

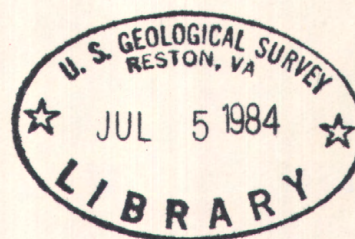
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Water Resources Data Oregon

Water Year 1982

Volume 2. Western Oregon



Volume 2
Western Oregon

Volume 1
Eastern Oregon

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-82-2
Prepared in cooperation with the Oregon Water Resources
Department and with other agencies

CALENDAR FOR WATER YEAR 1982

1981

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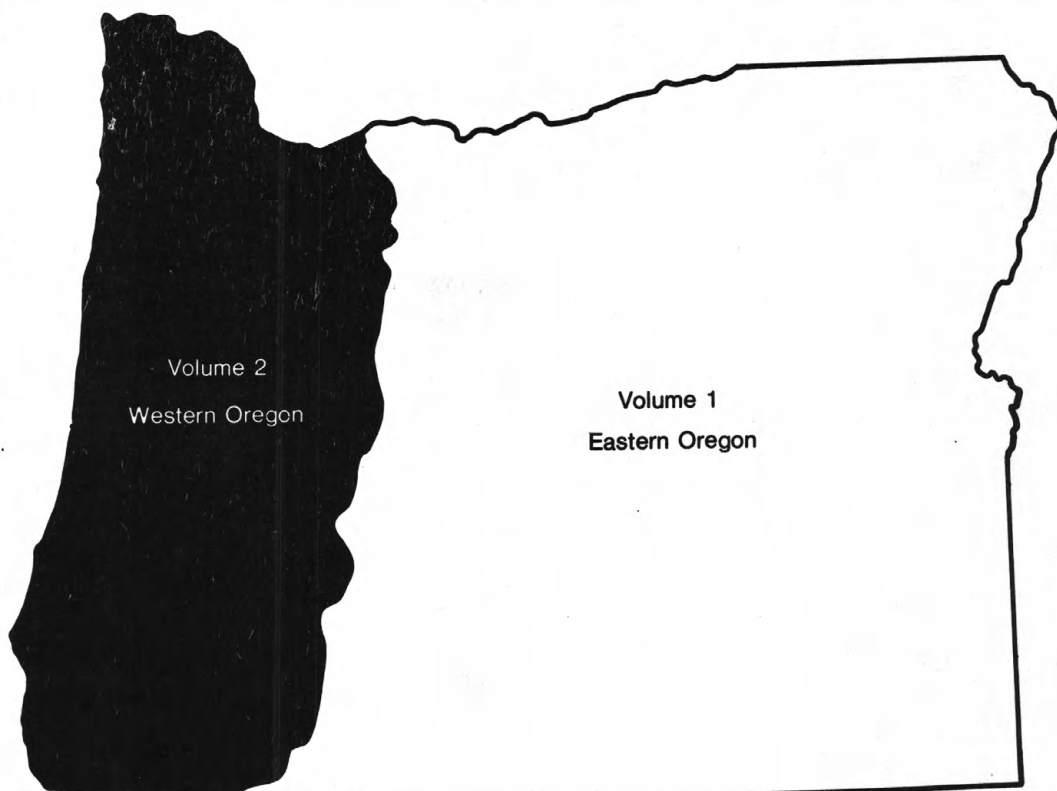
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Water Resources Data Oregon Water Year 1982

Volume 2. Western Oregon

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OR-82-2
Prepared in cooperation with the Oregon Water Resources
Department and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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847 N.E. 19th Ave., Suite 300
Portland, Oregon 97232

1983

PREFACE

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

Volume 1: Eastern Oregon
Volume 2: Western Oregon

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

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This report was prepared in cooperation with the State of Oregon and with other agencies under the general supervision of Stanley F. Kapustka, District Chief, Oregon, and J.D. Bredehoeft, Regional Hydrologist, Western Region.

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Prepared in cooperation with the State of Oregon and with other agencies					
16. Abstract (Limit: 200 words) Water Resources Data for the 1982 water year for Oregon consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality in wells and springs. This report, in two volumes, contains discharge records for 253 gaging stations; stage only records for 8 gaging stations; stage and contents for 37 lakes and reservoirs; water quality for 81 gaging stations, water levels for 57 observations wells; and water quality for 4 precipitation stations. Also included are 33 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and co-operating State and Federal agencies in Oregon.					
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CONTENTS

	Page
Preface.....	III
List of surface-water stations, in downstream order, for which records are published.....	VII
Introduction.....	1
Cooperation.....	2
Hydrologic conditions.....	3
Definition of terms.....	7
Special networks and programs.....	16
Downstream order and station numbers.....	18
Explanation of stage and water-discharge records.....	18
Collection and computation of data.....	18
Accuracy of data.....	23
Other data available.....	23
Records of discharge collected by agencies other than the Geological Survey.....	24
Explanation of water-quality records.....	24
Collection and computation of data.....	24
Water analysis.....	24
Water temperature.....	26
Sediment.....	26
Explanation of ground-water level records.....	27
Collection of data.....	27
Well descriptions.....	27
Water levels.....	28
Hydrographs.....	28
Well-numbering system.....	29
Publications on techniques of water-resources investigations....	30
Gaging station records.....	35
Discharge at ungaged sites.....	400
Discharge at partial-record stations and miscellaneous sites.....	403
Crest-stage partial-record stations.....	403
Discharge measurements at miscellaneous sites.....	405
Analyses of precipitation samples.....	406
Ground-water levels.....	409
Index.....	417

CONTENTS

ILLUSTRATIONS

	Page
Figure 1. Local identifier well-numbering system.....	29
2. Map of Western Oregon showing location of active gaging stations.....	33
3. Map of Western Oregon showing sites where water-quality data are obtained.....	34
4. Map of Western Oregon showing location of partial-record stations.....	401
5. Map of Western Oregon showing location of observation wells.....	408

TABLES

Table 1. Temperature conversion table, degrees Celsius (°C) to degrees Fahrenheit (°F).....	25
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GAGING STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED

VII

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

LOWER COLUMBIA RIVER BASIN	
COLUMBIA RIVER AT BONNEVILLE DAM (E).....	35
COLUMBIA RIVER BELOW BONNEVILLE DAM (E).....	37
COLUMBIA RIVER AT WARRENDALE (ECBTS).....	39
SANDY RIVER BASIN	
SANDY RIVER	
ZIGZAG RIVER NEAR RHODODENDRON (D).....	45
SALMON RIVER NEAR GOVERNMENT CAMP (D).....	47
SANDY RIVER NEAR MARMOT (D).....	48
BULL RUN RIVER	
BLAZED ALDER CREEK NEAR RHODODENDRON (D).....	49
BULL RUN RIVER NEAR MULTNOMAH FALLS (DCBTS).....	50
FIR CREEK NEAR BRIGHTWOOD (DCBTS).....	57
NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS (DCBTS)	64
DEER CREEK NEAR BULL RUN (CB).....	72
COUGAR CREEK NEAR BULL RUN (CB).....	74
BEAR CREEK NEAR BULL RUN (CB).....	76
BULL RUN RESERVOIR NUMBER ONE, NEAR BULL RUN (E).....	78
BULL RUN RIVER	
FIVEMILE CREEK NEAR BULL RUN (CB).....	79
CAMP CREEK NEAR BULL RUN (CB).....	81
SOUTH FORK BULL RUN RIVER	
CEDAR CREEK NEAR BRIGHTWOOD (D).....	83
SOUTH FORK BULL RUN RIVER NEAR BULL RUN (DCBTS).....	84
BULL RUN RESERVOIR NUMBER TWO, NEAR BULL RUN (E).....	92
BULL RUN RIVER NEAR BULL RUN (D).....	93
LITTLE SANDY RIVER NEAR BULL RUN (D).....	94
WILLAMETTE RIVER BASIN	
MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE (DT).....	96

VIII GAGING STATIONS, IN DOWNSTREAM ORDER--CONTINUED

LOWER COLUMBIA RIVER BASIN--CONTINUED	PAGE
COLUMBIA RIVER BASIN--CONTINUED	
WILLAMETTE RIVER BASIN--CONTINUED	
HILLS CREEK LAKE NEAR OAKRIDGE (E).....	99
MIDDLE FORK WILLAMETTE RIVER ABOVE SALT CREEK, NEAR OAKRIDGE (DT).....	100
SALMON CREEK NEAR OAKRIDGE (D).....	103
GRAY CREEK NEAR OAKRIDGE (D).....	104
WALDO LAKE NEAR OAKRIDGE (E).....	105
WALDO LAKE OUTLET NEAR OAKRIDGE (D).....	106
NORTH FORK OF MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE (D).....	107
MIDDLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIDGE (DT).....	108
LOOKOUT POINT LAKE NEAR LOWELL (E).....	111
MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER (DT).....	112
FALL CREEK NEAR LOWELL (DT).....	115
FALL CREEK LAKE NEAR LOWELL (E).....	118
FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK (DT)...	119
MIDDLE FORK WILLAMETTE RIVER AT JASPER (DT).....	122
COAST FORK WILLAMETTE RIVER AT LONDON (DT).....	125
COTTAGE GROVE LAKE NEAR COTTAGE GROVE (E).....	128
COAST FORK WILLAMETTE RIVER BELOW COTTAGE GROVE DAM (D).	129
ROW RIVER ABOVE PITCHER CREEK, NEAR DORENA (D).....	130
DORENA LAKE NEAR COTTAGE GROVE (E).....	131
ROW RIVER NEAR COTTAGE GROVE (D).....	132
COAST FORK WILLAMETTE RIVER NEAR GOSHEN (D).....	133
MCKENZIE RIVER AT OUTLET OF CLEAR LAKE (D).....	134
SMITH RIVER ABOVE SMITH RIVER RESERVOIR, NEAR BELKNAP SPRINGS (D).....	135
SMITH RIVER RESERVOIR NEAR BELKNAP SPRINGS (E).....	136
MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS (DCT).....	137
DEER CREEK	
BUDWORM CREEK NEAR BELKNAP SPRINGS (D).....	142
MCKENZIE RIVER AT MCKENZIE BRIDGE (DCT).....	143
SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW (DT).....	147
COUGAR LAKE NEAR RAINBOW (E).....	150
SOUTH FORK MCKENZIE RIVER NEAR RAINBOW (DT).....	151
BLUE RIVER BELOW TIDBITS CREEK, NEAR BLUE RIVER (DT)..	154
LOOKOUT CREEK NEAR BLUE RIVER (D).....	157
BLUE RIVER LAKE NEAR BLUE RIVER (E).....	158
BLUE RIVER AT BLUE RIVER (DT).....	159
MCKENZIE RIVER NEAR VIDA (DCT).....	162

GAGING STATIONS, IN DOWNSTREAM ORDER--CONTINUED

IX

LOWER COLUMBIA RIVER BASIN--CONTINUED	PAGE
COLUMBIA RIVER BASIN--CONTINUED	
WILLAMETTE RIVER BASIN--CONTINUED	
MCKENZIE RIVER BASIN--CONTINUED	
GATE CREEK AT VIDA (D).....	166
MOHAWK RIVER NEAR SPRINGFIELD (D).....	167
WILLAMETTE RIVER AT HARRISBURG (DT).....	168
LONG TOM RIVER NEAR NOTI (D).....	171
COYOTE CREEK NEAR CROW (D).....	172
FERN RIDGE LAKE NEAR ELMIRA (E).....	173
LONG TOM RIVER NEAR ALVADORE (D).....	174
AMAZON CREEK NEAR EUGENE (D).....	175
LONG TOM RIVER AT MONROE (D).....	176
MARYS RIVER NEAR PHILOMATH (D).....	177
WILLAMETTE RIVER ABOVE CALAPOOIA RIVER, AT ALBANY (T).....	178
CALAPOOIA RIVER AT HOLLEY (DT).....	180
CALAPOOIA RIVER AT ALBANY (T).....	183
WILLAMETTE RIVER AT ALBANY (D).....	185
NORTH SANTIAM RIVER (HEAD OF SANTIAM RIVER) BELOW	
BOULDER CREEK, NEAR DETROIT (DT).....	186
BREITENBUSH RIVER	
HUMBUG CREEK	
EAST HUMBUG CREEK NEAR DETROIT (D).....	189
BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR	
DETROIT (DT).....	190
DETROIT LAKE NEAR DETROIT (E).....	193
NORTH SANTIAM RIVER AT NIAGARA (DT).....	194
LITTLE NORTH SANTIAM RIVER NEAR MEHAMA (D).....	197
NORTH SANTIAM RIVER AT MEHAMA (D).....	198
SOUTH SANTIAM RIVER BELOW CASCADIA (DT).....	199
MIDDLE SANTIAM RIVER NEAR UPPER SODA (D).....	202
QUARTZVILLE CREEK NEAR CASCADIA (DT).....	203
GREEN PETER LAKE NEAR FOSTER (E).....	206
FOSTER LAKE AT FOSTER (E).....	207
WILEY CREEK AT FOSTER (D).....	208
SOUTH SANTIAM RIVER NEAR FOSTER (DT).....	209
SOUTH SANTIAM RIVER AT WATERLOO (DT).....	212
THOMAS CREEK NEAR SCIO (D).....	215
SANTIAM RIVER AT JEFFERSON (DT).....	216
LUCKIAMUTE RIVER NEAR SUVER (D).....	219
WILLAMETTE RIVER AT SALEM (DCT).....	220
SOUTH YAMHILL RIVER (HEAD OF YAMHILL RIVER) NEAR	
WILLAMINA (D).....	223
WILLAMINA CREEK NEAR WILLAMINA (D).....	224
SOUTH YAMHILL RIVER NEAR WHITESON (D).....	225
NORTH YAMHILL RIVER NEAR FAIRDALE (D).....	226

X GAGING STATIONS, IN DOWNSTREAM ORDER--CONTINUED

LOWER COLUMBIA RIVER BASIN--CONTINUED	PAGE
COLUMBIA RIVER BASIN--CONTINUED	
WILLAMETTE RIVER BASIN--CONTINUED	
SOUTH YAMHILL RIVER BASIN--CONTINUED	
NORTH YAMHILL RIVER--CONTINUED	
HASKINS CREEK RESERVOIR NEAR MCMINNVILLE (E).....	227
HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNVILLE (D).	228
MOLALLA RIVER ABOVE PINE CREEK, NEAR WILHOIT (D).....	229
PUDDING RIVER	
BUTTE CREEK AT MONITOR (D).....	230
TUALATIN RIVER	
TUALATIN RIVER NEAR GASTON (DT).....	231
SCOGGINS CREEK	
HENRY HAGG LAKE NEAR GASTON (E).....	234
SCOGGINS CREEK BELOW HENRY HAGG LAKE, NEAR GASTON (D).	235
TUALATIN RIVER NEAR DILLEY (DCS).....	236
OSWEGO CANAL NEAR LAKE OSWEGO (D).....	238
TUALATIN RIVER AT WEST LINN (DCBS).....	239
WILLAMETTE RIVER ABOVE FALLS, AT OREGON CITY (E).....	243
WILLAMETTE RIVER BELOW FALLS, AT OREGON CITY (E).....	244
CLACKAMAS RIVER	
TIMOTHY LAKE NEAR GOVERNMENT CAMP (E).....	246
OAK GROVE FORK NEAR GOVERNMENT CAMP (D).....	247
OAK GROVE FORK ABOVE POWERPLANT INTAKE (D).....	248
CLACKAMAS RIVER ABOVE THREE LYNX CREEK (D).....	249
CLACKAMAS RIVER AT ESTACADA (D).....	250
CLACKAMAS RIVER NEAR CLACKAMAS (D).....	251
JOHNSON CREEK AT SYCAMORE (D).....	252
WILLAMETTE RIVER AT PORTLAND (DCBS).....	253
PACIFIC SLOPE BASINS IN OREGON	
NEHALEM RIVER BASIN	
NEHALEM RIVER NEAR FOSS (DCBS).....	256
WILSON RIVER BASIN	
WILSON RIVER NEAR TILLAMOOK (D).....	259
NESTUCCA RIVER BASIN	
MCGUIRE LAKE NEAR FAIRDALE (E).....	260
NESTUCCA RIVER NEAR FAIRDALE (D).....	261
NESTUCCA RIVER NEAR BEAVER (DT).....	262
SILETZ RIVER BASIN	
SILETZ RIVER	
BIG ROCK CREEK NEAR VALSETZ (T).....	265
SILETZ RIVER AT SILETZ (DT).....	267

PACIFIC SLOPE BASINS IN OREGON--CONTINUED	PAGE
YAQUINA RIVER BASIN	
YAQUINA RIVER NEAR CHITWOOD (D).....	270
ALSEA RIVER BASIN	
NORTH FORK ALSEA RIVER AT ALSEA (D).....	271
FIVE RIVERS NEAR FISHER (D).....	272
ALSEA RIVER NEAR TIDEWATER (DCBS).....	273
BIG CREEK BASIN	
BIG CREEK NEAR ROOSEVELT BEACH (D).....	276
SIUSLAW RIVER BASIN	
SIUSLAW RIVER	
LAKE CREEK NEAR DEADWOOD (D).....	277
SIUSLAW RIVER NEAR MAPLETON (DCBS).....	278
NORTH FORK SIUSLAW RIVER NEAR MINERVA (D).....	281
UMPQUA RIVER BASIN	
SOUTH UMPQUA RIVER (HEAD OF UMPQUA RIVER)	
JACKSON CREEK NEAR TILLER (D).....	282
SOUTH UMPQUA RIVER AT TILLER (D).....	283
ELK CREEK NEAR DREW (D).....	284
SOUTH UMPQUA RIVER AT DAYS CREEK (DCT).....	285
COW CREEK NEAR AZALEA (D).....	288
WEST FORK COW CREEK NEAR GLENDALE (D).....	289
COW CREEK NEAR RIDDLE (D).....	290
SOUTH MYRTLE CREEK	
NORTH MYRTLE CREEK NEAR MYRTLE CREEK (D).....	291
LOOKINGGLASS CREEK AT BROCKWAY (D).....	292
SOUTH UMPQUA RIVER NEAR BROCKWAY (D).....	293
SOUTH UMPQUA RIVER NEAR ROSEBURG (CBT).....	294
NORTH UMPQUA RIVER	
LAKE CREEK NEAR DIAMOND LAKE (D).....	301
LEMOLO LAKE NEAR TOKETEE FALLS (E).....	302
NORTH UMPQUA RIVER BELOW LEMOLO LAKE, NEAR TOKETEE FALLS (D).....	303
CLEARWATER RIVER ABOVE TRAP CREEK, NEAR TOKETEE FALLS (D).....	304
FISH CREEK AT BIG CAMAS RANGER STATION, NEAR TOKETEE FALLS (D).....	305
NORTH UMPQUA RIVER ABOVE COPELAND CREEK, NEAR TOKETEE FALLS (D).....	306
STEAMBOAT CREEK NEAR GLIDE (D).....	307
LITTLE RIVER AT PEEL (D).....	308
NORTH UMPQUA RIVER AT WINCHESTER (DT).....	309
UMPQUA RIVER	
CALAPOOYA CREEK AT NONPAREIL (D).....	312
UMPQUA RIVER NEAR ELKTON (DCBTS).....	313

XII GAGING STATIONS, IN DOWNSTREAM ORDER--CONTINUED

PACIFIC SLOPE BASINS IN OREGON--CONTINUED	PAGE
COOS RIVER BASIN	
PONY CREEK AT COOS BAY (D).....	317
COQUILLE RIVER BASIN	
SOUTH FORK COQUILLE RIVER AT POWERS (D).....	319
ROGUE RIVER BASIN	
ROGUE RIVER ABOVE PROSPECT (D).....	320
ROGUE RIVER BELOW PROSPECT (DT).....	321
SOUTH FORK ROGUE RIVER NEAR PROSPECT (D).....	324
SOUTH FORK ROGUE RIVER, SOUTH OF PROSPECT (DT).....	325
LOST CREEK LAKE NEAR MCLEOD (E).....	328
ROGUE RIVER AT MCLEOD (T).....	329
SOUTH FORK BIG BUTTE CREEK NEAR BUTTE FALLS (D).....	331
BIG BUTTE CREEK NEAR MCLEOD (DT).....	332
ROGUE RIVER NEAR MCLEOD (DT).....	335
ELK CREEK NEAR CASCADE GORGE (DT).....	338
WEST BRANCH ELK CREEK NEAR TRAIL (DT).....	341
ELK CREEK NEAR TRAIL (DT).....	344
ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT (DT).....	347
SOUTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK (D).....	350
NORTH FORK LITTLE BUTTE CREEK AT FISH LAKE, NEAR LAKECREEK (D).....	351
NORTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK (D).....	352
EMIGRANT CREEK NEAR ASHLAND (D).....	353
WEST FORK ASHLAND CREEK NEAR ASHLAND (D).....	354
EAST FORK ASHLAND CREEK NEAR ASHLAND (D).....	355
ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT (DT).....	356
ROGUE RIVER AT GRANTS PASS (DT).....	359
APPLEGATE RIVER	
MIDDLE FORK APPLEGATE RIVER (HEAD OF APPLEGATE RIVER) NEAR COPPER (DT).....	362
ELLIOTT CREEK NEAR COPPER (DT).....	365
CARBERRY CREEK NEAR COPPER (DT).....	368
APPLEGATE LAKE NEAR COPPER (E).....	371
APPLEGATE RIVER NEAR COPPER (DCTS).....	372
APPLEGATE RIVER NEAR APPLEGATE (DT).....	379
APPLEGATE RIVER NEAR WILDERVILLE (DT).....	382

GAGING STATIONS, IN DOWNSTREAM ORDER--CONTINUED

XIII

PACIFIC SLOPE BASINS IN OREGON--CONTINUED	PAGE
ROGUE RIVER BASIN--CONTINUED	
ROGUE RIVER NEAR MERLIN (T).....	385
GRAVE CREEK AT PEASE BRIDGE, NEAR PLACER (D).....	387
ROGUE RIVER AT MARIAL (T).....	388
ROGUE RIVER NEAR AGNESS (DCBTS).....	390
EAST FORK ILLINOIS RIVER (HEAD OF ILLINOIS RIVER)	
NEAR TAKILMA (D).....	395
SUCKER CREEK BELOW LITTLE GRAYBACK CREEK, NEAR	
HOLLAND (D).....	396
WEST FORK ILLINOIS RIVER BELOW ROCK CREEK, NEAR	
O'BRIEN (D).....	397
ILLINOIS RIVER NEAR KERBY (D).....	398
CHETCO RIVER BASIN	
CHETCO RIVER NEAR BROOKINGS (D).....	399

WATER RESOURCES DATA FOR OREGON, 1982

INTRODUCTION

Water resources data for the 1982 water year for Oregon consists of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; water-levels and water quality of wells and springs; and water quality of precipitation. This report, in two volumes, contains discharge records for 253 gaging stations; stage only records for 8 gaging stations; stage and contents for 37 lakes and reservoirs; water quality for 81 gaging stations; water levels for 57 observation wells; and water quality for 4 precipitation stations. Also included are data for 33 crest-stage partial-record stations. Locations of these sites, except for precipitation stations, are shown on figures 2, 3, 4, and 5. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Oregon.

Records of discharge of streams, and contents (or stage) of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a multi-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels are published from 1935 to 1974 in a series of water-supply papers entitled, "Ground-water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the Branch of Distribution, U.S. Geological Survey, 1200 Eads Street, Arlington, VA 22202.

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

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report OR-82-1." For archiving and general distribution, the reports for water years 1971-74 are also identified as water-data reports. These water-data reports are for sale, in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Additional information, including current prices, for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (503) 231-2009.

COOPERATION

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

Oregon Water Resources Department, James E. Sexson, Director.
Oregon Department of Transportation, State Highway Division,
H. S. Coulter, State Highway Engineer.
Oregon State University, R. W. MacVicar, President.
Coos Bay-North Bend Water Board, C. W. Heckard, Manager.
Eugene Water and Electric Board, Keith Parks, General Manager.
Lane Council of Governments, George Kloeppel, Executive Director.
Douglas County, Ken Erickson, Director of Public Works.
Lane County, Board of County Commissioners, G. E. Morgan, General
Administrator.
Wasco County, through The Northern Wasco County People's Utility
District, Harold Haake, Manager.
City of McMinnville, A. H. Jones, General Manager.
City of Portland, Bureau of Public Works, Carl Gobel, Administrator.
The Confederated Tribes of the Umatilla Indian Reservation,
Antone Minthorn, Chairman of the General Council.
The Confederated Tribes of the Warm Springs Indian Reservation,
K. L. Smith, 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 Reclamation, National Park Service, U.S. Department of the Interior in collection of records for 100 stage and discharge stations and 45 water-quality stations published in this report.

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

GENERAL HYDROLOGIC CONDITIONS

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

Eastern Oregon Hydrology

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

Western Oregon Hydrology

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

WATER RESOURCES DATA FOR OREGON, 1982

HYDROLOGIC CONDITIONS FOR WESTERN OREGON DURING THE 1982 WATER YEAR

During the 1982 water year flows were above average. Precipitation was above average, with Eugene recording the second wettest December on record, 17.63 inches. As of April 1, the snow pack on the western side of the Cascades ranged from 80 percent to 107 percent of average, except for 50 percent in the Illinois River basin, as reported by the U.S. Soil Conservation Service. In a normal season the Columbia basin snowpack reaches its maximum depth around April 1.

No major flooding or drought occurred during the 1982 water year.

Willamette River Basin

Precipitation in the Willamette River basin for the winter season was about 122 percent of normal and the snowpack was very good, ranging from 80 percent of normal on the Row River to 106 percent on the Santiam. Flows in the Willamette River basin were above average in the 1982 water year. A typical stream in the basin, such as the North Santiam River above Boulder Creek, near Detroit (station 14178000), which drains part of the Cascade Range, had a mean discharge that was 114 percent of the 56-year average. The Tualatin River at West Linn (station 14207500), which drains a part of the Coast Range, had a mean discharge that was 146 percent of the 54-year mean. The mean flow of Willamette River at Salem (station 14191000) was 130 percent of the 66-year mean.

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

The Sandy River near Marmot (station 14137000), adjacent to and just north of the Willamette River basin, had an average flow which was 107 percent of the 71 year average. Peak flow occurred on February 20 and had an exceedance probability of about 20 percent, which means there is about a 20 percent chance that a peak of this magnitude will occur in any one year. The Sandy River is a glacial fed stream.

Most chemical concentrations were not significantly different from those in previous years for Tualatin River at West Linn (station 14207500) and Willamette River at Portland (station 14211720).

North Coast Region

In the 1982 water year, flows in the north coast region were generally above average. The Nehalem River is typical of streams in that region and provides an index of the flow pattern. Average runoff at the Foss gaging station (14301000) was 133 percent of the 43-year average. The April streamflow exceeded any previous April flows during the 43-year period. The monthly flows for May through September average 25 percent below normal offsetting the higher winter flows.

The peak flow for the year occurred on January 24 and represented a relatively small flood event, at an exceedance probability of 20 percent.

Most chemical concentrations were not significantly different from those in previous years for Nehalem River near Foss (station 14301000), Siuslaw River near Mapleton (station 14307620), and Alsea River near Tidewater (14306500).

South Coast Region

Flows in the south coast region were well above average in the 1982 water year. The South Fork Coquille River is typical of streams in that region. Mean flow for the year at the gaging station at Powers (14325000) was 165 percent of the 63-year average.

A generalized winter rain storm moved through the area on December 5 and 6 with 24-hour rainfall totals exceeding 4" being recorded at most reporting stations. This storm produced the peak discharge for the year on December 6 at the Powers gage. The exceedance probability for the peak discharge was 3 percent, which means that this flow would have a 3 percent chance of being exceeded in any one year. The small exceedance probability indicates that a peak of this magnitude is an extremely rare occurrence.

WATER RESOURCES DATA FOR OREGON, 1982

Southwest Region

Flows of streams in southwestern Oregon that drain the Cascade Range were well above average. The two principal streams are the Rogue and Umpqua Rivers. The Rogue River is regulated by Lost Creek Reservoir, but the Umpqua River is virtually uncontrolled. Umpqua River near Elkton (station 14321000) had a mean discharge in the 1982 water year which was 145 percent of the 77-year average.

Peak flow at Elkton was 167,000 ft³/s on December 6 and had an exceedance probability of about 10 percent.

Most chemical concentrations were not significantly different from those in previous years for Umpqua River near Elkton (station 14321000) and Rogue River near Agness (station 14372300).

GROUND-WATER LEVELS IN WESTERN OREGON, 1982 WATER YEAR

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

DEFINITION OF TERMS

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

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

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

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

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

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

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C $\pm$ 1.0°C on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

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

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

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

Ash weight is the weight or amount of residue present after the residue from the dry weight determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash weight values of zooplankton and phytoplankton are expressed as g/m (grams per cubic meter), and periphyton and benthic organisms in g/m² (grams per square meter).

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

Cfs-day (ft³/s-day) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, or 2,445 cubic meters. It represents a runoff of approximately 0.0372 inch from 1 square mile or 0.3468 millimeter from 1 square kilometer.

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

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

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

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

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

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

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

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

Instantaneous discharge is the discharge at a given time.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Cyanophyta (blue-green algae) are 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.

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

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

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

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

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

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

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

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

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

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 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 would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 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.....	Emphemeroptera
Family.....	Ephemeraidae
Genus.....	<u>Hexagenia</u>
Species.....	<u>Hexagenia limbata</u>

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

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

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

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

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

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

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

Water year in geological Survey reports dealing with surface-water supply 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, 1981 is called "1981 water year."

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the year after thorough mixing in the reservoir.

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

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

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

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

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

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

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

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

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

DOWNSTREAM ORDER AND STATION NUMBER

Stations are listed in downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all main-stream stations are listed before the first main-stream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of stations in the front of this report, the rank of tributaries is indicated by indentation, each indentation representing one rank.

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

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and Computation of Data

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

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

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

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

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

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

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

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

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

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

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 11.

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

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

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The line headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the

month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

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

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

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

Accuracy of Data

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

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

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

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

Other Data Available

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

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

WATER RESOURCES DATA FOR OREGON, 1982

Records of Discharge Collected by Agencies Other than the
Geological Survey

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Computation of Data

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

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

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

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey publications on Techniques of Water-Resources Investigations, which are listed on page 33.

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

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling

as much as possible, consistent with available sampling techniques and methods of analysis. Where an apparent inconsistency exists between a reported pH value and relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

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

Since October 1967, the U.S. Geological Survey has used the metric system for reporting data on chemical constituents and concentrations of suspended sediment. Chemical constituents are now reported in milligrams per liter (mg/l) except for certain minor elements that are reported in micrograms per liter (ug/l). Suspended sediment is reported in milligrams per liter and water temperatures in degrees Celsius (°C). In water with a density other than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. To convert temperature in degrees Celsius to degrees Fahrenheit, see table 1 below.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definitions of terms", page 11.)

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

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

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

Water temperature

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

Sediment

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

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

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

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

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of Data

The observation-well program in Oregon, begun in 1928, was continued through 1979 in cooperation with the Oregon Water Resources Department. During the period 1962-65, the number of wells in the observation-well network was increased from 102 to 840. Observation wells in the program are part of a basic national network for providing a historical record of water-level changes in selected aquifers in the nation. Most of the wells are measured periodically by personnel of the Oregon Water Resources Department. Measurements are made in most of the wells three or four times a year to obtain records of the effects of pumping and seasonal changes in ground-water storage. The measurements are generally made in winter and spring before pumping begins, during the pumping season, and at the end of the pumping season. Water-level measurements in 81 representative wells in the Oregon observation-well network are included in this report; the locations of these wells are shown in figure 5.

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

Well Descriptions

For each well, the well description includes, if available, the following information: Latitude-longitude number, local well number, owner, method of construction, use of well, aquifer name or lithology, diameter of casing, depth of well, depth interval perforated or screened, altitude of land surface datum (lstd) National Geodetic Vertical Datum of 1929 (NGVD), and a description of the measuring point.

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

Water Levels

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

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

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

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

Hydrographs

Hydrographs show fluctuations of water levels during 1963-82 in 12 selected observations wells. Generally, water levels are highest during the wet winter and spring months and lowest during the dry summer and autumn months. Water levels are shown on the hydrographs in feet below the land surface at the well.

Well-Numbering System

Local designations of wells discussed in this report are based on the official system for the rectangular subdivision of public lands, referenced to the Willamette base line and meridian. The number indicates the location of the well, by township, range, section, and its position within the section. A graphic illustration of this method of well numbering is shown below (fig 1). The numbers indicate the township, the range, and the section, respectively, in which the well is located. The letters following the section number locate the well within the section. The first letter denotes the quarter section (160 acres); the second, the quarter-quarter section (40 acres); and the third, the quarter-quarter-quarter section (10 acres). Where two or more wells are in the same 10-acre subdivision, serial numbers are added after the third letter. The section number and three-letter position indicator are shown on the location map adjacent to the well symbol. Within a county, the wells are arranged in sequential order based on increasing numbers for township and range and are shown on the map (fig. 5) by section number. For example, well 1S/32E-16CCB is in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.16, T.1 S., R.32 E., and will be labeled as 16CCB.

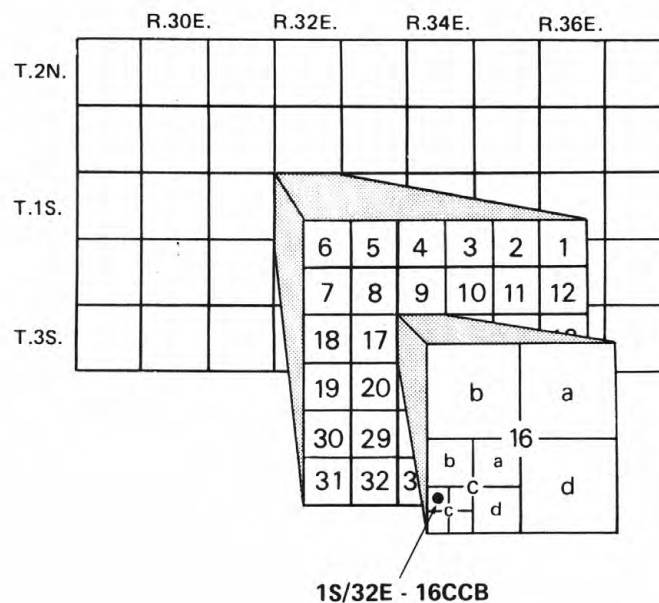


FIGURE 2. — Well-numbering system.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-seven manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

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

- 1-D1. WATER TEMPERATURE-INFLUENTIAL FACTORS, FIELD MEASUREMENT, AND DATA PRESENTATION, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI, Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. GUIDELINES FOR COLLECTION AND FIELD ANALYSIS OF GROUND-WATER SAMPLES FOR SELECTED UNSTABLE CONSTITUENTS, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. APPLICATION OF SURFACE GEOPHYSICS TO GROUND-WATER INVESTIGATIONS, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. APPLICATION OF BOREHOLE GEOPHYSICS TO WATER-RESOURCES INVESTIGATIONS, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. GENERAL FIELD AND OFFICE PROCEDURES FOR INDIRECT DISCHARGE MEASUREMENTS, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. MEASUREMENT OF PEAK DISCHARGE BY THE SLOPE-AREA METHOD, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. MEASUREMENT OF PEAK DISCHARGE AT CULVERTS BY INDIRECT METHODS, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. MEASUREMENT OF PEAK DISCHARGE AT WIDTH CONTRACTIONS BY INDIRECT METHODS, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. MEASUREMENT OF PEAK DISCHARGE AT DAMS BY INDIRECT METHODS, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. GENERAL PROCEDURE FOR GAGING STREAMS, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968. 13 pages.
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WATER RESOURCES DATA FOR OREGON, 1982

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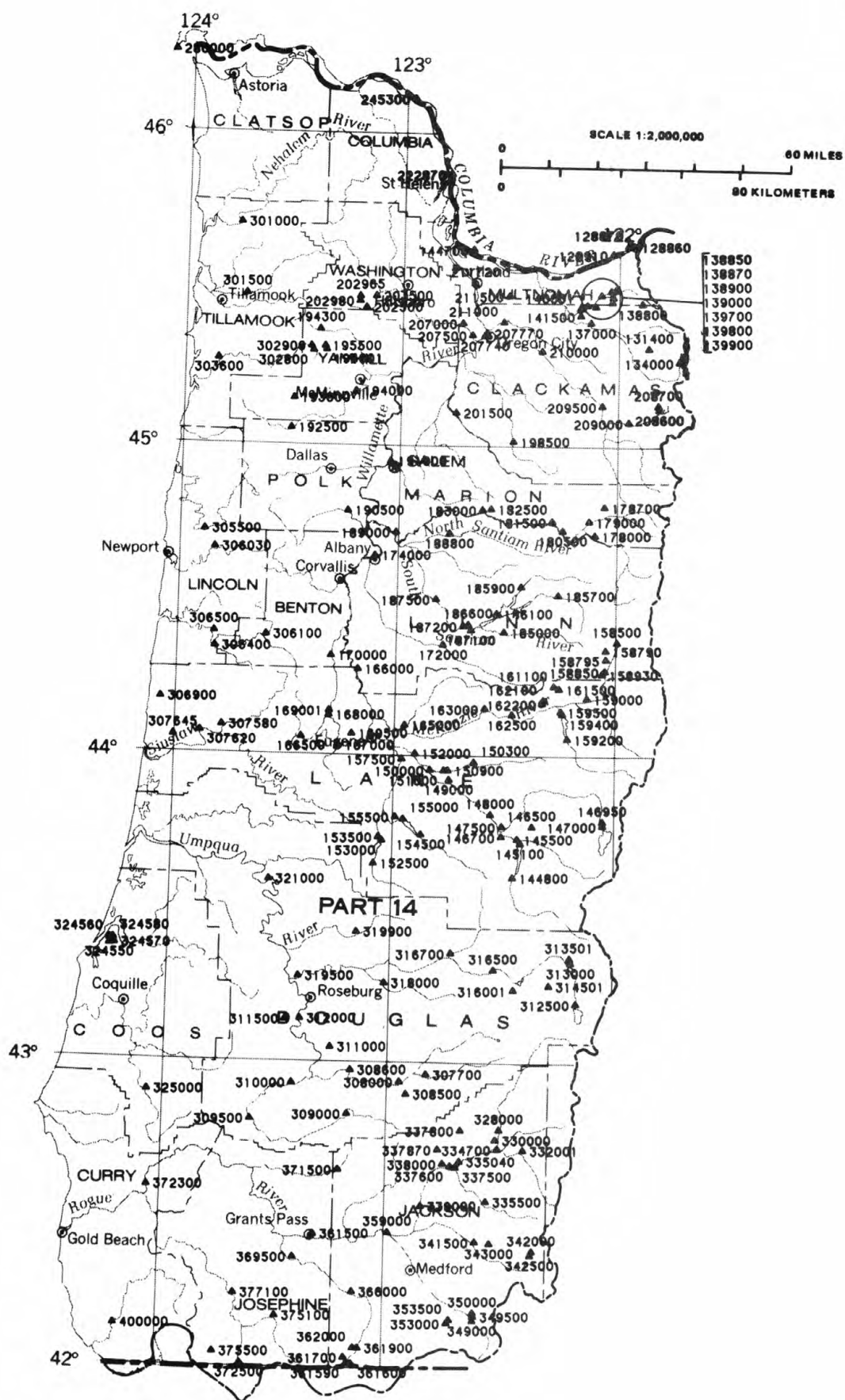


Figure 2.—Map of Western Oregon showing location of active gaging stations.

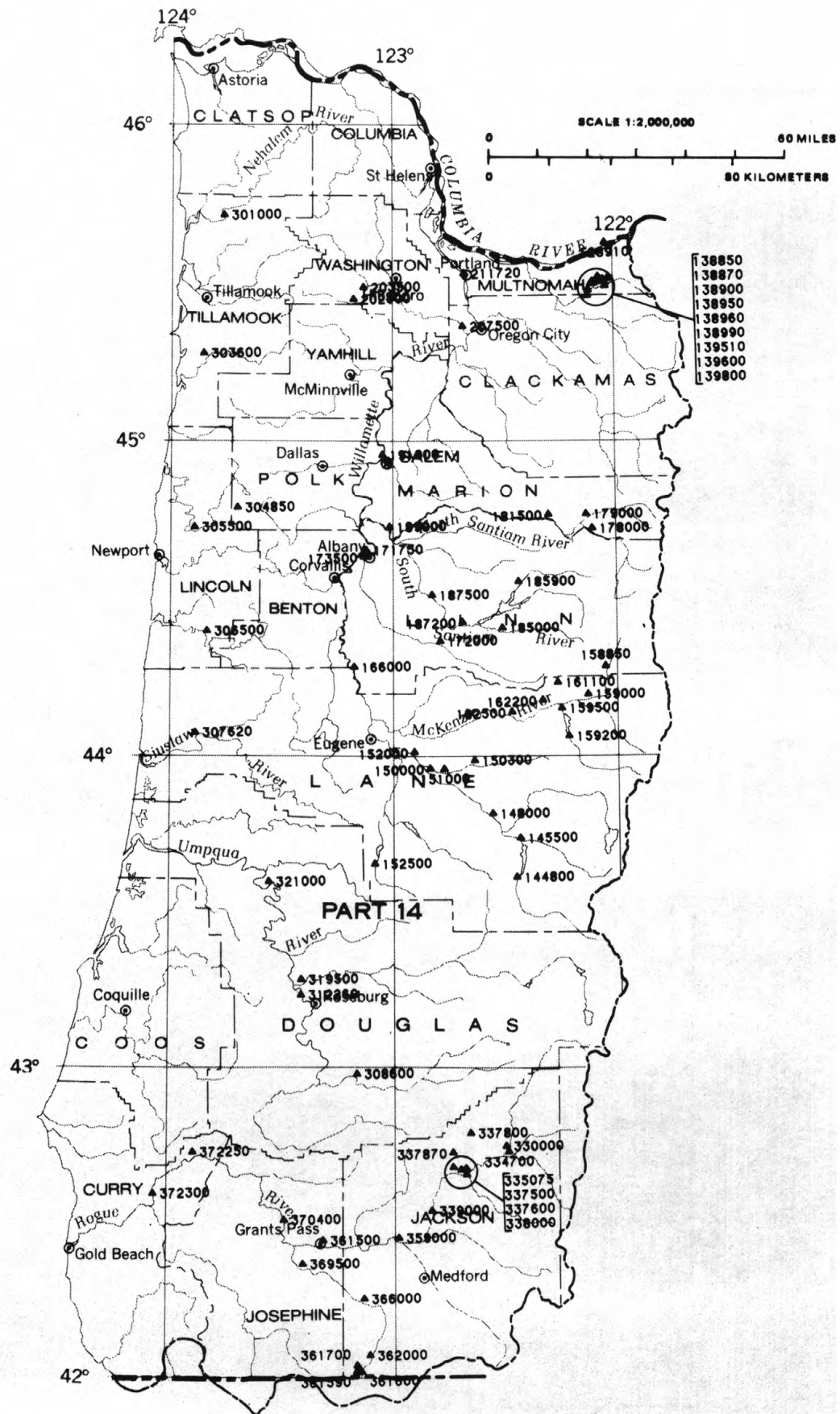


Figure 3.—Map Of Western Oregon showing sites where water-quality data are obtained.

COLUMBIA RIVER MAIN STEM

35

14128860 COLUMBIA RIVER AT BONNEVILLE DAM, OR

LOCATION.--Lat 45°38'36", long 121°56'21", in sec.22, T.2 N., R.7 E., Multnomah County, Hydrologic Unit 17080001, on north shore of Bradford Island, 200 ft (60 m) upstream from Bonneville Dam, at mile 146.1 (235.1 km).

DRAINAGE AREA.--239,900 mi² (621,300 km²), approximately.

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

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

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 76.61 ft (23.351 m) May 20, 1981; minimum, 69.65 ft (21.229 m) Oct. 25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 76.58 ft (23.342 m) June 10; minimum, 69.65 ft (21.229 m) Oct. 25.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	75.36	73.62	74.42	74.31	72.64	73.09	75.54	71.55	73.60	74.82	71.70	73.41
2	75.77	73.85	74.97	75.66	72.03	73.90	75.83	72.41	74.40	75.43	73.32	74.39
3	75.90	74.49	74.97	75.13	72.27	73.63	75.05	72.93	74.29	75.42	74.13	75.02
4	75.11	72.94	74.09	76.11	73.58	74.92	76.00	72.34	74.04	75.50	72.10	73.68
5	75.62	71.47	73.50	76.05	72.41	73.95	76.24	72.56	74.56	75.74	72.88	74.43
6	75.79	72.27	74.14	76.11	72.09	74.43	76.23	73.81	75.00	75.51	72.66	74.32
7	75.83	73.70	75.02	75.20	73.39	74.25	75.90	73.38	74.62	75.24	72.87	74.07
8	75.96	73.13	74.42	74.50	72.57	73.23	75.43	72.83	74.22	75.20	72.67	74.13
9	76.25	73.89	75.36	74.62	71.63	72.90	75.37	72.09	74.05	75.32	72.79	74.24
10	76.06	74.63	75.36	74.74	72.30	73.23	74.97	72.27	73.90	75.02	71.89	73.40
11	75.86	74.09	74.74	74.43	72.05	73.26	76.11	73.57	75.06	74.00	71.42	72.92
12	74.68	72.65	73.82	74.85	72.36	73.66	75.62	73.53	74.84	74.94	72.15	73.74
13	75.22	72.32	74.11	76.04	73.31	74.64	75.54	74.07	74.73	75.67	71.62	73.86
14	74.63	71.66	73.62	76.04	73.81	74.90	75.86	73.07	74.58	75.69	72.66	74.28
15	75.19	72.38	74.20	75.05	73.45	73.98	76.40	74.05	75.26	76.00	72.53	74.31
16	75.67	72.25	74.29	74.85	71.24	72.82	76.43	75.13	75.71	76.18	73.48	74.78
17	75.86	73.13	74.48	76.17	73.30	74.58	75.80	73.26	74.58	75.78	73.20	74.68
18	75.85	73.13	74.22	76.24	73.81	74.97	75.82	72.74	74.45	75.77	73.05	74.43
19	75.03	71.67	73.11	76.33	73.13	74.61	75.42	72.57	74.14	75.59	71.46	73.62
20	75.00	72.69	73.99	76.07	74.64	75.55	75.19	73.68	74.27	75.33	72.30	74.02
21	74.76	72.18	73.70	75.59	72.99	73.99	75.31	71.25	73.18	75.55	72.38	74.24
22	74.52	71.66	73.43	74.57	72.42	73.46	75.24	71.92	73.74	76.38	72.55	74.53
23	75.53	71.89	73.70	74.84	72.09	73.57	75.47	72.86	74.43	75.77	73.13	74.45
24	74.42	71.65	72.59	75.30	73.42	74.63	75.47	73.30	74.50	75.78	74.18	74.82
25	72.80	69.65	71.55	75.90	72.32	74.04	75.79	72.65	74.16	75.54	72.79	74.28
26	74.15	71.64	72.97	75.79	73.46	74.67	75.75	73.67	74.65	75.35	72.38	73.89
27	74.49	72.19	73.49	75.84	73.46	74.79	75.10	72.28	73.53	75.87	72.15	74.23
28	74.55	71.41	73.16	75.89	73.14	74.56	74.92	71.68	73.07	75.38	72.06	73.94
29	74.63	71.62	73.44	75.27	73.19	74.03	75.50	72.21	73.82	75.00	71.97	73.57
30	75.07	71.93	73.50	75.02	71.82	73.56	75.80	72.70	74.33	74.83	71.95	73.30
31	74.48	71.50	72.92	---	---	---	75.22	73.23	74.35	74.64	73.10	73.87
MONTH	76.25	69.65	73.91	76.33	71.24	74.06	76.43	71.25	74.32	76.38	71.42	74.09

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	74.35	71.58	73.28	73.54	71.99	72.65	74.21	72.01	73.02	74.77	73.58	74.31
2	74.42	71.75	73.10	72.76	71.61	72.13	73.06	72.21	72.69	74.85	73.93	74.43
3	74.68	71.67	73.33	73.89	72.65	73.36	73.60	72.54	73.13	74.86	73.57	74.09
4	75.60	71.93	73.83	75.14	73.72	74.29	73.31	72.47	72.86	75.02	73.37	74.06
5	75.57	71.56	74.21	75.78	72.87	74.50	74.04	72.36	73.33	74.47	73.24	73.99
6	75.75	71.49	73.33	73.22	71.64	72.49	73.84	72.08	72.66	75.13	73.68	74.32
7	75.06	71.89	73.37	72.90	71.89	72.51	73.17	71.94	72.48	75.85	73.10	74.47
8	75.90	71.94	73.85	73.67	71.51	72.77	74.42	71.47	73.00	76.04	74.29	74.89
9	75.68	72.37	73.92	76.01	73.71	75.00	74.82	72.13	73.29	76.31	74.88	75.66
10	75.35	72.07	73.66	75.88	74.37	75.25	75.00	72.96	73.87	76.34	74.73	75.62
11	75.13	71.73	73.52	74.82	73.72	74.28	75.98	74.39	75.17	76.14	74.77	75.52
12	74.91	71.95	73.39	74.72	73.82	74.28	74.52	71.85	73.28	75.48	74.13	74.67
13	74.72	71.49	73.10	75.35	74.19	74.71	75.32	73.70	74.65	75.25	74.17	74.82
14	75.52	72.12	73.61	75.73	73.93	74.83	75.68	73.30	74.90	75.56	74.63	75.05
15	75.59	73.88	74.68	74.03	72.47	73.17	73.83	72.40	72.96	75.81	74.58	75.35
16	75.58	72.01	73.61	73.29	71.33	72.30	75.39	73.78	74.35	75.70	74.86	75.21
17	75.65	72.35	74.16	72.35	71.42	71.94	75.44	73.21	73.96	75.53	74.53	75.11
18	74.89	71.99	73.31	72.51	71.91	72.20	73.70	72.60	72.97	75.41	74.56	74.99
19	75.91	71.83	73.74	73.97	71.57	72.50	75.70	72.47	73.89	75.36	73.88	74.68
20	75.38	74.26	74.81	74.07	72.95	73.59	75.58	71.66	73.72	75.23	74.41	74.83
21	74.98	74.34	74.63	74.04	72.18	73.03	73.91	71.89	73.02	75.21	74.14	74.78
22	74.90	73.97	74.59	72.85	71.31	72.04	73.99	72.25	73.25	75.47	74.43	75.08
23	75.17	74.07	74.65	72.20	71.45	71.84	75.09	73.17	74.27	75.83	74.72	75.30
24	75.23	74.30	74.65	72.39	71.75	72.15	74.05	72.49	73.21	75.80	74.11	74.96
25	74.98	74.50	74.74	72.85	71.82	72.24	73.50	72.24	72.99	75.53	74.32	75.02
26	75.00	72.26	74.13	72.93	72.26	72.59	73.77	72.19	73.06	75.55	74.00	74.91
27	74.78	72.06	73.63	74.01	72.22	72.88	74.14	72.71	73.50	75.49	74.65	75.08
28	74.95	73.34	73.93	73.05	72.12	72.66	75.92	73.62	75.00	75.54	74.37	74.92
29	---	---	---	73.83	72.36	73.17	75.78	74.21	75.01	75.79	74.73	75.10
30	---	---	---	74.84	72.99	74.00	74.25	72.12	73.35	75.79	74.53	75.09
31	---	---	---	74.39	72.86	73.47	---	---	---	76.01	74.63	75.29
MONTH	75.91	71.49	73.88	76.01	71.31	73.19	75.98	71.47	73.56	76.34	73.10	74.89

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	75.65	73.43	74.62	75.34	74.08	74.88	76.11	75.43	75.80	76.36	74.68	75.42
2	76.42	74.86	75.54	75.42	74.24	74.85	76.02	74.72	75.18	76.37	75.22	75.88
3	76.33	74.81	75.37	75.28	74.19	74.91	76.45	74.27	75.31	76.36	74.71	75.46
4	76.13	75.01	75.56	74.78	74.06	74.47	76.07	75.14	75.58	76.20	75.87	76.03
5	75.87	75.23	75.58	75.32	74.16	74.89	76.10	73.10	74.48	76.43	75.92	76.18
6	75.93	74.93	75.48	75.36	73.83	74.60	76.45	74.10	75.45	76.19	75.15	75.60
7	76.12	74.89	75.53	75.68	74.12	75.02	76.43	75.84	76.15	76.41	74.86	75.50
8	76.17	74.79	75.53	76.02	74.30	75.06	76.16	74.81	75.69	75.82	74.81	75.33
9	75.53	74.30	75.05	76.39	74.76	75.51	74.70	72.31	73.56	76.22	74.55	75.37
10	76.58	74.84	75.59	75.69	74.70	75.28	75.69	73.39	74.53	76.48	74.74	75.36
11	76.07	74.99	75.47	75.83	74.57	75.05	76.00	73.18	74.77	76.45	74.25	75.41
12	75.95	75.19	75.50	76.31	75.45	75.92	76.26	74.06	75.36	76.34	75.09	75.80
13	76.57	75.31	75.65	76.41	74.51	75.79	75.91	73.36	74.53	76.43	74.81	75.60
14	76.35	74.70	75.44	76.25	74.36	75.61	76.21	75.69	76.00	76.31	74.39	75.33
15	75.83	74.72	75.14	76.52	75.25	75.92	75.96	74.33	74.79	76.26	74.59	75.64
16	75.21	73.58	74.51	76.50	74.52	75.66	75.85	73.37	74.34	76.22	74.57	75.44
17	74.15	72.11	73.41	76.19	75.08	75.46	75.96	74.87	75.35	76.26	74.77	75.67
18	72.12	71.35	71.69	75.78	74.92	75.34	75.84	74.74	75.17	76.21	74.95	75.51
19	74.04	71.85	72.71	76.08	74.84	75.56	76.03	75.20	75.72	75.97	75.21	75.47
20	75.21	73.70	74.69	76.37	74.47	75.40	76.43	74.26	75.37	76.06	75.01	75.60
21	75.41	74.47	74.79	75.71	74.69	75.28	76.47	74.77	75.80	76.04	74.78	75.44
22	75.36	74.50	74.92	75.86	74.96	75.32	76.20	75.16	75.52	76.05	74.86	75.65
23	75.38	74.67	75.04	76.08	75.20	75.59	76.47	74.57	75.45	76.13	74.95	75.66
24	75.09	73.81	74.75	76.03	75.33	75.76	76.42	74.79	75.57	76.30	74.75	75.64
25	74.96	74.13	74.70	76.26	75.57	75.84	76.29	75.29	75.82	76.29	75.32	75.76
26	75.53	74.46	74.90	76.44	75.04	75.66	76.18	75.27	75.67	76.14	75.24	75.59
27	75.53	74.40	75.09	76.36	73.42	74.87	76.39	75.43	75.99	76.18	75.16	75.58
28	75.31	74.34	74.77	76.53	73.75	75.39	76.26	75.88	76.11	76.24	74.83	75.50
29	75.75	74.70	75.23	75.56	72.69	73.91	76.08	75.46	75.69	76.08	75.03	75.38
30	75.51	74.31	74.76	75.18	72.59	73.72	76.02	75.40	75.80	75.35	74.20	74.82
31	---	---	---	76.02	74.62	75.33	76.36	74.77	75.64	---	---	---
MONTH	76.58	71.35	74.90	76.53	72.59	75.22	76.47	72.31	75.36	76.48	74.20	75.55

YEAR	76.58	69.65	74.42
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COLUMBIA RIVER MAIN STEM

37

14128870 COLUMBIA RIVER BELOW BONNEVILLE DAM, OR

LOCATION.--Lat 45°38'20", long 121°57'16", in sec.21, T.2 N., R.7 E., Multnomah County, Hydrologic Unit 17080001, on left bank 0.4 mi (0.6 km) downstream from Bonneville Dam left bank powerhouse, 0.5 mi (0.8 km) upstream from Tanner Creek, and at mile 145.0 (233.3 km).

DRAINAGE AREA.--239,900 mi² (621,300 km²), approximately.

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

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

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 30.40 ft (9.266 m) June 11, 1981; minimum, 7.00 ft (2.134 m) Oct. 4, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 30.22 ft (9.211 m) June 24; minimum, 7.00 ft (2.134 m) Oct. 4.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.00	11.56	12.16	10.57	9.73	10.08	14.49	11.42	13.12	16.02	15.46	15.76
2	12.52	11.19	11.98	12.31	8.77	10.15	15.59	14.48	15.26	15.84	14.50	15.18
3	12.21	7.38	9.66	12.53	10.95	11.32	15.54	15.18	15.39	16.50	14.19	14.67
4	9.30	7.00	8.45	13.32	9.61	11.21	15.54	14.89	15.26	17.58	16.53	17.16
5	12.70	8.56	11.40	14.02	12.00	13.37	16.22	14.84	15.61	17.69	16.25	17.22
6	13.31	12.10	12.95	14.25	9.69	12.97	18.06	16.05	16.99	17.69	16.48	17.45
7	13.79	13.21	13.56	12.05	10.78	11.49	19.29	18.03	18.88	17.77	16.34	17.43
8	13.88	13.42	13.71	10.74	9.43	9.98	19.10	18.76	18.91	17.75	15.75	17.13
9	13.87	11.28	12.97	11.77	9.14	10.00	19.02	16.67	17.99	17.89	17.49	17.64
10	12.00	9.27	10.59	14.12	11.63	12.67	17.72	15.30	16.84	17.72	16.78	17.30
11	11.43	8.96	10.60	13.40	11.82	12.37	16.98	15.39	16.25	17.16	15.72	16.59
12	13.43	11.03	12.63	13.19	10.86	11.98	16.40	15.84	16.08	16.77	16.15	16.52
13	14.66	12.31	13.17	12.60	10.64	11.43	16.28	15.66	15.89	17.37	16.38	16.90
14	12.69	11.58	12.30	13.98	12.02	12.91	16.39	14.94	15.71	17.36	15.92	16.63
15	12.57	11.98	12.30	13.92	12.55	13.11	17.26	15.72	16.57	17.22	15.49	16.47
16	14.61	12.28	13.60	14.01	11.14	12.90	19.17	17.17	18.57	16.93	15.06	15.82
17	14.66	10.00	11.70	12.92	10.57	11.81	18.93	16.18	17.62	18.37	16.75	17.71
18	10.80	9.60	10.00	13.89	12.88	13.42	17.15	16.14	16.61	18.40	17.52	18.20
19	11.63	10.20	11.05	14.46	13.10	13.76	19.55	16.69	19.08	18.30	17.50	18.09
20	12.25	11.46	11.86	14.48	14.01	14.25	19.12	17.41	18.18	18.03	17.07	17.70
21	13.78	11.84	12.74	15.03	13.34	14.36	18.03	16.84	17.58	18.10	15.50	17.58
22	14.04	12.51	12.92	13.34	11.39	12.35	17.53	17.01	17.32	18.02	17.29	17.78
23	14.45	12.53	13.70	13.09	11.87	12.59	17.13	16.89	17.02	19.48	17.79	18.61
24	15.03	13.64	14.66	14.32	12.64	13.53	17.46	16.67	17.10	19.68	19.26	19.48
25	13.41	9.30	11.16	14.73	13.36	14.01	17.32	17.08	17.23	19.65	19.11	19.32
26	11.34	8.40	10.04	14.75	11.54	12.83	17.32	16.79	17.03	20.30	19.06	19.70
27	13.10	10.65	11.25	14.65	12.69	13.73	17.31	17.02	17.15	20.30	19.90	20.10
28	13.58	12.75	13.09	14.75	12.95	14.05	17.78	17.03	17.27	20.34	19.88	20.11
29	14.09	12.62	13.30	13.18	12.08	12.61	17.24	16.05	16.72	20.32	20.05	20.17
30	14.58	12.80	13.46	14.06	11.13	12.34	16.24	14.70	15.54	20.20	18.84	19.66
31	14.57	9.52	11.33	---	---	---	16.07	15.10	15.59	18.93	18.19	18.50
MONTH	15.03	7.00	12.07	15.03	8.77	12.45	19.55	11.42	16.79	20.34	14.19	17.70

14128870 COLUMBIA RIVER BELOW BONNEVILLE, OR--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	18.26	17.85	18.05	26.92	25.31	26.19	23.54	22.60	22.94	21.75	20.41	21.30
2	17.95	15.86	17.67	27.23	26.28	26.75	23.25	22.07	22.63	22.73	21.71	22.40
3	17.82	17.47	17.66	26.48	25.67	26.34	22.37	22.03	22.20	23.26	22.65	22.86
4	17.65	17.28	17.48	26.55	26.18	26.37	22.20	21.09	21.67	24.67	22.70	24.17
5	17.36	16.79	17.14	26.60	25.51	26.31	22.38	20.78	21.15	25.33	24.15	24.76
6	17.29	16.95	17.12	25.55	24.36	25.08	23.63	22.39	23.03	25.29	24.31	24.85
7	17.59	17.10	17.31	24.34	22.83	23.60	22.98	22.02	22.68	24.86	22.82	23.94
8	17.49	17.24	17.38	23.67	22.63	23.16	22.92	18.59	20.97	23.07	22.79	22.90
9	17.55	16.81	17.38	23.65	23.16	23.43	21.07	18.13	20.00	24.20	22.81	23.59
10	17.48	16.87	17.34	25.98	23.37	24.89	19.38	17.40	18.60	25.19	24.14	24.62
11	17.63	17.04	17.47	26.35	25.58	25.96	21.60	18.89	19.79	25.39	24.50	25.04
12	17.64	17.32	17.48	26.22	25.44	26.02	22.83	21.66	22.11	25.20	23.33	24.50
13	17.75	17.28	17.51	26.60	25.99	26.24	24.43	21.72	22.99	24.36	22.92	23.69
14	18.44	17.75	18.15	28.27	26.56	27.27	27.61	24.36	26.35	23.94	23.39	23.57
15	18.84	18.35	18.56	28.32	27.59	28.12	27.60	25.79	26.65	24.22	23.53	23.92
16	20.00	18.60	19.24	28.24	26.05	27.53	28.00	26.38	27.13	24.89	24.01	24.20
17	20.30	19.53	19.97	27.42	26.88	27.18	---	---	---	25.94	24.68	25.13
18	25.15	19.12	22.05	26.97	26.65	26.82	---	---	---	28.16	25.92	26.96
19	25.83	25.08	25.51	26.70	23.58	25.15	24.13	---	---	28.24	26.63	27.51
20	29.98	26.01	28.07	23.59	23.15	23.36	25.23	23.50	24.51	28.10	26.34	26.96
21	29.38	27.72	28.56	24.18	23.10	23.67	24.98	23.74	24.40	28.79	27.65	28.26
22	28.09	27.19	27.68	23.85	22.80	23.32	24.84	23.20	23.77	27.69	25.97	26.95
23	28.72	27.60	28.19	23.68	23.00	23.19	23.28	20.28	21.95	26.80	25.95	26.27
24	28.68	27.96	28.44	23.30	22.99	23.18	23.13	20.50	21.95	27.14	26.29	26.73
25	28.82	28.37	28.60	23.29	23.08	23.16	23.28	21.18	22.50	28.04	26.33	27.17
26	28.45	27.52	27.87	23.45	22.52	23.00	22.09	20.73	21.34	28.30	26.15	27.57
27	27.52	24.52	25.94	22.68	22.13	22.47	21.39	20.93	21.20	29.48	27.02	28.12
28	26.46	25.49	26.13	22.62	22.40	22.48	22.80	21.06	21.76	29.51	27.18	28.25
29	---	---	---	23.42	21.93	22.40	23.17	22.45	22.83	27.77	25.62	26.76
30	---	---	---	22.38	21.67	21.86	23.13	20.43	21.90	27.75	25.94	27.17
31	---	---	---	23.52	22.29	22.73	---	---	---	26.00	23.59	24.66
MONTH	29.98	15.86	21.43	28.32	21.67	24.75	28.00	17.40	22.56	29.51	20.41	25.32
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	24.15	22.51	23.48	29.19	27.54	28.19	14.66	11.93	12.71	14.46	12.70	13.64
2	25.86	23.52	24.43	28.55	27.24	27.97	15.90	12.69	14.89	13.09	12.12	12.60
3	25.20	23.20	24.01	27.90	26.96	27.48	15.55	13.90	14.53	13.03	11.39	12.05
4	25.81	23.04	24.55	28.01	26.75	27.24	17.73	14.44	15.53	11.53	9.69	10.22
5	24.93	23.07	24.29	27.40	25.84	26.47	18.07	16.00	17.11	10.46	9.57	9.95
6	25.13	24.86	24.97	26.29	24.78	25.44	18.93	18.08	18.61	11.46	9.88	10.41
7	25.73	23.72	24.70	26.43	24.87	25.55	19.06	18.75	18.87	14.10	11.27	12.63
8	25.70	23.65	24.65	26.04	23.68	25.03	19.08	18.77	18.93	15.80	13.93	14.48
9	24.17	23.00	23.79	24.47	22.56	23.52	19.10	16.33	18.33	16.50	14.68	15.63
10	24.05	22.60	23.17	24.11	22.21	22.78	16.35	15.41	15.86	15.48	13.68	14.77
11	23.53	22.86	23.27	23.86	22.99	23.53	15.85	14.87	15.38	14.21	12.28	13.02
12	23.51	23.25	23.40	24.59	22.76	23.59	18.41	14.88	16.79	12.70	11.83	12.21
13	23.55	22.64	23.44	23.31	22.33	22.66	18.55	14.20	16.03	14.46	12.00	12.95
14	25.11	22.60	23.77	23.18	22.06	22.43	15.70	13.17	14.28	14.65	13.19	14.08
15	27.25	24.99	26.50	22.93	20.87	22.07	13.42	12.07	12.67	15.26	14.13	14.70
16	28.38	26.84	27.70	22.41	20.41	21.36	13.10	11.93	12.67	14.51	12.47	13.44
17	28.94	27.89	28.44	20.41	20.02	20.21	16.14	12.65	14.84	13.94	12.21	12.90
18	28.90	28.36	28.60	20.37	18.47	19.82	16.46	13.28	15.23	13.27	10.12	11.13
19	28.63	28.19	28.37	19.73	17.49	18.71	16.44	15.31	15.92	11.90	9.78	10.99
20	28.90	27.82	28.37	21.41	18.55	19.49	18.04	16.30	16.78	13.35	10.20	12.25
21	29.16	28.43	28.87	20.00	18.15	18.93	18.23	13.87	15.07	12.99	11.40	11.83
22	29.13	28.68	28.86	20.33	19.16	20.02	14.63	12.99	13.83	12.07	11.04	11.38
23	29.28	28.80	29.03	20.32	17.62	19.42	13.43	12.29	12.84	11.64	10.90	11.18
24	30.22	28.57	29.07	17.68	16.66	17.11	13.77	13.30	13.53	11.72	10.15	11.30
25	29.40	28.45	28.89	17.14	16.40	16.85	14.16	12.05	12.97	10.59	9.31	9.83
26	28.78	27.74	28.25	19.50	16.70	18.36	12.40	10.17	10.83	9.78	8.99	9.43
27	28.85	27.88	28.26	19.62	17.57	18.67	10.87	9.01	10.08	11.14	9.27	10.00
28	28.35	27.63	28.07	19.24	18.33	18.87	9.87	8.66	9.52	12.31	10.78	11.42
29	28.51	27.64	28.02	19.14	18.52	18.97	9.91	8.90	9.56	12.53	11.05	11.68
30	28.51	27.32	28.08	19.12	17.01	18.38	11.39	8.18	10.36	11.52	10.40	10.95
31	---	---	---	18.70	14.44	15.35	14.34	10.13	12.72	---	---	---
MONTH	30.22	22.51	26.31	29.19	14.44	21.76	19.10	8.18	14.43	16.50	8.99	12.10
YEAR	30.22	7.00	18.93									

COLUMBIA RIVER MAIN STEM

14128910 COLUMBIA RIVER AT WARRENDALE, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°36'45", long 122°01'35", in NE¼SE¼ sec.35, T.2 N., R.6 E., Multnomah County, Hydrologic Unit 17080001, on left bank 0.1 mi (0.2 km) downstream from Tumult Creek, 1.0 mi (1.6 km) west of Warrendale, 5.1 mi (9.2 km) downstream from Bonneville Dam, and at mile 141.0 (226.9 km).

DRAINAGE AREA.--240,000 mi² (621,600 km²), approximately.

WATER-STAGE RECORDS

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

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

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height recorded, 30.91 ft (9.421 m) June 20, 1972; minimum, 4.49 ft (1.369 m) July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 25.84 ft (7.876 m) Feb. 20; minimum, 4.93 ft (1.503 m) Oct. 4.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.43	8.11	8.66	7.99	7.08	7.46	10.93	8.88	9.67	12.67	11.96	12.30
2	9.44	8.30	8.73	8.73	6.22	7.18	12.22	10.98	12.08	12.35	11.47	11.99
3	8.96	5.76	7.26	8.87	7.85	8.19	12.20	11.80	11.97	11.93	11.04	11.38
4	6.69	4.93	5.95	8.92	6.50	7.73	11.98	11.59	11.80	13.65	11.99	13.06
5	8.59	6.12	7.47	9.43	8.57	9.13	13.08	11.63	12.33	13.73	13.21	13.53
6	9.50	8.65	9.14	9.80	7.84	9.14	14.92	13.08	14.06	13.86	13.16	13.60
7	10.02	9.51	9.85	8.71	7.84	8.24	16.11	14.93	15.69	13.78	13.10	13.50
8	10.14	9.66	9.93	7.83	6.51	7.21	15.98	15.56	15.76	13.72	12.57	13.25
9	10.17	8.59	9.66	8.09	6.16	7.02	15.73	14.73	15.31	13.94	13.36	13.58
10	9.04	7.13	8.14	9.61	7.92	8.94	15.18	13.64	14.49	13.79	13.12	13.38
11	8.60	6.75	7.83	10.38	8.42	9.15	14.32	12.94	13.61	13.43	12.52	12.84
12	9.98	8.03	9.15	10.10	8.48	9.37	13.53	12.78	13.04	12.93	12.35	12.62
13	10.34	9.14	9.79	9.90	8.16	8.83	13.16	12.25	12.63	13.18	12.35	12.73
14	9.60	8.72	9.16	11.52	9.41	10.00	13.15	12.14	12.64	13.21	12.34	12.70
15	9.66	8.70	9.11	11.38	9.59	10.27	14.47	12.65	13.54	12.88	12.00	12.38
16	10.92	9.02	9.85	11.31	8.92	10.11	15.42	14.47	15.08	12.87	11.69	12.28
17	10.94	7.49	8.91	9.98	8.14	9.07	15.31	13.74	14.43	14.67	12.91	13.97
18	8.27	6.73	7.31	10.42	9.80	10.13	13.83	13.15	13.45	14.78	14.30	14.59
19	8.41	7.44	7.88	10.70	9.66	10.16	15.96	13.21	15.25	14.57	14.18	14.42
20	8.68	7.91	8.37	10.84	10.45	10.62	15.78	14.86	15.20	14.27	13.62	14.00
21	9.23	8.22	8.67	11.29	10.47	10.91	14.92	14.23	14.58	14.17	13.10	13.87
22	9.23	8.76	8.97	10.41	9.03	9.76	14.36	13.81	14.07	14.09	13.61	13.81
23	10.31	8.76	9.57	10.33	9.37	9.78	13.78	13.50	13.62	16.29	14.00	14.98
24	10.91	10.15	10.53	11.09	9.77	10.41	14.13	13.33	13.68	16.78	16.17	16.49
25	10.33	7.23	8.62	11.17	10.23	10.73	13.96	13.72	13.84	16.70	16.02	16.30
26	8.43	6.37	7.37	11.11	9.25	10.06	14.00	13.35	13.65	17.04	16.30	16.58
27	9.45	7.60	8.22	11.18	9.74	10.41	13.95	13.61	13.76	17.06	16.55	16.78
28	10.34	9.19	9.68	11.13	10.12	10.60	14.02	13.63	13.84	16.72	16.49	16.63
29	10.51	9.47	9.98	10.11	9.15	9.58	13.88	13.17	13.41	16.68	16.38	16.52
30	10.71	9.32	9.87	10.05	8.40	9.23	13.28	11.99	12.60	16.45	15.44	16.03
31	10.47	7.80	8.73	---	---	---	12.66	11.84	12.11	15.44	14.44	14.88
MONTH	10.94	4.93	8.79	11.52	6.16	9.31	16.11	8.88	13.59	17.06	11.04	14.03

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	14.48	13.95	14.20	22.05	20.94	21.49	18.13	17.55	17.80	16.67	15.85	16.32
2	13.97	13.34	13.78	22.27	21.87	22.10	17.88	17.31	17.63	17.51	16.99	17.15
3	13.69	13.31	13.57	21.90	21.63	21.80	17.61	17.20	17.31	17.97	17.41	17.76
4	13.39	13.04	13.25	21.92	21.64	21.80	17.32	16.42	16.98	19.28	17.67	18.73
5	13.02	12.47	12.76	21.85	21.35	21.66	16.90	16.05	16.30	19.79	19.18	19.49
6	13.04	12.47	12.68	21.31	20.07	20.67	18.21	16.91	17.82	19.88	19.44	19.65
7	13.47	12.70	13.01	20.12	18.50	19.26	17.93	17.52	17.76	19.55	18.32	19.07
8	13.35	12.91	13.10	18.86	18.17	18.49	17.68	15.25	16.64	18.32	17.83	18.01
9	13.35	12.81	13.09	18.94	18.63	18.79	16.01	14.40	15.53	18.81	17.82	18.34
10	13.29	12.93	13.09	20.66	18.83	19.73	14.53	13.48	14.17	19.59	18.79	19.23
11	13.43	12.92	13.23	21.22	20.58	20.95	16.50	14.44	14.96	19.97	19.44	19.72
12	13.46	13.10	13.26	21.29	20.88	21.09	17.50	16.45	17.04	19.76	18.81	19.41
13	13.67	12.99	13.29	21.55	21.08	21.25	19.14	17.27	17.99	18.89	18.02	18.54
14	14.76	13.67	14.29	22.87	21.55	22.06	22.28	19.18	20.85	18.56	18.28	18.39
15	15.35	14.74	15.01	23.05	22.72	22.92	22.34	21.55	21.86	18.81	18.30	18.58
16	16.37	15.22	15.69	22.90	21.84	22.49	22.49	21.62	22.19	19.21	18.68	18.83
17	16.89	16.36	16.65	22.20	21.80	22.05	---	---	---	20.01	19.19	19.64
18	20.20	16.30	17.71	21.83	21.50	21.71	---	---	---	22.24	20.02	21.14
19	21.83	20.25	21.35	21.51	19.00	20.43	18.90	18.20	18.50	22.40	21.59	22.06
20	25.84	21.83	23.76	19.00	18.12	18.49	19.75	18.70	19.15	22.12	21.33	21.64
21	25.78	24.70	25.22	18.79	17.98	18.40	---	---	---	23.20	22.14	22.76
22	24.69	23.93	24.20	18.60	17.96	18.24	---	---	---	22.53	21.16	21.90
23	24.49	23.92	24.20	18.17	17.92	18.04	---	---	---	21.34	20.89	21.06
24	24.28	23.95	24.12	18.13	17.88	17.99	---	---	---	21.68	21.29	21.45
25	24.22	24.00	24.08	18.21	17.92	18.06	---	---	---	22.40	21.29	21.74
26	24.01	23.22	23.53	18.31	17.62	17.99	---	---	---	22.77	21.44	22.38
27	23.23	21.20	21.83	17.66	17.29	17.46	---	---	---	23.60	21.56	22.43
28	21.90	21.13	21.55	17.68	17.32	17.46	17.46	16.37	16.78	23.69	22.36	23.01
29	---	---	---	17.75	17.22	17.49	17.93	17.47	17.71	22.35	20.86	21.56
30	---	---	---	17.24	16.79	17.03	18.05	16.23	17.37	22.18	21.15	21.88
31	---	---	---	18.08	16.95	17.57	---	---	---	21.09	18.82	19.86
MONTH	25.84	12.47	17.34	23.05	16.79	19.84	22.49	13.48	17.73	23.69	15.85	20.06

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.79	17.93	18.40	23.11	22.35	22.69	10.56	8.70	9.29	10.36	9.21	9.84
2	19.55	18.40	18.94	22.88	22.13	22.56	11.33	8.87	10.34	9.55	8.71	9.11
3	19.45	18.26	18.72	22.22	21.78	22.05	11.26	10.07	10.60	9.55	8.28	8.85
4	20.25	18.23	19.38	22.17	21.45	21.89	11.95	10.28	11.10	8.54	6.87	7.65
5	19.50	18.18	18.82	21.56	20.76	21.23	13.06	11.60	12.41	7.74	6.73	7.26
6	19.70	19.42	19.58	20.81	19.78	20.30	14.05	13.02	13.74	8.29	6.94	7.46
7	20.18	18.74	19.54	20.40	20.01	20.19	14.33	14.03	14.16	10.06	7.90	8.75
8	19.86	18.63	19.28	20.49	18.85	19.95	14.35	14.16	14.24	11.07	9.89	10.24
9	19.19	18.10	18.72	18.99	17.83	18.55	14.41	12.63	13.95	11.74	10.97	11.37
10	18.37	17.74	17.97	18.32	17.28	17.61	12.66	11.28	11.82	11.30	10.05	10.83
11	18.22	17.71	18.03	18.49	17.93	18.32	11.64	10.76	11.27	10.35	8.72	9.51
12	18.22	17.97	18.10	18.86	17.78	18.25	13.32	10.90	11.94	9.31	8.42	8.81
13	18.25	17.96	18.17	18.41	17.35	17.65	13.62	10.83	12.09	9.48	8.38	9.11
14	19.32	17.59	18.25	17.70	17.07	17.27	11.04	9.55	10.53	10.45	9.38	9.92
15	21.38	19.31	20.62	17.47	16.20	17.09	9.95	8.58	9.28	10.87	10.20	10.52
16	22.62	21.43	21.97	16.81	15.88	16.32	9.44	8.45	9.09	9.62	9.35	9.52
17	23.22	22.44	22.78	15.84	15.23	15.41	11.57	9.02	10.56	10.16	8.80	9.40
18	23.29	23.00	23.12	15.40	14.45	15.11	11.78	10.30	11.19	10.06	7.69	8.63
19	23.13	22.86	22.99	14.71	13.58	14.08	12.08	11.29	11.75	9.16	7.23	8.15
20	23.38	22.63	22.95	15.27	14.27	14.70	13.20	11.95	12.35	9.98	7.67	8.99
21	23.68	23.25	23.47	15.07	14.03	14.37	13.35	10.29	11.55	9.93	8.24	8.84
22	23.58	23.35	23.50	15.38	14.85	15.12	10.80	9.52	10.25	9.04	7.83	8.30
23	23.86	23.44	23.64	15.38	13.73	14.94	9.90	8.98	9.34	8.61	7.61	7.97
24	23.86	23.53	23.68	13.70	12.46	12.91	9.82	9.47	9.63	8.53	7.54	8.13
25	23.81	23.30	23.60	12.71	12.22	12.49	10.19	8.82	9.43	7.93	6.45	7.10
26	23.34	22.59	23.03	14.13	12.33	13.38	9.29	7.07	7.90	7.18	6.22	6.70
27	23.20	22.59	22.85	14.38	13.59	13.97	7.96	6.52	7.16	7.53	6.48	6.98
28	22.93	22.43	22.76	14.22	13.87	14.05	7.20	6.34	6.68	8.74	7.46	8.15
29	22.91	22.35	22.61	14.21	13.93	14.13	7.32	6.32	6.74	8.50	7.87	8.26
30	22.92	22.37	22.73	14.21	13.06	13.68	7.87	6.10	7.16	8.21	7.58	7.90
31	---	---	---	13.88	10.62	11.65	9.97	7.46	8.74	---	---	---
MONTH	23.86	17.59	20.94	23.11	10.62	16.84	14.41	6.10	10.53	11.74	6.22	8.74

YEAR	25.84	4.93	14.72									
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COLUMBIA RIVER MAIN STEM

41

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURES: October 1975 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 202 micromhos Mar. 1; minimum, 95 micromhos June 26, 27.

WATER TEMPERATURES: Maximum, 21.5°C Aug. 22-26, Sept. 2, 6; minimum, 3.5°C Jan. 7-15, 18-23, Feb. 6-14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 15...	1200	132000	158	7.8	14.5	9.5	K4	K8	65	3.0	18
FEB 11...	1200	201000	202	7.7	3.0	13.2	K2	E88	81	3.0	22
MAR 03...	1230	351000	181	--	4.5	15.8	K17	K3500	68	.00	18
MAY 28...	1000	403000	140	8.0	13.5	13.3	K4	K9	57	1.0	16
JUL 28...	0900	231000	120	8.1	19.5	9.6	K11	120	54	.00	15
SEP 02...	1100	134000	129	8.1	22.0	--	K1	K28	54	2.0	15

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 15...	4.8	6.5	1.2	62	--	10	3.5	.2	.130	<.10	.68
FEB 11...	6.4	9.2	1.8	78	--	16	4.6	.2	.080	.46	.62
MAR 03...	5.7	9.6	1.8	68	--	8.0	4.6	.2	.090	.88	.73
MAY 28...	4.2	5.2	1.3	56	54	5.0	2.7	.2	.120	<.10	.60
JUL 28...	3.9	4.0	1.0	57	52	9.0	1.7	.1	.090	<.10	.40
SEP 02...	3.9	3.8	.7	52	54	9.0	1.6	.1	.240	<.10	1.40

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 15...	.09	.030	.030	7.2	91	89	32400	2.1	6	2140	95
FEB 11...	.12	.040	--	14	122	121	66200	10	--	--	--
MAR 03...	.15	.070	.090	18	112	107	106000	39	83	78700	95
MAY 28...	.06	.030	.130	11	84	78	91400	7.4	42	45700	69
JUL 28...	.12	.020	.050	6.9	73	73	45500	4.0	13	8110	82
SEP 02...	.03	.020	.060	7.0	77	74	27900	2.5	4	1450	78

COLUMBIA RIVER MAIN STEM

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 15...	3	3	39	<100	<1	<1	<10	<10	<3	1
FEB 11...	2	1	33	<100	<1	<1	<10	<10	<3	1
MAR 03...	1	2	34	100	<1	1	<10	10	<3	2
SEP 02...	2	2	37	<100	<1	<1	<10	<10	<1	<1

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 15...	4	13	6	210	2	6	2	20	<.1
FEB 11...	1	2	39	770	<1	1	4	40	.2
MAR 03...	3	22	77	3800	<1	3	4	90	.2
SEP 02...	2	7	4	180	<1	<1	2	20	<.1

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 15...	.1	<1	9	<1	<1	<1	<1	15	30
FEB 11...	.5	<1	2	<1	<1	<1	<1	25	30
MAR 03...	.4	1	3	<1	<1	<1	<1	5	40
SEP 02...	<.1	<1	2	<1	<1	1	<1	12	10

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

COLUMBIA RIVER MAIN STEM

43

14128910 COLUMBIA RIVER AT WARRENDAL, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	159	---	178	181	200	157	167	133	100	131	129
2	151	161	164	181	184	193	159	168	133	101	129	129
3	---	164	176	190	188	179	161	171	133	103	131	129
4	---	163	190	198	192	170	161	176	131	104	129	129
5	152	165	---	200	196	165	162	179	130	105	129	129
6	---	168	---	198	199	159	163	181	128	104	130	129
7	---	170	172	199	200	156	163	180	126	106	130	129
8	147	169	178	199	198	155	164	178	124	108	130	131
9	---	169	182	196	197	159	164	172	122	109	131	132
10	---	167	189	191	197	165	166	168	120	109	131	135
11	---	164	193	183	195	173	165	166	120	109	131	136
12	160	165	194	177	192	181	162	164	120	110	130	134
13	162	166	190	174	186	182	163	161	120	110	131	132
14	162	169	189	173	171	177	164	158	122	111	131	132
15	162	168	---	172	159	172	166	156	124	111	130	133
16	164	163	177	166	154	168	166	154	125	110	129	135
17	163	160	176	---	150	165	163	152	124	111	128	136
18	163	158	174	153	151	163	162	151	125	113	128	136
19	169	157	175	160	159	162	166	149	126	117	129	136
20	171	161	184	162	152	161	169	149	125	118	129	135
21	171	161	185	163	147	160	172	149	123	116	131	136
22	165	---	182	166	150	160	175	149	118	114	130	137
23	165	162	176	156	156	159	177	148	109	116	131	137
24	165	163	172	157	166	158	176	147	100	123	130	137
25	162	164	171	151	177	156	179	146	97	122	131	134
26	161	162	172	157	179	154	180	144	96	119	132	136
27	164	167	175	164	186	155	180	142	96	122	130	138
28	164	170	175	169	198	154	176	141	98	124	130	138
29	163	---	177	171	---	155	174	138	98	126	129	139
30	163	---	181	175	---	155	170	135	100	128	127	139
31	162	---	176	176	---	156	---	134	---	131	128	---
MEAN	162	164	179	175	177	165	168	157	118	113	130	134

COLUMBIA RIVER MAIN STEM

14128910 COLUMBIA RIVER AT WARRENDALE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

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

SANDY RIVER BASIN

45

14131400 ZIGZAG RIVER NEAR RHODODENDRON, OR

LOCATION.--Lat 45°18'32", long 121°51'31", in NE¼SE¼ sec.18, T.3 S., R.8 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank at bridge, 0.5 mi (0.8 km) upstream from Devil Canyon Creek, 1.2 mi (1.9 km) downstream from Lady Creek, and 2.8 mi (4.5 km) southeast of Rhododendron.

DRAINAGE AREA.--14.8 mi² (38.3 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 2,191.52 ft (667.975 m) National Geodetic Vertical Datum of 1929.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 398 ft³/s (11.3 m³/s) Feb. 20, 1982, gage height, 5.27 ft (1.606 m); minimum, 44 ft³/s (1.25 m³/s) Sept. 17, 23, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 25, 1980, reached a stage of 6.0 ft (1.83 m), discharge, 863 ft³/s (24.4 m³/s), from slope-area measurement of peak flow.

EXTREMES FOR PERIOD JULY TO SEPTEMBER 1981.--Maximum daily discharge, 90 ft³/s (2.55 m³/s) July 7; minimum, 46 ft³/s (1.30 m³/s) Sept. 14.

EXTREMES FOR WATER YEAR 1982.--Peak discharges above base of 220 ft³/s (6.23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0930	224 6.34	4.84 1.475	Feb. 20	1500	*398 11.3	*5.27 1.606

Minimum, 44 ft³/s (1.25 m³/s) Sept. 17, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY 1981 TO SEPTEMBER 1981
MEAN VALUES

DAY	JUL	AUG	SEP
1	80	58	57
2	80	57	53
3	75	56	52
4	75	54	53
5	75	54	52
6	80	53	52
7	90	53	51
8	75	53	52
9	70	54	52
10	70	53	52
11	65	53	51
12	65	53	51
13	65	53	51
14	60	53	51
15	60	53	51
16	61	53	51
17	61	52	51
18	60	52	52
19	60	53	57
20	60	53	53
21	60	52	57
22	60	52	79
23	61	52	69
24	60	52	64
25	58	53	64
26	58	53	68
27	58	53	72
28	58	52	62
29	61	52	65
30	60	54	61
31	58	53	---
TOTAL	2039	1651	1706
MEAN	65.8	53.3	56.9
MAX	90	58	79
MIN	58	52	51
CFSM	4.45	3.60	3.85
IN.	5.12	4.15	4.29
AC-FT	4040	3270	3380

SANDY RIVER BASIN

14131400 ZIGZAG RIVER NEAR RHODODENDRON, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	58	60	75	67	69	88	71	80	92	89	61	48		
2	64	58	156	65	71	83	71	80	89	89	59	48		
3	69	59	90	65	71	82	71	80	88	87	58	48		
4	70	60	75	64	68	86	71	80	92	85	59	47		
5	70	59	131	63	67	81	71	80	95	85	63	47		
6	79	60	179	72	63	80	71	87	99	84	62	47		
7	79	60	135	62	64	79	71	97	88	84	61	47		
8	80	60	97	60	63	79	69	92	87	82	59	47		
9	80	60	89	59	63	84	71	88	90	80	59	52		
10	66	60	82	60	62	95	71	89	97	78	58	53		
11	64	62	70	61	60	108	77	88	107	79	62	57		
12	63	64	67	58	60	88	82	88	110	78	56	59		
13	62	62	75	60	85	85	82	88	101	79	57	51		
14	62	66	106	65	162	84	83	89	103	80	56	48		
15	62	67	162	72	157	84	80	87	103	75	54	47		
16	62	63	131	100	168	81	75	91	107	72	53	47		
17	62	65	98	116	174	79	70	98	112	72	52	46		
18	63	62	95	85	171	78	70	94	122	70	52	47		
19	61	61	153	71	194	76	70	91	118	69	51	49		
20	61	60	117	66	263	75	70	95	117	67	51	66		
21	60	68	100	65	251	73	75	105	114	66	49	51		
22	60	66	91	66	196	73	75	110	110	65	49	48		
23	62	65	84	137	149	73	80	107	107	66	49	47		
24	61	63	100	160	115	72	80	117	102	63	49	49		
25	62	64	97	127	106	73	80	126	99	63	48	47		
26	62	65	89	111	96	74	80	117	98	63	48	47		
27	61	62	84	92	86	75	80	104	94	63	48	47		
28	63	61	78	84	84	75	85	96	89	63	47	70		
29	64	61	71	79	---	74	80	91	85	61	55	63		
30	73	61	68	78	---	72	80	90	89	62	50	56		
31	65	---	67	76	---	72	---	91	---	62	49	---		
TOTAL	2030	1864	3112	2466	3238	2481	2262	2916	3004	2281	1684	1526		
MEAN	65.5	62.1	100	79.5	116	80.0	75.4	94.1	100	73.6	54.3	50.9		
MAX	80	68	179	160	263	108	85	126	122	89	63	70		
MIN	58	58	67	58	60	72	69	80	85	61	47	46		
CFSM	4.43	4.20	6.76	5.37	7.84	5.41	5.10	6.36	6.76	4.97	3.67	3.44		
IN.	5.10	4.68	7.82	6.20	8.14	6.24	5.69	7.33	7.55	5.73	4.23	3.84		
AC-FT	4030	3700	6170	4890	6420	4920	4490	5780	5960	4520	3340	3030		
WTR YR 1982	TOTAL	28864	MEAN	79.1	MAX	263	MIN	46	CFSM	5.35	IN	72.55	AC-FT	57250

SANDY RIVER BASIN

47

14134000 SALMON RIVER NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°15'55", long 121°43'00", in SE¼NW¼ sec.31, T.3 S., R.9 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank near lower end of Red Top Meadows and 3.0 mi (4.8 km) southeast of Government Camp.

DRAINAGE AREA.--8.00 mi² (20.7 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 3,445.53 ft (1,050.198 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1910, nonrecording gage at site 0.2 mi (0.3 km) upstream at different datum. Nov. 21, 1910, to May 31, 1912, and Apr. 21, 1926, to Sept. 30, 1933, at site 75 ft (23 m) upstream from former site at different datums. Oct. 1, 1933, to Sept. 30, 1960, at datum 1.00 ft (0.305 m) higher.

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

AVERAGE DISCHARGE.--57 years (water years 1911, 1927-82), 44.4 ft³/s (1.257 m³/s), 75.37 in/yr (1,914 mm/yr), 32,170 acre-ft/yr (39.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s (36.8 m³/s) Dec. 23, 1964, gage height, 4.75 ft (1.448 m), from rating curve extended above 310 ft³/s (8.78 m³/s), on basis of slope-area measurement of peak flow; minimum, 10 ft³/s (0.28 m³/s) Nov. 27, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0730	251 7.11	2.42 0.738	Dec. 19	0830	190 5.38	2.13 0.649
Dec. 5	1430	225 6.37	2.30 0.701	Feb. 20	1600	*376 10.6	*2.89 0.881

Minimum, 14 ft³/s (0.40 m³/s) Oct. 20-26, Nov. 8-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	30	35	38	58	36	64	91	69	38	26
2	21	18	121	33	39	55	35	65	85	69	37	26
3	20	17	54	32	39	52	34	63	84	67	36	27
4	19	16	46	35	36	50	33	59	87	64	35	26
5	19	16	104	34	38	47	33	62	91	64	34	25
6	36	15	69	34	36	46	32	72	99	61	34	24
7	30	15	52	34	35	45	32	81	86	60	34	24
8	32	15	41	34	36	45	32	72	84	58	36	24
9	40	15	43	34	36	53	33	66	87	57	36	31
10	25	15	43	34	47	68	35	65	93	56	35	39
11	21	17	36	32	53	70	59	69	98	55	37	39
12	19	22	33	28	30	57	53	78	101	54	34	48
13	18	20	34	28	54	52	50	77	91	54	35	29
14	17	27	52	34	135	50	44	81	91	58	33	25
15	17	32	91	43	106	47	41	86	91	52	31	23
16	17	28	57	48	128	45	39	88	92	50	31	22
17	16	35	45	49	137	44	39	95	96	49	30	22
18	16	28	47	37	130	43	36	88	101	48	30	24
19	15	24	119	33	202	41	35	84	95	47	30	27
20	15	25	68	31	251	40	37	89	93	46	31	61
21	15	40	55	30	180	40	40	100	89	45	30	32
22	15	34	48	30	111	41	48	103	86	43	29	26
23	15	30	44	95	88	42	57	99	85	42	29	24
24	15	26	64	112	76	43	56	110	80	41	28	27
25	15	23	61	69	68	44	53	122	80	41	28	26
26	16	22	49	58	63	46	56	108	80	40	28	24
27	16	20	45	49	58	44	60	97	80	41	27	24
28	17	19	42	44	56	41	66	91	75	41	26	49
29	19	19	39	41	---	39	59	87	71	40	33	34
30	32	20	37	41	---	38	59	88	72	41	31	27
31	30	---	36	41	---	37	---	90	---	40	27	---
TOTAL	634	674	1705	1312	2306	1463	1322	2599	2632	1593	993	885
MEAN	20.5	22.5	55.0	42.3	82.4	47.2	44.1	83.8	87.7	51.4	32.0	29.5
MAX	40	40	121	112	251	70	66	122	101	69	38	61
MIN	15	15	30	28	30	37	32	59	71	40	26	22
CFSM	2.56	2.81	6.88	5.29	10.3	5.90	5.51	10.5	11.0	6.43	4.00	3.69
IN.	2.95	3.13	7.93	6.10	10.72	6.80	6.15	12.08	12.24	7.41	4.62	4.11
AC-FT	1260	1340	3380	2600	4570	2900	2620	5160	5220	3160	1970	1760
CAL YR 1981	TOTAL	12145	MEAN 33.3	MAX 177	MIN 15	CFSM 4.16	IN 56.47	AC-FT 24090				
WTR YR 1982	TOTAL	18118	MEAN 49.6	MAX 251	MIN 15	CFSM 6.20	IN 84.24	AC-FT 35940				

SANDY RIVER BASIN

14137000 SANDY RIVER NEAR MARMOT, OR

LOCATION.--Lat 45°23'30", long 122°07'40", in SE¼ sec.13, T.2 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, on right bank 0.7 mi (1.1 km) southwest of Marmot, 0.8 mi (1.3 km) upstream from Sandy River Dam of Portland General Electric Co., 6.6 mi (10.6 km) downstream from Salmon River, and at mile 30.9 (49.7 km).

DRAINAGE AREA.--262 mi² (679 km²).

PERIOD OF RECORD.--August 1911 to current year. Published as "at Marmot" October 1912 to September 1913. Records for January 1916 to June 1919, published as "below dam, near Marmot," obtained by combining records for Sandy River below dam, near Marmot, with records for Sandy River Canal near Marmot.

REVISED RECORDS.--WSP 594: Drainage area. WSP 1288: 1912(M), 1915, 1922, 1924, 1934(M). WSP 1318: 1932(M).

GAGE.--Water-stage recorder. Altitude of gage is 730 ft (223 m), from river-profile map. Aug. 15, 1911, to Dec. 20, 1915, and July 2, 1919, to Oct. 19, 1933, nonrecording gage at site 1.0 mi (1.6 km) upstream at different datum. Oct. 20, 1933, to Sept. 30, 1958, water-stage recorder at site 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records excellent except those for period of no gage-height record, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--71 years, 1,368 ft³/s (38.74 m³/s), 70.91 in/yr (1,801 mm/yr), 991,100 acre-ft/yr (1.22 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,400 ft³/s (1,740 m³/s) Dec. 22, 1964, gage height, 17.05 ft (5.197 m), from rating curve extended above 7,000 ft³/s (198 m³/s); minimum, 195 ft³/s (5.52 m³/s) Nov. 27, 28, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,700 ft³/s (218 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1000	13,600 385	13.08 3.987	Jan. 23	1030	17,600 498	13.92 4.243
Dec. 6	0500	10,700 303	12.30 3.749	Feb. 14	1300	9,570 271	11.96 3.645
Dec. 15	2100	7,770 220	11.36 3.463	Feb. 20	1800	*20,900 592	*14.59 4.447
Jan. 17	0100	9,480 268	11.93 3.636				

Minimum recorded, 315 ft³/s (8.92 m³/s) Oct. 23-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	334	519	2110	1140	1790	1840	899	1550	1240	786	507	420
2	529	450	7860	1060	1880	1810	885	1550	1170	764	480	410
3	431	427	4020	1050	1950	1730	864	1670	1110	752	455	400
4	426	407	2670	995	1700	2370	846	1530	1120	738	435	400
5	385	381	5320	905	1470	2180	840	1420	1190	716	420	390
6	688	367	9120	862	1320	1790	826	1460	1380	703	414	390
7	752	357	5480	855	1200	1570	813	1740	1200	683	414	400
8	774	349	3330	822	1090	1470	805	1700	1130	664	426	420
9	1380	340	2440	791	1010	1650	790	1510	1110	643	431	430
10	884	334	2080	773	932	2210	782	1420	1150	626	431	450
11	674	351	1680	801	914	2750	1490	1340	1210	614	435	500
12	561	528	1430	886	873	2240	1870	1380	1300	610	441	570
13	493	478	1460	861	2170	1970	2110	1380	1200	608	432	510
14	459	566	2880	1010	7720	1930	2270	1430	1150	616	437	470
15	436	773	6560	1860	6450	1730	1850	1510	1120	621	428	450
16	406	762	5160	4680	6440	1540	1590	1600	1110	601	412	430
17	390	776	3030	6560	6790	1400	1540	1800	1110	578	399	420
18	370	875	2350	3430	6440	1280	1460	1750	1150	563	390	420
19	361	715	4200	2350	11500	1190	1310	1560	1140	557	387	430
20	347	666	3310	1820	14000	1100	1250	1540	1070	552	392	600
21	333	982	2650	1530	10600	1030	1300	1660	1030	546	398	440
22	324	1450	2110	1480	5570	994	1580	1740	961	531	400	440
23	320	1240	1770	11200	3820	974	1880	1640	902	514	400	450
24	315	996	2190	10400	2860	974	1810	1660	880	501	400	450
25	317	835	3040	5320	2360	986	1610	1930	872	493	390	460
26	335	739	2400	4340	2070	1060	1520	1830	867	497	390	460
27	374	655	2050	3270	1870	1090	1520	1560	910	506	400	480
28	371	589	1770	2550	1680	1120	1800	1370	862	515	410	520
29	397	568	1500	2080	---	1030	1670	1270	831	517	430	580
30	485	604	1330	1890	---	990	1560	1220	801	522	480	510
31	715	---	1220	1950	---	947	---	1230	---	527	450	---
TOTAL	15366	19079	98520	79521	108469	46945	41340	47950	32276	18664	13114	13700
MEAN	496	636	3178	2565	3874	1514	1378	1547	1076	602	423	457
MAX	1380	1450	9120	11200	14000	2750	2270	1930	1380	786	507	600
MIN	315	334	1220	773	873	947	782	1220	801	493	387	390
CFSM	1.89	2.43	12.1	9.79	14.8	5.78	5.26	5.91	4.11	2.30	1.62	1.74
IN.	2.18	2.71	13.99	11.29	15.40	6.67	5.87	6.81	4.58	2.65	1.86	1.95
AC-FT	30480	37840	195400	157700	215100	93120	82000	95110	64020	37020	26010	27170
CAL YR 1981 TOTAL	438508			MEAN 1201	MAX 9120	MIN 292	CFSM 4.58	IN 62.26	AC-FT 869800			
WTR YR 1982 TOTAL	534944			MEAN 1466	MAX 14000	MIN 315	CFSM 5.60	IN 75.95	AC-FT 1061000			

SANDY RIVER BASIN

49

14138800 BLAZED ALDER CREEK NEAR RHODODENDRON, OR

LOCATION.--Lat 45°27'10", long 121°53'25", in NW¼SE¼ sec.25, T.1 S., R.7 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 600 ft (183 m) below the confluence of Bedrock and Hickman Creeks and 8.6 mi (13.8 km) north of Rhododendron.

DRAINAGE AREA.--8.17 mi² (21.16 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 2,540 ft (774 m), from topographic map.

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

AVERAGE DISCHARGE.--19 years, 59.8 ft³/s (1.694 m³/s), 99.40 in/yr (2,525 mm/yr), 43,330 acre-ft/yr (53.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,610 ft³/s (73.9 m³/s) Dec. 22, 1964, gage height, 8.25 ft (2.515 m), from rating curve extended above 330 ft³/s (9.35 m³/s), on basis of slope-area measurement of peak flow; minimum, 1.5 ft³/s (0.042 m³/s) Sept. 5-10, 28, 29, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 2	0900	1,100	31.2	5.09	1.551	Jan. 23	1000	*1,210	34.3	*5.35	1.631
Dec. 5	2000	672	19.0	3.99	1.216	Feb. 14	1200	862	24.4	4.51	1.375
Dec. 15	1830	569	16.1	3.69	1.125	Feb. 16	1430	552	15.6	3.64	1.109
Jan. 16	2230	637	18.0	3.89	1.186	Feb. 20	2030	924	26.2	4.67	1.423

Minimum, 2.5 ft³/s (0.071 m³/s) Aug. 27-29, Sept. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	7.8	29	201	24	57	52	24	81	45	12	4.0	3.3		
2	26	21	656	24	60	52	23	78	38	11	4.0	3.0		
3	17	18	225	23	61	61	21	96	36	12	3.9	3.0		
4	15	17	142	21	47	100	20	82	36	11	3.6	3.0		
5	17	15	378	20	40	71	19	70	42	12	3.6	2.9		
6	66	14	457	18	35	51	18	73	57	11	3.4	2.8		
7	64	13	229	17	28	42	18	96	45	10	3.3	2.7		
8	87	12	126	17	28	39	18	87	39	9.8	3.3	2.5		
9	119	11	76	16	26	89	19	69	38	9.3	3.3	5.9		
10	62	11	66	15	24	137	21	59	37	8.8	3.9	8.1		
11	42	14	46	19	22	171	84	55	37	8.5	6.3	9.9		
12	30	35	37	18	18	105	136	62	40	8.1	4.5	25		
13	23	27	52	16	180	87	122	65	35	8.1	4.6	12		
14	18	25	136	26	678	78	92	73	31	9.3	5.3	8.6		
15	16	31	431	68	393	62	63	81	28	8.2	4.1	6.8		
16	14	35	235	307	437	48	50	88	26	7.6	3.7	5.9		
17	13	50	115	300	413	40	48	100	25	6.9	3.5	5.3		
18	12	59	89	122	351	34	41	84	25	6.4	3.3	4.9		
19	10	46	251	68	634	30	36	71	24	6.2	3.3	6.4		
20	9.6	45	148	48	717	26	37	74	23	5.9	3.0	61		
21	9.1	104	100	37	399	24	43	85	21	5.8	3.0	31		
22	8.6	118	62	52	146	23	58	84	19	5.4	3.0	18		
23	8.2	84	50	801	95	23	86	75	17	5.2	2.8	14		
24	7.8	58	96	553	68	24	89	83	16	5.0	2.8	15		
25	7.8	45	115	199	51	26	76	92	15	4.8	2.8	13		
26	8.6	36	74	145	43	33	71	75	15	4.7	2.8	15		
27	12	29	58	100	39	37	72	58	16	4.5	2.8	14		
28	13	24	44	71	34	36	119	48	15	4.3	2.5	24		
29	20	22	35	58	---	32	102	47	13	4.3	4.4	23		
30	42	26	30	58	---	29	84	47	13	4.3	6.3	18		
31	44	---	26	72	---	27	---	47	---	4.2	4.0	---		
TOTAL	849.5	1074	4786	3333	5124	1689	1710	2285	867	234.6	115.1	368.0		
MEAN	27.4	35.8	154	108	183	54.5	57.0	73.7	28.9	7.57	3.71	12.3		
MAX	119	118	656	801	717	171	136	100	57	12	6.3	61		
MIN	7.8	11	26	15	18	23	18	47	13	4.2	2.5	2.5		
CFSM	3.35	4.38	18.8	13.2	22.4	6.67	6.98	9.02	3.54	.93	.45	1.51		
IN.	3.87	4.89	21.79	15.17	23.33	7.69	7.79	10.40	3.95	1.07	.52	1.68		
AC-FT	1680	2130	9490	6610	10160	3350	3390	4530	1720	465	228	730		
CAL YR 1981	TOTAL	20029.6	MEAN	54.9	MAX	656	MIN	1.8	CFSM	6.72	IN	91.19	AC-FT	39730
WTR YR 1982	TOTAL	22435.2	MEAN	61.5	MAX	801	MIN	2.5	CFSM	7.53	IN	102.14	AC-FT	44500

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 (1.9 km) upstream from North Fork, 7.0 mi (11.3 km) southeast of Multnomah Falls, and at mile 14.8 (23.8 km).

DRAINAGE AREA.--47.9 mi² (124.1 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,080 ft (329 m), from topographic map.

REMARKS.--Water-discharge records excellent. Water stored since 1915 in Bull Run Lake, usable capacity, 12,270 acre-ft (15.1 hm³). No diversion above station.

AVERAGE DISCHARGE.--16 years, 424 ft³/s (12.01 m³/s), 120.21 in/yr (3,053 mm/yr), 307,200 acre-ft/yr (379 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,610 ft³/s (244 m³/s) Jan. 20, 1972, gage height, 13.22 ft (4.029 m); minimum, 33 ft³/s (0.93 m³/s) Sept. 27, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,800 ft³/s (108 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0630	5,950 169	11.14 3.395	Jan. 23	0930	6,090 172	11.26 3.432
Dec. 5	1830	4,090 116	9.45 2.880	Feb. 14	1100	5,180 147	10.45 3.185
Jan. 16	2300	4,470 127	9.80 2.987	Feb. 20	1330	*6,690 189	*11.76 3.584

Minimum, 47 ft³/s (1.33 m³/s) Sept. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	112	266	1430	239	479	540	202	411	246	102	61	54		
2	279	215	3730	222	545	543	195	387	224	99	61	52		
3	191	205	1340	211	546	600	185	463	211	106	60	50		
4	181	178	807	199	435	1050	185	408	208	99	58	50		
5	165	153	2410	180	356	664	178	357	228	121	57	50		
6	724	136	2700	161	307	480	170	364	291	107	56	49		
7	596	125	1370	157	271	401	171	427	241	97	55	49		
8	592	116	765	155	244	371	168	399	223	93	55	47		
9	834	110	528	152	219	588	170	341	218	89	55	86		
10	482	103	452	155	201	958	180	308	218	85	62	106		
11	334	124	391	181	197	1140	530	289	220	82	81	126		
12	255	305	333	194	187	694	899	301	228	81	68	312		
13	210	254	361	185	1310	607	863	303	218	81	69	166		
14	176	238	695	317	3980	605	681	329	206	100	82	121		
15	152	333	2680	729	2500	466	472	357	193	88	65	98		
16	134	416	1520	2430	2880	374	394	381	186	84	61	86		
17	122	497	737	2120	2710	314	388	425	183	79	58	79		
18	111	510	550	898	2140	269	353	382	180	76	56	72		
19	103	379	1540	568	3840	241	313	335	172	73	55	75		
20	96	359	911	428	4360	221	307	338	161	72	55	526		
21	88	792	672	354	2360	204	351	368	151	71	54	342		
22	84	845	498	348	1050	196	426	367	141	69	53	219		
23	81	628	404	4310	684	193	508	339	130	67	52	166		
24	77	450	712	3350	510	195	481	359	121	65	51	154		
25	76	359	852	1290	438	202	412	394	117	64	50	136		
26	80	300	575	1140	399	231	381	341	112	64	50	139		
27	115	251	459	787	388	253	375	295	127	62	50	127		
28	122	217	389	555	366	259	583	256	126	60	50	192		
29	189	205	321	481	---	238	502	249	109	60	57	194		
30	371	243	279	479	---	229	431	246	109	62	82	153		
31	401	---	258	564	---	218	---	247	---	63	60	---		
TOTAL	7533	9312	30669	23539	33902	13544	11454	10766	5498	2521	1839	4076		
MEAN	243	310	989	759	1211	437	382	347	183	81.3	59.3	136		
MAX	834	845	3730	4310	4360	1140	899	463	291	121	82	526		
MIN	76	103	258	152	187	193	168	246	109	60	50	47		
CFSM	5.07	6.47	20.6	15.8	25.3	9.12	7.98	7.24	3.82	1.70	1.24	2.84		
IN.	5.85	7.23	23.82	18.28	26.33	10.52	8.90	8.36	4.27	1.96	1.43	3.17		
AC-FT	14940	18470	60830	46690	67240	26860	22720	21350	10910	5000	3650	8080		
CAL YR 1981	TOTAL	137742	MEAN	377	MAX	3730	MIN	42	CFSM	7.87	IN	106.97	AC-FT	273200
WTR YR 1982	TOTAL	154653	MEAN	424	MAX	4360	MIN	47	CFSM	8.85	IN	120.10	AC-FT	306800

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.

WATER TEMPERATURES: October 1977 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1977 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

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

SEDIMENT DISCHARGE: Maximum daily, 5,930 tons (5,380 tonnes) Dec. 2, 1977; minimum, 0 tons (0 tonnes) on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 32 micromhos Aug. 21; minimum recorded, 9 micromhos Jan. 23.

WATER TEMPERATURES: Maximum, 15.5°C July 27; minimum, 0.0°C several days in January and February.

SEDIMENT CONCENTRATIONS: Maximum daily, 132 mg/l Feb. 20; minimum, 0 mg/l on many days throughout the year.

SEDIMENT DISCHARGE: Maximum daily, 1,970 tons (1,790 tonnes) Feb. 20; minimum, 0 tons (0 tonnes) on many days throughout the year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
03...	1035	177	23	7.3	8.0	6	4	8
10...	1025	497	20	7.1	8.2	3	4	6
17...	1015	121	24	7.3	6.6	1	<1	<1
24...	0950	79	24	7.3	5.8	<1	2	2
31...	0920	404	21	7.1	6.8	15	2	20
NOV								
07...	0930	125	23	7.3	5.7	2	1	2
21...	1020	952	18	7.1	7.0	12	7	26
28...	0815	221	21	7.0	2.9	1	1	12
DEC								
05...	1010	1920	15	7.1	6.5	15	5	14
12...	1030	335	19	7.2	3.6	1	<1	10
19...	1010	2120	14	7.0	5.2	7	2	16
26...	1020	571	17	7.0	3.6	2	<1	2
JAN								
14...	1340	284	20	7.2	2.8	1	<1	4
16...	1015	1850	15	7.0	3.0	5	2	14
23...	1040	5920	12	6.8	2.6	17	1	12
30...	1050	467	19	7.2	3.8	2	<1	4
FEB								
06...	1020	306	20	7.2	.5	2	1	6
13...	1005	460	19	7.1	2.5	8	3	12
20...	1020	5020	11	6.8	4.8	6	3	--
27...	1000	381	19	7.2	3.3	1	<1	<1
MAR								
06...	1105	474	17	7.1	3.0	<1	<1	1
13...	1035	587	17	7.1	3.5	1	<1	<1
20...	1005	265	20	7.2	3.5	1	<1	2
27...	1020	281	19	7.3	3.0	1	<1	<1
APR								
03...	1040	216	21	7.3	3.4	<1	<1	1
10...	1015	198	20	7.3	4.0	<1	<1	1
17...	0839	375	18	7.2	3.9	1	<1	1
24...	0930	504	17	7.2	4.0	<1	<1	<1
MAY								
01...	1025	425	18	7.2	4.8	<1	<1	1
08...	1015	428	17	7.3	4.0	1	17	<1
15...	1040	359	18	7.3	5.6	1	<1	2
22...	0950	391	18	7.2	6.4	1	1	<1
29...	1100	273	20	7.2	6.7	<1	1	<1
JUN								
05...	1015	235	20	7.3	6.4	4	1	10
12...	1015	252	20	7.3	9.0	12	19	24
19...	1005	190	22	7.3	11.8	4	9	--
26...	1050	120	25	7.4	12.1	7	12	12

SANDY RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT								
03...	--	--	--	--	--	26	.18	<5
10...	--	--	--	1.8	--	21	.20	<5
17...	--	--	--	--	--	25	.14	<5
24...	--	--	--	--	--	--	.18	<5
31...	--	--	--	--	--	23	.20	<5
NOV								
07...	--	--	--	--	--	--	.23	5
21...	<.020	.08	<.003	3.3	8.0	--	.60	30
28...	--	--	--	--	--	22	.20	<5
DEC								
05...	<.020	.05	<.003	2.6	7.3	--	1.4	5
12...	--	--	--	--	--	19	.21	5
19...	--	--	--	--	--	--	1.0	5
26...	--	--	--	--	--	20	.25	<5
JAN								
14...	--	--	--	--	--	21	.38	<5
16...	--	--	--	--	--	19	.77	5
23...	<.020	.04	<.003	2.6	5.3	--	7.9	60
30...	--	--	--	--	--	20	.30	<5
FEB								
06...	--	--	--	--	--	21	.18	<5
13...	<.020	.03	<.003	1.0	9.5	21	.69	<5
20...	--	--	--	--	--	--	4.8	30
27...	--	--	--	--	--	20	.25	<5
MAR								
06...	<.020	.02	.003	.9	8.8	18	.24	<5
13...	--	--	--	--	--	19	.29	<5
20...	--	--	--	--	--	20	.28	<5
27...	<.020	.02	.006	1.1	9.2	22	.24	<5
APR								
03...	--	--	--	--	--	22	.20	<5
10...	--	--	--	--	--	23	.19	<5
17...	<.020	.04	<.003	.9	8.7	21	.16	5
24...	--	--	--	--	--	19	.18	<5
MAY								
01...	--	--	--	--	--	19	.18	<5
08...	<.020	.01	.002	1.0	8.4	19	.20	<5
15...	--	--	--	--	--	20	.17	<5
22...	--	--	--	--	--	20	.16	<5
29...	<.020	.02	.005	.9	8.4	19	.15	<5
JUN								
05...	--	--	--	--	--	23	.19	<5
12...	--	--	--	--	--	22	.17	<5
19...	<.020	.03	.010	.8	9.9	26	.20	<5
26...	--	--	--	--	--	31	.19	<5

SANDY RIVER BASIN

53

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JUL								
03...	0943	123	25	7.3	10.0	23	40	30
10...	1020	92	26	7.4	11.0	2	7	2
17...	0929	89	26	7.4	10.8	15	10	14
24...	1020	69	27	7.4	11.5	15	15	10
31...	1020	65	28	7.5	11.6	17	23	20
AUG								
07...	1025	57	28	7.4	12.6	9	14	12
14...	1045	85	26	7.4	11.6	23	21	42
21...	1015	54	29	7.4	13.1	3	26	14
28...	1110	50	29	7.5	11.3	6	20	6
SEP								
11...	1120	76	27	7.5	9.6	16	16	24
18...	1045	73	26	7.4	9.8	3	9	10
25...	1100	144	24	7.4	10.8	8	13	10

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	TUR- BID- IDY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUL								
03...	--	--	--	--	--	23	.14	<5
10...	<.020	.03	.003	.7	12	26	.17	<5
17...	--	--	--	--	--	23	.13	<5
24...	--	--	--	--	--	25	.15	<5
31...	<.020	.03	<.003	.8	12	25	.16	<5
AUG								
07...	--	--	--	--	--	25	.18	<5
14...	--	--	--	--	--	24	.15	<5
21...	<.020	.04	<.003	.9	12	26	.16	<5
28...	--	--	--	--	--	29	--	5
SEP								
11...	<.020	.06	.005	1.6	12	26	.20	<5
18...	--	--	--	--	--	25	.18	<5
25...	--	--	--	--	--	25	.15	<5

SANDY RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

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

SANDY RIVER BASIN

55

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

SANDY RIVER BASIN

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1	.30	1	.72	---	37	4	2.6	1	1.3	1	1.5
2	2	1.5	1	.58	36	390	3	1.8	1	1.5	1	1.5
3	3	1.5	1	.55	6	20	1	.57	1	1.5	1	1.6
4	1	.49	1	.48	---	6.5	---	.54	0	.00	3	8.5
5	3	1.3	1	.41	---	254	---	.49	1	.96	2	3.6
6	4	7.6	1	.37	---	165	---	.43	0	.00	1	1.3
7	---	1.6	1	.34	6	25	---	.42	1	.73	1	1.1
8	2	3.6	---	.31	---	4.1	---	.42	1	.66	2	2.0
9	2	5.8	---	.30	---	1.4	---	.41	1	.59	2	3.2
10	0	.00	---	.28	1	1.2	---	.42	1	.54	3	7.8
11	1	.90	---	.33	2	2.1	---	.49	1	.53	3	9.2
12	0	.00	---	3.3	2	1.8	---	.52	1	.50	2	3.7
13	0	.00	3	2.1	1	.97	---	.50	7	42	1	1.6
14	---	.00	---	1.9	2	3.8	2	1.7	28	337	2	3.3
15	---	.00	---	2.7	9	73	2	3.9	9	59	1	1.3
16	---	.00	---	2.2	4	17	13	115	10	80	1	1.0
17	---	.33	---	2.7	1	2.0	6	42	5	37	1	.85
18	---	.30	---	2.8	1	1.5	2	4.8	5	34	0	.00
19	---	.28	---	2.0	2	7.8	2	3.1	23	256	0	.00
20	1	.26	2	1.9	0	.00	0	.00	132	1970	0	.00
21	1	.24	2	4.3	0	.00	1	.96	14	103	0	.00
22	1	.23	2	4.6	1	1.3	1	.94	3	8.5	0	.00
23	1	.22	1	1.7	1	1.1	69	969	2	3.7	0	.00
24	1	.21	---	1.2	2	3.8	21	201	2	2.8	0	.00
25	1	.21	---	.97	1	2.3	5	19	4	4.7	1	.55
26	1	.22	---	.81	1	1.6	2	6.2	2	2.2	1	.62
27	1	.31	---	.68	1	1.2	2	4.2	1	1.0	1	.68
28	1	.33	---	.59	5	5.3	2	3.0	1	.99	0	.00
29	2	1.0	---	.55	4	3.5	1	1.3	---	---	0	.00
30	2	2.0	---	.66	3	2.3	1	1.3	---	---	0	.00
31	1	1.1	---	---	---	4.2	1	1.5	---	---	0	.00
TOTAL	---	31.83	---	42.33	---	1040.77	---	1388.51	---	2950.70	---	54.90

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	0	.00	0	.00	1	.66	1	.28	1	.16	1	.15
2	0	.00	0	.00	1	.60	1	.27	1	.16	1	.14
3	0	.00	1	1.3	1	.57	1	.29	1	.16	0	.00
4	0	.00	0	.00	0	.00	1	.27	0	.00	0	.00
5	1	.48	1	.96	1	.62	0	.00	0	.00	3	.41
6	1	.46	1	.98	1	.79	0	.00	1	.15	0	.00
7	2	.92	1	1.2	1	.65	0	.00	1	.15	0	.00
8	1	.45	1	1.1	1	.60	1	.25	1	.15	1	.13
9	1	.46	0	.00	1	.59	1	.24	1	.15	1	.23
10	0	.00	0	.00	1	.59	1	.23	0	.00	0	.00
11	1	1.4	1	.78	1	.59	1	.22	1	.22	1	.34
12	3	7.3	1	.81	1	.62	3	.66	2	.37	1	.84
13	2	4.7	1	.82	1	.59	3	.66	2	.37	1	.00
14	1	1.8	1	.89	1	.56	1	.27	1	.22	0	.00
15	1	1.3	1	.96	0	.00	1	.24	0	.00	---	.00
16	1	1.1	1	1.0	1	.50	2	.45	0	.00	---	.00
17	1	1.0	1	1.1	0	.00	2	.43	0	.00	---	.00
18	1	.95	1	1.0	0	.00	2	.41	1	.15	---	.00
19	1	.85	1	.90	3	1.4	1	.20	1	.15	---	.00
20	1	.83	1	.91	3	1.3	1	.19	1	.15	---	4.3
21	1	.95	1	.99	0	.00	1	.19	1	.15	---	.92
22	0	.00	1	.99	0	.00	2	.37	2	.29	---	.59
23	0	.00	1	.92	0	.00	2	.36	2	.28	0	.00
24	1	1.3	1	.97	0	.00	1	.18	2	.28	0	.00
25	1	1.1	1	1.1	0	.00	2	.35	2	.27	1	.37
26	0	.00	1	.92	2	.60	2	.35	0	.00	0	.00
27	0	.00	1	.80	2	.69	1	.17	0	.00	0	.00
28	1	1.6	1	.69	2	.68	1	.16	1	.14	0	.00
29	0	.00	1	.67	1	.29	2	.32	1	.15	0	.00
30	0	.00	1	.66	1	.29	1	.17	1	.22	1	.41
31	---	---	1	.67	---	---	1	.17	1	.16	---	---
TOTAL	---	28.95	---	24.09	---	13.78	---	8.35	---	4.65	---	8.83

14138870 FIR CREEK NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°28'56", long 122°01'36", in NE¼SE¼ sec.14, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, on right bank, 6.4 mi (10.3 km) north of Brightwood and 0.6 mi (1.0 km) above Bull Run Reservoir Number One.

DRAINAGE AREA.--5.46 mi² (14.1 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR OR-78-1: 1976.

GAGE.--Water-stage recorder. Altitude of gage is 1,440 ft (439 m), from topographic map.

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

AVERAGE DISCHARGE.--7 years, 34.9 ft³/s (0.988 m³/s), 86.80 in/yr (2,205 mm/yr), 25,290 acre-ft/yr (31.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft³/s (36.5 m³/s) Dec. 2, 1977 (revised), gage height, 5.64 ft (1.719 m); minimum, 1.9 ft³/s (0.054 m³/s) Aug. 17-23, 1977, Sept. 16-18, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0700	478 13.5	4.54 1.384	Feb. 14	1030	493 14.0	4.57 1.393
Jan. 16	2230	427 12.1	4.88 1.487	Feb. 20	1430	815 23.1	5.10 1.554
Jan. 23	0900	*860 24.4	*5.16 1.573				

Minimum, 2.3 ft³/s (0.065 m³/s) Sept. 9.

REVISIONS.--The peak discharges above base of 400 ft³/s (11.3 m³/s) and annual maximum (*) for water years 1976, 1978, 1979, 1981 have been revised as shown in the following table. They supersede figures published in previous reports.

Water year	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Water year	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
1976	Dec. 1, 1975	0930	*624 17.7	*4.81 1.466	1978	Dec. 2, 1977	1500	*1,290 36.5	*5.64 1.719
1976	Dec. 4, 1975	0500	555 15.7	4.69 1.430	1978	Dec. 13, 1977	0900	787 22.3	5.06 1.542
1976	Dec. 7, 1975	0900	572 16.2	4.72 1.439	1979	Feb. 7, 1979	0130	*578 16.4	*4.73 1.442
1976	Jan. 14, 1976	1800	503 14.2	4.59 1.399	1981	Dec. 25, 1980	1930	*583 16.5	*4.74 1.445
1978	Nov. 25, 1977	2200	891 25.2	5.20 1.585					

The daily discharge for Dec. 25, 1980 has been revised to 405 ft³/s (11.5 m³/s), superseding the value published in the report for 1981.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	9.0	20	119	21	54	67	18	32	17	5.6	3.5	3.0		
2	27	16	299	19	66	67	17	31	15	5.3	3.4	2.8		
3	18	16	121	18	70	66	16	35	14	6.4	3.4	2.7		
4	17	14	75	17	54	101	16	32	15	5.7	3.3	2.7		
5	15	12	201	15	43	74	15	29	20	9.4	3.1	2.6		
6	62	11	241	13	36	55	14	29	30	7.5	3.1	2.5		
7	41	10	127	12	32	45	14	33	22	6.2	3.0	2.4		
8	43	9.2	73	11	28	40	13	31	19	5.8	3.0	2.4		
9	58	8.5	51	11	26	55	14	28	16	5.5	3.0	8.0		
10	35	8.0	42	12	24	75	15	26	15	5.2	3.8	7.5		
11	26	11	35	16	22	86	49	25	15	4.9	7.9	15		
12	21	25	30	17	20	60	69	25	15	4.8	4.6	43		
13	17	21	40	17	119	57	67	24	15	4.7	6.5	23		
14	14	19	74	37	380	61	59	26	13	6.3	8.0	17		
15	12	21	219	89	243	50	43	27	12	5.5	4.7	12		
16	11	24	136	250	275	41	37	28	11	5.2	4.1	9.8		
17	9.9	31	69	196	271	36	37	32	11	5.0	3.7	7.9		
18	8.9	34	53	82	236	32	33	30	11	4.8	3.5	6.6		
19	8.1	29	122	46	403	29	30	26	9.6	4.6	3.4	7.0		
20	7.4	29	74	31	443	26	30	26	8.5	4.4	3.2	59		
21	7.0	69	56	22	251	23	32	27	7.7	4.4	3.1	41		
22	6.6	65	43	27	116	22	39	27	6.6	4.2	3.0	28		
23	6.3	51	36	506	79	20	45	24	5.9	4.2	2.9	20		
24	6.2	37	53	348	60	20	40	25	5.4	4.0	2.8	17		
25	6.0	31	66	146	49	20	35	29	5.2	4.0	2.7	15		
26	6.5	27	51	132	45	22	32	25	5.3	3.9	2.7	15		
27	9.9	23	41	92	44	23	31	22	6.8	3.8	2.7	12		
28	11	20	34	66	42	24	42	19	7.8	3.7	2.6	16		
29	16	19	28	53	---	22	37	17	5.6	3.6	3.4	15		
30	27	22	25	53	---	21	33	17	6.1	3.6	6.2	12		
31	27	---	23	63	---	19	---	17	---	3.6	3.5	---		
TOTAL	589.8	732.7	2657	2438	3531	1359	972	824	366.5	155.8	117.8	427.9		
MEAN	19.0	24.4	85.7	78.6	126	43.8	32.4	26.6	12.2	5.03	3.80	14.3		
MAX	62	69	299	506	443	101	69	35	30	9.4	8.0	59		
MIN	6.0	8.0	23	11	20	19	13	17	5.2	3.6	2.6	2.4		
CFSM	3.48	4.47	15.7	14.4	23.1	8.02	5.93	4.87	2.23	.92	.70	2.62		
IN.	4.02	4.99	18.10	16.61	24.05	9.26	6.62	5.61	2.50	1.06	.80	2.91		
AC-FT	1170	1450	5270	4840	7000	2700	1930	1630	727	309	234	849		
CAL YR 1981	TOTAL	11732.7	MEAN	32.1	MAX	299	MIN	1.9	CFSM	5.88	IN	79.92	AC-FT	23270
WTR YR 1982	TOTAL	14171.5	MEAN	38.8	MAX	506	MIN	2.4	CFSM	7.11	IN	96.54	AC-FT	28110

SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.

WATER TEMPERATURES: October 1977 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1977 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

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

SEDIMENT DISCHARGE: Maximum, 345 tons (313 tonnes) Dec. 2, 1977; minimum, 0 tons (0 tonnes) on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 29 micromhos Aug. 23-25, Sept. 2, 3; minimum, 12 micromhos Feb. 19.

WATER TEMPERATURES: Maximum, 14.0°C July 27, 28; minimum, 0.5°C Jan. 3, 6.

SEDIMENT CONCENTRATIONS: Maximum, 200 mg/l Jan. 23, Feb. 20; minimum, 0 mg/l many days throughout the year.

SEDIMENT DISCHARGE: Maximum, 89 tons (81 tonnes) Jan. 23; minimum, 0 tons (0 tonnes) on many days throughout the year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
04...	1020	17	23	7.2	7.0	4	5	8
11...	1115	25	21	7.2	7.0	3	4	6
14...	1200	14	22	7.2	9.0	--	--	--
18...	1015	8.2	24	7.3	7.0	<1	3	<1
25...	0920	5.3	23	7.3	5.8	<1	2	2
NOV								
01...	1040	18	22	7.3	7.0	1	<1	<1
08...	1050	8.2	23	7.3	6.0	1	1	<1
22...	1020	64	19	7.1	6.0	3	<1	8
28...	1016	19	22	7.1	3.0	<1	1	12
DEC								
06...	1045	222	15	7.0	6.5	5	2	4
13...	1120	--	20	7.2	4.5	<1	<1	<1
20...	1120	71	17	7.2	5.0	1	1	<1
27...	1045	39	19	7.2	3.0	1	<1	<1
JAN								
12...	1400	35	20	7.6	3.0	--	--	--
17...	1005	298	15	7.0	3.3	3	2	6
24...	1027	352	15	7.0	3.5	3	<1	4
31...	1120	62	20	7.1	3.7	1	<1	<1
FEB								
07...	1120	31	21	7.2	2.0	<1	<1	<1
14...	1115	459	12	6.8	3.0	13	1	22
21...	1130	238	15	7.0	3.3	1	<1	2
28...	1025	42	20	7.2	3.2	<1	<1	<1
MAR								
07...	1050	48	19	7.1	3.7	<1	<1	<1
14...	1120	69	17	7.1	4.0	<1	<1	1
21...	1120	30	20	7.2	3.5	<1	2	<1
28...	1004	31	20	7.1	2.7	<1	1	1
APR								
04...	1050	21	21	7.2	3.0	<1	<1	<1
11...	0925	56	18	7.2	4.0	<1	<1	<1
18...	0807	43	19	7.1	3.1	<1	<1	<1
25...	1120	43	19	7.2	4.5	<1	<1	1
MAY								
02...	1040	39	19	7.2	5.0	<1	<1	<1
09...	1105	33	19	7.2	4.5	<1	<1	1
16...	1145	34	19	7.2	7.0	<1	1	1
23...	1110	31	18	7.2	6.0	<1	1	<1
25...	0920	37	18	7.0	7.0	--	--	--
30...	1055	22	20	7.2	7.0	<1	3	<1
JUN								
06...	1120	38	18	7.2	6.0	2	8	2
13...	1035	18	20	7.2	7.5	<1	--	<1
20...	1115	12	21	7.3	11.0	<1	12	<1
24...	1000	--	23	7.0	11.2	--	--	--
27...	1115	8.5	22	7.3	11.0	1	15	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JUL								
04...	0922	6.6	23	7.2	9.3	4	5	8
11...	1040	5.8	24	7.3	11.0	1	7	<1
18...	0915	4.8	25	7.3	10.9	2	2	2
25...	1100	4.0	26	7.4	12.0	7	19	--
26...	1000	--	27	7.3	12.2	--	--	--
AUG								
01...	1045	3.4	25	7.4	11.0	3	8	2
08...	1030	2.9	28	7.3	13.0	1	12	6
15...	1040	4.5	26	7.3	10.5	5	9	--
22...	1100	2.9	27	7.4	12.5	7	22	--
23...	1430	--	28	7.2	13.2	--	--	--
29...	1125	2.7	27	7.4	11.9	8	104	10
SEP								
05...	1020	2.6	26	7.4	11.0	2	29	8
12...	1025	45	22	7.2	10.0	77	54	112
19...	1030	6.2	24	7.3	10.0	1	32	2
26...	1035	17	23	7.3	9.0	3	17	8
27...	1100	--	23	7.3	9.0	--	--	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUL								
04...	--	--	--	--	--	22	.12	<5
11...	<.020	.06	.003	.8	12	24	.21	<5
18...	--	--	--	--	--	25	.11	<5
25...	--	--	--	--	--	25	.20	<5
26...	--	--	--	--	--	--	--	--
AUG								
01...	<.020	.04	<.003	.8	12	26	.21	<5
08...	--	--	--	--	--	25	.21	<5
15...	--	--	--	--	--	23	.18	5
22...	<.020	.06	<.003	1.0	12	25	.26	<5
23...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	29	.30	<5
SEP								
05...	--	--	--	--	--	26	.21	<5
12...	<.020	.19	.010	4.7	9.0	26	.44	20
19...	--	--	--	--	--	22	.21	<5
26...	--	--	--	--	--	23	.35	<5
27...	--	--	--	--	--	--	--	--

SANDY RIVER BASIN

61

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

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

SANDY RIVER BASIN

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14138870 FIR CREEK NEAR BRIGHTWOOD, OR--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2	.05	0	.00	2	.71	0	.00	1	.15	2	.36
2	3	.22	0	.00	15	15	0	.00	0	.00	1	.18
3	1	.05	0	.00	1	.33	0	.00	0	.00	1	.18
4	1	.05	0	.00	0	.00	0	.00	0	.00	1	.27
5	1	.04	0	.00	3	1.9	0	.00	0	.00	1	.20
6	2	.33	0	.00	2	1.3	0	.00	0	.00	1	.15
7	1	.11	0	.00	2	.69	0	.00	2	.17	1	.12
8	1	.12	0	.00	1	.20	0	.00	1	.08	1	.11
9	1	.16	0	.00	1	.14	0	.00	1	.07	1	.15
10	1	.09	0	.00	1	.11	0	.00	1	.06	2	.41
11	1	.07	0	.00	1	.09	0	.00	2	.12	2	.46
12	1	.06	0	.00	1	.08	0	.00	2	.11	2	.32
13	1	.05	0	.00	1	.11	0	.00	3	1.7	1	.15
14	1	.04	0	.00	1	.20	1	.10	8	9.0	0	.00
15	0	.00	1	.06	2	1.2	1	.24	2	1.3	1	.14
16	0	.00	0	.00	0	.00	3	3.0	2	1.5	1	.11
17	0	.00	0	.00	0	.00	2	1.4	1	.73	1	.10
18	0	.00	0	.00	0	.00	1	.22	2	1.3	1	.09
19	0	.00	0	.00	1	.33	1	.12	8	9.4	1	.08
20	0	.00	0	.00	0	.00	1	.08	30	51	1	.07
21	0	.00	1	.19	0	.00	1	.06	4	2.8	1	.06
22	0	.00	1	.18	0	.00	2	.15	0	.00	1	.06
23	0	.00	0	.00	0	.00	---	83	1	.21	1	.05
24	0	.00	0	.00	0	.00	---	6.0	0	.00	1	.05
25	0	.00	0	.00	0	.00	1	.39	1	.13	1	.05
26	0	.00	0	.00	0	.00	1	.36	3	.36	1	.06
27	0	.00	0	.00	0	.00	1	.25	1	.12	1	.06
28	0	.00	0	.00	0	.00	1	.18	1	.11	1	.06
29	0	.00	0	.00	0	.00	2	.29	---	---	1	.06
30	1	.07	0	.00	0	.00	1	.14	---	---	1	.06
31	0	.00	---	---	0	.00	1	.17	---	---	1	.05
TOTAL	---	1.51	---	0.43	---	22.39	---	96.15	---	80.42	---	4.27

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	0	.00	1	.09	0	.00	0	.00	0	.00	0	.00
2	0	.00	1	.08	0	.00	0	.00	0	.00	0	.00
3	2	.09	1	.09	0	.00	0	.00	0	.00	0	.00
4	2	.09	0	.00	0	.00	2	.03	0	.00	0	.00
5	1	.04	0	.00	0	.00	1	.03	0	.00	0	.00
6	1	.04	1	.08	1	.08	2	.04	0	.00	0	.00
7	1	.04	1	.09	0	.00	2	.03	0	.00	0	.00
8	1	.04	1	.08	0	.00	0	.00	0	.00	0	.00
9	1	.04	1	.08	0	.00	0	.00	0	.00	0	.00
10	1	.04	1	.07	0	.00	0	.00	2	.02	0	.00
11	1	.13	1	.07	0	.00	0	.00	0	.00	1	.04
12	1	.19	0	.00	0	.00	0	.00	0	.00	0	.00
13	2	.36	0	.00	0	.00	0	.00	0	.00	0	.00
14	1	.16	0	.00	1	.04	0	.00	0	.00	0	.00
15	1	.12	0	.00	1	.03	0	.00	0	.00	0	.00
16	1	.10	0	.00	0	.00	0	.00	0	.00	0	.00
17	1	.10	0	.00	0	.00	0	.00	0	.00	0	.00
18	1	.09	0	.00	0	.00	0	.00	0	.00	0	.00
19	1	.08	0	.00	0	.00	0	.00	0	.00	0	.00
20	1	.08	0	.00	0	.00	0	.00	0	.00	1	.16
21	1	.09	0	.00	0	.00	0	.00	0	.00	0	.00
22	1	.11	0	.00	1	.02	0	.00	0	.00	0	.00
23	1	.12	0	.00	1	.02	0	.00	0	.00	0	.00
24	1	.11	0	.00	0	.00	0	.00	0	.00	0	.00
25	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
26	0	.00	0	.00	0	.00	0	.00	0	.00	1	.04
27	1	.08	0	.00	1	.02	0	.00	0	.00	1	.03
28	1	.11	0	.00	1	.02	0	.00	0	.00	1	.04
29	1	.10	0	.00	0	.00	0	.00	0	.00	1	.04
30	1	.09	0	.00	0	.00	0	.00	0	.00	0	.00
31	---	---	0	.00	---	---	0	.00	0	.00	---	---
TOTAL	---	2.64	---	0.73	---	0.23	---	0.13	---	0.02	---	0.35

SANDY RIVER BASIN

14138900 NORTH FORK BULL RUN RIVER NEAR MULTNOMAH FALLS, OR

LOCATION.--Lat 45°29'40", long 122°02'05", near line between SE¼ and SW¼ sec.11, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, Mount Hood National Forest, on left bank 7.0 mi (11.3 km) southeast of Multnomah Falls and at mouth.

DRAINAGE AREA.--8.32 mi² (21.55 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 1,060 ft (323 m), from topographic map. Prior to Oct. 1, 1978, at site 700 ft (213 m) upstream at datum 18.7 ft (5.70 m) higher.

REMARKS.--Records excellent. Regulation at times since 1958 by North Fork dam, capacity, about 1,030 acre-ft (1.27 hm³). No diversion above station.

AVERAGE DISCHARGE.--17 years, 77.3 ft³/s (2.189 m³/s), 126.17 in/yr (3,205 mm/yr), 56,000 acre-ft/yr (69.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft³/s (275 m³/s), probably affected by surge from release of water temporarily impounded by landslide upstream from station, Jan. 20, 1972, gage height, 9.89 ft (3.014 m), from floodmark, from rating curve extended above 850 ft³/s (24.1 m³/s) on basis of estimate of peak flow from slope-area survey; minimum, 9.1 ft³/s (0.26 m³/s) Oct. 2-14, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0630	1,810 51.3	7.10 2.164	Feb. 14	1030	1,480 41.9	6.82 2.079
Dec. 5	1800	937 26.5	6.27 1.911	Feb. 16	1230	714 20.2	5.98 1.823
Jan. 16	2200	872 24.7	6.19 1.887	Feb. 20	1330	1,970 55.8	7.24 2.207
Jan. 23	0830	*2,290 64.9	*7.50 2.286				

Minimum, 14 ft³/s (0.40 m³/s) Aug. 22-29, Sept. 1-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	46	234	41	83	100	45	72	46	22	16	15
2	58	38	812	38	108	92	44	66	43	23	17	14
3	35	41	227	36	100	101	42	80	41	24	16	14
4	29	34	138	36	76	161	42	68	39	24	16	15
5	33	30	478	34	63	105	41	64	44	28	16	15
6	158	28	481	31	56	81	40	65	46	23	15	14
7	98	26	225	30	50	71	39	75	41	21	15	14
8	112	25	130	29	46	67	40	68	46	21	15	14
9	149	24	95	29	42	95	41	62	36	20	16	25
10	79	23	82	29	40	109	43	58	36	19	18	26
11	57	31	70	33	39	131	94	57	35	19	22	32
12	45	60	60	34	37	93	123	58	37	19	18	56
13	38	47	77	34	230	105	116	57	37	20	20	30
14	34	41	117	49	809	113	101	58	36	24	20	25
15	30	54	418	96	421	91	81	60	34	20	17	22
16	28	54	228	398	533	76	75	62	32	19	16	21
17	26	91	121	357	498	66	74	68	31	19	16	20
18	24	87	96	164	385	60	68	65	29	18	15	19
19	23	67	213	103	672	54	63	60	28	18	15	21
20	22	70	127	77	906	50	63	60	27	18	15	99
21	20	149	99	64	267	47	70	60	26	17	15	57
22	20	143	75	67	141	46	86	59	26	17	15	39
23	19	113	63	1160	100	46	94	57	24	17	15	32
24	19	79	128	720	81	46	84	58	23	17	14	32
25	19	65	137	232	70	46	77	60	23	16	14	29
26	21	56	92	212	66	53	70	58	24	16	14	32
27	33	47	73	150	67	52	69	56	28	16	14	28
28	33	41	63	108	64	52	102	49	26	16	14	38
29	48	40	54	91	---	48	80	45	23	16	16	33
30	76	48	47	91	---	48	76	45	25	16	20	28
31	67	---	44	97	---	46	---	44	---	17	16	---
TOTAL	1475	1698	5304	4670	6050	2351	2083	1874	992	600	501	859
MEAN	47.6	56.6	171	151	216	75.8	69.4	60.5	33.1	19.4	16.2	28.6
MAX	158	149	812	1160	906	161	123	80	46	28	22	99
MIN	19	23	44	29	37	46	39	44	23	16	14	14
CFSM	5.72	6.80	20.6	18.1	26.0	9.11	8.34	7.27	3.98	2.33	1.95	3.44
IN.	6.59	7.59	23.71	20.88	27.05	10.51	9.31	8.38	4.43	2.68	2.24	3.84
AC-FT	2930	3370	10520	9260	12000	4660	4130	3720	1970	1190	994	1700

CAL YR 1981	TOTAL	24029	MEAN 65.8	MAX 812	MIN 12	CFSM 7.91	IN 107.42	AC-FT 47660
WTR YR 1982	TOTAL	28457	MEAN 78.0	MAX 1160	MIN 14	CFSM 9.38	IN 127.22	AC-FT 56440

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1978 to current year.

pH: October 1980 to September 1981.

WATER TEMPERATURES: October 1978 to current year.

SEDIMENT DISCHARGE: October 1978 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

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

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

SEDIMENT DISCHARGE: Maximum daily, 633 tons (574 tonnes) Dec. 25, 1980; minimum, 0 tons (0 tonnes) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 43 micromhos Sept. 2, 3, 8, 9 (cement spill); minimum, 10 micromhos Feb. 19, 20.

pH: Maximum, 7.9 units July 22, 23; minimum, 6.5 units Feb. 20-23, Mar. 17, Apr. 23.

WATER TEMPERATURES: Maximum, 14.0°C Aug. 5, 9; minimum, 0.5°C Jan. 6.

SEDIMENT CONCENTRATIONS: Maximum daily, 92 mg/l Jan. 23, Feb. 20; minimum, 0 mg/l on many days throughout the year.

SEDIMENT DISCHARGE: Maximum daily, 368 tons (332 tonnes) Jan. 23, Feb. 20; minimum, 0 tons (0 tonnes) on many days throughout the year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
03...	1140	34	32	7.5	7.8	1	3	2
10...	1125	77	22	7.3	8.0	5	5	2
13...	1115	35	26	7.1	6.4	--	--	--
17...	1115	26	31	7.5	6.9	<1	<1	<1
24...	1110	18	33	7.5	6.0	<1	1	<1
31...	1035	63	23	7.3	7.0	2	1	14
NOV								
07...	1030	26	29	7.5	6.0	<1	1	<1
21...	1120	152	17	7.1	7.0	31	6	26
28...	0845	40	25	7.3	2.5	1	<1	4
DEC								
05...	1110	427	13	7.0	6.5	16	7	18
12...	1145	44	20	7.3	4.3	--	--	--
19...	1110	242	13	7.0	6.0	11	1	--
26...	1130	89	18	7.2	3.6	2	<1	2
JAN								
13...	1300	32	26	7.4	--	<1	<1	<1
16...	1130	313	15	7.0	2.8	26	1	36
23...	1155	1700	11	6.8	2.2	6	1	8
30...	1210	89	20	7.2	3.5	<1	<1	2
FEB								
06...	1110	52	23	7.3	1.0	<1	<1	2
13...	1140	147	19	7.2	2.2	8	1	10
20...	1125	1380	9	6.8	4.0	18	3	--
27...	1105	64	20	7.3	3.0	<1	<1	<1
MAR								
06...	1200	81	19	7.2	3.2	<1	<1	1
13...	1135	95	18	7.1	3.0	2	<1	1
20...	1105	47	23	7.2	4.0	1	1	1
27...	1120	47	24	7.3	4.0	<1	<1	<1
APR								
03...	1135	40	26	7.3	4.0	<1	<1	1
10...	1120	38	27	7.3	4.5	1	<1	<1
17...	0917	66	21	7.2	3.5	<1	<1	1
24...	1025	76	20	7.2	4.0	<1	1	2
MAY								
01...	1125	68	21	7.2	6.0	<1	<1	<1
08...	1130	66	21	7.3	5.0	<1	1	<1
15...	1140	55	23	7.3	8.0	<1	<1	<1
22...	1055	56	18	7.3	8.0	<1	1	<1
25...	1300	57	23	7.0	9.6	--	--	--
29...	1150	47	25	7.4	8.5	<1	2	2
JUN								
05...	1115	42	27	7.4	7.0	<1	<1	<1
12...	1115	43	28	7.4	9.0	2	13	4
19...	1110	29	32	7.4	11.0	1	4	2
24...	1245	--	34	7.3	10.2	--	--	--
26...	1200	25	35	7.5	11.0	1	7	2

SANDY RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT								
03...	--	--	--	--	--	33	.39	<5
10...	--	--	--	2.0	--	21	.40	<5
13...	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	30	.22	<5
24...	--	--	--	--	--	36	.21	<5
31...	--	--	--	--	--	25	.30	5
NOV								
07...	--	--	--	--	--	--	.20	<5
21...	<.020	.05	.003	2.9	7.5	21	.69	15
28...	--	--	--	--	--	24	.14	<5
DEC								
05...	<.020	.05	<.003	2.6	6.3	--	2.5	15
12...	--	--	--	--	--	20	.35	<5
19...	--	--	--	--	--	14	.66	5
26...	--	--	--	--	--	20	.35	<5
JAN								
13...	--	--	--	--	--	27	.14	5
16...	--	--	--	--	--	--	1.6	5
23...	<.020	.02	<.003	2.3	4.6	--	8.0	50
30...	--	--	--	--	--	20	.44	<5
FEB								
06...	--	--	--	--	--	22	.20	<5
13...	<.020	.03	<.003	1.4	8.4	21	.95	<5
20...	--	--	--	--	--	--	15	60
27...	--	--	--	--	--	19	.82	<5
MAR								
06...	<.020	.01	<.003	.9	8.9	19	.45	<5
13...	--	--	--	--	--	19	.52	<5
20...	--	--	--	--	--	23	.31	<5
27...	<.020	.02	.024	1.0	11	26	.36	<5
APR								
03...	--	--	--	--	--	27	.25	<5
10...	--	--	--	--	--	28	.39	<5
17...	<.020	.02	.007	.9	9.6	24	.19	5
24...	--	--	--	--	--	21	.25	<5
MAY								
01...	--	--	--	--	--	21	.26	<5
08...	<.020	.01	.004	1.2	9.3	22	.27	<5
15...	--	--	--	--	--	25	.21	<5
22...	--	--	--	--	--	24	.27	<5
25...	--	--	--	--	--	--	--	--
29...	.020	.01	.008	1.1	11	23	.25	<5
JUN								
05...	--	--	--	--	--	29	.33	<5
12...	--	--	--	--	--	30	.24	<5
19...	<.020	.02	.020	.8	14	--	.21	<5
24...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	33	.34	<5

SANDY RIVER BASIN

67

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JUL								
03...	1011	24	34	7.5	9.7	2	7	2
10...	1140	25	38	7.6	10.0	2	3	2
17...	0954	19	39	7.6	9.3	1	3	6
24...	1130	18	40	7.6	10.0	2	8	2
26...	1600	--	42	7.5	12.0	--	--	--
31...	1130	18	40	7.7	10.0	5	4	6
AUG								
07...	1145	16	42	7.6	11.0	<1	2	<1
14...	1145	21	38	7.5	10.0	3	3	20
21...	1130	15	42	7.6	11.0	<1	3	2
23...	1100	--	45	7.4	10.4	--	--	--
28...	1225	15	43	7.6	10.0	1	--	<1
SEP								
04...	1150	21	42	7.6	10.0	1	1	<1
11...	1215	20	39	7.6	9.0	5	8	4
18...	1150	19	38	7.5	9.5	2	8	10
23...	1100	--	30	7.4	10.0	--	--	--
25...	1210	28	32	7.5	10.0	1	4	6

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
JUL								
03...	--	--	--	--	--	32	.15	<5
10...	<.020	.03	.010	.6	17	35	.19	<5
17...	--	--	--	--	--	36	.15	<5
24...	--	--	--	--	--	37	.26	<5
26...	--	--	--	--	--	--	--	--
31...	<.020	.04	.005	.6	18	38	.19	<5
AUG								
07...	--	--	--	--	--	37	.24	<5
14...	--	--	--	--	--	33	.28	<5
21...	<.020	.04	.010	.7	17	39	.20	<5
23...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	.40	<5
SEP								
04...	--	--	--	--	--	40	.21	<5
11...	<.020	.06	.018	1.5	17	36	.30	<5
18...	--	--	--	--	--	34	.19	<5
23...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	32	.21	<5

SANDY RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

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

SANDY RIVER BASIN

69

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	7.4	7.1	7.1	6.9	7.2	6.8	7.3	7.2	7.2	6.9	6.9	6.7
2	7.4	7.2	7.2	7.0	7.0	6.7	7.3	7.1	7.2	6.8	7.0	6.8
3	7.3	7.2	7.1	7.0	7.1	6.9	7.2	7.1	7.2	6.9	7.0	6.8
4	7.3	7.1	7.2	6.9	7.1	6.8	7.3	7.2	7.2	6.8	7.1	6.6
5	7.3	7.1	7.2	6.9	7.2	6.7	7.2	7.1	7.1	6.8	7.0	6.6
6	7.3	6.9	7.1	6.9	7.0	6.7	7.2	7.1	7.0	6.8	7.1	6.7
7	7.1	6.9	7.1	6.9	7.1	6.6	7.4	7.1	7.1	6.9	7.1	6.7
8	7.1	6.8	7.1	6.9	7.1	6.7	7.3	7.1	7.1	6.8	7.0	6.7
9	7.0	6.7	7.1	6.8	7.1	6.8	7.2	7.0	7.0	6.9	7.0	6.8
10	7.0	6.9	7.1	6.8	6.8	6.7	7.2	7.0	7.0	6.8	7.1	6.7
11	7.1	7.0	7.0	6.9	7.0	6.8	7.1	7.0	7.2	6.8	6.9	6.7
12	7.2	6.9	7.1	6.9	7.1	7.0	7.2	7.0	7.2	7.0	7.0	6.7
13	7.2	6.9	7.1	7.0	7.2	6.7	7.2	7.0	7.3	6.8	7.1	6.8
14	7.3	7.0	7.0	6.9	7.2	6.7	7.4	7.0	7.1	6.8	6.9	6.7
15	7.3	7.0	7.0	6.9	7.0	6.7	7.2	6.9	7.2	6.8	7.1	6.7
16	7.2	6.9	7.0	6.9	7.0	6.6	6.9	6.5	7.3	6.9	6.9	6.7
17	7.2	6.8	7.0	6.8	7.2	6.9	7.0	6.7	7.2	6.9	7.0	6.5
18	7.1	6.9	7.0	6.8	7.1	6.9	6.9	6.7	7.3	6.8	6.9	6.6
19	7.1	6.8	7.0	6.9	7.1	6.7	7.1	6.8	7.0	6.7	6.8	6.6
20	7.1	6.7	7.1	6.9	7.1	6.7	7.1	6.9	7.0	6.8	7.0	6.7
21	7.1	6.8	6.9	6.6	7.0	6.6	7.1	7.0	7.0	6.8	7.1	6.7
22	7.1	6.8	7.0	6.7	6.9	6.7	7.2	7.0	7.0	6.8	7.1	6.7
23	7.1	6.8	6.9	6.7	7.0	6.8	7.0	6.7	6.9	6.5	7.1	6.7
24	7.1	6.8	7.0	6.9	7.0	6.6	6.9	6.7	6.8	6.5	7.2	6.7
25	7.2	6.8	7.2	7.0	7.0	6.7	7.2	6.7	7.1	6.7	7.1	6.7
26	6.9	6.8	7.2	7.0	7.1	6.9	7.1	6.9	6.9	6.7	6.8	6.6
27	7.1	6.9	7.2	7.0	7.0	6.8	7.2	7.0	6.9	6.7	6.9	6.6
28	7.0	6.8	7.0	6.9	7.0	6.8	7.2	6.9	7.2	6.9	6.8	6.6
29	6.9	6.7	7.0	7.0	7.0	6.9	7.2	7.0	---	---	7.1	6.7
30	7.0	6.8	7.0	7.0	7.2	6.9	7.2	6.8	---	---	7.0	6.7
31	7.2	6.9	---	---	7.2	7.2	7.0	6.8	---	---	6.8	6.7
MONTH	7.4	6.7	7.2	6.6	7.2	6.6	7.4	6.5	7.3	6.5	7.2	6.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	7.1	6.7	7.2	6.8	7.2	7.0	7.3	7.1	7.5	7.2	7.7	7.2
2	6.9	6.7	7.0	6.8	7.4	7.1	7.4	7.1	7.5	7.1	7.7	7.2
3	6.9	6.7	7.1	6.8	7.4	7.1	7.4	7.2	7.5	7.1	7.4	7.2
4	6.9	6.7	7.2	6.8	7.2	7.0	7.6	7.1	7.6	7.0	7.6	7.2
5	6.9	6.7	7.4	6.8	7.3	7.0	7.4	7.1	7.8	6.9	7.7	7.2
6	7.2	6.7	7.4	6.8	7.2	7.0	7.6	7.1	7.6	7.2	7.6	7.2
7	7.1	6.7	7.0	6.8	7.4	7.1	7.5	7.1	7.6	7.3	7.6	7.2
8	7.1	6.7	7.0	6.8	7.5	7.0	7.6	7.1	7.6	7.3	7.6	7.1
9	7.1	6.7	7.0	6.8	7.5	6.9	7.6	7.1	7.6	7.3	7.4	7.1
10	7.1	6.7	7.1	6.9	7.5	7.0	7.7	7.1	7.6	7.3	7.3	7.1
11	7.0	6.6	7.3	6.9	7.4	7.0	7.7	7.1	7.6	7.3	7.2	7.0
12	7.0	6.7	7.0	6.9	7.2	7.1	7.8	7.1	7.8	7.3	7.2	7.0
13	6.8	6.7	7.3	6.9	7.2	7.0	7.5	7.1	7.5	7.3	7.4	7.1
14	6.9	6.7	7.4	6.8	7.3	7.0	7.5	7.2	7.7	7.3	7.4	7.1
15	6.8	6.7	7.3	6.8	7.5	6.9	7.4	7.2	7.7	7.3	7.5	7.1
16	7.1	6.6	7.3	6.8	7.5	6.9	7.8	7.2	7.7	7.2	7.5	7.2
17	6.9	6.6	7.0	6.8	7.5	6.9	7.8	7.2	7.7	7.2	7.6	7.1
18	7.0	6.7	7.1	6.9	7.5	6.9	7.8	7.2	7.7	7.2	7.6	7.2
19	7.2	6.6	7.3	6.9	7.4	6.9	7.8	7.2	7.7	7.2	7.4	7.2
20	7.2	6.6	7.4	6.8	7.5	6.9	7.8	7.3	7.7	7.2	7.3	7.0
21	7.2	6.6	7.3	6.8	7.3	7.0	7.6	7.3	7.7	7.2	7.5	7.0
22	7.2	6.6	7.1	6.9	7.5	7.0	7.9	7.3	7.7	7.2	7.6	7.1
23	7.1	6.5	7.4	6.9	7.6	7.0	7.9	7.4	7.7	7.2	7.6	7.3
24	7.1	6.7	7.4	6.9	7.5	7.0	7.8	7.3	7.8	7.2	7.5	7.3
25	7.2	6.8	7.1	6.9	7.6	7.0	7.8	7.3	7.8	7.2	7.4	7.3
26	7.4	6.8	7.1	6.9	7.3	7.0	7.6	7.3	7.6	7.2	7.6	7.3
27	7.3	6.8	7.1	6.9	7.3	7.1	7.8	7.2	7.8	7.2	7.5	7.3
28	7.0	6.8	7.4	7.0	7.4	7.1	7.8	7.1	7.7	7.2	7.5	7.3
29	7.2	6.8	7.4	7.0	7.4	7.0	7.6	7.1	7.6	7.2	7.6	7.3
30	7.3	6.8	7.4	7.0	7.3	7.1	7.5	7.2	7.6	7.2	7.6	7.2
31	---	---	7.4	7.0	---	---	7.6	7.2	7.7	7.2	---	---
MONTH	7.4	6.5	7.4	6.8	7.6	6.9	7.9	7.1	7.8	6.9	7.7	7.0

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

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

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1	.06	0	.00	4	2.4	1	.11	1	.22	1	.27
2	1	.22	0	.00	85	290	1	.10	0	.00	1	.25
3	0	.00	0	.00	5	3.0	1	.10	0	.00	1	.27
4	0	.00	0	.00	3	1.1	1	.10	0	.00	5	2.0
5	0	.00	0	.00	20	33	1	.09	0	.00	1	.28
6	3	1.0	0	.00	9	12	0	.00	0	.00	1	.22
7	1	.26	0	.00	3	1.8	0	.00	0	.00	1	.19
8	1	.20	0	.00	2	.70	0	.00	1	.12	1	.18
9	1	.47	0	.00	1	.26	1	.08	1	.11	1	.26
10	1	.21	0	.00	1	.22	0	.00	0	.00	1	.29
11	1	.15	0	.00	1	.19	0	.00	0	.00	2	.71
12	1	.12	1	.16	1	.16	0	.00	1	.10	2	.50
13	0	.00	1	.13	2	.42	0	.00	7	6.4	1	.28
14	0	.00	2	.22	2	.67	1	.13	23	54	1	.31
15	0	.00	2	.29	8	8.3	2	.52	4	3.9	1	.25
16	0	.00	2	.29	3	1.7	17	24	7	10	1	.21
17	0	.00	2	.49	2	.65	6	5.9	4	5.0	0	.00
18	0	.00	1	.23	1	.26	2	.89	5	6.4	0	.00
19	0	.00	1	.18	4	1.9	2	.56	11	22	0	.00
20	0	.00	1	.19	3	1.0	2	.42	92	368	0	.00
21	0	.00	2	.83	1	.27	1	.17	7	5.7	0	.00
22	0	.00	1	.39	1	.20	1	.18	1	.38	0	.00
23	0	.00	1	.31	1	.17	81	368	1	.27	0	.00
24	0	.00	0	.00	2	.63	23	54	1	.22	0	.00
25	0	.00	0	.00	1	.36	---	1.8	1	.19	0	.00
26	0	.00	0	.00	0	.00	2	1.1	1	.18	0	.00
27	0	.00	0	.00	0	.00	2	.81	1	.18	1	.14
28	0	.00	0	.00	0	.00	1	.29	0	.00	0	.00
29	0	.00	0	.00	0	.00	1	.25	---	---	0	.00
30	1	.21	1	.13	1	.13	2	.49	---	---	1	.13
31	0	.00	---	---	---	---	1	.26	---	---	1	.12
TOTAL	---	2.90	---	3.84	---	361.49	---	460.35	---	483.37	---	6.86

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1	.12	0	.00	1	.12	1	.06	0	.00	0	.00
2	1	.12	0	.00	1	.12	1	.06	0	.00	0	.00
3	2	.23	1	.22	1	.11	0	.00	0	.00	0	.00
4	2	.23	1	.18	1	.11	0	.00	0	.00	0	.00
5	0	.00	1	.17	1	.12	0	.00	0	.00	0	.00
6	0	.00	1	.18	1	.12	0	.00	0	.00	0	.00
7	1	.11	1	.20	1	.11	1	.06	1	.04	0	.00
8	1	.11	1	.18	1	.12	1	.06	1	.04	0	.00
9	1	.11	1	.17	1	.10	0	.00	0	.00	0	.00
10	1	.12	0	.00	1	.10	0	.00	0	.00	0	.00
11	2	.51	0	.00	1	.09	0	.00	0	.00	1	.09
12	2	.65	1	.16	1	.10	0	.00	0	.00	0	.00
13	1	.31	1	.15	1	.10	0	.00	0	.00	1	.08
14	1	.27	1	.16	1	.10	0	.00	0	.00	0	.00
15	1	.22	1	.16	1	.09	0	.00	0	.00	1	.06
16	1	.20	1	.17	1	.09	0	.00	0	.00	1	.06
17	1	.20	1	.18	1	.08	0	.00	0	.00	0	.00
18	1	.18	1	.18	1	.08	0	.00	0	.00	0	.00
19	1	.17	1	.16	1	.08	0	.00	0	.00	0	.00
20	1	.17	1	.16	1	.07	0	.00	0	.00	0	.00
21	1	.19	1	.16	0	.00	1	.05	0	.00	0	.00
22	1	.23	1	.16	0	.00	0	.00	0	.00	0	.00
23	0	.00	1	.15	0	.00	0	.00	0	.00	0	.00
24	1	.23	1	.16	0	.00	1	.05	0	.00	0	.00
25	1	.21	1	.16	0	.00	0	.00	0	.00	0	.00
26	1	.19	1	.16	0	.00	0	.00	0	.00	0	.00
27	0	.00	1	.15	0	.00	0	.00	0	.00	1	.08
28	1	.28	1	.13	0	.00	0	.00	0	.00	0	.00
29	1	.22	1	.12	0	.00	0	.00	0	.00	0	.00
30	1	.21	1	.12	0	.00	0	.00	0	.00	0	.00
31	---	---	1	.12	---	---	0	.00	0	.00	---	---
TOTAL	---	5.79	---	4.37	---	2.01	---	0.34	---	0.08	---	0.37

SANDY RIVER BASIN

14138950 DEER CREEK NEAR BULL RUN, OR

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

DRAINAGE AREA.--1.62 mi² (4.20 km²).

