN--Continued						
14317500 North Umpqua River	North Umpqua River	Lat 43°19'51", long 123°00'07", near line between SE 1/4 SE 1/4 sec.1, T.26 S., R.3 W., Douglas County, Hydrologic Unit 17100301, 0.1 mi upstream from Rock Creek, 5.1 mi northeast of Glide, and at mile 35.8.	886	1993-94	7-27-95	1,140
Rock Creek at mouth	.....do.....	Lat 43°20'05", long 123°00'08", in NE 1/4 SE 1/4 sec. 1, T.26 S., R.3 W., Douglas County, Hydrologic Unit 17100301, 300 ft upstream from mouth.	---	---	7-27-95	80
Little River upstream from Black Creek	.....do.....	Lat 43°12'21", long 122°49'20", in SW 1/4 NE 1/4 sec.21, T.27 S., R.1 W., Douglas County, Hydrologic Unit 17100301 under the bridge , and at mile 20.7.	---	---	7-26-95	14
Black Creek at mouth	Little River	Lat 43°12'20", long 122°49'22", in SW 1/4 NE 1/4 sec. 21, T.27 S., R.1 W., Douglas County, Hydrologic Unit 17100301, 250 ft upstream from mouth.	---	---	7-26-95	5.4
Little River upstream from Wolf Creek	North Umpqua River	Lat 43°14'53", long 122°49'20", in NW 1/4 SW 1/4 sec.3, T.27 S., R.2 W., Douglas County, Hydrologic Unit 17100301, 40 ft downstream from bridge, and at mile 13.5.	---	---	7-26-95	30
Little River at mouth	.....do.....	Lat 43°17'44", long 123°05'56", in SE 1/4 NW 1/4 sec. 19, T.26 S., R.3 W., Douglas County, Hydrologic Unit 17100301, 1,000 ft upstream from mouth.	---	---	7-26-95	60

GROUND WATER LEVELS
MULTNOMAH COUNTY

445

452938122254801. Local number, 018/03E-10CCA

LOCATION.--Lat 45°29'38", long 122°25'48", Hydrologic Unit 17090012, 0.25 mi southeast of West Gresham School, City of Gresham.

Owner: Forest Lawn Memorial Park.

AQUIFER.--Cemented gravel of the Troutdale Formation and volcanic rocks of the Columbia River Basalt Group, both formations of Tertiary age.

WELL CHARACTERISTICS.--Drilled irrigation well, 16 inch casing 0 to 476 ft, 12 inch casing 480 to 715 ft, well depth 715 ft, perforated 235 to 242 ft, 360 to 365 ft, 415 to 420 ft, and 628 to 697 ft.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel since Nov. 2, 1990, periodic measurements using electric sounder tape and steel tape by Oregon Water Resources personnel from August 1963 to August 1990.

DATUM.--Elevation of land surface is 355 ft above sea level (from topographic map). Measuring point: Marked access hole 0.6 ft above land-surface datum in steel plate covering casing.

REMARKS.--Used to irrigate cemetery for approximately 3 months during the summer months some years, including 1994.

