

# CREST-STAGE GAGING STATIONS IN OREGON

A Compilation Of Peak Data Collected From  
October 1952 to September 1974

In cooperation with  
Oregon State Highway Commission  
Federal Highway Administration  
Bureau of Land Management

Open-File Report . . . October 1974



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by John Friday

Prepared by

UNITED STATES DEPARTMENT OF THE INTERIOR  
Geological Survey  
Water Resources Division  
Portland, Oregon

In cooperation with

Oregon State Highway Commission  
Federal Highway Administration  
Bureau of Land Management



Open-File Report . . . October 1974



#### NOTE TO THE USER

This report presents a complete compilation of annual peak stages and discharges at the study sites through September 1974. It supersedes all previous reports.

COPIES OF PRIOR REPORTS IN THIS SERIES CAN BE  
DISCARDED.



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# CREST-STAGE GAGING STATIONS IN OREGON

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## Introduction

A crest-stage gaging station provides an excellent means for determining peak water-surface elevations at a selected location on a stream channel. When related to streamflow, these data provide hydrologists with a knowledge of the flood experience of a drainage basin. If an adequate flood history is known, it is possible to estimate the probable magnitude and frequency of floods likely to occur in that basin, and this information is a valuable asset to anyone who must estimate design floods at proposed drainage structures. However, most design problems involve estimating peak flows on ungaged streams. This is difficult because the rate of storm runoff is not the same in all basins due to the influence of various basin characteristics which can either assist or retard the runoff. The crest-stage gaging program in Oregon is designed to provide a representative sampling of peak flows at basins having a wide range in characteristics. Then, after sufficient data are collected, a statistical analysis can be made which will provide a means for estimating design floods at ungaged sites on the basis of known basin characteristics.

This report is one of a series presenting a compilation of peak data collected at 232 crest-stage gaging stations in Oregon. The collection and publication of these data are made possible through mutual funding by State and Federal agencies. The Geological Survey, the Oregon State Highway Commission, the Federal Highway Administration, and the Bureau of Land Management are currently supporting 160 active crest-stage stations in Oregon.

## Explanation of Data

A crest-stage gaging station is a partial-record station because only peak-flow data are published. The Geological Survey also publishes streamflow data at 366 continuous-record stations on rivers, canals, lakes, and reservoirs in Oregon. Most continuous-record stations that provide peak-flow data have large drainage areas, and the hydrologic analysis of flood runoff has limited application to small basins. The network of crest-stage stations is specifically designed to collect peak-flow data at small drainage basins (less than 50 square miles), thereby extending the sampling of peak data to a full range of drainage areas in Oregon.

Most crest-stage stations are at highway culverts because these structures provide a good means for computing a stage-discharge relation (rating). Each station is operated for at least 10 years, which is usually adequate to define a 25-year design flood. To determine a 50-year flood, 20 or more years of peak-flow data are needed.

Many stations in this report have been discontinued because it was not economically feasible to continue their operation beyond the 10-year minimum period of record required for statistical analyses. Other stations with short periods of record have also been discontinued because of extensive flood damage to the drainage structure, severe debris obstructions during peak flows, or because of alterations in the normal surface runoff in the drainage basin (new reservoirs, stock ponds, and transbasin diversions). All records for discontinued stations are included in this compilation report for easy reference to historical data.

## Explanation of Data

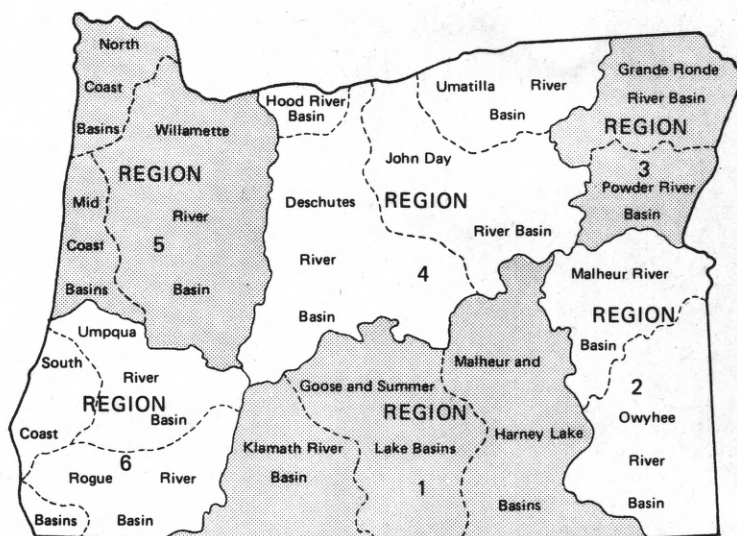


Figure 1.--Regional map of Oregon showing major drainage basins.

To simplify the presentation of data in this report, Oregon has been divided into six regions (fig. 1). The regional boundaries are formed by major drainage basins within the State and do not necessarily indicate a homogeneity of streamflow data within the region. The location of crest-stage gaging stations in each region is shown on maps preceding the station records (figs. 2-7). Also shown is the location of miscellaneous measurements of peak flows made at sites other than crest-stage stations that have drainage areas of less than 50 square miles. A complete tabulation of miscellaneous peak-flow measurements is given in table 1, page 153.

### Region 1

Located in south-central Oregon, Region 1 includes the drainage basins of Malheur, Harney, Goose, and Summer Lakes, the High Lava Plains, and the Klamath River basin (fig. 2, p. 6). Additional gaging-station records collected at continuous-recording stations on larger streams, lakes, and reservoirs are published by the Geological Survey in annual reports entitled "Water Resources Data for Oregon - Part 1" and also in water-supply papers entitled "The Great Basin" and "Pacific Slope Basins in California," Parts 10 and 11.

There are no crest-stage gage stations in the central part of Region 1 because it is impossible to define the surface-water hydrology in this arid lava and volcanic-ash desert. There is little evidence that this area experiences flash flooding from convection storm cells common to many other areas in eastern Oregon. Streams in the remainder of the region originate in well-defined mountain ranges and usually have peak flows produced by snowmelt. Of the 17 stations now operated in the region, 11 are on streams tributary to the closed lakes of the Great Basin; the others are in the Klamath River drainage.

### Region 2

This region is in the southeastern corner of Oregon and includes the Owyhee and Malheur River basins (fig. 3, p. 17). Additional gaging-station records in Region 2 are published by the Geological Survey in annual reports and in reports entitled "Snake River Basin," Part 13.

The Owyhee River drainage was completely devoid of crest-stage stations until 1969. Most of the eight stations in this basin are inaccessible during much of the winter and early spring seasons and free-flow conditions must be assumed during periods of peak runoff.

The remaining seven stations in the region are accessible throughout the year and annual and secondary peaks are well documented. Peak flows at these stations usually result from snowmelt and generalized rainstorms, but flash flooding from thunderstorm activity in the spring and summer months has also occurred.



## Explanation of Data

### Region 3

Located in northeastern Oregon, Region 3 includes the Burnt, Powder, and Grande Ronde River basins (fig. 4, p. 25). Additional gaging-station records within the region are published in the same annual and "Snake River Basin," Part 13 reports mentioned for Region 2.

The Blue and the Wallowa Mountain Ranges are the most significant orographic features of this region. The distribution of 16 active crest-stage stations is about equally divided between high-elevation tributaries and the interior valley streams. Almost all stations record peaks resulting from rainfall sometimes augmented by antecedent snowmelt. Some stations in the Burnt and Powder River basins also have recorded peaks resulting from high-intensity rainfall associated with thunderstorms. Low-elevation stations are accessible throughout the year, and peak data are well documented. Stations in the higher elevations are snowbound during part of the winter season, and some peak stages may be affected by obstructions from ice.

### Region 4

Region 4 is in north-central Oregon and includes the Umatilla, John Day, Deschutes, and Hood River drainage basins (fig. 5, p. 38). Additional gaging-station records collected at streams within the region are published by the Geological Survey in annual reports and in reports entitled "Pacific Slope Basins in Oregon and Lower Columbia River Basin," Part 14.

This large region extends from the summit of the Cascade Range to the summit of the Blue Mountains. The Ochoco Mountains form another impressive range in the south-central part of the region. Part of the southern regional boundary shares the same pervious volcanic-ash desert mentioned in the Region 1 discussion. Except for the desert area and the east slope of the Cascade Range, 57 crest-stage gaging stations are fairly well distributed throughout the region. Highly sustained spring flows are the source of most small streams originating on the east slope of the Cascade Range. However, these streams often lose flow in the volcanic areas on the lower slopes of the range.

Small basins in the more arid areas generally have ephemeral streams which respond to winter rainstorms. Gaging stations in the mountainous areas are not always accessible during the winter, but annual peaks result from spring snowmelt. Region 4 also has large areas subject to severe flash flooding from highly localized convection storm cells. Such storms usually occur in the spring and summer seasons.

### Region 5

This region is in the northwestern corner of Oregon and includes the Willamette and Sandy River basins and Pacific slope basins north of the Umpqua River (fig. 6, p. 73). Additional gaging-station records collected at continuous-recording gages in the large basins also are published in the annual and in the Part 14 reports.

Regions 5 and 6 are considered to be the "western" regions of Oregon. The first network of crest-stage stations established in the State was in the Willamette River basin in Region 5. This basin lies between the Coast and Cascade Ranges and, until 1968, had a network density of about one crest-stage gaging station per 400 square miles.

In 1968, many stations in the lower elevations of Region 5 were discontinued because of adequate records. Of the 31 stations now active, 13 are stations designed to collect at least 20 years of data. All stations respond to numerous peak flows which occur during the winter season. Annual peak events at stations high in the Cascade Range usually include some snowmelt, but seldom result from the sustained spring thawing common to eastern Oregon.

### Region 6

This region is in southwestern Oregon and includes Pacific slope basins from the Umpqua River to the Oregon-California boundary (fig. 7, p. 119). Additional gaging-station records in Region 6 are published in the Statewide annual reports and also in the Part 14 reports.

This region is very mountainous and has fairly narrow interior valleys along the Umpqua and Rogue Rivers. The Cascade Range, Siskiyou and Klamath Mountains, and the Coast Range are the most significant orographic features of the region. Like Region 5, some stations have been discontinued because of adequate record. The current network consists of 24 stations, of which six are long-term stations. As in Region 5, the annual peak events usually result from winter rainstorms augmented by snowmelt in the Cascade Range.

## Explanation of Data

### Definition of Terms

Definitions of the terms used in this report are as follows:

Basin runoff, expressed as cubic feet per second per square mile ( $\text{ft}^3/\text{s}/\text{mi}^2$ ), is the instantaneous volume of peak flow from each square mile of drainage area, assuming that the runoff is distributed uniformly in time and area.

Channel slope is the average gradient of the stream channel above the gage and is determined by measuring the fall and distance between two points which are 85 percent and 10 percent of the channel length upstream from the gage. The channel length is the distance from the gage to the summit of the basin via the longest tributary.

Control designates a feature downstream from a gage that determines a stage-discharge relation at the gage. This feature may be anything that causes a loss of energy of the water, such as a natural channel constriction, a drainage structure, or a sharp curve in the channel.

Crest-stage gaging station is a partial-record station where instantaneous peak-flow data are collected systematically over a period of years for use in hydrologic analysis.

Discharge is the volume of water passing a given point in a stream channel within a given period of time. In this report, discharge represents instantaneous peak streamflow expressed as cubic feet per second ( $\text{ft}^3/\text{s}$ ).

Drainage area is that area, measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the stream above a specified point. Figures of drainage area include all closed basins and noncontributing areas unless otherwise noted.

Gage datum is a permanent, arbitrary local datum established to maintain an accurate vertical control. If established bench marks are available, the gage datum is also referenced to mean sea level datum.

Gage heights are water-surface elevations at a gage and are referenced to gage datum.

Invert is the lowest point in the internal cross section of a culvert barrel.

Mean elevation is the average elevation of the drainage area above mean sea level and is determined by superimposing a grid on a topographic map of the basin and averaging the elevations of at least 20 grid points.

Rating refers to a stage-discharge relation developed at a gage upstream from a controlling feature in the stream channel. It is defined by relating gage heights (stages) to streamflow (discharge) determined from current-meter measurements or computations of flow through a range of stages.

Water year is a 12-month period beginning October 1. A water year ending September 30, 1974, is called the "1974 water year."

### Gaging Station Records

The gaging-station records in this report consist of a brief description of the location and physical features of each site and a compilation of the peak data collected through the period of record.

The number appearing above the station name is a reference number used on the regional maps (figs. 2-7) which precede the tabulation of data for each region. The number shown as part of the station name is a station index number assigned by the Geological Survey in its nationwide inventory of gaging stations.

The manuscript part of the gaging-station records gives a brief description of the location of the station, the characteristics of the drainage basin (if adequate contour maps are available), and the type of drainage structure (control) for which a stage-discharge relation has been developed. Pertinent remarks needed to explain or otherwise qualify the tabular data are also included in the manuscript.

## Explanation of Data

### Gaging Station Records

All units of measurements given in the manuscript part of the gaging-station records are in English units with the metric equivalent shown in parentheses. English units were converted to the International System (SI) of metric units by using the following conversion factors:

<u>Conversion factors</u>		
<u>To convert</u>	<u>To</u>	<u>Multiply by</u>
Inches (in.)	Millimetres (mm)	2.540x10
Feet (ft)	Metres (m)	3.048x10 <sup>-1</sup>
Miles (mi)	Kilometres (km)	1.609
Square miles (mi <sup>2</sup> )	Square kilometres (km <sup>2</sup> )	2.590
Acre-feet (acre-ft)	Cubic hectometres (hm <sup>3</sup> )	1.233x10 <sup>-3</sup>
Cubic feet per second (ft <sup>3</sup> /s)	Cubic metres per second (m <sup>3</sup> /s)	2.832x10 <sup>-2</sup>
Feet per mile (ft/mi)	Metres per kilometre (m/km)	1.894x10 <sup>-1</sup>
Note: To convert basin runoff expressed as cubic feet per second per square mile (ft <sup>3</sup> /s/mi <sup>2</sup> ) to cubic metres per second per square kilometre (m <sup>3</sup> /s/km <sup>2</sup> ), multiply by 1.090x10 <sup>-2</sup> .		

The dates of the peak events given in the tabulation of data are sometimes approximated on the basis of nearby continuous-record gaging stations, information from local residents, or from records from the National Weather Service.

The gage heights shown are headwater elevations at the drainage structure. These elevations are referred to permanent datum controls established at each site. Gage heights do not always have a direct relation to discharges because of variable backwater conditions from the downstream channel or because of debris at the culvert entrance. Such conditions are always noted in the manuscript preceding the tabulation of data.

Minor revisions of previously published data may become necessary because of additional rating definition or because of gradual changes in the stage-discharge relation or in the hydraulic properties of the drainage structure. This report, therefore, supersedes previous publications and such reports should be discarded.

Inquiries regarding further explanation of these data or regarding the availability of supplemental data, such as secondary peaks and base-flow data, should be addressed to:

District Chief  
U.S. Geological Survey  
Water Resources Division  
P. O. Box 3202  
Portland, Oregon 97208



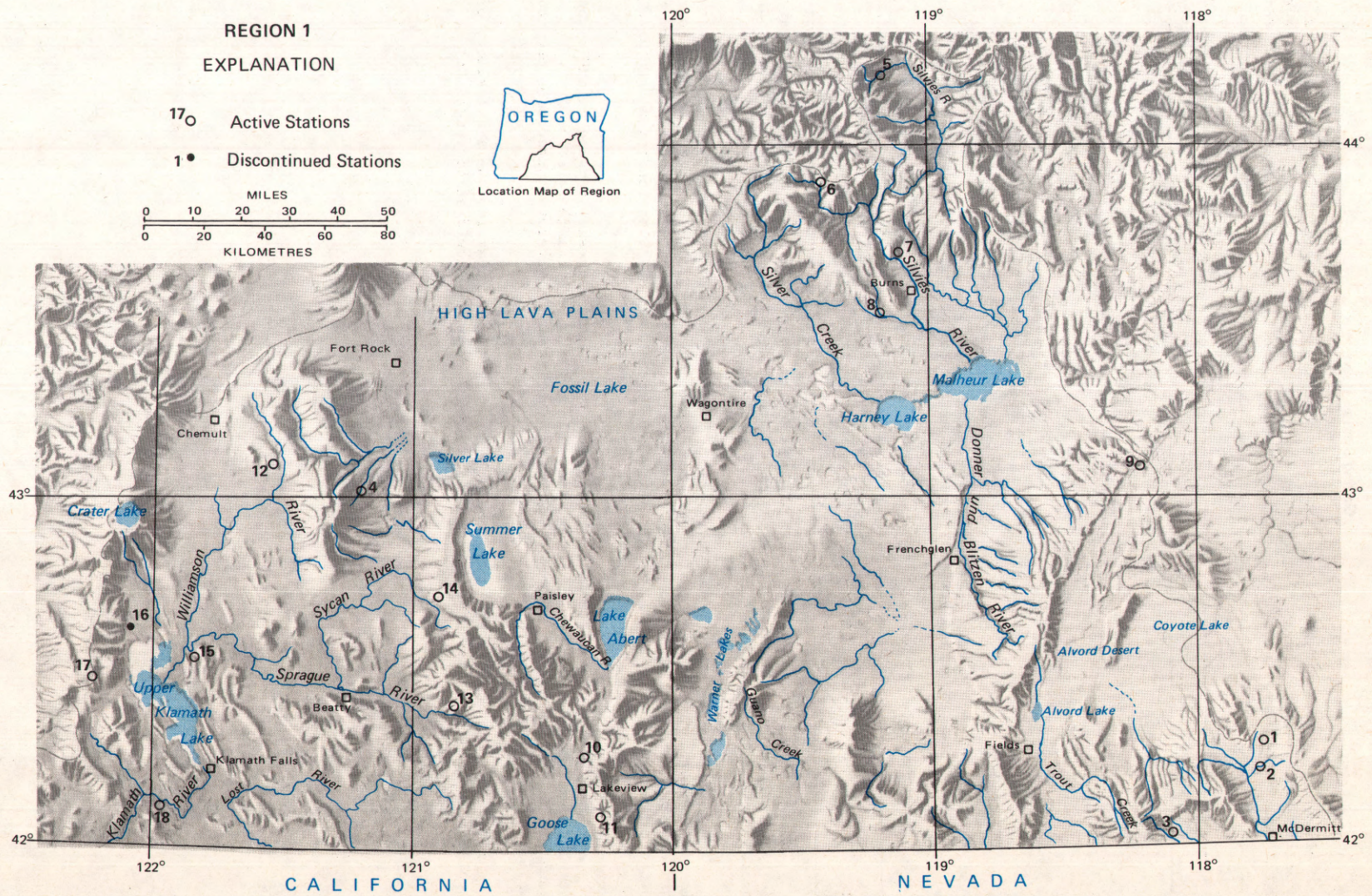


Figure 2.--Map of Region 1 showing the location of crest-stage gaging stations.



# REGION 1

7

## THE GREAT BASIN

### BLACK ROCK DESERT BASIN

#### QUINN RIVER BASIN

1

#### 10352200 BLUE MOUNTAIN CREEK TRIBUTARY NEAR McDERMITT, NEV.

LOCATION.--Lat 42°17'03", long 117°43'06", in SW¼ sec.7, T.38 S., R.43 E., Malheur County, at culvert on BLM access road, 0.1 mi (0.2 km) upstream from mouth, 0.5 mi (0.8 km) south of Reservoir No. 4, and 22 mi (35 km) north of McDermitt.

BASIN CHARACTERISTICS.--Drainage area, 2.2 mi<sup>2</sup> (5.7 km<sup>2</sup>), approximately. Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 2.5-ft (0.76 m) diameter culvert with upstream invert at 2.46 ft (0.750 m), gage datum.

REMARKS.--Station was established Oct. 19, 1971. Bypass flow will occur on right bank at 4.4 ft (1.34 m), gage datum.

#### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1972	Jan. 21, 1972	3.13	2.2	1.0
1973	Apr. 16, 1973	2.71	0.72	0.3
1974	Mar. 30, 1974	2.98	1.5	0.7

2

#### 10352300 JACKSON CREEK TRIBUTARY NEAR McDERMITT, NEV.

LOCATION.--Lat 42°14'00", long 117°44'20", in N½ sec.36, T.38 S., R.42 E., Malheur County, at culvert on Bureau of Land Management Star Valley Road, 14 mi (24 km) north of McDermitt.

BASIN CHARACTERISTICS.--Drainage area, 6.6 mi<sup>2</sup> (17.1 km<sup>2</sup>), approximately. Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 8.65 ft (2.637 m), gage datum.

REMARKS.--Station was established Aug. 12, 1969. Road overflow will occur at 13.8 ft (4.21 m), gage datum. Culvert assumed to be unobstructed during peak of Jan. 20, 1969.

#### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Jan. 20, 1969	9.49	4.2	0.6
1970	May 13, 1970	9.39	3.0	0.5
1971	Jan. 17, 1971	9.68	7.0	1.1
1972	Jan. 21, 1972	9.73	7.6	1.2
1973	Apr. 16, 1973	8.80	1.5	0.2
1974	Mar. 30, 1974	9.79	8.4	1.3

## REGION 1

## THE GREAT BASIN (Continued)

## QUINN RIVER BASIN

3

10352400 TURNER CREEK NEAR McDERMITT, NEV.

LOCATION.--Lat 42°02'18", long 118°06'55", in SW¼ sec.2, T.41 S., R.39 E., Malheur County, at culvert on BLM access road, 20 mi (32 km) west of McDermitt.

BASIN CHARACTERISTICS.--Drainage area, 2.0 mi<sup>2</sup> (5.2 km<sup>2</sup>), approximately. Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 3.0-ft (0.91 m) diameter culvert with upstream invert at 3.43 ft (1.045 m), gage datum.

REMARKS.--Station was established Sept. 23, 1970. Road overflow will occur at 7.2 ft (2.19 m), gage datum. Culvert system destroyed during flood of Jan. 17, 1971. Peak discharges for period 1971 to 1974, determined by slope-conveyance method at site 175 ft (53 m) upstream.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	-	97	48.5
1972	Mar. 2, 1972	-	57	28.5
1973	Apr. 16, 1973	-	19	9.5
1974	Mar. 30, 1974	-	20	10.0

## SILVER LAKE BASIN

4

10390400 BRIDGE CREEK NEAR THOMPSON RESERVOIR, OREG.

LOCATION.--Lat 43°01'28", long 121°12'04", in SE¼SW¼ sec.29, T.29 S., R.13 E., Lake County, at culvert on Forest Service road 2800 in Fremont National Forest, 7.2 mi (11.6 km) northwest of Thompson Reservoir, and 11 mi (18 km) southwest of town of Silver Lake.

BASIN CHARACTERISTICS.--Drainage area, 10.6 mi<sup>2</sup> (27.5 km<sup>2</sup>). Channel elevation at gage is 5,055 ft (1,541 m). Mean elevation of basin is 6,170 ft (1,881 m); channel slope, 288 ft/mi (54.5 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 7.0-ft (2.11 m) diameter culvert with upstream invert at 7.18 ft (2.188 m), gage datum.

REMARKS.--Station was established Aug. 10, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Peak discharges for the period 1965 to 1968 revised on the basis of additional rating definition. No data reported in 1969.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	13.10	218	20.6
1966	Apr. 25, 1966	12.60	186	17.5
1967	May 1, 1967	12.21	166	15.7
1968	Mar. 30, 1968	9.91	56	5.3
1970	May 13, 1970	10.11	64	6.0
1971	Jan. 18, 1971	11.29	118	11.1
1972	Mar. 3, 1972	9.68	47	4.4
1973	Apr. 28, 1973	9.49	41	3.9
1974	June 15, 1974	10.38	76	7.2



## REGION 1

9

## THE GREAT BASIN (Continued)

## MALHEUR AND HARNEY LAKES BASIN

5

## 10392300 SILVIES RIVER NEAR SENECA, OREG.

LOCATION.--Lat 44°10'30", long 119°12'50", in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.23, T.16 S., R.29 E., Grant County, at culvert on Forest Service road 1611 in Malheur National Forest, 100 ft (30 m) downstream from Wickiup Creek, and 12 mi (19 km) northwest of Seneca.

BASIN CHARACTERISTICS.--Drainage area, 18.4 mi<sup>2</sup> (47.6 m<sup>2</sup>). Channel elevation at gage is 5,020 ft (1,530 m). Mean elevation of basin is 5,530 ft (1,686 m); channel slope, 98 ft/mi (18.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 10.8 ft (3.29 m) x 6.8 ft (2.07 m) multiplate pipe-arch culvert with upstream invert at 10.52 ft (3.206 m), gage datum. Stage-discharge relation may be subject to variable backwater from downstream channel.

REMARKS.--Station was established Oct. 13, 1965. Road overflow will occur at 16.3 ft (4.97 m), gage datum. No peak data reported in 1966.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	May 10, 1967	13.06	100	5.4
1968	Feb. 22, 1968	11.69	22	1.2
1969	Apr. 10, 1969	12.44	57	3.1
1970	May 24, 1970	13.18	108	5.9
1971	May 10, 1971	12.74	78	4.2
1972	Mar. 2, 1972	12.38	53	2.9
1973	Mar. 1, 1973	11.73	23	1.2
1974	Mar. 15, 1974	12.99	96	5.2

6

## 10392800 CROWSFOOT CREEK NEAR BURNS, OREG.

LOCATION.--Lat 43°53'55", long 119°29'50", in NE $\frac{1}{4}$  sec.29, T.19 S., R.27 E., Harney County, at culvert on Forest Service road 1939 in Ochoco National Forest, 1 mi (2 km) upstream from mouth, and 31 mi (50 km) northwest of Burns.

BASIN CHARACTERISTICS.--Drainage area, 8.50 mi<sup>2</sup> (22.02 km<sup>2</sup>). Channel elevation at gage is 5,250 ft (1,600 m). Mean elevation of basin is 5,790 ft (1,765 m); channel slope, 210 ft/mi (39.8 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 7.8-ft (2.37 m) x 5.4-ft (1.64 m) multiplate pipe-arch culvert with upstream invert at 6.98 ft (2.128 m), gage datum.

REMARKS.--Station was established July 29, 1965. Road overflow will occur at 14.0 ft (4.27 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	Apr. 2, 1966	8.45	26	3.1
1967	May 9, 1967	8.82	39	4.6
1968	Feb. 22, 1968	8.71	35	4.1
1969	Apr. 3, 1969	9.04	50	5.9
1970	Jan. 24, 1970	8.61	32	3.8
1971	Jan. 17, 1971	9.53	72	8.5
1972	Mar. 13, 1972	9.55	73	8.6
1973	Apr. 9, 1973	8.63	32	3.8
1974	May 10, 1974	9.59	74	8.7

## REGION 1

## THE GREAT BASIN (Continued)

## MALHEUR AND HARNEY LAKES

7

## 10393900 DEVINE CANYON NEAR BURNS, OREG.

LOCATION.--Lat 43°46'20", long 119°00'15", in NE¼ sec.9, T.21 S., R.31 E., Harney County, at culvert on U.S. Highway 395, at junction with road to Baker corral, 0.7 mi (1.1 km) north of Malheur National Forest boundary, and 15 mi (24 km) north of Burns.

BASIN CHARACTERISTICS.--Drainage area, 4.96 mi<sup>2</sup> (12.85 km<sup>2</sup>). Channel elevation at gage is 4,920 ft (1,500 m). Mean elevation of basin is 5,410 ft (1,649 m); channel slope, 110 ft/mi (20.8 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 12.03 ft (3.667 m), gage datum.

REMARKS.--Station was established June 11, 1964. No peak data collected in 1967. Peaks of 1967, 1969, 1970, and 1971 are highest observed. Peak discharges for period of 1965 to 1970 revised on basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	June 9, 1965	13.20	28	5.6
1966	Mar. 17, 1966	12.42	5.0	1.0
1967	Apr. 25, 1967	12.38	2.0	0.4
1968	Mar. 4, 1968	12.70	12	2.4
1969	Apr. 3, 1969	12.42	4.9	1.0
1970	Mar. 10, 1970	12.48	6.4	1.3
1971	Apr. 26, 1971	12.62	9.4	1.9
1972	Mar. 16, 1972	12.79	14	2.8
1973	Mar. 1, 1973	12.33	3.5	0.7
1974	Mar. 15, 1974	12.59	9.0	1.8

8

## 10395200 SAGE HEN CREEK NEAR BURNS, OREG.

LOCATION.--Lat 43°31'30", long 119°15'10", in NW¼ sec.4, T.24 S., R.29 E., Harney County, at culvert on U.S. Highway 395, 4.1 mi (6.6 km) west of Willow Creek, and 10.8 mi (17.4 km) southwest of Burns.

BASIN CHARACTERISTICS.--(Not defined because of inadequate maps.)

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 3.0-ft (0.91 m) diameter culvert with upstream invert of 11.23 ft (3.423 m), gage datum.

REMARKS.--Station was established Aug. 1, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Mar. 31, 1969	12.67	8.2	-
1970	Jan. 26, 1970	12.91	11	-
1971	Mar. 25, 1971	12.36	5.3	-
1972	Mar. 2, 1972	12.37	5.3	-
1973	Mar. 1, 1973	12.32	5.2	-
1974	Mar. 15, 1974	13.79	21	-

## REGION 1

## CENTRAL VALLEY IN OREGON-CALIFORNIA (Continued)

## GOOSE LAKE BASIN

11

11341200 CRANE CREEK NEAR LAKEVIEW, OREG.

LOCATION.--Lat 42°07'05", long 120°17'25", in NW¼ sec.7, T.40 S., R.21 E., Lake County, at culvert on Crane Creek road in Fremont National Forest, 1.5 mi (2.4 km) east of crossing at U.S. Highway 395, and 6 mi (10 km) southeast of Lakeview.

BASIN CHARACTERISTICS.--Drainage area, 11.4 mi<sup>2</sup> (29.5 km<sup>2</sup>). Channel elevation at gage is 5,010 ft (1,527 m). Mean elevation of basin is 6,340 ft (1,932 m); channel slope, 613 ft/mi (116 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 9.21 ft (2.807 m) gage datum.

REMARKS.--Station was established Aug. 12, 1965. Road overflow will occur at 15.2 ft (4.63 m), gage datum. Peak discharges for the period 1966 to 1968 revised on basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	May 10, 1966	11.92	54	4.7
1967	May 9, 1967	14.68	166	14.6
1968	Feb. 21, 1968	12.48	75	6.6
1969	May 13, 1969	14.12	145	12.7
1970	Jan. 23, 1970	15.26	190	16.7
1971	Mar. 12, 1971	14.26	148	13.0
1972	Jan. 21, 1972	14.19	139	11.3
1973	Apr. 12, 1973	12.29	68	6.0
1974	Mar. 15, 1974	12.25	62	5.4



## REGION 1

13

## PACIFIC SLOPE BASINS OREGON-CALIFORNIA

## KLAMATH RIVER BASIN

12

## 11491800 MOSQUITO CREEK TRIBUTARY NEAR SHEVLIN, OREG.

LOCATION.--Lat 43°05'40", long 121°32'50", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.32, T.28 S., R.10 E., Klamath County, at culvert on Forest Service road 283A in Winema National Forest, 150 ft (46 m) south of intersection with road 283, 2 mi (3 km) southwest of Jacks Corral and 8 mi (13 km) southeast of Shevlin.

BASIN CHARACTERISTICS.--Drainage area, 2.63 mi<sup>2</sup> (6.81 km<sup>2</sup>). Channel elevation at gage is 4,900 ft (1,493 m). Mean elevation of basin is 5,090 ft (1,551 m); channel slope, 67 ft/mi (12.7 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 4.1-ft (1.25 m) x 2.6-ft (0.79 m) pipe-arch culvert with upstream invert at 6.61 ft (2.015 m), gage datum.

REMARKS.--Station was established Aug. 9, 1965. Culvert assumed to be unobstructed during peak of Dec. 22, 1964. Peaks of 1968 to 1970 are highest observed during year. No flow observed in 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	9.34	42	16.0
1966	May 10, 1966	8.05	18	6.8
1967	May 9, 1967	8.41	25	9.5
1968	Apr. 22, 1968	6.95	1.5	0.6
1969	June 30, 1969	7.99	17	6.5
1970	June 24, 1970	7.73	12	4.6
1971	Jan. 17, 1971	8.52	28	10.6
1972	Jan. 21, 1972	8.24	22	8.4
1974	Mar. 15, 1974	8.65	30	11.4

13

## 11494800 BROWNSWORTH CREEK NEAR BLY, OREG.

LOCATION.--Lat 42°25'40", long 120°50'20", in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.28, T.36 S., R.16 E., Lake County, at culvert on Forest Service road 3610 in Fremont National Forest, 2 mi (3 km) upstream from Hammond Creek, and about 12 mi (19 km) east of Bly.

BASIN CHARACTERISTICS.--Drainage area, 2.20 mi<sup>2</sup> (5.70 km<sup>2</sup>). Channel elevation at gage is 5,480 ft (1,670 m). Mean elevation of basin is 6,610 ft (2,015 m); channel slope, 468 ft/mi (88.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of peak flow through one 4.5-ft (1.37 m) diameter culvert with upstream invert at 9.18 ft (2.798 m) gage datum.

REMARKS.--Station was established Aug. 11, 1965. Culvert assumed to be unobstructed during peak flow of Dec. 22, 1964. Road overflow will occur at 15.3 ft (4.66 m), gage datum. No peak data reported in 1966. Peaks of 1967 and 1969 resulted from backwater from dam at culvert entrance.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	12.85	66	30.0
1968	Nov. 9, 1967	11.09	22	10.0
1970	Jan. 23, 1970	11.24	25	11.4
1971	Mar. 12, 1971	11.92	42	19.1
1972	Jan. 21, 1972	11.40	25	11.4
1973	Apr. 12, 1973	11.28	22	10.0
1974	Apr. 3, 1974	11.75	35	15.9

## REGION 1

## PACIFIC SLOPE BASINS OREGON-CALIFORNIA (Continued)

## KLAMATH RIVER BASIN

14

## 11497800 CURRIER CREEK NEAR PAISLEY, OREG.

LOCATION.--Lat 42°42'55", long 120°52'50", in NW¼NW¼ sec.18, T.33 S., R.16 E., Lake County, at culvert on Forest Service road 337, 100 ft (30 m) east of junction with road 3313 in Fremont National Forest, 1.4 mi (2.3 km) upstream from mouth, and 17 mi (27 km) west of Paisley.

BASIN CHARACTERISTICS.--Drainage area, 2.46 mi<sup>2</sup> (6.37 km<sup>2</sup>). Channel elevation of gage is 6,220 ft (1,896 m). Mean elevation of basin is 6,660 ft (2,030 m); channel slope, 179 ft/mi (33.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 6.0-ft (1.83 m) x 3.7-ft (1.13 m) pipe-arch culvert with upstream invert at 10.86 ft (3.310 m), gage datum.

REMARKS.--Station was established Aug. 10, 1965. Culvert was assumed to be unobstructed during peak flow of Dec. 22, 1964. Road overflow will occur at 17.7 ft (5.39 m), gage datum. No data reported in 1969.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	15.21	116	47.2
1966	May 8, 1966	12.73	36	14.6
1967	May 10, 1967	17.58	178	72.4
1968	Mar. 30, 1968	13.22	53	21.5
1970	Jan. 23, 1970	13.84	74	30.1
1971	Mar. 13, 1971	15.72	129	52.4
1972	Jan. 21, 1972	14.24	87	35.4
1973	Apr. 12, 1973	12.87	41	16.7
1974	Apr. 3, 1974	14.36	90	36.6

15

## 11501300 CRYSTAL CREEK NEAR CHILOQUIN, OREG.

LOCATION.--Lat 42°33'45", long 121°50'20", in SE¼ sec.2, T.35 S., R.7 E., Klamath County, at culvert on Chiloquin Ridge road in Winema National Forest, 200 ft (61 m) upstream from mouth, and 1.5 mi (2.4 km) southeast of Chiloquin.

BASIN CHARACTERISTICS.--Drainage area, 5.77 mi<sup>2</sup> (14.94 km<sup>2</sup>). Channel elevation at gage is 4,190 ft (1,277 m). Mean elevation of basin is 5,070 ft (1,545 m); channel slope, 328 ft/mi (62.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 6.0-ft (1.83 m) x 3.7-ft (1.13 m) pipe-arch culvert with upstream invert at 12.22 ft (3.725 m), gage datum.

REMARKS.--Station was established Aug. 13, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Road overflow will occur at 16.8 ft (5.12 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (cfs)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	14.89	65	11.3
1966	May 10, 1966	13.10	11	1.9
1967	June 20, 1967	13.45	21	3.6
1968	Mar. 30, 1968	13.25	15	2.6
1969	May 13, 1969	13.17	13	2.3
1970	Jan. 24, 1970	13.64	26	4.5
1971	Jan. 17, 1971	13.82	31	5.4
1972	Jan. 21, 1972	14.85	64	11.1
1973	Apr. 12, 1973	13.41	20	3.5
1974	Apr. 3, 1974	14.11	40	6.9

## REGION 1

15

## PACIFIC SLOPE BASINS OREGON-CALIFORNIA (Continued)

## KLAMATH RIVER BASIN

16

## 11504400 THREEMILE CREEK NEAR CRYSTAL, OREG. (Discontinued)

LOCATION.--Lat 42°38'20", long 122°05'45", in SE¼ sec.3, T.34 S., R.6 E., Klamath County, at culvert on Forest Service road 3413A in Winema National Forest, 1.5 mi (2.4 km) upstream from mouth, and 4 mi (6 km) north of Crystal.

BASIN CHARACTERISTICS.--Drainage area, 9.47 mi<sup>2</sup> (24.53 km<sup>2</sup>). Channel elevation at gage is 4,570 ft (1,393 m). Other basin characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 12.7-ft (3.87 m) x 8.1 ft (2.47 m) pipe-arch culvert with upstream invert at 9.01 ft (2.746 m), gage datum.

REMARKS.--Station was established Aug. 13, 1965. Peak discharge of Dec. 22, 1964, is estimated due to uncertain channel properties. Station discontinued in 1971 because of unstable channel properties. Records of gage heights are available to 1974.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	16.10	556	58.7
1966	May 10, 1966	11.15	44	4.6
1967	May 27, 1967	11.12	42	4.4
1968	Mar. 30, 1968	10.70	22	2.3
1969	May 12, 1969	10.87	41	4.3
1970	Jan. 27, 1970	10.91	45	4.8

17

## 11505550 LOST CREEK NEAR ROCKY POINT, OREG.

LOCATION.--Lat 42°29'35", long 122°11'30", in SE¼ sec.26, T.35 S., R.5 E., Klamath County, at culvert on Forest Service road 3561 in Winema National Forest, 1.5 mi (2.4 km) east of Long Lake, and 5.5 mi (8.8 km) west of Rocky Point.

BASIN CHARACTERISTICS.--Drainage area, 13.2 mi<sup>2</sup> (34.2 km<sup>2</sup>). Channel elevation at gage is 5,320 ft (1,622 m). Mean elevation of basin is 6,040 ft (1,841 m); channel slope, 158 ft/mi (29.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 8.0-ft (2.44 m) diameter culvert with upstream invert at 6.49 ft (1.978 m), gage datum.

REMARKS.--Station was established Aug. 14, 1965. Stage-discharge relation may be subject to backwater conditions in downstream channel. Peak discharges for the period 1966 to 1968 are revised on basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	May 10, 1966	11.42	176	13.3
1967	May 27, 1967	9.45	76	5.8
1968	Mar. 30, 1968	9.30	69	5.2
1969	June 30, 1969	9.98	100	7.6
1970	Jan. 27, 1970	9.35	72	5.5
1971	June 25, 1971	10.42	122	9.2
1972	Jan. 21, 1972	10.22	112	8.5
1973	Dec. 23, 1972	9.35	63	4.8
1974	Apr. 3, 1974	10.98	155	11.7

## REGION 1

## PACIFIC SLOPE BASINS OREGON-CALIFORNIA (Continued)

## KLAMATH RIVER BASIN

18

## 11509400 KLAMATH RIVER TRIBUTARY NEAR KENO, OREG.

LOCATION.--Lat 42°07'50", long 121°57'50", in SW¼ sec.35, T.39 S., R.7 E., Klamath County, at culvert on State Highway 66, 0.3 mi (0.5 km) upstream from mouth, 1.8 mi (2.9 km) west of Keno, and 4.0 mi (6.4 km) east of Klamath River bridge.

BASIN CHARACTERISTICS.--Drainage area, 1.02 mi<sup>2</sup> (2.64 km<sup>2</sup>). Channel elevation at gage is 4,240 ft (1,292 m). Mean elevation of basin is 4,500 ft (1,372 m); channel slope, 315 ft/mi (59.7 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computation of peak flow through one 2.0-ft (0.61 m) diameter culvert with upstream invert at 10.83 ft (3.301 m), gage datum.

REMARKS.--Station was established Aug. 21, 1963. No flow observed during 1964, 1967, 1968 and 1973 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 23, 1964	13.62	18	17.6
1966	Apr. 20, 1966	11.52	1.6	1.6
1969	Mar. 27, 1969	11.29	.96	0.9
1970	Jan. 27, 1970	12.46	9.5	9.3
1971	Jan. 17, 1971	12.54	10	9.8
1972	Jan. 26, 1972	12.22	7.2	7.1
1974	Jan. 15, 1974	12.07	5.9	5.8

## REGION 2

## SNAKE RIVER BASIN

## SUCCOR CREEK BASIN

19

## 13172930 SPRING CREEK TRIBUTARY NEAR ROCKVILLE, OREG.

LOCATION.--Lat 43°13'22", long 117°08'43", in SW¼ sec.7, T.27 S., R.46 E., Malheur County, at culvert on BLM access road, 6 mi (10 km) west of state line, and 5 mi (8 km) south of Rockville.

BASIN CHARACTERISTICS.--Drainage area, 0.76 mi<sup>2</sup> (1.97 km<sup>2</sup>). Channel elevation at gage is 4,880 ft (1,487 m). Mean elevation of basin is 5,420 ft (1,652 m); channel slope, 616 ft/mi (117 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 3.0-ft (0.91 m) diameter culvert with upstream invert at 8.78 ft (2.676 m), gage datum.