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT							
03...	1210	3.0	24	7.3	9.0	6	4
10...	1155	11	20	7.2	8.8	22	5
17...	1150	2.8	22	7.3	7.7	1	1
24...	1140	1.9	23	7.3	6.6	1	2
31...	1100	6.5	20	7.2	7.9	2	3
NOV							
07...	1100	2.9	21	7.3	7.0	<1	1
14...	0940	--	20	7.3	7.5	<1	<1
21...	1200	19	18	7.2	8.0	3	2
28...	0852	6.3	19	7.1	3.0	1	<1
DEC							
05...	1135	60	14	7.0	8.0	35	5
12...	1200	9.8	16	7.1	5.2	1	1
19...	1130	35	15	7.1	7.5	2	1
26...	1150	20	15	7.1	5.0	<1	1
JAN							
02...	1040	6.3	16	7.1	2.0	<1	<1
16...	1155	77	14	7.0	4.0	2	2
23...	1210	--	11	6.8	3.8	1	2
30...	1235	--	15	7.1	4.9	<1	<1
FEB							
06...	1130	6.9	16	7.1	1.8	<0	<1
13...	1210	9.6	15	7.0	3.5	2	1
20...	1150	--	10	6.8	5.8	14	2
27...	1130	9.1	14	7.1	4.0	<1	<1
MAR							
06...	1215	13	14	7.0	4.2	<1	<1
13...	1155	9.1	15	7.0	4.6	1	<1
20...	1125	6.3	15	7.1	4.5	<1	<1
27...	1150	4.9	17	7.1	4.5	1	<1
APR							
03...	1155	5.2	17	7.1	4.5	<1	<1
10...	1150	4.6	17	7.1	6.0	<1	<1
17...	0927	10	15	7.0	4.6	<1	<1
24...	1045	7.8	16	7.0	5.0	1	<1
MAY							
01...	1145	5.7	17	7.1	7.0	<1	<1
08...	1150	5.6	17	7.2	5.0	3	1
15...	1200	4.6	18	7.2	8.5	1	28
22...	1120	4.6	18	7.2	9.0	<1	2
29...	1210	3.7	19	7.2	9.0	1	7
JUN							
05...	1150	3.0	20	7.2	8.0	4	3
12...	1140	2.8	21	7.2	10.5	16	29
19...	1130	2.1	23	7.1	15.0	1	21
26...	1230	1.6	24	7.2	15.5	16	43
JUL							
03...	1023	2.1	24	7.0	11.8	7	24
10...	1210	1.6	25	7.3	14.0	5	21
17...	1004	1.3	26	7.2	14.9	1	5
24...	1145	.44	27	7.3	13.0	<1	16
31...	1150	.35	27	7.3	14.0	4	9
AUG							
07...	1210	.20	18	7.3	15.0	1	4
14...	1205	.73	28	7.3	12.0	7	14
21...	1150	.17	30	7.2	15.0	1	13
28...	1245	--	31	7.4	13.0	1	--
SEP							
04...	1215	--	31	7.3	14.5	1	24
11...	1245	1.3	29	7.3	11.0	31	29
18...	1210	1.9	26	7.3	12.0	4	9
25...	1230	3.5	22	7.2	12.0	9	13

SANDY RIVER BASIN

73

14138950 DEER CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI-FORM, TOTAL, IMMEDIATE (COLS. PER 100 MU)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS-SOLVED (MG/L AS SI02)	TUR-BID-ITY (NTU)	COLOR (PLAT-INUM-COBALT UNITS)
OCT							
03...	10	--	--	--	--	.18	<5
10...	46	--	--	--	--	.19	<5
17...	4	--	--	--	--	.17	5
24...	<1	--	--	--	--	.18	<5
31...	4	--	--	--	--	.19	<5
NOV							
07...	<1	--	--	--	--	.18	<5
14...	2	--	--	--	--	.20	<5
21...	12	<.020	.03	<.003	7.2	.34	<5
28...	24	--	--	--	--	.12	<5
DEC							
05...	56	<.020	.02	<.003	6.3	.71	<5
12...	2	--	--	--	--	.17	<5
19...	4	--	--	--	--	.26	<5
26...	<1	--	--	--	--	.20	<5
JAN							
02...	<1	<.020	.02	<.003	7.0	.14	<5
16...	6	--	--	--	--	.89	5
23...	14	<.020	.02	<.003	4.4	4.4	40
30...	<1	--	--	--	--	.21	<5
FEB							
06...	3	--	--	--	--	.18	<5
13...	6	--	--	--	--	.45	<5
20...	--	--	--	--	--	3.6	40
27...	2	--	--	--	--	.15	<5
MAR							
06...	<1	<.020	<.01	<.003	6.0	.16	<5
13...	1	--	--	--	--	.19	<5
20...	<1	--	--	--	--	.18	<5
27...	<1	<.020	<.01	<.003	7.5	.24	<5
APR							
03...	<1	--	--	--	--	.14	<5
10...	<1	--	--	--	--	.17	<5
17...	1	<.020	.01	<.003	6.6	.14	<5
24...	<1	--	--	--	--	.14	<5
MAY							
01...	1	--	--	--	--	.18	<5
08...	5	<.020	<.01	<.003	6.8	.15	<5
15...	<1	--	--	--	--	.18	<5
22...	<1	--	--	--	--	.14	<5
29...	<1	<.020	.02	.004	7.5	.18	<5
JUN							
05...	4	--	--	--	--	.16	<5
12...	22	--	--	--	--	.20	<5
19...	4	<.020	.01	.007	9.5	.16	<5
26...	18	--	--	--	--	.21	5
JUL							
03...	12	--	--	--	--	.13	<5
10...	2	<.020	.02	.005	10	.12	<5
17...	<1	--	--	--	--	.13	<5
24...	2	--	--	--	--	.15	<5
31...	4	<.020	.01	<.003	11	.10	<5
AUG							
07...	2	--	--	--	--	.10	<5
14...	32	--	--	--	--	.13	<5
21...	6	<.020	.03	<.003	11	.12	<5
28...	4	--	--	--	--	.12	<5
SEP							
04...	8	--	--	--	--	.13	<5
11...	46	<.020	.02	<.003	11	.14	<5
18...	2	--	--	--	--	.14	<5
25...	8	--	--	--	--	.20	<5

SANDY RIVER BASIN

14138960 COUGAR CREEK NEAR BULL RUN, OR

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

DRAINAGE AREA.--3.06 mi² (7.93 km²).

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
03...	1215	4.7	19	7.6	9.0	3	4	8
10...	1205	27	15	7.0	8.0	6	3	4
17...	1200	6.3	17	7.1	8.0	1	3	2
20...	1500	5.5	17	7.2	8.7	--	--	--
24...	1150	3.7	18	7.2	7.2	1	2	4
31...	1110	12	16	7.0	7.0	1	1	8
NOV								
07...	1110	5.6	16	7.1	6.8	<1	<1	<1
14...	0945	--	15	7.1	7.0	<1	1	2
21...	1210	39	14	7.0	7.0	8	3	16
28...	0858	14	16	7.0	3.0	1	1	6
DEC								
05...	1145	87	11	6.9	7.0	9	5	20
12...	1210	27	16	7.1	5.1	<1	<1	<1
19...	1140	55	13	7.0	7.0	1	<1	4
26...	1200	45	14	7.0	4.0	<1	1	<1
JAN								
02...	1045	12	16	7.1	2.2	1	<1	2
16...	1205	65	12	6.9	3.0	4	2	8
23...	1220	509	0	6.7	3.0	4	4	2
30...	1245	44	16	7.1	4.9	1	<1	<1
FEB								
06...	1140	24	17	7.1	2.0	<1	<1	1
13...	1215	42	14	7.0	3.5	1	1	3
20...	1200	553	8	6.6	4.0	--	--	--
27...	1140	--	15	7.1	4.1	1	<1	<1
MAR								
06...	1220	--	14	7.1	4.3	<1	<1	1
13...	1205	--	13	6.9	4.0	<1	<1	<1
20...	1135	--	15	7.0	4.5	<1	<1	<1
27...	1200	--	15	7.1	5.0	<1	<1	1
APR								
10...	1200	--	16	7.0	5.5	<1	<1	<1
17...	0933	--	14	7.0	4.0	<1	3	1
MAY								
01...	1155	--	14	7.0	6.0	<1	<1	1
08...	1200	--	12	7.1	5.0	1	<1	<1
15...	1210	--	13	7.1	8.0	<1	1	<1
22...	1130	--	12	7.0	7.5	<1	<1	<1
29...	1220	--	12	7.0	8.5	2	4	<1
JUN								
05...	1200	30	12	7.1	7.0	1	2	2
12...	1150	--	14	7.1	9.0	2	18	<1
19...	1140	--	15	7.0	12.5	1	12	4
24...	1330	--	18	7.1	16.0	--	--	--
26...	1240	--	17	7.1	14.5	7	9	6
JUL								
03...	1028	--	17	7.0	11.8	3	30	18
10...	1220	--	17	7.1	14.0	2	15	2
17...	1009	--	19	7.1	11.8	9	14	14
24...	1155	--	19	7.0	14.0	5	9	6
26...	1500	--	20	7.4	16.8	--	--	--
31...	1200	--	19	7.0	13.5	<1	11	12
AUG								
07...	1220	--	21	7.0	15.0	<1	8	2
14...	1215	--	19	<7.1	13.0	8	22	34
21...	1200	--	21	7.0	15.5	2	12	4
23...	1200	--	25	7.3	15.2	--	--	--
28...	1255	--	21	7.1	14.5	<1	19	8
SEP								
04...	1225	--	21	7.0	14.0	2	19	<1
11...	1255	--	20	7.1	11.0	5	16	16
18...	1220	1.4	19	7.1	12.5	2	7	<1
23...	1000	--	16	7.2	10.5	--	--	--
25...	1240	5.4	17	7.1	11.0	2	8	6

SANDY RIVER BASIN

75

14138960 COUGAR CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
03...	--	--	--	--	20	.10	<5
10...	--	--	--	--	13	.12	<5
17...	--	--	--	--	17	.10	<5
20...	--	--	--	--	--	--	--
24...	--	--	--	--	20	1.4	<5
31...	--	--	--	--	16	.12	<5
NOV							
07...	--	--	--	--	--	1.2	<5
14...	--	--	--	--	15	.17	<5
21...	<.020	.02	<.003	5.8	--	.20	5
28...	--	--	--	--	15	.15	<5
DEC							
05...	<.020	.01	<.003	5.3	14	.70	<5
12...	--	--	--	--	14	.15	<5
19...	--	--	--	--	--	.20	<5
26...	--	--	--	--	--	.13	<5
JAN							
02...	<.020	.02	<.003	7.3	17	.13	<5
16...	--	--	--	--	16	.56	5
23...	<.020	.02	<.003	4.3	--	4.0	30
30...	--	--	--	--	16	.19	<5
FEB							
06...	--	--	--	--	17	.14	<5
13...	--	--	--	--	17	.35	<5
20...	--	--	--	--	--	27	120
27...	--	--	--	--	13	.16	<5
MAR							
06...	<.020	<.01	<.003	6.8	13	.16	<5
13...	--	--	--	--	13	.17	<5
20...	--	--	--	--	14	.16	<5
27...	<.020	.01	<.003	6.8	17	.17	<5
APR							
10...	--	--	--	--	17	.13	<5
17...	<.020	.02	<.003	6.3	17	.15	<5
MAY							
01...	--	--	--	--	--	.11	<5
08...	<.020	<.01	<.003	5.8	13	.11	<5
15...	--	--	--	--	15	.13	<5
22...	--	--	--	--	13	.12	<5
29...	<.020	.02	.005	5.2	12	.17	<5
JUN							
05...	--	--	--	--	15	.11	<5
12...	--	--	--	--	15	.13	<5
19...	<.020	.02	.003	7.0	--	.13	<5
24...	--	--	--	--	--	--	--
26...	--	--	--	--	17	.14	<5
JUL							
03...	--	--	--	--	16	.15	<5
10...	<.020	.04	<.003	8.3	--	.14	<5
17...	--	--	--	--	16	.10	<5
24...	--	--	--	--	17	.18	<5
26...	--	--	--	--	--	--	--
31...	<.020	.04	<.003	9.1	18	.10	<5
AUG							
07...	--	--	--	--	18	.11	<5
14...	--	--	--	--	16	.12	<5
21...	<.020	.04	<.003	9.2	21	.18	<5
23...	--	--	--	--	--	--	--
28...	--	--	--	--	23	.11	<5
SEP							
04...	--	--	--	--	20	.11	<5
11...	<.020	.06	<.003	8.9	19	.16	<5
18...	--	--	--	--	16	.14	<5
23...	--	--	--	--	--	--	--
25...	--	--	--	--	17	.16	<5

14138990 BEAR CREEK NEAR BULL RUN, OR

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

DRAINAGE AREA.--1.68 mi² (4.35 km²).

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
03...	1225	.96	18	7.2	9.0	2	4	6
10...	1215	5.3	18	7.1	8.5	2	4	2
17...	1200	--	--	--	--	--	4	--
17...	1210	1.9	18	7.1	8.0	5	<5	<1
24...	1200	1.1	16	7.2	7.0	1	4	<1
31...	1120	2.8	17	7.1	7.9	<1	4	<1
NOV								
07...	1120	1.7	17	7.1	7.0	1	1	<1
14...	0955	3.2	16	7.1	7.7	3	3	4
21...	1220	9.5	17	7.0	8.0	1	2	8
28...	0906	4.6	17	7.0	4.0	<1	1	16
DEC								
05...	1155	44	14	7.0	8.0	2	3	4
12...	1220	11	15	7.0	5.8	<1	1	<1
19...	1150	28	14	7.1	7.5	1	1	4
26...	1210	17	15	7.0	5.0	<1	<1	4
JAN								
02...	1055	5.3	15	7.1	3.0	2	<1	<1
16...	1215	47	14	7.0	4.0	5	1	6
23...	1230	121	12	6.8	4.0	5	1	8
30...	1255	18	15	7.1	5.0	<1	<1	<1
FEB								
06...	1150	11	15	7.1	2.2	2	1	8
13...	1220	12	15	7.0	4.0	4	1	7
20...	1210	153	9	6.7	5.0	--	--	--
27...	1150	80	14	7.0	4.2	<1	<1	1
MAR								
06...	1215	53	--	--	--	--	--	--
06...	1230	61	14	7.0	4.8	1	<1	<1
13...	1215	80	14	7.0	5.0	<1	<1	<1
20...	1145	35	14	7.0	5.0	<1	<1	<1
27...	1210	28	14	7.0	5.0	<1	<1	<1
APR								
03...	1205	--	16	7.0	4.5	<1	<1	<1
03...	1220	28	15	7.0	4.5	<1	1	<1
10...	1210	25	15	7.0	5.5	<1	<1	<1
17...	0945	47	15	7.0	5.0	<1	<1	1
24...	1055	--	14	7.0	5.5	<1	<1	<1
24...	1105	39	15	7.0	6.0	<1	<1	1
MAY								
01...	1205	34	15	7.0	6.5	<1	<1	<1
08...	1210	33	15	7.1	6.0	<1	<1	<1
15...	1220	28	14	7.1	8.0	1	1	<1
22...	1140	30	14	7.1	8.0	<1	<1	2
29...	1230	26	14	7.0	8.5	<1	5	2
JUN								
05...	1210	22	15	7.1	7.5	<1	2	<1
12...	1200	20	15	7.1	9.5	1	13	2
19...	1150	17	16	7.0	13.0	1	10	<1
26...	1250	17	17	7.0	14.5	2	19	10
JUL								
03...	1041	16	16	7.0	11.2	2	26	4
10...	1230	15	17	7.1	13.0	1	13	6
17...	1019	14	17	7.0	11.9	3	11	4
24...	1205	14	18	7.1	14.0	4	13	8
31...	1210	13	18	7.1	13.5	6	8	12
AUG								
07...	1230	13	18	7.0	14.0	3	10	14
14...	1225	15	17	7.0	14.0	6	15	58
21...	1210	12	19	7.0	15.0	12	20	--
28...	1305	12	19	7.1	14.0	8	11	28
SEP								
04...	1235	12	19	7.1	14.0	6	22	8
11...	1305	15	18	7.0	11.5	11	10	20
18...	1230	16	17	7.0	11.5	2	11	4
25...	1250	20	17	7.1	11.0	1	12	<1

SANDY RIVER BASIN

77

14138990 BEAR CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT							
03...	--	--	--	--	20	.14	<5
10...	--	--	--	--	14	.14	<5
17...	--	--	--	--	--	--	--
17...	--	--	--	--	19	.15	<5
24...	--	--	--	--	--	.18	<5
31...	--	--	--	--	18	.16	<5
NOV							
07...	--	--	--	--	21	.14	<5
14...	--	--	--	--	16	.33	<5
21...	<.020	.03	<.003	7.4	20	.20	<5
28...	--	--	--	--	16	.17	<5
DEC							
05...	<.020	.01	<.003	6.5	16	.62	5
12...	--	--	--	--	14	.18	<5
19...	--	--	--	--	12	.19	<5
26...	--	--	--	--	16	.14	<5
JAN							
02...	<.020	.02	<.003	7.0	15	.12	<5
16...	--	--	--	--	--	.73	5
23...	<.020	.02	<.003	5.1	--	4.9	30
30...	--	--	--	--	15	.18	<5
FEB							
06...	--	--	--	--	15	.14	<5
13...	--	--	--	--	--	.34	<5
20...	--	--	--	--	--	46	240
27...	--	--	--	--	12	.19	<5
MAR							
06...	--	--	--	--	--	--	--
06...	<.020	<.01	<.003	6.5	14	.18	<5
13...	--	--	--	--	13	.16	<5
20...	--	--	--	--	13	.16	<5
27...	<.020	<.01	<.003	6.8	16	.20	<5
APR							
03...	--	--	--	--	17	.13	<5
03...	--	--	--	--	15	.13	5
10...	--	--	--	--	16	.13	<5
17...	<.020	.01	<.003	7.0	18	.14	<5
24...	--	--	--	--	15	.15	<5
24...	--	--	--	--	16	.10	<5
MAY							
01...	--	--	--	--	14	.10	<5
08...	<.020	.04	<.003	7.0	15	.10	<5
15...	--	--	--	--	15	.11	<5
22...	--	--	--	--	15	.09	<5
29...	<.020	<.01	<.003	6.0	14	.19	<5
JUN							
05...	--	--	--	--	16	.01	<5
12...	--	--	--	--	17	.11	<5
19...	<.020	.02	<.003	7.5	--	.11	<5
26...	--	--	--	--	18	.10	<5
JUL							
03...	--	--	--	--	16	.13	<5
10...	<.020	.02	<.003	7.9	18	.11	<5
17...	--	--	--	--	16	.09	<5
24...	--	--	--	--	17	.09	<5
31...	<.020	.01	<.003	8.6	17	.10	<5
AUG							
07...	--	--	--	--	18	.10	<5
14...	--	--	--	--	18	.11	<5
21...	<.020	.03	<.003	8.6	17	.09	<5
28...	--	--	--	--	21	.11	<5
SEP							
04...	--	--	--	--	18	.11	<5
11...	<.020	.03	<.003	8.1	18	.12	<5
18...	--	--	--	--	16	.11	<5
25...	--	--	--	--	18	.13	<5

14139000 BULL RUN RESERVOIR NUMBER ONE NEAR BULL RUN, OR

LOCATION.--Lat 45°28'50", long 122°04'50", in NW¼ sec.16, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, in control house of Bear Creek Dam on Bull Run River, 8.2 mi (13.2 km) northeast of Bull Run, and at mile 11.2 (18.0 km).

DRAINAGE AREA.--74.6 mi² (193.0 km²).

PERIOD OF RECORD.--October 1928 to current year. Prior to October 1937, published as Bull Run Reservoir. October 1937 to September 1967, published as Lake Ben Morrow. Prior to October 1975, monthend contents only.

REVISED RECORDS.--WSP 814: 1935(M). WSP 1935: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to Oct. 9, 1930, Oct. 1, 1962, to Dec. 31, 1975, nonrecording gage and Oct. 9, 1930, to Sept. 30, 1962, water-stage recorder at present site and datum.

REMARKS.--Lake is formed by concrete dam completed in March 1929 for water supply of city of Portland. Storage began about Apr. 29, 1929; first filling occurred May 15, 1929. Capacity, 26,930 acre-ft (33.2 hm³) at crest of spillway, elevation, 1,036.0 ft (315.77 m); capacity increased in October 1954 to 30,140 acre-ft (37.2 hm³) at elevation 1,044.0 ft (318.21 m) by installation of three gates 40 ft (12 m) wide and 8 ft (2.4 m) high. No dead storage. Water is used for power generation by Portland General Electric Co. and municipal supply for city of Portland.

COOPERATION.--Capacity table furnished by Portland Water Bureau.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,600 acre-ft (39.0 hm³) Mar. 31, 1931, elevation, 1,047.40 ft (319.248 m); minimum observed, 169 acre-ft (208,000 m³) Jan. 10, 1960, elevation, 887.5 ft (270.51 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 30,810 acre-ft (38.0 hm³) June 17, 18, elevation, 1,045.56 ft (318.687 m); minimum, 13,260 acre-ft (16.3 hm³) Oct. 1, elevation, 993.55 ft (302.834 m).

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	31,86

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	994.70	1035.46	1038.86	1037.04	1034.37	1034.70	1034.36	1042.03	1044.82	1044.27	1031.22	1013.76
2	997.64	1034.51	1040.22	1034.50	1035.05	1034.51	1036.04	1041.21	1044.65	1044.13	1030.99	1013.68
3	999.52	1034.01	1038.91	1034.72	1034.61	1034.93	1036.83	1041.09	1044.52	1043.95	1030.74	1012.66
4	1001.23	1033.27	1038.16	1035.23	1035.26	1034.54	1036.93	1040.70	1044.95	1043.75	1030.40	1011.93
5	1002.78	1033.59	1041.78	1034.50	1035.47	1035.42	1036.93	1040.20	1045.45	1044.17	1029.69	1012.39
6	1009.71	1034.61	1040.17	1034.96	1034.81	1034.82	1036.92	1039.91	1045.10	1044.73	1028.67	1011.56
7	1014.87	1035.54	1038.75	1034.74	1034.82	1035.71	1036.85	1037.81	1045.03	1044.96	1027.58	1010.64
8	1019.62	1036.33	1038.03	1034.30	1034.78	1034.32	1036.85	1037.34	1045.07	1044.78	1026.50	1009.68
9	1026.37	1036.57	1037.71	1034.29	1034.77	1035.76	1036.85	1037.25	1045.24	1044.20	1025.80	1009.42
10	1030.03	1036.61	1037.57	1034.35	1034.93	1035.03	1036.94	1037.20	1045.37	1043.42	1025.44	1010.35
11	1032.54	1036.83	1037.41	1034.12	1034.69	1035.42	1037.86	1037.12	1045.43	1042.63	1025.28	1010.20
12	1034.43	1037.18	1037.18	1034.72	1034.78	1034.29	1038.08	1037.15	1045.46	1041.96	1025.00	1012.90
13	1035.53	1037.01	1037.57	1036.07	1037.99	1034.98	1038.36	1037.13	1045.46	1041.65	1024.81	1014.27
14	1035.34	1036.94	1038.31	1035.30	1040.47	1034.78	1037.94	1037.21	1045.42	1041.54	1024.72	1015.25
15	1034.47	1037.16	1040.85	1034.75	1037.80	1034.51	1037.67	1037.25	1045.27	1041.47	1024.47	1014.40
16	1033.85	1037.20	1038.71	1040.23	1039.45	1034.57	1037.50	1037.29	1045.44	1041.40	1024.19	1015.12
17	1033.55	1037.65	1037.92	1037.01	1038.54	1034.45	1037.49	1037.37	1045.56	1041.16	1023.90	1014.44
18	1033.19	1037.47	1037.76	1034.82	1039.48	1034.73	1037.36	1037.30	1045.39	1040.95	1023.54	1015.07
19	1032.74	1037.31	1038.93	1034.93	1039.22	1034.83	1037.27	1037.22	1045.16	1040.48	1023.04	1014.13
20	1032.24	1037.28	1037.79	1034.92	1041.57	1034.96	1037.26	1037.23	1044.83	1039.69	1022.34	1018.83
21	1031.71	1038.18	1037.84	1034.47	1037.17	1034.98	1037.37	1038.54	1045.02	1039.04	1021.59	1021.55
22	1031.44	1038.06	1037.60	1034.58	1034.82	1034.96	1037.56	1040.37	1045.14	1038.48	1020.83	1023.25
23	1031.41	1037.75	1036.86	1041.30	1034.93	1034.92	1037.64	1042.00	1045.18	1037.67	1019.98	1024.54
24	1031.31	1037.46	1038.47	1038.33	1036.18	1034.94	1037.55	1043.25	1044.41	1037.59	1018.54	1025.76
25	1031.23	1037.28	1038.08	1035.73	1036.59	1034.84	1039.01	1044.45	1043.68	1037.59	1016.85	1026.83
26	1031.22	1037.18	1037.80	1035.78	1035.71	1034.81	1041.71	1044.76	1043.42	1034.75	1015.60	1027.98
27	1031.50	1037.02	1037.60	1034.72	1034.20	1035.03	1044.28	1044.70	1043.70	1033.77	1015.02	1027.24
28	1031.83	1036.95	1036.65	1034.33	1035.43	1034.73	1044.41	1044.66	1044.09	1032.79	1014.75	1028.74
29	1032.69	1036.94	1037.12	1034.91	---	1035.22	1043.52	1044.74	1044.41	1032.04	1014.59	1030.14
30	1034.70	1037.18	1037.01	1034.67	---	1034.26	1043.02	1044.79	1044.45	1031.71	1014.61	1031.27
31	1036.03	---	1037.08	1034.68	---	1034.92	---	1044.83	---	1031.48	1014.41	---
MEAN	1025.47	1036.55	1038.22	1035.45	1036.35	1034.87	1038.28	1040.13	1044.90	1040.07	1023.07	1017.60
MAX	1036.03	1038.18	1041.78	1041.30	1041.57	1035.76	1044.41	1044.83	1045.56	1044.96	1031.22	1031.27
MIN	994.70	1033.27	1036.65	1034.12	1034.20	1034.26	1034.36	1037.12	1043.42	1031.48	1014.41	1009.42
(†)	26940	27390	27350	26430	26710	26520	29730	30500	30330	25230	19340	25150
(‡)	+13690	+450	-40	-920	+280	-190	+3210	+770	-170	-5100	-5890	+5810

CAL YR 1981 MEAN 1029.69 MAX 1044.59 MIN 975.90 AC-FT# -140
WTR YR 1982 MEAN 1034.23 MAX 1045.56 MIN 994.70 AC-FT# +11900

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

‡ Change in contents, in acre-feet.

SANDY RIVER BASIN

79

14139510 FIVEMILE CREEK NEAR BULL RUN, OR

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

DRAINAGE AREA.--0.79 mi² (2.05 km²).

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCO FECAL, (COLS. PER 100 ML)
OCT							
03...	1250	.56	19	7.0	9.0	3	2
10...	1245	3.4	18	7.0	8.9	2	2
17...	1240	1.3	18	7.0	9.0	1	1
24...	1240	.56	18	7.1	8.0	1	2
31...	1200	1.5	18	7.0	8.2	<1	1
NOV							
07...	1150	.80	18	7.0	8.0	1	<1
14...	1020	1.5	17	7.0	7.0	7	2
21...	1255	3.7	18	7.1	8.1	40	33
28...	0925	2.4	17	7.0	5.5	3	2
DEC							
05...	1235	--	15	7.0	--	14	6
12...	1300	3.8	16	7.0	6.5	1	1
19...	1220	11	15	7.0	8.0	1	<1
26...	1240	6.7	15	7.0	5.2	1	1
JAN							
02...	1130	2.4	15	7.0	4.0	1	<1
16...	1235	21	14	7.0	5.0	3	7
23...	1250	66	12	6.8	4.8	3	3
30...	1315	6.7	15	7.0	5.6	<1	<1
FEB							
06...	1210	4.8	15	7.0	3.0	1	<1
13...	1230	3.9	15	6.9	4.9	1	1
20...	1240	48	11	6.7	6.0	--	2
27...	1220	3.9	14	7.0	5.0	1	<1
MAR							
06...	1300	8.2	14	7.0	5.5	1	<1
13...	1235	3.1	15	7.0	5.5	<1	<1
20...	1215	2.0	15	7.0	5.0	<1	<1
27...	1240	.95	15	7.0	5.0	22	2
APR							
03...	1240	1.5	15	6.9	5.0	1	2
10...	1245	1.2	15	7.0	6.0	1	<1
17...	1001	5.1	15	7.0	5.3	<1	<1
24...	1140	2.4	15	7.0	6.0	<1	<1
MAY							
01...	1240	.80	16	7.0	7.0	<1	<1
08...	1250	.56	16	7.1	6.5	<1	--
15...	1255	.38	22	7.1	8.5	1	2
22...	1220	.34	17	7.0	9.0	<1	3
29...	1305	.23	17	7.0	9.5	<1	4
JUN							
05...	1200	.20	17	7.0	8.5	<1	<5
12...	1220	.23	18	7.0	10.0	53	42
19...	1210	.12	19	7.0	14.0	<1	34
26...	1310	.09	19	7.0	14.0	13	23
JUL							
03...	1054	.17	19	6.9	12.0	1	55
10...	1250	.09	19	7.0	13.0	2	14
17...	1032	.09	19	6.9	12.8	27	7
24...	1225	.04	19	7.0	13.0	3	14
31...	1240	.02	19	7.0	13.5	3	9

SANDY RIVER BASIN

14139510 FIVEMILE CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI-FORM, TOTAL, IMMEDIATE (COLS. PER 100 ML)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, NITRATE TOTAL (MG/L AS N)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	SILICA, DISSOLVED (MG/L AS SiO2)	TURBIDITY (NTU)	COLOR (PLATINUM-COBALT UNITS)
OCT							
03...	2	--	--	--	--	.17	<5
10...	6	--	--	--	--	.20	<5
17...	2	--	--	--	--	.15	<5
24...	<1	--	--	--	--	.20	<5
31...	<1	--	--	--	--	.15	<5
NOV							
07...	4	--	--	--	--	.12	<5
14...	8	--	--	--	--	.15	<5
21...	56	<.020	.04	<.003	7.7	.24	<5
28...	--	--	--	--	--	.16	<5
DEC							
05...	8	<.020	.01	<.003	7.1	.90	5
12...	14	--	--	--	--	.19	<5
19...	2	--	--	--	--	.20	<5
26...	4	--	--	--	--	.17	<5
JAN							
02...	2	<.020	.01	<.003	7.2	.15	<5
16...	8	--	--	--	--	1.1	5
23...	--	<.020	.02	<.003	5.3	6.6	60
30...	<1	--	--	--	--	.25	<5
FEB							
06...	<1	--	--	--	--	.18	<5
13...	6	--	--	--	--	.37	<5
20...	2	--	--	--	--	1.2	5
27...	<1	--	--	--	--	.18	<5
MAR							
06...	2	<.020	<.01	<.003	6.6	.18	<5
13...	<1	--	--	--	--	.18	<5
20...	<1	--	--	--	--	.21	<5
27...	27	<.020	.01	<.003	7.3	.20	<5
APR							
03...	1	--	--	--	--	.17	<5
10...	<1	--	--	--	--	.16	<5
17...	<1	<.020	.01	<.003	6.6	.22	<5
24...	<1	--	--	--	--	.13	<5
MAY							
01...	<1	--	--	--	--	.14	<5
08...	2	<.020	<.01	<.003	7.1	.18	<5
15...	<1	--	--	--	--	.17	<5
22...	<1	--	--	--	--	.15	<5
29...	<1	<.020	.01	<.003	7.6	.17	<5
JUN							
05...	<1	--	--	--	--	.21	<5
12...	52	--	--	--	--	.20	<5
19...	<1	<.020	.03	.006	9.0	.17	<5
26...	28	--	--	--	--	.27	<5
JUL							
03...	4	--	--	--	--	.16	<5
10...	4	<.020	.05	<.003	8.8	.14	<5
17...	28	--	--	--	--	.13	<5
24...	<1	--	--	--	--	.16	<5
31...	12	<.020	.04	<.003	9.2	.14	<5

SANDY RIVER BASIN

81

14139600 CAMP CREEK NEAR BULL RUN, OR

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

DRAINAGE AREA.--3.27 mi² (8.47 km²).

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
04...	1105	4.4	22	7.2	8.2	1	1	2
11...	1200	16	21	7.2	8.0	1	2	18
18...	1100	5.7	22	7.2	8.5	<1	1	4
25...	1010	3.3	21	7.2	6.9	1	1	<1
NOV								
01...	1125	9.6	21	7.2	8.0	1	2	<1
08...	1140	6.0	21	7.2	7.1	<1	<1	2
15...	0950	--	20	7.2	7.0	<1	--	<1
22...	1050	30	19	7.2	7.3	1	1	<1
28...	1031	16	20	7.1	4.8	1	<1	<1
DEC								
06...	1125	195	15	7.0	8.0	2	1	8
13...	1210	19	18	7.1	6.0	1	1	<1
20...	1200	44	17	7.1	6.9	2	1	<1
27...	1130	33	17	7.1	5.0	1	<1	<1
JAN								
17...	1200	252	15	7.0	4.3	2	1	8
24...	1105	490	14	6.9	4.8	1	<1	<1
31...	1240	32	17	7.1	5.0	2	<1	3
FEB								
07...	1200	21	18	7.1	3.0	<1	<1	<1
14...	1205	102	14	7.0	4.4	6	2	18
21...	1220	148	14	7.0	5.0	1	<1	2
28...	1110	20	17	7.1	4.3	<1	<1	<1
MAR								
07...	1130	30	16	7.1	4.5	<1	<1	<1
14...	1200	24	16	7.1	5.0	<1	<1	<1
21...	1200	12	17	7.1	4.5	<1	4	<1
28...	1039	9.0	18	7.1	4.0	<1	<1	<1
APR								
04...	1140	11	18	7.2	4.0	<1	<1	<1
11...	1005	13	18	7.1	6.0	<1	<1	<1
18...	0830	28	17	7.1	4.7	<1	1	<1
25...	1150	16	18	7.2	5.0	1	<1	4
MAY								
02...	1125	7.8	18	7.2	6.5	<1	<1	<1
09...	1145	5.3	19	7.2	6.5	1	6	<1
16...	1230	4.0	19	7.2	9.0	1	1	1
23...	1145	3.3	20	7.2	9.0	<1	4	1
30...	1135	2.9	20	7.2	9.0	3	7	4
JUN								
13...	1150	2.8	21	7.2	10.0	<1	--	<1
20...	1150	2.3	22	7.3	14.0	2	12	4
27...	1200	2.5	22	7.3	13.5	6	26	--
JUL								
04...	0948	2.3	22	7.2	11.8	7	15	6
11...	1230	2.1	22	7.3	14.0	4	11	5
18...	0937	1.9	23	7.2	12.9	2	16	<1
25...	1150	1.8	23	7.4	14.0	5	24	8
AUG								
01...	1140	1.6	23	7.4	13.0	4	11	2
08...	1105	1.4	25	7.3	15.0	<1	8	4
15...	1130	1.8	23	7.3	12.5	6	22	11
22...	1150	1.4	24	7.4	14.5	9	21	16
29...	1225	1.5	25	7.3	13.8	360	540	--
SEP								
05...	1100	1.3	24	7.3	13.0	10	38	48
12...	1100	5.5	22	7.3	12.0	11	31	12
19...	1115	3.3	21	7.3	11.5	12	20	--
26...	1110	8.8	20	7.3	10.0	2	6	<1

SANDY RIVER BASIN

14139600 CAMP CREEK NEAR BULL RUN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT								
04...	--	--	--	--	--	24	.31	5
11...	--	--	--	1.1	--	19	.19	<5
18...	--	--	--	--	--	22	.19	<5
25...	--	--	--	--	--	23	.14	<5
NOV								
01...	--	--	--	--	--	21	.24	<5
08...	--	--	--	--	--	--	.18	<5
15...	--	--	--	--	--	20	.40	<5
22...	<.020	.04	<.003	1.5	8.8	21	.30	<5
28...	--	--	--	--	--	20	.13	<5
DEC								
06...	<.020	.02	<.003	1.7	8.0	18	.99	<5
13...	--	--	--	--	--	17	.56	<5
20...	--	--	--	--	--	15	.20	<5
27...	--	--	--	--	--	19	.34	<5
JAN								
17...	--	--	--	--	--	--	.54	5
24...	<.020	.03	<.003	1.3	6.8	--	.98	5
31...	--	--	--	--	--	17	.29	<5
FEB								
07...	--	--	--	--	--	18	.20	<5
14...	--	--	--	--	--	--	1.1	20
21...	--	--	--	--	--	16	.51	5
28...	--	--	--	--	--	15	.25	<5
MAR								
07...	<.020	<.01	.003	.6	7.8	16	.26	<5
14...	--	--	--	--	--	18	.24	<5
21...	--	--	--	--	--	17	.31	<5
28...	<.020	.02	<.003	.1	7.9	19	.15	<5
APR								
04...	--	--	--	--	--	19	.37	<5
11...	--	--	--	--	--	20	.35	<5
18...	<.020	.04	<.003	.6	8.3	19	.17	<5
25...	--	--	--	--	--	19	.24	<5
MAY								
02...	--	--	--	--	--	--	.26	<5
09...	<.020	.01	<.003	.7	8.6	20	.25	<5
16...	--	--	--	--	--	20	.20	<5
23...	--	--	--	--	--	21	.24	<5
30...	<.020	.02	<.003	.7	8.8	19	.20	<5
JUN								
13...	--	--	--	--	--	--	.40	<5
20...	<.020	.03	.006	.8	10	--	.25	<5
27...	--	--	--	--	--	23	.40	<5
JUL								
04...	--	--	--	--	--	21	.16	<5
11...	<.020	.05	<.003	.5	10	24	.21	<5
18...	--	--	--	--	--	22	.15	<5
25...	--	--	--	--	--	23	.21	<5
AUG								
01...	<.020	.05	<.003	.9	11	23	.25	<5
08...	--	--	--	--	--	24	.20	<5
15...	--	--	--	--	--	22	.21	<5
22...	<.020	.07	<.003	.9	11	23	.20	<5
29...	--	--	--	--	--	27	.30	<5
SEP								
05...	--	--	--	--	--	24	.24	<5
12...	<.020	.07	.004	3.6	10	25	.35	15
19...	--	--	--	--	--	19	.21	<5
26...	--	--	--	--	--	21	.30	<5

83

LOCATION.--Lat 45°27'30", long 122°01'50", in NE¼ sec.26, T.1 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 5.8 mi (9.3 km) north of Brightwood and at mile 2.5 (4.0 km).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,960 ft (597 m), from topographic map.

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

AVERAGE DISCHARGE.--17 years, 68.1 ft³/s (1.929 m³/s), 116.62 in/yr (2,962 mm/yr), 49,340 acre-ft/yr (60.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,990 ft³/s (56.4 m³/s) Dec. 22, 1964, gage height, 7.20 ft (2.195 m), from rating curve extended above 320 ft³/s (9.06 m³/s) on basis of slope-area measurement of peak flow; minimum, 6.9 ft³/s (0.20 m³/s) Oct. 9-13, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1000	1,100 31.2	4.74 1.445	Jan. 23	0900	*1,550 43.9	*5.82 1.774
Dec. 6	-	unknown	unknown	Feb. 14	1230	869 24.6	4.26 1.298
Dec. 15	2030	545 15.4	3.63 1.106	Feb. 16	1630	551 15.6	3.64 1.109
Jan. 16	-	unknown	unknown	Feb. 20	1430	1,160 32.9	4.87 1.484

Minimum, 10 ft³/s (0.28 m³/s) Sept. 7-9.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	33	207	34	80	119	39	66	26	18	13	12
2	54	28	615	31	102	109	38	60	25	18	13	12
3	32	30	260	30	99	124	37	81	24	19	13	11
4	29	27	145	28	76	224	37	65	26	19	13	11
5	28	23	470	25	61	127	35	57	32	24	13	11
6	104	20	540	22	51	86	34	57	44	21	12	11
7	77	19	210	20	44	69	35	66	31	19	12	11
8	97	17	113	19	39	63	34	59	28	18	12	10
9	137	16	86	20	35	92	33	52	26	17	12	20
10	72	16	72	21	32	123	35	50	24	16	14	20
11	50	21	61	28	30	171	102	46	24	16	19	29
12	39	48	48	29	29	102	145	45	26	16	15	60
13	33	38	82	41	201	103	173	44	26	16	17	30
14	27	33	134	90	602	107	126	45	25	20	20	25
15	23	38	402	250	384	82	86	47	23	18	15	21
16	21	43	267	440	425	68	73	48	22	17	14	18
17	19	56	127	330	437	59	73	54	21	16	13	17
18	18	59	98	120	370	52	64	49	20	16	13	16
19	17	49	200	86	692	46	58	44	19	15	13	17
20	15	53	117	72	717	42	59	43	19	15	12	102
21	14	135	99	57	386	39	66	43	18	15	12	56
22	14	137	73	69	173	37	81	42	17	14	12	38
23	13	96	58	998	105	37	93	38	17	14	12	30
24	13	66	104	550	76	37	83	38	16	14	11	29
25	12	53	125	235	62	38	70	40	16	14	11	27
26	14	44	87	223	58	46	66	36	17	14	11	29
27	21	36	72	149	60	52	63	33	20	14	11	26
28	24	33	54	98	58	52	103	30	21	13	11	45
29	34	31	45	81	---	47	78	28	18	13	13	40
30	56	42	41	79	---	45	69	27	19	14	21	31
31	48	---	38	99	---	42	---	26	---	14	14	---
TOTAL	1174	1340	5050	4374	5484	2440	2088	1459	690	507	417	815
MEAN	37.9	44.7	163	141	196	78.7	69.6	47.1	23.0	16.4	13.5	27.2
MAX	137	137	615	998	717	224	173	81	44	24	21	102
MIN	12	16	38	19	29	37	33	26	16	13	11	10
CFSM	4.78	5.64	20.6	17.8	24.7	9.92	8.78	5.94	2.90	2.07	1.70	3.43
IN.	5.51	6.29	23.69	20.52	25.72	11.44	9.79	6.84	3.24	2.38	1.96	3.82
AC-FT	2330	2660	10020	8680	10880	4840	4140	2890	1370	1010	827	1620

CAL YR 1981	TOTAL	22948.6	MEAN 62.9	MAX 615	MIN 8.9	CFSM 7.93	IN 107.64	AC-FT	45520
WTR YR 1982	TOTAL	25838.0	MEAN 70.8	MAX 998	MIN 10	CFSM 8.93	IN 121.19	AC-FT	51250

SANDY RIVER BASIN

14139800 SOUTH FORK BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'38", long 122°06'20", in NE¼NE¼ sec.31, T.1 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 6.2 mi (10.0 km) northeast of Bull Run, and at mile 0.6 (1.0 km).

DRAINAGE AREA.--15.4 mi² (39.9 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 990 ft (302 m) from topographic map.

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

AVERAGE DISCHARGE.--8 years, 109 ft³/s (3.087 m³/s), 96.12 in/yr (2,441 mm/yr), 78,970 acre-ft/yr (97.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,520 ft³/s (71.4 m³/s) Dec. 2, 1977, gage height, 8.32 ft (2.536 m), from rating curve extended above 810 ft³/s (22.9 m³/s); minimum, 8.0 ft³/s (0.23 m³/s) Oct. 12, 13, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 23	0900	*2,440 69.1	*8.26 2.518	Feb. 20	1500	1,910 54.1	7.65 2.332

Minimum, 13 ft³/s (0.38 m³/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	68	268	57	137	161	62	102	39	24	18	17
2	84	54	711	51	181	170	61	100	38	24	18	16
3	52	55	341	48	193	178	59	116	36	27	18	16
4	49	49	217	44	151	302	58	112	37	26	17	15
5	43	41	499	40	120	220	56	98	46	34	17	15
6	156	37	767	34	100	154	54	93	69	32	17	14
7	138	34	337	35	87	123	54	95	50	28	17	14
8	145	31	211	33	76	108	53	93	44	28	17	14
9	211	29	146	32	68	124	53	82	41	26	17	25
10	142	28	120	34	60	159	55	78	39	26	19	29
11	102	33	101	41	56	218	126	72	37	25	27	36
12	77	76	82	49	52	158	187	72	39	24	21	93
13	62	66	105	47	211	146	220	69	40	24	21	64
14	51	59	170	67	836	165	202	70	38	28	28	49
15	44	65	437	164	545	132	146	72	35	25	21	38
16	39	73	374	588	547	113	123	75	33	24	19	33
17	35	92	197	692	582	99	117	82	31	23	19	30
18	31	104	155	304	527	88	109	80	30	22	18	27
19	28	92	245	185	1150	80	99	72	29	22	17	28
20	26	96	180	141	1180	71	97	69	28	21	17	141
21	25	184	158	113	623	65	114	69	27	21	16	117
22	23	215	129	107	273	62	117	68	26	20	16	88
23	21	171	106	1550	177	59	128	63	25	20	16	71
24	21	136	137	955	129	57	128	62	24	20	16	56
25	20	111	178	368	108	57	111	66	24	19	15	52
26	21	93	149	324	99	63	106	64	23	19	15	48
27	31	74	126	246	100	74	99	56	27	19	15	44
28	38	62	106	180	96	79	129	50	29	18	15	65
29	51	56	87	144	---	72	120	44	25	18	17	75
30	85	72	73	132	---	70	109	42	25	18	28	59
31	89	---	64	154	---	67	---	40	---	18	19	---
TOTAL	1968	2356	6976	6959	8464	3694	3152	2326	1034	723	571	1389
MEAN	63.5	78.5	225	224	302	119	105	75.0	34.5	23.3	18.4	46.3
MAX	211	215	767	1550	1180	302	220	116	69	34	28	141
MIN	20	28	64	32	52	57	53	40	23	18	15	14
CFSM	4.12	5.10	14.6	14.5	19.6	7.73	6.82	4.87	2.24	1.51	1.20	3.01
IN.	4.75	5.69	16.85	16.81	20.44	8.92	7.61	5.62	2.50	1.75	1.38	3.36
AC-FT	3900	4670	13840	13800	16790	7330	6250	4610	2050	1430	1130	2760
CAL YR 1981	TOTAL	35229.2	MEAN	96.5	MAX	767	MIN	9.4	CFSM	6.27	IN	85.09
WTR YR 1982	TOTAL	39612.0	MEAN	109	MAX	1550	MIN	14	CFSM	7.08	IN	95.68
									AC-FT	69880		
									AC-FT	78570		

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1978 to current year.

pH: November 1980 to September 1981.

WATER TEMPERATURES: October 1978 to current year.

SEDIMENT DISCHARGE: October 1978 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 44 micromhos Sept. 16-19, 1981; minimum, 12 micromhos Dec. 4, 1979.

pH: Maximum, 7.9 units July 28, 1981; minimum, 6.5 units, Jan. 23, 1982.

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

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

SEDIMENT DISCHARGE: Maximum, 265 tons (239 tonnes) Jan. 23, 1982; minimum, 0 tons (0 tonnes) on many days throughout each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 44 micromhos Sept. 16-19; minimum, 13 micromhos Dec. 25.

pH: Maximum, 7.7 units July 29; minimum, 6.5 units Jan. 23.

WATER TEMPERATURES: Maximum, 16.0°C June 23, July 27; minimum, 0.0°C Jan. 4, 6.

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

SEDIMENT DISCHARGE: Maximum, 265 tons (239 tonnes) Jan. 23; minimum, 0 tons (0 tonnes) on many days throughout the year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT								
04...	1135	49	27	7.3	8.0	3	3	6
11...	1220	102	24	7.3	7.8	4	4	6
18...	1120	31	30	7.4	7.0	<1	1	<1
25...	1045	19	30	7.5	6.0	1	2	<1
NOV								
01...	1210	54	25	7.3	7.0	<1	1	0
08...	1205	31	28	7.4	5.9	<1	<1	<1
15...	1020	62	24	7.3	6.5	2	2	4
22...	1120	229	20	7.2	--	2	2	6
28...	1058	61	24	7.2	3.0	<1	1	20
DEC								
06...	1155	536	15	7.0	7.0	7	1	6
13...	1240	77	21	7.3	4.8	1	<1	2
20...	1235	207	18	7.2	5.6	<1	<1	<1
27...	1205	125	20	7.1	3.0	1	<1	2
JAN								
12...	1455	48	24	7.4	2.5	--	--	--
17...	1225	544	16	7.1	3.1	3	1	4
24...	1130	999	14	7.0	3.8	1	<1	<1
31...	1300	155	22	7.2	4.0	<1	<1	2
FEB								
07...	1225	88	24	7.3	2.0	<1	<1	<1
14...	1230	1180	13	6.9	3.0	9	8	32
21...	1240	544	15	7.0	4.0	1	<1	<1
28...	1140	93	23	7.2	3.8	2	<1	<1
MAR								
07...	1210	121	21	7.2	3.8	<1	<1	<1
14...	1220	154	19	7.1	4.0	<1	<1	<1
21...	1225	66	25	7.2	4.0	1	4	1
28...	1054	82	25	7.2	3.0	<1	<1	1
APR								
04...	1200	56	26	7.3	3.5	<1	<1	1
11...	1030	124	21	7.2	5.0	<1	<1	1
18...	0857	116	22	7.2	3.5	<1	<1	4
25...	1225	107	22	7.2	5.0	<1	<1	1
MAY								
02...	1145	96	22	7.2	5.5	<1	<1	16
09...	1210	83	22	7.3	5.0	<1	<1	<1
16...	1250	74	23	7.3	8.0	<1	3	<1
23...	1215	65	24	7.3	8.0	1	<1	1
25...	1000	77	23	7.0	9.2	--	--	--
30...	1205	42	26	7.4	9.0	<1	2	<1
JUN								
06...	1230	66	24	7.3	8.0	9	23	28
13...	1220	39	27	7.3	9.0	5	--	--
20...	1200	28	31	7.5	15.0	2	17	4
24...	1100	--	33	6.7	15.0	--	--	--

SANDY RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)
OCT								
04...	--	--	--	--	--	30	.29	5
11...	--	--	--	1.6	--	22	.20	5
18...	--	--	--	--	--	29	.23	5
25...	--	--	--	--	--	32	.19	<5
NOV								
01...	--	--	--	--	--	26	.27	<5
08...	--	--	--	--	--	33	.29	<5
15...	--	--	--	--	--	25	.31	<5
22...	<.020	.05	<.003	2.9	8.5	--	.44	10
28...	--	--	--	--	--	24	.17	5
DEC								
06...	<.020	.03	<.003	2.4	7.3	--	1.0	5
13...	--	--	--	--	--	21	.29	<5
20...	--	--	--	--	--	17	.35	5
27...	--	--	--	--	--	21	.24	<5
JAN								
12...	--	--	--	--	--	25	.25	5
17...	--	--	--	--	--	--	1.0	5
24...	<.020	.04	<.003	1.9	6.8	--	1.9	5
31...	--	--	--	--	--	21	.40	<5
FEB								
07...	--	--	--	--	--	23	.26	<5
14...	<.020	.02	<.003	2.6	5.3	13	3.4	20
21...	--	--	--	--	--	--	1.0	<5
28...	--	--	--	--	--	21	.35	<5
MAR								
07...	<.020	.01	.004	.9	9.3	20	.35	<5
14...	--	--	--	--	--	21	.32	<5
21...	--	--	--	--	--	24	.25	<5
28...	<.020	.02	.005	1.4	10	26	.62	<5
APR								
04...	--	--	--	--	--	27	.30	<5
11...	--	--	--	--	--	--	.47	<5
18...	<.020	.03	.005	1.0	9.5	24	.20	<5
25...	--	--	--	--	--	21	.22	<5
MAY								
02...	--	--	--	--	--	21	.26	<5
09...	<.020	<.01	<.003	1.0	9.2	22	.26	<5
16...	--	--	--	--	--	24	.21	<5
23...	--	--	--	--	--	24	.23	<5
25...	--	--	--	--	--	--	--	--
30...	<.020	<.01	.004	.9	11	24	.26	<5
JUN								
06...	--	--	--	--	--	--	.39	5
13...	--	--	--	--	--	28	.25	<5
20...	<.020	.02	.007	.9	13	34	.31	<5
24...	--	--	--	--	--	--	--	--

13319000 GRANDE RONDE RIVER AT LA GRANDE, OR

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

DRAINAGE AREA.--678 mi² (1,756 km²).

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

REVISED RECORDS.--WSP 768: 1933. WSP 1397: 1904-11, 1913, 1915, 1919-20, 1922-23, 1926, 1929-31, 1936-37, 1939, 1942. WSP 1737: Drainage area. WRD Oreg. 1974: 1973(M).

GAGE.--Water-stage recorder. Datum of gage is 2,826.25 ft (861.441 m) National Geodetic Vertical Datum of 1929. Nov. 6, 1903, to Sept. 30, 1915, nonrecording gage at site 5.5 mi (8.8 km) upstream at various datums. Feb. 16, 1918, to June 28, 1923, and Oct. 1, 1925, to Nov. 23, 1931, nonrecording gage at site 0.7 mi (1.1 km) downstream at various datums. Nov. 24, 1931, to Oct. 8, 1965, water-stage recorder at site 0.3 mi (0.5 km) upstream at datum 4.61 ft (1.405 m) higher.

REMARKS.--Records excellent. Since 1915, slight regulation by city of La Grande reservoir on Beaver Creek, capacity, about 900 acre-ft (1.11 hm³). Diversions for irrigation above station. Since 1909, city of La Grande has diverted about 3 ft³/s (0.08 m³/s) from Beaver Creek above station for domestic water supply.

AVERAGE DISCHARGE.--74 years, 384 ft³/s (10.87 m³/s), 278,200 acre-ft/yr (343 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s (300 m³/s) Jan. 30, 1965, gage height, 11.44 ft (3.487 m), site and datum then in use, from rating curve extended above 7,200 ft³/s (204 m³/s); minimum, 3.9 ft³/s (0.11 m³/s) Aug. 26, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft³/s (59.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 20	2400	*5,690 161	*10.16 3.097	Apr. 24	0400	2,410 68.3	6.87 2.094
Apr. 14	0400	2,850 80.7	7.40 2.256				

Minimum, 18 ft³/s (0.51 m³/s) Nov. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	57	107	183	380	1190	850	2040	865	485	112	46
2	40	54	103	185	366	1500	778	2170	961	543	102	43
3	41	51	93	170	359	1360	731	2230	1060	700	112	41
4	41	49	104	160	217	1310	666	1950	1080	607	109	44
5	39	44	107	130	190	1200	619	1640	1070	536	97	51
6	39	45	398	101	220	1070	595	1480	972	493	89	44
7	51	46	459	96	230	1020	567	1530	898	518	85	40
8	69	45	334	140	200	1010	523	1530	829	541	79	38
9	64	43	287	160	245	1090	537	1450	789	536	83	36
10	62	42	309	150	193	1460	562	1440	783	477	89	37
11	72	46	267	170	200	1820	1150	1320	817	455	96	45
12	65	52	193	180	202	1530	2310	1240	947	417	101	65
13	58	62	232	190	267	1320	2290	1230	1200	375	84	94
14	52	65	214	187	361	1210	2720	1340	1080	378	74	88
15	49	64	239	238	990	1190	2180	1540	1000	333	71	76
16	47	75	301	227	2680	1010	1730	1680	960	300	68	65
17	46	96	222	387	2690	927	1520	1780	906	276	64	59
18	46	95	222	316	2430	847	1390	1890	845	253	61	55
19	45	80	277	301	3400	764	1240	1650	782	231	58	59
20	43	74	499	250	4620	699	1110	1520	735	211	56	83
21	40	73	443	210	4860	617	1130	1550	683	193	54	80
22	37	93	366	223	2930	644	1380	1660	658	178	52	64
23	42	98	252	266	2050	666	1850	1770	593	166	48	58
24	42	102	265	700	1530	760	2320	1670	526	155	45	54
25	43	88	293	1030	1230	850	2250	1680	537	145	44	55
26	50	61	257	890	1060	1080	2080	1750	478	136	42	76
27	56	89	234	787	945	1210	2000	1530	444	158	40	81
28	52	62	220	619	857	1160	2190	1330	435	138	39	79
29	60	25	153	514	---	1090	2240	1140	522	124	41	93
30	58	81	178	451	---	1000	2070	955	445	117	52	91
31	60	---	141	418	---	948	---	868	---	129	55	---
TOTAL	1549	1957	7769	10029	35902	33552	43578	48553	23900	10304	2200	1840
MEAN	50.0	65.2	251	324	1282	1082	1453	1566	797	332	71.0	61.3
MAX	72	102	499	1030	4860	1820	2720	2230	1200	700	112	94
MIN	37	25	93	95	190	617	523	868	435	117	39	36
AC-FT	3070	3880	15410	19890	71210	66550	86440	96300	47410	20440	4360	3650
CAL YR 1981	TOTAL	137972	MEAN	378	MAX	2820	MIN	21	AC-FT	273700		
WTR YR 1982	TOTAL	221133	MEAN	606	MAX	4860	MIN	25	AC-FT	438600		

GRANDE RONDE RIVER BASIN

13320000 CATHERINE CREEK NEAR UNION, OR

LOCATION.--Lat 45°09'20", long 117°46'26", in NW¼SE¼ sec.2, T.5 S., R.40 E., Union County, Hydrologic Unit 17060104, on right bank 3.0 mi (4.8 km) downstream from Little Catherine Creek, 5.5 mi (8.8 km) southeast of Union, and at mile 25.4 (40.9 km).

DRAINAGE AREA.--105 mi² (272 km²).

PERIOD OF RECORD.--May 1906 to May 1907 (gage heights only), August 1911 to December 1912, March to September 1915, February 1913 to September 1919, October 1925 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1397: 1912-13, 1919, 1926, 1928-33, 1937, 1939, 1940(M), 1941-43, 1950.

GAGE.--Water-stage recorder. Datum of gage is 3,081.76 ft (939.320 m) National Geodetic Vertical Datum of 1929 (Oregon State Highway Department bench mark). Prior to Nov. 28, 1938, nonrecording gage at several sites within 1.8 mi (2.9 km) of present site at various datums. Nov. 28, 1938, to May 16, 1939, water-stage recorder at site 400 ft (122 m) downstream at datum 4.29 ft (1.308 m) lower.

REMARKS.--Records excellent. No regulation. Several small diversions for irrigation above station. Since 1937, diversion to Big Creek in Powder River basin provides a small part of the water used for irrigation in that basin.

AVERAGE DISCHARGE.--59 years (water years 1912, 1919, 1926-82), 118 ft³/s (3.342 m³/s), 85,490 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft³/s (49.3 m³/s) May 27, 1948, gage height, 4.57 ft (1.393 m); minimum, 6.5 ft³/s (0.18 m³/s) Feb. 4, 1955, result of freezeup; minimum daily, 8 ft³/s (0.23 m³/s) Nov. 7, 1925.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 16	1530	508 14.4	2.65 0.808	May 25	2230	*703 19.9	*3.10 0.945
May 17	2330	560 15.9	2.78 0.847	June 16	2130	644 18.2	2.98 0.908

Minimum, 24 ft³/s (0.68 m³/s) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	31	36	43	37	92	92	352	353	330	61	33
2	28	30	39	45	37	115	87	420	385	304	60	33
3	27	28	40	43	36	115	84	447	416	290	60	32
4	26	28	35	42	33	110	78	381	418	248	57	33
5	26	27	35	39	25	99	72	338	374	220	55	32
6	26	27	38	37	28	91	73	327	337	199	52	31
7	49	26	38	33	31	87	70	353	313	208	50	31
8	37	26	37	39	26	86	67	361	297	193	50	30
9	32	25	40	36	35	85	67	338	303	179	52	30
10	43	25	47	35	28	87	70	304	325	168	57	31
11	42	25	43	38	32	114	103	285	374	164	54	34
12	32	31	41	41	56	119	173	297	453	161	51	64
13	30	40	41	45	90	110	193	327	539	164	48	43
14	28	46	43	50	153	108	199	368	559	158	46	39
15	28	37	48	48	198	103	180	464	583	139	44	37
16	28	47	42	43	261	95	160	506	588	126	43	36
17	27	64	39	40	138	89	148	512	591	117	42	35
18	26	48	41	38	137	86	140	529	579	110	41	34
19	26	39	53	37	162	80	131	486	552	104	40	38
20	26	37	55	32	201	74	120	469	543	99	39	44
21	26	42	49	28	253	71	120	479	511	94	41	36
22	26	44	47	33	207	70	143	528	476	89	37	33
23	26	45	58	32	163	72	198	565	432	85	36	32
24	26	45	109	40	130	79	266	572	402	81	36	33
25	26	40	93	54	109	91	287	622	396	77	35	36
26	35	37	78	50	95	113	283	646	378	75	34	64
27	31	37	70	46	86	126	296	567	385	73	34	38
28	34	35	57	43	78	126	336	479	354	69	33	48
29	33	51	57	41	---	118	339	407	319	65	36	45
30	31	48	54	39	---	111	332	365	291	64	38	41
31	30	---	45	38	---	101	---	347	---	66	35	---
TOTAL	937	1111	1548	1248	2865	3023	4907	13441	12826	4519	1397	1126
MEAN	30.2	37.0	49.9	40.3	102	97.5	164	434	428	146	45.1	37.5
MAX	49	64	109	54	261	126	339	646	591	330	61	64
MIN	26	25	35	28	25	70	67	285	291	64	33	30
AC-FT	1860	2200	3070	2480	5680	6000	9730	25660	25440	8960	2770	2230

CAL YR 1981 TOTAL 39085 MEAN 107 MAX 610 MIN 24 AC-FT 77530
WTR YR 1982 TOTAL 48948 MEAN 134 MAX 646 MIN 25 AC-FT 97090

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	7.3	6.9	7.0	7.0	7.1	6.9	6.9	6.9	7.0	7.0	6.9	6.8
2	7.3	7.2	7.1	7.0	7.0	6.7	6.9	6.9	7.0	6.9	---	---
3	7.3	7.2	7.1	7.0	6.9	6.8	6.9	6.8	7.0	6.9	---	---
4	7.3	7.2	7.1	7.0	7.0	6.9	6.9	6.8	6.9	6.9	6.9	6.7
5	7.3	7.1	7.1	7.0	6.9	6.7	6.9	6.9	6.9	6.9	7.0	6.8
6	7.1	7.0	7.1	7.0	6.8	6.7	6.9	6.9	6.9	6.9	7.0	6.8
7	7.2	7.1	7.1	7.0	6.8	6.7	6.9	6.9	6.9	6.9	7.0	6.9
8	7.1	7.1	7.1	7.1	6.9	6.8	7.0	6.9	7.0	6.9	6.9	6.9
9	7.1	7.0	7.1	7.1	6.9	6.9	7.0	6.9	6.9	6.9	6.9	6.9
10	7.1	7.0	7.2	7.1	6.9	6.9	7.0	6.9	6.9	6.9	6.9	6.8
11	7.1	7.1	7.2	7.1	6.9	6.9	7.0	6.9	7.0	6.9	6.9	6.7
12	7.1	7.1	7.1	7.1	7.0	6.9	7.0	6.9	7.0	7.0	7.0	6.9
13	7.1	7.1	7.1	7.1	7.0	6.8	7.0	6.9	7.0	6.8	7.0	6.9
14	7.1	7.1	7.1	7.1	6.9	6.8	7.0	6.9	6.8	6.7	7.0	6.9
15	7.1	7.1	7.1	7.0	6.8	6.7	6.9	6.8	6.9	6.8	7.0	6.9
16	7.1	7.1	7.1	7.0	6.8	6.7	6.8	6.6	6.9	6.8	7.0	6.9
17	7.1	7.1	7.0	7.0	6.9	6.8	6.8	6.6	6.9	6.9	6.9	6.9
18	7.1	7.1	7.0	6.9	6.9	6.9	6.9	6.8	7.1	6.9	6.9	6.9
19	7.1	7.1	7.0	6.9	6.9	6.8	7.0	6.9	7.0	6.8	6.9	6.9
20	7.2	7.1	7.0	6.9	6.9	6.9	7.0	6.9	7.1	6.9	6.9	6.9
21	7.2	7.1	6.9	6.9	6.9	6.9	7.0	7.0	7.0	6.8	6.9	6.9
22	7.2	7.1	6.9	6.8	6.9	6.9	7.0	6.9	7.0	6.8	6.9	6.9
23	7.1	7.1	6.9	6.8	7.0	6.9	6.9	6.5	7.0	6.8	6.9	6.9
24	7.1	7.0	6.9	6.9	6.9	6.8	6.8	6.7	7.0	6.9	6.9	6.9
25	7.1	7.0	7.0	6.9	6.9	6.8	6.9	6.8	6.9	6.9	6.9	6.9
26	7.1	7.0	7.0	7.0	6.9	6.8	7.0	6.9	6.9	6.9	6.9	6.9
27	7.1	7.0	7.0	7.0	6.8	6.8	7.0	6.9	6.9	6.9	7.0	6.9
28	7.1	7.0	7.0	7.0	6.9	6.8	7.0	7.0	6.9	6.9	7.0	6.9
29	7.1	7.0	7.1	7.0	6.9	6.8	7.0	7.0	---	---	7.0	6.9
30	7.1	7.0	7.1	7.0	6.9	6.8	7.0	7.0	---	---	7.0	7.0
31	7.0	6.9	---	---	6.9	6.9	7.0	7.0	---	---	7.0	6.9
MONTH	7.3	6.9	7.2	6.8	7.1	6.7	7.0	6.5	7.1	6.7	7.0	6.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	7.0	6.9	7.2	7.1	7.1	7.1	7.6	7.5	7.6	7.4		
2	7.0	6.9	7.2	7.1	7.2	7.1	7.6	7.5	7.5	7.3		
3	7.0	6.9	7.2	7.1	7.2	7.1	7.6	7.5	7.6	7.4		
4	7.0	6.9	7.2	7.1	7.2	7.1	7.6	7.5	7.6	7.4		
5	7.0	6.9	7.2	7.1	7.1	7.0	7.6	7.5	7.5	7.4		
6	7.0	6.9	7.1	7.1	7.3	7.0	7.6	7.4	7.5	7.4		
7	7.0	6.9	7.2	7.1	7.2	7.1	7.6	7.4	7.5	7.3		
8	6.9	6.9	7.1	7.1	7.2	7.1	7.6	7.5	7.5	7.3		
9	6.9	6.8	7.1	7.0	7.3	7.2	7.6	7.5	7.5	7.3		
10	6.9	6.8	7.0	7.0	7.3	7.2	7.6	7.5	7.5	7.3		
11	7.1	6.9	7.1	6.8	7.3	7.2	7.6	7.5	7.4	7.3		
12	7.2	7.0	7.1	7.0	7.3	7.2	7.6	7.5	7.4	7.2		
13	7.2	6.9	7.1	7.1	7.3	7.2	7.6	7.5	7.3	7.2		
14	7.1	7.0	7.1	7.1	7.3	7.2	7.6	7.5	7.4	7.3		
15	7.1	7.1	7.1	7.1	7.3	7.2	7.6	7.5	7.4	7.3		
16	7.2	7.1	7.1	7.1	7.3	7.3	7.6	7.5	7.5	7.3		
17	7.1	7.1	7.1	7.0	7.4	7.3	7.6	7.5	7.5	7.3		
18	7.1	7.1	7.1	7.0	7.4	7.3	7.6	7.5	7.5	7.3		
19	7.1	7.1	7.1	7.0	7.4	7.3	7.6	7.5	7.5	7.3		
20	7.2	7.1	7.1	7.1	7.4	7.4	7.6	7.5	7.5	7.2		
21	7.2	7.1	7.1	7.0	7.5	7.4	7.6	7.5	7.5	7.3		
22	7.2	7.1	7.1	7.0	7.5	7.4	7.6	7.5	7.5	7.3		
23	7.2	7.1	7.1	7.0	7.6	7.5	7.5	7.5	7.5	7.1		
24	7.2	7.1	7.1	7.0	7.6	7.5	7.5	7.4	7.3	6.9		
25	7.2	7.1	7.0	6.9	7.6	7.5	7.5	7.4	7.1	6.8		
26	7.2	7.1	7.0	6.8	7.6	7.5	7.6	7.4	7.2	6.9		
27	7.2	7.1	6.9	6.8	7.6	7.5	7.6	7.3	7.2	7.0		
28	7.2	7.0	7.0	6.9	7.6	7.5	7.6	7.4	---	---		
29	7.2	7.2	7.1	7.0	7.6	7.5	7.7	7.4	---	---		
30	7.2	7.2	7.1	7.0	7.6	7.5	7.6	7.5	---	---		
31	---	---	7.1	7.1	---	---	7.5	7.3	---	---		
MONTH	7.2	6.8	7.2	6.8	7.6	7.0	7.7	7.3	7.6	6.8		

SANDY RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	0	.00	2	1.4	1	.15	1	.37	1	.43
2	1	.23	0	.00	---	61	1	.14	1	.49	0	.00
3	0	.00	0	.00	3	2.3	1	.13	1	.52	0	.00
4	0	.00	1	.13	2	1.2	1	.12	0	.00	1	.82
5	0	.00	1	.11	11	20	1	.11	1	.32	0	.00
6	1	.47	1	.10	5	12	---	.09	1	.27	0	.00
7	0	.00	1	.09	3	2.7	---	.09	0	.00	1	.33
8	0	.17	1	.08	1	.57	---	.09	1	.21	1	.29
9	2	.89	1	.08	1	.39	---	.09	0	.00	0	.00
10	1	.38	1	.08	1	.32	---	.09	0	.00	0	.00
11	1	.28	1	.09	2	.55	---	.11	2	.30	1	.59
12	1	.21	1	.21	1	.22	---	.13	1	.14	1	.43
13	0	.00	1	.18	2	.57	1	.13	9	7.8	0	.00
14	1	.14	1	.16	3	1.4	1	.18	---	29	0	.00
15	1	.12	1	.18	8	9.7	3	1.3	---	3.7	0	.00
16	1	.11	1	.20	3	3.0	14	28	5	6.8	1	.31
17	1	.09	2	.50	2	1.1	15	38	2	3.1	1	.27
18	1	.08	1	.28	2	.84	2	1.6	6	13	0	.00
19	1	.08	1	.25	2	1.3	1	.50	16	57	0	.00
20	1	.07	0	.00	0	.00	1	.38	27	116	0	.00
21	1	.07	2	.99	2	.85	1	.31	6	13	0	.00
22	1	.06	1	.58	2	.70	1	.29	2	1.5	0	.00
23	1	.06	1	.46	2	.57	52	265	0	.00	0	.00
24	1	.06	1	.37	3	1.1	17	48	0	.00	0	.00
25	1	.05	1	.30	2	.96	6	5.6	0	.00	0	.00
26	1	.06	1	.25	2	.80	3	2.9	0	.00	0	.00
27	1	.08	1	.20	2	.68	3	2.0	0	.00	0	.00
28	1	.10	1	.17	1	.29	2	.97	0	.00	0	.00
29	1	.14	1	.15	1	.23	1	.39	---	---	1	.19
30	1	.23	1	.19	1	.20	1	.36	---	---	1	.19
31	1	.24	---	---	2	.35	2	.83	---	---	0	.00
TOTAL	---	4.47	---	6.38	---	127.29	---	398.08	---	253.52	---	3.85

DAY	MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)	
	LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)	
APRIL												
1	0	.00	1	.28	0	.00	4	.26	0	.00	0	.00
2	0	.00	2	.54	0	.00	4	.26	0	.00	0	.00
3	0	.00	1	.31	0	.00	3	.22	0	.00	1	.04
4	0	.00	0	.00	0	.00	3	.21	0	.00	1	.04
5	0	.00	0	.00	1	.12	2	.18	0	.00	1	.04
MAY												
6	1	.15	1	.25	1	.19	2	.17	0	.00	1	.04
7	1	.15	1	.26	0	.00	3	.23	0	.00	1	.04
8	0	.00	0	.00	0	.00	3	.23	0	.00	1	.04
9	0	.00	0	.00	1	.11	1	.07	0	.00	1	.07
10	0	.00	0	.00	1	.11	1	.07	1	.05	1	.08
JUNE												
11	2	.68	1	.19	1	.10	1	.07	2	.15	1	.10
12	2	1.0	1	.19	0	.00	1	.06	1	.06	1	.25
13	1	.59	1	.19	0	.00	1	.06	1	.06	1	.17
14	1	.55	1	.19	1	.10	1	.08	1	.08	1	.13
15	1	.39	1	.19	1	.09	1	.07	1	.06	1	.10
JULY												
16	0	.00	1	.20	1	.09	0	.00	1	.05	1	.09
17	0	.00	1	.22	1	.08	0	.00	1	.05	1	.08
18	1	.29	1	.22	1	.08	0	.00	1	.05	1	.07
19	1	.27	0	.00	0	.00	0	.00	0	.00	0	.00
20	0	.00	1	.19	1	.08	0	.00	1	.05	3	1.1
AUGUST												
21	0	.00	1	.19	1	.07	0	.00	1	.04	1	.32
22	1	.32	1	.18	3	.21	0	.00	1	.04	1	.24
23	1	.35	1	.17	3	.20	0	.00	1	.04	1	.19
24	0	.00	1	.17	2	.13	0	.00	1	.04	1	.15
25	1	.30	1	.18	2	.13	1	.05	1	.04	2	.28
SEPTEMBER												
26	1	.29	0	.00	2	.12	1	.05	1	.04	2	.26
27	1	.27	0	.00	4	.29	1	.05	1	.04	1	.12
28	1	.35	0	.00	4	.31	1	.05	1	.04	1	.18
29	1	.32	0	.00	4	.27	1	.05	1	.05	1	.20
30	1	.29	0	.00	4	.27	1	.05	1	.08	1	.16
31	---	---	0	.00	---	---	0	.00	0	.00	---	---
TOTAL	---	6.56	---	4.31	---	3.15	---	2.54	---	1.11	---	4.58

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 south tower 0.3 mi (0.5 km) above headworks dam on Bull Run River, 4.4 mi (7.1 km) northeast of Bull Run, and at mile 6.5 (10.5 km).

DRAINAGE AREA.--102 mi² (264 km²).

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to Dec. 31, 1975, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth and rockfill dam with concrete spillway built by Portland Water Bureau. Storage began about Dec. 20, 1961; first filling occurred Dec. 24, 1961. Capacity, 20,990 acre-ft (25.8 hm³) at crest of spillway, elevation, 860.0 ft (262.13 m). Dead storage negligible. Water is used for power generation by Portland General Electric Co. and municipal supply for city of Portland.

COOPERATION.--Capacity table furnished by Portland Water Bureau.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 23,660 acre-ft (29.2 hm³) Dec. 22, 1964, elevation, 866.00 ft (263.957 m); no contents at times during low-flow periods.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 22,640 acre-ft (27.9 hm³) Jan. 23, elevation, 863.73 ft (263.265 m); minimum, 13,610 acre-ft (16.8 hm³) Oct. 6, elevation, 840.91 ft (256.309 m).

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

752	0	830	10,000
770	254	850	16,800
790	1,860	870	25,500
810	5,070		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	842.50	855.01	861.13	860.26	858.76	857.40	859.58	860.69	860.22	859.29	859.60	859.09
2	842.30	856.93	862.00	860.53	858.70	854.07	858.91	860.62	860.23	859.47	859.42	858.64
3	841.82	858.20	861.30	860.24	858.25	850.34	859.29	860.64	860.17	859.75	859.21	858.88
4	841.35	859.45	860.92	859.97	859.06	852.55	860.27	860.59	860.09	860.05	858.95	859.22
5	840.94	859.62	862.72	860.17	860.18	852.95	860.35	860.55	860.26	859.95	858.80	858.59
6	841.36	859.21	861.98	860.16	860.52	854.24	860.31	860.52	860.22	859.41	858.89	858.82
7	841.51	858.80	861.26	859.56	860.44	855.03	860.29	860.79	860.27	859.02	858.93	858.97
8	841.79	858.35	860.88	859.83	860.26	856.17	860.35	860.51	860.16	858.99	859.23	859.15
9	842.55	858.35	860.68	859.69	860.30	856.51	860.33	860.47	860.06	859.11	859.52	859.47
10	842.79	858.54	860.59	859.56	860.30	857.44	860.38	860.41	860.03	859.45	859.54	859.01
11	842.78	858.83	860.48	859.94	860.32	859.49	860.83	860.41	860.15	859.64	859.65	859.66
12	842.55	860.21	860.37	859.71	860.34	859.26	860.94	860.40	860.25	859.72	859.72	859.54
13	842.53	860.25	860.56	858.80	861.73	859.23	861.08	860.39	860.22	859.67	859.70	859.21
14	843.73	860.21	860.89	860.41	862.79	859.12	860.87	860.43	860.21	859.74	859.75	858.74
15	845.39	860.25	862.23	861.27	861.82	858.95	860.72	860.46	860.21	859.73	859.86	859.44
16	846.47	860.29	861.22	862.60	862.37	859.28	860.68	860.47	859.91	859.67	859.72	858.95
17	847.24	860.50	860.84	861.65	862.11	858.82	860.66	860.45	859.78	859.27	859.43	859.28
18	847.96	860.48	860.71	860.64	861.91	858.32	860.61	860.44	859.79	858.90	859.18	858.70
19	848.62	860.41	861.27	859.69	862.01	858.95	860.55	860.39	859.74	858.85	859.03	859.51
20	849.24	860.40	860.80	859.36	863.10	859.52	860.53	860.40	859.99	859.02	859.01	859.96
21	849.85	860.87	860.74	858.87	861.15	859.01	860.56	860.08	859.80	859.03	858.95	860.00
22	850.09	860.84	860.60	858.55	860.35	859.40	860.67	860.02	859.62	858.95	858.88	859.82
23	850.11	860.68	860.33	862.90	859.15	859.71	860.23	860.01	859.20	859.00	858.83	859.55
24	850.13	860.51	860.94	861.63	858.05	859.51	859.58	860.18	859.47	859.13	858.98	859.24
25	850.25	860.43	860.88	860.81	859.02	859.86	856.48	860.18	860.00	859.19	859.39	858.89
26	850.36	860.31	860.74	860.73	859.67	859.36	850.88	860.32	860.10	859.32	859.63	858.61
27	850.45	860.23	860.64	859.92	858.73	859.28	848.42	860.33	859.99	859.43	859.60	859.64
28	850.61	860.17	860.38	858.69	858.96	859.63	852.58	860.24	859.75	859.58	859.33	859.47
29	850.91	860.16	860.37	859.05	---	859.35	856.94	860.22	859.33	859.85	859.16	859.23
30	851.42	860.31	860.29	858.64	---	860.49	860.15	860.22	859.26	859.69	859.17	858.97
31	852.80	---	860.30	858.71	---	860.27	---	860.21	---	859.64	858.99	---
MEAN	846.21	859.63	860.94	860.08	860.37	857.86	859.13	860.39	859.95	859.40	859.29	859.21
MAX	852.80	860.87	862.72	862.90	863.10	860.49	861.08	860.79	860.27	860.05	859.86	860.00
MIN	840.94	855.01	860.29	858.55	858.05	850.34	848.42	860.01	859.20	858.85	858.80	858.59
(†)	17920	21140	21130	20430	20540	21120	21070	21090	20670	20840	20560	20550
(‡)	+3550	+3220	-10	-700	+110	+580	-50	+20	-420	+170	-280	-10
CAL YR 1981	MEAN 857.67	MAX 862.73	MIN 840.94	AC-FT‡	-150							
WTR YR 1982	MEAN 858.51	MAX 863.10	MIN 840.94	AC-FT‡	+6180							

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

‡ Change in contents, in acre-feet.

14140001 BULL RUN RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°26'15", long 122°10'40", in NE¼ sec.34, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on left bank 1.8 mi (2.9 km) downstream from Bull Run Reservoir Number Two, 2.7 mi (4.3 km) northeast of Bull Run, and at mile 4.7 (7.6 km).

DRAINAGE AREA.--107 mi² (277 km²).

PERIOD OF RECORD.--September 1907 to current year. Records for January 1895 to August 1907, published in WSP 370, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1288: 1910-11, 1913, 1920-23, 1926, 1929. WSP 1318: 1919(M). WSP 1568: 1952. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 567.90 ft (173.096 m) National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to July 27, 1909, nonrecording gage at site 1.5 mi (2.4 km) upstream at different datum. July 27, 1909, to Sept. 30, 1959, water-stage recorder at site 2.5 mi (4.0 km) upstream at different datums.

REMARKS.--Records excellent except those below 10 ft³/s (0.28 m³/s), which are fair. Water stored since 1915 in Bull Run Lake, capacity, 12,270 acre-ft (15.1 hm³), and since 1958 in North Fork Reservoir, capacity, 1,030 acre-ft (1.27 hm³). Flow regulated since 1929 by Bull Run Reservoir Number One (see station 14139000), and since 1961 by Bull Run Reservoir Number Two (see station 14139900). All records given herein include flow diverted from Bull Run Reservoir Number Two for city of Portland, and that used by Portland General Electric Co. for power generation, which returns to Bull Run River below station. Total diversion, 191,700 acre-ft (236 hm³) of which 50,350 acre-ft (62.1 hm³) was used for power generation and returned to Bull Run River.

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

AVERAGE DISCHARGE.--75 years, 777 ft³/s (22.00 m³/s), 98.61 in/yr (2,505 mm/yr), 562,900 acre-ft/yr (694 hm³/yr), adjusted for storage in Bull Run Reservoir Number One since 1929 and Bull Run Reservoir Number Two since 1961.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 24,800 ft³/s (702 m³/s) Dec. 22, 1964, gage height, 17.21 ft (5.246 m), from rating curve extended above 8,800 ft³/s (249 m³/s) on basis of computation of peak flow over dam; minimum, 1.1 ft³/s (0.031 m³/s) Oct. 4, 1974.

Combined flow, maximum discharge, 25,100 ft³/s (711 m³/s) Dec. 22, 1964; minimum daily, 63 ft³/s (1.78 m³/s) Aug. 13-16, 1926.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 13,200 ft³/s (374 m³/s) Jan. 23, gage height, 13.66 ft (4.164 m); minimum, 4.2 ft³/s (0.12 m³/s) Oct. 1.

Combined flow, maximum discharge, 13,600 ft³/s (385 m³/s) Jan. 23; minimum daily, 140 ft³/s (3.96 m³/s) Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	159	1830	604	1150	1630	670	823	442	212	140	217
2	175	159	6660	956	1240	1930	441	894	442	190	203	220
3	176	149	3180	577	1520	1950	173	874	406	186	220	233
4	169	169	1970	461	783	1830	200	830	367	167	209	171
5	152	152	3470	519	639	1300	420	803	285	182	301	186
6	183	204	6310	436	763	984	417	766	595	145	296	163
7	192	172	3410	405	676	617	391	1120	436	263	327	213
8	183	177	1950	398	629	848	404	891	396	207	329	180
9	181	190	1310	381	510	747	417	696	385	275	192	181
10	177	213	1060	381	450	1450	402	655	367	281	165	177
11	169	212	926	384	522	1330	652	621	357	299	197	177
12	170	187	818	388	406	1510	1400	569	362	281	177	183
13	182	423	766	383	1250	1090	1470	567	378	340	191	180
14	192	482	1190	437	6460	1310	1560	582	391	165	192	185
15	188	437	3760	1310	5430	1100	1200	648	414	186	168	182
16	189	599	3650	3500	4730	783	987	685	414	187	172	173
17	183	693	1800	5800	5480	887	927	734	377	252	234	205
18	181	943	1290	2920	4220	743	874	730	356	279	219	185
19	178	796	2210	1660	8040	443	770	667	397	274	238	183
20	191	764	2020	1190	8660	395	741	630	351	304	249	162
21	193	1120	1330	1080	6160	599	748	461	338	272	240	164
22	192	1550	1130	980	2940	411	843	290	322	289	289	180
23	193	1310	1060	8200	1830	399	1070	242	362	307	263	174
24	186	978	902	8500	1160	491	1070	272	341	316	324	174
25	172	827	1700	3730	631	415	1200	390	284	329	345	176
26	170	713	1330	2680	915	596	1310	463	262	319	290	159
27	182	602	1150	2320	1330	557	665	584	213	302	219	155
28	192	531	1170	1760	553	568	221	538	188	319	199	166
29	193	478	694	1010	---	499	198	479	223	288	212	179
30	185	516	743	1240	---	466	193	469	203	284	198	176
31	175	---	623	1200	---	431	---	455	---	297	167	---
TOTAL	5613	15905	61412	55790	69077	28309	22034	19428	10654	7997	7165	5459
MEAN	181	530	1981	1800	2467	913	734	627	355	258	231	182
MAX	193	1550	6660	8500	8660	1950	1560	1120	595	340	345	233
MIN	152	149	623	381	406	395	173	242	188	145	140	155
AC-FT	11130	31550	121800	110700	137000	56150	43700	38540	21130	15860	14210	10830
MEAN†	461	592	1981	1774	2474	920	788	640	345	178	131	279
CFSM†	4.31	5.53	18.5	16.6	23.1	8.60	7.36	5.98	3.22	1.66	1.22	2.61
IN.†	4.97	6.17	21.35	19.12	24.08	9.91	8.21	6.89	3.60	1.92	1.41	2.91
AC-FT†	14303	17756	61407	55004	69271	28505	23625	19829	10355	5510	4053	8384

CAL YR 1981 TOTAL 269603 MEAN 739 MAX 6660 MIN 148 AC-FT 534800 MEAN† 738 CFSM† 6.90 IN.† 93.67 AC-FT† 534400
WTR YR 1982 TOTAL 308843 MEAN 846 MAX 8660 MIN 140 AC-FT 612600 MEAN† 871 CFSM† 8.14 IN.† 110.55 AC-FT† 630700

† Adjusted for change 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 NW¼NW¼ sec.10, T.2 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on left bank 0.25 mi (0.40 km) upstream from Portland General Electric Co. dam and tunnel from Sandy River, 3.0 mi (4.8 km) east of Bull Run, and at mile 1.95 (3.14 km).

DRAINAGE AREA.--22.3 mi² (57.8 km²).

PERIOD OF RECORD.--May to July 1911, October 1911 to March 1912, June 1912 to April 1913, July 1919 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1154: 1949. WSP 1248: Drainage area. WSP 1288: 1912, 1920-21(M), 1922-23, 1931, 1945. WSP 1318: 1920.

GAGE.--Water-stage recorder. Altitude of gage is 720 ft (220 m), from topographic map. May 23, 1911, to Apr. 29, 1913, nonrecording gage at site 0.85 mi (1.37 km) downstream at different datum, 0.5 mi (0.8 km) downstream from Sandy River diversion tunnel. July 1, 1919, to Sept. 30, 1931, water-stage recorder at site 0.1 mi (0.2 km) downstream at different datum. Oct 1, 1931, to Nov. 3, 1967, at site 0.1 mi (0.2 km) downstream at datum 712 ft (217 m) National Geodetic Vertical Datum of 1929. Nov. 4, 1967, to Aug. 8, 1971, water-stage recorder at site 0.1 mi (0.2 km) downstream at datum 697.44 ft (212.580 m) National Geodetic Vertical Datum of 1929 (Portland General Electric Co. bench mark).

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

AVERAGE DISCHARGE.--63 years (water years 1920-82), 146 ft³/s (4.135 m³/s), 88.91 in/yr (2,258 mm/yr), 105,800 acre-ft/yr (130 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,320 ft³/s (151 m³/s) Nov. 20, 1921, gage height, 9.18 ft (2.798 m), site and datum then in use, from rating curve extended above 2,200 ft³/s (62.3 m³/s); minimum, 8 ft³/s (0.23 m³/s) Aug. 20, Sept. 16, 17, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1000	1,640 46.4	5.07 1.545	Feb. 20	1500	*2,320 65.7	*5.72 1.743
Jan. 23	0930	2,270 64.3	5.68 1.731				

Minimum, 17 ft³/s (0.48 m³/s) Aug. 24-29, Sept. 7-9.

REVISIONS.--The peak discharges and annual maximum (*) for water years 1972, 1974-1976, and 1978-1981 have been revised as shown in the following table. They supersede figures published in reports for those years.

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
1972:							
Nov. 26	1000	1,520 43.0	4.92 1.500	Jan. 21	0100	*3,520 99.7	*6.63 2.021
Dec. 5	1900	2,680 75.9	5.94 1.811	Mar. 2	1330	1,640 46.4	5.30 1.615
1974:							
Oct. 31	1700	1,530 43.3	4.98 1.518	Jan. 15	1000	*2,590 73.3	*5.95 1.814
Dec. 7	1500	1,400 39.6	4.79 1.460				
1975:							
Dec. 20	1000	*3,390 96.0	*6.54 1.993	Jan. 25	0200	2,920 82.7	6.21 1.893
1976:							
Dec. 1	1130	1,980 56.1	5.41 1.649	Jan. 8	0200	1,980 56.1	5.41 1.649
Dec. 4	0730	1,560 44.2	4.98 1.518	Jan. 14	1630	1,450 41.1	4.85 1.478
Dec. 7	1100	*2,010 56.9	*5.44 1.658				
1978:							
Nov. 25	2100	*2,710 76.7	*6.05 1.844	Dec. 13	1100	2,520 71.4	5.89 1.795
Dec. 2	1630	2,520 71.4	5.89 1.795				
1979:							
Dec. 4	-	1,910 54.1	a5.34 1.628	Mar. 5	-	1,580 44.7	a5.0 1.524
Feb. 7	-	*2,080 58.9	*5.5 1.676				
1980:							
Jan. 13	2130	*1,390 39.4	*4.78 1.457 (No peak above base)				
1981:							
Dec. 25	2130	*1,940 54.9	*5.37 1.637	June 9	0200	1,520 43.0	4.93 1.503

a From floodmark.

SANDY RIVER BASIN

95

14141500 LITTLE SANDY RIVER NEAR BULL RUN, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	66	363	103	190	209	81	132	65	36	21	21
2	77	54	943	94	306	217	80	124	59	35	21	20
3	50	56	434	90	334	203	76	160	56	41	21	19
4	52	55	272	87	240	326	77	136	62	39	20	19
5	41	45	647	77	181	278	74	117	79	56	19	19
6	140	41	913	67	150	212	72	120	115	48	19	18
7	116	38	495	65	127	172	73	152	82	40	19	17
8	140	35	284	63	111	153	71	138	68	37	19	17
9	242	33	198	61	98	181	72	112	62	34	19	30
10	135	32	159	62	89	245	78	110	58	32	24	42
11	92	37	131	76	85	323	195	100	55	31	38	57
12	69	77	110	86	78	205	256	105	59	30	29	152
13	57	65	154	83	335	182	244	100	60	29	26	75
14	49	59	289	123	1020	207	234	106	58	35	36	53
15	42	65	712	331	712	172	195	111	52	33	26	42
16	38	72	468	837	766	149	167	115	48	32	23	36
17	35	86	252	856	835	131	162	138	45	29	21	33
18	32	89	204	445	743	116	145	124	41	27	20	30
19	30	77	370	295	1410	106	133	103	40	26	20	31
20	28	90	242	218	1570	96	133	103	40	26	19	224
21	27	170	222	177	870	88	149	108	40	25	19	158
22	25	205	176	164	448	85	180	106	40	24	19	97
23	25	171	148	1520	311	83	198	93	40	23	18	71
24	24	126	222	1160	238	83	177	96	39	23	17	64
25	24	103	263	578	196	85	151	105	39	22	17	59
26	27	89	210	480	175	95	141	89	39	22	17	57
27	40	74	192	352	165	103	136	81	41	21	17	55
28	43	64	173	263	153	109	180	70	42	21	17	113
29	53	60	146	209	---	95	154	69	39	21	22	136
30	95	70	125	192	---	91	136	65	39	22	36	89
31	104	---	112	212	---	86	---	64	---	22	25	---
TOTAL	1979	2304	9629	9426	11936	4886	4220	3352	1602	942	684	1854
MEAN	63.8	76.8	311	304	426	158	141	108	53.4	30.4	22.1	61.8
MAX	242	205	943	1520	1570	326	256	160	115	56	38	224
MIN	24	32	110	61	78	83	71	64	39	21	17	17
CFSM	2.86	3.44	13.9	13.6	19.1	7.09	6.32	4.84	2.40	1.36	.99	2.77
IN.	3.30	3.84	16.06	15.72	19.91	8.15	7.04	5.59	2.67	1.57	1.14	3.09
AC-FT	3930	4570	19100	18700	23680	9690	8370	6650	3180	1870	1360	3680
CAL YR 1981	TOTAL	45949	MEAN 126	MAX 964	MIN 14	CFSM 5.65	IN 76.65	AC-FT 91140				
WTR YR 1982	TOTAL	52814	MEAN 145	MAX 1570	MIN 17	CFSM 6.50	IN 88.10	AC-FT 104800				

WILLAMETTE RIVER BASIN

14144800 MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR

LOCATION.--Lat 43°35'50", long 122°27'20", in NW¼NE¼ sec.9, T.23 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 0.2 mi (0.3 km) upstream from Windfall Creek, 8.3 mi (13.4 km) upstream from Hills Creek Dam, 10.2 mi (16.4 km) south of Oakridge, and at mile 240.8 (387.4 km).

DRAINAGE AREA.--258 mi² (668 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,556.83 ft (474.522 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 21, 1967, at site 0.5 mi (0.8 km) upstream at different datums. June 22, 1967, to June 23, 1971, water-stage recorder at same site at datum 5.00 ft (1.524 m) higher.

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

AVERAGE DISCHARGE.--24 years, 807 ft³/s (22.85 m³/s), 42.48 in/yr (1,079 mm/yr), 584,700 acre-ft/yr (721 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,800 ft³/s (1,130 m³/s) Dec. 22, 1964, gage height, 16.96 ft (5.169 m), from floodmark, site and datum then in use, from rating curve extended above 5,100 ft³/s (144 m³/s) on basis of slope-area measurement of peak flow; minimum, 187 ft³/s (5.30 m³/s) Sept. 15, 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0730	*26,000 736	*13.71 4.179	Feb. 14	1100	7,800 221	10.19 3.106
Dec. 15	0530	10,100 286	10.97 3.344	Feb. 20	2300	8,210 233	10.34 3.152
Dec. 19	1400	7,250 205	9.98 3.042				

Minimum, 226 ft³/s (6.40 m³/s) Oct. 4-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	231	424	1070	1340	1000	1520	787	1240	906	707	377	304		
2	241	387	2180	1180	950	1540	797	1280	917	701	377	300		
3	238	359	2010	1110	900	1420	834	1240	898	746	376	299		
4	231	339	1460	1160	850	1390	824	1150	874	684	367	304		
5	226	321	3890	1020	800	1250	805	1090	840	655	361	297		
6	292	307	17600	906	750	1130	780	1140	800	619	356	292		
7	478	297	4420	840	700	1040	757	1250	772	591	351	290		
8	411	289	2730	799	670	995	761	1230	761	573	357	288		
9	558	282	2180	818	652	1060	788	1090	783	556	405	290		
10	747	277	1880	864	630	1150	941	968	857	539	367	308		
11	595	290	1570	868	617	1390	1950	905	974	529	378	298		
12	467	657	1400	845	601	1310	1960	910	1080	517	362	400		
13	398	744	1650	805	1310	1170	1790	973	969	508	349	360		
14	354	794	3350	1400	6580	1100	1920	1030	887	509	348	440		
15	325	1060	6320	772	4880	1030	1530	1100	903	493	349	340		
16	307	1650	3270	785	5090	968	1300	1160	978	478	340	300		
17	293	2590	2240	1230	4660	921	1200	1290	1000	466	334	295		
18	282	1820	2130	1200	3540	889	1100	1240	1020	456	330	321		
19	272	1210	5320	1020	5950	854	1000	1120	1000	449	326	356		
20	265	1080	4160	906	5550	813	962	1120	932	440	323	500		
21	259	1790	3060	832	5900	775	994	1270	935	433	319	387		
22	255	2420	2220	789	3470	752	1160	1380	847	425	315	342		
23	252	2350	1780	1460	2440	740	1380	1350	786	418	313	322		
24	249	1820	1660	2200	1860	747	1410	1360	749	412	310	348		
25	247	1340	1840	2200	1590	781	1350	1560	753	406	307	333		
26	247	1080	2450	2400	1450	839	1280	1560	720	398	306	372		
27	244	886	2360	2000	1410	840	1260	1270	852	395	304	472		
28	352	759	1810	1700	1290	856	1300	1060	782	391	302	413		
29	396	677	2130	1400	---	812	1220	955	818	388	328	521		
30	421	629	1980	1200	---	799	1180	914	776	385	328	449		
31	423	---	1570	1100	---	803	---	901	---	379	311	---		
TOTAL	10556	28928	93690	37149	66090	31684	35320	36106	26169	15646	10576	10541		
MEAN	341	964	3022	1198	2360	1022	1177	1165	872	505	341	351		
MAX	747	2590	17600	2400	6580	1540	1960	1560	1080	746	405	521		
MIN	226	277	1070	772	601	740	757	901	720	379	302	288		
CFSM	1.32	3.74	11.7	4.64	9.15	3.96	4.56	4.52	3.38	1.96	1.32	1.36		
IN.	1.52	4.17	13.51	5.36	9.53	4.57	5.09	5.21	3.77	2.26	1.52	1.52		
AC-FT	20940	57380	185800	73690	131100	62850	70060	71620	51910	31030	20980	20910		
CAL YR 1981	TOTAL	296485	MEAN	812	MAX	17600	MIN	200	CFSM	3.15	IN	42.75	AC-FT	588100
WTR YR 1982	TOTAL	402455	MEAN	1103	MAX	17600	MIN	226	CFSM	4.28	IN	58.03	AC-FT	798300

WILLAMETTE RIVER BASIN

97

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1958 to January 1959, September 1959 to current year.

INSTRUMENTATION.--Temperature recorder October 1958 to January 1959, September 1959 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.0°C July 15, 1970; minimum, 0.0°C on several days during winter period most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 19.5°C July 28; minimum recorded, 1.0°C Feb. 12.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14145100 HILLS CREEK LAKE NEAR OAKRIDGE, OR

LOCATION.--Lat 43°42'30", long 122°25'25", in NW¼ sec.35, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, near right end of Hills Creek Dam on Middle Fork Willamette River, 600 ft (183 m) downstream from Hills Creek, 3.5 mi (5.6 km) southeast of Oakridge, and at mile 232.5 (374.1 km).

DRAINAGE AREA.--389 mi² (1,008 km²).

PERIOD OF RECORD.--August 1961 to current year. Prior to October 1971, published as Hills Creek Reservoir near Oakridge.

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

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1961 by the Corps of Engineers; storage began August 1961. Total capacity is 355,600 acre-ft (438 hm³) at elevation 1,543.0 ft (470.31 m), top of spillway gates, and usable capacity is 248,900 acre-ft (307 hm³) between elevations 1,414.0 ft (430.98 m), minimum power pool, and 1,543.0 ft (470.31 m). Reservoir used for flood control and power generation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 354,200 acre-ft (437 hm³) June 25, 1971, elevation, 1,542.52 ft (470.160 m); minimum, 104,800 acre-ft (129 hm³) Jan. 2, 1969, elevation, 1,412.52 ft (430.536 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 350,500 acre-ft (432 hm³) June 27, elevation, 1,541.19 ft (469.755 m); minimum, 163,700 acre-ft (202 hm³) Feb. 12, elevation, 1,453.21 ft (442.938 m).

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

1,410	101,500	1,460	174,900	1,520	297,200
1,420	114,600	1,480	211,000	1,540	347,300
1,440	143,000	1,500	251,900	1,544	358,500

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1478.49	1461.04	1472.15	1493.02	1461.00	1505.63	1517.13	1531.22	1541.01	1541.05	1538.08	1519.07
2	1477.19	1460.61	1473.38	1490.06	1460.19	1504.32	1517.69	1531.77	1541.01	1541.10	1538.10	1518.09
3	1475.88	1460.15	1472.85	1486.99	1459.52	1503.25	1518.33	1532.28	1541.01	1541.04	1538.15	1517.12
4	1474.52	1459.64	1470.51	1483.88	1459.70	1502.74	1518.95	1532.64	1541.04	1541.02	1538.18	1516.12
5	1473.37	1459.12	1471.33	1480.42	1459.32	1502.78	1519.53	1532.99	1541.03	1541.01	1538.21	1515.11
6	1472.48	1458.55	1486.74	1477.77	1458.60	1502.80	1520.08	1533.48	1541.00	1541.00	1538.23	1514.08
7	1471.70	1457.97	1488.98	1475.85	1457.84	1502.71	1520.51	1534.21	1541.01	1541.04	1538.27	1513.11
8	1470.76	1457.37	1487.81	1473.87	1456.82	1502.51	1520.89	1534.92	1540.99	1541.05	1538.26	1512.07
9	1470.33	1456.78	1485.21	1471.90	1455.97	1502.39	1521.30	1535.46	1541.04	1541.05	1538.28	1511.29
10	1470.67	1456.16	1482.04	1470.07	1454.97	1502.79	1522.12	1535.87	1541.06	1541.03	1538.24	1510.78
11	1470.79	1455.61	1479.68	1468.25	1453.68	1503.72	1524.66	1536.28	1541.10	1541.06	1537.83	1510.25
12	1470.69	1455.67	1477.70	1466.34	1453.36	1504.39	1526.54	1536.78	1541.07	1541.06	1537.03	1509.84
13	1470.41	1455.73	1476.19	1464.39	1455.44	1504.88	1527.64	1537.36	1541.03	1541.04	1536.19	1509.35
14	1470.03	1455.68	1478.37	1462.31	1467.33	1505.29	1528.14	1538.01	1541.02	1541.06	1535.36	1508.82
15	1469.58	1456.12	1485.04	1460.75	1475.05	1505.81	1527.72	1538.72	1541.05	1541.03	1534.52	1508.28
16	1469.11	1457.29	1486.05	1459.90	1481.98	1506.42	1527.49	1539.50	1541.05	1541.01	1533.66	1507.74
17	1468.62	1459.76	1486.05	1460.20	1488.24	1507.03	1527.85	1540.18	1541.05	1541.00	1532.82	1507.21
18	1468.10	1461.01	1486.85	1460.52	1492.44	1507.70	1528.01	1540.47	1541.09	1541.00	1531.95	1506.72
19	1467.57	1462.07	1493.14	1460.45	1499.06	1508.36	1528.04	1540.48	1541.04	1541.02	1531.06	1506.29
20	1467.03	1462.83	1497.41	1460.04	1505.11	1508.97	1528.04	1540.59	1540.99	1541.04	1530.17	1505.90
21	1466.46	1464.82	1500.09	1459.40	1511.17	1509.54	1528.09	1540.84	1541.00	1541.04	1529.28	1505.06
22	1465.88	1467.30	1500.98	1458.73	1514.23	1510.17	1528.34	1541.02	1540.98	1541.04	1528.38	1504.15
23	1465.30	1468.60	1501.15	1459.72	1515.56	1510.86	1528.82	1541.05	1540.97	1540.94	1527.46	1503.15
24	1464.71	1469.25	1500.36	1459.90	1515.23	1511.56	1528.89	1541.05	1540.99	1540.64	1526.55	1502.49
25	1464.12	1470.04	1499.48	1461.23	1514.33	1512.34	1528.76	1541.08	1541.00	1540.23	1525.63	1502.00
26	1463.51	1470.78	1499.88	1463.63	1512.64	1513.21	1528.82	1540.98	1541.14	1539.72	1524.68	1501.60
27	1462.92	1471.18	1500.06	1463.87	1510.28	1514.08	1529.21	1540.96	1541.19	1539.17	1523.74	1501.03
28	1462.49	1471.35	1499.14	1463.06	1507.74	1514.99	1529.81	1540.99	1541.14	1538.59	1522.78	1500.27
29	1462.11	1471.38	1498.46	1462.70	---	1515.59	1530.29	1541.04	1541.13	1538.15	1521.93	1499.66
30	1461.75	1471.38	1497.70	1462.25	---	1516.08	1530.73	1541.04	1541.06	1538.12	1520.99	1498.92
31	1461.40	---	1495.77	1461.68	---	1516.62	---	1541.02	---	1538.09	1520.03	---
MEAN	1468.64	1462.17	1488.08	1467.84	1480.60	1507.73	1525.41	1537.88	1541.04	1540.53	1532.07	1508.19
MAX	1478.49	1471.38	1501.15	1493.02	1515.56	1516.62	1530.73	1541.08	1541.19	1541.10	1538.28	1519.07
MIN	1461.40	1455.61	1470.51	1458.73	1453.36	1502.39	1517.13	1531.22	1540.97	1538.09	1520.03	1498.92
(†)	177300	194800	242800	177800	268900	289300	323400	350100	350200	342300	297300	249500
(‡)	-33300	+17500	+48000	-65000	-91100	+20400	+34100	+26700	+100	-7900	-45000	-47800
CAL YR 1981	MEAN	1500.63	MAX	1541.84	MIN	1451.88	AC-FT‡	+50700				
WTR YR 1982	MEAN	1505.17	MAX	1541.19	MIN	1453.36	AC-FT‡	+38900				

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

‡ Change in contents, in acre-feet.

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

LOCATION.--Lat 43°43'20", long 122°26'15", in NW¼NE¼ sec.27, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 90 ft (27 m) upstream from highway bridge, 0.4 mi (0.6 km) upstream from Salt Creek, 1.1 mi (1.8 km) downstream from Hills Creek Dam, 2.3 mi (3.7 km) southeast of Oakridge, and at mile 231.4 (372.3 km).

DRAINAGE AREA.--392 mi² (1,015 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1913 to September 1914, September 1935 to current year. Monthly discharge only September 1935, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1914.

GAGE.--Water-stage recorder. Datum of gage is 1,208.01 ft (368.201 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Oct. 3, 1913, to Sept. 30, 1914, nonrecording gage and Sept. 1, 1935, to Aug. 18, 1960, water-stage recorder at sites 400 ft (122 m) and 1,000 ft (305 m) downstream, respectively, at different datum.

REMARKS.--Water-discharge records good. Flow regulated since 1961 by Hills Creek Lake (see station 14145100). No diversions above station.

AVERAGE DISCHARGE.--48 years, 1,147 ft³/s (32.48 m³/s), 39.74 in/yr (1,009 mm/yr), 831,000 acre-ft/yr (1.02 km³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft³/s (963 m³/s) Dec. 28, 1945, gage height, 12.06 ft (3.676 m), site and datum then in use, from rating curve extended above 13,000 ft³/s (368 m³/s); minimum observed, 0.70 ft³/s (0.020 m³/s) Sept. 8-11, 13, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,490 ft³/s (184 m³/s) Dec. 9, gage height, 7.42 ft (2.262 m); minimum, 132 ft³/s (3.74 m³/s) Mar. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1580	856	1080	5030	1910	4910	528	1090	1180	926	409	1510
2	1570	851	2290	4960	1950	3930	527	1080	1160	913	357	1500
3	1580	853	3640	5000	1830	3300	528	1080	1160	1130	349	1500
4	1580	855	4410	5080	1020	2610	533	1080	1150	946	360	1510
5	1380	859	6060	5100	1450	1810	533	1040	1150	907	362	1520
6	1300	869	6100	3960	1690	1640	531	904	1100	820	382	1510
7	1440	871	6030	2870	1640	1650	613	780	986	660	385	1470
8	1450	869	5980	2830	1800	1660	686	784	993	723	427	1520
9	1200	868	6230	2870	1630	1660	680	786	907	741	460	1290
10	844	863	6350	2880	1700	1210	686	785	1120	671	501	968
11	842	879	4870	2870	1890	1020	694	676	1250	616	1010	959
12	838	897	4010	2870	1080	1140	1190	584	1540	671	1490	959
13	838	1040	4010	2840	396	1150	1870	543	1340	616	1530	960
14	845	1180	4040	2850	438	1160	2860	543	1150	589	1520	955
15	849	1180	4140	2390	1070	913	3140	543	1140	677	1520	957
16	850	1500	4190	1830	1600	703	2370	548	1310	595	1530	956
17	850	1760	3380	1790	1750	632	1480	882	1310	589	1530	956
18	849	1670	2370	1740	1760	466	1480	1290	1310	495	1520	945
19	845	913	2400	1720	1780	379	1500	1460	1390	495	1540	955
20	848	913	2090	1690	1800	369	1430	1340	1290	495	1540	1220
21	849	919	1870	1730	1810	369	1380	1390	1230	504	1530	1480
22	858	1300	2350	1720	1800	247	1460	1640	1110	509	1530	1470
23	850	2430	2380	1950	2170	132	1530	1790	966	638	1530	1520
24	849	2290	3270	3710	3230	144	2020	1820	907	888	1520	1240
25	849	1350	4040	2550	3350	184	2090	2060	882	1030	1520	979
26	850	926	4020	2320	4060	189	1730	2230	832	1130	1530	986
27	845	926	3950	2940	4960	239	1300	1700	1080	1220	1540	1270
28	858	926	3990	2950	4940	252	1100	1260	1140	1240	1540	1480
29	857	927	4020	2110	---	407	1100	1190	1140	1060	1480	1480
30	860	926	4000	1900	---	530	1100	1190	1140	479	1530	1450
31	858	---	4560	1910	---	535	---	1190	---	461	1510	---
TOTAL	31761	33466	122120	88960	56504	35540	38669	35278	34363	23434	35482	37475
MEAN	1025	1116	3939	2870	2018	1146	1289	1138	1145	756	1145	1249
MAX	1580	2430	6350	5100	4960	4910	3140	2230	1540	1240	1540	1520
MIN	838	851	1080	1690	396	132	527	543	832	461	349	945
AC-FT	63000	66380	242200	176500	112100	70490	76700	69970	68160	46480	70380	74330
MEAN†	483	1410	4720	1813	3659	1478	1862	1572	1147	627	413	446
CFSM†	1.23	3.60	12.04	4.62	9.33	3.77	4.75	4.01	2.93	1.60	1.05	1.14
IN.†	1.42	4.01	13.88	5.33	9.72	4.35	5.30	4.63	3.27	1.85	1.21	1.27
AC-FT†	29700	83880	290200	111500	203200	90890	110800	96670	68260	38980	25380	26530

CAL YR 1981 TOTAL 398739 MEAN 1092 MAX 6350 MIN 252 AC-FT 790900 MEAN† 1162 CFSM† 2.96 IN.† 40.27 AC-FT† 841600
WTR YR 1982 TOTAL 573052 MEAN 1570 MAX 6350 MIN 132 AC-FT 1137000 MEAN† 1624 CFSM† 4.14 IN.† 56.26 AC-FT† 1176000

† Adjusted for change in contents in Hills Creek Lake.

WILLAMETTE RIVER BASIN

101

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1960 to current year.

INSTRUMENTATION.--Temperature recorder since October 1960.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.0°C Sept. 4, 1960; minimum, 1.5°C Jan. 4, 1961.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 17.0°C Oct. 1-3; minimum, 4.0°C Feb. 7.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14146500 SALMON CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°45'45", long 122°22'18", in NE¼ sec.7, T.21 S., R.4 E., Lane County, Hydrologic Unit 17090001, In Willamette National Forest, on right bank 190 ft (58 m) upstream from Salmon Creek Falls, 0.1 mi (0.2 km) upstream from Needle Creek, 4.6 mi (7.4 km) east of Oakridge, and at mile 5.84 (9.40 km).

DRAINAGE AREA.--117 mi² (303 km²), at measuring cable 0.6 mi (1.0 km) downstream from gage.

PERIOD OF RECORD.--October to November 1909 (gage heights and one discharge measurement only), February 1913 to October 1919, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as Kelsey River near Hazeldell and Salmon Creek near Hazeldell, 1909.

REVISED RECORDS.--WSP 794: 1934(M). WSP 814: Drainage area. WSP 1124: 1935, 1942(M), 1943, 1946(M). WSP 1248: 1915, 1918. WRD 1971 Oreg.: 1968, 1969(M,P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,462.36 ft (445.727 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1914, nonrecording gage at several sites within 4 mi (6 km) of present site at various datums. Oct. 1, 1914, to Oct. 14, 1919, water-stage recorder at site 1.8 mi (2.9 km) downstream at different datum. Nov. 5, 1933, to Oct. 27, 1964, water-stage recorder at site 0.8 mi (1.3 km) downstream at datum 40.53 ft (12.354 m) lower. Oct. 28, 1964, to Aug. 27, 1965, nonrecording gage at site 0.6 mi (1.0 km) downstream at different datum.

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

AVERAGE DISCHARGE.--55 years (water years 1914-19, 1934-82), 426 ft³/s (12.06 m³/s), 49.45 in/yr (1,256 mm/yr), 308,600 acre-ft/yr (381 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Dec. 22, 1964, gage height, 9.15 ft (2.789 m), from floodmark, site and datum then in use, from rating curve extended above 2,100 ft³/s (59.5 m³/s) on basis of slope-area measurement of peak flow; minimum, 63 ft³/s (1.78 m³/s) Jan. 8, 1937.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0630	*6,790 192	*7.50 2.286	Dec. 26	1600	1,980 56.1	4.11 1.253
Dec. 15	0500	3,410 96.6	5.24 1.597	Feb. 14	-	unknown	- -
Dec. 19	1200	2,490 70.5	4.45 1.356	Feb. 20	2330	4,210 119	5.81 1.771

Minimum, 123 ft³/s (3.48 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	197	594	663	567	742	405	619	437	347	181	150
2	143	187	1140	594	526	741	403	641	442	349	181	143
3	133	175	1100	545	500	684	408	632	428	379	181	143
4	129	170	845	619	469	675	402	581	427	348	181	143
5	126	162	1180	555	439	641	396	545	420	361	178	143
6	142	155	4770	494	413	591	387	557	411	335	178	143
7	204	151	2580	451	394	550	379	617	385	315	174	136
8	203	146	1510	424	377	528	372	614	367	299	174	132
9	294	140	1170	445	362	548	379	553	372	286	178	143
10	377	137	1020	481	346	609	440	490	401	271	178	164
11	366	146	824	483	332	704	780	452	455	261	181	157
12	289	259	717	472	321	680	843	445	542	253	178	217
13	244	265	824	448	497	631	858	467	497	249	167	188
14	213	251	1600	437	2600	602	939	503	433	252	167	160
15	194	263	2840	425	2400	565	803	551	425	241	167	157
16	181	377	1810	434	2280	526	694	588	453	235	164	153
17	168	589	1260	777	2500	494	636	655	459	228	164	146
18	161	524	1160	794	2290	468	575	630	468	219	164	157
19	154	427	1970	700	3440	449	522	565	464	216	160	157
20	149	398	1830	621	3360	427	486	563	435	212	157	256
21	144	597	1390	566	3440	408	484	634	428	208	157	199
22	136	787	1130	531	2160	394	535	698	380	205	153	179
23	136	801	953	1080	1490	384	639	696	351	201	153	167
24	132	729	1000	1310	1130	384	698	703	338	200	150	182
25	129	598	1270	1290	970	392	688	815	334	199	146	170
26	129	497	1550	1370	851	416	658	799	326	197	146	188
27	128	415	1530	1170	759	421	645	637	374	192	146	210
28	168	362	1130	925	685	439	665	525	349	192	146	227
29	167	327	976	762	---	423	627	464	408	188	164	281
30	192	307	860	660	---	418	604	441	381	188	167	239
31	203	---	753	611	---	418	---	434	---	185	157	---
TOTAL	5663	10539	43286	21137	35898	16352	17350	18114	12390	7811	5138	5230
MEAN	183	351	1396	682	1282	527	578	584	413	252	166	174
MAX	377	801	4770	1370	3440	742	939	815	542	379	181	281
MIN	126	137	594	424	321	384	372	434	326	185	146	132
CFSM	1.56	3.00	11.9	5.83	11.0	4.50	4.94	4.99	3.53	2.15	1.42	1.49
IN.	1.80	3.35	13.76	6.72	11.41	5.20	5.52	5.76	3.94	2.48	1.63	1.66
AC-FT	11230	20900	85860	41930	71200	32430	34410	35930	24580	15490	10190	10370

CAL YR 1981 TOTAL 146334 MEAN 401 MAX 4770 MIN 107 CFSM 3.43 IN 46.53 AC-FT 290300
WTR YR 1982 TOTAL 198908 MEAN 545 MAX 4770 MIN 126 CFSM 4.66 IN 63.24 AC-FT 394500

WILLAMETTE RIVER BASIN

14146700 GRAY CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'48", long 122°30'38", in NE¼ sec.24, T.21 S., R.2 E., Lane County, Hydrologic Unit 17090001, Willamette National Forest, on left bank 0.9 mi (1.4 km) upstream from La Duke Road bridge, and 1.5 mi (2.4 km) southwest of Oakridge.

DRAINAGE AREA.--5.06 mi² (13.11 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,300 ft (396 m), from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,230 ft³/s (34.8 m³/s) Dec. 6, 1981, gage height, 7.05 ft (2.149 m), from rating curve extended above 160 ft³/s (4.53 m³/s) on basis of slope-area measurement of peak flow, result of release of water from bursting logjam; minimum, 0.14 ft³/s (0.004 m³/s) Sept. 8, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 140 ft³/s (3.96 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1430	262 7.42	2.68 0.817	Dec. 26	1130	227 6.43	3.73 1.137
Dec. 6	unknown	*1,230 34.8	*7.05 2.149	Jan. 24	1100	179 5.07	3.44 1.049
Dec. 15	1230	162 4.59	3.33 1.015	Feb. 14	0930	216 6.12	3.67 1.119
Dec. 19	1230	182 5.15	3.46 1.055				

Minimum, 0.14 ft³/s (0.004 m³/s) Sept. 8.

a From rating curve extended above 160 ft³/s (4.53 m³/s) on basis of slope-area measurement of peak flow, result of release of water from bursting logjam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	4.4	58	26	24	35	14	11	1.7	2.0	.64	.25
2	1.9	3.4	148	22	22	36	15	9.8	1.7	1.9	.62	.22
3	1.9	2.8	75	20	21	26	18	8.8	1.6	3.5	.63	.22
4	1.5	2.4	31	18	20	26	20	7.7	2.0	2.8	.58	.22
5	1.3	2.2	137	16	18	26	21	7.0	2.7	2.9	.52	.20
6	1.9	2.0	400	14	16	22	17	7.4	2.4	2.8	.46	.19
7	6.2	1.9	100	13	14	18	15	7.4	2.1	2.3	.42	.17
8	5.6	1.7	46	13	13	15	16	6.4	1.8	2.0	.41	.16
9	20	1.6	36	20	12	17	19	5.6	1.6	1.8	.41	.22
10	29	1.5	40	32	11	19	42	4.8	1.5	1.6	.42	.49
11	22	2.2	32	31	10	28	98	4.2	1.4	1.5	1.7	.41
12	9.8	13	28	28	9.4	25	68	4.2	1.7	1.4	1.3	4.0
13	5.5	13	40	24	40	20	77	4.3	1.7	1.4	.91	3.0
14	3.9	17	75	23	187	17	78	4.3	1.4	1.5	.77	1.9
15	2.9	25	140	25	108	15	47	4.2	1.2	1.3	.79	1.4
16	2.4	48	60	28	109	13	33	4.0	.92	1.3	.70	1.2
17	2.1	70	38	76	113	12	30	4.2	1.1	1.2	.56	1.1
18	1.8	41	26	58	87	10	28	3.7	1.1	1.1	.48	1.2
19	1.6	19	121	38	114	9.0	21	3.1	1.1	1.1	.42	1.9
20	1.5	13	81	28	103	8.2	19	2.8	1.1	1.0	.38	4.5
21	1.3	41	63	23	91	7.6	22	2.8	1.1	.96	.34	3.4
22	1.2	65	41	19	50	7.0	34	2.4	.98	.91	.31	2.5
23	1.1	71	30	98	32	6.8	34	2.3	.88	.85	.28	2.0
24	1.1	54	49	135	23	7.1	26	2.1	.83	.79	.26	2.5
25	.98	30	101	98	19	7.9	20	2.0	.87	.74	.25	2.3
26	.94	18	145	106	20	8.9	16	2.0	1.0	.71	.24	3.4
27	.95	12	91	65	23	8.4	14	1.9	2.0	.67	.24	6.2
28	2.9	8.8	48	38	20	9.1	15	1.9	1.6	.64	.23	5.8
29	4.8	7.3	42	29	---	9.6	12	1.8	2.2	.61	.29	9.9
30	7.6	6.9	45	24	---	11	11	1.8	2.5	.63	.30	5.9
31	6.2	---	33	25	---	14	---	1.7	---	.66	.27	---
TOTAL	153.67	599.1	2400	1213	1329.4	494.6	900	137.6	45.78	44.57	16.13	66.85
MEAN	4.96	20.0	77.4	39.1	47.5	16.0	30.0	4.44	1.53	1.44	.52	2.23
MAX	29	71	400	135	187	36	98	11	2.7	3.5	1.7	9.9
MIN	.94	1.5	26	13	9.4	6.8	11	1.7	.83	.61	.23	.16
CFSM	.98	3.95	15.3	7.73	9.39	3.16	5.93	.88	.30	.29	.10	.44
IN.	1.13	4.40	17.64	8.92	9.77	3.64	6.62	1.01	.34	.33	.12	.49
AC-FT	305	1190	4760	2410	2640	981	1790	273	91	88	32	133

CAL YR 1981 TOTAL 5399.13 MEAN 14.8 MAX 400 MIN .32 CFSM 2.93 IN 39.69 AC-FT 10710
WTR YR 1982 TOTAL 7400.70 MEAN 20.3 MAX 400 MIN .16 CFSM 4.01 IN 54.40 AC-FT 14680

NOTE.--No gage-height record Dec. 6-16, May 25 to June 1.

WILLAMETTE RIVER BASIN

105

14146950 WALDO LAKE NEAR OAKRIDGE, OR

LOCATION.--Lat 43°46'05", long 122°03'10", in SE¼WN¼ sec.7, T.21 S., R.6 E., Lane County, Hydrologic Unit 170900001, Willamette National Forest, on left bank at head of artificial outlet channel for Waldo Lake, at headwaters of the North Fork of the Middle Fork Willamette River, 20 mi (32 km) east of Oakridge, and at mile 43.51 (70.0 km).

DRAINAGE AREA.--30.5 mi² (79.0 km²).

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

GAGE.--Nonrecording gage. Altitude of gage is 5,410 ft (1,649.0 m), from topographic map; gage readings have been reduced to National Geodetic Vertical Datum of 1929. Present gage is at same site and datum as former gage for Waldo Lake outlet near Oakridge (see station 14147000) for period 1936-53.

REMARKS.--Lake not regulated. Lake level was lowered approximately 0.5 ft (0.2 m) when low rock dam in artificial outlet channel was removed Sept. 23, 1971. Lake outlet is an old artificial outlet channel 30 ft (9 m) below the gage. Diversion tunnel into head of Black Creek, near south end of lake, built about 1914, is not used; but leakage past old control gates was measured at 0.51 ft³/s (0.014 m³/s) Oct. 1, 1981. The maximum stage of the lake during period 1936-53 was 5,412.98 ft (1,649.876 m), which occurred Jan. 2, 1943. At times during this period the lake elevation could have been as much as 2 ft (0.6 m) below elevation 5,410 ft (1,649.0 m). A high-water mark noted Sept. 3, 1936, indicated that an elevation of 5,413.2 ft (1,649.94 m) had occurred sometime previous to that date. See station 14147000 for lake elevations for period 1936-53.

COOPERATION.--Waldo Lake bathymetric chart, used to compute capacity table, furnished by Environmental Protection Agency.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 778,900 acre-ft (960 hm³) Mar. 18, 1971, elevation, 5,413.25 ft (1,649.969 m); minimum observed, 759,400 acre-ft (936 hm³) Oct. 9, 1980, elevation, 5,410.14 ft (1,649.011 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 770,500 acre-ft (950 hm³) July 16, elevation, 5,411.94 ft (1,649.559 m); minimum observed, 760,100 acre-ft (937 hm³) Oct. 1, elevation, 5,410.26 ft (1,649.047 m).

ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)
Oct. 1	5,410.26	760,100
July 16	5,411.94	770,500
Sept.10	5,411.00	764,700

WILLAMETTE RIVER BASIN

14147000 WALDO LAKE OUTLET NEAR OAKRIDGE, OR

LOCATION.--Lat 43°46'05", long 122°03'10", in SE¼NW¼ sec.7, T.21 S., R.6 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank of artificial outlet channel of Waldo Lake forming the headwaters of the North Fork of the Middle Fork of Willamette River, 20 mi (32 km) east of Oakridge, and at mile 43.5 (70.0 km).

DRAINAGE AREA.--30.5 mi² (79.0 km²), of which about 10.5 mi² (27.2 km²) is Waldo Lake.

PERIOD OF RECORD.--October 1936 to September 1953, October 1969 to current year.

REVISED RECORDS.--WSP 2135: Drainage area.

GAGE.--Water-stage recorder and modified v-notch weir. Altitude of gage is 5,410 ft (1,649 m), from topographic map. October 1936 to September 1953, at site 120 ft (37 m) upstream on left bank at same datum.

REMARKS.--Records good. At times seiches from Waldo Lake cause rapid changes in stage at gage many times each hour. No regulation. Diversion tunnel into head of Black Creek, near south end of lake, built about 1914, is sealed off, but there was leakage of 0.51 ft³/s (0.014 m³/s) past control gates, measured Oct. 1, 1981.

AVERAGE DISCHARGE.--30 years, 34.2 ft³/s (0.969 m³/s), 24,780 acre-ft/yr (30.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150 ft³/s (4.25 m³/s) Jan. 20, 1971, from rating curve extended above 77 ft³/s (2.18 m³/s) and adjusted for overbank flow; maximum gage height, 2.98 ft (0.908 m) Jan. 2, 1943; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A high-water mark in the channel of a previous high stage in the lake was noted on Sept. 3, 1936, as 3.2 ft (0.98 m) gage height, affected by seiche.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 119 ft³/s (3.37 m³/s) Feb. 23, gage height, 2.44 ft (0.744 m); minimum, 0.86 ft³/s (0.024 m³/s) Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.9	13	79	81	107	74	63	47	62	33	17
2	1.2	1.8	15	79	78	106	76	61	47	65	32	16
3	1.2	1.7	16	84	77	106	79	61	47	65	31	16
4	1.1	1.6	16	93	75	109	80	60	48	65	30	15
5	1.0	1.5	18	91	75	107	79	59	49	60	29	15
6	1.2	1.3	28	89	70	100	78	58	49	60	29	15
7	1.6	1.3	31	85	70	100	75	57	48	60	28	14
8	1.8	1.2	32	85	70	98	75	57	47	60	29	14
9	2.3	1.2	31	85	65	97	75	57	47	60	28	14
10	2.8	1.1	33	81	65	96	76	56	47	55	27	14
11	3.0	1.1	33	80	65	97	78	55	48	55	27	14
12	2.8	1.7	33	77	60	96	78	54	50	55	27	16
13	2.6	2.4	35	76	65	94	79	53	49	55	26	16
14	2.5	2.5	39	75	75	93	85	52	49	50	25	15
15	2.3	2.9	46	72	77	92	87	52	50	50	24	14
16	2.1	3.8	47	71	81	90	85	51	51	49	24	13
17	2.1	5.2	46	74	86	88	83	51	52	48	23	13
18	2.0	6.1	48	76	89	86	81	51	53	47	23	12
19	1.9	5.9	55	75	97	86	80	51	54	46	22	12
20	1.8	6.3	60	73	102	84	78	50	54	45	22	15
21	1.8	7.1	62	73	110	82	75	50	56	44	21	15
22	1.6	9.3	61	75	112	80	73	50	56	43	21	15
23	1.4	10	61	84	114	79	72	50	56	42	20	14
24	1.4	11	62	86	110	77	70	49	56	41	20	15
25	1.3	12	66	86	110	74	69	49	56	40	19	15
26	1.2	11	71	88	110	74	68	50	57	39	18	15
27	1.2	11	76	90	109	73	66	50	58	38	18	15
28	1.5	11	78	88	107	74	65	50	62	37	17	16
29	1.6	10	78	86	---	74	65	49	63	36	18	17
30	1.9	11	77	84	---	74	64	49	63	35	18	16
31	2.0	---	77	82	---	75	---	48	---	35	17	---
TOTAL	55.3	155.9	1444	2522	2405	2768	2268	1653	1569	1542	746	443
MEAN	1.78	5.20	46.6	81.4	85.9	89.3	75.6	53.3	52.3	49.7	24.1	14.8
MAX	3.0	12	78	93	114	109	87	63	63	65	33	17
MIN	1.0	1.1	13	71	60	73	64	48	47	35	17	12
AC-FT	110	309	2860	5000	4770	5490	4500	3280	3110	3060	1480	879

CAL YR 1981 TOTAL 9018.89 MEAN 24.7 MAX 78 MIN .42 AC-FT 17890
WTR YR 1982 TOTAL 17571.20 MEAN 48.1 MAX 114 MIN 1.0 AC-FT 34850

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

LOCATION.--Lat 43°45'25", long 122°30'15", in SW¼ sec.7, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, on left bank 2.5 mi (4.0 km) northwest of Oakridge and at mile 1.0 (1.6 km).

DRAINAGE AREA.--246 mi² (637 km²), at measuring section 0.5 mi (0.8 km) downstream.

PERIOD OF RECORD.--October 1909 to March 1916, September 1935 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1912, published as "near Hazeldell."

REVISED RECORDS.--WSP 1248: 1914-16.

GAGE.--Water-stage recorder. Datum of gage is 1,029.6 ft (313.82 m) National Geodetic Vertical Datum of 1929 (river profile survey). Oct. 1, 1909, to March 31, 1916, water-stage recorder or nonrecording gage at several sites within 0.8 mi (1.3 km) of present site at various datums. Sept. 10, 1935, to Oct. 3, 1938, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--53 years (water years 1910-15, 1936-82), 789 ft³/s (22.34 m³/s), 43.56 in/yr (1,106 mm/yr), 571,600 acre-ft/yr (705 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft³/s (691 m³/s) Dec. 22, 1964, gage height, 19.14 ft (5.834 m), from floodmark, from rating curve extended above 7,100 ft³/s (201 m³/s) on basis of slope-area measurement of peak flow; minimum, 22 ft³/s (0.62 m³/s) Aug. 20, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1530	4,380 124	6.72 2.048	Dec. 26	1930	4,390 124	6.73 2.051
Dec. 6	0730	*12,800 362	*12.27 3.740	Feb. 14	1230	6,240 177	8.14 2.481
Dec. 15	0600	7,850 222	9.24 2.816	Feb. 20	2130	7,970 226	9.32 2.841
Dec. 19	1330	5,540 157	7.63 2.326				

Minimum, 161 ft³/s (4.56 m³/s) Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	358	1190	1440	1110	1580	789	1240	688	515	243	179
2	185	331	3020	1300	1030	1630	776	1260	691	501	241	174
3	183	302	2860	1230	986	1480	800	1230	677	599	241	171
4	176	282	2020	1180	930	1490	812	1130	672	534	235	175
5	166	263	2780	1050	869	1410	804	1050	689	558	230	170
6	177	248	9990	938	814	1280	772	1050	680	522	224	167
7	298	236	5370	859	771	1190	741	1140	641	483	220	164
8	292	226	3380	806	728	1140	720	1120	606	457	223	163
9	559	219	2560	806	694	1180	716	1020	601	431	229	163
10	718	213	2200	832	657	1310	831	922	634	411	230	193
11	657	218	1800	820	632	1590	1610	850	691	393	254	187
12	481	417	1570	799	604	1540	1760	828	842	577	237	291
13	386	451	1810	769	1140	1370	1810	852	841	368	222	266
14	329	451	3840	755	5500	1280	1990	896	726	372	217	211
15	292	492	6570	743	4820	1180	1720	949	683	354	220	193
16	268	674	3980	750	4740	1080	1500	989	687	343	212	183
17	250	1160	2800	1170	4920	1000	1370	1070	681	331	206	177
18	233	1110	2420	1240	4520	944	1240	1060	676	320	201	180
19	222	884	4410	1090	6890	893	1120	950	687	311	199	190
20	212	815	4030	960	6380	838	1060	921	653	304	195	315
21	204	1310	3270	871	6370	790	1060	1010	639	296	191	272
22	196	1980	2590	830	4070	758	1170	1090	572	290	189	225
23	191	1970	2100	1650	3000	741	1380	1080	523	283	185	207
24	186	1710	2120	2290	2360	740	1480	1070	489	278	183	215
25	183	1380	2690	2320	1960	762	1440	1200	474	272	180	215
26	180	1130	3460	2540	1710	813	1370	1200	458	267	178	231
27	179	929	3510	2200	1580	835	1320	1000	544	262	176	300
28	224	787	2640	1760	1430	862	1370	842	494	258	174	300
29	254	698	2190	1470	---	823	1320	748	596	253	186	460
30	321	655	1890	1290	---	802	1240	701	568	250	200	352
31	353	---	1630	1200	---	811	---	688	---	248	185	---
TOTAL	8735	21899	96690	37958	71215	34142	36091	31156	19103	11441	6506	6689
MEAN	282	730	3119	1224	2543	1101	1203	1005	637	369	210	223
MAX	718	1980	9990	2540	6890	1630	1990	1260	842	599	254	460
MIN	166	213	1190	743	604	740	716	688	458	248	174	163
CFSM	1.15	2.97	12.7	4.98	10.3	4.48	4.89	4.09	2.59	1.50	.85	.91
IN.	1.32	3.31	14.62	5.74	10.77	5.16	5.46	4.71	2.89	1.73	.98	1.01
AC-FT	17330	43440	191800	75290	141300	67720	71590	61800	37890	22690	12900	13270
CAL YR 1981 TOTAL	282533			774	MAX 9990	MIN 125	CFSM 3.15	IN 42.72	AC-FT 560400			
WTR YR 1982 TOTAL	381625			1046	MAX 9990	MIN 163	CFSM 4.25	IN 57.71	AC-FT 757000			

LOCATION.--Lat 43°48'05", long 122°33'35", in SW¼ sec.27, T.20 S., R.2 E., Lane County, Hydrologic Unit 17090001, on left bank 0.5 mi (0.8 km) downstream from Whitehead Creek, 4.2 mi (6.8 km) downstream from North Fork of Middle Fork Willamette River, 7.0 mi (11.3 km) northwest of Oakridge, and at mile 220.2 (354.3 km).

WATER-DISCHARGE RECORDS

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).

REMARKS.--Water-discharge records excellent. Flow regulated since 1961 by Hills Creek Lake (see station 14145100); slight regulation at times by logponds above station. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,800 ft³/s (2,320 m³/s) Dec. 28, 1945, gage height, 18.8 ft (5.73 m), from floodmark, site and datum then in use, from rating curve extended above 39,000 ft³/s (1,100 m³/s); minimum, 322 ft³/s (9.12 m³/s) Aug. 30, 1961, caused by closing outlet gates at Hills Creek Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,900 ft³/s (1,020 m³/s) Dec. 6, gage height, 9.73 ft (2.966 m); minimum, 1,030 ft³/s (29.2 m³/s) Aug. 5.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1900	1500	3170	7600	3990	7710	2300	4040	3110	2300	1160	2070
2	1920	1460	6800	7240	3850	7030	2310	4040	2810	2240	1100	2050
3	1920	1420	8150	7150	3680	6130	2340	4050	2780	2630	1090	2050
4	1920	1390	7240	7210	2800	5580	2440	3900	2780	2330	1090	2060
5	1750	1370	10200	6940	2970	4570	2490	3680	2810	2260	1080	2070
6	1640	1340	28500	5860	3180	4140	2460	3570	2740	2110	1080	2050
7	2030	1330	17100	4630	3020	3960	2500	3590	2530	1900	1070	2010
8	2010	1310	12300	4470	3110	3850	2570	3610	2470	1870	1110	2050
9	2210	1300	10600	4500	2890	3860	2580	3420	2390	1830	1150	1890
10	2160	1280	10000	4630	2880	3660	2800	3210	2640	1740	1200	1590
11	2110	1310	8110	4650	3030	3810	4310	2980	2960	1640	1630	1570
12	1790	1720	6750	4620	2370	3870	4900	2810	3520	1650	2110	1800
13	1610	1900	7070	4530	2340	3640	5740	2840	3300	1600	2110	1720
14	1510	2050	11100	4500	10100	3510	7280	2910	2890	1560	2120	1610
15	1440	2120	17200	4160	9710	3160	7220	3040	2810	1620	2120	1580
16	1400	2780	11700	3580	10300	2780	6080	3060	3040	1520	2110	1550
17	1360	4060	8590	4450	11000	2610	4790	3610	3070	1480	2090	1540
18	1330	3840	6750	4580	10200	2370	4590	4060	3090	1390	2080	1550
19	1310	2590	10900	4220	14600	2200	4400	4070	3190	1340	2090	1560
20	1290	2400	10100	3860	13800	2100	4160	3890	3000	1330	2080	2080
21	1270	3130	8080	3650	14500	2020	4080	4100	2940	1340	2070	2250
22	1260	4510	7280	3540	9770	1880	4320	4510	2670	1330	2070	2110
23	1260	5760	6360	6120	7760	1730	4760	4750	2400	1400	2060	2100
24	1250	5400	7010	8650	7640	1700	5460	4760	2270	1620	2050	1950
25	1240	3900	9200	7590	7050	1710	5540	5350	2230	1750	2040	1630
26	1230	2920	10800	7760	7180	1750	5040	5690	2130	1840	2050	1660
27	1230	2570	10900	7500	7790	1810	4470	4640	2530	1910	2050	2020
28	1340	2320	9030	6410	7480	1890	4280	3850	2470	1930	2050	2270
29	1380	2160	8150	5050	---	2030	4160	3470	2680	1820	2020	2550
30	1490	2090	7640	4370	---	2220	4030	3370	2610	1250	2120	2340
31	1510	---	7520	4170	---	2270	---	3310	---	1220	2080	---
TOTAL	49070	73230	304300	168190	188990	101550	124400	118180	82860	55750	54330	57310
MEAN	1583	2441	9816	5425	6750	3276	4147	3812	2762	1734	1753	1910
MAX	2210	5760	28500	8650	14600	7710	7280	5690				

WILLAMETTE RIVER BASIN

109

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: September 1950 to October 1960, June 1961 to current year.

INSTRUMENTATION.--Temperature recorder since September 1950.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.0°C July 19, 20, Aug 6, 8; minimum, 3.0°C Feb. 5, 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14149000 LOOKOUT POINT LAKE NEAR LOWELL, OR

LOCATION.--Lat 43°54'50", long 122°45'00", in SE¼ sec.13, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, in elevator house at right end of spillway section of dam on Middle Fork Willamette River, 1.5 mi (2.4 km) east of Lowell, and at mile 206.9 (332.9 km).

DRAINAGE AREA.--991 mi² (2,567 km²).

PERIOD OF RECORD.--November 1953 to current year. Prior to October 1971, published as Lookout Point Reservoir near Lowell.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Nov. 7, 1953, to Dec. 4, 1954, approximate elevations obtained from reference marks and Dec. 5, 1954, to Feb. 4, 1955, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1954 by Corps of Engineers. Planned storage began in November 1953. Total capacity is 455,800 acre-ft (562 hm³) at elevation 929 ft (283.2 m), and usable capacity is 349,200 acre-ft (431 hm³) between elevations 819 ft (249.6 m), and 929 ft (283.2 m), top of spillway gates. Reservoir used for flood control, improvement of navigation, power generation, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 464,900 acre-ft (573 hm³) Dec. 26, 1964, elevation, 931.09 ft (283.796 m); minimum observed since first filling, 91,450 acre-ft (113 hm³) Dec. 1, 1954, elevation, 811.00 ft (247.193 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 449,000 acre-ft (554 hm³) July 7, elevation, 927.40 ft (282.672 m); minimum, 115,600 acre-ft (143 hm³) Nov. 30, elevation, 823.47 ft (250.994 m).

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

820	108,600	860	205,500	900	338,900
830	129,500	870	235,500	910	377,400
840	152,500	880	267,800	920	417,800
850	117,700	890	302,300	930	460,200

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	887.98	860.50	824.77	877.67	844.34	886.48	894.30	917.82	924.14	926.09	922.90	912.78
2	887.52	869.30	828.10	875.38	844.00	885.24	894.96	918.46	924.37	925.97	922.26	912.48
3	887.07	868.20	830.78	873.34	843.95	883.78	895.67	918.51	924.73	926.28	921.56	912.27
4	886.60	867.08	832.38	871.43	843.00	882.98	896.38	918.50	925.11	926.63	920.90	912.02
5	885.94	875.67	838.90	867.52	842.00	883.08	897.04	918.36	925.33	926.93	920.30	911.80
6	884.97	864.50	862.15	862.10	841.13	883.15	897.64	918.40	925.34	927.15	919.77	911.57
7	883.90	863.18	871.92	856.50	840.44	883.18	898.24	918.62	925.15	926.76	919.17	911.32
8	882.94	862.00	875.35	852.94	839.80	882.52	898.86	919.24	925.15	926.39	918.48	911.07
9	882.18	850.82	876.30	850.18	838.60	883.74	899.47	919.82	925.29	926.34	917.84	910.78
10	882.14	849.48	876.28	847.36	837.54	884.56	900.32	920.28	925.68	926.39	917.28	910.32
11	882.00	848.38	876.12	844.67	836.68	885.30	902.05	920.86	926.02	926.40	916.90	909.74
12	881.58	847.64	873.10	841.94	835.28	886.04	904.06	921.35	926.53	926.44	916.78	909.40
13	880.95	846.45	871.62	839.20	836.18	886.94	906.54	921.86	926.88	926.46	916.67	908.98
14	879.75	845.30	874.05	836.38	844.56	887.82	909.00	922.42	926.86	926.42	916.54	908.48
15	878.77	844.24	884.65	833.36	851.95	887.96	910.26	923.01	926.77	926.42	916.42	907.84
16	877.74	843.80	887.80	832.37	858.42	887.84	910.74	923.74	926.58	926.38	916.30	907.04
17	876.72	844.65	888.16	832.60	864.75	887.88	911.20	924.62	926.32	926.30	916.04	906.24
18	875.68	845.14	886.14	832.90	868.40	888.52	911.16	925.21	926.25	926.20	915.79	905.46
19	874.60	844.18	890.50	832.28	876.70	889.02	911.25	925.45	926.13	926.08	915.58	904.70
20	873.47	843.35	893.58	831.22	884.10	889.44	912.04	925.66	925.98	925.92	915.37	904.14
21	872.34	843.36	892.24	830.55	891.40	889.82	912.52	925.92	925.93	925.84	915.17	903.28
22	871.22	844.14	890.45	830.00	894.32	890.27	913.12	926.17	925.69	925.67	914.94	902.35
23	869.94	843.84	897.72	833.35	894.00	890.48	913.90	926.49	925.62	925.44	914.72	901.40
24	868.84	842.38	895.25	840.00	893.55	890.70	915.06	926.58	925.59	925.30	914.48	900.34
25	867.65	840.00	894.18	842.34	892.70	890.92	916.12	926.68	925.82	925.18	914.25	899.15
26	866.47	846.92	894.68	843.08	891.40	891.22	916.66	926.43	925.87	925.08	914.02	897.94
27	865.28	844.06	895.62	843.39	889.74	891.55	916.90	925.86	925.98	924.95	913.80	896.90
28	864.20	830.34	894.78	842.95	888.00	891.94	917.09	925.09	926.03	924.90	913.59	896.02
29	863.14	826.34	893.39	843.55	---	892.38	917.20	924.76	926.16	924.63	913.38	895.30
30	862.47	823.67	891.50	844.18	---	893.12	917.22	924.40	926.28	924.08	913.20	894.42
31	861.50	---	879.60	844.14	---	893.74	---	924.02	---	923.50	912.98	---
MEAN	876.31	848.96	876.20	846.09	860.96	887.79	907.23	922.73	925.79	925.89	916.69	905.85
MAX	887.98	875.67	897.72	877.67	894.32	893.74	917.22	926.68	926.88	927.15	922.90	912.78
MIN	861.50	823.67	824.77	830.00	835.28	882.52	894.30	917.82	924.14	923.50	912.98	894.42
(+)	209800	116000	266500	162600	295300	315700	406400	434600	444200	432400	389300	318200
(-)	-86900	-93800	+150500	-103900	+132700	+20400	+90700	+28200	+9600	-11800	-43100	-71100

CAL YR 1981 MEAN 883.38 MAX 927.38 MIN 823.67 AC-FT# +99700
WTR YR 1982 MEAN 891.90 MAX 927.15 MIN 823.67 AC-FT# +21500

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

‡ Change in contents, in acre-feet.

LOCATION.--Lat 43°56'45", long 122°50'10", in SE¼NW¼ sec.5, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, on right bank 0.6 mi (1.0 km) upstream from Lost Creek, 2.0 mi (3.2 km) northwest of Dexter, 2.6 mi (4.2 km) downstream from Dexter Dam, and at mile 201.2 (323.7 km).

WATER-DISCHARGE RECORDS

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,200 ft³/s (459 m³/s) Jan. 5, gage height, 10.92 ft (3.328 m); minimum, 1,150 ft³/s (32.6 m³/s) May 14, 15.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2640	3090	2770	11800	4170	12000	1350	2540	3050	2390	2200	2640
2	2500	3080	4050	11800	4320	10900	1360	2420	2530	2530	2270	2420
3	2470	3070	6120	11800	4190	10200	1420	2950	2180	2130	2550	2400
4	2740	3070	6900	11800	4170	8790	1470	3410	1970	1610	2440	2410
5	3110	3080	6630	14300	4170	5390	1450	3510	2290	1620	2160	2420
6	3640	3060	1220	15400	4190	4400	1410	3340	2600	1830	2040	2430
7	3770	2950	2950	14200	4180	4350	1420	2610	2860	2330	2020	2610
8	3810	2870	7590	10700	4130	4110	1420	1770	2280	2640	2200	2540
9	3820	2850	10700	9400	4140	2570	1420	1780	2250	1870	2350	2430
10	2660	2850	12000	9370	4140	2440	1420	1800	2000	1620	2500	2440
11	2620	2870	12000	9530	4140	2710	1420	1560	2190	1600	2350	2460
12	2650	2840	11500	9290	4130	2890	1420	1480	2570	1600	2350	2460
13	2640	3490	11000	9020	1760	2360	1510	1400	2710	1550	2350	2470
14	3290	3610	10200	9010	1390	2360	3070	1170	2760	1560	2230	2470
15	3090	3590	2000	8980	1390	2830	5230	1170	3010	1560	2160	2580
16	3030	3770	6890	5230	2720	3050	5350	1170	3360	1570	2170	2910
17	3040	3770	9660	5060	3130	2730	3980	1540	3430	1560	2740	3130
18	2960	3800	11400	5390	5770	1490	3860	2140	3400	1560	2590	3110
19	2880	3810	5610	5400	3050	1290	3870	2940	3380	1560	2340	3110
20	2900	3780	6040	5930	2680	1300	2510	3050	3380	1560	2330	3070
21	2960	3750	11700	5370	2700	1300	2650	3150	3380	1430	2340	3730
22	2980	4360	11800	4380	5310	1300	2700	3530	3030	1580	2340	3910
23	3040	7450	11800	3400	9780	1300	2690	3540	2390	1640	2360	3940
24	3040	9380	11900	2720	10000	1300	2670	4180	2230	1810	2510	4010
25	3040	7760	11900	6070	9790	1300	2690	4910	2000	2090	2520	4210
26	3040	7340	11600	8900	10800	1300	3570	5310	1930	2000	2510	3610
27	3020	7340	10800	9030	12000	1300	3690	5820	2180	1990	2520	3900
28	2990	7310	11800	8130	12000	1300	3530	5090	2520	2000	2410	4160
29	3000	7490	11800	5060	---	1300	3370	3760	2630	2250	2230	4150
30	2620	5640	11800	4340	---	1310	3370	3490	2320	2190	2280	3670
31	2800	---	11800	4160	---	1330	---	3510	---	2200	2390	---
TOTAL	92790	133120	275930	254970	144340	102500	77290	90040	78810	57430	72750	91800
MEAN	2993	4437	8901	8225	5155	3306	2576	2905	2627	1853	2347	3060
MAX	3820	9380	12000	15400	12000	12000	5350	5820	3430	2640	2740	4210
MIN	2470	2840	1220	2720	1390	1290	1350	1170	1930	1430	2020	2400
AC-FT	184000	264000	547300	505700	286300	203300	153300	178600	156300	113900	144300	182100
CAL YR 1981	TOTAL	1020490	MEAN	2796	MAX	12000	MIN	1130	AC-FT	2024000		
WTR YR 1982	TOTAL	1471770	MEAN	4032	MAX	15400	MIN	1170	AC-FT	2919000		

WILLAMETTE RIVER BASIN

113

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1955 to current year.

INSTRUMENTATION.--Temperature recorder since August 1955.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.5°C Oct. 1, 2; minimum recorded, 4.5°C Feb. 10-13.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

115

14150300 FALL CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°58'15", long 122°38'15", in SW¼ sec.25, T.18 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.1 mi (0.2 km) downstream from North Fork, 8.0 mi (12.9 km) northeast of Lowell, and at mile 14.4 (23.2 km).

DRAINAGE AREA.--118 mi² (306 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 844.42 ft (257.379 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--19 years, 411 ft³/s (11.64 m³/s), 47.30 in/yr (1,201 mm/yr), 297,800 acre-ft/yr (367 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft³/s (343 m³/s) Jan. 21, 1972, which may have been caused by release from breakup of temporary logjam 12 mi (19 km) upstream, gage height, 11.84 ft (3.609 m); minimum, 16 ft³/s (0.45 m³/s) Oct. 3, 4, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1400	3,980 113	6.84 2.085	Jan. 23	0800	4,370 124	7.13 2.173
Dec. 6	0630	*10,600 300	*11.32 3.450	Feb. 14	1030	3,980 113	6.84 2.085
Dec. 15	0400	5,020 142	7.59 2.313	Feb. 19	0100	4,090 116	6.92 2.109
Dec. 26	1400	3,710 105	6.62 2.018				

Minimum, 28 ft³/s (0.79 m³/s) Sept. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	49	126	1220	616	585	865	416	284	97	112	46	33		
2	84	103	2620	526	509	876	449	271	93	109	44	31		
3	70	90	1610	542	473	745	563	256	90	225	44	30		
4	52	83	881	617	435	1030	528	237	108	160	42	31		
5	45	73	2030	501	388	948	477	223	119	195	40	30		
6	68	67	7250	414	351	739	423	218	114	168	39	29		
7	195	62	2410	364	324	604	389	222	100	132	38	28		
8	141	59	1370	338	298	524	378	212	91	113	38	28		
9	476	56	930	402	276	505	386	201	85	99	39	32		
10	531	54	761	544	255	489	579	185	81	89	43	55		
11	444	72	616	545	243	583	1490	173	81	82	84	44		
12	244	336	540	515	228	542	1160	168	148	75	59	139		
13	160	280	781	468	799	496	1350	167	146	72	45	94		
14	121	288	2970	506	3340	486	1730	166	110	80	43	50		
15	99	361	3780	543	2130	472	1300	165	97	69	44	39		
16	85	435	1850	627	2060	434	1070	162	89	64	40	35		
17	75	763	1130	1800	2550	395	906	177	81	62	38	32		
18	68	569	873	1510	2520	365	779	169	76	59	36	31		
19	62	387	2020	1070	3330	337	633	151	86	57	35	37		
20	58	323	1810	752	2660	309	551	145	102	54	35	133		
21	55	736	1680	584	2840	288	525	142	91	52	34	85		
22	52	1260	1200	517	1620	269	555	138	77	53	33	54		
23	50	1460	873	3120	1130	256	551	132	68	50	32	44		
24	48	967	975	3130	835	248	487	128	64	49	31	46		
25	48	689	1520	2190	701	242	425	128	64	48	30	46		
26	47	513	2660	2360	670	252	380	122	65	46	30	63		
27	47	379	2300	1720	772	265	349	113	111	46	30	119		
28	92	296	1440	1170	676	316	358	107	91	45	30	125		
29	140	255	1110	842	---	353	324	102	164	45	36	307		
30	222	262	942	671	---	394	298	97	134	46	46	135		
31	162	---	749	657	---	426	---	95	---	47	36	---		
TOTAL	4090	11404	52901	30161	32998	15053	19809	5256	2923	2603	1240	1985		
MEAN	132	380	1706	973	1179	486	660	170	97.4	84.0	40.0	66.2		
MAX	531	1460	7250	3130	3340	1030	1730	284	164	225	84	307		
MIN	45	54	540	338	228	242	298	95	64	45	30	28		
CFSM	1.12	3.22	14.5	8.25	9.99	4.12	5.59	1.44	.83	.71	.34	.56		
IN.	1.29	3.60	16.68	9.51	10.40	4.75	6.24	1.66	.92	.82	.39	.63		
AC-FT	8110	22620	104900	59820	65450	29860	39290	10430	5800	5160	2460	3940		
CAL YR 1981	TOTAL	146138	MEAN	400	MAX	7250	MIN	25	CFSM	3.39	IN	46.07	AC-FT	289900
WTR YR 1982	TOTAL	180423	MEAN	494	MAX	7250	MIN	28	CFSM	4.19	IN	56.88	AC-FT	357900

WILLAMETTE RIVER BASIN

14150300 FALL CREEK NEAR LOWELL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1963 to current year.

INSTRUMENTATION.-- Temperature recorder since August 1963.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C Aug. 8; minimum, 2.0°C Jan. 4, Feb. 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

117

14150300 FALL CREEK NEAR LOWELL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14150900 FALL CREEK LAKE NEAR LOWELL, OR

LOCATION.--Lat 43°56'40", long 122°45'20", in SW¼ sec.1, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, in regulating tower near the center of Fall Creek Dam on Fall Creek, 2.2 mi (3.5 km) northeast of Lowell, and at mile 7.2 (11.6 km).

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--January 1966 to current year. Prior to October 1971, published as Fall Creek Reservoir near Lowell.

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

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1965 by Corps of Engineers; storage began January 1966. Total capacity is 125,100 acre-ft (154 hm³) at elevation 834 ft (254.2 m) and usable capacity is 115,500 acre-ft (142 hm³) between elevation 728 ft (221.9 m) and 834 ft (254.2 m). Reservoir used for flood control, conservation, and recreation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 123,200 acre-ft (152 hm³) May 30, 31, 1972; maximum elevation, 832.98 ft (253.892 m) May 31, 1972; minimum, no contents Nov. 7 to Dec. 6, 1969, Nov. 14-16, 1970, Nov. 18-25, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 117,700 acre-ft (145 hm³) July 14, elevation, 829.92 ft (252.960 m); minimum, 17 acre-ft (21,000 m³) Dec. 4, elevation, 677.00 ft (206.350 m).

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

670.4	0	725	8,340	785	53,120
679	59	735	13,270	795	64,590
685	366	745	19,480	805	77,880
695	1,400	755	26,130	815	97,750
705	2,850	765	33,770	825	109,200
715	5,200	775	42,580	835	123,200

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	802.35	757.86	707.80	754.55	750.41	791.88	808.77	822.90	826.75	828.11	829.21	827.09
2	801.15	755.99	704.70	749.28	750.22	792.35	809.50	823.25	826.71	828.30	829.13	827.01
3	799.92	754.10	692.50	745.18	749.96	792.71	810.51	823.61	826.67	828.57	829.07	826.92
4	798.50	752.07	679.50	743.73	749.85	793.53	811.36	823.93	826.75	828.81	828.99	826.82
5	797.20	749.89	702.50	742.94	750.57	794.17	811.95	824.21	826.79	829.09	828.94	826.75
6	795.91	747.62	754.00	741.12	751.93	794.45	812.40	824.48	826.81	829.31	828.84	826.64
7	794.84	745.31	765.49	738.45	753.09	794.44	812.91	824.78	826.79	829.46	828.77	826.56
8	794.30	742.90	768.30	734.91	754.14	794.74	813.35	825.06	826.75	829.59	828.70	826.46
9	793.90	740.30	768.43	731.23	755.09	795.43	813.82	825.31	826.72	829.69	828.65	826.41
10	793.80	737.70	767.99	728.35	755.96	796.20	814.67	825.53	826.63	829.79	828.60	826.39
11	793.30	735.30	765.95	728.16	756.76	797.17	817.02	825.74	826.60	829.86	828.61	826.34
12	792.20	732.50	763.01	728.02	757.50	797.80	818.35	825.89	826.69	829.89	828.57	826.52
13	790.70	728.30	760.67	727.91	759.89	798.16	818.91	826.01	826.75	829.90	828.50	826.39
14	789.50	725.80	765.96	728.06	770.04	798.56	818.89	826.14	826.74	829.88	828.44	825.92
15	787.90	723.41	777.85	727.98	774.15	799.03	818.92	826.26	826.81	829.89	828.38	825.19
16	786.30	721.67	780.80	724.91	775.63	799.61	819.01	826.35	826.89	829.89	828.33	824.15
17	784.60	722.16	778.62	724.34	780.59	800.26	819.02	826.51	826.95	829.88	828.22	822.99
18	782.90	721.15	777.86	719.92	785.09	800.91	818.92	826.62	827.00	829.86	828.15	821.83
19	781.10	718.79	782.55	719.89	792.33	801.53	818.83	826.69	827.08	829.87	828.08	820.66
20	779.10	715.76	786.29	720.60	797.92	802.09	818.79	826.74	827.17	829.86	828.01	819.63
21	777.20	716.88	788.19	721.28	803.56	802.63	819.01	826.79	827.24	829.83	827.94	818.41
22	775.10	718.48	788.83	721.67	805.58	803.09	819.39	826.83	827.30	829.80	827.87	817.12
23	772.90	717.72	786.64	---	804.35	803.57	819.80	826.86	827.34	829.74	827.76	815.80
24	771.00	716.48	782.37	---	801.48	803.99	820.11	826.88	827.36	829.67	827.71	814.45
25	769.30	715.56	779.64	748.71	798.25	804.40	820.31	826.89	827.40	829.62	827.65	813.11
26	767.50	713.73	779.35	752.00	796.04	804.89	820.62	826.88	827.44	829.54	827.55	811.84
27	765.66	713.57	778.44	753.60	794.08	805.39	821.10	826.91	827.57	829.47	827.46	810.56
28	763.98	713.39	775.20	752.25	792.41	806.04	821.61	826.90	827.69	829.44	827.38	809.31
29	762.46	713.40	770.57	751.17	---	806.76	822.07	826.87	827.88	829.38	827.33	808.31
30	761.17	711.90	765.16	750.88	---	807.49	822.51	826.83	828.04	829.31	827.25	806.95
31	759.61	---	759.90	750.69	---	808.12	---	826.81	---	829.25	827.19	---
MEAN	783.40	729.32	761.45	---	773.82	799.72	817.08	825.85	827.04	829.50	828.23	821.08
MAX	802.35	757.86	788.83	---	805.58	808.12	822.51	826.91	828.04	829.90	829.21	827.09
MIN	759.61	711.90	679.50	---	749.85	791.88	808.77	822.90	826.60	828.11	827.19	806.95
(†)	29520	4390	29740	23180	61470	82350	105000	112300	114400	116500	112900	80660
(‡)	-46400	-25130	+25350	-6560	+38290	+20880	+22650	+7300	+2100	+2100	-3600	-32240

CAL YR 1981 MEAN 793.95 MAX 832.09 MIN 679.50 AC-FT† +19030
WTR YR 1982 MEAN --- MAX 829.90 MIN 679.50 AC-FT‡ +4740

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

‡ Change in contents, in acre-feet.