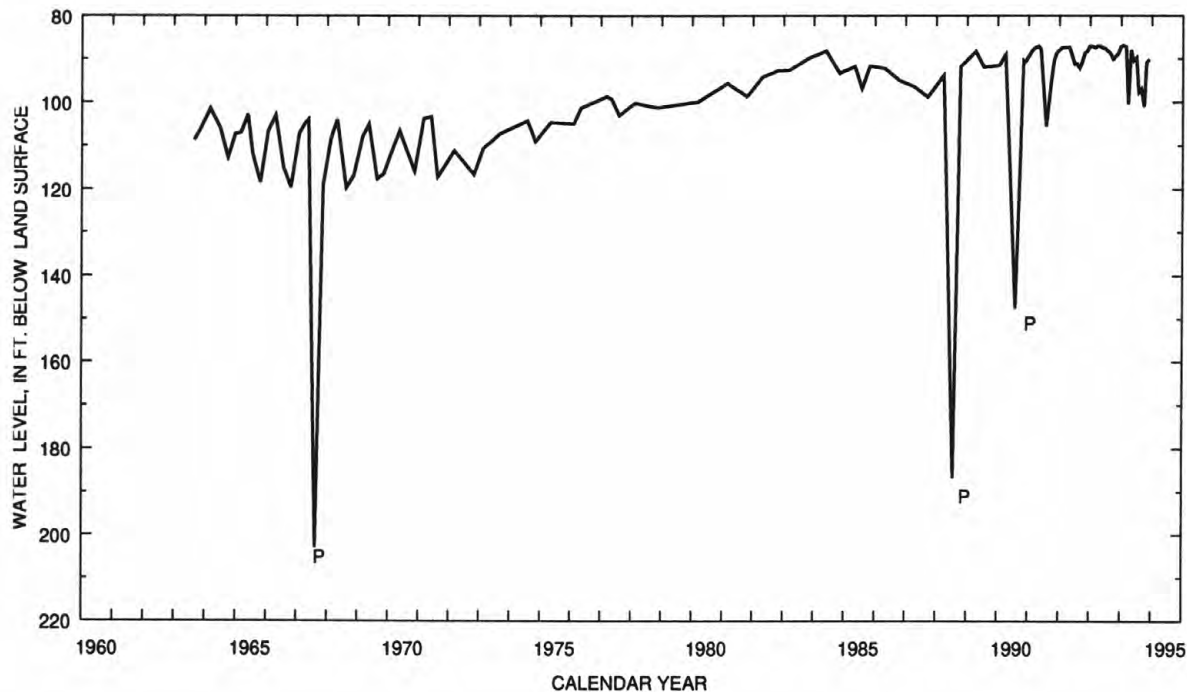
PERIOD OF RECORD.--August 1963 to current year. Records prior to October 1993 are unpublished and are available in files of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measurement, 86.9 ft below land-surface datum, January 25, 1994; lowest measurement, 203.0 ft below land-surface datum, August 16, 1967 well was being pumped.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	90.86	JAN 30	89.25	APR 27	87.28	JUL 28	91.32
NOV 28	90.09	FEB 28	89.49	MAY 30	91.68R	AUG 29	90.21
DEC 30	89.63	MAR 27	89.28	JUN 29	93.09R	SEP 28	91.82

R Indicates well was recovering from pumping previous night.



GROUND WATER LEVELS

UMATILLA COUNTY

453934118491701. Local number, 02N/32E-16BAB

LOCATION.--Lat 45°39'34", long 118°49'17", Hydrologic Unit 17090103, 0.5 mi northwest of Sherwood Heights School.

Owner: City of Pendleton.

AQUIFER.--Volcanic rocks of the Columbia River Basalt Group.

WELL CHARACTERISTICS.--24 inch casing 0 to 91 ft, 20 inch casing 0 to 390 ft, well depth 1,500 ft..

INSTRUMENTATION.--Mostly monthly, some weekly measurements with electric sounder tape by City of Pendleton, Oregon

Water Resources Department and U.S. Geological Survey personnel. Also a long term analog recorder record since

August 23, 1977 and an electronic data logger hourly record since February 25, 1994..

DATUM.--Elevation of land surface is 1,060 ft above sea level (from topographic map). Measuring point: access hole in

steel plate covering casing 1.1 ft above land-surface datum.

REMARKS.--Unused but affected by nearby pumping wells in Columbia River Basalt Group.

PERIOD OF RECORD.--April 1965 to current year. Records prior to October 1993 are unpublished and available in the files