REMARKS.--Station was established Aug. 31, 1971. Road overflow will occur at 14.7 ft (4.48 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1972	Jan. 21, 1972	11.56	30	44.8
1973	Dec. 23, 1972	11.37	26	38.8
1974	Mar. 15, 1974	10.28	11	14.5



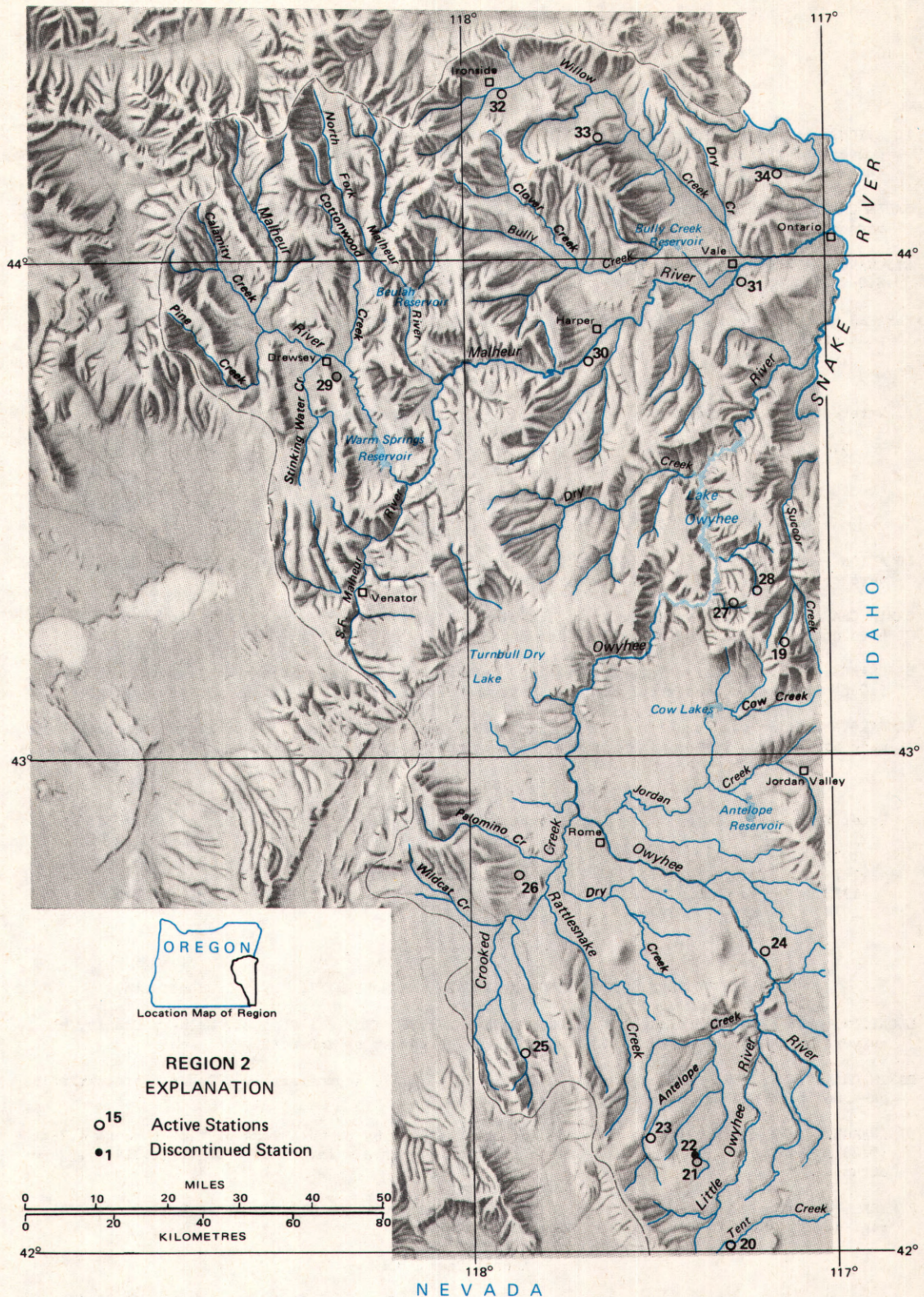


Figure 3.--Map of Region 2 showing the location of crest-stage gaging stations.



## REGION 2

## SNAKE RIVER BASIN (Continued)

## OWYHEE RIVER BASIN

20

13177805 TENT CREEK NEAR McDERMITT, NEV.

LOCATION.--Lat 42°02'00", long 117°16'15", in NW¼ sec.12, T.41 S. R.46 E., Malheur County, at culvert on BLM Star Valley access road, 8 mi (13 km) southwest of Lookout Lake, and 23 mi (37 km) east of McDermitt.

BASIN CHARACTERISTICS.--Drainage area, 11.6 mi<sup>2</sup> (30.0 km<sup>2</sup>), approximately. Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 8.0-ft (2.44 m) diameter culvert with upstream invert at 5.42 ft (1.652 m), gage datum.

REMARKS.--Station was established June 5, 1974. Culvert assumed to be unobstructed during peak of March 7, 1974.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1974	Mar. 7, 1974	10.77	195	16.8

21

13177885 POLE CREEK TRIBUTARY NEAR McDERMITT, NEV.

LOCATION.--Lat 42°09'02", long 117°23'36", in SW¼ sec.25, T.39 S., R.45 E., Malheur County, at culvert on BLM Star Valley Road, 19 mi (31 km) northeast of McDermitt.

BASIN CHARACTERISTICS.--Drainage area, 1.0 mi<sup>2</sup> (2.6 km<sup>2</sup>), approximately. Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 3.17 ft (0.966 m), gage datum.

REMARKS.--Station was established Sept. 22, 1970. Peak of 1971 verified by slope-conveyance study made at site 200 ft (61 m) upstream. Culvert assumed to be unobstructed during peak flows.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	7.05	77	77
1972	Jan. 21, 1972	7.88	105	105
1973	Apr. 16, 1973	4.22	7.2	7.2
1974	Mar. 7, 1974	4.83	17	17

22

13177890 POLE CREEK TRIBUTARY NO. 2 NEAR McDERMITT, NEV. (Discontinued)

LOCATION.--Lat 42°09'29", long 117°25'00", in NW¼ sec.26, T.39 S., R.45 E., Malheur County, at culvert on BLM Star Valley Road, 19 mi (31 km) northeast of McDermitt.

BASIN CHARACTERISTICS.--Drainage area, 0.17 mi<sup>2</sup> (0.44 km<sup>2</sup>), approximately. Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 4.2-ft (1.28 m) by 2.6-ft (0.79 m) pipe-arch culvert with upstream invert at 4.31 ft (1.314 m), gage datum.

REMARKS.--Station was established Sept. 22, 1970. Road overflow will occur at 8.1 ft (2.47 m), gage datum. Station discontinued Sept. 30, 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	5.07	5.0	29.4
1972	Mar. 2, 1972	5.01	4.4	25.8
1973	Apr. 16, 1973	4.61	0.82	4.8

## REGION 2

19

### SNAKE RIVER BASIN (Continued)

#### OWYHEE RIVER BASIN

23

13177895 ANTELOPE CREEK TRIBUTARY NEAR McDERMITT, NEV.

LOCATION.--Lat 42°15'55", long 117°31'45", in NW¼ sec.23, T.38 S., R.44 E., Malheur County, at culvert on BLM Star Valley Road, 21 mi (34 km) northeast of McDermitt.

BASIN CHARACTERISTICS.--Drainage area, 3.20 mi<sup>2</sup> (8.29 km<sup>2</sup>), approximately. Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 5.9-ft (1.80 m) by 3.9-ft (1.19 m) pipe-arch culvert with upstream invert at 8.81 ft (2.685 m), gage datum.

REMARKS.--Station was established Sept. 22, 1970. Peak data above 12.0 ft (3.66 m) gage height are questionable because of extensive bypass flow. Culvert assumed to be unobstructed during peak flows.

#### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	13.76	132	41.2
1972	Jan. 21, 1972	12.52	93	29.0
1973	Apr. 16, 1973	9.24	2.8	0.8
1974	Apr. 2, 1974	13.08	160	50.0

24

13177980 INDIAN CREEK NEAR JORDAN VALLEY, OREG.

LOCATION.--Lat 42°39'25", long 117°12'10", in NE¼ sec.28, T.33 S., R.45 E., Malheur County, at culvert on Bureau of Land Management Soldier Creek Road, 24 mi (39 km) south of Jordan Valley.

BASIN CHARACTERISTICS.--Drainage area, 4.0 mi<sup>2</sup> (10.4 km<sup>2</sup>), approximately. Other characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 8.04 ft (2.451 m), gage datum.

REMARKS.--Station established Aug. 12, 1969. Road overflow will occur at 13.8 ft (4.21 m), gage datum. Culvert assumed to be unobstructed during peak flow.

#### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1970	June 30, 1970	11.04	42	10.5
1971	Jan. 17, 1971	10.24	25	6.2
1972	Jan. 21, 1972	10.46	29	7.2
1973	Dec. 23, 1972	9.71	15	3.8
1974	Mar. 7, 1974	11.77	57	14.2

## REGION 2

## SNAKE RIVER BASIN (Continued)

## OWYHEE RIVER BASIN

25

## 13181300 CROOKED CREEK NEAR BURNS JUNCTION, OREG.

LOCATION.--Lat 42°24'09", long 117°51'27", in SW¼ sec.36, T.36 S., R.41 E., Malheur County, at twin culverts on U.S. Highway 95, 0.6 mi (1.0 km) south of Basque maintenance yards, and 24.5 mi (39.4 km) south of Burns Junction.

BASIN CHARACTERISTICS.--Drainage area, 46.2 mi<sup>2</sup> (119.6 km<sup>2</sup>). Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from computations of flow through two 4.0-ft (1.22 m) diameter culverts with upstream inverts at 10.25 ft (3.124 m), gage datum.

REMARKS.--Station was established Oct. 17, 1972. Peaks of 1973 and 1974 are adjusted on basis of silt obstruction on culvert inverts.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1973	Apr. 12, 1973	11.43	5.0	0.1
1974	Apr. 2, 1974	10.91	2.0	.04

26

## 13181400 CROOKED CREEK TRIBUTARY AT BURNS JUNCTION, OREG.

LOCATION.--Lat 42°45'48", long 117°51'15", in SW¼ sec.19, T.32 S., R.40 E., Malheur County, at culvert on U.S. Highway 95, 0.95 mi (1.53 km) south of Burns Junction, and 13 mi (21 km) southwest of Rome.

BASIN CHARACTERISTICS.--Drainage area, 4.83 sq mi (12.5 km<sup>2</sup>). Contributing drainage area is influenced by State Highway 78 which intercepts runoff that would otherwise flow into the basin. Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4-ft (1.22 m) diameter culvert with upstream invert at 1.56 ft (0.475 m), gage datum.

REMARKS.--Station was established Oct. 18, 1972.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1973	May 10, 1973	2.80	4.0	0.8
1974	Apr. 2, 1974	1.86	0.5	0.1



# REGION 2

21

## SNAKE RIVER BASIN (Continued)

### OWYHEE RIVER BASIN

27

#### 13182100 DAGO GULCH NEAR ROCKVILLE, OREG.

LOCATION.--Lat 43°17'37", long 117°15'14", in SW¼SE¼ sec.18, T.26 S., R.45 E., Malheur County, at culvert on Bureau of Land Management Leslie Gulch Road, 0.2 mi (0.3 km) west of Runaway Creek, and 8 mi (13 km) west of Rockville.

BASIN CHARACTERISTICS.--Drainage area, 3.09 mi<sup>2</sup> (8.00 km<sup>2</sup>). Channel elevation at gage is 3,640 ft (1,109 m). Mean elevation of basin is 4,560 ft (1,390 m); channel slope, 675 ft/mi (128 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 8.0-ft (2.44 m) x 6.0-ft (1.83 m) pipe-arch culvert with upstream invert at 10.90 ft (3.322 m), gage datum.

REMARKS.--Station was established May 19, 1970. Ditch bypass will occur at 16.7 ft (5.09 m), gage datum. Peaks of 1973 and 1974 are estimated.

#### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1970	June 30, 1970	12.69	34	11.0
1971	Jan. 17, 1971	12.41	20	6.5
1972	Mar. 3, 1972	12.29	15	4.9
1973	Dec. 23, 1972	11.85	2	0.6
1974	Apr. 2, 1974	11.70	1	0.3

28

#### 13182150 LONG GULCH NEAR ROCKVILLE, OREG.

LOCATION.--Lat 43°19'17", long 117°11'42", in NW¼NE¼ sec.10, T.26 S., R.45 E., Malheur County, at culvert on Bureau of Land Management Leslie Gulch Road, 1.3 mi (2.1 km) upstream from Bannock Gulch, and 4 mi (6 km) west of Rockville.

BASIN CHARACTERISTICS.--Drainage area, 1.38 mi<sup>2</sup> (3.57 km<sup>2</sup>). Channel elevation at gage is 4,570 ft (1,393 m). Mean elevation of basin is 5,030 ft (1,533 m); channel slope, 270 ft/mi (51.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 8.51 ft (2.594 m), gage datum.

REMARKS.--Station was established May 19, 1970. Road overflow will occur at 17.7 ft (5.39 m), gage datum.

#### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1970	Jan. 23, 1970	8.91	2.5	1.8
1971	Jan. 17, 1971	9.89	11	8.0
1972	Mar. 3, 1972	9.02	3.0	2.2
1973	Mar. 1, 1973	9.20	4.1	3.0
1974	Apr. 2, 1974	9.76	9.2	6.7

## REGION 2

## SNAKE RIVER BASIN (Continued)

## MALHEUR RIVER BASIN

29

## 13213900 MALHEUR RIVER TRIBUTARY NEAR DREWSEY, OREG.

LOCATION.--Lat 43°46'51", long 118°21'27", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.36, T.20 S., R.35 E., Harney County, at culvert on county road to Drewsey, 200 ft (61 m) north of U.S. Highway 20, and 2 mi (3 km) south of Drewsey.

BASIN CHARACTERISTICS.--Drainage area, 2.28 mi<sup>2</sup> (5.91 km<sup>2</sup>). Channel elevation at gage is 3,570 ft (1,088 m). Mean elevation of basin is 3,820 ft (1,164 m); channel slope, 158 ft/mi (29.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 8.0-ft (2.44 m) diameter culvert with upstream invert at 6.86 ft (2.091 m) gage datum.

REMARKS.--Station was established June 11, 1964. Road overflow will occur at 16.9 ft (5.15 m) gage datum. No significant flow occurred during 1966 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1964	July 17, 1964	10.88	100	43.7
1965	Dec. 22, 1964	9.54	42	18.3
1967	Mar. 10, 1967	10.62	87	38.0
1968	Jan. 15, 1968	8.00	7.0	3.1
1969	Feb. 9, 1969	8.82	22	9.6
1970	Jan. 22, 1970	9.49	41	17.9
1971	Jan. 19, 1971	9.64	46	20.1
1972	Mar. 2, 1972	9.17	31	13.5
1973	Dec. 23, 1972	9.57	43	18.8
1974	Mar. 15, 1974	9.61	45	19.7

## MALHEUR RIVER BASIN

30

## 13219300 MALHEUR RIVER TRIBUTARY NEAR HARPER, OREG.

LOCATION.--Lat 43°48'51", long 117°39'13", in SE $\frac{1}{4}$  sec.23, T.20 S., R.41 E., Malheur County, at culvert on U.S. Highway 20, 4 mi (6 km) southwest of Harper.

BASIN CHARACTERISTICS.--Drainage area, 0.10 mi<sup>2</sup> (0.26 km<sup>2</sup>). Channel elevation at gage is 2,650 ft (808 m). Mean elevation of basin is 2,870 ft (875 m); channel slope, 634 ft/mi (120 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 6.0-ft (1.82 m) diameter culvert with upstream invert at 7.83 ft (2.387 m), gage datum.

REMARKS.--Station was established July 24, 1968. Peak of 1969 is highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Mar. 24, 1969	9.65	3.0	30
1970	July 10, 1970	14.71	238	2,380
1971	Jan. 19, 1971	10.53	65	650
1972	June 8, 1972	13.68	217	2,170
1973	Dec. 23, 1972	10.25	44	440
1974	Jan. 15, 1974	8.65	0.3	3

## REGION 2

23

## SNAKE RIVER BASIN (Continued)

## MALHEUR RIVER BASIN

31

13228300 LYTLE CREEK NEAR VALE, OREG.

LOCATION.--Lat 43°57'26", long 117°13'33", in SE¼ sec.32, T.18 S., R.45 E., Malheur County, at culvert on county road (Lytle Boulevard in Vale), 2 mi (3 km) south of Vale.

BASIN CHARACTERISTICS.--Drainage area, 6.46 mi<sup>2</sup> (16.73 km<sup>2</sup>). Channel elevation at gage is 2,320 ft (707 m). Mean elevation of basin is 2,700 ft (823 m); channel slope, 126 ft/mi (23.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 10-ft (3.0 m) x 8-ft (2.4 m) concrete-box culvert with upstream invert at 7.9 ft (2.41 m), gage datum.

REMARKS.--Station was established July 25, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Mar. 31, 1969	10.38	133	20.6
1970	Jan. 22, 1970	9.49	64	9.9
1971	Jan. 17, 1971	11.50	220	34.1
1972	June 9, 1972	11.01	180	27.9
1973	Dec. 23, 1972	9.96	100	15.5
1974	Jan. 15, 1974	9.66	76	11.8

32

13229400 LOST VALLEY CREEK TRIBUTARY NEAR IRONSIDE, OREG.

LOCATION.--Lat 44°18'50", long 117°54'10", in SW¼ sec.26, T.14 S., R.39 E., Malheur County, at culvert on U.S. Highway 26, 2.2 mi (3.5 m) east of Ironside.

BASIN CHARACTERISTICS.--Drainage area, 1.86 mi<sup>2</sup> (4.82 km<sup>2</sup>). Channel elevation at gage is 3,780 ft (1,152 m). Mean elevation of basin, 4,050 ft (1,234 m); channel slope, 188 ft/mi (35.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 3.0-ft (0.91 m) diameter culvert with upstream invert at 5.60 ft (1.707 m), gage datum.

REMARKS.--Station was established Aug. 17, 1966. Road overflow will occur at 14.2 ft (4.33 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	Mar. 10, 1967	6.58	5.4	2.9
1968	Mar. 12, 1968	8.46	36	19.4
1969	Mar. 31, 1969	8.70	41	22.0
1970	Jan. 26, 1970	7.77	22	11.8
1971	Jan. 19, 1971	7.21	13	7.0
1972	Mar. 2, 1972	6.22	2.1	1.1
1973	Mar. 1, 1973	7.92	25	13.4
1974	Jan. 15, 1974	8.30	33	17.7

## REGION 2

## SNAKE RIVER BASIN (Continued)

## MALHEUR RIVER BASIN

33

## 13231700 CANYON CREEK TRIBUTARY NEAR BROGAN, OREG.

LOCATION.--Lat 44°15'50", long 117°37'15", in NW¼ sec.18, T.15 S., R.42 E., Malheur County, at culvert on U.S. Highway 26, 0.3 mi (0.5 km) upstream from mouth, and 5.8 mi (9.3 km) west of Brogan.

BASIN CHARACTERISTICS.--Drainage area, 1.24 mi<sup>2</sup> (3.21 km<sup>2</sup>). Channel elevation at gage is 3,470 ft (1,058 m). Mean elevation of basin is 3,960 ft (1,207 m); channel slope, 274 ft/mi (51.9 m/km). Basin consists of cattle rangeland.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 5.0-ft (1.52 m) concrete-box culvert with upstream invert at 9.89 ft (3.014 m), gage datum.

REMARKS.--Station was established Aug. 17, 1966. No flow observed during 1967, 1970, and 1971.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1968	Mar. 12, 1968	11.03	18	14.5
1969	Mar. 31, 1969	11.11	20	16.1
1972	Mar. 2, 1972	11.49	31	25.0
1973	Mar. 1, 1973	11.30	26	21.0
1974	Jan. 15, 1974	10.92	15	12.1

## MOORES HOLLOW BASIN

34

## 13269200 MOORES HOLLOW TRIBUTARY NEAR WEISER, IDAHO

LOCATION.--Lat 44°07'30", long 117°10'10", in SE¼SE¼ sec.18, T.16 S., R.46 E., Malheur County, at culvert on Interstate Highway 80N, 7.0 mi (11.3 km) southeast of junction with U.S. Highway 30, and 8.0 mi (12.9 km) southwest of Weiser.

BASIN CHARACTERISTICS.--Drainage area, 0.90 mi<sup>2</sup> (2.33 km<sup>2</sup>). Channel elevation at gage is 2,560 ft (780 m). Mean elevation of basin, 2,830 ft (863 m); channel slope, 211 ft/mi (40 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 17.49 ft (5.331 m), gage datum.

REMARKS.--Station was established Aug. 8, 1963. Peak of Aug. 10, 1965, affected by backwater from debris. No flow observed during 1966 water year. Station inoperative in 1973, due to Interstate Highway construction.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1964	June 8, 1964	18.75	9.2	10.2
1965	Aug. 10, 1965	25.56	98	109
1967	Mar. 10, 1967	19.34	20	22.2
1968	Feb. 2, 1968	19.29	20	22.2
1969	Mar. 31, 1969	19.19	8.2	9.1
1970	Jan. 22, 1970	20.02	28	31.1
1971	Oct. 23, 1970	20.77	52	57.8
1972	Jan. 21, 1972	20.43	44	48.9
1974	Jan. 21, 1974	17.72	2.0	2.2





**REGION 3  
EXPLANATION**

- 16 Active Stations
- 5 Discontinued Stations
- ▲2 Miscellaneous Measurements



Figure 4.--Map of Region 3 showing the location of crest-stage gaging stations.



## REGION 3

## SNAKE RIVER BASIN (Continued)

## BURNT RIVER BASIN

35

## 13269900 MIDDLE FORK BURNT RIVER NEAR UNITY, OREG. (Discontinued)

LOCATION.--Lat 44°30'50", long 118°17'25", in SE¼ sec.22, T.12 S., R.36 E., Baker County, at culvert on U.S. Highway 26, 5 mi (8 km) upstream from mouth, and 7 mi (11 km) northwest of Unity.

BASIN CHARACTERISTICS.--Drainage area, 9.22 mi<sup>2</sup> (23.88 km<sup>2</sup>). Channel elevation at gage is 4,150 ft (1,265 m). Channel slope, 210 ft/mi (39.8 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 3.0-ft (0.91 m) diameter culvert pipe with upstream invert at 10.39 ft (3.167 m), gage datum.

REMARKS.--Station established Mar. 19, 1952. Peak discharges after 1952 are considered unreliable but records of gage heights are available. Station discontinued Sept. 30, 1957.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Apr. 14, 1952	13.76	38	4.1

36

## 13272300 JOB CREEK TRIBUTARY NEAR UNITY, OREG.

LOCATION.--Lat 44°27'50", long 118°12'00", in S½ sec.5, T.13 S., R.37 E., Baker County, at culvert on State Highway 7, 100 ft (30 m) north of junction with U.S. Highway 26, and 2 mi (3 km) north of Unity.

BASIN CHARACTERISTICS.--Basin characteristics have not been determined due to inadequate mapping.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 10.65 ft (3.246 m), gage datum.

REMARKS.--Station was established Aug. 17, 1966. Road overflow will occur at 19.0 ft (5.79 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	Jan. 28, 1967	11.75	6.6	-
1968	Mar. 12, 1968	12.51	18	-
1969	Feb. 10, 1969	12.07	12	-
1970	May 24, 1970	12.52	20	-
1971	Jan. 17, 1971	12.30	16	-
1972	Mar. 2, 1972	11.07	1.2	-
1973	Dec. 23, 1972	11.81	7.8	-
1974	Jan. 13, 1974	12.18	13	-

### REGION 3

(27)

#### SNAKE RIVER BASIN (Continued)

##### BURNT RIVER BASIN

37

13274600 BURNT RIVER TRIBUTARY AT DURKEE, OREG.

LOCATION.--Lat 44°34'30", long 117°26'45", in SE¼ sec.28, T.11 S., R.43 E., Baker County, at culvert on Interstate Highway 80N, 0.6 mi (1.0 km) upstream from mouth, and 0.8 mi (1.3 km) south-east of Durkee.

BASIN CHARACTERISTICS.--Drainage area, 1.80 mi<sup>2</sup> (4.66 km<sup>2</sup>). Channel elevation at gage is 2,600 ft (792 m). Mean altitude of basin is 2,960 ft (902 m); channel slope, 323 ft/mi (61.2 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 7.0-ft (2.13 m) diameter culvert with upstream invert at 5.58 ft (1.701 m), gage datum.

REMARKS.--Station was established Aug. 16, 1966. Basin is adjacent to 1955 miscellaneous-measurement site on Durkee Creek. No flow observed during 1967 water year.

##### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1968	Feb. 2, 1968	7.61	32	17.8
1969	Feb. 10, 1969	7.20	21	11.7
1970	Jan. 22, 1970	7.36	25	13.9
1971	Jan. 17, 1971	9.18	98	54.4
1972	June 8, 1972	6.20	3.4	1.9
1973	Aug. 2, 1973	6.32	4.6	2.6
1974	Jan. 13, 1974	6.43	5.2	2.9

#### POWDER RIVER BASIN

38

13275400 CALIFORNIA GULCH NEAR BAKER, OREG. (Discontinued)

LOCATION.--Lat 44°40'10", long 117°58'10", in NW¼ sec.29, T.10 S., R.39 E., Baker County, at culvert on State Highway 220, at mouth, 10 mi (16 km) southwest of Baker.

BASIN CHARACTERISTICS.--Drainage area, 3.44 mi<sup>2</sup> (8.91 km<sup>2</sup>). Channel elevation at gage is 3,900 ft (1,189 m).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 7.0-ft (2.13 m) diameter culvert with upstream invert at 5.62 ft (1.713 m), gage datum.

REMARKS.--Station was established Aug. 9, 1963. No peak data collected for period Aug. 9 to Sept. 30, 1963. Station discontinued Sept. 30, 1966.

##### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1964	June 15, 1964	6.77	15	4.4
1965	Dec. 23, 1964	7.36	40	11.6
1966	Mar. 31, 1966	6.03	4.0	1.2



## REGION 3

## SNAKE RIVER BASIN (Continued)

## POWDER RIVER BASIN

39

## 13281800 ANTONE CREEK NEAR NORTH POWDER, OREG. (Discontinued)

LOCATION.--Lat 44°58'40", long 118°09'40" (unsurveyed), probably in NE¼ sec.10, T.7 S., R.37 E., Baker County, at culvert on Forest Service road S73 in Wallowa-Whitman National Forest, 12 mi (19 km) southwest of North Powder.

BASIN CHARACTERISTICS.--Drainage area, 4.39 mi<sup>2</sup> (11.37 km<sup>2</sup>). Other basin characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 12.2-ft (3.72 m) x 7.3-ft (2.23 m) pipe-arch culvert with upstream invert at 9.06 ft (2.761 m), gage datum.

REMARKS.--Station was established July 24, 1965. Culvert was assumed to be unobstructed during peak of Jan. 30, 1965. Peak flows for the period 1965 to 1968 revised on basis of additional rating definition. No peak data reported in 1970. Station discontinued in 1970 when road was relocated.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 30, 1965	11.98	161	36.7
1966	Apr. 2, 1966	11.23	84	19.1
1967	Mar. 10, 1967	11.54	115	26.2
1968	Mar. 12, 1968	11.30	91	20.7
1969	June 8, 1969	12.70	242	55.1

40

## 13286300 WATERSPOUT CREEK NEAR BAKER, OREG.

LOCATION.--Lat 44°50'08", long 117°32'48", in SW¼SW¼ sec.27, T.8 S., R.42 E., Baker County, at culvert on State Highway 86, 1.4 mi (2.3 km) east of Ruckles Creek, and 14 mi (23 km) east of Baker. Previously published as Powder River tributary near Baker.

BASIN CHARACTERISTICS.--Drainage area, 0.96 mi<sup>2</sup> (2.49 km<sup>2</sup>). Channel elevation at gage is 2,770 ft. (844 m). Mean elevation of basin is 2,950 ft (899 m); channel slope, 167 ft/mi (31.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 11.42 ft (3.481 m), gage datum.

REMARKS.--Station was established Sept. 27, 1968. No flow occurred during 1974 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	June 9, 1969	14.24	44	45.8
1970	July 10, 1970	20.30	208	217
1971	May 26, 1971	15.00	66	68.8
1972	June 8, 1972	14.25	44	45.8
1973	Jan. 15, 1973	12.73	10	10.4

## SNAKE RIVER BASIN (Continued)

## POWDER RIVER BASIN

41

13289100 IMMIGRANT GULCH NEAR RICHLAND, OREG.

LOCATION.--Lat 44°47'10", long 117°08'05", in NW¼ sec.18, T.9 S., R.46 E., Baker County, at culvert on State Highway 86, 1.9 mi (3.1 km) northeast of Richland, and 2.0 mi (3.2 km) above maximum flow line of Brownlee Reservoir.

BASIN CHARACTERISTICS.--Drainage area, 6.64 mi<sup>2</sup> (17.20 km<sup>2</sup>). Channel elevation at gage is 2,420 ft (738 m). Mean elevation of basin is 3,600 ft (1,097 m); channel slope, 275 ft/mi (52.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 8.0-ft (2.44 m) diameter culvert with upstream invert at 3.96 ft (1.207 m), gage datum.

REMARKS.--Station was established Aug. 9, 1963. No peak data collected during 1966 water year. Peaks of 1969 and 1973 are highest observed during year. Peak of 1974 resulted from ice jam, discharge unknown.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1964	May 1, 1964	7.19	89	13.4
1965	Jan. 30, 1965	7.22	91	13.7
1967	Mar. 10, 1967	7.03	79	11.9
1968	Feb. 20, 1968	9.18	205	30.9
1969	Mar. 4, 1969	6.23	36	5.4
1970	Jan. 22, 1970	7.29	92	13.9
1971	Jan. 17, 1971	7.26	83	12.5
1972	Mar. 1, 1972	6.90	72	10.8
1973	Feb. 28, 1973	6.03	3	0.5
1974	Jan. 15, 1974	9.20	-	-

## PINE CREEK BASIN

42

13290150 NORTH PINE CREEK NEAR HOMESTEAD, OREG.

LOCATION.--Lat 45°05'25", long 116°53'45" (unsurveyed), probably in NW¼ sec.31, T.5 S., R.48 E., Baker County, at culvert on Forest Service road S51 in Wallowa-Whitman National Forest, 300 ft (91 m) upstream from Doe Creek, and 5 mi (8 km) northwest of Homestead.

BASIN CHARACTERISTICS.--Drainage area, 2.89 mi<sup>2</sup> (7.49 km<sup>2</sup>). Channel elevation at gage is 4,310 ft (1,314 m). Mean elevation of basin is 5,110 ft (1,558 m); channel slope, 513 ft/mi (97.2 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of peak flow through 8.0-ft (2.44 m) diameter culvert with upstream invert at 7.80 ft (2.377 m), gage datum.

REMARKS.--Station was established July 23, 1965. Culvert was assumed to be unobstructed during peak of Apr. 30, 1965. No peak data reported during 1967 water year. Peak flows for the period 1965 to 1968 revised on basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Apr. 30, 1965	13.18	226	78.2
1966	Apr. 2, 1966	10.71	75	30.0
1968	Feb. 20, 1968	10.07	46	15.9
1969	Mar. 4, 1969	10.87	83	28.7
1970	May 19, 1970	11.03	91	31.5
1971	May 26, 1971	11.93	140	48.4
1972	Mar. 1, 1972	10.50	65	22.5
1973	Dec. 23, 1972	10.22	53	18.3
1974	Jan. 12, 1974	12.51	121	41.9

## REGION 3

## SNAKE RIVER BASIN (Continued)

## IMNAHA RIVER BASIN

43

## 13291200 MAHOGANY CREEK NEAR HOMESTEAD, OREG.

LOCATION.--Lat 45°12'15", long 116°52'05", in NE¼ sec.19, T.4 S., R.48 E., Wallowa County, at culvert on Forest Service road S115 in Wallowa-Whitman National Forest, 500 ft (152 m) upstream from mouth, and 12 mi (19 km) north of Homestead.

BASIN CHARACTERISTICS.--Drainage area, 4.00 mi<sup>2</sup> (10.36 km<sup>2</sup>). Channel elevation at gage is 3,740 ft (1,140 m). Mean elevation of basin is 5,250 ft (1,600 m); channel slope, 621 ft/mi (118 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharges through 6.0-ft (1.83 m) diameter culvert with upstream invert at 7.74 ft (2.359 m), gage datum.

REMARKS.--Station was established July 22, 1965. Culvert was assumed to be unobstructed during peak of Apr. 30, 1965. Road overflow will occur at 15.0 ft (4.57 m), gage datum. Peak of Jan. 13, 1974, not determined because of obstructed culvert entrance.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Apr. 30, 1965	12.06	116	24.0
1966	Mar. 30, 1966	10.20	37	9.2
1967	June 18, 1967	10.95	71	17.8
1968	May 15, 1968	11.24	84	21.0
1969	June 8, 1969	10.86	68	17.0
1970	May 19, 1970	10.58	57	14.2
1971	May 7, 1971	12.44	134	33.5
1972	Mar. 1, 1972	10.31	43	10.8
1973	Dec. 23, 1972	10.55	55	13.8
1974	Jan. 13, 1974	14.90	-	-

44

## 13291400 DEER CREEK NEAR IMNAHA, OREG.

LOCATION.--Lat 45°33'00", long 116°47'30", in SW¼ sec.23, T.1 N., R.48 E., Wallowa County, at culvert on Forest Service road N206 in Wallowa-Whitman National Forest, 2 mi (3 km) southeast of Imnaha.

BASIN CHARACTERISTICS.--Drainage area, 1.73 mi<sup>2</sup> (4.98 km<sup>2</sup>). Channel elevation at gage is 3,760 ft (1,146 m). Mean elevation of basin is 5,000 ft (1,524 m); channel slope, 719 ft/mi (136 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 2.0-ft (0.61 m) diameter culvert with upstream invert at 13.93 ft (4.246 m), gage datum.

REMARKS.--Station was established July 22, 1965. Culvert was assumed to be unobstructed during peak of Apr. 30, 1965. Road overflow will occur at 17.7 ft (5.39 m), gage datum. No peak data reported for period of 1966 to 1970. No flow observed during 1973 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Apr. 30, 1965	16.34	16	9.2
1971	May 7, 1971	14.88	3.8	2.2
1972	Mar. 13, 1972	14.78	3.2	1.8
1974	May 9, 1974	14.83	3.4	2.0

## REGION 3

31

## SNAKE RIVER BASIN (Continued)

## GRANDE RONDE RIVER BASIN

45

13318100 MCINTYRE CREEK NEAR STARKEY, OREG.

LOCATION.--Lat 45°19'40", long 118°26'55", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.5, T.3 S., R.35 E., Union County, at culvert on Forest Service road S217 in Wallowa-Whitman National Forest, 1.8 mi (2.9 km) south of Union County line, and 7 mi (11 km) north of Starkey.

BASIN CHARACTERISTICS.--Drainage area, 1.80 mi<sup>2</sup> (4.66 km<sup>2</sup>). Channel elevation at gage is 4,190 ft (1,277 m). Mean elevation of basin is 4,480 ft (1,366 m); channel slope, 136 ft/mi (25.8 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 3.0-ft (0.91 m) diameter culvert with upstream invert at 12.41 ft (3.783 m), gage datum.

REMARKS.--Station was established Oct. 27, 1965. Stage-discharge relation may reflect backwater conditions from downstream channel. Road overflow will occur at 15.2 ft (4.63 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	Mar. 30, 1966	13.45	5.7	3.2
1967	Jan. 19, 1967	13.78	9.7	5.4
1968	Mar. 30, 1968	13.62	7.6	4.2
1969	June 9, 1969	14.06	14	7.8
1970	May 15, 1970	13.74	9.0	5.0
1971	Jan. 18, 1971	13.91	12	6.7
1972	Mar. 3, 1972	14.68	23	12.8
1973	Mar. 1, 1973	13.14	26	14.4
1974	Jan. 12, 1974	14.14	15	8.3

46

13319000 MILL CREEK AT LA GRANDE, OREG. (Discontinued)

LOCATION.--Lat 45°19'10", long 118°05'00", near center sec.8, T.3 S., R.38 E., Union County, at culvert at intersection of 14th and H streets in La Grande.

BASIN CHARACTERISTICS.--Drainage area, 5.0 mi<sup>2</sup> (12.9 km<sup>2</sup>), approximately. Channel elevation at gage is 2,770 ft (844 m). Other basin characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through twin 3.5-ft (1.07 m) diameter culverts with upstream inverts at 14.05 ft (4.28 m), gage datum.

REMARKS.--Station established Sept. 18, 1957. Peak discharges collected after 1958 are not reliable but records of gage heights are available. Station discontinued Sept. 30, 1962.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1958	Feb. 25, 1958	16.99	92	18.4



## SNAKE RIVER BASIN (Continued)

## GRANDE RONDE RIVER BASIN

47

13320400 LITTLE CREEK AT HIGH VALLEY NEAR UNION, OREG.

LOCATION.--Lat 45°12'45", long 117°46'30", in SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.14, T.4 S., R.40 E., Union County, at county road bridge, 4 mi (6 km) east of Union.

BASIN CHARACTERISTICS.--Drainage area, 15.8 mi<sup>2</sup> (40.9 km<sup>2</sup>). Channel elevation at gage is 3,210 ft (978 m). Mean elevation of basin is 5,160 ft (1,573 m); channel slope, 454 ft/mi (86.0 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements of discharge through contracted bridge opening.

REMARKS.--Station established Feb. 14, 1952. Staff gage, 0.2 mi (0.3 km) downstream, observed during part of 1915 water year (no peak data collected). Peak of May 27, 1948, determined at site 1.1 mi (1.8 km) below station; drainage area, 25 mi<sup>2</sup> (65 km<sup>2</sup>). No data reported during 1954-56 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1948	May 27, 1948	-	330	13.2
1952	Apr. 19, 1952	7.74	150	9.5
1953	May 29, 1953	11.01	236	14.9
1957	Feb. 24, 1957	10.84	207	13.1
1958	May 29, 1958	10.83	205	13.0
1959	June 17, 1959	10.37	127	8.0
1960	May 22, 1960	10.33	121	7.6
1961	May 24, 1961	10.44	115	7.3
1962	May 25, 1962	10.09	65	4.1
1963	May 30, 1963	10.14	72	4.6
1964	June 6, 1964	10.71	140	8.9
1965	June 18, 1965	10.50	105	6.6
1966	May 6, 1966	9.96	37	2.3
1967	Jan. 19, 1967	9.77	22	1.4
1968	Feb. 2, 1968	10.79	155	9.8
1969	May 10, 1969	10.58	117	7.4
1970	May 24, 1970	10.99	183	11.6
1971	Jan. 19, 1971	10.13	54	3.4
1972	June 8, 1972	11.02	159	10.1
1973	May 7, 1973	10.18	48	3.0
1974	June 5, 1974	10.85	135	8.5

## SNAKE RIVER BASIN (Continued)

## GRANDE RONDE RIVER BASIN

48

13321300 LADD CANYON NEAR HOT LAKE, OREG.

LOCATION.--Lat 45°11'36", long 118°00'48", on sec. line 23 and 24, T.4 S., R.38 E., Union County, at culvert on U.S. Highway 30, 4 mi (6 km) southwest of Hot Lake, and 9 mi (14 km) southeast of La Grande.

BASIN CHARACTERISTICS.--Drainage area, 15.5 mi<sup>2</sup> (40.1 km<sup>2</sup>). Channel elevation at gage is 3,400 ft (1,036 m). Mean elevation of basin is 4,140 ft (1,262 m); channel slope, 134 ft/mi (25.4 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 8.0-ft (2.44 m) diameter culvert with upstream invert at 15.60 ft (4.755 m), gage datum.

REMARKS.--Station was established Sept. 17, 1957. Peak of Mar. 24, 1953, determined at same site at different datum. Station was inoperative in 1973 and 1974 due to Interstate Highway construction.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Mar. 24, 1953	10.03	173	11.2
1958	Feb. 17, 1958	19.78	120	7.7
1959	Jan. 26, 1959	18.42	59	3.8
1960	Mar. 21, 1960	20.26	151	9.7
1961	Mar. 14, 1961	17.76	37	2.4
1962	Jan. 6, 1962	19.04	84	5.4
1963	Feb. 1, 1963	18.98	81	5.2
1964	Apr. 2, 1964	19.30	95	6.1
1965	Apr. 30, 1965	18.87	77	5.0
1966	Mar. 30, 1966	18.26	54	3.5
1967	Jan. 29, 1967	19.98	132	8.5
1968	Feb. 22, 1968	19.30	98	6.3
1969	Apr. 6, 1969	18.17	51	3.3
1970	Jan. 22, 1970	19.50	120	7.7
1971	Jan. 17, 1971	20.00	147	9.5
1972	Mar. 12, 1972	20.62	182	11.7

## REGION 3

## SNAKE RIVER BASIN (Continued)

## GRANDE RONDE RIVER BASIN

49

## 13322300 DRY CREEK NEAR BINGHAM SPRINGS, OREG.

LOCATION.--Lat  $45^{\circ}38'10''$ , long  $118^{\circ}06'55''$ , in NE $\frac{1}{4}$  sec.24, T.2 N., R.37 E., Umatilla County, at culvert on Forest Service road N32 (Ruckel Road) in Umatilla National Forest, at Umatilla County line, 9 mi (14 km) southeast of Bingham Springs.

BASIN CHARACTERISTICS.--Drainage area,  $1.37 \text{ mi}^2$  ( $3.55 \text{ km}^2$ ). Channel elevation at gage is 3,960 ft (1,207 m). Mean elevation of basin is 4,460 ft (1,359 m); channel slope, 400 ft/mi (75.8 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 5.0-ft (1.52 m) diameter culvert with upstream invert at 27.60 ft (8.412 m), gage datum.

REMARKS.--Station was established Oct. 26, 1965. Culvert was assumed to be unobstructed during peak of Jan. 30, 1965. No peak data reported during 1967 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 30, 1965	30.58	58	42.3
1966	Mar. 30, 1966	29.37	25	18.2
1968	Dec. 25, 1967	29.74	34	24.8
1969	May 10, 1969	29.50	28	20.4
1970	Jan. 22, 1970	29.93	39	28.5
1971	Jan. 17, 1971	29.45	27	19.7
1972	Mar. 13, 1972	29.73	34	24.8
1973	Apr. 9, 1973	29.64	32	23.4
1974	Jan. 14, 1974	30.20	47	34.3

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## 13323900 PHILLIPS CREEK NEAR ELGIN, OREG. (Discontinued)

LOCATION.--Lat  $45^{\circ}34'$ , long  $117^{\circ}57'$ , in NW $\frac{1}{4}$  sec.16, T.1 N., R.39 E., Union County, at diversion dam at State Highway 204, 1.5 mi (2.4 km) west of Elgin.