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

LOCATION.--Lat 43°56'40", long 122°46'25", in NW¼SE¼ sec.2, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, on right bank 10 ft (3 m) upstream from highway bridge, 1.1 mi (1.8 km) downstream from Fall Creek Dam, 2.3 mi (3.7 km) southeast of town of Fall Creek, and at mile 6.1 (9.8 km). Prior to Aug. 27, 1982 at site on left bank.

DRAINAGE AREA.--186 mi² (482 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October to December 1911 (published as Big Fall Creek near Fall Creek; gage heights and discharge measurements only), September 1935 to current year.

REVISED RECORDS.--WSP 1094: 1946(M). WSP 1248: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 637.81 ft (194.404 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Oct. 1 to Dec. 31, 1911, nonrecording gage at site 0.25 mi (0.40 km) downstream at different datum. Sept. 9, 1935, to Aug. 3, 1950, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. Flow regulated since 1966 by Fall Creek Lake (see station 14150900). No diversion above station.

AVERAGE DISCHARGE.--47 years, 582 ft³/s (16.48 m³/s), 42.49 in/yr (1,079 mm/yr), 421,700 acre-ft/yr (520 hm³/yr), adjusted for storage since January 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s (700 m³/s) Dec. 11, 1956, gage height, 18.80 ft (5.730 m), from rating curve extended above 9,700 ft³/s (275 m³/s); minimum, 1.5 ft³/s (0.042 m³/s) Oct. 7, 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,920 ft³/s (111 m³/s) Dec. 29, gage height, 7.48 ft (2.280 m); minimum, 38 ft³/s (1.08 m³/s) July 1-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	901	868	2110	2950	887	1510	140	61	144	48	106	106
2	984	858	2870	2680	757	916	141	61	144	38	106	105
3	982	849	3260	2460	727	781	142	61	144	38	106	104
4	982	852	1980	1770	621	781	142	61	144	38	107	104
5	982	873	756	1160	297	781	253	61	144	38	108	104
6	974	884	252	1220	53	784	287	61	144	38	108	104
7	966	874	315	1350	53	786	204	61	144	38	108	104
8	869	880	751	1480	53	504	204	61	144	38	108	104
9	796	887	1270	1520	53	246	204	61	144	38	108	105
10	896	881	1300	1490	53	183	207	61	144	38	108	106
11	953	877	1710	842	53	187	211	61	144	38	108	106
12	1030	1150	1990	817	53	319	521	89	144	58	108	106
13	1050	1340	1960	732	56	415	1400	127	144	103	108	235
14	988	1210	1960	712	66	415	2500	127	144	104	108	444
15	1040	1060	243	809	945	346	1860	127	84	94	108	640
16	1070	1070	1140	1590	2050	229	1380	127	48	83	108	889
17	1070	1080	2750	2600	576	147	1220	125	48	83	108	992
18	1060	1070	1740	3090	1090	92	1150	130	48	71	108	1000
19	1070	1070	766	1530	256	71	916	144	48	66	106	1000
20	1080	1050	750	946	199	44	753	144	49	66	102	1050
21	1070	807	1510	704	202	44	511	144	49	73	102	1100
22	1100	1460	1520	641	878	44	401	144	49	104	102	1080
23	1100	2400	2610	518	2400	44	401	144	49	104	102	1070
24	912	1660	3770	1100	3180	44	401	144	49	104	78	1060
25	870	1140	3740	2080	2760	44	401	144	49	104	90	1060
26	878	1020	3800	2130	2660	44	235	144	49	104	108	1060
27	863	568	3840	2160	2290	45	105	144	49	104	107	1080
28	847	454	3790	2150	1970	50	84	144	49	104	106	1080
29	842	354	3850	1590	---	51	61	144	55	104	106	1080
30	840	934	3810	1040	---	101	61	144	58	105	106	1120
31	862	---	3320	963	---	140	---	144	---	106	106	---
TOTAL	29927	30480	65433	46824	25238	10188	16496	3395	2846	2272	3258	18298
MEAN	965	1016	2111	1510	901	329	550	110	94.9	73.3	105	610
MAX	1100	2400	3850	3090	3180	1510	2500	144	144	106	108	1120
MIN	796	354	243	518	53	44	61	61	48	38	78	104
AC-FT	59360	60460	129800	92880	50060	20210	32720	6730	5650	4510	6460	36290
MEAN†	211	594	2523	1404	1590	668	931	228	130	107	47	68
CFSM†	1.13	3.19	13.56	7.55	8.55	3.59	5.01	1.23	0.70	0.58	0.25	0.37
IN.†	1.31	3.56	15.64	8.70	8.91	4.14	5.58	1.41	0.78	0.67	0.29	0.41
AC-FT†	12960	35330	155150	86320	88350	41090	55370	14030	7740	6610	2860	4050

CAL YR 1981 TOTAL 206756 MEAN 566 MAX 3850 MIN 66 AC-FT 410100 MEAN† 593 CFSM† 3.19 IN.† 48.27 AC-FT† 429130
WTR YR 1982 TOTAL 254655 MEAN 698 MAX 3850 MIN 38 AC-FT 505100 MEAN† 704 CFSM† 3.78 IN.† 51.41 AC-FT† 509840

† Adjusted for change in contents in Fall Creek Lake.

WILLAMETTE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1950 to current year.

INSTRUMENTATION.--Temperature recorder since August 1950.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 19.0°C Aug. 15-18; minimum, 2.5°C Jan. 10-12.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

121

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR

LOCATION.--Lat 43°59'55", long 122°54'20", in SW¼SW¼ sec.14, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090001, on right bank 25 ft (8 m) downstream from highway bridge at Jasper, 0.1 mi (0.2 km) downstream from Hills Creek, and at mile 195.0 (313.8 km).

DRAINAGE AREA.--1,340 mi² (3,471 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1905 to February 1912, July 1913 to March 1917, October 1952 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1907-8, 1910-12, 1914-16, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 513.45 ft (156.500 m) National Geodetic Vertical Datum of 1929. September 1905 to February 1912 and July 1913 to March 1917, nonrecording gage at approximately same site at datum about 1.5 ft (0.46 m) higher. Oct. 22, 1952, to Sept. 30, 1953, nonrecording gage at site 25 ft (8 m) upstream at same datum.

REMARKS.--Water-discharge records good. Flow regulated since 1953 by Lookout Point Lake (see station 14149000), since 1961 by Hills Creek Lake (see station 14145100), and since 1966 by Fall Creek Lake (see station 14150900).

AVERAGE DISCHARGE.--39 years (water years 1906-11, 1914-16, 1953-82), 4,089 ft³/s (115.8 m³/s), 2,962,000 acre-ft/yr (3.65 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,000 ft³/s (2,660 m³/s) Nov. 23, 1909, gage height, 17.4 ft (5.20 m), datum then in use, from graph based on gage readings, from rating curve extended above 42,000 ft³/s (1,190 m³/s); minimum, 366 ft³/s (10.4 m³/s) Dec. 5, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,100 ft³/s (541 m³/s) Dec. 26, gage height, 9.20 ft (2.804 m); minimum, 1,470 ft³/s (41.6 m³/s) May 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3710	4130	5870	16300	5810	14300	2000	2910	3400	2610	2430	2830
2	3650	4100	8590	15800	5740	12500	2030	2800	2850	2750	2470	2640
3	3590	4080	10900	16500	5550	11300	2170	3320	2540	2390	2780	2600
4	3820	4080	9520	16600	5390	10000	2210	3710	2300	1830	2690	2620
5	4180	4100	10000	16500	5050	7030	2230	3790	2610	1790	2400	2630
6	4770	4090	11100	18000	4700	6050	2230	3610	2910	1990	2260	2630
7	5010	3980	6180	16400	4660	5850	2130	2850	3140	2500	2240	2780
8	4950	3890	9460	12500	4580	5340	2090	2080	2650	2820	2400	2740
9	5040	3880	12600	10600	4560	3620	2060	2080	2570	2100	2570	2650
10	4140	3880	14100	10500	4550	3300	2160	2100	2320	1780	2740	2660
11	3990	3940	14200	9960	4530	3580	2770	1800	2470	1750	2610	2670
12	3970	4450	14000	9690	4500	3870	2850	1740	2890	1750	2600	2700
13	3940	5200	13400	9320	2520	3450	4130	1690	3050	1760	2590	2810
14	4460	5390	15200	9250	3910	3420	7440	1490	3060	1770	2470	3000
15	4310	5250	6560	9300	4160	3760	8460	1480	3220	1770	2380	3290
16	4300	5510	9690	7280	6400	3860	7690	1480	3500	1750	2390	3820
17	4290	5930	13500	8860	6880	3480	6160	1850	3590	1750	2890	4150
18	4210	5790	14500	9940	8780	2100	5840	2420	3540	1730	2810	4150
19	4120	5560	9700	7900	6310	1800	5500	3240	3520	1720	2580	4170
20	4140	5410	8840	7400	5290	1750	3970	3350	3530	1720	2550	4170
21	4190	5420	16200	6650	5230	1720	3820	3450	3530	1590	2550	4840
22	4230	6810	15300	5770	7000	1710	3690	3790	3220	1740	2550	5090
23	4290	11300	15900	7140	12700	1690	3650	3820	2640	1820	2560	5080
24	4140	11600	17500	6480	13800	1670	3590	4340	2450	1990	2690	5170
25	4050	9060	17800	9870	12900	1660	3570	5050	2200	2300	2690	5360
26	4070	8350	18300	13300	13700	1660	4210	5350	2120	2220	2710	4810
27	4040	7710	17500	12900	14900	1670	4110	5730	2380	2220	2730	5090
28	4010	7440	18400	11300	14400	1800	3940	5230	2730	2220	2640	5370
29	4030	7380	18000	7720	---	1820	3750	4060	2890	2460	2460	5410
30	3790	6630	17600	6350	---	1870	3710	3750	2580	2430	2500	4940
31	3860	---	16900	5980	---	2000	---	3770	---	2440	2600	---
TOTAL	129290	174340	407310	332060	198500	129630	114160	98130	86400	63460	79530	112870
MEAN	4171	5811	13140	10710	7089	4182	3805	3165	2880	2047	2565	3762
MAX	5040	11600	18400	18000	14900	14300	8460	5730	3590	2820	2890	5410
MIN	3590	3880	5870	5770	2520	1660	2000	1480	2120	1590	2240	2600
AC-FT	256400	345800	807900	658600	393700	257100	226400	194600	171400	125900	157700	223900
CAL YR 1981 TOTAL	1391140			3811		18400	1420	AC-FT	2759000			
WTR YR 1982 TOTAL	1925680			5276		18400	1480	AC-FT	3820000			

WILLAMETTE RIVER BASIN

123

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1953 to December 1962, October 1963 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 17.5°C July 19, 20; minimum, 3.5°C Feb. 6, 8, 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

125

14152500 COAST FORK WILLAMETTE RIVER AT LONDON, OR

LOCATION.--Lat 43°38'30", long 123°05'05", in SW¼ sec.20, T.22 S., R.3 W., Lane County, Hydrologic Unit 17090002, on left bank 0.6 mi (1.0 km) north of London, 11.0 mi (17.7 km) south of Cottage Grove, and at mile 35.9 (57.8 km).

DRAINAGE AREA.--72.1 mi² (186.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1935 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 852.58 ft (259.866 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 18 to Oct. 17, 1935, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--47 years, 201 ft³/s (5.692 m³/s), 37.86 in/yr (962 mm/yr), 145,600 acre-ft/yr (180 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s (354 m³/s) Dec. 22, 1964, gage height, 13.37 ft (4.075 m), from rating curve extended above 3,200 ft³/s (90.6 m³/s), on basis of slope-area measurement of peak flow; minimum, 6.8 ft³/s (0.19 m³/s) Aug. 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft³/s (59.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0500	*8,490 240	*11.70 3.566	Jan. 23	0630	3,080 87.2	7.18 2.188
Dec. 15	0400	3,240 91.8	7.40 2.256				

Minimum, 10 ft³/s (0.28 m³/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	76	243	483	331	543	329	145	48	37	19	13
2	42	63	561	405	271	723	433	137	45	36	19	13
3	35	55	562	622	246	629	631	130	44	44	18	12
4	31	51	357	927	221	635	557	121	55	37	17	13
5	27	45	1210	559	199	552	490	113	56	38	15	12
6	67	42	4810	389	180	447	421	108	52	35	14	12
7	122	38	1230	307	165	367	400	110	48	31	14	11
8	96	36	718	260	153	310	382	107	45	30	14	11
9	161	35	528	255	142	287	362	103	42	27	14	12
10	277	34	615	299	130	270	437	96	40	25	15	20
11	191	66	511	297	123	324	921	91	38	24	22	15
12	115	259	428	290	115	293	752	87	42	23	19	26
13	79	208	428	263	264	256	1030	85	45	23	16	30
14	63	424	1110	252	1490	250	1220	83	41	27	16	19
15	53	414	2190	254	1010	242	876	80	38	23	17	16
16	46	396	993	294	870	234	647	77	36	22	15	15
17	41	745	658	907	1030	223	517	86	34	21	14	14
18	37	634	545	856	932	208	428	82	33	20	13	16
19	34	369	1140	618	1070	191	357	75	31	19	13	31
20	33	263	1120	457	1100	177	313	71	31	18	12	26
21	31	449	950	360	1200	164	287	68	32	17	13	23
22	30	658	662	336	782	152	284	66	29	18	12	19
23	28	1060	507	2070	588	142	281	64	27	17	11	18
24	27	614	423	1490	474	135	254	61	27	17	11	20
25	27	407	469	1070	410	129	225	59	27	17	11	20
26	26	319	671	1260	403	129	203	57	30	17	11	56
27	25	240	803	983	434	143	186	56	37	17	11	105
28	70	190	679	691	386	217	184	54	39	16	13	52
29	110	163	854	523	---	240	169	50	51	18	18	65
30	160	151	816	418	---	261	155	47	42	19	18	49
31	98	---	592	358	---	367	---	46	---	20	14	---
TOTAL	2210	8504	27383	18553	14719	9240	13731	2615	1185	753	459	764
MEAN	71.3	283	883	598	526	298	458	84.4	39.5	24.3	14.8	25.5
MAX	277	1060	4810	2070	1490	723	1220	145	56	44	22	105
MIN	25	34	243	252	115	129	155	46	27	16	11	11
CFSM	.99	3.93	12.2	8.29	7.30	4.13	6.35	1.17	.55	.34	.21	.35
IN.	1.14	4.39	14.13	9.57	7.59	4.77	7.08	1.35	.61	.39	.24	.39
AC-FT	4380	16870	54310	36800	29200	18330	27240	5190	2350	1490	910	1520

CAL YR 1981	TOTAL	70258.9	MEAN	192	MAX	4810	MIN	9.9	CFSM	2.66	IN	36.25	AC-FT	139400
WTR YR 1982	TOTAL	100116.0	MEAN	274	MAX	4810	MIN	11	CFSM	3.80	IN	51.65	AC-FT	198600

WILLAMETTE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1960 to September 1965, June 1967 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C July 7, 1968, Aug. 11, 1971; minimum, 0.0°C Jan. 9, 1974, and several days each winter 1976 through 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.0°C Aug. 8; minimum recorded, 3.0°C Feb. 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

127

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14153000 COTTAGE GROVE LAKE NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°43'00", long 123°02'55", in NE¼ sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, in east abutment of dam on Coast Fork Willamette River 5.8 mi (9.3 km) south of Cottage Grove, and at mile 29.7 (47.8 km).

DRAINAGE AREA.--104 mi² (269 km²).

PERIOD OF RECORD.--October 1942 to current year. Prior to October 1971, published as Cottage Grove Reservoir near Cottage Grove.

REVISED RECORDS.--WSP 1218: 1950.

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

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed by Corps of Engineers in 1942; storage began Oct. 31, 1942. Capacity, 32,930 acre-ft (40.6 hm³) between elevation 719.0 ft (219.15 m), outlet conduit, and 791.0 ft (241.10 m), crest of spillway. Dead storage negligible. Reservoir used for flood control and improvement of navigation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 36,750 acre-ft (45.3 hm³) Dec. 24, 1964, elevation, 794.23 ft (242.081 m); minimum since first filling, no contents Sept. 26 to Oct. 19, 1966, and Nov. 14, 15, Nov. 20 to Dec. 8, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 26,860 acre-ft (33.1 hm³) May 23, 24, elevation, 785.47 ft (239.411 m); minimum, 2,720 acre-ft (3.35 hm³) Nov. 25, elevation, 748.50 ft (228.143 m).

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

710.9	0	755	4,860	780	21,460
730	151	760	7,150	785	26,370
740	926	765	9,970	790	31,780
745	1,840	770	13,260	793	35,270
750	3,140	775	17,070		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	773.88	750.41	750.59	751.36	753.07	767.54	777.42	783.69	785.28	783.93	782.05	779.45
2	773.58	749.96	751.62	751.52	753.03	769.29	777.60	783.86	785.24	783.93	781.98	779.35
3	773.23	749.91	750.37	753.80	753.27	769.29	778.00	783.99	785.21	783.93	781.90	779.26
4	772.85	749.86	749.18	756.73	753.69	769.32	778.89	784.19	785.20	783.91	781.82	779.15
5	772.45	749.83	756.75	756.96	754.34	769.32	779.59	784.30	785.20	783.90	781.74	779.06
6	772.26	749.85	775.85	755.46	754.97	768.99	779.93	784.41	785.19	783.87	781.65	778.96
7	771.99	749.88	777.81	752.75	755.48	768.12	779.75	784.51	785.15	783.82	781.56	778.86
8	771.52	749.90	774.82	750.83	755.88	767.63	779.50	784.64	785.12	783.78	781.48	778.31
9	771.29	749.92	771.19	750.94	756.35	768.03	779.35	784.75	785.07	783.73	781.39	777.67
10	771.43	749.92	767.74	750.68	756.86	768.52	779.39	784.85	785.02	783.66	781.30	777.14
11	771.31	750.33	763.68	750.29	757.37	769.00	779.50	784.93	784.97	783.60	781.26	776.55
12	770.88	751.08	761.26	750.28	757.89	769.20	781.39	784.99	784.95	783.54	781.19	775.96
13	770.03	750.30	759.84	750.19	758.99	769.30	781.69	785.06	784.92	783.49	781.10	775.41
14	769.00	751.16	762.60	750.22	764.76	770.30	781.76	785.12	784.87	783.44	781.03	775.01
15	767.74	751.42	771.86	750.14	765.98	771.20	781.77	785.17	784.82	783.36	780.94	774.81
16	766.40	751.12	772.11	750.41	764.47	771.70	781.77	785.23	784.77	783.29	780.86	774.62
17	765.07	753.06	767.87	751.79	765.61	772.60	781.78	785.32	784.70	783.23	780.77	774.43
18	763.66	752.71	764.70	750.25	766.91	772.80	781.78	785.37	784.63	783.15	780.68	774.21
19	762.18	750.89	767.62	749.34	769.31	773.10	781.78	785.41	784.55	783.08	780.58	774.05
20	761.01	750.17	770.39	749.64	772.76	773.50	781.79	785.44	784.49	782.99	780.49	773.80
21	760.03	750.94	771.03	749.96	776.06	773.90	782.40	785.45	784.42	782.91	780.40	773.46
22	758.99	750.96	770.70	750.64	777.15	774.20	782.30	785.46	784.35	782.82	780.30	773.12
23	757.93	749.99	768.96	757.14	775.99	774.50	782.26	785.47	784.24	782.74	780.20	772.86
24	756.82	748.96	766.23	764.85	773.79	774.80	782.29	785.46	784.15	782.65	780.10	772.62
25	755.68	748.93	763.30	764.75	771.36	775.00	782.29	785.45	784.07	782.57	780.01	772.37
26	754.48	749.04	761.22	764.51	769.53	775.20	782.33	785.44	784.05	782.49	779.96	772.20
27	753.30	749.18	759.53	763.10	768.38	775.60	782.66	785.43	784.01	782.41	779.86	772.24
28	752.51	749.44	757.42	760.93	767.13	776.20	782.99	785.41	783.99	782.33	779.76	772.05
29	752.24	749.62	755.66	758.62	---	776.50	782.99	785.38	784.00	782.25	779.70	771.81
30	752.20	749.69	753.37	756.72	---	776.90	782.99	785.35	783.98	782.18	779.64	771.51
31	751.42	---	751.58	754.40	---	777.30	---	785.31	---	782.12	779.55	---
MEAN	764.43	750.28	763.45	754.17	763.23	771.90	781.00	784.99	784.69	783.20	780.81	775.34
MAX	773.88	753.06	777.81	764.85	777.15	777.30	782.99	785.47	785.28	783.93	782.05	779.45
MIN	751.42	748.93	749.18	749.34	753.03	767.54	777.42	783.69	783.98	782.12	779.55	771.51
(†)	3580	3050	3630	4630	11310	19020	24340	26690	25330	23480	21050	14350
(‡)	-12890	-530	+580	+1000	+6680	+7710	+5320	+2350	-1360	-1850	-2430	-6700

CAL YR 1981 MEAN 773.86 MAX 790.61 MIN 748.93 AC-FT# +90
WTR YR 1982 MEAN 771.51 MAX 785.47 MIN 748.93 AC-FT# -2120

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

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

129

14153500 COAST FORK WILLAMETTE RIVER BELOW COTTAGE GROVE DAM, OR

LOCATION.--Lat 43°43'15", long 123°02'55", in NE¼ sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank at bridge 0.3 mi (0.5 km) downstream from Cottage Grove Dam, 5.5 mi (8.8 km) south of Cottage Grove, and at mile 29.4 (47.3 km).

DRAINAGE AREA.--104 mi² (269 km²).

PERIOD OF RECORD.--January 1939 to current year. Prior to October 1944, published as "near Cottage Grove."

REVISED RECORDS.--WSP 1448: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 711.00 ft (216.713 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Jan. 1 to Oct. 12, 1939, nonrecording gage and Oct. 13, 1939, to Sept. 30, 1944, water-stage recorder at several sites and datums 0.8 mi (1.3 km) downstream.

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

AVERAGE DISCHARGE.--43 years, 275 ft³/s (7.788 m³/s), 35.91 in/yr (912 mm/yr), 199,200 acre-ft/yr (246 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,910 ft³/s (167 m³/s) Dec. 24, 1964, gage height, 11.83 ft (3.606 m); no flow July 5-7, 1945, and for part of Aug. 24, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,800 ft³/s (79.3 m³/s) Dec. 7, gage height, 8.47 ft (2.582 m); minimum, 24 ft³/s (0.68 m³/s) Aug. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	241	209	707	583	588	133	51	66	58	52	52
2	180	133	606	567	388	351	215	51	66	54	52	52
3	180	75	951	711	309	652	300	51	66	54	52	51
4	180	69	645	822	246	790	303	51	66	54	52	51
5	177	59	564	818	174	787	304	62	66	54	52	51
6	177	47	109	923	146	782	421	80	66	54	52	51
7	238	42	1110	988	147	774	502	80	66	54	52	160
8	287	42	2320	715	149	554	500	72	66	54	52	259
9	288	42	2210	374	116	246	427	68	66	54	52	259
10	288	42	2110	471	95	193	357	68	66	54	52	256
11	285	43	2010	473	78	195	359	68	66	54	52	255
12	285	261	1320	419	66	195	533	68	66	54	52	253
13	309	373	992	392	68	195	838	68	66	54	52	213
14	438	376	967	364	80	197	1200	68	66	54	52	135
15	478	467	73	375	737	142	1240	68	66	54	52	87
16	471	559	1360	379	1500	95	861	68	66	54	52	82
17	464	701	2430	946	888	83	491	69	66	54	52	94
18	458	923	1770	1380	738	129	373	69	66	54	51	105
19	449	798	715	962	485	118	364	68	65	54	51	106
20	342	459	596	615	107	79	312	68	65	54	51	131
21	283	504	1050	491	110	79	276	68	65	54	51	155
22	280	885	1040	434	530	79	276	68	65	54	51	137
23	277	1580	1300	435	1210	79	246	68	65	54	51	118
24	273	967	1470	920	1470	80	224	68	65	54	51	119
25	269	555	1480	1510	1430	80	223	66	65	54	32	118
26	266	432	1470	1800	1180	80	127	66	65	54	36	119
27	259	314	1430	1750	961	73	55	68	65	53	52	118
28	216	235	1390	1520	910	71	50	68	65	52	52	141
29	165	208	1470	1270	---	105	51	68	65	52	52	158
30	205	208	1480	990	---	133	51	67	65	52	52	159
31	244	---	1100	959	---	133	---	66	---	52	52	---
TOTAL	8891	11640	37747	25480	14901	8137	11612	2057	1968	1669	1569	4045
MEAN	287	388	1218	822	532	262	387	66.4	65.6	53.8	50.6	135
MAX	478	1580	2430	1800	1500	790	1240	80	66	58	52	259
MIN	165	42	73	364	66	71	50	51	65	52	32	51
AC-FT	17640	23090	74870	50540	29560	16140	23030	4080	3900	3310	3110	8020
MEAN†	77.3	379	1230	838	653	388	476	105	42.9	23.6	11.2	22.4
CFSM†	0.74	3.64	11.8	8.06	6.28	3.73	4.58	1.01	0.41	0.23	0.11	0.22
IN.†	0.86	4.07	13.61	9.29	6.54	4.30	5.11	1.16	0.46	0.26	0.12	0.24
AC-FT†	4750	22560	75450	51540	36240	23850	28350	6430	2550	1450	690	1330

CAL YR 1981 TOTAL 94811 MEAN 260 MAX 2430 MIN 42 AC-FT 188100 MEAN† 260 CFSM† 2.50 IN.† 33.93 AC-FT† 188160
WTR YR 1982 TOTAL 129716 MEAN 355 MAX 2430 MIN 32 AC-FT 257300 MEAN† 352 CFSM† 3.38 IN.† 46.02 AC-FT† 255180

† Adjusted for change in contents in Cottage Grove Lake.

WILLAMETTE RIVER BASIN

14154500 ROW RIVER ABOVE PITCHER CREEK, NEAR DORENA, OR

LOCATION.--Lat 43°44'10", long 122°52'20", in NE¼ sec.24, T.21 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank 0.5 mi (0.8 km) upstream from Pitcher Creek, 1.2 mi (1.9 km) northwest of Dorena, and at mile 13.2 (21.2 km).

DRAINAGE AREA.--211 mi² (546 km²).

PERIOD OF RECORD.--September 1935 to current year. Prior to October 1949, published as "at Star."

GAGE.--Water-stage recorder. Datum of gage is 856.16 ft (260.958 m) National Geodetic Vertical Datum of 1929. Sept. 16, 1935, to Oct. 17, 1938, nonrecording gage at site 450 ft (137 m) upstream at datum 1.00 ft (0.305 m) higher.

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

AVERAGE DISCHARGE.--47 years, 599 ft³/s (16.96 m³/s), 38.55 in/yr (979 mm/yr), 434,000 acre-ft/yr (535 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft³/s (937 m³/s) Dec. 22, 1964, gage height, 18.19 ft (5.544 m), from rating curve extended above 12,000 ft³/s (340 m³/s), on basis of slope-area measurement of peak flow; minimum, 10 ft³/s (0.28 m³/s) Sept. 24, 25, 1951, Oct. 7, 8, 1958.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s (198 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0630	*24,000 680	*15.22 4.639	Dec. 19	1300	7,110 201	9.23 2.813
Dec. 15	0530	11,100 314	10.84 3.304	Feb. 14	1030	8,090 229	9.65 2.941

Minimum, 19 ft³/s (0.54 m³/s) Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	206	1410	1130	763	1180	686	517	155	139	39	25
2	75	158	2910	914	668	1380	745	497	147	122	38	23
3	81	128	2450	947	624	1130	956	458	139	248	39	22
4	63	112	1320	1260	593	1200	939	408	149	188	37	23
5	54	97	3810	951	524	1160	886	368	177	168	34	22
6	59	88	16200	710	466	944	767	368	180	144	32	21
7	304	80	4380	576	424	793	747	425	158	120	31	20
8	282	74	2230	505	389	705	804	382	139	104	30	20
9	530	70	1460	602	358	689	823	335	132	91	30	21
10	986	65	1310	1010	329	739	1260	290	137	81	33	38
11	855	76	1130	1020	311	894	3660	264	141	74	65	41
12	486	488	978	914	290	855	2730	259	146	69	60	147
13	298	487	1120	781	932	730	2830	277	146	66	42	181
14	210	698	3940	801	6620	685	3080	295	125	72	37	79
15	159	962	7450	839	4090	650	2010	307	117	65	37	53
16	130	1170	2930	880	4290	612	1470	307	116	59	34	43
17	111	2120	1650	2100	4510	569	1280	344	109	56	32	38
18	95	1670	1260	1930	3350	530	1110	332	105	54	30	41
19	84	945	4550	1360	4520	489	917	276	97	50	28	96
20	75	717	3290	1000	3910	456	830	262	91	47	27	241
21	69	1530	2730	795	3960	422	914	295	89	44	26	194
22	65	2330	1870	648	2230	392	1200	301	78	44	25	108
23	61	2990	1320	2410	1480	368	1290	275	70	42	23	77
24	58	1930	1130	3540	1100	361	1100	262	65	40	22	72
25	56	1270	2250	3200	920	364	885	300	73	40	22	73
26	54	894	3220	3590	858	394	751	274	70	39	21	125
27	53	656	3250	2530	959	404	668	213	120	38	22	421
28	120	500	1970	1600	860	513	670	179	100	37	22	298
29	193	411	2130	1140	---	585	593	158	149	37	27	737
30	321	369	2270	901	---	591	523	152	170	38	30	371
31	252	---	1480	836	---	693	---	151	---	39	27	---
TOTAL	6301	23291	89398	41420	50328	21477	37124	9531	3690	2455	1002	3671
MEAN	203	776	2884	1336	1797	693	1237	307	123	79.2	32.3	122
MAX	986	2990	16200	3590	6620	1380	3660	517	180	248	65	737
MIN	53	65	978	505	290	361	523	151	65	37	21	20
CFSM	.96	3.68	13.7	6.33	8.52	3.28	5.86	1.46	.58	.38	.15	.58
IN.	1.11	4.11	15.76	7.30	8.87	3.79	6.55	1.68	.65	.43	.18	.65
AC-FT	12500	46200	177300	82160	99830	42600	73640	18900	7320	4870	1990	7280
CAL YR 1981	TOTAL	220979	MEAN 605	MAX 16200	MIN 16	CFSM 2.87	IN 38.96	AC-FT 438300				
WTR YR 1982	TOTAL	289688	MEAN 794	MAX 16200	MIN 20	CFSM 3.76	IN 51.07	AC-FT 574600				

WILLAMETTE RIVER BASIN

131

14155000 DORENA LAKE NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'10", long 122°57'15", in SE¼ sec.32, T.20 S., R.2 W., Lane County, Hydrologic Unit 17090002, on left end of Dorena Dam on Row River, 5.0 mi (8.0 km) east of Cottage Grove, and at mile 7.61 (12.24 km).

DRAINAGE AREA.--265 mi² (686 km²).

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

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

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

REMARKS.--Reservoir is formed by earthfill dam with concrete outlet and spillway, completed in 1949 by Corps of Engineers; controlled storage began Oct. 11, 1949. Capacity, 77,580 acre-ft (95.7 hm³) between elevations 739.0 ft (225.25 m), sill of outlet gates, and 835.0 ft (254.51 m), crest of spillway. Dead storage, 18 acre-ft (22,200 m³) below elevation 739.0 ft (225.25 m). Reservoir used for flood control and improvement of navigation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 95,550 acre-ft (118 hm³) Dec. 23, 1964, elevation, 844.03 ft (257.260 m); minimum observed since first filling, 159 acre-ft (196,000 m³) Dec. 14, 1970, elevation, 743.60 ft (226.649 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 69,270 acre-ft (85.4 hm³) May 28, 29, elevation, 830.45 ft (253.121 m); minimum, 6,640 acre-ft (8.19 hm³) Nov. 11, elevation, 769.61 ft (234.577 m).

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

760	2,810	780	12,530	800	28,490	820	52,480
765	4,560	785	15,850	805	33,700	825	60,060
770	6,840	790	19,580	810	39,380	830	68,470
775	9,540	795	23,780	815	45,620	835	77,600

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	811.03	770.65	773.53	784.53	783.64	797.73	813.34	825.21	830.41	829.23	828.23	825.00
2	810.26	770.16	777.96	780.80	782.59	799.19	813.91	825.56	830.38	829.27	828.15	824.64
3	809.48	770.20	779.28	778.96	782.41	799.74	814.87	825.92	830.36	829.45	828.06	824.52
4	808.64	770.25	776.47	779.21	782.41	800.41	815.76	826.26	830.37	829.57	827.97	824.41
5	807.76	770.25	783.57	778.11	782.42	800.91	816.33	826.52	830.41	829.67	827.89	824.30
6	806.96	770.22	819.85	775.63	782.51	800.88	816.58	826.81	830.44	829.73	827.79	824.19
7	806.45	770.14	824.75	772.11	782.63	800.45	816.84	827.15	830.44	829.75	827.70	823.76
8	805.63	770.02	823.38	771.27	782.97	800.44	817.15	827.45	830.42	829.76	827.61	822.75
9	805.11	769.89	820.82	772.27	783.34	801.07	817.41	827.67	830.38	829.76	827.50	821.49
10	805.62	769.72	817.81	773.20	783.86	801.58	818.36	827.83	830.35	829.74	827.43	820.21
11	805.80	769.85	813.47	773.36	784.42	802.35	822.90	827.95	830.31	829.71	827.40	818.92
12	805.28	770.47	808.64	772.85	784.91	802.77	825.09	828.07	830.31	829.67	827.36	817.83
13	804.32	769.86	804.58	772.03	787.37	802.76	826.34	828.21	830.31	829.64	827.27	816.87
14	802.78	771.35	807.91	772.05	803.47	802.67	826.72	828.38	830.27	829.61	827.18	815.89
15	800.90	773.18	818.79	772.03	809.63	803.01	825.21	828.55	830.22	829.56	827.10	815.25
16	798.90	774.95	817.41	772.24	812.48	803.73	823.47	828.74	830.16	829.49	827.00	814.79
17	796.79	779.38	813.52	776.41	814.44	804.47	822.65	828.98	830.10	829.44	826.91	814.33
18	794.62	780.35	808.83	777.98	813.79	805.20	822.77	829.18	830.03	829.38	826.81	813.83
19	792.33	778.18	814.52	777.23	815.19	805.88	822.92	829.31	829.95	829.31	826.71	813.41
20	790.02	775.01	817.25	775.04	816.20	806.55	822.90	829.44	829.86	829.24	826.61	813.16
21	787.82	774.96	815.17	772.67	817.14	807.15	823.02	829.62	829.78	829.16	826.50	812.69
22	785.86	776.90	811.54	771.69	815.27	807.67	823.30	829.80	829.67	829.07	826.39	812.06
23	783.84	778.68	806.78	781.46	812.10	808.14	823.42	829.94	829.54	828.98	826.28	811.39
24	781.74	775.81	802.01	790.70	808.09	808.58	823.30	830.07	829.42	828.90	826.16	810.71
25	779.54	772.08	799.67	794.79	803.59	809.02	823.21	830.23	829.31	828.82	826.03	810.01
26	777.29	771.04	799.79	798.92	799.40	809.52	823.25	830.36	829.24	828.74	825.89	809.47
27	774.94	770.96	799.70	798.26	797.64	810.09	823.59	830.42	829.19	828.65	825.78	809.43
28	773.29	770.98	796.83	794.68	796.87	810.97	824.11	830.45	829.17	828.56	825.66	809.08
29	772.66	770.83	794.26	790.42	---	811.76	824.48	830.44	829.18	828.47	825.61	809.40
30	772.49	770.89	791.66	787.76	---	812.34	824.83	830.43	829.21	828.40	825.50	809.02
31	771.66	---	788.30	785.52	---	812.88	---	830.42	---	828.31	825.40	---
MEAN	794.51	772.57	804.13	779.81	797.17	804.84	821.27	828.56	829.97	829.26	826.90	816.43
MAX	811.03	780.35	824.75	798.92	817.14	812.88	826.72	830.45	830.44	829.76	828.23	825.00
MIN	771.66	769.72	773.53	771.27	782.41	797.73	813.34	825.21	829.17	828.31	825.40	809.02
(+)	7700	7300	18270	16220	25480	42900	59790	69220	67090	65530	60700	38230
(#)	-33710	-400	+10970	-2050	+9260	+17420	+16890	+9430	-2130	-1560	-4830	-22470

CAL YR 1981 MEAN 810.19 MAX 833.28 MIN 769.72 AC-FT# +9790
WTR YR 1982 MEAN 808.87 MAX 830.45 MIN 769.72 AC-FT# -3180

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

Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14155500 ROW RIVER NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'35", long 122°59'25", in NE¼ sec.36, T.20 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank 1.7 mi (2.7 km) upstream from Mosby Creek, 2.1 mi (3.4 km) downstream from Dorena Dam, 3.5 mi (5.6 km) east of Cottage Grove, and at mile 5.5 (8.8 km).

DRAINAGE AREA.--270 mi² (699 km²).

PERIOD OF RECORD.--January 1939 to current year. Prior to October 1947, published as "near Dorena."

GAGE.--Water-stage recorder. Datum of gage is 685.24 ft (208.861 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Jan. 5 to Oct. 12, 1939, nonrecording gage at site 180 ft (55 m) upstream at datum 1.00 ft (0.305 m) higher.

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

AVERAGE DISCHARGE.--43 years, 753 ft³/s (21.32 m³/s), 37.87 in/yr (962 mm/yr), 545,500 acre-ft/yr (673 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s (606 m³/s) Dec. 28, 1945, gage height, 18.20 ft (5.547 m); minimum, 0.20 ft³/s (0.006 m³/s) Sept. 25 to Oct. 7, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,180 ft³/s (147 m³/s) Dec. 20, gage height, 8.15 ft (2.484 m); maximum gage height, 8.18 ft (2.493 m) Dec. 16, backwater from submerged tree; minimum discharge, 70 ft³/s (1.98 m³/s) Nov. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	574	364	826	2980	1690	1220	601	288	169	126	102	304
2	574	211	1960	2560	1220	1070	603	288	169	105	102	299
3	569	96	2440	2220	852	1210	606	233	170	104	102	109
4	564	80	2420	2040	726	1210	610	190	171	104	102	96
5	564	77	2120	1750	648	1220	724	190	170	104	102	96
6	559	76	162	1730	549	1220	822	190	171	104	102	95
7	587	76	1050	1700	489	1210	826	190	171	104	102	313
8	724	76	3730	905	373	899	826	190	171	104	102	762
9	793	76	3710	545	316	533	859	190	171	104	102	976
10	795	76	3720	978	243	613	898	190	172	103	102	966
11	795	77	4130	1190	190	689	917	190	172	103	102	956
12	795	414	4230	1250	183	794	1470	190	172	103	102	947
13	819	607	3710	1180	183	888	2470	190	171	104	102	850
14	1000	422	3040	987	213	888	3610	190	170	103	102	728
15	1100	590	1710	1050	1030	635	4010	190	170	103	102	466
16	1080	850	4640	1080	3170	390	3450	190	169	103	102	332
17	1060	1140	4970	1740	4190	327	2360	193	169	102	102	340
18	1030	1640	4840	2160	4650	275	1370	192	169	102	102	379
19	1010	1820	2140	2080	4580	244	1040	184	169	102	102	379
20	985	1740	2260	1990	4200	195	1040	169	169	102	101	427
21	882	1680	5110	1680	4250	183	1010	169	169	102	102	494
22	756	2150	4980	1120	4220	186	1170	169	169	102	101	494
23	737	3100	4800	500	4140	186	1390	169	169	102	101	490
24	716	3190	4300	1030	4030	186	1350	169	169	102	101	490
25	693	2370	4010	2230	3890	186	1080	169	169	102	117	487
26	671	1200	4060	2720	3450	187	819	169	169	102	119	486
27	647	729	4130	3710	2220	188	506	169	169	102	102	484
28	459	523	4070	3940	1490	193	375	169	169	102	105	533
29	284	458	4020	3480	---	291	375	169	169	102	104	580
30	318	365	4010	2320	---	457	333	169	168	102	104	625
31	380	---	3380	1980	---	559	---	169	---	102	104	---
TOTAL	22520	26273	104678	56825	57385	18532	37520	5876	5094	3211	3199	14983
MEAN	726	876	3377	1833	2049	598	1251	190	170	104	103	499
MAX	1100	3190	5110	3940	4650	1220	4010	288	172	126	119	976
MIN	284	76	162	500	183	183	333	169	168	102	101	95
AC-FT	44670	52110	207600	112700	113800	36760	74420	11660	10100	6370	6350	29720
MEAN†	178	869	3550	1800	2220	881	1530	343	134	78	25	122
CFSM†	.66	3.22	13.1	6.67	8.22	3.26	5.67	1.27	.50	.29	.09	.45
IN.†	.76	3.59	15.18	7.69	8.55	3.76	6.34	1.46	.55	.33	.10	.50
AC-FT†	10960	51710	218570	110650	123060	54180	91310	21090	7970	4810	1510	7250

CAL YR 1981 TOTAL 265207 MEAN 727 MAX 5110 MIN 76 AC-FT 526000 MEAN† 740 CFSM† 2.74 IN.† 37.22 AC-FT† 535800
WTR YR 1982 TOTAL 356096 MEAN 976 MAX 5110 MIN 76 AC-FT 706300 MEAN† 971 CFSM† 3.60 IN.† 48.84 AC-FT† 703120

† Adjusted for change in contents in Dorena Lake.

WILLAMETTE RIVER BASIN

133

14157500 COAST FORK WILLAMETTE RIVER NEAR GOSHEN, OR

LOCATION.--Lat 43°58'50", long 122°57'55", in NW¼ sec.29, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank at downstream side of bridge on State Highway 58, 2.5 mi (4.0 km) southeast of Goshen, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--642 mi² (1,663 km²).

PERIOD OF RECORD.--August 1905 to February 1912, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1248: 1905-12. WSP 1935: 1956.

GAGE.--Water-stage recorder. Datum of gage is 473.80 ft (144.414 m) National Geodetic Vertical Datum of 1929. Aug. 23, 1905, to Feb. 7, 1912, nonrecording gage at site 600 ft (183 m) upstream at different datum.

REMARKS.--Records good. Flow regulated since 1942 by Cottage Grove Lake (see station 14153000) and since 1949 by Dorena Lake (see station 14155000). Several small diversions for logponds and irrigation above station.

AVERAGE DISCHARGE.--38 years (water years 1906-11, 1951-82), 1,649 ft³/s (46.70 m³/s), 1,195,000 acre-ft/yr (1.47 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,500 ft³/s (1,660 m³/s) Nov. 22, 1909, gage height, 19.5 ft (5.94 m), site and datum then in use, from rating curve extended above 15,000 ft³/s (425 m³/s); minimum, 36 ft³/s (1.02 m³/s) Sept. 29, 30, Oct. 11, 12, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,000 ft³/s (878 m³/s) Dec. 6, gage height, 16.85 ft (5.136 m); minimum, 121 ft³/s (3.43 m³/s) July 28, Aug. 6, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	807	846	1530	4890	3600	3530	1840	653	294	296	151	190
2	813	707	3920	4370	2600	3270	1950	635	292	228	154	440
3	807	367	5490	5620	1900	3400	2440	599	289	225	153	197
4	794	316	4570	7960	1600	3510	2320	505	291	222	152	164
5	788	293	6100	5130	1400	3310	2160	479	297	222	148	154
6	812	267	23600	4080	1160	3070	2220	466	293	216	144	151
7	955	250	6430	3780	1090	2880	2430	460	291	205	143	195
8	1200	243	8330	3020	953	2540	2340	455	285	198	142	794
9	1390	238	7440	1800	819	1590	2220	445	277	192	142	1160
10	1710	236	7750	2200	725	1490	2240	432	272	184	142	1200
11	1650	253	7480	2600	602	1780	3470	421	267	181	154	1210
12	1440	1070	7220	2600	552	1800	3290	409	268	174	156	1210
13	1330	1690	6040	2500	618	1800	5490	403	283	168	154	1150
14	1510	1830	7760	2200	3800	1790	8210	398	288	172	153	986
15	1740	2250	9740	2200	4190	1690	8050	392	282	172	153	673
16	1720	2510	8350	2600	6660	1180	6220	387	273	166	153	466
17	1680	4070	8970	3800	8730	1350	4400	400	271	164	146	398
18	1640	4490	8070	5500	7310	1020	3060	398	265	162	142	484
19	1600	3960	8410	4800	8120	992	2350	384	258	157	142	509
20	1520	3250	5580	3800	6660	797	2180	354	254	148	142	533
21	1340	3390	9370	3200	7310	730	2010	347	259	145	138	664
22	1180	4830	7790	3000	6090	686	2040	332	269	145	140	658
23	1150	7530	7130	3800	6430	647	2190	331	254	145	146	624
24	1130	6710	6760	5000	6380	613	2130	327	242	144	140	625
25	1100	4800	6350	6500	6000	591	1870	317	242	142	133	621
26	1070	3190	7000	6500	5570	588	1520	314	254	145	138	638
27	1040	2100	7580	8000	4470	606	1080	315	296	143	135	730
28	968	1530	7270	7000	3290	975	812	311	294	144	143	723
29	747	1260	6940	6000	---	998	788	304	307	145	159	803
30	806	1130	7120	4600	---	1310	743	301	314	148	164	821
31	922	---	6030	3800	---	1720	---	296	---	150	160	---
TOTAL	37359	65606	232120	132850	108629	52253	84063	12570	8321	5448	4562	19171
MEAN	1205	2187	7488	4285	3880	1686	2802	405	277	176	147	639
MAX	1740	7530	23600	8000	8730	3530	8210	653	314	296	164	1210
MIN	747	236	1530	1800	552	588	743	296	242	142	133	151
AC-FT	74100	130100	460400	263500	215500	103600	166700	24930	16500	10810	9050	38030
CAL YR 1981	TOTAL	573781	MEAN	1572	MAX	23600	MIN	150	AC-FT	1138000		
WTR YR 1982	TOTAL	762952	MEAN	2090	MAX	23600	MIN	133	AC-FT	1513000		

WILLAMETTE RIVER BASIN

14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR

LOCATION.--Lat 44°21'40", long 121°59'40", in SE¼ sec.8, T.14 S., R.7 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, on west bank of Clear Lake in narrow channel, 150 ft (46 m) upstream from outlet and at mile 89.6 (144.2 km).

DRAINAGE AREA.--92.4 mi² (239.3 km²), hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--June 1912 to September 1915, October 1947 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1949. WSP 1318: 1915(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,015.32 ft (919.070 m) National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). June 20, 1912, to July 31, 1915, nonrecording gage at site 1.0 mi (1.6 km) north at different datum.

REMARKS.--Records good. Flow regulated by natural storage in lake. At high stages an undetermined flow enters numerous sinkholes in lava rock along south edge of lake above station.

AVERAGE DISCHARGE.--38 years, 469 ft³/s (13.28 m³/s), 68.93 in/yr (1,751 mm/yr), 339,800 acre-ft/yr (419 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft³/s (93.5 m³/s) Dec. 23, 1964, gage height, 8.15 ft (2.484 m); minimum, 137 ft³/s (3.88 m³/s) Sept. 23, 1977, Nov. 4, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,200 ft³/s (62.3 m³/s) Feb. 21, gage height, 6.43 ft (1.960 m); minimum, 172 ft³/s (4.87 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	184	447	694	517	981	487	734	752	494	415	316
2	176	189	522	659	508	938	485	762	735	489	413	315
3	176	193	652	637	499	893	481	775	713	489	411	313
4	174	195	629	598	485	848	475	773	691	482	408	310
5	174	195	781	554	467	796	464	763	668	478	405	307
6	177	194	1320	517	452	752	453	767	653	472	401	305
7	180	192	1150	493	440	713	442	801	639	469	398	303
8	183	191	944	479	431	675	433	814	623	467	395	300
9	192	189	882	464	426	652	426	793	616	463	392	300
10	203	187	927	445	419	692	425	770	613	458	389	300
11	215	188	880	432	414	719	443	755	612	452	389	296
12	227	194	838	420	408	713	481	752	641	448	382	297
13	232	193	817	413	427	688	577	760	648	444	378	291
14	230	200	946	407	510	674	631	775	606	440	375	291
15	225	211	1270	405	789	660	612	794	592	438	372	291
16	220	221	1160	407	1160	644	584	803	601	440	367	291
17	215	246	985	414	1410	629	579	827	609	441	362	290
18	211	266	926	406	1240	614	572	828	610	443	359	289
19	208	284	1320	397	1610	594	561	801	607	443	354	289
20	204	306	1340	393	1830	572	553	792	599	441	351	291
21	200	349	1110	391	2050	553	548	814	590	439	348	285
22	197	380	992	393	1770	534	550	850	569	437	345	283
23	194	402	931	401	1580	517	566	856	551	437	343	282
24	191	420	917	429	1420	506	607	841	538	435	339	283
25	188	438	958	432	1300	500	633	885	526	434	336	281
26	186	452	937	440	1190	501	645	911	516	431	333	281
27	183	457	917	441	1100	505	657	853	515	429	330	278
28	184	458	861	447	1020	509	690	805	508	428	327	280
29	185	457	803	485	---	504	707	781	505	426	328	280
30	185	451	758	517	---	499	714	773	501	423	325	279
31	184	---	727	522	---	495	---	767	---	420	320	---
TOTAL	6073	8482	28647	14532	25872	20070	16481	24775	18147	13930	11390	8797
MEAN	196	283	924	469	924	647	549	799	605	449	367	293
MAX	232	458	1340	694	2050	981	714	911	752	494	415	316
MIN	174	184	447	391	408	495	425	734	501	420	320	278
CFSM	2.12	3.06	10.0	5.08	10.0	7.00	5.94	8.65	6.55	4.86	3.97	3.17
IN.	2.44	3.41	11.53	5.85	10.42	8.08	6.64	9.97	7.31	5.61	4.59	3.54
AC-FT	12050	16820	56820	28820	51320	39810	32690	49140	35990	27630	22590	17450
CAL YR 1981	TOTAL	142616	MEAN 391	MAX 1340	MIN 165	CFSM 4.23	IN 57.42	AC-FT 282900				
WTR YR 1982	TOTAL	197196	MEAN 540	MAX 2050	MIN 174	CFSM 5.84	IN 79.39	AC-FT 391100				

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

LOCATION.--Lat 44°20'05", long 122°02'45", in SW¼SW¼ sec.24, T.14 S., R.6 E., Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 200 ft (61 m) upstream from Smith River Reservoir, 0.7 mi (1.1 km) downstream from Browder Creek, 10 mi (16 km) north of town of Belknap Springs, and at mile 4.4 (7.1 km).

DRAINAGE AREA.--16.2 mi² (42.0 km²).

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

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,610.00 ft (795.528 m) National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). Prior to Sept. 10, 1964, at datum 1.56 ft (0.475 m) higher.

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

AVERAGE DISCHARGE.--22 years, 91.2 ft³/s (2.583 m³/s), 76.45 in/yr (1,942 mm/yr), 66,070 acre-ft/yr (81.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,160 ft³/s (146 m³/s) Dec. 22, 1964, gage height, 11.9 ft (3.63 m), from floodmark, from rating curve extended above 560 ft³/s (15.9 m³/s), on basis of slope-area measurement of peak flow; minimum, 2.5 ft³/s (0.071 m³/s) Sept. 15-18, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. '5	1730	1,150 32.6	8.01 2.441	Feb. 16	1800	1,050 29.7	7.90 2.408
Dec. 15	0230	995 28.2	7.84 2.390	Feb. 20	1800	*1,290 36.5	*8.14 2.481
Dec. 19	0800	1,060 30.0	7.91 2.411				

Minimum, 4.9 ft³/s (0.14 m³/s) Sept. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	48	81	75	69	112	58	183	121	44	9.5	5.8
2	13	43	479	66	63	113	56	189	115	45	9.3	5.6
3	11	40	343	76	58	105	52	186	109	47	9.0	5.6
4	11	37	275	87	52	98	48	168	101	42	8.8	5.6
5	10	34	724	54	48	90	45	157	99	40	8.4	5.4
6	32	31	823	44	45	83	43	176	102	36	8.2	5.2
7	54	29	545	41	43	80	41	201	94	33	8.0	5.1
8	63	26	327	38	40	80	40	181	90	31	8.5	5.0
9	116	24	278	41	38	114	42	151	97	29	7.8	6.5
10	98	23	265	41	36	148	51	137	113	27	7.8	8.1
11	77	26	196	40	34	230	151	132	126	25	11	7.1
12	57	63	154	38	31	181	227	141	185	24	8.4	18
13	46	65	190	37	148	143	226	159	141	23	7.6	9.2
14	39	78	478	36	804	123	191	185	117	23	7.6	7.2
15	34	149	754	36	744	107	139	203	115	21	7.6	6.4
16	29	192	395	43	931	95	115	213	118	20	7.2	6.1
17	25	294	253	68	857	85	104	234	114	19	7.0	5.8
18	23	248	242	56	590	77	91	207	111	18	6.7	5.8
19	21	192	789	49	929	70	82	179	104	17	6.6	6.0
20	19	214	466	44	928	64	79	185	96	16	6.4	14
21	18	517	300	41	723	59	86	225	85	15	6.2	8.4
22	17	423	213	39	377	57	111	246	72	14	6.1	7.2
23	16	297	161	81	243	57	161	226	63	13	5.9	6.7
24	15	217	174	242	176	60	186	235	57	12	5.7	8.4
25	15	163	196	188	140	68	182	271	52	12	5.6	7.4
26	16	133	199	172	120	80	172	222	51	12	5.6	11
27	16	107	176	139	105	80	173	159	54	11	5.5	11
28	27	90	143	115	97	78	190	131	49	11	5.4	27
29	29	78	119	95	---	73	178	121	52	10	8.3	28
30	33	70	99	83	---	67	170	120	51	10	9.1	19
31	46	---	86	76	---	63	---	122	---	9.9	6.2	---
TOTAL	1038	3951	9923	2281	8469	2940	3490	5645	2854	709.9	230.8	277.6
MEAN	33.5	132	320	73.6	302	94.8	116	182	95.1	22.9	7.45	9.25
MAX	116	517	823	242	931	230	227	271	185	47	11	28
MIN	10	23	81	36	31	57	40	120	49	9.9	5.4	5.0
CFSM	2.07	8.15	19.8	4.54	18.6	5.85	7.16	11.2	5.87	1.41	.46	.57
IN.	2.38	9.07	22.78	5.24	19.45	6.75	8.01	12.96	6.55	1.63	.53	.64
AC-FT	2060	7840	19680	4520	16800	5830	6920	11200	5660	1410	458	551
CAL YR 1981 TOTAL	30543.3	MEAN	83.7	MAX 823	MIN 2.5	CFSM 5.17	IN 70.13	AC-FT 60580				
WTR YR 1982 TOTAL	41809.3	MEAN	115	MAX 931	MIN 5.0	CFSM 7.10	IN 96.00	AC-FT 82930				

WILLAMETTE RIVER BASIN

14158795 SMITH RIVER RESERVOIR NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°18'20", long 122°02'40", in SW¼SW¼ sec.36, T.14 S., R.6 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, in intake tower near left end of Smith River Dam on Smith River, 800 ft (244 m) upstream from Bunchgrass Creek, 8 mi (13 km) north of town of Belknap Springs, and at mile 2.1 (3.4 km).

DRAINAGE AREA.--18.2 mi² (47.1 km²).

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

GAGE.--Telemark with equipment to transmit elevations at 15-minute intervals. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1963 by Eugene Water and Electric Board; storage began Mar. 18, 1963. Total capacity is 15,000 acre-ft (18.5 hm³) at elevation 2,605.0 ft (794.00 m) top of spillway gates, and usable capacity is 9,900 acre-ft (12.2 hm³) between elevations 2,525.0 ft (769.62 m), minimum power pool, and 2,605.0 ft (794.0 m). Storage of 5,100 acre-ft (6.29 hm³), below elevation 2,525.0 ft (769.62 m), not normally available for release. Water used for power generation. Figures herein represent total contents.

COOPERATION.--Elevations and area-volume curves furnished by Eugene Water and Electric Board.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 15,200 acre-ft (18.7 hm³) Dec. 22, 1964, elevation, 2,606.5 ft (794.46 m); minimum, 5,700 acre-ft (7.03 hm³) Apr. 11, 14, 1964, elevation, 2,532.90 ft (772.028 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,550 acre-ft (17.9 hm³) Sept. 17, elevation, 2,602.66 ft (793.291 m); minimum, 5,880 acre-ft (7.25 hm³) July 1, elevation, 2,534.79 ft (772.604 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	2,601.14	14,290	-
Oct. 31.....	2,597.60	13,720	-570
Nov. 30.....	2,594.99	13,300	-420
Dec. 31.....	2,593.05	12,990	-310
CAL YR 1981.....	-	-	-330
Jan. 31.....	2,580.47	11,170	-1,820
Feb. 28.....	2,579.27	11,010	-160
Mar. 31.....	2,580.12	11,120	+110
Apr. 30.....	2,597.38	13,680	+2,560
May 31.....	2,567.00	9,440	-4,240
June 30.....	2,535.56	5,960	-3,480
July 31.....	2,581.82	11,350	+5,390
Aug. 31.....	2,593.45	13,050	+1,700
Sept.30.....	2,600.55	14,190	+1,140
WTR YR 1982.....	-	-	-100

WILLAMETTE RIVER BASIN

137

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

LOCATION.--Lat 44°16'05", long 122°02'55", in T.15 S., R.6 E., (unsurveyed), Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.4 mi (0.6 km) downstream from Trail Bridge Dam, 0.5 mi (0.8 km) upstream from Anderson Creek, 5 mi (8 km) north of town of Belknap Springs, and at mile 81.5 (131.1 km).

DRAINAGE AREA.--184 mi² (477 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,980.00 ft (603.504 m) National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). Prior to Oct. 11, 1963, at datum 5.60 ft (1.707 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1963 by Smith River Reservoir (see station 14158795). Diurnal fluctuations by powerplants and by Trail Bridge reregulating reservoir upstream. Water is diverted from McKenzie River in SW $\frac{1}{4}$ sec.20, T.14 S., R.7 E., to Smith River Reservoir and returned to river above station.

AVERAGE DISCHARGE.--23 years, 1,029 ft³/s (29.14 m³/s), 75.94 in/yr (1,929 mm/yr), 745,500 acre-ft/yr (919 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s (317 m³/s) Dec. 22, 1964, gage height, 12.45 ft (3.795 m), from rating curve extended above 3,700 ft³/s (105 m³/s) on basis of slope-area measurement of peak flow; minimum, 185 ft³/s (5.24 m³/s) Feb. 3, 1963; minimum daily, 425 ft³/s (12.0 m³/s) Nov. 23, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,940 ft³/s (140 m³/s) Feb. 20, gage height, 9.96 ft (3.036 m); minimum, 505 ft³/s (14.3 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	527	617	938	1390	1070	1640	1110	1290	1340	828	858	707
2	561	588	1410	1340	1040	1560	1010	1380	1340	835	856	843
3	566	554	1450	1460	1040	1570	1010	1380	1300	852	854	856
4	566	556	1260	1610	1010	1540	980	1380	1070	910	847	792
5	572	573	2040	1420	1010	1510	962	1380	1100	898	844	752
6	606	572	2480	1340	930	1400	960	1380	1160	862	843	731
7	629	572	2170	1270	960	1340	952	1380	1180	811	843	747
8	623	587	1830	997	950	1410	948	1380	1180	801	839	788
9	773	594	1690	1010	925	1370	949	1380	1190	793	836	811
10	670	598	1640	1040	901	1390	957	1460	1210	795	837	832
11	669	608	1530	1020	930	1540	1120	1500	1210	792	834	791
12	684	681	1470	933	894	1500	1190	1490	1300	790	834	806
13	663	649	1500	953	1070	1470	1180	1520	1240	787	828	750
14	656	640	1900	1010	2050	1420	1270	1560	1210	785	823	729
15	630	722	2650	966	2010	1310	1330	1610	1210	783	817	754
16	629	719	2170	976	2560	1300	1180	1600	1240	801	816	755
17	629	871	1850	1030	2920	1170	1110	1610	1270	870	808	755
18	629	914	1750	997	2590	1080	1140	1610	1290	874	822	756
19	629	827	2760	953	3510	1190	1130	1600	1280	867	797	756
20	637	873	2420	950	3870	1200	1110	1550	1250	881	801	789
21	642	1340	2120	961	3590	1120	1120	1540	1190	889	798	785
22	641	1320	1800	961	2970	1180	1150	1550	1180	862	794	727
23	617	1140	1740	1030	2450	1100	1200	1560	1080	859	795	706
24	576	1080	1720	1230	2170	1140	1270	1560	868	868	786	725
25	578	992	1710	1200	2040	1110	1270	1560	764	867	793	757
26	580	971	1760	1180	1830	1140	1270	1560	1050	867	740	779
27	580	962	1680	1120	1800	1110	1230	1520	1060	865	760	758
28	592	927	1620	1040	1660	1080	1210	1390	1020	866	709	743
29	595	903	1540	1020	---	1080	1230	1310	1040	861	685	754
30	621	934	1510	1050	---	1090	1280	1320	935	863	663	768
31	632	---	1430	1050	---	1150	---	1320	---	859	660	---
TOTAL	19202	23884	55538	34507	50750	40210	33828	45630	34757	26141	24820	23002
MEAN	619	796	1792	1113	1813	1297	1128	1472	1159	843	801	767
MAX	773	1340	2760	1610	3870	1640	1330	1610	1340	910	858	856
MIN	527	554	938	933	894	1080	948	1290	764	783	660	706
AC-FT	38090	47370	110200	68440	100700	79760	67100	90510	68940	51850	49230	45620
MEAN†	610	789	1787	1083	1810	1299	1171	1403	1100	931	828	803
CFSM†	3.32	4.29	9.71	5.89	9.84	7.06	6.36	7.62	5.98	5.06	4.50	4.36
IN.†	3.82	4.79	11.20	6.79	10.25	8.14	7.10	8.79	6.67	5.83	5.19	4.87
AC-FT†	37520	46950	109890	66620	100540	79870	69660	86270	65460	57240	50930	47760

CAL YR 1981 TOTAL 324112 MEAN 888 MAX 2760 MIN 527 AC-FT 642900 MEAN† 888 CFSM† 4.83 IN.† 65.50 AC-FT† 642590
WTR YR 1982 TOTAL 412269 MEAN 1130 MAX 3870 MIN 527 AC-FT 817700 MEAN† 1129 CFSM† 6.14 IN.† 83.34 AC-FT† 817600

† Adjusted for change in contents in Smith River Reservoir.

WILLAMETTE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to current year.

WATER TEMPERATURES: November 1976 to current year.

INSTRUMENTATION.--Dual conductivity-temperature recorder November 1976 to September 1980. Water-quality mini-monitor since September 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 61 micromhos Aug. 27; minimum, 36 micromhos Feb. 20.

WATER TEMPERATURES: Maximum, 9.5°C Sept. 8-10; minimum, 3.5°C many days in January and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 20...	0930	1050	48	7.2	4.5	12.6	16	4.1	1.5	3.5
SEP 08...	1310	773	56	7.6	9.0	12.2	18	4.2	1.8	4.0

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
APR 20...	1.0	24	5.0	.8	<.1	.090	<.10	.34	.090	.43
SEP 08...	1.1	20	<5.0	.8	<.1	<.060	<.10	.30	<.060	.20

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)
APR 20...	.030	.020	1.2	.1	19	41	49	116	.50
SEP 08...	.040	.060	.5	.2	22	40	--	83.5	.50

139

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

WILLAMETTE RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

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

WILLAMETTE RIVER BASIN

141

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14158930 BUDWORM CREEK NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°15'29", long 122°03'40", T.15 S., R.6 E., (unsurveyed), Linn County, Hydrologic Unit 17090004, Willamette National Forest, on right bank 0.1 mi (0.2 km) upstream from Deer Creek, 4.8 mi (7.7 km) north of town of Belknap Springs.

DRAINAGE AREA.--3.00 mi² (7.77 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 2,040 ft (622 m), from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 688 ft³/s (19.5 m³/s) Dec. 25, 1980, gage height, 3.78 ft (1.152 m), from rating curve extended above 180 ft³/s (5.10 m³/s); maximum gage height, 3.82 ft (1.164 m) Jan. 12, 1980; minimum, 0.45 ft/s (0.013 m³/s) Oct. 8-10, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*), from rating curve extended above 100 ft³/s (2.83 m³/s):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1100	330 9.35	3.08 0.937	Dec. 15	0230	296 8.38	3.32 1.012
Dec. 6	0200	*414 11.7	*3.67 1.119	Dec. 19	0830	265 7.50	3.21 0.978

Minimum, 0.67 ft³/s (0.019 m³/s) Sept. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	7.3	16	9.3	10	15	8.5	12	9.8	3.7	1.1	.78
2	2.5	6.0	170	8.1	9.5	17	8.0	13	9.1	3.9	1.1	.74
3	1.9	5.0	65	7.5	9.0	18	7.5	12	8.4	4.2	1.0	.75
4	1.8	4.3	39	6.8	8.0	20	7.0	9.4	7.9	3.7	1.0	.74
5	1.7	3.9	174	5.9	7.5	18	6.5	8.3	8.0	3.7	.98	.73
6	5.1	3.5	270	5.1	7.0	15	6.0	10	8.8	3.4	.98	.70
7	9.3	3.2	95	4.7	6.5	13	5.5	13	8.0	3.3	1.0	.69
8	9.9	2.9	40	4.5	6.0	12	5.5	11	7.5	3.2	1.1	.68
9	24	2.7	29	4.5	5.5	14	6.0	9.0	7.9	3.0	1.0	.83
10	20	2.5	27	5.0	4.7	18	11	8.5	8.9	2.8	.97	1.0
11	15	3.0	19	5.5	4.6	22	30	8.2	9.7	2.6	1.3	1.0
12	9.6	9.1	15	5.5	4.4	18	40	9.1	14	2.4	1.0	3.5
13	6.8	9.2	27	5.0	15	16	40	11	11	2.2	.96	1.4
14	5.2	10	125	5.0	95	14	30	14	8.3	2.2	.93	.99
15	4.3	14	200	5.0	75	13	22	15	7.9	2.0	.95	.89
16	3.6	19	66	7.0	80	12	18	16	7.8	1.8	.91	.83
17	3.2	33	31	15	85	11	16	17	7.2	1.8	.88	.82
18	2.8	33	33	11	70	9.5	14	16	6.7	1.7	.87	.80
19	2.6	25	159	9.0	110	9.0	13	14	6.1	1.6	.85	.80
20	2.4	28	63	8.5	95	8.0	12	16	5.5	1.6	.83	2.9
21	2.2	89	40	7.5	80	7.5	15	21	5.0	1.5	.82	1.4
22	2.0	78	26	7.0	50	7.5	20	22	4.4	1.4	.80	1.1
23	1.9	51	19	14	28	7.5	25	19	3.9	1.4	.79	.97
24	1.8	34	27	36	20	8.5	22	20	3.6	1.4	.77	1.7
25	1.7	24	38	34	17	9.4	16	23	3.3	1.3	.76	1.3
26	1.9	18	36	30	15	12	14	17	3.3	1.3	.74	2.2
27	1.7	14	32	24	14	12	13	12	4.0	1.2	.74	2.1
28	3.7	11	22	18	13	11	15	9.7	4.0	1.2	.74	5.6
29	5.2	9.2	16	14	---	10	12	9.3	4.9	1.2	1.0	7.0
30	6.7	8.4	13	12	---	9.5	11	9.7	4.2	1.2	.98	4.1
31	8.1	---	11	11	---	9.0	---	9.9	---	1.1	.82	---
TOTAL	170.5	561.2	1943	345.4	944.7	396.4	469.5	415.1	209.1	69.0	28.67	49.04
MEAN	5.50	18.7	62.7	11.1	33.7	12.8	15.7	13.4	6.97	2.23	.92	1.63
MAX	24	89	270	36	110	22	40	23	14	4.2	1.5	7.0
MIN	1.7	2.5	11	4.5	4.4	7.5	5.5	8.2	3.3	1.1	.74	.68
CFSM	1.83	6.23	20.9	3.70	11.2	4.27	5.23	4.47	2.32	.74	.31	.54
IN.	2.11	6.96	24.09	4.28	11.71	4.91	5.82	5.15	2.59	.86	.36	.61
AC-FT	338	1110	3850	685	1870	786	931	823	415	137	57	97

CAL YR 1981 TOTAL 5517.18 MEAN 15.1 MAX 270 MIN .61 CFM 5.03 IN 68.39 AC-FT 10940
WTR YR 1982 TOTAL 5601.61 MEAN 15.3 MAX 270 MIN .68 CFM 5.10 IN 69.44 AC-FT 11110

NOTE.--No gage-height record Jan. 13 to Mar. 24.

WILLAMETTE RIVER BASIN

143

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR

LOCATION.--Lat 44°10'45", long 122°07'45", on line between NE¼ and NW¼ sec.18, T.16 S., R.6 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, on left bank 1.0 mi (1.6 km) upstream from Glen Creek, 1.7 mi (2.7 km) east of town of McKenzie Bridge, and at mile 69.9 (112.5 km).

DRAINAGE AREA.--348 mi² (901 km²) at cableway 1.2 mi (1.9 km) upstream, where all discharge measurements are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1910 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "near McKenzie Bridge" August 1910 to September 1911 and October 1914 to September 1916.

REVISED RECORDS.--WSP 1248: 1911-16, 1920-25. WSP 1448: 1919. WSP 1638: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,419.04 ft (432.523 m) National Geodetic Vertical Datum of 1929. Prior to June 2, 1932, nonrecording gage at several sites within 2 mi (3 km) of present site at various datums.

REMARKS.--Water-discharge records good except those for periods of no gage-height record Jan. 26-28, Feb. 1 to Mar. 22, which are fair. Flow regulated since March 1963 by Smith River Reservoir (Carmen-Smith Project) 12 mi (19 km) upstream (see station 14158795). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--72 years, 1,681 ft³/s (47.61 m³/s), 1,218,000 acre-ft/yr (1.50 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,100 ft³/s (541 m³/s) Dec. 22, 1964, gage height, 10.36 ft (3.158 m), from rating curve extended above 7,100 ft³/s (201 m³/s) on basis of slope-area measurement of peak flow; minimum, 805 ft³/s (22.8 m³/s) Oct. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,820 ft³/s (278 m³/s) Feb. 20, gage height, 5.86 ft (1.786 m) from peak stage indicator; minimum, 948 ft³/s (26.8 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	956	1100	1660	2310	1900	2800	1850	2170	2060	1470	1440	1200
2	989	1060	3010	2220	1900	2600	1730	2270	2060	1500	1440	1320
3	998	1020	2820	2320	1900	2600	1720	2270	2010	1530	1430	1380
4	989	1010	2390	2480	1800	2600	1680	2240	1740	1600	1420	1300
5	989	1020	3820	2220	1800	2600	1650	2220	1770	1600	1410	1250
6	1060	1020	5780	2100	1700	2400	1640	2230	1840	1560	1410	1220
7	1140	1020	4380	2040	1700	2400	1630	2260	1850	1490	1410	1230
8	1110	1020	3470	1720	1700	2400	1620	2230	1850	1470	1410	1270
9	1390	1030	3100	1710	1600	2400	1620	2190	1860	1470	1400	1300
10	1280	1030	2930	1750	1600	2400	1650	2240	1900	1470	1400	1340
11	1220	1040	2660	1730	1600	2600	2050	2290	1920	1460	1400	1300
12	1200	1190	2500	1620	1600	2600	2280	2280	2130	1460	1390	1330
13	1150	1150	2580	1620	1800	2400	2280	2330	2010	1450	1380	1250
14	1120	1140	3710	1680	3600	2400	2400	2400	1930	1450	1370	1210
15	1090	1260	5310	1650	3600	2200	2360	2480	1920	1440	1370	1230
16	1080	1330	4190	1670	4600	2200	2130	2480	1960	1440	1360	1230
17	1070	1590	3440	1940	5800	2000	2020	2510	1990	1510	1350	1230
18	1070	1670	3170	1850	5200	1900	2000	2480	2010	1510	1360	1230
19	1060	1500	5000	1760	7000	2000	1960	2430	1990	1500	1330	1230
20	1070	1560	4310	1710	8000	2000	1930	2380	1960	1510	1330	1300
21	1070	2440	3740	1700	7500	1900	1940	2390	1880	1520	1320	1270
22	1070	2570	3210	1690	6000	1900	2020	2430	1860	1480	1320	1210
23	1050	2230	2970	2010	4600	1870	2140	2430	1760	1470	1320	1180
24	1000	2020	3000	2700	3800	1890	2240	2430	1520	1480	1310	1200
25	999	1830	3070	2490	3400	1870	2220	2480	1340	1480	1310	1230
26	1000	1730	3170	2400	3200	1910	2190	2440	1680	1470	1270	1260
27	1000	1670	3060	2200	3000	1890	2130	2320	1730	1470	1270	1240
28	1030	1600	2870	2000	2800	1870	2130	2140	1670	1470	1210	1250
29	1050	1550	2660	1960	---	1840	2130	2030	1710	1460	1200	1280
30	1080	1570	2540	1950	---	1840	2160	2040	1620	1460	1170	1260
31	1110	---	2400	1930	---	1900	---	2030	---	1450	1160	---
TOTAL	33490	42970	102920	61130	94700	68180	59500	71540	55530	46100	41670	37730
MEAN	1080	1432	3320	1972	3382	2199	1983	2308	1851	1487	1344	1258
MAX	1390	2570	5780	2700	8000	2800	2400	2510	2130	1600	1440	1380
MIN	956	1010	1660	1620	1600	1840	1620	2030	1340	1440	1160	1180
AC-FT	66430	85230	204100	121300	187800	135200	118000	141900	110100	91440	82650	74840

CAL YR 1981 TOTAL 582325 MEAN 1595 MAX 5780 MIN 956 AC-FT 1155000
WTR YR 1982 TOTAL 715460 MEAN 1960 MAX 8000 MIN 956 AC-FT 1419000

WILLAMETTE RIVER BASIN

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, November 1976 to current year.

WATER TEMPERATURES: November 1976 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 67 micromhos Nov. 11; minimum, 30 micromhos Feb. 20, 21.

WATER TEMPERATURES: Maximum, 11.0°C June 23, July 12, 19, 29, 31; minimum, 3.0°C Jan. 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 20...	1050	1900	49	6.8	6.5	12.8	16	3.9	1.5	3.6
SEP 08...	1100	1350	58	7.6	9.0	11.2	18	4.2	1.8	4.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
APR 20...	1.0	24	<5.0	1.3	<.1	.070	<.10	.29	.070	.74
SEP 08...	1.1	20	<5.0	1.5	<.1	<.060	<.10	.60	.060	.60

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)
APR 20...	.030	.020	.7	.1	20	39	53	200	.60
SEP 08...	.050	.090	.6	.1	22	49	--	179	.80

WILLAMETTE RIVER BASIN

145

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
APR 20...	<1	<1	21	<100	<1	1	<10	<10	<1	<1
SEP 08...	<1	<1	10	100	<1	<1	<10	<10	<1	<1

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
APR 20...	1	5	10	40	1	<1	<1	10	<.1
SEP 08...	2	4	5	30	3	<1	<1	<10	<.1

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
APR 20...	.1	1	2	<1	<1	1	<1	7	10
SEP 08...	.1	2	<1	<1	<1	<1	<1	6	10

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	63	59	48	50	42	47	47	47	52	55	57
2	59	63	50	49	49	41	47	46	47	53	55	56
3	60	63	49	48	49	41	47	47	47	52	55	55
4	60	63	50	48	50	41	47	47	48	52	55	55
5	60	63	46	48	50	42	48	47	48	53	55	56
6	61	63	40	49	51	42	48	46	48	53	55	56
7	59	63	42	49	51	43	49	46	48	53	55	56
8	59	64	45	51	51	43	49	47	49	53	55	56
9	57	64	47	51	51	43	49	47	49	53	56	56
10	56	64	47	52	52	43	49	47	49	53	55	56
11	57	64	48	52	52	40	47	47	48	53	55	56
12	58	63	49	52	51	41	46	47	47	53	56	56
13	59	62	48	52	49	42	45	47	47	53	55	57
14	59	63	43	52	38	42	45	46	48	53	56	57
15	60	61	40	52	38	43	46	46	48	53	56	57
16	60	61	43	52	35	45	47	46	48	53	56	57
17	61	59	44	50	35	46	47	45	48	53	56	57
18	61	58	45	51	36	46	48	45	48	53	56	57
19	61	61	40	52	32	46	48	45	48	54	56	57
20	61	60	42	52	33	45	48	46	48	53	56	57
21	60	55	43	52	33	46	49	45	49	53	56	57
22	62	52	45	52	35	46	48	45	49	54	56	57
23	62	55	46	50	38	47	47	45	49	54	56	58
24	62	56	45	47	39	46	46	44	50	54	56	58
25	63	56	45	48	41	46	46	43	52	54	57	58
26	63	56	45	48	40	46	46	44	51	54	56	58
27	63	57	45	48	41	46	46	44	50	55	57	58
28	63	59	46	49	42	46	45	45	51	55	57	58
29	62	60	47	49	---	46	46	46	51	54	57	58
30	62	60	47	50	---	46	47	46	51	55	57	58
31	63	---	48	50	---	47	---	46	---	55	58	---
MEAN	60	60	46	50	43	44	47	46	49	53	56	57

WILLAMETTE RIVER BASIN

14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

147

14159200 SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR

LOCATION.--Lat 44°02'50", long 122°13'00", in T.17 S., R.5 E., (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 100 ft (30 m) upstream from Tipsoo Creek, 8.0 mi (12.9 km) south of Rainbow, 9.0 mi (14.5 km) southeast of town of Blue River, and at mile 10.4 (16.7 km).

DRAINAGE AREA.--160 mi² (414 km²) at cableway 0.2 mi (0.3 km) downstream, where all discharge measurements are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1971, published as South Fork McKenzie River above Cougar Reservoir.

REVISED RECORDS.--WSP 1638: Drainage area. WSP 1935: 1958(M).

GAGE.--Water-stage recorder. Datum of gage is 1,709.51 ft (521.059 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

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

AVERAGE DISCHARGE.--25 years, 637 ft³/s (18.04 m³/s), 54.07 in/yr (1,373 mm/yr), 461,500 acre-ft/yr (569 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s (521 m³/s) Dec. 22, 1964, gage height, 20.06 ft (6.114 m), from floodmark, from rating curve extended above 7,600 ft³/s (215 m³/s), on basis of slope-area measurement of peak flow; minimum, 171 ft³/s (4.84 m³/s) Sept. 16, 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1300	3,130 88.6	8.52 2.597	Dec. 19	1130	4,240 120	9.68 2.950
Dec. 6	0430	*8,030 227	*12.82 3.908	Feb. 14	1000	4,600 130	10.02 3.054
Dec. 15	0400	5,450 154	10.78 3.286	Feb. 20	2030	6,230 176	11.43 3.484

Minimum, 200 ft³/s (5.66 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	314	689	825	695	1050	520	984	775	490	280	244
2	212	301	2140	765	658	1050	519	1020	777	500	280	239
3	207	285	1670	728	626	974	518	1000	757	547	280	242
4	210	273	1210	677	594	966	503	925	736	490	277	242
5	203	258	2250	626	560	897	490	877	735	504	274	239
6	225	250	6260	580	537	827	475	912	726	476	271	236
7	303	246	3320	554	518	778	465	1000	685	445	268	233
8	314	239	2120	535	496	766	456	967	658	422	269	232
9	511	234	1670	551	478	815	461	879	669	412	269	237
10	563	232	1450	574	459	901	552	805	715	394	268	250
11	481	255	1200	574	446	1120	1090	760	782	383	281	243
12	382	380	1040	555	432	1030	1240	765	1020	365	282	328
13	326	393	1240	534	1040	918	1260	807	932	359	277	270
14	294	377	2630	527	3930	859	1330	865	805	365	276	250
15	272	422	4410	522	3090	797	1070	918	775	350	277	242
16	257	577	2710	548	3410	742	923	971	776	343	272	238
17	253	823	1860	835	3360	697	863	1070	763	335	268	235
18	246	731	1670	778	3110	659	796	1030	781	329	266	236
19	234	608	3400	669	4990	623	735	943	797	320	264	240
20	229	589	2800	608	4740	588	703	962	755	314	259	360
21	225	1110	2140	569	4510	560	720	1080	738	311	257	279
22	222	1410	1640	545	2870	538	848	1160	645	307	256	257
23	217	1210	1350	1010	2060	525	1050	1160	581	303	254	247
24	215	1010	1330	1590	1600	524	1100	1180	534	299	252	265
25	215	814	1450	1460	1340	548	1040	1340	512	296	250	257
26	212	693	1900	1500	1180	590	995	1280	495	293	247	270
27	215	604	1850	1240	1070	592	984	1040	536	291	246	283
28	255	533	1430	1010	976	595	1050	885	517	286	246	326
29	270	483	1200	864	---	571	990	809	612	285	255	432
30	301	465	1020	781	---	555	953	776	548	282	255	333
31	322	---	910	743	---	545	---	769	---	278	248	---
TOTAL	8601	16119	61959	23877	49775	23200	24699	29939	21137	11374	8224	7985
MEAN	277	537	1999	770	1778	748	823	966	705	367	265	266
MAX	563	1410	6260	1590	4990	1120	1330	1340	1020	547	282	432
MIN	203	232	689	522	432	524	456	760	495	278	246	232
CFSM	1.73	3.36	12.5	4.81	11.1	4.68	5.14	6.04	4.41	2.29	1.66	1.66
IN.	2.00	3.75	14.41	5.55	11.57	5.39	5.74	6.96	4.91	2.64	1.91	1.86
AC-FT	17060	31970	122900	47360	98730	46020	48990	59380	41930	22560	16310	15840
CAL YR 1981	TOTAL	217754	MEAN 597	MAX 6260	MIN 175	CFSM 3.73	IN 50.63	AC-FT 431900				
WTR YR 1982	TOTAL	286889	MEAN 786	MAX 6260	MIN 203	CFSM 4.91	IN 66.70	AC-FT 569000				

WILLAMETTE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1957 to current year.

INSTRUMENTATION.--Temperature recorder since November 1957.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 15.5°C July 28, 29; minimum, 0°C Jan. 4.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

149

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14159400 COUGAR LAKE NEAR RAINBOW, OR

LOCATION.--Lat 44°07'40", long 122°14'25", in SE¼SE¼ sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, in intake tower near left end of Cougar Dam on South Fork McKenzie River, 2.7 mi (4.3 km) south of Rainbow, and at mile 4.5 (7.2 km).

DRAINAGE AREA.--207 mi² (536 km²).

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

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

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1963 by the Corps of Engineers; storage began September 1963. Total capacity is 219,100 acre-ft (270 hm³) at elevation 1,699 ft (517.9 m), maximum pool, and usable capacity is 164,800 acre-feet (203 hm³) between elevations 1,516 ft (462.1 m), minimum power pool, and 1,699 ft (517.9 m). Reservoir used for flood control and power generation. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 214,100 acre-ft (264 hm³) June 29, 1977, elevation, 1,695.06 ft (516.654 m); minimum, 33,690 acre-ft (41.5 hm³) Oct. 31 to Nov. 2, 1965, elevation, 1,475.40 ft (449.702 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 210,200 acre-ft (259 hm³) June 12, elevation, 1,691.95 ft (515.706 m); minimum, 63,330 acre-ft (78.1 hm³) Jan. 20, elevation, 1,531.09 ft (466.676 m).

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

1,510	50,920	1,650	162,300
1,550	75,940	1,696	215,300
1,600	114,800		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1617.10	1571.80	1550.04	1563.25	1548.57	1619.21	1644.40	1680.42	1691.58	1689.97	1686.92	1654.13
2	1615.52	1570.17	1557.08	1559.85	1547.59	1619.08	1645.22	1681.21	1691.58	1690.09	1686.00	1652.86
3	1613.87	1568.09	1559.29	1556.52	1547.23	1619.91	1646.03	1681.93	1691.56	1690.17	1685.07	1651.62
4	1612.18	1565.91	1556.50	1554.45	1547.84	1620.80	1646.77	1682.47	1691.55	1690.12	1684.14	1650.34
5	1610.43	1563.64	1562.09	1553.32	1547.24	1621.39	1647.44	1682.88	1691.58	1690.08	1683.16	1649.03
6	1608.60	1561.30	1588.51	1551.91	1545.59	1621.71	1648.05	1683.39	1691.59	1690.01	1682.21	1647.72
7	1607.24	1558.88	1597.45	1550.38	1543.93	1621.84	1648.63	1684.35	1691.50	1690.00	1681.25	1646.40
8	1605.93	1556.37	1598.32	1548.93	1542.20	1621.91	1649.19	1685.53	1691.45	1690.01	1680.30	1644.86
9	1605.35	1553.77	1597.71	1547.57	1541.93	1622.68	1649.76	1686.47	1691.53	1689.97	1679.35	1643.55
10	1605.01	1551.10	1596.15	1546.31	1542.71	1623.98	1650.73	1687.03	1691.58	1689.95	1678.39	1642.22
11	1604.30	1548.49	1593.63	1545.00	1543.44	1625.47	1653.31	1687.29	1691.75	1689.95	1677.49	1640.91
12	1603.17	1546.40	1590.62	1543.72	1544.13	1626.46	1656.15	1687.58	1691.90	1689.95	1676.50	1639.87
13	1601.80	1545.53	1588.49	1541.70	1547.99	1627.09	1659.24	1687.97	1691.69	1690.00	1675.49	1638.57
14	1600.29	1544.10	1594.37	1537.89	1556.08	1627.50	1661.81	1688.44	1691.60	1690.05	1674.46	1637.39
15	1598.67	1542.07	1610.48	1534.88	1576.78	1628.47	1663.02	1688.98	1691.59	1690.07	1673.44	1636.01
16	1596.98	1541.95	1615.38	1534.04	1589.34	1629.89	1664.13	1689.50	1691.62	1690.07	1672.39	1634.55
17	1595.20	1543.84	1613.93	1533.36	1601.18	1631.13	1665.56	1689.73	1691.62	1690.04	1671.33	1633.10
18	1593.38	1545.27	1611.04	1532.12	1610.48	1632.25	1666.76	1689.60	1691.74	1690.02	1670.26	1631.65
19	1591.51	1546.09	1619.46	1531.55	1626.86	1633.24	1667.78	1689.71	1691.80	1690.00	1669.18	1630.22
20	1589.58	1546.28	1624.92	1531.67	1641.59	1634.14	1668.71	1689.91	1691.65	1689.99	1668.08	1629.17
21	1587.62	1547.70	1624.54	1531.99	1653.87	1634.94	1669.66	1690.16	1691.59	1690.00	1666.99	1627.80
22	1585.60	1550.72	1621.41	1531.84	1657.54	1635.68	1670.99	1690.23	1691.46	1690.01	1665.88	1626.35
23	1583.55	1552.82	1614.82	1535.02	1655.34	1636.86	1672.85	1690.16	1691.39	1690.02	1664.74	1624.85
24	1581.46	1553.83	1607.99	1540.73	1650.22	1637.55	1674.78	1690.27	1691.39	1689.99	1663.57	1623.41
25	1579.32	1553.90	1602.10	1543.94	1644.28	1638.31	1676.54	1691.00	1691.20	1690.02	1662.41	1621.91
26	1577.14	1553.34	1599.34	1547.41	1637.90	1639.22	1677.57	1691.20	1690.88	1690.08	1661.23	1620.51
27	1575.86	1552.24	1596.02	1549.32	1631.01	1640.14	1678.36	1691.13	1690.66	1690.11	1660.04	1619.05
28	1575.27	1550.78	1589.47	1550.12	1623.63	1641.08	1679.31	1691.20	1690.47	1690.12	1658.82	1617.90
29	1574.81	1549.14	1581.75	1550.22	---	1641.94	1679.70	1691.32	1690.30	1689.61	1657.74	1616.91
30	1574.07	1548.61	1572.99	1549.87	---	1642.79	1679.81	1691.48	1690.04	1688.72	1656.58	1615.67
31	1572.95	---	1566.16	1549.36	---	1643.62	---	1691.57	---	1687.83	1655.37	---
MEAN	1594.96	1552.80	1593.61	1544.46	1587.70	1630.33	1662.08	1687.87	1691.39	1689.90	1671.90	1634.95
MAX	1617.10	1571.80	1624.92	1563.25	1657.54	1643.62	1679.81	1691.57	1691.90	1690.17	1686.92	1654.13
MIN	1572.95	1541.95	1550.04	1531.55	1541.93	1619.08	1644.40	1680.42	1690.04	1687.83	1655.37	1615.67
(+)	92720	74970	87580	75490	136100	155700	195500	209700	207800	205100	168000	128700
(#)	-38580	-17750	+12610	-12090	+60610	+19600	+39800	+14200	-1900	-2700	-37100	-39300
CAL YR 1981	MEAN	1625.36	MAX	1691.23	MIN	1531.45	AC-FT#	+40				
WTR YR 1982	MEAN	1628.76	MAX	1691.90	MIN	1531.55	AC-FT#	-2600				

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

Change in contents, in acre-feet.

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR

LOCATION.--Lat 44°08'10", long 122°14'50", in NE¼ sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 0.2 mi (0.3 km) upstream from Cougar Creek, 0.6 mi (1.0 km) downstream from Cougar Dam, 2.1 mi (3.4 km) south of Rainbow, and at mile 3.9 (6.3 km).

DRAINAGE AREA.--208 mi² (539 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1638: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,236.42 ft (376.861 m) National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). Oct. 1 to Nov. 4, 1947, nonrecording gage at site 40 ft (12 m) upstream at datum 0.80 ft (0.244 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1963 by Cougar Lake (see station 14159400), usable capacity, 165,000 acre-ft (203 hm³). No diversion above station.

AVERAGE DISCHARGE.--35 years, 868 ft³/s (24.58 m³/s), 56.67 in/yr (1,439 mm/yr), 628,900 acre-ft/yr (775 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s (498 m³/s) Dec. 11, 1956, gage height, 8.66 ft (2.640 m), from rating curve extended above 8,100 ft³/s (229 m³/s); maximum gage height, 8.90 ft (2.713 m) Dec. 22, 1955 (backwater from debris); minimum discharge, 17 ft³/s (0.48 m³/s) Nov. 18, 1965; minimum daily, 85 ft³/s (2.41 m³/s) Apr. 26-28, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s (694 m³/s) Dec. 28, 1945, gage height, 8.8 ft (2.68 m), from floodmarks, at Corps of Engineers gage at site 40 ft (12 m) upstream at datum 0.80 ft (0.244 m) higher; gage height at present site and datum, about 9.3 ft (2.83 m), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,020 ft³/s (142 m³/s) Dec. 23, gage height, 4.78 ft (1.457 m); minimum, 116 ft³/s (3.29 m³/s) Dec. 15; minimum daily, 168 ft³/s (4.76 m³/s) Dec. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	920	757	546	2010	1130	3540	321	838	838	590	791	867
2	920	895	1120	2040	1140	1460	321	781	846	517	799	865
3	920	1020	1650	2060	894	911	321	781	846	578	791	874
4	920	1040	2500	1520	524	911	325	781	804	610	796	876
5	930	1040	1360	1120	854	901	325	781	797	616	801	884
6	939	1040	205	1130	1150	898	321	789	838	578	798	881
7	936	1060	781	1120	1130	894	325	656	812	522	800	883
8	936	1070	2470	1100	1110	900	321	488	713	500	804	891
9	939	1080	2450	1090	670	688	325	483	684	500	804	898
10	939	1080	2450	1090	311	593	321	590	758	461	805	908
11	935	1100	2440	1120	307	825	325	699	789	439	811	909
12	940	1110	2440	1090	307	886	325	706	1130	418	815	910
13	946	749	2440	1260	309	885	325	692	1180	378	815	913
14	951	901	1710	1760	319	893	593	728	920	377	818	917
15	951	1140	168	1480	311	578	820	789	838	384	820	913
16	961	738	1190	990	309	316	623	820	855	390	820	916
17	964	539	2980	1480	311	318	407	1120	855	389	820	921
18	967	541	3330	1510	633	321	402	1290	820	382	827	927
19	976	546	820	1090	306	321	407	1170	882	369	823	929
20	976	754	990	728	321	321	397	1000	910	348	831	932
21	976	1120	2970	610	486	321	402	1110	855	331	835	928
22	981	1130	3470	743	1760	318	402	1300	773	331	832	941
23	985	1120	4450	630	3620	321	402	1400	630	353	840	934
24	992	1120	4700	684	4510	321	407	1280	584	328	845	949
25	998	1120	4410	1120	4520	321	407	1100	650	295	848	945
26	1010	1100	4000	1140	4490	321	650	1340	721	288	847	950
27	690	1100	3880	1140	4510	321	789	1190	721	304	852	948
28	504	1110	4500	1120	4500	330	789	920	677	307	855	945
29	506	1120	4450	1130	---	334	979	820	781	652	846	948
30	613	692	4500	1120	---	312	1100	751	736	785	849	940
31	758	---	3430	1130	---	325	---	797	---	788	862	---
TOTAL	27879	28932	78800	37355	40742	20905	14177	27990	24243	14108	25500	27342
MEAN	899	964	2542	1205	1455	674	473	903	808	455	823	911
MAX	1010	1140	4700	2060	4520	3540	1100	1400	1180	788	862	950
MIN	504	539	168	610	306	312	321	483	584	288	791	817
AC-FT	55300	57390	156300	74090	80810	41470	28120	55520	48090	27980	50580	54230
MEAN†	272	666	2750	1010	2550	993	1140	1130	776	411	219	251
CFSM†	1.31	3.20	13.22	4.86	12.26	4.77	5.48	5.43	3.73	1.98	1.05	1.21
IN.†	1.51	3.57	15.23	5.59	12.75	5.51	6.12	6.29	4.16	2.28	1.22	1.35
AC-FT†	16720	39640	168910	62000	141420	61070	67920	69720	46190	25280	13480	14930

CAL YR 1981 TOTAL 279284 MEAN 765 MAX 4930 MIN 168 AC-FT 554000 MEAN† 765 CFSM† 3.68 IN.† 49.95 AC-FT† 554000
WTR YR 1982 TOTAL 367973 MEAN 1008 MAX 4700 MIN 168 AC-FT 729900 MEAN† 1000 CFSM† 4.81 IN.† 65.58 AC-FT† 727300

† Adjusted for change in contents in Cougar Lake.

WILLAMETTE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1955 to current year.

INSTRUMENTATION.--Temperature recorder since July 1955.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.0°C July 28, 1958; minimum, 0.5°C Jan. 20-23, 1962.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 13.5°C Sept. 29; minimum recorded, 3.5°C Jan. 20-24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

153

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

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

LOCATION.--Lat 44°13'05", long 122°15'50", in SE¼NE¼ sec.36, T.15 S., R.4 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.2 mi (0.3 km) downstream from Tidbits Creek, 5.5 mi (8.8 km) northeast of town of Blue River, and at mile 8.5 (13.7 km).

DRAINAGE AREA.--45.8 mi² (118.6 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,386.90 ft (422.727 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

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

AVERAGE DISCHARGE.--19 years, 259 ft³/s (7.335 m³/s), 76.80 in/yr (1,951 mm/yr), 187,600 acre-ft/yr (231 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft³/s (351 m³/s) Dec. 22, 1964, gage height, 15.32 ft (4.670 m), from floodmarks, from rating curve extended above 2,800 ft³/s (79.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 8.2 ft³/s (0.23 m³/s) Sept. 28, 29, Oct. 2-4, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1130	3,310 93.7	8.10 2.469	Dec. 19	0900	3,260 92.3	8.05 2.454
Dec. 6	0500	*4,490 127	*8.99 2.740	Feb. 14	1200	3,920 111	8.58 2.615
Dec. 15	0300	3,430 97.1	8.20 2.499	Feb. 20	1930	4,050 115	8.68 2.646

Minimum, 12 ft³/s (0.34 m³/s) Sept. 5-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	157	267	212	249	471	165	354	120	58	21	15
2	54	124	1780	188	218	508	163	356	116	57	21	14
3	48	105	1050	180	202	462	163	330	109	66	20	13
4	45	92	740	162	184	559	163	288	106	59	20	13
5	42	82	1790	141	167	453	152	271	104	59	19	13
6	116	74	3450	129	154	354	146	297	116	54	18	12
7	201	69	1540	119	144	310	144	335	105	51	18	12
8	174	65	818	115	134	306	143	294	98	48	20	12
9	384	61	576	118	125	442	144	252	95	45	21	13
10	302	59	541	129	116	592	166	213	95	43	21	17
11	228	65	420	129	112	823	722	202	99	40	29	16
12	156	170	339	129	107	594	969	210	147	38	24	61
13	119	176	638	126	824	422	922	232	136	37	20	32
14	97	176	1650	124	3310	341	916	255	111	38	19	22
15	84	323	2760	126	2190	295	570	268	102	35	19	19
16	74	391	1380	174	2810	257	411	271	98	33	17	17
17	67	568	740	606	2730	228	357	287	93	32	17	16
18	62	563	565	426	1070	206	310	266	87	30	16	16
19	58	375	1990	283	2810	186	271	219	83	29	16	16
20	53	374	1310	223	2690	170	264	221	79	28	15	31
21	51	1040	948	188	2030	159	318	256	75	27	15	23
22	48	1070	642	172	967	151	496	261	66	26	15	19
23	47	807	446	197	610	150	639	238	60	26	14	17
24	45	563	495	168	429	164	603	232	58	25	14	19
25	44	394	645	792	335	194	495	251	57	24	14	19
26	48	303	739	797	295	224	423	214	54	23	13	30
27	48	236	714	532	304	224	396	167	69	23	13	37
28	75	194	488	404	288	216	414	157	61	22	13	58
29	111	168	357	311	---	194	388	138	70	22	17	106
30	145	153	284	264	---	184	340	124	63	21	19	56
31	184	---	243	271	---	178	---	122	---	21	16	---
TOTAL	3261	8997	30345	7935	25604	10017	11773	7581	2732	1140	554	764
MEAN	105	300	979	256	914	323	392	245	91.1	36.8	17.9	25.5
MAX	384	1070	3450	797	3310	823	969	356	147	66	29	106
MIN	42	59	243	115	107	150	143	122	54	21	13	12
CFSM	2.29	6.55	21.4	5.59	20.0	7.05	8.56	5.35	1.99	.80	.39	.56
IN.	2.65	7.31	24.65	6.44	20.80	8.14	9.56	6.16	2.22	.93	.45	.62
AC-FT	6470	17850	60190	15740	50790	19870	23350	15040	5420	2260	1100	1520
CAL YR 1981	TOTAL	86789	MEAN 238	MAX 3450	MIN 11	CFSM 5.20	IN 70.49	AC-FT 172100				
WTR YR 1982	TOTAL	110703	MEAN 303	MAX 3450	MIN 12	CFSM 6.62	IN 89.91	AC-FT 219600				

WILLAMETTE RIVER BASIN

155

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: September 1963 to current year.

INSTRUMENTATION.--Temperature recorder since September 1963.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.0°C Aug. 3, 4, 1974, July 20, 1979; minimum, 0.0°C on several days in 1969, 1971-74, 1976, 1979-80, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.0°C July 29; minimum recorded, 0.0°C Jan. 3, 4.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14161500 LOOKOUT CREEK NEAR BLUE RIVER, OR

LOCATION.--Lat 44°12'35", long 122°15'20", in T.15 or 16 S., R.5 E. (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 6.0 mi (9.7 km) northeast of town of Blue River, and at mile 0.5 (0.8 km).

DRAINAGE AREA.--24.1 mi² (62.4 km²).

PERIOD OF RECORD.--August 1949 to September 1955, September 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,377.76 ft (419.941 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good, except those for periods of no gage-height record Dec. 22 to Jan. 27, July 5-18, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--25 years, 127 ft³/s (3.597 m³/s), 71.56 in/yr (1,818 mm/yr), 92,010 acre-ft/yr (113 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft³/s (189 m³/s) Dec. 22, 1964, gage height, 8.88 ft (2.707 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s), on basis of slope-area measurement of peak flow; minimum, 4.8 ft³/s (0.14 m³/s) Sept. 16, 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1000	1,430 40.5	5.60 1.707	Feb. 14	1030	1,570 44.5	5.77 1.759
Dec. 6	0630	*1,750 49.6	*5.97 1.820	Feb. 16	1430	1,300 36.8	5.43 1.655
Dec. 15	0200	1,240 35.1	5.35 1.631	Feb. 20	1900	1,630 46.2	5.84 1.780
Dec. 19	0730	1,020 28.9	5.05 1.539				

Minimum, 8.8 ft³/s (0.25 m³/s) Oct. 6-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	63	172	120	146	205	100	168	82	38	16	10
2	17	53	898	110	133	216	102	169	78	39	16	9.9
3	14	45	516	100	123	224	107	164	74	45	16	9.9
4	15	40	333	90	112	273	106	151	71	40	15	9.8
5	14	36	559	80	103	233	102	143	73	41	14	9.2
6	31	34	1440	75	95	186	96	150	77	40	14	9.4
7	59	33	778	70	89	164	93	162	70	38	14	9.3
8	61	31	455	65	83	156	90	149	66	36	18	9.1
9	135	29	332	65	77	180	90	133	67	34	17	11
10	127	27	275	70	72	224	111	121	72	32	16	14
11	99	28	217	70	68	286	275	114	75	32	23	12
12	68	71	180	75	64	253	326	115	105	30	17	29
13	53	71	280	70	268	207	346	123	87	30	15	15
14	43	72	734	70	1260	182	368	135	74	30	15	12
15	36	95	1180	75	897	164	279	141	71	28	15	11
16	34	121	667	95	1110	149	221	146	70	26	14	10
17	31	174	404	340	1110	136	186	160	66	24	13	9.7
18	28	199	353	240	882	124	163	145	63	24	13	9.5
19	26	161	819	150	1390	114	146	129	61	23	12	9.9
20	24	169	597	120	1210	105	136	129	56	22	12	24
21	23	429	462	110	1000	98	136	147	53	21	12	15
22	22	507	360	100	545	93	160	151	46	20	11	12
23	21	418	300	110	358	90	203	141	55	20	11	11
24	20	301	360	480	265	89	218	143	75	19	10	14
25	19	215	420	460	207	93	202	156	71	18	10	13
26	18	169	440	400	180	101	186	136	70	18	9.9	24
27	18	138	380	300	171	104	178	108	86	18	9.8	24
28	29	114	280	246	161	109	188	93	79	18	9.7	29
29	44	101	220	230	---	106	175	88	69	17	14	37
30	59	93	160	196	---	104	165	86	44	17	13	20
31	68	---	140	158	---	103	---	85	---	17	11	---
TOTAL	1271	4037	14711	4940	12179	4871	5254	4181	2106	855	426.4	442.7
MEAN	41.0	135	475	159	435	157	175	135	70.2	27.6	13.8	14.8
MAX	135	507	1440	480	1390	286	368	169	105	45	23	37
MIN	14	27	140	65	64	89	90	85	44	17	9.7	9.1
CFSM	1.70	5.60	19.7	6.60	18.1	6.52	7.26	5.60	2.91	1.15	.57	.61
IN.	1.96	6.23	22.71	7.62	18.80	7.52	8.11	6.45	3.25	1.32	.66	.68
AC-FT	2520	8010	29180	9800	24160	9660	10420	8290	4180	1700	846	878
CAL YR 1981	TOTAL	42122.7	MEAN 115	MAX 1440	MIN 5.1	CFSM 4.77	IN 65.02	AC-FT 83550				
WTR YR 1982	TOTAL	55274.1	MEAN 151	MAX 1440	MIN 9.1	CFSM 6.27	IN 85.32	AC-FT 109600				

WILLAMETTE RIVER BASIN

14162100 BLUE RIVER LAKE NEAR BLUE RIVER, OR

LOCATION.--Lat 44°10'20", long 122°19'40", in SE¼SE¼ sec.16, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, in intake tower near left end of Blue River Dam on Blue River, 1.4 mi (2.3 km) north of town of Blue River, and at mile 1.7 (2.7 km).

DRAINAGE AREA.--87.3 mi² (226.1 km²).

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

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

REMARKS.--Reservoir is formed by earthfill dam with concrete gate and spillway section, completed in 1968 by Corps of Engineers; storage began October 1968. Total capacity is 89,520 acre-ft (110 hm³) at elevation 1,357 ft (413.6 m), maximum pool, and usable capacity is 85,550 acre-ft (105 hm³) between elevations 1,180 ft (359.7 m), minimum flood control pool, and 1,357 ft (413.6 m), maximum pool. Reservoir used for flood control. Figures given herein represent total contents.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 85,680 acre-ft (106 hm³) June 12, 13, 1977, elevation, 1,353.02 ft (412.400 m); minimum observed since first filling in 1968, 305 acre-ft (376,000 m³) Dec. 7, 1973, elevation, 1,125.47 ft (343.043 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 84,440 acre-ft (104 hm³) May 26, elevation, 1,351.71 ft (412.001 m); minimum, 3,870 acre-ft (4.77 hm³) Jan. 22, elevation, 1,179.24 ft (359.432 m).

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 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1247.94	1236.72	1181.81	1210.62	1210.33	1292.84	1319.15	1341.44	1351.33	1350.25	1333.90	1294.23
2	1248.17	1233.88	1222.09	1200.44	1211.52	1293.74	1320.03	1342.21	1351.14	1350.26	1332.78	1292.62
3	1248.28	1230.61	1227.74	1192.31	1215.00	1295.54	1320.98	1343.08	1351.01	1350.24	1331.63	1291.06
4	1248.37	1226.74	1219.79	1185.68	1218.92	1297.74	1321.93	1343.98	1350.65	1350.10	1330.46	1289.43
5	1248.44	1222.39	1235.60	1182.01	1222.15	1298.82	1322.75	1344.93	1350.34	1350.06	1329.33	1287.79
6	1249.07	1217.71	1270.18	1180.46	1224.90	1299.24	1323.47	1346.03	1350.15	1350.04	1328.15	1286.06
7	1250.53	1212.65	1279.56	1180.18	1227.30	1299.35	1324.22	1347.23	1350.09	1350.04	1326.99	1284.28
8	1251.97	1206.60	1279.71	1180.14	1229.40	1300.05	1324.96	1348.26	1350.07	1350.04	1325.86	1282.24
9	1255.41	1200.52	1278.06	1180.42	1231.25	1301.83	1325.70	1349.12	1350.06	1350.04	1324.72	1280.43
10	1258.11	1196.13	1275.95	1180.33	1232.90	1303.15	1326.95	1349.86	1350.06	1350.03	1323.56	1278.62
11	1259.96	1192.99	1271.63	1180.22	1234.42	1304.01	1330.83	1350.54	1350.16	1350.03	1322.47	1276.81
12	1261.04	1190.88	1265.80	1180.13	1235.78	1303.72	1333.94	1351.06	1350.34	1350.03	1321.33	1275.29
13	1261.51	1187.49	1262.27	1180.18	1245.08	1303.57	1335.32	1351.29	1350.28	1350.05	1320.13	1273.88
14	1261.22	1183.95	1270.06	1180.31	1275.07	1303.87	1335.27	1351.41	1350.16	1349.95	1318.95	1273.47
15	1260.25	1184.03	1289.34	1180.38	1287.82	1304.42	1334.50	1351.49	1350.08	1349.67	1317.70	1273.40
16	1258.95	1186.19	1295.14	1182.80	1296.43	1304.99	1334.17	1351.57	1349.99	1349.32	1316.40	1273.34
17	1257.59	1191.26	1292.86	1191.20	1305.38	1305.84	1334.08	1351.60	1349.93	1348.91	1315.11	1273.25
18	1256.17	1194.53	1287.57	1185.78	1310.29	1306.90	1334.04	1351.48	1349.98	1348.44	1313.80	1273.17
19	1254.73	1192.55	1297.77	1180.62	1324.36	1307.82	1334.03	1351.37	1350.01	1347.81	1312.47	1273.11
20	1253.22	1191.10	1302.88	1179.82	1333.19	1308.64	1334.04	1351.47	1350.04	1346.97	1311.16	1273.19
21	1251.68	1205.92	1302.57	1179.50	1336.34	1309.39	1334.41	1351.61	1350.04	1345.91	1309.83	1273.19
22	1250.09	1214.46	1298.86	1180.54	1332.80	1310.24	1335.38	1351.50	1350.04	1344.84	1308.49	1273.17
23	1248.48	1210.21	1292.00	1201.06	1326.45	1310.94	1336.37	1351.39	1350.02	1343.79	1307.10	1273.10
24	1246.84	1200.04	1285.42	1221.19	1318.93	1311.69	1336.96	1351.46	1350.05	1342.71	1305.73	1273.07
25	1245.21	1188.53	1279.52	1222.88	1310.71	1312.57	1337.22	1351.66	1350.05	1341.62	1304.34	1273.04
26	1243.55	1181.82	1274.29	1224.78	1303.16	1313.59	1337.68	1351.57	1350.11	1340.55	1302.94	1273.13
27	1241.88	1180.14	1268.53	1223.89	1298.27	1314.58	1338.39	1351.40	1350.17	1339.45	1301.52	1273.20
28	1240.02	1179.92	1260.13	1222.15	1294.46	1315.61	1339.30	1351.37	1350.17	1338.35	1300.10	1273.55
29	1239.52	1179.94	1248.91	1219.60	---	1316.51	1340.00	1351.43	1350.23	1337.24	1298.74	1274.19
30	1239.86	1180.59	1234.03	1215.68	---	1317.41	1340.64	1351.48	1350.25	1336.15	1297.29	1274.40
31	1238.95	---	1221.13	1211.85	---	1318.31	---	1351.52	---	1335.03	1295.77	---
MEAN	1250.87	1200.02	1266.81	1194.10	1271.16	1306.03	1331.56	1349.54	1350.23	1346.38	1315.77	1277.99
MAX	1261.51	1236.72	1302.88	1224.78	1336.34	1318.31	1340.64	1351.66	1351.33	1350.26	1333.90	1294.23
MIN	1238.95	1179.92	1181.81	1179.50	1210.33	1292.84	1319.15	1341.44	1349.93	1335.03	1295.77	1273.04
(†)	15880	4050	11300	9280	39600	55960	74270	84260	83060	69390	40410	28820
(‡)	-2610	-11830	+7250	-2020	+30320	+16360	+18310	+9990	-1200	-13670	-28980	-11590
CAL YR 1981	MEAN	1283.05	MAX	1351.06	MIN	1179.41	AC-FT#	-7080				
WTR YR 1982	MEAN	1288.50	MAX	1351.66	MIN	1179.50	AC-FT#	-10330				

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

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

159

14162200 BLUE RIVER AT BLUE RIVER, OR

LOCATION.--Lat 44°09'45", long 122°19'55", in NW¼SE¼ sec.21, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, on right bank 0.3 mi (0.5 km) upstream from Simmonds Creek, 0.7 mi (1.1 km) north of town of Blue River, 0.8 mi (1.3 km) downstream from Blue River Dam, and at mile 0.9 (1.4 km).

DRAINAGE AREA.--87.7 mi² (227.1 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,056.53 ft (322.030 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 25, 1966, nonrecording gage at datum 0.80 ft (0.244 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since October 1968 by Blue River Lake (see station 14162100). No diversion above station. Discharge not adjusted for storage or release from Blue River Lake as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--16 years, 469 ft³/s (13.28 m³/s), 339,800 acre-ft/yr (419 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,270 ft³/s (206 m³/s) Feb. 23, 1968, gage height, 8.93 ft (2.722 m); minimum, 0.80 ft³/s (0.023 m³/s) Oct. 8, 10, 11, 1968; minimum daily, 3.7 ft³/s (0.10 m³/s) Oct. 8, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,520 ft³/s (99.7 m³/s) Feb. 24, gage height, 8.02 ft (2.444 m); minimum, 38 ft³/s (1.08 m³/s) Sept. 14; minimum daily, 47 ft³/s (1.33 m³/s) Apr. 6, 7, 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	562	774	1460	645	1240	54	284	303	116	479	468
2	53	555	1080	1200	375	592	55	284	274	116	479	467
3	53	547	1400	966	113	365	51	209	252	154	479	464
4	53	571	2180	762	50	480	50	118	345	173	479	461
5	53	574	1450	491	50	543	48	71	345	135	479	459
6	54	558	225	351	51	543	47	55	305	101	475	471
7	54	543	706	276	52	543	47	55	216	92	475	474
8	55	563	1560	253	52	361	48	56	186	92	472	471
9	57	513	1560	251	53	232	47	56	178	92	471	468
10	57	369	1550	300	53	554	47	56	167	82	467	465
11	57	289	1820	305	54	1000	50	56	167	68	466	462
12	56	401	1980	299	54	1050	352	138	244	67	464	459
13	99	477	1990	285	57	759	1080	297	292	66	460	367
14	204	460	1600	296	77	535	1640	377	248	114	459	131
15	311	464	337	300	662	381	1340	412	220	180	474	52
16	351	503	1070	323	2200	295	895	428	220	208	481	48
17	351	638	2140	905	1880	152	708	496	199	234	479	48
18	348	794	2640	1320	1800	50	600	536	160	248	476	48
19	348	794	1110	923	454	50	504	409	139	310	475	48
20	345	776	928	538	1600	50	471	339	139	396	472	48
21	345	815	2020	437	2310	50	399	382	139	475	471	48
22	341	1310	2390	364	3080	50	398	497	139	475	467	48
23	340	1980	2840	235	3450	50	568	457	105	475	467	48
24	338	1870	2770	758	3460	50	667	372	92	475	464	48
25	335	1520	2730	1530	3430	51	669	358	92	475	464	48
26	331	939	2770	1530	2950	51	498	426	92	475	461	48
27	329	530	2710	1360	2030	51	372	373	126	476	459	48
28	395	386	2680	1090	1620	52	351	248	125	479	456	49
29	257	328	2760	947	---	52	352	203	116	479	455	50
30	204	311	2820	954	---	53	322	203	116	479	465	49
31	438	---	2020	947	---	54	---	204	---	479	471	---
TOTAL	6665	20940	56610	21956	32662	10339	12730	8455	5741	8286	14561	6863
MEAN	215	698	1826	708	1167	334	424	273	191	267	470	229
MAX	438	1980	2840	1530	3460	1240	1640	536	345	479	481	474
MIN	53	289	225	235	50	50	47	55	92	66	455	48
AC-FT	13220	41530	112300	43550	64790	20510	25250	16770	11390	16440	28880	13610
CAL YR 1981	TOTAL	171944	MEAN	471	MAX	3390	MIN	39	AC-FT	341100		
WTR YR 1982	TOTAL	205808	MEAN	564	MAX	3460	MIN	47	AC-FT	408200		

WILLAMETTE RIVER BASIN

14162200 BLUE RIVER AT BLUE RIVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1966 to current year.

INSTRUMENTATION.--Temperature recorder since August 1966.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C July 6, 1968; minimum, 0.0°C Jan. 5-9, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.0°C Sept. 13, 16, 21-23, 29; minimum recorded, 3.0°C Mar. 15.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

161

14162200 BLUE RIVER AT BLUE RIVER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14162500 MCKENZIE RIVER NEAR VIDA, OR

LOCATION.--Lat 44°07'30", long 122°28'10", in NE¼NE¼ sec.5, T.17 S., R.3 E., Lane County, Hydrologic Unit 17090004, on right bank 0.4 mi (0.6 km) downstream from Mason Creek, 5.4 mi (8.7 km) east of Vida, and at mile 47.7 (76.7 km).

DRAINAGE AREA.--930 mi² (2,409 km²) at cableway 0.4 mi (0.6 km) downstream, where all discharge measurement are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1910 to March 1911 (published as "at Martins Rapids, near Vida"), September 1924 to current year. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 855.71 ft (260.820 m) National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). July 1, 1910, to Mar. 31, 1911, nonrecording gage at site 3 mi (5 km) downstream at different datum. Sept. 1, 1924, to Nov. 16, 1928, nonrecording gage at site 20 ft (6 m) upstream at datum 0.15 ft (0.046 m) lower. Nov. 17, 1928, to Sept. 23, 1968, water-stage recorder at present site on left bank at datum 0.15 ft (0.046 m) lower.

REMARKS.--Water-discharge records good except those for period of no gage-height record, June 17 to July 22, which are fair. Flow regulated since 1963 by Smith River Reservoir (see station 14158795) and Cougar Lake (see station 14159400), and since 1968 by Blue River Lake (see station 14162100). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--58 years (water years 1925-82), 4,036 ft³/s (114.3 m³/s), 2,924,000 acre-ft/yr (3.61 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,400 ft³/s (1,820 m³/s) Dec. 28, 1945, gage height, 17.70 ft (5.395 m), site and datum then in use, from rating curve extended above 32,000 ft³/s (906 m³/s); minimum, 1,260 ft³/s (35.7 m³/s) Nov. 7, 1930, Sept. 17, Oct. 4, 8, 9, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1923 reached a stage of 17.2 ft (5.24 m), from floodmarks, discharge, 62,000 ft³/s (1,760 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,800 ft³/s (617 m³/s) Dec. 6, gage height, 7.94 ft (2.420 m); minimum, 2,040 ft³/s (57.8 m³/s) Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2280	2970	4640	7380	5340	9670	3190	4010	4110	3200	3180	2900
2	2350	3000	8940	7030	4850	6950	3150	4010	4130	3200	3170	2990
3	2330	3100	8650	6870	4340	6000	3150	3990	3990	3000	3170	3090
4	2330	3100	8900	6540	3620	6510	3150	4010	3810	3000	3150	3000
5	2330	3100	10500	5300	3760	6200	3130	3990	3770	3000	3140	2950
6	2450	3090	17200	4890	3960	5740	3060	3990	3850	2800	3130	2930
7	2820	3070	11400	4630	3860	5430	2970	3990	3710	2800	3110	2930
8	2650	3090	10700	4200	3800	5230	2920	3950	3610	2600	3130	2960
9	3350	3070	9590	4130	3320	4970	2880	3850	3510	2600	3110	3020
10	3380	2930	9170	4290	2790	5190	3020	3730	3550	2600	3110	3100
11	3190	2880	8750	4330	2750	6420	4460	3710	3750	2600	3190	3050
12	2910	3510	8520	4130	2690	6410	5030	3730	4200	2600	3130	3240
13	2780	3250	8800	4180	3940	5800	5880	3970	4400	2400	3090	2990
14	2810	3170	12000	4820	11500	5430	7470	4240	4200	2400	3080	2540
15	2840	3640	13600	4760	10200	4790	6950	4240	4000	2600	3100	2520
16	2860	3640	11600	4180	12800	4110	5830	4260	4000	2600	3090	2520
17	2840	4140	11700	6660	13800	3800	5030	4680	4000	2800	3060	2510
18	2830	4390	11600	6920	12400	3390	4660	5500	4000	2800	3070	2510
19	2820	3910	13200	5620	14800	3360	4350	5140	4000	2800	3050	2520
20	2810	3950	10900	4620	15300	3410	4150	4830	4000	2800	3030	2810
21	2810	5990	12400	4100	16200	3200	4030	5010	3800	3000	3020	2670
22	2790	7440	11600	4120	14100	3200	3930	5450	3800	2800	3020	2590
23	2780	7610	12300	6480	14100	3110	3950	5500	3400	2780	3010	2500
24	2730	6770	12500	8350	13900	3100	3990	5340	3200	2770	3010	2570
25	2730	5870	12800	8510	13200	3090	3990	5270	3000	2720	3000	2590
26	2750	5030	13500	8770	12300	3140	3990	5530	3200	2700	2980	2640
27	2470	4390	13200	7780	11400	3160	3990	5140	3400	2700	2930	2700
28	2360	4030	12600	6690	10600	3220	3990	4390	3400	2700	2920	2700
29	2340	3850	12000	6010	---	3150	4010	4010	3400	2920	2940	2960
30	2410	3520	11600	5730	---	3150	4010	3910	3200	3200	2890	2760
31	2870	---	10000	5700	---	3170	---	3930	---	3190	2880	---
TOTAL	84000	121500	344860	177720	245620	143500	124310	137300	112390	86680	94890	83760
MEAN	2710	4050	11120	5733	8772	4629	4144	4429	3746	2796	3061	2792
MAX	3380	7610	17200	8770	16200	9670	7470	5530	4400	3200	3190	3240
MIN	2280	2880	4640	4100	2690	3090	2880	3710	3000	2400	2880	2500
AC-FT	166600	241000	684000	352500	487200	284600	246600	272300	222900	171900	188200	166100

CAL YR 1981	TOTAL	1400260	MEAN	3836	MAX	17200	MIN	2010	AC-FT	2777000
WTR YR 1982	TOTAL	1756530	MEAN	4812	MAX	17200	MIN	2280	AC-FT	3484000

WILLAMETTE RIVER BASIN

163

14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to current year.

WATER TEMPERATURES: June 1961 to current year.

INSTRUMENTATION.--Graphic temperature recorder since June 1961. Dual conductivity-temperature recorder since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 72 micromhos Nov. 20, 1980; minimum recorded, 24 micromhos Nov. 25, 1977.

WATER TEMPERATURES: Maximum, 16.0°C July 6, 7, 28, 1968; minimum recorded, 0.5°C Jan. 1, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 63 micromhos Oct. 13; minimum, 36 micromhos Dec. 6.

WATER TEMPERATURES: Maximum, 14.5°C July 11, 12; minimum, 2.5°C Jan. 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 20...	1400	4100	47	6.6	8.5	11.6	19	5.1	1.4	3.1
SEP 08...	0900	2970	47	7.4	11.0	11.5	16	3.8	1.5	3.2
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
APR 20...	.8	21	5.0	1.1	<.1	.080	.18	.33	.090	.33
SEP 08...	.9	20	<5.0	1.1	<.1	<.060	<.10	.30	<.060	.40
DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	
APR 20...	.020	.020	1.7	.1	19	40	48	443	.60	
SEP 08...	.030	.060	.8	.2	19	36	--	289	10	

WILLAMETTE RIVER BASIN

14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
APR 20...	<1	<1	19	<100	<3	1	<10	<10	<1	1
SEP 08...	<1	<1	10	100	<1	<1	<10	<10	<1	1

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
APR 20...	3	8	16	70	2	1	<3	10	<.1
SEP 08...	3	6	8	50	2	2	2	20	<.1

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
APR 20...	.1	<1	5	<1	<1	<1	<1	--	20
SEP 08...	<.1	2	5	<1	<1	<1	1	10	10

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	56	51	43	49	45	51	48	49	44	41	43
2	54	55	45	44	50	48	51	49	49	44	42	44
3	54	54	45	45	51	50	51	49	49	44	42	44
4	55	54	45	47	52	49	50	49	48	44	42	45
5	54	54	44	51	52	50	51	51	48	44	42	46
6	54	55	38	52	52	51	52	51	48	44	42	46
7	54	55	41	52	52	51	52	50	47	45	42	47
8	54	55	42	52	51	51	52	50	48	45	40	47
9	56	55	43	52	52	52	53	50	47	43	41	47
10	57	56	43	52	54	52	52	50	47	44	43	48
11	57	56	43	52	54	49	50	50	47	45	43	48
12	59	56	44	51	54	49	48	50	46	46	43	48
13	61	57	44	52	52	50	46	49	45	45	44	49
14	57	56	42	51	44	50	43	50	46	45	42	51
15	57	56	42	51	45	51	43	49	46	44	42	51
16	57	55	45	52	43	51	45	49	46	44	43	52
17	57	54	44	50	43	52	47	48	45	43	42	52
18	57	54	44	49	44	52	47	47	45	43	43	52
19	57	55	44	50	42	53	46	48	45	42	42	53
20	58	55	46	51	41	51	47	48	44	41	42	52
21	56	55	44	52	39	52	46	48	45	41	42	53
22	57	52	44	52	41	52	46	47	45	41	42	53
23	57	54	43	48	43	53	45	46	45	41	43	53
24	57	52	43	46	44	53	45	47	45	41	43	53
25	58	51	42	46	44	53	45	47	46	41	43	54
26	58	54	41	46	45	53	45	46	45	41	43	54
27	59	53	41	46	45	52	46	46	45	40	44	54
28	58	52	41	47	44	52	46	48	45	40	44	53
29	58	52	41	48	---	51	47	49	45	40	43	52
30	58	53	41	48	---	50	47	48	45	40	44	52
31	56	---	41	48	---	50	---	48	---	40	44	---
MEAN	57	54	43	49	47	51	48	49	46	43	43	50

WILLAMETTE RIVER BASIN

165

14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14163000 GATE CREEK AT VIDA, OR

LOCATION.--Lat 44°08'45", long 122°34'15", in SW¼ sec.28, T.16 S., R.2 E., Lane County, Hydrologic Unit 17090004, on right bank 300 ft (91 m) downstream from bridge on State Highway 126, at Vida, and at mile 0.2 (0.3 km).

DRAINAGE AREA.--47.6 mi² (123.3 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 764.56 ft (233.038 m) National Geodetic Vertical Datum of 1929. June 11, 1951, to Sept. 30, 1957, water-stage recorder, and Oct. 1, 1957, to Aug. 1, 1966, crest-stage gage at same site and datum.

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

AVERAGE DISCHARGE.--22 years (water years 1952-57, 1967-82), 214 ft³/s (6.060 m³/s), 61.05 in/yr (1,551 mm/yr), 155,000 acre-ft/yr (191 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,140 ft³/s (202 m³/s) Dec. 22, 1964, gage height, 12.18 ft (3.712 m), from slope-area measurement of peak flow; minimum, 12 ft³/s (0.34 m³/s) Nov. 26, 27, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0600	*2,990 84.7	*7.99 2.435	Feb. 14	1030	2,030 57.5	6.71 2.045
Jan. 24	0900	1,830 51.8	6.41 1.954				

Minimum, 14 ft³/s (0.40 m³/s) Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	70	534	314	380	428	191	157	56	50	24	17
2	55	59	1170	283	331	441	198	148	56	48	24	16
3	43	53	722	281	310	443	214	142	54	55	24	15
4	38	49	455	287	289	631	224	134	58	50	23	16
5	34	45	884	252	262	522	233	127	59	53	21	16
6	85	42	2430	222	240	409	211	122	67	48	20	15
7	131	40	1130	204	222	346	200	118	58	44	20	15
8	99	38	690	192	208	309	203	115	53	41	20	14
9	233	37	494	194	196	307	208	112	50	38	21	19
10	191	36	423	212	184	309	255	108	47	36	22	27
11	157	46	353	210	175	352	578	103	46	35	35	22
12	103	149	314	214	165	327	497	99	83	33	28	77
13	76	130	405	208	519	294	674	95	75	33	22	41
14	62	116	960	221	1680	270	868	92	60	35	22	26
15	53	161	1640	239	1210	248	620	88	54	33	22	21
16	47	189	1180	317	1200	228	500	85	50	32	20	19
17	43	309	697	807	1470	211	444	89	46	30	20	18
18	40	341	538	667	1210	197	390	85	46	29	18	17
19	37	235	1120	467	1410	184	334	81	59	28	18	18
20	35	190	957	358	1190	172	308	77	46	27	18	35
21	34	367	897	304	1070	163	299	74	46	27	17	29
22	32	576	645	289	715	155	303	72	44	26	17	22
23	31	683	495	1230	534	148	292	69	40	26	16	20
24	31	420	489	1520	430	142	264	67	39	25	16	22
25	30	288	556	1030	374	137	237	65	39	24	16	22
26	34	239	818	1160	358	136	215	64	41	24	16	34
27	33	191	790	855	405	137	198	64	54	24	16	46
28	56	160	594	620	359	156	195	63	50	24	16	42
29	95	144	481	484	---	161	178	60	73	24	18	83
30	121	141	404	412	---	175	166	58	56	25	20	44
31	90	---	353	427	---	190	---	56	---	25	18	---
TOTAL	2186	5544	23618	14480	17096	8328	9697	2889	1605	1052	628	828
MEAN	70.5	185	762	467	611	269	323	93.2	53.5	33.9	20.3	27.6
MAX	233	683	2430	1520	1680	631	868	157	83	55	35	83
MIN	30	36	314	192	165	136	166	56	39	24	16	14
CFSM	1.48	3.89	16.0	9.81	12.8	5.65	6.79	1.96	1.12	.71	.43	.58
IN.	1.71	4.33	18.46	11.32	13.36	6.51	7.58	2.26	1.25	.82	.49	.65
AC-FT	4340	11000	46850	28720	33910	16520	19230	5730	3180	2090	1250	1640
CAL YR 1981	TOTAL	71673	MEAN 196	MAX 2430	MIN 16	CFSM 4.12	IN 56.01	AC-FT 142200				
WTR YR 1982	TOTAL	87951	MEAN 241	MAX 2430	MIN 14	CFSM 5.06	IN 68.73	AC-FT 174500				

WILLAMETTE RIVER BASIN

167

14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR

LOCATION.--Lat 44°05'34", long 122°57'20", in SE¼NW¼ sec.17, T.17 S., R.2 W., Lane County, Hydrologic Unit 17090004, on left bank 50 ft (15 m) downstream from bridge, 1.3 mi (2.1 km) northeast of Springfield, and at mile 1.59 (2.56 km).

DRAINAGE AREA.--177 mi² (458 km²).

PERIOD OF RECORD.--September 1935 to September 1952, October 1963 to current year. Prior to October 1935 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1939. WSP 1738: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 442.47 ft (134.865 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1935, to Sept. 30, 1952, nonrecording gage at same site and datum.

REMARKS.--Records good except those for Dec. 8 to May 25 when the orifice was partially buried and during periods of no gage-height record, which are fair. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--36 years, 535 ft³/s (15.15 m³/s), 41.05 in/yr (1,043 mm/yr), 387,600 acre-ft/yr (478 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Dec. 22, 1964, gage height, 22.60 ft (6.888 m); minimum, 8.2 ft³/s (0.23 m³/s) Sept. 9, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached at stage of 22.9 ft (6.98 m), from floodmark, probably affected by backwater from McKenzie River, discharge, 9,200 ft³/s (261 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	1200	*9,420 267	*18.62 5.675	Jan. 24	1430	5,510 156	13.74 4.188
Dec. 15	0900	5,120 145	13.16 4.011	Feb. 15	0100	4,030 114	11.43 3.484
Dec. 19	1630	4,330 123	11.92 3.633	Feb. 20	2330	4,650 132	12.43 3.789

Minimum, 19 ft³/s (0.54 m³/s) Sept. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	56	158	784	1100	1150	1530	590	400	119	90	39	24		
2	70	137	2090	1000	1010	1640	686	380	115	84	37	22		
3	70	125	2130	1400	909	1520	808	360	110	95	35	21		
4	60	122	1640	1600	816	1520	838	340	113	81	34	22		
5	53	109	2300	1750	729	1380	884	320	117	84	32	23		
6	128	99	8210	1450	680	1210	797	300	117	80	30	21		
7	272	94	4540	941	625	1060	703	320	110	70	28	20		
8	184	90	2750	838	582	939	646	320	100	67	28	19		
9	293	85	1980	781	546	906	589	280	94	62	27	20		
10	356	81	1720	750	505	854	603	260	89	58	32	39		
11	264	102	1440	725	487	1030	983	240	86	54	37	32		
12	177	558	1270	714	467	989	912	230	109	51	41	48		
13	135	463	1320	687	638	868	1390	230	132	59	32	66		
14	112	447	2200	697	3080	818	2160	230	107	65	31	37		
15	97	520	4850	721	3370	769	2040	230	96	56	34	29		
16	87	516	3960	856	3020	718	1650	220	89	51	30	26		
17	80	840	2760	2450	3920	672	1360	210	80	48	27	24		
18	76	927	2210	2670	3550	621	1170	204	76	44	25	24		
19	71	677	3440	2180	4260	571	1010	186	70	42	24	26		
20	67	595	3260	1690	3790	537	890	171	67	40	24	38		
21	64	1160	3270	1400	4090	510	794	164	76	38	23	51		
22	62	1720	2520	1240	2960	482	800	157	70	37	23	34		
23	60	2380	2150	4140	2500	457	850	169	63	36	22	30		
24	58	1560	1920	4890	2130	439	800	152	59	36	21	29		
25	58	1080	1850	3880	1810	420	700	138	61	34	20	31		
26	64	932	2000	3710	1620	416	650	133	68	32	20	37		
27	71	701	2400	3140	1540	431	600	134	110	33	21	66		
28	125	574	2200	2380	1350	553	500	130	92	33	23	48		
29	202	505	1800	1840	---	542	460	124	123	35	25	79		
30	304	476	1400	1510	---	533	440	116	104	38	37	58		
31	202	---	1200	1350	---	584	---	112	---	41	30	---		
TOTAL	3978	17833	77564	54480	52134	25519	27303	6960	2822	1674	892	1044		
MEAN	128	594	2502	1757	1862	823	910	225	94.1	54.0	28.8	34.8		
MAX	356	2380	8210	4890	4260	1640	2160	400	132	95	41	79		
MIN	53	81	784	687	467	416	440	112	59	32	20	19		
CFSM	.72	3.36	14.1	9.93	10.5	4.65	5.14	1.27	.53	.31	.16	.20		
IN.	.84	3.75	16.30	11.45	10.96	5.36	5.74	1.46	.59	.35	.19	.22		
AC-FT	7890	35370	153800	108100	103400	50620	54160	13810	5600	3320	1770	2070		
CAL YR 1981	TOTAL	198945	MEAN	545	MAX	8210	MIN	21	CFSM	3.08	IN	41.81	AC-FT	394600
WTR YR 1982	TOTAL	272203	MEAN	746	MAX	8210	MIN	19	CFSM	4.22	IN	57.21	AC-FT	559900

WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR

LOCATION.--Lat 44°16'14", long 123°10'21", in NW¼NE¼ sec.16, T.15 S., R.4 W., Linn County, Hydrologic Unit 17090003, on right bank 75 ft (23 m) north of intersection of First Street and Kesling Street in Harrisburg and at mile 161.0 (259.0 km).

DRAINAGE AREA.--3,420 mi² (8,860 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to current year. Gage-height records collected at same site in 1927-28, 1931, 1934, are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 288.39 ft (87.901 m) National Geodetic Vertical Datum of 1929. Oct 1 to Nov. 14, 1944, nonrecording gage at bridge 1,110 ft (338 m) upstream at different datum. Nov. 15, 1944, to Aug. 15, 1973, at site 1,100 ft (335 m) upstream at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good. Flow regulated by 8 reservoirs above station (see elsewhere in this report). Many small diversions above station for irrigation.

AVERAGE DISCHARGE.--38 years, 12,250 ft³/s (346.9 m³/s), 8,875,000 acre-ft/yr (10.9 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft³/s (5,950 m³/s) Dec. 29, 1945, gage height, 19.69 ft (6.002 m), from rating curve extended above 115,000 ft³/s (3,260 m³/s); minimum, 1,990 ft³/s (56.4 m³/s) Oct 30, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 20.5 ft (6.25 m) was reached in December 1861, and 20.1 ft (6.13 m) in February 1890 (information from Corps of Engineers). Flood of Jan. 1, 1943, reached a stage of 19.1 ft (5.82 m) from National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 77,400 ft³/s (2,192 m³/s) Dec. 7, gage height, 14.99 ft (4.569 m); minimum, 4,750 ft³/s (135 m³/s) July 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7130	8260	12700	33600	19000	33500	9220	10400	8510	6710	5900	5960
2	6990	8230	16800	31700	17000	30900	9220	9460	7920	6410	5830	6200
3	6970	7890	29400	31800	15300	26700	10100	9470	7440	6390	6140	6070
4	6960	7670	26300	38600	13700	26400	10300	9890	7120	6010	6160	5970
5	7210	7720	24400	32400	12600	23300	10100	9680	7030	5760	5910	5940
6	7980	7770	52800	30900	12000	20500	9980	9490	7410	5720	5640	5890
7	9220	7580	59500	29000	11600	18900	9810	9240	7630	5900	5600	5970
8	9310	7370	36100	25300	11200	17800	9590	8560	7230	6190	5670	6370
9	9980	7380	35400	20200	10800	14500	9270	8080	6740	5860	5840	6920
10	10600	7270	35800	20100	9880	13100	9160	7890	6590	5240	6050	7160
11	10100	7230	34200	20200	9400	14200	13000	7800	6530	4990	6130	7180
12	9170	8910	33900	19800	9160	15600	14000	7640	7270	4860	6100	7340
13	8690	11100	31600	19100	8070	14700	17500	7530	8970	4800	6000	7540
14	8770	11300	36400	18900	19900	13700	27400	7530	8240	4870	5920	7160
15	9140	12300	46000	19400	28600	13600	31200	7530	7920	4840	5780	6750
16	9100	12800	40000	17700	28900	12100	27000	7530	7970	4860	5750	6960
17	9040	14700	41800	21900	39300	11800	21900	7630	8300	4780	5960	7360
18	8940	16400	39600	29800	36200	9580	18500	8640	8160	4780	6180	7460
19	8750	15600	43800	26400	42600	8520	16100	9400	8200	4800	5990	7610
20	8660	14300	32100	21800	37100	8120	14200	9290	8180	4800	5800	7720
21	8520	14400	45300	18900	42200	7710	12800	9280	8220	4820	5790	8410
22	8350	19600	43100	16800	35300	7450	12300	9890	7790	4780	5830	8770
23	8340	24800	40200	25300	39600	7300	12600	10400	7080	4820	5780	8590
24	8240	29500	41100	29900	41000	7020	12800	10300	6310	4840	5830	8740
25	7970	23400	41000	35300	39100	6950	12500	11200	5660	5100	5850	8910
26	7960	19600	41400	36400	37000	6950	12300	11500	5910	5120	5900	8790
27	7960	16800	44700	38400	37000	7050	12000	12000	6500	5210	5890	8810
28	7720	14900	44300	33700	33600	7700	11300	11200	6870	5210	5910	9220
29	7670	14000	42100	27800	---	7950	10900	9810	7220	5300	5830	9620
30	7720	13600	40900	22800	---	8130	10900	8670	7160	5740	5800	9310
31	7720	---	39100	20100	---	8810	---	8510	---	5890	5820	---
TOTAL	260880	392380	1171800	814000	697110	430540	417950	285440	222080	165400	182580	224700
MEAN	8415	13080	37800	26260	24900	13890	13930	9208	7403	5335	5890	7490
MAX	10600	29500	59500	38600	42600	33500	31200	12000	8970	6710	6180	9620
MIN	6960	7230	12700	16800	8070	6950	9160	7530	5660	4780	5600	5890
AC-FT	517500	778300	2324000	1615000	1383000	854000	829000	566200	440500	328100	362100	445700
CAL YR 1981	TOTAL	3908700	MEAN	10710	MAX	59500	MIN	4230	AC-FT	7753000		
WTR YR 1982	TOTAL	5264860	MEAN	14420	MAX	59500	MIN	4780	AC-FT	10440000		

WILLAMETTE RIVER BASIN

169

14166000 WILLAMETTE RIVER AT HARRISBURG, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

INSTRUMENTATION.--Temperature recorder since October 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.0°C Aug. 12, 1973; minimum, 0.0°C Jan. 8, 9, 1973.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 18.0°C July 27, Aug. 8, 22, Sept. 2; minimum, 4.0°C Feb. 6, 9, 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

171

14166500 LONG TOM RIVER NEAR NOTI, OR

LOCATION.--Lat 44°03'00", long 123°25'30", in sec.33, T.17 S., R.6 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi (0.3 km) upstream from Southern Pacific Railroad bridge, 0.8 mi (1.3 km) downstream from Noti Creek, 1.3 mi (2.1 km) southeast of Noti, and at mile 37.4 (60.2 km).

DRAINAGE AREA.--89.3 mi² (231.3 km²).

PERIOD OF RECORD.--October 1935 to current year.

REVISED RECORDS.--WSP 1318: 1936(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 389.05 ft (118.582 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Weather Bureau). Prior to Nov. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Records fair. Slight regulation caused by logpond above Noti. No diversion above station.

AVERAGE DISCHARGE.--47 years, 234 ft³/s (6.627 m³/s), 35.58 in/yr (904 mm/yr), 169,500 acre-ft/yr (209 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,990 ft³/s (198 m³/s) Dec. 22, 1955, gage height, 20.17 ft (6.148 m); minimum, 0.04 ft³/s (0.001 m³/s) Aug. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	1600	*4,580 130	*17.62 5.371	Feb. 15	0500	1,640 46.4	11.86 3.615
Dec. 15	1900	3,430 97.1	16.08 4.901	Feb. 21	0500	2,010 56.9	13.06 3.981
Jan. 24	0700	2,480 70.2	14.35 4.374				

Minimum, 11 ft³/s (0.31 m³/s) Aug. 28-31, Sept. 4-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	119	322	526	486	593	353	193	85	49	24	12
2	21	99	739	508	436	718	387	185	83	49	23	13
3	21	82	889	697	402	707	593	179	85	49	20	12
4	21	71	544	1460	368	803	711	169	90	48	18	11
5	22	63	869	1100	334	692	659	161	85	47	16	11
6	87	61	3840	794	308	570	603	157	80	46	15	11
7	115	56	2960	625	288	489	545	150	77	45	14	11
8	77	52	1280	536	269	448	454	145	76	44	13	11
9	84	53	838	484	251	428	390	140	76	42	13	11
10	190	48	833	443	240	425	365	135	74	41	13	11
11	137	62	882	413	230	429	547	137	73	39	13	12
12	79	242	685	392	221	414	571	134	71	37	14	13
13	55	256	647	369	266	379	957	130	71	34	14	14
14	42	303	812	359	1060	367	1370	128	70	33	15	15
15	38	400	2530	362	1460	358	1210	126	69	33	14	15
16	33	359	2360	380	1130	325	950	123	67	33	14	15
17	29	587	1240	695	1120	320	723	122	65	33	13	15
18	27	763	924	878	927	296	582	121	62	32	12	15
19	27	453	1220	862	1240	273	484	119	60	32	12	15
20	25	334	1370	684	1330	252	424	117	57	31	12	17
21	24	465	1030	569	1770	238	380	115	55	30	12	23
22	23	661	774	504	1110	227	345	112	54	29	12	30
23	22	780	638	1540	914	217	317	109	53	28	12	23
24	21	614	558	2300	757	209	290	106	50	27	12	21
25	21	415	473	1660	644	197	270	103	48	26	12	20
26	24	345	529	1270	580	197	248	100	47	25	12	19
27	41	282	681	1180	553	235	233	98	47	24	12	26
28	138	232	826	996	494	264	221	96	47	24	11	32
29	182	203	907	784	---	238	215	93	48	24	11	36
30	270	191	689	648	---	233	203	90	49	24	11	32
31	178	---	560	560	---	302	---	87	---	24	12	---
TOTAL	2096	8651	33449	24578	19188	11843	15600	3980	1974	1082	431	522
MEAN	67.6	288	1079	793	685	382	520	128	65.8	34.9	13.9	17.4
MAX	270	780	3840	2300	1770	803	1370	193	90	49	24	36
MIN	21	48	322	359	221	197	203	87	47	24	11	11
CFSM	.76	3.23	12.1	8.88	7.67	4.28	5.82	1.43	.74	.39	.16	.20
IN.	.87	3.60	13.93	10.24	7.99	4.93	6.50	1.66	.82	.45	.18	.22
AC-FT	4160	17160	66350	48750	38060	23490	30940	7890	3920	2150	855	1040

CAL YR 1981	TOTAL	81187.3	MEAN 222	MAX 3840	MIN 8.2	CFSM 2.49	IN 33.82	AC-FT 161000
WTR YR 1982	TOTAL	123394.0	MEAN 338	MAX 3840	MIN 11	CFSM 3.79	IN 51.40	AC-FT 244800

WILLAMETTE RIVER BASIN

14167000 COYOTE CREEK NEAR CROW, OR

LOCATION.--Lat 44°01'19", long 123°15'17", in SW¼NE¼ sec.11, T.18 S., R.5 W., Lane County, Hydrologic Unit 17090003, on right bank 1.0 mi (1.6 km) downstream from Spencer Creek, 4.3 mi (6.9 km) northeast of Crow, and at mile 3.8 (6.1 km).

DRAINAGE AREA.--95.1 mi² (246.3 km²).

PERIOD OF RECORD.--July 1940 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 374.0 ft (114.00 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 31, 1940, nonrecording gage near same site at different datums.

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

AVERAGE DISCHARGE.--42 years, 178 ft³/s (5.041 m³/s), 25.42 in/yr (646 mm/yr), 129,000 acre-ft/yr (159 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) Feb. 10, 1961, gage height, 14.43 ft (4.398 m), from rating curve extended above 4,700 ft³/s (133 m³/s); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0800	*10,100 286	*14.34 4.371	Jan. 4	1000	2,460 69.7	11.16 3.402
Dec. 15	1200	3,410 96.6	11.82 3.603	Jan. 23	2130	2,430 68.8	11.13 3.392
Dec. 19	1500	1,710 48.4	10.46 3.188	Apr. 14	1230	1,870 53.0	10.63 3.240

Minimum, 0.19 ft³/s (0.005 m³/s) Aug. 27-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	30	232	388	258	463	209	69	15	9.9	1.5	.32
2	2.2	21	491	427	219	656	426	65	16	8.4	2.2	.31
3	1.6	17	637	829	192	620	793	62	15	8.1	2.6	.48
4	1.2	14	543	2050	166	619	749	59	14	8.1	1.7	.56
5	1.1	12	1480	1380	141	537	660	56	16	7.9	1.3	.50
6	3.3	11	6890	880	123	412	542	54	16	7.2	1.3	.44
7	17	10	2210	579	114	330	447	52	15	6.4	.98	.67
8	24	9.2	1150	421	106	282	328	51	13	5.3	.93	.81
9	12	8.6	758	347	97	276	261	54	11	4.7	.86	.85
10	33	8.1	799	308	86	249	266	51	11	3.9	.79	.74
11	40	11	721	279	83	280	661	49	8.9	3.4	.79	.71
12	23	170	580	295	79	260	482	47	9.1	2.7	.81	.79
13	14	189	590	261	128	217	1060	44	11	2.5	.90	.78
14	8.6	326	906	244	935	238	1770	43	13	2.9	.86	.80
15	6.5	461	2840	242	1420	260	1500	40	8.4	3.3	1.1	.82
16	5.4	368	1580	262	1260	210	1030	38	3.7	3.4	1.0	.82
17	4.4	686	971	521	1320	260	666	37	3.8	3.0	.94	.82
18	4.0	728	719	878	1120	226	447	38	5.6	2.5	.86	.88
19	3.6	488	1310	853	1100	198	329	36	5.3	2.2	.72	.96
20	5.3	313	1520	629	1070	167	265	33	4.8	1.7	.66	.92
21	3.4	558	1250	458	1200	145	217	31	4.4	1.2	.56	1.1
22	3.0	749	872	365	860	127	182	28	4.6	1.0	.44	1.1
23	3.1	889	602	1610	679	113	153	25	4.6	.87	.35	9.4
24	3.0	703	430	2030	494	103	133	23	3.5	.75	.29	5.1
25	2.9	427	361	1470	380	95	116	22	3.1	1.1	.30	1.4
26	4.3	349	494	1200	335	89	106	20	3.7	1.1	.26	1.0
27	3.1	260	584	976	344	101	93	20	8.3	1.0	.22	1.1
28	9.5	186	668	707	289	178	87	20	12	.69	.19	3.9
29	31	146	638	500	---	145	79	18	13	.59	.25	4.7
30	69	126	525	374	---	134	74	17	13	.99	.27	3.9
31	55	---	404	313	---	218	---	15	---	.96	.33	---
TOTAL	400.1	8273.9	33755	22076	14598	8208	14131	1217	285.8	107.75	26.26	46.68
MEAN	12.9	276	1089	712	521	265	471	39.3	9.53	3.48	.85	1.56
MAX	69	889	6890	2050	1420	656	1770	69	16	9.9	2.6	9.4
MIN	1.1	8.1	232	242	79	89	74	15	3.1	.59	.19	.31
CFSM	.14	2.90	11.5	7.49	5.48	2.79	4.95	.41	.10	.04	.009	.02
IN.	.16	3.24	13.20	8.64	5.71	3.21	5.53	.48	.11	.04	.01	.02
AC-FT	794	16410	66950	43790	28960	16280	28030	2410	567	214	52	93
CAL YR 1981 TOTAL	65701.11			MEAN 180	MAX 6890	MIN .00	CFSM 1.89	IN 25.70	AC-FT 130300			
WTR YR 1982 TOTAL	103125.49			MEAN 283	MAX 6890	MIN .19	CFSM 2.98	IN 40.34	AC-FT 204500			

14168000 FERN RIDGE LAKE NEAR ELMIRA, OR

LOCATION.--Lat 44°07'15", long 123°18'00", near center of sec.4, T.17 S., R.5 W., Lane County, Hydrologic Unit 17090003, in control house at spillway section of dam across Long Tom River and Coyote Creek, 4.5 mi (7.2 km) northeast of Elmira, and at mile 25.7 (41.4 km).

DRAINAGE AREA.--252 mi² (653 km²), not including Amazon Creek basin (see REMARKS).

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1971, published as Fern Ridge Reservoir near Elmira.

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

REMARKS.--Reservoir is formed by earth-fill dam with concrete outlet and spillway, completed in 1941 by Corps of Engineers; storage began Nov. 13, 1941. Total capacity, 116,800 acre-ft (144 hm³) at elevation 375.1 ft (114.33 m), maximum pool elevation. Usable capacity, 101,100 acre-ft (125 hm³) between elevations 340.0 ft (103.63 m), sill of outlet gate, and 373.5 ft (113.84 m), normal maximum operating pool level. Reservoir used for flood control and improvement of navigation. Since November 1951, most of flow of Amazon Creek has been diverted in SE¼ sec.29, T.17 S., R.4 W., and discharged into Fern Ridge Lake; drainage area at point of diversion, 21.3 mi² (55.2 km²).

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 124,500 acre-ft (154 hm³) Dec. 27, 1955, elevation, 375.83 ft (114.553 m); minimum since first filling in 1942, 163 acre-ft (201,000 m³) Nov. 11, 1950, elevation, 344.00 ft (104.851 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 103,100 acre-ft (127 hm³) Apr. 15, elevation, 373.72 ft (113.910 m); minimum, 7,060 acre-ft (8.70 hm³) Jan. 16, elevation, 352.92 ft (107.570 m).

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

349	2,270	356	12,440	364	37,490	372	87,720
350	3,250	358	17,020	366	46,940	374	105,800
352	5,730	360	22,670	368	58,320	376	126,300
354	8,760	362	29,460	370	71,900		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	371.55	362.50	353.69	356.30	361.27	367.25	371.77	373.46	373.40	373.26	372.74	372.10
2	371.53	361.96	354.21	355.70	361.24	367.62	372.09	373.48	373.39	373.26	372.72	372.09
3	371.51	361.39	354.50	356.96	361.22	367.88	372.47	373.45	373.40	373.26	372.70	372.06
4	371.49	360.77	354.02	358.99	361.24	368.11	372.82	373.42	373.42	373.26	372.68	372.03
5	371.45	360.05	356.94	359.40	361.36	368.27	373.01	373.42	373.41	373.25	372.65	372.01
6	371.30	359.26	364.83	358.72	361.57	368.33	373.02	373.40	373.41	373.24	372.63	371.99
7	371.03	358.39	367.00	357.77	361.75	368.32	372.98	373.39	373.40	373.23	372.62	371.97
8	370.74	357.44	367.09	356.51	361.92	368.41	372.96	373.41	373.40	373.22	372.60	371.96
9	370.48	356.48	366.77	355.02	362.13	368.59	372.97	373.41	373.39	373.20	372.57	371.95
10	370.25	355.63	366.47	354.31	362.33	368.77	373.11	373.42	373.39	373.20	372.56	371.94
11	369.95	355.12	365.94	354.05	362.51	368.94	373.38	373.42	373.37	373.17	372.55	371.92
12	369.63	354.49	365.37	353.43	362.69	369.08	373.39	373.42	373.38	373.16	372.52	371.90
13	369.30	353.83	364.94	353.02	363.15	369.19	373.56	373.43	373.38	373.17	372.50	371.87
14	368.94	353.57	365.42	353.10	364.56	369.34	373.65	373.41	373.37	373.15	372.49	371.83
15	368.57	353.80	367.41	352.99	365.60	369.50	373.67	373.41	373.37	373.13	372.47	371.82
16	368.23	354.04	368.31	353.19	365.91	369.67	373.44	373.40	373.36	373.11	372.44	371.80
17	367.94	354.68	368.13	353.38	365.98	369.87	373.20	373.40	373.35	373.10	372.42	371.80
18	367.64	354.87	367.75	353.80	365.92	370.04	373.10	373.41	373.34	373.09	372.40	371.81
19	367.34	354.09	368.29	353.73	365.89	370.18	373.08	373.42	373.31	373.07	372.38	371.79
20	367.03	353.55	368.68	353.64	366.20	370.31	373.12	373.42	373.29	373.04	372.36	371.79
21	366.69	354.04	368.46	353.96	366.50	370.42	373.17	373.43	373.27	372.97	372.33	371.78
22	366.35	354.61	367.79	354.66	366.54	370.52	373.21	373.43	373.25	372.95	372.31	371.77
23	365.97	355.14	366.84	358.17	366.53	370.62	373.27	373.42	373.23	372.94	372.28	371.77
24	365.57	354.99	365.69	361.11	366.42	370.71	373.33	373.43	373.21	372.92	372.27	371.76
25	365.18	354.08	364.35	362.02	366.35	370.79	373.38	373.42	373.18	372.89	372.23	371.76
26	364.79	353.50	363.03	362.26	366.39	370.87	373.41	373.42	373.25	372.87	372.20	371.79
27	364.45	353.41	361.88	362.09	366.59	371.01	373.40	373.42	373.24	372.84	372.18	371.79
28	364.09	353.43	360.90	361.64	366.81	371.16	373.41	373.39	373.27	372.82	372.15	371.82
29	363.79	353.45	359.74	361.41	---	371.29	373.42	373.41	373.28	372.80	372.16	371.81
30	363.43	353.49	358.64	361.40	---	371.41	373.45	373.41	373.27	372.78	372.14	371.80
31	363.00	---	357.57	361.32	---	371.59	---	373.40	---	372.76	372.10	---
MEAN	368.04	355.87	363.57	356.90	364.16	369.61	373.14	373.42	373.33	373.07	372.43	371.88
MAX	371.55	362.50	368.68	362.26	366.81	371.59	373.67	373.48	373.42	373.26	372.74	372.10
MIN	363.00	353.41	353.69	352.99	361.22	367.25	371.77	373.39	373.18	372.76	372.10	371.76
(†)	33320	7930	15950	27020	51300	84300	100600	100100	98940	94320	88570	86040
(‡)	-50730	-25390	+8020	+11070	+24280	+33000	+16300	-500	-1160	-4620	-5750	-2530
CAL YR 1981	MEAN 367.82		MAX 373.62	MIN 353.04		AC-FT‡ -6040						
WTR YR 1982	MEAN 367.98		MAX 373.67	MIN 352.99		AC-FT‡ -1990						

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

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14169001 LONG TOM RIVER NEAR ALVADORE, OR

LOCATION.--Lat 44°07'25", long 123°17'55", in SW¼NE¼ sec.4, T.17 S., R.5 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi (0.3 km) downstream from Fern Ridge Dam, 1.7 mi (2.7 km) west of Alvadore, and at mile 25.5 (41.0 km).

DRAINAGE AREA.--252 mi² (653 km²), not including Amazon Creek basin.

PERIOD OF RECORD.--August 1939 to current year. Prior to October 1943, published as "at Smithfield," and October 1943 to September 1959, as "below Fern Ridge Dam, near Smithfield."

REVISED RECORDS.--WSP 1248: 1940-41, 1948.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 332.00 ft (101.194 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 21, 1939, nonrecording gage and Sept. 21, 1939, to Sept. 30, 1943, water-stage recorder at site 2.5 mi (4.0 km) downstream at datum 11.09 ft (3.380 m) lower.

REMARKS.--Records good. Flow regulated since 1941 by Fern Ridge Lake (see station 14168000). Several small diversions for irrigation above station. Records include diversion to Coyote Creek Channel. Point of diversion is 500 ft (152 m) upstream and point of return, 2.3 mi (3.7 km) downstream. Discharge not adjusted for storage or release from Fern Ridge Lake as evaporation from reservoir at times exceeds natural flow and diversions, and beginning in November 1951, most of flow of Amazon Creek has been diverted into Fern Ridge Lake.

COOPERATION.--Gage-height record for Coyote Creek diversion furnished by Corps of Engineers.

AVERAGE DISCHARGE.--43 years, 534 ft³/s (15.12 m³/s), 386,900 acre-ft/yr (477 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s (326 m³/s) Jan. 1, 1943, gage height, 15.12 ft (4.609 m), site and datum then in use; minimum daily, 2 ft³/s (0.057 m³/s) Aug. 7, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,870 ft³/s (138 m³/s) Dec. 26; minimum daily, 30 ft³/s (0.85 m³/s) July 2-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	1140	690	2520	1040	538	63	202	61	50	63	43
2	64	1140	1230	1950	878	845	231	202	61	30	55	41
3	64	1100	1640	1520	764	1060	381	316	61	30	50	41
4	65	1080	1790	1630	632	1080	390	322	61	30	53	41
5	370	1210	1900	2770	419	1090	925	299	61	30	58	41
6	871	1200	901	3150	210	1100	1450	297	61	30	55	41
7	1170	1220	1320	2710	210	1100	1400	232	60	30	50	40
8	1230	1220	3540	2530	172	709	1070	168	59	30	48	38
9	1240	1100	3490	2290	84	409	745	168	58	30	48	38
10	1260	886	3530	1530	51	409	613	168	62	35	48	37
11	1240	831	3690	1050	52	414	623	168	70	40	48	37
12	1230	1070	3570	1200	52	403	1300	168	69	40	48	37
13	1220	1140	3030	1010	52	399	2640	168	69	49	44	37
14	1230	997	2640	713	63	401	3400	168	66	54	38	37
15	1250	1000	571	770	1090	300	3760	168	64	53	37	37
16	1100	993	2400	792	2720	120	3690	171	58	48	37	37
17	939	1260	3890	1380	3160	54	2930	134	62	38	37	37
18	926	1680	4100	1950	3140	53	1740	91	77	36	37	37
19	913	1810	2270	2040	3140	57	1020	91	90	41	37	38
20	924	1340	2830	1690	2790	61	738	91	94	47	45	38
21	928	1380	4090	1110	2690	61	513	77	86	68	53	38
22	963	1760	4510	854	2830	61	430	62	79	69	53	38
23	1000	1880	4730	442	2340	62	305	62	79	65	53	38
24	1020	1870	4670	1160	2000	62	219	61	79	62	53	38
25	1010	1820	4560	2570	1580	62	217	61	79	58	53	38
26	1000	1320	4610	3130	1240	62	284	61	66	58	53	39
27	1020	802	4280	3130	730	63	360	61	59	64	53	39
28	1040	558	3950	3080	528	63	364	61	57	68	53	38
29	981	478	3870	2190	---	62	258	61	58	68	53	38
30	1130	479	3140	1340	---	63	204	61	59	66	53	38
31	1140	---	2590	1260	---	63	---	61	---	63	50	---
TOTAL	28602	35764	94022	55461	34657	11286	32263	4481	2025	1480	1516	1155
MEAN	923	1192	3033	1789	1238	364	1075	145	67.5	47.7	48.9	38.5
MAX	1260	1880	4730	3150	3160	1100	3760	322	94	69	63	43
MIN	64	478	571	442	51	53	63	61	57	30	37	37
AC-FT	56730	70940	186500	110000	68740	22390	63990	8890	4020	2940	3010	2290
CAL YR 1981	TOTAL	204020	MEAN	559	MAX	4730	MIN	45	AC-FT	404700		
WTR YR 1982	TOTAL	302712	MEAN	829	MAX	4730	MIN	30	AC-FT	600400		

WILLAMETTE RIVER BASIN

175

14169500 AMAZON CREEK NEAR EUGENE, OR

LOCATION.--Lat 44°03'40", long 123°11'40", in SE¼ sec.29, T.17 S., R.4 W., Lane County, Hydrologic Unit 17090003, on right bank 250 ft (76 m) upstream from diversion structure, 5 mi (8 km) west of Eugene, and at mile 12.3 (19.8 km).