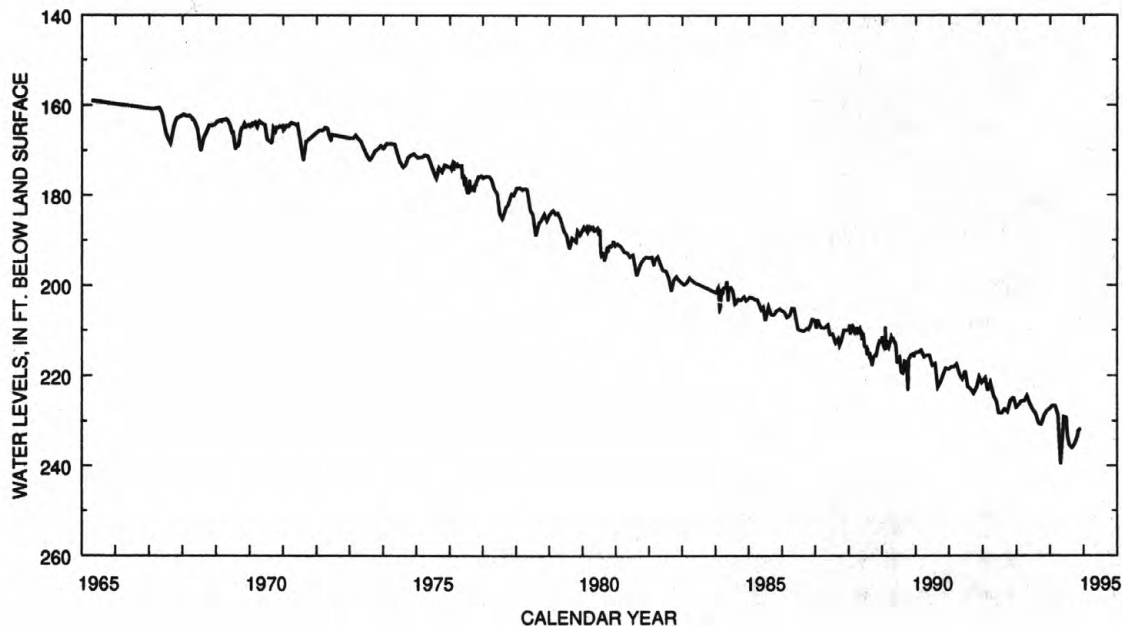
of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measurement, 159.0 ft below land-surface datum, April 17, 1965;

lowest measurement, 239.69 ft below land-surface datum, April 28, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	223.20	JAN 23	231.49	APR 25	230.82	JUL 26	236.66
NOV 30	231.65	FEB 23	231.17	MAY 25	230.31	AUG 30	237.04
DEC 30	229.55	MAR 29	231.73	JUN 26	233.85	SEP 28	236.30



NORTH UMPQUA WATER-QUALITY STUDY

Water samples were collected in the North Umpqua River during a one-week period in July 1995 to investigate nutrient sources and sinks, algal conditions, and diel fluctuations of water temperature, dissolved oxygen, and pH. Samples were collected at 27 sites between the inlet to Lemolo Lake (river mile 95.5) and Glide (river mile 27.8). The primary focus was on the Wild and Scenic reach, from Soda Springs Reservoir (river mile 69.7) to Glide (river mile 27.8). An additional site was sampled and analyzed for trace elements in water as well as nutrients and algae. Data from that site are published elsewhere in this report.