BASIN CHARACTERISTICS.--Drainage area,  $30 \text{ mi}^2$  ( $78 \text{ km}^2$ ), approximately. Channel elevation at gage is 2,800 ft (853 m).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge over wooden dam with average crest elevation of 13.8 ft (4.21 m), gage datum.

REMARKS.--Station established Nov. 22, 1952. Station discontinued Sept. 30, 1959. Peak data for 1957 and 1959 water years are unreliable but gage heights are available.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Mar. 24, 1953	16.26	335	11.2
1954	Dec. 19, 1953	15.63	178	5.9
1955	Mar. 1, 1955	16.23	328	10.9
1956	Mar. 22, 1956	16.90	495	16.5
1958	Apr. 20, 1958	16.92	646	21.5

## REGION 3

35

## SNAKE RIVER BASIN (Continued)

## GRANDE RONDE RIVER BASIN

51

## 13324150 RYSDAM CANYON TRIBUTARY NEAR MINAM, OREG.

LOCATION.--Lat 45°36'55", long 117°47'45", in NE¼ sec.34, T.2 N., R.40 E., Union County, at culvert on county road, 0.2 mi (0.3 km) upstream from mouth, 3.5 mi (5.6 km) west of Minam.

BASIN CHARACTERISTICS.--Drainage area, 0.99 mi<sup>2</sup> (2.56 km<sup>2</sup>). Channel elevation at gage is 3,290 ft (1,003 m). Mean elevation of basin is 3,550 ft (1,082 m); channel slope, 192 ft/mi (36.4 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 3.0-ft (0.91 m) diameter culvert with upstream invert at 21.39 ft (6.520 m), gage datum.

REMARKS.--Station was established Aug. 10, 1966. Bypass flow will occur at 24.9 ft (7.59 m), gage datum. Peak of 1974 may have resulted from backwater from ice.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	May 15, 1967	23.22	15	15.2
1968	Feb. 22, 1968	23.25	16	16.2
1969	Jan. 6, 1969	24.21	36	36.4
1970	Jan. 22, 1970	24.44	40	40.4
1971	Mar. 23, 1971	24.15	34	34.3
1972	Feb. 19, 1972	24.76	46	46.5
1973	Jan. 17, 1973	22.77	7.2	7.3
1974	Jan. 13, 1974	25.57	62	62.7

52

## 13329700 TROUT CREEK TRIBUTARY NEAR CHICO, OREG.

LOCATION.--Lat 45°35'50", long 117°15'35", in center sec.1, T.1 N., R.44 E., Wallowa County, at culvert on State Highway 3, 0.2 mi (0.3 km) upstream from mouth, 1.0 mi (1.6 km) south of National Forest boundary, and 9.5 mi (15.3 km) southwest of Chico.

BASIN CHARACTERISTICS.--Drainage area, 0.26 mi<sup>2</sup> (0.67 km<sup>2</sup>). Channel elevation at gage is 4,340 ft (1,323 m). Mean elevation of basin is 4,510 ft (1,375 m); channel slope, 391 ft/mi (74.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 3.0-ft (0.91 m) diameter culvert with upstream invert at 8.11 ft (2.472 m), gage datum.

REMARKS.--Station was established Aug. 11, 1966. Road overflow will occur at 15.9 ft (4.85 m), gage datum. No significant flow occurred during 1968 water year. Peaks of 1970 and 1973 are highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	May 16, 1967	9.33	6.1	23.5
1969	Apr. 6, 1969	9.92	16	61.5
1970	Mar. 11, 1970	9.12	5.1	19.6
1971	Mar. 24, 1971	9.19	5.9	22.7
1972	Mar. 13, 1972	9.51	8.2	31.5
1973	Mar. 21, 1973	9.03	4.1	15.8
1974	Jan. 15, 1974	9.71	12	46.2



## REGION 3

## SNAKE RIVER BASIN (Continued)

## GRANDE RONDE RIVER BASIN

53

## 13329750 TROUT CREEK TRIBUTARY AT ENTERPRISE, OREG.

LOCATION.--Lat 45°26'20", long 117°17'00", in NW¼ sec.35, T.1 S., R.44 E., Wallowa County, at culvert on State Highway 3, 0.9 mi (1.4 km) north of junction with State Highway 82 in Enterprise.

BASIN CHARACTERISTICS.--Drainage area, 4.38 mi<sup>2</sup> (11.34 km<sup>2</sup>). Channel elevation at gage is 3,730 ft (1,137 m). Mean elevation of basin is 4,140 ft (1,262 m); channel slope, 128 ft/mi (24.2 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 6.0-ft (1.83 m) diameter culvert with upstream invert at 14.03 ft (4.276 m), gage datum.

REMARKS.--Station was established Aug. 10, 1966. Road overflow will occur at 23.5 ft (7.16 m), gage datum. Site is subject to variable backwater from downstream channel.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	June 15, 1967	19.14	116	26.5
1968	Dec. 25, 1967	17.73	59	13.5
1969	June 9, 1969	17.16	39	8.9
1970	Jan. 22, 1970	16.88	10	2.3
1971	Jan. 17, 1971	16.30	16	3.7
1972	Feb. 19, 1972	17.78	60	13.7
1973	Jan. 17, 1973	17.20	38	8.7
1974	Jan. 12, 1974	18.52	90	20.5

54

## 13333050 BUFORD CREEK NEAR FLORA, OREG.

LOCATION.--Lat 45°53'25", long 117°17'00", on sec. line 23 and 26, T.5 N., R.44 E., Wallowa County, at two culverts on county road, 1.0 mi (1.6 km) west of junction with State Highway 3, 1.5 mi (2.4 km) southeast of Flora.

BASIN CHARACTERISTICS.--Drainage area, 0.47 mi<sup>2</sup> (1.22 km<sup>2</sup>). Channel elevation at gage is 4,350 ft (1,326 m). Mean elevation of basin is 4,440 ft (1,353 m); channel slope, 100 ft/mi (18.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 3.0-ft (0.91 m) and 2.0-ft (0.61 m) diameter culverts with upstream inverts at 7.47 ft (2.277 m) and 7.23 ft (2.204 m), gage datum.

REMARKS.--Station was established Aug. 11, 1966. Road overflow will occur at 14.7 ft (4.48 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	May 15, 1967	8.08	4.2	8.9
1968	Dec. 25, 1967	8.59	12	25.5
1969	Mar. 4, 1969	8.82	15	31.9
1970	Jan. 22, 1970	8.88	16	34.0
1971	Feb. 10, 1971	9.90	27	57.4
1972	May 7, 1972	8.29	7.5	16.0
1973	Dec. 18, 1972	8.19	6.3	13.4
1974	Jan. 15, 1974	9.18	23	48.9

## REGION 3

37

## SNAKE RIVER BASIN (Continued)

## GRANDE RONDE RIVER BASIN

55

13333100 DOE CREEK NEAR IMNAHA, OREG.

LOCATION.--Lat 45°44'50", long 117°01'20", in NE¼ sec.14, T.3 N., R.46 E., Wallowa County, at culvert on Forest Service road N431 in Wallowa-Whitman National Forest, 0.1 mi (0.2 km) north of Vigne forest camp, and 16 mi (26 km) northwest of Imnaha.

BASIN CHARACTERISTICS.--Drainage area, 5.49 mi<sup>2</sup> (14.22 km<sup>2</sup>). Channel elevation at gage is 3,780 ft (1,152 m). Mean elevation of basin is 4,520 ft (1,378 m); channel slope, 197 ft/mi (37.3 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 7.7-ft (2.35 m) x 5.4-ft (1.65 m) pipe-arch culvert with upstream invert at 4.35 ft (1.326 m), gage datum.

REMARKS.--Station was established July 21, 1965. Culvert was assumed to be unobstructed during the peak of Apr. 30, 1965. Peak of 1972 was estimated because of debris obstruction at culvert entrance.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Apr. 30, 1965	7.02	78	15.0
1966	Apr. 10, 1966	6.18	40	7.7
1967	May 15, 1967	6.07	36	6.9
1968	Dec. 25, 1967	6.26	43	8.3
1969	Apr. 4, 1969	6.45	50	9.6
1970	Jan. 22, 1970	5.75	23	4.4
1971	May 26, 1971	6.03	33	6.3
1972	Mar. 12, 1972	-	158	30.4
1973	Jan. 17, 1973	5.07	4.3	0.8
1974	Jan. 13, 1974	6.47	48	8.7

## REGION 4

## LOWER COLUMBIA RIVER BASIN

## WALLA WALLA RIVER BASIN

56

14016080 DRY CREEK TRIBUTARY NEAR MILTON-FREEWATER, OREG.

LOCATION.--Lat 45°53'05", long 118°23'28", in NE¼ sec.26, T.5 N., R.35 E., Umatilla County, at culvert on State Highway 11, 2.6 mi (4.2 km) south of Milton-Freewater.

BASIN CHARACTERISTICS.--Drainage area, 1.22 mi<sup>2</sup> (3.16 km<sup>2</sup>). Channel elevation at gage is 1,470 ft (448 m). Mean elevation of basin is 1,660 ft (506 m); channel slope, 239 ft/mi (45.3 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 5.0-ft (1.52 m) diameter culvert with upstream invert at 17.12 ft (5.218 m), gage datum.

REMARKS.--Station was established Aug. 9, 1966. No flow observed during 1968 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	Mar. 10, 1967	18.31	8.0	6.6
1969	Feb. 10, 1969	18.39	10	8.2
1970	Jan. 22, 1970	20.24	58	47.5
1971	May 26, 1971	34.83	348	285
1972	Mar. 2, 1972	22.61	135	111
1973	Jan. 17, 1973	18.77	23	18.9
1974	Apr. 2, 1974	19.95	54	44.3







## REGION 4

39

## LOWER COLUMBIA RIVER BASIN (Continued)

## COLD SPRINGS CANYON BASIN

57

14019120 NORTH FORK COLD SPRINGS CANYON TRIBUTARY AT HOLDMAN, OREG.

LOCATION.--Lat 45°52'40", long 118°55'10", in NW¼NE¼ sec.34, T.5 N., R.31 E., Umatilla County, at culvert on county road, at mouth, and 0.6 mi (1.0 km) east of Holdman.

BASIN CHARACTERISTICS.--Drainage area, 2.86 mi<sup>2</sup> (7.41 km<sup>2</sup>). Channel elevation at gage is 1,055 ft (322 m). Mean elevation of basin is 1,510 ft (460 m); channel slope, 140 ft/mi (26.5 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 5.0-ft (1.52 m) diameter culvert with upstream invert at 19.11 ft (5.825 m), gage datum.

REMARKS.--Station was established Aug. 9, 1966. Bypass flow will occur at 24.2 ft (7.38 m), gage datum. No flow occurred during 1967 and 1968 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	June 9, 1969	24.05	132	46.2
1970	Jan. 22, 1970	20.84	22	7.7
1971	Sept. 2, 1971	22.74	84	29.3
1972	Mar. 12, 1972	20.96	25	8.7
1973	Dec. 20, 1972	21.48	40	14.0
1974	Jan. 13, 1974	21.37	36	12.6

## UMATILLA RIVER BASIN

58

14019400 ELBOW CREEK NEAR BINGHAM SPRINGS, OREG.

LOCATION.--Lat 45°42'45", long 118°11'54", in NE¼ sec.28, T.3 N., R.37 E., Umatilla County, at culvert on Forest Service road N32 in Umatilla National Forest, 200 ft (61 m) upstream from mouth, and 2.6 mi (4.2 km) southeast of Bingham Springs.

BASIN CHARACTERISTICS.--Drainage area, 0.68 mi<sup>2</sup> (1.76 km<sup>2</sup>). Channel elevation at gage is 2,440 ft (744 m). Mean elevation of basin is 3,410 ft (1,039 m); channel slope, 972 ft/mi (184 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 6.0-ft (1.83 m) x 3.7-ft (1.13 m) pipe-arch culvert with upstream invert at 9.67 ft (2.947 m), gage datum.

REMARKS.--Station was established July 20, 1965. Culvert was assumed to be unobstructed during peak flow of Jan. 30, 1965. Road overflow will occur at 14.9 ft (4.54 m), gage datum. No peak data reported during 1967 water year. Peak flows for period 1965 to 1968 revised on basis of additional rating definition. Peak discharge of Apr. 9, 1973, is undetermined due to backwater from debris.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 30, 1965	13.16	99	146
1966	Mar. 31, 1966	12.08	55	80.9
1968	Feb. 22, 1968	11.89	46	67.6
1969	May 10, 1969	11.88	46	67.6
1970	Jan. 22, 1970	11.95	50	73.5
1971	Jan. 17, 1971	11.84	44	64.7
1972	Mar. 12, 1972	11.91	48	70.6
1973	Apr. 9, 1973	12.57	-	-
1974	June 20, 1974	12.81	86	126



## LOWER COLUMBIA RIVER BASIN (Continued)

## UMATILLA RIVER BASIN

59

14020800 MISSION CREEK AT ST. ANDREWS MISSION, OREG.

LOCATION.--Lat 45°38'05", long 118°37'18", in SE¼ sec.24, T.2 N., R.33 E., Umatilla County, at culvert on county road, 0.1 mi (0.2 km) east of St. Andrews Mission School, 8 mi (13 km) east of Pendleton.

BASIN CHARACTERISTICS.--Drainage area, 4.45 mi<sup>2</sup> (11.53 km<sup>2</sup>). Channel elevation at gage is 1,710 ft (521 m). Mean elevation of basin is 2,820 ft (860 m); channel slope, 401 ft/mi (75.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 6.0-ft (1.83 m) diameter culvert with upstream invert at 14.11 ft (4.301 m), gage datum.

REMARKS.--Station was established Oct. 8, 1957. No significant flow reported during 1959-62 water years. Peak flows for period 1966 to 1968 revised on basis of additional rating definition. Peak of Feb. 16, 1973, is maximum observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1958	Jan. 14, 1958	18.36	106	23.8
1963	Feb. 2, 1963	15.80	28	6.3
1964	June 15, 1964	16.21	43	9.7
1965	Jan. 30, 1965	19.71	170	38.2
1966	Mar. 14, 1966	15.86	56	12.6
1967	Jan. 19, 1967	16.47	81	18.2
1968	Feb. 22, 1968	15.28	33	7.4
1969	Feb. 10, 1969	16.00	63	14.2
1970	Jan. 22, 1970	16.31	75	16.9
1971	Jan. 17, 1971	14.99	22	4.9
1972	Dec. 5, 1971	18.13	146	32.8
1973	Feb. 16, 1973	14.08	3.3	0.7
1974	Mar. 30, 1974	16.11	67	15.1

## REGION 4

41

## LOWER COLUMBIA RIVER BASIN (Continued)

## UMATILLA RIVER BASIN

60

## 14021600 NELSON CREEK AT PENDLETON, OREG.

LOCATION.--Lat 45°40'56", long 118°48'24", on sec. line 3 and 4, T.2 N., R.32 E., Umatilla County, at culvert on U.S. Highway 395, 0.7 mi (1.1 km) upstream from mouth, and 0.5 mi (0.8 km) northwest of Pendleton.

BASIN CHARACTERISTICS.--Drainage area, 2.56 mi<sup>2</sup> (6.63 km<sup>2</sup>). Channel elevation at gage is 1,160 ft (354 m). Mean elevation of basin is 1,480 ft (451 m); channel slope, 172 ft/mi (32.6 m/km).

DISCHARGE.--Peak discharge are from rating curve defined by computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 10.50 ft (3.200 m), gage datum.

REMARKS.--Station was established Oct. 7, 1957. No flow occurred during 1960, 1962, 1966, 1968, 1971, and 1973 water years. Peak of 1970 is highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1958	Jan. 14, 1958	12.82	42	16.4
1959	Jan. 28, 1959	13.14	53	20.7
1960	-	-	0	0
1961	Mar. 15, 1963	12.67	37	14.5
1962	-	-	0	0
1963	Feb. 2, 1963	16.34	196	76.6
1964	June 9, 1964	11.22	2.5	1.0
1965	Jan. 30, 1965	19.22	278	109
1966	-	-	0	0
1967	Jan. 19, 1967	13.09	41	16.0
1968	-	-	0	0
1969	Nov. 13, 1968	12.93	46	18.0
1970	Feb. 11, 1970	11.01	2.7	1.1
1971	-	-	0	0
1972	Mar. 2, 1972	14.77	126	49.2
1973	-	-	0	0
1974	Dec. 21, 1973	11.96	12	4.7

61

## 14022300 LITTLE MCKAY CREEK NEAR PILOT ROCK, Oreg. (Discontinued)

LOCATION.--Lat 45°30'00", long 118°44'40", on sec. line 1 and 12, T.1 S., R.32 E., Umatilla County, at county road culvert 0.4 mi (0.6 km) upstream from mouth, 4 mi (6 km) northeast of Pilot Rock, and 5 mi (8 km) upstream from McKay Reservoir.

BASIN CHARACTERISTICS.--Drainage area, 5.18 mi<sup>2</sup> (13.42 km<sup>2</sup>). Channel elevation at gage is 1,550 ft (472 m). Mean elevation of basin is 2,340 ft (713 m); channel slope, 208 ft/mi (39.4 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through 5.0-ft (1.52 m) diameter culvert with upstream invert at 8.12 ft (2.475 m), gage datum.

REMARKS.--Station established Oct. 8, 1957. Station discontinued Sept. 30, 1960.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1958	Apr. 21, 1958	11.48	71	13.7
1959	Dec. 11, 1958	10.59	41	7.9

## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## UMATILLA RIVER BASIN

62

## 14032100 BUTTER CREEK TRIBUTARY NEAR PINE CITY, OREG.

LOCATION.--Lat 45°38'30", long 119°24'50", in NW¼ sec.23, T.2 N., R.27 E., Umatilla County, at culvert on State Highway 19, 0.1 mi (0.2 km) upstream from mouth, 1.8 mi (2.9 km) north of county line, and 4.2 mi (6.8 km) north of Pine City.

BASIN CHARACTERISTICS.--Drainage area, 1.50 mi<sup>2</sup> (3.88 km<sup>2</sup>). Channel elevation at gage is 940 ft (287 m). Mean elevation of basin is 1,150 ft (351 m); channel slope, 164 ft/mi (31.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through a 7.0-ft (2.13 m) diameter culvert with upstream invert at 6.98 ft (2.128 m), gage datum.

REMARKS.--Station established Aug. 10, 1963. Peak of June 9, 1948, computed at same site and datum, and includes road overflow. No peak data collected during 1965 water year. No flow observed during period 1964 to 1968 and 1970, 1971.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1948	June 9, 1948	19.02	5,220	3,480
1963	Feb. 3, 1963	10.86	122	81.3
1969	Jan. 6, 1969	8.40	21	14.0
1972	May 7, 1972	7.73	3.8	2.5
1973	Jan. 17, 1973	8.36	17	11.3
1974	Jan. 14, 1974	8.69	30	20.0

## JUNIPER CANYON BASIN

63

## 14034240 LITTLE JUNIPER CANYON NEAR PINE CITY, OREG.

LOCATION.--Lat 45°33'32", long 119°36'00", in NE¼NE¼ sec.19, T.1 N., R.26 E., Morrow County, at culvert on county road, 0.1 mi (0.2 km) north of State Highway 207, 8 mi (13 km) west of Pine City. Previously published as Sanford Canyon near Pine City.

BASIN CHARACTERISTICS.--Drainage area, 4.87 mi<sup>2</sup> (12.61 km<sup>2</sup>). Channel elevation at gage is 1,160 ft (354 m). Mean elevation of basin is 1,800 ft (549 m); channel slope, 175 ft/mi (33.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 4.0-ft (1.22 m) diameter culvert with upstream invert at 9.57 ft (2.917 m), gage datum.

REMARKS.--Station established Sept. 23, 1968. No peak data collected at site 0.5 mi (0.8 km) downstream during 1967 water year. Road overflow will occur at 17.1 ft (5.21 m), gage datum. No flow observed from 1971 to 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Sept. 18, 1969	14.64	98	20.1
1970	Jan. 22, 1970	12.57	47	9.6
1974	Jan. 14, 1974	15.46	121	24.8



## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLOW CREEK BASIN

64

## 14034370 WILLOW CREEK TRIBUTARY NEAR HEPPNER, OREG.

LOCATION.--Lat 45°13'40", long 119°20'00", in SE¼ sec.9, T.4 S., R.28 E., Morrow County, at culvert on Willow Creek Road, 300 ft (91 m) upstream from mouth, and 16.1 mi (25.9 km) southeast of Heppner.

BASIN CHARACTERISTICS.--Drainage area 1.11 mi<sup>2</sup> (2.87 km<sup>2</sup>). Channel elevation at gage is 3,600 ft (1,097 m). Mean elevation of basin is 4,310 ft (1,314 m); channel slope, 508 ft/mi (96.2 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 3.0-ft (0.91 m) diameter culvert with upstream invert at 11.00 ft (3.353 m), gage datum.

REMARKS.--Station established Apr. 17, 1958. No flow observed during 1958, and 1962, Peaks shown for 1959, 1970, 1971, and 1974, are maximum observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1959	Feb. 6, 1959	12.00	5.0	4.5
1960	Mar. 24, 1960	12.45	10	9.0
1961	Mar. 15, 1961	12.06	5.6	5.0
1963	Apr. 26, 1963	12.55	11	9.9
1964	June 18, 1964	11.79	3.2	2.9
1965	Jan. 30, 1965	13.60	26	23.4
1966	Jan. 3, 1966	12.06	5.6	5.0
1967	Jan. 29, 1967	12.26	7.6	6.8
1968	Oct. 28, 1967	12.19	6.8	6.1
1969	Mar. 19, 1969	13.06	19	17.1
1970	Mar. 18, 1970	11.06	1.5	1.4
1971	May 19, 1971	11.90	4.1	3.7
1972	Nov. 26, 1971	12.72	13	11.7
1973	Apr. 9, 1973	11.31	2.0	1.8
1974	Mar. 19, 1974	11.41	1.1	1.0

65

## 14034380 NORTH FORK WILLOW CREEK NEAR HEPPNER, OREG. (Discontinued)

LOCATION.--Lat 45°16'30", long 119°21'00", in E½ sec.29, T.3 S., R.28 E., Morrow County, at culvert on Willow Creek Road, 200 ft (61 m) upstream from mouth, and 12 mi (19 km) southeast of Heppner.

BASIN CHARACTERISTICS.--Drainage area, 10 mi<sup>2</sup> (26 km<sup>2</sup>), approximately. Channel elevation at gage is about 3,050 ft (930 m). Other basin characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 13.96 ft (4.255 m), gage datum.

REMARKS.--Station established Apr. 17, 1958. Road overflow will occur at about 17.2 ft (5.24 m), gage datum. Station was discontinued Dec. 21, 1964, because of flood damage.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1958	Feb. 16, 1958	16.89	43	4.3
1959	Mar. 1, 1959	15.64	22	2.2
1960	Mar. 24, 1960	15.50	20	2.0
1961	Mar. 15, 1961	16.24	33	3.3
1962	Mar. 27, 1962	15.98	28	2.8
1963	Apr. 26, 1963	18.19	81	8.1
1964	June 18, 1964	14.96	8.2	0.8

## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLOW CREEK BASIN

66

14034830 CASON CANYON AT RUGGS, OREG.

LOCATION.--Lat 45°15'50", long 119°41'05", in SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.34, T.3 S., R.25 E., Morrow County, at culvert on Rhea Creek road, at junction with State Highway 207, at Ruggs.

BASIN CHARACTERISTICS.--Drainage area, 2.21 mi<sup>2</sup> (5.72 km<sup>2</sup>). Elevation of datum of gage is 2,115.74 ft (644.878 m), above msl, from levels to bench mark Z381 at Rhea Creek bridge. Channel elevation at gage is 2,120 ft (646 m). Mean elevation of basin is 2,670 ft (814 m); channel slope, 221 ft/mi (41.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through 7.0-ft (2.13 m) diameter culvert with upstream invert at 4.73 ft (1.442 m), gage datum.

REMARKS.--Station was established Aug. 17, 1961. Road overflow will occur at 14.3 ft (4.36 m), gage datum. No flow occurred during 1968, 1971, and 1973 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1968	-	-	0	0
1969	June 9, 1969	9.57	190	86.0
1970	Jan. 18, 1970	7.55	100	45.2
1971	-	-	0	0
1972	Feb. 19, 1972	7.20	85	38.5
1973	-	-	0	0
1974	Jan. 14, 1974	5.49	1.0	0.5

## JOHN DAY RIVER BASIN

67

14036800 JOHN DAY RIVER NEAR PRAIRIE CITY, OREG.

LOCATION.--Lat 44°19'10", long 118°33'25", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.30, T.14 S., R.35 E., Grant County, at culvert on Forest Service road 1427 in Malheur National Forest, 200 ft (61 m) downstream from Call Creek, and 12 mi (19 km) southeast of Prairie City.

BASIN CHARACTERISTICS.--Drainage area, 17.4 mi<sup>2</sup> (45.1 km<sup>2</sup>). Channel elevation at gage is 4,610 ft (1,405 m). Mean elevation of basin is 6,320 ft (1,926 m); channel slope, 250 ft/mi (47.4 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 9.3-ft (2.83 m) x 6.6-ft (2.01 m) pipe-arch culvert with upstream invert at 5.65 ft (1.722 m), gage datum.

REMARKS.--Station was established July 26, 1966. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. No peak data reported during 1966 water year. Peak flows for 1965, 1967, and 1972 revised on basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	9.08	155	8.9
1967	June 15, 1967	8.78	105	6.0
1968	Feb. 22, 1968	7.64	35	2.0
1969	May 15, 1969	8.07	56	3.2
1970	May 23, 1970	8.62	94	5.4
1971	May 15, 1971	8.78	105	6.0
1972	June 1, 1972	9.11	118	6.8
1973	May 15, 1973	7.88	48	2.8
1974	May 7, 1974	8.94	118	6.8

## REGION 4

45

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

68

14038550 EAST FORK CANYON CREEK NEAR CANYON CITY, OREG.

LOCATION.--Lat 44°14'45", long 118°54'40", in NE¼NE¼ sec.30, T.15 S., R.32 E., Grant County, at culvert on Forest Service road 1451 in Malheur National Forest, at mouth, and 10 mi (16 km) south of Canyon City.

BASIN CHARACTERISTICS.--Drainage area, 24.8 mi<sup>2</sup> (64.2 km<sup>2</sup>). Channel elevation at gage is 4,080 ft (1,244 m). Mean elevation of basin is 5,780 ft (1,762 m); channel slope, 216 ft/mi (40.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 12.5-ft (3.81 m) x 7.8-ft (2.38 m) pipe-arch culvert with upstream invert at 8.94 ft (2.725 m), gage datum.

REMARKS.--Station was established July 27, 1965. Culvert was assumed to be unobstructed during peak of Dec. 21, 1964. Stage-discharge relation may be affected by variable backwater from Canyon Creek.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 21, 1964	13.46	285	11.5
1966	Apr. 1, 1966	11.38	109	4.4
1967	May 15, 1967	13.18	260	10.5
1968	Feb. 22, 1968	11.64	132	5.3
1969	May 15, 1969	12.79	225	9.1
1970	Jan. 26, 1970	12.54	205	8.3
1971	Jan. 19, 1971	12.44	195	7.9
1972	Mar. 2, 1972	12.29	185	7.5
1973	May 16, 1973	10.76	67	2.7
1974	May 15, 1974	13.11	254	10.2

69

14038600 VANCE CREEK NEAR CANYON CITY, OREG.

LOCATION.--Lat 44°17'20", long 118°58'40", in NE¼ sec.10, T.15 S., R.31 E., Grant County, at culvert on U.S. Highway 395, at confluence with South Fork, 1.0 mi (1.6 km) upstream from mouth, and 9.5 mi (15.3 km) south of Canyon City.

BASIN CHARACTERISTICS.--Drainage area, 6.54 mi<sup>2</sup> (16.94 km<sup>2</sup>). Channel elevation at gage is 4,000 ft (1,219 m). Mean elevation of basin is 5,060 ft (1,542 m); channel slope, 439 ft/mi (83.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of flow through 5.0-ft (1.52 m) diameter culvert with upstream invert at 10.44 ft (3.182 m), gage datum.

REMARKS.--Station was established Aug. 7, 1963. No peak data reported during 1966 and 1968 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1964	June 15, 1964	11.52	9.3	1.4
1965	Dec. 21, 1964	13.00	39	6.0
1967	May 18, 1967	11.57	10	1.5
1969	May 15, 1969	12.59	29	4.4
1970	Jan. 23, 1970	12.72	32	4.9
1971	Apr. 13, 1971	12.00	17	2.6
1972	Mar. 2, 1972	12.87	36	5.5
1973	May 16, 1973	11.92	16	2.4
1974	May 15, 1974	12.50	27	4.1



## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

70

## 14038750 BEECH CREEK NEAR FOX, OREG.

LOCATION.--Lat 44°34'05", long 119°06'30", in SE¼ sec.33, T.11 S., R.30 E., Grant County, at culvert on U.S. Highway 395, at entrance to Beech Creek forest camp, 6.8 mi (10.9 km) south of Fox.

BASIN CHARACTERISTICS.--Drainage area, 1.94 mi<sup>2</sup> (5.02 km<sup>2</sup>). Channel elevation at gage is 4,520 ft (1,378 m). Mean elevation of basin is 5,190 ft (1,582 m); channel slope, 409 ft/mi (77.5 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 4.0-ft (1.22 m) diameter culvert with upstream invert at 10.69 ft (3.258 m), gage datum.

REMARKS.--Station was established June 10, 1964. No peak data reported during 1967, 1968, and 1971 water years. Peak of 1969 is highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 30, 1965	12.47	19	9.8
1966	Jan. 3, 1966	12.85	28	14.4
1969	June 26, 1969	11.49	4.2	2.2
1970	Jan. 22, 1970	12.58	22	11.3
1972	Mar. 2, 1972	11.94	9.8	5.1
1973	May 16, 1973	12.49	20	10.3
1974	Mar. 30, 1974	12.00	11	5.7

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## 14038900 FIELDS CREEK NEAR MOUNT VERNON, OREG.

LOCATION.--Lat 44°23'35", long 119°18'25", in SE¼ sec.35, T.13 S., R.28 E., Grant County, at culvert on Forest Service road 1451 in Malheur National Forest, 0.3 mi (0.5 km) upstream from Big Canyon, and 10 mi (16 km) west of Mt. Vernon.

BASIN CHARACTERISTICS.--Drainage area, 17.5 mi<sup>2</sup> (45.3 km<sup>2</sup>). Channel elevation at gage is 3,150 ft (960 m). Mean elevation of basin is 5,310 ft (1,618 m); channel slope, 280 ft/mi (53.0 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 8.8-ft (2.68 m) x 6.2-ft (1.89 m) pipe-arch culvert with upstream invert at 7.62 ft (2.323 m); gage datum.

REMARKS.--Station was established July 28, 1965. No peak data reported during 1966 water year. Peak of June 20, 1973, is highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	Jan. 26, 1967	9.31	42	2.4
1968	Feb. 22, 1968	9.12	33	1.9
1969	Apr. 10, 1969	9.64	59	3.4
1970	Jan. 22, 1970	12.38	240	13.7
1971	Jan. 18, 1971	10.35	102	5.8
1972	Mar. 3, 1972	10.63	122	7.0
1973	June 20, 1973	8.64	16	0.9
1974	Mar. 30, 1974	10.32	100	5.7

## REGION 4

47

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

72

## 14039200 VENATOR CREEK NEAR SILVIES, OREG.

LOCATION.--Lat 43°59'55", long 119°16'30", in NW¼ sec.20, T.18 S., R.29 E., Grant County, at culvert on Forest Service road 1877 in Malheur National Forest, 1.5 mi (2.4 km) above mouth, and 16 mi (26 km) west of Silvies.

BASIN CHARACTERISTICS.--Drainage area, 11.9 mi<sup>2</sup> (30.8 km<sup>2</sup>). Channel elevation at gage is 4,460 ft (1,359 m). Mean elevation of basin is 5,510 ft (1,679 m); channel slope, 283 ft/mi (53.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 8.6-ft (2.62 m) x 5.8-ft (1.77 m) pipe-arch culvert with upstream invert at 9.55 ft (2.911 m), gage datum.

REMARKS.--Station was established July 27, 1965. Road overflow will occur at 19.1 ft (5.82 m), gage datum. No peak data reported during 1966 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	May 15, 1967	11.59	57	4.8
1968	Feb. 22, 1968	11.46	50	4.2
1969	Apr. 15, 1969	11.71	63	5.3
1970	Jan. 26, 1970	11.35	45	3.8
1971	May 2, 1971	11.68	61	5.1
1972	Mar. 25, 1972	11.88	72	6.1
1973	May 15, 1973	11.94	76	6.4
1974	May 10, 1974	12.46	108	9.1

73

## 14039400 JACKASS CREEK NEAR DAYVILLE, OREG.

LOCATION.--Lat 44°21'10", long 119°33'10", in SW¼ sec.13, T.14 S., R.26 E., Grant County, at culvert on Bureau of Land Management road, at mouth, and 8 mi (13 km) south of Dayville.

BASIN CHARACTERISTICS.--Drainage area, 3.95 mi<sup>2</sup> (10.23 km<sup>2</sup>). Other basin characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through 5.5-ft (1.68 m) diameter culvert with upstream invert at 7.34 ft (2.237 m), gage datum.

REMARKS.--Station was established Aug. 16, 1969. Bypass flow will occur at 14.0 ft (4.27 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1970	Jan. 23, 1970	9.96	78	19.7
1971	May 25, 1971	9.74	67	17.0
1972	Mar. 15, 1972	8.76	26	6.6
1973	Jan. 15, 1973	8.42	12	3.0
1974	Mar. 30, 1974	9.00	36	9.1

## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

74

## 14040700 WHISKY CREEK NEAR MITCHELL, OREG.

LOCATION.--Lat 44°31'21", long 119°55'18", in SE¼ sec.14, T.12 S., R.23 E., Wheeler County, at culvert on U.S. Highway 26, 1.5 mi (2.4 km) west of Antone road, and 13.6 mi (21.9 km) east of Mitchell.

BASIN CHARACTERISTICS.--Drainage area, 2.22 mi<sup>2</sup> (5.75 km<sup>2</sup>). Other basin characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 4.0-ft (1.22 m) concrete-box culvert with upstream invert at 8.71 ft (2.655 m), gage datum.

REMARKS.--Station was established July 30, 1968. Road overflow will occur at 18.1 ft (5.52 m), gage datum. Peak of 1974 may be ice affected.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Mar. 19, 1969	10.91	44	19.8
1970	Jan. 22, 1970	12.72	100	45.0
1971	Jan. 17, 1971	12.40	88	39.6
1972	Jan. 21, 1972	11.40	57	25.7
1973	Dec. 21, 1972	10.45	32	14.4
1974	Jan. 17, 1974	14.23	143	64.4

75

## 14040800 LOST CREEK NEAR GRANITE, OREG. (Discontinued)

LOCATION.--Lat 44°47'15", long 118°34'40", in NE¼ sec.14, T.9 S., R.34 E., Grant County, at twin culverts on Forest Service road S725 in Umatilla National Forest, 1 mi (2 km) east of Olive Lake, and 8 mi (13 km) west of Granite.

BASIN CHARACTERISTICS.--Drainage area, 3.11 mi<sup>2</sup> (8.05 km<sup>2</sup>). Channel elevation at gage is 5,880 ft (1,792 m). Mean elevation of basin is 6,710 ft (2,045 m); channel slope, 311 ft/mi (58.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through twin 6.3-ft (1.92 m) x 4.8-ft (1.46 m) pipe-arch culverts with upstream inverts at 8.17 ft (2.490 m) and 8.13 ft (2.478 m), gage datum.

REMARKS.--Station was established July 25, 1965. Peak discharges not published because of significant bypass flow in transbasin diversion.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	May 30, 1967	10.99	-	-
1968	Feb. 22, 1968	10.74	-	-

## REGION 4

49

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

76

## 14040900 BRUIN CREEK NEAR DALE, OREG.

LOCATION.--Lat 44°53'51", long 118°47'35", in SW¼ sec.6, T.8 S., R.33 E., Grant County, at culvert on Forest Service road SA12, in Umatilla National Forest, 0.6 mi (1.0 km) southeast of Park Creek, and 12 mi (19 km) southeast of Dale.

BASIN CHARACTERISTICS.--Drainage area, 4.63 mi<sup>2</sup> (11.99 km<sup>2</sup>). Channel elevation at the gage is 4,270 ft (1,301 m). Mean elevation of the basin is 5,220 ft (1,591 m); channel slope, 468 ft/mi (88.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through a 6.0-ft (1.83 m) diameter culvert with upstream invert at 9.76 ft (2.975 m), gage datum.

REMARKS.--Station was established Dec. 3, 1968. Peaks of 1971 and 1973 are highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	May 11, 1969	11.65	28	6.0
1970	May 19, 1970	11.67	28	6.0
1971	Apr. 16, 1971	11.12	11	2.4
1972	Mar. 15, 1972	11.77	31	6.7
1973	Apr. 25, 1973	10.96	2.0	0.4
1974	May 5, 1974	11.92	32	6.9

77

## 14041900 LINE CREEK NEAR LEHMAN SPRINGS, OREG.

LOCATION.--Lat 45°10'10", long 118°42'40", in NW¼ sec.3, T.5 S., R.33 E., Umatilla County, at culvert on Forest Service road 524 in Umatilla National Forest, 0.2 mi (0.3 km) upstream from mouth, and 2 mi (3 km) west of Lehman Springs.

BASIN CHARACTERISTICS.--Drainage area, 2.27 mi<sup>2</sup> (5.88 km<sup>2</sup>). Channel elevation at gage is 4,065 ft (1,239 m). Mean elevation of basin is 4,580 ft (1,396 m); channel slope, 225 ft/mi (42.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through 4.7-ft (1.43 m) x 3.0-ft (0.91 m) pipe-arch culvert with upstream invert at 9.86 ft (3.005 m), gage datum.

REMARKS.--Station was established Oct. 27, 1965. Culvert was assumed to be unobstructed during peak of Jan. 30, 1965. Road overflow will occur at 16.0 ft (4.88 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 30, 1965	14.44	90	39.6
1966	Apr. 6, 1966	12.18	44	19.4
1967	May 15, 1967	10.89	12	5.3
1968	Feb. 22, 1968	10.94	13	5.7
1969	Jan. 22, 1969	11.69	31	13.7
1970	Jan. 23, 1970	12.35	48	21.1
1971	May 25, 1971	11.64	30	13.2
1972	Feb. 29, 1972	11.81	34	15.0
1973	Jan. 15, 1973	10.90	12	5.3
1974	May 5, 1974	11.46	25	11.0



## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

78

## 14043800 BRIDGE CREEK NEAR PRAIRIE CITY, OREG.

LOCATION.--Lat 44°32'30", long 118°32'25", in NE¼ sec.7, T.12 S., R.35 E., Grant County, at culvert at intersection of Looney Springs Road and U.S. Highway 26, 3.1 mi (5.0 km) east of Dixie Summit, and 13.4 mi (21.6 km) east of Prairie City.

BASIN CHARACTERISTICS.--Drainage area, 6.93 mi<sup>2</sup> (17.95 km<sup>2</sup>). Channel elevation at gage is 4,620 ft (1,408 m). Mean elevation of basin is 5,350 ft (1,631 m); channel slope, 249 ft/mi (47.2 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through a 5.0-ft (1.52 m) diameter culvert with upstream invert at 6.01 ft (1.832 m), gage datum.

REMARKS.--Station was established Aug. 8, 1963. No peak data reported in 1966.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1964	June 15, 1964	7.77	35	5.1
1965	Jan. 30, 1965	8.59	66	9.5
1967	May 18, 1967	8.35	54	7.8
1968	Feb. 20, 1968	7.80	22	3.2
1969	Mar. 31, 1969	8.33	38	5.5
1970	May 23, 1970	8.89	59	8.5
1971	May 2, 1971	8.86	58	8.4
1972	Jan. 21, 1972	8.50	45	6.5
1973	Apr. 25, 1973	7.76	21	3.0
1974	May 10, 1974	9.15	79	11.4

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## 14043850 COTTONWOOD CREEK NEAR GALENA, OREG.

LOCATION.--Lat 44°39'10", long 118°51'55", in SE¼ sec.33, T.10 S., R.32 E., Grant County, at culvert on Forest Service road 1015 in Malheur National Forest, at Beymer Flat, 2.5 mi (4.0 km) upstream from mouth, and 4 mi (6 km) south of Galena.

BASIN CHARACTERISTICS.--Drainage area, 3.89 mi<sup>2</sup> (10.08 km<sup>2</sup>). Channel elevation at gage is 4,420 ft (1,347 m). Mean elevation of basin is 5,130 ft (1,564 m); channel slope, 297 ft/mi (56.3 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 6.0-ft (1.83 m) x 3.6-ft (1.10 m) pipe-arch culvert with upstream invert at 8.90 ft (2.713 m), gage datum.

REMARKS.--Station was established July 25, 1965. Culvert was assumed to be unobstructed during peak flow of Dec. 22, 1964. Road overflow will occur at 14.8 ft (4.51 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	11.64	66	17.0
1966	Jan. 3, 1966	11.68	67	17.2
1967	May 18, 1967	10.89	42	10.8
1968	Feb. 22, 1968	10.39	27	6.9
1969	Apr. 15, 1969	10.33	25	6.4
1970	Jan. 24, 1970	11.02	46	11.8
1971	Apr. 15, 1971	11.06	47	12.1
1972	Mar. 25, 1972	11.38	57	14.7
1973	Apr. 25, 1973	10.29	24	6.2
1974	May 3, 1974	12.49	93	23.9

## REGION 4

51

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

80

## 14043900 GRANITE CREEK NEAR DALE, OREG.

LOCATION.--Lat 44°53'40", long 119°00'50", in NW¼ sec.8, T.8 S., R.31 E., Grant County, at culvert on U.S. Highway 395, 4.7 mi (7.6 km) north of bridge on Middle Fork John Day River, and 8.2 mi (13.2 km) south of Dale.

BASIN CHARACTERISTICS.--Drainage area, 1.90 mi<sup>2</sup> (4.92 km<sup>2</sup>). Channel elevation at gage is 3,740 ft (1,140 m). Mean elevation of basin is 4,130 ft (1,259 m); channel slope, 161 ft/mi (30.5 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 12.74 ft (3.883 m), gage datum.