DRAINAGE AREA.--21.3 mi² (55.2 km²).

PERIOD OF RECORD.--October 1954 to September 1968, October 1979 to May 1982 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 372.41 ft (113.511 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. During summer and fall, several diversions by pumping for irrigation; natural flow (if any) may be augmented slightly by return flow in and below city of Eugene. Records include diversion at station to Fern Ridge Lake.

AVERAGE DISCHARGE.--16 years (water years 1955-68, 1980-81), 28.7 ft³/s (0.813 m³/s), 18.30 in/yr (465 mm/yr), 20,790 acre-ft/yr (25.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,070 ft³/s (86.9 m³/s) Feb. 10, 1961, gage height, 9.58 ft (2.920 m); maximum gage height, 9.86 ft (3.005 m) Dec. 6, 1981; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 800 ft³/s (22.7 m³/s) and maximum discharge, 2,180 ft³/s (61.7 m³/s) Dec. 6, gage height, 9.86 ft (3.005 m); minimum (October to May), 1.6 ft³/s (0.045 m³/s) Oct. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	4.4	51	61	16	69	21	6.1				
2	2.7	3.4	80	73	14	61	86	5.8				
3	2.9	4.0	56	256	13	44	69	5.6				
4	2.1	4.7	51	187	12	38	49	5.4				
5	1.9	2.8	769	97	11	26	37	5.3				
6	36	2.3	918	70	10	19	41	5.2				
7	32	2.1	115	56	9.8	16	36	5.0				
8	16	1.9	74	51	9.1	15	22	4.8				
9	39	1.8	68	49	9.0	25	17	4.8				
10	59	1.7	103	49	8.7	21	60	4.6				
11	25	44	68	55	8.6	34	74	4.5				
12	8.8	72	71	61	8.5	18	35	4.7				
13	4.5	45	87	54	37	15	184	4.4				
14	3.6	90	289	49	160	22	96	4.4				
15	3.0	65	234	48	75	20	58	4.4				
16	2.2	72	90	57	106	18	28	4.2				
17	1.9	132	67	99	108	19	19	4.0				
18	1.8	75	89	121	65	14	15	4.0				
19	1.8	47	235	76	61	13	12	4.0				
20	1.9	44	144	60	115	12	10	3.8				
21	1.9	128	100	53	57	12	9.1	3.8				
22	1.7	105	69	53	48	10	8.7	3.6				
23	1.6	126	57	220	44	10	8.1	3.6				
24	1.6	54	50	129	30	10	7.8	3.4				
25	1.7	43	49	62	22	9.6	7.6	3.4				
26	1.9	49	95	95	27	12	7.3	3.2				
27	1.9	37	87	52	26	19	7.0	3.2				
28	37	33	101	38	20	38	6.8	3.0				
29	36	31	66	29	---	18	6.4	3.2				
30	29	32	54	23	---	23	6.3	3.2				
31	9.1	---	54	18	---	35	---	3.2				
TOTAL	372.0	1353.1	4441	2401	1130.7	715.6	1044.1	131.8				
MEAN	12.0	45.1	143	77.5	40.4	23.1	34.8	4.25				
MAX	59	132	918	256	160	69	184	6.1				
MIN	1.6	1.7	49	18	8.5	9.6	6.3	3.0				
CFSM	.56	2.12	6.71	3.64	1.90	1.09	1.63	.20				
IN.	.65	2.36	7.76	4.19	1.97	1.25	1.82	.23				
AC-FT	738	2680	8810	4760	2240	1420	2070	261				

CAL YR 1981 TOTAL 10781.6 MEAN 29.5 MAX 918 MIN 1.5 CFSM 1.39 IN 18.83 AC-FT 21390

WILLAMETTE RIVER BASIN

14170000 LONG TOM RIVER AT MONROE, OR

LOCATION.--Lat 44°18'50", long 123°17'45", in NE¼ sec.33, T.14 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank in canalized river channel at Monroe, 110 ft (34 m) upstream from bridge on State Highway 99W, 0.1 mi (0.2 km) downstream from Shafer Creek, and at mile 6.8 (10.9 km).

DRAINAGE AREA.--391 mi² (1,013 km²).

PERIOD OF RECORD.--November 1920 to July 1921, October 1921 to April 1926, November 1926 to May 1927, October 1927 to current year. Prior to October 1930, published as "near Monroe."

REVISED RECORDS.--WSP 654: Drainage area. WSP 1248: 1923, 1927, 1928(M). WSP 1288: 1952.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 270.57 ft (82.470 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1944, nonrecording gage at various sites ranging from present site to 1.5 mi (2.4 km) downstream at different datums.

REMARKS.--Records good. Flow regulated since 1941 by Fern Ridge Lake (see station 14168000). Several small diversions above station.

AVERAGE DISCHARGE.--59 years (water years 1922-25, 1928-82), 772 ft³/s (21.86 m³/s), 559,300 acre-ft/yr (690 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/s (547 m³/s) Jan. 2, 1943, gage height, 17.14 ft (5.224 m), site and datum then in use, from graph based on gage readings, includes some overflow from Willamette River near Junction City; no flow Oct. 20-22, 1944 (water filling pool at gage); minimum observed prior to regulation, 7 ft³/s (0.20 m³/s) Sept. 29, Oct. 1, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,990 ft³/s (226 m³/s) Dec. 6, gage height, 9.47 ft (2.886 m); minimum, 17 ft³/s (0.48 m³/s) July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	1250	1230	3300	1530	1290	363	333	71	91	48	35
2	74	1230	2240	3040	1300	1650	571	325	65	59	44	30
3	75	1180	2550	3420	1140	1850	1340	382	64	58	31	29
4	75	1130	2480	4300	967	1890	1240	453	69	56	27	29
5	193	1290	3590	3800	783	1710	1300	385	72	49	31	29
6	754	1280	7130	4190	427	1600	2110	379	76	35	38	29
7	1210	1270	3410	3770	409	1540	2060	349	69	33	38	26
8	1320	1290	4550	3570	386	1280	1640	274	62	27	37	24
9	1320	1230	4270	3050	291	784	1180	263	55	24	34	26
10	1410	1010	4780	2490	220	821	966	258	47	24	33	29
11	1380	901	4660	1560	214	841	1650	253	52	32	34	30
12	1330	1320	4540	1720	211	769	1620	249	59	30	36	35
13	1300	1530	4140	1650	281	695	3740	245	76	24	38	31
14	1290	1380	4570	1220	1790	717	5020	227	74	41	30	29
15	1310	1530	4740	1090	2320	682	4930	222	59	44	29	28
16	1230	1460	3830	1240	3840	436	4710	235	50	43	28	28
17	989	2100	4740	2010	4380	307	3900	229	36	32	29	30
18	974	2550	5030	2970	4090	278	2710	151	39	22	27	32
19	959	2460	5350	2950	4520	263	1610	146	48	23	26	42
20	958	2070	3610	2530	4610	241	1230	144	61	22	24	46
21	963	2090	5260	1840	4080	226	912	137	62	23	30	53
22	965	2760	4970	1420	3970	216	718	112	46	43	34	53
23	1040	3130	5250	3430	3370	209	620	109	45	37	32	53
24	1050	2680	5160	2960	2960	204	428	94	42	39	30	46
25	1050	2400	5060	3790	2290	199	407	85	45	33	29	44
26	1040	2030	5390	4350	1930	194	414	80	60	30	25	50
27	1060	1280	5510	4210	1480	227	535	79	82	24	26	53
28	1170	888	5360	3890	1030	271	535	77	101	30	27	64
29	1090	698	4850	3320	---	254	462	77	97	34	36	62
30	1350	695	4130	1890	---	254	342	71	98	41	40	58
31	1300	---	3450	1820	---	407	---	74	---	38	42	---
TOTAL	30307	48112	135830	86790	54819	22305	49263	6497	1882	1141	1013	1153
MEAN	978	1604	4382	2800	1958	720	1642	210	62.7	36.8	32.7	38.4
MAX	1410	3130	7130	4350	4610	1890	5020	453	101	91	48	64
MIN	74	695	1230	1090	211	194	342	71	36	22	24	24
AC-FT	60110	95430	269400	172100	108700	44240	97710	12890	3730	2260	2010	2290
CAL YR 1981	TOTAL	296346	MEAN	812	MAX	7130	MIN	22	AC-FT	587800		
WTR YR 1982	TOTAL	439112	MEAN	1203	MAX	7130	MIN	22	AC-FT	871000		

14171000 MARYS RIVER NEAR PHILOMATH, OR

LOCATION.--Lat 44°31'35", long 123°20'00", in NE¼SE¼ sec.18, T.12 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank 50 ft (15 m) downstream from bridge on Bellfountain Road, 0.6 mi (1.0 km) downstream from Newton Creek, 2.0 mi (3.2 km) southeast of Philomath, and at mile 9.4 (15.1 km).

DRAINAGE AREA.--159 mi² (412 km²), including drainage area of Evergreen Creek above Bellfountain Road, 1.4 mi (2.3 km) south of station.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1935: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 224.01 ft (68.278 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1961, nonrecording gage at bridge 50 ft (15 m) upstream at same datum.

REMARKS.--Records good. Records include flow of Evergreen Creek at Bellfountain Road crossing 1.4 mi (2.3 km) south of station, with which overflow from Marys River may at times be mingled. Slight regulation by small storage reservoir on Rock Creek from which municipal supply is diverted for city of Corvallis. Other small diversions above station for irrigation.

AVERAGE DISCHARGE.--42 years, 458 ft³/s (12.97 m³/s), 39.12 in/yr (994 mm/yr), 331,800 acre-ft/yr (409 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) Dec. 22, 1964, gage height, 20.72 ft (6.315 m); maximum gage height, 20.91 ft (6.373 m) Jan. 15, 1974; minimum discharge, 0.60 ft³/s (0.017 m³/s) Aug. 23, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft³/s (90.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0300	*11,000 312	*20.90 6.370	Jan. 23	0900	5,660 160	20.11 6.130
Dec. 16	unknown	-- --	-- --	Feb. 20	1630	5,840 165	20.22 6.163

Minimum, 15 ft³/s (0.42 m³/s) Sept. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	228	891	1030	786	1310	510	303	76	59	30	19
2	32	157	2360	921	694	1300	635	282	78	58	28	19
3	30	123	2280	1630	623	1400	1040	269	82	60	27	19
4	32	102	1580	2380	558	1660	1050	259	93	56	26	19
5	31	86	5180	1750	504	1430	1030	235	94	56	24	18
6	172	76	9180	1260	466	1170	909	221	95	55	24	16
7	215	69	4660	994	434	981	764	209	90	53	26	16
8	138	64	2590	842	403	848	663	199	79	50	25	15
9	107	60	1810	737	377	802	591	193	75	47	24	18
10	122	57	1880	656	353	702	554	182	71	43	25	20
11	101	94	1900	606	350	800	930	173	69	45	27	21
12	78	394	1400	584	348	759	1140	164	81	46	26	24
13	62	345	1200	554	446	689	2290	157	89	48	26	24
14	54	1020	2000	556	1500	719	2800	153	85	58	25	25
15	46	1500	4000	591	2040	679	2630	147	75	46	22	22
16	43	1080	5800	720	2640	628	2040	139	71	43	21	20
17	40	1410	2800	1670	2650	581	1530	141	66	40	20	19
18	37	1510	1750	2090	2200	539	1190	136	61	38	21	23
19	35	990	2440	1660	2240	496	962	133	58	36	20	38
20	34	737	1840	1280	4000	458	807	125	57	36	20	17
21	33	1080	1980	1090	3990	431	698	114	55	37	20	19
22	31	1490	1530	1070	2640	403	616	105	56	35	21	18
23	33	1220	1270	4450	2030	382	557	100	54	31	19	19
24	32	953	1070	4740	1570	361	502	95	51	30	19	19
25	32	713	966	3170	1280	345	460	88	52	30	19	18
26	37	676	1300	2500	1190	334	424	84	62	30	18	19
27	45	561	1600	2110	1290	354	392	85	65	30	17	21
28	231	477	1930	1680	1160	367	377	83	64	30	17	21
29	373	420	1610	1320	---	341	351	83	68	31	19	30
30	461	439	1270	1080	---	376	324	79	63	30	20	27
31	321	---	1090	918	---	465	---	76	---	31	20	---
TOTAL	3073	18131	73157	46639	38762	22110	28766	4812	2135	1318	696	623
MEAN	99.1	604	2360	1504	1384	713	959	155	71.2	42.5	22.5	20.8
MAX	461	1510	9180	4740	4000	1660	2800	303	95	60	30	38
MIN	30	57	891	554	348	334	324	76	51	30	17	15
CFSM	.62	3.80	14.8	9.46	8.70	4.48	6.03	.98	.45	.27	.14	.13
IN.	.72	4.24	17.12	10.91	9.07	5.17	6.73	1.13	.50	.31	.16	.15
AC-FT	6100	35960	145100	92510	76880	43860	57060	9540	4230	2610	1380	1240
CAL YR 1981	TOTAL	159330	MEAN 437	MAX 9180	MIN 18	CFSM 2.75	IN 37.28	AC-FT 316000				
WTR YR 1982	TOTAL	240222	MEAN 658	MAX 9180	MIN 15	CFSM 4.14	IN 56.20	AC-FT 476500				

LOCATION.--Lat 44°38'30", long 123°07'00", in NW¼ sec.1, T.11 S., R.4 W., Benton County, Hydrologic Unit 17090003, temperature recorder on left bank, 0.6 mi (1.0 km) upstream from gaging station at Albany, 0.4 mi (0.6 km) upstream from Calapooia River, and at mile 119.9 (192.9 km).

PERIOD OF DAILY RECORD.--

INSTRUMENTATION.--Temperature recorder since October 1963.

WATER TEMPERATURES: Maximum, 23.5°C Aug. 3, 1977; minimum, 0.5°C Jan. 26, 1969, Dec. 11, 1972.

WATER TEMPERATURES: Maximum, 21.0°C July 20; minimum, not determined.

[illegible]

WILLAMETTE RIVER BASIN

179

14171750 WILLAMETTE RIVER ABOVE CALAPOOIA RIVER, AT ALBANY, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14172000 CALAPOOIA RIVER AT HOLLEY, OR

LOCATION.--Lat 44°21'05", long 122°47'10", in SE¼ sec.15, T.14 S., R.1 W., Linn County, Hydrologic Unit 17090003, on right bank 200 ft (61 m) downstream from bridge on State Highway 228, 0.3 mi (0.5 km) southwest of Holley, 5.0 mi (8.0 km) upstream from Brush Creek, and at mile 45.4 (73.0 km).

DRAINAGE AREA.--105 mi² (272 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1935 to current year. Prior to October 1963, published as Calapooya River at Holley.

REVISED RECORDS.--WSP 1044: 1943. WSP 1218: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 527.58 ft (160.806 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1963, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good except those for period of no gage-height record Nov. 12 to Dec. 10, which are fair. Slight regulation at times during low-water periods by small dam upstream. Diversions for irrigation above station.

AVERAGE DISCHARGE.--47 years, 530 ft³/s (15.01 m³/s), 56.91 in/yr (1,446 mm/yr), 318,800 acre-ft/yr (393 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s (357 m³/s) Dec. 22, 1964, gage height, 14.60 ft (4.450 m); maximum gage height, 15.30 ft (4.663 m) Dec. 22, 1964 (backwater from debris); minimum discharge observed, 13 ft³/s (0.37 m³/s) Sept. 8, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s (96.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 6	unknown	*6,300	178	*8.16	2.487	Feb. 17	1600	3,620	103	6.02	1.835
Dec. 15	2000	3,490	98.8	5.91	1.801	Feb. 20	1930	3,650	103	6.04	1.841
Feb. 14	1300	3,900	110	6.24	1.902						

Minimum, 25 ft³/s (0.71 m³/s) Aug. 24-27, Sept. 5-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	174	700	698	730	1050	374	393	108	90	41	29
2	79	144	1800	629	646	1180	436	375	103	84	39	28
3	78	129	1400	907	594	1120	488	356	98	100	38	27
4	68	120	1000	954	537	1200	505	326	98	91	37	27
5	62	108	2500	705	482	1050	496	300	110	97	35	26
6	141	100	5000	573	439	883	458	291	128	91	33	25
7	322	94	3000	496	404	766	435	304	115	81	32	25
8	206	89	2000	449	374	682	421	285	100	75	33	25
9	392	85	1400	432	346	710	423	262	92	69	34	29
10	357	82	1200	457	321	778	496	238	88	65	37	42
11	312	104	1020	456	304	961	1200	222	86	61	45	33
12	219	500	876	482	286	852	1240	212	135	58	49	86
13	169	400	937	460	648	721	1690	213	160	57	38	79
14	139	360	1660	482	3250	665	1860	216	119	64	40	47
15	118	440	3300	503	2710	609	1430	216	106	57	38	37
16	104	490	2430	666	2830	547	1160	208	96	53	34	33
17	95	740	1580	1590	3410	492	1010	232	87	51	32	31
18	87	1000	1290	1360	2630	447	875	221	81	48	31	29
19	81	700	2520	1050	2980	404	750	191	90	46	30	30
20	77	480	2110	836	2870	370	680	176	79	45	29	49
21	73	900	1880	708	2650	342	659	179	78	43	29	53
22	69	1400	1480	671	1770	317	715	180	73	43	28	39
23	67	1800	1200	2370	1340	301	761	168	66	42	27	34
24	65	1250	1060	2860	1070	291	695	159	62	40	26	34
25	63	860	1110	2070	897	285	607	164	63	39	26	36
26	71	700	1390	2120	825	299	540	155	66	39	25	40
27	72	540	1440	1660	869	305	493	137	92	39	26	73
28	122	460	1240	1300	786	359	498	123	84	38	26	62
29	195	410	1030	1050	---	341	455	114	128	39	32	127
30	235	360	870	883	---	355	410	109	104	41	42	84
31	206	---	776	832	---	377	---	107	---	42	33	---
TOTAL	4412	15019	51199	30709	36998	19059	22260	6832	2895	1828	1045	1319
MEAN	142	501	1652	991	1321	615	742	220	96.5	59.0	33.7	44.0
MAX	392	1800	5000	2860	3410	1200	1860	393	160	100	49	127
MIN	62	82	700	432	286	285	374	107	62	38	25	25
CFSM	1.35	4.77	15.7	9.44	12.6	5.86	7.07	2.10	.92	.56	.32	.42
IN.	1.56	5.32	18.14	10.88	13.11	6.75	7.89	2.42	1.03	.65	.37	.47
AC-FT	8750	29790	101600	60910	73390	37800	44150	13550	5740	3630	2070	2620
CAL YR 1981 TOTAL	155484			MEAN 426	MAX 5000	MIN 28	CFSM 4.06	IN 55.09	AC-FT 308400			
WTR YR 1982 TOTAL	193575			MEAN 530	MAX 5000	MIN 25	CFSM 5.05	IN 68.58	AC-FT 384000			

WILLAMETTE RIVER BASIN

181

14172000 CALAPOOIA RIVER AT HOLLEY, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.5°C July 17, Aug, 7, 1972, Aug. 12, 16, 1977; minimum, 0.0°C at times during winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.5°C July 19; minimum, 1.0°C Feb. 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	13.0	11.5	10.0	8.5	7.0	5.0	4.5	6.0	4.5	7.5	6.0
2	17.0	14.5	11.0	10.0	8.5	7.0	5.0	4.0	6.5	6.0	7.5	6.0
3	14.5	12.5	11.0	10.0	8.5	6.5	4.5	3.5	7.0	5.5	7.0	6.0
4	14.0	11.5	11.0	9.5	9.0	7.5	4.5	2.5	5.5	3.5	7.0	6.0
5	13.5	11.0	9.5	8.0	9.0	8.0	4.5	4.0	3.5	2.0	7.5	5.5
6	14.5	13.5	10.0	7.5	9.0	8.0	4.0	2.5	4.0	2.0	7.5	4.5
7	14.0	13.0	10.5	8.5	8.5	7.5	3.5	2.0	5.0	3.5	7.5	5.0
8	13.5	12.5	10.5	9.0	8.5	7.0	5.0	3.5	3.5	2.0	8.5	6.5
9	13.0	12.0	10.5	9.5	9.0	8.0	4.5	3.5	4.0	2.5	9.0	7.5
10	13.0	12.0	10.5	9.5	8.0	6.5	4.5	4.0	3.5	1.0	8.5	7.0
11	12.5	12.0	12.0	10.0	6.5	5.5	6.0	4.5	4.5	2.5	8.0	5.5
12	12.0	10.5	12.0	11.5	7.0	5.5	7.0	5.5	5.5	3.5	6.5	4.5
13	11.0	9.5	12.0	10.5	8.0	7.0	6.5	5.5	7.0	5.5	7.0	6.0
14	11.0	9.5	11.5	10.5	8.0	7.5	6.5	4.5	7.0	6.0	7.0	5.5
15	11.0	9.5	11.0	9.0	8.0	7.5	7.0	6.0	7.5	6.5	7.0	5.0
16	11.5	9.5	9.5	8.5	7.5	6.5	7.0	6.0	7.0	7.0	7.0	5.0
17	12.0	10.0	9.5	8.5	7.5	6.5	6.5	6.0	7.0	6.0	7.5	4.5
18	13.0	10.5	9.5	8.0	9.0	7.5	6.5	5.5	7.0	5.5	7.5	4.5
19	13.0	11.0	9.0	8.0	9.5	7.5	6.0	5.0	8.0	7.0	7.0	5.0
20	11.5	11.0	10.0	9.0	8.0	7.0	5.5	5.0	9.0	7.0	7.0	5.5
21	12.5	11.0	10.0	9.0	7.5	6.5	5.5	4.5	7.0	5.5	8.0	4.0
22	11.5	9.5	9.5	8.5	6.5	6.0	5.0	4.0	6.0	4.5	8.5	4.5
23	11.5	9.0	9.5	8.0	7.0	6.0	7.0	5.0	5.5	4.5	9.0	5.0
24	11.5	9.0	9.0	8.0	7.5	6.5	7.0	6.5	6.0	4.0	9.5	5.5
25	11.5	9.5	8.5	7.5	7.5	6.5	7.5	6.5	6.5	4.0	10.0	6.5
26	12.5	11.0	8.0	6.5	6.5	6.0	7.0	6.0	6.5	5.0	9.0	7.0
27	13.5	12.5	7.0	5.5	6.5	6.0	6.5	6.0	7.0	5.0	8.5	6.0
28	13.0	11.5	6.0	4.5	6.5	5.5	6.5	5.5	6.5	5.0	8.0	6.0
29	11.5	10.0	6.0	4.5	6.0	5.0	6.5	5.5	---	---	7.5	5.0
30	11.0	10.0	7.0	5.5	5.5	4.5	7.5	6.0	---	---	7.0	5.0
31	11.0	9.5	---	---	5.5	5.0	7.0	6.0	---	---	7.5	5.0
MONTH	17.0	9.0	12.0	4.5	9.5	4.5	7.5	2.0	9.0	1.0	10.0	4.0

WILLAMETTE RIVER BASIN

14172000 CALAPOOIA RIVER AT HOLLEY, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	4.5	12.5	9.0	16.0	12.5	18.0	15.5	20.5	18.5	24.0	17.0
2	7.0	5.5	10.5	8.5	16.0	12.5	17.5	15.5	21.0	17.5	25.0	19.0
3	7.5	5.0	10.5	8.5	16.0	12.5	18.5	14.5	20.5	16.5	21.5	19.5
4	7.0	5.5	12.0	7.0	15.0	13.0	18.0	15.0	24.5	16.5	23.5	18.5
5	7.0	5.0	13.0	8.0	16.0	12.5	20.0	15.5	24.5	17.0	23.0	17.5
6	7.5	5.0	14.0	9.5	15.0	12.5	20.5	15.5	25.5	17.5	24.0	17.5
7	8.5	6.0	13.0	10.5	17.5	12.5	20.0	16.5	26.0	19.0	23.5	17.5
8	10.0	5.0	12.5	9.0	19.5	12.5	22.5	15.5	26.5	21.5	23.0	17.0
9	10.0	5.5	10.5	9.0	21.5	14.5	23.5	17.0	22.5	19.5	19.5	16.5
10	8.0	6.5	10.5	8.5	22.5	15.5	25.0	18.5	20.5	18.5	19.0	15.0
11	8.5	7.0	13.5	7.5	19.5	16.5	25.5	19.0	22.5	18.5	16.5	14.5
12	8.0	6.5	16.0	11.0	16.5	13.5	26.5	19.5	24.0	17.5	16.5	15.5
13	7.0	6.0	15.0	11.0	14.5	12.5	23.0	20.0	22.5	17.5	19.0	14.5
14	6.5	5.5	16.0	11.5	17.5	13.5	24.0	18.5	22.5	18.0	19.5	14.0
15	8.5	5.5	16.5	12.0	18.5	13.5	21.5	17.0	24.5	17.5	19.5	13.5
16	9.5	5.0	16.5	12.5	22.5	15.0	24.0	17.0	25.0	18.0	19.0	12.5
17	8.0	6.5	15.0	12.5	24.0	17.5	25.5	18.5	25.5	18.5	19.0	14.0
18	7.5	6.0	14.0	11.5	25.5	19.0	27.0	20.0	25.5	18.5	19.5	15.0
19	10.0	5.5	16.5	10.0	25.5	20.0	27.5	19.5	25.0	18.5	20.0	16.5
20	11.0	6.0	17.5	12.0	22.5	20.5	27.0	20.0	27.0	20.0	17.5	15.0
21	12.0	6.5	17.0	13.5	23.0	19.5	24.5	20.0	26.5	20.0	18.0	13.5
22	12.5	8.0	17.5	13.0	24.5	17.5	24.5	17.0	27.0	20.0	18.5	14.5
23	11.5	8.0	17.5	12.5	25.0	18.0	25.0	18.0	26.5	19.0	20.0	15.0
24	10.5	8.0	19.0	13.0	23.0	18.5	26.5	18.5	26.0	19.0	19.0	16.5
25	10.5	6.5	19.0	15.0	23.5	19.0	27.0	20.0	25.5	19.5	17.5	15.5
26	11.5	7.0	15.5	12.5	20.5	18.5	26.0	20.0	24.0	19.5	16.0	14.5
27	11.5	8.0	15.0	11.5	19.5	17.5	25.5	20.5	22.0	18.5	16.5	13.5
28	11.0	8.5	18.0	12.0	18.0	16.5	23.0	21.0	23.5	16.5	16.0	13.5
29	11.5	6.5	19.0	12.5	17.5	15.5	21.0	19.5	21.0	19.5	14.5	11.5
30	12.0	8.5	19.5	13.0	18.5	16.0	19.5	18.5	23.0	18.5	13.5	9.5
31	---	---	16.0	13.5	---	---	22.0	18.0	23.5	17.0	---	---
MONTH	12.5	4.5	19.5	7.0	25.5	12.5	27.5	14.5	27.0	16.5	25.0	9.5

WILLAMETTE RIVER BASIN

183

14173500 CALAPOOIA RIVER AT ALBANY, OR

LOCATION.--Lat 44°37'15", long 123°07'40", in NW¼ sec.13, T.11 S., R.4 W., Linn County, Hydrologic Unit 17090003, near right bank on downstream side of bridge on Riverside Drive at Albany, 0.6 mi (1.0 km) downstream from Oak Creek, and at mile 3.0 (4.8 km).

DRAINAGE AREA.--372 mi² (963 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1964 to current year.

INSTRUMENTATION.--Temperature recorder since January 1964.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.5°C Aug. 16, 17, 19-21, 1967, Aug. 9, 1978; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.5°C June 19; minimum, 2.5°C Jan. 4-9, Feb. 10, 11.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14173500 CALAPOOIA RIVER AT ALBANY, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14174000 WILLAMETTE RIVER AT ALBANY, OR

LOCATION.--Lat 44°38'20", long 123°06'20", in SW¼ sec.6, T.11 S., R.3 W., Linn County, Hydrologic Unit 17090003, on right bank 5 ft (1.5 m) upstream from bridge on U.S. Highway 20 (Ellsworth Street) in Albany, 0.2 mi (0.3 km) downstream from Calapooia River, and at mile 119.31 (191.97 km).

DRAINAGE AREA.--4,840 mi² (12,500 km²), approximately.

PERIOD OF RECORD.--November 1878 to April 1888 (fragmentary), January to June 1892, November 1892 to September 1894, December 1894 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 694: Drainage area. WSP 904: 1939. WSP 964: 1881, 1890, 1894, 1897, 1901, 1903, 1908, 1910, 1916, 1923, 1927, 1932(M). WSP 984: 1916. WSP 1248: 1895, 1902, 1907, 1915(M), 1917(M), 1918-19, 1934(M). WSP 1318 (monthly and annual figures only): 1894, 1897, 1901-3, 1907-8, 1910, 1916, 1918-19, 1923, 1927.

GAGE.--Water-stage recorder. Datum of gage is 167.18 ft (50.956 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1906, nonrecording gage at site 0.2 mi (0.3 km) upstream at datum 5.00 ft (1.524 m) higher. Sept. 27, 1906, to Nov. 12, 1934, nonrecording gage at site 300 ft (91 m) upstream at datum 5.00 ft (1.524 m) higher. Nov. 14, 1934, to Sept. 30, 1962, at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records excellent. Flow regulated by nine reservoirs above station (see elsewhere in this report). Albany power canal diverts water from South Santiam River at Lebanon and discharges into Calapooia River near mouth; small diversions for irrigation and municipal water supply.

AVERAGE DISCHARGE.--88 years (water years 1894, 1896-82), 14,470 ft³/s (409.8 m³/s), 40.60 in/yr (1,031 mm/yr), 10,480,000 acre-ft/yr (12.9 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266,000 ft³/s (7,530 m³/s) Jan. 14, 1881, gage height, 37.8 ft (11.52 m), present datum; minimum, 1,840 ft³/s (52.1 m³/s) Sept. 1, 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached a stage of 41.0 ft (12.50 m), discharge, 340,000 ft³/s (9,630 m³/s), from rating curve extended above 220,000 ft³/s (6,230 m³/s). Flood of Feb. 4, 1890, reached a stage of 38.9 ft (11.86 m), discharge, 291,000 ft³/s (8,240 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94,700 ft³/s (2,680 m³/s) Dec. 7, gage height, 26.04 ft (7.937 m); minimum, 4,570 ft³/s (129 m³/s) July 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7920	10500	18100	49400	25800	41100	11700	12300	8720	7030	5830	5770
2	7530	10500	22300	43900	23300	43300	11900	11200	8410	6590	5850	5960
3	7470	10200	36300	43900	20900	40300	14700	10900	7980	6430	5850	6050
4	7420	9800	42200	53000	19000	36300	16400	11300	7500	6320	6090	5920
5	7500	9600	41300	58600	17100	34100	15700	11100	7250	5910	5970	5870
6	8410	9800	59700	49200	15800	29000	15200	10900	7420	5770	5710	5840
7	9960	9600	85200	42200	14900	25500	14800	10500	7720	5780	5530	5790
8	11200	9400	85800	37200	14300	23400	14100	9670	7730	5970	5530	5960
9	11300	9300	63000	31000	13700	20800	12900	8670	7110	6060	5680	6530
10	12700	9100	52900	27100	12900	17800	12100	8380	6860	5420	5850	6880
11	12500	9000	52600	25700	11900	17600	15600	8210	6660	5040	6070	7040
12	11700	10500	49800	25700	11500	19600	20400	8030	7040	4860	6060	7080
13	10900	14000	48100	25000	11300	19100	23300	7850	8270	4750	5990	7360
14	10400	16100	47400	23600	17200	17800	35800	7870	8790	4780	5940	7300
15	10900	17200	58900	23300	39900	17500	45100	7820	8170	4760	5820	6880
16	10900	17800	71700	23500	46000	16500	44900	7920	7990	4770	5710	6770
17	10600	19700	66700	26000	50800	14800	37300	8060	8150	4720	5700	7030
18	10400	25400	60600	37600	56700	13400	29400	8770	8160	4700	6040	7280
19	10200	25200	58900	41400	56000	11300	23900	9510	8080	4700	6000	7510
20	10000	22200	62100	34400	59800	10300	20500	9830	8100	4640	5790	7610
21	9910	20700	56600	28500	61300	9720	17500	9600	8170	4670	5700	7900
22	9760	26000	62300	24300	61000	9110	16200	9800	8040	4590	5720	8470
23	9680	35200	60800	30800	54000	8860	15700	10500	7450	4680	5710	8570
24	9720	40900	55400	49500	53500	8540	15600	10600	6690	4720	5680	8520
25	9500	38600	54100	52900	51300	8260	15200	11000	6150	4910	5740	8650
26	9520	31300	55000	53800	47600	8120	14500	11500	5810	5140	5760	8850
27	9480	25700	58100	54300	45700	8310	14400	12000	6150	5050	5790	8590
28	9700	21900	61600	53100	44000	8750	13700	12100	6700	5050	5780	8980
29	9900	19500	60600	45300	---	9720	13200	10900	7040	5090	5790	9260
30	10500	17700	56300	35500	---	9730	12600	9300	7310	5390	5780	9640
31	10300	---	52600	28800	---	10600	---	8790	---	5760	5730	---
TOTAL	307880	552400	1717000	1178500	957200	569220	584300	304880	225620	164050	180190	219860
MEAN	9932	18410	55390	38020	34190	18360	19480	9835	7521	5292	5813	7329
MAX	12700	40900	85800	58600	61300	43300	45100	12300	8790	7030	6090	9640
MIN	7420	9000	18100	23300	11300	8120	11700	7820	5810	4590	5530	5770
CFSM	2.05	3.80	11.4	7.86	7.06	3.79	4.03	2.03	1.55	1.09	1.20	1.51
IN.	2.37	4.25	13.20	9.06	7.36	4.37	4.49	2.34	1.73	1.26	1.38	1.69
AC-FT	610700	1096000	3406000	2338000	1899000	1129000	1159000	604700	447500	325400	357400	436100
CAL YR 1981 TOTAL	5177050			14180	MAX 85800	MIN 4770	CFSM 2.93	IN 39.79	AC-FT 10270000			
WTR YR 1982 TOTAL	6961100			19070	MAX 85800	MIN 4590	CFSM 3.94	IN 53.50	AC-FT 13810000			

WILLAMETTE RIVER BASIN

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

LOCATION.--Lat 44°42'25", long 122°06'00", in SE¼NW¼ sec.17, T.10 S., R.6 E., Marion County, Hydrologic Unit 17090005, on right bank 0.5 mi (0.8 km) downstream from Boulder Creek, 3.0 mi (4.8 km) southeast of Detroit, and at mile 70.7 (113.8 km).

DRAINAGE AREA.--216 mi² (559 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1907 to October 1909, October 1928 to current year. Monthly discharge only January 1907, published in WSP 1318. Prior to October 1952, published as "at Detroit."

REVISED RECORDS.--WSP 814: Drainage area at former site. WSP 1248: 1931.

GAGE.--Water-stage recorder. Datum of gage is 1,590.07 ft (484.653 m) National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Oct. 1, 1952.

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

AVERAGE DISCHARGE.--56 years, 1,005 ft³/s (28.46 m³/s), 63.18 in/yr (1,605 mm/yr), 728,100 acre-ft/yr (898 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft³/s (756 m³/s) Dec. 22, 1964, gage height, 13.76 ft (4.194 m), temporary backwater from debris, from rating curve extended above 6,600 ft³/s (187 m³/s) on basis of slope-area measurement of peak flow; minimum, 250 ft³/s (7.08 m³/s) Sept. 13, 1909.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft³/s (105 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 5	2030	6,810 193	7.89 2.405	Feb. 16	1600	6,110 173	7.60 2.316
Dec. 15	0600	5,670 161	7.41 2.259	Feb. 20	1900	*9,650 273	*8.98 2.737
Dec. 19	1100	6,210 176	7.64 2.329				

Minimum, 400 ft³/s (11.3 m³/s) Oct. 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	424	533	865	1020	1100	1490	835	1400	1210	902	539	449		
2	436	514	2510	993	1040	1450	830	1440	1190	893	527	448		
3	424	496	2220	960	1010	1450	818	1430	1150	924	520	454		
4	411	486	1870	933	957	1430	801	1360	1120	850	515	452		
5	411	467	3520	872	907	1340	771	1310	1110	811	513	442		
6	560	453	5370	805	878	1250	748	1350	1120	780	514	439		
7	644	444	3930	780	865	1160	727	1470	1070	759	512	442		
8	622	437	2670	761	818	1140	714	1420	1030	745	519	441		
9	780	430	2190	737	805	1350	712	1310	1050	729	514	456		
10	774	424	2130	731	767	1500	738	1220	1140	716	504	493		
11	695	432	1760	731	749	1890	1210	1170	1250	712	521	477		
12	601	621	1520	707	737	1660	1510	1210	1730	709	505	582		
13	550	610	1520	683	1070	1480	1690	1280	1560	699	495	496		
14	511	615	2650	678	3760	1350	1660	1340	1310	722	505	465		
15	488	652	5200	683	4550	1260	1400	1420	1290	682	503	450		
16	470	705	3520	779	5350	1160	1250	1470	1320	651	493	447		
17	457	980	2470	1080	5690	1080	1160	1620	1340	637	483	444		
18	444	972	2130	986	4350	1020	1080	1560	1430	631	476	443		
19	436	853	4740	900	6430	964	1010	1420	1450	630	475	454		
20	427	879	3530	846	7110	927	982	1420	1370	623	476	579		
21	418	1630	2680	805	6220	885	1000	1570	1290	616	479	509		
22	410	1900	2110	800	3770	858	1100	1700	1170	596	474	478		
23	406	1660	1760	1270	2800	851	1290	1680	1090	582	459	463		
24	404	1350	1730	2340	2190	860	1410	1670	1040	575	456	487		
25	400	1120	1760	2030	1830	882	1400	1890	981	571	456	490		
26	407	990	1650	1900	1640	941	1370	1820	986	573	454	495		
27	416	875	1520	1670	1490	951	1390	1510	1070	576	450	503		
28	456	788	1380	1460	1390	962	1460	1300	971	580	444	529		
29	472	741	1250	1330	---	927	1400	1230	967	571	482	555		
30	507	720	1140	1220	---	896	1370	1200	977	571	501	510		
31	551	---	1070	1170	---	870	---	1210	---	560	459	---		
TOTAL	15412	23777	74365	32660	70273	36234	33836	44400	35782	21176	15223	14372		
MEAN	497	793	2399	1054	2510	1169	1128	1432	1193	683	491	479		
MAX	780	1900	5370	2340	7110	1890	1690	1890	1730	924	539	582		
MIN	400	424	865	678	737	851	712	1170	967	560	444	439		
CFSM	2.30	3.67	11.1	4.88	11.6	5.41	5.22	6.63	5.52	3.16	2.27	2.22		
IN.	2.65	4.09	12.81	5.62	12.10	6.24	5.83	7.65	6.16	3.65	2.62	2.48		
AC-FT	30570	47160	147500	64780	139400	71870	67110	88070	70970	42000	30190	28510		
CAL YR 1981	TOTAL	334480	MEAN	916	MAX	5370	MIN	373	CFSM	4.24	IN	57.60	AC-FT	663400
WTR YR 1982	TOTAL	417510	MEAN	1144	MAX	7110	MIN	400	CFSM	5.30	IN	71.90	AC-FT	828100

WILLAMETTE RIVER BASIN

187

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: April 1951 to current year.

INSTRUMENTATION.--Temperature recorder since April 1951.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 19.0°C July 8, 18, 19, 1970; minimum, 0.0°C at times during 1954, 1956, 1974, 1978-80, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 17.0°C Aug. 20; minimum, 0.0°C Jan. 3, 4, Feb. 5.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

189

14178700 EAST HUMBURG CREEK NEAR DETROIT, OR

LOCATION.--Lat 44°47'57", long 122°03'28", in NW¼NE¼ sec.15, T.9 S., R.6 E., Marion County, Hydrologic Unit 17090005, in Willamette National Forest, on left bank 1.6 mi (2.6 km) upstream from confluence with Humberg Creek, and 6.3 mi (10.1 km) northeast of Detroit.

DRAINAGE AREA.--7.32 mi² (19.0 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 2,050 ft (625 m), from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,310 ft³/s (37.1 m³/s) Dec. 25, 1980, gage height, 4.42 ft (1.347 m); minimum, 1.8 ft³/s (0.051 m³/s) Sept. 6-9, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft³/s (7.93 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0800	812 23.0	4.08 1.244	Jan. 24	0800	357 10.1	3.56 1.085
Dec. 5	1900	777 22.0	4.05 1.234	Feb. 14	0930	862 24.4	4.12 1.256
Dec. 15	0300	556 15.7	3.83 1.167	Feb. 16	1330	552 15.6	3.83 1.167
Dec. 19	0830	574 16.3	3.85 1.173	Feb. 21	0030	*1,090 30.9	*4.30 1.311

Minimum, 1.8 ft³/s (0.051 m³/s) Sept. 6-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	25	30	22	32	65	28	72	35	12	4.4	2.2
2	8.5	18	441	21	29	69	28	73	33	12	4.3	2.2
3	7.5	15	168	23	27	64	26	69	30	11	4.2	2.2
4	7.2	13	116	21	25	66	25	64	28	11	4.0	2.2
5	7.5	12	396	17	23	60	24	60	27	10	3.8	2.0
6	33	11	300	17	22	51	23	67	26	9.8	3.6	2.0
7	41	11	193	19	20	48	22	73	25	9.6	3.4	1.9
8	42	10	106	18	19	53	22	65	24	9.0	3.4	1.9
9	61	9.9	92	18	19	84	25	55	25	8.7	3.8	2.6
10	50	9.6	119	19	19	103	33	48	26	8.4	3.5	3.6
11	35	11	77	16	19	136	138	46	27	8.1	4.8	4.0
12	30	27	57	16	18	89	126	52	30	7.9	3.7	8.1
13	25	25	67	15	153	65	115	57	26	7.8	3.3	3.8
14	20	21	182	15	660	56	90	63	23	7.9	3.5	2.6
15	16	29	403	16	397	50	63	66	22	7.5	3.1	2.2
16	13	32	216	44	463	44	53	66	22	7.3	2.8	2.1
17	10	55	103	111	426	40	50	68	21	6.9	2.7	2.0
18	9.0	52	83	51	290	37	45	60	20	6.8	2.6	2.0
19	6.9	39	382	34	608	33	41	53	20	6.5	2.6	2.1
20	6.8	51	181	27	631	30	41	57	19	6.4	2.4	7.8
21	6.4	120	98	23	438	28	52	64	18	6.1	2.4	5.1
22	6.3	114	67	21	169	27	80	66	17	5.9	2.4	3.2
23	6.1	90	50	103	102	30	103	61	16	5.6	2.3	2.4
24	5.8	61	52	269	74	36	91	62	15	5.5	2.2	3.2
25	5.7	43	66	121	61	42	74	67	14	5.2	2.2	3.1
26	6.0	34	52	99	53	47	70	57	14	5.0	2.2	5.8
27	6.8	28	41	68	48	45	72	45	15	4.8	2.2	5.6
28	9.8	24	35	48	45	42	79	39	14	4.8	2.1	5.5
29	14	21	30	38	---	38	69	38	13	4.7	4.0	6.9
30	25	20	26	33	---	35	66	37	13	4.7	3.6	4.6
31	36	---	24	35	---	31	---	37	---	4.6	2.5	---
TOTAL	565.1	1031.5	4253	1398	4890	1644	1774	1807	658	231.5	98.0	104.7
MEAN	18.2	34.4	137	45.1	175	53.0	59.1	58.3	21.9	7.47	3.16	3.49
MAX	61	120	441	269	660	136	138	73	35	12	4.8	8.1
MIN	5.7	9.6	24	15	18	27	22	37	13	4.6	2.1	1.9
CFSM	2.49	4.70	18.7	6.16	23.9	7.24	8.07	7.96	2.99	1.02	.43	.48
IN.	2.87	5.24	21.61	7.10	24.85	8.35	9.01	9.18	3.34	1.18	.50	.53
AC-FT	1120	2050	8440	2770	9700	3260	3520	3580	1310	459	194	208
CAL YR 1981 TOTAL	12762.7			MEAN 35.0	MAX 498	MIN 2.5	CFSM 4.78	IN 64.85	AC-FT 25310			
WTR YR 1982 TOTAL	18454.8			MEAN 50.6	MAX 660	MIN 1.9	CFSM 6.91	IN 93.77	AC-FT 36610			

WILLAMETTE RIVER BASIN

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°45'10", long 122°07'40", in SE¼NE¼ sec.36, T.9 S., R.5 E., Marion County, Hydrologic Unit 17090005, in Willamette National Forest, on left bank 600 ft (183 m) upstream from Canyon Creek, 1.5 mi (2.4 km) northeast of Detroit, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--106 mi² (275 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1932 to current year. Monthly discharge only June 1932, published in WSP 1318. Prior to October 1952, published as "above French Creek, near Detroit."

REVISED RECORDS.--WSP 1044: 1943(M). WSP 1248: 1947.

GAGE.--Water-stage recorder. Datum of gage is 1,573.95 ft (479.740 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1952, at site 0.2 mi (0.3 km) downstream at datum 13.46 ft (4.103 m) lower.

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

AVERAGE DISCHARGE.--50 years, 577 ft³/s (16.34 m³/s), 73.92 in/yr (1,878 mm/yr), 418,000 acre-ft/yr (515 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s (479 m³/s) Dec. 22, 1964, gage height, 14.55 ft (4.435 m); minimum, 87 ft³/s (2.46 m³/s) Sept. 2, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1030	4,700 133	7.86 2.396	Dec. 19	1030	5,280 150	8.26 2.518
Dec. 5	1900	6,060 172	8.85 2.697	Feb. 14	1100	5,390 153	8.35 2.545
Dec. 15	0400	4,800 136	7.93 2.417	Feb. 20	1830	*7,740 219	*9.93 3.027

Minimum, 142 ft³/s (4.02 m³/s) Sept. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	440	790	542	715	956	427	820	626	418	225	159
2	211	370	3190	502	660	1010	434	853	620	434	214	154
3	199	320	1940	491	622	1000	440	857	572	461	208	153
4	191	280	1540	460	574	1160	435	783	543	395	203	152
5	182	245	3300	418	520	1020	421	715	515	385	202	149
6	455	229	3860	385	476	852	400	737	515	380	199	147
7	705	215	2700	367	443	759	384	849	487	367	199	145
8	674	204	1870	354	415	722	376	808	476	365	199	144
9	788	195	1590	342	391	892	379	708	522	354	195	154
10	592	189	1640	344	370	1050	408	629	641	343	192	186
11	470	202	1310	344	357	1350	1030	584	757	351	204	176
12	373	405	1070	340	341	1160	1230	593	937	362	194	239
13	318	399	1090	331	876	975	1420	640	768	345	188	192
14	279	402	2070	330	4400	873	1360	721	622	370	194	168
15	252	431	4300	357	3990	787	1040	796	678	321	188	158
16	233	474	2650	691	4480	705	872	840	735	300	181	152
17	220	715	1770	1330	4640	637	806	940	756	302	178	147
18	210	739	1480	915	3120	581	728	858	859	301	174	145
19	202	599	3850	703	5210	531	656	734	866	314	171	147
20	193	668	2550	585	5710	490	623	731	751	306	168	240
21	183	1350	1840	509	4640	460	644	868	674	306	166	190
22	177	1590	1430	476	2550	439	765	983	602	283	164	174
23	171	1380	1120	1490	1780	431	944	962	565	263	161	160
24	168	1040	1160	2610	1340	437	994	963	533	258	158	165
25	166	804	1340	1780	1080	456	923	1200	502	257	157	170
26	168	676	1160	1630	939	495	866	1070	534	261	156	178
27	178	564	1050	1350	853	507	855	763	610	269	154	185
28	208	482	878	1090	786	510	917	609	501	263	153	200
29	244	437	740	895	---	480	846	577	466	250	176	220
30	355	423	645	784	---	463	791	580	449	248	184	190
31	498	---	587	772	---	449	---	615	---	238	166	---
TOTAL	9462	16467	56510	23517	52278	22637	22414	24386	18682	10070	5671	5139
MEAN	305	549	1823	759	1867	730	747	787	623	325	183	171
MAX	788	1590	4300	2610	5710	1350	1420	1200	937	461	225	240
MIN	166	189	587	330	341	431	376	577	449	238	153	144
CFSM	2.88	5.18	17.2	7.16	17.6	6.89	7.05	7.43	5.88	3.07	1.73	1.61
IN.	3.32	5.78	19.83	8.25	18.35	7.94	7.87	8.56	6.56	3.53	1.99	1.80
AC-FT	18770	32660	112100	46650	103700	44900	44460	48370	37060	19970	11250	10190

CAL YR 1981	TOTAL	208875	MEAN 572	MAX 4630	MIN 109	CFSM 5.40	IN 73.30	AC-FT 414300
WTR YR 1982	TOTAL	267233	MEAN 732	MAX 5710	MIN 144	CFSM 6.91	IN 93.78	AC-FT 530100

191

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.0°C July 27, 1973; minimum, 0.0°C on several days in 1972, 1973, 1977-79.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 15.0°C July 29; minimum recorded, 2.0°C Apr. 4, 14, 15.

[illegible]

WILLAMETTE RIVER BASIN

14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

193

14180500 DETROIT LAKE NEAR DETROIT, OR

LOCATION.--Lat 44°43'20", long 122°14'55", in SW¼NW¼ sec. 7, T.10 S., R.5 E., Marion County, Hydrologic Unit 17090005, in control house near right abutment of Detroit Dam on North Santiam River, 4.9 mi (7.9 km) west of Detroit, and at mile 60.9 (98.0 km).

DRAINAGE AREA.--437 mi² (1,132 km²).

PERIOD OF RECORD.--January 1953 to current year. Prior to October 1971, published as Detroit Reservoir near Detroit.

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

REMARKS.--Reservoir is formed by concrete, gravity-type dam with six 42-ft (12.8 m) by 28-ft (8.5 m) control gates. Length of dam is 1,580 ft (481.6 m), built by Corps of Engineers. Storage began in January 1953. Total capacity is 455,100 acre-ft (561 hm³) and usable capacity is 340,100 acre-ft (419 hm³) between elevations 1,425.0 ft (434.34 m), proposed lower limit of operation, and 1,569.0 ft (478.23 m), top of spillway gates. Reservoir used for flood control, power development, irrigation, improvement of navigation, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Midnight elevations furnished by Corps of Engineers and reviewed by Geological Survey. Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 457,900 acre-ft (565 hm³) July 13, 1972, elevation, 1,569.79 ft (478.472 m); minimum, 115,500 acre-ft (142 hm³) Jan. 30, 1969, elevation, 1,425.37 ft (434.453 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 442,300 acre-ft (545 hm³) June 26, elevation, 1,565.33 ft (477.113 m); minimum, 152,000 acre-ft (187 hm³) Jan. 10, elevation, 1,448.61 ft (441.536 m).

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

1,425	115,000	1,480	210,900	1,530	331,500
1,430	122,200	1,490	232,000	1,540	360,200
1,440	137,700	1,500	254,600	1,550	390,900
1,450	154,400	1,510	278,700	1,560	424,000
1,460	172,200	1,520	304,400	1,570	458,600
1,470	191,100				

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1517.43	1482.65	1451.96	1470.02	1467.49	1521.59	1533.97	1557.84	1562.54	1564.39	1562.98	1555.53
2	1516.26	1481.82	1462.11	1466.40	1466.90	1520.95	1534.50	1558.67	1562.60	1564.11	1562.89	1555.15
3	1515.02	1480.86	1463.82	1463.00	1466.32	1520.49	1535.01	1559.04	1562.84	1564.14	1562.78	1554.56
4	1513.74	1479.86	1463.85	1459.32	1465.41	1520.30	1535.51	1559.26	1563.25	1564.07	1562.68	1553.90
5	1512.48	1478.79	1473.75	1455.51	1464.35	1519.78	1535.90	1559.39	1563.23	1563.96	1562.56	1553.19
6	1511.66	1477.69	1488.92	1453.60	1463.17	1519.79	1536.23	1559.55	1563.33	1563.83	1562.44	1552.49
7	1511.02	1476.47	1497.41	1451.72	1461.89	1519.83	1536.57	1560.17	1563.32	1563.67	1562.34	1551.77
8	1510.37	1475.25	1500.46	1449.89	1460.40	1519.79	1536.88	1560.97	1563.53	1563.59	1562.24	1551.05
9	1510.10	1474.04	1498.95	1449.08	1458.89	1521.61	1537.19	1561.57	1564.04	1563.73	1562.14	1550.40
10	1509.47	1472.84	1495.35	1449.22	1457.14	1522.92	1537.70	1562.08	1564.60	1563.82	1562.03	1549.66
11	1508.60	1471.81	1490.73	1449.31	1455.51	1524.15	1539.54	1562.27	1564.91	1563.97	1561.98	1548.88
12	1507.47	1471.47	1487.60	1449.90	1454.19	1524.14	1541.87	1562.32	1564.87	1563.88	1561.88	1548.31
13	1506.14	1470.29	1486.91	1450.35	1457.58	1523.67	1544.72	1562.59	1564.42	1563.69	1561.75	1547.53
14	1504.70	1468.90	1490.01	1450.79	1474.62	1522.95	1546.91	1562.80	1564.58	1563.28	1561.64	1546.61
15	1503.27	1467.71	1503.51	1451.46	1487.07	1523.06	1547.82	1562.97	1564.83	1563.25	1561.53	1545.54
16	1501.91	1466.60	1508.29	1453.29	1500.29	1523.85	1548.40	1563.21	1564.78	1563.31	1561.17	1544.45
17	1500.73	1466.34	1508.09	1456.11	1512.25	1524.74	1549.50	1563.77	1564.60	1563.38	1560.80	1543.37
18	1499.49	1466.04	1504.46	1456.07	1519.02	1525.59	1550.46	1563.80	1564.66	1563.46	1560.43	1542.24
19	1498.22	1465.15	1512.03	1455.44	1532.82	1526.35	1551.25	1563.51	1564.60	1563.61	1560.04	1541.19
20	1496.94	1464.61	1514.66	1454.58	1547.02	1526.94	1551.56	1563.44	1564.60	1563.59	1559.67	1540.29
21	1495.55	1466.65	1512.84	1453.34	1555.29	1527.47	1551.84	1563.62	1564.54	1563.61	1559.28	1539.26
22	1494.16	1468.78	1509.25	1453.17	1556.16	1527.96	1552.43	1563.83	1564.58	1563.55	1558.86	1538.21
23	1492.73	1468.36	1504.72	1456.76	1552.98	1528.46	1553.35	1563.96	1564.67	1563.49	1558.48	1537.07
24	1491.27	1466.82	1500.26	1466.79	1548.61	1529.02	1554.38	1564.07	1564.84	1563.44	1558.06	1535.98
25	1489.81	1464.41	1495.87	1469.40	1543.03	1529.55	1555.27	1564.45	1565.03	1563.40	1557.64	1534.87
26	1488.33	1461.48	1491.05	1470.06	1537.08	1530.26	1555.63	1564.78	1565.00	1563.33	1557.21	1533.76
27	1486.91	1458.10	1485.70	1469.27	1530.91	1531.02	1555.97	1564.21	1564.91	1563.42	1556.79	1532.65
28	1485.60	1455.26	1482.14	1468.08	1524.49	1531.73	1556.48	1563.39	1564.71	1563.21	1556.36	1531.63
29	1484.50	1452.17	1479.52	1468.16	---	1532.39	1556.79	1563.08	1564.78	1563.17	1556.05	1530.58
30	1483.85	1451.22	1476.65	1467.95	---	1532.98	1557.06	1562.85	1564.71	1563.11	1555.85	1529.47
31	1483.35	---	1473.44	1467.79	---	1533.49	---	1562.64	---	1563.06	1555.72	---
MEAN	1501.00	1469.08	1490.78	1458.25	1497.17	1525.38	1546.02	1562.26	1564.26	1563.60	1560.20	1543.99
MAX	1517.43	1482.65	1514.66	1470.06	1556.16	1533.49	1557.06	1564.78	1565.03	1564.39	1562.98	1555.53
MIN	1483.35	1451.22	1451.96	1449.08	1454.19	1519.78	1533.97	1557.84	1562.54	1563.06	1555.72	1529.47
(+)	217800	156500	197800	186900	316400	341400	414000	433000	440200	434500	409500	330100
(+)	-83000	-61300	+41300	-10900	+129500	+25000	+72600	+19000	+7200	-5700	-25000	-79400

CAL YR 1981 MEAN 1523.76 MAX 1566.22 MIN 1451.22 AC-FT# -65800
WTR YR 1982 MEAN 1523.64 MAX 1565.03 MIN 1449.08 AC-FT# +29300

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

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR

LOCATION.--Lat 44°45'10", long 122°17'50", in NE¼NE¼ sec.34, T.9 S., R.4 E., Linn County, Hydrologic Unit 17090005, on left bank 0.1 mi (0.2 km) downstream from Little Sardine Creek, 0.8 mi (1.3 km) downstream from Big Cliff Dam, 2.1 mi (3.4 km) east of Niagara, and at mile 57.3 (92.2 km).

DRAINAGE AREA.--453 mi² (1,173 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1908 to January 1920, October 1921 to March 1922, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as North Fork of Santiam River near Niagara prior to October 1913, and as "above Mayflower Creek, near Detroit" October 1938 to September 1952.

REVISED RECORDS.--WSP 1288: 1914-18, 1920. WSP 1718: 1953-54.

GAGE.--Water-stage recorder. Datum of gage is 1,093.78 ft (333.384 m) National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--Water-discharge records excellent. Flow regulated since 1953 by Detroit Lake (see station 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft (3.61 hm³). No diversion above station.

AVERAGE DISCHARGE.--54 years (water years 1910-19, 1939-82), 2,335 ft³/s (66.13 m³/s), 70.00 in/yr (1,778 mm/yr), 1,692,000 acre-ft/yr (2.09 km³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,200 ft³/s (1,790 m³/s) Nov. 22, 1909, gage height, 16.4 ft (5.00 m), from floodmark, site and datum then in use, from rating curve extended above 35,000 ft³/s (991 m³/s); minimum, 19 ft³/s (0.54 m³/s) Aug. 21, 1963; minimum daily, 395 ft³/s (11.2 m³/s) Mar. 25, 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,900 ft³/s (394 m³/s) Feb. 25, gage height, 8.77 ft (2.673 m); minimum, 750 ft³/s (21.2 m³/s) Sept. 1; minimum daily, 892 ft³/s (25.3 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2460	2300	2080	5010	2860	8280	1030	1780	2450	2020	943	952
2	2450	2190	2180	4990	2830	4560	1040	1680	2100	2080	1010	1270
3	2410	2210	5190	4850	2900	4290	1050	2610	1640	1470	1020	1660
4	2360	2210	5020	4740	2930	4410	1020	2480	1390	1580	980	1740
5	2400	2170	3660	4740	2910	4390	1030	2480	1880	1530	979	1710
6	2930	2180	1200	3010	2910	2990	1050	2520	2020	1550	954	1820
7	3080	2170	1050	2940	2890	2940	1050	2130	2050	1590	949	1780
8	2980	2140	2940	2730	2900	2740	1050	1560	1560	1400	959	1790
9	3040	2120	6770	2050	2910	1290	1030	1620	1060	1070	960	1770
10	2860	2040	9320	1430	3090	2000	1020	1540	1190	967	973	2030
11	2930	2020	9240	1090	2860	3120	1120	1990	1870	964	940	2090
12	2880	2090	6970	1060	2540	4180	1270	2480	3160	1370	938	2140
13	2880	3060	4240	968	1200	4070	1340	2170	3460	1380	941	2100
14	3040	2990	4660	946	1160	4130	1710	2440	2230	1980	939	2130
15	2790	2990	1290	947	1960	2890	2380	2610	1900	1220	942	2360
16	2540	3020	3870	953	3150	1560	2090	2640	2590	997	1440	2300
17	2290	3060	5870	2130	3140	1090	1310	2440	2690	928	1420	2350
18	2400	3050	9330	2930	3890	1060	1120	3090	2460	892	1290	2370
19	2400	3030	4800	2940	1140	1110	1130	3350	2550	931	1350	2370
20	2320	3020	5490	2760	1160	1080	1840	3160	2610	976	1340	2370
21	2420	2960	8540	2890	3070	1080	1880	2960	2210	985	1360	2330
22	2390	3470	9210	2310	7760	1110	1920	3110	1920	1010	1340	2330
23	2360	4950	9150	1940	12300	1110	1940	3200	1790	990	1370	2430
24	2340	4780	9250	1110	12700	1060	1950	3110	1450	985	1350	2320
25	2360	4810	9390	3320	13600	1040	1930	3180	1320	959	1380	2410
26	2450	4890	9420	4990	13500	1050	2580	3110	1950	979	1400	2390
27	2410	4780	9300	5150	13000	1050	2560	3880	1990	947	1300	2420
28	2440	4110	6650	4750	12900	1050	2570	3790	2080	1000	1350	2440
29	2380	4100	4910	2880	---	1040	2570	2780	1530	990	1370	2410
30	2150	2510	4890	2870	---	1080	2530	2670	1760	972	1070	2440
31	2260	---	5010	2960	---	1050	---	2630	---	944	933	---
TOTAL	79400	91420	180890	88384	140160	73900	48110	81190	60860	37656	35490	63022
MEAN	2561	3047	5835	2851	5006	2384	1604	2619	2029	1215	1145	2101
MAX	3080	4950	9420	5150	13600	8280	2580	3880	3460	2080	1440	2440
MIN	2150	2020	1050	946	1140	1040	1020	1540	1060	892	933	952
AC-FT	157500	181300	358800	175300	278000	146600	95430	161000	120700	74690	70390	125000
MEAN†	1212	2017	6507	2674	7337	2791	2823	2927	2149	1122	738	766
CFSM†	2.68	4.45	14.36	5.90	16.20	6.16	6.23	6.46	4.74	2.48	1.63	1.69
IN.†	3.08	4.97	16.56	6.81	16.87	7.10	6.96	7.45	5.30	2.86	1.88	1.89
AC-FT†	74500	120000	400100	164400	407500	171600	168000	180000	127900	69000	45400	45600

CAL YR 1981 TOTAL 807506 MEAN 2212 MAX 9940 MIN 890 AC-FT 1602000 MEAN† 2122 CFSM† 4.68 IN.† 63.60 AC-FT† 1536200
WTR YR 1982 TOTAL 980482 MEAN 2686 MAX 13600 MIN 892 AC-FT 1945000 MEAN† 2727 CFSM† 6.02 IN.† 81.74 AC-FT† 1974300

† Adjusted for change in contents of Detroit Lake.

WILLAMETTE RIVER BASIN

195

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1953 to current year.

INSTRUMENTATION.--Temperature recorder since January 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 16.5°C July 28, 29, 1958; minimum, 1.0°C Jan. 30 to Feb. 4, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 14.0°C Oct. 1-10, 12; minimum, 2.5°C Feb. 9, 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14181500 NORTH SANTIAM RIVER AT NIAGARA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14182500 LITTLE NORTH SANTIAM RIVER NEAR MEHAMA, OR

LOCATION.--Lat 44°47'30", long 122°34'40", in NW¼ sec.16, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on left bank 2.0 mi (3.2 km) east of Mehama and at mile 2.0 (3.2 km).

DRAINAGE AREA.--112 mi² (290 km²) at cableway 1.2 mi (1.9 km) downstream where all discharge measurements are made.

PERIOD OF RECORD.--October 1931 to current year. Records for July to September 1924 and July to September 1931 at site 4 mi (6.4 km) upstream not equivalent owing to difference in drainage areas.

REVISED RECORDS.--WSP 754: 1932. WSP 1218: 1934, 1936, 1949-50. WSP 1935: Maximum only, 1932-34, 1936, 1938, 1943, 1945-49, 1950(M,P), 1951-53(M), 1954(M,P), 1955(M), 1956(M,P), 1957(M), 1958-59(M,P). WSP 2135: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 655.41 ft (199.769 m) National Geodetic Vertical Datum of 1929. Prior to June 12, 1948, nonrecording gage at about same site and datum.

REMARKS.--Records excellent. No regulation or diversion above station. Records herein are for measuring site.

AVERAGE DISCHARGE.--51 years, 769 ft³/s (21.78 m³/s), 93.24 in/yr (2,368 mm/yr), 557,100 acre-ft/yr (687 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft³/s (1,020 m³/s) Dec. 22, 1964, gage height, 16.73 ft (5.099 m), from rating curve extended above 17,000 ft³/s (481 m³/s); minimum, 13 ft³/s (0.37 m³/s) Aug. 30, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,200 ft³/s (232 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0930	14,100 399	11.32 3.450	Feb. 14	1130	*15,100 428	*11.60 3.536
Dec. 5	2230	9,250 262	9.81 2.990	Feb. 19	0800	10,800 306	10.34 3.152
Jan. 24	0730	10,000 283	10.08 3.072	Feb. 20	1830	12,300 348	10.82 3.298

Minimum, 32 ft³/s (0.91 m³/s) Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	630	1950	661	941	1190	436	713	395	160	50	41
2	254	460	7560	593	881	1340	433	708	353	149	49	38
3	234	368	2850	590	851	1290	428	724	320	173	48	36
4	173	315	2120	548	772	1840	427	684	308	164	47	36
5	140	260	4130	479	680	1450	411	591	321	161	45	35
6	535	223	6750	425	609	1080	390	595	365	152	44	35
7	1190	195	3390	397	549	894	369	740	352	136	42	34
8	1130	174	2010	376	495	806	357	672	329	125	41	33
9	1700	157	1470	365	453	998	355	577	338	114	43	37
10	880	143	1370	376	418	1430	400	516	386	106	46	96
11	626	153	1130	394	390	1720	1540	472	431	100	55	85
12	466	823	924	427	365	1270	1810	486	455	94	58	403
13	367	768	1210	419	1990	959	1850	510	396	90	48	261
14	292	592	2720	446	9340	904	1740	576	322	97	50	150
15	240	528	5160	598	4860	804	1270	638	314	89	50	106
16	205	535	3040	1490	5460	696	1010	658	330	83	44	85
17	178	646	1830	3330	5580	613	913	761	335	78	41	72
18	158	863	1390	1980	3830	548	823	709	335	73	40	64
19	140	657	3020	1390	8070	493	712	565	331	69	39	60
20	126	733	2120	1050	7050	449	661	538	326	67	38	135
21	115	1400	1750	857	4700	412	712	652	285	64	37	179
22	105	2030	1360	777	2220	382	993	712	241	61	36	131
23	100	1680	1070	5620	1540	367	1280	645	209	58	35	104
24	94	1180	1250	6700	1150	368	1160	605	191	57	34	95
25	89	869	1820	2950	935	391	932	783	183	55	34	97
26	94	694	1570	2830	818	446	810	685	176	54	33	99
27	111	562	1540	2120	821	487	761	483	196	53	33	142
28	174	473	1290	1600	755	523	877	377	183	52	34	136
29	283	424	1040	1230	---	479	838	348	179	51	39	244
30	579	428	853	1010	---	476	707	370	173	51	65	210
31	958	---	747	1040	---	464	---	391	---	51	52	---
TOTAL	11894	18963	70434	43068	66523	25569	25405	18484	9058	2887	1350	3279
MEAN	384	632	2272	1389	2376	825	847	596	302	93.1	43.5	109
MAX	1700	2030	7560	6700	9340	1840	1850	783	455	173	65	403
MIN	89	143	747	365	365	367	355	348	173	51	33	33
CFSM	3.43	5.64	20.3	12.4	21.2	7.37	7.56	5.32	2.70	.83	.39	.97
IN.	3.95	6.30	23.39	14.30	22.09	8.49	8.44	6.14	3.01	.96	.45	1.09
AC-FT	23590	37610	139700	85430	131900	50720	50390	36660	17970	5730	2680	6500
CAL YR 1981 TOTAL	243122		MEAN 666	MAX 7560	MIN 27	CFSM 5.95	IN 80.75	AC-FT 482200				
WTR YR 1982 TOTAL	296914		MEAN 813	MAX 9340	MIN 33	CFSM 7.26	IN 98.62	AC-FT 588900				

WILLAMETTE RIVER BASIN

14183000 NORTH SANTIAM RIVER AT MEHAMA, OR

LOCATION.--Lat 44°47'20", long 122°37'00", in NW¼ sec.18, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on right bank 300 ft (91 m) downstream from highway bridge at Mehama, 0.5 mi (0.8 km) downstream from Little North Santiam River, and at mile 38.71 (62.28 km).

DRAINAGE AREA.--655 mi² (1,696 km²), at cableway 0.8 mi (1.3 km) downstream, where all discharge measurements are made.

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to September 1914, September 1921 to current year. Monthly discharge only September 1921, published in WSP 1318. Prior to October 1913, published as North Fork of Santiam River at Mehama.

REVISED RECORDS.--WSP 739: 1922-23(M). WSP 1044: 1943. WSP 1248: 1906, 1911-14, 1924(M), 1926, 1934-36(M), 1937, 1938(M), 1942(M). WSP 2135: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 602.49 ft (183.639 m) National Geodetic Vertical Datum of 1929. Prior to June 15, 1933, nonrecording gage at site 100 ft (30 m) upstream at same datum.

REMARKS.--Records excellent. Flow regulated since 1953 by Detroit Lake (see station 14180500) and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft (3.61 km³). No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--66 years (water years 1906, 1911-14, 1922-82), 3,367 ft³/s (95.35 m³/s), 2,439,000 acre-ft/yr (3.01 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,600 ft³/s (2,170 m³/s) Dec. 28, 1945, gage height, 15.37 ft (4.685 m), from rating curve extended above 36,000 ft³/s (1,020 m³/s), on basis of slope-area measurement of peak flow; maximum gage height, 17.5 ft (5.33 m) Nov. 20, 1921, from graph based on gage readings, and Jan. 6, 1923, from floodmark, at site then in use; minimum discharge, 254 ft³/s (7.19 m³/s) Aug. 3, 1970; minimum daily, 420 ft³/s (11.9 m³/s) Sept. 18, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,400 ft³/s (549 m³/s) Dec. 2, Feb. 20, gage height, 8.76 ft (2.670 m); minimum, 975 ft³/s (27.6 m³/s) July 19; minimum daily, 1,060 ft³/s (30.0 m³/s) July 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2590	2970	4630	6880	4390	11900	1770	3030	3070	2240	1080	1100
2	2710	2670	12000	6750	4240	7400	1820	2780	2640	2390	1110	1330
3	2690	2570	10100	6720	4250	6880	1820	3620	2190	1850	1130	1720
4	2550	2520	8570	6470	4180	7790	1800	3580	1840	1840	1110	1900
5	2530	2450	11200	6250	4020	7120	1790	3470	2190	1800	1100	1800
6	3440	2410	13700	4340	3900	5120	1750	3440	2520	1770	1100	1970
7	4580	2380	7060	3900	3790	4600	1730	3370	2530	1810	1080	1930
8	4260	2320	6000	3650	3700	4270	1690	2610	2110	1640	1090	1900
9	4990	2280	9300	2900	3640	3070	1650	2520	1590	1380	1090	1910
10	3930	2180	12500	2350	3740	3780	1680	2340	1590	1170	1100	2200
11	3630	2210	12000	1770	3570	5680	3310	2630	2280	1160	1110	2290
12	3360	3120	9830	1820	3170	6200	4080	3160	3540	1450	1100	2780
13	3270	3940	6640	1700	3920	5780	4550	2970	4370	1510	1100	2510
14	3280	3790	9420	1710	13600	5790	5020	3230	2950	2200	1110	2420
15	3050	3750	10300	1890	9480	4700	4900	3520	2270	1450	1100	2520
16	2830	3820	8970	3210	11800	2670	4210	3670	2950	1190	1470	2490
17	2470	4080	9300	7160	12300	2180	3280	3480	3290	1110	1550	2520
18	2510	4350	12500	6350	10400	1960	2700	4060	2920	1060	1460	2520
19	2480	4020	11500	5370	13900	1910	2460	4290	3020	1060	1430	2530
20	2410	4100	9330	4660	12500	1800	2950	4010	3100	1110	1490	2600
21	2480	4970	12700	4430	11200	1750	3150	3950	2710	1110	1470	2600
22	2480	6460	12800	3740	11800	1720	3490	4080	2340	1120	1460	2550
23	2450	7670	12200	10200	15600	1700	3860	4160	2070	1110	1490	2590
24	2380	6860	12300	11100	15500	1650	3730	3990	1770	1110	1470	2520
25	2400	6440	13200	7910	15900	1650	3420	4260	1600	1100	1490	2560
26	2510	6240	13100	10500	15600	1730	3790	4050	2070	1100	1520	2570
27	2490	5960	13100	9060	15000	1820	3840	4730	2300	1090	1450	2610
28	2590	5170	10300	8060	14700	1940	3950	4500	2400	1110	1470	2620
29	2670	4980	7500	4980	---	1850	3940	3450	1890	1110	1530	2670
30	2850	3600	7150	4580	---	1880	3710	3220	1940	1110	1340	2770
31	3210	---	7070	4660	---	1860	---	3210	---	1080	1110	---
TOTAL	92070	120280	316270	165070	249790	120150	91840	109380	74050	43340	39710	69000
MEAN	2970	4009	10200	5325	8921	3876	3061	3528	2468	1398	1281	2300
MAX	4990	7670	13700	11100	15900	11900	5020	4730	4370	2390	1550	2780
MIN	2380	2180	4630	1700	3170	1650	1650	2340	1590	1060	1080	1100
AC-FT	182600	238600	627300	327400	495500	238300	182200	217000	146900	85960	78760	136900
CAL YR 1981	TOTAL	1208460	MEAN	3311	MAX	15700	MIN	1120	AC-FT	2397000		
WTR YR 1982	TOTAL	1490950	MEAN	4085	MAX	15900	MIN	1060	AC-FT	2957000		

WILLAMETTE RIVER BASIN

199

14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR

LOCATION.--44°23'35", long 122°30'35", in SE¼ sec.36, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, on left bank 100 ft (30 m) downstream from bridge at Cascadia ranger station, 0.5 mi (0.8 km) downstream from Mouse Creek, 0.5 mi (0.8 km) upstream from Deer Creek, 1.5 mi (2.4 km) southwest of Cascadia, and at mile 48.5 (78.0 km).

DRAINAGE AREA.--174 mi² (451 km²), at gaging cable 0.7 mi (1.1 km) upstream.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1935 to current year. Monthly discharge only September 1935, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 759.88 ft (231.611 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1935, nonrecording gage.

REMARKS.--Water-discharge records excellent. No regulation or diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--47 years, 821 ft³/s (23.25 m³/s), 64.08 in/yr (1,628 mm/yr), 594,800 acre-ft/yr (733 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft³/s (782 m³/s) Dec. 22, 1964, gage height, 19.68 ft (5.998 m), from rating curve extended above 14,000 ft³/s (396 m³/s); minimum, 23 ft³/s (0.65 m³/s) Dec. 1, 2, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,700 ft³/s (161 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1300	9,340 265	11.07 3.374	Jan. 24	1030	5,900 167	8.89 2.710
Dec. 6	0730	*13,100 371	*12.97 3.953	Feb. 14	1130	8,620 244	10.66 3.249
Dec. 15	0500	7,600 215	10.05 3.063	Feb. 16	1430	8,310 235	10.48 3.194
Dec. 19	1130	7,080 201	9.71 2.960	Feb. 20	1830	10,600 300	11.74 3.578

Minimum, 50 ft³/s (1.42 m³/s) Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	411	1700	825	870	1580	573	937	403	282	94	66
2	198	349	5710	702	761	1700	595	930	380	251	92	61
3	171	310	3540	714	706	1460	616	897	357	324	89	57
4	156	284	2390	718	631	1690	623	818	343	302	86	57
5	137	243	4950	575	560	1500	627	756	380	288	82	57
6	320	219	10700	470	502	1200	593	776	415	274	79	55
7	687	203	5280	416	457	1010	559	876	389	236	77	53
8	515	192	3140	386	411	914	546	789	350	221	81	52
9	957	183	2230	409	378	1070	550	699	336	205	84	57
10	819	176	2090	494	345	1280	655	630	346	192	93	82
11	746	196	1710	511	327	1710	2100	594	362	182	118	81
12	530	697	1380	528	303	1440	2410	612	536	171	113	256
13	413	653	1920	499	1160	1190	3230	651	574	165	89	175
14	344	602	4360	538	7000	1070	3070	692	433	180	87	120
15	289	811	6570	594	5590	971	2100	732	387	162	86	100
16	249	913	3920	956	6940	862	1590	744	369	152	79	89
17	220	1460	2370	2760	7610	767	1360	838	350	144	74	83
18	198	1600	1810	1850	5720	683	1190	781	335	136	67	79
19	184	1090	5080	1270	8240	619	1010	664	323	130	67	78
20	174	967	3880	944	7380	566	926	650	301	124	66	133
21	165	2650	3320	749	6060	523	955	719	295	118	64	120
22	155	3090	2310	664	3320	496	1160	754	264	116	62	96
23	150	2670	1630	3550	2200	476	1410	706	234	112	61	86
24	145	1780	1730	4780	1600	475	1380	679	216	107	60	82
25	140	1210	2330	3220	1300	488	1210	763	221	102	57	86
26	147	957	3100	3210	1130	531	1100	702	203	100	55	90
27	152	783	2950	2340	1150	539	1040	548	265	98	55	135
28	260	657	2060	1650	1040	597	1100	460	249	96	55	185
29	350	576	1510	1230	---	580	1010	420	329	95	69	396
30	425	548	1190	1010	---	577	937	414	310	94	100	237
31	473	---	983	995	---	593	---	411	---	94	77	---
TOTAL	10021	26480	97843	39557	73691	29157	36225	21642	10255	5253	2418	3304
MEAN	323	883	3156	1276	2632	941	1208	698	342	169	78.0	110
MAX	957	3090	10700	4780	8240	1710	3230	937	574	324	118	396
MIN	137	176	983	386	303	475	546	411	203	94	55	52
CFSM	1.86	5.08	18.1	7.33	15.1	5.41	6.94	4.01	1.97	.97	.45	.63
IN.	2.14	5.66	20.92	8.46	15.75	6.23	7.74	4.63	2.19	1.12	.52	.71
AC-FT	19880	52520	194100	78460	146200	57830	71850	42930	20340	10420	4800	6550
CAL YR 1981 TOTAL	302778		MEAN 830	MAX 10700	MIN 44	CFSM 4.77	IN 64.73	AC-FT 600600				
WTR YR 1982 TOTAL	355846		MEAN 975	MAX 10700	MIN 52	CFSM 5.60	IN 76.08	AC-FT 705800				

WILLAMETTE RIVER BASIN

14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR --Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1962 to July 1967, February 1969 to current year.

INSTRUMENTATION.--Temperature recorder June 1962 to July 1967, February 1969 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.0°C July 30, Aug. 7, 1965; minimum, 0.0°C at times during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C Aug. 21, 22; minimum recorded, 1.0°C Jan. 4, 6, 7.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

201

14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14185700 MIDDLE SANTIAM RIVER NEAR UPPER SODA, OR

LOCATION.--Lat 44°30'45", long 122°15'52", in SE¼NE¼ sec.24, T.12 S., R.4 E., Linn County, Hydrologic Unit 17090006, on right bank 0.8 mi (1.3 km) upstream from Bear Creek, 7.5 mi (12.1 km) north of Upper Soda, and at mile 23.9 (38.5 km).

DRAINAGE AREA.--74.6 mi² (193.2 km²).

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,500 ft (457.2 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record Dec. 1 to Apr. 29, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s (255 m³/s) Dec. 25, 1980, gage height, 8.58 ft (2.615 m), from floodmark, from rating curve extended above 3,600 ft³/s (102 m³/s) on basis of slope-area measurement of peak flow; minimum, 22 ft³/s (0.62 m³/s) Sept. 16-20, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 5	1900	4,890 138	a6.90 2.103	Feb. 20	1800	b*8,150 231	a*8.27 2.521

Minimum, 36 ft³/s (1.02 m³/s) Sept. 8, 9.

a From floodmark.

b From rating curve extended as explained above.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	240	1050	430	470	820	291	648	377	211	63	42
2	84	217	2340	360	400	920	288	652	353	205	63	41
3	73	194	1480	380	380	800	281	647	335	226	61	39
4	68	176	1200	390	340	920	276	607	317	197	60	39
5	60	157	1540	290	300	788	262	566	308	191	58	38
6	144	145	3400	240	270	661	251	578	314	178	57	38
7	249	135	2000	220	250	585	246	638	299	166	56	37
8	239	126	1580	200	220	553	244	605	284	152	61	36
9	382	119	1270	220	200	782	249	535	288	145	58	38
10	316	112	1100	270	190	834	290	485	313	137	56	55
11	276	118	900	280	180	920	821	452	341	130	62	50
12	224	259	700	290	160	860	972	460	489	123	59	123
13	190	255	1100	260	640	740	1300	480	415	118	53	72
14	164	251	2400	290	4500	660	1200	524	339	125	53	54
15	145	292	3500	350	3000	617	775	564	318	113	53	47
16	131	329	2100	580	4000	553	644	586	317	106	51	44
17	119	488	1300	1700	5000	490	585	650	308	100	49	42
18	110	515	900	900	4200	441	521	623	301	96	48	40
19	103	438	2700	620	5400	406	466	552	291	92	47	41
20	95	438	2100	480	5300	375	453	542	267	89	46	68
21	88	903	1800	380	3200	344	476	611	253	85	45	57
22	82	1010	1200	350	1800	322	566	651	227	83	44	48
23	78	889	800	1100	1200	314	788	624	207	79	43	45
24	75	746	900	2500	992	310	775	618	194	77	42	47
25	72	598	1300	1700	700	316	714	708	185	75	41	49
26	72	496	1700	1600	620	354	690	648	180	72	40	59
27	78	414	1600	1200	600	360	684	518	208	70	39	67
28	125	367	1100	900	540	366	738	432	184	68	38	83
29	143	330	750	660	---	341	684	399	217	67	48	137
30	192	314	600	540	---	324	639	387	251	65	57	92
31	252	---	500	540	---	310	---	385	---	65	46	---
TOTAL	4495	11071	46910	20220	45052	17386	17169	17375	8680	3706	1597	1668
MEAN	145	369	1513	652	1609	561	572	560	289	120	51.5	55.6
MAX	382	1010	3500	2500	5400	920	1300	708	489	226	63	137
MIN	60	112	500	200	160	310	244	385	180	65	38	36
CFSM	1.94	4.95	20.3	8.74	21.6	7.52	7.67	7.51	3.87	1.61	.69	.75
IN.	2.24	5.52	23.39	10.08	22.47	8.67	8.56	8.66	4.33	1.85	.80	.83
AC-FT	8920	21960	93050	40110	89360	34490	34050	34460	17220	7350	3170	3310

CAL YR 1981	TOTAL	147383	MEAN	404	MAX	3500	MIN	22	CFSM	5.42	IN	73.49	AC-FT	292300
WTR YR 1982	TOTAL	195329	MEAN	535	MAX	5400	MIN	36	CFSM	7.17	IN	97.40	AC-FT	387400

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR

LOCATION.--Lat 44°32'25", long 122°26'05", in NW¼ sec.10, T.12 S., R.3 E., Linn County, Hydrologic Unit 17090006, on Bureau of Land Management land, on right bank 80 ft (24 m) downstream from Panther Creek, 10 mi (16 km) north of Cascadia, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--99.2 mi² (256.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1963 to November 1964 (destroyed by flood of December 1964); October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,050 ft (320 m), from topographic map. Aug. 13, 1963, to Dec. 22, 1964, water-stage recorder on left bank at present datum.

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

AVERAGE DISCHARGE.--18 years (water years 1964, 1966-82), 676 ft³/s (19.14 m³/s), 92.54 in/yr (2,351 mm/yr), 489,800 acre-ft/yr (604 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s (634 m³/s) Jan. 20, 1972, gage height, 16.38 ft (4.993 m); minimum, 14 ft³/s (0.40 m³/s) Aug. 19-23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 36,500 ft³/s (1,030 m³/s) Dec. 22, 1964, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0930	11,900 337	13.24 4.036	Jan. 24	0900	7,390 209	11.51 3.508
Dec. 5	2100	10,300 292	12.63 3.850	Feb. 14	1000	*12,800 362	*13.56 4.133
Dec. 15	0330	8,940 253	12.06 3.676	Feb. 20	1700	12,400 351	13.40 4.084
Dec. 19	0930	9,080 257	12.12 3.694				

Minimum, 30 ft³/s (0.85 m³/s) Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	621	1970	480	624	1480	397	725	278	141	49	41
2	155	437	7160	425	530	1460	420	716	249	131	48	39
3	133	336	2900	414	510	1460	431	686	237	154	48	37
4	113	274	2060	364	462	1930	419	620	224	136	47	37
5	113	230	5300	312	398	1380	394	550	224	133	46	35
6	933	201	7470	275	348	992	367	589	252	122	45	35
7	1200	180	3440	256	311	820	352	695	235	111	45	34
8	1070	163	1830	242	278	783	361	595	220	103	51	33
9	1590	150	1290	242	253	1250	391	499	231	96	48	40
10	916	140	1430	275	231	1420	496	437	251	91	49	65
11	648	167	1130	277	217	1970	2180	409	261	87	57	66
12	437	920	884	280	204	1370	2280	437	366	83	54	270
13	324	692	1810	273	2360	1000	2530	469	299	81	46	138
14	257	539	3990	285	9750	912	2070	528	234	93	47	84
15	213	614	7430	324	5840	807	1250	548	222	82	46	66
16	183	639	3530	1050	6600	680	955	559	220	77	43	57
17	162	1020	1820	2850	6510	582	858	644	209	73	41	52
18	146	1120	1360	1520	4570	513	753	559	204	69	40	50
19	134	801	5760	917	7990	455	647	453	209	67	39	50
20	123	955	2910	661	7790	410	625	463	182	64	39	85
21	113	2180	2150	525	4790	377	718	554	165	62	38	78
22	105	2330	1440	493	2220	353	1060	569	143	60	37	62
23	99	1920	1030	3730	1420	345	1330	506	127	58	36	55
24	94	1240	1340	5350	1030	360	1160	501	118	57	35	55
25	90	886	1800	2510	820	407	934	597	116	56	35	57
26	95	712	1630	2490	740	475	822	485	111	54	34	82
27	106	559	1520	1630	791	485	781	351	139	53	34	105
28	224	458	1100	1100	772	499	888	280	124	52	34	138
29	413	407	828	814	---	453	777	274	161	51	44	216
30	711	407	656	661	---	443	696	282	164	50	73	143
31	883	---	556	713	---	428	---	290	---	51	49	---
TOTAL	11906	21298	79524	31738	68359	26299	27342	15870	6175	2598	1377	2305
MEAN	384	710	2565	1024	2441	848	911	512	206	83.8	44.4	76.8
MAX	1590	2330	7470	5350	9750	1970	2530	725	366	154	73	270
MIN	90	140	556	242	204	345	352	274	111	50	34	33
CFSM	3.87	7.16	25.9	10.3	24.6	8.55	9.18	5.16	2.08	.85	.45	.77
IN.	4.46	7.99	29.82	11.90	25.63	9.86	10.25	5.95	2.32	.97	.52	.86
AC-FT	23620	42240	157700	62950	135600	52160	54230	31480	12250	5150	2730	4570
CAL YR 1981	TOTAL	240334	MEAN 658	MAX 7470	MIN 36	CFSM 6.63	IN 90.12	AC-FT 476700				
WTR YR 1982	TOTAL	294791	MEAN 808	MAX 9750	MIN 33	CFSM 8.15	IN 110.55	AC-FT 584700				

WILLAMETTE RIVER BASIN

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR-- Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1963 to November 1964, October 1965 to current year.

INSTRUMENTATION.--Temperature recorder August 1963 to November 1964, October 1965 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 10, 11, 1971; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C July 20, 25, 27, Aug. 7; minimum recorded, 0.5°C Jan. 4.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

205

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.5	3.5	9.5	5.5	10.0	9.0	15.0	13.5	19.0	17.0	19.0	15.5
2	4.5	3.5	7.5	5.5	11.5	8.5	14.5	13.5	17.5	16.0	19.5	16.5
3	4.5	3.5	7.5	6.0	10.5	8.5	14.5	12.5	17.5	15.5	19.0	17.0
4	4.0	2.5	8.5	4.5	9.5	8.5	14.5	13.0	19.0	15.5	19.0	16.5
5	5.0	3.5	9.5	5.0	10.0	8.0	16.0	13.0	19.5	15.5	18.5	15.5
6	5.5	3.5	10.0	6.0	11.0	8.5	16.5	13.0	20.5	16.5	19.0	16.0
7	6.5	4.5	8.0	6.5	12.0	8.5	16.5	14.5	22.0	18.0	18.5	16.0
8	7.0	4.0	7.5	6.0	13.5	8.5	18.0	14.0	21.5	19.5	18.5	16.0
9	7.5	4.0	6.5	6.0	14.5	10.0	18.5	15.0	20.0	17.5	18.0	15.5
10	6.0	4.5	7.5	6.0	15.5	10.5	19.5	15.5	18.0	16.5	15.5	14.5
11	6.0	5.0	9.5	5.5	14.0	11.5	20.5	16.5	18.0	16.5	14.5	13.0
12	5.5	5.0	8.5	7.0	13.0	10.0	21.0	17.0	20.0	16.5	14.0	13.0
13	5.5	4.5	10.0	6.5	10.0	9.0	19.0	16.5	18.5	16.0	14.0	11.5
14	4.5	4.0	11.0	7.0	14.5	9.5	18.0	15.5	18.0	16.5	13.5	12.0
15	6.0	3.5	10.5	6.5	16.0	11.5	16.0	14.5	19.0	16.0	13.5	11.0
16	7.0	4.0	10.5	7.0	16.5	12.5	18.5	14.0	19.5	16.0	13.5	11.0
17	6.0	4.5	9.0	7.5	17.5	13.0	20.0	15.5	19.5	16.0	14.0	11.5
18	6.0	4.0	9.0	6.5	18.5	14.0	21.0	16.5	20.0	16.5	14.5	12.0
19	7.5	4.0	11.0	6.0	18.5	14.5	21.5	17.0	20.0	17.0	15.0	13.5
20	8.5	4.0	11.5	7.5	18.0	15.0	22.0	17.5	21.5	18.0	14.5	13.0
21	9.0	4.5	12.0	8.0	17.0	15.0	20.5	17.5	21.5	18.5	14.5	12.0
22	9.5	5.0	11.5	8.0	18.0	13.5	19.5	15.5	21.0	18.0	15.0	13.0
23	8.5	5.0	11.5	7.5	19.0	14.5	20.5	15.5	20.5	17.5	15.5	13.5
24	8.0	5.0	13.0	8.0	17.0	15.5	21.0	16.5	20.5	17.5	15.5	14.0
25	8.0	4.5	12.5	8.5	18.5	15.5	22.0	17.5	20.5	17.5	15.0	13.5
26	8.5	4.5	10.0	7.5	17.5	15.5	21.5	18.5	20.0	18.0	13.5	12.5
27	8.5	5.5	8.0	7.0	15.5	14.5	22.0	19.0	19.0	17.0	12.5	12.0
28	7.0	5.5	11.0	7.0	15.0	14.0	21.5	19.0	19.0	15.5	12.5	11.0
29	8.5	4.5	12.5	8.0	15.0	13.5	20.0	19.0	18.5	17.0	11.0	9.5
30	9.5	5.5	12.5	8.5	15.0	14.0	20.0	18.5	18.5	16.0	11.0	9.5
31	---	---	11.0	9.0	---	---	20.5	17.5	18.0	15.0	---	---
MONTH	9.5	2.5	13.0	4.5	19.0	8.0	22.0	12.5	22.0	15.0	19.5	9.5

14186100 GREEN PETER LAKE NEAR FOSTER, OR

LOCATION.--Lat 44°27'10", long 122°32'40", in NE¼SE¼ sec.10, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, in Green Peter Dam on Middle Santiam River 7.0 mi (11.3 km) northeast of Foster and at mile 5.7 (9.2 km).

DRAINAGE AREA.--273 mi² (707 km²).

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1971, published as Green Peter Reservoir near Foster.

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

REMARKS.--Reservoir is formed by concrete, gravity-type dam with ogee spillway completed in 1966 by Corps of Engineers; controlled storage began Oct. 6, 1966. Total capacity, 428,100 acre-ft (528 hm³) usable capacity 330,800 acre-ft (408 hm³) between elevations 887.0 ft (270.36 m), proposed lower limit of operation, and 1,015.0 ft (309.37 m), top of spillway gates. Reservoir used for flood control, power development, improvement of navigation, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Midnight elevations furnished by Corps of Engineers and reviewed by Geological Survey. Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 420,200 acre-ft (518 hm³) June 9, 1981, elevation, 1,012.86 ft (308.720 m); minimum, 116,900 acre-ft (144 hm³) Dec. 15, 1972, elevation, 899.20 ft (274.076 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 415,200 acre-ft (512 hm³) May 17, 18, elevation, 1,011.48 ft (308.299 m); minimum, 161,300 acre-ft (199 hm³) Jan. 11, elevation, 922.70 ft (281.239 m).

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

899	116,600	960	251,100
900	118,300	980	309,700
920	115,700	1,000	374,800
940	199,900	1,013	420,700

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	980.78	959.21	942.42	942.29	945.71	976.97	985.24	1004.19	1008.90	1010.88	1005.98	996.87
2	979.38	958.85	952.97	939.81	945.30	976.32	985.75	1004.80	1008.90	1010.93	1005.70	996.55
3	978.06	957.97	954.31	937.51	944.97	975.62	986.22	1005.40	1009.09	1010.98	1005.42	996.24
4	976.64	957.02	952.77	934.87	944.51	975.45	986.75	1005.94	1009.26	1011.05	1005.12	995.90
5	974.95	956.13	956.34	932.04	943.65	974.70	987.20	1006.40	1009.46	1011.07	1004.83	995.58
6	974.28	955.24	967.89	928.95	942.82	974.30	987.57	1006.89	1009.67	1011.10	1004.54	995.25
7	974.10	954.29	973.01	926.50	941.94	973.76	987.95	1007.49	1009.85	1011.07	1004.25	994.94
8	973.89	953.31	974.49	924.55	940.92	973.12	988.32	1008.01	1009.88	1011.00	1003.98	994.43
9	974.35	952.32	972.57	923.09	939.47	974.27	988.73	1008.41	1009.90	1010.90	1003.71	993.96
10	974.22	951.47	969.46	922.80	938.02	975.18	989.35	1008.75	1010.10	1010.77	1003.43	993.52
11	973.79	950.80	965.31	922.86	936.51	976.59	991.56	1009.03	1010.33	1010.62	1003.22	993.11
12	972.94	950.99	960.36	922.93	934.92	976.93	993.91	1009.32	1010.76	1010.50	1002.95	992.98
13	971.96	950.60	956.52	922.99	938.40	976.79	996.05	1009.73	1010.90	1010.38	1002.67	992.66
14	970.81	950.00	957.49	923.07	952.76	976.51	996.83	1010.20	1010.93	1010.23	1002.37	992.02
15	969.53	949.47	966.30	923.25	959.94	976.94	996.31	1010.72	1010.93	1010.07	1002.08	991.40
16	968.74	948.99	968.01	924.82	966.58	977.40	995.80	1011.24	1010.92	1009.90	1001.84	990.72
17	968.05	949.07	965.98	927.55	974.60	978.12	996.21	1011.34	1010.88	1009.72	1001.55	990.05
18	967.32	949.31	962.17	926.89	979.61	978.78	996.62	1010.76	1010.89	1009.53	1001.25	989.00
19	966.57	949.11	966.22	926.58	990.67	979.34	997.06	1010.28	1010.92	1009.35	1000.95	987.98
20	965.80	948.99	966.29	926.23	999.11	979.83	997.62	1009.79	1010.90	1009.11	1000.64	987.40
21	965.01	951.59	964.71	926.01	1004.27	980.25	998.21	1009.95	1010.84	1008.86	1000.29	986.74
22	964.18	954.18	960.92	926.23	1003.25	980.40	998.93	1010.03	1010.80	1008.60	999.94	986.07
23	963.36	953.98	956.34	933.34	999.55	980.75	1000.02	1010.04	1010.85	1008.36	999.65	985.38
24	962.50	952.86	953.34	942.96	995.12	981.20	1000.87	1010.04	1010.67	1008.06	999.33	984.74
25	961.67	951.21	952.34	946.07	990.27	981.63	1001.41	1010.15	1010.60	1007.80	999.00	983.87
26	960.84	949.11	951.55	947.68	985.22	982.17	1001.04	1009.94	1010.57	1007.56	998.70	983.19
27	959.99	946.92	950.80	947.80	981.94	982.76	1001.31	1009.61	1010.57	1007.29	998.37	982.70
28	959.36	944.68	949.92	946.94	978.83	983.35	1002.15	1009.36	1010.63	1007.04	997.98	982.19
29	959.16	942.40	948.43	946.91	---	983.87	1002.90	1009.25	1010.74	1006.80	997.73	981.81
30	959.24	940.83	946.61	946.72	---	984.34	1003.54	1009.16	1010.82	1006.56	997.48	981.24
31	959.35	---	944.53	946.24	---	984.80	---	1009.05	---	1006.27	997.17	---
MEAN	968.74	951.36	959.04	932.79	964.25	978.47	994.71	1008.88	1010.35	1009.43	1001.68	989.95
MAX	980.78	959.21	974.49	947.80	1004.27	984.80	1003.54	1011.34	1010.93	1011.10	1005.98	996.87
MIN	959.16	940.83	942.42	922.80	934.92	973.12	985.24	1004.19	1008.90	1006.27	997.17	981.24
(+)	249300	201900	210800	215100	306100	324800	387000	406400	412800	396500	365200	313600
(-)	-66300	-47400	+8900	+4300	+91000	+18700	+62200	+19400	+6400	-16300	-31300	-51600

CAL YR 1981 MEAN 982.29 MAX 1012.76 MIN 928.17 AC-FT# -38700
WTR YR 1982 MEAN 980.88 MAX 1011.34 MIN 922.80 AC-FT# -2000

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

‡ Change in contents, in acre-feet.

14186600 FOSTER LAKE AT FOSTER, OR

LOCATION.--Lat 44°25'00", long 122°40'25", in NW¼NE¼ sec.27, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, in Foster Dam on South Santiam River, 0.3 mi (0.5 km) above Wiley Creek, 0.5 mi (0.8 km) north of Foster, and at mile 37.7 (60.7 km).

DRAINAGE AREA.--492 mi² (1,274 km²).

PERIOD OF RECORD.--December 1966 to current year. Prior to October 1971, published as Foster Reservoir at Foster.

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

REMARKS.--Reservoir is formed by rockfill embankment with an impervious core and ogee spillway completed in 1966 by Corps of Engineers; controlled storage began in November 1966. Total capacity, 60,780 acre-ft (74.9 hm³) and usable capacity 33,210 acre-ft (40.9 hm³) between elevations 609.0 ft (185.52 m), proposed lower limit of operation, and 641.0 ft (195.38 m), top of spillway gates. Reservoir used for reregulation of water released from Green Peter Lake, flood control, power development, pollution abatement, and other purposes. Figures given herein represent total contents.

COOPERATION.--Midnight elevations furnished by Corps of Engineers and reviewed by Geological Survey. Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 60,090 acre-ft (74.1 hm³) Sept. 17, 1968, elevation, 640.45 ft (195.209 m); minimum, 26,590 acre-ft (32.8 hm³) Nov. 15, 16, 1971, elevation, 607.85 ft (185.273 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 57,310 acre-ft (70.7 hm³) Oct. 1, elevation, 638.19 ft (194.520 m); minimum, 29,510 acre-ft (36.4 hm³) Apr. 12, 13, elevation, 611.24 ft (186.306 m).

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 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	637.37	620.63	613.23	613.02	615.55	621.99	620.55	614.60	637.18	637.00	636.91	637.18
2	637.63	620.40	612.70	613.12	615.71	621.96	619.56	614.43	636.85	636.91	636.85	637.16
3	637.04	619.41	613.25	613.26	616.07	622.24	618.61	614.70	636.80	637.06	636.87	637.14
4	636.48	618.73	612.58	613.10	615.78	621.91	617.78	614.43	636.90	636.85	636.89	637.23
5	636.80	618.02	614.09	613.03	615.83	621.91	616.78	614.70	636.94	636.86	636.90	637.22
6	637.06	617.24	617.55	613.04	615.67	622.44	615.84	614.60	636.88	636.88	636.91	637.21
7	637.30	616.49	613.84	613.43	615.92	622.30	614.90	614.77	636.80	636.77	637.02	637.07
8	637.17	616.09	613.20	613.88	615.72	622.39	613.79	614.74	636.80	636.77	637.02	637.00
9	637.45	615.78	613.20	613.04	616.08	621.87	612.78	614.79	636.95	636.74	636.96	637.00
10	637.32	615.03	613.21	612.98	616.16	622.42	612.04	614.49	636.90	636.82	636.99	636.96
11	637.04	614.46	613.12	613.89	616.93	622.46	611.34	614.65	636.93	636.90	637.01	637.16
12	636.94	614.66	613.19	614.18	617.71	622.15	611.47	614.60	637.11	636.80	636.97	637.49
13	636.89	614.11	613.43	614.10	617.35	621.97	614.11	614.70	636.92	636.85	636.99	637.17
14	636.61	613.46	613.56	614.13	618.50	622.22	614.48	614.53	636.82	636.88	637.10	637.10
15	636.54	613.39	613.03	614.27	618.82	621.38	614.49	614.63	636.84	636.87	637.09	637.06
16	635.43	613.14	613.00	614.53	620.48	621.65	614.38	615.30	636.95	636.85	636.93	636.96
17	634.11	613.56	613.08	614.86	620.48	621.67	614.56	618.65	636.84	636.84	636.80	636.95
18	632.74	614.04	613.00	614.05	618.46	621.96	614.48	623.78	636.93	636.79	636.78	637.01
19	631.45	613.54	612.97	615.03	618.48	622.06	614.74	627.76	636.81	636.70	636.74	637.01
20	630.19	613.08	613.04	613.97	620.13	622.05	614.32	631.64	636.92	636.76	636.70	637.05
21	628.79	614.03	613.04	613.11	620.24	622.03	614.71	632.90	636.99	636.80	636.91	636.98
22	627.55	613.07	613.03	613.24	620.45	622.93	614.71	633.50	636.99	636.83	637.00	636.95
23	626.26	612.98	612.84	613.50	620.28	623.03	614.54	634.16	636.70	636.84	636.86	636.90
24	625.47	613.04	613.44	613.29	620.21	622.98	614.67	634.98	637.01	637.01	636.82	636.89
25	624.58	613.11	612.81	612.49	620.32	623.08	614.68	636.13	636.95	637.01	636.78	637.18
26	623.84	613.15	613.18	613.56	620.63	623.07	614.48	636.56	636.95	636.97	636.73	637.35
27	623.18	613.01	612.89	613.01	621.55	622.94	614.78	636.40	637.11	637.01	636.71	637.02
28	622.71	612.86	612.98	613.17	621.95	622.98	614.57	636.20	637.06	636.97	636.91	637.21
29	622.24	612.93	612.94	614.74	---	623.04	614.61	636.42	637.13	636.90	637.14	637.53
30	621.58	612.93	612.99	614.84	---	622.75	614.52	636.73	637.15	636.79	637.14	637.25
31	621.18	---	613.13	614.57	---	621.75	---	636.98	---	636.87	637.18	---
MEAN	631.84	614.88	613.28	613.69	618.27	622.31	614.91	623.47	636.94	636.87	636.92	637.11
MAX	637.63	620.63	617.55	615.03	621.95	623.08	620.55	636.98	637.18	637.06	637.18	637.53
MIN	621.18	612.86	612.58	612.49	615.55	621.38	611.34	614.43	636.70	636.70	636.70	636.89
(†)	38720	31000	31180	32480	39470	39270	32440	55850	56050	55720	56090	56170
(‡)	-18270	-7720	+180	+1300	+6990	-200	-6830	+23410	+200	-330	+370	+80
CAL YR 1981	MEAN 625.28		MAX 638.57	MIN 611.01	AC-FT†	-220						
WTR YR 1982	MEAN 625.09		MAX 637.63	MIN 611.34	AC-FT†	-820						

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

‡ Change in contents, in acre-feet.

WILLAMETTE RIVER BASIN

14187100 WILEY CREEK AT FOSTER, OR

LOCATION.--Lat 44°23'55", long 122°39'35", in SW¼NW¼ sec.35, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, on left bank 1.5 mi (2.4 km) downstream from Jackson Creek, 1.0 mi (1.6 km) southeast of Foster, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--62.3 mi² (161.4 km²).

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 590 ft (179.8 m), from topographic map. Prior to May 2, 1974, at present site at datum 5.00 ft (1.524 m) lower.

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

AVERAGE DISCHARGE.--9 years, 236 ft³/s (6.684 m³/s), 51.44 in/yr (1,307 mm/yr), 171,000 acre-ft/yr (211 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,320 ft³/s (179 m³/s) Jan. 15, 1974, gage height, 9.28 ft (2.829 m); minimum, 3.1 ft³/s (0.088 m³/s) Oct. 19, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0930	*4,410 125	*8.58 2.615	Feb. 16	1200	2,420 68.5	7.34 2.237
Jan. 24	0900	2,280 64.6	7.24 2.207	Feb. 20	1730	2,320 65.7	7.27 2.216
Feb. 14	0800	2,150 60.9	7.14 2.176				

Minimum, 8.8 ft³/s (0.25 m³/s) Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	32	85	477	296	350	656	196	175	43	48	23	13		
2	45	67	1080	262	308	740	227	163	42	46	22	12		
3	39	62	836	278	290	673	252	161	41	54	20	11		
4	37	58	625	464	257	683	246	144	42	43	19	11		
5	35	50	1280	332	231	585	239	131	53	52	18	10		
6	125	47	2780	254	211	475	218	125	54	48	16	9.9		
7	188	44	1360	206	195	387	203	125	47	44	16	9.3		
8	123	43	899	180	179	325	194	120	43	42	18	8.9		
9	195	41	662	172	165	357	199	113	40	40	19	13		
10	198	40	648	178	150	365	255	104	38	38	21	23		
11	173	56	559	184	144	501	809	96	36	36	28	15		
12	114	309	453	203	135	453	760	91	76	35	26	32		
13	82	234	490	201	625	374	1160	87	72	34	21	30		
14	61	227	856	213	1930	353	1190	86	54	39	26	20		
15	50	271	1550	224	1610	332	866	84	48	35	24	16		
16	44	276	1250	411	1690	299	688	81	44	33	20	13		
17	42	471	835	1020	1880	265	589	99	40	31	18	12		
18	40	572	619	741	1600	238	491	95	38	29	17	11		
19	38	389	1140	531	1690	212	395	81	38	28	16	13		
20	36	300	1190	390	1720	192	344	74	35	27	15	27		
21	36	734	1130	307	1450	175	331	69	37	25	14	23		
22	34	938	839	298	977	160	345	65	35	25	14	17		
23	33	1050	637	1310	690	151	357	60	32	24	13	15		
24	33	706	518	1740	534	141	322	56	30	22	12	15		
25	32	480	508	1290	431	133	279	53	31	21	11	16		
26	35	368	588	1380	403	139	248	51	33	20	9.6	21		
27	36	278	753	1030	433	145	225	50	46	20	10	31		
28	69	225	643	746	386	193	226	48	43	20	11	28		
29	139	195	520	575	---	187	202	46	79	21	18	44		
30	150	181	415	466	---	186	187	44	57	23	26	34		
31	110	---	331	425	---	199	---	42	---	24	16	---		
TOTAL	2404	8797	26471	16307	20664	10274	12243	2819	1547	1032	557.6	554.1		
MEAN	77.5	293	854	526	738	331	408	90.9	44.9	33.3	18.0	18.5		
MAX	198	1050	2780	1740	1930	740	1190	175	79	54	28	44		
MIN	32	40	331	172	135	133	187	42	30	20	9.6	8.9		
CFSM	1.24	4.70	13.7	8.44	11.8	5.31	6.55	1.46	.72	.54	.29	.30		
IN.	1.44	5.25	15.81	9.74	12.34	6.13	7.31	1.68	.80	.62	.33	.33		
AC-FT	4770	17450	52510	32340	40990	20380	24280	5590	2670	2050	1110	1100		
CAL YR 1981	TOTAL	86569.8	MEAN	237	MAX	2780	MIN	7.4	CFSM	3.80	IN	51.69	AC-FT	171700
WTR YR 1982	TOTAL	103469.7	MEAN	283	MAX	2780	MIN	8.9	CFSM	4.54	IN	61.78	AC-FT	205200

WILLAMETTE RIVER BASIN

209

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR

LOCATION.--Lat 44°24'45", long 122°41'15", in SE¼NE¼ sec.28, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, on left bank 0.6 mi (1.0 km) downstream from Wiley Creek and at mile 37.0 (59.5 km).

DRAINAGE AREA.--557 mi² (1,443 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year. Records for October 1966 to July 1973 (published as South Santiam River at Foster, station 14186700) at site 0.5 mi (0.8 km) upstream not equivalent owing to inflow between sites.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft (171 m), from topographic map.

REMARKS.--Water-discharge records good. Flow regulated since October 1966 by Green Peter Lake (see station 14186100) and since December 1966 by Foster Lake (see station 14186600). No diversion above station.

AVERAGE DISCHARGE.--9 years, 2,936 ft³/s (83.15 m³/s), 2,127,000 acre-ft/yr (2.62 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft³/s (532 m³/s) Feb. 26, 1982, gage height, 16.61 ft (5.063 m); minimum, 425 ft³/s (12.0 m³/s) July 26, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,800 ft³/s (532 m³/s) Feb. 26, gage height, 16.61 ft (5.063 m); minimum, 493 ft³/s (14.0 m³/s) July 6; minimum daily, 650 ft³/s (18.4 m³/s) July 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2690	2340	4530	6300	3840	9590	1890	1780	1450	762	760	752
2	2920	2080	9790	6100	3670	7570	1820	1860	1480	767	759	756
3	3120	3030	10500	7000	3280	7000	1860	1810	873	783	759	754
4	3160	2850	11300	7300	3410	7590	1790	1770	819	776	765	757
5	3070	2610	13300	6300	3560	7050	1850	1460	863	776	762	754
6	3030	2550	17000	6100	3360	5030	1800	1610	948	650	757	754
7	3200	2530	10800	4700	3090	4780	1720	1590	908	767	757	754
8	3130	2360	7280	4000	3250	4500	1730	1590	1050	766	755	1080
9	3230	2260	10000	4000	3430	2900	1680	1450	962	757	758	1090
10	3320	2260	11400	2500	3420	3190	1690	1540	824	756	761	1120
11	3270	2310	11600	1690	3070	4420	3620	1270	811	751	761	1110
12	3140	2640	11800	1960	3000	4930	3650	1410	1030	754	762	1140
13	2980	3230	12600	1960	2430	4640	5040	1190	1500	760	762	1320
14	3080	3240	14000	1970	10200	4280	8260	1340	1300	772	766	1490
15	2990	3170	13300	2010	10900	3380	7940	1240	1190	773	761	1460
16	2730	3440	12500	3700	13500	2220	6410	975	1100	766	762	1480
17	2630	3900	11700	6200	14200	1640	3850	852	1260	764	763	1440
18	2630	4060	12600	7810	13600	1310	3330	889	1040	762	761	2010
19	2560	3850	13300	5090	12100	1330	2630	792	1070	781	761	2020
20	2530	3780	13200	4120	12200	1310	2360	734	927	762	763	1520
21	2580	4230	14000	3830	11900	1250	2100	1210	970	776	760	1530
22	2510	6300	13700	3000	13500	1080	2600	1910	849	774	761	1490
23	2490	9140	12400	7250	15100	1040	2880	1830	765	774	754	1490
24	2220	7340	11000	8690	14200	1110	2920	1690	815	765	754	1460
25	2200	6400	9600	8390	13600	1030	2850	1560	779	762	756	1520
26	2220	6040	10100	9880	13300	1150	4260	2330	767	765	758	1540
27	2190	5810	10100	9280	9690	1260	2780	2470	763	766	755	1500
28	2260	5210	9000	7670	9030	1300	2200	2040	770	760	757	1480
29	2340	4950	7400	4380	---	1250	1930	1470	723	764	757	1650
30	2390	4310	7000	4300	---	1470	1890	1370	766	769	758	1800
31	2360	---	6600	4810	---	1880	---	1380	---	762	757	---
TOTAL	85170	118220	343400	162290	229830	102480	91330	46412	29372	23642	23542	39021
MEAN	2747	3941	11080	5235	8208	3306	3044	1497	979	763	759	1301
MAX	3320	9140	17000	9880	15100	9590	8260	2470	1500	783	766	2020
MIN	2190	2080	4530	1690	2430	1030	1680	734	723	650	754	752
AC-FT	168900	234500	681100	321900	455900	203300	181200	92060	58260	46890	46700	77400
CAL YR 1981 TOTAL	1086233			MEAN 2976	MAX 17000	MIN 709	AC-FT 2155000					
WTR YR 1982 TOTAL	1294709			MEAN 3547	MAX 17000	MIN 650	AC-FT 2568000					

NOTE.--No gage-height record Dec. 10 to Jan. 25.

WILLAMETTE RIVER BASIN

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1973 to current year.

INSTRUMENTATION.--Temperature recorder since July 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 15.5°C at times in 1975, 1978, 1981; minimum recorded, 2.5°C Dec. 30, 31, 1978, Feb. 1, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 15.0°C Oct. 1-3, 5; minimum recorded, 4.5°C several days in January.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

211

14187200 SOUTH SANTIAM RIVER NEAR FOSTER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR

LOCATION.--Lat 44°29'55", long 122°49'20", in SW¼NW¼ sec.28, T.12 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.1 mi (0.2 km) downstream from highway bridge at Waterloo, 2.1 mi (3.4 km) upstream from Hamilton Creek, and at mile 23.3 (37.5 km).

DRAINAGE AREA.--640 mi² (1,658 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to December 1911 (gage heights only January to December 1911), July 1923 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as South Fork of Santiam River at Waterloo 1905-07, 1910-11.

REVISED RECORDS.--WSP 1248: 1907, 1924-30, 1932.

GAGE.--Water-stage recorder. Datum of gage is 370.39 ft (112.895 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1911, nonrecording gage at site 0.5 mi (0.8 km) downstream at datum about 5.0 ft (1.52 m) lower. July 1, 1923, to Nov. 12, 1934, nonrecording gage, at present site and datum.

REMARKS.--Water-discharge records excellent. Flow regulated since October 1966 by Green Peter Lake (see station 14186100) and since December 1966 by Foster Lake (see station 14186600). No diversion above station.

AVERAGE DISCHARGE.--60 years (water years 1906, 1924-82), 2,935 ft³/s (83.12 m³/s), 2,126,000 acre-ft/yr (2.62 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,200 ft³/s (2,696 m³/s) Dec. 22, 1964, gage height, 24.50 ft (7.468 m); minimum, 61 ft³/s (1.73 m³/s) Oct. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,300 ft³/s (547 m³/s) Dec. 6, gage height, 10.30 ft (3.139 m); minimum, 418 ft³/s (11.8 m³/s) July 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2660	2320	4710	6460	4180	9590	2050	1860	1360	718	765	733
2	2790	2030	9360	6190	3860	7600	2070	1890	1420	723	760	729
3	3080	2930	10700	6900	3530	6950	2090	1870	892	746	756	730
4	3110	2890	11000	7290	3540	7480	2040	1830	737	734	762	741
5	3090	2620	13100	6450	3680	7040	2090	1560	756	733	757	735
6	3000	2530	17500	6060	3550	5310	2020	1650	870	555	740	733
7	3220	2510	11800	5160	3190	4910	1900	1590	825	712	745	727
8	3140	2380	7370	4070	3350	4670	1870	1640	949	720	747	1010
9	3220	2230	9650	4040	3470	3220	1820	1510	869	716	750	1110
10	3320	2230	11700	2890	3510	3130	1780	1610	756	710	755	1140
11	3260	2290	11900	1800	3190	4410	3570	1330	705	707	765	1130
12	3140	2780	12000	2000	3030	4970	3900	1400	878	703	762	1160
13	2920	3370	12200	2200	2360	4670	5010	1270	1390	714	763	1290
14	3060	3410	14100	2200	9900	4430	7920	1340	1260	728	772	1510
15	2970	3350	14100	2210	10800	3680	7980	1270	1130	726	764	1480
16	2730	3570	12800	2650	13000	2460	6820	1050	1060	721	757	1490
17	2610	4140	12000	7060	14000	1810	4290	935	1150	714	758	1450
18	2590	4370	12600	8680	13400	1450	3590	913	1050	710	753	1930
19	2520	4140	13500	5300	12300	1400	2980	789	987	728	752	2070
20	2490	4060	13600	5420	12300	1400	2530	752	923	715	753	1640
21	2520	4630	14100	4150	11900	1300	2310	975	889	717	755	1560
22	2480	6230	13900	3350	12600	1180	2450	1870	887	722	749	1500
23	2440	9610	12800	7610	14500	1080	3050	1770	686	721	740	1490
24	2220	7730	11000	9430	13500	1220	3020	1670	761	715	734	1470
25	2160	6770	9680	8240	12900	1110	2940	1510	734	709	733	1530
26	2190	6360	10100	10100	12600	1190	4010	2140	727	709	738	1560
27	2160	6080	10500	9450	9540	1400	2940	2410	736	712	734	1540
28	2240	5500	8270	7910	8510	1490	2470	2030	732	744	737	1490
29	2340	5140	7450	5010	---	1410	2050	1510	699	759	753	1650
30	2430	4710	6870	4450	---	1540	1900	1310	731	761	759	1830
31	2360	---	6570	5010	---	2030	---	1300	---	767	741	---
TOTAL	84460	122910	346930	169740	226190	105530	95460	46554	27549	22269	23309	39158
MEAN	2725	4097	11190	5475	8078	3404	3182	1502	918	718	752	1305
MAX	3320	9610	17500	10100	14500	9590	7980	2410	1420	767	772	2070
MIN	2160	2030	4710	1800	2360	1080	1780	752	686	555	733	727
AC-FT	167500	243800	688100	336700	448600	209300	189300	92340	54640	44170	46230	77670

CAL YR 1981 TOTAL 1131942 MEAN 3101 MAX 17500 MIN 672 AC-FT 2245000
WTR YR 1982 TOTAL 1310059 MEAN 3589 MAX 17500 MIN 555 AC-FT 2599000

WILLAMETTE RIVER BASIN

213

14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C Aug. 4, 1966; minimum, 1.5°C Dec. 18-20, 1965, Feb. 1, 2, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 18.5°C July 10-12, 17-19; minimum recorded, 4.0°C Jan. 7.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

215

14188800 THOMAS CREEK NEAR SCIO, OR

LOCATION.--Lat 44°42'42", long 122°45'55", in SE¼SE¼ sec.11, T.10 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.3 mi (0.5 km) upstream from bridge on State Highway 226, 1.6 mi (2.6 km) upstream from Mill Creek, 4.2 mi (6.8 km) east of Scio, and at mile 14.6 (23.5 km).

DRAINAGE AREA.--109 mi² (282 km²).

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WRD Reg. 1971: 1965(P), 1966(P), 1969(P).

GAGE.--Water-stage recorder. Datum of gage is 380.84 ft (116.080 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. No regulation. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--20 years, 497 ft³/s (14.08 m³/s), 61.92 in/yr (1,573 mm/yr), 360,100 acre-ft/yr (444 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s (776 m³/s) Dec. 22, 1964, gage height, 18.44 ft (5.621 m), from rating curve extended above 7,200 ft³/s (204 m³/s), on basis of slope-area measurement of peak flow; maximum gage height, 19.58 ft (5.968 m) Jan. 21, 1972, backwater from debris; minimum discharge, 7.8 ft³/s (0.22 m³/s) Aug. 20, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1000	6,660 189	10.31 3.142	Jan. 24	0630	6,790 192	10.40 3.170
Dec. 5	2400	7,050 200	10.57 3.222	Feb. 14	1030	*7,140 202	*10.63 3.240
Dec. 15	1600	5,610 159	9.56 2.914	Feb. 20	1730	6,750 186	10.25 3.124
Jan. 17	0200	3,690 105	8.01 2.441				

Minimum, 14 ft³/s (0.40 m³/s) Aug. 23-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	302	1000	630	690	1290	380	369	101	72	30	25
2	90	245	3900	575	650	1430	410	348	96	67	27	21
3	75	218	2000	958	600	1390	418	362	89	92	25	19
4	66	198	1430	994	534	1450	458	331	92	83	24	21
5	62	168	3270	690	482	1150	450	299	99	78	22	20
6	500	150	5470	546	438	928	410	290	103	70	21	18
7	650	136	2630	470	398	780	380	302	92	63	20	17
8	422	126	1600	422	366	685	366	284	83	57	25	16
9	620	119	1190	387	338	715	362	263	77	50	26	28
10	434	114	1120	362	311	700	394	239	70	45	30	48
11	327	165	904	359	296	904	1140	221	67	43	38	36
12	251	830	785	369	278	735	1210	218	119	42	39	119
13	200	630	1060	362	1050	650	1820	218	117	39	28	81
14	165	550	1770	383	5040	690	1900	221	92	49	37	49
15	144	575	4380	414	3240	615	1560	218	80	44	32	38
16	125	530	2520	1200	3360	542	1170	212	72	39	26	32
17	114	735	1500	2750	3430	486	982	254	65	36	23	28
18	103	735	1150	1840	2740	442	825	230	60	34	21	26
19	94	585	2160	1300	4080	398	700	198	58	33	21	27
20	88	590	1640	988	4230	359	630	185	52	30	19	53
21	81	1060	1650	815	3010	327	615	190	54	29	19	53
22	77	1550	1260	886	1770	305	650	185	52	30	19	39
23	72	1490	1000	4910	1310	287	680	170	45	30	17	34
24	70	970	904	4520	1040	275	615	160	41	26	16	34
25	67	735	904	2330	868	269	530	173	41	25	16	36
26	78	605	1050	2590	805	284	474	153	48	25	15	44
27	98	486	1100	1790	800	345	438	138	77	24	16	71
28	221	406	1060	1360	730	458	478	123	67	24	17	62
29	362	366	862	1050	---	398	422	114	107	25	25	99
30	430	348	715	868	---	394	383	107	86	26	51	71
31	394	---	670	800	---	402	---	101	---	29	32	---
TOTAL	6552	15717	52654	37918	42884	20083	21250	6876	2302	1359	777	1265
MEAN	211	524	1699	1223	1532	648	708	222	76.7	43.8	25.1	42.2
MAX	650	1550	5470	4910	5040	1450	1900	369	119	92	51	119
MIN	62	114	670	359	278	269	362	101	41	24	15	16
CFSM	1.94	4.81	15.6	11.2	14.1	5.95	6.50	2.04	.70	.40	.23	.39
IN.	2.24	5.36	17.97	12.94	14.64	6.85	7.25	2.35	.79	.46	.27	.43
AC-FT	13000	31170	104400	75210	85060	39830	42150	13640	4570	2700	1540	2310
CAL YR 1981 TOTAL	171537			470	5470	17	CFSM 4.31	IN 58.54	AC-FT 340200			
WTR YR 1982 TOTAL	209637			574	5470	15	CFSM 5.27	IN 71.55	AC-FT 415800			

WILLAMETTE RIVER BASIN

14189000 SANTIAM RIVER AT JEFFERSON, OR

LOCATION.--Lat 44°42'55", long 122°00'40", in SE¼ sec.11, T.10 S., R.3 W., Marion County, Hydrologic Unit 17090005, on right bank 350 ft (107 m) upstream from Southern Pacific railroad bridge at Jefferson, 2.1 mi (3.4 km) downstream from confluence of North and South Santiam Rivers, and at mile 9.62 (15.5 km).

DRAINAGE AREA.--1,790 mi² (4,640 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1905 to June 1906 (gage heights and discharge measurements only), October 1907 to September 1916, October 1939 to current year. Gage-height records collected at same site since 1907 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 904: Drainage area. WSP 1094: 1908, 1910, 1912, 1943. WSP 1248: 1911, 1915-16(M). WSP 1935: 1909.

GAGE.--Water-stage recorder. Datum of gage is 199.63 ft (60.847 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1940, nonrecording gages at sites within 350 ft (107 m) downstream at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records excellent. Flow regulated since 1953 by Detroit Lake (see station 14180500), since 1966 by Green Peter Lake (see station 14186100) and by Foster Lake (see station 14186600). Salem Canal diverts from North Santiam River at Stayton for irrigation and power; most of this water reaches Willamette River by way of Mill Creek at Salem. Stayton Canal diverts from North Santiam River at Stayton for irrigation of lands near West Stayton; some return flow reaches North Santiam River above station. Albany power canal diverts from South Santiam River at Lebanon; return flow reaches Willamette River at Albany.

AVERAGE DISCHARGE.--52 years (water years 1908-16, 1940-82), 7,789 ft³/s (220.6 m³/s), 5,643,000 acre-ft/yr (6.96 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft³/s (5,580 m³/s) Dec. 22, 1964, gage height, 24.22 ft (7.382 m); minimum observed, 260 ft³/s (7.36 m³/s) Aug. 15-22, Aug. 24 to Sept. 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 25.0 ft (7.62 m) was reached in December 1861, and 23.4 ft (7.13 m) in February 1890 (information from Corps of Engineers). On Nov. 21, 1921, the stage reached 19.5 ft (5.94 m) at gage on railroad bridge 350 ft (107 m) downstream, corresponding gage height at present site and datum, 24.4 ft (7.44 m), from curve of relation, discharge, 202,000 ft³/s (5,720 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56,000 ft³/s (1,590 m³/s) Dec. 6, gage height, 16.14 ft (4.919 m); minimum, 1,330 ft³/s (37.7 m³/s) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5150	6040	10700	15900	11200	27400	4810	5850	4330	2860	1450	1500
2	5360	5430	23800	15300	10200	21200	4860	5310	4050	2930	1440	1500
3	5800	5620	27200	17900	9840	18500	5020	5720	3460	2830	1460	1780
4	5630	5910	24200	20500	9360	19600	5100	6100	2720	2590	1440	2100
5	5570	5410	27200	16800	9190	18400	5110	5530	2740	2550	1410	2080
6	6220	5160	51600	13800	8850	14700	4850	5350	3270	2440	1370	2160
7	8740	5060	35200	11700	8110	12500	4630	5530	3320	2350	1350	2160
8	8100	4910	19200	9740	8050	11300	4420	4780	3110	2260	1370	2190
9	9260	4660	20900	8800	7900	9590	4300	4390	2630	2190	1410	2460
10	8450	4540	27500	7650	8060	8300	4210	4280	2250	1710	1460	2660
11	7810	4620	26900	5150	7650	12100	8120	4190	2490	1620	1520	2820
12	7260	7460	26000	5160	6850	13400	10500	4530	3450	1650	1520	3240
13	6780	8510	22300	5260	6550	12600	12200	4670	5310	1850	1470	3400
14	6680	8830	27200	5160	27800	12600	17300	4530	4380	2360	1470	3330
15	6460	8840	37000	5290	32000	11500	17900	4830	3390	2110	1480	3330
16	5930	8900	32100	6820	31700	7360	15500	4970	3510	1730	1550	3350
17	5370	10200	26700	19300	36400	5960	11200	4660	4050	1550	1800	3340
18	5180	10900	28200	21700	31100	5030	8900	5100	3620	1470	1770	3500
19	5080	9990	32500	15900	39800	4620	7720	5310	3540	1420	1650	3780
20	4970	9840	27300	14100	33800	4430	6960	5030	3660	1390	1770	3720
21	4930	11400	33400	11400	37700	4150	6970	4860	3380	1410	1710	3630
22	5020	15300	32000	9790	29100	3980	6980	5620	3180	1430	1700	3490
23	4930	21100	29100	24500	34700	3630	8210	5920	2580	1440	1740	3460
24	4930	18300	27200	33900	32900	3630	8200	5710	2400	1430	1730	3460
25	4510	15800	26100	23700	31600	3480	7690	5620	2200	1420	1690	3430
26	4510	14700	26500	28400	30900	3480	8440	5800	2290	1410	1720	3550
27	4510	13800	28300	25900	28300	3980	7950	6780	2930	1390	1710	3640
28	5220	12400	24800	21900	25400	4510	7410	6460	2950	1370	1690	3580
29	5510	11400	18700	15300	---	4390	6900	5400	2840	1410	1800	3780
30	6240	10700	17000	12000	---	4300	6260	4450	2610	1430	1880	3950
31	6400	---	16200	12400	---	4860	---	4330	---	1430	1630	---
TOTAL	186510	285730	833000	461120	595010	295480	238620	161610	96640	57430	49160	90370
MEAN	6016	9524	26870	14870	21250	9532	7954	5213	3221	1853	1586	3012
MAX	9260	21100	51600	33900	39800	27400	17900	6780	5310	2930	1880	3950
MIN	4510	4540	10700	5150	6550	3480	4210	4190	2200	1370	1350	1500
AC-FT	369900	566700	1652000	914600	1180000	586100	473300	320600	191700	113900	97510	179200
CAL YR 1981	TOTAL	2775660	MEAN	7605	MAX	51600	MIN	1370	AC-FT	5506000		
WTR YR 1982	TOTAL	3350680	MEAN	9180	MAX	51600	MIN	1350	AC-FT	6646000		

WILLAMETTE RIVER BASIN

217

14189000 SANTIAM RIVER AT JEFFERSON, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 8, 1971, Aug. 1, 1973, Aug. 9, 1981; minimum, 0.0°C Jan. 1, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C July 18-20; minimum recorded, 3.0°C Jan. 6, 7.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14189000 SANTIAM RIVER AT JEFFERSON, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

219

14190500 LUCKIAMUTE RIVER NEAR SUVER, OR

LOCATION.--Lat 44°47'00", long 123°14'00", in SW¼SW¼ sec.18, T.9 S., R.4 W., Polk County, Hydrologic Unit 17090003, on right bank 10 ft (3 m) upstream from highway bridge at Helmick State Park, 3.0 mi (4.8 km) northwest of Suver, 4.7 mi (7.6 km) downstream from Little Luckiamute River, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--240 mi² (622 km²).

PERIOD OF RECORD.--August 1905 to October 1911, July 1940 to current year.

REVISED RECORDS.--WSP 1044: Drainage area. WSP 1094: 1945-46. WSP 1248: 1905-11.

GAGE.--Water-stage recorder. Datum of gage is 171.92 ft (52.401 m) National Geodetic Vertical Datum of 1929. Aug. 18, 1905, to Oct. 31, 1911, nonrecording gage at present site at different datum, Aug. 20 to Oct. 15, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good. Some diurnal fluctuation during periods of low flow caused by millpond above station. A few small diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years, 910 ft³/s (25.77 m³/s), 51.49 in/yr (1,308 mm/yr), 659,300 acre-ft/yr (813 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s (932 m³/s) Dec. 22, 1964, gage height, 34.52 ft (10.522 m); minimum, 0.65 ft³/s (0.018 m³/s) Aug. 13, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,600 ft³/s (187 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	1500	*14,000 396	*30.12 9.181	Jan. 24	1630	9,370 265	28.36 8.644
Dec. 16	0400	8,730 247	28.05 8.550	Feb. 21	0200	11,600 329	29.28 8.925

Minimum, 20 ft³/s (0.57 m³/s) Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	676	2010	1600	1550	2100	814	571	152	83	41	26
2	67	469	3720	1460	1360	2090	897	536	151	76	41	25
3	70	372	5670	1920	1210	2150	1860	532	151	79	35	22
4	70	313	3920	3040	1080	2780	1760	534	154	79	35	22
5	71	274	3580	2510	971	2510	1730	482	154	78	34	23
6	215	248	12000	1850	887	2050	1540	451	150	72	32	27
7	724	227	8950	1480	820	1720	1310	428	151	65	31	25
8	406	211	5920	1280	755	1490	1140	413	135	60	31	23
9	461	199	4050	1130	704	1590	1000	401	126	57	31	25
10	442	189	3030	1010	653	1480	913	378	120	53	31	28
11	315	195	3030	927	628	1580	1530	361	111	50	35	33
12	246	468	2280	889	644	1500	2000	346	117	51	40	36
13	207	543	2190	831	813	1440	2730	327	159	44	37	38
14	178	785	3130	804	3530	1500	4060	311	143	52	35	37
15	162	1750	5620	824	5340	1380	4360	297	121	57	32	31
16	143	1560	7950	998	5170	1250	3630	285	112	51	30	28
17	131	1480	5290	3240	5480	1120	2660	281	101	47	29	26
18	122	2820	3450	3740	4520	1020	2070	271	91	45	27	25
19	116	2100	3550	3200	5460	928	1700	263	83	45	26	25
20	110	1590	3610	2420	7640	848	1430	250	80	38	26	28
21	104	1600	2870	1940	9380	785	1240	239	82	37	27	39
22	97	2050	2280	1750	5750	726	1110	229	72	34	28	44
23	94	1970	1940	5040	4140	678	1010	221	70	31	27	38
24	92	1640	1680	9120	3130	635	927	211	66	29	22	34
25	91	1310	1550	7030	2450	594	845	197	66	30	21	32
26	90	1180	1760	4890	2120	564	775	187	73	35	22	32
27	97	1010	2100	4070	2340	582	716	184	104	27	22	51
28	204	857	2650	3350	2090	628	691	179	92	31	24	55
29	373	755	2460	2640	---	580	673	170	94	31	26	45
30	540	739	1990	2140	---	586	613	160	93	33	27	52
31	922	---	1690	1810	---	696	---	155	---	38	28	---
TOTAL	7033	29580	115920	78933	80615	39580	47734	9850	3374	1538	933	975
MEAN	227	986	3739	2546	2879	1277	1591	318	112	49.6	30.1	32.5
MAX	922	2820	12000	9120	9380	2780	4360	571	159	83	41	55
MIN	67	189	1550	804	628	564	613	155	66	27	21	22
CFSM	.95	4.11	15.6	10.6	12.0	5.32	6.63	1.33	.47	.21	.13	.14
IN.	1.09	4.58	17.97	12.23	12.50	6.13	7.40	1.53	.52	.24	.14	.15
AC-FT	13950	58670	229900	156600	159900	78510	94680	19540	6690	3050	1850	1930

CAL YR 1981	TOTAL	294933	MEAN	808	MAX	12000	MIN	32	CFSM	3.37	IN	45.71	AC-FT	585000
WTR YR 1982	TOTAL	416065	MEAN	1140	MAX	12000	MIN	21	CFSM	4.75	IN	64.49	AC-FT	825300

WILLAMETTE RIVER BASIN

14191000 WILLAMETTE RIVER AT SALEM, OR

LOCATION.--Lat 44°56'40", long 123°02'30", in SE¼SW¼ sec. 22, T.7 S., R.3 W., Marion County, Hydrologic Unit 17090007, on right bank 300 ft (91 m) upstream from Center Street Bridge in Salem and at mile 84.16 (135.41 km).

DRAINAGE AREA.--7,280 mi² (18,900 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1909 to December 1916, January 1923 to current year. Monthly discharge only January 1923 to September 1927, published in WSP 1318. Gage-height records collected at about the same site since 1892 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1318: 1915(M).

GAGE.--Water-stage recorder. Datum of gage is 106.14 ft (32.351 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1909, to Dec. 31, 1916, nonrecording gage at site 0.5 mi (0.8 km) upstream at datum 8.00 ft (2.438 m) higher. Jan. 1, 1923, to Nov. 26, 1934, nonrecording gage at Center Street Bridge at datum 8.00 ft (2.438 m) higher. Nov. 27, 1934, to Sept. 30, 1962, water-stage recorder at present site at datum 8.00 ft (2.438 m) higher.

REMARKS.--Water-discharge records excellent. Flow regulated by 12 reservoirs above station (see elsewhere in this report). Many small diversions for irrigation above station; part of flow of Salem Canal, which diverts water from North Santiam River, returns to Willamette River below station, through Mill Creek at Salem.

AVERAGE DISCHARGE.--66 years, 23,560 ft³/s (667.2 m³/s), 43.95 in/yr (1,116 mm/yr), 17,070,000 acre-ft/yr (21.0 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348,000 ft³/s (9,860 m³/s) Jan. 8, 1923, gage height, 38.3 ft (11.67 m), present datum; minimum, 2,470 ft³/s (70.0 m³/s) Aug. 27, 1940, gage height, 3.55 ft (1.082 m), present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 500,000 ft³/s (14,200 m³/s) Dec. 4, 1861, gage height, about 47 ft (14.3 m) present datum, from rating curve extended above 250,000 ft³/s (7,080 m³/s) in 1916. Floods of Jan. 16, 1881, and Feb. 5, 1890, reached stages of 44.3 ft (13.50 m), discharge, 428,000 ft³/s (12,100 m³/s), and 45.1 ft (13.75 m), discharge, 448,000 ft³/s (12,700 m³/s), respectively, from floodmarks and information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 136,000 ft³/s (3,852 m³/s) Dec. 7, gage height, 26.40 ft (8.047 m); minimum, 6,520 ft³/s (185 m³/s) July 21, 23, gage height, 5.03 ft (1.533 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13200	17400	30200	70200	42200	71400	18200	19800	13800	10700	7690	7680
2	12900	16900	44400	65100	38000	69800	18600	18200	13600	10400	7770	7700
3	13100	15900	70000	63800	34700	65300	22200	17700	12700	10200	7700	8030
4	13100	16100	72000	75600	31700	61000	24700	18500	11500	9780	7880	8320
5	13000	15500	72000	81200	29200	59000	24500	18100	10900	9480	7880	8390
6	14100	15100	99200	73500	27300	51400	23100	17400	11300	9120	7640	8400
7	17800	14900	127000	60800	25600	43300	22300	17200	11800	8840	7360	8380
8	19700	14600	130000	52800	24500	38900	21100	16400	11800	8940	7310	8340
9	20300	14200	107000	45600	23600	35600	19800	14800	11100	8910	7430	8980
10	21300	14000	88700	38500	23000	30400	18600	14200	10200	8340	7640	9670
11	20800	13800	85900	34300	21600	31300	22600	13700	9900	7570	7920	10100
12	19700	16600	81900	32600	20500	35100	33100	13700	10600	7240	8010	10400
13	18100	21600	76900	32400	20100	35000	36800	13800	13200	7230	7940	11100
14	17200	25100	77500	31100	36400	33600	54100	13400	14700	7360	7870	11100
15	17200	29100	94700	30200	72500	32200	67600	13700	12900	7830	7810	10800
16	17000	30400	113000	31500	82100	28400	68300	13900	12200	7290	7670	10500
17	16300	32900	113000	45300	91500	24300	58100	13800	12700	7010	7860	10600
18	15700	40800	99700	61200	96300	21900	45500	14300	12800	6820	8060	10900
19	15500	40600	97000	65600	99900	19100	37400	15500	12300	6780	8130	11600
20	15200	36400	98400	57000	107000	17600	31500	15800	12400	6610	7970	11900
21	14900	34900	95800	46800	114000	16600	28200	15300	12400	6570	7840	11800
22	14900	44400	96200	40100	108000	15700	25800	15700	12000	6570	7820	12200
23	14600	55800	96700	51900	99100	15000	25500	16800	11200	6570	7860	12400
24	14500	61400	88900	85200	93800	14500	25500	16900	10200	6610	7780	12400
25	14200	59500	83000	93200	88700	14000	24600	16900	9430	6660	7760	12400
26	14100	51600	82900	89700	83300	13600	23900	17500	8960	6950	7810	12700
27	14400	44200	87800	88700	79300	13900	24200	18500	9550	6930	7870	12700
28	14700	37500	92000	84000	74100	14800	22600	19100	10200	6850	7860	12800
29	15500	32600	87900	72300	---	15800	21600	17600	10700	6900	7970	13300
30	16700	30500	80100	57000	---	15700	20500	15100	10600	7050	8120	13900
31	17300	---	73600	47400	---	16700	---	14000	---	7500	7890	---
TOTAL	497000	894300	2743400	1804600	1688000	970900	910500	497300	347640	241610	242120	319490
MEAN	16030	29810	88500	58210	60290	31320	30350	16040	11590	7794	7810	10650
MAX	21300	61400	130000	93200	114000	71400	68300	19800	14700	10700	8130	13900
MIN	12900	13800	30200	30200	20100	13600	18200	13400	8960	6570	7310	7680
CFSM	2.20	4.10	12.2	8.00	8.28	4.30	4.17	2.20	1.59	1.07	1.07	1.46
IN.	2.54	4.57	14.02	9.22	8.63	4.96	4.65	2.54	1.78	1.23	1.24	1.63
AC-FT	985800	1774000	5442000	3579000	3348000	1926000	1806000	986400	689500	479200	480200	633700
CAL YR 1981 TOTAL	8512550			MEAN 23320	MAX 130000	MIN 6600		CFSM 3.20	IN 43.50	AC-FT	16880000	
WTR YR 1982 TOTAL	11156860			MEAN 30570	MAX 130000	MIN 6570		CFSM 4.20	IN 57.01	AC-FT	22130000	

WILLAMETTE RIVER BASIN

221

14191000 WILLAMETTE RIVER AT SALEM, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1910-12, 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1951 to September 1972, October 1976 to current year.

WATER TEMPERATURES: February 1951 to current year.

INSTRUMENTATION.--Temperature recorder since February 1951. Specific conductance recorder February 1951 to September 1972 and since October 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 141 micromhos Sept. 17, 1966; minimum daily, 30 micromhos Jan. 29, 1965.

WATER TEMPERATURES: Maximum, 25.5°C July 23, 1959; minimum, 0.0°C on several days in 1956, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 92 micromhos Mar. 27; minimum, 45 micromhos Jan. 23-25, Feb. 17, 18.

WATER TEMPERATURES: Maximum, 21.5°C July 12, 19, 20; minimum, 4.0°C Jan. 6-10, Feb. 9-11.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	75	73	55	63	55	82	71	61	57	59	65
2	73	75	70	60	65	56	82	73	60	57	57	69
3	73	75	57	60	66	61	83	71	63	57	56	68
4	73	73	55	60	68	61	84	66	67	60	53	66
5	73	73	58	58	69	59	80	65	70	58	54	66
6	72	74	55	61	70	62	78	66	69	58	55	68
7	72	74	50	62	71	64	77	67	66	57	54	67
8	67	74	53	63	71	65	77	69	64	56	53	66
9	67	76	56	67	70	66	77	72	64	57	52	66
10	66	72	55	70	71	73	79	74	67	58	52	66
11	67	71	57	70	73	71	79	73	70	63	53	65
12	68	76	57	71	74	67	75	72	68	65	53	64
13	68	75	58	73	75	66	69	71	63	65	54	62
14	68	75	60	72	68	67	63	72	55	63	54	67
15	71	80	56	71	50	68	59	70	55	61	55	70
16	---	78	55	69	50	72	59	69	57	62	56	70
17	---	78	54	65	48	77	62	69	58	65	56	63
18	---	80	53	55	47	79	64	68	57	66	55	61
19	---	74	54	54	48	84	65	62	59	65	55	61
20	---	73	54	59	48	86	68	60	59	63	57	61
21	---	74	56	62	49	87	70	62	59	61	59	63
22	---	72	52	64	49	87	71	62	59	61	61	61
23	70	66	53	63	51	87	70	58	58	63	61	56
24	71	62	53	48	50	87	69	56	60	63	61	56
25	72	63	52	47	49	88	69	56	64	62	61	---
26	72	65	52	48	50	90	69	54	68	60	62	---
27	72	67	52	49	52	88	66	53	68	60	63	---
28	73	69	53	52	53	85	68	52	64	57	65	---
29	75	71	55	55	---	83	69	55	60	58	67	---
30	78	71	55	60	---	84	71	59	58	62	66	---
31	77	---	54	62	---	83	---	62	---	60	64	---
MEAN	71	73	56	61	60	74	72	65	62	61	58	64

WILLAMETTE RIVER BASIN

14191000 WILLAMETTE RIVER AT SALEM, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

223

14192500 SOUTH YAMHILL RIVER NEAR WILLAMINA, OR

LOCATION.--Lat 45°02'50", long 123°30'10", in NE¼SE¼ sec.14, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008, on left bank 2.3 mi (3.7 km) southwest of Willamina, 2.8 mi (4.5 km) upstream from Willamina Creek, and at mile 45.5 (73.2 km).

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--May 1934 to current year.

REVISED RECORDS.--WSP 814: Drainage area. WSP 1318: 1934.

GAGE.--Water-stage recorder. Datum of gage is 235.55 ft (71.796 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Slight regulation occasionally at low flows by millpond upstream. No diversion above station.

AVERAGE DISCHARGE.--48 years, 623 ft³/s (17.64 m³/s), 63.61 in/yr (1,616 mm/yr), 451,400 acre-ft/yr (557 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,600 ft³/s (555 m³/s) Dec. 22, 1964, gage height, 17.07 ft (5.203 m); minimum, 2.6 ft³/s (0.074 m³/s) Oct. 11, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,700 ft³/s (161 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1000	7,120 202	9.36 2.853	Jan. 24	0600	8,360 237	10.27 3.130
Dec. 5	1700	8,410 238	10.31 3.142	Feb. 20	1230	*10,900 309	*12.08 3.682
Dec. 15	1430	7,010 199	9.28 2.829				

Minimum, 10 ft³/s (0.28 m³/s) Aug. 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	585	1950	930	801	1950	633	319	80	43	22	15
2	64	462	5100	828	706	1740	959	298	80	44	21	13
3	66	392	2990	1420	622	2080	1560	319	81	46	22	12
4	68	330	1870	1480	547	2170	1540	285	81	47	21	13
5	60	283	6320	1140	489	1650	1390	262	77	52	19	16
6	1560	251	6520	924	447	1320	1180	246	80	48	17	15
7	1150	226	3820	788	410	1060	986	235	78	40	17	12
8	829	207	2390	687	379	923	843	228	72	38	18	12
9	825	191	1850	600	349	1270	736	214	67	34	18	13
10	573	180	2080	533	320	1050	675	203	62	31	20	17
11	419	274	1600	526	348	1340	1430	192	61	30	23	22
12	327	587	1290	516	397	1160	1950	180	76	29	23	56
13	264	484	1510	494	1410	1190	3750	169	94	30	20	42
14	226	2530	2000	522	3530	1170	2800	160	73	47	19	26
15	196	2100	5700	611	3220	1000	2360	151	65	39	19	20
16	170	1550	3840	1860	4720	871	1820	144	59	36	17	17
17	155	1850	2310	3780	4060	754	1460	140	54	31	15	16
18	140	1790	1690	2550	3150	659	1200	139	49	29	14	15
19	130	1370	2900	1820	3590	579	974	131	46	26	13	15
20	118	1300	1920	1370	7770	521	823	124	45	24	13	22
21	110	1890	1710	1100	4570	470	719	117	42	23	13	36
22	102	1800	1340	1390	2680	426	645	114	40	22	13	28
23	97	1580	1110	6110	1860	390	590	110	38	21	12	22
24	93	1220	1060	6270	1390	359	530	104	37	21	11	19
25	90	982	1010	3340	1100	329	475	97	38	20	11	18
26	87	887	1180	3110	1320	323	431	95	51	20	11	37
27	220	708	1420	2290	1390	374	395	101	55	19	13	70
28	741	595	1720	1740	1250	380	440	94	55	19	14	42
29	721	545	1450	1370	---	358	389	87	56	21	15	64
30	773	702	1200	1110	---	453	351	82	50	22	17	49
31	837	---	1040	961	---	615	---	79	---	23	17	---
TOTAL	11264	27851	73890	52170	52825	28934	34034	5219	1842	975	518	774
MEAN	363	928	2384	1683	1887	933	1134	168	61.4	31.5	16.7	25.8
MAX	1560	2530	6520	6270	7770	2170	3750	319	94	52	23	70
MIN	53	180	1010	494	320	323	351	79	37	19	11	12
CFSM	2.73	6.98	17.9	12.7	14.2	7.02	8.53	1.26	.46	.24	.13	.19
IN.	3.15	7.79	20.67	14.59	14.77	8.09	9.52	1.46	.52	.27	.14	.22
AC-FT	22340	55240	146600	103500	104800	57390	67510	10350	3650	1930	1030	1540

CAL YR 1981	TOTAL	218433	MEAN 598	MAX 5520	MIN 16	CFSM 4.50	IN 61.10	AC-FT 433300
WTR YR 1982	TOTAL	290296	MEAN 795	MAX 7770	MIN 11	CFSM 5.98	IN 81.19	AC-FT 575800

WILLAMETTE RIVER BASIN

14193000 WILLAMINA CREEK NEAR WILLAMINA, OR

LOCATION.--Lat 45°08'35", long 123°29'35", in NE¼NW¼ sec.13, T.5 S., R.7 W., Yamhill County, Hydrologic Unit 17090008, on right bank 4.5 mi (7.2 km) north of Willamina and at mile 6.2 (10.0 km).

DRAINAGE AREA.--64.7 mi² (167.6 km²).

PERIOD OF RECORD.--June 1934 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 315 ft (96.0 m) National Geodetic Vertical Datum of 1929 (plane-table survey). Prior to Oct. 1, 1939, water-stage recorder at site on left bank at datum 1.00 ft (0.305 m) higher. Oct. 1, 1939, to Aug. 5, 1968, water-stage recorder at site on left bank at present datum.

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

AVERAGE DISCHARGE.--48 years, 261 ft³/s (7.392 m³/s), 54.78 in/yr (1,391 mm/yr), 189,100 acre-ft/yr (233 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s (306 m³/s) Dec. 22, 1964, gage height, 13.54 ft (4.126 m), from rating curve extended above 3,400 ft³/s (96.3 m³/s) on basis of slope-area measurement at gage height 11.65 ft (3.551 m); minimum, 5.4 ft³/s (0.15 m³/s) July 15, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1931, reached a stage of about 12 ft (3.6 m) from information by local resident, discharge, 8,200 ft³/s (232 m³/s) from rating curve extended above 3,400 ft³/s (96.3 m³/s) on basis of slope-area measurement at gage height 11.65 ft (3.551 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s (65.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0730	2,650 75.0	7.37 2.246	Jan. 16	2200	2,490 70.5	7.18 2.188
Dec. 6	0200	3,640 103	8.46 2.579	Jan. 24	0430	3,780 107	8.60 2.621
Dec. 15	1130	2,340 66.3	6.99 2.131	Feb. 20	1130	*4,100 116	*8.92 2.719

Minimum, 12 ft³/s (0.35 m³/s) Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	192	1010	425	440	668	259	194	60	36	21	14
2	33	155	2010	383	397	655	358	184	60	37	22	13
3	33	134	1200	453	357	783	583	185	60	38	21	13
4	32	115	791	438	320	877	629	170	61	37	21	15
5	36	103	2430	373	290	740	594	162	60	40	19	15
6	599	93	2800	326	268	620	508	154	59	35	18	13
7	354	86	1570	295	248	520	437	149	58	33	17	13
8	257	81	1040	274	231	475	386	144	55	32	17	13
9	245	76	806	254	215	532	351	138	51	30	18	14
10	180	73	788	238	202	464	338	133	48	29	22	17
11	141	91	669	243	217	539	517	129	47	28	23	21
12	116	154	566	241	221	498	645	122	60	27	21	30
13	96	136	581	240	609	505	1250	118	60	31	19	20
14	84	356	726	270	1410	503	1120	113	51	35	20	16
15	74	398	1920	333	1300	457	1010	107	48	30	18	14
16	67	334	1490	1050	1620	413	849	103	45	30	17	14
17	63	544	1010	1730	1480	368	704	100	42	27	16	14
18	58	675	776	1230	1390	334	601	96	40	26	16	13
19	55	491	986	898	1520	300	510	92	37	25	15	14
20	52	448	769	702	3030	277	446	88	37	24	15	28
21	49	547	701	568	1890	256	404	85	36	23	15	27
22	47	564	594	659	1210	240	373	81	35	23	14	20
23	45	551	517	2870	889	226	348	78	34	22	14	17
24	44	456	496	2830	699	213	318	75	33	22	13	16
25	44	385	475	1590	582	202	288	70	33	21	13	16
26	44	383	563	1240	613	194	263	70	49	21	13	47
27	57	317	675	1010	644	201	245	71	43	20	14	37
28	129	273	731	814	575	194	248	67	42	20	14	26
29	142	255	645	678	---	192	224	64	41	21	15	27
30	237	386	546	577	---	214	208	61	38	22	16	23
31	280	---	484	504	---	260	---	59	---	22	15	---
TOTAL	3724	8852	30365	23736	22867	12920	15014	3462	1423	867	532	580
MEAN	120	295	980	766	817	417	500	112	47.4	28.0	17.2	19.3
MAX	599	675	2800	2870	3030	877	1250	194	61	40	23	47
MIN	31	73	475	238	202	192	208	59	33	20	13	13
CFSM	1.86	4.56	15.1	11.8	12.6	6.45	7.73	1.73	.73	.43	.27	.30
IN.	2.14	5.09	17.46	13.65	13.15	7.43	8.63	1.99	.82	.50	.31	.33
AC-FT	7390	17560	60230	47080	45360	25630	29780	6870	2820	1720	1060	1150

CAL YR 1981	TOTAL	90700	MEAN	248	MAX	2800	MIN	15	CFSM	3.83	IN	52.15	AC-FT	179900
WTR YR 1982	TOTAL	124342	MEAN	341	MAX	3030	MIN	13	CFSM	5.27	IN	71.49	AC-FT	246600

14194000 SOUTH YAMHILL RIVER NEAR WHITESON, OR

LOCATION.--Lat 45°10'08", long 123°12'25", in NE¼NW¼ sec.5, T.5 S., R.4 W., Yamhill County, Hydrologic Unit 17090008, near left bank on downstream side of Whiteson Bridge on State Highway 99W, 1.3 mi (2.1 km) northwest of Whiteson, 1.4 mi (2.3 km) downstream from Salt Creek, and at mile 16.71 (26.89 km).

DRAINAGE AREA.--502 mi² (1,300 km²).

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 82.30 ft (25.085 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good. Slight regulation during low-water periods by logpond upstream. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years, 1,768 ft³/s (50.07 m³/s), 47.83 in/yr (1,215 mm/yr), 1,281,000 acre-ft/yr (1.58 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft³/s (1,340 m³/s) Dec. 23, 1964, gage height, 49.20 ft (14.387 m); minimum, 3.2 ft³/s (0.091 m³/s) Aug. 24, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 46.9 ft (14.39 m), from Oregon State Highway Department bridge plans.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft³/s (368 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	1600	*25,500 722	*42.70 13.015	Jan. 24	2130	20,200 572	40.84 12.448
Dec. 16	1700	13,500 382	38.21 11.646	Feb. 21	0430	23,400 663	42.04 12.814

Minimum, 4.6 ft³/s (0.13 m³/s) Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	154	1530	3980	3160	2620	4550	2000	1020	236	112	48	20		
2	127	1110	6360	2950	2260	5080	2090	951	235	93	43	24		
3	136	884	9910	3570	2010	5020	4460	917	229	98	34	22		
4	139	734	8560	5370	1780	5820	5120	907	234	101	34	18		
5	139	625	7180	5050	1570	5390	4930	833	238	104	36	19		
6	663	540	21800	3790	1430	4310	4190	778	226	108	32	23		
7	3290	470	21200	2830	1310	3420	3360	733	238	94	26	24		
8	2020	418	15300	2290	1200	2830	2750	712	227	80	21	20		
9	1680	377	9940	1980	1120	3150	2350	671	200	75	26	18		
10	1390	341	6760	1760	1030	3210	2100	621	179	66	28	20		
11	976	333	5790	1610	982	3450	2900	580	160	64	32	27		
12	746	818	4690	1620	1120	3530	4790	558	175	60	50	42		
13	597	1120	3910	1590	1290	3240	6400	524	245	49	41	90		
14	492	2190	4710	1610	5180	3270	9640	497	228	58	38	77		
15	417	5480	7030	1760	7750	3050	9920	478	188	91	37	49		
16	360	5120	12500	2280	9050	2720	8600	468	166	74	34	37		
17	317	4140	10300	6950	12200	2360	6120	457	145	67	28	35		
18	295	5320	6900	8930	12000	2070	4450	401	128	60	22	31		
19	257	4700	5900	7190	10900	1810	3460	389	112	51	19	31		
20	232	3810	6920	5020	12600	1620	2830	342	105	37	19	37		
21	214	3740	6010	3650	21600	1470	2420	332	106	28	16	55		
22	205	4980	4850	3000	15700	1340	2140	319	94	32	15	87		
23	197	4870	3900	6990	10600	1240	1950	318	86	30	14	68		
24	192	4160	3270	16600	6720	1150	1760	312	81	26	12	54		
25	185	3270	3130	17900	4450	1060	1580	297	74	26	9.0	44		
26	187	2810	3300	12800	3560	997	1430	283	87	28	7.4	41		
27	242	2470	4320	9660	4380	1070	1310	284	141	26	8.5	89		
28	791	2050	5770	6910	4010	1150	1250	288	134	20	6.9	139		
29	1230	1720	5770	4950	---	1140	1260	272	130	24	13	94		
30	1360	1660	4610	3780	---	1180	1120	261	130	27	19	118		
31	1980	---	3570	3120	---	1560	---	243	---	35	19	---		
TOTAL	21210	71790	228140	160670	160422	83257	108680	16046	4957	1844	787.8	1450		
MEAN	684	2393	7359	5183	5729	2686	3623	518	165	59.5	25.4	48.3		
MAX	3290	5480	21800	17900	21600	5820	9920	1020	245	112	50	139		
MIN	127	333	3130	1590	982	997	1120	243	74	20	6.9	18		
CFSM	1.36	4.77	14.7	10.3	11.4	5.35	7.22	1.03	.33	.12	.05	.10		
IN.	1.57	5.32	16.91	11.91	11.89	6.17	8.05	1.19	.37	.14	.06	.11		
AC-FT	42070	142400	452500	318700	318200	165100	215600	31830	9830	3660	1560	2880		
CAL YR 1981	TOTAL	604118.0	MEAN	1655	MAX	21800	MIN	19	CFSM	3.30	IN	44.77	AC-FT	1198000
WTR YR 1982	TOTAL	859253.8	MEAN	2354	MAX	21800	MIN	6.9	CFSM	4.69	IN	63.67	AC-FT	1704000

WILLAMETTE RIVER BASIN

14194300 NORTH YAMHILL RIVER NEAR FAIRDALE, OR

LOCATION.--Lat 45°21'55", long 123°22'40", in SW¼ sec.25, T.2 S., R.6 W., Yamhill County, Hydrologic Unit 17090008, on right bank 0.4 mi (0.6 km) downstream from small tributary, 1.3 mi (2.1 km) upstream from Kutch Creek, 2.1 mi (3.4 km) west of Fairdale, 9.5 mi (15.3 km) west of Yamhill and at mile 28.4 (45.7 km).

DRAINAGE AREA.--9.03 mi² (23.39 km²).

PERIOD OF RECORD.--October 1958 to March 1966, October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft (171 m), from topographic map.