WATER-QUALITY DATA

MISCELLANEOUS STATION ANALYSES

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH, WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BICAR- BONATE, WATER FIELD MG/L AS HCO3 (00453)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
431750122104500 LAKE CREEK AB LEMOLO LAKE NR DIAMOND LAKE, OR (LAT 43 17 50N LONG 122 10 45W)										
JUL 1995										
24...	1700	16.5	658	57	33	9.2	110	7.6	21	<0.002
25...	0646	12.5	658	--	34	8.9	97	7.2	--	--
431839122091300 N UMPQUA RIVER AB LEMOLO LAKE NR DIAMOND LAKE, OR (LAT 43 18 39N LONG 122 09 13W)										
JUL 1995										
24...	1545	9.0	658	--	52	11.9	118	7.8	--	--
25...	0709	5.0	658	--	53	10.7	98	7.4	--	--
25...	1110	6.5	658	289	53	11.0	104	7.8	30	<0.002
14313500 NORTH UMPQUA R BL LEMOLO LK NR T FALLS,OR (LAT 43 19 20N LONG 122 11 40W)										
JUL 1995										
24...	1755	9.0	658	39	50	11.1	111	7.6	--	--
25...	0830	9.0	658	37	51	10.0	100	7.4	27	0.002
431552122252100 N UMPQUA R BL TOKETEE LAKE NR TOKETTE FALLS, OR (LAT 43 15 52N LONG 122 25 21W)										
JUL 1995										
24...	1600	10.0	700	18	61	10.2	99	7.4	35	<0.002
25...	0618	9.0	700	--	59	10.7	101	6.9	--	--
431814122295100 N UMPQUA R BELOW SODA SPRINGS NR TOKETEE FALLS, OR (LAT 43 18 14N LONG 122 29 51W)										
JUL 1995										
24...	1815	14.0	716	--	56	9.8	101	7.8	--	--
25...	0655	13.0	716	--	55	10.6	107	7.4	--	--
25...	0945	13.5	716	35	55	10.8	110	7.5	33	<0.002
431813122295100 SEEP AT N UMPQUA R BL SODA SP DAM NR TOKETEE F, OR (LAT 43 18 13N LONG 122 29 51W)										
JUL 1995										
24...	1815	16.0	716	E0.5	82	--	--	7.3	51	<0.002
431821122300100 FISH POND EFF AT N UMPQ R BL SODA SP DAM NR T FLS, OR (LAT 43 18 21N LONG 122 30 01W)										
JUL 1995										
24...	1900	17.0	716	E7.0	58	--	--	7.3	33	<0.002
431824122300600 N UMPQUA R BL PWR H AT SODA SP DAM NR TOKETEE F,OR (LAT 43 18 24N LONG 122 30 06W)										
JUL 1995										
25...	0735	13.0	717	881	56	11.3	115	7.6	32	<0.002
26...	1515	13.5	716	--	E55	10.6	109	8.0	--	--
14316495 BOULDER CREEK NEAR TOKETEE FALLS, OR (LAT 43 18 13N LONG 122 31 45W)										
JUL 1995										
24...	1645	16.5	E718	7.9	59	9.0	98	7.5	26	<0.002
25...	0715	15.0	718	7.4	64	9.7	102	7.5	--	--
14316500 NO UMPQUA R AB COPELAND CR NR TOKETEE FALLS,OR (LAT 43 17 45N LONG 122 32 10W)										
JUL 1995										
25...	0837	13.5	718	935	59	10.6	108	7.7	34	<0.002
27...	1345	14.0	718	951	59	10.1	105	8.1	33	0.014
431730122323800 COPELAND CR NR MTH AB N UMPQUA R NR T FALLS, OR (LAT 43 17 30N LONG 122 32 38W)										
JUL 1995										
24...	1915	18.0	E718	--	101	8.3	94	7.4	--	--
25...	0800	15.0	E718	--	107	9.7	103	7.5	--	--
25...	1150	16.5	E718	23	108	9.9	108	7.6	29	0.002
431728122370800 CALF CR NR MOUTH AB N UMPQUA R NR STEAMBOAT, OR (LAT 43 17 28N LONG 122 37 08W)										
JUL 1995										
25...	1500	20.0	E724	7.8	71	8.8	102	8.2	31	<0.002
26...	0638	16.5	724	--	69	8.8	96	7.4	--	--
431815122404400 PANTHER CR NR MOUTH AB N UMPQUA R NR STEAMBOAT, OR (LAT 43 18 15N LONG 122 40 44W)										
JUL 1995										
25...	1632	19.0	727	--	91	8.7	99	8.1	--	--
26...	0800	16.0	E727	6.2	92	8.9	95	7.8	49	<0.002
431820122403700 NORTH UMPQUA RIVER AB APPLE CREEK NR STEAMBOAT, OR (LAT 43 18 20N LONG 122 40 37W)										
JUL 1995										
25...	1648	17.0	727	--	62	9.3	102	8.2	--	--
26...	0705	13.5	727	--	61	9.6	97	7.5	--	--
26...	1135	15.0	727	927	57	9.9	103	7.9	31	<0.002

E Estimated.