REMARKS.--Station was established June 10, 1964. Road overflow will occur at 21.8 ft (6.64 m), gage datum. No peak data reported during period of 1966 to 1969. Peak of 1973 is highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 21, 1964	14.53	46	24.2
1970	Jan. 23, 1970	14.00	25	13.2
1971	Jan. 19, 1971	13.97	24	12.6
1972	Jan. 27, 1972	14.27	33	17.4
1973	May 17, 1973	13.11	2.8	1.5
1974	Jan. 17, 1974	13.67	9.0	4.7

81

## 14044100 PAUL CREEK NEAR LONG CREEK, OREG.

LOCATION.--Lat 44°43'26", long 119°07'54", in SE¼ sec.5, T.10 S., R.30 E., Grant County, at culvert on State Highway 207, 1.5 mi (2.4 km) west of junction of U.S. Highway 395 in town of Long Creek.

BASIN CHARACTERISTICS.--Drainage area, 3.50 mi<sup>2</sup> (9.06 km<sup>2</sup>). Channel elevation at gage is 3,760 ft (1,146 m). Mean elevation of basin is 4,490 ft (1,369 m); channel slope, 446 ft/mi (84.5 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 7.30 ft (2.225 m), gage datum.

REMARKS.--Station was established July 31, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Mar. 30, 1969	9.80	51	14.6
1970	Jan. 23, 1970	9.92	56	16.0
1971	Jan. 17, 1971	9.68	46	13.1
1972	Jan. 20, 1972	9.31	34	9.7
1973	Feb. 20, 1973	8.13	4.1	1.2
1974	Jan. 14, 1974	8.53	12	3.4

## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

82

## 14045100 EAST FORK COTTONWOOD CREEK TRIBUTARY NEAR HAMILTON, OREG. (Discontinued)

LOCATION.--Lat 44°45'25", long 119°21'21", in SE¼ sec.28, T.9 S., R.28 E., Grant County, at culvert on State Highway 207, 3.9 mi (6.3 km) west of Hamilton, and 5.8 mi (9.3 km) east of Monument.

BASIN CHARACTERISTICS.--Drainage area, 0.78 mi<sup>2</sup> (2.02 km<sup>2</sup>). Other basin characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through 3.0-ft (0.91 m) diameter culvert with upstream invert at 10.65 ft (3.246 m), gage datum.

REMARKS.--Station was established July 31, 1968. Peak of May 15, 1973 estimated by slope-conveyance method at site 500 ft (152 m) upstream from site. Station discontinued in 1973, because of severe flood damage.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Jan. 6, 1969	12.55	22	28.2
1970	July 4, 1970	12.15	15	19.2
1971	May 25, 1971	12.14	15	19.2
1972	Mar. 2, 1972	12.09	14	17.9
1973	May 15, 1973	-	4,140	5,310

83

## 14046250 IVES CANYON NEAR SPRAY, OREG.

LOCATION.--Lat 44°51'35", long 119°42'50", in NE¼ sec.22, T.8 S., R.25 E., Wheeler County, at two culvert sites on State Highway 207, 4 mi (6 km) south of National Forest boundary, and 4 mi (6 km) northeast of Spray.

BASIN CHARACTERISTICS.--Drainage area, 2.73 mi<sup>2</sup> (7.07 km<sup>2</sup>). Other basin characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from rating curves defined by computations of flow through 3.0-ft (0.91 m) and 2.0-ft (0.61 m) diameter culverts with upstream inverts at 10.53 ft (3.210 m) and 7.08 ft (2.158 m), gage datum. Peak discharges represent total flow from combined basins. Published gage heights refer to headwater elevations at largest culvert.

REMARKS.--Station was established Aug. 16, 1967. No flow occurred during 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1968	-	-	0	0
1969	June 9, 1969	12.78	32	11.7
1970	July 4, 1970	13.40	43	15.8
1971	Jan. 17, 1971	12.34	19	7.0
1972	Mar. 2, 1972	11.66	11	4.0
1973	Feb. 21, 1973	11.08	2.9	1.1
1974	Jan. 14, 1974	12.73	24	8.8

## REGION 4

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## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

84

## 14046300 BIG SERVICE CREEK NEAR SERVICE CREEK, OREG.

LOCATION.--Lat 44°53'38", long 120°04'11", in NE¼ sec.10, T.8 S., R.22 E., Wheeler County, at culvert on State Highway 19, 0.5 mi (0.8 km) south of Shelton State Park, and 7 mi (11 km) north of town of Service Creek.

BASIN CHARACTERISTICS.--Drainage area, 5.56 mi<sup>2</sup> (14.40 km<sup>2</sup>). Channel elevation at gage is 3,120 ft (951 m). Mean elevation of basin is 3,880 ft (1,183 m); channel slope, 335 ft/mi (63.4 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 5.0-ft (1.52 m) diameter culvert with upstream invert at 6.41 ft (1.954 m), gage datum.

REMARKS.--Station was established Aug. 28, 1968. Peaks for period 1969 to 1973 are highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Mar. 13, 1969	7.21	6.2	1.1
1970	Feb. 18, 1970	7.15	5.4	1.0
1971	Jan. 26, 1971	6.95	3.5	0.6
1972	Mar. 16, 1972	7.50	11	2.0
1973	June 20, 1973	6.85	2.8	0.5
1974	Jan. 14, 1974	7.38	8.6	1.5

85

## 14046400 DONNELLY CREEK TRIBUTARY NEAR SERVICE CREEK, OREG.

LOCATION.--Lat 44°46'20", long 120°00'10", in SE¼ sec.19, T.9 S., R.23 E., Wheeler County, at two culverts on State Highway 207, 1.8 mi (2.9 km) south of town of Service Creek.

BASIN CHARACTERISTICS.--Drainage area, 1.85 mi<sup>2</sup> (4.79 km<sup>2</sup>). Channel elevation at gage is 2,120 ft (646 m). Mean elevation of basin is 2,880 ft (878 m); channel slope, 419 ft/mi (79.4 m/km).

DISCHARGE.--Peak discharges are from rating curves defined by computations of flow through 4.0-ft (1.22 m) x 2.5-ft (0.76 m) pipe-arch culvert and 2.0-ft (0.61 m) diameter culvert with upstream inverts at 8.85 ft (2.697 m) and 11.71 ft (3.569 m), gage datum. Peak discharges represent total flow from combined basins above culverts. Published gage heights refer to headwater elevations at largest culvert.

REMARKS.--Station was established Aug. 7, 1963. No flow occurred in 1968. Peak of 1973 is highest observed.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1964	June 15, 1964	9.42	3.6	1.9
1965	Aug. 25, 1965	11.06	39	21.1
1966	Jan. 3, 1966	9.21	1.0	0.5
1967	May 15, 1967	10.04	14	7.6
1968	-	-	0	0
1969	June 9, 1969	11.37	39	21.1
1970	July 4, 1970	9.81	9.2	5.0
1971	Jan. 17, 1971	9.96	12	6.5
1972	Mar. 2, 1972	9.98	8.7	4.7
1973	Oct. 20, 1972	9.60	5.0	2.7
1974	Jan. 14, 1974	9.71	7.2	3.9



## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

86

## 14046600 KEYES CREEK TRIBUTARY NEAR MITCHELL, OREG. (Discontinued)

LOCATION.--Lat 44°34'04", long 120°05'36", in SW¼ sec.33, T.11 S., R.22 E., Wheeler County, at culvert on U.S. Highway 26, at H. H. Wheeler historical monument, 3.4 mi (5.5 km) east of Mitchell.

BASIN CHARACTERISTICS.--Drainage area, 2.48 mi<sup>2</sup> (6.42 km<sup>2</sup>). Other basin characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 7.0-ft (2.13 m) x 5.0-ft (1.52 m) pipe-arch culvert with upstream invert at 8.47 ft (2.582 m), gage datum.

REMARKS.--Station was established July 30, 1968. Road overflow will occur at 14.0 ft (4.27 m), gage datum. Station was discontinued in 1970 due to channel alterations.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Apr. 2, 1969	10.46	43	17.3

87

## 14046650 CARROL CREEK NEAR MITCHELL, OREG.

(Formerly published as West Branch Bridge Creek tributary)

LOCATION.--Lat 44°33'07", long 120°20'25", in SW¼ sec.4, T.12 S., R.20 E., Wheeler County, at culvert on U.S. Highway 26, 7.8 mi (12.6 km) west of Bridge Creek bridge, and 11.5 mi (18.5 km) west of Mitchell.

BASIN CHARACTERISTICS.--Drainage area, 0.28 mi<sup>2</sup> (0.73 km<sup>2</sup>). Channel elevation at gage is 3,550 ft (1,082 m). Mean elevation of basin is 3,820 ft (1,164 m); channel slope, 586 ft/mi (111 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 7.0-ft (2.13 m) diameter culvert with upstream invert at 8.56 ft (2.609 m), gage datum.

REMARKS.--Station was established July 30, 1968. No flow occurred during period of 1970 to 1974.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	June 10, 1969	10.49	35	125

## REGION 4

55

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

88

## 14046900 JOHN DAY RIVER TRIBUTARY NEAR CLARNO, OREG.

LOCATION.--Lat 44°54'20", long 120°34'05", in NE¼ sec.4, T.8 S., R.18 E., Wasco County, at culvert on State Highway 218, 5 mi (8 km) west of Clarno, and 8 mi (13 km) east of Antelope.

BASIN CHARACTERISTICS.--Drainage area, 1.36 mi<sup>2</sup> (3.52 km<sup>2</sup>). Channel elevation at gage is 3,000 ft (914 m). Mean elevation of basin is 3,730 ft (1,137 m); channel slope, 383 ft/mi (72.5 m/km). Basin consists almost entirely of improved range land.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 6.0-ft (1.83 m) diameter culvert with upstream invert at 23.65 ft (7.209 m), gage datum.

REMARKS.--Station was established May 5, 1959. No flow observed during 1959, 1960, 1962, 1964, 1968, and 1973 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1961	Feb. 10, 1961	25.92	40	29.4
1963	Feb. 2, 1963	26.01	43	31.6
1965	Dec. 21, 1964	27.13	83	61.0
1966	Jan. 3, 1966	26.04	42	30.9
1967	Jan. 28, 1967	25.74	33	24.3
1969	Mar. 20, 1969	25.79	34	25.0
1970	Jan. 23, 1970	25.88	37	27.2
1971	Jan. 17, 1971	26.64	65	47.8
1972	May 7, 1972	26.37	54	39.7
1974	Jan. 16, 1974	25.85	22	16.2

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## 14047300 Condon Canyon tributary near Condon, Oreg. (Discontinued)

LOCATION.--Lat 45°12'30", long 120°10'20", in NW¼ sec.23, T.4 S., R.21 E., Gilliam County, at culvert on State Highway 19, at mouth, 1.9 mi (3.1 km) south of Condon, and 3.9 mi (6.3 km) north of Thirtymile Creek bridge.

BASIN CHARACTERISTICS.--Drainage area, 1.03 mi<sup>2</sup> (2.67 km<sup>2</sup>). Channel elevation at gage is 2,500 ft (762 m). Other characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 3.0-ft (0.91 m) diameter culvert with upstream invert at 11.78 ft (3.591 m), gage datum.

REMARKS.--Station was established Aug. 6, 1963. Peak of Dec. 22, 1964, affected by backwater from debris. Road overflow occurs at 15.4 ft (4.69 m), gage datum. Station discontinued Sept. 30, 1967. Peak of 1972 determined at slope-conveyance reach, 300 ft (91 m) upstream from gage.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	17.54	104	101
1966	Jan. 3, 1966	13.67	12.1	11.7
1972	June 8, 1972	-	79	76.7

## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

90

## 14047350 ROCK CREEK NEAR HARDMAN, OREG.

LOCATION.--Lat 45°04'40", long 119°34'10", in NE¼ sec.2, T.6 S., R.26 E., Morrow County, at culvert on Forest Service road 618 in Umatilla National Forest, 0.5 mi (0.8 km) upstream from mouth, and 8.5 mi (13.7 km) southeast of Hardman.

BASIN CHARACTERISTICS.--Drainage area 6.25 mi<sup>2</sup> (16.19 km<sup>2</sup>). Channel elevation at gage is 3,620 ft (1,103 m). Mean elevation of basin is 4,100 ft (1,250 m); channel slope, 136 ft/mi (25.8 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through 7.8-ft (2.38 m) x 5.4-ft (1.65 m) pipe-arch culvert. Site is subject to variable backwater conditions from downstream channel.

REMARKS.--Station was established July 30, 1965. Culvert was assumed to be unobstructed during peak of Jan. 30, 1965. Bypass flow through cattle guard will occur at 15.5 ft (4.72 m), gage datum. No data reported during 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 30, 1965	14.62	117	18.7
1966	Mar. 30, 1966	12.87	36	5.8
1967	Jan. 29, 1967	13.25	51	8.2
1969	Mar. 24, 1969	13.40	86	13.8
1970	Jan. 23, 1970	14.09	115	18.4
1971	Jan. 17, 1971	13.45	88	14.1
1972	Jan. 21, 1972	13.46	80	12.8
1973	Dec. 20, 1972	12.45	11	1.8
1974	May 5, 1974	12.98	34	5.4

91

## 14047450 WEST FORK DRY CREEK NEAR GOOSEBERRY, OREG.

(Formerly published as Dry Fork tributary)

LOCATION.--Lat 45°17'12", long 119°57'53", in SE¼ sec.20, T.3 S., R.23 E., Morrow County, at culvert on State Highway 206, 3.5 mi (5.6 km) west of Gooseberry, and 10 mi (16 km) northeast of Condon.

BASIN CHARACTERISTICS.--Drainage area, 0.81 mi<sup>2</sup> (2.10 km<sup>2</sup>). Channel elevation at gage is 2,210 ft (674 m). Mean elevation of basin is 2,540 ft (774 m); channel slope, 333 ft/mi (63.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through 4.0-ft (1.22 m) diameter culvert with upstream invert at 5.68 ft (1.731 m), gage datum.

REMARKS.--Station was established Aug. 17, 1967. Culvert assumed to be unobstructed during peak of Dec. 22, 1964. No flow observed during 1968 and 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	13.04	134	165
1969	Sept. 18, 1969	9.69	75	92.6
1970	Jan. 23, 1970	9.98	81	100
1971	June 10, 1971	7.01	11	13.6
1972	Mar. 2, 1972	7.08	12	14.8
1974	Nov. 13, 1973	7.07	12	14.8

## REGION 4

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## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

92

## 14047470 JUNIPER CANYON TRIBUTARY NEAR MIKKALO, OREG.

LOCATION.--Lat 45°27'51", long 120°11'54", in SW¼ sec.21, T.1 S., R.21 E., Gilliam County, at culvert on Mikkalo Road, 0.1 mi (0.2 km) upstream from mouth, and 1.7 mi (2.7 km) east of Mikkalo.

BASIN CHARACTERISTICS.--Drainage area, 1.94 mi<sup>2</sup> (5.02 km<sup>2</sup>). Basin consists almost entirely of grain fields. Channel elevation at gage is 1,480 ft (451 m). Mean elevation of basin is 1,800 ft (549 m); channel slope, 120 ft/mi (22.7 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 5.60 ft (1.707 m), gage datum.

REMARKS.--Station was established June 20, 1972. Culvert assumed to be unobstructed during peak of June 9, 1972.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1972	June 9, 1972	16.15	346	178
1973	May 15, 1973	6.30	4.0	2.1
1974	Jan. 15, 1974	7.80	40	20.6

93

## 14048020 GRASS VALLEY CANYON NEAR GRASS VALLEY, OREG.

LOCATION.--Lat 45°22'25", long 120°46'27", on sec. line 23 and 26, T.2 S., R.16 E., Sherman County, at culvert on county road, 1 mi (2 km) northeast of Grass Valley.

BASIN CHARACTERISTICS.--Drainage area, 8.15 mi<sup>2</sup> (21.11 km<sup>2</sup>). Channel elevation at gage is 2,190 ft (668 m). Mean elevation of basin is 2,370 ft (722 m); channel slope, 45.0 ft/mi (8.52 m/km). Basin consists primarily of grain fields, improved pasture lands, and the town of Grass Valley.

DISCHARGE.--Peak discharges are from computations of flow through one concrete-arch culvert with natural dirt invert at 13.4 ft (4.08 m), gage datum.

REMARKS.--Station was established Sept. 9, 1957. No flow observed during 1959, 1960, 1964, and 1968 water years. Road overflow occurs at 20.8 ft (6.34 m), gage datum. Peak for 1969 not determined, but is known to be greater than 30 ft<sup>3</sup>/s (0.850 m<sup>3</sup>/s).

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s mi <sup>2</sup> )
1958	Feb. 16, 1958	15.94	146	17.9
1961	Jan. 5, 1961	16.3	200	24.5
1962	Jan. 7, 1962	15.62	110	13.5
1963	Feb. 2, 1963	18.83	588	72.1
1965	Dec. 21, 1964	21.77	1,570	193
1966	Jan. 3, 1966	17.92	440	54.0
1967	Jan. 28, 1967	15.30	72	8.8
1969	Jan. 11, 1969	-	-	-
1970	Jan. 23, 1970	16.04	166	20.4
1971	Jan. 17, 1971	15.39	90	11.0
1972	Jan. 21, 1972	15.86	138	16.9
1973	Dec. 23, 1972	-	64	7.9
1974	Jan. 16, 1974	16.68	256	31.4



## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

94

## 14048040 GORDON HOLLOW AT DE MOSS SPRINGS, OREG.

LOCATION.--Lat 45°30'50", long 120°40'55", in NW¼ sec.3, T.1 S., R.17 E., Sherman County, at culvert on U.S. Highway 97 in De Moss Springs.

BASIN CHARACTERISTICS.--Drainage area, 8.86 mi<sup>2</sup> (22.95 km<sup>2</sup>). Channel elevation at gage is 1,580 ft (482 m). Mean elevation of basin is 1,960 ft (597 m); channel slope, 96.2 ft/mi (18.2 m/km). Basin consists primarily of grain fields.

DISCHARGE.--Peak discharges are from computations of flow through 8-ft (2.44 m) concrete-box culvert with a natural bedrock invert at 6.5 ft (1.98 m), gage datum. Culvert was lengthened during summer of 1963.

REMARKS.--Station was established May 20, 1959. No flow observed during 1959, 1960, 1964, and 1968 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1961	Feb. 10, 1961	12.48	720	81.3
1962	Dec. 20, 1961	8.38	291	32.8
1963	Mar. 28, 1963	7.38	209	23.6
1965	Dec. 21, 1964	20.65	984	111
1966	Jan. 3, 1966	17.15	830	93.7
1967	Jan. 28, 1967	9.56	167	18.8
1969	Jan. 6, 1969	8.26	43	4.9
1970	Jan. 23, 1970	9.31	140	15.8
1971	Jan. 17, 1971	10.14	230	26.0
1972	June 8, 1972	16.86	820	92.6
1973	Dec. 20, 1972	9.96	210	23.7
1974	Jan. 16, 1974	8.84	91	10.3

95

## 14048060 HAY CANYON NEAR DEMOSS SPRINGS, OREG. (Discontinued)

LOCATION.--Lat 45°29'20", long 120°36'50", in N¼ sec.18, T.1 S., R.18 E., Sherman County, at bridge at Monkland Ranch, 3 mi (5 km) upstream from mouth, and 4 mi (6 km) southeast of DeMoss Springs.

BASIN CHARACTERISTICS.--Drainage area, 23.8 mi<sup>2</sup> (61.6 km<sup>2</sup>). Channel elevation at bridge is 1,960 ft (597 m). Other characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from computations of flow by contracted-opening and slope-area methods.

REMARKS.--Station was established May 20, 1959; discontinued Sept. 30, 1965.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1961	Jan. 5, 1961	6.17	624	26.2
1963	Sept. 2, 1963	11.41	2,620	110
1965	Dec. 21, 1964	13.38	4,180	176

## REGION 4

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## LOWER COLUMBIA RIVER BASIN (Continued)

## JOHN DAY RIVER BASIN

96

## 14048080 BUCK CANYON NEAR KLONDIKE, OREG. (Discontinued)

LOCATION.--Lat 45°31'35", long 120°35'50", in SW¼ sec.32, T.1 N., R.18 E., Sherman County, at culvert on State Highway 206, 0.3 mi (0.5 km) upstream from mouth, and 4 mi (6 km) south of Klondike.

BASIN CHARACTERISTICS.--Drainage area, 3.42 mi<sup>2</sup> (8.86 km<sup>2</sup>). Channel elevation at gage is 1,340 ft (408 m). Other characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from computations of flow through twin 7.0-ft (2.13 m) diameter culverts with upstream inverts at 8.38 ft (2.554 m), gage datum.

REMARKS.--Station was established May 20, 1959. Peak of Aug. 26, 1953, made at site 0.1 mi (0.2 km) downstream and published as "Bull Run Canyon near Klondike." No flow observed during periods of 1959, 1960, 1964, and 1966-68. Road overflow occurs at 15.9 ft (4.85 m), gage datum. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Aug. 26, 1953	-	1,030	301
1961	Jan. 5, 1961	11.85	171	50.0
1962	Dec. 20, 1961	10.87	94	27.5
1963	Feb. 2, 1963	11.04	107	31.3
1965	Dec. 21, 1964	-	904	264

## SPANISH HOLLOW BASIN

97

## 14048300 SPANISH HOLLOW AT WASCO, OREG.

LOCATION.--Lat 45°35'20", long 120°41'40", in NE¼ sec.9, T.1 N., R.17 E., Sherman County, at culvert on street in southwest Wasco, 1 block east of U.S. Highway 97.

BASIN CHARACTERISTICS.--Drainage area, 8.05 mi<sup>2</sup> (20.85 km<sup>2</sup>). Channel elevation at gage is 1,280 ft (390 m). Mean elevation of basin is 1,560 ft (475 m); channel slope, 65.0 ft/mi (12.3 m/km). Basin consists of farmland used for growing grain.

DISCHARGE.--Peak discharges are from computations of flow through one 9.0-ft (2.74 m) x 6.0 ft (1.83 m) concrete-box culvert with upstream invert at 2.30 ft (0.700 m), gage datum.

REMARKS.--Station was established May 21, 1959. No flow observed during 1959, 1964, and 1967 water years. Road overflow occurs at 8.5 ft (2.59 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1960	Feb. 8, 1960	4.37	96	11.9
1961	Jan. 5, 1961	6.74	279	34.7
1962	Dec. 20, 1961	3.86	64	8.0
1963	Feb. 2, 1963	5.10	148	18.4
1965	Dec. 21, 1964	10.52	585	72.7
1966	Jan. 3, 1966	5.36	169	21.0
1968	Feb. 19, 1968	2.55	3.5	0.4
1969	Jan. 6, 1969	4.26	90	11.2
1970	Jan. 23, 1970	3.60	45	5.6
1971	Jan. 17, 1971	4.09	78	9.7
1972	Jan. 21, 1972	3.84	205	25.5
1973	Dec. 21, 1972	5.94	213	26.5
1974	Jan. 15, 1974	3.91	66	8.2

## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## SPANISH HOLLOW BASIN

98

## 14048310 SPANISH HOLLOW TRIBUTARY AT WASCO, OREG.

LOCATION.--Lat 45°35'30", long 120°42'55", on sec. line 5 and 8, T.1 N., R.17 E., Sherman County, at culvert at junction of State Highway 206 and U.S. Highway 97, 0.9 mi (1.4 km) west of Wasco.

BASIN CHARACTERISTICS.--Drainage area, 6.13 mi<sup>2</sup> (15.88 km<sup>2</sup>). Channel elevation at gage is 1,240 ft (378 m). Mean elevation of basin is 1,610 ft (491 m); channel slope, 128 ft/mi (24.2 m/km). Basin consists almost entirely of grain fields.

DISCHARGE.--Prior to 1973, peak discharges were from rating curve defined by computations of flow through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 6.31 ft (1.923 m), gage datum then in use. Peak discharges after 1973 are from computations of flow through one 12.0-ft (3.66 m) x 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 5.32 ft (1.622 m), present datum.

REMARKS.--Station was established Aug. 14, 1967. Peak for 1973 estimated by slope-conveyance method of site 200 ft (61 m) upstream from gages.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1968	Feb. 19, 1968	6.56	2	0.3
1969	Jan. 6, 1969	10.19	92	15.0
1970	Jan. 23, 1970	8.34	30	4.9
1971	Jan. 17, 1971	9.42	63	10.3
1972	Jan. 21, 1972	18.24	376	61.3
1973	Dec. 21, 1972	-	85	13.9
1974	Jan. 15, 1974	7.90	175	28.5

## FULTON CANYON BASIN

99

## 14048350 FULTON CANYON TRIBUTARY NEAR WASCO, OREG. (Discontinued)

LOCATION.--Lat 45°35'05", long 120°45'35", in center sec.12, T.1 N., R.16 E., Sherman County, at culvert on county road, 2.7 mi (4.3 km) upstream from mouth, and 3.5 mi (5.6 km) west of Wasco.

BASIN CHARACTERISTICS.--Drainage area, 6.75 mi<sup>2</sup> (17.48 km<sup>2</sup>). Channel elevation at gage is 1,240 ft (378 m). Mean elevation of basin is 1,700 ft (518 m); channel slope, 145 ft/mi (27.5 m/km). Basin consists almost entirely of grain fields.

DISCHARGE.--Peak discharges are from computations of flow through one concrete-arch culvert with upstream invert at 7.30 ft (2.225 m), gage datum.

REMARKS.--Station was established May 22, 1959. No flow observed during periods of 1959, 1960, and 1962-64. Station discontinued Sept. 30, 1966.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1961	Jan. 5, 1961	13.14	335	49.6
1965	Dec. 21, 1964	21.20	1,370	203
1966	Jan. 3, 1966	12.89	300	44.4

## REGION 4

61

## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

100

14077800 WOLF CREEK TRIBUTARY NEAR PAULINA, OREG.

(Formerly published as East Fork Wolf Creek)

LOCATION.--Lat 44°16'39", long 119°49'00", in NW¼NW¼ sec.14, T.15 S., R.24 E., Crook County, at culvert on Forest Service road 1438 in Ochoco National Forest, 1.7 mi (2.7 km) south of Crook County line, and 13 mi (21 km) northeast of Paulina.

BASIN CHARACTERISTICS.--Drainage area, 2.15 mi<sup>2</sup> (5.57 km<sup>2</sup>). Channel elevation at gage is 4,190 ft (1,277 m). Mean elevation of basin is 5,150 ft (1,570 m); channel slope, 260 ft/mi (49.2 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 8.0-ft (2.44 m) x 5.9-ft (1.80 m) pipe-arch culvert with upstream invert at 6.63 ft (2.021 m), gage datum.

REMARKS.--Station was established July 29, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Road overflow will occur at 15.1 ft (4.60 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	12.62	300	140
1966	Apr. 10, 1966	8.62	55	25.6
1967	Dec. 13, 1966	9.50	107	49.8
1968	Feb. 23, 1968	8.29	39	18.1
1969	Mar. 30, 1969	8.39	44	20.5
1970	Jan. 23, 1970	10.35	160	74.4
1971	Jan. 17, 1971	8.64	50	23.3
1972	Mar. 2, 1972	9.45	103	47.9
1973	Apr. 9, 1973	8.66	52	24.2
1974	Jan. 15, 1974	8.99	72	33.5

101

14078200 LIZARD GULCH TRIBUTARY NEAR HAMPTON, OREG.

(Formerly published as South Fork Crooked River Tributary)

LOCATION.--Lat 43°35'20", long 119°59'00", in SW¼ sec.8, T.23 S., R.23 E., Lake County, at culvert on U.S. Highway 20, in Glass Mountain Conservation Area, and 15.5 mi (24.9 km) east of Hampton.

BASIN CHARACTERISTICS.--Drainage area, 19.6 mi<sup>2</sup> (50.8 km<sup>2</sup>). Other basin characteristics have not yet been evaluated.

DISCHARGE.--Prior to 1974, peak discharges were from rating curve defined by computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 5.61 ft (1.710 m), gage datum. Culvert extended upstream in 1974; present upstream invert elevation is 6.74 ft (2.054 m), gage datum.

REMARKS.--Station was established June 11, 1964. No flow observed during 1968 and 1973 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 21, 1964	16.20	177	9.0
1966	Apr. 10, 1966	9.18	62	3.2
1967	Dec. 13, 1966	6.54	6.5	0.3
1969	June 9, 1969	7.24	16	0.8
1970	Jan. 23, 1970	7.95	30	1.5
1971	Jan. 17, 1971	8.00	31	1.6
1972	Mar. 2, 1972	7.02	12	0.6
1974	Jan. 15, 1974	12.76	113	5.8



## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

102

14078280 MIDDLE FORK CAMP CREEK NEAR PAULINA, OREG.

LOCATION.--Lat 43°57'24", long 120°15'30", in NW¼ sec.6, T.19 S., R.21 E., Crook County, at culvert on Camp Creek road, 0.2 mi (0.3 km) upstream from mouth, and 20 mi (32 km) southwest of Paulina.

BASIN CHARACTERISTICS.--Drainage area and other characteristics have not been evaluated because of inadequate maps. Several small stock reservoirs are located in basin.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 6.85 ft (2.088 m), gage datum.

REMARKS.--Station was established Aug. 24, 1971. Peak of Mar. 2, 1972, revised on basis of additional information from basin reconnaissance.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1972	Mar. 2, 1972	9.20	36	-
1973	Dec. 20, 1972	8.26	13	-
1974	May 10, 1974	11.98	132	-

103

14078300 CEMETERY CREEK NEAR PAULINA, OREG.

(Formerly published as Crooked River Tributary)

LOCATION.--Lat 44°06'36", long 120°10'39", in SW¼ sec.11, T.17 S., R.21 E., Crook County, at culvert on State Highway 380, 0.2 mi (0.3 km) above mouth, 1.0 mi (1.6 km) east of Maury Creek, and 10 mi (16 km) west of Paulina.

BASIN CHARACTERISTICS.--Drainage area, 5.1 mi<sup>2</sup> (13.2 km<sup>2</sup>), approximately. Other basin characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 10.93 ft (3.331 m), gage datum.

REMARKS.--Station was established July 23, 1968. No flow observed during 1973 and 1974.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Apr. 2, 1969	11.78	4.6	0.9
1970	Jan. 23, 1970	13.51	37	7.3
1971	Jan. 17, 1971	13.94	48	9.4
1972	Mar. 2, 1972	11.94	6.4	1.3

## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

104

14078400 LOOKOUT CREEK NEAR POST, OREG.

LOCATION.--Lat 44°18'40", long 120°14'24", in SW¼ sec.32, T.14 S., R.21 E., Crook County, at culvert on Forest Service road 143 in Ochoco National Forest, and 16 mi (26 km) northeast of Post.

BASIN CHARACTERISTICS.--Drainage area, 7.53 mi<sup>2</sup> (19.50 km<sup>2</sup>). Datum of gage is 4,625 ft (1,410 m) above mean sea level (from levels to U.S.G.S. bench mark at site). Mean elevation of basin is 5,670 ft (1,728 m); slope, 291 ft/mi (55.1 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 5.7-ft (1.74 m) x 3.8-ft (1.16 m) pipe-arch culvert with upstream invert at 5.50 ft (1.676 m), gage datum.

REMARKS.--Station was established July 30, 1965. Road overflow will occur at 14.6 ft (4.45 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	Apr. 10, 1966	7.41	40	5.3
1967	Dec. 13, 1966	7.29	36	4.8
1968	Apr. 29, 1968	6.37	11	1.5
1969	Apr. 2, 1969	7.50	43	5.7
1970	Jan. 23, 1970	7.67	48	6.4
1971	Jan. 17, 1971	8.02	60	8.0
1972	Jan. 20, 1972	8.80	85	11.3
1973	Dec. 21, 1972	7.05	24	3.2
1974	May 10, 1974	8.73	82	10.9

105

14079750 CROOKED RIVER TRIBUTARY NEAR POST, OREG.

LOCATION.--Lat 44°10'42", long 120°34'06", in SE¼ sec.16, T.16 S., R.18 E., Crook County, at culvert on State Highway 380, 1.4 mi (2.3 km) west of Wickiup Creek, and 4 mi (6 km) northwest of Post.

BASIN CHARACTERISTICS.--Drainage area, 0.3 mi<sup>2</sup> (0.8 km<sup>2</sup>), approximately. Other basin characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from computations of flow through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 9.48 ft (2.890 m), gage datum.

REMARKS.--Station was established July 23, 1968. No flow observed in 1970, 1973, and 1974.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	June 10, 1969	11.64	36	120
1971	Jan. 17, 1971	10.45	8.9	29.7

## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

106

## 14080100 BEAR CREEK TRIBUTARY NEAR BROTHERS, OREG.

LOCATION.--Lat 43°56'17", long 120°34'51", in NE¼ sec.8, T.19 S., R.18 E., Crook County, at culvert on BLM Bear Creek road, 9 mi (14 km) north of Brothers.

BASIN CHARACTERISTICS.--Drainage area, 0.86 mi<sup>2</sup> (2.23 km<sup>2</sup>). Channel elevation at gage is 4,040 ft (1,231 m). Mean elevation of basin is 4,360 ft (1,329 m); channel slope, 320 ft/mi (60.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 1.10 ft (0.335 m), gage datum.

REMARKS.--Station was established Sept. 24, 1970. Road overflow will occur at 8.4 ft (2.56 m), gage datum. No flow occurred in 1972, 1973, and 1974.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	4.22	47	54.7

107

## 14080150 BEAR CREEK TRIBUTARY NO. 2 NEAR BROTHERS, OREG.

LOCATION.--Lat 43°57'00", long 120°39'02", in NE¼SE¼ sec.2, T.19 S., R.17 E., Crook County, at culvert on Bear Creek road, 0.2 mi (0.3 km) upstream from mouth, and 12 mi (19 km) north of Brothers.

BASIN CHARACTERISTICS.--Drainage area, 2.50 mi<sup>2</sup> (6.48 km<sup>2</sup>). Channel elevation at gage is 3,760 ft (1,146 m). Mean elevation of basin is 4,290 ft (1,308 m); channel slope, 270 ft/mi (51.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 5.9-ft (1.80 m) by 3.6-ft (1.10 m) pipe-arch culvert with upstream invert at 6.68 ft (2.036 m), gage datum.

REMARKS.--Station was established Aug. 24, 1971. Road overflow will occur at 13.8 ft (4.21 m), gage datum. No flow occurred in 1972 and 1974.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1973	May 3, 1973	7.36	6.6	2.6

108

## 14080180 SAGE HOLLOW TRIBUTARY NEAR MILLICAN, OREG.

LOCATION.--Lat 43°58'41", long 120°43'07", in NE¼SW¼ sec.29, T.18 S., R.17 E., Crook County, at culvert on State Highway 27, 1.0 mi (1.6 km) upstream from Bear Creek, and 12 mi (19 km) north-east of Millican.

BASIN CHARACTERISTICS.--Drainage area, 3.50 mi<sup>2</sup> (9.06 km<sup>2</sup>). Channel elevation at gage is 3,640 ft (1,109 m). Mean elevation of basin is 4,360 ft (1,329 m); channel slope, 345 ft/mi (65.3 m/km). Two small stock reservoirs are located in basin.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4.4-ft (1.34 m) diameter culvert with upstream invert at 8.10 ft (2.469 m) gage datum.

REMARKS.--Station was established Aug. 25, 1971. Road overflow will occur at 14.0 ft (4.27 m), gage datum. Flow not adjusted for storage in stock reservoirs. No flow observed in 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1972	Mar. 2, 1972	9.59	15	4.3
1974	Mar. 7, 1974	9.13	7.1	2.0

## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

109

14080200 SAGE HOLLOW NEAR MILLICAN, OREG. (Discontinued)

LOCATION.--Lat 43°59'16", long 120°42'17", in SW¼SW¼ sec.21, T.18 S., R.17 E., Crook County, at culvert on Bear Creek road, at mouth, and 13 mi (21 km) northwest of Brothers.

BASIN CHARACTERISTICS.--Drainage area, 38.8 mi<sup>2</sup> (100.5 km<sup>2</sup>). Other characteristics have not been evaluated. Drainage area at slope-area site used in 1971, 29.3 mi<sup>2</sup> (75.9 km<sup>2</sup>).

DISCHARGE.--Peak discharge for flood of Jan. 17, 1971, is from slope-area measurement made at site 3 mi (5 km) upstream from culvert. Maximum gage height at culvert, 20.15 ft (6.142 m), gage datum.

REMARKS.--Station established Sept. 24, 1970; discontinued Jan. 17, 1971. Extensive road overflow occurs at 18.0 ft (5.49 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	-	1,300	44.4

110

14080300 BEAR CREEK TRIBUTARY NEAR MILLICAN, OREG.

LOCATION.--Lat 44°03'40", long 120°44'20" (approximately), near sec. line 30 and 31, T.17 S., R.17 E., Crook County, at culvert on State Highway 27, 0.3 mi (0.5 km) west of Bear Creek bridge, and 15 mi (24 km) northeast of Millican.

BASIN CHARACTERISTICS.--Drainage area, 6.59 mi<sup>2</sup> (17.07 km<sup>2</sup>). Other basin characteristics have not yet been determined. Location and drainage area data should be considered provisional until new maps become available.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of flow through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 5.40 ft (1.646 m), gage datum.

REMARKS.--Station was established Sept. 8, 1969. Road overflow occurs at 12.0 ft (3.66 m), gage datum. No flow observed in 1973 and 1974. Peaks for period 1969 to 1972 are revised because of silt on culvert invert.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	June 9, 1969	9.30	62	9.4
1970	July 1, 1970	12.00	158	24.0
1971	Jan. 17, 1971	9.44	68	10.3
1972	July 6, 1972	9.56	70	10.6



## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

111

## 14080600 DRY CREEK NEAR PRINEVILLE, OREG.

LOCATION.--Lat 44°12'12", long 120°45'36", in NW¼ sec. 12, T.16 S., R.16 E., Crook County, at culvert on county road (Juniper Canyon road), 8 mi (13 km) southeast of Prineville.

BASIN CHARACTERISTICS.--Drainage area, 14.5 mi<sup>2</sup> (37.6 km<sup>2</sup>). Channel elevation at gage is 3,870 ft (1,180 m). Mean elevation of basin is 4,280 ft (1,305 m); channel slope, 172 ft/mi (32.6 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 11.0-ft (3.35 m) x 7.0-ft (2.13 m) pipe-arch culvert with upstream invert at 11.51 ft (3.508 m), gage datum.

REMARKS.--Station was established July 22, 1968. Peak of 1971 includes road overflow 0.1 mi (0.2 km) east of site. No flow observed in 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Mar. 20, 1969	15.12	175	12.1
1970	Jan. 23, 1970	16.40	285	19.7
1971	Jan. 17, 1971	18.58	513	35.4
1972	Mar. 2, 1972	16.56	300	20.7
1974	Jan. 18, 1974	14.64	137	9.4

112

## 14081800 AHALT CREEK NEAR MITCHELL, OREG.

LOCATION.--Lat 44°26'00", long 120°21'05", in NE¼ sec. 20, T.13 S., R.20 E., Crook County, at culvert on Forest Service road 1222, 200 ft (61 m) upstream from mouth, and 14 mi (23 km) southwest of Mitchell.

BASIN CHARACTERISTICS.--Drainage area, 2.28 mi<sup>2</sup> (5.91 km<sup>2</sup>). Channel elevation at gage is 4,680 ft (1,426 m). Other characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from computations of flow through one 6.0-ft (1.83 m) x 4.0-ft (1.22 m) pipe-arch culvert with upstream invert at 5.94 ft (1.811 m), gage datum.

REMARKS.--Station was established May 16, 1956. Road overflow occurs at 9.0 ft (2.74 m), gage datum. Peak of Dec. 21, 1964, does not include road overflow. No flow observed during 1957, 1959, and 1968 water years. Culvert assumed to be unobstructed during peak winter flows. Peaks of 1958, 1962, 1964, and 1969 are maximum observed.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1956	May 8, 1956	9.42	90	39.5
1958	May 7, 1958	6.94	8.8	3.9
1960	Mar. 21, 1960	7.94	45	19.7
1961	Feb. 10, 1961	7.85	42	18.4
1962	May 4, 1962	6.90	13	5.7
1963	Feb. 3, 1963	8.53	63	27.6
1964	May 20, 1964	6.70	8.3	3.6
1965	Dec. 21, 1964	10.41	122	-
1966	Apr. 10, 1966	8.07	50	21.9
1967	May 27, 1967	7.44	28	12.3
1969	Apr. 30, 1969	6.54	0.2	0.1
1970	Jan. 22, 1970	7.88	43	18.9
1971	Jan. 17, 1971	7.95	45	19.7
1972	Mar. 2, 1972	8.26	55	24.1
1973	Dec. 20, 1972	7.73	38	16.7
1974	May 10, 1974	7.85	42	18.4

## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

113

## 14082400 WILDCAT CREEK NEAR PRINEVILLE, OREG.

LOCATION.--Lat 44°24'47", long 120°30'00", in NW¼ sec.30, T.13 S., R.19 E., Crook County, at culvert on U.S. Highway 26, 5 mi (8 km) southwest of Marks Creek lodge, and 18 mi (29 km) northeast of Prineville.

BASIN CHARACTERISTICS.--Drainage area, 3.66 mi<sup>2</sup> (9.48 km<sup>2</sup>). Channel elevation at gage is 4,050 ft (1,234 m). Mean elevation of basin is 4,770 ft (1,454); channel slope, 490 ft/mi (92.8 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 4.0-ft (1.22 m) concrete-box culvert with upstream invert at 9.20 ft (2.804 m), gage datum.

REMARKS.--Station was established July 30, 1968. Bypass flow will occur at 14.4 ft (4.39 m), gage datum. Peaks of 1969, 1973, and 1974 are highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	Apr. 2, 1969	9.05	0.2	0.05
1970	Jan. 22, 1970	11.33	42	11.5
1971	Jan. 17, 1971	11.14	24	6.6
1972	Mar. 2, 1972	11.90	44	12.0
1973	Mar. 22, 1973	9.10	0.3	.08
1974	Mar. 27, 1974	10.30	14.4	3.9

114

## 14084400 OCHOCO RESERVOIR TRIBUTARY NEAR PRINEVILLE, OREG.

LOCATION.--Lat 44°18'09", long 120°43'00", in NW¼ sec.5, T.15 S., R.17 E., Crook County, at culvert on U.S. Highway 26, 0.4 mi (0.6 km) upstream from axis of Ochoco dam, and 6 mi (10 km) east of Prineville.