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

AVERAGE DISCHARGE.--22 years (water years 1959-65, 1968-82), 48.1 ft³/s (1.362 m³/s), 72.34 in/yr (1,837 mm/yr), 34,850 acre-ft/yr (43.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft³/s (66.0 m³/s) Dec. 22, 1964, gage height, 6.88 ft (2.097 m), from rating curve extended above 1,000 ft³/s (28.3 m³/s); maximum gage height, 9.7 ft (2.96 m) Dec. 23, 1964 (backwater from debris); minimum discharge, 2.3 ft³/s (0.065 m³/s) Sept. 23-26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.91 m³/s) and maximum discharge (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0800	370 10.5	4.16 1.268	Jan. 24	0200	*583 16.5	*4.82 1.469
Dec. 6	0330	387 11.0	4.22 1.286	Feb. 20	1030	501 14.2	4.58 1.396

Minimum, 2.7 ft³/s (0.076 m³/s) Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	47	149	58	84	126	42	48	14	8.0	5.0	3.4
2	9.8	37	309	54	79	128	49	46	14	8.4	5.4	3.2
3	7.9	31	193	57	75	144	70	48	15	8.6	5.2	3.3
4	7.6	26	134	53	70	169	67	44	15	8.6	4.8	3.8
5	14	23	327	48	65	138	63	41	14	8.5	4.6	3.5
6	121	21	336	45	60	112	59	39	14	7.6	4.4	3.2
7	83	19	237	42	56	92	55	38	13	7.4	4.2	3.1
8	67	18	171	39	52	84	53	36	13	7.1	4.4	3.1
9	64	16	143	37	48	98	52	34	12	6.9	4.9	3.7
10	47	16	149	36	45	92	53	32	12	6.6	5.3	4.3
11	34	19	132	37	50	105	84	30	12	6.4	5.1	5.3
12	28	28	113	36	50	98	116	29	14	6.2	4.6	5.7
13	23	28	109	37	107	101	183	27	13	6.7	4.6	4.0
14	20	135	119	44	218	98	161	27	12	7.1	4.6	3.6
15	17	132	246	56	243	89	126	26	11	6.8	4.3	3.4
16	15	105	219	157	274	79	104	25	10	6.5	4.1	3.3
17	14	124	155	235	231	72	90	24	9.8	6.0	3.9	3.2
18	13	149	134	176	208	65	81	23	9.3	5.8	3.7	3.5
19	12	115	179	131	232	59	73	22	9.0	5.6	3.5	4.1
20	12	92	141	105	410	54	68	21	8.6	5.6	3.5	8.5
21	11	106	117	87	265	50	65	20	8.6	5.4	3.5	5.8
22	11	105	98	95	176	47	67	20	8.3	5.3	3.3	4.5
23	11	96	84	333	132	44	70	19	8.0	5.1	3.1	3.9
24	10	82	83	395	106	41	68	18	7.8	5.0	3.1	3.7
25	10	74	80	220	90	39	63	17	7.9	4.9	3.1	3.8
26	10	77	83	196	95	38	58	17	11	4.9	3.3	9.5
27	19	66	88	160	93	39	54	17	9.5	4.8	3.4	6.4
28	30	58	84	130	87	37	58	16	9.1	4.8	3.3	5.6
29	37	57	77	111	---	36	54	16	8.8	5.0	3.9	5.8
30	62	75	68	100	---	39	51	15	8.2	5.2	3.9	4.7
31	63	---	63	94	---	44	---	14	---	5.1	3.6	---
TOTAL	891.4	1977	4620	3404	3701	2457	2257	849	331.9	195.9	127.6	132.9
MEAN	28.8	65.9	149	110	132	79.3	75.2	27.4	11.1	6.32	4.12	4.43
MAX	121	149	336	395	410	169	183	48	15	8.6	5.4	9.5
MIN	7.6	16	63	36	45	36	42	14	7.8	4.8	3.1	3.1
CFSM	3.19	7.30	16.5	12.2	14.6	8.78	8.33	3.03	1.23	.70	.46	.49
IN.	3.67	8.14	19.03	14.02	15.24	10.12	9.30	3.50	1.37	.81	.53	.55
AC-FT	1770	3920	9160	6750	7340	4870	4480	1680	658	389	253	264

CAL YR 1981	TOTAL	17098.1	MEAN 46.8	MAX 336	MIN 3.3	CFSM 5.18	IN 70.43	AC-FT 33910
WTR YR 1982	TOTAL	20944.7	MEAN 57.4	MAX 410	MIN 3.1	CFSM 6.36	IN 86.27	AC-FT 41540

WILLAMETTE RIVER BASIN

227

14195500 HASKINS CREEK RESERVOIR NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'43", long 123°21'23", in SW¼NW¼ sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on control tower 250 ft (76 m) upstream from dam on Haskins Creek, 11 mi (18 km) northwest of McMinnville, and at mile 5.1 (8.2 km).

DRAINAGE AREA.--6.88 mi² (17.82 km²).

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

REVISED RECORDS.--WSP 1738: Drainage area. The maximum contents for water year 1978 published in the report for that year is in error and should not be used, see revision published in the report for water year 1979.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of McMinnville). Prior to February 1981, at datum 20.0 ft (6.10 m) lower.

REMARKS.--Reservoir is formed by earthfill dam equipped with five siphon spillways which act as overflow weirs until priming occurs, approximately 815.5 ft (248.56 m) elevation. Capacity of reservoir is 733 acre-ft (904,000 m³) between elevations 741.5 ft (226.01 m), invert of outlet tunnel, and 815.0 ft (248.41 m), crest of siphon spillways. Dead storage negligible. Rated capacity of three siphons is 700 ft³/s (19.8 m³/s) each and remaining two siphons 350 ft³/s (9.91 m³/s) each. Under normal operation, reservoir is filled in the spring (April or May) and drained when fall rains start. There is no planned storage during winter months; however, during periods of heavy runoff, inflow may be greater than capacity of outlet tunnel and there may be some temporary storage. Water is used for municipal supply of city of McMinnville.

COOPERATION.--Elevations and capacity table furnished by city of McMinnville, Water and Light Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 748 acre-ft (922,000 m³) Nov. 17, 1954, elevation, 815.65 ft (248.610 m), present datum; no contents most of time during winter months.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 733 acre-ft (904,000 m³) many days during the year, elevation, 815.0 ft (248.41 m), present datum; no contents Dec. 31 to Mar. 24.

MONTHEND ELEVATIONS AND CONTENTS AT 0800, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	815.0	733	-
Oct. 31.....	815.0	733	0
Nov. 30.....	815.0	733	0
Dec. 31.....	-	0	-733
CAL YR 1981.....	-	-	-733
Jan. 31.....	-	0	0
Feb. 28.....	-	0	0
Mar. 31.....	796.0	378	+378
Apr. 30.....	815.0	733	+355
May 31.....	814.9	731	-2
June 30.....	812.0	666	-65
July 31.....	811.5	656	-10
Aug. 31.....	814.9	731	+75
Sept.30.....	815.0	733	+2
WTR YR 1982.....	-	-	0

WILLAMETTE RIVER BASIN

14196001 HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'39", long 123°21'06", in SE¼NW¼ sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on right bank 800 ft (244 m) downstream from Haskins Creek Reservoir, 11 mi (18 km) northwest of McMinnville, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--6.90 mi² (17.87 km²).

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

REVISED RECORDS.--WSP 1738: Drainage area. Maximum discharge for water year 1957, published in WSP 1518, has been found to be unreliable and should not be used.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 707 ft (215 m) National Geodetic Vertical Datum of 1929 (topographic survey of 1955). Prior to Aug. 5, 1952, water-stage recorder at site 600 ft (183 m) upstream at different datum.

REMARKS.--Records fair. All records given herein include flow in pipeline which diverts 600 ft (183 m) above station for municipal supply of McMinnville. Flow regulated by Haskins Creek Reservoir (see station 14195500); during winter months reservoir is empty except when inflow exceeds capacity of outlet tunnel. Water from McGuire Lake (station 14302800) on the Nestucca River is diverted through a tunnel to Haskins Creek Reservoir to augment summer flows.

COOPERATION.--Meter readings for diversion and elevations of Haskins Creek Reservoir furnished by city of McMinnville.

AVERAGE DISCHARGE.--31 years, 32.3 ft³/s (0.915 m³/s), 63.57 in/yr (1,615 mm/yr), 23,400 acre-ft/yr (28.9 hm³/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,030 ft³/s (29.2 m³/s) Dec. 23, 1964, gage height, 5.98 ft (1.823 m), from floodmark, from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of slope-area measurement of peak flow; maximum daily, 515 ft³/s (14.6 m³/s) Jan. 21, 1972; minimum daily, 0.10 ft³/s (0.003 m³/s) Oct. 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 345 ft³/s (9.77 m³/s) Dec. 5; minimum daily, 4.2 ft³/s (0.12 m³/s) Mar. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	25	144	43	65	92	5.3	31	6.3	5.9	6.1	9.6
2	5.8	19	115	40	62	94	5.8	29	9.3	7.3	6.4	9.8
3	4.8	17	165	41	56	109	5.4	29	8.5	7.7	9.6	10
4	5.5	14	105	39	51	119	4.8	27	11	7.7	18	8.4
5	6.3	12	345	35	45	102	31	25	8.7	7.7	18	9.2
6	27	12	305	31	41	82	45	24	8.3	7.8	17	9.8
7	38	11	194	30	38	68	42	23	8.2	8.2	18	9.9
8	29	10	125	28	35	63	39	22	11	9.5	17	11
9	29	9.5	115	26	32	72	39	20	13	11	17	7.6
10	22	9.8	115	25	31	64	43	19	14	13	18	7.3
11	21	12	95	26	32	71	68	18	8.7	13	17	9.2
12	14	16	84	24	32	65	93	16	5.6	12	10	11
13	12	14	81	24	68	65	151	16	5.7	11	12	9.1
14	10	84	94	27	127	64	131	16	7.0	7.6	11	8.8
15	9.5	74	173	31	134	60	105	16	8.8	7.3	10	9.0
16	9.0	37	154	100	165	52	86	15	12	6.9	12	9.8
17	8.1	56	112	187	167	49	74	15	13	9.2	13	10
18	8.0	56	124	161	151	46	62	14	13	12	13	9.4
19	7.9	46	167	102	163	42	58	13	12	13	11	6.7
20	7.3	44	158	76	202	38	58	13	9.4	14	10	12
21	7.5	104	136	65	222	35	53	13	7.9	13	12	11
22	7.9	124	133	77	196	32	51	13	8.4	11	9.2	8.9
23	7.1	93	127	186	129	18	49	12	14	9.5	11	8.6
24	7.0	74	119	233	84	5.4	46	11	12	8.9	12	8.1
25	6.6	64	108	233	70	5.2	43	10	10	13	11	8.5
26	6.6	64	95	210	80	4.5	40	8.9	6.0	14	7.9	14
27	12	55	86	170	74	4.3	38	11	5.3	14	8.3	10
28	21	48	78	115	68	4.5	39	11	5.3	13	7.8	9.7
29	18	46	69	93	---	4.2	36	11	7.0	10	6.5	9.9
30	31	69	58	79	---	5.6	33	13	5.3	9.8	6.8	8.7
31	35	---	47	71	---	5.3	---	11	---	8.6	8.4	---
TOTAL	438.3	1319.3	4026	2628	2620	1541.0	1574.3	525.9	274.7	316.6	365.0	285.0
MEAN	14.1	44.0	130	84.8	93.6	49.7	52.5	17.0	9.16	10.2	11.8	9.50
MAX	38	124	345	233	222	119	151	31	14	14	18	14
MIN	4.4	9.5	47	24	31	4.2	4.8	8.9	5.3	5.9	6.1	6.7
AC-FT	869	2620	7990	5210	5200	3060	3120	1040	545	628	724	565
MEAN†	14.1	44.0	118	84.8	93.6	55.8	58.4	16.9	8.10	4.68	3.65	2.69
CFSMT	2.04	6.38	17.1	12.3	13.6	8.09	8.46	2.45	1.17	.678	.529	.390
IN.†	2.36	7.12	19.72	14.17	14.13	9.33	9.45	2.83	1.31	.78	.61	.43
AC-FT†	869	2618	7253	5213	5197	3432	3477	1040	482	288	225	160

CAL YR 1981 TOTAL 12193.2 MEAN 33.4 MAX 345 MIN 4.1 AC-FT 24190 MEAN† 31.3 CFSMT 4.54 IN.† 61.64 AC-FT† 22677
WTR YR 1982 TOTAL 15914.1 MEAN 43.6 MAX 345 MIN 4.2 AC-FT 31570 MEAN† 41.8 CFSMT 6.06 IN.† 82.22 AC-FT† 30251

† Adjusted for change in contents of Haskins Creek Reservoir and diversion from McGuire Lake.

14198500 MOLALLA RIVER ABOVE PINE CREEK, NEAR WILHOIT, OR

LOCATION.--Lat 45°00'35", long 122°28'45", in NE¼NE¼ sec.31, T.6 S., R.3 E., Clackamas County, Hydrologic Unit 17090009, on right bank 0.5 mi (0.8 km) upstream from Pine Creek, 5 mi (8 km) southeast of Wilhoit, and at mile 32.5 (52.3 km).

DRAINAGE AREA.--97.0 mi² (251.2 km²), at cableway 0.2 mi (0.3 km) downstream.

PERIOD OF RECORD.--October 1935 to current year.

REVISED RECORDS.--WSP 1738: Drainage area. WDR OR-75-1: 1967(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 791.35 ft (241.203 m) National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). Oct. 1, 1935, to Sept. 30, 1945, and Oct. 1, 1945, to Feb. 9, 1961, water-stage recorder at site 0.3 mi (0.5 km) downstream at datums 8.42 ft (2.566 m) and 10.44 ft (3.182 m) lower, respectively. Feb. 10, 1961, to July 21, 1966, water-stage recorder at site 0.2 mi (0.3 km) downstream at datum 5.99 ft (1.826 m) lower.

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

AVERAGE DISCHARGE.--47 years, 544 ft³/s (15.41 m³/s), 76.16 in/yr (1,934 mm/yr), 394,100 acre-ft/yr (486 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft³/s (688 m³/s) Dec. 22, 1964, gage height, 16.3 ft (4.97 m), from floodmark, site and datum then in use, from rating curve extended above 5,200 ft³/s (147 m³/s); minimum, 18 ft³/s (0.51 m³/s) Oct. 3, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft³/s (102 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1100	4,730 134	8.15 2.484	Jan. 24	0600	6,730 191	9.31 2.838
Dec. 5	2300	6,960 197	9.43 2.874	Feb. 14	1100	6,280 178	9.06 2.761
Dec. 15	-	7,330 208	a9.61 2.929	Feb. 16	1230	5,510 156	8.62 2.627
Dec. 19	-	5,500 156	- -	Feb. 20	1600	*10,000 283	*10.86 3.310

Minimum, 27 ft³/s (0.76 m³/s) Sept. 9.

a From floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	343	694	418	609	1040	324	470	219	91	49	37
2	124	267	3170	383	586	1140	343	454	205	87	49	33
3	102	228	1860	378	587	1150	346	465	189	95	49	32
4	91	200	1360	360	523	1380	339	437	185	91	47	32
5	80	173	4290	312	461	1110	321	409	182	95	44	30
6	700	154	5630	276	411	868	305	407	194	90	42	30
7	880	141	3320	259	370	724	287	463	186	82	40	29
8	664	126	1840	246	328	649	285	448	175	81	39	28
9	860	118	1240	241	301	846	297	407	168	76	40	41
10	525	109	1090	240	275	1190	345	375	171	71	43	73
11	435	123	901	270	263	1330	1250	348	176	69	50	54
12	325	539	752	312	247	996	1670	349	197	67	51	270
13	259	474	927	307	1040	801	1910	351	183	64	45	149
14	214	500	2380	341	5170	760	1590	374	162	75	58	97
15	181	601	5910	452	3950	663	1070	388	151	69	50	76
16	158	591	2530	1230	4880	579	802	400	145	65	45	65
17	141	903	1410	2460	4200	511	686	471	141	61	41	57
18	125	1080	1100	1430	2870	458	583	447	133	59	39	52
19	114	756	3600	972	4400	411	510	379	128	57	35	52
20	105	674	1870	742	6470	370	504	357	120	55	34	144
21	96	1050	1310	600	3980	342	543	385	116	54	32	147
22	90	1450	993	590	2060	318	692	397	112	54	31	106
23	86	1180	793	3600	1360	303	830	368	101	51	30	87
24	83	863	773	4690	1010	295	752	347	92	50	30	83
25	80	661	907	2220	823	298	628	399	97	48	28	82
26	81	542	865	2170	727	326	561	357	93	48	28	89
27	107	444	839	1490	704	360	521	294	110	48	29	109
28	198	377	735	1100	652	386	581	250	102	46	29	106
29	284	337	614	851	---	353	531	229	105	46	38	158
30	365	315	520	711	---	356	475	220	98	46	59	133
31	463	---	462	692	---	345	---	218	---	48	43	---
TOTAL	8108	15319	54685	30343	49257	20658	19881	11663	4436	2039	1267	2481
MEAN	262	511	1764	979	1759	666	663	376	148	65.8	40.9	82.7
MAX	880	1450	5910	4690	6470	1380	1910	471	219	95	59	270
MIN	80	109	462	240	247	295	285	218	92	46	28	28
CFSM	2.70	5.27	18.2	10.1	18.1	6.87	6.84	3.88	1.53	.68	.42	.85
IN.	3.11	5.87	20.97	11.64	18.89	7.92	7.62	4.47	1.70	.78	.49	.95
AC-FT	16080	30390	108500	60190	97700	40980	39430	23130	8800	4040	2510	4920
CAL YR 1981	TOTAL	176675	MEAN 484	MAX 5910	MIN 26	CFSM 4.99	IN 67.76	AC-FT 350400				
WTR YR 1982	TOTAL	220137	MEAN 603	MAX 6470	MIN 28	CFSM 6.22	IN 84.42	AC-FT 436600				

WILLAMETTE RIVER BASIN

14201500 BUTTE CREEK AT MONITOR, OR

LOCATION.--Lat 45°06'06", long 122°44'42", in SE¼SE¼ sec.25, T.5 S., R.1 W., Marion County, Hydrologic Unit 17090009, on left bank at downstream side of highway bridge at Monitor and at mile 7.7 (12.4 km).

DRAINAGE AREA.--58.7 mi² (152.0 km²).

PERIOD OF RECORD.--January to December 1936, October 1940 to September 1952, October 1966 to current year. Monthly discharge only for January to December 1936, published is WSP 1318.

REVISED RECORDS.--WSP 2135: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 155 ft (47.2 m) from topographic map. Jan. 20 to Oct. 22, 1936, nonrecording gage at present site at different datum. Oct. 23 to Dec. 19, 1936, nonrecording gage at site 70 ft (21 m) downstream at different datum. Oct. 1, 1940, to Sept. 30, 1952, nonrecording gage at present site at 151.35 ft (46.131 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--28 years (water years 1941-52, 1967-82), 221 ft³/s (6.259 m³/s), 51.13 in/yr (1,299 mm/yr), 160,100 acre-ft/yr (197 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,310 ft³/s (207 m³/s) Jan. 21, 1972, gage height, 15.26 ft (4.651 m), from floodmark; minimum, 0.04 ft³/s (0.001 m³/s) July 23, 24, Aug. 26, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum recorded (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0300	2,650 75.0	10.80 3.292	Feb. 14		Stage and discharge unknown	
Dec. 15	2330	1,980 56.1	9.56 2.914	Feb. 20	unknown	*3,540 100	*12.28 3.743
Jan. 24	0400	2,350 66.6	10.30 3.139				

Minimum, 0.04 ft³/s (0.001 m³/s) July 23, 24, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	89	210	313	321	600	200	188	63	22	9.3	6.5
2	35	76	858	281	300	640	200	180	58	22	6.0	5.6
3	30	66	606	260	270	640	193	178	54	22	4.3	6.0
4	25	64	369	367	240	750	188	170	55	24	4.3	6.0
5	23	58	1090	324	215	590	190	151	57	24	3.4	6.5
6	100	50	2150	243	195	472	180	147	58	26	3.0	3.4
7	190	47	1420	210	175	394	163	153	54	20	3.0	2.8
8	160	43	936	185	156	340	151	149	49	18	5.1	6.0
9	190	41	670	163	142	340	140	145	45	14	4.3	28
10	123	38	621	151	128	388	136	136	44	12	6.9	21
11	107	42	529	151	120	454	278	126	40	13	8.6	30
12	82	170	442	156	114	361	454	122	51	9.9	8.6	44
13	68	166	415	158	205	337	733	114	55	6.9	6.5	31
14	58	285	550	165	1700	335	940	116	46	12	8.6	22
15	51	435	1360	200	1400	302	761	116	41	11	12	17
16	43	351	1460	565	1700	250	601	118	36	9.3	6.5	13
17	39	449	896	1050	1400	225	487	149	32	7.4	4.3	11
18	37	530	642	778	1000	200	409	145	29	8.6	2.8	9.3
19	32	369	785	589	1500	175	343	126	27	6.0	1.4	9.9
20	30	303	924	475	2500	160	305	116	26	4.3	1.7	21
21	45	423	698	400	1300	150	281	114	24	4.3	1.4	42
22	29	622	598	382	800	143	278	114	23	3.0	6.0	28
23	25	519	502	1140	600	138	294	109	18	2.0	4.7	23
24	23	390	430	1810	450	132	289	99	17	1.2	2.3	26
25	23	309	415	1100	400	128	260	103	14	4.7	1.8	26
26	23	265	382	1180	350	128	238	101	19	5.6	.62	30
27	29	215	466	860	320	151	220	88	29	4.7	2.1	28
28	57	180	481	666	300	193	228	76	28	5.6	3.0	33
29	84	160	484	526	---	170	213	70	27	6.0	12	43
30	96	152	412	430	---	200	195	67	26	7.4	13	38
31	99	---	340	379	---	208	---	66	---	9.3	8.6	---
TOTAL	1979	6907	22141	15657	18301	9694	9548	3852	1145	346.2	166.12	617.0
MEAN	63.8	230	714	505	654	313	318	124	38.2	11.2	5.36	20.6
MAX	190	622	2150	1810	2500	750	940	188	63	26	13	44
MIN	23	38	210	151	114	128	136	66	14	1.2	.62	2.8
CFSM	1.09	3.92	12.2	8.60	11.1	5.33	5.42	2.11	.65	.19	.09	.35
IN.	1.25	4.38	14.03	9.92	11.60	6.14	6.05	2.44	.73	.22	.11	.39
AC-FT	3930	13700	43920	31060	36300	19230	18940	7640	2270	687	329	1220

CAL YR 1981 TOTAL 68741.60 MEAN 188 MAX 2150 MIN 1.8 CFSM 3.20 IN 43.56 AC-FT 136300
WTR YR 1982 TOTAL 90353.32 MEAN 248 MAX 2500 MIN .62 CFSM 4.23 IN 57.26 AC-FT 179200

NOTE.--No gage-height record Feb. 14 to Mar. 5.

14202500 TUALATIN RIVER NEAR GASTON, OR

LOCATION.--Lat 45°26'11", long 123°10'07", in SE¼SW¼ sec.34, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on right bank 1.5 mi (2.4 km) west of Gaston, and at mile 63.9 (102.8 km).

DRAINAGE AREA.--48.5 mi² (125.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to September 1956, October 1972 to September 1976, October 1978 to current year. October 1976 to September 1978 in reports of Oregon Water Resources Department. Prior to October 1973 published as "at Gaston."

GAGE.--Water-stage recorder. Altitude of gage is 170 ft (52 m), by barometer. Prior to May 20, 1942, water-stage recorder at site 1.5 mi (2.4 km) downstream at datum 164.18 ft (50.042 m) National Geodetic Vertical Datum of 1929. May 20, 1942, to Sept. 30, 1956, nonrecording gage at present site at different datum.

REMARKS.--Water-discharge records fair. Slight diurnal fluctuation caused by logponds upstream. Small diversions for irrigation above station. In 1949 city of Hillsboro began diverting about 5 ft³/s (0.14 m³/s) for municipal supply. Some water is diverted from Roaring Creek upstream for Forest Grove municipal supply.

AVERAGE DISCHARGE.--24 years (water years 1941-56, 1973-76, 1979-82), 197 ft³/s (5.579 m³/s), 55.16 in/yr (1,401 mm/yr), 142,700 acre-ft/yr (176 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft³/s (231 m³/s) Dec. 21, 1955, gage height, 13.18 ft (4.017 m), site and datum then in use; minimum, 0.20 ft³/s (0.006 m³/s) Sept. 22, 23, 1951, Aug. 14, 15, Sept. 25, Oct. 8, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 5	1600	2,170 61.5	15.64 4.767	Feb. 20	1130	*2,540 71.9	*16.70 5.090
Jan. 23	1230	2,520 71.4	16.65 5.075				

Minimum, 14 ft³/s (0.40 m³/s) Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	173	711	260	301	450	192	150	42	26	17	17
2	30	124	1540	240	266	550	282	145	43	26	17	17
3	21	96	900	260	247	600	474	140	42	26	17	16
4	19	79	600	230	214	660	373	130	50	27	17	17
5	19	68	1910	210	184	600	330	125	50	27	16	17
6	470	57	1850	200	163	500	303	120	47	25	15	17
7	333	51	1500	185	146	450	269	115	47	23	19	16
8	193	47	1000	170	132	390	249	110	43	23	20	17
9	185	43	750	165	120	400	238	105	40	21	21	17
10	130	40	600	160	116	370	234	100	37	20	23	18
11	94	43	480	160	167	390	322	96	34	19	25	18
12	70	87	380	160	196	390	424	93	42	18	24	22
13	53	81	400	170	391	390	714	93	50	17	22	20
14	43	443	600	250	943	390	704	89	45	20	22	18
15	37	671	1800	410	885	360	673	85	39	19	22	17
16	34	330	1310	956	1100	320	620	80	36	20	21	17
17	31	370	599	1590	910	280	540	79	33	19	20	17
18	29	450	423	846	810	260	460	78	31	19	19	16
19	26	370	687	600	1020	240	400	75	26	18	19	17
20	25	320	631	470	2030	220	350	70	26	17	19	27
21	24	370	425	400	1520	200	310	66	25	16	18	30
22	22	390	380	500	1040	185	280	63	26	16	18	26
23	22	360	340	2100	800	170	260	62	22	16	17	22
24	27	320	330	1900	600	173	240	57	24	15	16	18
25	26	280	320	996	500	167	220	53	23	16	15	18
26	27	260	310	836	450	160	205	51	34	15	15	27
27	34	230	370	717	500	160	190	51	39	16	16	30
28	91	200	400	590	480	158	180	51	35	15	16	23
29	89	180	360	464	---	158	170	49	32	15	17	23
30	206	280	320	381	---	163	160	45	29	17	18	22
31	306	---	280	349	---	193	---	43	---	17	18	---
TOTAL	2740	6813	22506	16925	16231	10097	10366	2669	1092	604	579	597
MEAN	88.4	227	726	546	580	326	346	86.1	36.4	19.5	18.7	19.9
MAX	470	671	1910	2100	2030	660	714	150	50	27	25	30
MIN	19	40	280	160	116	158	160	43	22	15	15	16
CFSM	1.82	4.68	15.0	11.3	12.0	6.72	7.13	1.78	.75	.40	.39	.41
IN.	2.10	5.23	17.26	12.98	12.45	7.74	7.95	2.05	.84	.46	.44	.46
AC-FT	5430	13510	44640	33570	32190	20030	20560	5290	2170	1200	1150	1180

CAL YR 1981 TOTAL 64507 MEAN 177 MAX 1910 MIN 13 CFSM 3.65 IN 49.48 AC-FT 127900
WTR YR 1982 TOTAL 91219 MEAN 250 MAX 2100 MIN 15 CFSM 5.16 IN 69.96 AC-FT 180900

NOTE.--No gage-height record Nov. 15-30, Dec. 3, 4, 6-16, 18, Dec. 21 to Jan. 24, Feb. 23 to Mar. 23, Apr. 15 to May 12.

WILLAMETTE RIVER BASIN

14202500 TUALATIN RIVER NEAR GASTON, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1978 to current year.

INSTRUMENTATION.--Temperature recorder since Dec. 5, 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C Aug. 11, 1981; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 22.0°C Aug. 25; minimum, 0.5°C Feb. 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

233

14202500 TUALATIN RIVER NEAR GASTON, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

WILLAMETTE RIVER BASIN

14202965 HENRY HAGG LAKE NEAR GASTON, OR

LOCATION.--Lat 45°28'25", long 123°11'51", in SE¼NE¼ sec.20, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, at left end of Scoggins Dam on Scoggins Creek, 3.8 mi (6.1 km) northwest of Gaston, and at mile 4.9 (7.9 km).

DRAINAGE AREA.--38.7 mi² (100.2 km²).

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

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

REMARKS.--Reservoir is formed by earthfill dam with gated concrete spillway and a gated outlet tunnel. Storage began in January 1975. Total capacity at elevation 305.7 ft (93.18 m), maximum water-surface elevation, is 63,360 acre-ft (78.1 hm³), of which 56,160 acre-ft (69.2 hm³) is active storage above elevation 239.3 ft (72.94 m), proposed minimum pool. Reservoir is used for irrigation, flood control, and recreation. Figures given herein represent active storage.

COOPERATION.--Capacity table and monthend elevations furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 53,660 acre-ft (66.2 hm³) Apr. 30, 1975, elevation, 303.52 ft (92.513 m); minimum observed since first filling, 808 acre-ft (1.00 hm³) Oct. 31, 1975, elevation, 237.21 ft (72.302 m).

EXTREMES FOR CURRENT YEAR.--Maximum monthend contents, 53,060 acre-ft (65.4 hm³) Apr. 30, elevation, 302.99 ft (94.485 m); minimum monthend, 23,750 acre-ft (29.3 hm³) Oct. 31, elevation, 273.05 ft (83.226 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	279.39	29,260	-
Oct. 31.....	273.05	23,750	-5,510
Nov. 30.....	273.52	24,140	+390
Dec. 31.....	283.24	32,790	+8,650
CAL YR 1981.....	-	-	-2,280
Jan. 31.....	290.30	39,610	+6,820
Feb. 28.....	297.87	47,430	+7,820
Mar. 31.....	299.23	48,900	+1,470
Apr. 30.....	302.99	53,060	+4,160
May 31.....	302.35	52,340	-720
June 30.....	299.77	49,490	-2,850
July 31.....	295.40	44,820	-4,670
Aug. 31.....	288.92	38,240	-6,580
Sept. 30.....	282.87	32,450	-5,790
WTR YR 1982.....	-	-	+3,190

WILLAMETTE RIVER BASIN

235

14202980 SCOGGINS CREEK BELOW HENRY HAGG LAKE, NEAR GASTON, OR

LOCATION.--Lat 45°28'10", long 123°11'56", in SE¼NE¼ sec.20, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 600 ft (183 m) downstream from Scoggins Dam, 800 ft (244 m) upstream from small left bank tributary, 3.7 mi (6.0 km) northwest of Gaston, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--38.8 mi² (100.5 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 187.48 ft (57.144 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Flow completely regulated by Henry Hagg Lake since January 1975. Discharge not adjusted for storage or release from Henry Hagg Lake as evaporation from reservoir at times exceeds natural flow.

AVERAGE DISCHARGE.--7 years, 101 ft³/s (2.860 m³/s), 73,170 acre-ft (90.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft³/s (35.4 m³/s) Dec. 16, 1977, gage height, 13.50 ft (4.115 m); minimum, 1.4 ft³/s (0.040 m³/s) Nov. 16, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 834 ft³/s (23.6 m³/s) Feb. 26, gage height, 11.00 ft (3.353 m); minimum, 23 ft³/s (0.65 m³/s) Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	129	240	336	350	390	63	57	74	72	109	105
2	155	129	248	334	349	436	64	57	74	72	109	105
3	154	129	244	338	348	517	150	73	74	71	109	104
4	154	129	279	337	346	547	200	83	74	71	113	104
5	137	128	371	334	237	475	176	83	74	71	108	104
6	146	79	386	331	134	434	163	83	74	71	108	104
7	155	52	367	330	122	393	147	83	73	71	107	104
8	154	52	356	328	96	314	139	83	73	71	107	104
9	154	52	353	326	82	272	120	83	73	71	107	104
10	153	52	355	324	82	257	111	65	73	71	107	104
11	153	52	351	169	83	249	131	58	73	71	107	104
12	152	52	348	80	82	233	144	59	73	73	107	104
13	151	52	350	60	83	220	203	58	73	81	107	104
14	151	52	353	50	84	220	308	63	73	82	107	103
15	151	82	379	50	86	220	365	73	73	82	107	103
16	129	115	368	51	88	199	362	73	73	82	108	103
17	118	116	359	52	132	178	359	73	73	82	107	103
18	118	185	357	99	176	154	326	73	73	82	106	103
19	118	241	368	178	197	127	260	74	73	82	106	103
20	118	239	362	210	332	115	200	74	73	82	106	103
21	118	240	421	209	398	116	146	74	73	88	106	103
22	117	239	526	211	386	104	128	74	72	92	105	103
23	117	238	554	221	493	89	129	74	72	91	105	102
24	117	237	500	228	712	84	129	74	72	91	105	102
25	116	235	339	224	792	84	129	74	72	91	105	102
26	93	237	340	222	810	75	129	74	72	91	105	102
27	98	235	340	282	824	63	122	75	72	101	105	102
28	119	234	343	349	578	63	109	75	72	109	105	102
29	123	233	341	356	---	63	94	75	72	109	105	54
30	130	235	338	355	---	63	65	74	72	109	105	23
31	129	---	337	352	---	63	---	74	---	109	105	---
TOTAL	4153	4480	11173	7326	8482	6817	5171	2245	2187	2592	3308	2970
MEAN	134	149	360	236	303	220	172	72.4	72.9	83.6	107	99.0
MAX	155	241	554	356	824	547	365	83	74	109	113	105
MIN	93	52	240	50	82	63	63	57	72	71	105	23
AC-FT	8240	8890	22160	14530	16820	13520	10260	4450	4340	5140	6560	5890
CAL YR 1981	TOTAL	44548	MEAN 122	MAX 554	MIN 17	AC-FT	88360					
WTR YR 1982	TOTAL	60904	MEAN 167	MAX 824	MIN 23	AC-FT	120800					

WILLAMETTE RIVER BASIN

14203500 TUALATIN RIVER NEAR DILLEY, OR

LOCATION.--Lat 45°28'30", long 123°07'23", in NE¼NW¼ sec.24, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 5 ft (2 m) upstream from highway bridge, 1.0 mi (1.6 km) south of Dilley, 1.2 mi (1.9 km) downstream from Scoggins Creek, and at mile 58.81 (94.63 km).

DRAINAGE AREA.--125 mi² (324 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1940 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1935: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 147.57 ft (44.979 m) National Geodetic Vertical Datum of 1929. Prior to June 16, 1950, nonrecording gage at several sites within 200 ft (61 m) of present site at datum 4.00 ft (1.219 m) higher. June 16, 1950, to Aug. 10, 1966, water-stage recorder at present site at datum 4.00 ft (1.219 m) higher.

REMARKS.--Records good. Diurnal fluctuation caused by operation of millpond on Scoggins Creek above station and regulation by Henry Hagg Lake since January 1975. Diversions above station of approximately 3,000 acre-ft (3.70 hm³) from J.W. Barney Reservoir on the Middle Fork of North Fork Trask River for municipal water supply and irrigation in Wapato Lake area.

AVERAGE DISCHARGE.--43 years, 401 ft³/s (11.36 m³/s), 290,500 acre-ft/yr (358 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 ft³/s (484 m³/s) Dec. 22, 1964, gage height, 19.34 ft (5.895 m), from rating curve extended above 6,000 ft³/s (170 m³/s); minimum, 0.08 ft³/s (0.002 m³/s) Sept. 3, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,030 ft³/s (114 m³/s) Feb. 20, gage height, 17.93 ft (5.465 m); minimum, 44 ft³/s (1.25 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	348	935	847	941	1280	295	257	113	88	127	121
2	199	294	1430	820	872	1330	359	243	113	88	128	120
3	191	264	1520	842	830	1370	785	248	110	91	126	120
4	187	243	1190	899	784	1490	854	252	117	91	123	121
5	177	228	1670	877	701	1350	800	239	122	92	123	121
6	409	196	2850	829	526	1180	721	229	119	91	114	121
7	497	141	2270	771	435	1060	627	220	120	86	115	118
8	341	127	1630	719	387	937	552	216	115	84	123	116
9	330	119	1350	676	342	927	482	210	109	81	126	119
10	279	113	1330	639	323	918	428	196	101	79	131	125
11	260	114	1240	546	324	922	527	174	97	75	141	123
12	240	158	1120	372	343	894	720	166	109	77	139	132
13	220	166	1070	346	432	860	922	161	133	82	133	126
14	208	413	1160	336	938	850	1140	157	115	90	136	123
15	202	787	1630	358	1220	797	1200	164	110	92	133	122
16	189	761	1820	485	1500	725	1130	157	104	93	130	123
17	169	671	1420	1400	1560	633	1050	155	100	92	127	122
18	166	836	1220	1460	1470	559	965	153	93	91	125	124
19	163	864	1430	1220	1720	470	867	149	88	90	125	126
20	160	818	1370	1070	3000	416	770	143	88	84	123	146
21	157	825	1210	937	3050	388	645	138	88	85	123	155
22	157	879	1130	873	1850	359	566	134	89	94	122	142
23	154	887	1090	1650	1550	326	524	133	88	89	121	134
24	158	852	1060	2910	1450	302	472	130	87	89	119	127
25	157	768	954	2180	1400	287	428	126	86	93	118	127
26	143	786	912	1630	1400	273	398	118	94	95	119	139
27	143	762	934	1410	1500	256	372	120	105	101	119	157
28	212	679	998	1320	1360	256	357	120	99	119	120	137
29	224	613	988	1180	---	255	337	118	94	118	123	110
30	296	608	927	1070	---	254	291	116	92	121	127	46
31	460	---	875	1010	---	289	---	114	---	122	123	---
TOTAL	7039	15320	40733	31682	32208	22213	19584	5256	3098	2863	3882	3743
MEAN	227	511	1314	1022	1150	717	653	170	103	92.4	125	125
MAX	497	887	2850	2910	3050	1490	1200	257	133	122	141	157
MIN	143	113	875	336	323	254	291	114	86	75	114	46
AC-FT	13960	30390	80790	62840	63880	44060	38840	10430	6140	5680	7700	7420
CAL YR 1981	TOTAL	132492	MEAN 363	MAX 2850	MIN 77	AC-FT 262800						
WTR YR 1982	TOTAL	187621	MEAN 514	MAX 3050	MIN 46	AC-FT 372100						

WILLAMETTE RIVER BASIN

237

14203500 TUALATIN RIVER NEAR DILLEY, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1981 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
28...	1010	263	33	23
NOV				
10...	1000	130	13	4.6
16...	1130	771	72	150
DEC				
07...	1000	2300	59	366
16...	1027	1840	65	323
30...	1145	932	46	116
JAN				
14...	1350	346	35	33
24...	1500	3190	236	2030
FEB				
04...	1115	786	39	83
22...	1100	1810	78	381
MAR				
10...	1130	924	43	107
25...	0845	289	24	19
APR				
05...	1000	240	17	11
07...	1330	622	34	57
22...	1340	567	33	51
MAY				
24...	1230	130	10	3.5
JUN				
10...	1200	101	8	2.2
JUL				
07...	1245	90	5	1.2
19...	1330	88	8	1.9
AUG				
05...	1030	122	15	4.9
17...	1345	127	9	3.1
SEP				
02...	0945	132	8	2.9
13...	1000	124	16	5.4

WILLAMETTE RIVER BASIN

14207000 OSWEGO CANAL NEAR LAKE OSWEGO, OR

LOCATION.--Lat 45°23'18", long 122°43'11", in NW¼NW¼ sec.20, T.2 S., R.1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 0.4 mi (0.6 km) downstream from point of diversion on Tualatin River, 1.0 mi (1.6 km) upstream from Lake Oswego, and 3.5 mi (5.6 km) southwest of town of Lake Oswego.

PERIOD OF RECORD.--October 1928 to current year. October 1951 to September 1970, Oswego Canal records were not published separately, but were combined with records for Tualatin River at West Linn.

GAGE.--Water-stage recorder. Datum of gage is 96.50 ft (29.413 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 15, 1928, nonrecording gage 800 ft (244 m) upstream at different datum. Nov. 15, 1928, to June 29, 1939, nonrecording gage 900 ft (274 m) downstream at datum about 1.0 ft (0.3 m) higher.

REMARKS.--Records good. Oswego Canal diverts water from Tualatin River in NW¼ sec.20, but diversion dam is in NE¼ sec.33, about 3 mi (5 km) downstream. Water used for recreational facilities and development of power below Lake Oswego and returned to Willamette River at that point.

AVERAGE DISCHARGE.--54 years, 69.0 ft³/s (1.954 m³/s), 49,990 acre-ft/yr (61.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6,000 ft³/s (170 m³/s) Dec. 23, 1933; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	85	88	5.0	182	79	62	56	46	57	30	61
2	80	79	102	6.4	217	76	70	54	47	56	50	58
3	79	61	113	10	203	74	91	54	82	56	61	55
4	78	52	97	11	189	72	105	52	92	57	69	55
5	76	46	89	9.3	158	70	78	51	93	59	73	53
6	90	42	104	8.5	105	68	81	48	95	60	68	51
7	100	40	111	8.0	98	66	80	46	93	59	63	52
8	108	35	119	8.2	105	81	79	45	93	58	58	52
9	104	32	125	8.2	110	91	79	44	92	56	58	54
10	88	30	130	9.3	103	78	78	46	90	55	62	61
11	62	31	131	11	94	84	79	51	86	52	56	62
12	54	41	130	11	90	81	84	52	86	54	52	64
13	47	44	130	12	95	78	91	50	90	55	53	58
14	41	50	129	11	101	76	99	48	96	54	53	57
15	36	68	116	40	89	80	101	46	97	52	53	55
16	33	98	99	106	99	82	105	45	94	56	53	52
17	32	90	97	146	105	78	104	47	90	52	53	51
18	30	77	96	146	110	75	104	46	86	50	52	49
19	29	76	100	97	117	71	103	45	81	52	51	48
20	27	77	99	98	128	64	101	43	79	54	50	56
21	28	80	98	100	91	57	98	51	74	52	44	58
22	31	84	96	102	95	55	93	60	71	49	43	50
23	30	85	94	111	99	56	87	59	69	48	48	44
24	30	97	91	92	96	58	79	58	63	48	46	38
25	29	105	88	58	91	60	70	56	51	44	44	39
26	31	106	87	61	86	57	63	53	51	42	40	37
27	34	104	84	61	83	55	67	51	54	42	38	36
28	36	101	82	61	80	57	68	50	52	38	38	42
29	45	96	80	84	---	58	64	49	44	42	41	56
30	61	91	78	144	---	58	61	48	47	29	51	60
31	74	---	54	139	---	58	---	46	---	17	60	---
TOTAL	1704	2103	3137	1774.9	3219	2153	2522	1550	2284	1555	1611	1564
MEAN	55.0	70.1	101	57.3	115	69.5	84.1	50.0	76.1	50.2	52.0	52.1
MAX	108	106	131	146	217	91	105	60	97	60	73	64
MIN	27	30	54	5.0	80	55	61	43	44	17	30	36
AC-FT	3380	4170	6220	3520	6380	4270	5000	3070	4530	3080	3200	3100
CAL YR 1981	TOTAL	27527.4	MEAN	75.4	MAX	190	MIN	3.6	AC-FT	54600		
WTR YR 1982	TOTAL	25176.9	MEAN	69.0	MAX	217	MIN	5.0	AC-FT	49940		

14207500 TUALATIN RIVER AT WEST LINN, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°21'03", long 122°40'30", in SW¼ sec.34, T.2 S., R.1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 300 ft (90 m) upstream from bridge on State Highway 212, 0.4 mi (0.6 km) west of West Linn city limits, and at mile 1.8 (2.9 km).

DRAINAGE AREA.--706 mi² (1,829 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to current year. Prior to October 1960, published as "near Willamette."

REVISED RECORDS.--WSP 1014: 1943. WSP 1184: 1947. WSP 1248: 1941. WSP 1935: Drainage area. WDR OR-75-1: 1974(M). WDR OR-77-1: 1971-73, 1975, 1976(M).

GAGE.--Water-stage recorder. Datum of gage is 85.61 ft (26.094 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 12, 1941, nonrecording gage at datum 1.02 ft (0.311 m) higher.

REMARKS.--Water-discharge records good. October 1951 to September 1970, all records published for this station included the daily flow of Oswego Canal. October 1971 to current year, maximum and average discharge only include flow in Oswego Canal. Oswego Canal diverts at point 5.0 mi (8.0 km) above station for development of power between outlet of Lake Oswego and Willamette River. Some regulation in low-water season by flashboards on crest of diversion dam for Oswego Canal and regulation by Henry Hagg Lake since January 1975. Several diversions above station for irrigation.

AVERAGE DISCHARGE.--54 years, 1,530 ft³/s (43.33 m³/s), 29.43 in/yr (748 mm/yr), 1,108,000 acre-ft/yr (1.37 km³/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,300 ft³/s (660 m³/s) Dec. 23, 1933, gage height, 17.72 ft (5.401 m); minimum daily, 0.20 ft³/s (0.006 m³/s) July 30 to Aug. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,900 ft³/s (337 m³/s) Feb. 23, gage height, 12.69 ft (3.868 m); minimum, 38 ft³/s (1.08 m³/s) July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	317	986	2200	4250	6320	7410	1360	1200	304	158	100	181
2	311	1070	2610	4090	5710	7090	1520	1100	241	147	57	172
3	300	896	3030	4250	5070	6780	2030	1030	127	145	68	164
4	290	748	3290	4530	4500	6480	2810	980	192	152	75	160
5	276	655	4390	4430	3960	6190	3190	943	236	183	94	155
6	428	595	6230	4180	3460	5930	3350	897	267	198	117	154
7	879	543	6410	3850	2980	5680	3330	849	280	181	104	153
8	1450	468	6660	3500	2520	5360	3180	812	273	160	89	153
9	1360	412	7350	3150	2060	5030	2950	789	255	147	86	158
10	1140	384	7970	2810	1750	4630	2680	763	224	133	116	180
11	972	407	8080	2500	1550	4390	2680	736	193	120	139	190
12	787	606	7850	2230	1460	4110	2940	696	178	109	187	198
13	651	703	7570	1970	1560	3860	3380	656	213	105	216	198
14	562	822	7330	1810	2020	3730	3940	625	269	99	211	204
15	496	1330	7890	1720	2900	3570	4160	595	290	93	204	197
16	452	2240	7600	2020	3930	3400	4250	568	248	95	201	187
17	421	2620	7360	3250	4560	3210	4330	601	203	95	196	178
18	382	2710	7280	4180	4970	2980	4330	598	172	95	181	172
19	354	2650	7660	4450	5870	2710	4260	572	153	93	161	167
20	342	2650	7580	4620	7960	2370	4110	536	139	91	151	270
21	307	2750	7500	4830	8830	2030	3850	472	126	86	165	522
22	297	2930	7220	4980	10400	1800	3490	449	120	81	149	518
23	282	3010	6890	5650	11700	1630	3060	438	116	76	132	433
24	282	3030	6490	6670	11200	1480	2630	422	111	72	124	311
25	281	2920	6000	6600	10100	1360	2190	403	117	66	107	258
26	267	2920	5660	7170	9050	1280	1890	376	127	64	94	240
27	286	2850	5250	7600	8270	1240	1670	360	135	69	99	232
28	338	2720	5050	7920	7660	1270	1520	348	168	88	99	178
29	448	2540	4780	7850	---	1290	1410	345	203	47	103	163
30	655	2320	4550	7470	---	1290	1320	334	186	160	134	189
31	811	---	4360	6970	---	1290	---	312	---	148	178	---
TOTAL	16424	51485	190090	141500	152320	110870	87810	19805	5866	3556	4137	6635
MEAN	530	1716	6132	4565	5440	3576	2927	639	196	115	133	221
MAX	1450	3030	8080	7920	11700	7410	4330	1200	304	198	216	522
MIN	267	384	2200	1720	1460	1240	1320	312	111	47	57	153
AC-FT	32580	102100	377000	280700	302100	219900	174200	39280	11640	7050	8210	13160
MEAN†	585	1786	6232	4622	5554	3646	3012	689	272	165	185	273
CFSM†	.829	2.53	8.83	6.55	7.87	5.16	4.27	.976	.385	.234	.262	.387
IN.†	.96	2.82	10.18	7.55	8.19	5.96	4.76	1.13	.43	.27	.30	.43
AC-FT†	35960	106270	383220	284220	308480	224170	179200	42350	16170	10133	11406	16260

CAL YR 1981 TOTAL 557997 MEAN 1529 MAX 8370 MIN 115 AC-FT 1107000 MEAN† 1604 CFSM† 2.27 IN.† 30.85 AC-FT† 1161290
WTR YR 1982 TOTAL 790498 MEAN 2166 MAX 11700 MIN 47 AC-FT 1568000 MEAN† 2235 CFSM† 3.17 IN.† 42.98 AC-FT† 1617940

† Adjusted for diversion of Oswego Canal.

WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: October 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 26...	1200	279	164	7.0	11.0	6.8	K9	85	55	7.0	15
DEC 17...	1400	7160	89	6.8	7.0	10.0	610	2700	28	3.0	7.5
FEB 22...	1300	10600	70	--	9.0	9.0	--	--	21	.00	5.4
APR 28...	1035	1530	106	7.0	12.0	9.8	K19	K12	38	1.0	9.8
JUL 26...	0930	64	91	7.9	22.0	11.0	67	880	58	.00	15
SEP 01...	0930	181	221	7.6	20.0	--	K120	860	54	10	14

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)	ALKA- LITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 26...	4.2	11	2.4	48	--	10	11	.1	.520	1.6	1.60
DEC 17...	2.3	4.3	1.6	25	--	5.0	4.6	.1	.070	1.8	.87
FEB 22...	1.9	3.6	1.6	23	--	6.0	3.8	.1	.200	1.3	1.10
APR 28...	3.3	6.6	1.1	37	--	6.0	5.0	<.1	.190	.99	.76
JUL 26...	5.1	16	3.9	58	53	21	12	.2	.080	2.1	1.00
SEP 01...	4.5	17	4.8	44	49	26	16	.2	.920	2.5	1.90

WILLAMETTE RIVER BASIN

14207500 TUALATIN TIVER AT WEST LINN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 26...	.74	.220	.240	22	109	106	82.1	3.4	8	6.0	92
DEC 17...	.25	.010	.110	16	70	57	1350	29	360	6880	85
FEB 22...	.18	.100	.210	14	58	51	1660	88	100	2920	84
APR 28...	.46	.160	.250	20	74	75	306	4.8	9	37	92
JUL 26...	.58	.150	.270	24	132	130	22.8	2.0	8	1.4	55
SEP 01...	.49	.150	.170	24	142	138	69.4	2.2	5	2.4	91

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 26...	2	2	<100	<100	<1	9	<10	<10	<1	1
DEC 17...	2	2	27	100	<1	<1	<10	<10	<3	<1
FEB 22...	<1	1	18	100	1	<1	10	10	<3	5
SEP 01...	2	2	30	<100	<1	<1	<10	<10	<1	<1

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 26...	6	15	220	570	4	6	40	60	<.1
DEC 17...	12	10	120	2400	3	7	17	70	<.1
FEB 22...	4	16	130	9500	1	9	22	200	.1
SEP 01...	3	7	8	330	<1	<1	44	140	<.1

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 26...	<.1	3	6	<1	<1	<1	<1	70	70
DEC 17...	.1	<1	3	<1	<1	<1	<1	16	40
FEB 22...	.6	3	6	<1	<1	<1	<1	<3	50
SEP 01...	<.1	4	7	<1	<1	<1	<1	11	10

WILLAMETTE RIVER BASIN

14207500 TUALATIN TIVER AT WEST LINN, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
APR 28...	<.01	<.10	<.01	<.01	<.01	.01	<.01	<.01	<.01
JUL 26...	<.01	<.10	<.01	<.01	<.01	.03	<.01	<.01	<.01

DATE	ETHION, TOTAL (UG/L)	HEPTA- CHLOR- EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
APR 28...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
JUL 26...	<.01	<.01	<.01	.01	.01	<.01	<.01	<.01	<.01

DATE	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)
APR 28...	<.10	<.10	<.01	<.10	.03	<.01	<.01	<1	<.01
JUL 26...	<.10	<.10	<.01	<.10	.08	<.01	<.01	<1	<.01

DATE	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
APR 28...	<.1	4.0	1.5	.9	1.9	.7	<.1	<.1	.1

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	PER- THANE IN BOTTOM MATERIL (UG/KG)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
APR 28...	.1	<.1	<.1	<.1	<1.00	5	<1.0	<10

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

WILLAMETTE RIVER BASIN

243

14207740 WILLAMETTE RIVER ABOVE FALLS, AT OREGON CITY, OR

LOCATION.--Lat 45°20'55", long 122°37'08", in SW¼SW¼ sec.31, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090007, on right bank 0.2 mi (0.3 km) above Willamette Falls, 0.6 mi (1.0 km) downstream from Tualatin River, and at mile 26.8 (43.1 km).

DRAINAGE AREA.--10,000 mi² (25,900 km²), approximately.

PERIOD OF RECORD.--October 1976 to current year.

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

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 64.79 ft (19.748 m) Dec. 17, 1977; minimum recorded, 52.65 ft (16.048 m) Feb. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 63.23 ft (19.273 m) Feb. 21; minimum, 53.39 ft (16.273 m) July 22.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55.69	56.46	56.96	59.59	58.20	60.00	55.35	55.54	54.51	53.80	54.53	55.52
2	55.63	56.41	57.74	59.32	57.79	60.00	55.50	55.39	54.36	54.38	55.08	55.51
3	55.61	56.30	59.17	59.11	57.45	59.81	55.98	55.21	54.27	55.55	55.47	55.27
4	55.64	56.23	59.77	59.58	57.11	59.57	56.50	55.21	54.13	55.31	55.49	54.83
5	55.63	56.20	60.02	60.07	56.82	59.37	56.60	55.24	53.99	55.22	55.52	54.84
6	55.76	56.13	61.34	60.01	56.57	58.99	56.47	55.13	53.94	55.15	55.52	54.84
7	56.23	56.10	62.43	59.32	56.35	58.35	56.29	55.04	54.03	55.06	55.49	54.78
8	56.60	56.07	62.99	58.60	56.13	57.87	56.10	55.00	54.08	55.12	55.45	54.59
9	56.58	56.03	62.87	58.05	55.98	57.60	55.90	54.82	54.15	55.06	55.45	54.68
10	56.63	55.96	61.97	57.50	55.84	57.28	55.69	54.65	53.88	55.02	55.48	54.94
11	56.59	55.94	61.18	57.12	55.73	57.08	55.82	54.56	53.75	54.84	55.53	55.05
12	56.46	56.10	60.79	56.89	55.59	57.29	56.86	54.50	53.76	54.87	55.58	55.17
13	56.31	56.57	60.47	56.76	55.57	57.36	57.50	54.50	53.99	54.59	55.58	55.30
14	56.17	56.94	60.32	56.70	56.59	57.24	58.49	54.49	54.54	54.26	55.57	55.34
15	56.11	57.44	60.93	56.62	59.06	57.13	59.46	54.47	54.34	54.22	55.57	55.32
16	56.10	57.76	61.77	56.76	60.39	56.92	59.85	54.48	54.13	54.34	55.57	55.26
17	56.05	57.69	62.19	57.96	61.03	56.51	59.55	54.52	54.08	54.21	55.60	55.23
18	55.97	58.06	62.03	59.13	61.34	56.18	58.68	54.51	54.16	53.89	55.62	55.25
19	55.92	58.20	61.68	59.60	61.80	55.86	57.87	54.63	54.10	53.62	55.68	55.31
20	55.89	57.90	61.57	59.38	62.41	55.54	57.29	54.72	54.05	53.56	55.69	55.46
21	55.85	57.65	61.43	58.68	63.17	55.34	56.89	54.72	54.04	53.42	55.62	55.56
22	55.83	57.97	61.20	58.04	63.06	55.18	56.58	54.66	54.01	53.51	55.60	55.55
23	55.81	58.57	61.07	58.37	62.55	55.04	56.41	54.76	53.95	53.56	55.59	55.57
24	55.80	58.92	60.90	60.43	61.89	54.93	56.35	54.85	53.78	53.56	55.60	55.55
25	55.78	58.93	60.53	61.44	61.30	54.86	56.23	54.84	53.62	53.62	55.58	55.54
26	55.75	58.67	60.27	61.56	60.84	54.75	56.07	54.85	53.52	53.77	55.56	55.54
27	55.78	58.24	60.35	61.40	60.56	54.73	56.03	54.90	53.51	53.97	55.56	55.57
28	55.83	57.79	60.65	61.14	60.24	54.84	55.90	55.05	53.60	53.99	55.57	55.56
29	56.01	57.35	60.76	60.65	---	55.00	55.78	55.01	53.71	53.84	55.54	55.61
30	56.26	57.08	60.44	59.75	---	55.05	55.66	54.76	53.77	53.83	55.55	55.69
31	56.35	---	59.94	58.84	---	55.09	---	54.48	---	54.07	55.56	---
MEAN	56.02	57.19	60.83	58.98	58.98	56.80	56.79	54.82	53.99	54.30	55.51	55.27

WILLAMETTE RIVER BASIN

14207770 WILLAMETTE RIVER BELOW FALLS, AT OREGON CITY, OR

LOCATION.--Lat 45°21'28", long 122°36'35", in NE¼NW¼ sec.31, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090007, on right bank 0.5 mi (0.8 km) below Willamette Falls, 1.4 mi (2.2 km) upstream from Clackamas River, and at mile 26.2 (42.2 km).

DRAINAGE AREA.--10,000 mi² (25,900 km²), approximately.

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Oregon State Highway Division bench mark).

REMARKS.--Flow regulated by many reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 32.18 ft (9.808 m) Feb. 21, 1982; minimum, 1.86 ft (0.567 m) July 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 32.18 ft (9.808 m) Feb. 21; minimum, 2.77 ft (0.844 m) Aug. 28.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	8.07	6.45	7.06	11.18	9.59	10.32	17.91	17.19	17.47
2	---	---	---	7.68	6.04	6.68	15.53	11.08	13.17	17.29	16.35	16.78
3	---	---	---	7.17	5.96	6.55	17.48	15.55	16.55	16.52	15.97	16.21
4	---	---	---	6.68	5.48	6.08	18.00	17.47	17.74	18.27	16.54	17.47
5	---	---	---	6.76	5.57	6.16	21.63	17.79	18.85	19.12	18.29	18.76
6	---	---	---	6.94	5.63	6.18	24.54	21.82	23.52	18.88	18.00	18.64
7	---	---	---	7.15	5.18	6.06	25.84	24.54	25.27	17.99	16.12	17.08
8	---	---	---	7.14	4.92	5.89	26.25	25.79	26.04	16.08	14.79	15.43
9	8.75	7.60	8.12	7.36	4.82	5.94	26.11	24.45	25.51	14.74	13.89	14.36
10	8.87	7.35	8.02	8.39	5.08	6.57	24.49	22.27	23.39	13.85	12.77	13.29
11	8.80	6.95	7.77	9.31	5.68	7.18	22.27	20.97	21.55	12.74	11.80	12.32
12	9.09	6.96	7.81	9.61	6.45	7.81	20.93	20.07	20.45	11.99	11.28	11.64
13	9.10	6.88	7.81	10.34	7.02	8.44	20.05	19.32	19.61	11.69	11.05	11.36
14	8.94	6.43	7.49	11.54	7.74	9.33	19.92	19.13	19.41	11.59	10.92	11.23
15	8.91	6.24	7.26	12.38	9.93	10.81	23.33	19.92	21.62	11.31	10.58	10.99
16	9.05	6.28	7.29	11.90	10.97	11.34	24.16	23.26	23.69	12.98	10.88	11.60
17	8.26	6.05	7.10	11.78	10.50	11.02	24.49	24.01	24.22	16.62	13.09	15.10
18	7.57	5.27	6.21	12.92	11.66	12.22	24.15	22.82	23.53	17.99	16.67	17.47
19	7.41	5.12	6.02	12.98	12.47	12.73	23.97	22.61	23.25	18.50	17.94	18.25
20	7.16	5.14	5.94	12.70	11.74	12.24	23.69	22.84	23.21	18.18	16.82	17.65
21	6.87	5.10	5.88	12.50	11.45	11.98	22.82	22.05	22.48	16.74	14.97	15.97
22	6.93	5.22	6.07	13.43	12.03	12.80	22.02	21.28	21.63	14.92	14.06	14.46
23	7.38	5.18	6.17	14.77	13.33	14.14	21.39	21.04	21.21	18.89	14.02	16.04
24	7.83	5.70	6.59	15.49	14.58	15.07	21.05	20.38	20.75	23.29	19.04	21.80
25	7.82	5.41	6.48	15.37	14.94	15.15	20.33	19.67	20.06	23.57	23.16	23.36
26	7.45	4.75	5.96	14.90	13.98	14.57	19.78	19.34	19.54	23.51	23.22	23.37
27	8.13	5.10	6.42	13.91	12.94	13.41	19.96	19.36	19.65	23.22	22.63	22.96
28	8.86	5.71	7.11	12.85	11.65	12.28	20.69	19.88	20.29	22.69	21.77	22.23
29	8.88	6.47	7.42	11.58	10.55	11.00	20.67	20.36	20.54	21.75	20.23	21.00
30	8.84	6.59	7.39	10.50	9.97	10.21	20.35	18.99	19.62	20.20	17.79	18.95
31	8.65	6.92	7.55	---	---	---	18.97	17.96	18.31	17.71	15.66	16.56
MONTH	9.10	4.75	6.95	15.49	4.82	9.90	26.25	9.59	20.81	23.57	10.58	16.77

WILLAMETTE RIVER BASIN

14208600 TIMOTHY LAKE NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'35", in NE¼ sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, in intake structure 350 ft (107 m) upstream from dam on Oak Grove Fork, 0.4 mi (0.6 km) upstream from Anvil Creek, 14 mi (22.5 km) south of Government Camp, and at mile 15.8 (25.4 km).

DRAINAGE AREA.--53.8 mi² (139.3 km²).

PERIOD OF RECORD.--May 1956 to current year. Prior to October 1957, published as Timothy Meadows Reservoir.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway built by Portland General Electric Co. Usable storage began May 28, 1956. Capacity, 65,710 acre-ft (81.0 hm³) at elevation 3,190 ft (972.3 m), normal maximum operating level. Usable capacity increased in 1966 water year to 64,450 acre-ft (79.5 hm³) between elevations 3,125.0 ft (952.50 m), invert of outlet pipe, and 3,192.0 ft (972.92 m), top of radial gates. Storage of 4,060 acre-ft (5.0 hm³) below elevation 3,125.0 ft (952.50 m) not normally available for release. Water is used for power generation. Figures given herein represent total contents.

COOPERATION.--Elevations and capacity table furnished by Portland General Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 68,800 acre-ft (84.8 hm³) Oct. 3, 1967, elevation, 3,192.2 ft (972.98 m); minimum observed, 16,010 acre-ft (19.7 hm³) Feb. 24, 1957, elevation, 3,144.5 ft (958.44 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 66,030 acre-ft (81.4 hm³) July 27, elevation, 3,190.23 ft (972.382 m); minimum observed, 50,540 acre-ft (62.3 hm³) Dec. 2, elevation, 3,178.28 ft (968.740 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.30.....	3,182.03	55,220	-
Oct. 31.....	3,183.27	56,800	+1,580
Nov. 30.....	3,178.58	50,910	-5,890
Dec. 31.....	3,186.08	60,450	+9,540
CAL YR 1981.....	-	-	+10,100
Jan. 31.....	3,185.89	60,200	-250
Feb. 28.....	3,189.91	65,590	+5,390
Mar. 31.....	3,186.33	60,780	-4,810
Apr. 30.....	3,183.78	57,450	-3,330
May 31.....	3,188.88	64,180	+6,730
June 30.....	3,189.93	65,610	+1,430
July 31.....	3,189.95	65,640	+30
Aug. 31.....	3,189.80	65,440	-200
Sept.30.....	3,189.61	65,180	-260
WTR YR 1982.....	-	-	+9,960

WILLAMETTE RIVER BASIN

247

14208700 OAK GROVE FORK NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'50", in NE¼ sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi (0.2 km) upstream from Anvil Creek, 0.3 mi (0.5 km) downstream from Timothy Lake, 14 mi (23 km) south of Government Camp, and at mile 15.5 (24.9 km).

DRAINAGE AREA.--54.4 mi² (140.9 km²).

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

GAGE.--Water-stage recorder and artificial control. Datum of gage is 3,041.83 ft (927.150 m) National Geodetic Vertical Datum of 1929 (Portland General Electric Co. bench mark).

REMARKS.--Records good. Flow regulated since 1956 by Timothy Lake (see station 14208600). No diversion above station.

AVERAGE DISCHARGE.--26 years, 130 ft³/s (3.682 m³/s), 32.45 in/yr (824 mm/yr), 94,180 acre-ft/yr (116 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s (59.8 m³/s) Dec. 24, 1964, gage height, 3.93 ft (1.198 m), from rating curve extended above 290 ft³/s (8.21 m³/s) on basis of slope-area measurement of peak flow; minimum, 3.7 ft³/s (0.10 m³/s) Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 954 ft³/s (27.0 m³/s) Feb. 20, gage height, 3.54 ft (1.079 m); minimum, 33 ft³/s (0.93 m³/s) Oct. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	97	272	207	145	303	364	99	166	121	101	79
2	40	103	72	206	150	290	366	86	183	112	89	79
3	42	103	43	223	154	290	366	85	192	115	76	79
4	40	104	42	219	181	289	366	108	196	115	76	80
5	40	104	51	260	196	256	364	114	153	106	76	80
6	40	85	53	270	214	212	364	105	83	102	76	79
7	40	39	51	270	222	194	377	77	167	102	76	80
8	40	39	47	289	236	296	429	72	163	102	75	80
9	40	39	45	288	242	486	427	103	116	103	75	80
10	40	40	45	290	253	109	422	116	118	99	76	80
11	40	39	43	281	253	105	361	128	109	87	76	81
12	40	62	43	292	260	197	307	119	126	91	76	80
13	40	133	42	300	185	269	130	120	117	96	78	80
14	40	339	43	296	48	269	129	118	125	107	83	81
15	40	372	48	264	49	269	174	107	126	103	83	81
16	40	190	45	123	55	269	188	101	120	89	82	81
17	40	92	44	42	59	272	193	79	92	86	84	80
18	40	327	43	42	60	330	209	83	72	88	83	80
19	40	346	48	84	242	362	219	104	72	92	83	80
20	40	354	45	222	656	363	221	98	72	92	82	81
21	40	248	44	223	701	376	203	96	74	77	82	71
22	40	40	43	226	285	375	190	84	85	38	82	94
23	40	40	43	70	228	374	161	86	81	38	82	94
24	40	196	43	51	467	374	136	89	79	39	82	94
25	40	318	43	48	309	372	143	74	84	42	82	94
26	36	322	43	47	383	368	137	75	112	47	83	95
27	35	342	42	45	340	346	126	101	124	89	80	96
28	40	345	104	44	339	347	97	138	120	130	79	99
29	40	351	155	91	---	258	110	141	121	156	79	94
30	70	341	176	122	---	239	102	156	122	162	78	93
31	81	---	190	121	---	305	---	164	---	141	78	---
TOTAL	1302	5550	2091	5556	6912	9164	7381	3226	3570	2967	2493	2525
MEAN	42.0	185	67.5	179	247	296	246	104	119	95.7	80.4	84.2
MAX	81	372	272	300	701	486	429	164	196	162	101	99
MIN	35	39	42	42	48	105	97	72	72	38	75	71
AC-FT	2580	11010	4150	11020	13710	18180	14640	6400	7080	5890	4940	5010
MEAN†	67.7	86.0	223	175	344	217	190	214	143	96.2	77.2	79.8
CFSM†	1.24	1.58	4.10	3.22	6.32	3.99	3.49	3.93	2.63	1.77	1.42	1.47
IN.†	1.44	1.76	4.72	3.71	6.58	4.61	3.90	4.53	2.93	2.04	1.64	1.64
AC-FT†	4163	5120	13687	10770	19100	13370	11310	13129	8511	5915	4745	4748

CAL YR 1981 TOTAL 35668 MEAN 97.7 MAX 372 MIN 30 AC-FT 70750 MEAN† 112 CFSM† 2.06 IN.† 27.87 AC-FT† 80840
WTR YR 1982 TOTAL 52737 MEAN 144 MAX 701 MIN 35 AC-FT 104600 MEAN† 158 CFSM† 2.90 IN.† 39.49 AC-FT† 114560

† Adjusted for change in contents in Timothy Lake.

14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR

LOCATION.--Lat 45°04'20", long 121°57'00", on line between secs.3 and 4, T.6 S., R.7 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.2 mi (0.3 km) upstream from Spring Creek, 0.7 mi (1.1 km) upstream from Kink Creek, 1.0 mi (1.6 km) upstream from Portland General Electric Co. diversion dam, 24 mi (39 km) southeast of Estacada, and at mile 6.1 (9.8 km).

DRAINAGE AREA.--126 mi² (326 km²).

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as both Oak Grove Fork of Clackamas River at proposed intake, near Cazadero, and Oak Grove Fork of Clackamas River at intake, near Cazadero, May 1909 to September 1910, as Oak Grove Fork of Clackamas River at intake, near Cazadero, October 1910 to September 1921, and as Oak Grove Fork at Portland General Electric Power Co. intake, October 1921 to September 1929.

REVISED RECORDS.--WSP 1248: 1909, 1910(M), 1916, 1918, 1923, 1932. WSP 1935: 1914, 1921.

GAGE.--Water-stage recorder. Datum of gage is 2,052.31 ft (625.544 m) National Geodetic Vertical Datum of 1929. May 21, 1909, to Nov. 17, 1911, nonrecording gage and Mar. 26, 1912, to Sept. 30, 1923, water-stage recorder, at various sites 0.7 mi (1.1 km) downstream, below Kink Creek, at different datum.

REMARKS.--Records excellent. Flow regulated since 1956 by Timothy Lake (see station 14208600). No diversion above station.

AVERAGE DISCHARGE.--73 years, 500 ft³/s (14.16 m³/s), 362,200 acre-ft/yr (447 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s) Jan. 7, 1923, gage height, 5.45 ft (1.661 m), site and datum then in use, from rating curve extended above 2,300 ft³/s (65.1 m³/s) on basis of peak discharge for other stations in Clackamas River basin; minimum, 208 ft³/s (5.89 m³/s) Aug. 28-31, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,230 ft³/s (91.5 m³/s) Feb. 20, gage height, 5.29 ft (1.612 m); minimum, 217 ft³/s (6.15 m³/s) Oct. 1, 26, 27, Nov. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	290	544	544	536	839	666	550	548	381	327	296
2	226	297	723	542	536	791	668	546	554	375	315	295
3	226	295	545	553	534	772	660	550	558	376	300	297
4	231	293	466	542	536	774	653	551	562	369	300	296
5	231	294	866	570	538	715	648	547	540	359	297	295
6	283	283	1140	567	547	652	643	556	436	351	297	294
7	259	222	924	567	539	609	646	551	514	348	297	293
8	259	222	702	572	543	675	687	539	505	347	297	294
9	278	221	604	570	548	901	689	550	456	346	297	304
10	254	220	599	567	548	585	694	548	459	342	297	303
11	240	224	508	559	543	598	715	551	453	328	304	323
12	236	263	467	550	539	646	694	549	489	328	297	336
13	236	304	446	551	554	705	566	548	464	332	299	305
14	231	516	518	550	770	694	538	556	458	348	307	299
15	228	561	852	548	891	680	556	550	455	345	304	297
16	226	433	720	546	1120	662	551	554	446	329	302	297
17	225	298	598	589	1340	650	549	552	419	321	302	296
18	224	544	546	486	1220	685	551	550	388	320	302	296
19	224	548	862	475	1720	707	553	553	383	325	301	301
20	223	555	738	604	2420	695	555	548	377	325	302	342
21	222	556	645	588	2410	699	550	555	372	315	305	299
22	222	350	570	595	1570	694	559	552	376	267	302	315
23	222	330	524	621	1200	693	559	549	366	266	302	312
24	222	419	565	814	1290	692	551	557	361	265	302	315
25	222	551	575	676	1030	693	555	561	358	268	302	313
26	221	544	528	636	1030	696	554	551	382	271	301	317
27	220	552	489	563	916	677	554	545	402	302	299	321
28	230	546	510	515	874	679	550	558	390	346	299	344
29	235	552	537	513	---	595	551	551	388	376	312	337
30	269	544	539	546	---	562	547	551	387	388	305	324
31	288	---	540	534	---	607	---	553	---	370	297	---
TOTAL	7330	11827	19390	17653	26842	21322	18012	17082	13246	10329	9370	9256
MEAN	236	394	625	569	959	688	600	551	442	333	302	309
MAX	288	561	1140	814	2420	901	715	561	562	388	327	344
MIN	217	220	446	475	534	562	538	539	358	265	297	293
AC-FT	14540	23460	38460	35010	53240	42290	35730	33880	26270	20490	18590	18360
CAL YR 1981	TOTAL	151474	MEAN	415	MAX	1260	MIN	217	AC-FT	300400		
WTR YR 1982	TOTAL	181659	MEAN	498	MAX	2420	MIN	217	AC-FT	360300		

14209500 CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OR

LOCATION.--Lat 45°07'30", long 122°04'20", in NE¼ sec.21, T.5 S., R.6 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi (0.2 km) upstream from Three Lynx Creek, 0.25 mi (0.40 km) downstream from powerplant, 17 mi (27 km) southeast of Estacada, and at mile 47.8 (76.9 km).

DRAINAGE AREA.--479 mi² (1,241 km²).

PERIOD OF RECORD.--April 1909 to December 1913, October 1921 to current year. Prior to October 1911 (monthly discharge only), published in WSP 1318.

REVISED RECORDS.--WSP 1148: Drainage area. WSP 1248: 1910(M), 1912, 1948-50(M).

GAGE.--Water-stage recorder. Datum of gage is 1,091.69 ft (332.747 m) National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). Apr. 23, 1909, to Jan. 4, 1914, nonrecording gage at about same site and datum. Nov. 1, 1921, to Dec. 27, 1924, water-stage recorder at present site at datum 0.91 ft (0.277 m) higher.

REMARKS.--Records excellent. Minor regulation since May 1956 by Timothy Lake (see station 14208600).

AVERAGE DISCHARGE.--65 years, 1,988 ft³/s (56.30 m³/s), 56.36 in/yr (1,432 mm/yr), 1,440,000 acre-ft/yr (1.78 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft³/s (1,930 m³/s) Dec. 22, 1964, gage height, 21.7 ft (6.61 m), from floodmark, from rating curve extended above 34,100 ft³/s (966 m³/s) on basis of slope-area measurement at gage height 15.06 ft (4.590 m); minimum recorded, 292 ft³/s (8.27 m³/s) Sept. 25, 1980; minimum daily, 427 ft³/s (12.1 m³/s) Oct. 5, 1958.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,100 ft³/s (229 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1300	11,000 312	7.91 2.411	Jan. 24	0730	11,400 323	8.07 2.460
Dec. 5	2130	19,400 549	10.99 3.350	Feb. 14	2300	14,200 402	9.17 2.795
Dec. 15	1300	11,700 331	8.19 2.496	Feb. 17	0400	15,800 447	9.77 2.978
Dec. 19	1100	14,100 399	9.10 2.774	Feb. 20	1900	*26,900 762	*13.26 4.042

Minimum, 394 ft³/s (11.2 m³/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	688	1140	2290	2080	2510	3460	1880	2700	2240	1180	780	697		
2	727	1050	7410	1990	2400	3510	1880	2760	2170	1150	774	657		
3	716	989	5580	1960	2310	3480	1860	2770	2090	1180	751	664		
4	694	936	4340	1890	2160	3890	1820	2650	2030	1110	746	684		
5	678	888	9470	1770	2040	3530	1780	2500	1990	1090	740	677		
6	1470	849	14900	1650	1960	3090	1740	2500	1800	1040	730	668		
7	1930	757	9320	1630	1880	2780	1700	2750	1890	1020	730	671		
8	1650	723	5720	1600	1800	2680	1710	2750	1840	997	728	672		
9	2040	714	4240	1570	1750	3140	1710	2560	1810	971	729	726		
10	1590	698	4100	1560	1680	3580	1750	2320	1940	958	727	772		
11	1350	712	3390	1580	1660	4140	2900	2170	2070	924	754	763		
12	1150	1250	2890	1570	1610	3790	3840	2190	2380	913	757	970		
13	1020	1400	2670	1540	2340	3380	4300	2280	2150	916	716	821		
14	930	1600	4220	1560	11300	3100	4200	2410	1880	937	750	762		
15	862	1740	10500	1660	11600	2840	3350	2570	1880	932	741	727		
16	820	1730	7330	2470	13500	2620	2900	2670	1880	892	725	718		
17	780	2070	4800	4520	14400	2460	2700	2910	1870	868	718	702		
18	740	2640	3920	3230	10000	2360	2510	2860	1890	853	717	703		
19	720	2200	10300	2570	14900	2290	2320	2590	1820	853	711	715		
20	700	2200	7030	2340	19200	2180	2210	2530	1790	845	714	981		
21	680	3490	5160	2140	16400	2090	2210	2740	1670	834	705	688		
22	660	4250	4050	2050	9110	2030	2370	2970	1530	759	698	733		
23	660	3420	3390	5550	6410	1990	2730	2970	1440	761	694	740		
24	650	2810	3440	9370	5420	1970	2990	2860	1370	750	689	747		
25	650	2430	3720	6010	4470	1980	2900	3250	1320	748	686	741		
26	650	2130	3360	5190	4020	2050	2780	3170	1320	749	679	751		
27	683	1890	3000	4230	3590	2080	2740	2660	1400	773	685	817		
28	736	1730	2720	3500	3310	2100	2890	2330	1300	816	683	857		
29	801	1640	2490	3000	---	1970	2840	2240	1270	843	742	961		
30	980	1620	2310	2740	---	1860	2700	2190	1240	866	792	848		
31	1230	---	2180	2680	---	1840	---	2220	---	834	748	---		
TOTAL	29635	51696	160240	87200	173730	84260	76210	81040	53270	28362	22539	22643		
MEAN	956	1723	5169	2813	6205	2718	2540	2614	1776	915	727	755		
MAX	2040	4250	14900	9370	19200	4140	4300	3250	2380	1180	792	981		
MIN	650	698	2180	1540	1610	1840	1700	2170	1240	748	679	664		
CFSM	2.00	3.60	10.8	5.87	13.0	5.67	5.30	5.46	3.71	1.91	1.52	1.58		
IN.	2.30	4.01	12.44	6.77	13.49	6.54	5.92	6.29	4.14	2.20	1.75	1.76		
AC-FT	58780	102500	317800	173000	344600	167100	151200	160700	105700	56260	44710	44910		
CAL YR 1981	TOTAL	651387	MEAN	1785	MAX	14900	MIN	505	CFSM	3.73	IN	50.59	AC-FT	1292000
WTR YR 1982	TOTAL	870825	MEAN	2386	MAX	19200	MIN	650	CFSM	4.98	IN	67.63	AC-FT	1727000

WILLAMETTE RIVER BASIN

14210000 CLACKAMAS RIVER AT ESTACADA, OR

LOCATION.--Lat 45°18'00", long 122°21'10", in NE¼ sec.19, T.3 S., R.4 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.2 mi (0.3 km) downstream from River Mill Dam, 1.5 mi (2.4 km) northwest of Estacada, and at mile 23.1 (37.2 km).

DRAINAGE AREA.--671 mi² (1,738 km²).

PERIOD OF RECORD.--April 1908 to current year. Monthly discharge only April 1908, published in WSP 1318. Published as "near Cazadero" January 1909 to September 1957.

REVISED RECORDS.--WSP 1248: 1908-9, 1910(M), 1916, 1917(M), 1922(M), 1923. WSP 1288: Drainage area (former site). WSP 1638: 1919(M).

GAGE.--Water-stage recorder. Datum of gage is 296.93 ft (90.504 m) National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). See WSP 1738 for history of changes prior to Oct. 1, 1957. Oct. 1, 1957, to Feb. 16, 1965, water-stage recorder at same site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records excellent. Large diurnal fluctuations and some regulation caused by powerplants at River Mill Dam and, since 1958, North Fork Dam. Minor regulation since 1956 by Timothy Lake (see station 14208600). Two small diversions above station for Oregon City and Estacada municipal water supply.

AVERAGE DISCHARGE.--74 years, 2,747 ft³/s (77.80 m³/s), 55.59 in/yr (1,412 mm/yr), 1,990,000 acre-ft/yr (2.45 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,900 ft³/s (2,460 m³/s) Dec. 22, 1964, gage height, 18.36 ft (5.596 m); minimum, 50 ft³/s (1.42 m³/s) Mar. 10, 1961, from rating curve extended below 260 ft³/s (7.36 m³/s); minimum daily, 285 ft³/s (8.07 m³/s) Oct. 4, 5, 1958, caused by filling of North Fork dam forebay.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1530	18,100 513	8.10 2.469	Jan. 24	1030	19,800 561	8.51 2.594
Dec. 6	0030	30,800 872	10.77 3.283	Feb. 16	1700	22,000 623	9.00 2.743
Dec. 15	1100	17,800 504	8.01 2.441	Feb. 20	2200	*42,600 1,210	*12.70 3.871
Dec. 19	1330	18,800 532	8.27 2.521				

Minimum, 600 ft³/s (17.0 m³/s) Oct. 8, 15, Nov. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	876	1400	3380	2830	3670	4800	2580	3340	2780	1540	1000	868
2	985	1390	11100	2690	3720	4870	2900	3410	2730	1460	891	764
3	1030	1190	8640	2750	3530	4650	2540	3460	2610	1510	959	806
4	1100	1190	6390	2690	3260	5350	2490	3310	2540	1440	883	815
5	1020	1110	12700	2430	3030	5210	2350	3210	2610	1410	901	808
6	2070	1080	24700	2220	2770	4390	2210	3010	2380	1310	907	799
7	2730	945	14800	2150	2500	3860	2240	3400	2470	1260	903	788
8	1370	931	8760	2150	2510	3610	2220	3470	2410	1300	879	785
9	2840	892	6200	2080	2370	4010	2260	3260	2330	1200	900	973
10	2200	851	5680	2110	2280	4570	2260	3040	2420	1210	884	1010
11	1830	1020	4690	2130	2260	5580	3690	2910	2590	1140	968	934
12	1490	1580	3960	2290	2190	5350	5230	2870	2920	1130	941	1700
13	1380	1770	3590	2250	3290	4590	5960	2970	2710	1130	894	1140
14	1640	2000	5780	2350	14600	4290	6700	3080	2390	1220	1020	996
15	876	2770	15300	3480	16900	3900	5120	3320	2370	1190	892	946
16	888	2700	11000	4110	18700	3610	4280	3370	2360	1130	876	890
17	884	2610	7320	8800	20000	3390	3800	3690	2320	1070	859	875
18	899	3730	5460	5920	14800	3210	3540	3730	2350	1090	871	874
19	919	2910	12900	4350	23000	3110	3180	3420	2260	1130	861	887
20	892	2700	10100	3590	28500	2960	3030	3260	2250	998	852	1710
21	904	3880	7310	3640	25500	2810	3020	3430	2080	915	856	1200
22	838	5870	5620	3570	13500	2670	3180	3680	1980	973	837	965
23	822	4590	4930	8950	9150	2660	3640	3710	1840	954	872	958
24	806	3670	4170	16100	7440	2640	3920	3480	1730	951	799	1040
25	777	3100	5470	9940	6140	2510	3680	3890	1670	939	805	977
26	858	2730	4870	8440	5410	2730	3500	3920	1650	915	832	944
27	905	2400	4540	6720	4860	3200	3250	3400	1780	949	809	930
28	747	2190	3930	5390	4380	3020	3640	2940	1660	998	821	1200
29	964	1840	3730	4460	---	2780	3560	2860	1600	1020	894	1590
30	1120	2070	3230	3900	---	2550	3350	2740	1590	1070	993	1290
31	1630	---	2750	3780	---	2510	---	2730	---	1020	907	---
TOTAL	38290	67109	233000	138260	250260	115390	103320	102310	67380	35572	27566	30462
MEAN	1235	2237	7516	4460	8938	3722	3444	3300	2246	1147	889	1015
MAX	2840	5870	24700	16100	28500	5580	6700	3920	2920	1540	1020	1710
MIN	747	851	2750	2080	2190	2510	2210	2730	1590	915	799	764
CFSM	1.84	3.33	11.2	6.65	13.3	5.55	5.13	4.92	3.35	1.71	1.33	1.51
IN.	2.12	3.72	12.92	7.67	13.87	6.40	5.73	5.67	3.74	1.97	1.53	1.69
AC-FT	75950	133100	462200	274200	496400	228900	204900	202900	133600	70560	54680	60420
CAL YR 1981 TOTAL		924162		MEAN 2532	MAX 24700	MIN 625	CFSM 3.77	IN 51.24	AC-FT 1833000			
WTR YR 1982 TOTAL		1208919		MEAN 3312	MAX 28500	MIN 747	CFSM 4.94	IN 67.02	AC-FT 2398000			

14211000 CLACKAMAS RIVER NEAR CLACKAMAS, OR

LOCATION.--Lat 45°23'36", long 122°31'54", in NE¼SW¼ sec.14, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.8 mi (1.3 km) upstream from Johnson Creek, 2.1 mi (3.4 km) southeast of Clackamas, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--930 mi² (2,409 km²) at gage, 936 mi² (2,424 km²) at Gladstone Bridge 3.6 mi (5.8 km) downstream, where high-flow discharge measurements are made.

PERIOD OF RECORD.--September 1911 to April 1912 (published as "at Park Place"), October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 50.68 ft (15.447 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 15, 1911, to Apr. 22, 1912, nonrecording gage at site 3.6 mi (5.8 km) downstream at different datum. Oct. 1, 1962, to Sept. 10, 1969, water-stage recorder at site 300 ft (91 m) downstream at present datum.

REMARKS.--Records excellent. Diurnal fluctuations and some regulation by powerplants and several storage dams upstream, operated by Portland General Electric Co. Small diversions above station for Estacada municipal water supply. All records given herein are for gage site.

AVERAGE DISCHARGE.--20 years, 3,636 ft³/s (103.0 m³/s), 53.09 in/yr (1,348 mm/yr), 2,634,000 acre-ft/yr (3.25 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s (3,400 m³/s) Dec. 22, 1964, gage height, 27.0 ft (8.23 m), from floodmarks; minimum, 336 ft³/s (9.52 m³/s) Sept. 1, 11, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (453 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1730	21,100 598	10.23 3.118	Jan. 24	1230	26,200 742	11.55 3.520
Dec. 6	0400	36,700 1,040	13.97 4.258	Feb. 15	0230	22,700 643	10.66 3.249
Dec. 15	1430	21,900 620	10.45 3.185	Feb. 17	0800	25,500 722	11.38 3.469
Dec. 19	1730	20,600 583	10.12 3.085	Feb. 21	0030	*50,700 1,440	*16.78 5.115
Jan. 17	0700	17,000 481	9.08 2.768				

Minimum, 701 ft³/s (19.9 m³/s) Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	1600	3740	3960	5080	6230	3030	3940	3020	1720	1120	966
2	1110	1570	12200	3710	5290	6540	3350	3970	3020	1580	1030	899
3	1240	1380	11300	4250	5160	6150	3040	4080	2880	1670	1040	885
4	1200	1380	8210	4450	4650	6890	3010	3980	2820	1740	1020	899
5	1190	1300	12900	3740	4190	6970	2930	3730	2930	1640	992	913
6	2020	1220	31800	3220	3770	5970	2700	3520	2750	1530	982	925
7	3060	1120	19800	2980	3220	5170	2760	3830	2810	1450	1000	857
8	1780	1060	11800	2860	3200	4720	2640	4120	2690	1440	945	863
9	2930	1020	8390	2730	2970	4900	2640	3800	2640	1380	1030	1060
10	2590	1010	7330	2720	2810	5520	2680	3550	2640	1360	996	1260
11	2030	1030	6290	2760	2740	6750	3980	3390	2790	1310	1050	1090
12	1780	1910	5260	3090	2640	6720	6060	3270	3090	1270	1100	1970
13	1400	2090	4740	3030	3780	5870	7020	3370	3070	1270	1020	1580
14	1860	2180	7150	3250	14800	5650	9100	3460	2700	1340	1150	1230
15	1230	3030	18200	4550	20000	5150	7760	3750	2580	1330	1050	1110
16	950	3140	15200	7690	20800	4710	6410	3780	2570	1290	1000	1050
17	1020	3000	9930	14300	24000	4300	5550	4260	2530	1230	950	1020
18	1010	4310	7580	9900	18400	3940	5000	4430	2510	1200	956	980
19	1020	3530	13800	7250	29200	3740	4420	3980	2440	1210	961	1030
20	1030	3020	12700	5780	35000	3510	4050	3760	2410	1190	943	1990
21	986	4290	9520	5280	34900	3280	3890	3880	2270	996	940	1860
22	964	7100	7410	5110	18500	3110	4020	4160	2150	1110	935	1240
23	924	5890	6310	12800	12500	3050	4510	4230	2000	1050	946	1180
24	898	4550	5760	22400	9870	3020	4890	3950	1860	1050	879	1210
25	892	3760	6880	14300	8170	2980	4590	4330	1830	1030	883	1220
26	892	3230	6660	12500	7060	2950	4300	4500	1790	1020	923	1120
27	1110	2820	6740	9930	6440	3270	4000	3860	1900	1030	894	1130
28	905	2550	6260	8100	5760	3790	4190	3340	1880	1070	899	1280
29	1030	2190	5540	6640	---	3220	4320	3170	1780	1130	944	1860
30	1320	2300	4860	5690	---	3030	4000	3020	1700	1170	1150	1530
31	1700	---	3850	5320	---	2980	---	2990	---	1150	1050	---
TOTAL	43081	78580	298110	204290	314900	144080	130840	117400	74050	39956	30778	36207
MEAN	1390	2619	9616	6590	11250	4648	4361	3787	2468	1289	993	1207
MAX	3060	7100	31800	22400	35000	6970	9100	4500	3090	1740	1150	1990
MIN	892	1010	3740	2720	2640	2950	2640	2990	1700	996	879	857
CFSM	1.50	2.82	10.3	7.09	12.1	5.00	4.69	4.07	2.65	1.39	1.07	1.30
IN.	1.72	3.14	11.92	8.17	12.60	5.76	5.23	4.70	2.96	1.60	1.23	1.45
AC-FT	85450	155900	591300	405200	624600	285800	259500	232900	146900	79250	61050	71820
CAL YR 1981	TOTAL	1162064	MEAN	3184	MAX	31800	MIN	733	CFSM	3.42	IN	46.48
WTR YR 1982	TOTAL	1512272	MEAN	4143	MAX	35000	MIN	857	CFSM	4.46	IN	60.49
									AC-FT	2305000	AC-FT	3000000

WILLAMETTE RIVER BASIN

14211500 JOHNSON CREEK AT SYCAMORE, OR

LOCATION.--Lat 45°28'40", long 122°30'24", in lot 2, SW¼ sec.13, T.1 S., R.2 E., Multnomah County, Hydrologic Unit 17090012, on right bank 0.3 mi (0.5 km) southwest of Sycamore station, 2.5 mi (4.0 km) east of city limits of Portland, and at mile 10.2 (16.4 km).

DRAINAGE AREA.--26.5 mi² (68.6 km²).

PERIOD OF RECORD.--July 1940 to current year.

REVISED RECORDS.--WSP 1318: 1941(M). WDR OR-75-1: 1974.

GAGE.--Water-stage recorder and V-notch weir. Datum of gage is 228.47 ft (69.638 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by recreational ponds upstream. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years, 54.6 ft³/s (1.546 m³/s), 26.29 in/yr (668 mm/yr), 39,560 acre-ft/yr (48.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,620 ft³/s (74.2 m³/s) Dec. 22, 1964, gage height, 14.68 ft (4.474 m); minimum, 0.08 ft³/s (0.002 m³/s) Aug. 21, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0200	1,170 33.1	11.58 3.530	Jan. 23	1100	1,010 28.6	10.92 3.328
Dec. 15	0500	797 22.6	9.77 2.978	Feb. 20	1500	*2,020 57.2	*13.66 4.164
Jan. 17	0300	1,010 28.6	10.92 3.328				

Minimum, 0.98 ft³/s (0.028 m³/s) Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2.4	9.4	74	88	79	158	56	12	3.2	2.7	1.9	2.9		
2	12	8.0	192	94	132	175	68	11	3.2	2.6	1.7	2.1		
3	4.5	7.5	151	263	103	136	57	14	3.2	2.7	1.7	2.2		
4	3.5	7.4	107	336	79	137	69	10	5.7	4.2	1.5	2.4		
5	4.1	6.8	560	171	63	102	62	9.1	7.0	3.3	1.3	2.0		
6	108	7.2	806	107	52	81	57	8.5	4.8	2.7	1.3	2.0		
7	35	7.0	360	76	45	66	46	9.0	4.1	2.6	1.2	2.0		
8	29	6.6	185	62	39	59	38	9.3	3.7	2.6	1.3	1.9		
9	27	6.4	126	53	34	65	32	8.9	3.4	2.5	1.6	2.1		
10	15	6.3	114	47	30	52	30	8.5	3.1	2.4	3.3	8.1		
11	12	6.4	94	53	27	74	69	8.0	5.8	2.3	5.1	5.6		
12	9.7	89	71	70	25	55	76	7.5	8.7	2.1	3.2	9.3		
13	8.6	55	116	72	42	57	189	6.9	4.9	2.1	3.4	4.6		
14	7.7	68	190	77	121	71	289	6.5	4.1	2.4	4.5	3.2		
15	6.7	42	596	85	141	57	332	6.1	3.7	2.4	2.2	2.9		
16	6.2	46	274	377	361	49	202	6.0	3.4	1.9	1.9	2.6		
17	5.8	90	150	600	353	42	122	11	3.1	1.9	2.3	2.4		
18	5.7	94	123	288	364	36	84	15	2.9	1.9	2.2	2.3		
19	5.4	57	285	179	636	30	62	6.9	2.6	1.7	2.1	3.4		
20	5.4	52	165	121	1240	26	49	5.7	6.0	1.8	2.0	103		
21	5.2	94	187	109	407	24	41	5.3	2.4	1.7	1.5	23		
22	5.7	238	126	143	222	23	31	5.0	2.6	1.6	1.4	8.6		
23	6.6	120	186	696	174	21	25	4.6	2.4	1.7	1.3	5.8		
24	6.6	74	123	663	131	19	22	4.3	2.3	1.7	1.1	5.3		
25	7.2	51	132	291	99	18	19	4.4	2.3	1.6	1.3	4.7		
26	7.2	67	161	351	97	19	16	4.3	5.2	1.7	1.2	4.7		
27	9.4	43	224	196	93	27	15	4.1	4.7	1.5	1.1	3.8		
28	16	32	237	190	84	38	16	4.1	3.5	1.5	1.3	3.8		
29	20	26	150	129	---	34	15	3.9	3.1	1.6	6.5	4.0		
30	13	24	100	100	---	48	13	3.7	2.8	2.7	15	3.3		
31	12	---	83	86	---	81	---	3.4	---	4.4	6.0	---		
TOTAL	422.6	1441.0	6448	6173	5273	1880	2202	227.0	117.9	70.5	83.4	252.9		
MEAN	13.6	48.0	208	199	188	60.6	73.4	7.32	3.93	2.27	2.69	8.43		
MAX	108	238	806	696	1240	175	332	15	8.7	4.4	15	103		
MIN	2.4	6.3	71	47	25	18	13	3.4	2.3	1.5	1.1	1.9		
CF5M	.51	1.81	7.85	7.51	7.09	2.29	2.77	.28	.15	.09	.10	.32		
IN.	.59	2.02	9.05	8.67	7.40	2.64	3.09	.32	.17	.10	.12	.36		
AC-FT	838	2860	12240	12240	10460	2730	4370	450	234	140	165	502		
CAL YR 1981	TOTAL	16980.69	MEAN	46.5	MAX	806	MIN	.84	CF5M	1.76	IN	23.84	AC-FT	33680
WTR YR 1982	TOTAL	24591.30	MEAN	67.4	MAX	1240	MIN	1.1	CF5M	2.54	IN	34.52	AC-FT	48780

WILLAMETTE RIVER BASIN

253

14211720 WILLAMETTE RIVER AT PORTLAND, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°31'07", long 122°40'00", in NW¼NE¼ sec.3, T.1 S., R.1 E., Multnomah County, Hydrologic Unit 17090012, in pier at east end of drawspan on upstream side of Morrison Bridge in Portland and at mile 12.8 (20.6 km).

DRAINAGE AREA.--11,100 mi² (28,700 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year. Gage-height records collected in this vicinity since 1879 are in reports of the National Weather Service.

GAGE.--Acoustic velocity meter (AVM) with water-stage and velocity-index recorder. Datum of gage is 1.55 ft (0.472 m) National Geodetic Vertical Datum of 1929 (levels by National Weather Service).

REMARKS.--Water-discharge records fair above 50,000 ft³/s (1,420 m³/s), poor below. Flow regulated by many reservoirs upstream (see elsewhere in this report). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--10 years, 32,760 ft³/s (928 m³/s), 23,730,000 acre-ft/yr (29.3 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 283,000 ft³/s (8,010 m³/s) Jan. 18, 1974; maximum gage height, 23.84 ft (7.266 m) Jan. 18, 1974; minimum daily discharge, 4,200 ft³/s (119 m³/s) July 10, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 7, 1894, and June 1, 1948, reached stages of 33.0 ft (10.06 m) and 30.0 ft (9.14 m), respectively, from information by National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 207,000 ft³/s (5,860 m³/s) Feb. 21; maximum gage height, 20.1 ft (6.13 m) Feb. 21; minimum daily discharge, 8,000 ft³/s (230 m³/s) several days in July and August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17000	23000	39000	93000	71000	105000	27000	32000	19000	13000	10000	9000
2	17000	22000	57000	88000	64000	105000	30000	28000	18000	12000	8000	9000
3	17000	20000	86000	84000	55000	101000	34000	26000	18000	12000	10000	10000
4	16000	19000	95000	92000	51000	98000	40000	26000	17000	12000	9000	10000
5	15000	19000	103000	102000	46000	95000	42000	27000	16000	12000	9000	10000
6	18000	20000	150000	102000	43000	89000	39000	26000	15000	13000	9000	9000
7	25000	20000	164000	89000	40000	77000	38000	27000	17000	11000	10000	9000
8	27000	19000	171000	76000	38000	66000	37000	26000	17000	11000	10000	9000
9	28000	18000	166000	67000	36000	58000	34000	24000	17000	12000	9000	9000
10	29000	18000	143000	54000	34000	53000	31000	22000	16000	11000	9000	11000
11	27000	18000	127000	48000	32000	52000	32000	22000	14000	11000	9000	11000
12	26000	20000	117000	45000	31000	55000	46000	22000	14000	11000	10000	13000
13	25000	26000	109000	43000	31000	55000	56000	22000	15000	10000	9000	13000
14	24000	29000	108000	43000	49000	54000	77000	22000	17000	10000	9000	13000
15	22000	41000	130000	42000	97000	51000	95000	21000	17000	10000	9000	12000
16	21000	47000	148000	46000	123000	50000	102000	21000	16000	11000	9000	11000
17	22000	46000	153000	69000	142000	44000	98000	22000	17000	11000	9000	12000
18	21000	53000	148000	85000	142000	40000	82000	21000	17000	10000	9000	10000
19	20000	57000	144000	91000	161000	36000	67000	23000	16000	9000	8000	11000
20	19000	54000	144000	87000	177000	33000	53000	24000	16000	9000	9000	13000
21	19000	51000	137000	75000	196000	28000	48000	23000	16000	8000	10000	14000
22	19000	58000	128000	63000	179000	26000	43000	25000	16000	8000	10000	13000
23	20000	66000	126000	73000	162000	24000	42000	25000	16000	9000	9000	14000
24	17000	73000	120000	119000	147000	23000	41000	25000	14000	9000	8000	14000
25	18000	74000	114000	134000	134000	22000	39000	25000	14000	9000	8000	14000
26	17000	70000	109000	134000	123000	22000	38000	25000	13000	8000	9000	14000
27	17000	62000	110000	128000	118000	22000	37000	24000	12000	9000	9000	14000
28	17000	54000	115000	122000	111000	24000	35000	26000	14000	8000	9000	13000
29	19000	47000	119000	111000	---	24000	34000	26000	14000	9000	9000	14000
30	20000	42000	112000	94000	---	24000	34000	23000	14000	8000	8000	14000
31	20000	---	100000	70000	---	24000	---	22000	---	9000	8000	---
TOTAL	639000	1186000	3792000	2569000	2633000	1580000	1451000	753000	472000	315000	280000	352000
MEAN	20610	39530	122300	82870	94040	50970	48370	24290	15730	10160	9032	11730
MAX	29000	74000	171000	134000	196000	105000	102000	32000	19000	13000	10000	14000
MIN	15000	18000	39000	42000	31000	22000	27000	21000	12000	8000	8000	9000
AC-FT	1267000	2352000	7521000	5096000	5223000	3134000	2878000	1494000	936200	624800	555400	698200
CAL YR 1981	TOTAL	11908000	MEAN	32620	MAX	171000	MIN	7000	AC-FT	23620000		
WTR YR 1982	TOTAL	16022000	MEAN	43900	MAX	196000	MIN	8000	AC-FT	31780000		

WILLAMETTE RIVER BASIN

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1975 to September 1981.

WATER TEMPERATURES: November 1975 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 16...	1300	21000	71	6.9	12.0	10.3	760	K9	27	--	7.8
FEB 09...	1112	36000	75	7.4	4.0	13.5	630	37	26	.00	6.6
MAR 04...	1200	40000	60	7.4	7.5	13.4	1200	1100	21	.00	5.6
MAY 27...	1045	24000	63	7.7	15.0	10.8	48	K4	20	.00	5.2
JUL 27...	0930	9000	91	7.9	22.0	8.2	120	98	29	.00	7.6
SEP 03...	0930	10000	82	7.6	19.0	--	140	200	24	2.0	6.2

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 16...	1.9	4.6	.7	25	--	<5.0	4.0	.1	.150	.32	.85
FEB 09...	2.2	4.1	.7	27	--	6.0	3.5	<.1	.160	1.1	.69
MAR 04...	1.8	3.5	.6	23	--	5.0	2.5	.1	.100	.61	.45
MAY 27...	1.8	4.2	.8	24	24	5.0	3.3	<.1	--	--	--
JUL 27...	2.5	6.5	1.0	34	30	7.0	6.2	<.1	.110	.31	1.10
SEP 03...	2.1	5.8	.7	22	28	6.0	4.6	<.1	.260	.21	.70

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 16...	.15	.050	.070	15	53	--	3010	4.2	9	510	91
FEB 09...	.12	.070	.070	18	57	58	5540	6.1	15	1460	96
MAR 04...	.09	.050	.060	15	46	48	4970	16	33	3560	95
MAY 27...	--	--	--	13	39	48	2530	3.3	8	518	92
JUL 27...	.18	.060	.110	17	68	66	1650	1.5	9	219	96
SEP 03...	.15	.050	.120	16	--	59	1590	3.8	10	270	90

WILLAMETTE RIVER BASIN

255

14211720 WILLAMETTE RIVER AT PORTLAND, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 16...	2	2	22	<100	<1	1	<10	<10	<3	<1
FEB 09...	2	2	22	<100	<1	<1	<10	10	<3	2
MAR 04...	1	1	13	<100	<1	1	<10	10	<3	1
MAY 27...	2	2	17	<100	<1	<1	10	<10	<1	<1
JUL 27...	2	2	13	<100	<1	<1	<10	20	<1	<1
SEP 03...	1	2	20	<100	<1	<1	<10	<10	<1	<1

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 16...	2	11	74	410	2	2	12	30	<.1
FEB 09...	2	12	100	1600	<1	1	20	60	<.1
MAR 04...	2	9	76	1600	<1	2	8	40	.1
MAY 27...	2	8	35	210	<1	3	4	20	<.1
JUL 27...	2	16	30	260	<1	1	2	40	<.1
SEP 03...	3	13	27	390	<1	<1	4	40	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 16...	.1	<1	2	<1	<1	<1	<1	43	30
FEB 09...	.1	<1	2	<1	<1	<1	<1	5	30
MAR 04...	.4	<1	2	1	<1	<1	<1	6	30
MAY 27...	<.1	<1	2	<1	<1	<1	<1	24	30
JUL 27...	.2	<1	3	<1	<1	<1	<1	13	20
SEP 03...	--	1	3	<1	<1	<1	<1	12	20

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
FEB 09...		2.9	<.4	1.0	<.4	1.1	.13
MAR 04...		17	1.5	5.1	.6	5.2	.21
SEP 03...		<1.1	<.5	1.1	<.6	1.1	.09

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

PACIFIC SLOPE BASINS IN OREGON

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR
(National stream-quality accounting network station)

LOCATION.--Lat 45°42'15", long 123°45'15", in NW¼ sec.35, T.3 N., R.9 W., Tillamook County, Hydrologic Unit 17100202, on right bank 0.2 mi (0.3 km) upstream from Cook Creek, 2.2 mi (3.5 km) northeast of Foss, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--667 mi² (1,728 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 32.60 ft (9.936 m) National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to Nov. 11, 1939, nonrecording gage.

REMARKS.--Water-discharge records good. No regulation. Several small diversions for irrigation and domestic use above station.

AVERAGE DISCHARGE.--43 years, 2,727 ft³/s (77.23 m³/s), 55.52 in/yr (1,410 mm/yr), 1,976,000 acre-ft/yr (2.44 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,900 ft³/s (1,328 m³/s) Jan. 20, 1972, gage height, 23.11 ft (7.044 m); minimum, 34 ft³/s (0.96 m³/s) Aug. 29-31, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 19,000 ft³/s (538 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	2330	23,700 671	15.45 4.709	Feb. 16	1330	20,200 572	14.63 4.459
Jan. 17	2300	20,300 575	14.31 4.362	Feb. 20	1330	32,200 912	18.59 5.666
Jan. 24	0530	*33,600 952	*18.78 5.724				

Minimum, 79 ft³/s (2.24 m³/s) Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	398	3220	7100	3470	4400	7340	2020	1550	545	259	133	102
2	425	2570	15600	3060	3870	8380	2400	1480	533	246	143	106
3	409	2130	13800	2990	3470	9800	6460	1530	552	257	150	103
4	388	1790	10400	3010	3100	12000	9160	1470	558	256	148	102
5	737	1490	17300	2810	2800	10500	7260	1380	538	257	145	102
6	9180	1260	22300	2490	2530	8070	5650	1310	539	247	137	98
7	8110	1130	21500	2220	2300	6140	4760	1270	525	229	130	94
8	6300	1020	15500	2050	2100	4810	4010	1230	503	215	123	92
9	6090	926	10400	1920	1940	5680	3480	1180	476	199	119	110
10	4430	849	9140	1810	1790	5680	3120	1140	449	186	121	126
11	3160	940	8490	2020	1830	6220	4130	1090	428	177	125	162
12	2440	1500	7460	2260	2240	6610	6130	1050	426	168	133	208
13	1940	1680	6450	2370	6510	7810	10400	1010	444	173	144	229
14	1570	5680	6310	2750	15900	7710	11300	980	443	202	151	197
15	1260	7950	12600	3720	17600	6500	10300	944	438	205	145	174
16	1100	7090	15500	10200	19500	5290	9340	914	401	201	137	147
17	964	6400	12400	19100	19100	4270	7910	893	373	199	129	128
18	864	7920	8570	18600	15900	3520	6240	881	352	184	123	116
19	774	7180	10200	14900	14500	3000	5050	854	330	173	113	111
20	694	6060	9340	9270	24900	2630	4110	822	313	165	108	165
21	628	7590	7420	6620	18000	2340	3470	790	299	157	103	287
22	570	9110	5810	5730	13000	2110	3080	759	287	152	99	323
23	524	9000	4690	21000	9400	1930	2810	731	273	145	95	290
24	502	7650	4060	29300	7010	1780	2510	705	265	139	92	221
25	488	6160	3820	20400	5670	1660	2260	679	262	134	87	186
26	484	5080	3600	15700	5280	1590	2060	657	278	130	85	231
27	790	4350	3930	11700	5590	1560	1880	644	303	127	85	250
28	1810	3670	4660	9310	5530	1570	1880	626	306	125	82	255
29	1820	3250	5000	7380	---	1560	1810	609	315	125	83	275
30	2520	3430	4610	5990	---	1650	1670	585	280	126	89	262
31	3770	---	3970	5180	---	1810	---	561	---	130	93	---
TOTAL	65139	128075	291930	249330	235760	151520	146660	30324	12034	5688	3650	5252
MEAN	2101	4269	9417	8043	8420	4888	4889	978	401	183	118	175
MAX	9180	9110	22300	29300	24900	12000	11300	1550	558	259	151	323
MIN	388	849	3600	1810	1790	1560	1670	561	262	125	82	92
CFSM	3.15	6.40	14.1	12.1	12.6	7.33	7.33	1.47	.60	.27	.18	.26
IN.	3.63	7.14	16.28	13.91	13.15	8.45	8.18	1.69	.67	.32	.20	.29
AC-FT	129200	254000	579000	494500	467600	300500	290900	60150	23870	11280	7240	10420
CAL YR 1981	TOTAL	962603	MEAN	2637	MAX	22300	MIN	82	CFSM	3.95	IN	53.69
WTR YR 1982	TOTAL	1325362	MEAN	3631	MAX	29300	MIN	82	CFSM	5.44	IN	73.92
									AC-FT			2629000

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1980 to September 1981.

WATER TEMPERATURES: December 1974 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 23...	1230	534	71	6.8	8.5	11.8	K16	K1	22	--	6.2
DEC 08...	0900	16700	47	6.6	8.0	11.2	K27	K4300	15	2.0	4.7
MAR 16...	1630	5000	50	7.2	7.0	12.3	K11	340	17	.00	5.0
MAY 03...	1045	1560	57	6.9	10.0	11.4	K10	K7	16	.00	4.5
JUL 12...	1130	167	78	8.0	21.5	9.2	--	--	22	.00	6.1
AUG 30...	1100	88	89	8.0	20.5	9.3	28	710	25	.00	7.0

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 23...	1.5	6.5	.6	22	--	<5.0	5.0	.1	.080	.41	.64
DEC 08...	.8	3.6	.9	13	--	5.0	4.1	.1	.100	1.1	.49
MAR 16...	1.0	4.1	.6	17	--	<5.0	3.8	.1	<.060	.55	.54
MAY 03...	1.1	4.5	.6	19	--	6.0	4.1	<.1	.090	.29	.42
JUL 12...	1.6	6.3	.9	28	26	<5.0	5.8	<.1	.070	.10	1.00
AUG 30...	1.8	6.8	.6	26	29	5.0	7.1	<.1	.190	.10	1.00

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDD (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDD (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 23...	.06	.020	.030	15	48	--	69.2	1.8	2	2.9	90
DEC 08...	.09	.030	.040	14	42	41	1890	25	111	5000	64
MAR 16...	.06	.010	.020	15	36	--	486	4.0	17	229	56
MAY 03...	--	.040	.040	14	47	46	198	1.8	4	17	78
JUL 12...	.03	<.010	.020	14	64	--	28.9	1.6	4	1.8	86
AUG 30...	.03	.010	.080	13	70	59	16.6	3.4	3	.71	92

NEHALEM RIVER BASIN

14301000 NEHALEM RIVER NEAR FOSS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 23...	1	1	<100	<100	<1	1	<10	<10	<1	<1
DEC 08...	2	2	17	100	<1	1	<10	<10	<3	1
MAY 03...	1	2	16	<100	<1	<1	10	<10	<1	1
JUL 12...	1	2	12	<100	<1	1	<10	10	<1	<1
AUG 30...	1	2	18	<100	<1	<1	<10	<10	<1	<1

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 23...	5	8	220	350	2	5	<10	10	<.1
DEC 08...	2	23	85	4800	2	10	13	80	.1
MAY 03...	2	5	100	240	<1	11	3	<10	<.1
JUL 12...	4	5	130	300	<1	1	4	20	<.1
AUG 30...	1	3	75	280	<1	<1	2	20	<.1

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 23...	.1	1	2	<1	<1	<1	<1	30	10
DEC 08...	.3	<1	4	<1	<1	<1	1	17	20
MAY 03...	<.1	1	5	<1	<1	<1	1	7	20
JUL 12...	.1	<1	8	<1	<1	<1	<1	6	80
AUG 30...	<.1	<1	4	<1	<1	<1	<1	7	20

DATE	DI- AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)
MAY 03...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

DATE	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
MAY 03...	<.1	<1.0	<.1	<.1	<.1	<.1	<.1	<.1	<.1

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	PER- THANE IN BOTTOM MATERIAL (UG/KG)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
MAY 03...	<.1	<.1	<.1	<.1	<1.00	<1	<1.0	<10

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

14301500 WILSON RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°29'05", long 123°41'20", in SW¼SE¼ sec.8, T.1 S., R.8 W., Tillamook County, Hydrologic Unit 17100203, on right bank 0.2 mi (0.3 km) upstream from Negro Jack Creek, 8.0 mi (12.9 km) east of Tillamook, and at mile 11.4 (18.3 km).

DRAINAGE AREA.--161 mi² (417 km²), at cableway, 2.0 mi (3.2 km) downstream, where all discharge measurements are made.

PERIOD OF RECORD.--October 1914 to September 1915, August to November 1916, July 1931 to current year. Prior to January 1915 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1398: 1953. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 71.89 ft (21.912 m) National Geodetic Vertical Datum of 1929. Dec. 18, 1914, to Nov. 4, 1916, nonrecording gage at site 2.8 mi (4.5 km) downstream at different datum. July 30, 1931, to Sept. 30, 1938, nonrecording gage at site 2.82 mi (4.54 km) downstream at datum 28.83 ft (8.787 m) lower. Oct. 1, 1938, to Oct. 17, 1968, water-stage recorder at site 2.1 mi (3.4 km) downstream at datum 29.76 ft (9.071 m) lower.

REMARKS.--Records good. No regulation. Small diversions for domestic use above station.

AVERAGE DISCHARGE.--52 years (water years 1915, 1932-82), 1,203 ft³/s (34.07 m³/s), 101.47 in/yr (2,577 mm/yr), 871,600 acre-ft/yr (1.07 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft³/s (1,020 m³/s) Jan. 20, 1972, gage height, 16.91 ft (5.154 m); maximum gage height, 20.26 ft (6.175 m) Dec. 22, 1964 (site and datum then in use); minimum discharge, 32 ft³/s (0.91 m³/s) Sept. 5, 1973, but may have been less for short period following a landslide Jan. 31, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1916 reached a stage of 20.8 ft (6.34 m), from floodmark, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 5	1600	12,700 360	12.56 3.828	Feb. 14	1630	12,800 362	12.60 3.840
Jan. 24	0500	*19,200 544	*14.36 4.377	Feb. 20	1230	19,000 538	14.30 4.359

Minimum, 59 ft³/s (1.67 m³/s) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	214	1680	3990	1060	1620	2500	730	716	217	123	80	63		
2	252	1230	9140	980	1460	2640	844	675	214	123	86	62		
3	232	996	4920	1040	1330	3050	1750	728	214	146	88	60		
4	220	818	3040	978	1200	3970	1720	687	213	148	84	72		
5	279	695	9360	888	1070	2970	1480	630	203	142	81	74		
6	5620	609	8940	788	968	2200	1310	588	203	130	77	67		
7	3980	555	5900	700	875	1760	1180	574	201	121	75	64		
8	2490	506	3540	650	797	1530	1090	562	190	117	74	62		
9	2740	467	2920	600	731	2470	1060	517	182	112	74	70		
10	1700	442	2810	600	697	2450	1040	481	174	107	78	79		
11	1180	497	2410	600	781	2650	1840	450	169	105	79	91		
12	890	804	1930	600	1030	2460	3100	427	176	102	81	121		
13	707	799	2380	700	5600	2950	4370	410	187	104	83	101		
14	589	2830	4010	942	11900	2800	3700	393	173	115	85	86		
15	502	3340	7940	1330	9280	2250	2720	382	162	108	81	77		
16	448	2540	4490	4920	8740	1790	2200	367	156	106	77	72		
17	405	2630	3220	7400	7100	1490	1880	359	151	101	74	69		
18	369	4190	2690	4660	5440	1280	1650	353	144	97	72	67		
19	359	2850	4430	2960	6600	1110	1450	337	138	94	70	67		
20	343	2410	2850	2150	14200	996	1300	322	136	92	68	109		
21	321	3060	1850	1720	7780	891	1220	309	131	90	66	145		
22	305	3180	1510	2110	4150	808	1230	300	130	88	66	114		
23	290	2730	1440	12100	2780	737	1270	291	126	86	64	96		
24	281	2170	1460	13500	2090	679	1140	280	123	85	62	87		
25	272	1740	1440	5760	1740	629	1000	266	122	83	61	82		
26	269	1520	1430	5000	1760	594	903	259	142	82	61	105		
27	431	1290	1490	3780	1960	616	830	257	151	81	61	114		
28	963	1110	1530	2900	1730	630	895	248	142	80	61	114		
29	984	1020	1390	2290	---	622	870	239	133	80	61	121		
30	1900	1320	1270	1950	---	654	785	226	128	80	64	121		
31	2690	---	1170	1830	---	740	---	217	---	80	65	---		
TOTAL	32225	50028	106890	87486	105409	52916	46557	12850	4931	3208	2259	2632		
MEAN	1040	1668	3448	2822	3765	1707	1552	415	164	103	72.9	87.7		
MAX	5620	4190	9360	13500	14200	3970	4370	728	217	148	88	145		
MIN	214	442	1170	600	697	594	730	217	122	80	61	60		
CFSM	6.46	10.4	21.4	17.5	23.4	10.6	9.64	2.98	1.02	.64	.45	.55		
IN.	7.45	11.56	24.70	20.21	24.36	12.23	10.76	2.97	1.14	.74	.52	.61		
AC-FT	63920	99230	212000	173500	209100	105000	92350	25490	9780	6360	4480	5220		
CAL YR 1981	TOTAL	413328	MEAN	1132	MAX	12300	MIN	70	CFSM	7.03	IN	95.50	AC-FT	819800
WTR YR 1982	TOTAL	507391	MEAN	1390	MAX	14200	MIN	60	CFSM	8.63	IN	117.23	AC-FT	1006000

NESTUCCA RIVER BASIN

14302800 MCGUIRE LAKE NEAR FAIRDALE, OR

LOCATION.--Lat 45°18'30", long 123°24'30", in NW¼SE¼ sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, on control tower in reservoir on Nestucca River, 0.3 mi (0.5 km) upstream from Walker Creek, and 5.0 mi (8.0 km) southwest of Fairdale.

DRAINAGE AREA.--2.85 mi² (7.38 km²).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam with ungated spillway. Capacity of reservoir is 3,840 acre-ft (4.73 hm³) between elevations 1,810.0 ft (551.69 m) and 1,865.5 ft (568.60 m). Dead storage negligible. Under normal operation, reservoir is filled in the spring (April or May) and drained when fall rains start. There is no planned storage during winter months; however, during periods of heavy runoff, inflow may be greater than capacity of outlet tunnel and there may be temporary storage. Water is used during summer months for municipal supply of city of McMinnville.

COOPERATION.--Elevation and capacity table furnished by city of McMinnville, Water and Light Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,890 acre-ft (4.80 hm³) Mar. 12 1972, Feb. 19, Mar. 28, 1974, elevation, 1,865.8 ft (568.70 m); no contents most of time during winter months.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,770 acre-ft (4.65 hm³) Feb. 20 to May 17, elevation, 1,865.0 ft (568.45 m); reservoir empty Dec. 26 to Jan. 8.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1,859.4	3,020	-
Oct. 31.....	1,860.8	3,190	+170
Nov. 30.....	1,836.5	970	-2,220
Dec. 31.....	-	0	-970
CAL YR 1981.....	-	-	-1,650
Jan. 31.....	1,851.1	2,120	+2,120
Feb. 28.....	1,865.0	3,770	+1,650
Mar. 31.....	1,865.0	3,770	0
Apr. 30.....	1,865.0	3,770	0
May 31.....	1,864.0	3,630	-140
June 30.....	1,864.7	3,730	+100
July 31.....	1,862.7	3,450	-280
Aug. 31.....	1,857.8	2,830	-620
Sept. 30.....	1,854.0	2,410	-420
WTR YR 1982.....	-	-	-610

NESTUCCA RIVER BASIN

261

14302900 NESTUCCA RIVER NEAR FAIRDALE, OR

LOCATION.--Lat 45°18'40", long 123°25'05", in SW¼NW¼ sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, on right bank 100 ft (30 m) upstream from former Meadow Lake, 0.4 mi (0.6 km) downstream from Walker Creek, 5.3 mi (8.5 km) southwest of Fairdale, and at mile 49.3 (79.3 km).

DRAINAGE AREA.--6.18 mi² (16.01 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,778.99 ft (542.236 m) National Geodetic Vertical Datum of 1929 (levels by city of McMinnville).

REMARKS.--Records good. Flow regulated since March 1969 by McGuire Lake about 1 mi (1.6 km) above station (see station 14302800); during winter months lake is empty except when inflow exceeds capacity of outlet tunnel.

AVERAGE DISCHARGE.--22 years, 32.2 ft³/s (0.912 m³/s), 70.76 in/yr (1,797 mm/yr), 23,330 acre-ft/yr (28.8 hm³/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 876 ft³/s (24.8 m³/s) Dec. 22, 1964, gage height, 10.43 ft (3.179 m); minimum, 0.76 ft³/s (0.022 m³/s) Aug. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 355 ft³/s (10.1 m³/s) Dec. 5, gage height, 5.61 ft (1.710 m); minimum, 1.4 ft³/s (0.040 m³/s) Aug. 7, 8; minimum daily, 1.5 ft³/s (0.042 m³/s) Aug. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	52	147	35	32	101	25	30	13	3.2	1.8	2.3
2	6.2	47	215	33	30	114	32	28	13	3.4	1.9	2.3
3	5.8	45	152	34	29	145	50	30	9.5	3.7	1.9	2.3
4	5.8	43	122	30	26	158	47	28	5.6	3.5	1.7	2.5
5	10	49	300	28	24	119	43	26	5.5	3.5	1.6	2.4
6	95	56	285	27	23	90	39	23	5.2	3.2	1.5	2.4
7	53	54	183	19	21	70	35	21	5.2	3.1	1.5	2.3
8	40	54	140	11	20	65	33	20	4.8	3.0	1.6	2.3
9	35	53	130	11	20	85	33	19	4.5	2.8	1.6	2.4
10	25	52	137	11	19	71	36	18	4.8	2.8	2.0	2.5
11	20	54	124	12	21	85	88	17	4.1	2.8	2.4	2.8
12	16	58	114	12	24	74	136	16	5.7	2.8	2.3	2.9
13	14	56	120	12	61	73	229	16	5.3	3.0	2.6	2.5
14	12	92	145	13	119	71	179	15	4.4	3.0	2.6	2.4
15	10	90	229	16	128	61	122	15	4.1	3.3	2.7	2.4
16	9.1	81	203	86	150	53	88	15	3.9	3.3	2.6	2.4
17	8.7	122	165	121	111	45	73	15	3.7	3.1	2.5	2.3
18	8.3	140	154	80	101	39	62	15	3.5	3.0	2.5	2.4
19	7.8	131	195	52	104	35	53	14	3.4	3.0	2.3	2.5
20	7.5	122	166	37	255	32	48	14	3.5	2.8	2.4	4.0
21	7.4	135	149	29	228	30	47	14	3.3	2.3	2.6	3.2
22	7.2	130	133	45	154	27	49	14	3.2	2.2	2.6	2.9
23	7.0	124	118	188	108	26	52	14	3.2	2.1	2.6	2.7
24	7.0	113	110	212	81	23	49	13	3.0	2.0	2.6	2.6
25	6.9	106	96	105	63	21	44	13	3.1	2.0	2.6	2.6
26	10	106	72	94	80	21	39	13	5.0	2.0	2.5	6.1
27	30	98	61	76	82	24	35	14	4.0	2.0	2.3	4.0
28	50	94	55	58	75	23	43	13	3.8	1.9	2.3	3.6
29	49	92	47	46	---	23	38	13	3.7	1.9	2.4	3.9
30	57	104	42	40	---	25	33	13	3.4	1.9	2.5	3.3
31	58	---	37	37	---	27	---	13	---	1.9	2.4	---
TOTAL	684.5	2553	4346	1610	2189	1856	1880	542	148.4	84.5	69.4	85.2
MEAN	22.1	85.1	140	51.9	78.2	59.9	62.7	17.5	4.95	2.73	2.24	2.84
MAX	95	140	300	212	255	158	229	30	13	3.7	2.7	6.1
MIN	5.8	43	37	11	19	21	25	13	3.0	1.9	1.5	2.3
AC-FT	1360	5060	8620	3190	4340	3680	3730	1080	294	168	138	169
MEAN†	24.9	47.7	124	86.4	108	59.9	62.5	15.3	6.67	3.61	1.55	2.64
CFSM†	4.03	7.72	20.1	14.0	17.5	9.69	10.1	2.48	1.08	.584	.251	.427
IN.†	4.64	8.62	23.22	16.11	18.17	11.17	11.29	2.85	1.20	.67	.29	.48
AC-FT†	1530	2841	7651	5310	5989	3681	3722	938	396	223	95	157

CAL YR 1981 TOTAL 12067.5 MEAN 33.1 MAX 300 MIN 2.0 AC-FT 23940 MEAN† 31.8 CFSM† 5.15 IN.† 69.96 AC-FT† 23053
WTR YR 1982 TOTAL 16048.0 MEAN 44.0 MAX 300 MIN 1.5 AC-FT 31830 MEAN† 44.9 CFSM† 7.27 IN.† 98.72 AC-FT† 32529

† Adjusted for storage and diversion by McGuire Lake.

NESTUCCA RIVER BASIN

14303600 NESTUCCA RIVER NEAR BEAVER, OR

LOCATION.--Lat 45°16'00", long 123°50'45", in SE¼NE¼ sec.36, T.3 S., R.10 W., Tillamook County, Hydrologic Unit 17100203, on right bank 150 ft (46 m) upstream from Saling Creek, 1.2 mi (1.9 km) southwest of Beaver, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--180 mi² (466 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 43 ft (13 m), from river profile map.

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

AVERAGE DISCHARGE.--18 years, 1,090 ft³/s (30.87 m³/s), 82.23 in/yr (2,089 mm/yr), 789,700 acre-ft/yr (974 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft³/s (833 m³/s) Jan. 11, 1972, gage height, 22.0 ft (6.71 m), from floodmark; minimum, 32 ft³/s (0.91 m³/s) Sept. 14, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1962, reached a stage of 23.4 ft (7.13 m), discharge, 32,500 ft³/s (920 m³/s) caused by failure of Meadow Lake Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0930	10,400 295	12.60 3.840	Jan. 24	0500	*13,600 385	*14.74 4.493
Dec. 6	0300	8,110 230	10.76 3.280	Feb. 20	1300	12,500 354	14.01 4.270

Minimum, 38 ft³/s (1.08 m³/s) Aug. 24, 25, Sept. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	1260	3290	1460	1620	2270	980	655	248	135	78	46
2	208	1020	8200	1330	1530	2310	1120	628	249	138	81	41
3	253	893	5410	1530	1420	2500	1910	672	248	186	82	39
4	234	766	3610	1550	1300	2800	1960	614	242	198	74	63
5	208	670	5850	1380	1180	2510	1790	576	238	197	64	63
6	802	623	7460	1220	1080	2140	1580	548	251	163	60	50
7	3620	575	5490	1100	990	1840	1400	535	235	143	58	46
8	2510	538	3970	997	909	1680	1240	519	217	134	58	42
9	2160	508	3160	912	841	2040	1150	493	205	126	60	70
10	1940	478	3010	851	783	1880	1080	472	197	120	73	101
11	1470	570	2660	936	831	2290	1390	456	191	114	82	158
12	1120	823	2330	958	859	2220	2030	440	221	110	77	344
13	763	727	2250	942	1860	2430	3480	423	251	127	76	188
14	650	2370	2470	1100	4910	2420	3390	408	209	160	85	127
15	567	2520	4970	1800	4810	2160	2870	397	191	136	69	100
16	515	2070	4840	4500	5260	1880	2380	386	178	129	61	84
17	477	2320	3530	6500	5010	1650	2040	379	168	117	54	75
18	441	2630	2780	4500	4460	1470	1760	378	160	108	51	68
19	405	2300	3230	3350	5360	1320	1520	363	153	102	51	67
20	383	2040	2710	2580	10200	1190	1330	352	147	93	49	133
21	357	2510	2400	2110	7300	1070	1210	340	146	90	47	185
22	336	2520	2080	2500	4530	978	1130	328	141	86	45	123
23	320	2440	1840	10600	3240	896	1080	318	134	83	42	99
24	307	2110	1820	11100	2520	828	1000	307	132	81	40	86
25	294	1810	1830	6200	2100	774	921	293	130	81	39	81
26	288	1680	1820	4710	2100	762	850	290	172	81	42	210
27	459	1410	1960	3620	2130	780	790	297	182	78	42	220
28	970	1220	2070	2910	1960	776	822	281	166	78	42	166
29	936	1130	1940	2420	---	790	749	268	158	80	54	176
30	1260	1410	1750	2050	---	848	697	255	147	81	64	152
31	1640	---	1610	1820	---	974	---	248	---	82	53	---
TOTAL	26093	43941	102340	89536	81093	50476	45649	12919	5707	3637	1853	3403
MEAN	842	1465	3301	2888	2896	1628	1522	417	190	117	59.8	113
MAX	3620	2630	8200	11100	10200	2800	3480	672	251	198	85	344
MIN	200	478	1610	851	783	762	697	248	130	78	39	39
CFSM	4.68	8.14	18.3	16.0	16.1	9.04	8.46	2.32	1.06	.65	.33	.63
IN.	5.39	9.08	21.15	18.50	16.76	10.43	9.43	2.67	1.18	.75	.38	.70
AC-FT	51760	87160	203000	177600	160800	100100	90540	25620	11320	7210	3680	6750

CAL YR 1981	TOTAL	380472	MEAN	1042	MAX	8200	MIN	73	CFSM	5.79	IN	78.63	AC-FT	754700
WTR YR 1982	TOTAL	466647	MEAN	1278	MAX	11100	MIN	39	CFSM	7.10	IN	96.44	AC-FT	925600

NESTUCCA RIVER BASIN

263

14303600 NESTUCCA RIVER NEAR BEAVER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1964 to current year.

INSTRUMENTATION.--Graphic temperature recorder October 1964 to Sept. 7, 1977. Digital temperature recorder since Sept. 7, 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.0°C July 1-3, 1967, Aug. 9, 10, 1981; minimum, 0.5°C Jan. 28-30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C June 23, July 12; minimum recorded, 2.0°C Feb. 9, 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

NESTUCCA RIVER BASIN

14303600 NESTUCCA RIVER NEAR BEAVER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

SILETZ RIVER BASIN

265

14304850 BIG ROCK CREEK NEAR VALSETZ, OR

LOCATION.--Lat 44°46'41", long 123°41'34", in NE¼NW¼ sec.20, T.9 S., R.8 W., Polk County, Hydrologic Unit 17100204, on left bank about 0.2 mi (0.3 km) downstream from roadbridge and 4.7 mi (7.6 km) southwest of Valsetz.

DRAINAGE AREA.--6.90 mi² (17.9 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1979 to current year.

INSTRUMENTATION.--Temperature recorder since Feb. 27, 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.0°C Aug. 9, 10, 1981; minimum, 0.0°C Jan. 28-30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 19.0°C June 18; minimum, 3.5°C Jan. 7, Feb. 4.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

SILETZ RIVER BASIN

14304850 BIG ROCK CREEK NEAR VALSETZ, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14305500 SILETZ RIVER AT SILETZ, OR

LOCATION.--Lat 44°42'55", long 123°53'10", in NW¼SW¼ sec.11, T.10 S., R.10 W., Lincoln County, Hydrologic Unit 17100204, on right bank, 1.8 mi (2.9 km) downstream from Baker Creek, 1.5 mi (2.4 km) east of Siletz, and at mile 42.6 (68.5 km).

DRAINAGE AREA.--202 mi² (523 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1905 to November 1911, January to May 1912, January to June 1924, November 1924 to current year. Prior to December 1905 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1935: 1943, 1947-49(M), 1953-58(M).

GAGE.--Water-stage recorder. Datum of gage is 102.32 ft (31.187 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1905, to Sept 30, 1938, nonrecording gage at various sites within 2.5 mi (4.0 km) downstream at different datums.

REMARKS.--Records excellent. Slight regulation from logponds. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--63 years (water years 1906-11, 1926-82), 1,561 ft³/s (44.21 m³/s), 104.94 in/yr (2,665 mm/yr), 1,131,000 acre-ft/yr (1.39 km³/yr).

EXTREMES FOR PERIOD OF RECORD (1905-12, 1924-38).--Maximum discharge, 34,600 ft³/s (980 m³/s) Nov. 22, 1909, gage height, 24.6 ft (7.50 m), site and datum then in use; minimum observed, 51 ft³/s (1.44 m³/s) Dec. 6, 7, 1929.

EXTREMES FOR PERIOD OF RECORD (1938-82).--Maximum discharge, 32,200 ft³/s (912 m³/s) Jan. 28, 1965, gage height, 27.32 ft (8.327 m), present site and datum; minimum, 48 ft³/s (1.36 m³/s) Sept 25, 26, Oct. 4, 1965, Sept. 28, 29, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1921, reached a stage of 31.6 ft (9.63 m), at site 2.5 mi (4.0 km) downstream at different datum, from floodmark, discharge, 40,800 ft³/s (1,160 m³/s), from rating curve extended above 17,000 ft³/s (481 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 14,000 ft³/s (396 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0730	17,200 487	16.71 5.093	Jan. 23	1200	19,000 538	17.93 5.465
Dec. 6	0500	16,300 462	16.13 4.916	Feb. 20	1330	*21,400 606	*19.51 5.947

Minimum, 65 ft³/s (1.84 m³/s) Sept. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	200	1940	5710	1700	1890	2950	1290	762	267	172	106	75		
2	236	1430	13200	1540	1680	2920	1460	725	265	169	106	70		
3	221	1160	7090	1980	1500	3470	2200	835	267	176	106	66		
4	231	957	4340	2660	1330	4240	2300	761	275	173	102	76		
5	211	823	11000	2110	1200	3440	2380	701	264	217	97	90		
6	3190	732	14000	1710	1090	2720	2140	659	267	186	93	76		
7	2570	662	7990	1450	999	2200	1830	637	260	166	91	70		
8	1860	611	4960	1270	916	1930	1590	618	239	158	91	67		
9	2270	567	3590	1130	849	2470	1420	580	230	151	91	74		
10	1890	540	3390	1010	788	2340	1320	549	220	145	100	106		
11	1250	682	2880	998	803	2800	2420	523	216	142	111	116		
12	906	1310	2450	988	858	2600	4040	498	246	138	110	260		
13	724	1180	2720	954	3420	2980	6770	478	286	148	96	165		
14	612	2850	3930	977	11300	3040	6050	461	236	186	96	118		
15	537	3170	9580	1070	9140	2620	4750	444	218	157	91	98		
16	481	2670	7620	3310	10300	2200	3780	428	208	146	85	88		
17	445	2860	4580	7600	9500	1850	2990	415	198	139	82	84		
18	410	3550	3290	5040	7460	1590	2430	409	193	133	80	82		
19	385	2830	4870	3700	11100	1390	2010	392	184	128	78	85		
20	364	2650	3820	2910	15900	1240	1760	376	180	124	77	98		
21	344	3500	3130	2430	10400	1110	1480	364	178	120	77	128		
22	321	3830	2540	2950	5920	1000	1440	350	172	114	76	107		
23	309	3580	2180	16400	3990	915	1370	340	166	112	73	93		
24	297	2920	2080	14600	3010	845	1190	326	161	110	71	86		
25	290	2360	2110	7700	2460	786	1070	312	159	108	70	84		
26	290	2080	2330	6520	2640	774	978	304	187	109	70	162		
27	559	1710	2600	5100	2970	915	903	317	202	108	71	221		
28	1450	1430	2880	4000	2610	947	950	299	202	107	71	159		
29	1770	1280	2600	3150	---	901	887	285	207	109	75	232		
30	2200	1840	2200	2570	---	998	821	272	187	109	94	188		
31	2980	---	1920	2210	---	1210	---	265	---	109	85	---		
TOTAL	29803	57704	147580	111737	126023	61391	66019	14685	6540	4369	2722	3424		
MEAN	961	1923	4761	3604	4501	1980	2201	474	218	141	87.8	114		
MAX	3190	3830	14000	16400	15900	4240	6770	835	286	217	111	260		
MIN	200	540	1920	954	788	774	821	265	159	107	70	66		
CFSM	4.76	9.52	23.6	17.8	22.3	9.80	10.9	2.35	1.08	.70	.44	.56		
IN.	5.49	10.63	27.18	20.58	23.21	11.31	12.16	2.70	1.20	.80	.50	.63		
AC-FT	59110	114500	292700	221600	250000	121800	130900	29130	12970	8670	5400	6790		
CAL YR 1981	TOTAL	499374	MEAN	1368	MAX	14000	MIN	82	CFSM	6.77	IN	91.96	AC-FT	990500
WTR YR 1982	TOTAL	631997	MEAN	1731	MAX	16400	MIN	66	CFSM	8.57	IN	116.39	AC-FT	1254000

SILETZ RIVER BASIN

14305500 SILETZ RIVER AT SILETZ, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1979 to current year.

INSTRUMENTATION.--Temperature recorder since Feb. 28, 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 10, 1981; minimum, 0.0°C Jan. 28-30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.0°C July 12; minimum, 2.5°C Feb. 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

SILETZ RIVER BASIN

269

14305500 SILETZ RIVER AT SILETZ, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

YAQUINA RIVER BASIN

14306030 YAQUINA RIVER NEAR CHITWOOD, OR

LOCATION.--Lat 44°39'29", long 123°50'15", in NE¼SW¼ sec.31, T.10 S., R.9 W., Lincoln County, Hydrologic Unit 17100204, on left bank 200 ft (60 m) below Thornton Creek and 1.1 mi (1.8 km) west of Chitwood.

DRAINAGE AREA.--71.0 mi² (183.9 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 28.43 ft (8.665 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--10 years, 251 ft³/s (7.11 m³/s), 48.01 in/yr (1,219 mm/yr), 181,800 acre-ft/yr (224 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,150 ft³/s (174 m³/s) Nov. 16, 1973, gage height, 14.43 ft (4.398 m); minimum, 2.8 ft³/s (0.079 m³/s) Sept. 27, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1600	3,150 89.2	10.00 3.048	Jan. 23	1430	*4,020 114	*11.47 3.496
Dec. 6	1000	3,830 108	11.16 3.402	Feb. 20	2030	3,520 99.7	10.64 3.243

Minimum, 4.7 ft³/s (0.13 m³/s) Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	155	729	475	395	564	329	129	44	25	13	7.6
2	19	115	2380	435	343	558	353	121	43	24	13	6.1
3	22	95	1660	801	303	616	566	131	43	24	12	5.3
4	22	80	917	1560	269	802	627	114	46	23	11	6.6
5	21	68	1640	1030	241	758	689	105	44	25	10	6.6
6	123	61	3530	737	217	616	609	99	43	23	9.3	6.8
7	116	57	2080	562	197	497	488	96	40	21	9.3	6.1
8	67	53	1180	449	180	424	397	92	37	20	9.8	5.3
9	94	50	820	371	167	394	334	88	35	19	11	6.4
10	81	48	705	322	155	351	303	84	33	18	11	11
11	58	73	650	291	151	467	372	81	33	17	13	14
12	46	212	582	269	142	506	567	77	40	16	13	22
13	38	195	543	254	246	494	1150	74	49	20	11	18
14	34	456	733	246	1360	516	1510	72	37	25	10	12
15	30	592	2050	244	1440	485	1490	69	33	21	9.4	9.0
16	29	431	2120	322	1280	434	1140	66	30	18	8.9	7.7
17	27	506	1190	997	1320	374	839	66	28	17	7.5	6.8
18	25	756	812	981	1200	327	636	65	27	16	6.8	6.6
19	25	515	868	834	2010	287	495	63	26	15	6.5	8.4
20	24	387	806	689	2650	258	403	61	26	14	6.4	9.9
21	22	443	761	576	2320	231	341	59	25	14	6.3	13
22	21	574	684	634	1300	207	298	57	24	13	6.4	13
23	20	615	584	3280	967	188	264	56	23	12	6.0	9.6
24	20	525	515	2610	824	172	235	55	22	12	5.5	7.9
25	20	410	496	1620	711	160	209	53	22	12	5.3	7.4
26	21	340	698	1290	637	154	189	52	26	13	5.9	13
27	28	282	929	1130	642	173	172	54	29	13	6.7	22
28	89	238	988	934	590	165	167	52	29	13	6.9	18
29	157	210	877	736	---	162	149	48	31	13	6.9	24
30	189	225	682	587	---	191	138	45	28	14	8.0	21
31	238	---	553	478	---	258	---	43	---	14	8.6	---
TOTAL	1743	8767	33762	25744	22257	11789	15459	2327	996	544	274.4	331.1
MEAN	56.2	292	1089	830	795	380	515	75.1	33.2	17.5	8.85	11.0
MAX	238	756	3530	3280	2650	802	1510	131	49	25	13	24
MIN	17	48	496	244	142	154	138	43	22	12	5.3	5.3
CFSM	.79	4.11	15.3	11.7	11.2	5.35	7.25	1.06	.47	.25	.13	.16
IN.	.91	4.59	17.69	13.49	11.66	6.18	8.10	1.22	.52	.29	.14	.17
AC-FT	3460	17390	66970	51060	44150	23380	30660	4620	1980	1080	544	657

CAL YR 1981	TOTAL	95081.2	MEAN 260	MAX 3530	MIN 7.2	CFSM 3.66	IN 49.82	AC-FT 188600
WTR YR 1982	TOTAL	123993.5	MEAN 340	MAX 3530	MIN 5.3	CFSM 4.79	IN 64.96	AC-FT 245900

ALSEA RIVER BASIN

271

14306100 NORTH FORK ALSEA RIVER AT ALSEA, OR

LOCATION.--Lat 44°22'45", long 123°35'40", in SE¼ sec.1, T.14 S., R.8 W., Benton County, Hydrologic Unit 17100205, on left bank at Alsea, 0.2 mi (0.3 km) upstream from bridge on Lobster Valley Road, 0.7 mi (1.1 km) upstream from confluence with South Fork, and at mile 49.4 (79.5 km).

DRAINAGE AREA.--63.0 mi² (163 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 272.31 ft (83.000 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation. Some diversions by pumping above station.

AVERAGE DISCHARGE.--25 years, 281 ft³/s (7.958 m³/s), 60.57 in/yr (1,538 mm/yr), 203,600 acre-ft/yr (251 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft³/s (399 m³/s) Dec. 22, 1964, gage height, 14.57 ft (4.441 m), from rating curve extended above 2,900 ft³/s (82.1 m³/s) on basis of slope-area measurement at gage height 11.80 ft (3.597 m); minimum, 8.3 ft³/s (0.24 m³/s) June 8, Sept. 19, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0900	3,690 105	7.25 2.210	Jan. 23	0630	5,400 153	9.30 2.835
Dec. 6	0330	*5,450 154	*9.36 2.853	Feb. 16	1130	2,480 70.2	5.65 1.722
Dec. 15	1500	3,450 97.7	6.94 2.115	Feb. 20	1500	4,550 129	8.31 2.533

Minimum, 15 ft³/s (0.42 m³/s) July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	267	942	476	457	776	312	186	64	42	26	18
2	32	198	2590	439	412	794	408	176	62	42	25	17
3	31	158	1280	715	376	941	605	173	64	42	24	17
4	30	130	814	839	340	1090	608	160	66	40	23	20
5	30	112	3010	624	309	878	630	150	64	40	22	21
6	438	100	4170	500	285	688	556	144	64	38	22	19
7	272	90	1950	428	265	564	466	139	63	36	22	18
8	179	83	1170	383	246	482	402	136	58	37	21	18
9	229	78	877	352	230	458	360	131	55	34	21	20
10	185	75	874	333	215	407	359	126	53	33	23	26
11	129	146	756	338	209	505	694	121	52	32	25	23
12	101	313	646	354	210	458	895	115	63	31	24	29
13	80	272	732	347	447	423	1740	111	65	34	23	26
14	69	760	1060	361	1840	423	1630	107	56	38	23	21
15	61	918	2990	393	1580	398	1190	104	52	33	22	19
16	54	749	1880	681	2140	364	894	102	49	31	21	22
17	49	899	1090	1530	1910	324	708	103	47	31	20	18
18	46	904	820	1370	1540	296	585	98	46	30	19	18
19	43	624	1240	976	1730	267	490	96	44	29	19	22
20	42	503	1050	737	3110	248	429	91	43	27	19	23
21	39	871	1250	611	2160	230	390	88	43	27	19	23
22	38	1130	918	754	1220	215	367	85	42	26	19	20
23	37	881	716	3990	920	203	337	83	39	26	18	19
24	36	655	603	3120	760	192	300	79	39	26	17	19
25	36	501	524	1610	657	182	270	77	39	26	17	19
26	47	434	714	1410	668	177	246	75	51	25	18	32
27	73	358	823	1200	751	205	228	76	46	25	18	33
28	311	303	865	939	682	206	229	73	48	25	18	28
29	400	273	725	742	---	197	207	69	49	25	20	40
30	493	318	590	613	---	226	197	65	45	27	22	29
31	404	---	524	523	---	293	---	64	---	27	20	---
TOTAL	4046	13103	38193	27688	25669	13110	16732	3403	1571	985	650	677
MEAN	131	437	1232	893	917	423	558	110	52.4	31.8	21.0	22.6
MAX	493	1130	4170	3990	3110	1090	1740	186	66	42	26	40
MIN	30	75	524	333	209	177	197	64	39	25	17	17
CFSM	2.08	6.94	19.6	14.2	14.6	6.71	8.86	1.75	.83	.51	.33	.36
IN.	2.39	7.74	22.55	16.35	15.16	7.74	9.88	2.01	.93	.58	.38	.40
AC-FT	8030	25990	75760	54920	50910	26000	33190	6750	3120	1950	1290	1340
CAL YR 1981	TOTAL	97968	MEAN 268	MAX 4170	MIN 21	CFSM 4.25	IN 57.85	AC-FT 194300				
WTR YR 1982	TOTAL	145827	MEAN 400	MAX 4170	MIN 17	CFSM 6.35	IN 86.11	AC-FT 289200				

ALSEA RIVER BASIN

14306400 FIVE RIVERS NEAR FISHER, OR

LOCATION.--Lat 44°20'15", long 123°49'35", W $\frac{1}{2}$ sec.19, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, in Siuslaw National Forest, on left bank at downstream side of abandoned highway bridge, 500 ft (152 m) downstream from Lobster Creek, 3.2 mi (5.1 km) north of Fisher, and at mile 3.3 (5.3 km).

DRAINAGE AREA.--114 mi² (295 km²).

PERIOD OF RECORD.--August 1958 to September 1963, October 1967 to current year.

REVISED RECORDS.--WSP 1718: 1959.

GAGE.--Water-stage recorder. Altitude of gage is 130 ft (39.6 m) from topographic map.

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

AVERAGE DISCHARGE.--20 years, 556 ft³/s (15.75 m³/s), 66.23 in/yr (1,682 mm/yr), 402,800 acre-ft/yr (497 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s (487 m³/s) Jan. 21, 1972, gage height, 21.08 ft (6.425 m); minimum, 16 ft³/s (0.45 m³/s) Oct. 1, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 22.3 ft (6.80 m), from floodmarks, discharge, 19,000 ft³/s (538 m³/s) from rating curve extended above 10,000 ft³/s (283 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1200	5,490 155	11.95 3.642	Jan. 23	0830	6,800 193	13.30 4.054
Dec. 6	0430	*9,260 262	*15.44 4.706	Feb. 16	1330	5,220 148	11.67 3.557
Dec. 15	1730	5,880 167	12.37 3.770	Feb. 20	1700	8,390 238	14.73 4.490

Minimum, 24 ft³/s (0.68 m³/s) Aug. 25, Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	563	1270	937	822	1330	824	326	116	70	39	27
2	62	448	3930	903	722	1510	991	312	114	70	37	26
3	59	380	2530	1770	647	1850	1340	309	121	70	36	26
4	62	324	1650	2460	580	2050	1310	286	124	68	36	27
5	59	285	5800	1620	525	1600	1320	272	120	68	35	28
6	859	257	7850	1240	481	1270	1230	259	115	65	34	27
7	653	235	4190	1030	445	1050	1050	249	110	60	34	26
8	452	218	2400	879	412	917	885	243	105	58	33	24
9	518	205	1780	770	386	905	759	234	100	56	33	26
10	580	200	1820	703	360	812	715	225	95	54	36	34
11	419	398	1520	673	388	1020	1050	216	100	53	40	34
12	296	835	1290	670	375	958	1550	208	110	52	40	57
13	230	726	1350	629	788	846	3120	200	110	58	37	43
14	191	2000	1940	607	3450	779	3100	191	96	64	35	33
15	164	1870	5470	610	3190	710	2510	185	90	55	34	28
16	145	1550	3990	720	4420	653	1900	178	86	51	32	26
17	134	1920	2300	1480	3840	597	1460	176	82	49	30	25
18	125	2020	1670	1520	2780	548	1170	171	80	47	29	25
19	118	1460	3050	1350	3060	502	973	165	78	46	28	31
20	110	1240	2220	1120	5800	467	828	157	76	45	28	36
21	103	2290	2090	999	4420	435	717	152	74	44	28	35
22	97	2780	1660	1170	2510	404	637	148	72	42	28	31
23	94	2370	1340	5240	1840	381	572	144	70	41	27	29
24	91	1680	1140	4270	1470	360	519	139	68	40	26	29
25	89	1260	982	2730	1210	342	475	133	70	40	25	32
26	134	1120	1350	2470	1160	339	440	128	80	40	25	70
27	262	915	1600	2170	1160	408	409	130	84	40	26	65
28	999	761	1630	1720	1050	428	408	126	84	39	27	58
29	1050	673	1380	1360	---	424	367	122	84	41	29	54
30	1030	657	1130	1130	---	503	346	121	75	42	30	46
31	743	---	1010	964	---	741	---	114	---	41	29	---
TOTAL	9988	31640	73332	45914	48291	25139	32975	6019	2789	1609	986	1058
MEAN	322	1055	2366	1481	1725	811	1099	194	93.0	51.9	31.8	35.3
MAX	1050	2780	7850	5240	5800	2050	3120	326	124	70	40	70
MIN	59	200	982	607	360	339	346	114	68	39	25	24
CFSM	2.83	9.25	20.8	13.0	15.1	7.11	9.64	1.70	.82	.46	.28	.31
IN.	3.26	10.32	23.93	14.98	15.76	8.20	10.76	1.96	.91	.53	.32	.35
AC-FT	19810	62760	145500	91070	95790	49860	65410	11940	5530	3190	1960	2100

CAL YR 1981 TOTAL 199281 MEAN 546 MAX 7850 MIN 32 CFMS 4.79 IN 65.03 AC-FT 395300
WTR YR 1982 TOTAL 279740 MEAN 766 MAX 7850 MIN 24 CFMS 6.72 IN 91.28 AC-FT 554900

NOTE.--No gage-height record June 5 to July 13.

14306500 ALSEA RIVER NEAR TIDEWATER, OR

LOCATION.--Lat 44°23'10", long 123°49'50", in NW¼NW¼ sec.6, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, on right bank 0.9 mi (1.4 km) downstream from Grass Creek, 2.5 mi (4.0 km) upstream from Scott Creek, 3.8 mi (6.1 km) southeast of Tidewater, and at mile 21.0 (33.8 km).

DRAINAGE AREA.--334 mi² (865 km²).

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 48.16 ft (14.679 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 16, 1939, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--43 years, 1,522 ft³/s (43.10 m³/s), 61.88 in/yr (1,572 mm/yr), 1,103,000 acre-ft/yr (1.36 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft³/s (1,180 m³/s) Dec. 22, 1964, gage height, 27.44 ft (8.364 m); minimum, 45 ft³/s (1.27 m³/s) Sept. 26, 27, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on or about Feb. 3, 1890, reached a stage of 29.5 ft (8.99 m), from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft³/s (368 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1400	14,800 419	15.63 4.764	Jan. 23	1030	19,100 541	17.98 5.480
Dec. 6	0430	*23,400 663	*20.01 6.099	Feb. 20	1900	19,700 558	18.31 5.581
Dec. 15	1930	15,500 439	16.05 4.892				

Minimum, 69 ft³/s (1.95 m³/s) Sept. 3, 4, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	169	1420	4010	2740	2440	3770	2060	996	334	207	120	80		
2	169	1110	11000	2560	2170	4340	2380	941	331	199	113	74		
3	159	926	7570	4220	1950	5100	3510	927	338	205	111	71		
4	163	786	4830	6550	1770	6070	3410	869	351	199	107	73		
5	155	690	12600	4400	1610	4900	3520	817	343	194	104	80		
6	1610	624	20800	3360	1480	3820	3270	777	325	196	99	79		
7	1600	572	11800	2760	1380	3130	2800	745	324	178	97	74		
8	1020	528	7060	2390	1280	2700	2400	730	301	172	96	71		
9	1150	497	5110	2130	1210	2580	2110	705	285	167	95	74		
10	1170	475	5100	1960	1130	2310	1970	675	274	158	100	94		
11	931	713	4370	1890	1160	2700	2940	649	264	155	114	108		
12	674	1900	3640	1920	1150	2600	4310	622	282	150	121	147		
13	532	1630	3660	1840	1750	2350	8250	598	329	152	110	132		
14	441	4170	4980	1810	9250	2240	8820	576	292	192	103	109		
15	379	4970	13600	1870	8430	2090	7170	556	267	175	99	88		
16	337	3950	11100	2200	10400	1930	5460	536	252	159	92	79		
17	308	4600	6610	5480	10000	1770	4190	529	240	153	88	78		
18	286	5400	4800	5580	7810	1630	3340	520	230	148	85	73		
19	270	3730	7390	4540	8680	1500	2770	498	225	138	81	85		
20	254	3000	6020	3610	14000	1400	2390	479	212	134	81	99		
21	240	4920	6410	3080	12200	1310	2110	463	214	126	80	107		
22	229	6760	4990	3140	7250	1230	1900	448	209	121	79	101		
23	221	5820	3960	15100	5400	1160	1740	437	198	118	77	88		
24	216	4280	3320	13100	4310	1100	1580	416	191	115	75	82		
25	210	3170	2890	8550	3600	1050	1440	399	190	115	71	79		
26	269	2740	3900	7350	3400	1030	1320	385	213	115	70	116		
27	497	2230	4860	6460	3650	1150	1230	388	247	113	71	222		
28	1910	1870	4980	5180	3250	1250	1220	376	234	111	73	169		
29	2210	1660	4250	4040	---	1190	1110	363	249	116	78	175		
30	2610	1620	3430	3310	---	1320	1050	347	230	122	85	168		
31	2050	---	2980	2820	---	1800	---	331	---	124	86	---		
TOTAL	22439	76761	202020	135940	131110	72520	91770	18098	7974	4727	2861	3075		
MEAN	724	2559	6517	4385	4683	2339	3059	584	266	152	92.3	103		
MAX	2610	6760	20800	15100	14000	6070	8820	996	351	207	121	222		
MIN	155	475	2890	1810	1130	1030	1050	331	190	111	70	71		
CFSM	2.17	7.66	19.5	13.1	14.0	7.00	9.16	1.75	.80	.46	.28	.31		
IN.	2.50	8.55	22.50	15.14	14.60	8.08	10.22	2.02	.89	.53	.32	.34		
AC-FT	44510	152300	400700	269600	260100	143800	182000	35900	15820	9380	5670	6100		
CAL YR 1981	TOTAL	537074	MEAN	1471	MAX	20800	MIN	82	CFSM	4.40	IN	59.82	AC-FT	1065000
WTR YR 1982	TOTAL	769295	MEAN	2108	MAX	20800	MIN	70	CFSM	6.31	IN	85.68	AC-FT	1526000

ALSEA RIVER BASIN

14306500 ALSEA RIVER NEAR TIDEWATER, OR--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1979 to September 1981.

WATER TEMPERATURES: October 1979 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 20...	1300	249	67	6.6	12.0	10.5	23	K16	20	.00	5.4
DEC 09...	1330	4890	52	7.2	9.5	11.0	K23	K3800	14	.00	3.9
MAR 18...	1230	1690	53	6.8	8.5	11.3	K9	72	27	6.0	8.8
MAY 04...	0815	872	58	6.9	9.5	12.3	K10	40	17	.00	4.5
JUL 13...	0900	146	66	7.2	21.5	7.8	K11	130	19	.00	4.8
AUG 31...	0900	87	73	7.5	18.0	8.7	20	K300	20	.00	5.0

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 20...	1.7	6.0	.7	24	--	<5.0	4.3	<.1	.110	.35	.61
DEC 09...	1.0	4.7	.8	16	--	<5.0	4.4	.1	.080	.63	.36
MAR 18...	1.3	4.4	.6	21	--	5.0	3.9	.1	<.060	.46	.57
MAY 04...	1.4	4.4	.7	22	--	6.0	3.9	<.1	.080	.25	.49
JUL 13...	1.8	5.5	.9	28	25	<5.0	4.3	<.1	.110	.12	.80
AUG 31...	1.9	5.7	.6	26	33	<5.0	4.8	<.1	.220	<.10	.70

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 20...	.06	.020	.030	13	46	--	30.9	1.0	2	1.3	74
DEC 09...	--	.010	.020	13	40	--	528	11	90	1190	35
MAR 18...	.03	.010	.010	14	37	51	169	1.5	4	18	69
MAY 04...	--	.060	.040	13	40	47	94.2	1.5	3	7.1	62
JUL 13...	.03	<.010	<.010	13	55	--	21.7	1.3	3	1.2	56
AUG 31...	.03	.020	.060	13	66	--	15.5	1.6	2	.47	72

ALSEA RIVER BASIN

275

14306500 ALSEA RIVER NEAR TIDEWATER, OR--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 20...	1	1	<100	<100	<1	1	<10	<10	<1	<1
DEC 09...	1	3	17	<100	<1	<1	<10	<10	<3	<1
MAY 04...	1	1	20	<100	<1	<1	10	<10	<1	4
JUL 13...	1	2	14	<100	<1	<1	<10	10	<1	<1
AUG 31...	1	2	23	<100	<1	<1	<10	<10	<1	<1

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 20...	2	6	100	250	2	4	10	20	<.1
DEC 09...	2	13	36	3000	1	9	7	60	.2
MAY 04...	1	4	38	140	1	3	5	<10	<.1
JUL 13...	2	5	49	170	<1	<1	3	10	<.1
AUG 31...	1	3	40	120	<1	<1	2	20	<.1

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 20...	.1	<1	2	<1	<1	<1	<1	10	40
DEC 09...	.3	<1	2	<1	<1	<1	<1	7	30
MAY 04...	<.1	<1	6	<1	<1	<1	<1	<9	10
JUL 13...	.1	<1	10	<1	<1	<1	1	10	20
AUG 31...	.1	1	2	<1	<1	<1	1	10	10

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

BIG CREEK BASIN

14306900 BIG CREEK NEAR ROOSEVELT BEACH, OR

LOCATION.--Lat 44°10'05", long 124°03'55", in SE¼ sec.13, T.16 S., R.12 W., Lane County, Hydrologic Unit 17100205, on right bank 1.0 mi (1.6 km) downstream from Frying Pan Creek, 2.5 mi (4.0 km) east of Roosevelt Beach.

DRAINAGE AREA.--11.9 mi² (30.8 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 141 ft (43.0 m), by barometer.