CHEMICAL ANALYSES OF SURFACE WATER SAMPLES IN NORTH UMPQUA RIVER BASIN

NORTH UMPQUA WATER-QUALITY STUDY--Continued

WATER-QUALITY DATA

MISCELLANEOUS STATION ANALYSES

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	ALKA- LITY, DIS IT FIELD (MG/L AS CACO3) (39086)
431750122104500 LAKE CREEK AB LEMOLO LAKE NR DIAMOND LAKE, OR (LAT 43 17 50N LONG 122 10 45W)										
JUL 1995										
24...	<0.001	<0.2	<0.2	0.010	0.024	0.017	0.011	0.4	14	17
25...	--	--	--	--	--	--	--	--	--	--
431839122091300 N UMPQUA RIVER AB LEMOLO LAKE NR DIAMOND LAKE, OR (LAT 43 18 39N LONG 122 09 13W)										
JUL 1995										
24...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	<0.001	<0.2	<0.2	<0.005	0.058	0.059	0.063	1.5	32	25
14313500 NORTH UMPQUA R BL LEMOLO LK NR T FALLS, OR (LAT 43 19 20N LONG 122 11 40W)										
JUL 1995										
24...	--	--	--	--	--	--	--	--	--	--
25...	<0.001	<0.2	<0.2	<0.005	0.050	0.045	0.045	1.4	27	22
431552122252100 N UMPQUA R BL TOKETEE LAKE NR TOKETTE FALLS, OR (LAT 43 15 52N LONG 122 25 21W)										
JUL 1995										
24...	<0.001	<0.2	0.2	0.015	0.072	0.059	0.061	0.9	30	29
25...	--	--	--	--	--	--	--	--	--	--
431814122295100 N UMPQUA R BELOW SODA SPRINGS NR TOKETEE FALLS, OR (LAT 43 18 14N LONG 122 29 51W)										
JUL 1995										
24...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	<0.001	<0.2	<0.2	<0.005	0.041	0.038	0.037	1.4	27	27
431813122295100 SEEP AT N UMPQUA R BL SODA SP DAM NR TOKETEE F, OR (LAT 43 18 13N LONG 122 29 51W)										
JUL 1995										
24...	<0.001	<0.2	<0.2	<0.005	0.006	0.011	0.007	1.1	33	42
431821122300100 FISH POND EFF AT N UMPQ R BL SODA SP DAM NR T FLS, OR (LAT 43 18 21N LONG 122 30 01W)										
JUL 1995										
24...	<0.001	<0.2	<0.2	<0.005	0.047	0.041	0.039	1.5	26	27
431824122300600 N UMPQUA R BL PWR H AT SODA SP DAM NR TOKETEE F, OR (LAT 43 18 24N LONG 122 30 06W)										
JUL 1995										
25...	<0.001	<0.2	<0.2	<0.005	0.041	0.038	0.038	1.4	27	26
26...	--	--	--	--	--	--	--	--	--	--
14316495 BOULDER CREEK NEAR TOKETEE FALLS, OR (LAT 43 18 13N LONG 122 31 45W)										
JUL 1995										
24...	<0.001	<0.2	0.2	<0.005	0.012	0.012	0.008	1.9	15	21
25...	--	--	--	--	--	--	--	--	--	--
14316500 NO UMPQUA R AB COPELAND CR NR T FLS, OR (LAT 43 17 45N LONG 122 32 10W)										
JUL 1995										
25...	<0.001	<0.2	<0.2	<0.005	0.039	0.037	0.037	1.5	27	28
27...	<0.001	<0.2	<0.2	<0.005	0.027	0.021	0.019	1.6	27	27
431730122323800 COPELAND CR NR MTH AB N UMPQUA R NR T FALLS, OR (LAT 43 17 30N LONG 122 32 38W)										
JUL 1995										
24...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	<0.001	<0.2	<0.2	<0.005	0.005	0.004	0.004	2.0	16	24
431728122370800 CALF CR NR MOUTH AB N UMPQUA R NR STEAMBOAT, OR (LAT 43 17 28N LONG 122 37 08W)										
JUL 1995										
25...	<0.001	<0.2	<0.2	<0.005	0.009	0.009	0.007	1.8	14	25
26...	--	--	--	--	--	--	--	--	--	--
431815122404400 PANTHER CR NR MOUTH AB N UMPQUA R NR STEAMBOAT, OR (LAT 43 18 15N LONG 122 40 44W)										
JUL 1995										
25...	--	--	--	--	--	--	--	--	--	--
26...	<0.001	<0.2	<0.2	<0.005	0.021	0.017	0.015	2.5	20	40
431820122403700 NORTH UMPQUA RIVER AB APPLE CREEK NR STEAMBOAT, OR (LAT 43 18 20N LONG 122 40 37W)										
JUL 1995										
25...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	<0.001	<0.2	<0.2	<0.005	0.033	0.034	0.031	1.6	25	26