BASIN CHARACTERISTICS.--Drainage area, 0.63 mi<sup>2</sup> (1.63 km<sup>2</sup>). Channel elevation at gage is 3,150 ft (960 m). Other characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from computations of flow through one 3.0-ft (0.91 m) diameter culvert with upstream invert at 0.69 ft (0.210 m), gage datum.

REMARKS.--Station was established July 29, 1968. Culvert assumed to be unobstructed during peak of Dec. 22, 1964. No flow observed during 1969, and 1972-74 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	9.47	54	85.7
1970	Oct. 2, 1969	6.48	12	19.0
1971	Jan. 17, 1971	6.50	12	19.0

## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

115

## 14087100 LONE PINE CREEK TRIBUTARY NEAR PRINEVILLE, OREG.

LOCATION.--Lat 44°24'56", long 121°00'16", in NW $\frac{1}{4}$  sec.25, T.13 S., R.14 E., Jefferson County, at culvert on U.S. Highway 26, 0.8 mi (1.3 km) northwest of county line, and 10 mi (16 km) northwest of Prineville.

BASIN CHARACTERISTICS.--Drainage area, 1.02 mi<sup>2</sup> (2.64 km<sup>2</sup>). Channel elevation at gage is 3,220 ft (981 m). Mean elevation of basin is 3,570 ft (1,088 m); channel slope, 404 ft/mi (76.5 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 2.5-ft (0.76 m) diameter culvert with upstream invert at 10.78 ft (3.286 m), gage datum.

REMARKS.--Station was established July 27, 1968. No flow observed in 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1969	June 10, 1969	13.27	23	22.5
1970	Jan. 23, 1970	11.90	6.8	6.7
1971	Jan. 17, 1971	13.51	26	25.5
1972	Mar. 2, 1972	11.86	6.5	6.4
1974	Jan. 15, 1974	11.82	6.1	6.0

116

## 14092300 WILLOW CREEK TRIBUTARY NEAR CULVER, OREG.

LOCATION.--Lat 44°30'38", long 121°04'15", in SE $\frac{1}{4}$  sec.20, T.12 S., R.14 E., Jefferson County, at culvert on U.S. Highway 26 in Crooked River National Grasslands, 0.4 mi (0.6 km) upstream from mouth, and 7 mi (11 km) east of Culver.

BASIN CHARACTERISTICS.--Drainage area, 7.47 mi<sup>2</sup> (19.35 km<sup>2</sup>). Channel elevation at gage is 3,040 ft (927 m). Mean elevation of basin is 3,340 ft (1,018 m); channel slope, 119 ft/mi (22.5 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 8.54 ft (2.603 m), gage datum.

REMARKS.--Station was established Oct. 15, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Road overflow will occur at 16.9 ft (5.15 m), gage datum. No flow occurred in 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	13.62	89	11.9
1966	Jan. 3, 1966	9.47	6.0	0.8
1967	Mar. 10, 1967	9.87	11	1.5
1968	Aug. 20, 1968	9.78	9.2	1.2
1969	June 10, 1969	10.38	19	2.5
1970	Jan. 23, 1970	9.20	3.6	0.5
1971	Jan. 17, 1971	10.06	14	1.9
1972	July 6, 1972	9.30	4.2	0.6
1974	Nov. 15, 1973	9.59	6.7	0.9

REGION 4

69

LOWER COLUMBIA RIVER BASIN (Continued)

DESCHUTES RIVER BASIN

117

14093700 WOODS HOLLOW AT ASHWOOD, OREG.

(Formerly published as Trout Creek Tributary)

LOCATION.--Lat 44°44'13", long 120°45'22", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.36, T.9 S., R.16 E., Jefferson County, at culvert on county road, 0.1 mi (0.2 km) upstream from mouth, and 0.3 mi (0.5 km) north of Ashwood.

BASIN CHARACTERISTICS.--Drainage area, 1.42 mi<sup>2</sup> (3.68 km<sup>2</sup>). Channel elevation at gage is 2,530 ft (771 m). Mean elevation of basin is 3,210 ft (978 m); channel slope, 409 ft/mi (77.5 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 4.18 ft (1.274 m), gage datum.

REMARKS.--Station was established May 7, 1969. Peak discharges represent outflow from small stock pond and are not adjusted for storage. No flow observed during 1964, 1967, and 1973 water years.

Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1960	Mar. 9, 1960	4.68	2.2	1.5
1961	Feb. 10, 1961	5.99	25	17.6
1962	Dec. 20, 1961	4.88	2.3	1.6
1963	Feb. 2, 1963	5.18	6.0	4.2
1965	Dec. 21, 1964	6.61	44	31.0
1966	Jan. 3, 1966	5.21	6.4	4.5
1968	Feb. 23, 1968	4.76	1.5	1.1
1969	Mar. 20, 1969	4.89	2.4	1.7
1970	Mar. 3, 1970	4.66	1.0	0.7
1971	Jan. 17, 1971	4.90	2.5	1.8
1972	Jan. 21, 1972	4.61	0.9	0.6
1974	Jan. 16, 1974	5.49	11	7.7

118

14094200 ANTELOPE CREEK AT ANTELOPE, OREG. (Discontinued)

LOCATION.--Lat 44°54'30", long 120°43'05", in NE $\frac{1}{4}$  sec.5, T.8 S., R.17 E., Jefferson County, at culvert on State Highway 218 in Antelope.

BASIN CHARACTERISTICS.--Drainage area, 26 mi<sup>2</sup> (67 km<sup>2</sup>), approximately. Channel elevation at gage is 2,600 ft (792 m). Mean elevation of basin is 3,280 ft (1,000 m); channel slope, 151 ft/mi (28.6 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 7.0-ft (2.13 m) diameter culvert pipe with upstream invert at 7.28 ft (2.219 m), gage datum. Site is subject to variable backwater conditions in downstream channel.

REMARKS.--Station was established May 6, 1959. No flow observed during 1959, 1960, 1962, and 1964 water years. Station discontinued Sept. 30, 1966.

Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1961	Feb. 10, 1961	12.22	127	4.9
1963	Feb. 2, 1963	12.90	136	5.2
1965	Dec. 21, 1964	20.61	977	37.6
1966	Jan. 3, 1966	12.91	163	6.3



## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

119

## 14094300 COW CANYON CREEK NEAR ANTELOPE, OREG.

LOCATION.--Lat 44°50'35", long 120°55'40", in NW¼SW¼ sec.27, T.8 S., R.15 E., Jefferson County, at culvert on U.S. Highway 97, 2.6 mi (4.2 km) north of Willowdale, and 11 mi (18 km) southwest of Antelope.

BASIN CHARACTERISTICS.--Drainage area; 2.71 mi<sup>2</sup> (7.02 km<sup>2</sup>). Channel elevation at gage is 2,160 ft (658 m). Mean elevation of basin is 2,860 ft (872 m); channel slope, 296 ft/mi (56.1 m/km). Stream contained by steep canyon walls and parallels U.S. Highway 97 on alternate sides of the road fill.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 24.45 ft (7.452 m), gage datum.

REMARKS.--Station was established May 6, 1959. No flow observed during 1959-60, 1962, 1967-69, and 1972-1974 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi)
1961	Feb. 10, 1961	29.16	80	29.5
1963	Feb. 3, 1963	26.12	15	5.5
1964	Dec. 28, 1963	28.85	73	26.9
1965	Dec. 21, 1964	32.88	142	52.4
1966	Jan. 3, 1966	26.68	25	9.2
1970	Jan. 23, 1970	25.69	8.8	3.2
1971	Jan. 17, 1971	24.96	2.6	1.0

120

## 14095200 SAGEBRUSH CREEK TRIBUTARY NEAR GATEWAY, OREG.

LOCATION.--Lat 44°45'33", long 121°02'02", in SE¼NE¼ sec.27, T.9 S., R.14 E., Jefferson County, at culvert on former U.S. Highway 97, 1 mi (2 km) upstream from mouth, and 11 mi (18 km) north of Madras.

BASIN CHARACTERISTICS.--Drainage area, 7.4 mi<sup>2</sup> (19.2 km<sup>2</sup>), approximately. Channel elevation at gage is 1,920 ft (585 m). Other characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from computations of discharge through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 9.10 ft (2.774 m), gage datum.

REMARKS.--Station was established Sept. 10, 1957. Peak discharge for flood of May 7, 1957, determined by Corps of Engineers at site 900 ft (274 m) upstream. Road overflow occurs at 15.8 ft (4.82 m), gage datum. No flow observed during 1959, 1960, 1962, 1964, 1971, 1972, and 1974 water years. Peaks of 1968 and 1973 are highest observed and represent return flow from irrigation.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1957	May 7, 1957	-	5,200	703
1958	June 7, 1958	16.65	347	46.9
1961	Feb. 10, 1961	11.99	54	7.3
1963	Feb. 2, 1963	12.80	90	12.2
1965	Aug. 21, 1965	16.66	347	46.9
1966	July 14, 1966	14.58	145	19.6
1967	Aug. 14, 1967	13.49	110	14.9
1968	May 8, 1968	9.40	1.0	-
1969	June 10, 1969	12.12	60	8.1
1970	July 9, 1970	10.99	17	2.3
1973	June 6, 1973	10.36	1.4	-

## REGION 4

71

## LOWER COLUMBIA RIVER BASIN (Continued)

## DESCHUTES RIVER BASIN

121

## 14100800 JORDAN CREEK NEAR TYGH VALLEY, OREG.

LOCATION.--Lat 45°20'27", long 121°20'45", in SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.6, T.3 S., R.12 E., Wasco County, at culvert on Forest Service road S207 in Mt. Hood National Forest, 10.5 mi (16.9 km) northwest of Tygh Valley.

BASIN CHARACTERISTICS.--Drainage area, 9.01 mi<sup>2</sup> (23.34 km<sup>2</sup>). Channel elevation at gage is 2,360 ft (719 m). Mean elevation of basin is 3,830 ft (1,167 m); channel slope, 316 ft/mi (59.9 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 11.0-ft (3.35 m) diameter culvert with upstream invert at 9.00 ft (2.743 m), gage datum.

REMARKS.--Station was established Sept. 7, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. No data reported during 1968. Peak of 1969 revised on basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	18.56	700	77.7
1966	Jan. 3, 1966	11.27	46	5.1
1967	Jan. 28, 1967	12.11	89	9.9
1969	May 19, 1969	12.27	69	7.7
1970	Jan. 22, 1970	13.33	158	17.5
1971	Jan. 17, 1971	12.52	89	9.9
1972	Mar. 2, 1972	12.09	76	8.4
1973	Dec. 20, 1972	12.55	91	10.1
1974	Jan. 14, 1974	16.98	515	57.2

122

## 14102300 BOX ELDER CANYON NEAR GRASS VALLEY, OREG.

LOCATION.--Lat 45°21'37", long 120°54'10", in SW $\frac{1}{4}$  sec.26, T.2 S., R.15 E., Sherman County, at culvert on BLM Deschutes River access road, at mouth, and 6 mi (10 km) west of Grass Valley.

BASIN CHARACTERISTICS.--Drainage area, 2.21 mi<sup>2</sup> (5.72 km<sup>2</sup>). Channel elevation at gage is 515 ft (157 m). Mean elevation of basin is 940 ft (287 m); channel slope, 940 ft/mi (178 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 8.2-ft (2.50 m) by 6.0-ft (1.83 m) pipe-arch culvert with upstream invert at 8.62 ft (2.627 m), gage datum.

REMARKS.--Station was established Aug. 26, 1971. Bypass flow in right bank ditch will occur at 14.4 ft (4.39 m), gage datum. Culvert assumed to be unobstructed during peak of Jan. 17, 1971. Peak of 1973 is highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	13.06	178	80.5
1972	Jan. 21, 1972	9.95	30	13.6
1973	Jan. 29, 1973	9.41	6.8	3.1
1974	Jan. 15, 1974	10.06	34	15.4

## REGION 4

## LOWER COLUMBIA RIVER BASIN (Continued)

## FIFTEENMILE CREEK BASIN

123

## 14104100 RAMSEY CREEK NEAR DURFUR, OREG.

LOCATION.--Lat 45°24'03", long 121°22'27", in NW¼ sec.13, T.2 S., R.11 E., Wasco County, at culvert on Forest Service road S207 in Mt. Hood National Forest, 0.8 mi (1.3 km) west of forest boundary, and 12 mi (19 km) west of Dufur.

BASIN CHARACTERISTICS.--Drainage area, 3.87 mi<sup>2</sup> (10.02 km<sup>2</sup>). Channel elevation at gage is 2,850 ft (869 m). Mean elevation of basin is 3,920 ft (1,195 m); channel slope, 281 ft/mi (53.2 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4.8-ft (1.46 m) diameter culvert with upstream invert at 8.72 ft (2.658 m), gage datum. Damaged culvert replaced in 1974; upstream invert elevation, 8.87 ft (2.704 m), same gage datum.

REMARKS.--Station was established Oct. 11, 1965. Culvert was assumed to be unobstructed during peak flow of Dec. 22, 1964. Road overflow will occur at 14.6 ft (4.45 m), gage datum. No data reported during 1968. Peak of 1974 determined at slope-area site 300 ft (91 m) downstream from gage.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	13.86	124	32.0
1966	Jan. 3, 1966	10.49	22	5.7
1967	Jan. 28, 1967	10.58	24	6.2
1969	May 19, 1969	11.37	45	11.6
1970	Jan. 22, 1970	11.61	52	13.4
1971	Jan. 17, 1971	11.16	39	10.1
1972	Jan. 21, 1972	13.72	119	30.7
1973	Dec. 20, 1972	10.87	31	8.0
1974	Jan. 14, 1974	-	380	98.2

124

## 14128740 DRY CREEK AT CASCADE LOCKS, OREG. (Discontinued)

LOCATION.--Lat 45°40'20", long 121°52'50", in NW¼ sec.7, T.2 N., R.8 E., Hood River County, at culvert on former U.S. Highway 30, 0.4 mi (0.6 km) upstream from mouth, and 0.8 mi (1.3 km) east of Cascade Locks.

BASIN CHARACTERISTICS.--Drainage area, 3.18 mi<sup>2</sup> (8.24 km<sup>2</sup>). Channel elevation at gage is 130 ft (40 m). Mean elevation of basin is 2,170 ft (661 m); channel slope, 682 ft/mi (129 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 5.0-ft (1.52 m) concrete box culvert with upstream invert at 4.73 ft (1.442 m), gage datum.

REMARKS.--Station established Oct. 30, 1951; discontinued, Sept. 30, 1960.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 18, 1951	7.57	68	21.4
1953	Jan. 18, 1953	8.94	125	39.3
1954	Dec. 19, 1953	7.62	70	22.0
1955	Dec. 31, 1954	7.08	52	16.4
1956	Dec. 21, 1955	10.18	186	58.5
1957	Mar. 7, 1957	8.12	90	28.3
1958	Apr. 21, 1958	7.60	69	21.7
1959	Dec. 11, 1958	7.24	57	17.9
1960	Oct. 22, 1959	7.87	80	25.2



# REGION 5 EXPLANATION

- 31 Active Stations
- 31 Discontinued Stations
- ▲ 14 Miscellaneous Measurements

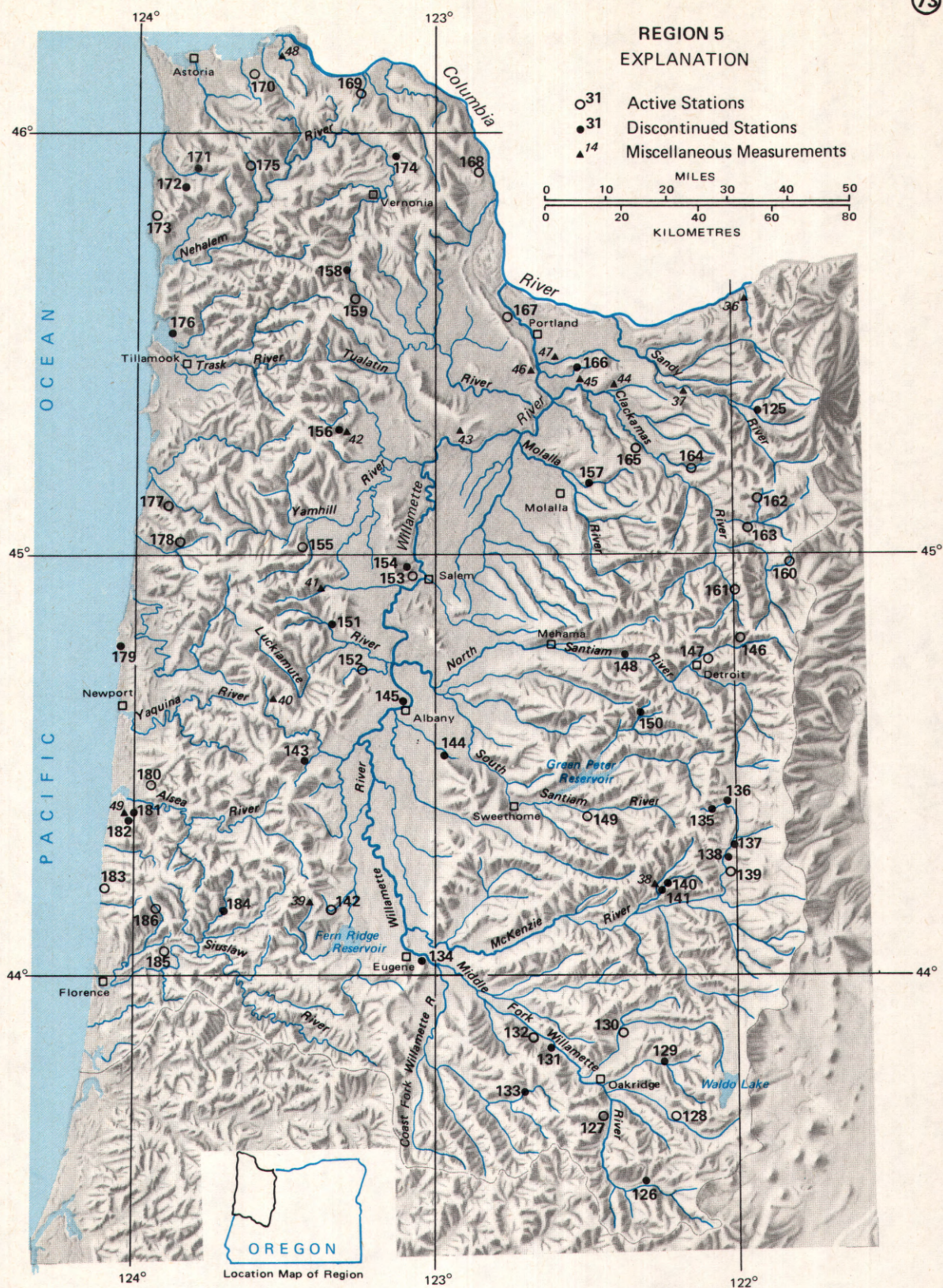
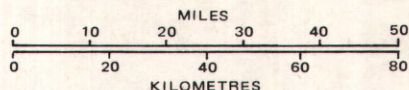


Figure 6.—Map of Region 5 showing the location of crest-stage gaging stations.



## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## SANDY RIVER BASIN

125

14131200 LADY CREEK NEAR RHODODENDRON, OREG. (Discontinued)

LOCATION.--Lat 45°19'00", long 121°49'50", in NW¼ sec.16, T.3 S., R.8 E., Clackamas County, at diversion dam 300 ft (91 m) upstream from mouth, 4 mi (6 km) east of Rhododendron.

BASIN CHARACTERISTICS.--Drainage area, 3.82 mi<sup>2</sup> (9.89 km<sup>2</sup>). Channel elevation at gage is 2,550 ft (777 m). Mean elevation of basin is 4,010 ft (1,222 m); channel slope, 554 ft/mi (105 m/km).

DISCHARGE.--Peak discharges are from computations of flow over 19-ft (5.8 m) wide dam with average crest elevation at 10.0 ft (3.05 m), gage datum.

REMARKS.--Station established Dec. 19, 1952. Diversion flow considered negligible at time of peak discharge. Station discontinued Sept. 30, 1965.

## Annual Maximum Discharge

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	12.65	331	86.6
1954	Nov. 22, 1953	12.24	221	57.9
1955	June 9, 1955	11.52	148	38.7
1956	Nov. 26, 1955	12.44	293	76.7
1957	Dec. 11, 1956	13.23	439	115
1958	Apr. 20, 1958	12.20	252	66.0
1959	Dec. 11, 1958	12.02	223	58.4
1960	Oct. 22, 1959	11.56	153	40.1
1961	Nov. 24, 1960	12.50	304	79.6
1962	Jan. 7, 1962	11.70	174	45.5
1963	Nov. 26, 1962	11.52	148	38.7
1964	Dec. 28, 1963	11.47	140	36.6
1965	Dec. 21, 1964	14.26	710	186

## WILLAMETTE RIVER BASIN

126

14144775 NOISY CREEK NEAR McCREIDIE SPRINGS, OREG. (Discontinued)

LOCATION.--Lat 43°30'35", long 122°18'05", in SE¼NW¼ sec.11, T.24 S., R.4 E., Lane County, at culvert on Forest Service road 211 (Rigdon Road) in Willamette National Forest, 0.5 mi (0.8 km) upstream from mouth, and 14 mi (23 km) south of McCredie Springs.

BASIN CHARACTERISTICS.--Drainage area, 5.20 mi<sup>2</sup> (13.47 km<sup>2</sup>). Channel elevation at gage is 2,620 ft (799 m). Mean elevation of basin is 4,600 ft (1,402 m); channel slope, 591 ft/mi (112 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 11.0-ft (3.35 m) diameter (out-of-round) culvert with upstream invert at 15.64 ft (4.767 m), gage datum.

REMARKS.--Station was established Sept. 1, 1965. Culvert was assumed to be unobstructed during peak of Dec. 21, 1964. Station discontinued Sept. 30, 1969. Records for period 1966 to 1968 revised on basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 21, 1964	27.08	940	181
1966	Jan. 3, 1966	19.26	153	29.4
1967	Oct. 15, 1966	19.55	178	34.2
1968	Feb. 22, 1968	20.69	286	55.0
1969	Nov. 9, 1968	20.27	243	46.7

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

127

14144870 MIDDLE FORK WILLAMETTE RIVER TRIBUTARY NEAR OAKRIDGE, OREG.

LOCATION.--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 (122 m) upstream from flow line of Hills Creek Reservoir, and 5.0 mi (8.0 km) south of Oakridge.

BASIN CHARACTERISTICS.--Drainage area, 0.50 mi<sup>2</sup> (1.30 km<sup>2</sup>). Datum of gage is 1,587 ft (483.7 m) above mean sea level, from levels to U.S.A.E. temporary reference marks. Mean elevation of basin is 2,150 ft (665 m); channel slope, 710 ft/mi (134 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 13.72 ft (4.182 m), gage datum.

REMARKS.--Station was established Nov. 18, 1959. Peaks of 1967, 1968, and 1973 are highest observed during year. No data reported in 1969.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>3</sup> )
1960	Feb. 9, 1960	14.90	11	22.0
1961	Feb. 10, 1961	16.04	31	62.0
1962	Nov. 23, 1961	15.83	26	52.0
1963	Feb. 1, 1963	15.47	19	38.0
1964	Jan. 19, 1964	16.89	53	106
1965	Dec. 22, 1964	17.94	82	164
1966	Jan. 6, 1966	16.25	36	72.0
1967	Nov. 16, 1966	14.85	10	20.0
1968	Dec. 29, 1967	14.93	11	22.0
1970	Jan. 22, 1970	15.87	27	54.0
1971	Jan. 17, 1971	16.54	43	86.0
1972	Jan. 21, 1972	16.10	32	64.0
1973	Dec. 19, 1972	15.10	13	26.0
1974	Jan. 15, 1974	16.76	49	98.0

128

14145690 SWAMP CREEK NEAR McCREDIE SPRINGS, OREG.

LOCATION.--Lat 43°39'40", long 122°12'45", in SE¼ sec.16, T.22 S., R.5 E., Lane County, at culvert on Forest Service road 2156 in Willamette National Forest, 0.7 mi (1.1 km) upstream from mouth, and 6 mi (10 km) southeast of McCredie Springs.

BASIN CHARACTERISTICS.--Drainage area, 1.51 mi<sup>2</sup> (3.91 km<sup>2</sup>). Channel elevation at gage is 2,640 ft (805 m). Mean elevation of basin is 4,130 ft (1,259 m); channel slope 1,260 ft/mi (239 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 4.5-ft (1.37 m) diameter culvert with upstream invert at 6.44 ft (1.963 m), gage datum.

REMARKS.--Station was established Aug. 30, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Peaks of 1967, 1968, and 1973 are highest observed during year. No data reported during 1969 and 1970 water years.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	12.39	120	79.5
1966	Jan. 4, 1966	8.21	18	11.9
1967	Mar. 1, 1967	7.23	3	2.0
1968	Mar. 25, 1968	7.21	2	1.3
1971	Jan. 18, 1971	8.64	28	18.5
1972	Jan. 20, 1972	8.77	32	21.2
1973	May 2, 1973	7.40	2	1.3
1974	Jan. 15, 1974	8.25	19	12.6

## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

129

## 14146400 MULE CREEK NEAR MCCREDIE SPRINGS, OREG. (Discontinued)

LOCATION.--Lat 43°48'20", long 122°14'30", in N½ sec.29, T.20 S., R.5 E., Lane County, at culvert on Forest Service road 202 in Willamette National Forest, 7 mi (11 km) northeast of McCredie Springs.

BASIN CHARACTERISTICS.--Drainage area. 1.48 mi<sup>2</sup> (3.83 km<sup>2</sup>). Channel elevation at gage is 3,040 ft (927 m). Mean elevation of basin is 4,770 ft (1,454 m); channel slope, 1,180 ft/mi (223 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 7.0-ft (2.13 m) diameter culvert with upstream invert at 7.08 ft (2.158 m), gage datum.

REMARKS.--Station was established Aug. 31, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Road overflow will occur at 17.8 ft (5.43 m), gage datum. Peaks during period of 1966 to 1968 are maximums observed during year. No data reported during 1969 water year. Peaks for 1971 and 1972 not determined because of storm damage to culvert. Station discontinued Sept. 30, 1972.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	12.52	195	132
1966	Apr. 7, 1966	9.01	29	19.6
1967	Mar. 1, 1967	8.94	27	18.2
1968	Mar. 25, 1968	8.88	25	16.9
1970	Jan. 22, 1970	9.93	63	42.6

130

## 14147400 TUMBLE CREEK NEAR WESTFIR, OREG.

LOCATION.--Lat 43°52'50", long 122°22'30", in N½NE¼ sec.31, T.19 S., R.4 E., Lane County, at culvert on Forest Service road 196 in Willamette National Forest, at mouth, and 10.5 mi (16.9 km) northeast of Westfir.

BASIN CHARACTERISTICS.--Drainage area, 1.52 mi<sup>2</sup> (3.94 km<sup>2</sup>). Channel elevation at gage is 1,820 ft (555 m). Mean elevation of basin is 2,850 ft (869 m); channel slope, 670 ft/mi (127 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 8.3-ft (2.53 m) diameter culvert with upstream invert at 6.39 ft (1.948 m), gage datum.

REMARKS.--Station was established Aug. 31, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Road overflow will occur at 14.5 ft (4.42 m), gage datum. Peaks of 1968 and 1973 are highest observed during year. No data reported during 1969 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	9.82	98	64.5
1966	Jan. 3, 1966	8.45	36	23.7
1967	Jan. 28, 1967	7.97	20	13.2
1968	Mar. 25, 1968	7.50	4	2.6
1970	Jan. 22, 1970	9.03	60	39.5
1971	Jan. 18, 1971	9.41	77	50.7
1972	Jan. 20, 1972	9.50	82	53.9
1973	Dec. 21, 1972	7.98	16	10.5
1974	Jan. 18, 1974	8.43	35	23.0

## REGION 5

77

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

131

14148300 NORTH AND SOUTH CREEK NEAR OAKRIDGE, OREG. (Discontinued)

LOCATION.--Lat 43°49'30", long 122°37'10", in SW¼ sec.18, T.20 S., R.2 E., Lane County, at culvert on State Highway 58, at mouth, and 10 mi (16 km) northwest of Oakridge.

BASIN CHARACTERISTICS.--Drainage area, 2.84 mi<sup>2</sup> (7.36 km<sup>2</sup>). Channel elevation at gage is 900 ft (274 m). Other characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from computations of discharge through one 8.0-ft (2.44 m) concrete-box culvert with upstream invert at 9.86 ft (3.005 m) gage datum.

REMARKS.--Station established Oct. 7, 1952. Station discontinued Sept. 30, 1955, when Lookout Point Reservoir submerged drainage structure.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	15.01	272	95.8
1954	Nov. 23, 1953	14.38	225	79.2

132

14148700 FERN CREEK NEAR LOWELL, OREG.

LOCATION.--Lat 43°51'50", long 122°41'05", in W¼NW¼ sec.3, T.20 S., R.1 E., Lane County, at culvert on State Highway 58, at mouth, and 6 mi (10 km) southeast of Lowell.

BASIN CHARACTERISTICS.--Drainage area, 0.44 mi<sup>2</sup> (1.14 km<sup>2</sup>). Datum of gage is 930 ft (283.5 m) above mean sea level (from levels to O.S.H.D. temporary BM). Mean elevation of basin is 1,540 ft (469 m); channel slope, 817 ft/mi (155 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 5.0-ft (1.52 m) concrete-box culvert with upstream invert at 3.02 ft (0.920 m), gage datum.

REMARKS.--Station was established Oct. 7, 1952. Peaks of 1967, 1968, and 1973 are highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1954	Nov. 23, 1953	5.17	22	50.0
1956	Dec. 21, 1955	5.45	30	68.2
1958	Feb. 15, 1958	5.14	22	50.0
1959	Jan. 22, 1959	5.06	21	47.7
1960	Mar. 7, 1960	4.95	9.2	20.9
1961	Feb. 10, 1961	6.04	52	118
1962	Dec. 20, 1961	5.04	12	27.3
1963	Feb. 1, 1963	5.08	13	29.5
1964	Jan. 19, 1964	5.97	49	111
1965	Dec. 21, 1964	5.67	35	79.5
1966	Jan. 6, 1966	5.33	22	50.0
1967	Jan. 10, 1967	4.71	4.3	9.8
1968	Mar. 25, 1968	4.72	4.5	10.2
1969	Jan. 13, 1969	5.32	22	50.0
1970	Jan. 22, 1970	5.48	28	63.6
1971	Dec. 16, 1970	5.24	19	43.2
1972	Mar. 2, 1972	5.66	35	79.5
1973	Dec. 22, 1972	5.03	12	27.3
1974	Jan. 15, 1974	5.81	41	93.2



## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

133

## 14153900 PRATHER CREEK NEAR DISSTON, OREG. (Discontinued)

LOCATION.--Lat 43°42'45", long 122°44'25", in NE¼SW¼ sec.30, T.21 S., R.1 E., Lane County, at diversion dam 0.2 mi (0.3 km) upstream from mouth, 1.8 mi (2.9 km) northeast of Disston.

BASIN CHARACTERISTICS.--Drainage area, 5.69 mi<sup>2</sup> (14.74 km<sup>2</sup>). Channel elevation at gage is 1,260 ft (384 m). Mean elevation of basin is 2,630 ft (802 m); channel slope, 628 ft/mi (119 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge over 24.8 ft (7.56 m) wide concrete dam with average crest elevation at 3.84 ft (1.170 m), gage datum.

REMARKS.--Station was established Oct. 8, 1952. Diversion flow considered negligible at peak flows. Station was discontinued Sept. 30, 1964.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi)
1953	Jan. 18, 1953	5.54	237	41.7
1954	Nov. 22, 1953	5.73	286	50.3
1955	Dec. 30, 1954	4.89	92	16.2
1956	Dec. 21, 1955	5.65	264	49.4
1957	Dec. 11, 1956	5.59	250	43.9
1958	Feb. 15, 1958	5.58	247	43.4
1959	Jan. 27, 1959	5.16	144	25.3
1960	Feb. 8, 1960	5.12	136	23.9
1961	Feb. 10, 1961	5.86	326	57.3
1962	Nov. 22, 1961	5.64	262	46.0
1963	May 5, 1963	5.24	162	28.5
1964	Jan. 19, 1964	5.64	262	46.0

134

## 14157800 WILLAMETTE RIVER TRIBUTARY NEAR SPRINGFIELD, OREG. (Discontinued)

LOCATION.--Lat 44°01'00", long 123°01'25", in W¼SW¼ sec.11, T.18 S., R.3 W., Lane County, at culvert on U.S. Highway 99, 0.1 mi (0.2 km) upstream from mouth, and 2 mi (3 km) south of Springfield.

BASIN CHARACTERISTICS.--Drainage area, 2.60 mi<sup>2</sup> (6.73 km<sup>2</sup>). Channel elevation at gage is 450 ft (137 m). Mean elevation of basin is 654 ft (199 m); channel slope, 680 ft/mi (129 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 8.0-ft (2.44 m) x 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 4.22 ft (1.286 m), gage datum.

REMARKS.--Station was established Nov. 30, 1951; discontinued Sept. 30, 1956.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 3, 1951	7.69	167	64.2
1954	Jan. 27, 1954	7.79	175	67.3
1955	Apr. 12, 1955	6.24	82	31.5

# REGION 5

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## LOWER COLUMBIA RIVER BASIN (Continued)

### WILLAMETTE RIVER BASIN

135

#### 14158250 HACKLEMAN CREEK NEAR UPPER SODA, OREG. (Discontinued)

LOCATION.--Lat 44°23'50", long 122°07'30", in SW¼NW¼ sec.32, T.13 S., R.6 E., Lane County, at culvert on U.S. Highway 20, 1.3 mi (2.1 km) upstream from Indian Creek, and 7 mi (11 km) east of Upper Soda.

BASIN CHARACTERISTICS.--Drainage area, 0.21 mi<sup>2</sup> (0.54 km<sup>2</sup>). Datum of gage is 3,964 ft (1,208.2 m) above mean sea level (from Bureau of Public Roads bench mark at site). Mean elevation of basin is 4,630 ft (1,411 m); channel slope, 1,590 ft/mi (301 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 4.0-ft (1.22 m) concrete-box culvert with upstream invert at 1.30 ft (0.396 m), gage datum.

REMARKS.--Station was established Sept. 24, 1952. Basin is subject to heavy snowfall and culvert is sometimes buried by snow-plowing operations. Culvert may have been obstructed during 1957 and 1965 annual peaks. Station discontinued Sept. 30, 1968.

#### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Dec. 7, 1952	3.72	47	224
1954	Nov. 22, 1953	4.04	56	267
1955	June 11, 1955	2.77	20	95.2
1956	Jan. 15, 1956	4.23	62	295
1957	Dec. 11, 1956	5.38	102	486
1958	Feb. 15, 1958	3.21	33	157
1959	Apr. 2, 1959	2.99	27	129
1960	Nov. 15, 1959	3.17	32	152
1961	Nov. 24, 1960	3.92	53	252
1962	Dec. 20, 1961	3.29	35	167
1963	Feb. 2, 1963	3.43	38	181
1964	Nov. 8, 1964	3.20	32	152
1965	Dec. 21, 1964	5.20	95	452
1966	Apr. 10, 1966	2.45	12	57.1
1967	June 5, 1967	2.46	13	61.9
1968	Feb. 19, 1968	2.83	22	105

136

#### 14158300 ECHO CREEK NEAR UPPER SODA, OREG. (Discontinued)

LOCATION.--Lat 44°24'20", long 122°04'25", in SE¼ sec. 27, T.13 S., R.6 E., Lane County, at culvert on U.S. Highway 20, 0.2 mi (0.3 km) upstream from mouth, 3.3 mi (5.3 km) west of Clear Lake Junction, and 10 mi (16 km) east of Upper Soda.

BASIN CHARACTERISTICS.--Drainage area, 0.85 mi<sup>2</sup> (2.20 km<sup>2</sup>). Channel elevation at gage is 3,370 ft (1,027 m). Other characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from computations of flow through twin 6.0-ft (1.83 m) diameter culverts with upstream inverts at 10.95 ft (3.338 m) and 10.75 ft (3.277 m), gage datum.

REMARKS.--Station established Sept. 24, 1952; discontinued Sept. 30, 1954.

#### Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Dec. 7, 1952	13.14	73	85.9

## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

137

14158750 CARMEN CREEK NEAR MCKENZIE BRIDGE, OREG. (Discontinued)

LOCATION.--Lat 44°17'05", long 122°02'00", in NE¼ sec.12, T.15 S., R.6 E., Lane County, at culvert on Clear Lake road, 9 mi (14 km) north of junction with U.S. Highway 126, and 10 mi (16 km) northeast of McKenzie Bridge.

BASIN CHARACTERISTICS.--Drainage area, 0.50 mi<sup>2</sup> (1.30 km<sup>2</sup>); hydrologic drainage boundary is uncertain due to significant gaining characteristics of stream. Channel elevation at gage is 2,100 ft (640 m). Other characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from computations of flow through twin 6.0-ft (1.83 m) x 4.0-ft (1.22 m) pipe-arch culverts with upstream inverts at 9.36 ft (2.853 m) and 8.79 ft (2.679 m), gage datum.

REMARKS.--Station established Sept. 25, 1952; discontinued Sept. 30, 1953.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Dec. 7, 1952	12.5	206	412

138

14158900 ANDERSON CREEK NEAR MCKENZIE BRIDGE, OREG. (Discontinued)

LOCATION.--Lat 44°15'45", long 122°02'40", in SW¼ sec.13, T.15 S., R.6 E., Lane County, at culvert on Clear Lake road, 0.1 mi (0.2 km) upstream from mouth, 7 mi (11 km) north of junction with U.S. Highway 126, and 7 mi (11 km) northeast of McKenzie Bridge.

BASIN CHARACTERISTICS.--Drainage area, 9.7 mi<sup>2</sup> (25.1 km<sup>2</sup>), approximately; hydrologic drainage boundary is uncertain due to significant gaining characteristics of stream channel. Channel elevation at gage is 2,000 ft (610 m).

DISCHARGE.--Peak discharges are from computations of flow through twin 6.0-ft (1.83 m) x 4.0-ft (1.22 m) pipe-arch culverts with upstream inverts at 10.21 ft (3.112 m) and 10.07 ft (3.069 m), gage datum.

REMARKS.--Station established Sept. 25, 1952, discontinued Sept. 30, 1953.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Unknown	13.90	234	24.1

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

139

## 14158950 TWISTY CREEK NEAR BELKNAP SPRINGS, OREG.

LOCATION.--Lat 44°13'30", long 122°02'35", probably in NE¼ sec.35 (unsurveyed), T.15 S., R.6 E., Lane County, at culvert on Forest Service road 1558 in Willamette National Forest, 0.8 mi (1.3 km) upstream from mouth, and 2.5 mi (4.0 km) north of Belknap Springs.

BASIN CHARACTERISTICS.--Drainage area, 1.18 mi<sup>2</sup> (3.06 km<sup>2</sup>). Channel elevation at gage is 2,560 ft (780 m). Mean elevation of basin is 2,910 ft (887 m); channel slope, 302 ft/mi (57.2 m/km).

DISCHARGE.--Peak discharges are from computations of flow through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 18.16 ft (5.535 m), gage datum.

REMARKS.--Station was established Sept. 2, 1965. Culvert was assumed to be unobstructed during peak flow of Dec. 22, 1964. Peak flows does not include bypass flow at 25.8 ft (7.86 m), gage datum. Peak discharges for 1965-68 water years are revised on the basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	26.94	202	171
1966	Jan. 3, 1966	20.05	29	24.6
1967	Jan. 28, 1967	20.04	28	23.7
1968	Feb. 3, 1968	20.40	39	33.1
1969	Jan. 13, 1969	20.30	36	30.5
1970	Jan. 22, 1970	20.58	44	37.3
1971	Jan. 17, 1971	21.35	70	59.3
1972	Mar. 2, 1972	20.19	32	27.1
1973	Dec. 19, 1972	20.08	29	24.6
1974	Jan. 15, 1974	20.32	37	31.4

140

## 14161200 LOOKOUT CREEK TRIBUTARY NO. 3 NEAR BLUE RIVER, OREG. (Discontinued)

LOCATION.--Lat 44°13'10", long 122°14'30", in NE¼ sec.31, T.15 S., R.5 E., Lane County, at flume near Lookout Creek road, 0.1 mi (0.2 km) upstream from mouth, and 6 mi (10 km) northeast of town of Blue River.

BASIN CHARACTERISTICS.--Drainage area, 0.39 mi<sup>2</sup> (1.01 km<sup>2</sup>). Channel elevation at gage is 1,520 ft (463 m). Mean altitude of basin, 2,460 ft (750 m); channel slope, 1,690 ft/mi (320 m/km). Basin is part of forest-management study by Forest Service.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through trapezoidal flume with upstream trough elevation at 0.54 ft (0.165 m), gage datum.

REMARKS.--Forest Service collects streamflow, precipitation, sedimentation, and temperature data at this station. Peak of Dec. 20, 1961, not determined due to backwater from debris. Station discontinued Sept. 30, 1965.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	2.80	47	121
1954	Nov. 22, 1953	2.53	35	89.7
1955	Dec. 30, 1954	2.62	39	100
1956	Jan. 15, 1956	2.57	36	92.3
1957	Dec. 11, 1956	2.73	44	113
1958	Dec. 20, 1957	2.90	52	133
1959	Jan. 27, 1959	2.35	27	69.2
1960	Feb. 8, 1960	2.01	15	38.5
1961	Feb. 10, 1961	2.66	40	103
1963	Feb. 1, 1963	2.10	18	46.2
1964	Mar. 4, 1964	2.43	30	76.9



## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

141

14161600 LOOKOUT CREEK TRIBUTARY NEAR BLUE RIVER, OREG. (Discontinued)

LOCATION.--Lat 44°12'25", long 122°15'30", in NW¼ sec.6, T.16 S., R.5 E., Lane County, at flume near Lookout Creek road, 0.2 mi (0.3 km) upstream from mouth, and 5.4 mi (8.7 km) northeast of town of Blue River.

BASIN CHARACTERISTICS.--Drainage area, 0.37 mi<sup>2</sup> (0.96 km<sup>2</sup>). Channel elevation at gage is 1,400 ft (427 m). Mean elevation of basin is 2,380 ft (725 m); channel slope, 1,490 ft/mi (282 m/km). Basin is part of forest-management study conducted by Forest Service.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through trapezoidal flume with upstream trough elevation at 0.70 ft (0.213 m), gage datum.