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

AVERAGE DISCHARGE.--10 years, 92.9 ft³/s (2.631 m³/s), 106.02 in/yr (2,693 mm/yr), 67,310 acre-ft/yr (83.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft³/s (60.9 m³/s) Nov. 30, 1975, gage height, 6.90 ft (2.103 m); minimum, 3.8 ft³/s (0.11 m³/s) Oct. 15, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	0530	939 26.6	5.90 1.798	Jan. 23	0630	*1,210 34.3	*6.19 1.887
Dec. 6	0200	808 22.9	5.74 1.750	Feb. 20	0930	896 25.4	5.85 1.783

Minimum, 4.8 ft³/s (0.14 m³/s) Aug. 24, Sept. 1-3, 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	156	375	144	183	225	125	46	16	10	6.5	5.0
2	16	114	814	134	163	222	154	44	16	11	6.5	4.8
3	11	98	541	198	146	244	160	47	19	11	6.2	4.8
4	10	77	371	249	129	240	169	41	20	11	6.2	7.8
5	9.4	66	606	202	118	207	182	39	17	12	6.0	6.1
6	124	57	758	162	109	163	199	37	16	10	5.9	5.5
7	71	51	543	136	100	151	184	35	15	9.6	5.8	5.1
8	89	46	369	119	92	142	163	34	14	9.3	5.9	4.9
9	93	42	297	106	86	136	143	33	13	9.0	5.9	7.3
10	93	41	247	94	80	129	141	31	13	8.5	6.8	7.2
11	65	122	202	89	95	174	176	30	13	8.4	11	9.7
12	50	103	179	82	86	156	247	29	14	8.2	7.2	19
13	41	112	233	74	243	161	369	28	14	12	6.2	8.9
14	35	200	329	70	618	154	333	27	13	11	6.2	7.2
15	31	219	519	69	565	143	282	27	12	9.0	5.9	6.2
16	28	215	417	157	577	133	231	25	12	8.6	5.9	5.9
17	26	323	312	256	557	121	194	24	11	8.3	5.6	5.6
18	24	295	265	221	551	110	162	24	11	8.1	5.6	5.5
19	23	246	368	195	708	98	139	23	11	7.7	5.4	11
20	21	235	310	170	817	92	122	22	10	7.6	5.4	7.2
21	20	396	262	156	654	82	108	21	10	7.5	5.5	6.5
22	19	402	218	299	458	75	96	20	9.7	7.3	5.4	6.2
23	18	378	184	1000	342	69	85	20	9.5	7.2	5.2	5.9
24	18	304	183	809	273	63	77	19	9.4	6.8	5.0	5.7
25	17	251	163	555	228	59	70	18	9.4	6.8	5.2	6.1
26	40	222	235	486	237	63	64	18	15	6.8	5.4	17
27	96	179	242	404	210	78	59	18	13	6.8	5.4	11
28	195	151	233	346	193	73	62	18	13	6.5	5.3	9.3
29	235	135	205	290	---	77	53	17	12	6.8	6.3	11
30	253	159	174	244	---	95	49	17	11	6.8	6.2	8.6
31	226	---	161	214	---	117	---	16	---	6.8	5.4	---
TOTAL	2006.5	5395	10315	7730	8618	4052	4598	848	392.0	266.4	186.4	231.8
MEAN	64.7	180	333	249	308	131	153	27.4	13.1	8.59	6.01	7.73
MAX	253	402	814	1000	817	244	369	47	20	12	11	19
MIN	9.1	41	161	69	80	59	49	16	9.4	6.5	5.0	4.8
CFSM	5.44	15.1	28.0	20.9	25.9	11.0	12.9	2.30	1.10	.72	.51	.65
IN.	6.27	16.86	32.24	24.16	26.94	12.67	14.37	2.65	1.23	.83	.58	.72
AC-FT	3980	10700	20460	15330	17090	8040	9120	1680	778	528	370	460

CAL YR 1981	TOTAL	33833.5	MEAN	92.7	MAX	814	MIN	5.4	CFSM	7.79	IN	105.76	AC-FT	67110
WTR YR 1982	TOTAL	44639.1	MEAN	122	MAX	1000	MIN	4.8	CFSM	10.3	IN	139.53	AC-FT	88540

SIUSLAW RIVER BASIN

277

14307580 LAKE CREEK NEAR DEADWOOD, OR

LOCATION.--Lat 44°04'58", long 123°47'05", in NW¼NW¼ sec.21, T.17 S., R.9 W., Lane County, Hydrologic Unit 17100206, on right bank 0.2 mi (0.3 km) upstream from Indian Creek, 1.5 mi (2.4 km) southwest of Deadwood, and at mile 2.6 (4.2 km).

DRAINAGE AREA.--174 mi² (451 km²).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 178.86 ft (54.517 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Flow slightly regulated by natural storage in Triangle Lake. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 726 ft³/s (20.56 m³/s), 56.66 in/yr (1,439 mm/yr), 526,000 acre-ft/yr (649 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft³/s (578 m³/s) Dec. 25, 1980, gage height, 15.86 ft (4.834 m); minimum, 12 ft³/s (0.34 m³/s) Aug. 14, 15, 17, 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,200 ft³/s (119 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1130	6,670 189	8.05 2.454	Jan. 3	2230	4,430 125	6.40 1.951
Dec. 6	0530	*10,700 303	*10.63 3.240	Jan. 23	0900	9,050 256	9.62 2.932
Dec. 15	0400	7,950 225	8.90 2.713	Feb. 20	1900	7,840 222	8.83 2.691
Dec. 19	1030	4,860 138	6.70 2.042				

Minimum, 20 ft³/s (0.57 m³/s) Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	81	656	1680	1350	1210	1630	1130	423	133	83	46	26		
2	77	486	4890	1270	1050	1980	1240	403	130	83	45	23		
3	71	398	3190	2520	934	2430	1620	394	133	83	45	23		
4	69	331	2310	3300	837	2770	1940	370	145	79	42	24		
5	71	287	4770	2290	750	2300	2170	348	142	83	40	26		
6	465	257	9660	1700	689	1840	1980	331	136	77	39	25		
7	470	234	6200	1350	637	1510	1720	314	127	73	38	23		
8	389	214	3710	1150	586	1280	1390	306	119	73	38	21		
9	492	196	2710	1000	543	1210	1160	294	113	69	38	23		
10	912	189	2610	927	486	1100	1040	287	105	66	37	31		
11	543	302	2280	889	503	1320	1430	275	105	66	45	31		
12	375	912	1880	875	481	1270	1930	264	111	64	46	38		
13	283	837	2000	837	1080	1130	3440	257	121	64	40	42		
14	226	1300	3150	822	4750	1040	3880	246	111	66	39	33		
15	186	1340	7160	845	4220	942	3320	234	103	62	37	29		
16	160	1140	5780	988	4970	867	2730	222	96	60	33	27		
17	145	2090	3720	2160	4500	800	2110	222	89	56	32	26		
18	130	2410	2790	2490	3810	730	1670	211	87	54	31	26		
19	119	1750	4020	2330	5020	669	1350	203	81	52	30	35		
20	108	1340	3200	1880	5650	617	1150	193	79	50	29	40		
21	103	2290	2710	1570	5220	573	988	182	83	49	29	39		
22	96	2610	2160	1860	3480	532	882	176	77	48	29	37		
23	91	2810	1760	7050	2710	503	786	172	73	48	27	34		
24	89	2100	1510	6170	2110	475	709	163	69	46	25	33		
25	87	1520	1330	4460	1710	454	650	157	69	45	24	33		
26	121	1250	1930	3900	1510	444	592	154	87	45	24	85		
27	179	1000	2170	3470	1410	573	543	151	91	45	25	98		
28	764	830	2610	2810	1300	676	526	148	93	43	25	64		
29	996	709	2200	2180	---	637	486	142	98	46	25	73		
30	1190	709	1740	1720	---	682	454	136	91	49	29	64		
31	942	---	1500	1430	---	988	---	133	---	49	29	---		
TOTAL	10030	32497	99330	67593	62156	33972	45016	7511	3097	1876	1061	1132		
MEAN	324	1083	3204	2180	2220	1096	1501	242	103	60.5	34.2	37.7		
MAX	1190	2810	9660	7050	5650	2770	3880	423	145	83	46	98		
MIN	69	189	1330	822	481	444	454	133	69	43	24	21		
CFSM	1.86	6.22	18.4	12.5	12.8	6.30	8.63	1.39	.59	.35	.20	.22		
IN.	2.14	6.95	21.24	14.45	13.29	7.26	9.62	1.61	.66	.40	.23	.24		
AC-FT	19890	64460	197000	134100	123300	67380	89290	14900	6140	3720	2100	2250		
CAL YR 1981	TOTAL	256542	MEAN	703	MAX	9660	MIN	27	CFSM	4.04	IN	54.85	AC-FT	508900
WTR YR 1982	TOTAL	365271	MEAN	1001	MAX	9660	MIN	21	CFSM	5.75	IN	78.09	AC-FT	724500

SIUSLAW RIVER BASIN

14307620 SIUSLAW RIVER NEAR MAPLETON, OR
(National stream-quality accounting network station)

LOCATION.--Lat 44°03'45", long 123°52'55", in SW¼NW¼ sec.27, T.17 S., R.10 W., Lane County, Hydrologic Unit 17100206, on right bank 250 ft (76 m) above Shoemaker Creek, 2.5 mi (4.0 km) northwest of Mapleton, and at mile 23.7 (38.1 km).

DRAINAGE AREA.--588 mi² (1,523 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 41 ft (12.5 m), from topographic map.

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

AVERAGE DISCHARGE.--15 years, 2,159 ft³/s (61.14 m³/s), 49.86 in/yr (1,266 mm/yr), 1,564,000 acre-ft/yr (1.93 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,400 ft³/s (1,400 m³/s) Jan. 21, 1972, gage height, 28.45 ft (8.672 m); minimum, 45 ft³/s (1.27 m³/s) Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 reached a stage of about 28 ft (8.5 m), from information by local residents (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1330	17,900 507	16.15 4.923	Jan. 23	1030	29,100 824	21.08 6.425
Dec. 6	1200	*35,800 1,010	*23.67 7.215	Feb. 14	2100	16,700 473	15.58 4.749
Dec. 15	0730	25,600 725	19.63 5.983	Feb. 20	2030	20,700 586	17.47 5.325

Minimum, 73 ft³/s (2.07 m³/s) Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	265	1900	4830	3970	3480	4610	3250	1400	506	350	188	94
2	239	1470	13500	3830	3070	5980	3440	1330	500	340	180	87
3	218	1190	9790	7440	2770	6570	5050	1300	512	336	173	85
4	202	1010	6460	10700	2520	7410	5860	1230	547	322	165	88
5	202	873	13400	7420	2300	6360	6480	1170	540	320	157	90
6	1210	782	33300	5960	2120	5080	5730	1110	510	313	149	91
7	1610	714	22900	4570	1980	4200	4990	1070	484	294	143	83
8	755	755	13000	3780	1860	3620	4120	1040	454	286	139	77
9	706	706	7410	3260	1760	3400	3430	1010	427	272	134	80
10	677	677	7070	2960	1660	3200	3060	984	419	257	134	93
11	2020	939	6810	2760	1630	3690	4170	955	409	247	154	103
12	2640	2640	5530	2650	1580	3620	5500	918	425	239	172	110
13	2880	2880	5680	2540	2610	3230	9150	884	461	243	158	130
14	742	3840	9150	2440	13500	2980	12200	848	439	276	146	117
15	4090	4090	23400	2420	13600	2760	10500	813	416	263	136	118
16	3440	3440	16700	2680	13400	2580	8080	785	392	246	129	93
17	468	5800	10200	6120	12600	2460	6080	777	370	238	122	83
18	429	6900	7210	7390	10500	2350	4760	754	352	229	114	82
19	397	5010	11800	7160	14400	2190	3890	734	339	220	108	106
20	370	3790	10400	5500	15400	2020	3310	707	326	211	106	132
21	349	6310	8210	4530	15100	1880	2920	681	334	206	103	130
22	332	7000	6620	4760	9710	1770	2600	655	325	197	99	122
23	316	8000	5290	23400	7180	1680	2350	637	311	194	92	115
24	308	6500	4510	19700	5830	1610	2140	613	300	188	89	112
25	300	4800	4000	13900	4910	1540	1980	588	294	177	83	108
26	362	4000	5990	11300	4370	1510	1850	568	333	176	81	199
27	513	3200	6730	10100	4090	1760	1730	566	384	176	80	371
28	1840	2800	7420	7830	3740	2070	1680	554	378	174	79	283
29	2450	2200	6550	6010	---	2030	1570	538	409	175	82	268
30	3260	2400	5170	4850	---	2090	1480	516	385	183	89	258
31	2680	---	4360	4080	---	2700	---	502	---	190	94	---
TOTAL	36270	96616	303390	206010	177670	98950	133350	26237	12281	7538	3878	3908
MEAN	1170	3221	9787	6645	6345	3192	4445	846	409	243	125	130
MAX	4090	8000	33300	23400	15400	7410	12200	1400	547	350	188	371
MIN	202	677	4000	2420	1580	1510	1480	502	294	174	79	77
CFSM	1.99	5.48	16.6	11.3	10.8	5.43	7.56	1.44	.70	.41	.21	.22
IN.	2.29	6.11	19.19	13.03	11.24	6.26	8.44	1.66	.78	.48	.25	.25
AC-FT	71940	191600	601800	408600	352400	196300	264500	52040	24360	14950	7690	7750
CAL YR 1981 TOTAL		781446		MEAN 2141	MAX 33300	MIN 90	CFSM 3.64	IN 49.44	AC-FT 1550000			
WTR YR 1982 TOTAL		1106098		MEAN 3030	MAX 33300	MIN 77	CFSM 5.15	IN 69.98	AC-FT 2194000			

SIUSLAW RIVER BASIN

279

14307620 SIUSLAW RIVER NEAR MAPLETON, OR--continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1967 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1978 to September 1981.

WATER TEMPERATURES: November 1967 to September 1975. October 1977 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 02...	1230	1370	58	7.4	11.0	11.8	22	20	15	4.2	1.2
JAN 13...	1400	2490	40	6.6	6.0	13.4	K4	25	20	6.4	.9
MAR 02...	0945	6180	36	6.9	8.0	12.1	27	170	9	2.2	.8
MAY 05...	1145	1200	41	7.4	12.0	11.7	K2	K80	14	4.2	1.0
JUL 06...	1330	312	46	7.4	19.0	9.9	K8	46	12	3.0	1.1
SEP 13...	1300	152	53	7.6	18.0	11.2	K15	120	13	3.3	1.2

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
NOV 02...	5.1	.8	9.0	<5.0	5.1	<.1	.130	--	.38	.06
JAN 13...	4.3	.7	13	<5.0	3.8	.1	.080	.31	.46	--
MAR 02...	3.1	.6	13	<5.0	3.3	<.1	<.060	.29	.40	--
MAY 05...	3.5	.7	15	6.0	4.3	.1	.070	<.10	.44	.15
JUL 06...	4.3	.8	18	<5.0	4.2	<.1	<.060	<.10	1.00	--
SEP 13...	4.7	.9	20	<5.0	5.5	<.1	<.060	<.10	.70	--

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 02...	.020	.020	11	42	--	155	2.2	4	15	71
JAN 13...	<.010	<.010	12	28	--	188	2.5	15	101	68
MAR 02...	<.010	.040	11	27	--	451	8.0	40	667	36
MAY 05...	<.010	.050	12	37	41	120	1.7	5	16	59
JUL 06...	.040	.040	12	40	43	33.7	15	4	3.4	69
SEP 13...	<.010	<.010	11	37	--	15.2	1.3	--	--	--

SIUSLAW RIVER BASIN

14307620 SIUSLAW RIVER NEAR MAPLETON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIIUM, DIS- SOLVED (UG/L AS BA)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
NOV 02...	<1	<1	<100	100	1	1	<10	<10	<1	2
MAR 02...	1	1	25	100	<1	<1	<10	<10	<3	6
MAY 05...	<1	<1	16	100	<1	1	<10	<10	<1	<1
SEP 13...	<1	<1	17	100	<1	<1	<10	<10	<1	<1

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
NOV 02...	3	3	130	230	2	4	<1	10	.1
MAR 02...	2	8	63	1400	<1	6	4	40	<.1
MAY 05...	2	6	83	540	4	3	6	20	<.1
SEP 13...	2	3	84	170	<1	3	4	10	.1

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
NOV 02...	.1	<1	3	<1	<1	<1	<1	20	30
MAR 02...	.2	1	4	<1	<1	<1	<1	<3	30
MAY 05...	.1	<1	1	<1	<1	<1	1	10	30
SEP 13...	<.1	1	<1	1	<1	<1	<1	16	10

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

SIUSLAW RIVER BASIN

281

14307645 NORTH FORK SIUSLAW RIVER NEAR MINERVA, OR

LOCATION.--Lat 44°02'50", long 124°00'10", in NW¼ sec.34, T.17 S., R.11 W., Lane County, Hydrologic Unit 17100206, on left bank 10 ft (3 m) downstream from county road bridge, 0.3 mi (0.5 km) upstream from Condon Creek, 2.7 mi (4.3 km) southwest of Minerva, and at mile 13.09 (21.06 km).

DRAINAGE AREA.--41.2 mi² (106.7 km²).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 40 ft (12 m), from topographic map.

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

AVERAGE DISCHARGE.--15 years, 290 ft³/s (8.213 m³/s), 95.59 in/yr (2,428 mm/yr), 210,100 acre-ft/yr (259 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,400 ft³/s (153 m³/s) Dec. 25, 1980, gage height, 24.36 ft (7.425 m); minimum, 11 ft³/s (0.31 m³/s) Sept. 9-11, 17, 18, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	1130	4,320 122	21.83 6.654	Jan. 23	0900	*4,520 128	*22.07 6.727
Dec. 6	0600	3,780 107	21.13 6.440	Feb. 14	1930	2,310 65.4	17.99 5.483
Dec. 15	0730	2,270 64.3	17.81 5.428	Feb. 20	1930	2,810 79.6	19.52 5.950

Minimum, 14 ft³/s (0.40 m³/s) Aug. 23-26, Sept. 8, 9, 16-18, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	474	1410	550	432	461	507	158	50	31	21	16
2	50	326	3380	521	368	470	502	151	50	31	20	15
3	47	263	2320	756	321	480	555	150	53	35	20	15
4	48	209	1360	1260	281	493	631	137	62	35	20	17
5	45	176	1910	899	248	473	732	129	55	40	19	21
6	273	155	3570	699	222	485	737	123	51	33	19	17
7	271	142	2370	570	201	484	619	118	48	30	18	15
8	261	127	1480	488	184	455	520	115	45	28	18	14
9	379	120	1050	431	168	429	439	111	44	26	18	18
10	724	117	981	389	154	412	413	106	42	26	18	26
11	299	257	779	357	154	629	611	102	42	26	31	21
12	178	470	674	302	147	589	955	98	44	24	26	36
13	131	387	874	334	500	528	1410	93	48	33	21	25
14	111	746	1350	293	1980	525	1440	90	42	34	20	20
15	98	653	2180	283	1880	491	1180	86	40	26	19	17
16	87	504	1630	398	1650	446	912	83	38	23	17	15
17	80	727	1090	1080	1630	393	722	80	36	22	17	14
18	75	792	874	899	1490	351	581	78	35	24	17	14
19	71	585	1250	812	2320	316	483	75	34	24	16	26
20	67	561	1040	646	2350	298	414	71	35	22	16	22
21	64	1290	925	570	2210	276	361	69	35	22	16	20
22	62	1410	762	761	1400	252	321	65	34	22	16	17
23	58	1310	641	3940	923	237	292	64	31	22	15	16
24	57	965	629	3110	680	223	261	60	31	22	14	15
25	56	725	623	2100	538	224	240	58	31	22	14	14
26	84	663	1080	1740	493	226	219	57	42	21	15	56
27	153	526	1070	1370	456	254	203	57	39	21	15	47
28	615	425	990	1040	386	284	202	55	37	21	15	30
29	826	367	829	791	---	280	180	53	40	21	15	33
30	890	393	676	629	---	325	167	51	34	21	18	27
31	804	---	598	526	---	444	---	49	---	21	18	---
TOTAL	7011	15865	40395	28544	23766	12233	16809	2792	1248	809	562	659
MEAN	226	529	1303	921	849	395	560	90.1	41.6	26.1	18.1	22.0
MAX	890	1410	3570	3940	2350	629	1440	158	62	40	31	56
MIN	45	117	598	283	147	223	167	49	31	21	14	14
CFSM	5.49	12.8	31.6	22.4	20.6	9.59	13.6	2.19	1.01	.63	.44	.53
IN.	6.33	14.32	36.47	25.77	21.46	11.05	15.18	2.52	1.13	.73	.51	.60
AC-FT	13910	31470	80120	56620	47140	24260	33340	5540	2480	1600	1110	1310

CAL YR 1981	TOTAL	110494	MEAN 303	MAX 3570	MIN 18	CFSM 7.35	IN 99.76	AC-FT 219200
WTR YR 1982	TOTAL	150693	MEAN 413	MAX 3940	MIN 14	CFSM 10.0	IN 136.06	AC-FT 298900

UMPUA RIVER BASIN

14307700 JACKSON CREEK NEAR TILLER, OR

LOCATION.--Lat 42°57'15", long 122°49'40", in SW¼NE¼ sec.21 T.30 S., R.1 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.5 mi (0.8 km) upstream from Chapman Creek, 0.8 mi (1.3 km) downstream from Beaver Creek, 6.5 mi (10.5 km) northeast of Tiller, and at mile 3.0 (4.8 km). Records include flow of Chapman Creek.

DRAINAGE AREA.--152 mi² (394 km²), at cableway 0.6 mi (1.0 km) downstream where all discharge measurements are made.

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 1935: 1956-57(M).

GAGE.--Water-stage recorder. Datum of gage is 1,240.25 ft (378.028 m) National Geodetic Vertical Datum of 1929 (levels by Douglas County Water Resources Survey).

REMARKS.--Records good except for those for periods of no gage-height record, Nov. 29 to Dec. 16 and Apr. 8 to June 2, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--27 years, 313 ft³/s (8.864 m³/s), 27.96 in/yr (710 mm/yr), 226,800 acre-ft/yr (280 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft³/s (598 m³/s) Dec. 22, 1964, gage height, 18.0 ft (5.49 m), from floodmark, from rating curve extended above 5,100 ft³/s (144 m³/s) and basin runoff comparison; minimum, 11 ft³/s (0.31 m³/s) Jan. 6, 1977, Nov. 13, 1978, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	a0800	*8,420 238	*b11.11 3.386	Dec. 29	1730	4,020 114	7.60 2.316
Dec. 15	a0600	unknown	unknown	Feb. 16	1000	2,520 71.4	6.12 1.865
Dec. 19	1930	4,590 130	8.12 2.475	Feb. 19	0630	2,760 78.2	6.38 1.945
Dec. 26	1430	3,920 111	7.51 2.289				

Minimum, 19 ft³/s (0.54 m³/s) Sept. 8, 9.

a Approximate.
b From floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	22	81	520	910	371	917	362	360	160	114	31	21		
2	24	65	1000	716	336	929	345	350	150	115	32	20		
3	28	54	1500	584	314	728	361	340	164	131	32	20		
4	23	47	1050	603	292	653	351	320	178	111	31	21		
5	22	43	900	499	267	590	316	300	172	105	30	20		
6	28	40	5000	404	245	505	291	310	157	95	29	20		
7	80	37	3200	350	230	441	289	320	146	87	28	20		
8	42	36	1800	319	214	392	290	300	139	82	28	19		
9	56	34	1300	357	201	369	280	290	138	76	28	19		
10	127	32	1000	469	187	381	340	260	141	72	28	21		
11	117	33	820	528	177	442	960	240	148	68	28	21		
12	74	132	700	482	167	412	880	230	159	64	28	25		
13	52	171	800	425	195	369	780	230	150	60	27	35		
14	42	436	1000	386	915	372	890	240	138	59	26	25		
15	37	734	2500	365	1410	372	700	240	133	56	26	22		
16	34	1150	1500	362	2350	352	580	250	131	54	25	21		
17	31	1570	877	646	1830	342	520	260	128	53	25	21		
18	29	925	740	724	1400	375	470	270	126	50	24	20		
19	28	558	2820	576	2390	408	430	250	130	48	24	23		
20	27	415	3060	474	1910	375	380	240	121	45	23	25		
21	26	502	2000	402	1930	337	400	250	134	43	22	24		
22	26	670	1270	355	1400	310	420	280	109	42	22	22		
23	25	1050	910	638	1010	293	480	270	97	41	22	21		
24	25	1120	831	1020	783	286	510	270	91	40	21	24		
25	24	742	1210	1190	658	291	460	280	104	39	21	26		
26	24	535	2630	1370	586	306	430	300	89	37	20	26		
27	24	407	2230	1050	568	303	410	250	167	35	20	73		
28	48	318	1350	766	523	354	400	210	131	33	20	43		
29	73	310	2880	596	---	355	390	190	146	32	22	61		
30	96	280	2240	491	---	342	370	170	127	32	24	46		
31	88	---	1290	423	---	380	---	165	---	32	22	---		
TOTAL	1402	12527	50928	18480	22859	13281	14085	8235	4104	1951	789	805		
MEAN	45.2	418	1643	596	816	428	470	266	137	62.9	25.5	26.8		
MAX	127	1570	5000	1370	2390	929	960	360	178	131	32	73		
MIN	22	32	520	319	167	286	280	165	89	32	20	19		
CFSM	.30	2.75	10.8	3.92	5.37	2.82	3.09	1.75	.90	.41	.17	.18		
IN.	.34	3.07	12.46	4.52	5.59	3.25	3.45	2.02	1.00	.48	.19	.20		
AC-FT	2780	24850	101000	36660	45340	26340	27940	16330	8140	3870	1560	1600		
CAL YR 1981	TOTAL	111718	MEAN	306	MAX	5000	MIN	17	CFSM	2.01	IN	27.34	AC-FT	221600
WTR YR 1982	TOTAL	149446	MEAN	409	MAX	5000	MIN	19	CFSM	2.69	IN	36.57	AC-FT	296400

14308000 SOUTH UMPQUA RIVER AT TILLER, OR

LOCATION.--Lat 42°55'50", long 122°56'50", in NE¼ sec.33, T.30 S., R.2 W., Douglas County, Hydrologic Unit 17100302, Umpqua National Forest, on left bank 0.3 mi (0.5 km) upstream from bridge on State Highway 227 at Tiller, 0.3 mi (0.5 km) upstream from Elk Creek, and at mile 187.31 (301.38 km).

DRAINAGE AREA.--449 mi² (1,163 km²).

PERIOD OF RECORD.--October 1910 to December 1911, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to December 1911, published as South Fork of Umpqua River at Tiller.

REVISED RECORDS.--WSP 1448: 1911(M), 1912, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 991.8 ft (302.30 m) National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 1, 1939, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum.

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

AVERAGE DISCHARGE.--44 years, 1,034 ft³/s (29.28 m³/s), 31.27 in/yr (794 mm/yr), 749,100 acre-ft/yr (924 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,200 ft³/s (1,700 m³/s) Dec. 22, 1964, gage height, 25.72 ft (7.839 m); minimum observed, 20 ft³/s (0.57 m³/s) Sept. 3, 4, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s (198 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0930	*31,400 889	*18.37 5.599	Dec. 29	1930	13,100 371	11.92 3.633
Dec. 15	0730	13,000 368	11.88 3.621	Feb. 14	1130	8,290 235	9.48 2.890
Dec. 19	1930	13,500 382	12.09 3.685	Feb. 16	1230	9,350 265	10.10 3.078
Dec. 26	1600	12,600 357	11.70 3.566	Feb. 19	0930	10,900 309	10.91 3.325

Minimum, 52 ft³/s (1.47 m³/s) Sept. 8-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	69	348	3040	3110	1460	2500	1070	1130	500	318	92	61		
2	66	268	4720	2410	1310	2840	1020	1120	485	295	90	59		
3	79	213	4090	1960	1240	2260	1110	1080	461	359	91	57		
4	69	178	2580	2000	1180	2160	1150	985	464	314	92	57		
5	62	157	2660	1650	1070	2080	1070	916	473	294	89	58		
6	67	141	19700	1340	963	1770	985	933	437	265	86	55		
7	247	129	8640	1140	881	1520	984	1030	402	241	83	54		
8	181	120	4890	1030	812	1360	1010	1000	382	222	83	53		
9	270	112	3320	1080	756	1300	997	891	373	208	81	52		
10	656	107	2810	1440	698	1330	1300	785	382	195	84	53		
11	549	107	2220	1680	658	1540	3540	725	410	184	82	57		
12	332	334	1980	1530	617	1450	3160	698	422	174	82	60		
13	223	526	2480	1340	875	1260	2760	724	427	165	80	97		
14	171	1110	6670	1240	6680	1190	3190	749	403	160	76	85		
15	141	1770	10200	1220	6210	1160	2530	780	384	153	74	65		
16	123	2820	5270	1240	8450	1090	2030	788	394	147	73	60		
17	113	4640	3280	2470	7090	1030	1760	848	397	143	71	56		
18	104	3080	2570	2980	5420	1070	1530	851	394	139	69	56		
19	96	1720	8870	2270	9330	1080	1350	770	404	132	68	70		
20	91	1250	9400	1780	7070	1030	1260	738	375	128	67	97		
21	86	1530	6850	1480	7470	940	1310	811	383	122	65	87		
22	83	2760	4290	1250	5280	874	1500	888	333	118	62	77		
23	79	4220	3040	1950	3690	827	1720	869	297	115	61	68		
24	77	3810	2670	3840	2740	811	1690	838	271	113	61	72		
25	76	2490	4120	5050	2230	835	1540	911	280	110	59	92		
26	74	1760	8130	5890	1920	888	1390	935	254	105	58	82		
27	74	1330	7280	4470	1820	881	1310	783	406	102	56	289		
28	107	1040	4550	2990	1670	1000	1310	659	345	98	56	167		
29	205	854	8800	2240	---	1020	1230	581	378	95	56	210		
30	371	766	7530	1830	---	968	1130	531	351	94	66	187		
31	369	---	4420	1620	---	1080	---	507	---	92	65	---		
TOTAL	5310	39690	171070	67520	89590	41144	47936	25854	11667	5400	2278	2593		
MEAN	171	1323	5518	2178	3200	1327	1598	834	389	174	73.5	86.4		
MAX	656	4640	19700	5890	9330	2840	3540	1130	500	359	92	289		
MIN	62	107	1980	1030	617	811	984	507	254	92	56	52		
CFSM	.38	2.95	12.3	4.85	7.13	2.96	3.56	1.86	.87	.39	.16	.19		
IN.	.44	3.29	14.17	5.59	7.42	3.41	3.97	2.14	.97	.45	.19	.21		
AC-FT	10530	78730	339300	133900	177700	81610	95080	51280	23140	10710	4520	5140		
CAL YR 1981	TOTAL	373722	MEAN	1024	MAX	19700	MIN	39	CFSM	2.28	IN	30.96	AC-FT	741300
WTR YR 1982	TOTAL	510052	MEAN	1397	MAX	19700	MIN	52	CFSM	3.11	IN	42.26	AC-FT	1012000

UMPUA RIVER BASIN

14308500 ELK CREEK NEAR DREW, OR

LOCATION.--Lat 42°53'25", long 122°55'00", in SW¼ sec.11, T.31 S., R.2 W., Douglas County, Hydrologic Unit 17100302, on right bank 100 ft (30 m) downstream from Dixon Creek, 0.1 mi (0.2 km) upstream from Drew Creek, 1.3 mi (2.1 km) northwest of Drew, 3.3 mi (5.3 km) southeast of Tiller, and at mile 4.1 (6.6 km).

DRAINAGE AREA.--54.4 mi² (140.9 km²).

PERIOD OF RECORD.--September 1954 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,279.25 ft (389.915 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years, 84.3 ft³/s (2.387 m³/s), 61,080 acre-ft/yr (75.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s (251 m³/s) Dec. 22, 1964, gage height, 10.61 ft (3.234 m), from rating curve extended above 2,900 ft³/s (82.1 m³/s) on basis of slope-area measurement at gage height 10.34 ft (3.152 m); maximum gage height, 10.80 ft (3.292 m) Jan. 15, 1974; no flow at times in September 1974, Aug. 16-22, 1977, and Aug. 17-24, Sept. 16-19, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 11.8 ft (3.60 m), from floodmarks, probably for flood in January or November 1953, discharge, about 11,000 ft³/s (312 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 16	2130	1,240 35.1	5.81 1.771	Dec. 19	1000	3,360 95.2	7.70 2.347
Dec. 6	0700	*7,580 215	*10.35 3.155	Dec. 29	0930	1,700 48.1	6.28 1.914
Dec. 15	0430	1,720 48.7	6.30 1.920	Feb. 15	2300	1,850 52.4	6.43 1.960

Minimum, 0.09 ft³/s (0.003 m³/s) Aug. 18, 21-23, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	13	369	272	99	364	128	57	7.9	7.2	.81	.31
2	2.4	11	307	207	89	316	140	54	7.4	6.8	.98	.39
3	3.0	9.1	258	177	82	221	172	50	7.2	7.0	1.0	.28
4	2.4	8.1	176	313	76	179	141	46	9.4	5.4	.91	.33
5	2.2	7.5	574	189	69	150	115	43	11	4.9	.76	.29
6	4.3	7.1	3420	136	64	127	100	40	9.0	4.1	.53	.34
7	15	6.6	689	108	59	109	98	37	7.8	3.4	.53	.42
8	9.0	6.1	340	97	55	97	96	36	7.4	3.0	.42	.39
9	7.1	5.6	250	113	51	88	102	35	6.6	2.6	.37	.36
10	12	5.2	277	157	46	90	148	32	5.8	2.4	.56	.38
11	21	5.8	195	171	42	100	376	29	5.2	2.1	.71	.21
12	17	24	177	152	39	90	298	27	5.9	1.9	.61	.55
13	11	31	177	132	53	80	267	26	6.9	1.8	.64	1.2
14	8.6	135	266	120	546	84	267	24	6.5	1.9	.46	1.3
15	7.1	309	965	113	743	90	208	23	5.8	1.8	.51	1.1
16	5.9	511	388	115	1270	86	162	21	5.3	1.6	.39	1.0
17	5.4	700	240	205	731	87	138	22	5.4	1.5	.38	.92
18	4.9	309	207	220	417	103	124	21	4.6	1.3	.21	.94
19	4.2	146	2470	169	387	102	110	19	4.5	1.1	.21	1.5
20	3.9	93	1380	136	327	93	103	18	4.9	.88	.18	1.9
21	3.6	93	689	117	397	83	104	16	5.0	.74	.13	1.6
22	3.6	114	395	101	307	76	110	15	3.8	.73	.09	1.4
23	3.4	255	261	170	227	70	114	14	3.2	.79	.13	1.2
24	3.2	542	207	257	178	65	105	12	3.0	.59	.20	1.4
25	3.2	252	243	305	153	62	93	11	4.9	.59	.24	2.0
26	3.2	171	485	419	143	62	82	9.9	4.3	.42	.25	2.2
27	3.3	123	549	304	157	60	75	9.5	9.9	.28	.12	21
28	7.7	90	326	209	143	101	70	9.0	8.1	.21	.18	9.7
29	17	71	1130	158	---	102	65	8.6	13	.27	.33	19
30	19	64	674	130	---	98	60	8.1	8.6	.36	.48	12
31	16	---	380	112	---	168	---	7.7	---	.64	.34	---
TOTAL	231.8	4118.1	18464	5584	6950	3603	4171	780.8	198.3	68.30	13.66	85.61
MEAN	7.48	137	596	180	248	116	139	25.2	6.61	2.20	.44	2.85
MAX	21	700	3420	419	1270	364	376	57	13	7.2	1.0	21
MIN	2.2	5.2	176	97	39	60	60	7.7	3.0	.21	.09	.21
AC-FT	460	8170	36620	11080	13790	7150	8270	1550	393	135	27	170

CAL YR 1981 TOTAL 31020.62 MEAN 85.0 MAX 3420 MIN .00 AC-FT 61530
WTR YR 1982 TOTAL 44268.57 MEAN 121 MAX 3420 MIN .09 AC-FT 87810

UMPQUA RIVER BASIN

285

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR

LOCATION.--Lat 42°58'05", long 123°09'60", in NW¼ sec.15, T.30 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.3 mi (0.5 km) upstream from Days Creek, 0.4 mi (0.6 km) southeast of community of Days Creek, and at mile 170.2 (273.9 km).

DRAINAGE AREA.--641 mi² (1,660 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 738.55 ft (225.110 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records excellent. No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--7 years, 1,066 ft³/s (30.19 m³/s), 22.58 in/yr (574 mm/yr), 772,300 acre-ft/yr (952 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,300 ft³/s (1,200 m³/s) Dec. 6, 1981, gage height, 22.39 ft (6.824 m); minimum, 31 ft³/s (0.88 m³/s) Sept. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	1000	*42,300 1,200	*22.39 6.824	Dec. 26	1730	13,500 382	12.70 3.871
Dec. 15	0830	14,800 419	13.30 4.054	Dec. 29	2100	16,000 453	13.81 4.209
Dec. 19	2230	16,700 473	14.07 4.289				

Minimum, 43 ft³/s (1.22 m³/s) Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	383	3680	4180	1840	3100	1470	1290	521	336	97	56
2	84	310	5380	3260	1650	3600	1420	1290	502	304	94	53
3	89	249	4990	2690	1530	2850	1640	1240	473	364	96	50
4	96	213	3170	3460	1460	2620	1700	1140	493	334	98	52
5	80	191	3200	2720	1330	2510	1530	1060	505	308	92	52
6	83	175	25200	2090	1200	2170	1380	1050	461	285	87	51
7	203	161	10500	1700	1090	1870	1350	1150	418	256	84	47
8	251	150	5820	1490	1000	1670	1350	1140	395	238	84	46
9	226	141	4010	1500	928	1560	1320	1020	379	222	79	47
10	631	134	3540	1930	849	1570	1550	899	382	210	86	51
11	667	138	2800	2260	797	1800	3750	818	402	199	85	53
12	417	292	2490	2100	740	1740	3900	784	443	189	83	64
13	276	592	2700	1840	809	1520	3180	800	448	178	83	89
14	213	1370	7050	1680	6730	1430	3800	830	413	172	78	107
15	180	2180	11900	1620	6820	1450	3230	852	389	166	76	76
16	158	3410	6360	1630	9470	1350	2580	869	389	158	74	63
17	141	6090	4050	2820	8010	1290	2230	920	394	154	69	58
18	131	4110	3090	3710	6030	1360	1940	949	391	149	65	57
19	121	2250	10200	2910	9690	1400	1700	856	397	141	65	74
20	114	1560	12100	2300	7510	1340	1570	803	369	134	62	98
21	108	1690	8830	1930	8160	1230	1570	860	371	126	60	96
22	104	3150	5460	1640	6000	1130	1720	960	332	121	58	85
23	100	4780	3930	2270	4340	1060	1960	943	297	116	56	72
24	97	5230	3230	4290	3270	1020	1950	905	271	116	53	69
25	95	3350	4790	5800	2680	1020	1800	966	279	113	50	82
26	93	2310	8430	6700	2320	1070	1620	1010	268	108	48	90
27	93	1750	8920	5550	2240	1070	1510	864	371	102	47	255
28	111	1360	5610	3800	2050	1250	1480	716	380	98	49	229
29	217	1100	10800	2850	---	1340	1430	621	386	96	51	208
30	391	973	10000	2340	---	1260	1310	560	365	96	57	237
31	394	---	5700	2050	---	1460	---	523	---	98	63	---
TOTAL	6057	49792	207930	87110	100543	51110	58940	28688	11884	5687	2229	2667
MEAN	195	1660	6707	2810	3591	1649	1965	925	396	183	71.9	88.9
MAX	667	6090	25200	6700	9690	3600	3900	1290	521	364	98	255
MIN	80	134	2490	1490	740	1020	1310	523	268	96	47	46
CFSM	.30	2.59	10.5	4.38	5.60	2.57	3.07	1.44	.62	.29	.11	.14
IN.	.35	2.89	12.07	5.06	5.83	2.97	3.42	1.66	.69	.33	.13	.15
AC-FT	12010	98760	412400	172800	199400	101400	116900	56900	23570	11280	4420	5290

CAL YR 1981	TOTAL	442220	MEAN	1212	MAX	25200	MIN	37	CFSM	1.89	IN	25.66	AC-FT	877100
WTR YR 1982	TOTAL	612637	MEAN	1678	MAX	25200	MIN	46	CFSM	2.62	IN	35.55	AC-FT	1215000

UMPQUA RIVER BASIN

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971 to 1982 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1970 to September 1982 (discontinued).

INSTRUMENTATION.--Temperature recorder since October 1971.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 30.0°C July 25, 1978; minimum, 0.0°C on many days during 1972, 1976-79.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.5°C July 27; minimum, 1.0°C Feb. 6, 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JAN 15...	1330	1670	68	6.8	4.0	28	7.7	2.1	3.7	.6
APR 26...	1515	1640	60	6.5	10.0	23	6.2	1.8	3.4	.5
JUN 15...	1400	403	73	6.7	19.5	27	7.8	1.9	6.7	.7

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
JAN 15...	32	5.0	2.2	.1	<.10	.030	19	60	269
APR 26...	26	5.0	1.1	<.1	<.10	.040	17	51	224
JUN 15...	31	<5.0	2.2	<.1	.41	.020	16	--	--

14308600 SOUTH UMPQUA RIVER AT DAYS CREEK, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	13.0	10.0	8.0	6.5	5.0	5.0	5.0	4.5	4.0	7.0	5.5
2	16.5	14.5	10.0	8.0	7.5	6.5	5.0	4.0	4.5	3.5	6.5	5.5
3	16.0	13.5	9.0	8.5	7.5	7.0	4.0	4.0	5.0	4.0	6.5	6.0
4	15.5	13.0	9.0	8.5	7.5	6.5	4.5	4.0	5.0	2.5	6.5	6.0
5	15.5	12.5	10.0	8.0	8.0	7.0	4.5	4.0	2.5	1.5	6.5	5.5
6	15.5	14.5	10.0	8.5	8.5	8.0	4.0	2.5	2.0	1.0	5.5	4.5
7	14.5	13.0	10.0	8.5	8.5	8.0	2.5	1.5	3.0	1.5	6.0	5.0
8	13.0	12.5	11.0	8.5	8.0	7.5	3.5	2.0	3.0	2.0	7.5	6.0
9	13.0	12.0	10.0	8.5	8.5	8.0	4.0	3.0	3.5	2.0	8.5	7.0
10	12.0	11.5	10.5	8.5	8.5	7.0	4.0	3.5	3.0	1.5	7.5	7.0
11	12.0	10.5	11.0	9.5	7.0	6.0	4.5	4.0	2.5	1.0	7.5	6.5
12	12.0	10.0	11.5	10.0	6.5	6.0	5.0	4.5	2.5	1.5	6.5	5.0
13	12.0	9.5	10.5	9.0	7.0	6.5	4.5	4.0	4.5	2.5	6.0	5.0
14	12.0	9.5	---	---	8.0	7.0	4.0	3.5	6.0	4.5	6.5	6.0
15	12.0	8.5	8.5	8.0	8.5	7.5	4.0	3.5	6.0	5.5	6.5	5.5
16	12.0	8.0	9.0	8.5	7.5	6.0	5.0	4.0	6.5	6.0	6.0	5.0
17	13.0	8.5	9.0	8.5	6.5	6.0	5.5	5.0	6.5	6.0	6.5	5.0
18	13.5	9.5	8.5	7.5	8.0	6.5	5.5	4.5	6.5	5.5	6.5	5.5
19	14.0	10.0	8.0	7.5	8.5	7.5	5.0	4.0	7.0	6.0	6.0	5.5
20	13.0	10.5	8.0	7.5	8.0	7.5	4.5	4.0	7.0	7.0	6.5	5.5
21	12.5	10.5	8.5	8.0	7.5	7.0	4.5	3.5	7.0	5.0	7.0	5.0
22	13.0	10.5	8.5	8.5	7.0	6.0	3.5	3.0	5.5	5.0	7.5	5.5
23	13.0	10.5	8.5	8.0	6.0	5.5	4.0	3.0	5.0	4.5	7.5	6.0
24	12.5	10.5	8.0	7.5	6.5	6.0	5.5	4.0	4.5	4.0	8.5	6.0
25	13.0	10.0	7.5	7.0	7.0	6.5	6.0	5.5	4.5	4.0	8.5	7.0
26	12.5	11.0	7.0	6.0	7.0	6.0	6.0	5.5	5.5	4.5	9.0	8.0
27	13.5	11.0	6.5	6.0	7.0	6.0	5.5	5.0	6.0	5.0	8.5	7.0
28	13.0	11.0	6.0	5.0	6.0	5.5	5.5	5.0	5.5	5.0	7.0	6.0
29	11.5	10.0	5.0	4.5	6.5	6.0	5.0	4.5	---	---	6.0	5.0
30	10.0	8.5	5.0	4.5	6.5	6.0	4.5	4.0	---	---	5.5	5.0
31	9.5	7.5	---	---	6.0	5.0	5.5	4.5	---	---	6.5	5.0
MONTH	17.0	7.5	11.5	4.5	8.5	5.0	6.0	1.5	7.0	1.0	9.0	4.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	5.0	11.0	9.5	16.5	12.5	21.0	17.0	21.5	19.5	24.5	21.0
2	6.5	5.5	11.5	9.5	17.5	14.0	19.5	18.5	21.0	18.0	23.5	19.5
3	6.5	5.5	11.0	9.5	16.0	14.5	20.0	17.5	21.0	17.5	---	---
4	7.0	5.0	11.5	9.0	15.5	13.0	18.5	17.0	23.0	18.0	---	---
5	6.5	5.5	12.0	9.0	15.0	12.5	20.5	17.0	24.0	19.0	---	---
6	6.5	5.5	13.0	10.0	16.0	12.5	22.0	18.0	26.0	20.0	---	---
7	7.0	5.5	12.0	11.0	17.0	14.0	21.0	18.5	24.5	21.0	---	---
8	8.5	6.0	12.0	10.0	18.5	14.0	22.5	18.5	27.0	22.5	---	---
9	8.5	6.0	10.5	9.0	21.0	15.5	23.5	19.5	26.0	22.0	---	---
10	7.5	7.0	10.0	8.5	---	---	24.5	19.5	24.0	20.5	---	---
11	8.0	7.0	12.5	9.0	---	---	25.0	20.5	24.5	20.5	---	---
12	7.5	6.5	14.0	11.0	---	---	26.0	20.5	24.5	20.0	---	---
13	7.5	7.0	14.0	12.0	---	---	24.0	21.5	26.0	20.5	---	---
14	7.5	6.0	15.0	12.0	---	---	25.0	21.0	23.5	21.0	---	---
15	6.5	5.0	14.5	12.0	---	---	23.0	19.5	24.0	20.0	---	---
16	7.5	5.5	15.0	12.0	22.0	---	23.5	18.5	24.0	20.0	---	---
17	8.0	7.0	13.5	12.0	23.0	19.0	25.0	19.0	25.0	20.5	---	---
18	8.5	7.0	13.0	11.0	24.0	20.0	25.5	20.5	25.0	20.5	---	---
19	8.0	6.5	14.0	10.5	23.5	21.0	26.5	21.0	25.5	21.5	---	---
20	9.5	7.0	15.0	11.5	22.0	20.5	26.5	21.5	26.0	22.0	---	---
21	10.0	7.5	16.5	13.5	23.0	19.5	25.0	21.5	26.5	22.0	---	---
22	11.0	9.0	16.0	14.0	23.5	20.0	25.5	20.0	26.0	22.0	---	---
23	11.0	9.5	16.0	13.5	24.0	19.5	26.0	20.0	26.0	21.5	---	---
24	10.0	9.5	16.5	13.0	23.0	20.5	26.5	20.5	26.0	21.5	---	---
25	10.5	8.5	17.5	15.0	22.5	20.0	26.5	21.5	26.0	22.0	---	---
26	10.5	8.0	15.5	13.5	21.0	20.0	27.0	22.0	24.0	21.5	---	---
27	10.5	9.0	14.5	12.0	21.0	19.0	27.5	22.5	23.5	21.0	---	---
28	11.5	9.5	14.5	11.0	19.0	17.5	26.0	22.5	23.5	20.0	---	---
29	10.5	8.5	15.5	12.0	18.0	16.5	25.0	22.0	22.5	21.0	---	---
30	10.5	8.5	17.0	13.0	19.0	16.5	23.5	21.5	23.0	20.0	---	---
31	---	---	15.5	13.5	---	---	22.0	21.0	24.0	19.5	---	---
MONTH	11.5	5.0	17.5	8.5	24.0	12.5	27.5	17.0	27.0	17.5	24.5	19.5

UMPQUA RIVER BASIN

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 (1.3 km) upstream from Whitehorse Creek, 4.5 mi (7.2 km) northeast of Azalea, and at mile 58.2 (93.6 km).

DRAINAGE AREA.--78.0 mi² (202.0 km²).

PERIOD OF RECORD.--April 1926 to September 1928 (no winter records), April 1929 to December 1931, April 1932 to current year.

REVISED RECORDS.--WSP 984: 1933-36. WSP 1154: 1946(M), 1948(M). WSP 1448: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,694.32 ft (516.429 m) National Geodetic Vertical Datum of 1929 (Douglas County Road Department bench mark). Prior to July 19, 1949, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--52 years (water years 1930-31, 1933-82), 110 ft³/s (3.115 m³/s), 19.15 in/yr (486 mm/yr), 79,700 acre-ft/yr (98.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) Jan. 15, 1974, gage height, 16.40 ft (4.999 m), from high-water mark in well; minimum, 1.1 ft³/s (0.031 m³/s) Aug. 12, 1981, but may have been less during period of no gage-height record Sept. 4-30, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 16	2400	1,460 41.3	6.52 1.987	Dec. 19	1130	3,350 94.9	10.22 3.115
Dec. 6	0800	*8,370 237	*14.94 4.554	Dec. 29	1230	1,670 47.3	7.20 2.195
Dec. 15	0530	1,840 52.1	7.67 2.338				

Minimum, 4.8 ft³/s (0.14 m³/s) Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	24	221	415	182	704	146	119	37	21	13	7.8
2	11	20	255	342	166	530	178	112	36	20	14	7.5
3	14	17	262	296	156	397	233	105	35	23	13	7.3
4	11	16	213	492	146	328	211	99	39	20	13	8.4
5	9.8	15	662	332	135	279	184	91	43	19	13	7.4
6	20	14	4080	251	128	240	166	85	38	18	12	6.4
7	54	13	1030	214	121	216	158	83	35	16	12	6.1
8	27	13	583	189	114	197	152	80	33	16	12	6.2
9	23	12	476	189	109	179	154	78	32	16	11	6.8
10	37	12	560	201	103	176	201	72	31	16	12	8.8
11	34	15	409	214	98	191	488	68	30	14	12	8.4
12	27	56	377	213	94	168	409	65	31	14	11	11
13	21	65	351	198	113	151	551	62	32	13	9.6	18
14	17	255	510	187	549	152	550	60	31	13	9.6	12
15	15	371	1200	178	662	150	410	58	28	13	11	9.6
16	14	512	567	178	1140	143	314	56	27	12	11	8.9
17	13	899	397	259	865	139	266	57	26	12	10	9.2
18	13	450	355	292	556	139	238	57	26	13	9.9	11
19	12	250	2340	243	516	134	215	54	25	13	9.5	19
20	12	144	1780	214	460	129	204	51	25	12	8.3	17
21	12	193	1190	194	540	122	204	49	24	12	7.6	14
22	12	277	702	168	437	115	218	47	23	12	6.2	13
23	11	434	479	231	353	110	229	45	21	13	7.3	12
24	10	651	379	326	296	107	216	43	21	14	6.1	13
25	9.6	337	371	381	257	103	192	42	21	13	5.5	15
26	10	241	495	573	242	101	168	41	20	13	6.1	15
27	12	187	534	440	255	99	152	40	26	13	5.8	23
28	39	144	407	330	232	120	141	39	23	13	6.9	19
29	54	123	1120	261	---	114	129	39	28	13	8.5	22
30	45	112	862	226	---	114	123	37	24	14	8.7	18
31	30	---	535	205	---	164	---	37	---	14	8.1	---
TOTAL	639.4	5872	23702	8432	9025	6011	7200	1971	871	458	303.7	360.8
MEAN	20.6	196	765	272	322	194	240	63.6	29.0	14.8	9.80	12.0
MAX	54	899	4080	573	1140	704	551	119	43	23	14	23
MIN	9.6	12	213	168	94	99	123	37	20	12	5.5	6.1
CFSM	.26	2.51	9.81	3.49	4.13	2.49	3.08	.82	.37	.19	.13	.15
IN.	.30	2.80	11.30	4.02	4.30	2.87	3.43	.94	.42	.22	.14	.17
AC-FT	1270	11650	47010	16720	17900	11920	14280	3910	1730	908	602	716
CAL YR 1981	TOTAL	42730.3	MEAN 117	MAX 4080	MIN 1.9	CFSM 1.50	IN 20.38	AC-FT 84760				
WTR YR 1982	TOTAL	64845.9	MEAN 178	MAX 4080	MIN 5.5	CFSM 2.28	IN 30.93	AC-FT 128600				

14309500 WEST FORK COW CREEK NEAR GLENDALE, OR

LOCATION.--Lat 42°48'15", long 123°36'35", in SW¼NE¼ sec.11, T.32 S., R.8 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.6 mi (2.6 km) downstream from Bear Creek, 11 mi (18 km) northwest of Glendale, and at mile 0.8 (1.3 km).

DRAINAGE AREA.--86.9 mi² (225.1 km²).

PERIOD OF RECORD.--August 1955 to current year.

REVISED RECORDS.--WSP 1738: 1956, drainage area (former site). WSP 1935: 1956.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,018.48 ft (310.433 m) National Geodetic Vertical Datum of 1929. Prior to June 8, 1964, at site 0.6 mi (1.0 km) upstream at different datum.

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

AVERAGE DISCHARGE.--27 years, 273 ft³/s (7.731 m³/s), 42.66 in/yr (1,084 mm/yr), 197,800 acre-ft/yr (244 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s (445 m³/s) Dec. 22, 1964, gage height, 18.59 ft (5.666 m), from floodmark, from rating curve extended above 2,600 ft³/s (73.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 3.7 ft³/s (0.11 m³/s) Aug. 17, 19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 16	2300	4,590 130	9.61 2.929	Feb. 14	0630	3,450 97.7	8.05 2.454
Dec. 6	0400	*11,300 320	*15.81 4.819	Feb. 17	0530	2,650 75.0	7.21 2.198
Dec. 15	0200	4,580 130	9.17 2.795	Mar. 1	1030	3,010 85.2	7.59 2.313
Dec. 19	0600	6,160 174	10.84 3.304	Apr. 13	0900	4,430 125	9.03 2.752
Dec. 29	1700	2,960 83.8	7.53 2.295				

Minimum, 5.9 ft³/s (0.17 m³/s) Aug. 26.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	15	184	866	741	449	2200	377	211	45	31	12	7.6		
2	14	130	843	600	399	1980	486	194	43	28	12	7.2		
3	13	101	729	636	367	1390	716	177	43	27	12	6.4		
4	13	84	553	1470	345	1180	636	160	47	26	12	6.4		
5	12	70	2470	928	311	871	570	146	49	26	11	6.3		
6	151	61	6860	634	275	659	528	138	44	25	10	6.4		
7	298	54	1940	489	248	530	528	135	41	23	9.7	6.4		
8	110	49	1090	404	226	446	550	128	39	22	9.5	6.4		
9	90	45	975	357	209	451	627	120	37	21	9.0	6.4		
10	138	42	1420	370	192	440	833	113	36	20	9.0	6.8		
11	105	73	1060	402	180	415	2250	104	35	19	9.2	7.2		
12	73	437	841	426	167	371	2060	98	36	18	9.3	7.5		
13	55	399	861	398	626	328	3390	94	36	18	8.9	8.7		
14	44	1070	1900	373	2930	299	2480	90	34	18	8.7	8.6		
15	36	1010	3110	371	2070	265	1490	86	32	17	9.3	7.4		
16	31	1700	1330	383	2160	244	997	81	31	17	9.1	6.8		
17	27	2640	854	734	2150	232	793	78	29	16	8.6	6.5		
18	25	1380	966	875	1280	238	647	76	28	16	8.3	8.7		
19	22	749	4230	694	950	224	551	71	27	15	8.1	21		
20	21	610	2020	540	921	212	513	68	28	14	7.9	16		
21	19	1060	1580	439	1010	199	568	65	29	14	7.5	11		
22	19	1210	1060	366	756	186	637	62	26	13	7.4	9.8		
23	18	1790	785	1180	599	172	614	59	24	13	7.2	9.2		
24	17	1260	616	1620	490	162	519	56	24	12	7.1	8.7		
25	16	860	537	1320	423	153	423	54	30	12	6.7	8.1		
26	16	767	1230	1830	418	148	358	52	30	12	6.3	11		
27	31	649	1360	1330	507	153	309	51	31	11	6.6	35		
28	964	493	1010	879	490	191	281	50	33	11	6.9	22		
29	834	392	2100	670	---	200	250	49	48	11	7.9	42		
30	648	359	1620	552	---	209	225	47	38	11	8.2	31		
31	314	---	981	493	---	339	---	45	---	12	8.1	---		
TOTAL	4189	19728	47797	22504	21148	15087	25206	2958	1053	549	273.5	352.5		
MEAN	135	658	1542	726	755	487	840	95.4	35.1	17.7	8.82	11.8		
MAX	964	2640	6860	1830	2930	2200	3390	211	49	31	12	42		
MIN	12	42	537	357	167	148	225	45	24	11	6.3	6.3		
CFSM	1.55	7.57	17.7	8.35	8.69	5.60	9.67	1.10	.40	.20	.10	.14		
IN.	1.79	8.45	20.46	9.63	9.05	6.46	10.79	1.27	.45	.24	.12	.15		
AC-FT	8310	39130	94810	44640	41950	29930	50000	5870	2090	1090	542	699		
CAL YR 1981	TOTAL	102083.8	MEAN	280	MAX	6860	MIN	6.3	CFSM	3.22	IN	43.70	AC-FT	202500
WTR YR 1982	TOTAL	160845.0	MEAN	441	MAX	6860	MIN	6.3	CFSM	5.08	IN	68.85	AC-FT	319000

UMPQUA RIVER BASIN

14310000 COW CREEK NEAR RIDDLE, OR

LOCATION.--Lat 42°55'25", long 123°25'40", in NE¼ sec.32, T.30 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.4 mi (0.6 km) upstream from Council Creek, 3.8 mi (6.1 km) southwest of Riddle, and at mile 6.7 (10.8 km).

DRAINAGE AREA.--456 mi² (1,181 km²).

PERIOD OF RECORD.--September 1954 to current year.

REVISED RECORDS.--WSP 1935: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 682.60 ft (208.056 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--28 years, 888 ft³/s (25.15 m³/s), 634,400 acre-ft/yr (793 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,400 ft³/s (1,090 m³/s) Jan. 15, 1974, gage height, 28.17 ft (8.586 m); minimum, 7.4 ft³/s (0.21 m³/s) Aug. 17-19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 29, 1950, reached a stage of about 28.5 ft (8.69 m), present site and datum, from slope-area measurement, discharge, 41,100 ft³/s (1,160 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (283 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 17	0300	11,800 334	12.77 3.892	Dec. 19	1600	14,900 422	14.92 4.548
Dec. 6	0830	*31,000 878	*24.42 7.443	Dec. 30	0030	10,900 309	12.08 3.682
Dec. 15	0730	11,600 329	12.60 3.840				

Minimum, 25 ft³/s (0.71 m³/s) Aug. 24-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	449	1990	3380	1530	5110	1540	741	204	148	48	35
2	56	317	2530	2770	1360	7550	1780	694	198	130	47	32
3	52	247	2290	2550	1250	4650	3340	649	192	124	46	31
4	49	207	1810	4800	1180	3580	3130	613	197	122	45	29
5	48	177	4310	4420	1080	2780	2630	569	217	121	44	29
6	62	158	24000	2920	984	2220	2560	534	209	115	42	29
7	536	142	8510	2210	906	1840	2480	516	195	108	40	29
8	263	130	4080	1830	843	1590	2270	500	184	101	40	29
9	190	122	2980	1600	790	1430	2280	486	177	94	39	29
10	235	115	4510	1560	733	1340	2700	462	167	89	37	29
11	219	124	3600	1680	691	1300	5730	439	157	85	37	30
12	179	808	2780	1820	649	1210	5670	415	155	80	38	31
13	141	887	2580	1690	918	1090	7770	395	157	75	37	33
14	117	2880	3820	1560	5300	1020	7530	380	155	72	36	36
15	99	3170	9870	1480	5360	994	5260	364	148	72	36	37
16	88	4410	5140	1470	5980	940	3520	349	141	69	37	37
17	80	9750	3150	2170	6810	928	2730	339	134	68	35	35
18	76	5650	2640	2990	4620	907	2230	340	127	66	33	38
19	72	2780	11100	2680	3320	867	1890	328	119	65	32	82
20	69	1830	9840	2120	2790	819	1710	310	123	64	31	77
21	64	2460	7770	1750	2960	777	1710	298	129	60	29	67
22	62	3950	4830	1420	2670	732	1770	287	118	59	27	60
23	62	5560	3370	2650	2230	693	1750	273	106	58	26	54
24	60	5390	2550	4110	1870	661	1540	258	109	57	26	49
25	59	3870	2180	4180	1630	637	1310	248	121	56	25	46
26	59	2920	2840	5060	1490	614	1140	238	123	54	25	52
27	62	2440	4390	5070	1650	603	1010	233	133	54	25	91
28	1390	1810	3610	3390	1560	671	931	224	137	53	25	94
29	1670	1370	5650	2480	---	718	853	217	191	52	34	114
30	1540	1140	8180	2000	---	719	791	211	174	50	42	126
31	746	---	4520	1730	---	1200	---	202	---	49	45	---
TOTAL	8465	65263	161420	81540	63154	50190	81555	12112	4697	2470	1109	1490
MEAN	273	2175	5207	2630	2256	1619	2719	391	157	79.7	35.8	49.7
MAX	1670	9750	24000	5070	6810	7550	7770	741	217	148	48	126
MIN	48	115	1810	1420	649	603	791	202	106	49	25	29
AC-FT	16790	129400	320200	161700	125300	99550	161800	24020	9320	4900	2200	2960
CAL YR 1981	TOTAL	327333	MEAN	897	MAX	24000	MIN	15	AC-FT	649300		
WTR YR 1982	TOTAL	533465	MEAN	1462	MAX	24000	MIN	25	AC-FT	1058000		

14311000 NORTH MYRTLE CREEK NEAR MYRTLE CREEK, OR

LOCATION.--Lat 43°02'30", long 123°15'30", in SW¼ sec.14, T.29 S., R.5 W., Douglas County, Hydrologic Unit 17100302, on left bank 300 ft (91 m) downstream from Bilger Creek, 1.5 mi (2.4 km) northeast of town of Myrtle Creek, and at mile 2.2 (3.5 km).

DRAINAGE AREA.--54.2 mi² (140.4 km²).

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 1738: 1957. WRD OR-79: 1978.

GAGE.--Water-stage recorder. Datum of gage is 642.81 ft (195.928 m) National Geodetic Vertical Datum of 1929 (levels by City Engineer of Myrtle Creek). Oct. 1, 1955, to Aug. 31, 1977, at site 340 ft (104 m) downstream on right bank. Oct. 1, 1955, to Sept. 30, 1975, at datum 1.63 ft (0.497 m) lower and Oct. 1, 1975, to Aug. 31, 1977, at datum 1.33 ft (0.405 m) lower.

REMARKS.--Records fair. No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years, 72.8 ft³/s (2.062 m³/s), 52,740 acre-ft/yr (65.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft³/s (105 m³/s) Dec. 6, 1981, gage height, 10.08 ft (3.072 m), from floodmark, from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 11.58 ft (3.530 m) Dec. 26, 1955 (backwater from debris), site and datum then in use; no flow at times in July 1973 and August 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft³/s (31.2 m³/s) and maximum (*) from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	a0800	*3,700 105	*b10.08 3.072	Dec. 29	1700	1,400 39.6	6.38 1.945
Dec. 14	2030	1,510 42.8	6.61 2.015				

Minimum, 0.38 ft³/s (0.011 m³/s) Aug. 25.

a Approximately.
b From floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

MAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	17	450	373	129	105	76	39	12	12	4.7	2.7
2	7.8	14	350	322	113	117	104	37	12	14	5.0	1.7
3	9.2	13	250	304	98	118	158	34	11	17	5.6	1.6
4	7.8	12	200	567	95	118	177	31	14	13	4.3	2.3
5	6.9	12	250	433	90	104	168	29	15	12	2.9	2.3
6	6.9	11	2000	308	85	92	153	26	14	11	2.1	2.2
7	10	11	530	229	80	95	149	25	13	10	1.8	1.9
8	11	11	301	186	76	85	140	25	12	9.2	1.9	1.9
9	13	11	225	160	72	80	126	25	11	7.5	1.7	1.7
10	21	11	202	156	68	80	118	24	9.8	6.3	3.7	4.8
11	29	14	172	157	66	85	131	23	9.8	5.5	4.1	5.3
12	24	60	173	160	64	75	103	22	11	5.4	3.8	5.5
13	19	36	185	157	100	70	110	21	12	5.2	3.3	4.8
14	16	70	674	149	147	68	141	20	11	6.9	2.8	4.0
15	13	65	996	143	144	66	173	19	9.5	5.7	3.0	3.0
16	11	150	445	143	135	64	158	18	8.4	5.3	1.6	2.5
17	10	300	289	214	176	62	135	19	7.6	5.3	1.2	2.5
18	9.2	200	231	265	188	60	100	19	7.4	4.6	1.4	3.5
19	8.3	120	583	246	235	58	80	18	6.6	4.1	1.4	8.0
20	8.3	75	556	201	213	56	65	17	6.8	3.5	1.2	7.0
21	7.8	120	476	170	183	54	58	16	7.0	3.3	1.1	5.0
22	8.3	200	344	145	161	52	61	15	5.7	3.5	1.2	4.0
23	7.8	350	272	311	141	52	61	14	5.1	3.4	1.3	3.5
24	7.8	450	218	387	122	50	60	14	5.1	2.5	1.1	3.5
25	7.8	250	215	380	108	50	57	13	7.4	2.0	.72	4.0
26	7.8	150	294	409	95	49	53	13	8.0	1.6	.95	5.0
27	7.8	120	341	405	95	48	49	12	12	1.4	1.5	10
28	12	90	326	309	95	62	48	13	11	2.0	1.5	9.0
29	18	70	913	229	---	62	45	12	13	2.1	3.2	14
30	31	60	724	182	---	61	42	11	12	3.6	4.5	12
31	21	---	460	153	---	73	---	11	---	4.8	3.4	---
TOTAL	387.3	3073	13645	7953	3374	2271	3099	635	300.2	193.7	77.97	139.2
MEAN	12.5	102	440	257	121	73.3	103	20.5	10.0	6.25	2.52	4.64
MAX	31	450	2000	567	235	118	177	39	15	17	5.6	14
MIN	6.9	11	172	143	64	48	42	11	5.1	1.4	.72	1.6
AC-FT	768	6100	27060	15770	6690	4500	6150	1260	595	384	155	276

CAL YR 1981 TOTAL 26955.62 MEAN 73.9 MAX 2000 MIN .53 AC-FT 53470
WTR YR 1982 TOTAL 35148.37 MEAN 96.3 MAX 2000 MIN .72 AC-FT 69720

NOTE.--No gage-height record Nov. 12 to Dec. 7.

UMPQUA RIVER BASIN

14311500 LOOKINGGLASS CREEK AT BROCKWAY, OR

LOCATION.--Lat 43°07'50", long 123°27'50", in SE¼SE¼ sec.13, T.28 S., R.7 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.7 mi (2.7 km) northwest of Brockway and at mile 2.85 (4.59 km).

DRAINAGE AREA.--158 mi² (409 km²).

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WSP 2135: Drainage area (former site).

GAGE.--Water-stage recorder. Altitude of gage is 540 ft (165 m), from topographic map. Prior to Oct. 5, 1967, water-stage recorder at site 2.3 mi (3.7 km) downstream at different datum.

REMARKS.--Records good. Some regulation by Ben Irving Reservoir 17 mi (27 km) upstream on Berry Creek, capacity, 11,200 acre-ft (13.8 hm³) since January 1980. Many diversions by pumping for irrigation above station. Discharge not adjusted for storage or release from Ben Irving Reservoir as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--24 years (water years 1956-79), 282 ft³/s (7.986 m³/s), 204,300 acre-ft/yr (252 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) Dec. 26, 1955, gage height, 24.93 ft (7.599 m), site and datum then in use, from rating curve extended above 7,200 ft³/s (204 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 25.28 ft (7.705 m) Dec. 23, 1964 (backwater from South Umpqua River, site and datum then in use); no flow at times each year prior to January 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,200 ft³/s (402 m³/s) Dec. 6, gage height, 17.71 ft (5.398 m); minimum, 0.08 ft³/s (0.002 m³/s) July 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	77	845	1190	378	984	462	102	22	18	2.4	4.7
2	8.5	52	972	1110	317	1560	746	95	22	15	5.7	3.9
3	7.8	40	802	2260	276	1190	1890	90	21	12	6.5	3.4
4	9.3	34	588	3410	243	1130	1670	84	22	11	6.6	4.0
5	8.1	30	2470	1910	215	901	1440	78	24	11	6.5	5.2
6	9.3	26	9540	1130	193	678	1550	67	22	11	4.8	4.8
7	29	23	2480	784	174	526	1400	62	21	10	3.6	3.4
8	32	21	1220	595	157	417	1010	60	18	7.4	3.0	3.1
9	24	19	886	478	147	356	808	60	17	5.5	2.7	4.0
10	43	18	1230	424	135	300	812	57	16	3.6	2.5	2.9
11	33	19	1050	421	126	297	1060	54	14	3.9	1.7	3.7
12	23	140	962	434	117	257	843	50	15	3.6	3.0	3.7
13	18	148	1010	399	317	232	1320	49	15	3.3	3.1	4.7
14	13	360	3800	356	1670	222	2140	44	15	2.4	3.5	3.7
15	12	365	4780	322	1220	217	1960	42	14	3.5	2.9	3.8
16	10	711	1940	313	1110	202	1270	40	12	4.3	3.2	3.9
17	8.9	2120	1140	499	1270	325	910	38	11	4.7	2.6	4.7
18	11	1220	946	795	1190	327	701	38	9.7	4.8	2.4	4.4
19	11	626	2930	754	1300	319	557	37	9.1	4.7	3.2	7.2
20	10	411	2260	587	1040	279	407	35	8.8	4.5	2.4	8.1
21	10	478	1740	482	891	246	331	33	11	3.3	2.5	9.6
22	11	813	1150	461	725	218	275	32	8.7	3.9	4.6	9.3
23	11	1580	900	2260	648	195	218	31	6.7	3.6	4.4	8.7
24	11	1380	673	1940	528	176	192	29	6.3	2.5	4.1	8.7
25	11	1040	577	1580	440	159	172	28	7.1	.87	4.5	7.7
26	11	858	1890	2090	386	148	153	27	9.8	.16	4.0	8.6
27	11	744	2250	2010	367	137	137	27	14	.11	3.6	11
28	71	563	1700	1230	322	147	128	26	15	.32	4.4	14
29	204	420	3860	814	---	134	116	24	23	.12	6.9	13
30	258	337	2670	599	---	156	109	22	23	.10	8.3	13
31	131	---	1520	473	---	428	---	21	---	2.0	7.5	---
TOTAL	1070.2	14673	60781	32110	15902	12863	24787	1482	453.2	161.18	127.1	190.9
MEAN	34.5	489	1961	1036	568	415	826	47.8	15.1	5.20	4.10	6.36
MAX	258	2120	9540	3410	1670	1560	2140	102	24	18	8.3	14
MIN	7.8	18	577	313	117	134	109	21	6.3	.10	1.7	2.9
AC-FT	2120	29100	120600	63690	31540	25510	49170	2940	899	320	252	379
CAL YR 1981	TOTAL	100855.35	MEAN	276	MAX	9540	MIN	.35	AC-FT	200000		
WTR YR 1982	TOTAL	164600.58	MEAN	451	MAX	9540	MIN	.10	AC-FT	326500		

14312000 SOUTH UMPQUA RIVER NEAR BROCKWAY, OR

LOCATION.--Lat 43°08'00", long 123°23'50", in SW¼ sec.15, T.28 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on right bank 10 ft (3 m) upstream from Winston Bridge on State Highway 99, 2.5 mi (4.0 km) northeast of Brockway, 4.2 mi (6.8 km) downstream from Lookingglass Creek, and at mile 132.8 (213.7 km).

DRAINAGE AREA.--1,670 mi² (4,325 km²).

PERIOD OF RECORD.--December 1905 to June 1912, October 1923 to September 1926, January 1942 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1946(M), 1948(M), 1951. WSP 1448: Drainage area. WRD Oreg. 1972: 1965(M).

GAGE.--Water-stage recorder. Datum of gage is 462.52 ft (140.976 m) National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to June 24, 1949, nonrecording gage at several sites within 400 ft (122 m) of present site at various datums. June 24, 1949, to Oct. 1, 1970, at datum 461.84 ft (140.769 m) National Geodetic Vertical Datum of 1929 (State Highway Department bench mark).

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

AVERAGE DISCHARGE.--48 years (water years 1907-11, 1924-26, 1943-82), 2,873 ft³/s (81.36 m³/s), 23.36 in/yr (593 mm/yr), 2,081,000 acre-ft/yr (2.57 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft³/s (3,540 m³/s) Dec. 23, 1964, gage height, 34.28 ft (10.449 m); minimum, 16 ft³/s (0.45 m³/s) Aug. 23, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 21, 1927, reached a stage of about 31.2 ft (9.51 m), present site and datum, discharge (revised), 89,500 ft³/s (2,530 m³/s). Discharge for flood of February 1890, which reached a stage 1.9 ft (0.60 m) higher, according to local resident who lived nearby at time of both floods, has been found to be in error and should not be used.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (566 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 17	0800	23,000 657	14.67 4.471	Dec. 19	2100	37,500 1,060	18.42 5.614
Dec. 6	1730	*77,600 2,200	*28.74 8.760	Dec. 29	2300	36,000 1,020	18.0 5.49
Dec. 15	1200	36,100 1,020	18.03 5.496	Feb. 16	1900	20,200 572	13.77 4.197

Minimum, 56 ft³/s (1.59 m³/s) Aug. 26, 27.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	216	1160	5440	12000	4770	8260	4400	2490	844	613	151	119		
2	183	892	9370	9870	4330	15500	4580	2410	831	544	153	104		
3	165	695	9800	10100	3830	10800	8410	2330	796	541	155	93		
4	155	573	6690	16600	3570	8810	8300	2200	779	570	156	88		
5	162	487	8310	13000	3280	7460	7050	2020	843	529	151	85		
6	157	425	58700	8610	3020	6180	6830	1920	835	501	142	86		
7	321	389	33200	6360	2760	5210	6480	1940	769	451	130	85		
8	741	356	14900	5230	2560	4570	5770	1990	702	407	126	77		
9	535	330	9750	4610	2410	4110	5350	1910	655	371	122	72		
10	646	310	11200	4690	2240	3840	5690	1760	622	339	120	76		
11	1120	312	9400	5250	2080	3930	10400	1600	607	322	123	86		
12	888	817	7600	5420	1990	3930	12400	1500	629	307	126	92		
13	615	1650	7230	5040	2130	3460	12800	1450	690	281	124	111		
14	432	3430	15600	4610	11800	3200	16000	1450	677	266	124	128		
15	367	5500	32700	4350	15600	3260	13100	1450	620	255	117	153		
16	311	7540	18300	4270	17200	3070	9230	1450	579	250	112	136		
17	272	20100	11200	5570	19600	3200	7270	1440	566	244	107	119		
18	251	13500	8240	8860	15200	3160	6010	1520	556	238	97	114		
19	236	7300	24800	8040	15600	3180	5120	1450	527	233	90	132		
20	220	4580	30100	6350	13600	3030	4520	1340	540	218	87	196		
21	205	4260	24100	5310	13300	2820	4280	1310	544	205	86	216		
22	195	8090	15100	4540	11600	2630	4320	1380	519	195	85	204		
23	190	12600	10900	7730	8860	2460	4470	1410	446	186	81	185		
24	186	14700	8270	11600	6790	2330	4310	1350	398	182	78	167		
25	179	11300	8830	14100	5660	2240	3860	1320	397	176	72	153		
26	176	7320	13200	15800	4870	2210	3430	1360	420	172	61	161		
27	176	5840	19800	16500	4670	2210	3120	1310	440	164	61	213		
28	624	4620	14000	11200	4590	2420	2930	1150	609	149	65	466		
29	2010	3530	23000	8010	---	2700	2830	1030	614	142	84	376		
30	2290	2930	28000	6330	---	2620	2600	937	685	146	103	430		
31	1650	---	15600	5390	---	3490	---	872	---	150	108	---		
TOTAL	15874	145536	513330	255340	207910	136290	195860	49049	18739	9347	3397	4723		
MEAN	512	4851	16560	8237	7425	4396	6529	1582	625	302	110	157		
MAX	2290	20100	58700	16600	19600	15500	16000	2490	844	613	156	466		
MIN	155	310	5440	4270	1990	2210	2600	872	397	142	61	72		
CFSM	.31	2.91	9.92	4.93	4.45	2.63	3.91	.95	.37	.18	.07	.09		
IN.	.35	3.24	11.43	5.69	4.63	3.04	4.36	1.09	.42	.21	.08	.11		
AC-FT	31490	288700	1018000	506500	412400	270300	388500	97290	37170	18540	6740	9370		
CAL YR 1981	TOTAL	1030159	MEAN	2822	MAX	58700	MIN	37	CFSM	1.69	IN	22.95	AC-FT	2043000
WTR YR 1982	TOTAL	1555395	MEAN	4261	MAX	58700	MIN	61	CFSM	2.55	IN	34.65	AC-FT	3085000

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR

LOCATION.--Lat 43°13'20", long 123°24'45", in NW¼SE¼ sec.16, T.27 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on left bank, 3.7 mi (6.0 km) west of Roseburg, and at mile 117.7 (189.4 km).

DRAINAGE AREA.--1,798 mi² (4,657 km²).

PERIOD OF RECORD.--Water years 1970 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1970 to current year.

pH: August 1971 to current year.

DISSOLVED OXYGEN: October 1970 to current year.

WATER TEMPERATURES: October 1970 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 423 micromhos Sept. 18, 1971; minimum, 41 micromhos Mar. 2, 3, 1972.

pH: Maximum, 10.0 units Sept. 8, 9, 1971; minimum, 5.0 units Sept. 29, 1971.

DISSOLVED OXYGEN: Maximum, 16.0 mg/l July 30, 1977; minimum, 0.4 mg/l Aug. 10, 1978.

WATER TEMPERATURES: Maximum, 35.0°C July 16, 1976; minimum, 0.0°C Dec. 14, 16, 1972, Jan. 9, 1974.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 247 micromhos Oct. 1; minimum recorded, 55 micromhos Dec. 30.

pH: Maximum recorded, 9.1 units July 20; minimum recorded, 6.8 units Aug. 8, 9.

DISSOLVED OXYGEN: Maximum recorded, 14.2 mg/l Sept. 13; minimum recorded, 3.6 mg/l July 20.

WATER TEMPERATURES: Maximum recorded, 28.0°C July 20; minimum, 2.0°C Feb. 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 06...	1430	400	195	7.8	16.0	8.6	230	230	70	17
NOV 04...	1500	550	80	7.4	10.0	9.4	450	76	53	13
DEC 02...	1030	11900	84	7.3	7.5	11.9	K800	K2300	31	6.8
JAN 11...	1130	4490	94	7.3	5.5	13.1	K620	1600	37	7.9
FEB 04...	0900	1190	98	7.4	5.0	13.0	120	110	37	8.1
MAR 04...	0810	8950	76	7.5	7.5	12.2	210	1100	32	6.9
APR 15...	1115	8000	70	7.4	7.5	12.1	K1300	1500	33	7.4
MAY 03...	1000	2300	90	7.8	12.5	10.9	93	K420	45	11
JUN 15...	1250	631	112	8.1	21.0	9.0	K11	120	46	11
JUL 07...	1140	500	124	8.4	21.0	9.5	100	940	49	12
AUG 11...	1230	122	177	8.1	23.0	8.4	38	1400	63	14
SEP 14...	1130	128	198	8.2	19.0	9.8	90	4500	75	17

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	PHOS- PHORUS, TOTAL (MG/L AS P)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 06...	6.6	15	.24	.400	.95	1.2	.64	.220	115	124
NOV 04...	5.1	7.4	.18	.160	.56	1.1	.34	.090	77	114
DEC 02...	3.4	--	.10	.120	.46	.68	.12	.100	66	2120
JAN 11...	4.2	--	.13	.140	.40	.53	.09	.010	70	849
FEB 04...	4.0	3.3	.12	.080	.59	--	.09	.050	65	209
MAR 04...	3.5	2.4	<.10	<.060	.26	--	.03	.050	54	1300
APR 15...	3.5	2.0	<.10	.090	.31	--	.06	.040	49	1060
MAY 03...	4.2	3.3	<.10	--	--	--	.18	--	77	478
JUN 15...	4.5	5.1	<.10	.130	1.10	--	.03	.120	66	112
JUL 07...	4.7	11	<.10	.070	.90	--	.12	.060	76	103
AUG 11...	6.8	12	.16	.370	1.20	1.4	.74	.260	136	44.8
SEP 14...	8.0	14	.23	.230	.90	1.1	.61	.310	134	46.3

UMPQUA RIVER BASIN

295

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)		
DATE										
OCT 06...	1	38	<1	<10	<3	3	31	<1		
FEB 04...	1	23	<1	<10	<3	2	150	2		
AUG 11...	1	<100	<1	<10	<1	2	30	<1		
	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)		
DATE										
OCT 06...	8	18	<.1	<1	<10	<1	<1	50		
FEB 04...	4	11	<.1	<1	<10	<1	<1	<3		
AUG 11...	10	<10	<.1	<1	<1	<1	<1	20		
	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)
DATE										
OCT 06...	<.01	<.10	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
FEB 04...	<.01	<.10	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
APR 15...	<.01	<.10	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
AUG 11...	<.01	<.10	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
	LINDANE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)
DATE										
OCT 06...	<.01	<.01	<.01	<.10	<.10	<.10	.03	<.01	<.01	<1
FEB 04...	<.01	<.01	<.01	<.10	<.10	<.10	<.01	<.01	<.01	<1
APR 15...	<.01	<.01	<.01	<.10	<.10	<.10	<.01	<.01	<.01	<1
AUG 11...	<.01	<.01	<.01	<.10	<.10	<.10	.01	<.01	<.01	<1

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

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	120	108	90	92	86	92	90	99	126	162	195
2	239	127	87	94	94	70	92	90	101	124	163	194
3	234	132	79	97	94	73	88	---	104	123	163	194
4	220	137	83	94	94	77	84	---	106	123	164	196
5	208	140	---	97	92	79	87	---	107	123	166	198
6	199	144	---	102	91	82	87	---	107	126	166	197
7	185	145	---	103	92	85	87	---	107	125	166	197
8	187	147	---	101	94	87	88	---	108	126	167	195
9	183	152	---	102	95	89	89	---	110	128	170	194
10	174	155	---	101	97	90	88	---	111	129	174	194
11	153	158	---	96	98	90	81	96	113	130	179	195
12	147	165	---	93	99	88	66	99	114	132	178	196
13	133	164	---	92	103	87	69	101	114	133	181	198
14	127	139	---	94	88	90	67	103	113	135	181	201
15	128	112	---	94	61	92	70	102	110	137	181	199
16	133	105	---	95	61	92	75	100	111	138	182	199
17	137	92	---	94	62	93	78	100	111	140	---	200
18	143	86	---	81	66	94	82	97	112	141	---	200
19	149	90	---	77	68	94	86	95	113	144	---	194
20	153	98	---	81	66	93	88	95	113	146	---	192
21	158	105	---	86	67	94	89	95	114	148	---	195
22	161	97	---	91	67	95	88	102	112	149	---	193
23	164	90	---	89	72	97	84	95	112	152	---	192
24	166	85	74	82	76	98	82	92	114	152	---	191
25	168	87	75	77	81	99	82	90	118	152	---	190
26	172	92	72	78	83	99	84	90	118	154	---	188
27	177	95	62	75	85	99	85	88	119	156	---	186
28	174	98	69	81	84	99	87	86	121	156	---	186
29	169	101	70	84	---	97	---	87	123	158	---	180
30	117	105	67	88	---	96	87	90	128	161	---	181
31	112	---	84	91	---	98	---	95	---	164	---	---
MEAN	168	119	78	90	83	90	83	95	112	140	171	194

UMPQUA RIVER BASIN

297

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	7.6	6.9	---	---	7.6	7.4	7.2	7.1	7.3	7.3	7.7	7.5
2	7.5	7.0	---	---	7.4	7.3	7.1	7.0	7.4	7.3	7.5	7.4
3	7.6	7.0	---	---	7.3	7.3	7.0	7.0	7.4	7.3	7.5	7.4
4	7.9	7.0	---	---	7.4	7.3	7.0	7.0	7.4	7.4	7.6	7.4
5	8.0	7.0	7.7	7.3	7.4	7.2	7.0	6.9	7.5	7.4	7.5	7.5
6	7.4	7.1	7.8	7.3	---	---	7.1	6.9	7.6	7.5	7.6	7.5
7	7.9	7.0	7.9	7.3	---	---	7.2	7.0	7.6	7.6	7.6	7.5
8	7.5	7.1	7.9	7.3	---	---	7.2	7.1	7.6	7.6	7.7	7.6
9	7.5	7.2	8.1	7.4	---	---	7.3	7.2	7.7	7.6	7.7	7.7
10	7.5	7.2	8.0	7.4	---	---	7.3	7.3	7.7	7.7	7.8	7.7
11	7.4	7.2	7.7	7.3	---	---	7.3	7.3	7.8	7.7	7.8	7.7
12	7.5	7.3	7.6	7.3	---	---	7.3	7.2	7.8	7.7	7.8	7.7
13	7.5	7.2	7.6	7.4	---	---	7.3	7.3	7.8	7.7	7.8	7.8
14	7.7	7.2	7.5	7.2	---	---	7.3	7.3	7.7	7.3	7.8	7.8
15	7.8	7.1	7.3	7.2	---	---	7.3	7.3	7.3	7.2	7.8	7.8
16	8.0	7.2	7.3	7.1	---	---	7.3	7.3	7.3	7.3	7.9	7.8
17	8.2	7.3	7.1	7.0	---	---	7.4	7.3	7.3	7.3	7.9	7.8
18	8.2	7.3	7.2	7.0	---	---	7.3	7.2	7.3	7.3	7.9	7.8
19	8.2	7.3	7.2	7.2	---	---	7.2	7.2	7.3	7.3	7.9	7.8
20	8.0	7.3	7.3	7.2	---	---	7.2	7.2	7.3	7.3	7.9	7.8
21	8.2	7.4	7.3	7.3	---	---	7.3	7.2	7.4	7.3	7.9	7.9
22	8.2	7.4	7.3	7.2	---	---	7.4	7.3	7.4	7.3	7.9	7.9
23	8.3	7.5	7.2	7.1	---	---	7.5	7.3	7.4	7.4	7.9	7.9
24	8.3	7.5	7.2	7.2	7.6	7.6	7.3	7.2	7.5	7.4	8.0	7.9
25	8.4	7.5	7.3	7.2	7.7	7.6	7.2	7.2	7.5	7.4	8.0	7.9
26	8.1	7.6	7.4	7.3	7.6	7.5	7.2	7.2	7.6	7.5	8.0	7.9
27	---	---	7.4	7.4	7.5	7.4	7.2	7.2	7.6	7.6	8.0	7.9
28	---	---	7.4	7.4	7.4	7.4	7.2	7.1	7.7	7.6	8.1	7.9
29	---	---	7.5	7.4	7.7	7.4	7.3	7.2	---	---	8.0	7.9
30	---	---	7.5	7.5	7.5	7.2	7.3	7.2	---	---	7.9	7.9
31	---	---	---	---	7.2	7.1	7.3	7.3	---	---	7.9	7.8
MONTH	8.4	6.9	8.1	7.0	7.7	7.1	7.5	6.9	7.8	7.2	8.1	7.4

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	7.8	7.8	7.9	7.8	8.6	7.4	8.2	7.4	8.8	7.0	8.9	7.2
2	7.8	7.6	8.0	7.8	8.5	7.4	8.2	7.4	8.9	7.1	8.9	7.2
3	7.7	7.5	---	---	8.3	7.4	8.3	7.3	9.0	7.1	8.7	7.1
4	7.5	7.5	---	---	8.2	7.5	8.4	7.4	9.0	7.1	8.9	7.1
5	7.5	7.5	---	---	8.1	7.5	8.4	7.4	9.0	7.0	8.8	7.1
6	7.5	7.5	---	---	8.1	7.5	8.6	7.4	9.0	6.9	9.0	7.1
7	7.5	7.5	---	---	7.9	7.5	8.5	7.3	8.9	6.9	8.9	7.1
8	7.6	7.5	---	---	8.0	7.5	8.5	7.2	9.0	6.8	8.9	7.1
9	7.6	7.6	---	---	8.0	7.4	8.6	7.1	8.4	6.8	8.0	7.1
10	7.6	7.6	---	---	8.1	7.4	8.6	7.1	8.7	6.9	8.7	7.0
11	7.6	7.3	8.5	8.0	7.9	7.3	8.5	7.1	8.6	7.0	8.8	7.1
12	7.4	7.3	8.5	8.1	7.7	7.2	8.6	7.1	8.7	7.3	8.5	7.1
13	7.4	7.3	8.5	7.9	7.8	7.2	8.4	7.0	8.7	7.3	8.9	7.1
14	7.4	7.3	8.6	7.9	7.8	7.4	8.5	7.0	8.8	7.3	8.7	7.2
15	7.3	7.3	8.5	7.9	8.0	7.5	8.7	7.0	8.8	7.3	8.8	7.2
16	7.4	7.3	8.5	7.9	8.2	7.5	8.7	7.1	8.8	7.3	8.8	7.3
17	7.4	7.4	8.4	7.9	8.2	7.5	8.7	7.0	---	---	8.8	7.3
18	7.5	7.4	8.4	7.8	8.2	7.4	8.8	7.1	---	---	8.8	7.3
19	7.5	7.4	8.4	7.8	8.3	7.4	8.8	7.0	---	---	8.4	7.2
20	7.6	7.5	8.5	7.8	8.0	7.3	8.9	7.0	---	---	8.3	7.1
21	7.6	7.5	8.7	7.8	8.1	7.2	8.8	7.0	---	---	8.4	7.2
22	7.6	7.6	8.8	7.8	8.3	7.3	8.9	7.0	---	---	8.4	7.3
23	7.6	7.6	8.7	7.6	8.4	7.3	9.0	7.0	---	---	8.5	7.3
24	7.7	7.6	8.8	7.6	8.4	7.3	9.0	7.0	---	---	8.5	7.2
25	7.7	7.7	8.9	7.5	8.4	7.2	9.1	7.0	---	---	8.4	7.2
26	7.7	7.7	8.8	7.6	8.2	7.2	8.9	7.0	---	---	7.9	7.2
27	7.8	7.7	8.9	7.6	8.3	7.2	8.7	6.9	---	---	8.3	7.2
28	7.8	7.7	8.9	7.5	7.8	7.3	9.0	7.0	---	---	8.2	7.3
29	---	---	9.0	7.5	8.0	7.3	8.7	7.0	---	---	8.3	7.5
30	7.9	7.8	8.9	7.4	8.1	7.4	8.7	6.9	---	---	8.3	7.4
31	---	---	8.2	7.4	---	---	8.8	6.9	---	---	---	---
MONTH	7.9	7.3	9.0	7.4	8.6	7.2	9.1	6.9	9.0	6.8	9.0	7.0

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	10.6	10.1	10.3	12.2	12.0	12.1	11.7	11.3	11.5
2	---	---	---	10.6	10.0	10.2	12.0	11.9	12.0	11.8	11.6	11.7
3	---	---	---	10.4	9.8	10.0	12.0	11.7	11.9	11.9	---	---
4	---	---	---	10.8	9.9	10.3	12.1	11.9	12.0	---	---	---
5	---	---	---	11.2	10.1	10.5	11.9	10.8	11.6	---	---	---
6	---	---	---	11.2	10.1	10.5	---	---	---	---	---	---
7	9.2	6.0	7.2	11.3	10.1	10.6	---	---	---	---	---	---
8	8.5	6.5	7.7	11.3	10.2	10.6	---	---	---	13.4	11.6	12.7
9	8.7	7.6	8.1	11.5	10.1	10.6	---	---	---	13.3	13.1	13.2
10	9.0	7.6	8.1	11.2	9.9	10.4	---	---	---	13.3	13.1	13.2
11	9.3	8.1	8.8	10.7	9.3	10.0	---	---	---	13.2	13.0	13.1
12	9.6	8.8	9.1	10.1	9.4	9.7	---	---	---	13.0	12.9	13.0
13	10.0	9.0	9.4	10.2	9.9	10.0	---	---	---	13.1	13.0	13.1
14	10.2	9.1	9.5	10.3	9.9	10.2	---	---	---	13.0	13.0	13.0
15	10.4	9.1	9.6	10.6	10.3	10.4	---	---	---	13.1	13.0	13.1
16	10.5	9.0	9.6	10.7	10.5	10.6	---	---	---	13.1	12.8	13.0
17	10.8	8.9	9.5	10.6	10.3	10.4	---	---	---	12.9	12.7	12.8
18	10.8	8.9	9.6	10.9	10.6	10.8	---	---	---	12.7	12.5	12.6
19	10.7	8.6	9.5	11.0	10.9	10.9	---	---	---	12.8	12.5	12.7
20	10.3	8.5	9.3	11.0	10.9	11.0	---	---	---	12.7	12.6	12.7
21	10.9	8.6	9.6	11.0	10.9	11.0	---	---	---	12.9	12.7	12.7
22	11.1	8.8	9.8	11.0	10.9	10.9	---	---	---	13.1	12.9	13.0
23	11.2	8.9	9.9	11.0	10.9	11.0	12.0	---	---	13.1	12.7	12.9
24	11.4	8.9	9.9	11.1	11.0	11.0	12.0	11.9	12.0	12.7	12.3	12.5
25	11.4	9.0	10.0	11.3	11.1	11.3	12.0	12.0	12.0	12.4	12.1	12.3
26	10.8	8.9	9.7	11.5	11.3	11.4	12.1	11.8	11.9	12.2	12.0	12.1
27	10.6	8.7	9.4	11.7	11.5	11.6	12.1	11.8	12.0	12.2	11.9	12.1
28	10.1	8.2	8.9	11.8	11.7	11.8	12.0	11.7	11.8	12.3	11.9	12.0
29	9.8	8.9	9.5	12.1	11.8	12.0	12.2	11.7	11.9	12.5	12.3	12.4
30	10.2	9.8	10.1	12.2	12.1	12.2	12.3	10.6	11.9	12.7	12.5	12.6
31	10.6	10.1	10.4	---	---	---	11.6	10.4	11.5	12.8	12.6	12.7
MONTH	11.4	6.0	9.3	12.2	9.3	10.7	12.3	10.4	11.9	13.4	11.3	12.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	12.9	12.8	12.8	11.7	11.2	11.5	13.1	12.8	13.0	---	---	---
2	13.0	12.9	13.0	11.3	11.1	11.2	13.0	12.7	12.9	---	---	---
3	13.1	12.9	13.0	11.2	11.0	11.1	12.8	12.6	12.7	---	---	---
4	13.3	13.0	13.1	12.2	11.0	11.7	12.9	12.4	12.7	---	---	---
5	13.6	13.3	13.5	12.4	12.1	12.3	12.9	12.7	12.8	---	---	---
6	13.9	13.6	13.8	12.4	12.2	12.3	13.1	12.9	13.0	---	---	---
7	14.0	13.7	13.9	12.5	12.4	12.4	13.1	12.5	13.0	---	---	---
8	13.9	13.7	13.8	12.6	12.5	12.6	12.5	12.1	12.4	---	---	---
9	13.8	13.6	13.7	12.8	12.4	12.6	12.4	11.9	12.2	---	---	---
10	13.7	13.5	13.6	12.8	12.5	12.6	12.0	11.6	11.8	---	---	---
11	13.8	13.5	13.6	12.9	12.8	12.8	11.9	11.5	11.7	11.2	10.1	10.6
12	13.9	13.7	13.8	13.1	12.9	13.0	12.3	11.9	12.2	11.1	10.0	10.5
13	13.7	13.0	13.5	13.2	13.0	13.1	12.6	12.3	12.4	11.3	9.9	10.6
14	13.0	12.4	12.6	13.1	13.0	13.1	12.7	12.6	12.6	11.2	9.8	10.4
15	12.4	12.2	12.3	13.2	12.3	13.0	12.6	11.7	12.3	11.3	9.8	10.4
16	12.2	12.1	12.2	12.4	11.9	12.1	12.7	12.5	12.6	11.4	9.7	10.5
17	12.1	11.9	12.0	12.7	12.4	12.6	---	---	---	11.4	9.9	10.5
18	12.0	11.8	11.9	13.0	12.7	12.8	---	---	---	11.7	10.2	10.9
19	11.9	11.6	11.8	13.0	12.7	12.9	---	---	---	12.1	10.5	11.2
20	11.6	11.3	11.4	13.3	13.0	13.1	---	---	---	12.3	10.4	11.3
21	11.8	11.3	11.5	13.4	12.6	13.1	---	---	---	12.3	10.0	11.1
22	12.1	11.8	12.0	13.2	12.7	13.0	---	---	---	12.4	9.8	10.9
23	12.1	12.0	12.0	13.0	12.6	12.8	---	---	---	12.6	9.8	11.0
24	12.1	11.9	12.0	12.8	12.5	12.7	---	---	---	12.8	9.6	11.1
25	12.1	11.8	12.0	12.8	12.3	12.6	---	---	---	12.6	9.3	10.7
26	12.1	12.0	12.1	12.7	12.2	12.4	---	---	---	12.2	9.2	10.5
27	12.0	11.8	11.9	12.6	12.1	12.4	---	---	---	13.2	9.9	11.2
28	11.8	11.5	11.6	12.9	12.1	12.5	---	---	---	13.4	9.9	11.4
29	---	---	---	13.1	12.5	12.9	---	---	---	13.3	9.5	11.2
30	---	---	---	13.2	12.8	13.0	---	---	---	13.9	9.3	11.2
31	---	---	---	13.2	12.9	13.0	---	---	---	11.7	9.4	10.5
MONTH	14.0	11.3	12.7	13.4	11.0	12.6	13.1	11.5	12.5	13.9	9.2	10.8

UMPQUA RIVER BASIN

299

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	12.7	9.9	11.0	9.1	7.4	8.1				13.1	4.6	8.5
2	12.3	9.7	10.9	8.9	7.4	8.1				13.4	4.8	8.9
3	12.3	10.0	11.1	9.3	7.5	8.3				12.8	5.3	9.3
4	12.2	10.1	10.9	9.2	7.1	8.3				14.1	6.0	9.7
5	11.7	9.9	10.7	9.5	7.6	8.5				13.0	6.4	9.4
6	11.7	9.8	10.6	9.7	7.4	8.6				12.6	7.1	9.7
7	11.7	10.2	10.9	9.8	7.2	8.3				13.6	5.4	9.3
8	11.6	9.7	10.6	10.0	6.5	8.2				13.4	5.4	9.2
9	10.6	8.8	9.8	10.2	6.3	8.0				9.7	4.9	7.5
10	9.6	7.2	8.7	10.1	6.2	7.7				13.6	5.6	9.5
11	8.1	6.9	7.4	10.3	5.6	7.7				13.7	6.2	9.9
12	8.5	7.2	7.9	10.5	5.3	7.7				12.6	6.1	9.0
13	9.5	7.8	8.7	9.4	4.9	7.2				14.2	6.8	10.3
14	9.5	8.3	8.9	10.5	4.7	7.4				12.4	7.6	9.3
15	9.2	7.8	8.5	11.7	5.1	8.3				12.4	6.6	9.2
16	8.8	7.3	8.0	12.1	5.4	8.4				12.1	7.4	9.6
17	8.3	6.9	7.6	12.0	4.6	8.1				12.4	7.2	9.6
18	7.9	6.3	7.1	12.2	4.7	8.0				12.5	7.0	9.4
19	7.5	6.0	6.7	12.7	4.4	8.0				10.7	6.5	8.3
20	7.4	5.9	6.5	12.7	3.6	7.5				10.8	6.3	8.1
21	7.4	5.9	6.6	11.8	4.0	7.4				10.9	6.9	8.5
22	7.4	5.7	6.6	12.8	4.6	8.2				10.8	7.3	8.6
23	7.2	5.5	6.4	13.5	4.2	9.4				11.1	7.4	8.8
24	7.0	5.2	6.0	12.6	8.2	9.3				10.6	7.0	8.5
25	8.1	5.0	6.4	---	---	---				10.6	6.9	8.4
26	7.5	5.7	6.6	---	---	---				9.2	7.4	8.2
27	8.0	5.9	6.8	---	---	---				10.9	6.8	8.7
28	7.3	5.8	6.7	---	---	---				10.7	8.2	9.2
29	7.8	6.3	7.1	---	---	---				10.9	8.8	9.6
30	9.0	6.5	7.6	---	---	---				11.2	8.7	9.7
31	---	---	---	---	---	---				---	---	---
MONTH	12.7	5.0	8.3	13.5	3.6	8.1				14.2	4.6	9.1

UMPQUA RIVER BASIN

14312260 SOUTH UMPQUA RIVER NEAR ROSEBURG, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.5	15.5	11.5	10.0	7.5	6.5	7.0	6.0	6.0	5.5	7.5	6.5
2	18.0	16.5	11.5	10.5	8.5	7.5	6.0	5.5	6.0	5.0	7.5	7.0
3	18.0	16.5	11.5	10.5	8.5	8.0	6.0	5.5	6.0	5.0	7.5	7.0
4	17.0	15.5	10.5	9.5	9.0	8.5	6.5	6.0	5.5	4.5	8.0	7.5
5	17.0	15.5	10.5	9.5	10.0	9.0	6.5	5.5	4.5	3.5	8.5	7.5
6	16.5	16.0	10.5	9.5	---	---	5.5	5.0	3.5	2.5	8.0	7.5
7	17.0	15.5	10.5	9.5	---	---	5.0	4.0	3.0	2.5	8.0	7.0
8	15.5	15.0	10.5	9.5	---	---	4.0	3.5	3.0	2.0	8.0	7.5
9	15.0	15.0	11.0	10.0	---	---	4.5	4.0	3.5	2.5	9.5	8.0
10	15.0	14.5	11.5	10.5	---	---	5.0	4.5	3.5	2.5	9.5	9.0
11	14.5	13.5	11.5	11.0	---	---	5.5	5.0	3.5	3.0	9.5	8.5
12	14.0	13.0	12.5	11.5	---	---	6.0	5.5	3.0	3.0	8.5	7.5
13	13.5	12.0	12.0	11.0	---	---	6.0	5.5	5.5	3.0	8.5	7.5
14	13.0	12.0	11.0	10.5	---	---	5.5	5.0	6.5	5.5	7.5	7.0
15	13.5	11.5	10.5	9.5	---	---	5.5	5.0	7.0	6.5	8.0	6.5
16	14.0	11.5	9.5	9.5	---	---	6.0	5.0	7.5	7.0	8.0	7.0
17	14.0	12.0	10.0	9.5	---	---	6.5	6.0	8.0	7.5	7.5	6.5
18	14.5	12.5	10.0	9.0	---	---	6.5	6.0	7.5	7.0	8.0	6.5
19	15.0	13.0	9.0	8.5	---	---	6.0	5.5	8.0	7.0	7.5	7.0
20	14.0	13.0	9.5	9.0	---	---	5.5	5.5	8.5	8.0	8.0	6.5
21	14.5	13.0	10.0	9.5	---	---	5.5	5.0	8.5	7.0	8.0	6.5
22	14.0	12.5	10.0	9.5	---	---	5.0	5.0	7.0	6.0	8.5	6.5
23	13.5	13.0	9.5	9.5	---	---	6.5	5.0	6.0	5.5	9.0	7.5
24	13.5	12.5	9.5	9.0	7.5	7.0	7.0	6.5	6.0	5.5	10.0	8.5
25	14.0	12.5	9.0	8.5	8.0	7.5	7.5	6.5	5.5	5.0	10.0	9.5
26	13.5	13.0	8.5	7.5	8.0	7.5	7.0	6.5	5.5	5.0	10.0	9.5
27	14.0	13.0	7.5	7.5	7.5	7.5	6.5	6.0	7.0	5.5	9.5	9.0
28	13.5	13.0	8.0	7.0	7.5	7.0	6.5	6.0	7.0	6.5	9.0	8.5
29	13.0	11.0	7.0	6.5	7.5	7.0	6.5	6.0	---	---	9.0	7.5
30	11.0	10.5	6.5	6.5	7.5	7.5	6.0	5.5	---	---	7.5	6.5
31	10.5	10.0	---	---	7.5	7.0	6.5	5.5	---	---	7.5	6.0
MONTH	18.5	10.0	12.5	6.5	10.0	6.5	7.5	3.5	8.5	2.0	10.0	6.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	6.0	13.5	12.0	18.0	17.0	22.0	20.5	21.5	20.0	25.0	21.0
2	7.0	6.5	13.0	12.0	18.5	17.0	21.0	19.5	21.0	19.0	25.5	22.5
3	7.0	6.5	---	12.0	18.0	17.0	21.0	19.0	21.0	18.5	24.5	22.5
4	7.5	6.5	---	---	18.0	17.0	21.0	19.5	23.0	19.0	25.0	22.0
5	7.0	6.5	---	---	17.0	16.5	22.0	19.5	24.0	20.0	24.0	21.5
6	6.5	6.0	---	---	17.0	16.5	22.5	20.0	25.0	20.5	24.0	21.0
7	8.0	6.5	---	---	17.5	16.5	22.5	20.5	25.0	22.0	24.0	21.0
8	9.0	7.5	---	---	19.0	17.0	24.0	20.0	27.5	23.5	24.5	21.5
9	9.5	8.0	---	---	21.0	18.5	24.5	21.0	25.0	23.0	23.0	20.5
10	9.0	8.0	---	---	23.0	20.0	25.5	21.5	24.5	22.0	22.0	19.0
11	9.0	8.0	14.0	12.0	21.5	20.0	26.5	22.0	25.0	22.0	21.5	19.0
12	8.5	8.0	15.0	13.0	20.0	18.5	27.0	23.0	24.0	21.5	21.5	20.5
13	8.5	8.0	16.5	14.0	19.5	18.0	25.0	23.5	25.5	21.5	21.5	18.5
14	8.0	7.0	17.5	15.0	20.5	18.5	25.0	23.0	23.5	22.0	20.5	18.5
15	7.5	6.5	17.5	15.5	21.5	19.5	24.0	21.5	25.0	21.0	20.5	17.5
16	8.5	7.0	18.0	15.5	23.0	20.5	24.5	21.0	25.0	21.0	20.5	17.5
17	9.0	8.0	17.0	16.0	24.5	21.5	25.0	21.5	---	---	20.0	18.0
18	9.5	8.0	16.5	15.0	26.5	23.0	26.5	22.5	---	---	20.5	18.0
19	10.0	8.5	16.0	14.0	27.5	24.5	27.5	23.5	---	---	20.0	18.5
20	11.0	8.5	17.0	14.5	26.0	24.5	28.0	24.0	---	---	20.0	18.5
21	12.0	9.5	18.5	15.5	26.5	24.5	26.0	23.5	---	---	20.0	18.0
22	13.0	10.5	19.0	16.5	27.0	24.5	26.0	22.5	---	---	20.0	18.0
23	13.5	11.0	19.0	17.0	27.0	24.5	26.0	22.5	---	---	21.0	18.5
24	12.5	11.0	20.0	17.0	26.5	24.5	26.0	22.0	---	---	21.0	19.0
25	12.0	10.5	20.5	18.5	25.5	23.5	26.5	22.5	---	---	20.5	19.0
26	13.0	10.5	19.5	17.5	24.5	23.0	26.0	22.5	---	---	19.0	18.0
27	13.0	11.0	18.5	16.5	24.0	22.0	26.0	23.0	---	---	18.5	17.0
28	13.0	11.5	18.0	16.0	22.5	20.5	24.5	22.5	---	---	18.0	17.0
29	---	---	19.0	16.5	21.0	20.0	23.5	22.0	---	---	17.5	16.5
30	13.5	11.5	19.5	17.5	21.0	20.0	23.0	21.5	---	---	17.0	15.5
31	---	---	19.5	17.5	---	---	22.5	21.0	---	---	---	---
MONTH	13.5	6.0	20.5	12.0	27.5	16.5	28.0	19.0	27.5	18.5	25.5	15.5

UMPQUA RIVER BASIN

301

14312500 LAKE CREEK NEAR DIAMOND LAKE, OR

LOCATION.--Lat 43°11'10", long 122°09'55", in NW¼SW¼ sec.30, T.27 S., R.6 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on right bank 260 ft (79 m) downstream from outlet of Diamond Lake, 1.5 mi (2.6 km) northwest of town of Diamond Lake, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--54.9 mi² (142.2 km²).

PERIOD OF RECORD.--May 1922 to September 1925 (no winter records), October 1926 to September 1929, April, July, August 1930, October 1930 to September 1953, October 1971 to October 1977, February 1978 to current year. Prior to October 1971 published as "at Diamond Lake, near Fort Klamath."

GAGE.--Water-stage recorder. Altitude of gage is 5,180 ft (1,580 m), from river-profile map. Prior to May 26, 1931, nonrecording gage at site 300 ft (91 m) downstream at different datum. May 26, 1931, to Oct. 6, 1933, nonrecording gage at present site and datum.

REMARKS.--Records fair. Flow regulated by gates and fish racks at lake outlet. No diversion above station.

AVERAGE DISCHARGE.--36 years (water years 1927-29, 1931-53, 1972-77, 1979-82), 56.2 ft³/s (1.592 m³/s), 40,720 acre-ft/yr (50.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 336 ft³/s (9.52 m³/s) Jan. 1, 1943, gage height, 2.8 ft (0.85 m), from rating curve extended above 120 ft³/s (3.40 m³/s); no flow Aug. 25-27, 1931, Sept. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 227 ft³/s (6.43 m³/s) Nov. 21, gage height, 2.59 ft (0.789 m); minimum, 8.4 ft³/s (0.24 m³/s) Aug. 23, 24.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	28	95	140	78	111	62	58	73	112	16	13
2	9.5	26	97	139	75	109	62	58	75	103	17	13
3	9.5	25	94	141	72	109	60	57	74	104	17	14
4	9.5	25	91	144	70	109	60	57	76	101	17	14
5	10	34	97	140	68	107	60	56	77	99	17	14
6	14	61	112	136	66	102	58	34	78	95	17	15
7	18	77	113	133	64	96	56	11	76	92	18	15
8	22	73	111	128	62	92	56	12	76	88	19	15
9	28	69	112	124	61	90	60	14	74	85	20	16
10	30	63	117	120	60	87	64	16	73	82	20	16
11	30	61	126	116	58	89	70	18	73	81	20	16
12	28	65	125	113	57	86	78	19	99	80	20	17
13	28	70	127	110	65	82	80	21	135	79	21	18
14	26	79	134	107	83	80	78	24	132	76	21	17
15	24	133	141	104	92	78	76	26	131	72	22	17
16	22	184	139	100	102	75	76	28	129	71	18	17
17	22	205	135	98	104	73	74	32	128	70	15	18
18	22	200	138	100	104	71	74	35	128	68	15	21
19	22	194	161	98	114	70	72	37	127	67	18	22
20	22	201	166	95	114	68	70	40	127	67	17	25
21	22	213	154	92	116	66	70	43	126	65	17	26
22	22	205	150	92	116	66	68	48	124	63	18	25
23	22	213	146	94	115	66	68	52	122	61	15	27
24	22	164	145	93	114	64	68	59	121	60	8.7	28
25	22	109	144	91	112	64	66	63	122	59	9.0	29
26	22	108	145	94	109	64	64	67	124	59	9.4	36
27	26	106	146	94	109	62	63	68	125	35	9.8	37
28	25	101	146	90	109	62	62	70	124	15	10	39
29	26	95	145	87	---	62	61	71	123	16	11	43
30	29	93	142	84	---	62	60	73	122	16	12	41
31	28	---	140	81	---	62	---	73	---	16	12	---
TOTAL	672.5	3280	4034	3378	2469	2484	1996	1340	3194	2157	496.9	664
MEAN	21.7	109	130	109	88.2	80.1	66.5	43.2	106	69.6	16.0	22.1
MAX	30	213	165	144	116	111	80	73	135	112	22	43
MIN	9.5	25	91	81	57	62	56	11	73	15	8.7	13
AC-FT	1330	6510	8000	6700	4900	4930	3960	2660	6340	4280	986	1320

CAL YR 1981 TOTAL 16961.6 MEAN 46.5 MAX 213 MIN 5.7 AC-FT 33640
WTR YR 1982 TOTAL 26165.4 MEAN 71.7 MAX 213 MIN 8.7 AC-FT 51900

NOTE.--No gage-height record Mar. 20 to Apr. 19.

UMPQUA RIVER BASIN

14313000 LEMOLO LAKE NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°19'10", long 122°11'20", in SE¼NW¼ sec.11, T.26 S., R.5 E., Douglas County, Hydrologic Unit 17100301, at Lemolo No. 1 diversion dam on North Umpqua River, 0.8 mi (1.3 km) downstream from Lake Creek, 13.0 mi (20.9 km) east of town of Toketee Falls, and at mile 93.01 (149.7 km).

DRAINAGE AREA.--170 mi² (440 km²).

PERIOD OF RECORD.--July 1954 to current year. Prior to October 1960, published as Lemolo Reservoir near Toketee Falls.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

REMARKS.--Lake is formed by Lemolo No 1 diversion dam. Storage began July 15, 1954. Usable capacity for normal operation, 12,520 acre-ft (15.4 hm³) between elevations 4,097.0 ft (1,248.77 m) and 4,148.5 ft (1,264.46 m). Dead storage below 4,097.0 ft (1,248.77 m), 1,040 acre-ft (1.28 hm³). Water is used for power generation. Figures given herein represent total contents.

COOPERATION.--Gage readings furnished by Pacific Power & Light Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 14,000 acre-ft (17.3 hm³) Dec. 24, 1964, elevation, 4,149.5 ft (1,264.77 m); minimum observed, 11 acre-ft (13,600 m³) Mar. 5, 1955, elevation, 4,055.4 ft (1,236.09 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 13,330 acre-ft (16.4 hm³) June 21, 22, Sept 7, elevation, 4,147.95 ft (1,264.295 m); minimum observed, 1,420 acre-ft (1.75 hm³) Apr. 28, elevation, 4,101.5 ft (1,250.14 m).

MONTHEND ELEVATION AND CONTENTS AT 0900, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	4,145.8	12,440	-
Oct. 31.....	4,129.2	6,750	-5,690
Nov. 30.....	4,133.2	7,970	+1,220
Dec. 31.....	4,141.6	10,820	+2,850
CAL YR 1981.....	-	-	+1,970
Jan. 31.....	4,123.4	5,120	-5,700
Feb. 28.....	4,141.2	10,670	+5,550
Mar. 31.....	4,125.3	5,630	-5,040
Apr. 30.....	4,104.3	1,690	-3,940
May 31.....	4,137.6	9,410	+7,720
June 30.....	4,146.8	12,850	+3,440
July 31.....	4,147.1	12,970	+120
Aug. 31.....	4,147.8	13,270	+300
Sept. 30.....	4,142.1	11,010	-2,260
WTR YR 1982.....	-	-	-1,430

14313501 NORTH UMPQUA RIVER BELOW LEMOLO LAKE, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°19'20", long 122°11'40", in NW¼NW¼ sec.11, T.26 S., R.5 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on right bank 0.4 mi (0.6 km) downstream from Lemolo Lake, 13 mi (21 km) east of town of Toketee Falls, and at mile 92.6 (148.9 km).

DRAINAGE AREA.--170 mi² (440 km²).

PERIOD OF RECORD.--October 1927 to December 1945, March 1946 to current year. Published as "below Lake Creek" prior to October 1952, as "below Lake Creek, near Toketee Falls" October 1952 to September 1953, and as "below Lemolo Reservoir near Toketee Falls" October 1953 to September 1960.

REVISED RECORDS.--WSP 1448: Drainage area. WRD OR-75-1: 1964(M).

GAGE.--Water-stage recorder. Altitude of gage is 4,025 ft (1,227 m), from river-profile map. Prior to July 15, 1954, at site 1 mi (2 km) upstream at datum about 65 ft (19.8 m) higher. July 15, 1954, to Sept. 25, 1955, at site 400 ft (122 m) upstream at datum 14.11 ft (4.301 m) higher.

REMARKS.--Records good. Flow regulated since 1954 by Lemolo Lake (see station 14313000); also slightly regulated by Diamond Lake. All records given herein include flow in Lemolo No. 1 power canal which, beginning July 1955, diverts 0.4 mi (0.6 km) above station for power generation with return flow 4.3 mi (6.9 km) downstream.

COOPERATION.--Records of daily power plant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--54 years, 422 ft³/s (11.95 m³/s), 33.71 in/yr (856 mm/yr), 305,700 acre-ft/yr (377 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 4,600 ft³/s (130 m³/s) Dec. 25, 1964, from rating curve extended above 450 ft³/s (12.7 m³/s) on basis of slope-area measurement of peak flow, gage height, 9.20 ft (2.804 m), from floodmark; minimum, 6.4 ft³/s (0.18 m³/s) July 17, 1954.

Combined flow, maximum discharge, 4,680 ft³/s (133 m³/s) Dec. 25, 1964, from river rating curve extended above 450 ft³/s (12.7 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 9.7 ft³/s (0.27 m³/s) May 13, 1955.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 1,300 ft³/s (36.8 m³/s) Dec. 19, gage height, 7.65 ft (2.332 m); minimum, 22 ft³/s (0.62 m³/s) Jan. 18-21.

Combined flow, maximum daily discharge, 912 ft³/s (25.8 m³/s) May 27; minimum daily, 139 ft³/s (3.94 m³/s) Oct. 9.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	276	444	542	569	542	576	553	517	591	614	389	471
2	269	443	510	568	541	574	554	513	570	595	522	488
3	253	448	485	325	537	572	553	518	573	581	518	479
4	250	449	535	406	536	572	552	552	573	584	517	475
5	268	346	449	561	542	572	554	550	574	584	454	383
6	237	375	197	563	537	573	555	553	577	583	526	383
7	222	393	181	561	530	570	557	546	580	582	453	476
8	236	395	198	559	482	572	551	502	581	529	428	489
9	139	395	315	567	491	570	545	512	580	571	500	455
10	226	385	436	568	483	570	543	511	575	552	519	483
11	385	378	487	566	525	572	484	508	582	490	520	453
12	504	382	502	565	516	570	460	517	582	513	517	451
13	525	364	488	565	500	569	546	519	583	552	514	509
14	521	250	248	566	281	569	546	522	580	552	405	518
15	519	173	388	564	172	568	549	523	579	551	368	522
16	538	159	542	562	196	567	551	514	581	530	493	519
17	535	166	542	558	209	567	550	564	622	537	519	518
18	541	202	553	557	215	567	550	453	649	541	519	517
19	536	309	664	558	215	568	550	508	650	538	526	516
20	538	402	752	562	219	567	545	565	653	521	489	517
21	555	456	698	564	239	559	539	618	680	521	371	515
22	534	497	660	566	228	551	544	535	697	518	372	518
23	475	499	608	568	405	551	549	419	695	515	474	528
24	470	528	570	567	566	548	550	542	698	516	468	531
25	473	539	568	536	576	543	541	636	686	440	469	535
26	472	537	553	535	577	555	548	681	674	511	465	514
27	470	536	570	531	577	554	552	912	675	501	466	524
28	446	539	569	533	576	552	524	907	674	515	431	436
29	433	538	570	537	---	550	524	732	672	512	436	521
30	444	544	567	538	---	554	517	705	640	513	417	520
31	441	---	568	545	---	554	---	657	---	389	482	---
TOTAL	12731	12071	15515	16890	12013	17476	16236	17811	18626	16551	14547	14764
MEAN	411	402	500	545	429	564	541	575	621	534	469	492
MAX	555	544	752	569	577	576	557	912	698	614	526	535
MIN	139	159	181	325	172	543	460	419	570	389	368	383
AC-FT	25250	23940	30770	33500	23830	34660	32200	35330	36940	32830	28850	29280
MEAN†	318	423	547	452	529	482	475	700	679	536	474	454
CFSM†	1.87	2.49	3.22	2.66	3.11	2.84	2.79	4.12	3.99	3.15	2.79	2.67
IN.†	2.16	2.78	3.71	3.07	3.24	3.27	3.12	4.75	4.45	3.63	3.22	2.98
AC-FT†	19560	25160	33620	27800	29380	29620	28260	43050	40380	32950	29150	27020

CAL YR 1981 TOTAL 128851 MEAN 353 MAX 752 MIN 113 AC-FT 255600 MEAN† 356 CFSM† 2.09 IN.† 28.42 AC-FT† 257600
WTR YR 1982 TOTAL 185231 MEAN 507 MAX 912 MIN 139 AC-FT 367400 MEAN† 506 CFSM† 2.98 IN.† 40.37 AC-FT† 366000

† Adjusted for change in contents in Lemolo Lake.

LOCATION.--Lat 43°14'40", long 122°17'10", in SW¼ sec.1, T.27 S., R.4 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on right bank 900 ft (274 m) downstream from Clearwater No. 1 diversion dam, 0.4 mi (0.6 km) upstream from Trap Creek, 8.7 mi (14.0 km) east of town of Toketee Falls, and at mile 7.8 (12.6 km).

PERIOD OF RECORD.--October 1927 to December 1945, March 1946 to current year. Monthly discharge only December 1927 to March 1928, published in WSP 1318. Prior to October 1952, published as "above Trap Creek."

GAGE.--Water-stage recorder. Datum of gage is 3,862.84 ft (1,177.394 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.). Prior to Dec. 1, 1953, at two sites about 0.4 mi (0.6 km) downstream at different datums.

COOPERATION.--Records of daily power plant generation furnished by Pacific Power and Light Co.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 848 ft³/s (24.0 m³/s) Dec. 23, 1964, gage height, 7.19 ft (2.192 m); maximum gage height, 7.87 ft (2.399 m) Dec. 23, 1964, log jam; minimum discharge, 0.08 ft³/s (0.002 m³/s) Sept. 21, 1977, result of beavers plugging release gate at diversion dam 900 ft (274 m) upstream.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 239 ft³/s (6.77 m³/s) May 13, gage height, 4.76 ft (1.451 m); minimum, 4.6 ft³/s (0.13 m³/s) Jan. 28 to Feb. 4.

Combined flow, maximum discharge, 392 ft³/s (11.1 m³/s) Dec. 19; minimum daily, 118 ft³/s (3.34 m³/s) Oct. 6.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	133	149	198	161	241	186	222	233	214	172	170
2	150	132	145	184	155	219	181	234	237	221	166	167
3	125	132	151	238	165	227	183	249	245	210	179	169
4	129	132	151	192	156	225	182	244	232	214	180	168
5	136	129	176	166	152	205	182	236	220	214	171	169
6	118	127	332	175	156	202	181	241	215	203	171	168
7	142	129	251	179	161	200	174	247	225	198	172	167
8	131	128	215	174	156	200	186	277	231	192	179	161
9	153	134	214	164	163	200	190	248	216	190	183	170
10	135	124	199	184	160	200	163	259	222	195	169	171
11	140	134	183	170	147	202	198	232	239	195	170	161
12	136	151	181	169	154	199	193	233	256	194	173	170
13	127	137	186	170	164	198	194	237	231	195	172	178
14	136	147	215	179	213	199	199	263	225	196	174	170
15	124	144	308	165	221	186	184	253	250	193	173	169
16	132	176	244	162	267	202	190	251	240	186	173	169
17	132	211	229	171	246	198	176	253	244	191	173	169
18	126	170	242	200	234	182	191	267	260	189	172	169
19	127	151	351	158	283	191	197	260	249	185	173	169
20	135	151	322	156	301	187	186	261	247	186	152	192
21	127	166	269	163	345	179	183	259	245	186	177	180
22	129	173	244	164	312	186	186	273	238	182	164	169
23	131	170	226	163	284	191	196	280	228	172	165	170
24	120	151	224	164	266	181	194	278	222	177	175	169
25	134	154	223	178	250	190	202	289	220	185	168	169
26	132	145	240	173	241	183	227	292	221	178	168	169
27	124	149	216	162	227	185	199	276	231	189	168	178
28	146	139	214	173	222	193	226	263	224	172	167	172
29	128	149	219	149	---	192	229	252	226	179	169	178
30	134	144	210	150	---	176	230	232	218	179	168	173
31	129	---	204	160	---	182	---	249	---	179	170	---
TOTAL	4143	4412	6933	5353	5962	6101	5788	7910	6990	5939	5306	5123
MEAN	134	147	224	173	213	197	193	255	233	192	171	171
MAX	175	211	351	238	345	241	230	292	260	221	183	192
MIN	118	124	145	149	147	176	163	222	215	172	152	161
CFSM	3.22	3.53	5.39	4.16	5.12	4.74	4.64	6.13	5.60	4.62	4.11	4.11
IN.	3.70	3.95	6.20	4.79	5.33	5.46	5.18	7.07	6.25	5.31	4.74	4.58
AC-FT	8220	8750	13750	10620								

14316001 FISH CREEK AT BIG CAMAS RANGER STATION, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°13'50", long 122°26'45", in SE¼ sec.10, T.27 S., R.3 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, 0.2 mi (0.3 km) upstream from Camas Creek, 0.7 mi (1.1 km) east of Big Camas ranger station, 3.2 mi (5.1 km) south of town of Toketee Falls, and at mile 4.7 (7.6 km).

DRAINAGE AREA.--68.8 mi² (178.2 km²).

PERIOD OF RECORD.--October 1947 to current year. Prior to October 1952, published as "at Big Camas ranger station."

REVISED RECORDS.--WSP 1448: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,858.52 ft (871.277 m) National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.). Prior to July 10, 1951, water-stage recorder and July 10 to Aug. 10, 1951, nonrecording gage at site 1,000 ft (305 m) upstream at datum 13.72 ft (4.182 m) higher. Aug. 11 to Nov. 3, 1951, nonrecording gage at site 200 ft (61 m) downstream at different datum. Nov. 4, 1951, to Sept. 30, 1956, water-stage recorder at present site at datum 1.92 ft (0.585 m) higher.

REMARKS.--Records good except those for January and February, which are fair. All records given herein include flow in Fish Creek power canal (diversion began June 18, 1952), which diverts water 2 mi (3 km) above station for power generation at Fish Creek powerplant; diversion discharged to North Umpqua River 600 ft (183 m) downstream from Toketee powerplant.

COOPERATION.--Records of daily powerplant generation furnished by Pacific Power and Light Co.

AVERAGE DISCHARGE.--35 years, 236 ft³/s (6.684 m³/s), 46.58 in/yr (1,183 mm/yr), 171,000 acre-ft/yr (211 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 12,100 ft³/s (343 m³/s) Dec. 22, 1964, gage height, 13.9 ft (4.24 m), from floodmark; minimum, 2.3 ft³/s (0.06 m³/s) Sept. 25, 1957.

Combined flow, maximum discharge, 12,100 ft³/s (343 m³/s) Dec. 22, 1964; minimum daily, 19 ft³/s (0.54 m³/s) July 30, 1979, result of powerplant manipulation.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 4,700 ft³/s (133 m³/s) Dec. 6, gage height, 9.37 ft (2.856 m); minimum, 9.0 ft³/s (0.25 m³/s) Oct. 3.

Combined flow, peak discharges above base of 900 ft³/s (25.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 17	0230	1,100 31.2	- -	Dec. 19	0630	2,070 58.6	- -
Dec. 6	0400	*4,830 137	- -	Feb. 15	2330	2,750 77.9	- -
Dec. 15	0300	2,450 69.4	- -	Feb. 20	2200	3,160 89.5	- -

Minimum daily, 38 ft³/s (1.08 m³/s) Oct. 4.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	94	228	316	214	507	183	422	378	261	97	60
2	59	87	496	272	199	474	182	446	368	285	97	59
3	42	79	469	267	192	433	170	418	347	307	95	60
4	38	68	389	249	189	381	166	393	351	253	93	61
5	39	63	1040	206	176	338	163	381	335	257	88	59
6	65	56	3370	170	166	325	158	405	309	219	89	54
7	127	63	1580	157	167	309	149	455	298	210	88	59
8	72	52	1040	149	155	290	146	438	294	204	88	51
9	134	51	866	159	154	293	160	380	306	194	87	53
10	219	52	708	170	149	314	176	346	345	187	83	67
11	145	56	587	183	146	378	387	333	409	178	92	54
12	89	243	521	178	143	361	429	341	434	163	86	75
13	80	244	644	172	393	330	434	359	380	162	78	72
14	66	253	1180	166	1610	320	455	381	364	162	79	69
15	61	390	1730	166	1700	291	371	398	380	154	78	67
16	52	643	1030	177	2080	275	327	430	410	148	79	66
17	47	890	775	196	1500	265	312	495	425	144	82	70
18	50	533	924	214	1140	249	292	463	422	141	82	64
19	49	395	1720	200	2230	229	277	418	411	128	74	68
20	43	383	1380	182	2200	214	278	440	387	129	75	78
21	44	594	1040	176	2160	207	284	523	372	127	77	62
22	47	629	791	170	1210	196	325	567	341	122	67	50
23	42	620	662	217	849	195	400	548	305	118	69	58
24	42	497	587	276	638	198	443	575	295	116	66	56
25	43	399	550	338	528	199	421	685	286	113	64	61
26	41	335	709	433	465	224	430	665	283	110	69	68
27	43	281	674	370	417	222	423	515	349	107	65	96
28	86	237	508	321	383	223	444	434	302	107	61	81
29	95	218	560	272	---	205	422	383	302	101	66	75
30	69	185	566	251	---	191	408	369	289	101	77	66
31	76	---	406	229	---	199	---	365	---	100	61	---
TOTAL	2148	8690	27730	7002	21553	8835	9215	13771	10477	5108	2452	1939
MEAN	69.3	290	895	226	770	285	307	444	349	165	79.1	64.6
MAX	219	890	3370	433	2230	507	455	685	434	307	97	96
MIN	38	51	228	149	143	191	146	333	283	100	61	50
CFSM	1.01	4.22	13.0	3.29	11.2	4.14	4.46	6.45	5.07	2.40	1.15	.94
IN.	1.16	4.70	14.99	3.79	11.65	4.78	4.98	7.45	5.66	2.76	1.33	1.05
AC-FT	4260	17240	55000	13890	42750	17520	18280	27310	20780	10130	4860	3850
CAL YR 1981 TOTAL	83626			MEAN 229	MAX 3370	MIN 29	CFSM 3.33	IN 45.22	AC-FT 165900			
WTR YR 1982 TOTAL	118920			MEAN 326	MAX 3370	MIN 38	CFSM 4.74	IN 64.30	AC-FT 235900			

UMPQUA RIVER BASIN

14316500 NORTH UMPQUA RIVER ABOVE COPELAND CREEK, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°17'45", long 122°32'10", in NW¼ sec.24, T.26 S., R.2 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on left bank 0.6 mi (1.0 km) upstream from Copeland Creek, 4.7 mi (7.6 km) west of town of Toketee Falls, and at mile 67.2 (108.1 km).

DRAINAGE AREA.--475 mi² (1,230 km²).

PERIOD OF RECORD.--September 1949 to current year. Monthly discharge only September 1949, published in WSP 1318. Prior to October 1952, published as "above Copeland Creek."

REVISED RECORDS.--WSP 1448: 1953(M), 1954, drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 1,580 ft (482 m), from river-profile map. Prior to Aug. 1, 1976, on right bank at same datum.

REMARKS.--Records excellent. Considerable fluctuation caused by powerplants upstream; flow slightly regulated by Diamond Lake and by Lemolo Lake (see station 14313000). No diversion above station.

AVERAGE DISCHARGE.--33 years, 1,503 ft³/s (42.56 m³/s), 1,089,000 acre-ft/yr (1.34 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,700 ft³/s (1,150 m³/s) Dec. 22, 1964, gage height, 19.1 ft (5.82 m), from floodmark, from rating curve extended above 7,200 ft³/s (204 m³/s) on basis of slope-area measurement of peak flow; minimum, 370 ft³/s (10.5 m³/s) Sept. 30, 1981; minimum daily, 565 ft³/s (16.0 m³/s) Sept. 13, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,100 ft³/s (371 m³/s) Dec. 6, gage height, 13.09 ft (3.990 m); minimum, 589 ft³/s (16.7 m³/s) Oct. 1; minimum daily, 633 ft³/s (17.9 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	793	888	1400	2260	1580	2610	1620	2280	1970	1590	881	920
2	695	833	2450	2040	1520	2640	1540	2290	1910	1580	1090	922
3	638	833	2330	1910	1550	2460	1510	2250	1820	1650	1100	927
4	663	829	1870	1470	1460	2380	1520	2230	1810	1530	1060	958
5	633	723	2910	1780	1440	2280	1530	2200	1840	1530	979	905
6	643	652	9560	1680	1350	2200	1480	2110	1770	1440	1080	850
7	833	664	5560	1580	1350	2020	1460	2340	1650	1470	1000	847
8	765	674	3670	1480	1250	1970	1480	2310	1680	1340	945	924
9	716	698	3010	1610	1210	1950	1420	2120	1740	1350	1050	951
10	1000	753	2760	1660	1330	2050	1530	1950	1740	1350	1120	947
11	1020	743	2290	1650	1310	2350	2330	1850	1960	1220	1040	865
12	1010	946	2160	1650	1230	2320	2450	1820	2000	1120	1090	945
13	998	1050	2460	1610	1570	2120	2390	1960	1930	1330	1070	902
14	911	1030	4180	1530	4440	2060	2670	2080	1800	1270	946	1030
15	954	1220	6190	1530	4380	1960	2330	2020	1820	1290	875	1060
16	929	1760	4260	1540	5400	1860	2010	2080	1890	1260	935	957
17	966	2690	3280	1710	4910	1870	2020	2240	1950	1230	1040	972
18	948	1690	3140	1660	4290	1780	1940	2220	2050	1230	1040	1020
19	935	1300	5560	1660	6770	1690	1850	2170	1920	1200	1040	1070
20	935	1380	5490	1510	6140	1660	1820	2080	1920	1200	1010	1080
21	935	2080	4520	1530	6590	1660	1860	2320	1890	1160	862	1040
22	923	2550	3580	1540	4650	1640	1950	2430	1830	1150	799	987
23	721	2690	3000	1640	3580	1470	2390	2410	1770	1150	901	983
24	787	2160	2760	1990	3230	1660	2470	2390	1770	1120	931	981
25	793	1870	3020	2400	2830	1630	2410	2610	1700	1040	912	1050
26	759	1710	3660	2550	2570	1650	2340	2820	1690	1120	929	1060
27	804	1470	3660	2220	2460	1700	2320	2540	1810	1080	955	1150
28	854	1390	2950	1960	2320	1760	2340	2550	1740	1070	933	985
29	822	1290	2970	1740	---	1670	2320	2210	1750	1080	913	1010
30	821	1320	2800	1650	---	1570	2160	2050	1710	1100	918	1060
31	840	---	2440	1590	---	1610	---	2010	---	935	937	---
TOTAL	26044	39886	109890	54330	82710	60250	59460	68940	54830	39185	30381	29358
MEAN	840	1330	3545	1753	2954	1944	1982	2224	1828	1264	980	979
MAX	1020	2690	9560	2550	6770	2640	2670	2820	2050	1650	1120	1150
MIN	633	652	1400	1470	1210	1470	1420	1820	1650	935	799	847
AC-FT	51660	79110	218000	107800	164100	119500	117900	136700	108800	77720	60260	58230
CAL YR 1981	TOTAL	472571	MEAN	1295	MAX	9560	MIN	633	AC-FT	937300		
WTR YR 1982	TOTAL	655264	MEAN	1795	MAX	9560	MIN	633	AC-FT	1300000		

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 (61 m) downstream from Canton Creek, 19 mi (31 km) northeast of Glide, and at mile 0.5 (0.8 km).

DRAINAGE AREA.--227 mi² (588 km²).

PERIOD OF RECORD.--Annual maximum, water year 1956, June 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,128.55 ft (343.982 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Public Roads). Oct. 7, 1955, to June 13, 1956, nonrecording gage at site 100 ft (30 m) upstream at same datum.

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

AVERAGE DISCHARGE.--26 years, 735 ft³/s (20.82 m³/s), 43.97 in/yr (1,117 mm/yr), 532,500 acre-ft/yr (657 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft³/s (1,440 m³/s) Dec. 22, 1964, gage height, 25.6 ft (7.80 m), from floodmark, from rating curve extended above 13,000 ft³/s (368 m³/s) on basis of slope-area measurement at 17.96 ft (5.474 m); minimum, 30 ft³/s (0.85 m³/s) Sept. 15-17, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0530	*23,900 677	*16.74 5.102	Feb. 14	1000	14,300 405	12.42 3.786
Dec. 15	0530	11,600 329	11.12 3.389	Feb. 19	0730	9,120 258	9.82 2.993
Dec. 19	1230	10,100 286	10.33 3.149				

Minimum, 38 ft³/s (1.08 m³/s) Sept. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	348	1560	1480	1040	1740	717	785	239	181	62	44
2	82	246	4930	1190	949	1940	746	764	231	165	62	43
3	87	193	2980	1040	952	1660	837	704	220	210	64	41
4	72	165	1670	1100	958	2050	858	622	229	175	62	42
5	66	146	4940	936	869	1770	851	566	225	167	59	41
6	99	132	15800	764	767	1360	789	597	228	149	57	40
7	410	122	4560	658	692	1130	751	687	209	133	55	39
8	365	115	2430	597	634	1050	814	615	194	124	55	38
9	754	108	1670	627	581	1230	903	517	192	116	54	39
10	1110	104	1410	846	531	1430	1400	438	204	110	56	48
11	727	116	1270	882	501	1670	3930	394	219	104	59	48
12	431	498	1140	836	461	1500	3180	393	222	100	60	90
13	266	525	1900	754	2140	1170	2640	430	205	96	54	131
14	195	652	5780	718	11700	999	2970	460	184	100	53	73
15	160	919	8380	713	6890	883	2020	483	184	94	55	57
16	137	1540	3400	737	7010	791	1640	487	188	90	52	51
17	123	2390	1990	1230	6890	725	1500	557	184	87	50	49
18	112	1870	1710	1270	4810	679	1310	508	183	84	49	60
19	105	1120	6810	1270	8090	648	1100	420	184	80	48	116
20	97	914	4500	1140	6330	633	1040	407	170	78	47	157
21	92	1840	3630	921	5710	602	1220	474	173	76	46	133
22	87	2720	2250	788	3140	569	1560	488	148	74	45	88
23	84	3770	1620	2100	2050	549	1680	449	133	72	43	71
24	82	2200	1450	4240	1510	568	1450	437	125	71	42	76
25	79	1460	2500	3960	1260	625	1190	502	140	69	42	78
26	77	1050	4640	4610	1130	699	1010	462	127	68	41	128
27	77	790	4150	2960	1300	665	922	351	225	65	41	398
28	133	625	2430	1880	1210	692	948	286	175	65	41	209
29	283	524	2950	1410	---	673	861	256	209	64	48	444
30	461	466	3030	1180	---	660	771	243	212	62	51	237
31	438	---	1990	1070	---	703	---	241	---	63	46	---
TOTAL	7370	27668	109470	43907	80105	32063	41608	15023	5761	3192	1599	3109
MEAN	238	922	3531	1416	2861	1034	1387	485	192	103	51.6	104
MAX	1110	3770	15800	4610	11700	2050	3930	785	239	210	64	444
MIN	66	104	1140	597	461	549	717	241	125	62	41	38
CFSM	1.05	4.06	15.6	6.24	12.6	4.56	6.11	2.14	.85	.45	.23	.46
IN.	1.21	4.53	17.94	7.20	13.13	5.25	6.82	2.46	.94	.52	.26	.51
AC-FT	14620	54880	217100	87090	158900	63600	82530	29800	11430	6330	3170	6170

CAL YR 1981 TOTAL 271965 MEAN 745 MAX 15800 MIN 34 CFSM 3.28 IN 44.57 AC-FT 539400
WTR YR 1982 TOTAL 370875 MEAN 1016 MAX 15800 MIN 38 CFSM 4.48 IN 60.78 AC-FT 735600

UMPQUA RIVER BASIN

14318000 LITTLE RIVER AT PEEL, OR

LOCATION.--Lat 43°15'10", long 12°01'30", in NW¼ sec.2, T.27 S., R.3 W., Douglas County, Hydrologic Unit 17100301, on left bank 0.6 mi (1.0 km) southeast of Peel, 0.9 mi (1.5 km) downstream from Cavitt Creek, and at mile 6.3 (10.1 km).

DRAINAGE AREA.--177 mi² (458 km²).

PERIOD OF RECORD.--August 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 828.33 ft (252.475 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. No regulation. Small diversions for rural domestic use and irrigation above station.

AVERAGE DISCHARGE.--28 years, 468 ft³/s (13.25 m³/s), 35.91 in/yr (912 mm/yr), 339,100 acre-ft/yr (418 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft³/s (598 m³/s) Dec. 11, 1956, gage height, 19.63 ft (5.983 m), from rating curve extended above 5,900 ft³/s (167 m³/s) on basis of slope-area measurement at gage height 16.55 ft (5.044 m); minimum, 14 ft³/s (0.40 m³/s) Sept. 2, 9, 10, 28, 29, 1967, Sept. 25-27, 1974, Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 22, 23, 1953, reached a stage of 20.6 ft (6.28 m), from floodmark, discharge, 22,700 ft³/s (643 m³/s), from rating curve extended above 5,900 ft³/s (167 m³/s) on basis of slope-area measurement at gage height 16.55 ft (5.044 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0530	*15,600 442	*17.58 5.358	Dec. 15	0400	6,660 189	10.76 3.280

Minimum, 15 ft³/s (0.42 m³/s) Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	40	176	1620	1340	597	930	470	392	112	72	30	19		
2	48	140	2250	1030	527	1040	483	374	106	77	29	18		
3	50	114	1850	941	486	899	572	351	101	97	29	17		
4	37	98	1130	1310	457	967	576	323	117	73	28	18		
5	32	86	2530	929	412	940	532	301	121	71	26	18		
6	48	77	9490	706	373	788	490	302	110	64	25	17		
7	208	69	3320	574	341	652	515	318	98	57	24	16		
8	149	63	1960	500	314	564	528	301	90	54	24	16		
9	236	59	1400	526	292	554	524	276	85	50	23	17		
10	476	55	1260	724	269	577	741	245	81	47	24	21		
11	484	86	1060	768	255	684	1800	226	79	44	26	21		
12	286	369	987	679	239	626	1460	219	82	42	25	30		
13	183	302	1180	584	417	535	1430	222	85	40	23	56		
14	131	761	3710	535	3140	511	1830	221	91	42	23	32		
15	103	870	4880	523	2440	493	1300	219	75	40	24	24		
16	85	1260	2300	544	2660	460	1000	213	70	38	23	21		
17	74	1940	1450	1190	2610	437	870	230	66	37	21	20		
18	65	1290	1130	1310	2080	415	755	225	64	35	20	20		
19	58	746	3130	987	2930	384	645	200	68	34	20	39		
20	53	555	2870	772	2550	357	595	188	66	32	19	43		
21	50	913	2410	636	2850	329	614	189	64	31	19	37		
22	46	1450	1630	547	1870	308	695	190	57	31	18	28		
23	44	2520	1190	1800	1290	291	749	181	53	30	18	25		
24	42	1820	1060	2370	954	282	688	172	50	29	17	27		
25	41	1160	1850	2400	788	283	593	174	60	29	16	32		
26	40	848	3650	2780	693	309	521	168	57	28	16	45		
27	39	634	3180	2010	672	316	473	151	98	27	16	226		
28	87	490	1890	1300	604	403	477	137	77	27	17	102		
29	183	406	3650	936	---	405	441	127	91	27	19	162		
30	257	388	2940	761	---	407	404	118	82	28	21	107		
31	208	---	1800	672	---	474	---	112	---	30	20	---		
TOTAL	3883	19745	74757	32684	33110	16620	22771	7065	2446	1363	683	1274		
MEAN	125	658	2412	1054	1183	536	759	228	81.5	44.0	22.0	42.5		
MAX	484	2520	9490	2780	3140	1040	1830	392	121	97	30	226		
MIN	32	55	987	500	239	282	404	112	50	27	16	16		
CFSM	.71	3.72	13.6	5.96	6.68	3.03	4.29	1.29	.46	.25	.12	.24		
IN.	.82	4.15	15.71	6.87	6.96	3.49	4.79	1.48	.51	.29	.14	.27		
AC-FT	7700	39160	148300	64830	65670	32970	45170	14010	4850	2700	1350	2530		
CAL YR 1981	TOTAL	169237	MEAN	464	MAX	9490	MIN	15	CFSM	2.62	IN	35.57	AC-FT	335700
WTR YR 1982	TOTAL	216401	MEAN	593	MAX	9490	MIN	16	CFSM	3.35	IN	45.48	AC-FT	429200

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR

LOCATION.--Lat 43°16'20", long 123°24'40", in NW¼NE¼ sec.33, T.26 S., R.6 W., Douglas County, Hydrologic Unit 17100301, on left bank 400 ft (122 m) downstream from county bridge, 3.0 mi (4.8 km) west of Winchester, and at mile 1.8 (2.9 km).

DRAINAGE AREA.--1,344 mi² (3,481 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1908 to December 1913, October 1923 to September 1929, August 1954 to current year. Prior to December 1908, monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1448: 1909-12, drainage area. WRD Oreg. 1972: 1965(M).

GAGE.--Water-stage recorder. Datum of gage is 372.97 ft (113.681 m) National Geodetic Vertical Datum of 1929 (Douglas County Road Department bench mark). Oct. 1, 1908, to Dec. 31, 1913, and Oct. 1, 1923, to Sept. 30, 1929, nonrecording gage at site 4.8 mi (7.7 km) upstream at different datums. Aug. 27, 1954, to Aug. 12, 1965, water-stage recorder on right bank at same datum.

REMARKS.--Water-discharge records excellent. Diurnal fluctuation caused by upstream powerplants; slight regulation by Lemolo Lake (see station 14313000) and Diamond Lake. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--39 years, 3,730 ft³/s (105.6 m³/s), 37.69 in/yr (957 mm/yr), 2,702,000 acre-ft/yr (3.33 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft³/s (4,250 m³/s) Dec. 22, 1964, gage height, 34.2 ft (10.42 m), from floodmark; minimum, 383 ft³/s (10.8 m³/s) Sept. 25, 1960; minimum daily, 578 ft³/s (16.4 m³/s) Sept. 14, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 29, 1950, reach a stage of 23.2 ft (7.07 m), from floodmark, at site 4.8 mi (7.7 km) upstream at different datum, discharge, 88,000 ft³/s (2,490 m³/s). Flood of Nov. 23, 1953, reach a stage of 28.4 ft (8.66 m), from floodmarks, present site and datum, discharge, 93,300 ft³/s (2,640 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (566 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 2	2330	20,000 566	10.01 3.051	Dec. 26	2230	26,000 736	11.72 3.572
Dec. 6	1200	*79,100 2,240	*25.25 7.696	Dec. 29	2030	23,700 671	11.07 3.374
Dec. 15	1000	40,200 1,140	15.50 4.724	Feb. 14	1530	32,400 918	13.56 4.133
Dec. 19	1800	30,700 869	13.07 3.984	Feb. 19	1430	28,100 796	12.32 3.755

Minimum, 478 ft³/s (13.5 m³/s) Sept. 20.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	933	1940	6450	8970	4850	6640	4400	4290	2700	2120	1030	992
2	1010	1750	12100	7550	4580	8820	4730	4370	2630	1980	981	963
3	941	1510	14400	8600	4220	7570	5640	4270	2490	2120	1210	959
4	847	1390	8440	10500	4170	8060	5460	4080	2490	2090	1200	970
5	832	1320	10300	7420	3870	7840	5130	3870	2560	1930	1180	1000
6	824	1150	63100	5800	3570	6730	4770	3720	2490	1890	1060	945
7	1330	1030	28000	4850	3350	5740	4650	3970	2370	1780	1170	989
8	1830	1010	14200	4210	3140	5290	4510	4040	2210	1760	1070	932
9	1870	999	9750	3980	2830	5120	4470	3810	2240	1620	1010	971
10	3500	1000	8730	4570	2760	5560	4920	3390	2290	1610	1130	1020
11	3480	1110	7510	4980	2730	6050	11000	3060	2340	1600	1230	1020
12	2620	2040	6720	4800	2630	6440	11700	3040	2650	1420	1150	951
13	2010	2750	6960	4420	2850	5560	9870	2990	2580	1380	1180	1170
14	1630	3530	19200	4090	24800	5120	12800	3230	2470	1550	1150	1110
15	1460	4320	34300	3960	22600	4920	10500	3310	2320	1480	1010	1150
16	1400	6370	18200	3950	21100	4400	8060	3280	2380	1490	934	1150
17	1320	11900	11200	6650	21500	4350	7120	3400	2400	1440	995	1030
18	1320	9610	8750	8840	17300	4090	6290	3640	2460	1410	1100	1070
19	1270	5990	20300	7200	24900	3880	5640	3370	2550	1390	1100	1260
20	1220	4450	21800	5730	21200	3710	5170	3210	2420	1350	1090	1170
21	1200	5320	18300	4960	23400	3570	5150	3280	2410	1350	1060	1370
22	1190	10400	12300	4490	15600	3430	5660	3570	2340	1310	893	1240
23	1170	15100	9410	9520	11000	3230	6420	3570	2210	1280	825	1140
24	942	11800	7600	14100	8510	3090	6380	3440	2120	1290	920	1120
25	1000	8200	10700	15500	7220	3350	5840	3580	2120	1260	952	1140
26	1000	6440	16300	16800	6300	3300	5350	3890	2020	1170	934	1240
27	976	5280	20600	14400	6300	3460	4990	3690	2220	1230	955	1950
28	1120	4220	13000	9490	5920	3940	4910	3380	2360	1190	984	1750
29	1540	3590	16900	7120	---	4050	4890	3180	2250	1190	1000	1620
30	2350	3240	17400	5860	---	3910	4520	2850	2280	1210	987	1760
31	2080	---	11100	5260	---	4300	---	2710	---	1230	985	---
TOTAL	46215	138759	484020	228570	283200	155520	190940	109480	71370	47120	32475	35152
MEAN	1491	4625	15610	7373	10110	5017	6365	3532	2379	1520	1048	1172
MAX	3500	15100	63100	16800	24900	8820	12800	4370	2700	2120	1230	1950
MIN	824	999	6450	3950	2630	3090	4400	2710	2020	1170	825	932
CFSM	1.11	3.44	11.6	5.49	7.52	3.73	4.74	2.63	1.77	1.13	.78	.87
IN.	1.28	3.84	13.40	6.33	7.84	4.30	5.28	3.03	1.98	1.30	.90	.97
AC-FT	91670	275200	960100	453400	561700	308500	378700	217200	141600	93460	64410	69720

CAL YR 1981	TOTAL	1364502	MEAN	3738	MAX	63100	MIN	669	CFSM	2.78	IN	37.77	AC-FT	2706000
WTR YR 1982	TOTAL	1822821	MEAN	4994	MAX	63100	MIN	824	CFSM	3.72	IN	50.45	AC-FT	3616000

UMPQUA RIVER BASIN

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-69, 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1971 to current year.

INSTRUMENTATION.--Temperature recorder since 1971.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.5°C Aug. 10, 1972, Aug. 8, 9, 1978, Aug. 9, 10, 1981; minimum, 0.0°C at times in 1971-72, 1974, 1977, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.0°C July 20; minimum, 2.5°C Feb. 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

UMPQUA RIVER BASIN

311

14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

UMPQUA RIVER BASIN

14319900 CALAPOOYA CREEK AT NONPAREIL, OR

LOCATION.--Lat 43°25'04", long 123°09'13", in SW¼SE¼ sec.3, T.25 S., R.4 W., Douglas County, Hydrologic Unit 17100303, on left bank 0.3 mi (0.5 km) upstream from county road bridge, 0.9 mi (1.4 km) northeast of Nonpareil, and at mile 26.7 (43.0 km).

DRAINAGE AREA.--88.6 mi² (229.5 km²).

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 699.22 ft (213.122 m) National Geodetic Vertical Datum of 1929 (Douglas County Survey bench mark).

REMARKS.--Records good except those for periods of backwater, July 25 to Sept. 30, which are fair. No regulation. Only minor diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--6 years, 190 ft³/s (5.381 m³/s), 29.12 in/yr (740 mm/yr), 137,700 acre-ft/yr (170 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,640 ft³/s (216 m³/s) Dec. 6, 1981, gage height, 11.16 ft (3.402 m); minimum, 5.3 ft³/s (0.15 m³/s) Aug. 17-19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0500	*7,640 216	*11.16 3.402	Dec. 15	0430	2,750 77.9	7.20 2.195

Minimum, 8.7 ft³/s (0.26 m³/s) Aug. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	99	415	655	335	413	330	153	43	38	13	21
2	38	80	724	540	296	551	381	143	41	35	13	20
3	37	68	768	777	269	523	586	134	40	50	12	20
4	27	61	497	1350	247	566	538	124	51	39	12	21
5	23	54	1280	759	224	539	446	116	51	38	9.9	23
6	41	49	4710	506	206	444	390	110	47	36	9.1	23
7	120	45	1520	384	192	367	400	105	43	30	8.9	22
8	124	42	905	319	178	312	374	104	40	28	10	22
9	148	40	678	294	166	287	351	104	38	25	12	23
10	243	37	625	303	154	265	420	97	35	23	16	27
11	216	79	525	303	147	281	900	90	33	21	20	25
12	139	346	473	301	138	265	774	85	36	20	20	29
13	100	245	464	285	217	244	891	80	41	19	16	25
14	76	355	1050	273	1190	242	1120	77	40	22	14	16
15	59	385	2090	266	989	246	934	73	34	21	14	12
16	52	455	1090	279	808	240	709	69	32	19	14	11
17	44	878	722	736	918	253	577	75	29	18	15	9.4
18	40	753	580	796	904	241	471	74	27	16	14	13
19	37	453	1230	645	1050	230	393	68	34	16	13	27
20	34	329	1180	488	978	219	345	65	29	15	12	18
21	33	378	1060	391	1010	203	322	61	31	14	12	14
22	31	597	780	340	751	188	315	58	26	14	13	12
23	30	1150	617	1410	575	174	306	56	23	13	14	10
24	28	768	515	1370	454	162	279	53	21	13	13	11
25	28	511	600	1180	382	152	250	51	21	14	14	12
26	28	441	882	1350	346	148	224	49	24	13	13	28
27	28	398	1130	1200	329	156	203	47	38	14	15	74
28	71	298	923	812	298	243	196	46	36	14	17	30
29	125	239	1400	590	---	259	179	45	51	12	21	40
30	214	210	1230	459	---	271	165	42	44	13	23	29
31	130	---	829	390	---	347	---	40	---	13	22	---
TOTAL	2368	9843	31492	19751	13751	9031	13769	2494	1079	676	444.9	667.4
MEAN	76.4	328	1016	637	491	291	459	80.5	36.0	21.8	14.4	22.2
MAX	243	1150	4710	1410	1190	566	1120	153	51	50	23	74
MIN	23	37	415	266	138	148	165	40	21	12	8.9	9.4
CFSM	.86	3.70	11.5	7.19	5.54	3.28	5.18	.91	.41	.25	.16	.25
IN.	.99	4.13	13.22	8.29	5.77	3.79	5.78	1.05	.45	.28	.19	.28
AC-FT	4700	19520	62460	39180	27280	17910	27310	4950	2140	1340	882	1320

CAL YR 1981	TOTAL	83748.3	MEAN	229	MAX	4710	MIN	5.7	CFSM	2.59	IN	35.16	AC-FT	166100
WTR YR 1982	TOTAL	105366.3	MEAN	289	MAX	4710	MIN	8.9	CFSM	3.26	IN	44.24	AC-FT	209000

14321000 UMPQUA RIVER NEAR ELKTON, OR
 (National stream-quality accounting network station)

LOCATION.--Lat 43°35'10", long 123°33'15", in NW¼ sec.8, T.23 S., R.7 W., Douglas County, Hydrologic Unit 17100303, on left bank 3.5 mi (5.6 km) south of Elkton, 8.3 mi (13.4 km) upstream from Elk Creek, and at mile 56.9 (91.6 km).

DRAINAGE AREA.--3,683 mi² (9,539 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1905 to current year.

REVISED RECORDS.--WSP 1184: 1927(M), 1938(M), 1943(M), 1946(M). WSP 1448: 1911-13, drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 90.42 ft (27.560 m) National Geodetic Vertical Datum of 1929. Prior to June 29, 1972, at site 2,400 ft (732 m) downstream at same datum. See WSP 1931 or 2135 for history of changes prior to June 29, 1972.

REMARKS.--Water-discharge records excellent. Regulation by powerplants on North Umpqua River ordinarily does not affect discharge at this station. Diversions for irrigation above station.

AVERAGE DISCHARGE.--77 years, 7,480 ft³/s (211.8 m³/s), 27.58 in/yr (701 mm/yr), 5,419,000 acre-ft/yr (6.68 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 265,000 ft³/s (7,500 m³/s) Dec. 23, 1964, gage height, 51.95 ft (15.834 m), from floodmarks, minimum observed, 640 ft³/s (18.1 m³/s) July 18, 1926.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least December 1861, that of Dec. 2, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 52,000 ft³/s (1,470 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	1930	*167,000 4,730	*39.18 11.942	Dec. 27	0930	54,200 1,530	19.80 6.035
Dec. 15	1500	96,200 2,720	27.72 8.449	Dec. 30	0430	73,500 2,080	23.61 7.196
Dec. 20	0500	75,000 2,120	23.90 7.285	Feb. 15	0100	57,200 1,620	20.38 6.212

Minimum, 1,020 ft³/s (28.9 m³/s) Aug. 24.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1520	4030	9430	26900	11600	12600	10100	7230	3630	3050	1390	1160		
2	1320	3320	21100	22600	10600	25800	10600	7120	3610	2810	1290	1170		
3	1280	2840	29000	24900	9670	23400	16200	6980	3510	2610	1200	1160		
4	1240	2380	20000	40800	9160	20500	18800	6680	3360	2760	1360	1150		
5	1200	2110	18000	32400	8620	19000	16600	6320	3380	2700	1390	1150		
6	1160	1930	129000	21000	7880	16000	15300	6010	3480	2540	1370	1150		
7	1340	1730	103000	15500	7160	13500	14400	5820	3370	2410	1300	1140		
8	1780	1570	40400	12700	6640	11800	13000	6170	3180	2240	1310	1120		
9	2800	1500	25400	11000	6220	10800	11900	6090	2970	2160	1280	1120		
10	3190	1460	23100	10600	5760	10600	11500	5730	2940	2000	1200	1120		
11	4810	1500	22100	11400	5560	10700	17500	5180	2910	1960	1280	1150		
12	4630	2040	18200	11800	5350	11700	27200	4800	3010	1910	1370	1160		
13	3580	4150	17300	11300	5310	10700	24700	4690	3290	1760	1320	1140		
14	2790	5870	29500	10500	27300	9670	33500	4700	3250	1650	1360	1250		
15	2280	10800	86500	9810	49500	9540	32400	4860	3120	1790	1310	1340		
16	1930	12800	55900	9600	38900	8990	23400	4880	2960	1720	1260	1310		
17	1810	29900	30300	10700	44900	8580	18100	4890	2950	1720	1130	1370		
18	1700	31300	21800	19600	39900	8400	15100	5120	2950	1670	1150	1280		
19	1630	18900	35000	19800	40500	8130	13000	5200	3000	1640	1250	1290		
20	1570	12100	68100	15700	42200	7790	11400	4870	3020	1610	1250	1470		
21	1510	10300	53100	12900	40400	7360	10500	4630	2930	1550	1240	1450		
22	1470	17000	36300	11600	33500	6940	10500	4840	2910	1530	1240	1540		
23	1450	28300	25900	22900	24700	6550	11000	5060	2820	1490	1110	1530		
24	1420	31600	20000	30400	19200	6120	11500	5020	2620	1450	1050	1410		
25	1290	25100	19400	36100	15800	6020	10800	4860	2510	1440	1050	1370		
26	1250	17700	24700	33800	13700	6040	9830	5060	2550	1430	1110	1410		
27	1290	14700	48600	40900	12900	6080	9040	5380	2510	1350	1090	1500		
28	1420	11800	35800	27900	12500	6420	8470	4960	2810	1390	1080	2270		
29	1670	9580	36000	20000	---	7280	8310	4650	3050	1360	1130	2130		
30	4320	8050	64600	15400	---	7420	7840	4200	3020	1350	1150	2160		
31	5230	---	36000	13000	---	8490	---	3800	---	1360	1150	---		
TOTAL	65880	326360	1203530	613510	555430	332920	452490	165800	91620	58410	38170	40970		
MEAN	2125	10880	38820	19790	19840	10740	15080	5348	3054	1884	1231	1366		
MAX	5230	31600	129000	40900	49500	25800	33500	7230	3630	3050	1390	2270		
MIN	1160	1460	9430	9600	5310	6020	7840	3800	2510	1350	1050	1120		
CFSM	.58	2.95	10.5	5.37	5.39	2.92	4.09	1.45	.83	.51	.33	.37		
IN.	.67	3.30	12.16	6.20	5.61	3.36	4.57	1.67	.93	.59	.39	.41		
AC-FT	130700	647300	2387000	1217000	1102000	660300	897500	328900	181700	115900	75710	81260		
CAL YR 1981	TOTAL	2783343	MEAN	7626	MAX	129000	MIN	866	CFSM	2.07	IN	28.11	AC-FT	5521000
WTR YR 1982	TOTAL	3945090	MEAN	10810	MAX	129000	MIN	1050	CFSM	2.94	IN	39.85	AC-FT	7825000

UMPQUA RIVER BASIN

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued
(National stream quality accounting network station)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: April 1971 to current year.