CHEMICAL ANALYSES OF SURFACE WATER SAMPLES IN NORTH UMPQUA RIVER BASIN

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NORTH UMPQUA WATER-QUALITY STUDY--Continued

WATER-QUALITY DATA

MISCELLANEOUS STATION ANALYSES

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	PH, WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BICAR- BONATE, WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	
432034122440100 N UMP R AB STMBOAT CR AT MOTT BR NR STEAMBOAT, OR (LAT 43 20 34N LONG 122 44 01W)										
JUL 1995										
25...	1345	16.0	728	979	63	10.3	110	8.0	32	<0.002
25...	1530	17.0	728	--	64	10.1	109	8.1	--	--
26...	0730	14.0	728	--	58	9.7	98	7.4	--	--
432100122434300 CANTON CR NR MOUTH AB STEAMBOAT CR NR STEAMBOAT,OR (LAT 43 21 00N LONG 122 43 43W)										
JUL 1995										
25...	1656	21.0	738	--	63	8.5	99	8.2	--	--
26...	0704	18.5	732	--	62	8.8	98	7.6	--	--
26...	1000	18.5	732	--	62	9.2	103	7.8	35	<0.002
432523122360300 STEAMBOAT CREEK AB BIG BEND CREEK NR STEAMBOAT, OR (LAT 43 25 23N LONG 122 36 03W)										
JUL 1995										
25...	1543	21.5	716	--	68	9.5	116	8.4	--	--
26...	0740	19.0	719	17	68	8.1	93	7.5	39	<0.002
14316700 STEAMBOAT CREEK NEAR GLIDE,OR (LAT 43 21 00N LONG 122 43 40W)										
JUL 1995										
26...	0810	19.0	732	--	68	8.6	97	7.6	--	--
26...	1300	21.0	732	E103	70	9.2	107	8.4	39	<0.002
26...	1525	22.5	732	--	70	8.7	104	8.7	--	--
432034122442500 N UMPQUA R AT MI 52.5 BL STMBT CR NR STAMBOAT, OR (LAT 43 20 34N LONG 122 44 25W)										
JUL 1995										
26...	0915	14.5	731	--	59	9.8	100	7.6	30	<0.002
26...	1750	18.0	731	--	59	9.2	102	8.1	--	--
431912122482700 WRIGHT CR NR MOUTH AB N UMPQUA R NR STEAMBOAT, OR (LAT 43 19 12N LONG 122 48 27W)										
JUL 1995										
26...	1750	16.5	734	1.4	70	9.3	99	7.6	--	--
27...	0928	15.0	733	--	69	9.3	97	7.7	--	--
14316800 NORTH UMPQUA R BL STEAMBOAT CR NR GLIDE,OR (LAT 43 19 18N LONG 122 48 30W)										
JUL 1995										
26...	1726	18.0	734	1020	60	9.3	102	8.3	--	--
27...	0700	15.0	733	1020	59	9.6	99	7.5	--	--
27...	0830	15.0	733	1020	59	9.6	99	7.5	32	<0.002
14317100 SUSAN CREEK NEAR IDLEYLD PARK,OR (LAT 43 17 50N LONG 122 54 25W)										
JUL 1995										
27...	1450	18.0	742	2.3	68	9.1	99	7.6	42	<0.002
27...	1525	19.0	742	--	63	9.4	105	8.3	--	--
432000123000700 ROCK CR NR MOUTH AB N UMPQUA RIVER NR GLIDE, OR (LAT 43 20 00N LONG 123 00 07W)										
JUL 1995										
26...	1852	20.5	741	--	64	8.6	98	7.7	--	--
27...	0705	17.5	742	--	66	9.0	96	7.6	--	--
27...	0915	17.5	743	80	66	9.1	97	7.5	34	<0.002
431221122492100 LITTLE RIVER AB BLACK CREEK NR GLIDE, OR (LAT 43 12 21N LONG 122 49 21W)										
JUL 1995										
26...	1648	18.0	717	14	80	8.7	97	8.1	--	--
27...	0724	15.5	717	--	79	9.5	102	7.9	--	--
431453122553400 LITTLE RIVER ABOVE WOLF CREEK NR GLIDE, OR (LAT 43 14 53N LONG 122 55 34W)										
JUL 1995										
26...	1545	21.0	732	30	88	8.7	102	8.6	--	--
27...	0645	18.5	733	--	86	9.0	100	7.7	--	--
431750123060000 LITTLE R NR MOUTH AB NORTH UMPQUA R NR GLIDE, OR (LAT 43 17 50N LONG 123 06 00W)										
JUL 1995										
26...	1300	22.0	746	60	112	9.0	105	8.4	52	<0.002
26...	1810	22.5	746	--	112	8.5	101	8.3	--	--
27...	0634	20.0	745	--	112	8.3	94	7.6	--	--
431827123072200 NORTH UMPQUA RIVER BELOW LITTLE RIVER NR GLIDE, OR (LAT 43 18 27N LONG 123 07 22W)										
JUL 1995										
27...	1440	20.5	742	--	63	10.1	115	8.3	34	<0.002
27...	1745	21.0	745	--	64	9.8	113	8.5	--	--