REMARKS.--Station was established in August, 1952. Weir modified in August, 1957. Forest Service collects streamflow, precipitation, sedimentation, and temperature data at this station. Station discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1954	Nov. 22, 1953	2.80	44	119
1955	Dec. 30, 1954	2.63	37	100
1956	Dec. 21, 1955	2.73	41	111
1957	Dec. 11, 1956	3.35	75	203
1958	Dec. 20, 1957	3.29	62	168
1959	Jan. 27, 1959	2.68	34	91.9
1960	Mar. 29, 1960	2.14	16	43.2
1961	Feb. 10, 1961	2.94	45	122
1962	Dec. 20, 1961	2.94	45	122
1963	Feb. 1, 1963	2.47	26	70.3
1964	Nov. 8, 1963	2.59	31	83.8
1965	Dec. 21, 1964	3.34	65	176
1966	Mar. 9, 1966	2.41	10	27.0
1967	Jan. 28, 1967	2.75	26	70.3
1968	Feb. 23, 1968	2.93	37	100

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

142

14169700 BEAR CREEK NEAR CHESHIRE, OREG.

LOCATION.--Lat 44°09'30", long 123°21'10", in SE¼ sec.24, T.16 S., R.6 W., Lane County, at culvert on State Highway 36, 4.2 mi (6.8 km) southwest of Cheshire.

BASIN CHARACTERISTICS.--Drainage area, 5.19 mi<sup>2</sup> (13.44 km<sup>2</sup>). Channel elevation at gage is 500 ft (152 m). Mean elevation of basin is 857 ft (261 m); channel slope, 67.5 ft/mi (12.8 m/km). Basin consists of farm lands and light second-growth timber.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements of flow through one 10-ft (3.05 m) x 8.0-ft (2.44 m) concrete-box culvert with upstream invert at 15.48 ft (4.718 m), gage datum.

REMARKS.--Station established Feb. 18, 1957. Flood-hydrograph recorder operated Dec. 1, 1964, to Sept. 30, 1966.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1957	Mar. 7, 1957	18.68	169	32.6
1958	Dec. 20, 1957	18.75	173	33.3
1959	Jan. 11, 1959	19.48	240	46.2
1960	Feb. 9, 1960	18.72	171	32.9
1961	Nov. 24, 1960	20.86	357	68.8
1962	Dec. 21, 1961	18.40	149	28.7
1963	Mar. 29, 1963	18.71	171	32.9
1964	Jan. 19, 1964	21.66	426	82.1
1965	Dec. 21, 1964	21.76	436	84.0
1966	Jan. 3, 1966	21.82	442	85.2
1967	Jan. 28, 1967	18.67	175	33.7
1968	Feb. 20, 1968	18.07	130	25.0
1969	Dec. 5, 1968	19.53	245	47.2
1970	Jan. 26, 1970	19.35	230	44.3
1971	Jan. 18, 1971	20.50	325	62.6
1972	Jan. 21, 1972	22.14	455	87.7
1973	Dec. 22, 1972	18.27	145	27.9
1974	Jan. 15, 1974	23.16	530	102

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

143

14170500 ROCK CREEK NEAR PHILOMATH, OREG. (Discontinued)

LOCATION.--Lat  $44^{\circ}30'05''$ , long  $123^{\circ}26'20''$ , in NE $\frac{1}{4}$  sec.29, T.12 S., R.6 W., Benton County, on right bank 250 ft (76 m) upstream from State Highway 34, 0.2 mi (0.3 km) upstream from mouth, and 4.5 mi (7.2 km) southwest of Philomath.

BASIN CHARACTERISTICS.--Drainage area, 14.6 mi<sup>2</sup> (37.8 km<sup>2</sup>). Datum of gage is 354.16 ft (107.948 m) above mean sea level, datum of 1929. Mean elevation of basin is 1,510 ft (460 m); channel slope, 277 ft/mi (52.5 m/km). Part of basin is watershed for City of Corvallis.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements of flow over Columbus-type concrete control with notch elevation at 0.0 ft, gage datum.

REMARKS.--Station established Oct. 26, 1945. Daily records 1946-52 published in WSP of Geological Survey. Diversion flow is negligible during peak flows. Station discontinued Sept. 30, 1960.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1946	Nov. 27, 1945	2.80	1,090	74.7
1947	Dec. 15, 1946	4.09	760	52.1
1948	Jan. 6, 1948	5.78	1,650	113
1949	Feb. 10, 1949	5.30	1,360	93.2
1950	Jan. 6, 1950	4.56	1,010	69.2
1951	Nov. 16, 1950	4.70	1,080	74.0
1952	Dec. 4, 1951	5.20	1,350	92.5
1953	Jan. 18, 1953	4.58	1,000	68.5
1954	Nov. 23, 1953	4.42	938	64.2
1955	Dec. 30, 1954	3.73	662	45.3
1956	Dec. 21, 1955	6.82	2,190	150
1957	Feb. 24, 1957	3.81	694	47.5
1958	Jan. 12, 1958	3.55	590	40.4
1959	Jan. 10, 1959	5.33	1,360	93.2
1960	Feb. 9, 1960	4.99	1,200	82.2

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

144

14172300 BUTTE CREEK NEAR PLAINVIEW, OREG. (Discontinued)

LOCATION.--Lat 44°28'25", long 122°57'25", in NW¼NE¼ sec.5, T.13 S., R.2 W., Linn County, at culvert on county road, 2.9 mi (4.7 km) east of Plainview.

BASIN CHARACTERISTICS.--Drainage area, 5.06 mi<sup>2</sup> (13.11 km<sup>2</sup>). Channel elevation at gage is 315 ft (96.0 m). Mean elevation of basin is 877 ft (267 m); channel slope, 221 ft/mi (41.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 6.0-ft (1.83 m) and one 4.0-ft (1.22 m) diameter culverts with upstream inverts at 10.43 ft (3.179 m) and 10.88 ft (3.316 m), gage datum.

REMARKS.--Station was established Oct. 28, 1954. Road overflow occurs at 19.0 ft (5.79 m), gage datum. Station discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1955	Nov. 17, 1954	14.11	143	28.3
1956	Dec. 21, 1955	16.23	294	58.1
1957	Mar. 7, 1957	14.46	171	33.8
1958	Feb. 16, 1958	15.74	262	51.8
1959	Jan. 12, 1959	20.2	595	118
1960	Feb. 9, 1960	13.58	100	19.8
1961	Nov. 24, 1960	20.32	647	128
1962	Dec. 20, 1961	14.07	140	27.7
1963	Mar. 30, 1963	15.06	214	42.3
1964	Jan. 19, 1964	15.61	253	50.0
1965	Dec. 21, 1964	19.03	472	93.3
1966	Jan. 3, 1966	18.04	370	73.1
1967	Jan. 28, 1967	14.39	164	32.4
1968	Feb. 20, 1968	14.13	147	29.1



## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

145

14174100 COX CREEK AT ALBANY, OREG. (Discontinued)

LOCATION.--Lat 44°38'35", long 123°04'05", in SW¼ sec.4, T.11 S., R.3 W., Linn County, at dam at outlet of Waverly Lake in Albany.

BASIN CHARACTERISTICS.--Drainage area, 15.2 mi<sup>2</sup> (39.4 km<sup>2</sup>); hydrologic boundary uncertain because of high-flow surface-water exchange with Burkhart Creek, Albany Canal, and Cheadle Lake in Lebanon. Channel elevation at gage is 210 ft (64 m). Mean elevation of basin is 261 ft (80 m); channel slope, 10.5 ft/mi (1.99 m/km). There are small lakes and mill ponds above gage and considerable ponding occurs because of very mild stream gradient.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge over 43.4 ft (13.23 m) wide ogee-section dam with average crest elevation at 9.62 ft (2.932 m), gage datum.

REMARKS.--Station was established Nov. 18, 1953. Peak discharges represent outflow of Waverly Lake and are not adjusted for storage.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 20, 1953	11.22	329	21.6
1954	Jan. 28, 1954	12.23	716	47.1
1955	Dec. 30, 1954	10.98	251	16.5
1956	Dec. 21, 1955	12.34	765	50.3
1957	Mar. 7, 1957	11.22	329	21.6
1958	Dec. 20, 1957	11.66	486	32.0
1959	Jan. 10, 1959	11.82	550	36.2
1960	Feb. 9, 1960	11.47	416	27.4
1961	Nov. 24, 1960	12.81	985	64.8
1962	Mar. 26, 1962	11.66	486	32.0
1963	Feb. 2, 1963	11.94	598	39.3
1964	Jan. 19, 1964	11.86	566	37.2
1965	Dec. 21, 1964	12.98	1,070	70.4
1966	Jan. 3, 1966	12.33	760	50.0
1967	Jan. 28, 1967	11.58	460	30.3
1968	Feb. 19, 1968	11.73	512	33.7

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

146

14178600 SHORT CREEK AT BREITENBUSH HOT SPRINGS, OREG.

LOCATION.--Lat 44°47'10", long 121°58'55", probably in SW $\frac{1}{4}$  sec.17, T.9 S., R.7 E. (unsurveyed), Marion County, at culvert on Forest Service road S906 in Willamette National Forest, 0.5 mi (0.8 km) northwest of Breitenbush Hot Springs.

BASIN CHARACTERISTICS.--Drainage area, 2.00 mi<sup>2</sup> (5.18 km<sup>2</sup>). Channel elevation at gage is 2,280 ft (695 m). Mean elevation of basin is 3,320 ft (1,012 m); channel slope, 707 ft/mi (134 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 3.81 ft (1.161 m), gage datum. Prior to 1967, one 6.5-ft diameter culvert, invert elevation, 8.56 ft (2.609 m), former gage datum.

REMARKS.--Station was established Sept. 2, 1965. Culvert was assumed to be unobstructed during peak of Dec. 21, 1964. Peak flow does not include bypass flow in drainage ditch at 14.5 ft (4.42 m), former gage datum. No data reported for 1969 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 21, 1964	15.11	206 <sup>7</sup>	103
1966	Mar. 9, 1966	11.61	64	32.0
1967	Jan. 28, 1967	6.90	65	32.5
1968	Feb. 19, 1968	6.80	58	29.0
1970	Jan. 23, 1970	8.18	112	56.0
1971	Jan. 17, 1971	8.20	115	57.5
1972	Jan. 21, 1972	8.44	125	62.5
1973	Dec. 21, 1972	7.42	82	41.0
1974	Jan. 16, 1974	9.86	195	97.5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

147

14178800 WIND CREEK NEAR DETROIT, OREG.

LOCATION.--Lat 44°45'20", long 122°07'10", in NE¼ sec.31, T.9 S., R.6 E., Marion County, at culvert on Breitenbush River road, 0.1 mi (0.2 km) upstream from mouth, and 2 mi (3 km) northeast of Detroit.

BASIN CHARACTERISTICS.--Drainage area, 1.03 mi<sup>2</sup> (2.67 km<sup>2</sup>). Channel elevation at gage is 1,680 ft (512 m). Mean elevation of basin is 3,010 ft (917 m); channel slope, 1,420 ft/mi (269 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 6.76 ft (2.060 m), gage datum.

REMARKS.--Station established Dec. 8, 1953.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1954	Dec. 20, 1953	11.30	111	108
1955	Dec. 30, 1954	9.56	43	41.7
1956	Jan. 15, 1956	11.17	107	104
1957	Dec. 11, 1956	11.86	127	123
1958	Nov. 13, 1957	10.18	71	68.9
1959	Apr. 2, 1959	9.96	62	60.2
1960	Feb. 9, 1960	9.82	57	55.3
1961	Feb. 11, 1961	10.80	96	93.2
1962	Mar. 26, 1962	10.29	76	73.8
1963	Nov. 20, 1962	14.38	182	177
1964	Nov. 8, 1963	9.24	34	33.0
1965	Dec. 21, 1964	16.20	231	224
1966	Jan. 3, 1966	9.82	56	54.4
1967	Jan. 28, 1967	10.16	68	66.0
1968	Feb. 19, 1968	9.87	58	56.3
1969	Dec. 5, 1968	11.08	98	95.1
1970	Jan. 22, 1970	10.04	63	61.2
1971	Jan. 17, 1971	10.94	93	90.3
1972	Jan. 21, 1972	11.69	118	115
1973	Jan. 17, 1973	9.80	55	53.4
1974	Jan. 16, 1974	12.08	128	124

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

148

14181700 NORTH SANTIAM RIVER TRIBUTARY NEAR GATES, OREG. (Discontinued)

LOCATION.--Lat 44°45'20", long 122°23'25", in SW¼ sec.25, T.9 S., R.3 E., Marion County, at culvert on State Highway 22, 0.1 mi (0.2 km) upstream from mouth, and 1.3 mi (2.1 km) east of Gates.

BASIN CHARACTERISTICS.--Drainage area, 0.4 mi<sup>2</sup> (1.0 km<sup>2</sup>), approximately. Channel elevation at gage is about 1,030 ft (314 m). Other characteristics can not be evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 5.0-ft (1.52 m) x 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 14.62 ft (4.456 m), gage datum.

REMARKS.--Station was established Nov. 16, 1951. Station discontinued Sept. 30, 1968. Basin runoff data should be considered provisional until accurate drainage area can be determined.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 22, 1951	16.25	47	120
1953	Jan. 9, 1951	17.44	86	215
1954	Nov. 23, 1953	16.96	71	180
1955	Feb. 8, 1955	17.29	81	200
1956	Dec. 21, 1955	17.28	81	200
1957	Mar. 7, 1957	15.83	32	80
1958	Dec. 20, 1957	16.53	56	140
1959	Dec. 11, 1958	16.46	54	135
1960	Oct. 9, 1959	16.01	38	95
1961	Nov. 24, 1960	18.00	103	260
1962	Dec. 20, 1961	16.30	48	120
1963	Nov. 26, 1962	15.90	34	85
1964	Jan. 19, 1964	16.76	64	160
1965	Jan. 30, 1965	19.00	132	330
1966	Jan. 4, 1966	17.74	95	240
1967	Dec. 13, 1966	16.46	54	135
1968	Feb. 20, 1968	16.34	51	130



## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

149

14184900 SHEEK CREEK NEAR CASCADIA, OREG.

LOCATION.--Lat 44°23'25", long 122°30'25", in SW¼SE¼ sec.36, T.13 S., R.2 E., Linn County, at culvert on U.S. Highway 20, at former Cascadia ranger station, 0.1 mi (0.2 km) upstream from mouth, and 1.5 mi (2.4 km) west of Cascadia.

BASIN CHARACTERISTICS.--Drainage area, 0.89 mi<sup>2</sup> (2.31 km<sup>2</sup>). Channel elevation at gage is 800 ft (244 m). Mean elevation of basin is 1,780 ft (543 m); channel slope, 714 ft/mi (135 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 3.5-ft (1.07 m) diameter culvert with upstream invert at 10.07 ft (3.069 m), gage datum.

REMARKS.--Station was established Sept. 23, 1952. Culvert extended in 1972. Peak of 1973 is maximum observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Dec. 7, 1952	13.28	47	52.8
1954	Dec. 4, 1953	14.90	72	80.9
1955	Dec. 30, 1954	12.67	33	37.1
1956	Dec. 21, 1955	13.21	44	49.4
1957	Dec. 11, 1956	13.54	51	57.3
1958	Dec. 20, 1957	17.08	105	118
1959	Jan. 27, 1959	13.17	43	48.3
1960	Feb. 9, 1960	12.67	33	37.1
1961	Nov. 24, 1960	15.97	89	100
1962	Nov. 22, 1961	13.62	52	58.4
1963	Nov. 26, 1962	14.84	71	79.8
1964	Jan. 19, 1964	15.44	81	91.0
1965	Dec. 22, 1964	18.20	116	130
1966	Jan. 3, 1966	17.37	107	120
1967	Jan. 28, 1967	12.17	24	27.0
1968	Jan. 10, 1968	12.09	22	24.7
1969	Dec. 5, 1968	13.03	42	47.2
1970	Jan. 22, 1970	13.22	45	50.6
1971	Jan. 17, 1971	14.03	59	66.3
1972	Jan. 21, 1972	16.91	102	115
1973	Jan. 9, 1973	11.42	5.0	5.6
1974	Jan. 15, 1974	14.10	60	67.4

## REGION 5

91

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

150

## 14185850 LITTLE MEADOW CREEK NEAR DETROIT, OREG. (Discontinued)

LOCATION.--Lat 44°35'15", long 122°13'50", probably in SW¼ sec.29, T.11 S., R.5 E. (unsurveyed), Linn County, at culvert on Forest Service road 1177 in Willamette National Forest, 0.2 mi (0.3 km) upstream from mouth, and 11 mi (18 km) south of Detroit.

BASIN CHARACTERISTICS.--Drainage area, 1.29 mi<sup>2</sup> (3.34 km<sup>2</sup>). Channel elevation at gage is about 2,400 ft (732 m). Mean elevation of basin is 3,730 ft (1,137 m); channel slope, 793 ft/mi (150 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 9.0-ft (2.74 m) diameter culvert with upstream invert at 20.06 ft (6.114 m), gage datum.

REMARKS.--Station was established May 12, 1966. Culvert was assumed to be unobstructed during peak flow of Mar. 9, 1966. No peak data reported during 1967 and 1969. Station discontinued Sept. 30, 1972, because of flood damage.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	Mar. 9, 1966	22.80	57	44.2
1968	Feb. 20, 1968	22.70	55	42.6
1970	Jan. 18, 1970	23.48	91	70.5
1971	Jan. 17, 1971	22.23	34	26.4

151

## 14190200 WAYMIRE CREEK NEAR FALLS CITY, OREG. (Discontinued)

LOCATION.--Lat 44°52'00", long 123°24'45", in NW¼ sec.22, T.8 S., R.6 W., Yamhill County, at culvert on county road, 0.8 mi (1.3 km) upstream from mouth, and 1 mi (2 km) east of Falls City.

BASIN CHARACTERISTICS.--Drainage area, 3.46 mi<sup>2</sup> (8.96 km<sup>2</sup>). Channel elevation at gage is 340 ft (104 m). Mean elevation of basin is 874 ft (266 m); channel slope, 138 ft/mi (26.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 6.0-ft (1.83 m) and 2.0-ft (0.61 m) diameter culverts with upstream inverts at 6.53 ft (1.990 m) and 11.24 ft (3.426 m), gage datum.

REMARKS.--Station was established Dec. 9, 1953. Road overflow occurs at 15.7 ft (4.79 m), gage datum. Station discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1954	Feb. 12, 1954	14.49	304	87.9
1955	Dec. 30, 1954	10.42	80	23.1
1956	Dec. 21, 1955	16.33	522	151
1957	Feb. 26, 1957	12.64	189	54.6
1958	Jan. 12, 1958	12.56	185	53.5
1959	Jan. 9, 1959	13.91	245	70.8
1960	Feb. 9, 1960	12.51	170	49.1
1961	Nov. 24, 1960	15.75	350	101
1962	Nov. 23, 1961	12.72	200	57.8
1963	Nov. 25, 1962	12.97	215	62.1
1964	Jan. 25, 1964	14.19	262	75.7
1965	Dec. 21, 1964	16.66	598	173
1966	Mar. 9, 1966	16.18	490	142
1967	Jan. 28, 1967	12.80	203	58.7
1968	Feb. 20, 1968	13.25	227	65.6

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

152

14190600 SOAP CREEK TRIBUTARY NEAR SUVER, OREG.

LOCATION.--Lat 44°42'00", long 123°13'10", in SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.18, T.10 S., R.4 W., Benton County, at culvert on U.S. Highway 99 W, 1.2 mi (1.9 km) south of Polk County line, and 3 mi (5 km) south of Suver.

BASIN CHARACTERISTICS.--Drainage area, 0.57 mi<sup>2</sup> (1.48 km<sup>2</sup>). Channel elevation at gage is 216 ft (66 m). Mean elevation of basin is 365 ft (111 m); channel slope, 124 ft/mi (23.5 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 5.0-ft (1.52 m) x 3.0-ft (0.91 m) concrete-box culvert with upstream invert at 1.50 ft (0.457 m), gage datum.

REMARKS.--Station was established Sept. 18, 1952.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Feb. 17, 1953	4.10	63	111
1954	Jan. 27, 1954	3.79	51	89.5
1955	Dec. 30, 1954	3.04	26	45.6
1956	Dec. 21, 1955	4.53	80	140
1957	Mar. 7, 1957	2.85	21	36.8
1958	Jan. 12, 1958	3.51	41	71.9
1959	Jan. 9, 1959	3.49	41	71.9
1960	Mar. 29, 1960	3.00	25	43.9
1961	Nov. 24, 1960	3.73	49	86.0
1962	Nov. 22, 1961	3.85	53	93.0
1963	Nov. 20, 1962	3.59	44	77.2
1964	Jan. 19, 1964	3.71	48	84.2
1965	Jan. 28, 1965	4.62	84	147
1966	Jan. 3, 1966	3.95	57	100
1967	Jan. 28, 1967	3.41	37	64.9
1968	Feb. 20, 1968	3.15	29	50.9
1969	Dec. 5, 1968	3.63	45	78.9
1970	Dec. 11, 1969	3.44	38	66.7
1971	Jan. 17, 1971	3.91	55	96.5
1972	Mar. 2, 1972	4.62	86	151
1973	Dec. 18, 1972	3.04	26	45.6
1974	Jan. 16, 1974	4.05	61	107

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

153

14192100 GLENN CREEK NEAR SALEM, OREG.

LOCATION.--Lat 44°57'05", long 123°05'00", in SE 1/4 sec.20, T.7 S., R.3 W., Polk County, at twin culverts on Glenn Creek road, 1.5 mi (2.4 km) northwest of Salem. Prior to Oct. 1, 1957, at same site at different datum.

BASIN CHARACTERISTICS.--Drainage area, 2.72 mi<sup>2</sup> (7.04 km<sup>2</sup>). Channel elevation at gage is 250 ft (76 m). Mean elevation of basin is 630 ft (192 m); channel slope, 256 ft/mi (48.5 m/km). Basin consists primarily of small farm tracts although upper basin is becoming urbanized.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through twin 5.0-ft (1.52 m) diameter culverts with upstream invert elevations at 14.64 ft (4.462 m) and 14.77 ft (4.502 m), gage datum. Prior to Oct. 1, 1957, culvert system consisted of three wooden culverts with natural gravel inverts at about 10 ft (3.0 m), gage datum then in use.

REMARKS.--Station was established Nov. 1, 1951. Culvert was extended when road was widened during summer of 1962. Peaks of 1956, 1961, and 1963 are adjusted for backwater from debris at culvert entrance.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 4, 1951	11.96	64	23.5
1953	Jan. 20, 1953	13.28	156	57.4
1954	Jan. 27, 1954	12.81	121	44.5
1955	Feb. 8, 1955	11.25	24	8.8
1956	Dec. 21, 1955	14.26	172	63.2
1957	Mar. 7, 1957	16.34	38	14.0
1958	Jan. 12, 1958	16.97	72	26.5
1959	Jan. 9, 1959	17.09	86	31.6
1960	Feb. 9, 1960	16.45	38	14.0
1961	Feb. 10, 1961	17.57	100	36.8
1962	Dec. 20, 1961	16.44	43	15.8
1963	Nov. 22, 1962	16.73	45	16.5
1964	Jan. 25, 1964	17.48	105	38.6
1965	Dec. 22, 1964	18.18	155	57.0
1966	Mar. 9, 1966	17.42	100	36.8
1967	Jan. 28, 1967	16.74	59	21.7
1968	Feb. 20, 1968	16.87	67	24.6
1969	Nov. 9, 1968	16.26	32	11.8
1970	Jan. 22, 1970	16.78	60	22.1
1971	Jan. 17, 1971	16.93	69	25.4
1972	Jan. 20, 1972	17.91	137	50.4
1973	Dec. 18, 1972	16.44	42	15.4
1974	Nov. 15, 1973	18.37	170	62.5



## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

154

14192200 GIBSON CREEK NEAR SALEM, OREG. (Discontinued)

LOCATION.--Lat 44°58'20", long 123°04'30", in S½SE¼ sec.8, T.7 S., R.3 W., Marion County, at three culverts on Gibson Road, 0.8 mi (1.3 km) upstream from mouth, and 2.5 mi (4.0 km) northwest of Salem.

BASIN CHARACTERISTICS.--Drainage area, 4.83 mi<sup>2</sup> (12.51 km<sup>2</sup>). Channel elevation at gage is 140 ft (43 m). Mean elevation of basin is 595 ft (181 m); channel slope, 227 ft/mi (43.0 m/km). Basin consists of farm and pasture land.

DISCHARGE.--Peak discharges are from fall-discharge rating curve defined by current-meter measurements or computations of discharge through two 2.5-ft (0.76 m) and one 3.0-ft (0.91 m) diameter culverts. Site is subject to variable backwater conditions and headwater-tailwater relation (fall) is used whenever total submersion occurs.

REMARKS.--Station was established Nov. 1, 1951. Road overflow occurs at 16.2 ft (4.94 m), gage datum. Culvert was obstructed during peaks of 1957 and 1958. Station was discontinued Sept. 30, 1966.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 3, 1951	13.39	102	21.1
1953	Jan. 20, 1953	16.53	238	49.3
1954	Jan. 27, 1954	15.65	162	33.5
1955	Apr. 12, 1955	12.21	53	11.0
1956	Jan. 4, 1956	16.40	190	39.3
1957	Mar. 7, 1957	14.17	126	26.1
1958	Jan. 12, 1958	15.35	153	31.7
1959	Jan. 9, 1959	15.68	161	33.3
1960	Feb. 9, 1960	13.34	86	17.8
1961	Feb. 10, 1961	15.59	153	31.7
1962	Dec. 20, 1961	13.01	90	18.6
1963	Mar. 30, 1963	13.76	106	21.9
1964	Jan. 19, 1964	15.82	167	34.6
1965	Dec. 23, 1964	17.04	434	89.9
1966	Jan. 3, 1966	15.59	162	33.5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

155

14192800 SOUTH YAMHILL RIVER TRIBUTARY NEAR WILLAMINA, OREG.

LOCATION.--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 mi (3.5 km) upstream from mouth, and 2.5 mi (4.0 km) south of Willamina.

BASIN CHARACTERISTICS.--Drainage area, 1.81 mi<sup>2</sup> (4.69 km<sup>2</sup>). Channel elevation at gage is 280 ft (85 m). Mean elevation of basin is 625 ft (190 m); channel slope, 284 ft/mi (53.8 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 5.0-ft (1.52 m) concrete-box culvert with upstream invert at 6.14 ft (1.871 m), gage datum.

REMARKS.--Station was established Dec. 10, 1953. Peak of Dec. 21, 1955, may have been affected by backwater from debris.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1954	Feb. 12, 1954	11.48	179	98.9
1955	Feb. 7, 1955	8.38	51	28.2
1956	Dec. 21, 1955	21.00	420	232
1957	Feb. 26, 1957	10.42	132	72.9
1958	Jan. 12, 1958	9.80	104	57.5
1959	Jan. 9, 1959	11.21	170	93.9
1960	Mar. 29, 1960	10.30	126	69.6
1961	Nov. 24, 1960	11.18	166	91.7
1962	Apr. 27, 1962	8.80	66	36.5
1963	Nov. 26, 1962	11.11	164	90.6
1964	Jan. 19, 1964	9.62	97	53.6
1965	Dec. 22, 1964	14.25	256	141
1966	Jan. 3, 1966	11.74	195	108
1967	Dec. 4, 1966	10.00	114	63.0
1968	Feb. 20, 1968	11.12	165	91.2
1969	Jan. 13, 1969	10.67	143	79.0
1970	Dec. 11, 1969	10.20	121	66.9
1971	Jan. 17, 1971	11.54	187	103
1972	Jan. 20, 1972	11.24	172	95.0
1973	Dec. 18, 1972	9.80	105	58.0
1974	Jan. 15, 1974	12.28	122	67.4

## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

156

14197300 PANTHER CREEK NEAR CARLTON, OREG. (Discontinued)

LOCATION.--Lat 45°18'20", long 123°21'00", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.18, T.3 S., R.5 W., Yamhill County, at diversion dam 1.6 mi (2.6 km) upstream from Fall Creek, 9 mi (14 km) west of Carlton.

BASIN CHARACTERISTICS.--Drainage area, 3.19 mi<sup>2</sup> (8.26 km<sup>2</sup>). Channel elevation at gage is 560 ft (171 m). Mean elevation of basin is 1,400 ft (427 m); channel slope, 518 ft/mi (98.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge over dam with average crest elevation at about 12.0 ft (3.66 m) gage datum. Stage-discharge relation varies because of adjustable flash boards of dam.

REMARKS.--Station was established Jan. 30, 1953. Diversion flow considered negligible at time of peak discharge. Peak of Feb. 12, 1954, affected by backwater from debris. Station discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 19, 1953	13.55	184	57.7
1954	Feb. 12, 1954	13.77	212	66.5
1955	Dec. 30, 1954	13.03	113	35.4
1956	Dec. 21, 1955	14.72	492	154
1957	Mar. 7, 1957	13.55	208	65.2
1958	Dec. 20, 1957	13.70	232	72.7
1959	Jan. 10, 1959	13.35	155	48.6
1960	Feb. 9, 1960	13.24	140	43.9
1961	Nov. 24, 1960	13.82	235	73.7
1962	Nov. 23, 1961	13.38	159	49.8
1963	Nov. 25, 1962	14.02	302	94.7
1964	Jan. 25, 1964	14.08	304	95.3
1965	Dec. 21, 1964	15.03	612	192
1966	Mar. 9, 1966	13.73	241	75.5
1967	Dec. 13, 1966	13.69	220	69.0
1968	Feb. 20, 1968	13.59	195	61.1

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

157

14199700 BULL CREEK NEAR COLTON, OREG. (Discontinued)

LOCATION.--Lat 45°10'05", long 122°28'46", in NE¼ sec.6, T.5 S., R.3 E., Clackamas County, at culvert on State Highway 211, 300 ft (91 m) upstream from mouth, 2.2 mi (3.5 km) west of Colton, and 4.5 mi (7.2 km) east of Molalla.

BASIN CHARACTERISTICS.--Drainage area, 4.16 mi<sup>2</sup> (10.77 km<sup>2</sup>). Channel elevation at gage is 425 ft (129 m). Mean elevation of basin is 909 ft (277 m); channel slope, 192 ft/mi (36.4 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 10.39 ft (3.167 m), gage datum. Stage-discharge relation varies because of removable weir board at the culvert entrance. Crest of weir is at 11.58 ft (3.530 m), gage datum.

REMARKS.--Station was established Mar. 6, 1957. Peak of Jan. 18, 1953, may have been affected by backwater from debris. Station discontinued Sept. 30, 1968

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	16.20	257	61.8
1957	Mar. 7, 1957	14.09	119	28.6
1958	Dec. 20, 1957	13.96	133	32.0
1959	Jan. 10, 1959	12.88	74	17.8
1960	Feb. 9, 1960	12.81	70	16.8
1961	Nov. 24, 1960	16.35	293	70.4
1962	Dec. 20, 1961	13.07	84	20.2
1963	Mar. 30, 1963	13.96	133	32.0
1964	Nov. 8, 1963	13.54	107	25.7
1965	Dec. 22, 1964	15.64	241	57.9
1966	Jan. 2, 1966	13.51	106	25.5
1967	Dec. 13, 1966	11.83	30	7.2
1968	Feb. 20, 1968	13.94	132	31.7



## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

158

14203800 BEAVER CREEK NEAR GLENWOOD, OREG. (Discontinued)

LOCATION.--Lat 45°40'20", long 123°17'25", in NE¼SW¼ sec.10, T.2 N., R.5 W., Washington County, at culvert on Glenwood Timber highway, 1.7 mi (2.7 km) northwest of Glenwood, and 2.5 mi (4.0 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 4.31 mi<sup>2</sup> (11.16 km<sup>2</sup>). Channel elevation at gage is 540 ft (165 m). Mean elevation of basin is 940 ft (287 m); channel slope, 121 ft/mi (22.9 m/km).

DISCHARGE.--Peak discharges are from fall-discharge rating curve based on current-meter measurements and computations of discharge through concrete-arch culvert. Site subject to variable backwater conditions and headwater-tailwater relation (fall) is used whenever total submersion occurs. Culvert submerged at 15.57 ft (4.746 m), gage datum.

REMARKS.--Station was established Nov. 8, 1951. Road overflow occurs at 19.0 ft (5.79 m), gage datum. Maximum stage of 20.52 ft (6.254 m) occurred Dec. 21, 1955, when culvert became obstructed by debris. Station discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 4, 1951	16.20	163	37.8
1953	Jan. 8, 1953	15.97	153	35.5
1954	Dec. 9, 1953	17.04	207	48.0
1955	Feb. 8, 1955	14.64	106	24.6
1956	Jan. 4, 1956	17.17	260	60.3
1957	Mar. 7, 1957	15.29	140	32.5
1958	Jan. 12, 1958	15.58	160	37.1
1959	Jan. 10, 1959	16.04	159	36.9
1960	Feb. 9, 1960	16.21	201	46.6
1961	Nov. 24, 1960	17.22	265	61.5
1962	Mar. 24, 1962	14.69	125	29.0
1963	Feb. 2, 1963	20.04	472	110
1964	Jan. 25, 1964	17.78	305	70.8
1965	Dec. 21, 1964	19.28	331	76.8
1966	Jan. 3, 1966	16.63	256	59.4
1967	Dec. 13, 1966	17.69	318	73.8
1968	Feb. 2, 1968	16.52	250	58.0

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

159

14204100 BATEMAN CREEK NEAR GLENWOOD, OREG.

LOCATION.--Lat 45°37'30", long 123°15'40", in SE¼ sec.26, T.2 N., R.5 W., Washington County, at culvert on State Highway 6, at mouth, and 1.5 mi (2.4 km) south of Glenwood.

BASIN CHARACTERISTICS.--Drainage area, 1.27 mi<sup>2</sup> (3.29 km<sup>2</sup>). Channel elevation at gage is 410 ft (125 m). Mean elevation of basin is 1,140 ft (347 m); channel slope, 467 ft/mi (88.4 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 8.39 ft (2.557 m), gage datum.

REMARKS.--Station was established Nov. 13, 1951.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 4, 1951	11.11	43	33.9
1953	Jan. 8, 1953	12.44	77	60.6
1954	Feb. 12, 1954	13.88	115	90.6
1955	Feb. 8, 1955	10.67	31	24.9
1956	Dec. 21, 1955	16.00	145	114
1957	Mar. 7, 1957	11.32	44	34.6
1958	Dec. 20, 1957	11.05	39	30.7
1959	Jan. 10, 1959	11.36	45	35.4
1960	Feb. 9, 1960	11.27	43	33.9
1961	Nov. 24, 1960	11.49	49	38.6
1962	Dec. 20, 1961	11.23	46	36.2
1963	Feb. 3, 1963	12.85	90	70.9
1964	Jan. 25, 1964	12.57	81	63.8
1965	Dec. 21, 1964	12.72	85	66.9
1966	Jan. 3, 1966	11.51	43	33.9
1967	Dec. 13, 1966	12.08	65	51.2
1968	Feb. 2, 1968	13.20	97	76.4
1969	Jan. 13, 1969	12.33	73	57.5
1970	Jan. 23, 1970	11.24	37	29.1
1971	Jan. 17, 1971	11.20	36	28.3
1972	Jan. 21, 1972	14.00	113	89.0
1973	Dec. 21, 1972	11.85	62	48.8
1974	Mar. 28, 1974	13.12	94	74.0

## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

160

## 14207920 POOP CREEK NEAR BIG BOTTOM, OREG.

LOCATION.--Lat 44°58'35", long 121°50'35", probably in SW $\frac{1}{4}$  sec.9 (unsurveyed), T.7 S., R.8 E., Clackamas County, at culvert on Forest Service road S650 in Mt. Hood National Forest, at mouth, and 3 mi (5 km) southeast of Big Bottom.

BASIN CHARACTERISTICS.--Drainage area, 1.74 mi<sup>2</sup> (4.51 km<sup>2</sup>). Channel elevation at gage is 2,760 ft (841 m). Mean elevation of basin is 3,620 ft (1,103 m); channel slope, 731 ft/mi (138 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements or computations of discharge through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 10.45 ft (3.185 m), gage datum.

REMARKS.--Station was established Sept. 10, 1965. Road overflow will occur at 16.7 ft (5.09 m), gage datum. No peak data reported during 1968. Peak of 1973 is highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	May 5, 1966	11.69	8.0	4.6
1967	Dec. 13, 1966	11.38	4.0	2.3
1969	Jan. 7, 1969	11.97	14	8.0
1970	Jan. 22, 1970	11.96	14	8.0
1971	Jan. 17, 1971	11.74	9.8	5.6
1972	Jan. 21, 1972	12.18	18	10.3
1973	Jan. 15, 1973	11.70	9.2	5.3
1974	Jan. 15, 1974	12.51	28	16.1

161

## 14208200 COLLAWASH RIVER TRIBUTARY NEAR BREITENBUSH HOT SPRINGS, OREG.

LOCATION.--Lat 44°55'50", long 122°00'40", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.25, T.7 S., R.6 E., Clackamas County, at culvert on Forest Service road S63, 0.5 mi (0.8 km) north of Russ Creek, and 10 mi (16 km) north of Breitenbush Hot Springs.

BASIN CHARACTERISTICS.--Drainage area, 0.39 mi<sup>2</sup> (1.01 km<sup>2</sup>). Other basin characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 3.0-ft (0.91 m) diameter culvert with upstream invert at 24.77 ft (7.550 m), gage datum.

REMARKS.--Station was established June 13, 1966. Culvert assumed to be unobstructed during peak of May 5, 1966. No data reported during 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	May 5, 1966	27.02	21	53.8
1967	Jan. 28, 1967	27.04	22	56.4
1969	Jan. 7, 1969	26.62	15	38.5
1970	Jan. 22, 1970	26.99	21	53.8
1971	Jan. 17, 1971	27.77	32	82.1
1972	Jan. 2, 1972	33.90	95	244
1973	Apr. 12, 1973	27.50	28	71.8
1974	Jan. 15, 1974	31.80	80	205

## WILLAMETTE RIVER BASIN

162

14208850 EAST FORK SHELLROCK CREEK NEAR GOVERNMENT CAMP, OREG.

LOCATION.--Lat 45°08'30", long 121°53'55", in NW¼ sec.13, T.5 S., R.7 E., Clackamas County, at culvert on Forest Service road 58B in Mt. Hood National Forest, 5 mi (8 km) west of Timothy Meadows Reservoir, and 13.5 mi (21.7 km) southwest of Government Camp.

BASIN CHARACTERISTICS.--Drainage area, 2.30 mi<sup>2</sup> (5.96 km<sup>2</sup>). Channel elevation at gage is 3,480 ft (1,061 m). Mean elevation of basin is 4,230 ft (1,289 m); channel slope, 388 ft/mi (73.5 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 8.63 ft (2.630 m), gage datum.

REMARKS.--Station was established Sept. 10, 1965. Culvert was assumed to be unobstructed during peak flow of Dec. 22, 1964. Road overflow will occur at 17.4 ft (5.30 m), gage datum. No data reported during 1968 and 1969. Peak discharges 1965-67 revised on the basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	May 5, 1966	11.00	41	17.8
1967	Jan. 28, 1967	10.80	35	15.2
1970	Jan. 22, 1970	12.00	73	31.7
1971	Jan. 17, 1971	11.12	45	19.6
1972	Jan. 21, 1972	12.95	105	45.7
1973	Dec. 21, 1972	11.10	44	19.1
1974	Jan. 15, 1974	12.17	79	34.3

163

14209100 KINK CREEK NEAR GOVERNMENT CAMP, OREG.

LOCATION.--Lat 45°04'15", long 121°57'45", in SW¼ sec.4, T.6 S., R.7 E., Clackamas County, at culvert 0.1 mi (0.2 km) downstream from Kelley Creek, 0.2 mi (0.3 km) upstream from mouth at Lake Harriet on the Oak Grove Fork Clackamas River, and 19 mi (31 km) southwest of Government Camp.

BASIN CHARACTERISTICS.--Drainage area, 3.75 mi<sup>2</sup> (9.71 km<sup>2</sup>). Channel elevation at gage is 2,200 ft (671 m). Mean elevation of basin is 3,400 ft (1,036 m); channel slope, 343 ft/mi (65.0 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 13.41 ft (4.08 m), gage datum.

REMARKS.--Station established May 8, 1957. Culvert entrance obstructed during peak of Dec. 21, 1964, discharge estimated. Peak flows of less than 50 ft<sup>3</sup>/s (1.42 m<sup>3</sup>/s) are considered approximate because of critical flow in approach channel.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1958	Dec. 20, 1957	16.22	53	14.1
1959	Dec. 11, 1958	16.44	60	16.0
1960	Feb. 9, 1960	16.18	41	10.9
1961	Feb. 10, 1961	16.35	48	12.8
1962	Dec. 20, 1961	15.65	30	8.0
1963	Feb. 2, 1963	15.20	20	5.3
1964	Jan. 25, 1964	15.00	15	4.0
1965	Dec. 21, 1964	18.78	94	25.1
1966	Mar. 9, 1966	16.75	60	16.0
1967	Jan. 28, 1967	16.09	41	10.9
1968	Feb. 20, 1968	16.91	67	17.9
1969	Jan. 7, 1969	17.07	72	19.2
1970	Jan. 22, 1970	17.21	76	20.3
1971	Jan. 18, 1971	17.27	77	20.5
1972	Jan. 21, 1972	17.22	76	20.3
1973	Dec. 21, 1972	15.59	26	6.9
1974	Jan. 15, 1974	17.65	89	23.7



## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

164

14209750 WHISKY CREEK NEAR ESTACADA, OREG.

LOCATION.--Lat°12'50", long 122°09'30", in E<sup>1</sup>/<sub>4</sub> sec.23, T.4 S., R.5 E., Clackamas County, at culvert on Forest Service road S457 in Mt. Hood National Forest, 0.1 mi (0.2 km) upstream from mouth, and 10 mi (16 km) southeast of Estacada.

BASIN CHARACTERISTICS.--Drainage area, 1.06 mi<sup>2</sup> (2.75 km<sup>2</sup>). Channel elevation at gage is 2,030 ft (619 m). Mean elevation of basin is 2,570 ft (783 m); channel slope, 476 ft/mi (90.2 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4.8-ft (1.46 m) x 3.0-ft (0.91 m) pipe-arch culvert with upstream invert at 11.04 ft (3.365 m) gage datum.