INSTRUMENTATION.--Temperature recorder since April 1971.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 30.0°C July 14, 1971; minimum, 0.0°C Jan. 7, 8, 11, 12, and probably Jan. 9, 10, 1974.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.5°C July 20; minimum, 3.0°C Feb. 9, 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 10...	1130	1440	100	7.1	10.5	11.5	K5	K8	36	9.2	3.1
JAN 11...	1056	11900	81	6.7	4.5	13.2	110	K79	31	7.1	3.3
MAR 04...	1345	20500	64	6.7	8.5	11.7	K600	310	23	5.4	2.3
MAY 04...	1445	6600	67	7.7	13.0	11.1	K11	40	25	6.4	2.3
JUL 08...	1620	2230	76	8.2	20.5	9.6	K1	68	27	6.7	2.4
SEP 15...	1000	1350	78	7.8	17.0	9.7	22	200	25	5.9	2.5

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
NOV 10...	6.0	.8	27	<5.0	6.7	.1	.110	.54	.68	.12
JAN 11...	3.9	.7	35	<5.0	3.7	.1	.120	.17	.25	.09
MAR 04...	3.1	.5	29	5.0	2.0	<.1	.060	<.10	.29	.06
MAY 04...	3.4	.6	29	5.0	2.3	.1	.060	<.10	.31	.06
JUL 08...	4.3	.9	32	6.0	2.8	<.1	<.060	<.10	1.20	--
SEP 15...	5.6	1.1	27	<5.0	3.6	<.1	.070	<.10	.80	.18

UMPQUA RIVER BASIN

315

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 10...	.040	.050	17	71	--	276	2.0	3	12	82
JAN 11...	.040	.020	18	65	--	2090	12	16	514	82
MAR 04...	<.010	.050	15	56	51	3100	26	49	2710	79
MAY 04...	.030	.030	19	43	57	766	1.7	3	53	84
JUL 08...	.040	.030	17	55	59	331	--	3	18	65
SEP 15...	.030	.020	19	56	--	204	.50	1	3.6	92

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
NOV 10...	2	1	<100	100	1	1	<10	<10	<1	2
MAR 04...	1	1	21	<100	<1	<1	<10	10	<3	1
MAY 04...	<1	<1	15	<100	<1	<1	<10	<10	<1	<1
SEP 15...	1	1	14	<100	<1	<1	<10	<10	<1	<1

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
NOV 10...	5	10	100	110	3	5	10	10	.1
MAR 04...	3	9	94	2800	<1	4	5	60	<.1
MAY 04...	1	5	27	130	4	7	2	10	<.1
SEP 15...	1	2	18	60	<1	2	1	10	<.1

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
NOV 10...	.1	<1	2	<1	<1	<1	<1	10	10
MAR 04...	.2	1	7	<1	<1	<1	<1	<3	20
MAY 04...	<.1	<1	1	<1	<1	<1	<1	<3	30
SEP 15...	.1	2	<1	<1	<1	<1	<1	<3	10

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

UMPQUA RIVER BASIN

14321000 UMPQUA RIVER NEAR ELKTON, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	15.5	11.0	10.5	7.0	6.5	6.5	6.0	6.5	6.0	7.5	7.0
2	17.0	16.0	11.5	10.5	8.0	7.0	6.0	5.5	6.0	6.0	8.0	7.5
3	17.0	16.0	11.0	11.0	8.5	8.0	5.5	5.0	6.5	6.0	8.0	8.0
4	16.5	15.5	11.0	10.5	8.5	8.5	5.5	5.0	6.0	5.5	8.5	8.0
5	16.0	15.0	10.5	10.0	9.0	8.5	6.0	5.5	5.5	5.0	8.5	8.0
6	16.0	15.5	10.0	9.5	10.0	9.0	5.5	5.0	5.0	4.0	8.5	8.0
7	15.5	15.0	10.0	9.5	10.0	9.5	5.0	4.5	4.0	3.5	8.0	7.5
8	15.0	14.5	10.0	9.5	9.5	9.0	4.5	4.0	3.5	3.5	8.0	7.5
9	14.5	14.0	10.5	10.0	9.0	8.5	4.5	4.0	4.0	3.0	9.0	8.0
10	14.0	13.5	10.5	10.5	9.0	8.5	4.5	4.0	4.0	3.0	10.0	9.0
11	14.0	13.0	11.0	10.5	8.5	8.0	5.0	4.5	4.0	3.5	10.0	9.0
12	13.0	12.5	11.0	10.5	8.0	7.5	5.5	5.0	4.0	3.5	9.0	8.5
13	13.0	12.0	11.0	10.5	8.0	7.5	6.0	5.5	5.0	4.0	8.5	8.0
14	12.5	12.0	10.5	10.0	9.0	8.0	5.5	5.5	7.0	5.0	8.5	8.0
15	12.5	12.0	10.5	10.0	9.5	9.0	5.5	5.0	7.5	7.0	8.0	7.5
16	12.5	11.5	10.0	9.5	9.0	8.0	5.5	5.0	8.0	7.5	8.0	7.5
17	13.0	12.0	9.5	9.5	8.0	7.5	6.5	5.5	8.5	8.0	8.5	7.5
18	13.5	12.5	10.0	9.0	8.0	7.5	6.5	6.5	8.0	7.5	8.0	7.5
19	13.5	12.5	9.5	9.0	9.5	8.0	6.5	6.0	8.5	7.5	8.0	7.5
20	13.5	12.5	9.0	9.0	9.5	8.5	6.0	5.5	9.0	8.5	8.0	8.0
21	13.0	12.5	9.5	9.0	8.5	8.0	5.5	5.5	9.0	8.0	8.5	7.5
22	13.0	12.0	9.5	9.5	8.0	7.5	5.5	5.0	8.0	6.5	8.5	8.0
23	13.0	12.0	9.5	9.5	7.5	7.0	6.5	5.5	6.5	6.0	9.5	8.0
24	12.5	12.0	9.5	9.0	7.0	7.0	7.0	6.5	6.5	6.0	10.0	9.0
25	12.5	12.0	9.0	8.5	7.5	7.0	7.5	7.0	6.5	6.0	10.5	10.0
26	12.5	12.5	8.5	8.0	8.0	7.5	7.5	7.0	6.0	6.0	10.5	10.0
27	12.5	12.5	8.0	7.0	8.0	7.5	7.0	6.5	7.0	6.0	10.0	9.5
28	12.5	12.0	7.0	7.0	7.5	7.0	7.0	6.5	7.0	6.5	10.0	9.5
29	12.0	11.0	7.0	7.0	7.0	7.0	6.5	6.5	---	---	9.5	8.5
30	11.0	10.5	7.0	6.5	7.5	7.0	6.5	6.0	---	---	8.5	7.5
31	11.5	11.0	---	---	7.0	6.5	6.5	6.0	---	---	7.5	7.5
MONTH	17.0	10.5	11.5	6.5	10.0	6.5	7.5	4.0	9.0	3.0	10.5	7.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	7.0	13.5	12.5	17.0	16.0	19.5	18.5	21.0	20.0	23.0	21.0
2	7.5	7.0	13.0	12.5	17.0	16.0	19.0	18.5	20.5	19.5	23.0	22.0
3	7.5	7.0	13.0	12.5	16.0	15.5	19.5	18.0	20.0	19.5	23.0	22.0
4	7.5	7.0	13.5	12.0	16.5	15.5	19.0	18.5	21.5	19.5	22.5	21.5
5	7.5	7.0	13.5	12.0	16.5	15.5	19.5	18.0	22.5	20.0	22.5	21.5
6	7.5	7.0	14.5	13.0	16.5	15.5	20.0	18.5	23.0	21.0	22.5	21.5
7	8.0	7.0	14.5	13.5	17.0	15.0	20.0	19.0	23.5	22.0	22.5	21.5
8	9.0	7.5	14.0	13.0	18.5	16.0	21.0	18.5	24.0	22.5	22.5	20.0
9	10.0	8.0	13.5	12.5	20.0	17.0	22.0	20.0	23.5	22.5	22.5	21.0
10	9.5	9.0	13.0	12.0	21.0	18.5	23.0	20.5	22.5	22.0	21.0	20.0
11	9.5	9.0	13.5	12.0	20.5	19.0	23.5	21.5	23.0	21.5	20.0	19.0
12	9.0	8.5	15.0	13.0	19.0	17.5	24.5	22.0	23.5	22.0	19.5	19.0
13	8.5	8.5	16.0	13.5	18.0	17.0	24.0	23.0	23.0	22.0	19.5	18.5
14	8.5	7.5	17.0	14.5	18.5	17.0	23.5	22.0	23.0	21.5	19.5	18.0
15	7.5	7.0	17.0	15.5	20.0	17.5	23.0	21.5	23.0	21.0	19.0	17.0
16	8.5	7.0	17.5	15.5	21.0	18.5	22.5	20.5	23.0	21.0	19.0	17.0
17	9.0	8.0	17.0	16.0	22.5	20.0	23.5	21.5	23.0	21.5	19.0	17.5
18	9.5	8.5	16.0	15.5	24.0	21.5	24.0	22.0	23.5	22.0	18.5	17.5
19	10.0	8.5	16.5	15.0	24.5	22.5	25.0	22.5	23.5	22.0	19.0	18.0
20	11.0	9.0	17.0	15.0	24.0	22.5	25.5	23.5	23.5	22.5	19.0	18.0
21	12.0	9.5	17.5	15.5	24.0	22.0	25.0	23.0	23.5	22.0	19.0	17.5
22	13.0	11.0	18.5	16.0	24.5	23.0	24.5	22.5	24.0	22.5	19.0	17.5
23	13.0	11.5	19.0	17.0	24.5	22.5	24.5	22.5	24.5	23.0	19.0	17.5
24	13.0	11.5	19.5	17.5	23.5	22.5	25.0	23.0	24.5	23.5	19.0	18.0
25	12.5	11.0	20.0	18.0	22.5	22.0	24.5	22.5	24.5	23.5	19.0	18.0
26	12.5	10.5	18.5	17.5	22.0	21.5	23.5	22.0	24.0	22.5	18.0	16.5
27	12.5	11.5	18.0	16.5	21.5	20.5	23.5	22.0	23.5	22.5	16.5	16.0
28	12.5	12.0	18.0	16.0	20.5	19.5	23.5	22.0	23.0	22.0	16.5	16.0
29	13.0	11.5	18.5	16.5	19.5	19.0	22.0	21.5	23.0	22.0	16.0	15.0
30	13.0	12.0	19.0	16.5	19.5	18.5	21.5	20.5	22.5	21.5	15.5	14.5
31	---	---	18.0	16.5	---	---	21.0	20.0	22.5	21.0	---	---
MONTH	13.0	7.0	20.0	12.0	24.5	15.0	25.5	18.0	24.5	19.5	23.0	14.5

COOS RIVER BASIN

317

14324580 PONY CREEK AT COOS BAY, OR

LOCATION.--Lat 43°22'50", long 124°14'24", in SE¼SE¼ sec.21, T.25 S., R.13 W., Coos County, Hydrologic Unit 17100304, at Ocean Boulevard in town of Coos Bay, 250 ft (76 m) below Lower Pony Creek Dam, and at mile 2.2 (3.5 km).

DRAINAGE AREA.--3.90 mi² (10.1 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 12.23 ft (3.728 m) National Geodetic Vertical Datum of 1929 (Coos Bay-North Bend Water Board bench mark).

REMARKS.--Records good except those for November to February, April, which are fair. Flow regulated by Upper and Lower Pony Creek Reservoirs (see stations 14324550 and 14324560) and diversion above station from Lower Pony Creek Reservoir to municipal water supply of Coos Bay-North Bend (station 14323570). Approximately 4.6 ft³/s (0.13 m³/s) is diverted to the Coos Bay-North Bend water treatment plant, maximum capacity, 10.8 ft³/s (0.31 m³/s).

AVERAGE DISCHARGE.--7 years, 10.1 ft³/s (0.286 m³/s), 35.17 in/yr (893 mm/yr), 7,320 acre-ft/yr (9.03 hm³/yr), adjusted for Coos Bay-North Bend diversion and change in contents of Upper and Lower Pony Creek Reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft³/s (5.13 m³/s) Dec. 6, 1981, gage height, 6.19 ft (1.887 m); minimum, 0.01 ft³/s (0.001 m³/s) Feb. 11-20, Apr. 27, 29, May 12, 13, June 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 181 ft³/s (5.13 m³/s) Dec. 6, gage height, 6.19 ft (1.887 m); minimum, 0.02 ft³/s (0.001 m³/s) on many days during October, November, May to September.

MONTHLY DISCHARGE OF PONY CREEK, PONY CREEK DIVERSION AND MONTHLY CHANGE IN CONTENTS
OF RESERVOIRS NEAR COOS BAY, OR, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	14324580 Pony Creek at Coos Bay (acre-feet)	14324570 Diversion from Lower Pony Cr. Reservoir to City of Coos Bay (acre-feet)	14324560 Lower Pony Creek Reservoir Change in Contents (acre-feet)	14324550 Upper Pony Creek Reservoir Change in Contents (acre-feet)	Pony Creek adjusted for diversion and change in contents (acre-feet) (inches)	
October.....	28.6	193	+8	+370	600	2.89
November.....	835	277	+9	+90	1,210	5.82
December.....	2,660	235	+6	+20	2,920	14.04
CAL YR 1981.....	4,790	3,940	+16	+160	8,950	43.04
January.....	2,090	250	-5	-10	2,320	11.16
February.....	1,250	234	-1	0	1,480	7.12
March.....	707	255	+1	+370	1,330	6.40
April.....	1,500	242	-6	-20	1,720	8.27
May.....	111	381	-30	+10	472	2.27
June.....	3.5	379	+16	-120	278	1.34
July.....	17.4	432	+10	-180	279	1.34
August.....	24.8	491	0	-330	186	0.89
September.....	82.1	371	-27	-240	186	0.89
WTR YR 1982.....	9,310	3,740	-19	-40	12,990	62.47

COOS RIVER BASIN

14324580 PONY CREEK AT COOS BAY, OR--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.03	22	35	16	30	24	5.0	.02	.02	.40	1.5
2	.02	.03	30	46	17	35	31	5.6	.02	.02	1.3	.20
3	.02	.05	30	56	17	43	35	6.3	.02	.02	.02	1.7
4	.02	.04	27	98	14	35	30	4.6	.02	.02	.02	2.9
5	.02	.04	48	70	19	15	37	4.4	.02	.50	.02	3.1
6	.02	.03	163	43	16	4.2	48	4.3	.02	.67	.02	3.5
7	.44	.02	85	43	17	4.9	42	4.2	.02	.12	.02	2.3
8	1.3	.02	37	27	18	3.3	33	4.2	.02	.06	.02	.17
9	4.5	.02	37	20	16	3.8	31	6.1	.02	.02	.02	.05
10	4.5	.02	26	18	17	1.5	30	4.2	.02	.02	.02	2.9
11	.51	.53	17	17	17	4.8	31	4.5	.02	.02	.02	2.4
12	.67	1.1	26	13	16	3.0	33	2.0	.02	.02	.02	4.1
13	.04	13	26	13	21	2.8	49	.02	.02	.02	.02	2.4
14	.03	18	83	11	27	3.6	48	.02	.03	.02	.02	2.1
15	.03	13	49	11	25	2.7	42	.02	1.1	.02	.02	.15
16	.02	17	56	13	27	3.0	33	.02	.02	.02	.02	1.2
17	.02	26	40	17	30	2.1	30	.02	.02	.02	.02	.12
18	.02	21	46	20	26	.45	29	.02	.02	.02	.02	3.3
19	.02	21	79	14	25	4.2	29	.02	.02	.02	.03	4.4
20	.02	21	60	13	36	3.6	20	.02	.02	.02	.03	2.9
21	.02	33	48	15	42	7.1	10	.02	.02	.02	.02	.02
22	.02	31	35	17	36	7.9	8.0	.02	.02	.02	.02	.02
23	.02	36	30	108	31	7.2	8.0	.02	.02	.02	.02	.02
24	.02	27	27	81	24	7.7	5.6	.02	.02	.02	.02	.02
25	.02	24	25	49	19	6.9	7.4	.04	.02	.02	.02	.02
26	.02	30	33	61	18	7.5	6.5	.02	.04	.02	.02	.03
27	.05	28	32	43	23	17	5.2	.02	.03	.02	.02	.02
28	.13	23	31	29	18	21	5.3	.02	.02	2.3	.08	.02
29	.62	19	33	21	---	19	6.8	.02	.02	1.9	2.4	.02
30	1.2	18	32	16	---	22	6.0	.02	.02	1.3	5.8	.02
31	.05	---	30	17	---	27	---	.02	---	1.5	1.9	---
TOTAL	14.41	420.93	1343	1055	628	356.25	753.8	55.80	1.72	8.81	12.40	41.60
MEAN	.46	14.0	43.3	34.0	22.4	11.5	25.1	1.80	.057	.28	.40	1.39
MAX	4.5	36	163	108	42	43	49	6.3	1.1	2.3	5.8	4.4
MIN	.02	.02	17	11	14	.45	5.2	.02	.02	.02	.02	.02
AC-FT	29	835	2660	2090	1250	707	1500	111	3.4	17	25	83
CAL YR 1981	TOTAL	2417.77	MEAN	6.62	MAX	163	MIN	.02	AC-FT	4800		
WTR YR 1982	TOTAL	4691.72	MEAN	12.9	MAX	163	MIN	.02	AC-FT	9310		

COQUILLE RIVER BASIN

319

14325000 SOUTH FORK COQUILLE RIVER AT POWERS, OR

LOCATION.--Lat 42°53'30", long 124°04'10", in SE¼ sec.12, T.31 S., R.12 W., Coos County, Hydrologic Unit 17100305, on left bank 0.6 mi (1.0 km) downstream from highway bridge at Powers, 0.9 mi (1.4 km) upstream from Woodward Creek, and at mile 64.5 (103.8 km).

DRAINAGE AREA.--169 mi² (438 km²).

PERIOD OF RECORD.--September 1916 to September 1926, October 1928 to current year.

REVISED RECORDS.--WSP 1184: 1946(M). WSP 1448: 1917-18(M), 1919, 1920(M), 1925.

GAGE.--Water-stage recorder. Datum of gage is 197.42 ft (60.274 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1938, nonrecording gage at various sites within 1 mi (2 km) of present site at different datums.

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

AVERAGE DISCHARGE.--63 years (water years 1917-26, 1930-82), 789 ft³/s (22.34 m³/s), 63.40 in/yr (1,610 mm/yr), 571,600 acre-ft/yr (705 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,900 ft³/s (1,380 m³/s) Dec. 22, 1964, gage height, 26.51 ft (8.080 m), from floodmarks, from rating curve extended above 19,000 ft³/s (538 m³/s) on basis of contracted-opening measurement at gage height 18.14 ft (5.529 m) and slope-area measurement of peak flow; minimum, 12 ft³/s (0.34 m³/s) Sept. 22-25, 27-30, 1939, Oct. 5, 1961, Oct. 16-20, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,300 ft³/s (263 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0330	*33,200 940	*20.28 6.181	Feb. 14	0600	12,500 354	11.51 3.508
Dec. 15	0300	14,900 422	12.65 3.856	Apr. 13	0830	12,000 340	10.84 3.304
Dec. 19	0730	18,500 524	14.24 4.340				

Minimum, 22 ft³/s (0.62 m³/s) Sept. 9, 10, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	103	728	1340	2190	1020	5160	1370	804	135	90	37	25		
2	95	547	2300	2130	894	4920	2030	759	128	79	35	25		
3	90	442	2130	2710	808	4300	2720	690	122	73	34	24		
4	78	375	1500	4070	748	3520	2090	620	148	69	33	24		
5	71	323	9810	2370	682	2530	2230	571	154	71	32	24		
6	1100	283	17900	1610	621	1890	2460	572	133	67	30	24		
7	1780	253	5260	1240	570	1480	1780	588	120	63	30	23		
8	913	230	2960	1010	524	1230	1330	527	112	61	30	23		
9	954	211	2870	901	484	1460	1200	466	106	57	30	22		
10	1260	209	4050	879	448	1430	1430	417	100	54	29	23		
11	887	551	2830	879	420	1420	5300	388	98	51	30	24		
12	611	1510	2130	861	395	1250	6550	367	97	48	30	28		
13	451	1310	3040	792	3080	1050	10200	355	97	47	29	43		
14	349	3800	6210	763	10700	1000	7070	343	93	48	28	37		
15	284	2590	9670	747	6450	964	3790	324	88	46	29	30		
16	240	3420	3840	746	7990	896	2400	304	84	43	28	25		
17	209	7280	2280	1210	6020	852	1850	300	79	42	27	24		
18	184	4260	3150	1890	3700	812	1520	290	76	41	26	27		
19	165	2340	12600	1540	3630	755	1310	263	72	41	26	61		
20	153	1810	5320	1250	4720	704	1250	246	69	39	27	55		
21	141	3550	4220	1140	4680	650	1510	236	68	38	27	40		
22	132	3700	2980	1120	2760	599	1840	225	66	37	26	33		
23	125	4840	2190	3350	2000	557	1930	209	61	36	26	29		
24	118	3380	1710	3620	1570	526	1700	197	58	35	24	27		
25	114	2560	1530	2940	1300	502	1420	192	57	35	24	25		
26	110	2440	2410	4780	1220	508	1210	184	75	34	24	50		
27	155	1830	3000	3570	1360	713	1060	168	92	34	24	209		
28	1900	1340	2730	2480	1360	1090	975	158	88	34	23	129		
29	2220	1050	5010	1830	---	988	920	150	118	35	24	175		
30	1900	891	4070	1420	---	1080	843	143	104	37	25	144		
31	1090	---	2600	1180	---	1720	---	137	---	37	25	---		
TOTAL	17982	58053	133640	57218	70154	46556	73288	11193	2898	1522	872	1452		
MEAN	580	1935	4311	1846	2506	1502	2443	361	96.6	49.1	28.1	48.4		
MAX	2220	7280	17900	4780	10700	5160	10200	804	154	90	37	209		
MIN	71	209	1340	746	395	502	843	137	57	34	23	22		
CFSM	3.43	11.5	25.5	10.9	14.8	8.89	14.5	2.14	.57	.29	.17	.29		
IN.	3.96	12.78	29.42	12.59	15.44	10.25	16.13	2.46	.64	.34	.19	.32		
AC-FT	35670	115100	265100	113500	139200	92340	145400	22200	5750	3020	1730	2880		
CAL YR 1981	TOTAL	330500	MEAN	905	MAX	17900	MIN	19	CFSM	5.36	IN	72.75	AC-FT	655500
WTR YR 1982	TOTAL	474828	MEAN	1301	MAX	17900	MIN	22	CFSM	7.70	IN	104.52	AC-FT	941800

14328000 ROGUE RIVER ABOVE PROSPECT, OR

LOCATION.--Lat 42°46'30", long 122°29'55", in SE¼NE¼ sec.19, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, Rogue River National Forest, on left bank 1.4 mi (2.3 km) upstream from Pacific Power and Light Co. diversion dam, 1.8 mi (2.9 km) northwest of Prospect, and at mile 173.4 (279.0 km).

DRAINAGE AREA.--312 mi² (808 km²).

PERIOD OF RECORD.--January 1908 to February 1912, October 1923 to current year. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1925, published as "near Prospect."

REVISED RECORDS.--WSP 1248: 1925, 1927(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,620 ft (799 m), from river-profile map. Prior to Feb. 17, 1912, nonrecording gage at several sites within a few hundred feet upstream at various datums.

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

AVERAGE DISCHARGE.--62 years (water years 1909-11, 1924-82), 820 ft³/s (23.22 m³/s), 35.69 in/yr (907 mm/yr), 594,100 acre-ft/yr (733 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s (634 m³/s) Dec. 22, 1964, gage height, 11.55 ft (3.520 m), from floodmark, from rating curve extended above 9,000 ft³/s (255 m³/s) on basis of slope-area measurement at 16,600 ft³/s (470 m³/s); minimum observed, 200 ft³/s (5.66 m³/s) Nov. 20, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	1200	*6,490 184	*6.15 1.875	Feb. 16	1400	4,510 128	5.08 1.548
Dec. 15	1030	4,700 133	5.19 1.582	Feb. 19	1100	5,120 145	5.43 1.655
Dec. 19	1530	5,870 166	5.83 1.777	Apr. 12	0030	4,030 114	4.78 1.457

Minimum recorded, 319 ft³/s (9.03 m³/s) Oct. 26, 27, but may have been less during period of no gage-height record Oct. 1-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	458	719	1150	700	1450	866	1740	1430	997	574	504
2	330	453	1030	1080	684	1460	854	1810	1400	1050	578	499
3	320	436	1310	1020	675	1350	837	1770	1340	1060	576	501
4	320	421	1120	1000	647	1280	810	1650	1340	952	570	511
5	320	405	1230	949	626	1200	789	1620	1280	925	565	498
6	350	392	5000	926	640	1130	772	1730	1190	877	559	497
7	600	383	3580	922	636	1090	766	1890	1150	851	554	492
8	400	373	2360	892	601	1060	745	1850	1120	830	555	491
9	541	363	1950	838	601	1080	753	1640	1130	799	560	488
10	755	360	1890	827	570	1140	818	1500	1210	782	551	491
11	528	365	1550	809	573	1330	1230	1450	1320	765	561	491
12	426	642	1380	781	568	1300	1460	1490	1490	755	553	536
13	391	682	1470	756	701	1200	1610	1590	1340	743	543	550
14	372	665	2510	741	2950	1180	1700	1630	1280	736	539	503
15	360	922	3970	732	3200	1120	1350	1680	1300	715	539	491
16	350	1550	2660	719	4170	1060	1180	1740	1360	697	534	491
17	344	2290	1990	748	3540	1020	1130	1870	1370	686	529	487
18	339	1540	1960	752	2780	977	1090	1810	1360	675	527	495
19	335	1100	4400	720	4530	944	1060	1700	1350	666	524	527
20	332	991	4040	706	3840	903	1070	1700	1340	655	521	521
21	329	1380	3640	693	4350	878	1150	1880	1390	647	521	504
22	325	1820	2260	682	3140	867	1330	1980	1230	638	515	492
23	323	1890	1870	683	2390	874	1580	1950	1150	629	513	481
24	323	1540	1680	759	1960	898	1740	1930	1100	624	509	499
25	323	1230	1680	822	1720	957	1740	2110	1080	613	507	494
26	321	1060	1900	925	1550	1020	1680	2180	1050	607	505	509
27	320	916	1960	883	1420	1020	1700	1870	1220	601	503	621
28	442	811	1640	832	1330	1020	1770	1650	1080	599	503	521
29	455	745	1550	776	---	959	1700	1520	1080	592	526	560
30	422	703	1400	750	---	927	1670	1450	1030	586	525	531
31	420	---	1260	727	---	910	---	1410	---	579	510	---
TOTAL	12046	26886	66959	25600	51092	33604	36950	53790	37510	22931	16649	15276
MEAN	389	896	2160	826	1825	1084	1232	1735	1250	740	537	509
MAX	755	2290	5000	1150	4530	1460	1770	2180	1490	1060	578	621
MIN	320	360	719	682	568	867	745	1410	1030	579	503	481
CFSM	1.25	2.87	6.92	2.65	5.85	3.47	3.95	5.56	4.01	2.37	1.72	1.63
IN.	1.44	3.21	7.98	3.05	6.09	4.01	4.41	6.41	4.47	2.73	1.99	1.82
AC-FT	23890	53330	132800	50780	101300	66650	73290	106700	74400	45480	33020	30300
CAL YR 1981	TOTAL	268068	MEAN	734	MAX	5000	MIN	300	CFSM	2.35	IN	31.96
WTR YR 1982	TOTAL	399293	MEAN	1094	MAX	5000	MIN	320	CFSM	3.51	IN	47.61
									AC-FT	531700		792000

ROGUE RIVER BASIN

321

14330000 ROGUE RIVER BELOW PROSPECT, OR

LOCATION.--Lat 42°43'50", long 122°30'55", in SE¼NW¼ sec.6, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 600 ft (183 m) downstream from Prospect No. 1 powerplant, 1.4 mi (2.3 km) downstream from Mill Creek, 2.0 mi (3.2 km) southwest of Prospect, 2.1 mi (3.4 km) upstream from South Fork Rogue River, and at mile 169.4 (272.6 km).

DRAINAGE AREA.--379 mi² (982 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1913 to September 1930, October 1968 to current year.

REVISED RECORDS.--WSP 1518: 1914-23, 1924(M), 1925, 1928.

GAGE.--Water-stage recorder. Datum of gage is 1,964.56 ft (598.798 m) National Geodetic Vertical Datum of 1929 (Pacific Power and Light Co. bench mark). Prior to September 1927 nonrecording gage at site 1,000 ft (305 m) upstream, above powerplants, at different datum, also concurrent nonrecording gage on headrace to obtain equivalent combined flow.

REMARKS.--Water-discharge records good. Small fluctuations caused by powerplant 600 ft (183 m) above station. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--31 years, 1,248 ft³/s (35.34 m³/s), 904,200 acre-ft/yr (1,115 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s (309 m³/s) Jan. 18, 1971, gage height, 7.62 ft (2.323 m), from high-water mark; minimum, 205 ft³/s (5.81 m³/s) Sept. 17, 22, 24, 1980, caused by regulation of diversion gates upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 12.4 ft (3.78 m) Dec. 22, 1964, from floodmarks, discharge, 25,000 ft³/s (708 m³/s), from records for station above Prospect (see station 14328000) and for station below South Fork Rogue River near Prospect (see station 14335000) after adjusting for estimated intervening tributary inflow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,980 ft³/s (226 m³/s) Dec. 6, gage height, 6.46 ft (1.969 m); minimum, 478 ft³/s (13.5 m³/s) Oct. 27, caused by regulation of diversion gates upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	779	929	1300	1760	1430	2200	1610	2340	2010	1680	1230	1110
2	795	925	1610	1730	1430	2220	1610	2480	2000	1700	1240	1100
3	795	905	1810	1660	1440	2070	1590	2440	1950	1720	1240	1100
4	769	884	1680	1600	1430	2030	1550	2290	1950	1610	1230	1110
5	769	859	1880	1530	1380	1970	1520	2250	1910	1590	1220	1090
6	800	852	6020	1430	1390	1910	1510	2390	1840	1570	1210	1090
7	1060	839	4150	1430	1410	1850	1500	2580	1820	1530	1200	1080
8	874	826	2880	1570	1370	1830	1460	2540	1800	1500	1200	1080
9	992	792	2430	1520	1370	1820	1460	2300	1820	1490	1210	1080
10	1230	768	2320	1510	1330	1910	1540	2090	1860	1460	1200	1090
11	974	779	2030	1490	1320	2020	1930	1990	1920	1440	1220	1080
12	880	1080	1880	1470	1310	1990	2110	1990	2080	1420	1170	1140
13	874	1100	2010	1440	1430	1910	2330	2110	1950	1410	1170	1160
14	852	1050	3140	1440	3580	1900	2460	2130	1910	1410	1160	1100
15	827	1290	4780	1430	4090	1840	2050	2310	1920	1400	1160	1080
16	819	1890	3140	1420	5270	1810	1910	2350	1950	1380	1150	1070
17	814	2660	2470	1460	4580	1790	1860	2520	1980	1360	1150	1070
18	805	1890	2480	1470	3580	1750	1830	2440	1960	1350	1160	1080
19	798	1500	5310	1420	5630	1720	1810	2320	1950	1350	1150	1110
20	793	1390	5130	1420	4910	1680	1810	2300	1930	1330	1140	1070
21	785	1750	3670	1410	5520	1630	1870	2520	1980	1340	1130	1010
22	770	2130	2830	1410	4070	1620	2010	2640	1860	1320	1130	992
23	766	2220	2370	1420	3200	1620	2270	2620	1810	1320	1120	981
24	769	1890	2170	1510	2740	1640	2400	2610	1770	1300	1120	1000
25	770	1620	2180	1570	2470	1690	2430	2750	1750	1290	1110	995
26	772	1490	2450	1700	2310	1740	2370	2870	1710	1280	1110	1000
27	767	1350	2560	1670	2180	1740	2380	2500	1840	1280	1110	1120
28	909	1260	2160	1610	2060	1760	2460	2240	1740	1270	1100	1020
29	939	1160	2120	1550	---	1690	2360	2090	1750	1260	1130	1060
30	898	1200	2000	1510	---	1670	2320	2040	1710	1250	1130	1040
31	886	---	1870	1480	---	1660	---	1990	---	1240	1110	---
TOTAL	26330	39278	84830	47040	74230	56680	58320	73030	56430	43850	36110	32108
MEAN	849	1309	2736	1517	2651	1828	1944	2356	1881	1415	1165	1070
MAX	1230	2660	6020	1760	5630	2220	2460	2870	2080	1720	1240	1160
MIN	766	768	1300	1410	1310	1620	1460	1990	1710	1240	1100	981
AC-FT	52230	77910	168300	93300	147200	112400	115700	144900	111900	86980	71620	63690
CAL YR 1981	TOTAL	460343	MEAN	1261	MAX	6020	MIN	705	AC-FT	913100		
WTR YR 1982	TOTAL	628236	MEAN	1721	MAX	6020	MIN	766	AC-FT	1246000		

ROGUE RIVER BASIN

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to September 1981.

pH: November 1976 to September 1981.

WATER TEMPERATURES: October 1968 to current year.

DISSOLVED OXYGEN: October 1979 to September 1981.

SUSPENDED SEDIMENT DISCHARGE: November 1976 to September 1981 (October to April only, 1980 water year, November to April only, 1981 water year).

INSTRUMENTATION.--Water-quality monitor since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 73 micromhos Sept. 22, 1980; minimum recorded, 28 micromhos Jan. 13, 1980, may have been lower during period of missing record Jan. 14-17, 1980.

pH: Maximum recorded, 8.3 units Aug. 10, 1981, may have been higher during period of no record in July and August 1981; minimum, 7.0 units Nov. 30, 1976.

WATER TEMPERATURES: Maximum, 20.5°C July 20, 1979 (result of regulation); minimum, 0.0°C Jan. 1, 2, 4, 5, 1970, Mar. 1, 1971, Jan. 26, 29-31, Feb. 2, 1979, and Jan. 29, 30, 1980.

DISSOLVED OXYGEN: Maximum, 13.6 mg/l Dec. 8, 1980, Feb. 21, 1981; minimum, 7.2 mg/l June 21, 1980, result of regulation.

SEDIMENT CONCENTRATIONS: Maximum daily mean (water years 1977-79), 1,270 mg/l (estimated) Jan. 11, 1979; minimum, 0 mg/l on many days each year. Maximum daily mean (period October 1979 to April 1981), 716 mg/l Oct. 25, 1979; minimum daily mean, 0 mg/l on several days in October and December 1979, Nov. 15-21, 28, Dec. 1, 1980, Jan. 19, 1981.

SEDIMENT DISCHARGE: Maximum daily (water years 1977-79), 17,790 tons (16,140 tonnes) Dec. 15, 1977; minimum daily, 0 tons (0 tonnes) on many days each year. Maximum daily (period October 1979 to April 1981), 5,570 tons (5,050 tonnes) Jan. 13, 1980; minimum daily, 0 tons (0 tonnes) on several days in October and December 1979, Nov. 15-21, 28, Dec. 1, 1980, Jan. 19, 1981.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 15.0°C July 29, 30; minimum, 0.5°C Jan. 7.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

323

14330000 ROGUE RIVER BELOW PROSPECT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14332001 SOUTH FORK ROGUE RIVER NEAR PROSPECT, OR

LOCATION.--Lat 42°42'30", long 122°23'30", in SE¼SW¼ sec.7, T.33 S., R.4 E., Jackson County, Hydrologic Unit 17100307, in Rogue River National Forest on left bank 0.3 mi (0.5 km) downstream from South Fork dam and intake of South Fork power canal, 0.31 mi (0.50 km) downstream from Imnaha Creek, 5.6 mi (9.0 km) southeast of Prospect, and at mile 10.2 (16.4 km).

DRAINAGE AREA.--83.8 mi² (217 km²). Area at site above Imnaha Creek used October 1931 to September 1949, 61.3 mi² (158.8 km²), and Imnaha Creek near Prospect, 22.2 mi² (57.5 km²).

PERIOD OF RECORD.--April 1924 to September 1931, October 1949 to current year. Equivalent records for period October 1931 to September 1949 may be obtained from combined flow of South Fork Rogue River above Imnaha Creek, near Prospect and Imnaha Creek near Prospect.

REVISED RECORDS.--WSP 1318: 1925(M), 1927(M), 1930(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,300 ft (1,006 m), from topographic map. Prior to Sept. 10, 1965, at site 1,000 ft (305 m) upstream at different datum.

REMARKS.--Records good. All records given herein include flow in South Fork power canal (completed in March 1932) which diverts 1,500 ft (457 m) above station and returns water to Rogue River above South Fork Rogue River; practically no storage above diversion dam.

AVERAGE DISCHARGE.--58 years (water years 1925-82), 177 ft³/s (5.013 m³/s), 128,200 acre-ft/yr (158 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 7,010 ft³/s (199 m³/s) Dec. 22, 1964, gage height, 11.1 ft (3.38 m), from floodmark, from rating curve extended above 410 ft³/s (11.6 m³/s) on basis of measurement of flow over dam of 3,180 ft³/s (90.1 m³/s); no flow Jan. 31, 1950, Sept. 29, 30, 1967 (entire flow diverted to canal).

Combined flow, maximum discharge, 7,010 ft³/s (199 m³/s) Dec. 22, 1964 (no flow in canal); minimum daily, about 38 ft³/s (1.08 m³/s) Aug. 1-31, 1931.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 1,460 ft³/s (41.3 m³/s) Feb. 21, gage height, 5.01 ft (1.527 m); minimum, 0.26 ft³/s (0.007 m³/s) Nov. 30.

Combined flow, maximum discharge, 1,580 ft³/s (44.7 m³/s) Feb. 21; minimum daily, 41 ft³/s (1.16 m³/s) Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	71	114	458	152	424	186	368	358	220	126	96
2	58	66	244	420	153	404	181	382	349	209	126	96
3	58	64	278	383	150	373	180	379	321	218	122	94
4	54	62	219	355	151	342	176	361	315	201	117	98
5	51	64	228	319	149	327	170	354	305	187	121	95
6	58	62	604	302	148	312	165	371	293	178	119	94
7	89	62	514	302	146	279	162	400	271	180	121	93
8	62	57	406	282	144	291	159	388	267	174	112	90
9	83	56	356	249	140	276	157	343	273	168	125	92
10	111	58	322	235	134	298	170	315	298	162	113	96
11	73	56	269	227	139	321	217	303	317	157	118	94
12	69	84	253	210	136	291	226	309	323	146	118	93
13	61	82	288	197	167	377	234	325	308	150	116	108
14	61	96	498	201	448	350	270	342	289	148	108	94
15	61	111	651	192	492	319	247	353	304	147	106	92
16	60	250	470	184	654	317	238	367	315	136	101	93
17	56	235	377	191	600	303	236	420	318	146	105	92
18	58	163	411	187	529	285	233	404	305	139	107	95
19	41	157	833	175	845	273	227	369	298	134	104	94
20	56	146	892	164	881	263	227	372	288	137	109	108
21	55	223	681	158	1370	249	244	405	282	133	104	91
22	56	267	557	151	1010	235	266	420	251	136	96	90
23	53	271	485	158	776	224	303	423	232	131	98	89
24	54	250	465	177	653	226	333	444	209	130	101	91
25	54	197	560	180	554	218	328	500	224	132	99	89
26	53	177	741	186	504	213	343	500	219	129	95	101
27	53	158	681	173	463	210	342	423	222	129	97	119
28	68	150	551	171	430	208	356	377	211	123	97	101
29	63	132	584	163	---	197	346	351	223	124	97	106
30	70	127	563	161	---	197	349	342	245	123	115	61
31	59	---	504	158	---	196	---	346	---	120	93	---
TOTAL	1916	3954	14599	7069	12118	8798	7271	11756	8433	4747	3386	2845
MEAN	61.8	132	471	228	433	284	242	379	281	153	109	94.8
MAX	111	271	892	458	1370	424	356	500	358	220	126	119
MIN	41	56	114	151	134	196	157	303	209	120	93	61
AC-FT	3800	7840	28960	14020	24040	17450	14420	23320	16730	9420	6720	5640
CAL YR 1981	TOTAL	54055	MEAN 148	MAX 892	MIN 41	AC-FT 107200						
WTR YR 1982	TOTAL	86892	MEAN 238	MAX 1370	MIN 41	AC-FT 172400						

ROGUE RIVER BASIN

325

14334700 SOUTH FORK ROGUE RIVER, SOUTH OF PROSPECT, OR

LOCATION.--Lat 42°42'45", long 122°30'20", in NW¼ sec.7, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 200 ft (61 m) upstream from unnamed tributary, 0.6 mi (1.0 km) upstream from Smith Creek, 1.2 mi (1.9 km) downstream from Beaver Creek, 2.8 mi (4.5 km) southwest of Prospect, and at mile 2.4 (3.9 km).

DRAINAGE AREA.--246 mi² (637 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,030 ft (619 m), from topographic map.

REMARKS.--Water-discharge records good. Some regulation by South Fork canal dam upstream. Power diversions above station from South Fork Rogue River, Middle Fork Rogue River, and Red Blanket Creek divert water to Rogue River via Main Canal. During summer base flow all of streamflow is diverted for power except that for fish life. Base flow at station is principally from springs downstream from power diversions.

AVERAGE DISCHARGE.--14 years, 382 ft³/s (10.82 m³/s), 276,800 acre-ft/yr (341 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,880 ft³/s (280 m³/s) Mar. 3, 1972, gage height, 12.71 ft (3.874 m), from floodmark; minimum, 54 ft³/s (1.53 m³/s) Aug. 16-19, 1977; minimum daily, 54 ft³/s (1.53 m³/s) Sept. 24-30, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 20.1 ft (6.13 m), Dec. 22, 1964, from floodmarks at gage, discharge, 28,500 ft³/s (807 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,130 ft³/s (145 m³/s) Feb. 21, gage height, 10.25 ft (3.124 m); minimum, 56 ft³/s (1.59 m³/s) Oct. 4-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	94	307	1210	396	1080	370	760	710	497	174	132
2	62	78	556	1100	357	1010	366	789	688	482	171	131
3	59	75	681	1000	345	943	366	765	650	478	162	133
4	57	74	537	938	307	886	351	730	623	438	161	133
5	56	80	572	866	291	832	345	706	605	396	162	132
6	76	71	1870	715	283	779	334	730	551	366	160	132
7	170	69	1590	649	278	760	334	779	526	360	160	132
8	130	71	1110	545	263	725	328	779	513	345	162	132
9	172	98	931	529	235	700	343	691	521	334	162	132
10	286	120	837	509	235	650	410	668	583	326	159	131
11	199	124	689	486	249	842	658	735	658	317	170	130
12	136	197	660	459	241	793	710	730	720	307	160	155
13	85	193	747	416	337	725	760	770	663	289	157	144
14	78	263	1280	399	1530	745	902	789	622	271	163	128
15	73	382	1970	373	1940	677	798	706	658	263	164	128
16	71	779	1330	363	2440	631	735	730	735	253	162	129
17	68	790	1020	410	2100	591	701	832	740	251	151	128
18	68	502	1110	406	1730	562	654	808	750	239	144	133
19	67	379	2970	376	2620	521	618	745	735	232	144	141
20	66	344	3070	360	2600	486	604	750	725	221	143	170
21	64	541	2100	345	4360	463	600	813	715	200	143	224
22	71	718	1560	331	2970	438	613	886	649	207	144	223
23	72	753	1320	396	2100	441	682	876	587	195	142	222
24	72	693	1170	478	1710	423	770	902	558	192	136	238
25	73	544	1260	497	1480	420	775	1060	537	190	138	236
26	70	469	1780	618	1280	423	750	1130	521	181	138	262
27	72	398	1850	591	1150	423	740	933	570	176	137	305
28	110	348	1450	529	1050	445	755	784	529	176	137	264
29	99	320	1740	474	---	420	725	720	517	176	154	290
30	104	266	1670	438	---	413	720	701	549	175	168	253
31	100	---	1410	410	---	406	---	710	---	174	147	---
TOTAL	2946	9833	41147	17216	34877	19653	17817	24507	18708	8707	4775	5223
MEAN	95.0	328	1327	555	1246	634	594	791	624	281	154	174
MAX	286	790	3070	1210	4360	1080	902	1130	750	497	174	305
MIN	56	69	307	331	235	406	328	668	513	174	136	128
AC-FT	5840	19500	81620	34150	69180	38980	35340	48610	37110	17270	9470	10360
CAL YR 1981	TOTAL	102010	MEAN	279	MAX	3070	MIN	56	AC-FT	202300		
WTR YR 1982	TOTAL	205409	MEAN	563	MAX	4360	MIN	56	AC-FT	407400		

ROGUE RIVER BASIN

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1968 to current year.

SEDIMENT RECORDS: October 1976 to April 1981 (October to April only 1980 water year, November to April only 1981 water year).

INSTRUMENTATION.--Water temperature recorder since October 1968.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.0°C July 18, 19, 1979; minimum, 0.0°C on several days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 654 mg/l Nov. 26, 1977; minimum daily, 0 mg/l on several days each year.

SEDIMENT DISCHARGE: Maximum daily, 6,180 tons (5,610 tonnes) Nov. 26, 1977; minimum daily, 0 tons (0 tonnes) on several days each year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 17.5°C July 28-30; minimum, 1.0°C Feb. 5, 6, 10.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

327

14334700 SOUTH FORK ROGUE RIVER SOUTH OF PROSPECT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14335040 LOST CREEK LAKE NEAR MCLEOD, OR

LOCATION.--Lat 42°40'16", long 122°40'25", in SW¼ sec.26, T.33 S., R. 1 E., Jackson County, Hydrologic Unit 17100307, in outlet structure of Lost Creek Dam on Rogue River, 1.0 mi (1.6 km) northeast of McLeod and at mile 157.2 (252.9 km).

DRAINAGE AREA.--674 mi² (1,746 km²).

PERIOD OF RECORD.--February 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Nov. 28, 1977, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam completed in October 1976. Storage began in February 1977. Total capacity, 465,000 acre-ft (573 hm³) between elevations 1,551.0 ft (472.74 m) and 1,872.0 ft (570.59 m), maximum pool elevation. Elevation of gated spillway crest, 1,823.0 ft (555.65 m). Usable storage, 315,000 acre-ft (388 hm³) between elevation 1,751.0 ft (533.70 m) and 1,872.0 ft (570.59 m). Water is used for flood control, recreation, power generation, pollution abatement, domestic use and other purposes.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 465,100 acre-ft (573 hm³) May 21, 1979, May 25, 1981, elevation, 1,872.02 ft (570.592 m); minimum since first filling, 100,800 acre-ft (124 hm³) Oct. 29, 1977, elevation, 1,720.50 ft (524.408 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 465,000 acre-ft (573 hm³) May 26, elevation, 1,871.93 ft (570.564 m); minimum, 259,500 acre-ft (320 hm³) Nov. 11, elevation, 1,801.99 ft (549.247 m).

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

1,720.0	100,100	1,850.0	393,100
1,750.0	148,200	1,872.0	465,000
1,800.0	254,600		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1805.79	1802.74	1803.17	1816.93	1824.57	1852.99	1860.93	1861.98	1871.60	1871.72	1860.90	1843.96
2	1805.59	1802.71	1803.78	1815.57	1825.45	1853.14	1860.93	1861.99	1871.61	1871.71	1860.30	1843.45
3	1805.39	1802.68	1804.75	1814.03	1826.31	1853.39	1860.93	1862.09	1871.57	1871.75	1859.68	1842.96
4	1805.15	1802.63	1805.42	1813.18	1827.08	1853.58	1860.95	1862.22	1871.59	1871.67	1859.11	1842.45
5	1804.92	1802.57	1806.34	1812.93	1827.79	1853.64	1860.95	1862.30	1871.57	1871.64	1858.54	1841.94
6	1804.83	1802.49	1811.55	1812.81	1828.48	1853.63	1860.99	1862.47	1871.59	1871.56	1857.94	1841.42
7	1804.88	1802.39	1814.28	1813.21	1829.20	1853.52	1861.02	1862.79	1871.65	1871.45	1857.37	1840.89
8	1804.83	1802.29	1815.45	1813.81	1829.87	1853.46	1861.08	1863.07	1871.67	1871.28	1856.80	1840.48
9	1804.91	1802.17	1816.10	1814.15	1830.52	1853.70	1861.15	1863.14	1871.72	1871.08	1856.22	1840.38
10	1805.27	1802.07	1816.60	1814.51	1831.14	1854.23	1861.20	1863.12	1871.82	1870.86	1855.63	1840.16
11	1805.31	1802.04	1816.66	1814.88	1831.75	1854.85	1861.45	1863.14	1871.85	1870.62	1855.08	1839.98
12	1805.24	1802.30	1816.64	1815.20	1832.35	1855.28	1861.47	1863.19	1871.80	1870.38	1854.45	1839.85
13	1805.11	1802.55	1816.73	1815.46	1833.25	1855.63	1861.53	1863.33	---	1870.09	1853.84	1839.73
14	1804.95	1802.58	1817.82	1815.79	1836.74	1856.00	1861.52	1863.68	---	1869.79	1853.22	1839.56
15	1804.77	1802.61	1819.92	1816.15	1840.51	1856.29	1861.40	1864.33	1871.38	1869.45	1852.61	1839.30
16	1804.62	1802.91	1818.92	1816.48	1844.57	1856.60	1861.36	1865.03	1871.42	1869.09	1851.96	1839.00
17	1804.45	1803.28	1816.79	1816.95	1847.86	1856.87	1861.38	1865.88	1871.53	1868.69	1851.32	1838.69
18	1804.20	1803.02	1814.77	1817.47	1849.36	1857.28	1861.39	1866.68	1871.62	1868.28	1850.68	1838.42
19	1803.99	1802.58	1820.19	1817.99	1850.77	1857.67	1861.43	1867.35	1871.69	1867.86	1850.05	1838.14
20	1803.84	1802.47	1826.05	1818.51	1850.97	1857.93	1861.51	1868.03	1871.71	1867.39	1849.48	1837.84
21	1803.69	1802.69	1826.94	1819.05	1854.72	1858.14	1861.63	1868.82	1871.77	1866.94	1848.72	1837.50
22	1803.53	1802.99	1825.63	1819.65	1855.67	1858.37	1861.72	1869.76	1871.72	1866.44	1848.23	1837.11
23	1803.37	1802.99	1823.69	1820.24	1855.17	1858.63	1861.74	1870.73	1871.71	1865.94	1847.86	1836.70
24	1803.20	1802.89	1821.47	1820.88	1854.25	1858.99	1861.75	1871.45	1871.64	1865.44	1847.49	1836.35
25	1803.06	1802.82	1819.22	1821.40	1853.98	1859.44	1861.79	1871.83	1871.63	1864.91	1847.14	1835.98
26	1802.90	1802.78	1818.25	1821.99	1854.08	1859.82	1861.79	1871.89	1871.68	1864.38	1846.79	1835.66
27	1802.74	1802.80	1817.67	1822.16	1853.96	1860.15	1861.85	1871.78	1871.68	1863.83	1846.37	1835.44
28	1802.75	1802.78	1816.33	1822.27	1853.48	1860.49	1861.91	1871.68	1871.66	1863.26	1845.86	1835.12
29	1802.78	1802.75	1817.03	1822.63	---	1860.64	1861.94	1871.63	1871.68	1862.69	1845.42	1834.82
30	1802.78	1802.81	1819.00	1823.21	---	1860.80	1861.96	1871.61	1871.71	1862.12	1844.95	1834.47
31	1802.75	---	1818.13	1823.79	---	1860.94	---	1871.59	---	1861.52	1844.45	---
MEAN	1804.24	1802.65	1816.30	1817.53	1840.49	1856.65	1861.42	1866.41	---	1868.19	1852.21	1838.93
MAX	1805.79	1803.28	1826.94	1823.79	1855.67	1860.94	1861.96	1871.89	---	1871.75	1860.90	1843.96
MIN	1802.74	1802.04	1803.17	1812.81	1824.57	1852.99	1860.93	1861.98	---	1861.52	1844.45	1834.47
(+)	261400	261600	301200	316500	404000	428000	431300	463600	464000	429900	376100	346600
(+)	-8200	+200	+39600	+15300	+87500	+24000	+3300	+32300	+400	-34100	-53800	-29500

CAL YR 1981 MEAN 1837.38 MAX 1872.01 MIN 1802.04 AC-FT+ +6800

ROGUE RIVER BASIN

329

14335075 ROGUE RIVER AT MCLEOD, OR

LOCATION.--Lat 42°39'35", long 122°41'30", in SW¼NW¼ sec.34, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.3 mi (0.5 km) upstream from Big Butte Creek, 0.1 (0.2 km) southwest of McLeod, and at mile 155.6 (250.4 km).

DRAINAGE AREA.--690 mi² (1,787 km²), approximately.

PERIOD OF RECORD.--May 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 15.0°C June 22, July 3, 1981; minimum, 0.5°C Jan. 9, 1977; minimum since full operation of Lost Creek Lake, 3.5°C Feb. 1-9, 15, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 13.0°C June 19, 20; minimum, 4.0°C many days January and February.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14335075 ROGUE RIVER AT MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14335500 SOUTH FORK BIG BUTTE CREEK NEAR BUTTE FALLS, OR

LOCATION.--Lat 42°32'25", long 122°33'15", in NE¼SW¼ sec.11, T.35 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 10 ft (3 m) downstream from Ginger Creek, 0.6 mi (1.0 km) east of town of Butte Falls, and at mile 14.0 (22.5 km).

DRAINAGE AREA.--138 mi² (357 km²).

PERIOD OF RECORD.--September 1910 to October 1911 (published as "at Butte Falls"), August to October 1915, October 1917 to September 1922, March 1925 to current year. Monthly discharge only August, September 1915, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1911, 1918-19, 1921-22, 1929. WSP 1318: 1918-19. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Oct. 1, 1968. Altitude of gage is 2,360 ft (719 m), from river-profile map. Sept. 21, 1910, to Sept. 30, 1922, nonrecording gage at site 300 ft (91 m) upstream at different datums.

REMARKS.--Records good except those above 500 ft³/s (14.2 m³/s), which are fair. Flow slightly regulated since 1952 by Willow Creek Reservoir, capacity, 7,320 acre-ft (9.03 hm³). Diversions for irrigation above station and for municipal water supply for Medford (since 1927) and Butte Falls.

AVERAGE DISCHARGE.--63 years (water years 1911, 1918-22, 1926-82), 155 ft³/s (4.390 m³/s), 112,300 acre-ft/yr (138 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s (357 m³/s) Dec. 22, 1964, gage height, 7.65 ft (2.332 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 29 ft³/s (0.82 m³/s) Sept. 26, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 19	2330	822	23.3	2.68	0.817	Feb. 15	2330	808	22.9	2.74	0.835
Dec. 29	2000	822	23.3	2.68	0.817	Feb. 21	1200	*1,480	41.1	*3.38	1.030
Jan. 26	1530	486	13.8	2.18	0.664	Apr. 14	1600	450	12.7	2.11	0.643

Minimum, 30 ft³/s (0.85 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	46	108	498	210	385	194	197	94	81	77	81
2	33	44	120	415	195	366	194	188	96	79	77	81
3	43	42	133	361	185	334	200	179	90	83	77	83
4	40	41	113	321	180	309	200	167	92	79	77	83
5	40	40	115	278	170	285	197	158	96	79	72	83
6	40	40	289	250	160	268	194	158	92	77	72	81
7	56	39	236	220	155	254	191	155	90	75	72	79
8	50	38	176	206	150	243	185	150	85	75	72	79
9	49	39	155	200	145	233	188	148	83	74	72	79
10	56	40	140	194	140	229	226	145	79	74	72	81
11	50	42	125	185	135	309	330	135	79	72	77	81
12	47	44	130	176	130	297	375	130	81	72	72	83
13	44	47	138	170	247	278	375	128	79	70	66	85
14	44	52	176	164	668	293	430	128	79	68	66	83
15	43	72	250	158	696	278	390	118	79	68	66	81
16	41	108	200	155	822	271	343	118	79	68	66	81
17	43	105	170	176	710	254	317	125	77	68	61	81
18	43	74	173	194	592	247	289	125	79	68	66	83
19	43	61	553	188	738	236	271	115	77	68	61	83
20	41	56	682	182	717	226	254	113	85	70	61	83
21	41	87	465	179	1250	212	243	113	85	72	81	66
22	46	108	334	170	1040	206	240	113	79	72	81	66
23	41	130	278	212	787	200	240	113	77	72	81	59
24	41	133	254	229	634	194	236	108	77	72	81	66
25	41	101	293	254	542	191	236	105	77	72	77	61
26	41	90	564	435	476	188	226	108	77	72	79	77
27	41	75	661	420	430	188	219	105	79	74	79	83
28	47	68	604	350	380	203	215	101	79	75	81	66
29	51	62	731	270	---	194	206	98	79	77	83	56
30	50	61	703	250	---	194	200	94	81	75	85	50
31	48	---	592	230	---	206	---	92	---	75	81	---
TOTAL	1367	1985	9661	7690	12684	7771	7604	4030	2481	2276	2291	2284
MEAN	44.1	66.2	312	248	453	251	253	130	82.7	73.4	73.9	76.1
MAX	56	133	731	498	1250	385	430	197	96	83	85	85
MIN	33	38	108	155	130	188	185	92	77	68	61	50
AC-FT	2710	3940	19160	15250	25160	15410	15080	7990	4920	4510	4540	4530
CAL YR 1981	TOTAL	31201	MEAN	85.5	MAX	731	MIN	31	AC-FT	61890		
WTR YR 1982	TOTAL	62124	MEAN	170	MAX	1250	MIN	33	AC-FT	123200		

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR

LOCATION.--Lat 42°39'05", long 122°41'25", in NE¼NW¼ sec.3, T.34 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 225 ft (69 m) upstream from county road bridge, 0.9 mi (1.4 km) south of McLeod, and at mile 0.64 (1.03 km).

DRAINAGE AREA.--245 mi² (635 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to September 1957. October 1967 to current year.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,525.95 ft (465.110 m) National Geodetic Vertical Datum of 1929. Oct. 9, 1945, to Sept. 30, 1957, nonrecording gage at site 260 ft (79 m) downstream at datum 0.53 ft (0.162 m) higher.

REMARKS.--Water-discharge records good. Slight regulation by fish hatchery 600 ft (183 m) above station. Several diversions in the vicinity of Butte Falls, the two largest being the city of Medford diversion and Eagle Point Irrigation District Canal.

AVERAGE DISCHARGE.--27 years, 283 ft³/s (8.015 m³/s), 205,000 acre-ft/yr (253 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft³/s (253 m³/s) Dec. 22, 1955, gage height, 12.75 ft (3.886 m), site and datum then in use, from rating curve extended above 3,300 ft³/s (93.5 m³/s) on basis of slope-area measurement of peak flow; minimum, 6.4 ft³/s (0.18 m³/s) June 23, 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 18.6 ft (5.67 m), present site, from floodmark by local resident, discharge, 16,800 ft³/s (476 m³/s), from rating curve, at former site, extended above 9,000 ft³/s (255 m³/s) and field estimate of overflow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0830	2,280 64.4	7.32 2.231	Dec. 29	1000	3,120 88.4	8.41 2.563
Dec. 19	2130	*4,800 136	*10.16 3.097	Feb. 14	0400	2,670 75.6	7.85 2.393
Dec. 26	1800	2,030 57.5	6.94 2.115	Feb. 21	1330	4,380 124	9.74 2.969

Minimum, 40 ft³/s (1.13 m³/s) Oct. 16-18, 20-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	103	495	1170	530	812	445	336	215	91	56	54
2	93	47	397	975	490	746	436	326	220	89	57	53
3	103	46	398	861	466	682	488	313	211	93	59	55
4	98	45	304	838	436	616	452	291	201	83	63	58
5	98	44	459	718	398	565	444	277	143	80	57	57
6	121	43	1330	603	375	526	419	266	132	75	55	56
7	149	42	816	529	363	496	402	254	114	73	54	55
8	60	42	547	499	346	468	384	250	105	71	54	52
9	79	42	469	484	333	441	379	245	99	70	51	53
10	78	42	480	471	313	435	482	234	92	69	51	57
11	55	48	318	453	301	558	717	228	94	67	57	59
12	49	129	404	433	292	536	757	213	88	65	54	60
13	46	101	483	409	708	494	767	201	90	65	52	64
14	50	121	664	390	2200	531	902	194	90	64	55	60
15	79	318	974	377	1960	511	788	186	89	63	53	60
16	42	619	630	370	2310	504	694	178	83	62	51	61
17	41	521	484	485	1730	475	626	182	78	63	50	61
18	42	239	565	609	1400	446	568	186	79	61	52	63
19	42	142	3420	525	1970	442	526	171	83	58	51	75
20	42	112	2620	480	1740	419	491	164	86	59	51	81
21	42	305	1430	460	3620	386	466	161	172	60	53	62
22	42	438	901	437	2460	365	455	156	86	59	55	60
23	42	727	727	694	1710	347	451	154	79	59	57	58
24	41	694	653	711	1310	333	441	143	79	60	55	66
25	41	356	754	733	1080	323	430	139	83	59	51	66
26	41	286	1500	1340	931	319	413	140	83	58	50	65
27	41	206	1550	1040	862	318	392	136	96	57	53	80
28	54	152	1280	858	757	444	385	192	86	56	55	70
29	58	126	2280	731	---	402	370	227	95	57	57	73
30	67	118	1830	644	---	458	351	217	90	65	58	69
31	82	---	1440	583	---	561	---	215	---	56	55	---
TOTAL	2000	6254	30602	19910	31391	14959	15321	6575	3341	2067	1682	1863
MEAN	64.5	208	987	642	1121	483	511	212	111	66.7	54.3	62.1
MAX	149	727	3420	1340	3620	812	902	336	220	93	63	81
MIN	41	42	304	370	292	318	351	136	78	56	50	52
AC-FT	3970	12400	60700	39490	62260	29670	30390	13040	6630	4100	3340	3700
CAL YR 1981	TOTAL	67132	MEAN 184	MAX 3420	MIN 39	AC-FT 133200						
WTR YR 1982	TOTAL	135965	MEAN 373	MAX 3620	MIN 41	AC-FT 269700						

ROGUE RIVER BASIN

333

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1970 to current year.

INSTRUMENTATION.--Temperature recorder since August 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.0°C at times in 1973, 1977, 1979-81; minimum, 0.0°C at times in 1971, 1972, 1977-80.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C June 18, 19, July 25-29; minimum, 1.0°C Jan. 7.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14337500 BIG BUTTE CREEK NEAR MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.0	3.5	13.0	8.5	15.5	11.0	19.5	14.0	18.5	14.5	18.5	12.5
2	---	---	12.5	8.5	15.0	10.5	17.0	14.0	16.0	12.5	18.0	13.5
3	---	---	11.5	8.5	13.0	10.5	17.5	12.5	15.5	11.5	16.0	14.0
4	7.5	3.5	12.5	7.5	11.5	10.0	16.0	12.5	18.5	12.5	17.0	11.5
5	6.0	4.5	13.5	8.0	13.5	9.5	19.0	12.5	19.5	13.0	17.5	12.0
6	5.5	4.0	14.0	7.5	15.0	9.5	19.5	13.5	20.5	13.5	17.5	12.5
7	7.5	4.5	14.0	9.5	16.5	11.0	18.5	14.5	18.5	15.0	17.5	12.5
8	8.0	4.0	12.0	9.0	17.5	10.5	19.5	13.5	21.5	15.5	18.0	13.0
9	9.5	4.5	10.0	7.5	18.5	11.5	19.0	14.0	21.0	16.0	16.5	12.5
10	7.5	5.5	12.5	6.5	19.5	12.5	20.0	13.5	18.5	14.5	15.5	11.5
11	9.0	7.0	13.0	8.0	18.0	14.0	21.0	14.5	18.5	15.0	15.0	10.0
12	7.5	6.0	14.5	9.0	17.0	13.5	20.5	15.0	19.5	13.0	15.0	12.5
13	8.0	6.5	14.0	9.5	16.0	12.5	19.0	15.0	20.0	13.5	15.5	10.5
14	7.0	5.5	15.0	10.0	19.0	12.0	19.5	13.5	20.0	14.5	15.0	10.5
15	7.5	4.5	15.0	9.5	20.5	13.5	18.5	13.0	20.0	14.5	14.0	9.5
16	8.5	4.0	15.5	10.0	21.0	14.5	19.0	12.5	19.0	13.5	14.0	10.5
17	9.0	6.0	13.5	11.0	21.5	14.5	20.0	13.5	19.0	13.0	14.0	11.0
18	9.5	5.5	14.0	9.0	22.0	15.5	21.0	14.5	19.5	13.5	14.0	11.5
19	9.5	5.0	15.0	8.5	22.0	17.0	21.0	15.0	19.5	14.0	13.0	11.5
20	10.5	6.0	16.5	10.0	20.0	16.0	21.0	15.0	20.5	14.5	14.0	11.0
21	11.5	6.5	17.5	12.0	20.5	14.5	21.0	15.0	20.0	14.5	14.5	10.0
22	12.0	7.0	17.0	11.5	21.0	15.0	20.5	14.0	20.0	14.5	15.5	10.5
23	12.0	8.0	17.0	11.0	21.5	15.0	20.5	14.0	20.0	14.5	15.5	10.5
24	12.0	8.0	18.5	11.5	19.0	15.5	21.0	14.5	20.0	14.0	15.5	12.5
25	11.5	7.5	19.5	13.0	19.5	14.0	22.0	15.5	19.5	14.5	14.0	12.0
26	11.5	7.5	16.5	11.5	17.0	14.5	22.0	15.5	19.0	14.0	12.0	11.0
27	11.5	8.0	15.0	7.5	19.0	14.0	22.0	15.5	18.5	13.0	12.5	10.5
28	11.5	8.5	13.5	8.5	16.5	13.5	22.0	16.0	16.5	13.0	12.5	11.0
29	11.5	6.5	14.5	9.5	17.0	12.5	22.0	16.0	17.5	14.0	13.0	9.5
30	12.0	8.0	15.5	10.5	17.5	14.0	21.5	15.5	18.0	12.5	12.5	8.5
31	---	---	13.0	11.0	---	---	21.0	15.0	18.0	12.5	---	---
MONTH	12.0	3.5	19.5	6.5	22.0	9.5	22.0	12.5	21.5	11.5	18.5	8.5

ROGUE RIVER BASIN

335

14337600 ROGUE RIVER NEAR MCLEOD, OR

LOCATION.--Lat 42°39'20", long 122°42'50", in SW¼ sec.33, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on left bank at Obstinate J Ranch, 1.3 mi (2.1 km) downstream from Big Butte Creek, 1.6 mi (2.6 km) southwest of McLeod, and at mile 154.0 (247.8 km).

DRAINAGE AREA.--938 mi² (2,429 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,489.08 ft (453.872 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Diversions for irrigation above station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--17 years, 2,100 ft³/s (59.47 m³/s), 1,521,000 acre-ft/yr (1.88 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) Mar. 3, 1972, gage height, 12.24 ft (3.731 m); minimum, 468 ft³/s (13.3 m³/s) Feb. 18, 1977, result of closure of Lost Creek Dam, minimum prior to that time, 604 ft³/s (17.1 m³/s) Sept. 5, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1928, 20.35 ft (6.203 m) Dec. 22, 1964, from floodmarks, discharge, 74,300 ft³/s (2,100 m³/s) from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,700 ft³/s (331 m³/s) Feb. 21, gage height, 7.25 ft (2.210 m); minimum, 988 ft³/s (28.0 m³/s) Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	1080	1990	6310	1410	5460	2680	3600	3000	2250	2340	1970
2	1150	1020	1970	6140	1170	4200	2640	3750	2970	2240	2370	1970
3	1170	1020	1850	5980	1150	3740	2720	3490	2940	2250	2370	1970
4	1150	1020	1740	4900	1160	3610	2540	3260	2890	2260	2290	1970
5	1150	1020	1910	3570	1110	3520	2520	3240	2780	2160	2280	1980
6	1170	1020	3570	3010	1090	3490	2390	3240	2530	2100	2250	1980
7	1190	1020	3730	2170	1090	3470	2360	3220	2390	2100	2230	1980
8	1100	1020	3430	1890	1070	3270	2210	3240	2380	2190	2260	1840
9	1140	1020	3400	2120	1060	2720	2230	3230	2380	2200	2230	1390
10	1150	1020	3400	2060	1030	2260	2530	3190	2370	2190	2250	1530
11	1120	1030	3230	2000	1020	2660	3250	2990	2640	2190	2260	1510
12	1110	1110	3310	2000	1010	2870	3970	2920	3110	2160	2260	1510
13	1110	1130	3400	1980	1450	2740	4210	2930	3200	2180	2250	1520
14	1110	1420	4210	1860	3080	2780	4850	2660	3210	2200	2260	1490
15	1140	2200	5910	1770	3530	2770	4310	2170	3050	2200	2260	1600
16	1110	3470	7150	1770	4920	2660	3700	2160	2740	2200	2260	1710
17	1100	4130	7410	1860	4370	2560	3390	2160	2730	2250	2260	1700
18	1110	3360	7460	1980	5340	2220	3240	2170	2730	2250	2270	1710
19	1110	2780	6300	1790	9200	2140	3050	2180	2710	2250	2270	1720
20	1020	2110	4270	1690	9980	2270	2900	2130	2720	2250	2260	1720
21	1020	2620	7110	1620	9050	2240	2900	2130	2800	2250	2210	1770
22	1020	3360	7890	1540	9090	2110	3170	2130	2740	2280	2050	1810
23	1020	4420	7680	1950	8720	2030	3550	2130	2550	2350	1850	1810
24	1020	3950	7680	2070	7850	1900	3800	2480	2500	2350	1800	1810
25	1020	2930	7740	2370	6030	1830	3760	3430	2400	2350	1760	1810
26	1020	2550	8090	3590	4970	1920	3730	4190	2270	2340	1740	1820
27	1020	2050	7630	3480	4940	2070	3560	3900	2590	2350	1840	1820
28	1040	1920	7410	3170	5060	2350	3690	3570	2440	2360	1970	1820
29	1040	1710	6560	2470	---	2440	3570	3190	2300	2350	1970	1820
30	1060	1600	3540	1930	---	2520	3500	3010	2250	2360	1970	1820
31	1060	---	6530	1790	---	2720	---	3010	---	2350	1970	---
TOTAL	33900	60110	157500	82830	110950	85540	96920	91100	80310	69760	66610	52880
MEAN	1094	2004	5081	2672	3963	2759	3231	2939	2677	2250	2149	1763
MAX	1190	4420	8090	6310	9980	5460	4850	4190	3210	2360	2370	1980
MIN	1020	1020	1740	1540	1010	1830	2210	2130	2250	2100	1740	1390
AC-FT	67240	119200	312400	164300	220100	169700	192200	180700	159300	138400	132100	104900
CAL YR 1981	TOTAL	660908	MEAN	1811	MAX	8090	MIN	730	AC-FT	1311000		
WTR YR 1982	TOTAL	988410	MEAN	2708	MAX	9980	MIN	1010	AC-FT	1961000		

ROGUE RIVER BASIN

14337600 ROGUE RIVER NEAR MCLEOD, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1970 to current year.

INSTRUMENTATION.--Temperature recorder since August 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.0°C July 17, 18, Aug. 7, 1973; minimum, 0.5°C Jan. 3-5, 14, 15, 1971. Maximum since full operation of Lost Creek Lake, 15.0°C July 1, 1980; minimum, 3.0°C Feb. 2, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 12.0°C July 19-21; minimum, 4.0°C Feb. 5-12.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

337

14337600 ROGUE RIVER NEAR MCLEOD, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14337800 ELK CREEK NEAR CASCADE GORGE, OR

LOCATION.--Lat 42°46'25", long 122°40'15", in NW¼ sec.23, T.32 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.1 mi (0.2 km) downstream from Sugarpine Creek, 6.5 mi (10.5 km) northwest of town of Cascade Gorge, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--78.8 mi² (204.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,813.83 ft (552.855 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

AVERAGE DISCHARGE.--9 years, 148 ft³/s (4.191 m³/s), 25.51 in/yr (648 mm/yr), 107,200 acre-ft/yr (132 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft³/s (192 m³/s) Jan. 15, 1974, gage height, 8.9 ft (2.71 m), from floodmark; minimum daily, 0.72 ft³/s (0.020 m³/s) Aug. 24, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0600	*4,160 118	*7.60 2.316	Dec. 26	1930	1,730 49.0	5.81 1.771
Dec. 15	0300	2,660 75.3	6.59 2.009	Dec. 29	1800	1,790 50.7	5.86 1.786
Dec. 19	1430	3,760 106	7.35 2.240	Feb. 14	1700	2,690 76.2	6.61 2.015

Minimum, 2.0 ft³/s (0.057 m³/s) Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	41	450	441	235	406	228	203	47	24	6.6	3.2
2	5.2	36	647	352	221	443	217	199	44	24	7.2	2.5
3	5.7	30	532	293	219	398	228	186	41	24	7.6	3.0
4	4.7	26	350	258	220	374	216	165	46	21	8.3	3.6
5	4.5	20	581	215	194	341	201	155	45	21	7.3	3.1
6	11	18	2530	183	172	296	185	162	40	19	6.5	2.5
7	31	17	1020	159	157	260	191	169	37	18	5.9	2.4
8	16	15	546	149	143	236	202	159	35	17	6.4	2.4
9	29	14	412	165	132	225	225	138	33	16	6.2	2.3
10	52	13	374	213	126	227	314	122	31	16	6.1	2.9
11	39	15	295	252	112	249	725	112	30	15	5.8	3.1
12	27	67	298	246	105	232	624	109	31	14	6.0	5.2
13	20	77	379	222	260	208	571	109	30	14	5.9	7.9
14	17	116	687	206	2100	202	583	111	29	14	5.7	5.0
15	15	355	1630	198	1830	188	442	111	27	14	5.6	4.0
16	13	640	674	197	2320	176	352	108	26	13	5.2	3.7
17	12	776	432	268	1490	163	304	111	25	13	4.9	3.6
18	12	421	373	353	1030	156	276	105	23	12	4.9	3.9
19	11	204	2540	306	1380	148	253	96	25	11	4.9	5.6
20	9.9	134	1940	257	1210	138	244	93	27	11	4.5	5.2
21	9.5	230	1130	221	1290	128	257	96	30	11	3.8	4.7
22	9.0	309	650	191	876	118	293	99	24	9.6	3.8	4.2
23	8.6	586	476	236	604	112	329	93	22	9.5	3.8	3.7
24	8.8	478	427	364	460	113	324	89	20	8.9	3.5	4.9
25	8.5	316	550	549	383	118	291	86	24	8.3	3.8	5.5
26	8.6	226	1140	942	334	130	263	82	23	8.1	3.8	8.6
27	8.5	168	1110	653	314	127	244	73	42	7.8	3.8	23
28	18	128	627	454	286	150	235	66	31	7.4	3.8	13
29	33	106	1240	350	---	152	217	59	32	7.0	4.8	20
30	49	94	1030	291	---	164	205	53	27	7.2	5.0	15
31	47	---	601	258	---	232	---	49	---	6.7	4.0	---
TOTAL	548.4	5676	25671	9442	18203	6610	9239	3568	947	422.5	165.4	177.7
MEAN	17.7	189	828	305	650	213	308	115	31.6	13.6	5.34	5.92
MAX	52	776	2540	942	2320	443	725	203	47	24	8.3	23
MIN	4.5	13	295	149	105	112	185	49	20	6.7	3.5	2.3
CFSM	.23	2.40	10.5	3.87	8.25	2.70	3.91	1.46	.40	.17	.07	.08
IN.	.26	2.68	12.12	4.46	8.59	3.12	4.36	1.68	.45	.20	.08	.08
AC-FT	1090	11260	50920	18730	36110	13110	18330	7080	1880	838	328	352
CAL YR 1981	TOTAL	46699.6	MEAN 128	MAX 2540	MIN 1.9	CFSM 1.62	IN 22.05	AC-FT 92630				
WTR YR 1982	TOTAL	80670.0	MEAN 221	MAX 2540	MIN 2.3	CFSM 2.81	IN 38.08	AC-FT 160000				

ROGUE RIVER BASIN

339

14337800 ELK CREEK NEAR CASCADE GORGE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to October 1976, August 1977 to current year.

INSTRUMENTATION.--Temperature recorder August 1973 to October 1976 and since August 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum recorded, 28.5°C July 29, 30, 1973, Aug. 9-11, 1981; minimum, 0.0°C Nov. 20-22, 1977, many days during November 1978 through February 1979, Jan. 28-30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 25.5°C July 17; minimum, 0.5°C Jan. 6, 7.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14337800 ELK CREEK NEAR CASCADE GORGE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

341

14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR

LOCATION.--Lat 42°42'40", long 122°44'55", in SW¼ sec.7, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on Bureau of Land Management land, on left bank 300 ft (91 m) upstream from Spot Creek and 5.3 mi (8.5 km) northeast of Trail.

DRAINAGE AREA.--14.2 mi² (36.8 km²).

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 (540.484 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

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

AVERAGE DISCHARGE.--8 years, 23.9 ft³/s (0.677 m³/s), 22.86 in/yr (581 mm/yr), 17,320 acre-ft/yr (21.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft³/s (39.9 m³/s) Jan. 15, 1974, gage height, 5.30 ft (1.615 m), from rating curve extended above 600 ft³/s (17.0 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.26 ft³/s (0.007 m³/s) Sept. 16, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0400	485 13.7	3.10 0.945	Dec. 29	2000	316 8.95	2.59 0.789
Dec. 15	0330	354 10.0	2.73 0.832	Feb. 14	1800	426 12.1	2.89 0.881
Dec. 19	1400	*697 19.7	*3.72 1.134				

Minimum, 0.98 ft³/s (0.028 m³/s) Oct. 1,2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	6.0	57	60	35	56	35	11	4.6	4.0	2.3	1.8
2	1.4	4.5	73	49	32	68	31	11	4.5	4.1	2.3	1.7
3	1.4	3.6	55	37	31	60	36	10	4.7	4.1	2.4	1.8
4	1.2	3.1	34	32	32	61	34	9.5	5.8	3.7	2.2	1.9
5	1.3	2.9	72	27	28	59	31	8.8	5.5	3.6	2.1	1.8
6	3.5	2.8	270	22	24	49	29	8.4	4.8	3.4	1.9	1.8
7	5.8	2.6	86	19	21	39	29	8.1	4.5	3.3	2.0	1.7
8	2.9	2.5	52	18	20	32	34	8.1	4.2	3.2	2.0	1.7
9	4.2	2.4	37	21	18	28	46	8.2	4.2	3.1	2.0	1.7
10	7.1	2.3	38	38	16	28	79	7.7	3.9	3.0	2.1	1.8
11	9.6	3.7	30	55	15	28	191	7.5	3.9	2.9	2.1	1.8
12	7.1	13	30	48	14	25	121	7.3	4.0	2.8	2.0	2.3
13	4.3	14	45	38	47	22	81	6.9	3.9	2.8	1.9	2.7
14	3.1	26	102	34	374	21	69	6.5	3.9	2.8	1.9	2.0
15	2.5	60	223	33	274	21	58	6.4	3.8	2.8	1.9	1.9
16	2.2	85	81	33	306	20	44	6.1	3.7	2.8	1.8	1.9
17	2.1	89	48	53	195	20	40	6.6	3.5	2.7	1.8	1.9
18	1.8	48	37	68	120	20	37	6.2	3.8	2.5	1.7	2.3
19	1.8	22	474	60	152	19	32	6.0	4.0	2.5	1.7	3.0
20	1.7	15	284	47	115	17	30	5.9	3.7	2.4	1.6	2.6
21	1.7	26	154	36	121	17	28	5.8	3.6	2.4	1.6	2.3
22	1.7	40	89	28	103	16	28	5.4	3.3	2.3	1.6	2.1
23	1.7	78	62	32	72	15	27	5.3	3.2	2.3	1.6	1.9
24	1.7	61	48	66	58	14	23	5.0	3.3	2.3	1.6	2.6
25	1.7	37	47	103	49	14	20	4.9	3.6	2.2	1.6	2.4
26	1.8	26	97	171	41	14	17	5.0	4.1	2.1	1.6	2.9
27	2.1	20	111	110	36	14	15	4.8	6.0	2.0	1.6	5.9
28	4.7	16	77	73	32	17	14	4.8	5.4	2.0	1.7	3.6
29	7.5	13	172	56	---	17	13	4.6	5.4	2.0	1.9	5.8
30	9.8	12	155	44	---	19	12	4.5	4.3	2.1	1.9	3.9
31	8.4	---	88	37	---	40	---	4.7	---	2.1	1.9	---
TOTAL	109.0	737.4	3228	1548	2381	890	1284	211.0	127.1	86.3	58.3	73.5
MEAN	3.52	24.6	104	49.9	85.0	28.7	42.8	6.81	4.24	2.78	1.88	2.45
MAX	9.8	89	474	171	374	68	191	11	6.0	4.1	2.4	5.9
MIN	1.2	2.3	30	18	14	14	12	4.5	3.2	2.0	1.6	1.7
CFSM	.25	1.73	7.32	3.51	5.99	2.02	3.01	.48	.30	.20	.13	.17
IN.	.29	1.93	8.46	4.06	6.24	2.33	3.36	.55	.33	.23	.15	.19
AC-FT	216	1460	6400	3070	4720	1770	2550	419	252	171	116	146
CAL YR 1981	TOTAL	5973.74	MEAN 16.4	MAX 474	MIN .29	CFSM 1.16	IN 15.65	AC-FT 11850				
WTR YR 1982	TOTAL	10733.60	MEAN 29.4	MAX 474	MIN 1.2	CFSM 2.07	IN 28.12	AC-FT 21290				

ROGUE RIVER BASIN

14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1977 to current year.

INSTRUMENTATION.--Temperature recorder since August 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 8, 1978; minimum, 0.0°C Nov. 20-22, 1977, many days during November 1978 to February 1979, and Jan. 28-31, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C July 27-30; minimum recorded, 0.5°C Jan. 7, but may have been lower during period of missing record in February.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

343

14337870 WEST BRANCH ELK CREEK NEAR TRAIL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14338000 ELK CREEK NEAR TRAIL, OR

LOCATION.--Lat 42°39'50", long 122°44'50", in SW¼ sec.30, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 3.3 mi (5.3 km) northeast of Trail and at mile 0.4 (0.6 km).

DRAINAGE AREA.--133 mi² (344 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Prior to March 1946 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,456.56 ft (443.959 m) National Geodetic Vertical Datum of 1929. Prior to July 5, 1946, nonrecording gage at various sites within 1.0 mi (1.6 km) of present site at different datums. July 5, 1946, to June 22, 1950, nonrecording gage, and June 23, 1950, to May 23, 1954, water-stage recorder, at site 0.3 mi (0.5 km) upstream at datum 12.14 ft (3.700 m) higher.

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

AVERAGE DISCHARGE.--37 years, 230 ft³/s (6.514 m³/s), 166,600 acre-ft/yr (205 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,200 ft³/s (544 m³/s) Dec. 22, 1964, gage height, 18.84 ft (5.742 m), from rating curve extended above 4,700 ft³/s (133 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.40 ft³/s (0.011 m³/s) Aug. 16, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	1030	6,490 184	10.34 3.152	Dec. 29	2030	2,960 83.8	7.40 2.256
Dec. 15	0600	3,670 104	8.03 2.448	Feb. 16	0100	3,750 106	8.10 2.469
Dec. 19	1800	*6,720 190	*10.52 3.206				

Minimum, 2.4 ft³/s (0.068 m³/s) Aug. 25-30, Sept. 1, 8-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	58	626	746	362	569	423	229	63	37	7.8	2.7
2	6.7	46	1030	590	331	681	369	225	59	38	8.1	3.0
3	6.7	36	877	480	323	594	396	214	58	39	9.7	2.9
4	6.7	29	559	432	321	558	380	195	65	33	9.6	3.2
5	6.7	24	631	365	290	510	350	184	66	32	8.5	3.3
6	10	21	3820	307	257	436	323	185	61	28	7.7	3.5
7	41	18	1680	265	234	373	326	192	56	27	6.8	3.3
8	25	17	873	241	213	328	341	187	52	25	6.6	2.8
9	26	15	608	252	197	303	371	172	48	23	6.2	2.4
10	72	14	584	336	180	302	529	151	46	22	6.6	2.7
11	70	15	457	425	168	326	1220	135	44	21	6.7	3.0
12	52	86	450	414	155	305	1010	133	45	15	6.3	3.3
13	34	119	586	363	301	268	820	135	45	16	6.2	7.0
14	25	183	1120	331	3140	262	824	135	43	16	6.1	8.8
15	19	515	2580	319	2710	248	632	135	40	17	6.2	6.3
16	16	841	1140	309	3290	239	497	131	37	17	5.7	5.6
17	14	1280	680	416	2240	229	425	136	32	16	5.2	5.2
18	12	777	555	623	1480	222	381	129	31	14	4.6	6.1
19	11	360	4270	544	1870	215	343	119	33	14	5.0	8.9
20	11	223	3550	437	1590	205	322	112	37	12	5.0	9.1
21	9.8	312	1940	365	1770	193	328	114	40	11	4.1	8.5
22	9.5	510	1160	309	1330	180	360	117	34	11	3.2	7.6
23	9.2	945	802	365	908	171	397	111	30	10	3.0	7.1
24	9.0	830	647	607	674	167	384	105	29	10	2.9	7.9
25	9.0	578	829	985	547	170	345	103	32	9.4	2.5	8.2
26	9.3	398	1480	1770	469	180	309	100	33	8.4	2.4	10
27	9.8	292	1800	1260	438	179	284	93	57	8.4	2.6	36
28	17	221	1030	797	394	215	271	85	47	6.9	2.7	27
29	38	174	1880	588	---	231	252	76	50	7.0	2.7	36
30	73	147	1850	469	---	260	234	67	42	7.3	3.1	34
31	73	---	1030	402	---	428	---	64	---	7.9	3.9	---
TOTAL	738.1	9084	41124	16112	26182	9547	13446	4269	1355	559.3	167.7	275.4
MEAN	23.8	303	1327	520	935	308	448	138	45.2	18.0	5.41	9.18
MAX	73	1280	4270	1770	3290	681	1220	229	66	39	9.7	36
MIN	6.7	14	450	241	155	167	234	64	29	6.9	2.4	2.4
AC-FT	1460	18020	81570	31960	51930	18940	26670	8470	2690	1110	333	546
CAL YR 1981	TOTAL	73484.01	MEAN	201	MAX	4270	MIN	.92	AC-FT	145800		
WTR YR 1982	TOTAL	122859.50	MEAN	337	MAX	4270	MIN	2.4	AC-FT	243700		

ROGUE RIVER BASIN

345

14338000 ELK CREEK NEAR TRAIL, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1973 to current year.

INSTRUMENTATION.--Enviro-Lab temperature unit since June 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.5°C July 17, 1979; minimum, 0.0°C at times in 1976-78, 1980, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.0°C July 29; minimum, 0.0°C Jan. 7.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	11.0	10.5	7.5	6.5	4.0	5.5	4.5	4.5	2.5	7.5	6.0
2	15.0	13.0	10.0	7.0	7.5	6.5	4.5	3.5	5.0	3.0	6.5	5.5
3	14.0	11.5	9.5	7.0	8.0	7.0	3.5	2.5	6.0	3.0	6.5	5.5
4	14.0	9.0	10.0	7.5	7.0	6.5	3.5	3.0	4.0	2.0	7.5	5.0
5	13.0	9.0	9.0	6.5	7.5	6.5	3.5	2.0	3.5	.5	7.0	4.0
6	13.5	12.5	10.0	7.0	9.0	7.5	2.5	1.0	3.0	.5	7.0	3.5
7	13.0	11.0	10.0	6.5	8.5	8.0	2.0	.0	4.5	1.5	6.5	4.0
8	12.5	11.5	10.0	7.0	8.5	7.0	4.0	2.0	3.5	1.5	8.5	6.0
9	12.5	11.5	9.5	6.5	8.5	7.5	4.0	2.5	5.0	2.5	9.5	6.5
10	13.0	11.5	9.5	7.0	7.5	6.5	4.0	3.0	3.5	.5	7.5	5.5
11	11.5	10.0	11.0	9.0	6.5	5.5	4.5	3.5	3.5	.5	7.5	5.0
12	11.0	8.0	11.0	10.0	7.0	6.0	5.0	4.0	3.5	1.5	7.0	3.0
13	11.0	7.0	10.5	9.0	7.5	7.0	4.0	2.5	4.5	3.5	7.0	4.0
14	11.0	7.0	9.5	8.0	8.5	7.5	3.5	2.5	5.5	4.0	7.0	5.5
15	11.5	7.0	9.0	8.0	8.5	7.0	4.0	3.0	6.5	5.5	6.5	4.0
16	12.0	7.5	9.5	9.0	7.0	6.0	5.0	3.5	6.5	6.0	6.0	3.5
17	13.0	8.0	9.5	8.5	7.5	5.5	5.5	4.0	7.0	5.5	7.5	4.5
18	13.5	9.0	9.0	8.0	8.0	7.5	5.0	4.0	6.5	5.5	6.0	4.5
19	14.0	9.0	8.0	7.0	8.5	8.0	5.0	4.5	7.5	6.0	6.5	4.5
20	14.0	9.5	8.5	8.0	8.5	7.5	5.0	4.0	8.0	6.5	6.5	4.0
21	13.5	9.0	9.0	8.5	---	---	4.5	3.5	7.0	5.0	8.0	2.5
22	13.0	8.5	9.0	8.0	---	---	3.5	2.5	6.0	5.0	8.5	3.5
23	12.5	8.5	8.5	8.0	---	---	4.0	2.5	5.5	4.0	9.5	4.0
24	12.5	8.5	8.5	7.0	---	---	5.0	3.5	6.0	3.5	10.0	4.5
25	12.5	8.5	8.0	6.5	---	---	6.0	4.5	6.0	3.5	10.0	5.5
26	12.0	9.5	7.0	6.5	---	---	5.5	5.0	5.5	4.0	9.0	7.5
27	12.0	11.0	6.5	5.5	---	---	6.0	5.0	7.0	4.5	7.5	5.5
28	11.5	10.0	5.5	4.0	---	---	6.0	4.5	6.0	4.0	6.5	4.0
29	10.0	8.5	5.0	3.5	---	---	5.0	3.5	---	---	5.5	3.5
30	8.5	8.0	5.5	4.0	---	---	5.5	3.5	---	---	5.0	4.0
31	10.0	7.0	---	---	5.5	---	5.5	3.5	---	---	6.5	3.5
MONTH	17.5	7.0	11.0	3.5	9.0	4.0	6.0	.0	8.0	.5	10.0	2.5

ROGUE RIVER BASIN

14338000 ELK CREEK NEAR TRAIL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.5	4.0	13.0	7.5	18.0	12.0	23.0	18.0	24.0	18.5	24.5	18.0
2	6.5	4.5	12.5	7.5	17.5	12.0	20.5	17.5	21.0	17.0	24.0	19.5
3	6.0	4.0	11.5	7.0	15.0	12.5	21.5	15.5	20.5	16.0	22.0	19.5
4	7.0	4.5	12.5	6.0	13.5	11.5	19.5	16.0	24.0	16.5	22.5	16.5
5	6.0	4.5	14.0	7.0	15.0	11.5	23.0	15.5	25.5	17.5	23.0	17.0
6	5.5	4.5	14.0	8.5	17.0	11.0	24.0	16.5	27.0	18.0	22.5	17.5
7	8.5	4.5	14.0	8.5	17.5	11.5	22.5	17.5	24.5	20.0	22.5	17.0
8	9.0	3.5	12.0	7.5	18.0	12.5	24.0	16.5	28.5	21.5	23.0	17.5
9	10.0	4.0	11.0	6.5	18.0	14.0	23.5	17.5	27.0	22.0	21.0	18.0
10	7.5	5.0	13.0	6.5	20.0	15.5	25.0	17.5	24.0	19.0	19.0	15.5
11	8.5	6.0	14.0	7.5	20.0	17.5	26.5	19.0	23.5	20.0	19.0	13.5
12	7.5	6.0	15.0	9.0	19.0	16.5	27.0	19.0	25.0	17.0	19.0	16.5
13	7.0	6.0	14.5	9.5	18.5	15.5	25.0	19.5	25.5	18.0	20.0	14.5
14	6.0	5.0	15.0	10.0	21.0	14.5	25.5	18.0	24.5	19.0	19.0	13.5
15	8.0	4.5	15.5	9.5	23.0	16.5	24.0	17.0	25.5	19.0	18.0	12.5
16	9.5	4.0	15.5	10.0	24.0	18.0	24.5	16.0	25.0	18.0	18.0	13.5
17	9.5	5.5	14.0	11.0	25.0	18.5	26.0	17.5	25.5	18.0	18.0	14.0
18	10.0	4.5	14.5	8.5	26.0	19.5	26.5	19.0	26.0	18.0	17.5	15.0
19	10.0	4.0	15.5	8.5	25.5	20.5	27.5	19.5	25.5	19.5	17.0	15.0
20	11.5	4.5	16.5	10.0	24.0	20.5	27.5	20.0	27.0	20.0	19.0	14.5
21	12.0	5.5	18.5	12.5	23.5	19.5	26.5	20.0	27.0	20.0	18.5	13.5
22	12.5	6.0	18.0	11.5	23.5	19.0	26.0	18.5	27.0	20.5	20.0	14.0
23	12.5	6.5	17.5	11.5	24.5	19.0	26.5	18.5	26.5	20.0	20.0	14.0
24	12.5	6.5	19.0	12.0	23.0	19.5	27.0	19.0	26.0	19.5	20.5	16.5
25	11.5	6.0	20.0	14.0	23.5	18.5	28.0	20.5	26.5	20.0	19.0	16.5
26	12.0	6.5	17.0	12.5	21.5	19.0	28.5	21.0	25.5	20.0	16.5	14.0
27	12.0	6.5	15.5	10.0	22.0	17.5	28.5	21.0	24.5	18.5	14.5	13.0
28	12.0	8.0	15.5	9.5	19.5	16.5	28.5	21.5	22.0	18.0	16.0	13.5
29	12.0	5.5	16.5	10.5	20.5	15.5	29.0	21.5	22.5	19.5	15.0	11.5
30	12.5	7.0	18.0	12.0	22.0	17.0	28.5	21.0	23.5	17.5	15.0	10.5
31	---	---	15.5	13.0	---	---	27.5	20.0	23.5	17.0	---	---
MONTH	12.5	3.5	20.0	6.0	26.0	11.0	29.0	15.5	28.5	16.0	24.5	10.5

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR

LOCATION.--Lat 42°31'30", long 122°50'30", in SE¼ sec.17, T.35 S., R.1 W., Jackson County, Hydrologic Unit 17100307, on right bank 50 ft (15 m) upstream from Dodge Bridge, 0.7 mi (1.1 km) downstream from Reese Creek, 4.3 mi (6.9 km) northwest of Eagle Point, and at mile 138.61 (223.02 km).

DRAINAGE AREA.--1,215 mi² (3,147 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1094: 1942(M), 1943, 1945(M), 1946. WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,271.39 ft (387.520 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1938, nonrecording gage, Dec. 21, 1938, to Aug. 15, 1968, water-stage recorder, at datum 2.27 ft (0.692 m) higher, Aug. 16, 1968, to Sept. 30, 1976, water-stage recorder, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Water-discharge records excellent. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Diversions for irrigation above station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--44 years, 2,597 ft³/s (73.55 m³/s), 1,882,000 acre-ft/yr (2.32 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,600 ft³/s (2,480 m³/s) Dec. 22, 1964, gage height, 12.78 ft (3.895 m), datum then in use, from rating curve extended above 23,000 ft³/s (651 m³/s); minimum, 567 ft³/s (16.1 m³/s) Feb. 18, 1977, result of closure of Lost Creek dam, minimum prior to that time 611 ft³/s (17.3 m³/s) Aug. 6, 14, 29, Sept. 9, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,600 ft³/s (697 m³/s) Dec. 19, gage height, 9.55 ft (2.911 m); minimum, 1,040 ft³/s (29.5 m³/s) Oct. 20-27, Nov. 5, 8-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	1210	3100	8490	2160	7090	3500	3880	3070	2320	2410	2020
2	1250	1140	3340	7770	1810	5760	3330	4010	3030	2320	2410	2010
3	1230	1130	3030	7370	1730	4880	3510	3810	3020	2330	2410	2020
4	1230	1110	2520	6810	1730	4600	3290	3480	2960	2310	2350	2020
5	1220	1100	3040	4670	1640	4390	3160	3450	2880	2180	2320	2020
6	1240	1110	10900	3940	1570	4220	2990	3440	2640	2140	2320	2020
7	1310	1100	6650	2900	1520	4090	2930	3430	2450	2160	2310	2020
8	1230	1090	4860	2500	1470	3860	2790	3440	2460	2240	2300	1970
9	1250	1100	4350	2740	1430	3370	2810	3430	2440	2220	2300	1410
10	1290	1110	4410	2860	1370	2810	3240	3380	2440	2210	2300	1560
11	1260	1110	3940	2870	1320	3130	5160	3160	2660	2200	2300	1550
12	1240	1290	4160	2850	1290	3380	5760	3100	3120	2190	2300	1540
13	1220	1310	4560	2750	2080	3160	5540	3100	3240	2210	2320	1540
14	1210	1670	6400	2500	10100	3190	6360	2920	3240	2250	2320	1520
15	1230	2740	11000	2350	8930	3170	5570	2350	3140	2230	2320	1550
16	1190	4600	9280	2320	11900	3090	4520	2320	2780	2260	2310	1710
17	1180	5900	8780	2620	8860	2950	4060	2330	2770	2330	2310	1710
18	1190	4590	8850	3330	7950	2680	3810	2340	2770	2330	2300	1730
19	1190	3330	19500	2930	13400	2440	3590	2330	2770	2320	2300	1750
20	1120	2600	12400	2550	13600	2630	3370	2290	2810	2320	2310	1760
21	1100	2890	11100	2360	14300	2560	3360	2290	2900	2320	2290	1760
22	1100	4110	10600	2170	12300	2440	3600	2280	2810	2360	2130	1820
23	1090	5900	9690	2930	11300	2300	4050	2280	2590	2370	1920	1830
24	1090	5530	9300	3400	9940	2170	4280	2470	2550	2360	1810	1840
25	1090	3830	9600	4100	7650	2060	4240	3390	2480	2360	1810	1840
26	1090	3170	11700	7190	6010	2120	4150	4280	2350	2370	1790	1850
27	1100	2590	11400	6100	6070	2330	3950	4050	2640	2370	1840	1870
28	1130	2300	9840	4810	5820	2700	4010	3730	2560	2370	2010	1870
29	1150	2060	12700	3730	---	2880	3980	3300	2420	2380	2020	1870
30	1200	1870	7090	2870	---	3030	3770	3100	2330	2380	2020	1880
31	1200	---	9380	2590	---	3810	---	3080	---	2390	2020	---
TOTAL	36880	74590	247470	119370	169250	103290	118680	96240	82320	71100	68180	53860
MEAN	1190	2486	7983	3851	6045	3332	3956	3105	2744	2294	2199	1795
MAX	1310	5900	19500	8490	14300	7090	6360	4280	3240	2390	2410	2020
MIN	1090	1090	2520	2170	1290	2060	2790	2280	2330	2140	1790	1410
AC-FT	73150	147900	490900	236800	335700	204900	235400	190900	163300	141000	135200	106800
CAL YR 1981 TOTAL	788734			2161				823				1564000
WTR YR 1982 TOTAL	1241230			3401				1090				2462000

ROGUE RIVER BASIN

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.0°C July 27, 28, 1975; minimum, 0.0°C Jan. 6-8, 10, 11, 1974, Jan. 6-9, 1977. Maximum since full operation of Lost Creek Lake, 19.5°C July 3, 1981; minimum, 1.5°C Feb. 2, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.0°C June 22, July 6, 11, 18-20, 29; minimum recorded, 2.5°C Jan. 7, may have been lower during period of missing record in February.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

349

14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR--Continued

TEMPERATURE, WATER (DEG. C); WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14341500 SOUTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR

LOCATION.--Lat 42°24'30", long 122°36'00", in SE¼ sec.29, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on left bank 0.5 mi (0.8 km) upstream from intake of Rogue River Valley Canal, 1.4 mi (2.3 km) southeast of Lakecreek, and at mile 18.1 (29.1 km).

DRAINAGE AREA.--138 mi² (357 km²).

PERIOD OF RECORD.--April 1921 to September 1982 (discontinued).

REVISED RECORDS.--WSP 934: 1925(M). WSP 1398: 1922, 1927(M), 1937, 1941-42.

GAGE.--Water-stage recorder. Altitude of gage is 1,725 ft (526 m), by barometer. Supplementary nonrecording gage at site 25 ft (8 m) upstream used Jan. 12 to Sept. 6, 1965. Apr. 15 to June 17, 1921, nonrecording gage, and June 18, 1921, to Sept. 6, 1965, water-stage recorder at site 75 ft (23 m) upstream at datum 4.97 ft (1.515 m) higher.

REMARKS.--Records fair. No regulation. Diversions for irrigation above station; also, in December 1958 Dead Indian collection canal began diverting above station from Code Creek and Dead Indian Creek and in December 1959 South Fork Little Butte collection canal began diverting above station from South Fork Little Butte Creek, Daley Creek, and Beaver Dam Creek. These are transbasin diversions to Howard Prairie Reservoir in Klamath River basin, but eventually this water is diverted back to Rogue River basin for irrigation of lands in the Ashland-Medford area and power development enroute.

AVERAGE DISCHARGE.--61 years, 104 ft³/s (2.945 m³/s), 75,350 acre-ft/yr (92.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,660 ft³/s (217 m³/s) Dec. 2, 1962, gage height, 8.35 ft (2.545 m), site and datum then in use; minimum, 2.0 ft³/s (0.057 m³/s) Aug. 10, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 14	1330	579 16.4	6.37 1.942	Dec. 26	1930	1,600 45.3	7.55 2.301
Nov. 24	0500	534 15.1	6.54 1.993	Dec. 29	2200	546 15.5	6.56 1.999
Dec. 6	1030	870 24.6	6.97 2.124	Feb. 16	0200	534 15.1	6.54 1.993
Dec. 19	1800	*2,420 68.5	*8.01 2.441	Feb. 21	0900	2,010 56.9	7.80 2.377

Minimum recorded, 11 ft³/s (0.31 m³/s) Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	17	176	290	105	235	176	217	61	45	25	22
2	17	16	208	245	99	221	168	217	56	45	25	22
3	17	16	240	208	96	190	181	208	53	46	25	22
4	25	16	176	212	90	185	176	203	66	45	26	21
5	25	16	159	190	86	176	164	190	80	43	25	21
6	18	16	504	176	83	168	151	185	66	40	23	21
7	16	16	336	159	80	176	155	185	56	44	25	21
8	16	16	240	159	77	172	142	181	51	40	25	21
9	14	16	208	146	75	168	142	176	48	38	23	21
10	14	33	199	146	74	168	185	172	56	38	25	22
11	13	37	181	146	74	203	336	168	56	36	25	22
12	13	62	176	138	71	185	320	151	64	34	25	23
13	13	171	181	131	127	181	300	142	58	34	25	30
14	12	315	190	124	354	194	325	127	58	32	22	25
15	12	176	305	116	310	203	305	93	53	32	21	23
16	12	116	226	112	450	190	280	93	51	32	21	22
17	12	95	190	131	325	185	260	102	44	30	21	23
18	12	80	190	172	265	181	245	105	46	28	21	26
19	12	74	910	151	348	190	230	96	45	27	21	26
20	12	71	830	135	354	181	226	69	46	28	22	25
21	13	159	558	131	1450	172	226	64	50	27	21	23
22	13	176	396	124	920	164	226	61	47	25	21	23
23	13	235	285	151	534	159	235	61	44	25	21	22
24	13	396	235	168	354	151	245	93	44	25	21	22
25	13	194	320	176	290	151	250	90	44	25	19	23
26	12	164	664	221	245	151	245	58	43	25	20	25
27	14	124	640	176	221	155	240	48	43	25	20	42
28	16	99	396	159	194	176	240	46	44	25	21	32
29	18	86	438	135	---	176	226	64	44	25	22	38
30	19	80	504	124	---	176	221	61	45	25	23	32
31	18	---	360	112	---	185	---	61	---	25	22	---
TOTAL	466	3088	10621	4964	7751	5568	6821	3787	1562	1014	702	741
MEAN	15.0	103	343	160	277	180	227	122	52.1	32.7	22.6	24.7
MAX	25	396	910	290	1450	235	336	217	80	46	26	42
MIN	12	16	159	112	71	151	142	46	43	25	19	21
AC-FT	924	6130	21070	9850	15370	11040	13530	7510	3100	2010	1390	1470
CAL YR 1981	TOTAL	26964.1	MEAN	73.9	MAX	910	MIN	7.8	AC-FT	53480		
WTR YR 1982	TOTAL	47085.0	MEAN	129	MAX	1450	MIN	12	AC-FT	93390		

14342500 NORTH FORK LITTLE BUTTE CREEK AT FISH LAKE, NEAR LAKECREEK, OR

LOCATION.--Lat 42°22'35", long 122°21'20", in SE¼SW¼ sec.4, T.37 S., R.4 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.5 mi (0.8 km) downstream from Fish Lake dam, 14 mi (23 km) east of Lakecreek, and at mile 15.2 (24.5 km).

DRAINAGE AREA.--20.8 mi² (53.9 km²).

PERIOD OF RECORD.--October 1914 to July 1915, June 1916 to current year. Monthly discharge only November 1916 to May 1917, published in WSP 1318.

REVISED RECORDS.--WSP 654: Drainage area (former site). WSP 1218: 1917(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,571.41 ft (1,393.66 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1914, to July 31, 1915, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum. June 1, 1916, to July 9, 1918, nonrecording gage and July 10, 1918, to Oct. 28, 1932, water-stage recorder at site 0.25 mi (0.40 km) upstream at different datums.

REMARKS.--Records good May to September, fair January to April, poor October to December. Since 1915, Fish Lake (see below) has stored water for irrigation by Medford Irrigation District. Cascade Canal diverts from Fourmile Lake in Klamath River basin and discharges into lava bed 1.0 mi (1.6 km) above Fish Lake; diversion began August 1923. No diversion from creek above station.

AVERAGE DISCHARGE.--66 years (water years 1917-82), 35.6 ft³/s (1.008 m³/s), 25,790 acre-ft/yr (31.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 940 ft³/s (26.6 m³/s) June 5, 1917, computed from rate of change in contents of reservoir after break in dam occurred; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 78 ft³/s (2.21 m³/s) July 31, Aug. 15, gage height, 1.53 ft (0.466 m); minimum daily, 0.04 ft³/s (0.001 m³/s) Oct. 14 to Nov. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	.04	.35	14	16	21	23	28	32	29	74	74
2	5.0	.04	.35	14	16	21	23	29	32	29	74	74
3	5.0	.04	.35	14	16	21	23	29	32	29	74	72
4	5.0	.04	.35	15	16	21	23	29	32	29	74	72
5	5.0	.04	.35	15	16	21	23	29	32	29	74	72
6	5.0	.04	2.5	15	16	21	23	30	32	29	74	74
7	5.0	.04	2.5	15	16	21	23	30	32	29	72	74
8	5.0	.04	2.5	15	16	21	21	30	32	39	74	72
9	5.0	.04	2.5	16	16	21	21	32	32	50	74	72
10	5.0	.04	2.5	16	16	23	23	32	31	50	74	70
11	5.0	.04	2.5	16	16	23	23	32	31	48	72	69
12	.70	.04	2.5	16	16	23	23	33	31	48	72	69
13	.05	.04	2.5	16	16	23	23	33	31	58	72	60
14	.04	.04	2.5	16	16	23	23	33	30	65	74	53
15	.04	.35	2.5	16	16	23	21	33	30	63	74	53
16	.04	.35	2.5	16	16	23	21	33	30	63	74	51
17	.04	.35	2.5	16	16	23	21	33	30	63	74	46
18	.04	.35	2.5	16	16	23	21	33	30	63	74	30
19	.04	.35	2.5	16	17	23	21	33	30	63	74	20
20	.04	.35	2.5	16	18	23	21	33	30	65	74	20
21	.04	.35	2.5	16	19	23	21	33	30	70	74	20
22	.04	.35	2.5	16	19	23	23	33	30	70	74	20
23	.04	.35	2.5	16	19	23	23	33	30	70	74	20
24	.04	.35	2.5	16	19	23	24	33	30	69	74	20
25	.04	.35	2.5	16	20	23	24	33	30	69	74	20
26	.04	.35	13	16	20	23	25	33	30	69	74	21
27	.04	.35	13	16	20	23	26	33	30	69	74	21
28	.04	.35	13	16	20	23	27	33	30	70	74	21
29	.04	.35	14	16	---	23	27	33	30	76	74	21
30	.04	.35	14	16	---	23	27	32	29	76	74	21
31	.04	---	14	16	---	23	---	32	---	76	74	---
TOTAL	56.47	6.16	132.75	485	479	695	691	988	921	1725	2286	1402
MEAN	1.82	.21	4.28	15.6	17.1	22.4	23.0	31.9	30.7	55.6	73.7	46.7
MAX	5.0	.35	14	16	20	23	27	33	32	76	74	74
MIN	.04	.04	.35	14	16	21	21	28	29	29	72	20
AC-FT	112	12	263	962	950	1380	1370	1960	1830	3420	4530	2780
(†)	1720	2570	a3120	a3810	a4230	a4790	5190	a6000	a6370	6000	5810	5440

CAL YR 1981 TOTAL 5695.58 MEAN 15.6 MAX 83 MIN .04 AC-FT 11300
WTR YR 1982 TOTAL 9867.38 MEAN 27.0 MAX 76 MIN .04 AC-FT 19570

† Monthend contents, in acre-feet, of Fish Lake.

a Interpolated.

NOTE.--No gage-height record Oct. 2-12, Oct. 17 to Dec. 28.

ROGUE RIVER BASIN

14343000 NORTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR

LOCATION.--Lat 42°24'10", long 122°32'10", in NW¼ sec.36, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 1.2 mi (1.9 km) upstream from Wasson Canyon, 4.9 mi (7.9 km) east of Lakecreek, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--43.8 mi² (113.4 km²).

PERIOD OF RECORD.--September 1911 to March 1913, July to September 1917, May 1922 to December 1964, September 1965 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as "above Medford intake, near Lakecreek" 1922-28, 1931-40. Records for April to September 1916, May 1917 to September 1919, April to September 1921, and October 1923 to September 1924 at site 3 mi (5 km) upstream not equivalent owing to diversion and difference in drainage areas.

REVISED RECORDS.--WSP 1518: 1912-13. WSP 1738: Drainage area (former site).

GAGE.--Water-stage recorder. Concrete control since Oct. 9, 1968. Altitude of gage is 2,160 ft (658 m), from topographic map. Sept. 10, 1911, to Mar. 31, 1913, and July 1 to Sept. 30, 1917, nonrecording gage at site 1,000 ft (305 m) downstream at different datums. May 26, 1922, to Dec. 31, 1964, water-stage recorder at site 1,000 ft (305 m) downstream at datum 2,125.01 ft (644.703 m) above mean sea level.

REMARKS.--Records good except those for periods of no gage-height record, Jan. 13 to Mar. 1, which are fair. Flow partly regulated since 1915 by Fish Lake (published with station 14342500). Diversions for irrigation above station; some water diverted into Fish Lake from Fourmile Lake, in Klamath River basin, since 1923.

AVERAGE DISCHARGE.--60 years (water years 1912, 1923-64, 1966-82), 71.1 ft³/s (2.014 m³/s), 51,510 acre-ft/yr (63.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft³/s (49.6 m³/s) Dec. 22, 1964, gage height, 6.06 ft (1.847 m), present site and datum; minimum, 11 ft³/s (0.31 m³/s) Oct. 29 to Nov. 8, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 600 ft³/s (17.0 m³/s) Feb. 21; minimum, 16 ft³/s (0.45 m³/s) Oct. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	48	130	44	85	68	72	58	54	98	100
2	19	17	52	100	40	80	67	72	58	56	98	100
3	18	17	48	85	38	79	70	72	58	54	98	100
4	18	17	38	83	36	76	71	71	59	53	98	100
5	18	17	35	70	34	73	70	70	62	53	96	98
6	19	17	102	66	32	71	67	68	59	53	96	98
7	21	17	61	63	31	70	67	67	58	53	98	98
8	19	17	48	61	30	67	66	67	57	57	98	96
9	19	17	42	61	30	66	68	66	57	71	98	96
10	20	17	39	63	30	68	83	65	57	70	98	96
11	20	17	37	63	29	92	102	63	56	71	100	89
12	19	21	37	61	29	79	103	63	56	70	98	92
13	18	20	39	56	50	75	100	62	56	76	98	82
14	18	21	41	50	100	83	97	62	57	87	100	71
15	18	29	52	47	135	85	103	62	56	87	100	70
16	17	43	42	45	170	80	94	63	56	83	100	70
17	18	35	39	54	140	77	89	65	56	83	100	68
18	17	26	39	62	115	79	83	63	56	82	100	56
19	17	24	173	60	135	82	80	61	56	83	100	42
20	17	23	131	55	140	77	77	61	56	82	100	41
21	17	34	94	53	600	75	76	61	54	92	100	41
22	17	34	71	50	400	72	76	61	54	92	102	41
23	17	44	59	58	250	71	76	59	54	91	102	41
24	17	62	59	64	150	68	75	59	56	89	102	41
25	17	38	83	70	120	66	75	59	54	89	100	41
26	17	34	234	90	100	66	75	59	54	89	102	44
27	17	30	270	75	90	66	73	59	54	89	102	43
28	18	27	200	65	80	68	75	59	56	91	102	43
29	18	26	170	57	---	68	73	58	56	100	103	44
30	18	26	200	50	---	68	73	58	56	100	103	42
31	17	---	170	46	---	72	---	58	---	98	102	---
TOTAL	558	784	2753	2013	3178	2304	2372	1965	1692	2398	3092	2084
MEAN	18.0	26.1	88.8	64.9	114	74.3	79.1	63.4	56.4	77.4	99.7	69.5
MAX	21	62	270	130	600	92	103	72	62	100	103	100
MIN	17	17	35	45	29	66	66	58	54	53	96	41
AC-FT	1110	1560	5460	3990	6300	4570	4700	3900	3360	4760	6130	4130
CAL YR 1981	TOTAL	18758	MEAN 51.4	MAX 270	MIN 17	AC-FT 37210						
WTR YR 1982	TOTAL	25193	MEAN 69.0	MAX 600	MIN 17	AC-FT 49970						

14350000 EMIGRANT CREEK NEAR ASHLAND, OR

LOCATION.--Lat 43°09'50", long 122°36'15", in SE¼NE¼ sec.20, T.39 S., R.2 E., Jackson County, Hydrologic Unit 17100309, on left bank 0.1 mi (0.2 km) downstream from Emigrant Dam, 6 mi (10 km) southeast of Ashland, and at mile 29.2 (47.0 km).

DRAINAGE AREA.--64.3 mi² (166.5 km²).

PERIOD OF RECORD.--January to June 1920, October to July 1922, February 1923 to May 1924 (incomplete), October 1924 to November 1925, February to August 1926, October 1926 to September 1928, April 1929 to September 1930, April 1931 to October 1932 (incomplete), April 1933 to September 1935, April 1936 to September 1939 (incomplete), April 1940 to September 1947, January 1948 to October 1952 (incomplete), December 1952 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1448: 1921, 1927-28, 1937, 1953(M).

GAGE.--Water-stage recorder and artificial control. Datum of gage is 2,042.80 ft (622.645 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Oct. 1, 1926, water-stage recorder or nonrecording gage at several nearby sites at various datums. Oct. 1, 1926, to Feb. 24, 1959, water-stage recorder near present site at datum 10.93 ft (3.331 m) higher. Feb. 25, 1959, to May 7, 1961, water-stage recorder at site 1.0 mi (1.6 km) downstream at different datum.

REMARKS.--Records good. Flow regulated since 1924 by Emigrant Lake (see below). Several diversions above station for irrigation, the principal diversion canals are Ashland lateral and East lateral (see below). From June 1923 to August 1960, water diverted by Keene Creek Canal from Klamath River basin into Emigrant Creek above station. Beginning May 1960, water from Klamath River basin diverted to Emigrant Creek above station via Green Springs powerplant diversion.

AVERAGE DISCHARGE.--42 years (water years 1925, 1927-30, 1934-35, 1941-47, 1954-82), 31.8 ft³/s (0.901 m³/s), 23,040 acre-ft/yr (28.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,260 ft³/s (149 m³/s) Feb. 20, 1927, by computation of peak flow over dam; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge recorded, 497 ft³/s (14.1 m³/s) Dec. 23, 26, gage height, 3.22 ft (0.981 m); no flow Oct. 5.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	.20	472	.40	430	213	151	24	.40	66	41
2	.10	.10	.20	472	.40	318	213	190	24	.50	66	42
3	.10	.20	.20	466	.40	168	213	178	23	.50	62	43
4	.10	.10	.20	466	.40	168	213	112	19	.50	57	43
5	.10	.10	.20	466	3.0	146	213	79	7.4	.50	54	43
6	.10	.10	.20	186	.30	101	213	62	1.6	.50	53	43
7	.10	.10	.20	.50	.30	102	186	38	1.6	.50	53	42
8	.10	.10	.20	.50	.30	102	160	30	1.6	.50	53	42
9	.10	.20	.20	.50	.30	46	160	31	1.2	5.0	53	42
10	.10	.20	.20	.50	.30	.90	160	31	6.8	7.4	52	42
11	.10	.10	.20	.50	.30	.70	160	31	11	7.4	48	42
12	.10	.10	.20	.50	.30	.70	219	43	5.0	7.4	46	42
13	.10	.10	.20	.50	.30	.70	76	72	.70	13	42	39
14	.10	.10	.20	.50	.30	.70	373	55	.50	23	40	36
15	.10	.10	.20	.40	.30	.70	310	56	.50	31	40	36
16	.10	.20	.20	.40	.40	.70	206	58	3.5	37	40	33
17	.10	.20	.20	.40	.30	.70	206	52	8.6	41	45	25
18	.10	.20	.20	.50	.30	.70	206	48	8.6	42	46	24
19	.10	.20	.20	.50	.40	.70	90	48	8.6	45	43	22
20	.10	.20	.20	.50	.40	.70	1.2	48	8.6	51	45	15
21	.10	.20	280	.40	4.0	.70	1.2	48	4.0	52	46	11
22	.10	.20	460	.40	164	.70	1.2	48	.40	52	46	11
23	.10	.20	487	.40	395	.70	53	47	.40	52	47	12
24	.10	.20	484	.40	430	.70	104	47	5.6	52	49	12
25	.20	.20	484	.50	433	.70	118	47	6.8	52	49	12
26	.20	.20	484	.70	436	.70	273	47	.40	52	46	12
27	.20	.20	484	.50	436	24	217	43	.40	55	45	12
28	.20	.20	481	.50	430	110	18	30	.40	66	45	12
29	.20	.20	481	.50	---	110	31	24	.40	67	44	12
30	.30	.20	481	.40	---	160	69	24	.40	67	42	12
31	.20	---	478	.40	---	213	---	24	---	67	41	---
TOTAL	3.90	4.80	5088.00	2539.80	2737.40	2210.10	4676.6	1842	185.00	948.10	1504	855
MEAN	.13	.16	164	81.9	97.8	71.3	156	59.4	6.17	30.6	48.5	28.5
MAX	.30	.20	487	472	436	430	373	190	24	67	66	43
MIN	.10	.10	.20	.40	.30	.70	1.2	24	.40	.40	40	11
AC-FT	7.7	9.5	10090	5040	5430	4380	9280	3650	367	1880	2980	1700
(†)	a4780	12720	24270	25090	a34760	38840	39000	36780	a32590	25980	a15940	10150
(‡)	0	0	0	0	0	468	1720	6010	7030	8400	9470	7010
CAL YR 1981	TOTAL	11169.17	MEAN	30.6	MAX	487	MIN	.10	AC-FT	22150		
WTR YR 1982	TOTAL	22594.70	MEAN	61.9	MAX	487	MIN	.10	AC-FT	44820		

† Monthend contents, in acre-feet, of Emigrant Lake.

‡ Diversion, in acre-feet, by East Lateral.

a Interpolated.

ROGUE RIVER BASIN

14353000 WEST FORK ASHLAND CREEK NEAR ASHLAND, OR

LOCATION.--Lat 42°08'55", long 122°42'55", near line between NW¼ and SW¼ sec.28, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, in Rogue River National Forest, on left bank 0.3 mi (0.5 km) above city diversion, 2.5 mi (4.0 km) south of Ashland, and at mile 0.4 (0.6 km).

DRAINAGE AREA.--10.5 mi² (27.2 km²), at diversion dam 0.3 mi (0.5 km) downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60, 1963, annual maximum; December 1974 to September 1982 (discontinued). Monthly discharge only for some periods published in WSP 1318.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,962.75 ft (903.046 m) National Geodetic Vertical Datum of 1929. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 0.2 mi (0.3 km) upstream at different datum. Oct. 14, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.3 mi (0.5 km) downstream at different datum.

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

AVERAGE DISCHARGE.--15 years (water years 1925-32, 1976-82), 8.92 ft³/s (0.253 m³/s), 11.54 in/yr (293 mm/yr), 6,460 acre-ft/yr (7.97 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 330 ft³/s (9.35 m³/s) Dec. 2, 1962, gage height, 15.51 ft (4.727 m), site and datum then in use, from rating curve defined by computation of peak flow over dam; minimum, 1.3 ft³/s (0.037 m³/s) Aug. 29, 1931, Sept. 8, 9, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1900. Discharge, 4,780 ft³/s (135 m³/s) by slope-area measurement of peak flow, gage height, 9.5 ft (2.90 m), from floodmarks. Peak believed to be affected by release from debris dams breaking upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 15	1230	92 2.60	2.92 0.890	Dec. 26	1530	69 1.95	3.10 0.945
Nov. 16	2000	115 3.26	3.13 0.954	Feb. 20	a2200	53 1.50	2.92 0.890
Dec. 19	1400	*157 4.45	*3.70 1.128	Mar. 1	0700	51 1.44	2.92 0.890

Minimum, 1.7 ft³/s (0.048 m³/s) Oct. 1, 2.

a About.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1.9	5.5	15	39	12	47	15	23	32	17	6.4	4.0		
2	1.7	5.1	17	36	12	43	15	23	31	16	6.4	3.9		
3	2.7	4.9	16	33	12	40	15	22	29	15	6.2	3.9		
4	2.3	4.8	15	30	12	35	14	22	30	15	6.1	3.9		
5	2.2	4.7	15	26	11	34	14	21	29	14	5.9	3.8		
6	2.0	4	41	23	11	31	14	22	27	13	5.7	3.5		
7	5.6	4	39	22	11	30	14	23	26	13	5.7	2.9		
8	3.3	4	33	22	11	28	14	23	25	12	5.5	2.8		
9	3.4	4.4	30	24	11	27	14	22	24	12	5.4	3.4		
10	5.6	4.4	26	24	10	27	17	21	24	11	5.5	4.1		
11	4.9	6.4	23	24	9.8	26	34	21	25	11	5.6	3.5		
12	3.3	12	21	22	9.8	22	29	21	25	11	5.5	3.8		
13	3.0	13	20	21	13	22	31	21	25	11	5.3	4.3		
14	2.8	17	20	21	23	22	30	21	25	10	5.2	3.7		
15	2.7	41	27	20	28	21	26	22	25	9.8	5.2	3.5		
16	2.5	62	22	20	32	20	25	22	25	9.5	5.0	3.4		
17	2.4	54	22	20	24	19	23	23	25	9.2	4.9	3.5		
18	2.3	22	31	19	20	19	22	22	25	8.9	4.7	4.4		
19	2.2	15	108	18	24	18	21	22	25	8.7	4.6	4.5		
20	2.1	11	107	18	30	18	21	23	25	8.5	4.5	4.2		
21	2.1	20	77	16	65	18	21	24	24	8.3	4.4	3.8		
22	2.1	16	58	15	52	17	23	25	22	8.2	4.4	3.5		
23	2.1	18	48	15	48	17	23	26	21	8.0	4.3	3.4		
24	2.1	20	45	15	44	17	24	28	20	7.8	4.3	4.4		
25	2.1	17	43	15	42	17	23	31	19	7.5	4.2	3.9		
26	2.2	15	54	15	40	17	22	32	20	7.3	4.2	4.6		
27	4.5	12	53	14	35	17	22	33	19	7.1	4.1	8.9		
28	10	11	50	14	34	17	22	32	20	7.0	4.0	5.1		
29	5.8	9.8	48	13	---	16	22	31	20	6.9	4.4	6.0		
30	5.7	9.0	44	13	---	16	22	30	17	6.8	4.3	5.1		
31	5.8	---	41	13	---	16	---	32	---	6.4	4.1	---		
TOTAL	103.4	448.7	1209	640	686.6	734	632	764	729	316.9	156.0	123.7		
MEAN	3.34	15.0	39.0	20.6	24.5	23.7	21.1	24.6	24.3	10.2	5.03	4.12		
MAX	10	62	108	39	65	47	34	33	32	17	6.4	8.9		
MIN	1.7	4.4	15	13	9.8	16	14	21	17	6.4	4.0	2.8		
CFSM	.32	1.43	3.71	1.96	2.33	2.26	2.01	2.34	2.31	.97	.48	.39		
IN.	.57	1.59	4.28	2.27	2.43	2.60	2.24	2.71	2.58	1.12	.55	.44		
AC-FT	205	890	2400	1270	1360	1460	1250	1520	1450	629	309	245		
CAL YR 1981	TOTAL	3128.6	MEAN	8.57	MAX	108	MIN	1.7	CFSM	.82	IN	11.08	AC-FT	6210
WTR YR 1982	TOTAL	6543.3	MEAN	17.9	MAX	108	MIN	1.7	CFSM	1.71	IN	23.18	AC-FT	12980

14353500 EAST FORK ASHLAND CREEK NEAR ASHLAND, OR

LOCATION.--Lat 42°09'10"N, long 122°42'30"W, near line between NE¼ and NW¼ sec.28, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, Rogue River National Forest, on left bank 0.1 mi (0.2 km) above city diversion dam, 2.5 mi (4.0 km) south of Ashland, and at mile 0.2 (0.3 km).

DRAINAGE AREA.--8.14 mi² (21.1 km²), at diversion dam 0.1 mi (0.2 km) downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60; 1963, annual maximum, December 1974 to September 1982 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,903.70 ft (885.048 m) National Geodetic Vertical Datum of 1929. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 200 ft (61.0 m) downstream at different datum. Oct. 19, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.1 mi (0.2 km) downstream at different datum.

REMARKS.--Records good except those for October through December, which are fair. No regulation or diversion.

AVERAGE DISCHARGE.--15 years (water years 1925-32, 1976-82), 9.37 ft³/s (0.265 m³/s), 15.63 in/yr (397 mm/yr), 6,790 acre-ft/yr (8.37 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335 ft³/s (9.49 m³/s) Dec. 2, 1962, gage height, 5.42 ft (1.652 m), site and datum then in use, from rating curve defined by computations of peak flow over dam; minimum, 0.47 ft³/s (0.013 m³/s) Mar. 14, 1977, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1925. Discharge, 5,630 ft³/s (159 m³/s) by slope-area measurement of peak flow, gage height, 10.2 ft (3.11 m) from floodmarks. Peak believed to be affected by release from debris dams breaking upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.13 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 16	1500	85 2.41	2.25 0.686	Feb. 16	0300	73 2.07	2.18 0.664
Dec. 6	1000	76 2.15	2.20 0.671	Feb. 20	2230	115 3.26	2.40 0.732
Dec. 19	a1400	*174 4.93	*2.63 0.802	Mar. 1	0730	49 1.39	2.02 0.616

Minimum, 2.2 ft³/s (0.062 m³/s) Oct. 1, 2.

a About.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	5.8	15	40	12	42	15	23	31	22	8.5	4.2
2	2.2	5.6	15	38	11	41	15	23	28	21	8.4	4.0
3	2.7	5.4	15	35	10	38	15	23	25	20	8.1	4.2
4	2.5	5.2	14	30	11	36	14	23	26	19	8.0	4.1
5	2.5	5.0	17	27	11	34	14	23	25	18	7.6	4.0
6	2.5	4.9	49	25	11	32	13	24	24	18	7.2	3.9
7	6.2	4.8	42	21	11	31	13	24	23	18	7.0	3.8
8	4.0	4.7	32	18	11	29	12	23	22	17	7.0	3.8
9	3.8	4.6	28	18	10	29	12	22	22	17	6.7	4.0
10	6.0	4.6	27	18	11	30	15	21	22	16	6.8	4.5
11	5.0	6.0	23	19	11	29	25	19	23	16	6.7	4.1
12	4.0	13	22	20	10	25	23	19	24	15	6.6	4.3
13	3.7	14	21	19	18	24	23	19	25	15	6.4	4.5
14	3.4	17	22	19	41	24	24	20	26	15	6.3	4.1
15	3.3	40	35	18	45	22	22	19	27	14	6.4	3.9
16	3.1	52	27	18	57	22	21	19	27	14	6.0	3.9
17	2.9	50	27	18	44	21	20	19	27	13	5.6	3.9
18	2.8	27	40	17	40	20	19	19	27	13	5.4	4.8
19	2.7	19	130	17	40	22	18	19	28	12	5.3	4.9
20	2.6	15	120	16	58	21	18	20	28	12	5.1	4.5
21	2.6	27	99	16	74	21	18	21	27	12	5.0	4.1
22	2.6	22	66	15	55	20	20	23	27	12	4.8	3.9
23	2.6	21	52	15	57	19	22	24	26	11	4.8	3.8
24	2.6	24	44	14	47	19	23	26	26	11	4.7	4.4
25	2.6	20	44	15	43	18	23	33	26	11	4.6	4.0
26	2.7	17	55	15	41	18	23	37	26	10	4.4	4.4
27	5.0	15	54	14	37	17	23	37	27	9.6	4.4	6.7
28	11	13	52	14	36	17	24	37	27	9.4	4.4	4.7
29	7.0	11	50	13	---	16	21	35	26	9.2	4.7	5.1
30	6.0	11	48	13	---	16	22	34	24	8.9	4.5	4.7
31	6.0	---	45	13	---	16	---	33	---	8.6	4.4	---
TOTAL	118.8	484.6	1330	608	863	769	570	761	772	437.7	185.8	129.2
MEAN	3.83	16.2	42.9	19.6	30.8	24.8	19.0	24.5	25.7	14.1	5.99	4.31
MAX	11	52	130	40	74	42	25	37	31	22	8.5	6.7
MIN	2.2	4.6	14	13	10	16	12	19	22	8.6	4.4	3.8
CFSM	.47	1.99	5.27	2.41	3.78	3.05	2.33	3.01	3.16	1.73	.74	.53
IN.	.54	2.21	6.08	2.78	3.94	3.51	2.60	3.48	3.53	2.00	.85	.59
AC-FT	236	961	2640	1210	1710	1530	1130	1510	1530	868	369	256

CAL YR 1981 TOTAL 3498.5 MEAN 9.58 MAX 130 MIN 2.0 CFSM 1.18 IN 15.99 AC-FT 6940
WTR YR 1982 TOTAL 7029.1 MEAN 19.3 MAX 130 MIN 2.2 CFSM 2.37 IN 32.12 AC-FT 13940

NOTE.--No gage-height record Oct. 10 to Nov. 16, Dec. 15-20.

ROGUE RIVER BASIN

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR

LOCATION.--Lat 42°26'15", long 122°59'10", in SW¼ sec.18, T.36 S., R.2 W., Jackson County, Hydrologic Unit 17100308, on right bank at Raygold, 0.1 mi (0.2 km) downstream from Gold Ray Dam, 1.0 mi (1.6 km) downstream from Bear Creek, 5.6 mi (9.0 km) northwest of Central Point, and at mile 125.8 (202.4 km).

DRAINAGE AREA.--2,053 mi² (5,317 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1905 to current year. Prior to October 1921, published as "near Tolo."

REVISED RECORDS.--WSP 1248: 1906, 1914(M), 1915. WSP 1398: 1910(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,121.78 ft (341.919 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1914, nonrecording gage and Sept. 19, 1914, to Sept. 30, 1956, water-stage recorder, at site 300 ft (91 m) upstream at same datum.

REMARKS.--Water-discharge records excellent. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040). Slight regulation by Fish Lake (published with station 14342500) and Emigrant Lake (published with station 14350000). Many diversions for irrigation above station.

AVERAGE DISCHARGE.--77 years, 2,963 ft³/s (83.91 m³/s), 2,147,000 acre-ft/yr (2.65 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 131,000 ft³/s (3,710 m³/s) Dec. 23, 1964, gage height, 23.43 ft (7.141 m), from rating curve extended above 63,000 ft³/s (1,780 m³/s) on basis of slope-area measurement of 113,000 ft³/s (3,200 m³/s); minimum not determined; minimum daily, 616 ft³/s (17.4 m³/s) Sept. 6, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 32 ft (10 m), discharge not determined, and flood in February 1890 reached a stage of about 27.5 ft (8.38 m), discharge not determined, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 57,700 ft³/s (1,630 m³/s) Dec. 19, gage height, 15.46 ft (4.712 m); minimum, 1,210 ft³/s (34.3 m³/s) Nov. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	1320	4490	11300	2820	8540	4940	4640	3380	2500	2440	2080
2	1330	1290	4680	9660	2360	7300	4540	4680	3270	2500	2450	2060
3	1330	1270	4420	8920	2250	6040	4920	4560	3280	2520	2470	2090
4	1310	1250	3410	10000	2210	5680	4860	4100	3230	2490	2440	2120
5	1300	1240	3590	6970	2060	5400	4470	3980	3300	2390	2370	2150
6	1330	1250	15800	5640	1960	5120	4190	3950	2970	2290	2340	2170
7	1520	1250	9130	3980	1900	4970	4050	3890	2700	2250	2350	2140
8	1380	1240	6150	3380	1800	4750	3790	3860	2650	2320	2340	2120
9	1400	1240	5390	3460	1790	4300	3720	3880	2580	2290	2360	1530
10	1500	1250	5590	3650	1710	3570	4250	3830	2520	2270	2340	1710
11	1480	1260	4870	3640	1630	4250	6420	3570	2660	2260	2360	1720
12	1430	1670	5160	3570	1590	4480	6940	3460	3210	2230	2350	1700
13	1390	1590	5540	3380	2780	4040	6430	3450	3370	2260	2370	1740
14	1380	2010		3200	14100	4150	7290	3360	3370	2310	2360	1680
15	1350	3460		2940	10800	4520	6920	2630	3280	2280	2390	1680
16	1340	644		2880	15000	4340	5730	2590	2820	2280	2370	1850
17	1330	8210	5130	3220	10200	4130	5290	2630	2800	2350	2360	1860
18	1330	6000	9350	4470	8360	3750	4920	2630	2790	2340	2350	1970
19	1330	4180	35600	4080	14700	3470	4630	2640	2870	2330	2370	2080
20	1280	3250	26700	3410	14700	3570	4230	2550	2890	2320	2370	2040
21	1240	3640	15100	3100	25200	3360	4170	2540	3000	2310	2340	2030
22	1240	5450	12700	2840	17100	3200	4330	2530	2850	2370	2210	2040
23	1250	7460	11100	4060	13500	2980	4760	2500	2610	2370	2000	2020
24	1240	9080	10400	4510	11500	2850	5110	2600	2540	2370	1870	2040
25	1250	5640	10800	5070	9130	2670	5080	3490	2560	2360	1870	2030
26	1240	4290	14500	8340	7260	2690	5080	4480	2470	2370	1850	2050
27	1240	3450	16000	7280	7250	2930	4970	4380	2820	2340	1860	2160
28	1290	2900	11900	5810	6720	3680	4770	4080	2790	2350	2070	2160
29	1310	2610	18700	4730	---	4030	4760	3590	2700	2350	2110	2150
30	1360	2350	12300	3660	---	4030	4480	3390	2550	2380	2150	2130
31	1350	---	11300	3290	---	5570	---	3350	---	2400	2100	---
TOTAL	41370	97540	334250	154440	212380	134360	150040	107810	86830	72750	69980	59300
MEAN	1335	3251	10780	4982	7585	4334	5001	3478	2894	2347	2257	1977
MAX	1520	9080	35600	11300	25200	8540	7290	4680	3380	2520	2470	2170
MIN	1240	1240	3410	2840	1590	2670	3720	2500	2470	2230	1850	1530
AC-FT	82060	193500	663000	306300	421300	266500	297600	213800	172200	144300	138800	117600

CAL YR 1981	TOTAL	956410	MEAN	2620	MAX	35600	MIN	1070	AC-FT	1897000
WTR YR 1982	TOTAL	1521050	MEAN	4167	MAX	35600	MIN	1240	AC-FT	3017000

ROGUE RIVER BASIN

357

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 22.0°C July 25, 26, 1976; minimum, 0.0°C Jan. 7, 1974. Maximum since full operation of Lost Creek Lake, 20.5°C July 3, 4, 1981; minimum, 1.0°C Dec. 30, 1978, Jan. 30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.0°C June 22; minimum, 2.0°C Jan. 7, Feb. 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14361500 ROGUE RIVER AT GRANTS PASS, OR

LOCATION.--Lat 42°25'50", long 123°19'00", in NW¼ sec.20, T.36 S., R.5 W., Josephine County, Hydrologic Unit 17100308, on right bank at city of Grants Pass filter plant, 0.6 mi (1.0 km) upstream from bridge on State Highway 99 at Grants Pass, and at mile 101.8 (163.8 km).

DRAINAGE AREA.--2,459 mi² (6,369 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 885.28 ft (269.833 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 8, 1957, at datum 3.00 ft (0.914 m) higher.

REMARKS.--Water-discharge records excellent except those for August and September, which are fair. Flow regulated since February 1977 by Lost Creek Lake (station 14355040), slight regulation by Fish Lake and Emigrant Lake. Large fluctuations at times caused by Savage Rapids Dam 5.5 mi (8.8 km) above station. Many diversions from Rogue River and tributaries above station, the largest of which is at Savage Rapids Dam of Grants Pass Irrigation District, 5.5 mi (8.8 km) above station.

AVERAGE DISCHARGE.--44 years, 3,475 ft³/s (98.41 m³/s), 2,518,000 acre-ft/yr (3.10 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 152,000 ft³/s (4,300 m³/s) Dec. 23, 1964, gage height, 34.15 ft (10.409 m), from rating curve extended above 93,000 ft³/s (2,630 m³/s); minimum, 195 ft³/s (5.52 m³/s) Jan. 30, 1961; minimum daily, 606 ft³/s (17.2 m³/s) Sept. 10, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 42 ft (13 m), present datum (information furnished by Corps of Engineers). Flood in February 1890 reached a stage of about 35 ft (11 m), present datum, and that of Feb. 21, 1927, about 31 ft (9 m), present datum, according to local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 78,700 ft³/s (2,230 m³/s) Dec. 20, gage height, 22.89 ft (6.977 m); minimum, 912 ft³/s (25.8 m³/s) Oct. 5; minimum daily, 1,190 ft³/s (33.7 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1240	1430	4540	14700	4010	11100	6320	5170	3290	2580	2420	2190
2	1340	1380	5690	12500	3360	10200	5910	5280	3200	2510	2460	2190
3	1320	1350	5510	11600	3170	8150	7220	5420	3210	2610	2490	2170
4	1260	1330	4210	14300	3070	7510	6980	4680	3140	2570	2480	2180
5	1190	1310	4150	10300	2860	7020	6130	4310	3310	2500	2390	2200
6	1470	1310	22700	7860	2650	6570	5750	4070	3080	2310	2340	2250
7	1650	1310	13700	5610	2540	6280	5400	4280	2630	2250	2350	2190
8	1590	1300	8180	4640	2430	6000	5080	4230	2580	2290	2360	2190
9	1490	1290	6740	4520	2330	5460	4920	4240	2500	2290	2370	1620
10	1610	1300	7280	4720	2210	4470	5520	4170	2470	2250	2360	1430
11	1630	1350	6080	4670	2100	5110	8980	3900	2480	2230	2390	1590
12	1570	1780	6220	4610	2020	5620	9580	3700	3120	2150	2400	1580
13	1490	1900	6870	4360	2420	4960	9020	3660	3380	2160	2400	1630
14	1480	2280	9470	4170	18200	4940	10300	3690	3370	2240	2400	1660
15	1440	3700	17500	3830	16100	5470	9800	2860	3320	2230	2440	1600
16	1380	7570	13000	3740	21300	5170	7830	2730	2890	2220	2420	1790
17	1400	11000	11200	4020	15700	5000	7000	2660	2780	2320	2410	1870
18	1390	8020	10900	5820	11600	4620	6390	2760	2770	2300	2410	1990
19	2040	5120	41100	5820	17700	4110	6010	2720	2880	2300	2390	2140
20	1370	3970	46300	4760	18100	4280	5390	2640	2920	2270	2430	2150
21	1300	3820	22100	4310	26600	4010	5210	2520	3040	2260	2420	2060
22	1290	6670	16900	3880	21900	3850	5200	2510	2910	2310	2330	2060
23	1290	8620	14000	4980	16800	3570	5660	2460	2680	2310	2170	2030
24	1290	11300	12600	6050	14400	3460	6030	2440	2540	2320	1660	2020
25	1290	7590	12800	6930	11800	3220	5970	3260	2600	2320	1760	2040
26	1220	5350	16100	11300	9220	3190	5900	4290	2520	2340	1700	2040
27	1260	4390	19000	10800	9160	3430	5740	4440	2830	2310	1730	2140
28	1390	3570	14400	8160	8370	4010	5450	4120	3050	2320	1930	2220
29	1440	3220	22700	6630	---	4830	5460	3650	2940	2330	2000	2170
30	1510	2770	18500	5110	---	4540	5000	3380	2660	2330	2060	2170
31	1490	---	14400	4540	---	6900	---	3270	---	2380	2110	---
TOTAL	44120	117300	434840	209240	272120	167050	195150	113510	87090	72110	69980	59560
MEAN	1423	3910	14030	6750	9719	5389	6505	3662	2903	2326	2257	1985
MAX	2040	11300	46300	14700	26600	11100	10300	5420	3380	2610	2490	2250
MIN	1190	1290	4150	3740	2020	3190	4920	2440	2470	2150	1660	1430
AC-FT	87510	232700	862500	415000	539700	331300	387100	225100	172700	143000	138800	118100
CAL YR 1981	TOTAL	1094370	MEAN	2998	MAX	46300	MIN	1110	AC-FT	2171000		
WTR YR 1982	TOTAL	1842070	MEAN	5047	MAX	46300	MIN	1190	AC-FT	3654000		

ROGUE RIVER BASIN

14361500 ROGUE RIVER AT GRANTS PASS, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C June 7, 1977; minimum, 0.5°C on several days in 1974, 1977, 1978, 1980. Maximum since full operation of Lost Creek Lake, 21.5°C July 4, 5, 1981.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 19.0°C June 19, July 20, 29; minimum, 3.0°C Jan. 7, 8, may have been lower during period of no record in January and February.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

361

14361500 ROGUE RIVER AT GRANTS PASS--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14361590 MIDDLE FORK APPLGATE RIVER NEAR COPPER, OR

LOCATION.--Lat 42°00'23", long 123°09'23", in W-1/2 sec.17, T.48 N., R.11 W., Mt. Diablo Meridian, Siskiyou County, CA, Rogue River National Forest, Hydrologic Unit 17100309, on left bank 0.2 mi (0.3 km) upstream from Elliot Creek, 1.6 mi (2.6 km) southwest of former town of Copper, and at mile 51.6 (83.0 km).

DRAINAGE AREA.--50.7 mi² (131.3 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 2,001.74 ft (610.130 m) National Geodetic Vertical datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Water-discharge records good except those for period of no gage-height record, Dec. 7-19, which are fair. No regulation or diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,880 ft³/s (167 m³/s) Dec. 19, 1981, gage height, 9.74 ft (2.969 m); minimum, 8.3 ft³/s (0.24 m³/s) Sept. 14-26, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 16	1900	2,300 65.1	7.23 2.204	Dec. 26	1530	960 27.2	5.27 1.606
Nov. 21	0930	1,350 38.2	5.76 1.756	Feb. 15	2200	3,350 94.9	7.92 2.414
Dec. 6	0830	2,720 77.0	7.79 2.374	Feb. 21	0800	2,690 76.2	7.33 2.234
Dec. 15	unknown	unknown	unknown	Mar. 1	0630	773 21.9	4.95 1.509
Dec. 19	a1500	*5,880 167	*9.74 2.969	Apr. 13	2100	811 23.0	5.02 1.530

Minimum, 9.1 ft³/s (0.26 m³/s) Oct. 5, 6.

a About.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	74	175	468	156	646	153	474	252	116	29	17
2	10	68	304	405	151	547	159	462	238	104	28	17
3	9.9	61	382	361	148	457	162	466	217	95	28	16
4	9.9	57	316	347	144	391	154	455	205	87	27	16
5	9.2	52	709	309	138	347	147	436	184	81	26	16
6	14	47	1960	275	133	314	140	485	170	77	26	15
7	48	42	700	250	130	291	132	539	166	73	25	15
8	24	37	500	234	126	269	129	490	172	69	25	15
9	64	33	450	223	123	270	130	395	179	66	23	15
10	97	32	400	217	119	286	165	346	202	63	23	15
11	48	47	30	216	115	353	543	328	212	60	24	15
12	31	242	0	212	112	318	561	339	190	58	23	16
13	25	319	0	204	541	287	685	377	183	56	23	16
14	21	395	0	196	2330	275	653	410	189	53	23	16
15	19	935	30	189	2010	252	481	408	192	52	22	15
16	18	1510	500	185	2440	238	383	410	189	50	22	15
17	17	1400	450	195	1510	222	339	441	181	49	22	15
18	16	615	700	200	932	209	314	392	172	47	21	15
19	15	385	4000	190	1640	195	301	352	206	45	20	20
20	14	358	2350	184	1640	185	309	377	220	43	20	17
21	14	1030	1400	173	2150	177	341	470	164	40	19	17
22	13	963	952	164	1150	170	422	505	141	39	18	16
23	13	898	691	164	766	166	524	477	123	38	18	15
24	13	654	589	167	606	166	548	505	114	36	17	16
25	13	490	531	173	513	169	526	552	106	35	17	15
26	12	383	705	217	453	171	495	491	136	33	17	15
27	19	293	635	204	394	168	462	365	166	32	17	17
28	138	232	535	192	367	168	472	303	129	32	17	17
29	76	196	597	175	---	159	454	279	182	31	17	17
30	54	169	595	169	---	160	456	269	137	30	18	16
31	60	---	543	163	---	165	---	268	---	29	18	---
TOTAL	946.0	12018	24869	7021	21037	8191	10740	12866	5317	1719	673	478
MEAN	30.5	401	802	226	751	264	358	415	177	55.5	21.7	15.9
MAX	138	1510	4000	468	2440	646	685	552	252	116	29	20
MIN	9.2	32	175	163	112	159	129	268	106	29	17	15
CFSM	.60	7.91	15.8	4.46	14.8	5.21	7.06	8.19	3.49	1.10	.43	.31
IN.	.69	8.82	18.25	5.15	15.44	6.01	7.88	9.44	3.90	1.26	.49	.35
AC-FT	1880	23840	49330	13930	41730	16250	21300	25520	10550	3410	1330	948
CAL YR 1981	TOTAL	60535.1	MEAN 166	MAX 4000	MIN 8.3	CFSM 3.27	IN 44.42	AC-FT 120100				
WTR YR 1982	TOTAL	105875.0	MEAN 290	MAX 4000	MIN 9.2	CFSM 5.72	IN 77.68	AC-FT 210000				

ROGUE RIVER BASIN

363

14361590 MIDDLE FORK APPLGATE RIVER NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1979 to current year.

INSTRUMENTATION.--Temperature recorder since August 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 8, 10-12, 1981; minimum recorded, 1.5°C Jan. 29, 30, Dec. 8, 12-14, 1980, Mar. 31, 1982, but may have been lower during period of missing record in February 1982.

EXTREMES CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C July 30; minimum recorded, 1.5°C Mar. 31, may have been lower during period of missing record in February.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14361590 MIDDLE FORK APPLEGATE RIVER NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

365

14361600 ELLIOTT CREEK NEAR COPPER, OR

LOCATION.--Lat 42°00'16", long 123°09'00", in W-1/2 sec.17, T.48 N., R.11 W., Mt. Diablo Meridian, Siskiyou County, CA, Hydrologic Unit 17100309, Rogue River National Forest, on left bank 0.3 mi (0.5 km) upstream from Middle Fork Applegate River and 1.5 mi (2.4 km) south of former town of Copper.

DRAINAGE AREA.--51.8 mi² (134 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,023.56 ft (616.781 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Minor fluctuation from small power generator 0.2 mi (0.3 km) upstream. No diversion.

AVERAGE DISCHARGE.--5 years, 103 ft³/s (2.917 m³/s), 27.00 in/yr (686 mm/yr), 74,620 acre-ft/yr (92.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,980 ft³/s (113 m³/s) Dec. 19, 1981, gage height, 7.13 ft (2.173 m); minimum, 3.9 ft³/s (0.11 m³/s) Sept. 10, 1980; minimum daily, 7.1 ft³/s (0.20 m³/s) Sept. 14-16, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 15	1430	1,100 31.2	4.61 1.405	Dec. 19	1500	*3,980 113	*7.13 2.173
Nov. 21	1300	500 14.2	3.34 1.018	Feb. 15	1900	1,800 51.0	5.18 1.579
Dec. 6	1130	1,410 39.9	5.09 1.551	Feb. 20	2200	1,600 45.3	4.94 1.506
Dec. 15	0430	971 27.5	4.39 1.338	Mar. 1	0500	798 22.6	3.73 1.137

Minimum, 9.2 ft³/s (0.26 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	11	32	119	351	120	606	137	239	212	116	37	22		
2	12	29	140	327	117	427	141	240	202	109	38	21		
3	14	26	144	294	118	355	147	244	190	103	39	21		
4	11	25	130	294	114	306	139	241	188	96	37	21		
5	11	24	234	273	111	280	136	241	181	92	36	21		
6	11	23	789	244	107	264	131	257	168	87	35	20		
7	17	22	421	226	106	254	125	272	161	82	33	20		
8	20	21	295	212	103	237	122	258	157	80	33	20		
9	20	20	288	211	102	226	122	231	158	77	31	19		
10	42	19	283	212	100	226	166	214	166	74	31	23		
11	38	27	235	215	98	231	344	208	175	72	33	21		
12	25	94	225	206	96	214	283	214	172	69	32	22		
13	21	87	286	193	364	201	313	227	170	68	30	24		
14	19	133	421	185	900	198	309	236	172	65	30	21		
15	18	453	689	177	1030	191	251	241	172	63	29	20		
16	17	604	402	173	1110	187	220	245	174	61	28	20		
17	16	543	318	173	700	175	206	254	173	59	28	20		
18	16	235	577	173	553	171	196	242	180	57	27	24		
19	15	165	3090	165	714	163	189	234	210	55	26	29		
20	14	156	1850	162	875	156	186	244	214	53	26	25		
21	14	380	1060	152	1310	153	192	274	179	51	25	23		
22	13	321	685	143	837	150	214	288	156	50	24	21		
23	13	293	539	139	642	148	238	283	143	48	24	20		
24	13	289	450	141	536	146	242	306	134	47	23	23		
25	13	219	396	143	458	144	238	343	130	45	23	22		
26	13	190	428	166	396	142	230	320	148	43	22	21		
27	18	163	397	152	350	139	227	274	147	42	22	30		
28	64	142	360	145	325	141	232	247	131	41	22	24		
29	37	128	423	135	---	135	226	234	151	40	23	25		
30	28	118	429	129	---	131	232	225	130	39	23	26		
31	29	---	399	125	---	141	---	221	---	38	23	---		
TOTAL	623	4981	16502	6036	12392	6638	6134	7797	5044	2022	893	669		
MEAN	20.1	166	532	195	443	214	204	252	168	65.2	28.8	22.3		
MAX	64	604	3090	351	1310	606	344	343	214	116	39	30		
MIN	11	19	119	125	96	131	122	208	130	38	22	19		
CFSM	.39	3.21	10.3	3.76	8.55	4.13	3.94	4.87	3.24	1.26	.56	.43		
IN.	.45	3.58	11.85	4.33	8.90	4.77	4.41	5.60	3.62	1.45	.64	.48		
AC-FT	1240	9880	32730	11970	24580	13170	12170	15470	10000	4010	1770	1330		
CAL YR 1981	TOTAL	35521.8	MEAN	97.3	MAX	3090	MIN	7.1	CFSM	1.88	IN	25.51	AC-FT	70460
WTR YR 1982	TOTAL	69731.0	MEAN	191	MAX	3090	MIN	11	CFSM	3.69	IN	50.08	AC-FT	138300

ROGUE RIVER BASIN

14361600 ELLIOTT CREEK NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1977 to current year.

INSTRUMENTATION.--Temperature recorder since October 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.0°C Aug. 7, 8, 1978, Aug. 8, 10-12, 1981; minimum, 0.0°C Nov. 20, 21, 1977, many days November 1978 to February 1979, Jan. 28-30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.5°C July 28-30; minimum, 1.5°C Feb. 5, 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

367

14361600 ELLIOT CREEK NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14361700 CARBERRY CREEK NEAR COPPER, OR

LOCATION.--Lat 42°01'34", long 123°10'10", in SW¼SW¼ sec.3, T.41 S., R.4 W., Jackson County, Hydrologic Unit 17100309, Rogue River National Forest, on right bank, 1.2 mi (1.9 km) west of former town of Copper and at mile 0.9 (1.4 km).

DRAINAGE AREA.--68.9 mi² (178 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,990.01 ft (606.555 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. No regulation. Diversion for irrigation of up to 8 ft³/s (0.2 m³/s) from Sturgis Fork into Thompson Creek above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,470 ft³/s (127 m³/s) Dec. 19, 1981, gage height, 8.10 ft (2.469 m); minimum, 5.9 ft³/s (0.17 m³/s) Sept. 14-16, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 4.2 ft³/s (0.12 m³/s) was measured Sept. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 15	1300	776 22.0	3.58 1.091	Feb. 15	2330	2,270 64.3	5.70 1.737
Nov. 16	2030	2,120 60.0	5.50 1.676	Feb. 21	1000	1,460 41.3	4.55 1.387
Dec. 6	1030	2,430 68.8	5.90 1.798	Mar. 1	0730	860 24.4	3.50 1.067
Dec. 15	0500	1,620 45.9	4.80 1.463	Apr. 11	1930	845 23.9	3.47 1.058
Dec. 19	1430	*4,470 127	*8.10 2.469				

Minimum, 9.1 ft³/s (0.26 m³/s) Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	58	252	561	200	739	171	560	223	103	30	17
2	9.4	55	261	505	194	700	181	540	213	98	30	16
3	10	50	276	445	188	645	186	540	198	93	30	16
4	9.7	44	249	439	182	588	178	540	196	87	30	17
5	9.7	40	477	397	173	534	178	500	180	81	29	16
6	26	36	1560	357	167	505	171	540	166	76	28	16
7	60	33	705	333	163	485	164	600	159	73	27	16
8	29	31	517	309	158	458	166	560	153	70	27	15
9	25	29	440	298	154	439	172	480	153	67	25	15
10	40	27	416	293	148	413	238	380	161	65	25	15
11	34	34	546	293	142	398	738	300	170	63	25	15
12	24	127	501	284	137	367	719	320	160	60	24	15
13	20	183	509	271	345	335	786	340	154	59	23	17
14	18	282	34	262	1390	321	738	360	148	55	22	16
15	17	436	0	252	1410	294	623	360	148	50	23	15
16	16	971	30	246	1850	282	567	370	147	48	22	16
17	16	1050	509	254	1270	263	509	376	142	47	21	16
18	15	497	710	262	949	252	473	354	143	46	21	19
19	15	394	3480	247	1160	235	446	324	201	44	20	26
20	15	348	2360	238	1100	223	450	340	180	42	20	20
21	15	495	1320	224	1320	213	500	400	142	41	19	18
22	14	497	776	209	1000	205	550	412	123	41	18	18
23	14	485	601	207	800	199	600	398	111	40	18	17
24	14	477	588	211	650	194	650	424	103	39	17	18
25	14	427	538	222	586	191	600	467	97	38	16	18
26	14	383	659	290	549	189	580	415	113	37	16	19
27	17	338	714	267	509	183	540	324	127	36	16	28
28	100	298	631	251	477	188	560	278	119	34	16	23
29	73	276	683	230	---	176	540	255	154	33	18	25
30	54	258	652	218	---	176	540	241	117	31	18	23
31	52	---	609	208	---	185	---	235	---	31	17	---
TOTAL	798.9	8659	23933	9083	17371	10575	13514	12533	4601	1728	691	541
MEAN	25.8	289	772	293	620	341	450	404	153	55.7	22.3	18.0
MAX	100	1050	3480	561	1850	739	786	600	223	103	30	28
MIN	9.1	27	249	207	137	176	164	235	97	31	16	15
CFSM	.37	4.19	11.2	4.25	9.00	4.95	6.53	5.86	2.22	.81	.32	.26
IN.	.43	4.68	12.92	4.90	9.38	5.71	7.30	6.77	2.48	.93	.37	.29
AC-FT	1580	17180	47470	18020	34460	20980	26810	24860	9130	3430	1370	1070
CAL YR 1981	TOTAL	50819.1	MEAN 139	MAX 3480	MIN 6.2	CFSM 2.02	IN 27.44	AC-FT 100800				
WTR YR 1982	TOTAL	104027.9	MEAN 285	MAX 3480	MIN 9.1	CFSM 4.14	IN 56.17	AC-FT 206300				

ROGUE RIVER BASIN

369

14361700 CARBERRY CREEK NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1977 to current year.

INSTRUMENTATION.--Temperature recorder since October 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.5°C Aug. 8-12, 1981; minimum, 0.0°C Nov. 20, 21, 1977, many days during November 1978 through February 1979, Jan. 29, 30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C July 29, 30; minimum recorded, 1.5°C Mar. 31, but may have been lower during period of no record in February.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14361700 CARBERRY CREEK NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

371

14361900 APPLEGATE LAKE NEAR COPPER, OR

LOCATION.--Lat 42°03'25", long 123°06'30", in SE¼ sec.25, T.40 S., R.4 W., Jackson County, Hydrologic Unit 17100309, in outlet structure of Applegate Dam on Applegate River, 2.5 miles (4.0 km) northeast of former town of Copper, 13 mi (21 km) south of Ruch and at mile 46.3 (74.5 km).

DRAINAGE AREA.--223 mi² (578 km²).

PERIOD OF RECORD.--December 1980 to current year.

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

REMARKS.--Reservoir is formed by earthfill dam completed in October 1980. Storage began Dec. 2, 1980. Total capacity, 82,200 acre-ft (101 hm³) between elevations 1,763.0 ft (537.36 m) and 1,987.0 ft (605.64 m), maximum pool elevation. Elevation of gated spillway crest, 1,943.7 ft (592.44 m). Usable contents, 75,200 acre-ft (92.7 hm³) between elevations 1,854.0 ft (565.10 m) and 1,987.0 ft (605.64 m). Water is used for flood control, recreation, pollution abatement, irrigation, and other purposes.

COOPERATION.--Capacity table furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 82,210 acre-ft (101 hm³) May 6, 1982, elevation, 1,987.01 ft (605.641 m); minimum since first filling, 52,920 acre-ft (65.3 hm³) Sept. 30, 1982, elevation, 1,953.54 ft (595.439 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 82,210 acre-ft (101 hm³) May 6, elevation, 1,987.01 ft (605.641 m); minimum, 11,770 acre-ft (14.5 hm³) Nov. 11, elevation, 1,873.12 ft (570.927 m).