WATER-QUALITY DATA

	NITRO- GEN, NITRITE DIS- SOLVED	NITRO- GEN, AM- MONIA + ORGANIC DIS.	NITRO- GEN, AM- MONIA + ORGANIC TOTAL	NITRO- GEN, NO ₂ +NO ₃ DIS. SOLVED	PHOS- PHORUS, DIS- SOLVED	PHOS- PHORUS, ORTHO, DITHIO- SOLVED	CHLO- RIDE, DIS- SOLVED	SILICA, DIS- SOLVED	ALKA- LINITY, DIS IT FIELD
DATE	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS P)	(MG/L AS P)	(MG/L AS P)	(MG/L AS CL)	(MG/L AS CACO ₃)
	(00613)	(00623)	(00625)	(00631)	(00665)	(00666)	(00671)	(00940)	(00955) (39086)

JUL 1995

JUL 1995

JUL 1995

14316700 STEAMBOAT CREEK NEAR GLIDE,OR (LAT 43 21 00N LONG 122 43 40W)

JUL 1995

432034122442500 N UMPQUA R AT MI 52.5 BL STMBT CR NR STAMBOAT. OR (LAT 43 20 34N LONG 122 44 25W)

431912122482700 WRIGHT CR NR MOUTH AB N UMPOUA R NR STEAMBOAT. OR (LAT 43 19 12N LONG 122 48 27W)

JUL 1995

14316800 NORTH UMPQUA R BL STEAMBOAT CR NR GLIDE,OR (LAT 43 19 18N LONG 122 48 30W)

JUL 1995

14317100 SUSAN CREEK NEAR IDLEYLD PARK,OR (LAT 43 17 50N LONG 122 54 25W)

JUL 1995

[illegible]

432000123000700 ROCK CR NR MOUTH AB N UMPQUA RIVER NR GLIDE. OR (LAT 43 20 00N LONG 123 00 07W)

JUL 1995

26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
27...	<0.001	<0.2	<0.2	<0.005	0.039	0.034	0.036	1.3	19 28

431221122492100 LITTLE RIVER AB BLACK CREEK NR GLIDE, OR (LAT 43 12 21N LONG 122 49 21W)

JUL 1995

26...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--

431453122553400 LITTLE RIVER ABOVE WOLF CREEK NR GLIDE. OR (LAT 43 14 53N LONG 122 55 34W)

JUL 1995

JUL 1995
26... .. .
27... .. .

431750123060000 LITTLE R NR MOUTH AB NORTH UMPOUA R NR GLIDE. OR (LAT 43 17 50N LONG 123 06 00W)

JUL 1995

[illegible]

431827123072200 NORTH UMPOUA RIVER BELOW LITTLE RIVER NR GLIDE. OR (LAT 43 18 27N LONG 123 07 22W)

JUL 1995

[illegible]

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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