REMARKS.--Station was established Sept. 9, 1965. Culvert was assumed to be unobstructed during peak flow of Dec. 22, 1964. Road overflow occurs at 14.4 ft (4.39 m), gage datum. No peak data reported during 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	15.64	249	235
1966	Jan. 3, 1966	13.02	36	34.0
1967	Jan. 28, 1967	12.22	16	15.1
1969	Jan. 7, 1969	13.51	47	44.3
1970	Jan. 22, 1970	13.36	44	41.5
1971	Jan. 17, 1971	14.95	78	73.6
1972	Jan. 21, 1972	15.14	92	86.8
1973	Dec. 21, 1972	13.52	48	45.3
1974	Jan. 16, 1974	14.30	65	61.3

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

165

14209900 DUBOIS CREEK AT ESTACADA, OREG.

LOCATION.--Lat 45°16'55", long 122°20'35", in NW¼ sec.29, T.3 S., R.4 E., Clackamas County, at culvert on county road, 0.4 mi (0.6 km) upstream from mouth, and 0.5 mi (0.8 km) southwest of Estacada.

BASIN CHARACTERISTICS.--Drainage area, 2.52 mi<sup>2</sup> (6.53 km<sup>2</sup>). Channel elevation at gage is 490 ft (149 m). Mean elevation of basin is 1,010 ft (308 m); channel slope, 227 ft/mi (43.0 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of flow through one 7.0-ft (2.13 m) x 4.8-ft (1.46 m) pipe-arch culvert with upstream invert at 14.64 ft (4.462 m), gage datum.

REMARKS.--Station was established June 19, 1957. Road overflow occurs at 19.3 ft (5.88 m), gage datum. Peak of Dec. 28, 1966, was highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1957	Mar. 7, 1957	17.20	78	31.0
1958	Apr. 20, 1958	17.49	93	36.9
1959	Feb. 14, 1959	16.79	59	23.4
1960	Feb. 8, 1960	16.42	42	16.7
1961	Feb. 10, 1961	19.14	167	66.3
1962	Dec. 20, 1961	17.37	86	34.1
1963	Mar. 30, 1963	17.28	81	32.1
1964	Jan. 26, 1964	17.14	65	25.8
1965	Dec. 22, 1964	20.80	508	202
1966	Jan. 3, 1966	17.50	83	32.9
1967	Dec. 28, 1966	15.56	12	4.8
1968	Feb. 20, 1968	16.77	49	19.4
1969	Jan. 13, 1969	19.58	188	74.6
1970	Jan. 22, 1970	18.22	118	46.8
1971	Jan. 17, 1971	17.16	67	26.6
1972	Jan. 21, 1972	20.08	347	138
1973	Dec. 20, 1972	17.16	67	26.6
1974	Jan. 16, 1974	17.61	88	34.9

## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

166

14210800 ROCK CREEK NEAR BORING, OREG. (Discontinued)

LOCATION.--Lat 45°26'10", long 122°28'47", in SW¼ sec.32, T.1 S., R.3 E., Clackamas County, at culvert on Foster Road, 1.5 mi (2.4 km) northwest of Damascus, and 4.5 mi (7.2 km) west of Boring.

BASIN CHARACTERISTICS.--Drainage area, 2.25 mi<sup>2</sup> (5.83 km<sup>2</sup>). Datum of gage is 300.05 ft (91.455 m) above mean sea level, datum of 1929, supplementary adjustment of 1947. Mean elevation of basin is 576 ft (176 m); channel slope, 107 ft/mi (20.3 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through two 4.0-ft (1.22 m) diameter culverts with upstream inverts at 49.90 ft (15.210 m), gage datum.

REMARKS.--Station was established Feb. 28, 1957; flood-hydrograph recorder operated during 1962 and 1963. Station discontinued Sept. 30, 1966.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1957	Mar. 7, 1957	54.42	153	68.0
1958	Jan. 12, 1958	52.87	91	40.4
1959	Jan. 10, 1959	52.54	78	34.7
1960	Feb. 9, 1960	52.48	75	33.3
1961	Nov. 24, 1960	56.40	270	120
1962	Dec. 20, 1961	53.35	110	48.9
1963	Nov. 20, 1962	57.16	280	124
1964	Jan. 25, 1964	55.17	222	98.7
1965	Dec. 22, 1964	56.20	257	114
1966	Jan. 2, 1966	53.99	164	72.9

## LOWER COLUMBIA RIVER BASIN (Continued)

## WILLAMETTE RIVER BASIN

167

14211800 SALTZMAN CREEK AT PORTLAND, OREG.

LOCATION.--Lat 45°33'55", long 122°44'40", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.13, T.1 N., R.1 W., Multnomah County, at culvert at intersection of N.W. Balboa and Culebra Streets in Portland, 430 ft (131 m) downstream from U.S. Highway 30, and 0.3 mi (0.5 km) upstream from mouth. Prior to Dec. 8, 1954, at three sites 0.3 mi (0.5 km) upstream at various datums.

BASIN CHARACTERISTICS.--Drainage area, 1.46 mi<sup>2</sup> (3.78 km<sup>2</sup>). Channel elevation at gage is 60 ft (18.3 m). Mean elevation of basin is 818 ft (249 m); channel slope, 538 ft/mi (102 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 18.0-ft (5.49 m) x 4.0-ft (1.22 m) concrete-box culvert with upstream invert at 10.82 ft (3.298 m), gage datum.

REMARKS.--Station established Nov. 21, 1951.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 3, 1951	37.86	76	52.1
1953	Jan. 20, 1953	9.13	80	54.8
1954	Jan. 22, 1954	-	223	153
1955	Apr. 12, 1955	11.95	73	50.0
1956	Dec. 21, 1955	13.33	306	210
1957	Mar. 7, 1957	12.86	200	137
1958	Feb. 15, 1958	11.79	59	40.4
1959	Feb. 14, 1959	12.13	90	61.6
1960	Jan. 28, 1960	11.64	44	30.1
1961	Feb. 10, 1961	11.98	73	50.0
1962	Dec. 20, 1961	11.76	53	36.3
1963	Mar. 30, 1963	12.50	137	93.8
1964	Jan. 25, 1964	12.55	144	98.6
1965	Dec. 22, 1964	13.06	242	166
1966	Jan. 3, 1966	12.28	108	74.0
1967	Dec. 13, 1967	11.84	57	39.0
1968	Jan. 10, 1968	11.56	32	21.9
1969	Feb. 8, 1969	12.28	110	73.5
1970	Jan. 22, 1970	12.50	142	97.3
1971	Jan. 17, 1971	12.30	113	77.4
1972	Jan. 21, 1972	12.42	130	89.0
1973	Dec. 22, 1972	12.52	145	99.3
1974	Jan. 16, 1974	12.96	222	152



## REGION 5

## LOWER COLUMBIA RIVER BASIN (Continued)

## MERRILL CREEK BASIN

168

14222905 MERRILL CREEK AT DEER ISLAND, OREG.

LOCATION.--Lat 45°55'59", long 122°51'14", in NW¼ sec.7, T.5 N., R.1 W., Columbia County, at culvert on Canaan Road, 0.6 mi (1.0 km) west of town of Deer Island.

BASIN CHARACTERISTICS.--Drainage area, 7.53 mi<sup>2</sup> (19.50 km<sup>2</sup>). Channel elevation at gage is 45 ft (13.7 m). Mean elevation of basin is 540 ft (165 m); channel slope, 93 ft/mi (17.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 12.0-ft (3.66 m) x 9.0-ft (2.74 m) concrete-box culvert with upstream invert at 3.00 ft (0.914 m), gage datum. Headwater elevations reflect backwater conditions from downstream channel.

REMARKS.--Station was established Aug. 2, 1972. Culvert assumed to be unobstructed during peak of Jan. 21, 1972.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1972	Jan. 21, 1972	9.09	480	63.7
1973	Dec. 21, 1972	9.26	330	43.8
1974	Jan. 16, 1974	11.01	560	74.4

## CLATSKANIE RIVER BASIN

169

14247020 FALL CREEK NEAR CLATSKANIE, OREG.

LOCATION.--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 ft (30 m) south of State Highway 47, 2.5 mi (4.0 km) west of Clatskanie.

BASIN CHARACTERISTICS.--Drainage area, 2.07 mi<sup>2</sup> (5.36 km<sup>2</sup>). Channel elevation at gage is 440 ft (134 m). Mean elevation of basin is 1,200 ft (366 m); channel slope, 445 ft/mi (84.3 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 5.21 ft (1.588 m), gage datum.

REMARKS.--Station was established July 11, 1972. Road overflow will occur at 10.9 ft (3.32 m), gage datum. Culvert assumed to be unobstructed during peaks of Jan. 21, 1972, and Dec. 21, 1972.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1972	Jan. 21, 1972	8.10	40	19.3
1973	Dec. 21, 1972	10.65	99	47.8
1974	Jan. 16, 1974	10.63	98	47.3

## LOWER COLUMBIA RIVER BASIN (Continued)

## BIG CREEK BASIN

170

14248510 LITTLE CREEK NEAR KNAPPA, OREG.

LOCATION.--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 mi (5 km) south of Knappa.

BASIN CHARACTERISTICS.--Drainage area, 1.53 mi<sup>2</sup> (3.96 km<sup>2</sup>). Channel elevation at gage is 225 ft (68.6 m). Mean elevation of basin is 1,340 ft (408 m); channel slope, 556 ft/mi (105 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 8.05 ft (2.454 m), gage datum.

REMARKS.--Station was established July 11, 1972. Resident at station said Jan. 21, 1972, peak was highest flow seen in 38 years. Diversion flow is negligible at time of peaks.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1972	Jan. 21, 1972	13.53	184	120
1973	Dec. 21, 1972	11.12	72	47.1
1974	Jan. 16, 1974	10.96	64	41.8

## PACIFIC SLOPE BASINS

## NECANICUM RIVER BASIN

171

14298500 NORTH FORK NECANICUM RIVER NEAR SEASIDE, OREG. (Discontinued)

LOCATION.--Lat 45°54'35", long 123°48'30", in NE¼NW¼ sec.21, T.5 N., R.9 W., Clatsop County, at diversion dam near U.S. Highway 26, 8 mi (13 km) southeast of Seaside.

BASIN CHARACTERISTICS.--Drainage area, 5.70 mi<sup>2</sup> (14.76 km<sup>2</sup>). Channel elevation at gage is 300 ft (91.4 m). Mean elevation of basin is 1,180 ft (360 m); channel slope, 369 ft/mi (69.9 m/km).

DISCHARGE.--Peak discharge is from computation of flow over 45-ft (13.7 m) wide concrete dam with average crest elevation at 5.10 ft (1.554 m), gage datum.

REMARKS.--Station established Nov. 14, 1951; discontinued Sept. 30, 1960. Records of gage heights are available for period 1953-59.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Jan. 30, 1952	6.45	358	62.8

## REGION 5

## PACIFIC SLOPE BASINS (Continued)

## NECANICUM RIVER BASIN

172

14299000 SOUTH FORK NECANICUM RIVER NEAR SEASIDE, OREG. (Discontinued)

LOCATION.--Lat 45°53'35", long 123°49'55", in NW¼ sec.29, T.5 N., R.9 W., Tillamook County, at Seaside water-supply dam on Hollenback road, 1.4 mi (2.3 km) upstream from mouth, and 8 mi (13 km) southeast of Seaside.

BASIN CHARACTERISTICS.--Drainage area, 7.99 mi<sup>2</sup> (20.69 km<sup>2</sup>). Channel elevation at gage is 280 ft (85.3 m). Mean elevation of basin is 1,170 ft (357 m); channel slope, 336 ft/mi (63.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge over 50-ft (15.2 m) wide dam with average crest elevation at 4.24 ft (1.292 m), gage datum.

REMARKS.--Station was established Sept. 10, 1952. Peaks of 1954, 1956, and 1959, affected by back-water from debris. Station discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Dec. 4, 1952	7.65	1,780	223
1954	Jan. 22, 1954	8.52	2,320	290
1955	Feb. 8, 1955	7.13	1,310	164
1956	Dec. 21, 1955	8.85	3,020	378
1957	Feb. 26, 1957	7.77	1,880	235
1958	Dec. 19, 1957	7.66	1,780	223
1959	Nov. 18, 1958	7.92	2,020	253
1960	Mar. 15, 1960	7.47	1,610	202
1961	Mar. 14, 1961	7.52	1,660	208
1962	Mar. 24, 1962	7.69	1,810	227
1963	Feb. 2, 1963	7.11	1,310	164
1964	Jan. 25, 1964	8.86	3,040	380
1965	Dec. 21, 1964	7.58	1,710	214
1966	Jan. 2, 1966	8.02	2,120	265
1967	Dec. 13, 1966	8.42	2,560	320
1968	Feb. 20, 1968	7.36	1,500	188

## PACIFIC SLOPE BASINS (Continued)

## ASBURY CREEK BASIN

173

14299500 ASBURY CREEK NEAR CANNON BEACH, OREG.

LOCATION.--Lat 45°48'55", long 123°57'50", in SW¼ sec.19, T.4 N., R.10 W., Clatsop County, at culvert on U.S. Highway 101, at Arch Cape, 0.1 mi (0.2 km) upstream from mouth, and 6 mi (10 km) south of Cannon Beach.

BASIN CHARACTERISTICS.--Drainage area, 1.97 mi<sup>2</sup> (5.10 km<sup>2</sup>). Channel elevation at gage is 30 ft (9.1 m). Mean elevation of basin is 1,010 ft (308 m); channel slope, 1,030 ft/mi (195 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 10.0-ft (3.05 m) diameter culvert with upstream invert at 2.89 ft (0.881 m), gage datum. Weir board installed on upstream invert in 1953 with crest at 4.36 ft (1.329 m), gage datum.

REMARKS.--Station was established Nov. 14, 1951.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Feb. 4, 1952	7.69	211	107
1953	Jan. 22, 1953	8.68	235	119
1954	Jan. 22, 1954	8.20	193	98.0
1955	Dec. 30, 1954	7.86	188	95.4
1956	Dec. 21, 1955	8.97	260	132
1957	Dec. 11, 1956	8.14	205	104
1958	Feb. 15, 1958	7.64	173	87.8
1959	Jan. 24, 1959	7.86	188	95.4
1960	Feb. 9, 1960	8.57	231	117
1961	Feb. 10, 1961	9.66	314	159
1962	Nov. 23, 1961	7.48	159	80.7
1963	Nov. 20, 1962	7.60	167	84.8
1964	Jan. 25, 1964	9.07	267	136
1965	Jan. 28, 1965	9.22	279	142
1966	Jan. 2, 1966	7.62	167	84.8
1967	Jan. 28, 1967	7.99	195	99.0
1968	Feb. 2, 1968	8.30	215	109
1969	Dec. 5, 1968	7.84	189	95.9
1970	Jan. 24, 1970	7.65	173	87.8
1971	Jan. 25, 1971	9.30	285	145
1972	Jan. 11, 1972	8.10	202	103
1973	Dec. 20, 1972	8.92	255	129
1974	Dec. 16, 1973	7.60	170	86.3

## REGION 5

## PACIFIC SLOPE BASINS (Continued)

## NEHALEM RIVER BASIN

174

14300200 OAK RANCH CREEK NEAR VERNONIA, OREG. (Discontinued)

LOCATION.--Lat 45°57'00", long 123°07'40", in NW¼NW¼ sec.1, T.5 N., R.4 W., Columbia County, at culvert on county road, 1.9 mi (3.1 km) upstream from mouth, and 7 mi (11 km) north of Vernonia.

BASIN CHARACTERISTICS.--Drainage area, 11.6 mi<sup>2</sup> (30.0 km<sup>2</sup>). Channel elevation at gage is 700 ft (213 m). Other basin characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through twin 6.0-ft (1.83 m) diameter culverts with upstream inverts at 10.25 ft (3.124 m) and 10.04 ft (3.060 m), gage datum.

REMARKS.--Station was established Sept. 4, 1959; discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1959	Jan. 24, 1959	15.24	294	25.3
1960	Nov. 23, 1959	14.18	200	17.2
1961	Nov. 24, 1960	15.47	312	26.9
1962	Dec. 20, 1961	13.52	152	13.1
1963	Feb. 3, 1963	17.78	493	42.5
1964	Jan. 25, 1964	17.60	484	41.7
1965	Dec. 21, 1964	18.46	514	44.3
1966	Mar. 9, 1966	14.88	264	22.8
1967	Dec. 13, 1966	14.69	255	22.0
1968	Feb. 20, 1968	13.67	170	14.7

175

14300400 FISHHAWK CREEK NEAR JEWEL, OREG.

LOCATION.--Lat 45°58'45", long 123°36'10", in NW¼NW¼ sec.30, T.6 N., R.7 W., Clatsop County, at two culverts on State Highway 202, 6.5 mi (10.5 km) northwest of Jewel.

BASIN CHARACTERISTICS.--Drainage area, 0.71 mi<sup>2</sup> (1.84 km<sup>2</sup>). Channel elevation at gage is 950 ft (290 m). Mean elevation of basin is 1,260 ft (384 m); channel slope, 260 ft/mi (49.2 m/km).

DISCHARGE.--Peak discharges are from rating curves defined by current-meter measurements and computations of flow through one 4.0-ft (1.22 m) and one 2.0-ft (0.61 m) diameter culverts with upstream inverts at 15.20 ft (4.633 m), and 10.62 ft (3.237 m), gage datum. Gage heights represent headwater elevations at largest culvert.

REMARKS.--Station was established Aug. 11, 1970. Discharge represents combined flow through both culverts. Peak of 1972 computed by slope-area method at site 0.4 mi (0.6 km) downstream; drainage area, 2.23 mi<sup>2</sup> (5.78 km<sup>2</sup>).

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	18.90	93	131
1972	Jan. 21, 1972	-	1,920	861
1973	Dec. 21, 1972	18.58	80	113
1974	Jan. 16, 1974	18.94	131	185



## PACIFIC SLOPE BASINS (Continued)

## PATTERSON CREEK BASIN

176

14301400 PATTERSON CREEK AT BAY CITY, OREG. (Discontinued)

LOCATION.--Lat 45°31'40", long 123°53'15", in SE¼ sec.34, T.1 N., R.10 W., Tillamook County, at culvert on U.S. Highway 101 in Bay City, 0.3 mi (0.5 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 1.87 mi<sup>2</sup> (4.84 km<sup>2</sup>). Channel elevation at gage is 30 ft (9.1 m). Mean elevation of basin is 530 ft (162 m); channel slope, 360 ft/mi (68.2 m/km). Small municipal water-supply dam is located in basin.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 9.0-ft (2.74 m) x 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 9.11 ft (2.77 m), gage datum.

REMARKS.--Station established Nov. 15, 1951; flood-hydrograph recorder operated during 1963 and 1964. Station was discontinued Sept. 30, 1968. Diversion flow is negligible during peak flows.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Mar. 17, 1952	10.72	55	29.4
1953	Jan. 18, 1953	12.55	166	88.8
1954	Jan. 22, 1954	11.82	117	62.6
1955	Dec. 30, 1954	11.57	102	54.5
1956	Nov. 26, 1955	13.08	207	111
1957	Mar. 7, 1957	11.27	84	44.9
1958	Apr. 20, 1958	11.05	74	39.6
1959	Jan. 24, 1959	11.18	80	42.8
1960	Feb. 9, 1960	11.05	74	39.6
1961	Feb. 10, 1961	12.82	186	99.5
1962	Dec. 20, 1961	11.02	72	38.5
1963	Nov. 20, 1962	11.42	93	49.7
1964	Jan. 25, 1964	13.06	205	110
1965	Jan. 28, 1965	14.38	300	160
1966	Dec. 28, 1965	11.35	89	47.6
1967	Dec. 13, 1966	11.96	126	67.4
1968	Feb. 20, 1968	11.00	69	36.9

## PACIFIC SLOPE BASINS (Continued)

## LITTLE NESTUCCA RIVER BASIN

177

14303650 SQUAW CREEK NEAR NESKOWIN, OREG.

LOCATION.--Lat 45°06'56", long 123°53'41", in NE¼ sec.22, T.5 S., R.10 W., Tillamook County, at culvert on Forest Service road S533 in Siuslaw National Forest, 1 mi (2 km) upstream from mouth, and 4 mi (6 km) east of Neskowin.

BASIN CHARACTERISTICS.--Drainage area, 2.11 mi<sup>2</sup> (5.46 km<sup>2</sup>). Channel elevation at gage is 270 ft (82.3 m). Mean elevation of basin is 820 ft (250 m); channel slope, 281 ft/mi (53.2 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 12.0-ft (3.66 m) x 7.0-ft (2.13 m) pipe-arch culvert with upstream invert at 11.19 ft (3.411 m), gage datum.

REMARKS.--Station was established Aug. 20, 1965. Culvert was assumed to be unobstructed during peak of Jan. 28, 1965.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 28, 1965	16.11	305	145
1966	Mar. 9, 1966	14.30	148	70.1
1967	Dec. 13, 1966	14.58	172	81.5
1968	Feb. 18, 1968	14.40	157	74.4
1969	Nov. 9, 1968	14.26	145	68.7
1970	Jan. 25, 1970	13.32	72	34.1
1971	Jan. 25, 1971	15.18	222	105
1972	Jan. 21, 1972	15.41	243	115
1973	Dec. 18, 1972	15.68	264	125
1974	Jan. 16, 1974	14.46	165	78.2

## PACIFIC SLOPE BASINS (Continued)

## SALMON RIVER BASIN

178

14303700 ALDER BROOK NEAR ROSE LODGE, OREG.

LOCATION.--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 mi (0.2 km) upstream from mouth, and 1.5 mi (2.4 km) northeast of Rose Lodge.

BASIN CHARACTERISTICS.--Drainage area, 1.09 mi<sup>2</sup> (2.82 km<sup>2</sup>). Channel elevation at gage is 240 ft (73.2 m). Mean elevation of basin is 950 ft (290 m); channel slope, 397 ft/mi (75.2 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 8.93 ft (2.722 m), gage datum.

REMARKS.--Station was established Nov. 18, 1953.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1954	Dec. 19, 1953	11.65	82	75.2
1955	Dec. 30, 1954	11.97	101	92.7
1956	Dec. 21, 1955	11.61	80	73.4
1957	Dec. 11, 1956	11.09	58	53.2
1958	Apr. 20, 1958	11.81	91	83.5
1959	Jan. 10, 1959	11.11	58	53.2
1960	Feb. 9, 1960	10.87	51	46.8
1961	Nov. 24, 1960	11.84	92	84.4
1962	Dec. 20, 1961	10.76	48	44.0
1963	Nov. 20, 1962	12.99	147	135
1964	Jan. 25, 1964	11.94	99	90.8
1965	Jan. 28, 1965	13.97	194	178
1966	Dec. 28, 1965	11.46	72	66.1
1967	Dec. 4, 1966	11.53	76	69.7
1968	Feb. 3, 1968	11.67	83	76.1
1969	Nov. 9, 1968	13.92	202	185
1970	Jan. 24, 1970	11.48	59	54.1
1971	Dec. 30, 1970	11.92	93	85.3
1972	Jan. 21, 1972	14.22	218	200
1973	Dec. 17, 1972	12.37	113	104
1974	Nov. 15, 1973	11.45	57	52.3

## ROCKY CREEK BASIN

179

14306010 ROCKY CREEK NEAR DEPOE BAY, OREG. (Discontinued)

LOCATION.--Lat 44°46'45", long 123°04'10", in NE¼ sec.19, T.9 S., R.11 W., Lincoln County, at culvert on U.S. Highway 101, at mouth, and 2 mi (3 km) south of Depoe Bay.

BASIN CHARACTERISTICS.--Drainage area, 5.36 mi<sup>2</sup> (13.88 km<sup>2</sup>). Channel elevation at gage is 30 ft (9.1 m). Mean elevation of basin is 380 ft (116 m); channel slope, 74 ft/mi (14.0 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 15.71 ft (4.788 m), gage datum.

REMARKS.--Station established Nov. 2, 1953; discontinued Sept. 30, 1957. Records of gage heights are available for period 1954-55.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1956	Mar. 4, 1956	22.24	283	52.8
1957	Dec. 11, 1956	21.31	226	42.2

## REGION 5

## PACIFIC SLOPE BASINS (Continued)

## ALSEA RIVER BASIN

180

14306830 LYNDON CREEK NEAR WALDPOR, OREG.

LOCATION.--Lat 44°27'02", long 123°58'50", in SE¼ sec.11, T.13 S., R.11 W., Lincoln County, at culvert on Forest Service road 1245 in Siuslaw National Forest, 0.9 mi (1.4 km) upstream from mouth, and 4 mi (6 km) northeast of Waldport.

BASIN CHARACTERISTICS.--Drainage area, 0.90 mi<sup>2</sup> (2.33 km<sup>2</sup>). Channel elevation at gage is about 250 ft (76.2 m). Mean elevation of basin is 510 ft (155 m); channel slope, 170 ft/mi (32.2 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 6.0 ft (1.83 m) diameter culvert with upstream invert at 4.25 ft (1.295 m), gage datum.

REMARKS.--Station was established Aug. 20, 1965. Culvert was assumed to be unobstructed during peak of Jan. 28, 1965. Road overflow will occur at 16.9 ft (5.15 m), gage datum. Peak discharges for 1965-68 water years are revised on the basis of additional rating definition. No data reported for 1970 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 28, 1965	9.04	162	180
1966	Mar. 9, 1966	6.49	42	46.7
1967	Jan. 28, 1967	6.66	48	53.3
1968	Feb. 18, 1968	6.07	28	31.1
1969	Dec. 11, 1968	7.06	64	71.1
1971	Jan. 25, 1971	6.47	42	46.7
1972	Jan. 10, 1972	7.25	73	81.1
1973	Dec. 18, 1972	5.88	23	25.6
1974	Jan. 16, 1974	7.62	90	100

## REGION 5

(115)

## PACIFIC SLOPE BASINS (Continued)

## ALSEA RIVER BASIN

181

14306850 SOUTH FORK WEISS CREEK NEAR WALDPOR, OREG. (Discontinued)

LOCATION.--Lat 44°23'40", long 124°01'30", in SW¼ sec.33, T.13 S., R.11 W., Lincoln County, at Waldport water-supply dam, 0.1 mi (0.2 km) upstream from mouth, and 3.5 mi (5.6 km) southeast of Waldport.

BASIN CHARACTERISTICS.--Drainage area, 0.33 mi<sup>2</sup> (0.85 km<sup>2</sup>). Channel elevation at gage is 400 ft (122 m). Mean elevation of basin is 840 ft (256 m), channel slope, 600 ft/mi (114 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements made at earth-fill dam with 3.7-ft (1.13 m) wide flume. Entrance of flume is at 5.14 ft (1.567 m), gage datum.

REMARKS.--Station was established Oct. 29, 1952. Peak discharges are not adjusted for leakage or diversion. Station discontinued Sept. 30, 1966.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 17, 1953	6.92	30	90.9
1954	Jan. 28, 1954	6.36	14	42.4
1955	Dec. 30, 1954	6.44	16	48.5
1956	Dec. 21, 1955	6.81	26	78.8
1957	Oct. 25, 1956	6.13	9.6	29.1
1958	Jan. 12, 1958	6.15	10	30.3
1959	Jan. 12, 1959	6.59	20	60.6
1960	Feb. 9, 1960	6.08	8.6	26.1
1961	Feb. 10, 1961	6.30	13	39.4
1962	Dec. 20, 1961	6.52	18	54.5
1963	Feb. 2, 1963	5.76	3.8	11.5
1964	Jan. 19, 1964	6.23	12	36.4
1965	Jan. 28, 1965	7.54	54	164
1966	Jan. 2, 1966	6.97	31	93.9

182

14306860 ECKMAN CREEK NEAR WALKPORT, OREG. (Discontinued)

LOCATION.--Lat 44°23'55", long 124°01'45", in NW¼ sec.33, T.13 S., R.11 W., Lincoln County, at culvert 0.1 mi. (0.2 km) upstream from bridge on Eckman Slough road, 2.2 mi. (3.5 km) southeast of Waldport.

BASIN CHARACTERISTICS.--Drainage area, 5.17 mi<sup>2</sup> (13.39 km<sup>2</sup>). Other basin characteristics have not been determined.

DISCHARGE.--Peak discharges are from computations of flow through one 8.0 ft (2.44 m) diameter culvert with upstream invert at 16.38 ft (4.993 m), gage datum.

REMARKS.--Station was established Sept. 8, 1966. Road overflow will occur at 25.3 ft (7.71 m), gage datum. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1967	Jan. 28, 1967	23.75	220	42.6
1968	Jan. 19, 1968	21.73	91	17.6



## REGION 5

## PACIFIC SLOPE BASINS (Continued)

## MILL CREEK BASIN

183

14306880 MILL CREEK NEAR YACHATS, OREG.

LOCATION.--Lat 44°13'15", long 124°06'30", in NE¼ sec.34, T.15 S., R.12 W., Lane County, at culvert on Forest Service road 1571 in Siuslaw National Forest, 0.2 mi (0.3 km) upstream from mouth, and 7 mi (11 km) south of Yachats.

BASIN CHARACTERISTICS.--Drainage area, 1.65 mi<sup>2</sup> (4.27 km<sup>2</sup>). Channel elevation at gage is 80 ft (24.4 m). Mean elevation of basin is 960 ft (293 m); channel slope, 346 ft/mi (65.5 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 9.0-ft (2.74 m) diameter culvert with upstream invert at 6.42 ft (1.957 m), gage datum.

REMARKS.--Station was established Aug. 19, 1965.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	Mar. 9, 1966	10.01	101	61.2
1967	Jan. 28, 1967	10.48	126	76.4
1968	Feb. 18, 1968	9.79	90	54.5
1969	Mar. 18, 1969	13.16	295	179
1970	Jan. 22, 1970	10.02	100	60.6
1971	Apr. 9, 1971	10.38	121	73.3
1972	Jan. 21, 1972	11.58	194	118
1973	Dec. 21, 1972	9.72	84	50.9
1974	Nov. 15, 1973	11.81	210	127

## SIUSLAW RIVER BASIN

184

14307550 DEADWOOD CREEK TRIBURTARY AT ALPHA, OREG. (Discontinued)

LOCATION.--Lat 44°10'25", long 123°42'10", in SE¼ sec.18, T.16 S., R.8 W., Lane County, at culvert on county road, 0.1 mi (0.2 km) upstream from mouth, 0.5 mi (0.8 km) north of Alpha, and 6.2 mi (10.0 km) west of Triangle Lake.

BASIN CHARACTERISTICS.--Drainage area, 0.75 mi<sup>2</sup> (1.94 km<sup>2</sup>). Channel elevation at gage is 500 ft (152 m). Mean elevation of basin is 1,000 ft (305 m); channel slope, 308 ft/mi (58.3 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 14.73 ft (4.490 m), gage datum.

REMARKS.--Station was established Feb. 19, 1957. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1957	Feb. 26, 1957	16.89	32	42.7
1958	Dec. 20, 1957	17.59	53	70.7
1959	Jan. 12, 1959	17.16	40	53.3
1960	Feb. 9, 1960	17.35	46	61.3
1961	Nov. 24, 1960	18.51	86	115
1962	Nov. 23, 1961	17.45	48	64.0
1963	Dec. 2, 1962	16.94	34	45.3
1964	Jan. 25, 1964	17.85	62	82.7
1965	Dec. 22, 1964	18.68	89	119
1966	Jan. 4, 1966	18.06	75	100
1967	Jan. 28, 1967	17.33	61	81.3
1968	Feb. 2, 1968	16.85	46	61.3

## PACIFIC SLOPE BASINS (Continued)

## SIUSLAW RIVER BASIN

185

14307610 SIUSLAW RIVER TRIBUTARY NEAR RAINROCK, OREG.

LOCATION.--Lat 44°04'00", long 123°52'45", in NW¼ sec.27, T.17 S., R.10 W., Lane County, at culvert on State Highway 36, at mouth, and 1.3 mi (2.1 km) west of Rainrock.

BASIN CHARACTERISTICS.--Drainage area, 0.42 mi<sup>2</sup> (1.09 km<sup>2</sup>). Channel elevation at gage is 40 ft (12.2 m). Mean elevation of basin is 500 ft (152 m); channel slope, 479 ft/mi (90.7 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 6.0-ft (1.83 m) x 4.0-ft (1.22 m) concrete-box culvert with natural earth invert at 5.50 ft (1.676 m), gage datum.

REMARKS.--Station was established Feb. 19, 1957.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1957	Feb. 26, 1957	6.38	8.6	20.5
1958	Dec. 20, 1957	7.08	29	69.0
1959	Jan. 12, 1959	6.65	15	35.7
1960	Feb. 9, 1960	6.57	13	31.0
1961	Feb. 11, 1961	7.31	37	88.1
1962	Dec. 20, 1961	6.88	22	52.4
1963	Feb. 1, 1963	6.70	16	38.1
1964	Jan. 26, 1964	7.04	28	66.7
1965	Jan. 24, 1965	7.56	47	112
1966	Jan. 3, 1966	7.26	37	88.1
1967	Jan. 28, 1967	6.73	18	42.9
1968	Dec. 5, 1967	6.71	17	40.5
1969	Dec. 5, 1968	6.94	24	57.1
1970	Jan. 22, 1970	6.94	24	57.1
1971	Apr. 9, 1971	6.99	25	59.5
1972	Jan. 21, 1972	7.98	62	148
1973	Dec. 21, 1972	6.84	21	50.0
1974	Nov. 15, 1973	7.12	30	71.4

## REGION 5

## PACIFIC SLOPE BASINS (Continued)

## SIUSLAW RIVER BASIN

186

14307640 SAM CREEK NEAR MINERVA, OREG.

LOCATION.--Lat 44°09'08", long 123°56'49", in NE¼ sec.25, T.16 S., R.11 W., Lane County, at culvert on Forest Service road 1658 in Siuslaw National Forest, 5.5 mi (8.8 km) north of Minerva.

BASIN CHARACTERISTICS.--Drainage area, 2.58 mi<sup>2</sup> (6.68 km<sup>2</sup>). Channel elevation at gage is 460 ft (140 m). Mean elevation of basin is 980 ft (299 m); channel slope, 374 ft/mi (70.8 m/km).

DISCHARGE.--Peak discharges are from computation of discharge through one 13.4-ft (4.08 m) x 8.5-ft (2.59 m) pipe-arch culvert with upstream invert at 6.98 ft (2.128 m), gage datum.

REMARKS.--Station was established Aug. 18, 1965. Culvert was assumed to be unobstructed during peak flow of Jan. 24, 1965. Peak of 1972 does not include bypass flow in ditch.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 24, 1965	12.62	450	174
1966	Mar. 8, 1966	11.16	292	113
1967	Jan. 28, 1967	11.41	320	124
1968	Feb. 18, 1968	10.19	192	74.4
1969	Dec. 4, 1968	11.39	315	122
1970	Jan. 27, 1970	11.66	343	133
1971	Jan. 16, 1971	12.01	380	147
1972	Jan. 21, 1972	16.30	800	310
1973	Dec. 24, 1972	10.62	236	91.5
1974	Jan. 15, 1974	11.57	333	129

## REGION 6

## UMPQUA RIVER BASIN

187

1430768500 MULT CREEK NEAR TILLER, OREG.

LOCATION.--Lat 43°06'00", long 122°44'55", in SW¼ sec.30, T.28 S., R.1 E., Douglas County, at culvert on Forest Service road 282 in Umpqua National Forest, at mouth, and 15.5 mi (24.9 km) northeast of Tiller.

BASIN CHARACTERISTICS.--Drainage area, 2.65 mi<sup>2</sup> (6.86 km<sup>2</sup>). Channel elevation at gage is about 1,720 ft (524 m). Mean elevation of basin is 2,960 ft (902 m); channel slope, 571 ft/mi (108 m/km).

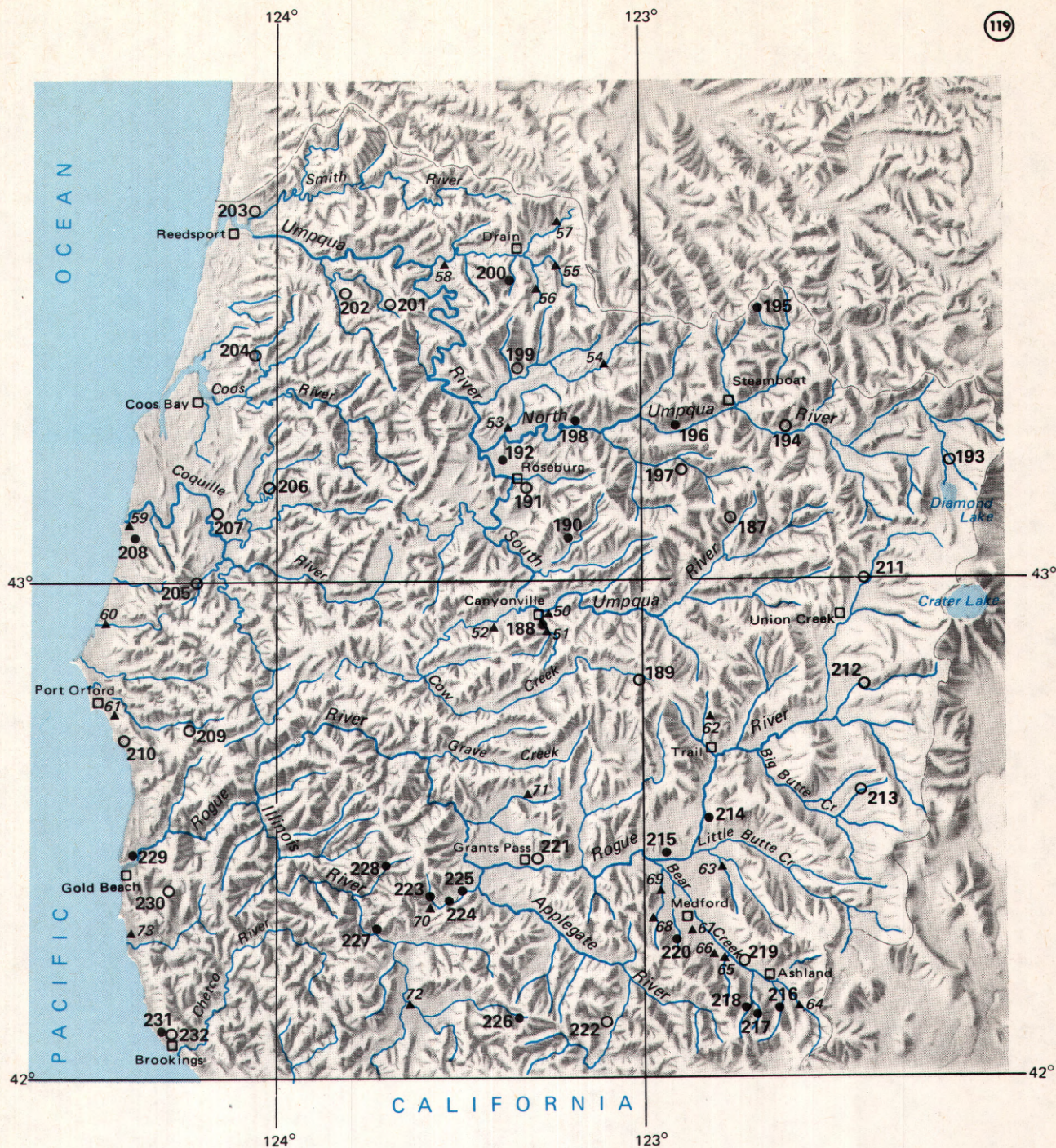
DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 8.0-ft (2.44 m) diameter culvert with upstream invert at 5.75 ft (1.753 m), gage datum.

REMARKS.--Station was established Aug. 26, 1965. Culvert was assumed to be unobstructed during peak flow of Dec. 22, 1964. Road overflow will occur at 17.1 ft (5.21 m), gage datum. Peak discharges for 1965-68 water years are revised on basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	16.76	540	204
1966	Jan. 4, 1966	11.15	216	81.5
1967	Jan. 28, 1967	10.02	145	54.7
1968	Feb. 23, 1968	11.33	228	86.0
1969	Jan. 13, 1969	9.63	123	46.4
1970	Dec. 21, 1969	11.11	215	81.1
1971	Jan. 17, 1971	13.10	349	132
1972	Jan. 21, 1972	13.39	365	138
1973	Dec. 20, 1972	9.76	130	49.1
1974	Jan. 15, 1974	11.44	235	88.7





REGION 6  
EXPLANATION

- <sup>24</sup> Active Stations
- <sup>22</sup> Discontinued Stations
- ▲<sup>24</sup> Miscellaneous Measurements

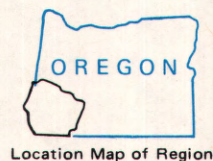


Figure 7.—Map of Region 6 showing the location of crest-stage gaging stations.



## PACIFIC SLOPE BASINS (Continued)

## UMPQUA RIVER BASIN

188

14308900 CANYON CREEK AT CANYONVILLE, OREG. (Discontinued)

LOCATION.--Lat 42°55'10", long 123°16'20", in SE¼ sec.34, T.30 S., R.5 W., Douglas County, at dam 100 ft (30 m) east of U.S. Highway 99, 0.5 mi (0.8 km) south of Canyonville, and 2.5 mi (4.0 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 36.9 mi<sup>2</sup> (95.6 km<sup>2</sup>). Channel elevation at gage is 770 ft (235 m). Mean elevation of basin is 2,100 ft (640 m); channel slope, 168 ft/mi (31.8 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge over 20-ft (6.1 m) wide dam with average crest elevation at 18.2 ft (5.55 m), gage datum. Dam is equipped with sluiceway and fish ladder.

REMARKS.--Station established Dec. 16, 1953. Peak of Oct. 29, 1950, made at same site at different datum. Station was discontinued Sept. 30, 1966.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1951	Oct. 29, 1950	-	3,700	100
1953	Jan. 18, 1953	26.3	2,420	65.6
1954	Jan. 28, 1954	26.99	2,760	74.8
1955	Dec. 31, 1954	21.36	595	16.1
1956	Dec. 21, 1955	28.66	3,810	103
1957	Feb. 26, 1957	25.80	2,170	58.8
1958	Jan. 29, 1958	25.91	2,220	60.2
1959	Jan. 11, 1959	26.71	2,620	71.0
1960	Feb. 9, 1960	24.55	1,620	43.9
1961	Feb. 10, 1961	27.57	3,060	82.9
1962	Nov. 23, 1961	25.05	1,820	49.3
1963	May 6, 1963	25.74	2,090	56.6
1964	Jan. 19, 1964	27.31	2,920	79.1
1965	Dec. 21, 1964	26.51	2,520	68.3
1966	Jan. 4, 1966	28.08	3,410	92.4



## PACIFIC SLOPE BASINS (Continued)

## UMPQUA RIVER BASIN

189

14308950 BEAVER CREEK NEAR DREW, OREG.

LOCATION.--Lat 42°48'40", long 122°59'30", in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.12, T.32 S., R.3 W., Douglas County, at culvert on Forest Service road 3232 in Umpqua National Forest, 0.2 mi (0.3 km) upstream from mouth, and 7 mi (11 km) southwest of Drew.