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

1,860.0	8,330	1,920.0	30,960	1,987.0	82,200
1,880.0	13,890	1,940.0	43,090		
1,900.0	21,380	1,960.0	58,020		

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1895.67	1877.60	1889.02	1892.65	1892.08	1949.58	1974.92	1986.30	1986.58	1986.61	1981.54	1970.73
2	1894.85	1877.42	1889.20	1889.83	1893.43	1952.81	1975.50	1986.29	1986.61	1986.61	1981.24	1970.32
3	1894.04	1877.14	1888.99	1889.04	1894.73	1955.35	1976.20	1986.49	1986.60	1986.61	1980.94	1969.92
4	1893.19	1876.78	1888.86	1889.06	1896.05	1956.92	1976.80	1986.97	1986.60	1986.64	1980.66	1969.50
5	1892.32	1876.34	1890.07	1889.04	1897.38	1958.15	1977.29	1986.99	1986.57	1986.68	1980.36	1969.09
6	1891.70	1875.83	1895.31	1889.01	1898.62	1959.10	1977.70	1986.99	1986.58	1986.70	1980.06	1968.68
7	1891.63	1875.25	1891.15	1888.95	1899.78	1959.86	1978.03	1986.99	1986.62	1986.71	1979.76	1968.26
8	1891.01	1874.60	1888.49	1889.03	1900.86	1960.72	1978.34	1986.88	1986.66	1986.70	1979.44	1967.84
9	1890.58	1873.90	1889.18	1889.04	1901.96	1961.78	1978.66	1986.86	1986.59	1986.66	1979.12	1967.42
10	1890.63	1873.33	1888.98	1888.97	1902.91	1962.83	1979.33	1986.88	1986.78	1986.61	1978.79	1967.00
11	1890.32	1873.38	1888.92	1888.99	1903.81	1963.98	1979.86	1986.92	1986.81	1986.55	1978.47	1966.58
12	1889.76	1875.98	1889.01	1888.92	1904.73	1964.76	1979.76	1986.90	1986.67	1986.46	1978.14	1966.16
13	1889.09	1879.21	1889.45	1888.92	1909.50	1965.35	1980.22	1986.94	1986.60	1986.35	1977.80	1965.75
14	1888.37	1883.54	1891.31	1888.97	1925.78	1965.86	1980.03	1986.94	1986.62	1986.23	1977.46	1965.33
15	1887.61	1893.53	1896.41	1889.00	1933.22	1966.21	1979.80	1986.85	1986.65	1986.07	1977.12	1964.90
16	1886.79	1902.44	1891.84	1889.09	1941.52	1966.78	1979.88	1986.89	1986.68	1985.90	1976.77	1964.50
17	1885.95	1904.90	1890.27	1889.07	1943.77	1967.43	1980.28	1986.87	1986.66	1985.73	1976.42	1964.02
18	1885.07	1900.22	1891.78	1889.06	1941.69	1968.00	1980.69	1986.75	1986.68	1985.55	1976.06	1963.53
19	1884.18	1894.70	1927.99	1889.00	1938.91	1968.45	1981.10	1986.73	1986.91	1985.34	1975.70	1963.05
20	1883.28	1891.63	1946.60	1888.96	1937.58	1968.81	1981.60	1986.85	1986.66	1985.11	1975.35	1962.53
21	1882.39	1893.12	1946.22	1888.97	1938.94	1969.15	1982.26	1986.94	1986.62	1984.85	1974.99	1961.82
22	1881.49	1891.10	1941.45	1888.97	1939.04	1969.60	1983.10	1986.83	1986.61	1984.58	1974.63	1961.01
23	1880.56	1888.92	1934.68	1889.00	1940.99	1970.07	1983.57	1986.82	1986.61	1984.30	1974.26	1960.10
24	1879.61	1889.06	1926.12	1888.99	1945.10	1970.59	1983.74	1986.91	1986.62	1984.02	1973.87	1959.18
25	1878.64	1888.90	1915.68	1889.06	1948.38	1971.14	1984.09	1986.89	1986.60	1983.72	1973.46	1958.23
26	1877.67	1888.98	1907.82	1888.99	1950.18	1971.72	1984.57	1986.64	1986.77	1983.43	1973.07	1957.27
27	1876.89	1888.91	1901.24	1888.99	1950.95	1972.32	1985.13	1986.59	1986.64	1983.12	1972.68	1956.37
28	1877.97	1888.96	1896.45	1889.09	1949.38	1972.97	1985.65	1986.55	1986.75	1982.82	1972.29	1955.42
29	1878.17	1888.91	1896.24	1889.37	---	1973.49	1986.06	1986.56	1986.63	1982.50	1971.93	1954.48
30	1877.92	1888.90	1895.83	1889.89	---	1974.07	1986.30	1986.58	1986.59	1982.18	1971.52	1953.54
31	1877.69	---	1894.60	1890.79	---	1974.58	---	1986.59	---	1981.86	1971.13	---
MEAN	1885.97	1885.12	1901.91	1889.25	1922.19	1965.56	1980.68	1986.78	1986.65	1985.26	1976.61	1963.75
MAX	1895.67	1904.90	1946.60	1892.65	1950.95	1974.58	1986.30	1986.99	1986.91	1986.71	1981.54	1970.73
MIN	1876.89	1873.33	1888.49	1888.92	1892.08	1949.58	1974.92	1986.29	1986.57	1981.86	1971.13	1953.54
(+)	13150	16970	19150	17670	49770	70490	81520	81800	81800	77220	67420	52920
(#)	-6770	+3820	+2180	-1480	+32100	+20720	+11030	+280	0	-4580	-9800	-14500
CAL YR 1981	MEAN	1923.33	MAX	1966.02	MIN	1873.33	AC-FT#	+2220				
WTR YR 1982	MEAN	1944.22	MAX	1986.99	MIN	1873.33	AC-FT#	+33000				

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

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR

LOCATION.--Lat 42°03'50", long 123°06'37", in SW¼ sec.30, T.40 S., R.3 W., Jackson County, Hydrologic Unit 17100309, U.S. Corps of Engineers land, on left bank 0.1 mi (0.2 km) downstream from Brushy Gulch, 0.6 mi (1.0 km) downstream from Applegate Dam, 3.1 mi (5.0 km) northeast of former town of Copper, and at mile 45.7 (73.5 km).

DRAINAGE AREA.--225 mi² (583 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WDR OR-78-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,747.51 ft (532.641 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977, at site 0.6 mi (1.0 km) upstream at datum 12.15 ft (3.703 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since December 1980 by Applegate Lake (see station 14361900). Some storage during winter in Squaw Lakes Reservoir, capacity, 1,100 acre-ft (1.36 hm³) on Squaw Creek above station. Diversions above station from Carberry Creek for irrigation in Thompson Creek basin.

AVERAGE DISCHARGE.--44 years, 447 ft³/s (12.66 m³/s), 323,900 acre-ft/yr (399 hm³/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft³/s (844 m³/s) Jan. 15, 1974, gage height, 25.38 ft (7.736 m), site and datum then in use, from high-water mark in well, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of four slope-area measurements of peak flows made in 1950, 1955, 1964, and 1974; minimum, 1.5 ft³/s (0.042 m³/s) Dec. 20, 1980, result of regulation at Applegate dam, 0.7 mi (1.1 m) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,730 ft³/s (134 m³/s) Dec. 21, gage height, 8.51 ft (2.594 m); minimum, 79 ft³/s (2.24 m³/s) Feb. 12; minimum daily, 107 ft³/s (3.03 m³/s) Feb. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	199	566	1830	274	2160	437	1260	762	355	254	242
2	210	199	752	1800	238	678	378	1240	708	342	250	242
3	206	203	958	1360	237	644	326	1140	690	315	248	242
4	210	197	815	1240	201	775	326	970	689	274	238	242
5	206	199	1210	1120	167	778	371	1170	635	255	241	240
6	205	198	3310	1000	170	781	395	1250	563	245	242	239
7	205	199	3330	945	172	783	396	1360	531	239	242	239
8	199	200	2220	833	168	659	398	1320	531	240	240	239
9	201	197	1570	823	163	566	401	1090	580	242	236	237
10	203	180	1680	817	165	576	421	972	480	242	236	236
11	202	150	1320	803	167	633	1540	922	588	242	236	236
12	201	147	1190	796	140	680	1690	965	636	242	236	236
13	200	149	1440	751	107	698	1780	1000	591	241	239	236
14	200	154	2320	725	454	699	1960	1080	546	244	239	236
15	199	225	3170	687	2220	698	1520	1120	546	244	239	236
16	204	1430	3120	655	2800	594	1150	1060	546	242	238	235
17	209	2540	2010	701	2810	514	899	1170	547	242	236	264
18	209	2440	2340	715	3090	515	821	1180	531	242	236	292
19	209	2120	2890	681	4280	516	780	1040	638	249	236	292
20	206	1520	1160	657	3840	517	739	962	799	255	235	292
21	205	1740	4120	610	4250	511	713	1170	545	260	234	371
22	204	2300	4260	575	3230	453	792	1310	461	266	235	408
23	203	2260	4240	561	1840	416	1170	1230	414	264	235	447
24	203	1560	4240	580	658	386	1350	1250	383	267	243	463
25	202	1220	4240	583	598	372	1230	1420	373	267	245	463
26	200	1010	3800	784	896	346	1100	1400	364	267	234	462
27	205	844	3250	706	1090	330	1000	1050	545	267	234	460
28	200	687	2530	644	1810	330	1030	924	399	267	234	459
29	202	617	1850	559	---	331	1050	832	590	267	234	458
30	203	552	1850	490	---	359	1120	796	447	267	237	456
31	203	---	1850	390	---	411	---	780	---	265	240	---
TOTAL	6327	25636	73601	25421	36235	18709	27283	34433	16658	8116	7402	9400
MEAN	204	855	2374	820	1294	604	909	1111	555	262	239	313
MAX	213	2540	4260	1830	4280	2160	1960	1420	799	355	254	463
MIN	199	147	566	390	107	330	326	780	364	239	234	235
AC-FT	12550	50850	146000	50420	71870	37110	54120	68300	33040	16100	14680	18640
MEAN†	94.2	919	2410	796	1870	941	1090	1120	555	187	79.4	69.6
AC-FT†	5790	54670	148180	48940	103970	57830	65150	68580	33040	11520	4880	4140

CAL YR 1981 TOTAL 159309 MEAN 436 MAX 4260 MIN 95 AC-FT 316000 MEAN† 440 AC-FT† 318220
WTR YR 1982 TOTAL 289221 MEAN 792 MAX 4280 MIN 107 AC-FT 573700 MEAN† 838 AC-FT† 606710

† Adjusted for change in contents of Applegate Lake.

14362000 APPLGATE RIVER NEAR COPPER, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: September 1980 to current year.

pH: September 1980 to current year.

WATER TEMPERATURES: January 1977 to current year.

DISSOLVED OXYGEN: September 1980 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1980.

REMARKS.--Storage began in Applegate Lake Dec. 2, 1980. Dam site is approximately 0.5 mi (0.8 km) upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 188 micromhos Sept. 13, 1980; minimum, 61 micromhos Dec. 3, 1980, Dec. 20, 1981.

pH: Maximum, 9.0 units Sept. 4, 1980; minimum, 7.4 units Sept. 8-18, 1981, Sept. 21-29, 1982.

WATER TEMPERATURES: Maximum, 26.5°C Aug. 7, 1978; minimum, 0.0°C on many days during winter periods prior to filling of Applegate Lake.

DISSOLVED OXYGEN: Maximum, 15.1 mg/l Dec. 15, 1981; minimum, 4.9 mg/l Sept. 28-30, 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 155 micromhos Oct. 5, 7, 25; minimum, 61 micromhos Dec. 20.

pH: Maximum, 8.3 units Oct. 15-29, Nov. 11; minimum, 7.4 units Sept. 21-29.

WATER TEMPERATURES: Maximum, 17.5°C Oct. 1-5; minimum, 3.5°C many days during January and February.

DISSOLVED OXYGEN: Maximum, 15.1 mg/l Dec. 15; minimum, 6.0 mg/l Oct. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
FEB 02...	1145	228	129	7.6	4.0	<1	1	<100	1	10
AUG 12...	1500	220	74	7.6	11.0	1	1	100	1	<10

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
FEB 02...	15	160	15	50	<.1	<.1	<1	1	20
AUG 12...	6	80	9	10	<.1	<.1	<1	<1	30

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 26...	200	16	8.6	MAY 17...	1170	<1	--
NOV 09...	197	9	4.8	JUN 02...	708	<1	--
DEC 23...	4240	135	1550	15...	546	<1	--
JAN 12...	796	5	11	25...	373	<1	--
FEB 23	1840	5	25	JUL 09...	242	2	1.3
MAR 08...	659	11	20	27...	267	3	2.2
25...	372	5	5.0	AUG 12...	236	4	2.5
APR 12...	1690	7	32	27...	234	<1	--
29...	1050	2	5.7	SEP 09...	237	<1	--
				27...	460	<1	--

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	145	114	96	---	85	105	99	81	72	68	76
2	143	144	114	---	---	92	106	99	80	73	68	77
3	145	142	113	100	---	94	106	100	80	79	69	78
4	150	141	113	99	---	92	108	99	---	81	70	79
5	153	141	111	107	---	92	106	99	---	81	70	80
6	153	142	105	113	---	93	106	98	---	81	71	80
7	153	142	82	116	---	101	107	98	---	80	70	83
8	147	142	77	116	---	103	107	97	---	80	71	84
9	146	142	78	116	---	104	106	98	---	80	72	86
10	147	142	82	116	---	104	103	97	---	80	72	86
11	140	145	87	118	---	102	104	96	84	79	74	86
12	140	142	93	---	---	102	104	95	84	80	73	88
13	144	---	96	---	---	101	105	95	85	80	70	88
14	146	---	93	---	---	103	104	94	83	80	69	88
15	149	---	88	---	---	104	106	95	76	81	69	88
16	149	---	78	---	---	103	104	95	71	81	70	90
17	148	88	79	---	---	103	101	94	68	80	70	90
18	148	80	81	---	---	104	101	91	67	80	71	91
19	149	85	79	---	---	108	102	91	67	79	71	92
20	150	94	67	---	---	107	101	91	67	79	70	92
21	150	97	63	---	---	108	101	90	68	78	71	94
22	151	95	70	---	---	107	101	91	69	76	73	92
23	151	92	78	---	---	108	101	90	70	73	74	92
24	152	90	82	---	79	109	100	89	73	73	76	93
25	152	91	84	---	87	108	100	90	75	72	76	95
26	151	96	88	---	90	106	100	88	74	71	75	96
27	149	100	90	---	90	105	99	85	73	70	75	97
28	149	104	90	---	86	105	99	86	72	68	76	98
29	149	108	90	---	---	105	99	86	73	67	76	101
30	151	112	92	---	---	105	98	83	73	66	77	102
31	150	---	95	---	---	105	---	81	---	67	75	---
MEAN	148	117	89	110	86	102	103	93	74	76	72	89

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.7	7.6	8.2	8.0	7.8	7.8	7.8	7.7	---	---	7.9	7.8
2	7.8	7.7	8.2	8.0	7.8	7.7	---	---	---	---	7.9	7.8
3	7.9	7.8	8.1	8.0	7.8	7.7	7.8	7.7	---	---	7.9	7.9
4	8.0	7.9	8.1	7.9	7.8	7.7	7.8	7.7	---	---	7.9	7.8
5	8.0	7.9	8.2	7.9	7.8	7.6	7.8	7.8	---	---	7.9	7.8
6	8.1	8.0	8.1	7.9	7.8	7.7	7.8	7.8	---	---	7.9	7.9
7	8.1	8.0	8.2	7.9	7.8	7.6	7.8	7.8	---	---	7.9	7.9
8	8.1	8.0	8.2	7.9	7.7	7.7	7.8	7.8	---	---	7.9	7.8
9	8.1	8.0	8.1	7.9	7.7	7.7	7.8	7.8	---	---	7.9	7.9
10	8.1	8.0	8.2	7.9	7.7	7.7	7.9	7.8	---	---	7.9	7.9
11	8.2	8.1	8.3	7.9	7.8	7.7	7.9	7.8	---	---	7.9	7.9
12	8.2	8.0	8.2	7.9	7.8	7.8	---	---	---	---	7.9	7.9
13	8.2	8.0	---	---	7.8	7.7	---	---	---	---	7.9	7.9
14	8.2	8.0	---	---	7.8	7.7	---	---	---	---	7.9	7.9
15	8.3	8.0	---	---	7.8	7.7	---	---	---	---	7.9	7.9
16	8.3	8.0	---	---	7.8	7.7	---	---	---	---	7.9	7.9
17	8.3	8.0	7.8	7.8	7.7	7.7	---	---	---	---	7.9	7.9
18	8.3	8.0	7.8	7.8	7.7	7.6	---	---	---	---	7.9	7.9
19	8.3	8.0	7.8	7.8	7.8	7.6	---	---	---	---	7.9	7.9
20	8.3	8.0	7.9	7.8	7.6	7.6	---	---	---	---	7.9	7.9
21	8.3	8.0	7.8	7.8	7.6	7.6	---	---	---	---	8.0	7.9
22	8.3	8.0	7.8	7.8	7.7	7.6	---	---	---	---	8.0	7.9
23	8.3	8.0	7.8	7.6	7.7	7.6	---	---	---	---	8.0	7.9
24	8.3	8.0	7.8	7.7	7.8	7.7	---	---	7.9	7.9	8.0	7.9
25	8.3	8.0	7.8	7.7	7.8	7.7	---	---	7.9	7.9	8.0	7.9
26	8.3	8.0	7.8	7.8	7.7	7.7	---	---	7.9	7.9	8.0	7.9
27	8.3	8.0	7.8	7.8	7.7	7.7	---	---	7.9	7.9	8.0	7.9
28	8.3	8.1	7.8	7.8	7.7	7.7	---	---	7.9	7.8	8.0	7.9
29	8.3	8.0	7.8	7.8	7.7	7.7	---	---	---	---	8.0	7.9
30	8.1	8.0	7.9	7.8	7.8	7.7	---	---	---	---	8.0	7.9
31	8.1	8.0	---	---	7.8	7.7	---	---	---	---	8.0	7.9
MONTH	8.3	7.6	8.3	7.6	7.8	7.6	7.9	7.7	7.9	7.8	8.0	7.8
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.1	7.9	7.9	7.8	7.9	7.8	7.9	7.7	7.7	7.6	7.6	7.6
2	8.1	7.9	7.9	7.8	7.9	7.8	8.1	7.7	7.7	7.6	7.6	7.5
3	8.0	7.9	8.0	7.8	7.9	7.8	8.1	7.7	7.7	7.6	7.6	7.5
4	8.0	7.9	8.0	7.8	---	---	8.1	7.7	7.7	7.5	7.6	7.5
5	8.0	7.9	7.9	7.8	---	---	8.1	7.7	7.7	7.6	7.6	7.5
6	8.0	7.9	7.9	7.7	---	---	8.1	7.7	7.7	7.6	7.6	7.5
7	8.0	7.9	7.9	7.7	---	---	8.1	7.7	7.6	7.6	7.6	7.5
8	8.0	7.9	7.9	7.8	---	---	8.1	7.7	7.6	7.6	7.6	7.5
9	8.1	7.9	7.9	7.8	---	---	8.1	7.7	7.7	7.6	7.6	7.5
10	8.0	7.9	7.9	7.8	---	---	8.1	7.7	7.7	7.6	7.6	7.6
11	7.9	7.9	7.9	7.7	7.8	7.7	8.0	7.7	7.7	7.6	7.6	7.5
12	7.9	7.8	7.9	7.7	7.8	7.7	8.0	7.6	7.7	7.6	7.6	7.5
13	7.9	7.8	7.9	7.7	7.8	7.7	8.0	7.7	7.7	7.6	7.6	7.5
14	7.9	7.8	7.8	7.7	7.8	7.7	8.0	7.7	7.7	7.6	7.6	7.5
15	7.9	7.9	7.8	7.7	7.8	7.7	8.0	7.7	7.7	7.6	7.6	7.5
16	7.9	7.9	7.8	7.7	7.8	7.7	8.0	7.7	7.7	7.6	7.6	7.5
17	7.9	7.9	7.9	7.7	8.0	7.7	7.9	7.7	7.7	7.6	---	---
18	7.9	7.9	7.9	7.8	7.9	7.7	7.9	7.7	7.7	7.6	7.6	7.5
19	8.0	7.8	7.9	7.8	7.8	7.7	7.9	7.7	7.7	7.6	7.6	7.5
20	8.0	7.9	7.9	7.8	7.8	7.7	7.9	7.6	7.7	7.6	7.6	7.5
21	8.0	7.9	7.9	7.8	7.8	7.7	7.9	7.6	7.7	7.6	7.5	7.4
22	7.9	7.9	7.9	7.8	7.9	7.7	7.9	7.6	7.6	7.5	7.5	7.4
23	7.9	7.8	7.9	7.8	7.9	7.7	7.8	7.6	7.7	7.5	7.5	7.4
24	7.9	7.8	7.9	7.8	7.9	7.7	7.8	7.6	7.6	7.5	7.5	7.4
25	7.9	7.8	7.9	7.8	7.8	7.7	7.8	7.6	7.6	7.5	7.5	7.4
26	7.9	7.8	7.9	7.8	7.8	7.7	7.8	7.6	7.7	7.5	7.5	7.4
27	7.9	7.8	7.9	7.8	7.8	7.7	7.7	7.6	7.6	7.5	7.5	7.4
28	7.9	7.8	7.9	7.8	7.8	7.7	7.8	7.6	7.6	7.5	7.5	7.4
29	8.0	7.8	7.9	7.8	7.8	7.6	7.8	7.6	7.6	7.5	7.5	7.4
30	7.9	7.8	8.0	7.8	7.8	7.6	7.7	7.6	7.7	7.5	7.5	7.5
31	---	---	7.9	7.8	---	---	7.7	7.6	7.7	7.5	---	---
MONTH	8.1	7.8	8.0	7.7	8.0	7.6	8.1	7.6	7.7	7.5	7.6	7.4

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	17.5	17.0	12.5	11.5	6.0	5.5	5.5	5.5	4.0	4.0	5.0	5.0
2	17.5	17.0	12.0	11.5	6.0	6.0	---	---	4.5	4.0	5.5	5.0
3	17.5	17.0	11.5	11.0	6.0	6.0	5.0	4.5	4.5	4.0	5.5	5.0
4	17.5	17.0	11.5	11.0	6.5	6.0	5.0	4.0	4.5	4.0	5.5	5.0
5	17.5	17.0	11.5	11.0	7.0	6.5	4.5	4.0	4.5	4.0	5.5	5.5
6	17.0	17.0	11.5	11.0	7.0	7.0	4.5	4.0	4.0	3.5	5.5	5.5
7	17.0	16.5	11.0	10.5	7.0	7.0	4.5	4.0	4.0	3.5	5.5	5.5
8	16.5	15.5	11.0	10.5	7.0	7.0	4.0	4.0	4.0	3.5	6.0	5.5
9	16.0	15.5	11.0	10.5	7.0	7.0	4.0	4.0	4.5	4.0	6.0	5.5
10	15.5	15.5	11.0	10.5	7.0	7.0	4.0	3.5	4.5	3.5	5.5	5.5
11	15.5	14.5	11.5	10.5	7.0	6.5	4.0	3.5	4.5	4.0	5.5	5.5
12	15.0	14.5	11.0	10.5	6.5	6.5	4.0	3.5	4.5	4.0	6.0	5.5
13	15.0	14.0	---	---	6.5	5.5	4.0	3.5	4.5	4.0	5.5	5.5
14	14.5	14.0	---	---	6.5	6.5	4.0	3.5	4.5	4.0	5.5	5.5
15	15.5	14.0	---	---	6.5	6.5	4.0	3.5	4.0	4.0	6.0	5.5
16	15.5	15.0	---	---	6.5	6.5	4.0	3.5	4.5	4.0	6.0	5.5
17	15.5	14.5	8.0	8.0	6.5	6.0	4.0	3.5	4.5	4.5	6.0	5.5
18	15.0	14.5	8.0	7.5	6.0	6.0	4.0	3.5	5.0	4.5	6.0	5.5
19	15.0	14.5	7.5	7.5	7.5	6.0	4.0	3.5	5.5	4.5	6.0	5.5
20	15.0	14.0	7.5	7.5	7.5	6.5	4.0	4.0	6.0	5.5	6.0	5.5
21	14.5	14.0	7.5	7.5	6.5	6.5	4.0	4.0	6.0	6.0	6.0	5.5
22	14.5	14.0	8.0	7.5	6.5	6.5	4.0	3.5	6.0	6.0	6.0	5.5
23	14.5	14.0	7.5	7.5	6.5	6.5	4.0	3.5	6.0	5.5	6.0	5.5
24	14.5	13.5	7.5	7.5	6.5	6.0	4.0	4.0	5.5	5.0	6.0	5.5
25	14.0	13.5	7.5	7.0	6.0	6.0	4.0	4.0	5.5	5.0	6.0	5.5
26	14.0	13.5	7.0	6.5	6.0	6.0	4.0	4.0	5.0	5.0	6.0	5.5
27	13.5	13.0	6.5	6.0	6.0	6.0	4.0	4.0	5.5	5.0	6.0	5.5
28	13.5	13.0	6.0	6.0	6.0	6.0	4.0	4.0	5.0	5.0	6.0	5.5
29	13.0	12.5	6.0	6.0	6.0	5.5	4.0	4.0	---	---	6.0	5.5
30	13.0	12.5	6.0	6.0	5.5	5.5	4.0	4.0	---	---	6.0	5.5
31	12.5	12.0	---	---	5.5	5.5	4.5	4.0	---	---	6.0	5.5
MONTH	17.5	12.0	12.5	6.0	7.5	5.5	5.5	3.5	6.0	3.5	6.0	5.0

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

ROGUE RIVER BASIN

377

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	6.7	6.0	6.4	11.7	10.6	10.9	13.2	12.1	12.5	14.4	13.4	13.8
2	7.0	6.3	6.4	11.5	10.5	10.8	13.6	12.6	13.0	---	---	---
3	8.3	6.9	8.0	11.4	10.5	10.8	14.1	13.0	13.4	14.6	13.6	14.3
4	10.1	8.1	9.4	11.9	10.8	11.1	14.2	12.6	13.2	14.6	13.6	14.3
5	9.9	9.4	9.6	11.8	10.8	11.1	14.3	11.8	12.9	14.9	14.1	14.5
6	10.1	9.6	9.8	11.7	10.9	11.1	14.7	12.4	13.6	15.0	14.1	14.5
7	10.4	9.9	10.1	12.2	10.9	11.3	13.7	13.1	13.3	14.7	14.1	14.4
8	10.4	9.9	10.1	12.2	11.0	11.3	14.2	12.8	13.3	14.7	13.9	14.3
9	10.7	10.0	10.4	11.6	10.6	11.0	13.8	12.7	13.0	14.7	14.0	14.3
10	10.6	10.1	10.3	11.2	10.4	10.7	14.5	13.3	13.5	14.8	14.1	14.4
11	10.7	10.2	10.4	11.7	10.0	10.6	14.3	13.2	13.5	14.9	14.1	14.4
12	11.0	10.3	10.5	11.4	10.2	10.5	14.1	13.2	13.5	---	---	---
13	11.1	10.4	10.7	---	---	---	14.7	13.4	13.6	---	---	---
14	11.1	10.4	10.6	---	---	---	15.0	13.8	14.2	---	---	---
15	11.3	10.0	10.5	---	---	---	15.1	13.7	14.0	---	---	---
16	10.9	10.1	10.4	---	---	---	14.8	13.7	13.9	---	---	---
17	11.1	10.1	10.5	13.3	12.2	12.8	15.0	13.9	14.4	---	---	---
18	11.4	10.1	10.6	13.8	12.4	13.0	15.0	14.0	14.3	---	---	---
19	11.3	10.2	10.5	13.9	12.4	13.0	15.0	10.8	13.4	---	---	---
20	11.4	10.2	10.6	13.3	12.0	12.6	14.3	10.7	11.8	---	---	---
21	11.7	10.3	10.7	13.9	12.1	12.7	14.4	13.1	13.4	---	---	---
22	11.4	10.2	10.6	14.2	12.7	13.1	14.1	13.0	13.2	---	---	---
23	11.5	10.3	10.7	13.9	12.7	13.1	13.7	12.5	13.1	---	---	---
24	11.6	10.3	10.7	13.7	12.6	13.2	13.9	12.3	13.2	---	---	---
25	11.5	10.3	10.7	13.5	12.6	13.1	14.1	12.8	13.2	---	---	---
26	11.2	10.0	10.4	13.6	12.4	12.8	13.8	12.8	13.2	---	---	---
27	10.8	9.9	10.2	13.4	12.5	12.8	14.0	13.0	13.3	---	---	---
28	11.1	10.0	10.3	13.2	12.4	12.7	14.0	12.9	13.3	---	---	---
29	11.4	10.2	10.6	13.3	12.4	12.7	14.3	13.2	13.6	---	---	---
30	11.5	10.5	10.8	13.2	12.4	12.6	14.4	13.5	13.8	---	---	---
31	11.7	10.7	11.0	---	---	---	14.2	13.4	13.8	---	---	---
MONTH	11.7	6.0	10.1	14.2	10.0	12.0	15.1	10.7	13.4	15.0	13.4	14.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	14.6	13.5	14.1	12.8	12.2	12.6	12.8	12.3	12.6
2	---	---	---	14.2	13.0	13.6	12.8	12.2	12.4	13.3	12.6	12.9
3	---	---	---	14.2	13.2	13.6	12.9	12.3	12.6	13.4	12.5	12.9
4	---	---	---	14.2	13.2	13.8	12.9	12.3	12.6	12.9	12.3	12.6
5	---	---	---	14.3	13.3	13.8	13.1	12.2	12.5	13.2	12.5	12.8
6	---	---	---	14.3	13.1	13.8	13.0	12.3	12.5	13.2	12.7	12.9
7	---	---	---	14.4	13.1	13.5	13.0	12.3	12.6	13.5	12.8	13.1
8	---	---	---	14.3	13.1	13.6	13.0	12.3	12.6	13.3	12.7	13.0
9	---	---	---	14.1	13.1	13.7	12.9	12.0	12.5	13.1	12.5	12.7
10	---	---	---	13.8	13.0	13.4	12.4	11.7	12.0	12.8	12.4	12.6
11	---	---	---	14.0	12.8	13.4	13.6	11.9	12.9	12.8	12.2	12.5
12	---	---	---	13.9	13.0	13.5	13.9	12.9	13.5	12.7	12.0	12.4
13	---	---	---	13.8	12.7	13.3	13.9	12.7	13.2	12.8	12.2	12.5
14	---	---	---	13.5	12.8	13.2	14.3	13.5	13.7	12.7	12.3	12.5
15	---	---	---	13.6	12.6	13.2	14.3	13.7	13.9	12.8	12.3	12.5
16	---	---	---	13.3	12.6	13.0	14.0	13.0	13.6	12.7	12.2	12.5
17	---	---	---	13.2	12.6	12.8	13.6	13.1	13.4	13.5	12.4	12.8
18	---	---	---	13.3	12.4	12.8	14.0	13.1	13.5	13.4	12.6	12.9
19	---	---	---	13.3	12.7	13.0	14.0	13.0	13.3	13.3	12.7	12.9
20	---	---	---	13.3	12.7	13.0	13.4	12.7	13.1	13.2	12.6	12.9
21	---	---	---	13.3	12.7	12.9	13.3	12.7	13.0	13.2	12.6	12.9
22	---	---	---	13.1	12.6	12.8	13.9	12.7	13.2	13.3	12.8	13.0
23	---	---	---	13.0	12.5	12.7	13.9	13.3	13.7	13.0	12.5	12.8
24	13.8	12.7	13.3	12.9	12.3	12.6	14.2	13.2	13.7	13.0	12.4	12.7
25	14.2	12.9	13.4	13.1	12.3	12.6	13.9	13.4	13.7	13.2	12.7	12.9
26	14.3	12.9	13.8	13.6	12.7	13.1	14.2	13.4	13.6	13.2	12.5	12.9
27	14.7	13.3	14.3	13.4	12.7	13.1	13.7	13.1	13.4	13.0	12.2	12.6
28	14.7	13.8	14.3	13.0	12.6	12.8	13.7	13.1	13.3	12.7	12.2	12.4
29	---	---	---	12.9	12.2	12.6	13.3	12.3	12.9	12.6	12.0	12.3
30	---	---	---	12.9	12.3	12.6	13.1	11.7	12.5	12.3	11.5	11.9
31	---	---	---	12.8	12.3	12.6	---	---	---	12.0	11.4	11.7
MONTH	14.7	12.7	13.8	14.6	12.2	13.2	14.3	11.7	13.1	13.5	11.4	12.7

ROGUE RIVER BASIN

14362000 APPLEGATE RIVER NEAR COPPER, OR--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12.0	11.5	11.7	11.8	11.1	11.4	---	---	---	10.8	9.9	10.4
2	12.6	11.4	11.9	11.7	9.8	10.6	---	---	---	10.8	9.8	10.3
3	12.3	11.7	12.0	11.8	10.0	10.9	---	---	---	11.1	10.3	10.6
4	---	---	---	12.0	11.1	11.6	---	---	---	10.9	10.0	10.6
5	---	---	---	12.2	11.1	11.6	---	---	---	10.7	10.0	10.4
6	---	---	---	12.1	11.1	11.6	---	---	---	10.9	10.2	10.5
7	---	---	---	12.0	10.9	11.4	11.2	10.3	10.9	10.9	10.0	10.5
8	---	---	---	11.8	10.5	11.2	11.1	10.4	10.7	10.7	9.9	10.3
9	---	---	---	11.8	10.7	11.2	11.1	10.3	10.8	10.4	9.8	10.0
10	---	---	---	11.8	10.7	11.3	11.3	10.3	10.7	10.6	9.9	10.3
11	12.4	11.9	12.1	12.1	10.5	11.2	10.8	10.1	10.4	10.9	9.4	10.3
12	12.4	11.8	12.0	11.5	10.0	10.8	11.0	10.2	10.5	10.4	9.6	10.0
13	12.2	11.8	12.0	11.3	---	---	11.8	10.5	11.2	10.1	9.6	9.9
14	12.0	11.6	11.8	---	---	---	10.9	10.2	10.6	10.3	9.5	9.9
15	12.7	11.5	12.1	---	---	---	11.1	10.4	10.8	10.3	9.4	9.7
16	12.4	11.7	12.1	---	---	---	11.1	10.4	10.8	10.1	9.4	9.7
17	12.0	10.7	11.6	---	---	---	11.4	10.8	11.1	10.2	9.5	9.8
18	12.0	11.4	11.7	---	---	---	11.6	10.6	11.1	10.0	9.4	9.7
19	12.5	11.1	11.8	---	---	---	11.2	10.4	11.1	10.1	9.3	9.8
20	12.7	11.6	12.1	---	---	---	11.1	10.2	10.7	10.2	9.6	9.8
21	12.0	11.3	11.7	---	---	---	11.7	10.9	11.4	10.1	9.5	9.8
22	11.9	10.6	11.4	---	---	---	11.6	10.8	11.2	11.0	9.4	10.3
23	11.2	10.2	10.6	12.3	10.7	11.7	11.5	10.2	10.9	11.0	10.4	10.7
24	11.8	10.6	11.3	12.2	11.3	11.7	11.2	10.2	10.7	11.1	10.6	10.8
25	11.7	10.9	11.4	12.3	11.5	11.9	10.7	9.7	10.3	10.8	10.3	10.6
26	11.9	10.8	11.3	12.1	10.9	11.6	10.8	10.0	10.4	11.0	10.3	10.6
27	11.8	11.0	11.4	---	---	---	11.6	10.6	11.1	10.8	10.2	10.5
28	11.7	10.7	11.1	---	---	---	12.1	10.9	11.6	11.2	10.1	10.7
29	11.6	10.8	11.2	---	---	---	11.8	11.2	11.5	10.8	10.4	10.6
30	11.7	10.9	11.2	---	---	---	11.8	9.8	10.8	10.9	9.9	10.6
31	---	---	---	---	---	---	11.0	10.2	10.5	---	---	---
MONTH	12.7	10.2	11.6	12.3	9.8	11.4	12.1	9.7	10.9	11.2	9.3	10.3

ROGUE RIVER BASIN

379

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR

LOCATION.--Lat 42°14'30", long 123°08'20", in NE¼ sec.26, T.38 S., R.4 W., Jackson County, Hydrologic Unit 17100309, on left bank 0.9 mi (1.4 km) downstream from Keeler Creek, 1.8 mi (2.9 km) southeast of Applegate, and at mile 26.7 (43.0 km).

DRAINAGE AREA.--483 mi² (1,251 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1738: Drainage area. WSP 1935: 1953(M), 1956(M). WDR OR-76-1: 1956(M), 1965(M).

GAGE.--Water-stage recorder. Datum of gage is 1,285.33 ft (391.769 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 23, 1938, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records excellent. Flow regulated since December 1980 by Applegate Lake (see station 14361900). Many diversions for irrigation above station. McDonald Creek Canal diverts from McDonald Creek above station for irrigation in Bear Creek basin. Thompson Creek Irrigation Association ditch diverts above station for irrigation in Thompson Creek basin. Fowler-Keeler and Berryman ditches divert above station for irrigation below.

AVERAGE DISCHARGE.--44 years, 551 ft³/s (15.60 m³/s), 399,200 acre-ft/yr (492 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft³/s (1,050 m³/s) Jan. 15, 1974, gage height, 20.41 ft (6.221 m), from rating curve extended above 18,000 ft³/s (510 m³/s) on basis of slope-area measurements of flow at gage heights 18.00 ft (5.486 m) and 19.57 ft (5.965 m); minimum, 4.6 ft³/s (0.13 m³/s) Sept. 22-25, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 20, 1927, reached a stage of 18.7 ft (5.70 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,700 ft³/s (303 m³/s) Dec. 19, gage height, 9.95 ft (3.033 m); minimum, 161 ft³/s (4.56 m³/s) Nov. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	225	668	2570	550	3490	689	1560	888	431	230	206
2	208	219	818	2510	480	1580	662	1530	831	403	223	208
3	205	217	1080	2000	440	1250	642	1450	797	378	226	212
4	203	217	950	1930	430	1350	662	1210	814	334	215	213
5	205	219	1120	1820	379	1280	696	1370	780	304	211	217
6	217	216	3770	1570	371	1230	722	1460	697	290	215	218
7	236	216	4070	1390	363	1200	700	1610	633	268	216	213
8	220	213	2730	1250	353	1070	680	1600	614	260	216	208
9	220	211	1740	1190	343	893	678	1330	653	251	213	211
10	220	206	2080	1180	338	897	723	1180	560	251	209	215
11	230	169	1610	1170	332	945	2130	1100	643	243	212	215
12	224	220	1410	1170	319	979	2540	1140	711	237	212	217
13	220	201	1490	1090	321	984	2440	1170	678	235	211	219
14	217	288	2580	1040	807	989	2730	1250	632	240	212	209
15	214	417	3430	989	2880	985	2220	1280	628	237	218	214
16	214	1590	3890	951	3850	917	1740	1220	625	243	216	214
17	217	3160	2350	991	3640	778	1360	1340	613	236	215	231
18	220	2840	2600	1060	3780	779	1220	1300	599	230	218	280
19	211	2440	6480	1020	5240	766	1150	1190	628	232	215	290
20	212	1760	3840	967	4720	756	1090	1130	966	236	213	295
21	211	1770	5820	907	6060	741	1040	1320	664	237	208	336
22	211	2650	5500	835	4950	690	1080	1550	536	244	208	382
23	211	2590	5260	814	3190	625	1480	1440	478	243	204	418
24	209	1960	5100	839	1540	605	1700	1430	443	242	201	447
25	211	1470	5010	869	1220	579	1600	1640	432	246	209	448
26	212	1220	4700	1100	1440	562	1420	1690	415	245	199	449
27	222	1010	3980	1000	1620	526	1310	1260	572	242	199	460
28	260	828	3380	900	2110	547	1300	1100	482	238	201	455
29	250	744	2620	800	---	530	1370	998	643	237	206	455
30	231	667	2690	700	---	547	1340	931	534	236	208	451
31	227	---	2610	600	---	652	---	916	---	231	213	---
TOTAL	6765	30153	95376	37222	52066	29722	39114	40695	19189	8180	6572	8806
MEAN	218	1005	3077	1201	1860	959	1304	1313	640	264	212	294
MAX	260	3160	6480	2570	6060	3490	2730	1690	966	431	230	460
MIN	197	169	668	600	319	526	642	916	415	230	199	206
AC-FT	13420	59810	189200	73830	103300	58950	77580	80720	38060	16230	13040	17470
CAL YR 1981 TOTAL	189904			520	6480	135	AC-FT	376700				
WTR YR 1982 TOTAL	373860			1024	6480	169	AC-FT	741600				

ROGUE RIVER BASIN

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since August 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.0°C July 29, 30, Aug. 3, 4, 1974; minimum, 0.0°C on several days 1975-80. Maximum since full operation of Applegate Lake, 20.5°C July 26-30, Aug. 6, 8, 1981; minimum recorded, 1.5°C Feb. 5, 6, 11, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 20.5°C July 26-30, Aug. 6, 8; minimum recorded, 1.5°C Feb. 5, 6, 11.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

381

14366000 APPLEGATE RIVER NEAR APPLEGATE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR

LOCATION.--Lat 45°21'15", long 123°24'20", in SE¼NE¼ sec.16, T.37 S., R.6 W., Josephine County, Hydrologic Unit 17100309, on left bank 0.3 mi (0.5 km) downstream from Jackson Creek, 3.6 mi (5.8 km) southeast of Wilderville, and at mile 7.6 (12.2 km).

DRAINAGE AREA.--698 mi² (1,808 km²).

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 (288.700 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Sept. 1, 1978, nonrecording gage at site 1,100 ft (335 m) upstream at datum 2.36 ft (0.719 m) higher.

REMARKS.--Water-discharge records excellent. Flow regulated since December 1980 by Applegate Lake (see station 14361900). Many diversions for irrigation above station. Wilderville ditch diverts up to 16 ft³/s (0.45 m³/s) 0.3 mi (0.5 km) upstream and at the mouth of Jackson Creek.

AVERAGE DISCHARGE.--21 years, 733 ft³/s (20.76 m³/s), 531,100 acre-ft/yr (655 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,500 ft³/s (1,350 m³/s) Jan. 18, 1953, gage height, 18.3 ft (5.58 m) from floodmark, site and datum then in use, from rating curve extended above 12,000 ft³/s (340 m³/s) as explained below; minimum, 0.78 ft³/s (0.022 m³/s) Aug. 22-24, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 20.3 ft (6.19 m) from floodmark, former site and datum, discharge, 66,500 ft³/s (1,880 m³/s), from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurement of peak flow.

Flood of February 1927 reached a stage of 22 ft (6.7 m) at former site, from local resident. Floods of Dec. 22, 1964, and Jan. 15, 1974, are known to have exceeded the December 1955 flood.

No flow was observed at present site during the late summer of 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,600 ft³/s (612 m³/s) Dec. 19, gage height, 12.76 ft (3.889 m); minimum, 190 ft³/s (5.38 m³/s) Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	326	1090	3580	1110	4960	1330	1920	999	556	231	215
2	223	310	1290	3410	925	3160	1520	1880	949	479	229	212
3	227	297	1600	3250	865	2290	2280	1830	883	473	237	215
4	227	292	1460	3910	838	2290	1860	1570	921	424	231	219
5	227	286	1980	3270	731	2110	1650	1650	940	394	223	217
6	261	283	7850	2510	650	1960	1620	1710	836	355	226	220
7	305	279	6170	2110	594	1860	1450	1860	741	321	229	220
8	291	276	4000	1900	528	1730	1330	1850	712	308	228	216
9	277	273	2870	1750	479	1430	1280	1640	718	276	217	214
10	286	270	3620	1700	456	1380	1440	1540	735	271	218	228
11	286	252	70	1670	433	1470	2970	1380	661	268	222	224
12	282	349	60	1650	428	1600	3790	1350	755	264	220	236
13	268	458	2830	1560	865	1530	4070	1360	744	261	216	242
14	259	643	4060	1500	3620	1430	4730	1420	697	258	220	241
15	255	1100	5830	1400	4610	1430	3710	1450	676	252	222	231
16	251	2390	5650	1360	6640	1360	2850	1400	670	253	224	236
17	255	4750	3640	1430	5380	1210	2270	1470	654	255	228	244
18	255	3840	3740	1820	4630	1180	2020	1470	628	250	225	310
19	246	3120	13100	1770	6470	1130	1880	1410	655	245	222	344
20	243	2410	9700	1610	6060	1070	1780	1270	1050	249	216	349
21	239	2120	8410	1500	7560	1060	1750	1390	765	235	217	354
22	239	3560	7160	1360	6880	1030	1810	1620	622	238	213	410
23	239	3590	6430	1370	4600	921	2140	1560	557	245	210	444
24	239	3530	5950	1500	2550	865	2310	1550	512	244	201	483
25	239	2450	5720	1540	1970	865	2260	1680	482	243	203	490
26	240	2090	5770	2220	2110	851	2000	1790	473	245	200	491
27	248	1760	4870	2180	2320	754	1850	1530	587	245	196	507
28	384	1440	4360	1830	2370	725	1780	1280	650	235	203	507
29	461	1230	3970	1550	---	725	1860	1160	709	228	211	508
30	421	1090	4300	1390	---	779	1710	1060	712	228	217	508
31	355	---	3830	1240	---	1450	---	1030	---	234	224	---
TOTAL	8443	45064	146280	60840	76672	46605	65300	47080	21693	9032	6779	9535
MEAN	272	1502	4719	1963	2738	1503	2177	1519	723	291	219	318
MAX	461	4750	13100	3910	7560	4960	4730	1920	1050	556	237	508
MIN	215	252	1090	1240	428	725	1280	1030	473	228	196	212
AC-FT	16750	89380	290100	120700	152100	92440	129500	93380	43030	17910	13450	18910
CAL YR 1981	TOTAL	274932	MEAN	753	MAX	13100	MIN	127	AC-FT	545300		
WTR YR 1982	TOTAL	543323	MEAN	1489	MAX	13100	MIN	196	AC-FT	1078000		

ROGUE RIVER BASIN

383

14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: September 1978 to current year.

INSTRUMENTATION.--Temperature recorder since September 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.0°C July 20, 1979; minimum recorded, 0.5°C Dec. 30, 31, 1978, Jan. 29, 30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 24.0°C July 28, 29; minimum, 3.0°C Feb. 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	14.0	12.0	11.0	8.0	7.0	6.0	5.0	6.0	5.0	8.5	7.0
2	16.5	15.5	12.0	11.0	8.5	7.5	6.0	5.0	6.0	5.0	8.5	6.5
3	16.5	14.0	12.0	11.0	---	---	6.0	5.0	7.0	5.0	9.0	7.0
4	15.5	13.5	12.5	11.0	---	---	6.0	5.0	6.0	4.5	9.0	6.5
5	15.5	13.5	11.5	10.5	---	---	6.0	5.0	5.5	3.5	9.0	6.0
6	16.0	15.5	12.0	10.5	---	---	5.5	4.5	5.0	3.0	8.5	5.5
7	15.5	14.0	11.5	10.5	---	---	5.0	3.5	5.5	3.5	7.5	6.0
8	14.5	13.5	11.0	10.5	---	---	5.5	4.0	5.5	3.5	9.0	7.0
9	15.0	14.0	11.5	10.5	---	---	5.5	4.5	6.0	4.5	10.0	8.0
10	15.0	14.0	12.0	10.5	---	---	5.5	4.5	6.0	3.5	9.0	8.0
11	14.5	13.0	12.5	11.0	---	---	5.5	5.0	5.5	3.5	9.0	7.5
12	14.0	11.5	12.5	11.5	---	---	5.5	4.5	5.5	4.0	9.0	5.5
13	13.5	11.0	12.0	10.5	---	---	5.0	4.0	7.0	5.5	9.0	6.5
14	13.5	11.0	11.0	10.0	---	---	5.0	4.0	8.0	7.0	8.5	7.5
15	13.5	10.5	10.5	9.5	---	---	5.0	4.0	7.5	6.5	8.5	6.0
16	14.0	11.0	10.0	9.5	---	---	5.5	5.0	8.0	7.0	8.0	6.5
17	14.5	11.5	9.5	9.0	---	---	6.5	5.5	8.0	6.5	9.0	6.0
18	15.0	12.5	9.0	8.5	---	---	6.0	5.0	7.0	6.0	8.5	7.0
19	15.0	12.5	9.0	8.0	---	---	5.5	4.5	8.5	6.5	8.5	6.5
20	15.0	12.5	9.0	8.5	---	---	5.5	5.0	9.5	7.0	8.5	6.5
21	14.0	12.0	9.5	9.0	8.5	---	5.5	5.0	8.5	7.0	9.5	6.0
22	14.0	12.0	9.5	8.5	7.5	7.0	6.0	4.5	8.0	6.5	10.0	6.5
23	14.0	12.0	9.0	9.0	7.5	7.0	7.5	6.0	8.0	6.0	10.5	7.0
24	13.5	11.5	9.0	8.5	7.5	6.5	7.0	6.0	7.5	5.0	11.0	7.5
25	14.0	11.5	8.5	8.0	8.0	7.0	7.0	6.0	7.0	5.0	11.5	8.0
26	14.0	12.5	8.0	7.0	8.0	6.5	7.0	6.0	7.5	5.5	10.0	8.5
27	14.0	13.0	8.0	7.5	7.5	6.5	6.0	5.0	8.5	6.0	9.0	7.5
28	13.5	12.0	8.0	7.0	7.5	6.5	6.5	5.5	7.5	6.0	9.5	7.0
29	12.0	11.0	7.0	6.0	7.5	6.5	6.0	5.0	---	---	8.0	6.5
30	12.0	10.5	7.0	6.5	7.5	6.5	6.0	5.0	---	---	7.0	6.0
31	12.0	10.5	---	---	6.5	5.5	6.0	5.5	---	---	9.0	5.5
MONTH	17.5	10.5	12.5	6.0	8.5	5.5	7.5	3.5	9.5	3.0	11.5	5.5

ROGUE RIVER BASIN

14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

385

14370400 ROGUE RIVER NEAR MERLIN, OR

LOCATION.--Lat 42°29'50", long 123°29'15", in SE¼ sec.26, T.35 S., R.7 W., Josephine County, Hydrologic Unit 17100310, on left bank at Robertson Bridge, 3.4 mi (5.5 km) upstream from Jumpoff Joe Creek, 3.7 mi (6.0 km) southwest of Merlin, and at mile 86.8 (139.7 km).

DRAINAGE AREA.--3,271 mi² (8,472 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1974 to current year.

INSTRUMENTATION.--Temperature recorder since February 1974.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.5°C Aug. 3-5, 1977; minimum, 0.0°C Jan. 9, 1977, Dec. 30, 1978, to Jan. 1, 1979, Jan. 30, 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C July 12, 19, 20, 27-29, Aug. 25; minimum, 2.5°C Feb. 6.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14370400 ROGUE RIVER NEAR MERLIN, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

14371500 GRAVE CREEK AT PEASE BRIDGE, NEAR PLACER, OR

LOCATION.--Lat 42°38'30", long 123°12'40", in SE¼ sec.6, T.34 S., R.4 W., Jackson County, Hydrologic Unit 17100310, on right bank 0.5 mi (0.8 km) downstream from Pease Bridge, 0.5 mi (0.8 km) upstream from Boulder Creek, 5.4 mi (8.7 km) east of Placer, and at mile 27.1 (43.6 km).

DRAINAGE AREA.--22.1 mi² (57.2 km²) at measuring site 0.5 mi (0.8 km) upstream.

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1945 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,354.2 ft (717.56 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Aug. 4, 1955, at sites 0.5 mi (0.8 km) upstream at datum 29.9 ft (9.11 m) higher.

REMARKS.--Records excellent except those during gold dredging activity, Aug. 17 to Sept. 30, which are fair. No regulation. One small diversion above station. Prior to 1945, Columbia upper ditch diverted water about 2 mi (3 km) above station, bypassing station. Records herein are for measuring site.

AVERAGE DISCHARGE.--37 years (water years 1946-82), 59.1 ft³/s (1.674 m³/s), 36.32 in/yr (923 mm/yr), 42,820 acre-ft/yr (52.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft³/s (177 m³/s) Dec. 22, 1964, gage height, 11.20 ft (3.414 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of slope-area measurement at gage height 9.66 ft (2.944 m); minimum, 0.12 ft³/s (0.003 m³/s) July 15, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s (24.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 16	1930	1,120 31.7	5.10 1.554	Dec. 19	0530	1,820 51.5	6.30 1.920
Dec. 6	0530	*4,670 132	*9.59 2.923	Feb. 15	2200	1,170 33.1	5.19 1.582
Dec. 15	0300	1,140 32.3	5.14 1.567				

Minimum, 0.81 ft³/s (0.023 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	25	126	147	76	321	37	73	15	6.5	1.8	1.5
2	1.2	19	260	119	73	251	45	69	14	6.5	2.0	1.4
3	1.2	14	262	100	73	181	49	64	15	6.3	2.1	1.4
4	1.2	11	193	123	71	148	45	58	14	5.9	2.1	1.4
5	1.2	9.0	615	105	66	124	45	53	13	5.8	1.9	1.5
6	10	7.3	2420	87	60	107	44	53	12	5.3	1.7	1.4
7	16	6.1	461	75	56	94	46	53	12	4.9	1.5	1.5
8	8.8	5.3	234	67	52	85	60	49	11	4.8	1.8	1.5
9	18	4.7	183	64	49	83	88	42	9.5	4.6	2.0	1.5
10	40	4.3	192	65	45	89	152	36	9.4	4.3	2.0	1.5
11	29	8.1	155	68	42	96	460	34	8.3	4.0	1.5	1.6
12	18	43	143	68	39	85	356	33	8.1	3.7	1.0	1.8
13	12	98	172	65	107	75	469	32	8.2	3.5	.96	2.3
14	9.1	254	383	64	783	70	366	31	7.9	3.5	1.0	2.1
15	7.3	457	704	64	747	63	217	30	7.3	3.4	1.3	1.8
16	6.2	582	276	64	964	59	163	29	6.8	3.4	1.4	1.7
17	5.4	665	178	96	673	55	151	29	6.4	3.1	1.4	1.7
18	4.7	308	172	116	358	53	148	28	6.1	2.8	1.5	2.1
19	4.3	173	1310	98	374	49	141	26	6.0	2.4	1.4	3.6
20	3.7	144	827	84	361	45	149	25	6.6	2.0	1.4	2.7
21	3.5	218	519	73	331	43	172	24	5.9	1.5	1.3	2.2
22	3.3	296	287	65	219	40	193	23	5.5	1.4	1.2	2.0
23	3.0	385	195	95	163	40	195	22	4.9	1.3	1.2	1.8
24	3.0	305	160	153	129	40	174	20	4.8	1.2	1.1	1.9
25	2.9	201	192	181	106	42	145	20	6.3	1.7	1.1	1.9
26	2.9	147	256	250	97	44	120	19	6.5	2.0	1.1	2.3
27	3.2	112	243	183	99	41	104	19	7.7	1.8	1.1	3.7
28	36	89	182	138	96	43	95	18	7.6	1.8	1.1	3.3
29	52	74	308	109	---	39	84	17	9.2	1.6	1.3	4.6
30	42	63	286	93	---	38	76	16	7.4	1.7	1.5	3.3
31	31	---	191	83	---	40	---	15	---	1.8	1.5	---
TOTAL	381.3	4727.8	12085	3162	6309	2583	4589	1060	262.4	104.5	45.26	63.0
MEAN	12.3	158	390	102	225	83.3	153	34.2	8.75	3.37	1.46	2.10
MAX	52	665	2420	250	964	321	469	73	15	6.5	2.1	4.6
MIN	1.2	4.3	126	64	39	38	37	15	4.8	1.2	.96	1.4
CFSM	.56	7.15	17.6	4.62	10.2	3.77	6.92	1.55	.40	.15	.07	.10
IN.	.64	7.96	20.34	5.32	10.62	4.35	7.72	1.78	.44	.18	.08	.11
AC-FT	756	9380	23970	6270	12510	5120	9100	2100	520	207	90	125
CAL YR 1981 TOTAL	23447.46	MEAN 64.2	MAX 2420	MIN .52	CFSM 2.91	IN 39.47	AC-FT 46510					
WTR YR 1982 TOTAL	35372.26	MEAN 96.9	MAX 2420	MIN .96	CFSM 4.39	IN 59.54	AC-FT 70160					

ROGUE RIVER BASIN

14372250 ROGUE RIVER AT MARIAL, OR

LOCATION.--Lat 42°42'50", long 123°53'10", in NW¼ sec.9, T.33 S., R.10 W., Curry County, Hydrologic Unit 17100310, on right bank 0.2 mi (0.3 km) downstream from Mule Creek and at mile 48.2 (77.6 km).

DRAINAGE AREA.--3,812 mi² (9,873 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1974 to current year.

INSTRUMENTATION.--Temperature recorder since June 1974.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 27.5°C Aug. 5, 1977; minimum, 1.0°C Jan. 1, 2, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.5°C June 18; minimum, 3.5°C Feb. 6-8.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

389

14372250 ROGUE RIVER AT MARIAL, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

ROGUE RIVER BASIN

14372300 ROGUE RIVER NEAR AGNESS, OR
(National stream-quality accounting network station)

LOCATION.--Lat 42°34'50", long 124°03'30", in NE¼NW¼ sec.6, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100310, on left bank 0.8 mi (1.3 km) upstream from Shasta Costa Creek, 1.5 mi (2.4 km) north of Agness, 2.6 mi (4.2 km) upstream from Illinois River, and at mile 29.7 (47.8 km).

DRAINAGE AREA.--3,939 mi² (10,202 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 113.81 ft (34.689 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Public Roads).

REMARKS.--Water-discharge records fair. Flow regulated since February 1977 by Lost Creek Lake (see station 14335040), since December 1980 by Applegate Lake (see station 14361900), slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation and mining.

AVERAGE DISCHARGE.--22 years, 6,149 ft³/s (174.1 m³/s), 4,455,000 acre-ft/yr (5.49 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290,000 ft³/s (8,210 m³/s) Dec. 23, 1964, from slope-area measurement; maximum gage height, 68.03 ft (20.736 m) Dec. 23, 1964, from floodmark (backwater from Illinois River); minimum discharge, 608 ft³/s (17.2 m³/s) July 9, 10, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 119,000 ft³/s (3,370 m³/s) Dec. 20, gage height, 26.37 ft (8.038 m); minimum, 1,430 ft³/s (40.5 m³/s) Oct. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	2700	8790	24600	8490	20400	12000	8860	4760	3530	2610	2350
2	1540	2380	10600	21800	6590	28400	12000	8890	4660	3330	2640	2290
3	1680	2160	10900	21200	6500	21600	16500	8900	4500	3240	2670	2260
4	1590	2000	9260	27600	6000	18100	16900	8220	4550	3250	2720	2290
5	1550	1920	12700	25600	6000	15600	14000	7580	4670	3190	2660	2330
6	2010	1880	61600	17900	5500	13700	14200	7260	4590	3000	2550	2380
7	2780	1830	45100	13600	5100	12400	12900	7320	4180	2800	2540	2400
8	2420	1800	23500	10800	4900	11600	11400	7400	3810	2720	2580	2340
9	2380	1750	17200	9520	4710	10800	10600	7220	3770	2730	2560	2320
10	2510	1750	18900	9260	4520	9680	11400	6890	3680	2680	2550	1760
11	2350	1910	16800	9150	4330	9280	20800	6550	3540	2630	2560	1850
12	2150	3250	14000	9090	4140	9280	26500	6140	3780	2620	2580	1940
13	1980	4210	16600	8790	7020	9270	32900	5990	4350	2560	2570	1950
14	1870	7360	22800	8270	23200	9000	31300	5950	4460	2650	2570	1980
15	1820	9210	38900	7880	36100	8850	26600	5670	4380	2720	2570	1930
16	1750	15000	31600	7540	34700	8790	19700	5050	4200	2690	2610	1890
17	1690	32100	23100	8140	37000	8620	15900	4910	3800	2730	2600	2070
18	1700	22900	20800	9320	28400	8060	13900	4980	3760	2800	2590	2210
19	1680	13900	56400	9900	26700	7450	12700	4930	3760	2750	2580	2530
20	2160	10300	101000	10500	31300	7050	11900	4740	4030	2710	2570	2570
21	1610	10400	55000	9040	34700	6980	11600	4560	4530	2650	2540	2570
22	1550	16300	38000	9040	36100	6690	11400	4670	4380	2630	2530	2510
23	1540	20400	29900	9610	25200	6320	11900	4780	4130	2670	2410	2560
24	1530	22600	25700	11100	22400	6030	12100	4670	3770	2680	2210	2580
25	1510	18900	23700	14200	18800	5650	11900	4870	3750	2680	1920	2610
26	1510	13100	25000	19600	15900	5480	11000	6050	3620	2650	1980	2700
27	1550	11300	30700	22800	14900	5410	10400	6690	3530	2640	1950	2770
28	3880	8650	25600	15700	14900	6000	9780	6110	3990	2580	2020	2840
29	5060	7110	28200	12800	---	8000	9460	5660	4050	2550	2250	2920
30	4830	8520	39000	9610	---	8000	8950	5090	3950	2520	2330	2850
31	3380	---	25400	9610	---	13000	---	4790	---	2560	2370	---
TOTAL	67120	277590	906750	413570	474100	325490	452590	191390	122930	86140	76390	70550
MEAN	2165	9253	29250	13340	16930	10500	15090	6174	4098	2779	2464	2352
MAX	5060	32100	101000	27600	37000	28400	32900	8900	4760	3530	2720	2920
MIN	1510	1750	8790	7540	4140	5410	8950	4560	3530	2520	1920	1760
AC-FT	133100	550600	1799000	820300	940400	645600	897700	379600	243800	170900	151500	139900
CAL YR 1981	TOTAL	2017030	MEAN	5526	MAX	101000	MIN	1340	AC-FT	4001000		
WTR YR 1982	TOTAL	3464610	MEAN	9492	MAX	101000	MIN	1510	AC-FT	6872000		

ROGUE RIVER BASIN

391

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued
(National stream quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1960 to current year.

INSTRUMENTATION.--Temperature recorder since October 1960.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.5°C on several days in 1962, Aug. 3, 6, 9-11, 1977; minimum, 1.0°C Jan. 22-25, 1962, Dec. 9-16, 1972, Jan. 9, 10, 1977, Jan. 1-3, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 23.0°C July 20, 21, 28-31; minimum, 4.0°C Feb. 6-9, 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 04...	0940	2010	82	6.8	10.0	--	K1	K4	50	12	4.9
JAN 12...	1000	9060	118	7.6	5.0	13.4	K32	K140	47	11	4.8
MAR 03...	1130	21400	87	7.5	7.5	12.5	81	860	39	9.5	3.6
MAY 04...	0830	8000	91	7.6	12.0	10.9	K12	100	39	9.5	3.7
JUL 08...	0925	2490	97	7.5	18.0	9.0	K56	1200	39	9.6	3.6
SEP 15...	1700	1800	--	8.5	18.0	10.6	160	69	43	11	3.7

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
NOV 04...	5.9	1.0	55	<5.0	5.1	.1	.110	.22	.41	.12
JAN 12...	4.3	.8	51	<5.0	2.8	.1	.140	.27	.65	.09
MAR 03...	3.3	.6	46	<5.0	1.7	.1	.060	<.10	.25	.06
MAY 04...	3.7	.8	43	6.0	2.0	.1	.070	<.10	.37	.18
JUL 08...	4.5	1.0	44	7.0	2.2	<.1	<.060	.11	.60	.12
SEP 15...	5.3	1.2	49	<5.0	2.5	<.1	<.060	<.10	.90	.12

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 04...	.040	.060	19	84	--	456	1.7	6	33	76
JAN 12...	<.010	<.010	21	81	--	1980	10	24	587	72
MAR 03...	<.010	.050	17	65	--	3760	30	105	6070	62
MAY 04...	<.010	.030	22	72	74	1560	2.9	9	194	69
JUL 08...	.110	.600	22	72	76	484	28	6	40	83
SEP 15...	.030	.040	23	70	--	340	.50	4	19	85

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)		ARSENIC TOTAL (UG/L AS AS)		BARIUM, DIS- SOLVED (UG/L AS BA)		BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)		CADMIUM DIS- SOLVED (UG/L AS CD)		CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)		CHRO- MIUM, DIS- SOLVED (UG/L AS CR)		CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)		COBALT, DIS- SOLVED (UG/L AS CO)		COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	
NOV 04...	1		1		<100		<100		1		1		<10		<10		<1		2	
MAR 03...	1		1		24		<100		1		<1		<10		10		<3		2	
MAY 04...	<1		1		18		<100		<1		1		<10		<10		<1		<1	
SEP 15...	1		1		19		<100		<1		<1		<10		<10		<1		<1	

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)
NOV 04...	5	9	90	180	4	3	<10	10	.1
MAR 03...	2	22	54	3900	<1	5	6	80	<.1
MAY 04...	2	7	28	330	4	2	<2	10	.1
SEP 15...	2	2	23	140	<1	<1	2	10	<.1

[illegible][illegible]

ROGUE RIVER BASIN

393

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ETHION, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
MAY 04...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

DATE	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)
MAY 04...	<.10	<.10	<.01	<.10	<.01	<.01	<.01	<.1	<.01

DATE	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
MAY 04...	<.1	<1.0	<.1	.1	<.1	<.1	<.1	<.1	<.1

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	PER- THANE IN BOTTOM MATERIL (UG/KG)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
MAY 04...	<.1	<.1	<.1	<.1	<1.00	<.1	<1.0	<10

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

ROGUE RIVER BASIN

14372300 ROGUE RIVER NEAR AGNESS, OR--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

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

ROGUE RIVER BASIN

395

14372500 EAST FORK ILLINOIS RIVER NEAR TAKILMA, OR

LOCATION.--Lat 42°00'10", long 123°37'30", in SE¼NE¼ sec.15, T.41 S., R.8 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on right bank 0.3 mi (0.5 km) downstream from Dunn Creek (California-Oregon State line), 3.4 mi (5.5 km) south of Takilma, and at mile 71.2 (114.6 km).

DRAINAGE AREA.--42.3 mi² (109.6 km²).

PERIOD OF RECORD.--April to September 1926, April 1927 to April 1932, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1318. Records prior to 1942 water year not equivalent owing to large diversions.

REVISED RECORDS.--WSP 1184: 1948. WSP 1288: 1951(P). WSP 1398: 1946, 1947(M), 1949. WSP 1738: Drainage area (former site).

GAGE.--Water-stage recorder. Altitude of gage is 1,780 ft (543 m), from topographic map. Prior to Oct. 31, 1946, nonrecording gage at sites 0.6 mi (1.0 km) downstream at different datums. Oct. 31, 1946, to May 13, 1949, nonrecording gage and May 14, 1949, to Aug. 23, 1965, water-stage recorder at site 0.6 mi (1.0 km) downstream at datum 1,746.6 ft (532.36 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--41 years (water years 1942-82), 178 ft³/s (5.041 m³/s), 57.15 in/yr (1,452 mm/yr), 129,000 acre-ft/yr (159 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s (445 m³/s) Dec. 22, 1964, gage height, 14.90 ft (4.542 m), present site and datum, from floodmark, from rating curve extended above 4,400 ft³/s (125 m³/s) on basis of slope-area measurement of peak flow; minimum, 4.6 ft³/s (0.13 m³/s) Nov. 3, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 15	1300	3,360 95.2	7.86 2.396	Dec. 19	0830	*4,240 120	*8.64 2.633
Dec. 6	1030	3,010 85.2	7.53 2.295	Feb. 14	0430	4,000 113	8.44 2.573

Minimum, 9.2 ft³/s (0.26 m³/s) Sept. 9, 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	170	219	472	149	1070	156	401	134	49	16	11
2	13	147	373	379	138	678	188	377	125	46	16	11
3	13	115	396	341	132	519	230	365	114	44	16	10
4	12	90	313	414	126	412	190	346	114	41	16	10
5	11	74	549	358	118	315	161	333	103	39	15	10
6	55	64	1860	286	111	254	139	366	94	37	15	9.8
7	108	56	972	236	106	221	127	395	92	35	14	9.7
8	49	49	547	209	99	206	122	349	93	34	14	9.7
9	85	44	499	195	94	214	134	283	99	32	14	9.6
10	167	42	601	202	90	241	259	246	110	31	14	11
11	108	60	413	214	85	377	1010	232	113	29	15	10
12	67	278	395	201	81	342	788	238	101	28	14	10
13	48	473	841	184	666	261	1210	260	98	27	13	10
14	37	692	1300	171	2660	224	1030	273	96	27	13	9.9
15	31	1580	1610	163	1660	199	548	255	99	25	13	9.5
16	27	1900	719	158	1880	183	400	243	100	25	13	9.4
17	23	1660	456	205	1040	167	346	252	94	24	12	9.6
18	21	712	736	248	680	157	328	236	89	23	12	12
19	20	433	3320	229	1320	145	320	220	88	22	12	15
20	19	399	1900	202	934	134	353	234	87	21	11	12
21	18	913	1030	174	1030	125	442	271	74	21	11	11
22	17	917	624	158	673	118	547	283	65	20	11	11
23	16	892	453	227	456	113	597	266	59	20	11	10
24	16	713	367	258	334	112	560	292	58	19	10	10
25	16	473	379	269	267	114	509	321	57	18	10	10
26	15	388	1030	438	240	115	459	274	64	18	10	12
27	27	308	826	348	239	115	421	205	64	17	10	18
28	319	242	538	269	264	119	436	167	57	17	10	13
29	291	203	1010	219	---	112	419	151	60	16	14	12
30	216	177	855	188	---	124	399	147	54	16	12	11
31	172	---	580	166	---	181	---	148	---	16	11	---
TOTAL	2048	14264	25711	7781	15672	7667	12828	8429	2655	837	398	327.2
MEAN	66.1	475	829	251	560	247	428	272	88.5	27.0	12.8	10.9
MAX	319	1900	3320	472	2660	1070	1210	401	134	49	16	18
MIN	11	42	219	158	81	112	122	147	54	16	10	9.4
CFSM	1.56	11.2	19.6	5.93	13.2	5.84	10.1	6.43	2.09	.64	.30	.26
IN.	1.80	12.54	22.61	6.84	13.78	6.74	11.28	7.41	2.33	.74	.35	.29
AC-FT	4060	28290	51000	15430	31090	15210	25440	16720	5270	1660	789	649
CAL YR 1981 TOTAL	67203.9			MEAN 184	MAX 3320	MIN 7.6	CFSM 4.35	IN 59.10	AC-FT 133300			
WTR YR 1982 TOTAL	98617.2			MEAN 270	MAX 3320	MIN 9.4	CFSM 6.38	IN 86.73	AC-FT 195600			

14375100 SUCKER CREEK BELOW LITTLE GRAYBACK CREEK, NEAR HOLLAND, OR

LOCATION.--Lat 42°09'35", long 123°28'40", in NE¼SW¼ sec.24, T.39 S., R.7 W., Josephine County, Hydrologic Unit 17100311, on right bank 500 ft (152 m) downstream from Little Grayback Creek, 2.0 mi (3.2 km) downstream from Grayback Creek, 3.7 mi (6.0 km) northeast of Holland, and at mile 9.3 (15.0 km).

DRAINAGE AREA.--83.9 mi² (217.3 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,713.92 ft (522.403 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Records good. Grayback Canal and 3 small diversions from Grayback and Cave Creeks divert water for domestic use and irrigation above station. Return flow from these diversions enters creek above station.

AVERAGE DISCHARGE.--17 years, 240 ft³/s (6.800 m³/s), 38.85 in/yr (987 mm/yr), 173,900 acre-ft/yr (214 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,550 ft³/s (242 m³/s) Jan. 15, 1974, gage height, 8.20 ft (2.499 m); minimum, 12 ft³/s (0.34 m³/s) Oct. 20, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1940, 10.8 ft (3.292 m) on Dec. 22, 1964, from floodmark, discharge, 19,300 ft³/s (547 m³/s), from estimate based on slope-area measurement of peak flow at site 0.7 mi (1.1 km) upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 16	2030	2,600 73.6	5.06 1.542	Feb. 14	0500	3,300 93.5	5.56 1.695
Dec. 6	1130	3,160 89.5	5.47 1.667	Feb. 21	0930	2,280 64.6	4.81 1.466
Dec. 15	0600	2,210 62.6	4.76 1.451	Mar. 1	0800	1,800 51.0	4.41 1.344
Dec. 19	1630	*4,960 140	*6.57 2.003	Apr. 13	2330	1,660 47.0	4.28 1.305
Dec. 26	1630	1,520 43.0	4.14 1.262				

Minimum, 22 ft³/s (0.62 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	116	308	885	313	1430	305	713	336	166	58	35
2	33	102	416	756	294	1160	341	685	319	159	60	33
3	31	89	456	676	279	999	404	668	297	149	60	33
4	26	80	390	698	269	842	355	637	306	138	59	33
5	25	72	642	650	254	713	325	613	284	132	56	32
6	74	66	2000	558	240	632	299	642	265	126	54	31
7	121	60	1310	488	226	570	283	674	257	122	52	30
8	62	57	904	441	212	521	280	633	252	118	50	30
9	72	54	802	420	206	495	296	561	255	113	49	32
10	111	53	834	413	196	498	397	515	268	109	50	37
11	82	67	674	413	187	575	1110	487	276	104	52	32
12	55	193	629	400	179	543	1130	482	262	100	49	32
13	44	289	834	383	645	500	1340	495	258	97	48	34
14	40	428	1260	368	2680	477	1470	501	252	95	47	31
15	37	788	1760	355	2230	443	990	489	257	92	47	29
16	35	1450	1140	344	2560	424	753	483	259	90	45	29
17	34	1560	849	379	1770	400	672	511	250	87	44	30
18	32	822	1010	412	1280	384	639	476	262	83	43	39
19	31	529	3940	394	1780	362	620	450	300	80	41	47
20	29	419	3420	376	1640	341	653	473	256	77	39	38
21	27	640	2230	352	2030	327	749	526	219	75	38	35
22	28	757	1510	323	1540	311	887	537	196	74	37	33
23	28	881	1130	348	1140	302	981	526	180	72	36	30
24	28	801	930	392	896	294	960	568	171	71	35	30
25	28	611	887	426	757	286	900	634	164	68	34	31
26	29	509	1150	613	681	281	840	569	199	65	34	37
27	41	413	1110	565	620	274	779	466	215	64	35	44
28	228	336	900	480	597	283	769	412	203	62	35	36
29	205	289	1190	414	---	268	738	385	246	61	42	38
30	150	258	1260	375	---	276	722	369	189	61	39	34
31	122	---	1050	340	---	310	---	357	---	59	37	---
TOTAL	1912	12789	36925	14437	25701	15521	20987	16537	7453	2969	1405	1015
MEAN	61.7	426	1191	466	918	501	700	533	248	95.8	45.3	33.8
MAX	228	1560	3940	885	2680	1430	1470	713	336	166	60	47
MIN	24	53	308	323	179	268	280	357	164	59	34	29
CFSM	.74	5.08	14.2	5.55	10.9	5.97	8.34	6.35	2.96	1.14	.54	.40
IN.	.85	5.67	16.37	6.40	11.40	6.88	9.31	7.33	3.30	1.32	.62	.45
AC-FT	3790	25370	73240	28640	50980	30790	41630	32800	14780	5890	2790	2010
CAL YR 1981	TOTAL	81214	MEAN 223	MAX 3940	MIN 16	CFSM 2.66	IN 36.01	AC-FT 161100				
WTR YR 1982	TOTAL	157651	MEAN 432	MAX 3940	MIN 24	CFSM 5.15	IN 69.90	AC-FT 312700				

14375500 WEST FORK ILLINOIS RIVER BELOW ROCK CREEK, NEAR O'BRIEN, OR

LOCATION.--Lat 42°02'20", long 123°44'50", in SW¼SE¼ sec.34, T.40 S., R.9 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on left bank 0.2 mi (0.3 km) downstream from Rock Creek, 3.0 mi (4.8 km) southwest of O'Brien, and at mile 12.8 (20.6 km).

DRAINAGE AREA.--42.4 mi² (109.8 km²).

PERIOD OF RECORD.--September 1954 to current year.

REVISED RECORDS.--WDR OR-80-2: 1979.

GAGE.--Water-stage recorder. Datum of gage is 1,516.14 ft (462.119 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage height record, which are fair. Three small diversions from Elk Creek for irrigation above station.

AVERAGE DISCHARGE.--28 years, 216 ft³/s (6.117 m³/s), 69.18 in/yr (1,757 mm/yr), 156,500 acre-ft/yr (193 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft³/s (456 m³/s) Dec. 22, 1964, gage height, 16.05 ft (4.892 m), from rating curve extended above 6,200 ft³/s (176 m³/s), on basis of slope-area measurement at gage height 14.79 ft (4.508 m); minimum, 1.5 ft³/s (0.042 m³/s) Sept. 2-4, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 16	1830	3,980 113	9.72 2.963	Dec. 29	1030	3,110 88.1	8.93 2.722
Dec. 6	0930	4,180 118	9.89 3.014	Feb. 14	0400	5,110 145	10.60 3.231
Dec. 15	0230	3,150 89.2	8.97 2.734	Apr. 13	2200	3,360 95.2	9.17 2.795
Dec. 19	0800	*5,190 147	*10.66 3.249				

Minimum, 4.8 ft³/s (0.14 m³/s) Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	146	384	783	237	1220	385	294	40	26	10	6.3
2	13	104	792	562	216	1220	644	265	39	25	10	6.1
3	13	80	597	549	203	1190	880	244	38	23	10	6.0
4	12	66	398	1060	193	908	550	224	43	23	9.0	6.0
5	12	57	1350	759	177	595	422	206	42	22	9.0	6.0
6	68	51	3160	500	162	446	361	196	39	21	8.7	5.8
7	170	46	1460	383	150	372	322	180	37	20	7.8	5.5
8	127	43	796	316	140	331	301	154	35	19	6.9	5.0
9	310	40	766	272	131	344	316	131	34	18	6.1	4.9
10	302	41	1090	246	125	342	577	115	33	17	6.7	5.4
11	141	84	724	229	117	462	1990	104	32	16	7.1	5.8
12	83	587	903	212	110	399	1840	96	34	15	7.3	5.8
13	59	800	1880	196	1420	316	3030	91	34	15	7.3	6.1
14	46	832	2070	183	3650	276	2470	85	32	15	7.6	6.0
15	39	1350	2170	174	2230	246	1170	80	30	15	7.4	5.6
16	34	2370	999	168	2430	231	735	75	28	14	6.2	5.4
17	31	2520	627	319	1400	217	592	75	26	14	6.2	5.5
18	28	1160	1390	512	863	200	532	70	25	13	6.2	6.1
19	26	604	3970	411	1460	180	492	66	24	12	6.3	9.0
20	25	560	2470	320	961	170	548	62	26	12	6.1	8.4
21	24	1050	1610	264	1010	160	623	60	27	11	5.9	8.0
22	22	1190	924	248	745	140	664	57	24	11	5.9	7.3
23	22	1470	628	670	522	130	657	54	22	10	5.7	6.8
24	21	1100	481	730	406	120	579	51	22	10	5.6	6.2
25	21	713	461	549	338	110	500	50	28	10	5.4	6.8
26	20	661	1330	1060	311	110	433	48	30	9.0	5.5	9.4
27	28	514	1050	766	338	120	378	47	30	8.6	5.6	14
28	565	398	733	492	329	150	372	46	33	8.6	5.9	9.6
29	698	320	2180	371	---	160	343	44	40	8.6	6.7	8.6
30	463	265	1330	308	---	200	313	42	32	8.6	7.0	8.1
31	229	---	880	267	---	350	---	41	---	9.0	6.7	---
TOTAL	3665	19222	39603	13879	20374	11415	23019	3353	959	459.4	217.8	205.5
MEAN	118	641	1278	448	728	368	767	108	32.0	14.8	7.03	6.85
MAX	698	2520	3970	1060	3650	1220	3030	294	43	26	10	14
MIN	12	40	384	168	110	110	301	41	22	8.6	5.4	4.9
CFSM	2.78	15.1	30.1	10.6	17.2	8.68	18.1	2.55	.76	.35	.17	.16
IN.	3.22	16.86	34.75	12.18	17.87	10.01	20.20	2.94	.84	.40	.19	.18
AC-FT	7270	38130	78550	27530	40410	22640	45660	6650	1900	911	432	408

CAL YR 1981 TOTAL 90003.75 MEAN 247 MAX 3970 MIN 3.6 CFSM 5.83 IN 78.96 AC-FT 178500
WTR YR 1982 TOTAL 136371.7 MEAN 374 MAX 3970 MIN 4.9 CFSM 8.82 IN 119.64 AC-FT 270500

NOTE.--No gage-height record June 5 to Aug. 5.

ROGUE RIVER BASIN

14377100 ILLINOIS RIVER NEAR KERBY, OR

LOCATION.--Lat 42°13'55", long 123°39'45", in SE¼SE¼ sec.29, T.38 S., R.8 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on right bank 1.6 mi (2.6 km) upstream from Josephine Creek, 2.5 mi (4.0 km) northwest of Kerby, and at mile 50.3 (80.9 km).

DRAINAGE AREA.--380 mi² (984 km²).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,198.8 ft (365.175 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 28, 1965, water-stage recorder, and Jan. 28 to Sept. 30, 1965, nonrecording gage 700 ft (213 m) downstream at datum 2.99 ft (0.911 m) lower.

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

AVERAGE DISCHARGE.--21 years, 1,312 ft³/s (37.16 m³/s), 46.89 in/yr (1,191 mm/yr), 950,500 acre-ft/yr (1.17 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,200 ft³/s (2,610 m³/s) Dec. 22, 1964, gage height, 45.28 ft (13.801 m), from floodmark, site and datum then in use, from rating curve extended above 30,000 ft³/s (850 m³/s) on basis of slope-area measurement of peak flow; minimum, 14 ft³/s (0.40 m³/s) Aug. 11, 13, 14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft³/s (312 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 16	2300	21,900 620	23.12 7.047	Dec. 29	1400	13,100 371	18.09 5.514
Dec. 6	1230	21,900 620	23.15 7.056	Feb. 14	0730	22,700 643	23.80 7.254
Dec. 15	0630	16,600 470	20.12 6.133	Apr. 13	2000	15,000 425	19.33 5.892
Dec. 19	1200	*26,200 742	*25.59 7.800				

Minimum, 35 ft³/s (0.99 m³/s), from range in stage, occurred between Aug. 23 and Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	999	1980	4910	1630	7280	2700	2610	652	324	69	48
2	51	825	3420	3940	1480	7400	3310	2450	617	298	66	48
3	51	670	3400	4300	1400	6340	5560	2360	586	279	66	46
4	51	537	2540	6580	1340	4980	4130	2230	610	264	66	46
5	52	457	5780	4740	1240	3720	3400	2090	605	252	63	45
6	95	404	17300	3350	1150	3020	3130	2140	542	234	62	44
7	873	363	9050	2660	1080	2610	2730	2230	505	220	60	44
8	902	334	5450	2290	1010	2320	2420	2080	479	211	54	44
9	992	314	4690	2040	952	2320	2310	1770	473	202	53	45
10	1650	302	6520	1890	897	2370	3080	1560	475	195	53	46
11	876	315	4670	1830	847	2900	8720	1440	494	171	53	48
12	532	1940	4590	1730	806	2740	8990	1370	485	158	51	48
13	387	3570	8630	1620	4980	2270	12700	1370	465	149	51	48
14	316	5030	11200	1520	18600	2050	12600	1390	457	139	52	46
15	275	7680	13100	1450	12100	1900	7090	1310	437	138	51	44
16	248	12100	6990	1380	14200	1790	4700	1250	433	131	50	44
17	223	14800	4730	1750	8790	1660	3810	1280	411	127	50	46
18	206	7270	7470	2780	5790	1570	3430	1230	396	123	49	52
19	192	4370	22600	2500	8360	1480	3160	1120	444	117	49	56
20	178	4040	16000	2140	6550	1380	3220	1090	431	112	48	60
21	166	5760	10300	1860	7310	1300	3610	1150	380	105	47	60
22	155	6940	6400	1670	5640	1220	4000	1200	343	96	44	56
23	146	7990	4690	2680	4160	1150	4290	1150	320	93	44	54
24	140	7010	3660	3330	3280	1090	4050	1150	287	92	42	54
25	134	4770	3340	2850	2730	1050	3680	1270	287	89	42	57
26	124	4530	5540	5150	2460	1010	3340	1240	291	87	42	60
27	145	3690	5690	4260	2550	1020	2990	994	358	84	42	64
28	1930	2800	4180	3070	2410	1310	2920	859	336	77	46	80
29	3110	2270	9300	2420	---	1310	2830	764	388	71	54	90
30	2580	1920	7650	2050	---	1690	2650	710	359	72	54	91
31	1400	---	5460	1820	---	3250	---	683	---	73	50	---
TOTAL	18231	114000	226320	86560	123742	77500	135550	45540	13346	4783	1623	1614
MEAN	588	3800	7301	2792	4419	2500	4518	1469	445	154	52.4	53.8
MAX	3110	14800	22600	6580	18600	7400	12700	2610	652	324	69	91
MIN	51	302	1980	1380	806	1010	2310	683	287	71	42	44
CFSM	1.55	10.0	19.2	7.35	11.6	6.58	11.9	3.87	1.17	.41	.14	.14
IN.	1.78	11.16	22.16	8.47	12.11	7.59	13.27	4.46	1.31	.47	.16	.16
AC-FT	36160	226100	448900	171700	245400	153700	268900	90330	26470	9490	3220	3200

CAL YR 1981	TOTAL	530893	MEAN	1455	MAX	22600	MIN	21	CFSM	3.83	IN	51.97	AC-FT	1053000
WTR YR 1982	TOTAL	848809	MEAN	2326	MAX	22600	MIN	42	CFSM	6.12	IN	83.09	AC-FT	1684000

NOTE.--No gage-height record Aug. 24 to Sept. 23.

CHETCO RIVER BASIN

399

14400000 CHETCO RIVER NEAR BROOKINGS, OR

LOCATION.--Lat 42°07'25", long 124°11'10", in SE¼ sec.12, T.40 S., R.13 W., Curry County, Hydrologic Unit 17100312, on right bank 16 ft (5 m) upstream from bridge, 0.5 mi (0.8 km) upstream from Elk Creek, 6.8 mi (10.9 km) northeast of Brookings, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--271 mi² (702 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 50 ft (15 m), from topographic map.

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

AVERAGE DISCHARGE.--13 years, 2,320 ft³/s (65.70 m³/s), 116.26 in/yr (2,953 mm/yr), 1,681,000 acre-ft/yr (2.07 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,800 ft³/s (1,860 m³/s) Jan. 16, 1971, gage height, 27.45 ft (8.367 m); minimum, 45 ft³/s (1.27 m³/s) Oct. 21-23, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 32.25 ft (9.830 m), from high-water mark on bridge pier, discharge, 85,400 ft³/s (2,420 m³/s), from rating curve extended above 45,000 ft³/s (1,270 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (566 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 17	0130	30,000 850	16.87 5.142	Dec. 29	1830	21,900 620	14.02 4.273
Dec. 6	0700	*51,800 1,470	*23.06 7.029	Feb. 14	0700	33,000 935	17.80 5.425
Dec. 15	0400	39,700 1,120	19.72 6.011	Apr. 13	1000	28,800 816	16.50 5.029
Dec. 19	0930	39,200 1,110	19.57 5.965				

Minimum, 61 ft³/s (1.73 m³/s) Sept. 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	246	3220	3560	7230	2910	10100	4180	2560	482	238	109	77
2	201	2510	6480	6090	2600	11800	5910	2400	449	232	105	73
3	178	2030	6950	6580	2300	9500	7190	2270	429	232	104	72
4	156	1710	5130	12300	2100	7000	5840	2140	531	220	106	71
5	198	1440	13600	8650	1900	5000	5450	1990	493	216	105	71
6	5820	1280	40700	5820	1700	3800	5470	2050	423	205	102	71
7	6820	1130	19000	4350	1500	3400	4540	2160	391	196	98	68
8	4690	1030	10200	3420	1350	3100	3740	1910	370	191	97	66
9	7210	931	8490	2910	1170	3000	3270	1610	352	185	94	66
10	8920	984	9630	2750	1060	3100	4310	1410	339	180	93	67
11	4520	1880	7200	2760	967	4000	18900	1320	329	175	96	69
12	2920	6010	7200	2600	889	3800	20700	1290	326	170	95	69
13	2110	6120	12000	2340	9020	3000	25500	1310	313	164	91	67
14	1620	11100	23900	2180	29400	2600	19200	1320	297	162	88	65
15	1320	12600	28600	2070	22500	2400	11800	1220	281	156	88	63
16	1110	14500	12900	1990	25700	2200	8000	1120	271	149	86	62
17	953	24000	7970	2830	22200	2000	5880	1080	257	146	84	62
18	832	13300	10800	4350	13300	1800	4790	1020	249	142	83	68
19	735	8380	30900	3800	13800	1700	4030	923	242	138	81	87
20	662	8380	21200	3430	13000	1600	3750	882	237	135	81	93
21	591	13500	16900	3090	13200	1500	4130	911	243	132	80	81
22	540	14500	10500	3030	8950	1400	4560	923	227	127	80	74
23	498	14600	7570	7160	6370	1300	4740	866	213	122	77	70
24	464	9930	6140	8410	4790	1200	4340	847	207	118	74	69
25	437	6930	5480	6910	3780	1150	3890	852	206	117	72	70
26	421	6970	9010	10600	3450	1100	3420	802	385	117	73	92
27	833	6490	8510	8970	4090	1100	3020	668	408	115	73	144
28	5720	5030	7270	6730	3950	1600	2820	587	309	113	73	114
29	7100	3980	15700	5380	---	1700	2740	545	290	111	75	95
30	6580	3380	13700	4350	---	2200	2570	518	263	110	79	90
31	4320	---	8740	3560	---	3000	---	497	---	108	79	---
TOTAL	78725	207845	395930	156640	217946	102150	208680	40001	9812	4922	2721	2306
MEAN	2540	6928	12770	5053	7784	3295	6956	1290	327	159	87.8	76.9
MAX	8920	24000	40700	12300	29400	11800	25500	2560	531	238	109	144
MIN	156	931	3560	1990	889	1100	2570	497	206	108	72	62
CFSM	9.37	25.6	47.1	18.6	28.7	12.2	25.7	4.76	1.21	.59	.32	.28
IN.	10.81	28.53	54.35	21.50	29.92	14.02	28.65	5.49	1.35	.68	.37	.32
AC-FT	156200	412300	785300	310700	432300	202600	413900	79340	19460	9760	5400	4570
CAL YR 1981	TOTAL	1021269	MEAN	2798	MAX	40700	MIN	77	CFSM	10.3	IN	140.19
WTR YR 1982	TOTAL	1427678	MEAN	3911	MAX	40700	MIN	62	CFSM	14.4	IN	195.98
									AC-FT	2026000		
									AC-FT	2832000		

COLUMBIA RIVER BASIN

Discharge at ungaged sites

Monthly records for the following sites have been computed by routing methods described in USGS Circular 550. Circular 550 contains monthly records for these sites for water years 1928-65, including monthly flows adjusted for major upstream storage. Figures given here represent unadjusted flows, and are rated fair. Adjusted records are available from the district office, Portland, Oregon.

14144700 COLUMBIA RIVER AT VANCOUVER, WA.--Lat 45°37'15", long 122°40'20", in NE¼NW¼ sec.34, T.2 N., R.1 E., Clark County, Hydrologic Unit 17080001, 5.0 mi (8.0 km) upstream from Willamette River, and at mile 106.5 (171.4 km). Drainage area, 241,000 mi² (624,200 km²), approximately. Records available, monthly discharge October 1927 to current year. Daily discharge for October 1963 to September 1969, published in annual data reports for Oregon, 1965-67, 1969.

14222870 COLUMBIA RIVER AT SAINT HELENS, OR.--Lat 45°51'58", long 122°47'00", Columbia County, Hydrologic Unit 17080003, center of channel at intersection of Township (4/5N) line and Oregon-Washington boundary, 0.6 mi (1.0 km) east of Saint Helens and at mile 86.0 (138.3 km). Drainage area, 253,900 mi² (657,600 km²), approximately. Records available, monthly discharge October 1927 to current year.

14245300 COLUMBIA RIVER AT LONGVIEW, WA.--Lat 46°06'22", long 122°57'14", Cowlitz County, Hydrologic Unit 17080003, at Longview Bridge, 1.0 mi (1.6 km) south of Longview, 2.0 mi (3.2 km) downstream from Cowlitz River, and at mile 66.0 (106.2 km). Drainage area, 256,700 mi² (664,900 km²), approximately. Records available, monthly discharge October 1927 to current year.

14280000 COLUMBIA RIVER AT MOUTH, NEAR ASTORIA, OR.--Lat 46°15', long 124°05', Clatsop County, Hydrologic Unit 17080006, center of channel at river mouth, due north from original end of south jetty, 12.3 mi (19.8 km) northwest of Astoria, and at mile 0. Drainage area, 258,000 mi² (668,200 km²), approximately. Records available, monthly discharge October 1927 to current year.

MONTHLY AND ANNUAL MEAN DISCHARGE IN CUBIC FEET PER SECOND
WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
14144700 COLUMBIA RIVER AT VANCOUVER, WA												
129,500	131,300	183,600	202,400	271,900	340,800	301,800	363,500	387,600	299,500	166,000	132,200	243,000
14222870 COLUMBIA RIVER AT SAINT HELENS, OR												
153,500	178,800	319,600	298,500	382,000	402,200	358,000	392,800	405,600	311,400	176,500	146,800	294,000
14245300 COLUMBIA RIVER AT LONGVIEW, WA												
163,400	193,700	344,700	321,900	413,700	421,300	371,900	400,900	416,700	316,000	179,600	150,700	307,900
14280000 COLUMBIA RIVER AT MOUTH, NEAR ASTORIA, OR												
169,100	202,000	363,200	340,700	429,800	432,700	382,800	400,500	414,400	329,000	181,600	165,500	316,000

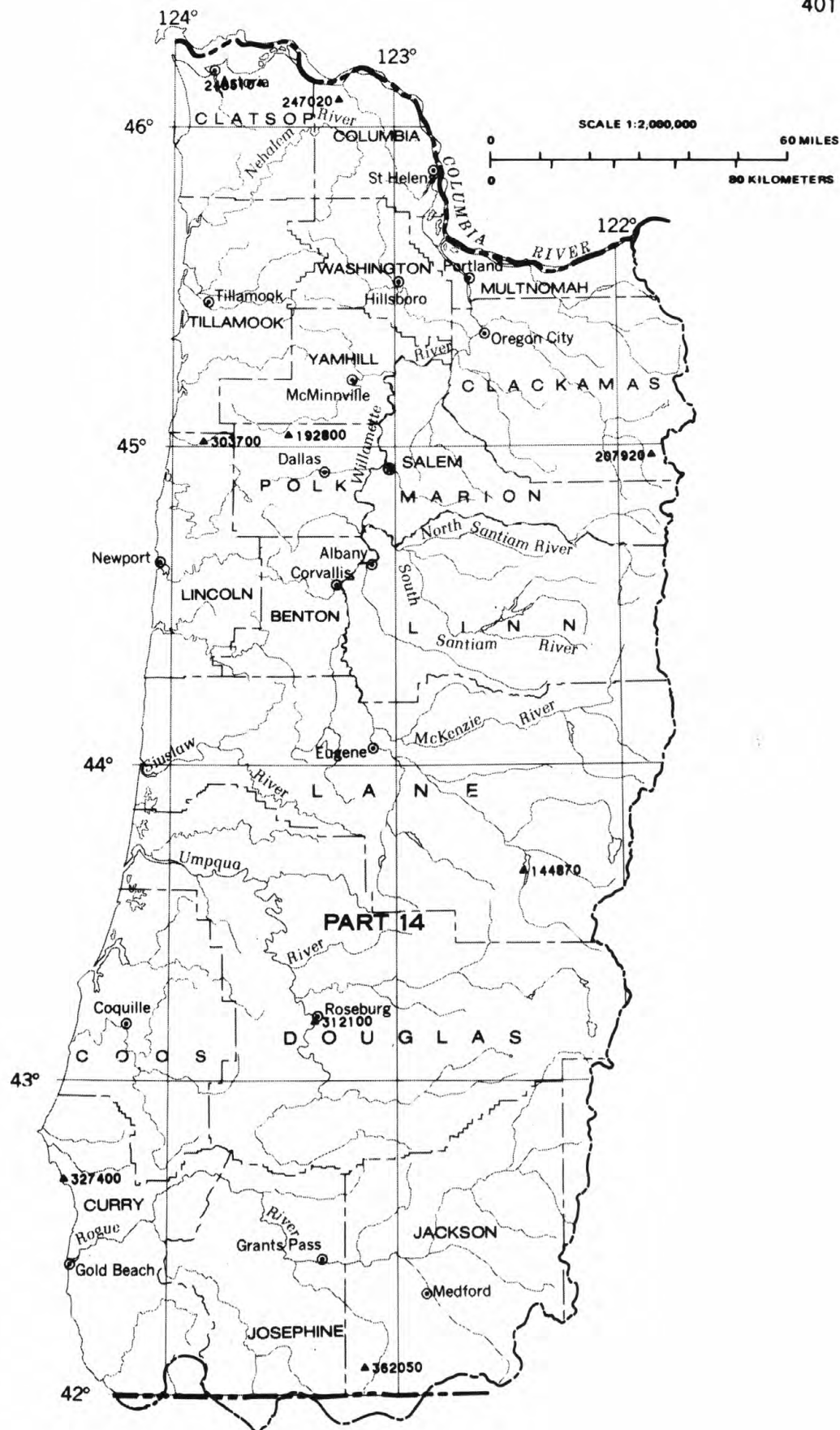


Figure 4.—Map of Western Oregon showing location of partial-record stations.

Crest-stage partial-record stations

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

					Annual maximum		
Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (ft)	Dis-charge (ft ³ /s)
SANDY RIVER BASIN							
14138950	DEER CREEK NEAR BULL RUN, OR	Lat 45°29'31", long 122°03'27", in SE¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 300 ft upstream from Bull Run Reservoir Number One, and 9.6 miles northeast of Bull Run.	1.62	1978-82	1-23-82	4.73	640
14138960	COUGAR CREEK NEAR BULL RUN, OR	Lat 45°29'28", long 122°03'40", in SW¼SW¼ sec.10, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 300 ft upstream from Bull Run Reservoir Number One, and 9.4 miles northeast of Bull Run.	3.06	1978-82	1-23-82	4.79	645
14138990	BEAR CREEK NEAR BULL RUN, OR	Lat 45°29'18", long 122°04'58", in NW¼NW¼ sec.16, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 400 ft upstream from Bull Run Reservoir Number One, and 8.3 miles northeast of Bull Run.	1.68	1978-82	2-20-82	-	280
14139510	FIVEMILE CREEK NEAR BULL RUN, OR	Lat 45°28'57", long 122°05'25", in SW¼NE¼ sec.17, T.1 S., R.6 E., Multnomah County, at culvert on Forest Service road S10, 800 ft upstream from Bull Run Reservoir Number Two, and 7.9 miles northeast of Bull Run.	.79	1978-82	1-23-82	2.90	87
14139600	CAMP CREEK NEAR BULL RUN, OR	Lat 45°27'41", long 122°06'13", in SW¼SW¼ sec.20, T.1 S., R.6 E., Multnomah County, 15 ft downstream from falls at confluence with West Branch of Camp Creek, 0.3 mile upstream from Bull Run Reservoir Number Two, and 6.6 miles northeast of Bull Run.	3.27	1978-82	2-20-82	4.12	561
WILLAMETTE RIVER BASIN							
14144870	MIDDLE FORK WILLAMETTE RIVER TRIBUTARY NEAR OAKRIDGE, OR	Lat 43°40'20", long 122°26'00", in SW¼ sec.10, T.22 S., R.3 E., Lane County, at culvert on Rigdon Road, 400 ft upstream from flow line of Hills Creek Reservoir, and 5.0 miles south of Oakridge.	.50	1960-82	12- 6-81	18.87	a34
14192800	SOUTH YAMHILL RIVER TRIBUTARY NEAR WILLAMINA, OR	Lat 45°02'38", long 123°28'20", in SW¼ sec.18, T.6 S., R.6 W., Polk County, at culvert on State Highway 22, 2.2 miles upstream from mouth, and 2.5 miles south of Willamina.	1.81	1954-82	2-21-82	10.98	157
14207920	POOP CREEK NEAR BIG BOTTOM, OR	Lat 44°58'35", long 121°50'35", in SW¼ sec.9 (unsurveyed), T.7 S., R.8 E., Clackamas County, in Mt. Hood National Forest, at mouth, and 3 miles southeast of Big Bottom.	1.74	1966-82	2-20-82	12.45	22
CLATSKANIE RIVER BASIN							
14247020	FALL CREEK NEAR CLATSKANIE, OR	Lat 46°05'47", long 123°14'56", in NW¼ sec.13, T.7 N., R.5 W., Columbia County, at culvert on private road, 100 feet south of State Highway 47, 2.5 miles west of Clatskanie.	2.07	1972-82	2-20-82	12.40	(b)

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (ft)	Dis- charge (ft ³ /s)
BIG CREEK BASIN							
14248510	LITTLE CREEK NEAR KNAPPA, OR	Lat 46°08'44", long 123°36'16", in SW¼ sec.30, T.8 N., R.7 W., Clatsop County, at culvert on Hillcrest Road, 3 miles south of Knappa.	1.53	1972-82	1-24-82	12.01	112
SALMON RIVER BASIN							
14303700	ALDER BROOK NEAR ROSE LODGE, OR	Lat 45°01'20", long 123°51'10", in SE¼ sec.25, T.6 S., R.10 W., Lincoln County, at culvert on State Highway 18, 0.1 mile upstream from mouth, and 1.5 miles northeast of Rose Lodge.	1.09	1954-82	1-24-82	11.92	96
UMPQUA RIVER BASIN							
14312100	PARROTT CREEK AT ROSEBURG, OR	Lat 43°11'45", long 123°20'50", in NE¼ sec.25, T.27 S., R.6 W., Douglas County, at culvert on Starmer Street between Marsters and Booth Streets in Roseburg, 0.5 mile upstream from mouth.	2.42	1952-82	12- 5-81	c15.72	277
ROGUE RIVER BASIN							
14338005	ROGUE RIVER TRIBUTARY NEAR TRAIL, OR (Station discontinued)	Lat 42°39'35", long 122°46'45", in E-1/2 sec.35, T.33 S., R.1 W., Jackson County, at culvert on State Highway 62, 1.7 miles northeast of Trail.	.64	1980-82	12-19-81	16.13	21
14362050	KINNEY CREEK NEAR MCKEE BRIDGE, OR	Lat 42°05'35", long 123°07'40", in NW¼ sec.13, T.40 S., R.4 W., Jackson County, in Rogue River National Forest, at culvert on Forest Service road 405, 1.3 miles upstream from mouth, and 4 miles southwest of McKee Bridge.	2.83	1965-82	12-19-81	11.05	123

a Estimated.

b Discharge not determined.

c Backwater from debris.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

405

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 1982

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
Part 14 SANDY RIVER BASIN						
Deer Creek	Bull Run River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.1 S., R.6 E.	1.62	1979-81	10-16-81 2-10-82 3-16-82 7-21-82	3.34 7.06 8.81 .72
Cougar Creek	do.....	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.1 S., R.6 E.	3.06	1979-81	10-16-81 3-17-82 7-21-82	7.39 20.1 1.66
Bear Creek	do.....	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.1 S., R.6 E.	1.68	1979-81	10-21-81 3-16-82 7-21-82	1.15 13.9 .46
Fivemile Creek	do.....	SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.1 S., R.6 E.	.79	1979-81	10-21-81 3-16-82 7-20-82	.66 4.60 .14
Camp Creek	do.....	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.20, T.1 S., R.6 E.	3.27	1979-81	10-15-81 3-19-82 7-20-82	8.38 22.8 1.28
Part 14 WILLAMETTE RIVER BASIN						
Waldo Lake Tunnel	Black Creek	Outlet to unused tunnel from Kloydahl Bay in sec.36, T.21 S., R.5-1/2 E., (unsurveyed).	-	1937, 1940, 1943, 1945, 1948, 1950-52, 1954, 1957, 1969-71, 1973-78, 1980	10- 1-81	.51
Separation Creek	Horse Creek	Lat 44°07'29", long 122°02'08".	63.0	1981	9- 9-82	246
McKenzie River	Willamette River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.6, T.17 S., R.2 E.	-	1962-64, 1967-68, 1970, 1975, 1980	7-28-82	472
Part 14 ROGUE RIVER BASIN						
Dutton Creek	Castle Creek	Lat 42°53'40", long 122°10'00".	-	1967-68, 1977-81	10-13-81 7-28-82 8-24-82	.28 2.15 .91
Castle Creek	Rogue River	Lat 42°54'45", long 122°17'00".	-	1967-68, 1977-81	10-13-81 7-28-82 8-24-82	.43 6.27 1.62
Castle Creek Tributary	Castle Creek	Lat 42°53'30", long 122°10'00".	-	1967-68, 1977-78, 1980-81	10-13-81 7-28-82 8-24-82	0 .36 .02
.....Do.....	do.....	Lat 42°53'25", long 122°09'45".	-	1967-68, 1977-81	10-13-81 7-28-82 8-24-82	0 0 0

ANALYSES OF WETFALL SAMPLES COLLECTED AT ATMOSPHERIC DEPOSITION SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

452650122091801 - PRECIPITATION AT BULL RUN-WEEKLY COMPOSITES

DATE	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	SILICA, DIS- SOLVED (MG/L AS SIO2)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT								
06-13	5.1	5	.1	.1	.2	.4	.3	.8
20-27	4.9	6	.1	.1	<.1	.2	.2	.6
27-31	5.0	6	<.1	.1	<.1	.3	.2	.7
NOV								
01-03	5.0	6	<.1	.1	<.1	.3	.2	.7
10-17	5.1	6	<.1	.1	.1	.4	.2	.9

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BARIIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BROMIDE DIS- SOLVED (MG/L AS BR)	CADMIUM DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT									
06-13	<.1	.05	<.100	<2	<1	<.05	<1	<3	<10
20-27	.1	.06	<.100	<2	<1	<.05	1	<3	<10
27-31	.1	.05	<.100	<2	<1	<.05	<1	<3	<10
NOV									
01-03	.1	.05	<.100	<2	<1	<.05	<1	<3	<10
10-17	<.1	.04	<.100	<2	<1	<.05	<1	<3	<10

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT								
06-13	<10	<4	<10	<1	<10	2	<6.0	<3
20-27	<10	<4	<10	<1	<10	<1	<6.0	4
27-31	<10	<4	<10	<1	<10	<1	<6.0	<3
NOV								
01-03	<10	<4	<10	<1	<10	<1	<6.0	<3
10-17	<10	<4	10	<1	<10	<1	<6.0	<3

ANALYSES OF WETFALL SAMPLES COLLECTED AT ATMOSPHERIC DEPOSITION SITES

407

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

452650122091800 - PRECIPITATION AT BULL RUN-SMITH

DATE	PH (STAND- ARD UNITS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
OCT		
06-13	5.1	5
20-27	4.9	6
27-31	5.0	6
NOV		
01-03	5.0	6
10-17	5.1	6
17-24	5.2	5
24-30	5.3	6
DEC		
01-01	5.3	6
01-08	5.2	3
08-15	5.1	6
15-22	4.9	7
22-29	5.0	8
29-31	4.9	9
JAN		
01-05	4.9	9
19-26	5.1	4
26-31	5.0	13
FEB		
01-02	5.0	13
09-16	5.3	3
16-23	5.2	4
23-28	5.0	6
MAR		
01-02	5.0	6
02-09	4.6	12
09-16	5.1	7
30-31	5.1	4
APR		
01-06	5.1	4
06-13	5.1	4
13-20	4.9	9
27-30	4.9	7
MAY		
01-04	4.9	7
04-11	4.6	17
11-18	4.4	18
JUN		
01-08	4.4	19
08-15	4.4	19
22-29	4.9	8
29-30	4.9	7
JUL		
01-06	4.9	7

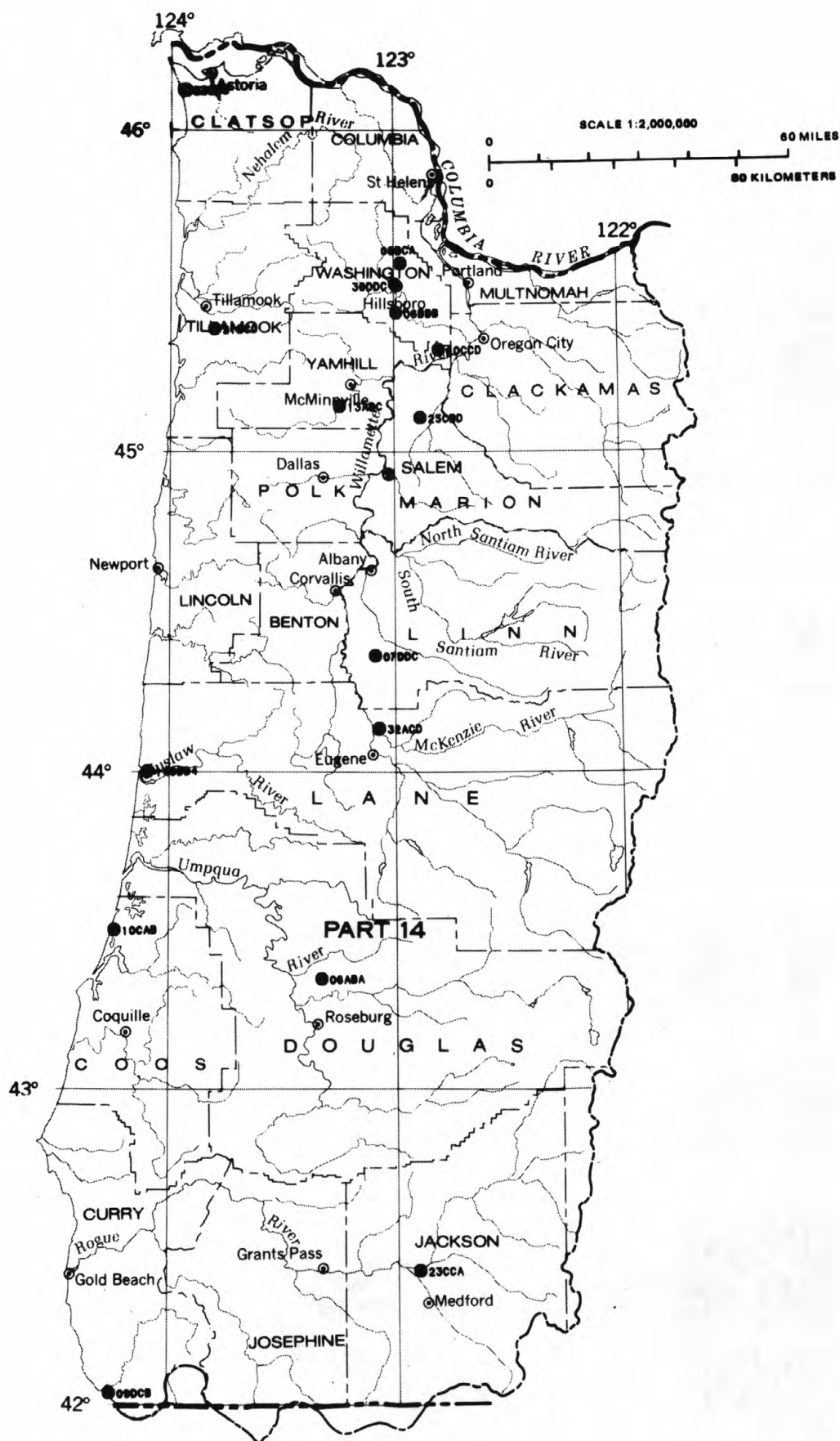


Figure 5.—Map Of Western Oregon showing location of observation wells.

GROUND-WATER LEVELS

409

CLACKAMAS COUNTY

451905122475801. Local number 3S/1W-10CCD.

LOCATION.--Lat 45°19'05", long 122°47'58", Hydrologic Unit 17090007.

Owner: Pamoukis.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), reported depth 115 ft (35 m).

DATUM.--Altitude of land surface datum is 235 ft (72 m). Measuring point: Top of casing extension, 1.45 ft (0.44 m) above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.42 ft (20.85 m) below datum, May 12, 1956; lowest measured, 92.64 ft (28.24 m) below datum, Oct. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	92.42	APR 15	84.93	-	-	-	-

CLATSOP COUNTY

460733123560301. Local number 8N/10W-33CCC.

LOCATION.--Lat 46°07'33", long 123°56'03", Hydrologic Unit 17100201.

Owner: U.S. Geological Survey.

AQUIFER.--Dune sand.

WELL CHARACTERISTICS.--Drilled observation well, diam 6 in (150 mm), cased to 73 ft (22 m), screened 73 to 88 ft (22 to 27 m).

DATUM.--Land surface datum is 34.13 ft (10.40 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.5 ft (0.46 m) above datum.

REMARKS.--Continuous water-level recorder installed Aug. 4, 1977.

PERIOD OF RECORD.--1967-68, 1977 to current year.

EXTREMES FOR THE PERIOD OF RECORD.--Highest water level measured, 10.40 ft (3.17 m) below datum, Feb. 28, 1982; lowest measured, 16.29 ft (4.97 m) below datum, Oct. 20, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	14.83	JAN 5	12.90	APR 5	11.42	JUL 5	13.23
OCT 10	14.64	JAN 10	13.00	APR 10	11.55	JUL 10	13.31
OCT 15	14.66	JAN 15	13.13	APR 15	11.56	JUL 15	13.29
OCT 20	14.71	JAN 20	12.81	APR 20	11.67	JUL 20	13.29
OCT 25	14.75	JAN 25	11.60	APR 25	11.77	JUL 25	13.32
OCT 31	14.67	JAN 31	-	APR 30	11.93	JUL 31	13.36
NOV 5	14.71	FEB 5	-	MAY 5	12.12	AUG 5	13.40
NOV 10	14.82	FEB 10	-	MAY 10	12.25	AUG 10	13.43
NOV 15	14.65	FEB 15	-	MAY 15	12.41	AUG 15	13.48
NOV 20	14.45	FEB 20	-	MAY 20	12.60	AUG 20	13.55
NOV 25	14.24	FEB 25	10.44	MAY 25	12.79	AUG 25	13.58
NOV 30	14.07	FEB 28	10.40	MAY 31	12.98	AUG 31	13.65
DEC 5	13.67	MAR 5	10.42	JUN 5	13.14	SEP 5	13.68
DEC 10	13.22	MAR 10	10.51	JUN 10	13.23	SEP 10	13.67
DEC 15	12.93	MAR 15	10.66	JUN 15	13.32	SEP 15	13.68
DEC 20	12.78	MAR 20	10.96	JUN 20	13.33	SEP 20	13.70
DEC 25	12.75	MAR 25	11.14	JUN 25	13.23	SEP 25	13.71
DEC 31	12.72	MAR 31	11.31	JUN 30	13.20	SEP 30	13.73

COOS COUNTY

433006124141501. Local number 24S/13W-10CAB.

LOCATION.--Lat 43°30'06", long 124°14'15", Hydrologic Unit 17100304.

Owner: Coos Bay - North Bend Water Board.

AQUIFER.--Dune sand.

WELL CHARACTERISTICS.--Drilled observation well, diam 2 in (51 mm), depth 121 ft (37 m), cased to 119 ft (36 m), screened 119 to 121 ft (36 to 37 m).

DATUM.--Land surface datum is 35.26 ft (10.75 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.20 ft (0.67 m) above datum.

REMARKS.--Locally known as well 200A.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.20 ft (1.58 m) below datum, Feb. 6, 1969; lowest measured, 11.50 ft (3.51 m) below datum, Nov. 8, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	11.00	JAN 20	7.90	APR 28	8.10	AUG 18	10.50
NOV 25	9.60	FEB 18	7.80	MAY 19	8.50	SEP 22	11.10
DEC 9	8.50	MAR 17	8.10	JUL 14	9.60		

GROUND-WATER LEVELS

CURRY COUNTY

420205124145501. Local number 41S/13W-9DCB.

LOCATION.--Lat 42°02'05", long 124°14'55", Hydrologic Unit 17100312.

Owner: Minnie Clendenin.

AQUIFER.--Sandstone and gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 10 in (250 mm), depth 59 ft (18 m), cased to 45 ft (14 m), perforated 30-45 ft (9-14 m).

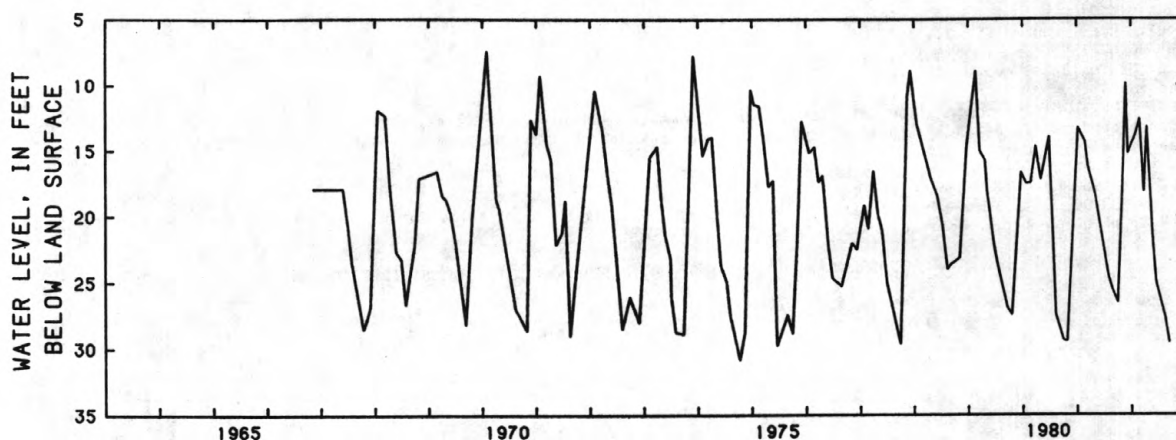
DATUM.--Altitude of land surface datum is about 110 ft (34 m). Measuring point: Top of casing 0.9 ft (0.3 m) above datum.

PERIOD OF RECORD.--1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.42 ft (2.26 m) below datum, Jan. 30, 1970; lowest measured, 30.52 ft (9.30 m) below datum, Sept. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	18.48	JAN 28	13.79	APR 13	13.20	AUG 12	27.56
NOV 23	9.88	FEB 26	12.60	MAY 20	R/21.42	SEP 9	29.48
DEC 7	15.20	MAR 23	18.10	JUN 15	R/24.95		



41S/13W-9DCB

DOUGLAS COUNTY

432051123195601. Local number 26S/5W-6ABA.

LOCATION.--Lat 43°20'51", long 123°19'56", Hydrologic Unit 17100301.

Owner: Stanley Mohr.

AQUIFER.--Sandstone and siltstone.

WELL CHARACTERISTICS.--Drilled domestic well, diam 8 in (200 mm), depth 225 ft (69 m), cased to 20 ft (6 m).

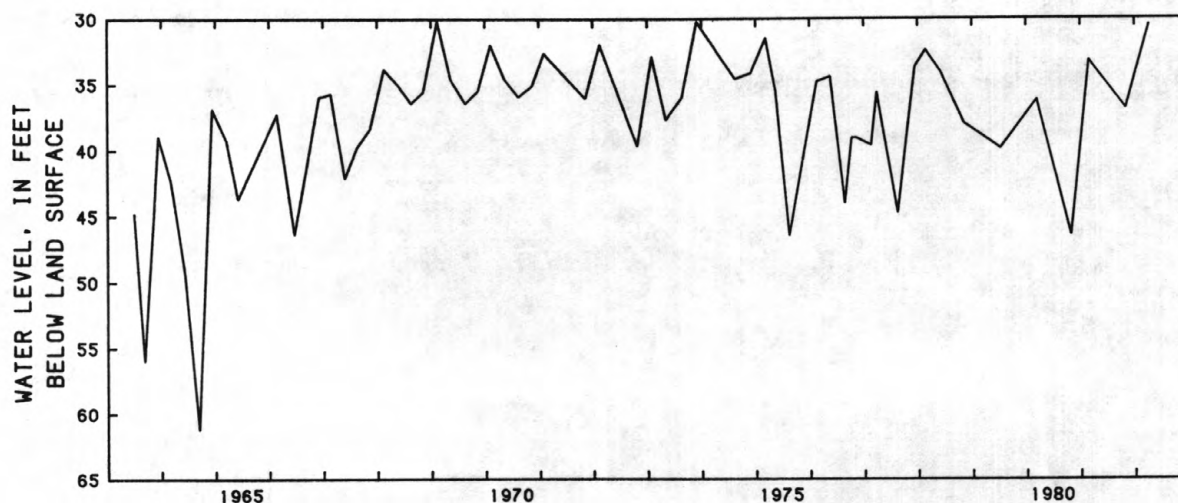
DATUM.--Altitude of land surface datum is 580 ft (177 m). Measuring point: Hole in casing seal, 0.7 ft (0.21 m) above datum.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.15 ft (9.19 m) below datum, Feb. 13, 1969; lowest measured, R/61.19 ft (18.65 m) below datum, Sept. 10, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	36.85	APR 6	30.52	-	-	-	-



26S/5W-6ABA

GROUND-WATER LEVELS

411

JACKSON COUNTY

422517122543401. Local number 36S/2W-23CCA.

LOCATION.--Lat 42°25'17", long 122°54'34", Hydrologic Unit 17100308.

Owner: U.S. Geological Survey.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled observation well, diam 8 in (200 mm), depth 110 ft (33 m), cased to 106 ft (32 m).

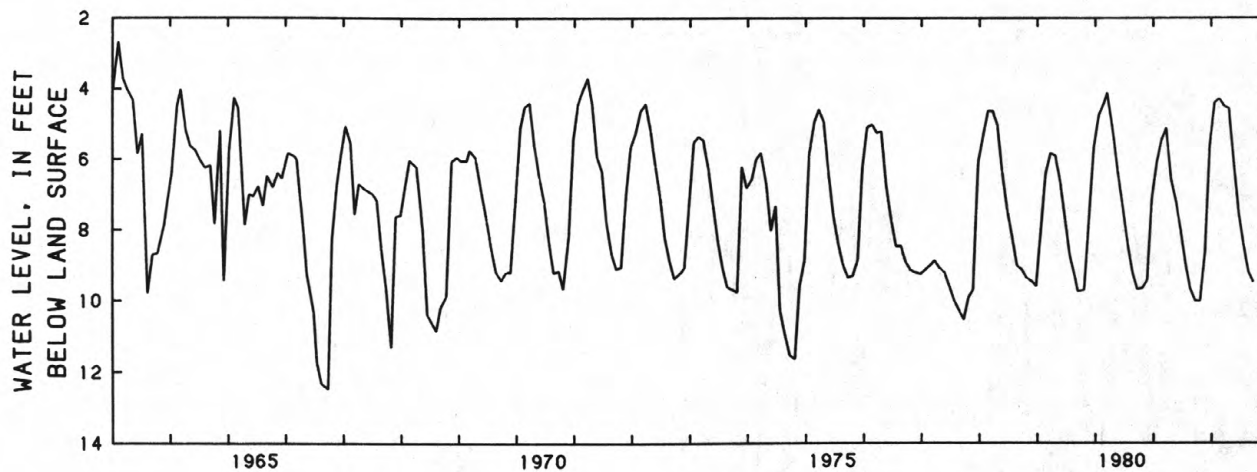
DATUM.--Altitude of land surface datum is 1,230 ft (375 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above datum.

PERIOD OF RECORD.--1953-54, 1956, 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.27 ft (0.69 m) below datum, Mar. 5, 1962; lowest measured, 12.47 ft (3.80 m) below datum, Sept. 23, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	10.00	JAN 20	4.39	APR 19	4.56	JUL 20	8.44
NOV 20	8.61	FEB 19	4.28	MAY 20	6.11	AUG 20	9.20
DEC 20	5.62	MAR 19	4.48	JUN 21	7.53	SEP 20	9.45



36S/2W-23CCA

GROUND-WATER LEVELS

LANE COUNTY

440000124054004. Local number 18S/12W-14CDD4.

LOCATION.--Lat 44°00'01", long 124°05'40", Hydrologic Unit 17100206.

Owner: U.S. Geological Survey.

AQUIFER.--Sand.

WELL CHARACTERISTICS.--Drilled observation well, diam 6 in (150 mm), depth 59 ft (18 m), cased to 59 ft (18 m), screened 44-59 ft (13-18 m).

DATUM.--Altitude of land surface datum is 70 ft (21 m). Measuring point: Top of casing at datum.

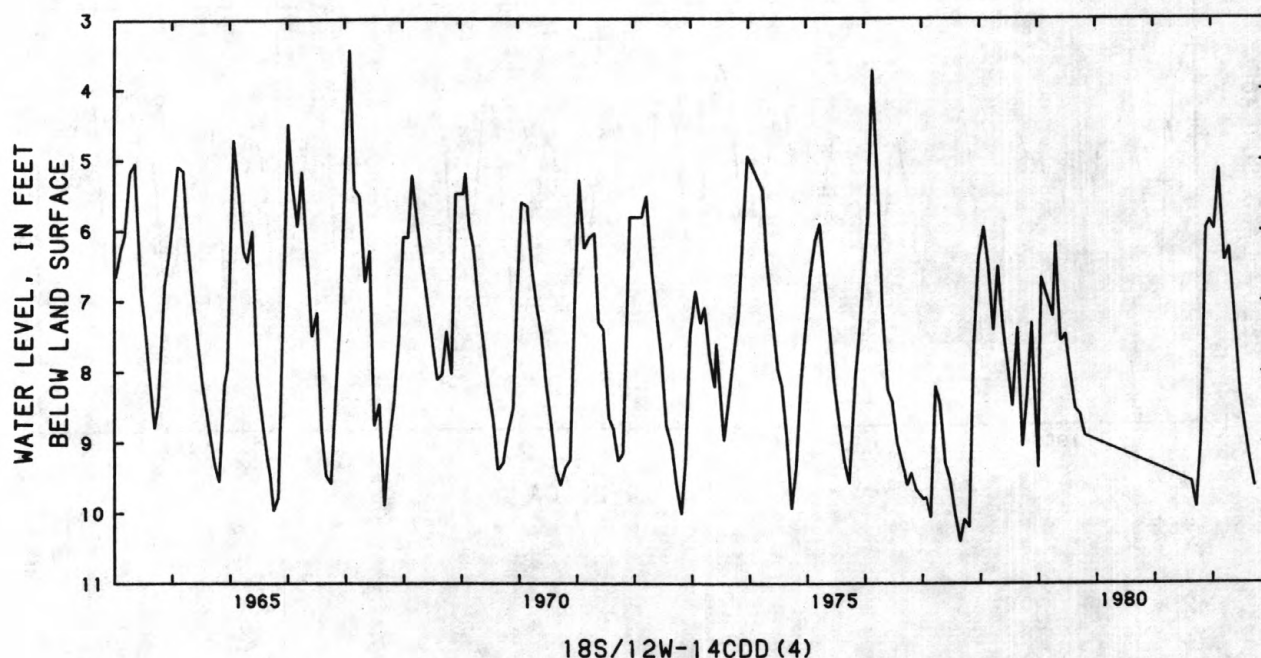
REMARKS.--No measurements in 1980.

PERIOD OF RECORD.--1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.44 ft (1.05 m) below datum, Jan. 31, 1967; lowest measured, 10.40 ft (3.17 m) below datum, Aug. 24, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	8.93	JAN 20	5.98	APR 22	6.24	AUG 22	9.26
NOV 29	5.96	FEB 21	5.12	JUN 23	8.30	SEP 20	9.62
DEC 22	5.85	MAR 23	6.42	JUL 20	8.76		



LINN COUNTY

442140123052501. Local number 14S/3W-7DCC.

LOCATION.--Lat 44°21'40", long 123°05'25", Hydrologic Unit 17090003.

Owner: H.H. Kirk

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 8 in (200 mm), depth 123 ft (37 m), cased to 110 ft (34 m), perforated 35-110 ft (11-34 m).

DATUM.--Altitude of land surface datum is 288 ft (88 m). Measuring point: Top of casing, 0.55 ft (0.17 m) above datum.

PERIOD OF RECORD.--1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.74 ft (0.53 m) below datum, Feb. 26, 1982; lowest measured, 13.30 ft (4.05 m) below datum, Oct. 11, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	7.47	JAN 21	1.75	APR 21	2.09	JUL 27	8.74
NOV 17	3.15	FEB 26	1.74	MAY 19	4.30	AUG 20	10.02
DEC 17	2.01	MAR 22	2.19	JUN 23	6.31	SEP 29	11.18

GROUND-WATER LEVELS

413

MARION COUNTY

450620122530501. Local number 5S/2W-25CBD.

LOCATION.--Lat 45°06'20", long 122°52'58", Hydrologic Unit 17090009.

Owner: Agricultural Research Corp. (Sam H. Brown).

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 18 to 6 in (460 to 150 mm), depth 252 ft (77 m), casing perforated 117-147 ft (36-45 m), 215-245 ft (65-75 m).

DATUM.--Land surface datum is 180.31 ft (54.96 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of seal around pump column, 0.65 ft (0.20 m) below datum.

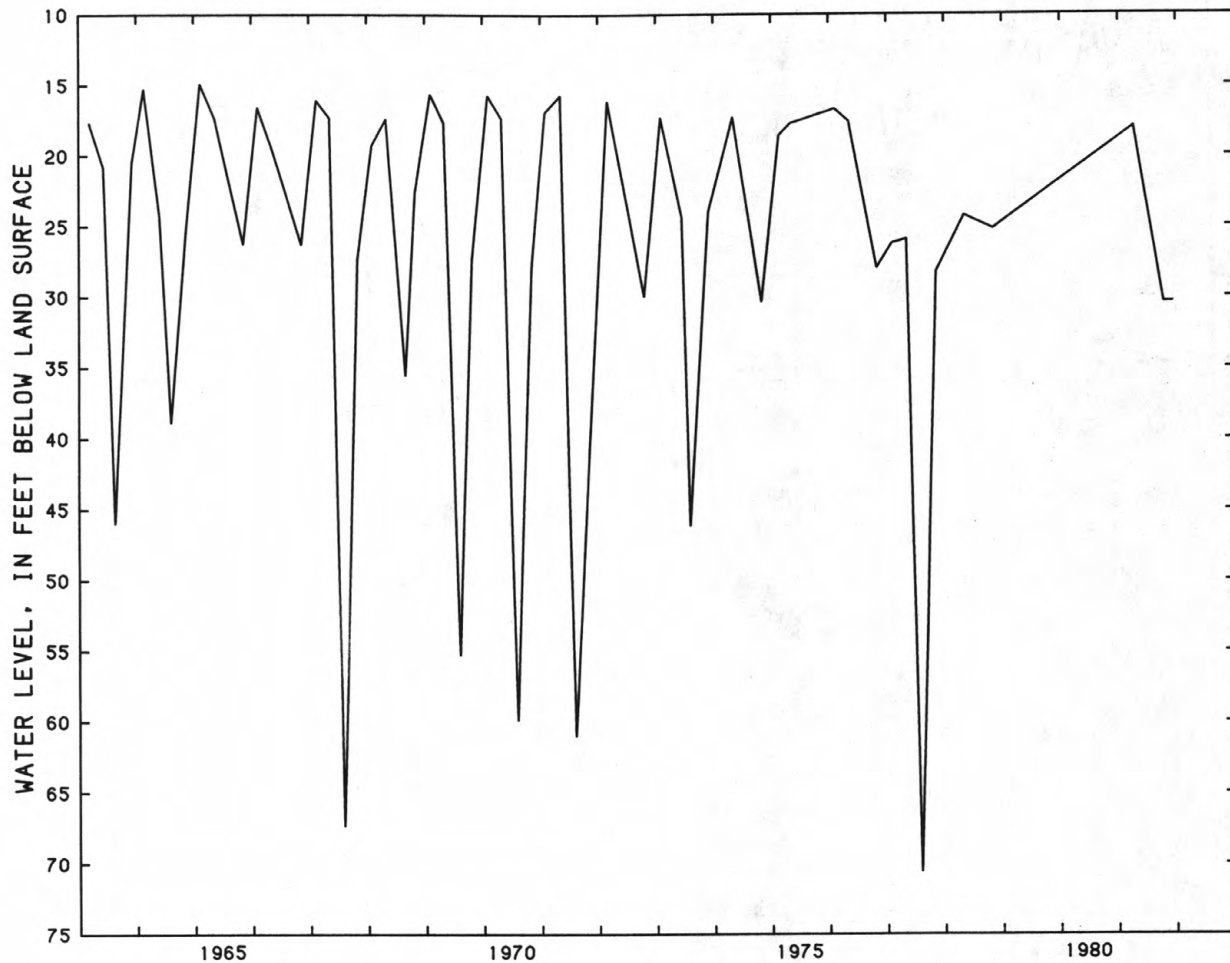
REMARKS.--No measurements in 1980.

PERIOD OF RECORD.--1929-30, 1935-36, 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.74 ft (4.19 m) below datum, Mar. 11, 1948; lowest measured, R/ 61.03 ft (18.60 m) below datum, Aug. 3, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	30.39	MAY 6	(P)	-	-	-	-



5S/2W-25CBD

GROUND-WATER LEVELS

TILLAMOOK COUNTY

452300123481501. Local number 2S/9W-21BCC.

LOCATION.--Lat 45°23'03", long 123°48'08", Hydrologic Unit 17100203.

Owner: Vern Darby.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), depth 128 ft (39 m).

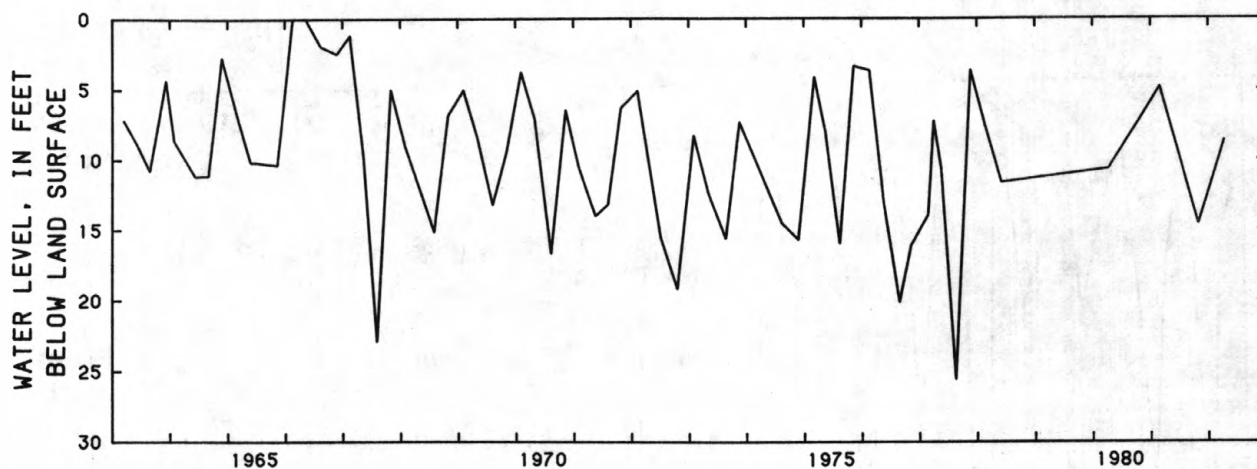
DATUM.--Altitude of land surface datum is about 120 ft (37 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing, Feb. 21, 1966; lowest measured, 22.89 ft (6.98 m) below datum, Aug. 2, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	R/ 14.58	APR 8	8.67	-	-	-	-



2S/9W-21BCC

GROUND-WATER LEVELS

415

WASHINGTON COUNTY

453514122575801. Local number 1N/2W-8BCA.

LOCATION.--Lat 45°35'14", long 122°57'58", Hydrologic Unit 17090010.

Owner: Van Raden Farms.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled domestic well, diam 6 in (150 mm), reported depth 60 ft (18 m), cased to 60 ft (18 m), perforated 28-60 ft (9-18 m).

DATUM.--Altitude of land surface datum is 200 ft (61 m). Measuring point: Top of casing, 0.40 ft (0.12 m) above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.30 ft (0.01 m) above datum, Dec. 20, 1955; lowest measured, 26.91 ft (8.20 m) below datum, July 15, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	18.05	APR 20	2.88	-	-	-	-

453117122593402. Local number 1N/3W-36DDC.

LOCATION.--Lat 45°31'17", long 122°59'34", Hydrologic Unit 17090010.

Owner: Terminal Ice. Co.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused well, diam 12 in (300 mm), reported depth 171 ft (52 m).

DATUM.--Altitude of land surface datum is 180 ft (55 m). Measuring point: Top of casing, at datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.02 ft (2.14 m) below datum, Jan. 28, 1970; lowest measured, 22.16 ft (6.75 m) below datum, Sept. 22, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	15.63	APR 20	11.70	-	-	-	-

453050123081001. Local number 1S/4W-2ADC.

LOCATION.--Lat 45°30'50", long 123°08'10", Hydrologic Unit 17090010.

Owner: Myron Sheelar.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 6 in (150 mm), depth 85 ft (26 m).

DATUM.--Altitude of land surface datum is 170 ft (52 m). Measuring point: Top of casing, 0.80 ft (0.24 m) above datum.

REMARKS.--No measurements in 1980.

PERIOD OF RECORD.--1951 to 1982 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.81 ft (2.38 m) below datum, Jan. 13, 1959; lowest measured, 16.94 ft (5.16 m) below datum, Nov. 2, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	<u>2</u> /7.89	-	-	-	-	-	-

GROUND-WATER LEVELS

WASHINGTON COUNTY--Continued

452600122592201. Local number 2S/2W-6BBB.

LOCATION.--Lat 45°25'58", long 122°59'20", Hydrologic Unit 17090010.

Owner: S.R. Rotchstrom.

AQUIFER.--Columbia River Basalt Group.

WELL CHARACTERISTICS.--Drilled irrigation well, diam 6 in (150 mm), reported depth 486 ft (148 m), cased to 250 ft (76 m).

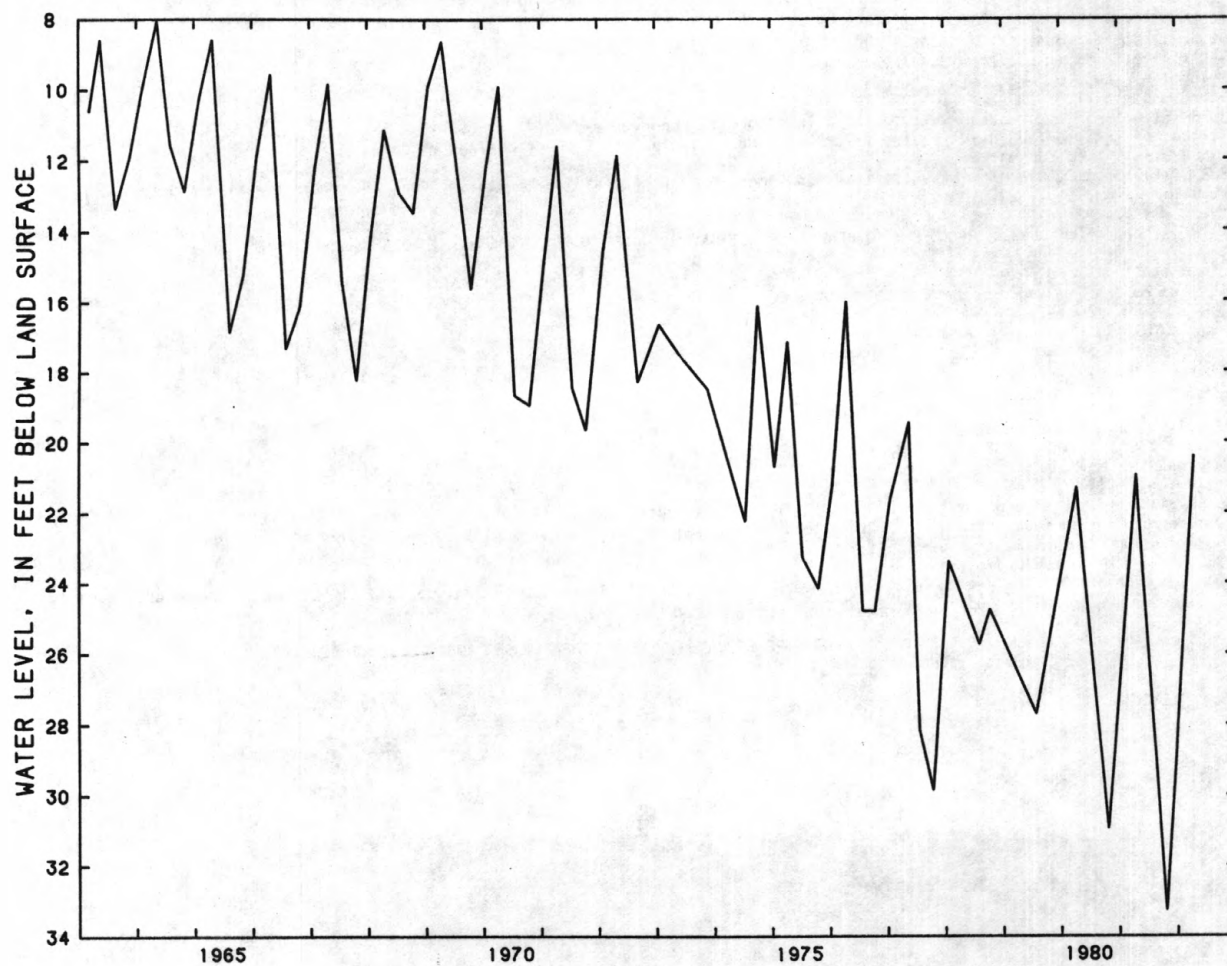
DATUM.--Altitude of land surface datum is 190 ft (58 m). Measuring point: Hole in south side of pumpbase, 0.60 ft (0.18 m) above datum.

PERIOD OF RECORD.--1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.66 ft (1.42 m) below datum, Mar. 16, 1951; lowest measured, $\frac{I}{33.28}$ ft (10.14 m) below datum, Oct. 21, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	$\frac{I}{33.28}$	APR 20	20.43	-	-	-	-



2S/2W-6BBB

P Pumping.
 R Recently pumped.
 T Nearby well recently pumped.
 Z Surface water effects (new full pond 125 ft distant).

INDEX

417

	PAGE		PAGE
ALDER BROOK NEAR ROSE LODGE.....	404	DEER CREEK NEAR BULL RUN.....	72,73,403
ALSEA RIVER, NEAR TIDEWATER.....	273-275	DEFINITION OF TERMS.....	7
NORTH FORK, AT ALSEA.....	271	DETROIT LAKE NEAR DETROIT.....	193
AMAZON CREEK NEAR EUGENE.....	175	DISCHARGE AT UNGAGED SITES.....	400
APPEGATE LAKE NEAR COPPER.....	371	DISCHARGE AT PARTIAL-RECORD STATIONS AND	
APPEGATE RIVER, NEAR APPEGATE.....	379-381	MISCELLANEOUS SITES.....	403
MIDDLE FORK, NEAR COPPER.....	362-364	DORENA LAKE NEAR COTTAGE GROVE.....	131
NEAR COPPER.....	372-378	DOWNSTREAM ORDER AND STATION NUMBERS.....	18
NEAR WILDERVILLE.....	382-384		
ASHLAND CREEK, EAST FORK, NEAR ASHLAND.....	355		
WEST FORK, NEAR ASHLAND.....	354		
		EAST HUMBURG CREEK NEAR DETROIT.....	189
BEAR CREEK (SANDY RIVER BASIN)		EAST LATERAL NEAR ASHLAND.....	353
NEAR BULL RUN.....	76,77,403	ELK CREEK (ROGUE RIVER BASIN)	
BIG BUTTE CREEK, NEAR MCLEOD.....	332-334	NEAR CASCADE GORGE.....	338-340
SOUTH FORK, NEAR BUTTE FALLS.....	333	WEST BRANCH, NEAR TRAIL.....	341-343
BIG CREEK NEAR ROOSEVELT BEACH.....	276	NEAR TRAIL.....	344-346
BIG ROCK CREEK NEAR VALSETZ.....	265,266	ELK CREEK (UMPQUA RIVER BASIN) NEAR DREW.....	284
BLAZED ALDER CREEK NEAR RHODODENDRON.....	49	ELLIOTT CREEK NEAR COPPER.....	365-367
BLUE RIVER, AT BLUE RIVER.....	159-161	EMIGRANT CREEK NEAR ASHLAND.....	353
BELOW TIDBITS CREEK, NEAR BLUE RIVER.....	154-156	EMIGRANT LAKE NEAR ASHLAND.....	353
BLUE RIVER LAKE NEAR BLUE RIVER.....	158	EXPLANATION OF GROUND-WATER LEVEL RECORDS.....	27
BREITENBUSH RIVER ABOVE CANYON CREEK,		EXPLANATION OF STAGE AND	
NEAR DETROIT.....	190-192	WATER-DISCHARGE RECORDS.....	18
BUDWORM CREEK NEAR BELKNAP SPRINGS.....	142	EXPLANATION OF WATER-QUALITY RECORDS.....	24
BULL RUN RESERVOIR NUMBER ONE NEAR BULL RUN...	78		
BULL RUN RESERVOIR NUMBER TWO NEAR BULL RUN...	92	FALL CREEK (CLATSKANIE RIVER BASIN) NEAR	
BULL RUN RIVER, NEAR BULL RUN.....	93	CLATSKANIE.....	403
NEAR MULTNOMAH FALLS.....	50-56	FALL CREEK (WILLAMETTE RIVER BASIN) BELOW	
NORTH FORK, NEAR MULTNOMAH FALLS.....	64-71	WINBERRY CREEK, NEAR FALL CREEK.....	119-121
SOUTH FORK, NEAR BULL RUN.....	84-91	NEAR LOWELL.....	115-117
BUTTE CREEK AT MONITOR.....	230	FALL CREEK LAKE NEAR LOWELL.....	118
		FERN RIDGE LAKE NEAR ELMIRA.....	173
CALAPOOIA RIVER, AT ALBANY.....	183,184	FIR CREEK NEAR BRIGHTWOOD.....	57-63
AT HOLLEY.....	180-182	FISH CREEK, AT BIG CAMAS RANGER STATION, NEAR	
CALAPOOYA CREEK AT NONPAREIL.....	312	TOKETEE FALLS.....	305
CAMP CREEK NEAR BULL RUN.....	81,82,403	FISH LAKE NEAR LAKECREEK.....	352
CARBERRY CREEK NEAR COPPER.....	368-370	FIVEMILE CREEK NEAR BULL RUN.....	79,80,403
CEDAR CREEK NEAR BRIGHTWOOD.....	83	FIVE RIVERS NEAR FISHER.....	272
CHETCO RIVER NEAR BROOKINGS.....	399	FOSTER LAKE AT FOSTER.....	207
CLACKAMAS RIVER, ABOVE THREE LYNX CREEK.....	249		
AT ESTACADA.....	250	GATE CREEK AT VIDA.....	166
NEAR CLACKAMAS.....	251	GRAVE CREEK AT PEASE BRIDGE, NEAR PLACER.....	387
CLEARWATER RIVER ABOVE TRAP CREEK,		GRAY CREEK NEAR OAKRIDGE.....	104
NEAR TOKETEE FALLS.....	304	GREEN PETER LAKE NEAR FOSTER.....	206
COLUMBIA AT BONNEVILLE DAM.....	35,36	GROUND-WATER LEVELS IN:	
AT LONGVIEW, WA.....	400	CLACKAMAS COUNTY.....	409
AT MOUTH, NEAR ASTORIA.....	400	CLATSOP COUNTY.....	409
AT SAINT HELENS.....	400	COOS COUNTY.....	409
AT VANCOUVER, WA.....	400	CURRY COUNTY.....	410
AT WARRENDALE.....	39-44	DOUGLAS COUNTY.....	410
BELOW BONNEVILLE DAM.....	37,38	JACKSON COUNTY.....	411
COOPERATION.....	2	LANE COUNTY.....	412
COQUILLE RIVER, SOUTH FORK, AT POWERS.....	319	LINN COUNTY.....	412
COTTAGE GROVE LAKE NEAR COTTAGE GROVE.....	128	MARION COUNTY.....	413
COUGAR CREEK NEAR BULL RUN.....	74,75,403	TILLAMOOK COUNTY.....	414
COUGAR LAKE NEAR RAINBOW.....	150	WASHINGTON COUNTY.....	415,416
COW CREEK, NEAR AZALEA.....	288		
NEAR RIDDLE.....	290	HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNVILLE	228
WEST FORK, NEAR GLENDALE.....	289	HASKINS CREEK RESERVOIR NEAR MCMINNVILLE.....	227
COYOTE CREEK NEAR CROW.....	172	HENRY HAGG LAKE NEAR GASTON.....	234
		HILLS CREEK LAKE NEAR OAKRIDGE.....	99
		HYDROLOGIC CONDITIONS.....	3

	PAGE		PAGE
ILLINOIS RIVER, EAST FORK, NEAR TAKILMA.....	395	MCKENZIE RIVER NEAR VIDA.....	162-165
WEST FORK, BELOW ROCK CREEK, NEAR O'BRIEN....	397	SOUTH FORK, ABOVE COUGAR LAKE, NEAR RAINBOW..	147-149
NEAR KERBY.....	398	NEAR RAINBOW.....	151-153
INTRODUCTION.....	1	MIDDLE SANTIAM RIVER NEAR UPPER SODA.....	202
		MOHAWK RIVER NEAR SPRINGFIELD.....	167
		MOLALLA RIVER, ABOVE PINE CREEK, NEAR WILHOIT..	229
JACKSON CREEK NEAR TILLER.....	282		
JOHNSON CREEK AT SYCAMORE.....	252		
KINNEY CREEK NEAR MCKEE BRIDGE.....	404	NEHALEM RIVER NEAR FOSS.....	256-258
		NESTUCCA RIVER, NEAR BEAVER.....	262-264
		NEAR FAIRDALE.....	261
		NORTH MYRTLE CREEK NEAR MYRTLE CREEK.....	291
		NORTH SANTIAM RIVER, AT MEHAMA.....	198
		AT NIAGARA.....	194-196
LAKE CREEK (SIUSLAW RIVER BASIN) NEAR DEADWOOD..	277	BELOW BOULDER CREEK, NEAR DETROIT.....	186-188
LAKE CREEK (UMPQUA RIVER BASIN)		NORTH UMPQUA RIVER, ABOVE COPELAND CREEK, NEAR	
NEAR DIAMOND LAKE.....	301	TOKETEE FALLS.....	306
LAKES AND RESERVOIRS:		AT WINCHESTER.....	309-311
APPLGATE LAKE NEAR COPPER.....	371	BELOW LEMOLO LAKE, NEAR TOKETEE FALLS.....	303
BLUE RIVER LAKE NEAR BLUE RIVER.....	158	NORTH YAMHILL RIVER NEAR FAIRDALE.....	226
BULL RUN RESERVOIR NUMBER ONE NEAR BULL RUN..	78		
BULL RUN RESERVOIR NUMBER TWO NEAR BULL RUN..	92	OAK GROVE FORK, ABOVE POWERPLANT INTAKE.....	248
COTTAGE GROVE LAKE NEAR COTTAGE GROVE.....	128	NEAR GOVERNMENT CAMP.....	247
COUGAR LAKE NEAR RAINBOW.....	150	OSWEGO CANAL NEAR LAKE OSWEGO.....	238
DETROIT LAKE NEAR DETROIT.....	193		
DORENA LAKE NEAR COTTAGE GROVE.....	131		
EMIGRANT LAKE NEAR ASHLAND.....	353	PARROTT CREEK AT ROSEBURG.....	404
FALL CREEK LAKE NEAR LOWELL.....	118	PONY CREEK AT COOS BAY.....	317,318
FERN RIDGE LAKE NEAR ELMIRA.....	173	POOP CREEK NEAR BIG BOTTOM.....	403
FISH LAKE NEAR LAKECREEK.....	352	PRECIPITATION SAMPLES, WATER-QUALITY	
FOSTER LAKE AT FOSTER.....	207	ANALYSES OF.....	406,407
GREEN PETER LAKE NEAR FOSTER.....	206	PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES	
HASKINS CREEK RESERVOIR NEAR MC MINNVILLE.....	227	INVESTIGATIONS.....	30-32
HENRY HAGG LAKE NEAR GASTON.....	234		
HILLS CREEK LAKE NEAR OAKRIDGE.....	99	QUARTZVILLE CREEK NEAR CASCADIA.....	203-205
LEMOLO LAKE NEAR TOKETEE FALLS.....	302		
LOOKOUT POINT LAKE NEAR LOWELL.....	111		
LOST CREEK LAKE NEAR MCLEOD.....	328	ROGUE RIVER, ABOVE PROSPECT.....	320
LOWER PONY CREEK RESERVOIR AT COOS BAY.....	317	AT DODGE BRIDGE, NEAR EAGLE POINT.....	347-349
MCGUIRE LAKE NEAR FAIRDALE.....	260	AT GRANTS PASS.....	359-361
SMITH RIVER RESERVOIR NEAR BELKNAP SPRINGS...	136	AT MARIAL.....	388,389
TIMOTHY LAKE NEAR GOVERNMENT CAMP.....	246	AT MCLEOD.....	329,330
UPPER PONY CREEK RESERVOIR NEAR COOS BAY.....	317	AT RAYGOLD, NEAR CENTRAL POINT.....	356-358
WALDO LAKE NEAR OAKRIDGE.....	105	BELOW PROSPECT.....	321-323
LEMOLO LAKE NEAR TOKETTE FALLS.....	302	NEAR AGNESS.....	390-394
LITTLE BUTTE CREEK, NORTH FORK, AT FISH LAKE,		NEAR MCLEOD.....	335-337
NEAR LAKECREEK.....	351	NEAR MERLIN.....	385,386
NORTH FORK, NEAR LAKECREEK.....	352	SOUTH FORK, NEAR PROSPECT.....	324
SOUTH FORK, NEAR LAKECREEK.....	350	SOUTH OF PROSPECT.....	325-327
LITTLE CREEK NEAR KNAPPA.....	404	TRIBUTARY NEAR TRAIL.....	404
LITTLE NORTH SANTIAM RIVER NEAR MEHAMA.....	197	ROGUE RIVER BASIN, DISCHARGE MEASUREMENTS AT	
LITTLE RIVER AT PEEL.....	308	MISCELLANEOUS SITES IN.....	405
LITTLE SANDY RIVER NEAR BULL RUN.....	94,95	ROW RIVER, ABOVE PITCHER CREEK, NEAR DORENA....	130
LONG TOM RIVER, AT MONROE.....	176	NEAR COTTAGE GROVE.....	132
NEAR ALVADORE.....	174		
NEAR NOTI.....	171		
LOOKINGGLASS CREEK AT BROCKWAY.....	292	SALMON CREEK NEAR OAKRIDGE.....	103
LOOKOUT CREEK NEAR BLUE RIVER.....	157	SALMON RIVER NEAR GOVERNMENT CAMP.....	47
LOOKOUT POINT LAKE NEAR LOWELL.....	111	SANDY RIVER NEAR MARMOT.....	48
LOST CREEK LAKE NEAR MCLEOD.....	328	SANDY RIVER BASIN, DISCHARGE MEASUREMENTS AT	
LOWER PONY CREEK RESERVOIR AT COOS BAY.....	317	MISCELLANEOUS SITES IN.....	405
LUCKIAMUTE RIVER NEAR SUVER.....	219	SANTIAM RIVER AT JEFFERSON.....	216-218
MARYS RIVER NEAR PHILOMATH.....	177		
MCGUIRE LAKE NEAR FAIRDALE.....	260		
MCKENZIE RIVER, AT MCKENZIE BRIDGE.....	143-146		
AT OUTLET OF CLEAR LAKE.....	134		
BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS.	137-141		

INDEX

419

PAGE

SCOGGINS CREEK BELOW HENRY HAGG LAKE, NEAR GASTON.....	235
SILETZ RIVER AT SILETZ.....	267-269
SIUSLAW RIVER NEAR MAPLETON.....	278-280
NORTH FORK, NEAR MINERVA.....	281
SMITH RIVER (WILLAMETTE RIVER BASIN) ABOVE SMITH RIVER RESERVOIR, NEAR BELKNAP SPRINGS.....	135
RESERVOIR NEAR BELKNAP SPRINGS.....	136
SOUTH SANTIAM RIVER, AT WATERLOO.....	212-214
BELOW CASCADIA.....	199-201
NEAR FOSTER.....	209-211
SOUTH UMPQUA RIVER, AT DAYS CREEK.....	285-287
AT TILLER.....	283
NEAR BROCKWAY.....	293
NEAR ROSEBURG.....	294-300
SOUTH YAMHILL RIVER, NEAR WHITESON.....	225
NEAR WILLAMINA.....	223
TRIBUTARY NEAR WILLAMINA.....	403
SPECIAL NETWORKS AND PROGRAMS.....	16
STEAMBOAT CREEK NEAR GLIDE.....	307
SUCKER CREEK BELOW LITTLE GRAYBACK CREEK, NEAR HOLLAND.....	396
THOMAS CREEK NEAR SCIO.....	215
TIMOTHY LAKE NEAR GOVERNMENT CAMP.....	246
TUALATIN RIVER, AT WEST LINN.....	239-242
NEAR DILLEY.....	236,237
NEAR GASTON.....	231-233

PAGE

UMPQUA RIVER NEAR ELKTON.....	313-316
UPPER PONY CREEK RESERVOIR NEAR COOS BAY.....	317
WALDO LAKE NEAR OAKRIDGE.....	105
WALDO LAKE OUTLET NEAR OAKRIDGE.....	106
WILEY CREEK AT FOSTER.....	208
WILLAMETTE RIVER, ABOVE CALAPOOIA RIVER, AT ALBANY.....	178,179
ABOVE FALLS, AT OREGON CITY.....	243
AT ALBANY.....	185
AT HARRISBURG.....	168-170
AT PORTLAND.....	253-255
AT SALEM.....	220-222
BELOW FALLS, AT OREGON CITY.....	244,245
COAST FORK, AT LONDON.....	125-127
BELOW COTTAGE GROVE DAM.....	129
NEAR GOSHEN.....	133
MIDDLE FORK, ABOVE SALT CREEK, NEAR OAKRIDGE. AT JASPER.....	100-102
BELOW NORTH FORK, NEAR OAKRIDGE.....	122-124
NEAR DEXTER.....	108-110
NEAR OAKRIDGE.....	112-114
NORTH FORK OF, NEAR OAKRIDGE.....	96-98
TRIBUTARY NEAR OAKRIDGE.....	107
WILLAMETTE RIVER BASIN, DISCHARGE MEASUREMENTS AT MISCELLANEOUS SITES IN.....	403
WILLAMINA CREEK NEAR WILLAMINA.....	405
WILSON RIVER NEAR TILLAMOOK.....	224
YAQUINA RIVER NEAR CHITWOOD.....	259
ZIGZAG RIVER NEAR RHODODENDRON.....	270
	45,46

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1 2.54×10^{-2}	millimeters (mm) meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3 4.047×10^{-1} 4.047×10^{-3}	square meters (m ²) square hectometers (hm ²) square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0 3.785×10^0 3.785×10^{-3}	liters (L) cubic decimeters (dm ³) cubic meters (m ³)
million gallons	3.785×10^3 3.785×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1 2.832×10^{-2}	cubic decimeters (dm ³) cubic meters (m ³)
cfs-days	2.447×10^3 2.447×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3 1.233×10^{-3} 1.233×10^{-6}	cubic meters (m ³) cubic hectometers (hm ³) cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1 2.832×10^{-2}	liters per second (L/s) cubic decimeters per second (dm ³ /s)
gallons per minute (gal/min)	6.309×10^{-2} 6.309×10^{-2} 6.309×10^{-5}	cubic meters per second (m ³ /s) liters per second (L/s) cubic decimeters per second (dm ³ /s)
million gallons per day	4.381×10^1 4.381×10^{-2}	cubic meters per second (m ³ /s) cubic decimeters per second (dm ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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