BASIN CHARACTERISTICS.--Drainage area, 1.61 mi<sup>2</sup> (4.17 km<sup>2</sup>). Channel elevation at gage is about 2,350 ft (716 m). Mean elevation of basin is 3,010 ft (917 m); channel slope, 465 ft/mi (88.1 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 6.5-ft (1.98 m) diameter culvert with upstream invert at 5.96 ft (1.817 m), gage datum.

REMARKS.--Station was established Aug. 26, 1965. Culvert was assumed to be unobstructed during peak flow of Dec. 22, 1964.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	10.60	138	85.7
1966	Jan. 4, 1964	8.62	50	31.1
1967	Jan. 28, 1967	8.01	32	19.9
1968	Feb. 23, 1968	7.95	28	17.4
1969	Jan. 13, 1969	8.90	66	41.0
1970	Dec. 21, 1969	9.28	82	50.9
1971	Jan. 17, 1971	9.26	81	50.3
1972	Jan. 21, 1972	8.46	48	29.8
1973	Dec. 21, 1972	7.90	30	18.6
1974	Jan. 14, 1974	11.77	210	130

190

14310900 WEST FORK FROZEN CREEK NEAR MYRTLE CREEK, OREG. (Discontinued)

LOCATION.--Lat 43°05'15", long 123°11'50", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.32, T.28 S., R.4 W., Douglas County, at culvert on Frozen Creek road, 0.1 mi (0.2 km) upstream from mouth, and 6.2 mi (10.0 km) north-east of town of Myrtle Creek.

BASIN CHARACTERISTICS.-- Drainage area, 3.16 mi<sup>2</sup> (8.18 km<sup>2</sup>). Channel elevation at gage is 860 ft (262 m). Mean elevation of basin is 1,550 ft (472 m); channel slope, 545 ft/mi (103 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 9-ft (2.74 m) x 6-ft (1.83 m) pipe-arch culvert with upstream invert at 14.03 ft (4.276 m), gage datum.

REMARKS.--Station was established Oct. 8, 1954. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1955	Dec. 30, 1954	16.31	50	15.8
1956	Dec. 26, 1955	19.64	300	94.9
1957	Dec. 11, 1956	17.99	149	47.2
1958	Jan. 29, 1958	18.58	197	62.3
1959	Jan. 11, 1959	17.55	118	37.3
1960	Feb. 9, 1960	17.91	144	45.6
1961	Feb. 10, 1961	18.50	190	60.1
1962	Nov. 23, 1961	18.23	187	59.2
1963	May 6, 1963	17.76	155	49.1
1964	Jan. 19, 1964	19.04	252	79.7
1965	Dec. 22, 1964	18.68	224	70.9
1966	Jan. 4, 1966	18.61	200	63.3
1967	Jan. 28, 1967	17.15	93	29.4
1968	Feb. 23, 1968	16.36	52	16.5

## PACIFIC SLOPE BASINS (Continued)

## UMPQUA RIVER BASIN

191

14312100 PARROTT CREEK AT ROSEBURG, OREG.

LOCATION.--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 mi (0.8 km) upstream from mouth.

BASIN CHARACTERISTICS.--Drainage area, 2.42 mi<sup>2</sup> (6.27 km<sup>2</sup>). Channel elevation at gage is 510 ft (155 m). Mean elevation of basin is 1,130 ft (344 m); slope, 274 ft/mi (51.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 7.50 ft (2.286 m), gage datum.

REMARKS.--Station was established Nov. 29, 1951. Culvert was lengthened during summer of 1965. Peak of 1955 is highest observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 23, 1951	12.32	141	58.3
1953	Jan. 18, 1953	12.94	168	69.4
1954	Nov. 22, 1953	12.41	144	59.5
1955	Apr. 1, 1955	8.37	3	1.2
1956	Dec. 21, 1955	15.24	290	120
1957	Feb. 26, 1957	11.89	120	49.6
1958	Dec. 20, 1957	14.13	228	94.2
1959	Jan. 10, 1959	13.12	177	73.1
1960	Feb. 8, 1960	12.05	128	52.9
1961	Feb. 10, 1961	13.40	191	78.9
1962	Nov. 23, 1961	14.14	228	94.2
1963	Dec. 15, 1962	11.20	91	37.6
1964	Jan. 19, 1964	12.94	168	69.4
1965	Dec. 22, 1964	14.20	231	95.5
1966	Jan. 3, 1966	12.99	170	70.2
1967	Jan. 28, 1967	11.02	84	34.7
1968	Feb. 23, 1968	10.94	80	33.1
1969	Feb. 9, 1969	12.07	142	58.7
1970	Dec. 21, 1969	14.28	235	97.1
1971	Jan. 17, 1971	12.07	127	52.5
1972	Jan. 21, 1972	12.32	138	57.0
1973	Dec. 21, 1972	9.01	16	6.6
1974	Jan. 15, 1974	12.16	132	54.5

## PACIFIC SLOPE BASIN (Continued)

## UMPQUA RIVER BASIN

192

14312300 MARKS CREEK NEAR ROSEBURG, OREG. (Discontinued)

LOCATION.--Lat 43°14'55", long 123°23'50", in NE¼SW¼ sec. 3, T.27 S., R.6 W., Douglas County, at culvert on Garden Valley Road, 1.0 mi (1.6 km) upstream from mouth, and 3.8 mi (6.1 km) northwest of Roseburg.

BASIN CHARACTERISTICS.--Drainage area, 1.26 mi<sup>2</sup> (3.26 km<sup>2</sup>). Channel elevation at gage is 445 ft (136 m). Mean elevation of basin is 760 ft (232 m); channel slope, 236 ft/mi (44.7 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of flow through one 7.0-ft (2.13 m) diameter culvert with upstream invert at 7.30 ft (2.225 m), gage datum. Prior to 1966, peak discharges were from rating curve defined by current-meter measurements at concrete-arch culvert with upstream invert at 9.20 ft (2.804 m) gage datum then in use.

REMARKS.--Station was established Nov. 28, 1951. Road overflow occurs at 18.0 ft (5.49 m), present datum. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Feb. 3, 1952	12.49	96	76.2
1953	Jan. 18, 1953	13.37	140	111
1954	Nov. 22, 1953	12.74	108	85.7
1955	Dec. 30, 1954	11.31	46	36.5
1956	Dec. 21, 1955	15.08	235	187
1957	Feb. 26, 1957	13.33	138	110
1958	Dec. 20, 1957	13.83	164	130
1959	Jan. 10, 1959	14.65	212	168
1960	Feb. 9, 1960	12.47	95	75.4
1961	Feb. 10, 1961	16.10	260	206
1962	Nov. 23, 1961	14.56	208	165
1963	Dec. 2, 1962	13.18	130	103
1964	Jan. 19, 1964	13.67	154	122
1965	Dec. 22, 1964	14.06	178	141
1966	Mar. 10, 1966	12.63	156	124
1967	Jan. 28, 1967	11.43	100	79.4
1968	Feb. 23, 1968	10.30	54	42.9

## REGION 6

## PACIFIC SLOPE BASIN (Continued)

## UMPQUA RIVER BASIN

193

## 14312700 THIELSEN CREEK NEAR DIAMOND LAKE, OREG.

LOCATION.--Lat 43°13'10", long 122°08'15", probably in SW $\frac{1}{4}$  sec.17, T.27 S., R.6 E. (unsurveyed), Douglas County, at culvert on State Highway 209 in Umpqua National Forest, 3 mi (5 km) north of resort at Diamond Lake.

BASIN CHARACTERISTICS.--Drainage area, 12.2 mi<sup>2</sup> (31.6 km<sup>2</sup>). Channel elevation at gage is 5,020 ft (1,530 m). Mean elevation of basin is 6,480 ft (1,975 m); channel slope, 328 ft/mi (62.1 m/km). Hydrologic analysis may be uncertain due to significant losing characteristics of stream channel in upper basin.

DISCHARGE.--Peak discharges are from computations of discharge through one 4.5-ft (1.37 m) diameter culvert with upstream invert at 8.24 ft (2.512 m) gage datum.

REMARKS.--Station was established Aug. 28, 1965. Peak of 1973 is highest observed during year; peak of 1974 is provisional, pending additional data.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	May 10, 1966	9.55	12	1.0
1967	Jan. 28, 1967	9.98	21	1.7
1968	May 1, 1968	9.43	11	0.9
1969	May 13, 1969	9.65	14	1.1
1970	May 10, 1970	10.08	24	2.0
1971	Jan. 17, 1971	10.75	42	3.4
1972	May 28, 1972	10.67	39	3.2
1973	May 16, 1973	9.05	5.6	0.5
1974	May 6, 1974	11.64	71	5.8

194

## 14316600 DOG CREEK NEAR IDLEYLD PARK, OREG.

LOCATION.--Lat 43°17'55", long 122°38'15", in NE $\frac{1}{4}$  sec.24, T.26 S., R.1 E., Douglas County, at culvert on State Highway 138 in Umpqua National Forest, at mouth, 6.5 mi (10.5 km) southeast of Steamboat Ranger Station, and 19 mi (31 km) east of Idleyld Park.

BASIN CHARACTERISTICS.--Drainage area, 3.93 mi<sup>2</sup> (10.18 km<sup>2</sup>). Channel elevation at gage is 1,430 ft (436 m). Mean elevation of basin is 3,240 ft (988 m); channel slope, 818 ft/mi (155 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 9.5-ft (2.90 m) diameter culvert with upstream invert at 5.30 ft (1.615 m), gage datum.

REMARKS.--Station was established Aug. 24, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. By pass flow will occur in ditch on right bank at about 16.0 ft, (4.88 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	17.38	810	206
1966	Jan. 5, 1966	9.07	132	33.6
1967	Jan. 28, 1967	8.33	84	21.4
1968	Feb. 23, 1968	8.15	71	18.1
1969	Nov. 8, 1968	8.24	79	20.1
1970	Jan. 23, 1970	9.07	140	35.6
1971	Jan. 17, 1971	12.23	400	102
1972	Jan. 21, 1972	10.78	274	69.7
1973	Dec. 21, 1972	8.22	76	19.3
1974	Jan. 14, 1974	10.08	215	54.7

## REGION 6

(125)

## PACIFIC SLOPE BASINS (Continued)

## UMPQUA RIVER BASIN

195

14316650 FUGAWEE CREEK NEAR DISSTON, OREG. (Discontinued)

LOCATION.--Lat 43°30'15", long 122°37'40", in NE¼ sec.12, T.24 S., R.1E., Lane County, at twin culverts on Forest Service road 2423 in Umpqua National Forest, at mouth, and 15 mi (24 km) southeast of Disston.

BASIN CHARACTERISTICS.--Drainage area, 2.01 mi<sup>2</sup> (5.21 km<sup>2</sup>). Channel elevation at gage is about 2,060 ft (628 m). Mean elevation of basins is 2,820 ft (860 m); channel slope, 308 ft/mi (58.3 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through twin 5.8-ft (1.77 m) x 3.6-ft (1.10 m) pipe-arch culverts with upstream inverts at 8.53 ft (2.600 m) and 8.10 ft (2.469 m), gage datum.

REMARKS.--Station was established Aug. 24, 1965. Culvert was assumed to be unobstructed during peak flow of Dec. 24, 1964. Peak flow does not include road overflow which occurs at 14.0 ft (4.27 m) gage datum. Culvert partially obstructed during peak of Feb. 23, 1968, discharge estimated. Peak of Jan. 17, 1971, not determined because of obstructed culvert entrance. Station discontinued in 1972.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	15.77	361	180
1966	Jan. 5, 1966	12.05	196	97.5
1967	Jan. 28, 1967	12.78	239	119
1968	Feb. 23, 1968	10.35	68	33.8
1969	Nov. 8, 1968	11.32	142	70.6
1970	Jan. 23, 1970	12.20	205	102
1971	Jan. 17, 1971	15.50	-	-

196

14317100 SUSAN CREEK NEAR IDLEYLD PARK, OREG. (Discontinued)

LOCATION.--Lat 43°17'50", long 122°54'25", in NW¼ sec.23, T.26 S., R.2 W., Douglas County, at twin culverts on North Umpqua Highway, in Susan Creek State Park, 0.1 mi (0.2 km) upstream from mouth, and 6 mi (10 km) east of Idleyld Park.

BASIN CHARACTERISTICS.--Drainage area, 4.86 mi<sup>2</sup> (12.59 km<sup>2</sup>). Channel elevation at gage is 920 ft (280 m). Mean elevation of basin is 2,800 ft (853 m); channel slope, 731 ft/mi (138 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through twin 8.0-ft (2.44 m) diameter culverts with upstream inverts at 9.04 ft (2.755 m) and 9.08 ft (2.768 m), gage datum.

REMARKS.--Station was established Feb. 13, 1957. Peak of Dec. 11, 1956, may be affected by backwater from debris. Peak of 1959 is highest observed during year. Station was discontinued Dec. 21, 1964.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1957	Dec. 11, 1956	16.20	707	145
1958	Dec. 20, 1957	13.82	360	74.1
1959	Feb. 15, 1959	12.23	38.3	7.9
1960	Feb. 8, 1960	12.78	100	20.6
1961	Feb. 10, 1961	13.03	124	25.5
1962	Dec. 20, 1961	14.76	519	107
1963	Dec. 2, 1962	13.20	155	31.9
1964	Jan. 19, 1964	13.61	248	51.0



## REGION 6

## PACIFIC SLOPE BASINS (Continued)

## UMPQUA RIVER BASIN

197

## 14317700 WHITE CREEK NEAR PEEL, OREG.

LOCATION.--Lat 43°13'20", long 122°51'10", in NW $\frac{1}{4}$  sec.17, T.27 S., R.1 W., Douglas County, at culvert on Forest Service road 274 in Umpqua National Forest, 0.4 mi (0.6 km) upstream from mouth, and 9.5 mi (15.3 km) east of Peel.

BASIN CHARACTERISTICS.--Drainage area, 3.92 mi<sup>2</sup> (10.15 km<sup>2</sup>). Channel elevation at gage is 1,600 ft (488 m). Mean elevation of basin is 3,230 ft (985 m); channel slope, 781 ft/mi (148 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 14.4-ft (4.39 m) x 8.9-ft (2.71 m) pipe-arch culvert with upstream invert at 7.30 ft (2.225 m), gage datum.

REMARKS.--Station was established Aug. 25, 1965. Culvert assumed to be unobstructed during peak of Dec. 22, 1964. Peak flow does not include road overflow which occurs at 15.6 ft (4.75 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	16.92	950	242
1966	Jan. 5, 1966	9.93	140	35.7
1967	Jan. 28, 1967	9.55	108	27.6
1968	Feb. 23, 1968	9.40	95	24.2
1969	Jan. 12, 1969	9.46	100	25.5
1970	Dec. 21, 1969	9.87	135	34.4
1971	Jan. 17, 1971	11.19	275	70.2
1972	Jan. 21, 1972	10.91	245	62.5
1973	Dec. 21, 1972	9.62	113	28.8
1974	Jan. 14, 1974	10.98	250	63.8

198

## 14318600 NORTH UMPQUA RIVER TRIBUTARY NEAR GLIDE, OREG. (Discontinued)

LOCATION.--Lat 43°19'00", long 123°10'05", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.9, T.26 S., R.4 W., Douglas County, at culvert on county road, 0.1 mi (0.2 km) upstream from mouth, and 3.7 mi (5.9 km) northwest of Glide.

BASIN CHARACTERISTICS.--Drainage area, 0.75 mi<sup>2</sup> (1.94 km<sup>2</sup>). Channel elevation at gage is 650 ft (198 m). Mean elevation of basin is 1,180 ft (360 m); channel slope, 517 ft/mi (97.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 8.40 ft (2.560 m), gage datum.

REMARKS.--Station was established Feb. 14, 1957. Stage-discharge relation changed in 1962 when gages were relocated. No significant peak flow occurred in 1968. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1956	Dec. 26, 1955	14.26	188	251
1957	Mar. 6, 1957	11.48	61	81.3
1958	Dec. 20, 1957	11.39	57	76.0
1959	Feb. 14, 1959	11.48	61	81.3
1960	Feb. 8, 1960	10.83	28	37.3
1961	Mar. 6, 1961	11.4	57	76.0
1962	Dec. 20, 1961	11.71	78	104
1963	Dec. 2, 1962	10.45	38	50.7
1964	Jan. 19, 1964	10.64	44	58.7
1965	Dec. 21, 1964	11.54	73	97.3
1966	Jan. 4, 1966	11.27	64	85.3
1967	Nov. 14, 1966	9.99	23	30.7

## PACIFIC SLOPE BASINS (Continued)

## UMPQUA RIVER BASIN

199

14320600 CABIN CREEK TRIBUTARY NEAR OAKLAND, OREG.

LOCATION.--Lat 43°26'10", long 123°18'45", in SE¼ sec.32, T.24 S., R.5 W., Douglas County, at culvert on Interstate Highway 5, 0.2 mi (0.3 km) upstream from mouth, and 1.0 mi (1.6 km) northwest of Oakland.

BASIN CHARACTERISTICS.--Drainage area, 1.28 mi<sup>2</sup> (3.32 km<sup>2</sup>). Channel elevation at gage is 440 ft (134 m). Mean elevation of basin is 810 ft (247 m); channel slope, 188 ft/mi (35.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements. Culvert is 6.0-ft (1.83 m) flared-inlet box culvert with upstream invert at 7.56 ft (2.304 m), gage datum.

REMARKS.--Station was established Feb. 12, 1957.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1957	Dec. 11, 1956	12.74	215	168
1958	Feb. 15, 1958	11.82	169	132
1959	Jan. 10, 1959	12.48	202	158
1960	May 26, 1960	10.83	120	93.8
1961	Feb. 10, 1961	13.20	242	189
1962	Nov. 23, 1961	13.26	246	192
1963	Dec. 2, 1962	10.32	98	76.6
1964	Jan. 19, 1964	12.70	213	166
1965	Dec. 21, 1964	12.59	208	162
1966	Jan. 3, 1966	11.97	176	138
1967	Jan. 28, 1967	10.23	94	73.4
1968	Feb. 2, 1968	9.60	69	53.9
1969	Dec. 5, 1968	11.66	155	121
1970	Dec. 21, 1969	13.16	230	180
1971	Jan. 17, 1971	12.06	175	137
1972	Mar. 2, 1972	11.60	152	119
1973	Dec. 20, 1972	9.33	58	45.3
1974	Jan. 15, 1974	12.18	181	141

## PACIFIC SLOPE BASINS (Continued)

## UMPQUA RIVER BASIN

200

14322700 BEAR CREEK NEAR DRAIN, OREG. (Discontinued)

LOCATION.--Lat 43°38'00", long 123°21'55", in NW¼ sec.25, T.22 S., R.6 W., Douglas County, at water-supply dam, 0.8 mi (1.3 km) downstream from Lost Cabin Creek, and 3.5 mi (5.6 km) south-west of Drain.

BASIN CHARACTERISTICS.--Drainage area, 5.13 mi<sup>2</sup> (13.29 km<sup>2</sup>). Channel elevation at gage is 555 ft (169 m). Mean elevation of basin in 1,280 ft (390 m); channel slope, 163 ft/mi (30.9 m/km). Basin is watershed for town of Drain.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge over irregular 40-ft (12.2 m) wide dam with crest elevation at 12.5 ft (3.81 m), gage datum.

REMARKS.--Station was established Nov. 29, 1951. Diversion flow considered negligible at time of peak discharge. Peaks of 1956 and 1958 affected by backwater from debris. Station discontinued in 1966.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Nov. 29, 1951	14.43	247	48.1
1953	Jan. 18, 1953	14.96	381	74.3
1954	Jan. 27, 1974	15.07	412	80.3
1955	Dec. 30, 1954	14.07	174	33.9
1956	Dec. 21, 1955	15.59	452	88.1
1957	Dec. 11, 1956	14.57	281	54.8
1958	Feb. 15, 1958	16.69	430	83.8
1959	Feb. 14, 1959	14.87	356	69.4
1960	Feb. 9, 1960	14.10	180	35.1
1961	Feb. 10, 1961	15.89	674	131
1962	Nov. 23, 1961	14.92	370	72.1
1963	Feb. 1, 1963	14.57	281	54.8
1964	Jan. 19, 1964	15.48	534	104
1965	Dec. 22, 1964	14.99	389	75.8
1966	Jan. 6, 1966	15.30	476	92.8

## PACIFIC SLOPE BASINS (Continued)

## UMPQUA RIVER BASIN

201

14322850 SAWYER CREEK NEAR ELKTON, OREG.

LOCATION.--Lat 43°35'54", long 123°40'12", in NW¼SE¼ sec.5, T.23 S., R.8 W., Douglas County, at culvert on BLM Sawyer Creek road, 6 mi (10 km) southwest of Elkton.

BASIN CHARACTERISTICS.--Drainage area, 0.3 mi<sup>2</sup> (0.8 km<sup>2</sup>), approximately. Other characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 7.38 ft (2.249 m), gage datum.

REMARKS.--Station was established Aug. 21, 1970.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	9.43	33	110
1972	Jan. 21, 1972	9.59	38	127
1973	Dec. 22, 1972	8.73	16	53.3
1974	Jan. 15, 1974	9.38	32	107

202

14323020 BUCK CREEK TRIBUTARY NEAR SCOTTSBURG, OREG.

LOCATION.--Lat 43°35'30", long 123°46'00", in NE¼NE¼ sec.9, T.23 S., R.9 W., Douglas County, at culvert on Buck Creek road, at mouth, and 5 mi (8 km) south of Scottsburg.

BASIN CHARACTERISTICS.--Drainage area and other basin characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of flow through one 3.5-ft (1.07 m) diameter culvert with upstream invert at 7.66 ft (2.335 m) gage datum.

REMARKS.--Station was established Aug. 21, 1970.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	8.96	9.2	-
1972	Mar. 2, 1972	11.08	47	-
1973	Dec. 22, 1972	8.32	1.0	-
1974	Jan. 15, 1974	9.06	10	-

## PACIFIC SLOPE BASINS (Continued)

## UMPQUA RIVER BASIN

203

14323170 SMITH RIVER TRIBUTARY NEAR GARDINER, OREG.

LOCATION.--Lat 43°44'35", long 124°02'30", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.17, T.21 S., R.11 W., Douglas County, at culvert on Smith River Road, 3.5 mi (5.6 km) east of Gardiner.

BASIN CHARACTERISTICS.--Drainage area, 0.13 mi<sup>2</sup> (0.34 km<sup>2</sup>). Other characteristics have not been evaluated because of inadequate maps.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of flow through one 3.0-ft (0.91 m) diameter culvert with upstream invert at 7.32 ft (2.231 m), gage datum.

REMARKS.--Station was established Aug. 18, 1970. Bypass flow in right-bank ditch will occur at 13.4 ft (4.08 m), gage datum. Highwater mark found at 13.3 ft (4.05 m), gage height; discharge, 74 ft<sup>3</sup>/s (2.1 m<sup>3</sup>/s), date unknown. Peak of 1973 is maximum observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	8.32	5.0	38.5
1972	Jan. 21, 1972	8.56	7.4	56.9
1973	Oct. 16, 1972	7.75	1.0	7.7
1974	Jan. 16, 1974	8.69	9.0	69.2

## COOS RIVER BASIN

204

14324520 DAGGET CREEK NEAR ALLEGANY, OREG.

LOCATION.--Lat 43°28'42", long 124°03'16", in NW $\frac{1}{4}$  sec.19, T.24 S., R.11 W., Coos County, at culvert on West Fork Millicoma River road, 5 mi (8 km) north of Allegany.

BASIN CHARACTERISTICS.--Drainage area, 0.41 mi<sup>2</sup> (1.06 km<sup>2</sup>). Channel elevation at gage is 100 ft (30.5 m). Mean elevation of basin is 900 ft (274 m); channel slope, 684 ft/mi (130 m/km).

REMARKS.--Station was established Aug. 18, 1970. Road overflow will occur at 13.6 ft (4.15 m), gage datum. Peak of 1972 includes road overflow.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	12.87	32	78.0
1972	Jan. 21, 1972	13.97	54	132
1973	Dec. 17, 1972	11.65	15	36.6
1974	Jan. 15, 1974	12.96	32	78.0



## PACIFIC SLOPE BASINS (Continued)

## COQUILLE RIVER BASIN

205

14326600 GETTYS CREEK NEAR MYRTLE POINT, OREG.

LOCATION.--Lat 43°00'30", long 124°12'40", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.35, T.29 S., R.13 W., Coos County, at culvert on county road, 0.2 mi (0.3 km) upstream from mouth, and 5.5 mi (8.8 km) southwest of Myrtle Point.

BASIN CHARACTERISTICS.--Drainage area, 1.45 mi<sup>2</sup> (3.76 km<sup>2</sup>). Channel elevation at gage is 150 ft (45.7 m). Mean elevation of basin is 600 ft (183 m); channel slope, 194 ft/mi (36.7 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 6.72 ft (2.048 m), gage datum.

REMARKS.--Station was established Nov. 31, 1952. Peak of Dec. 11, 1956, affected by backwater from debris.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	14.34	176	121
1954	Jan. 16, 1954	13.42	154	106
1955	Dec. 30, 1954	12.35	128	88.3
1956	Dec. 21, 1955	16.33	223	154
1957	Dec. 11, 1956	10.95	91	62.8
1958	Feb. 15, 1958	13.86	165	114
1959	Feb. 14, 1959	15.24	197	136
1960	Feb. 8, 1960	10.48	78	53.8
1961	Feb. 10, 1961	18.29	245	169
1962	Nov. 22, 1961	12.65	137	94.5
1963	May 5, 1963	11.82	117	80.7
1964	Jan. 19, 1964	13.80	160	110
1965	Dec. 22, 1964	13.04	145	100
1966	Jan. 6, 1966	15.83	201	139
1967	Jan. 27, 1967	11.63	107	73.8
1968	Jan. 15, 1968	10.60	81	55.9
1969	Feb. 9, 1969	12.46	125	86.2
1970	Jan. 27, 1970	12.59	128	88.3
1971	Jan. 16, 1971	17.16	227	157
1972	Nov. 26, 1971	14.15	165	114
1973	Jan. 13, 1973	9.20	40	27.6
1974	Jan. 15, 1974	13.74	155	107

## REGION 6

## PACIFIC SLOPE BASINS (Continued)

## COQUILLE RIVER BASIN

206

14326820 MIDDLE CREEK TRIBUTARY NEAR MCKINLEY, OREG.

LOCATION.--Lat 43°11'50", long 124°01'25", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.29, T.27 S., R.11 W., Coos County, at culvert on Middle Creek road, 0.6 mi (1.0 km) north of McKinley, and 8 mi (13 km) east of Coquille.

BASIN CHARACTERISTICS.--Drainage area, 1.29 mi<sup>2</sup> (3.34 km<sup>2</sup>). Channel elevation at gage is 130 ft (39.6 m). Mean elevation of basin is 450 ft (137 m); channel slope, 153 ft/mi (29.0 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 15.47 ft (4.715 m), gage datum.

REMARKS.--Station was established Aug. 19, 1970.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	21.10	97	75.2
1972	Nov. 26, 1971	19.65	69	53.5
1973	Jan. 13, 1973	17.48	22	17.1
1974	Jan. 15, 1974	19.66	69	53.5

207

14327050 GLEN AIKEN CREEK TRIBUTARY NEAR COQUILLE, OREG.

LOCATION.--Lat 43°08'50", long 124°09'50", in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.18, T.28 S., R.12 W., Coos County, at culvert on Glen Aiken Creek road, 3 mi (5 km) southeast of Coquille.

BASIN CHARACTERISTICS.--Drainage area, 0.33 mi<sup>2</sup> (0.85 km<sup>2</sup>). Other characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of flow through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 7.61 ft (2.320 m), gage datum.

REMARKS.--Station was established Aug. 19, 1970. Road overflow will occur at 13.7 ft (4.18 m), gage datum.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1971	Jan. 17, 1971	10.22	35	106
1972	Nov. 26, 1971	9.70	24	72.7
1973	Jan. 13, 1973	8.71	7.2	21.8
1974	Jan. 15, 1974	9.30	16	48.5

## PACIFIC SLOPE BASINS (Continued)

## COQUILLE RIVER BASIN

208

14327100 GEIGER CREEK NEAR BANDON, OREG (Discontinued)

LOCATION.--Lat 43°06'15", long 124°22'45", in SE $\frac{1}{4}$  sec.32, T.28 S., R.14 W., Coos County, at culvert on county road, 1.1 mi (1.8 km) upstream from mouth, and 1.8 mi (2.9 km) south-east of Bandon.

BASIN CHARACTERISTICS.--Drainage area 1.36 mi<sup>2</sup> (3.52 km<sup>2</sup>). Channel elevation at gage is 120 ft. (36.6 m). Mean elevation of basin is 260 ft (79.2 m); channel slope, 100 ft/mi (18.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 15.59 ft (4.752 m), gage datum.

REMARKS.--Station was established Nov. 3, 1953. Peak of Jan. 18, 1953, determined at site at mouth, adjusted to present site on basis of drainage-area ratio. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	-	110	80.9
1954	Nov. 22, 1953	22.10	101	74.3
1955	Dec. 30, 1954	20.89	83	61.0
1956	Dec. 21, 1955	24.10	131	96.3
1957	Oct. 25, 1956	21.90	98	72.1
1958	Feb. 15, 1958	23.94	129	94.9
1959	Feb. 14, 1959	25.22	151	111
1960	Feb. 8, 1960	19.04	47	34.6
1961	Feb. 10, 1961	30.74	206	151
1962	Nov. 22, 1961	28.73	185	136
1963	May 6, 1963	19.72	59	43.4
1964	Jan. 19, 1964	21.86	96	70.6
1965	Dec. 22, 1964	19.03	47	34.6
1966	Dec. 28, 1965	22.62	110	80.9
1967	Jan. 28, 1967	19.51	56	41.2
1968	Feb. 20, 1968	19.02	47	34.6

## PACIFIC SLOPE BASINS (Continued)

## ELK CREEK BASIN

209

14327240 MILBURY CREEK NEAR PORT ORFORD, OREG.

LOCATION.--Lat 42°43'20", long 124°15'00", in NE¼ sec.16, T.33 S., R.13 W., Curry County, at culvert on Forest Service road 325 in Siskiyou National Forest, at mouth, and 13 mi (21 km) east of Port Orford.

BASIN CHARACTERISTICS.--Drainage area, 0.80 mi<sup>2</sup> (2.07 km<sup>2</sup>). Channel elevation at gage is 720 ft (219 m). Mean elevation of basin is 1,690 ft (515 m); channel slope, 1,180 ft/mi (223 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 8.5-ft (2.59 m) diameter culvert with upstream invert at 25.48 ft (7.766 m), gage datum. Culvert crown has 6.0-ft (1.83 m) diameter drop structure designed to reduce headwater elevations if culvert entrance becomes obstructed by debris.

REMARKS.--Station established May 10, 1966. Peak flow for Jan. 4, 1966, is estimated on basis of observed stages prior to peak.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	Jan. 4, 1966	31.80	286	358
1967	Jan. 28, 1967	28.23	87	109
1968	Feb. 20, 1968	28.13	79	98.8
1969	Dec. 4, 1968	27.71	56	70.0
1970	Dec. 21, 1969	29.52	215	269
1971	Jan. 17, 1971	28.52	110	138
1972	Jan. 21, 1972	29.93	270	338
1973	Dec. 18, 1972	28.44	103	129
1974	Jan. 16, 1974	29.08	164	205

## PACIFIC SLOPE BASINS (Continued)

## BRUSH CREEK BASIN

10

14327400 DRY RUN CREEK NEAR PORT ORFORD, OREG.

LOCATION.--Lat 42°41'20", long 124°26'00", in NW¼ sec.25, T.33 S., R.15 W., Curry County, at three culverts in Humboldt Mountain State Park, 5 mi (8 km) southeast of Port Orford.

BASIN CHARACTERISTICS.--Drainage area, 0.86 mi<sup>2</sup> (2.23 km<sup>2</sup>). Channel elevation at gage is 40 ft (12.2 m). Mean elevation of basin is 690 ft (210 m); channel slope, 542 ft/mi (103 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through three 3.0-ft (0.91 m) diameter culverts with upstream inverts at 13.63 ft (4.154 m), 12.16 ft (3.706 m), and 13.07 ft (3.984 m), gage datum. Prior to 1972, through twin 3.0-ft (0.91 m) diameter culverts with inverts at 11.15 ft (3.399 m) and 11.40 ft (3.475 m), gage datum.

REMARKS.--Station was established Nov. 5, 1953. Road overflow occurs at 17.6 ft (5.36 m) elevation. Peak of Jan. 11, 1959, not determined because of backwater from debris. Peaks for period 1970 to 1972 determined at slope-area reach 100 ft (30 m) downstream, and include road overflow.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1954	Nov. 22, 1953	17.81	151	176
1955	Dec. 30, 1954	17.82	151	176
1956	Jan. 4, 1956	16.90	133	155
1957	Dec. 11, 1956	14.60	73	84.9
1958	Feb. 15, 1958	18.14	158	184
1959	Jan. 11, 1959	17.76	-	-
1960	Mar. 5, 1960	13.66	45	52.3
1961	Nov. 24, 1960	17.35	134	156
1962	Nov. 22, 1961	17.76	145	169
1963	May 6, 1963	14.56	72	83.7
1964	Jan. 19, 1964	15.36	90	105
1965	Jan. 23, 1965	14.61	74	86.0
1966	Jan. 6, 1966	14.21	63	73.3
1967	Nov. 19, 1966	13.80	49	57.0
1968	Feb. 20, 1968	17.78	145	169
1969	Dec. 5, 1968	14.52	74	86.0
1970	Dec. 21, 1969	-	193	224
1971	Jan. 18, 1971	-	213	248
1972	Jan. 20, 1972	-	162	188
1973	Jan. 13, 1973	14.82	46	53.5
1974	Jan. 16, 1974	16.67	142	165



## REGION 6

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

211

14327490 NATIONAL CREEK NEAR UNION CREEK, OREG.

LOCATION.--Lat 43°00'15", long 122°21'50", in E½ sec.32, T.29 S., R.4 E., Douglas County, at culvert on Forest Service road 2967 in Rogue River National Forest, 0.3 mi (0.5 km) upstream from mouth, and 9 mi (14 km) northeast of town of Union Creek.

BASIN CHARACTERISTICS.--Drainage area, 19.3 mi<sup>2</sup> (50.0 km<sup>2</sup>). Channel elevation at gage is about 3,600 ft (1,097 m). Hydrologic analysis may be uncertain due to significant gaining characteristics of the stream channel. Other characteristics have not yet been evaluated.

DISCHARGE.--Peak discharges are from computations of discharge through one 11.3-ft (3.44 m) x 7.2-ft (2.19 m) pipe-arch culvert with upstream invert at 15.67 ft (4.776 m), gage datum.

REMARKS.--Station was established Aug. 27, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. No peak data collected in 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	22.83	475	24.6
1966	May 10, 1966	18.29	108	5.6
1967	May 22, 1967	18.35	112	5.8
1968	Feb. 22, 1968	19.56	208	10.8
1969	June 4, 1969	18.50	122	6.3
1970	Dec. 21, 1969	19.47	200	10.4
1971	Jan. 17, 1971	19.07	168	8.7
1972	Jan. 20, 1972	20.03	250	13.0
1974	Jan. 15, 1974	19.18	178	9.2

212

14333490 ELKHORN CREEK NEAR PROSPECT, OREG.

LOCATION.--Lat 42°47'18", long 122°23'55", in SW¼NW¼ sec.18, T.32 S., R.4 E., Jackson County, at culvert on Forest Service road 3227 in Rogue River National Forest, 0.2 mi (0.3 km) upstream from mouth, and 5 mi (8 km) northeast of Prospect.

BASIN CHARACTERISTICS.--Drainage area, 1.50 mi<sup>2</sup> (3.88 km<sup>2</sup>). Channel elevation at gage is 3,080 ft (939 m). Mean elevation of basin is 4,620 ft (1,408 m); channel slope, 775 ft/mi (147 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 5.0-ft (1.52 m) diameter culvert with upstream invert at 6.76 ft (2.060 m), gage datum.

REMARKS.--Station was established Aug. 27, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. No peak data reported during 1967 water year. Peaks of 1968, 1969, and 1971 were highest observed during year. No data collected in 1973.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	11.60	111	74.0
1966	May 5, 1966	8.51	15	10.0
1968	Feb. 27, 1968	7.85	6.8	4.5
1969	May 15, 1969	8.01	13	8.7
1970	Dec. 21, 1969	9.78	68	45.3
1971	July 30, 1971	8.00	12	8.0
1972	Jan. 20, 1972	9.55	60	40.0
1974	Jan. 15, 1974	8.92	25	16.7

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

213

14335080 FIRELINE CREEK NEAR BUTTE FALLS, OREG.

LOCATION.--Lat 42°34'10", long 122°24'10", in SE¼ sec.36, T.34 S., R.3 E., Jackson County, at culvert on Forest Service road 3520B in Rogue River National Forest, 0.8 mi (1.3 km) upstream from mouth, and 8 mi (13 km) east of Butte Falls.

BASIN CHARACTERISTICS.--Drainage area, 4.77 mi<sup>2</sup> (12.35 km<sup>2</sup>). Channel elevation at gage is about 3,260 ft (994 m). Mean elevation of basin is 4,310 ft (1,314 m); channel slope, 357 ft/mi (67.6 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 6.4-ft (1.95 m) diameter culvert (out-of-round) with upstream invert at 6.30 ft (1.920 m), gage datum.

REMARKS.--Station was established Aug. 16, 1965. Peaks of 1966 and 1970 are highest observed during year. Peaks of 1967 and 1968 are revised on basis of additional rating definition.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	Apr. 21, 1966	8.18	20	4.2
1967	May 9, 1967	8.72	38	8.0
1968	Feb. 22, 1968	8.43	27	5.7
1969	Jan. 26, 1969	9.66	78	16.4
1970	Feb. 11, 1970	8.33	25	5.2
1971	Nov. 24, 1970	9.36	66	13.8
1972	Mar. 2, 1972	13.89	261	54.7
1973	Jan. 15, 1973	8.07	16	3.4
1974	Jan. 15, 1974	8.31	23	4.8

214

14338900 MURDERER CREEK NEAR EAGLE POINT, OREG. (Discontinued)

LOCATION.--Lat 42°32'30", long 122°48'25", in SW¼ sec.10, T.35 S., R.1 W., Jackson County, at diversion dam 300 ft (91 m) east of State Highway 62, 5 mi (8 km) north of Eagle Point.

BASIN CHARACTERISTICS.--Drainage area, 1.78 mi<sup>2</sup> (4.61 km<sup>2</sup>). Channel elevation at gage is 1,280 ft (390 m). Dam stores irrigation water during summer season. Other characteristics have not been evaluated.

DISCHARGE.--Peak discharges are from computations of discharge over 24-ft (7.3 m) wide dam with average crest elevation at 1.74 ft (0.530 m), gage datum.

REMARKS.--Station established Oct. 14, 1952. Station discontinued Sept. 30, 1955, when larger dam was built and station was submerged. Peaks not adjusted for storage.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	3.44	120	67.4
1954	Nov. 23, 1963	5.58	182	102

## REGION 6

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

215

## 14339200 CONSTANCE CREEK NEAR SAMS VALLEY, OREG. (Discontinued)

LOCATION.--Lat 42°30'40", long 122°53'10", in SW¼ sec.24, T.35 S., R.2 W., Jackson County, at culvert on State Highway 234, 4.5 mi (7.2 km) east of Sams Valley, and 10 mi (16 km) north of Medford.

BASIN CHARACTERISTICS.--Drainage area, 6.42 mi<sup>2</sup> (16.63 km<sup>2</sup>). Channel elevation at gage is 1,320 ft (402 m). Mean elevation of basin is 1,570 ft (479 m); channel slope, 72 ft/mi (13.6 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 18.0 ft (5.49 m) x 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 11.60 ft (3.536 m), gage datum. Stage-discharge relation subject to variable backwater from downstream channel.

REMARKS.--Station was established Aug. 19, 1958; discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1959	Feb. 14, 1959	15.16	256	39.9
1960	Feb. 8, 1960	15.64	280	43.6
1961	Feb. 11, 1961	16.02	380	59.2
1962	Dec. 20, 1961	15.56	300	46.7
1963	Dec. 2, 1962	18.60	950	148
1964	Jan. 19, 1964	16.50	430	67.0
1965	Dec. 22, 1964	17.70	744	116
1966	Jan. 3, 1966	17.51	735	114
1967	Jan. 28, 1967	15.84	341	53.1
1968	Feb. 2, 1968	16.93	310	48.3

216

## 14350900 NEIL CREEK ABOVE DUNN DITCH NEAR ASHLAND, OREG. (Discontinued)

LOCATION.--Lat 42°08'05", long 112°28'05", in SW¼ sec.31, T.39 S., R.2 E., Jackson County, at culvert on former U.S. Highway 99 in Rogue River National Forest, 4.5 mi (7.2 km) southeast of Ashland. Monthly discharges for part of 1913 water year published for site 0.4 mi (0.6 km) downstream, records are not equivalent due to diverted flow.

BASIN CHARACTERISTICS.--Drainage area, 10.3 mi<sup>2</sup> (26.7 km<sup>2</sup>). Channel elevation at gage is about 2,530 ft (771 m). Mean elevation of basin is 4,670 ft (1,423 m); channel slope, 478 ft/mi (90.5 m/km).

DISCHARGE.--Peak discharge are from computations of discharge through one 8.0-ft (2.44 m) concrete-box culvert with upstream invert at 6.38 ft (1.945 m), gage datum.

REMARKS.--Station was established Aug. 14, 1965. Peak of Dec. 2, 1962, was made at same site and datum. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Peaks of 1966, 1968, and 1972 are highest observed during year. Station discontinued Sept. 30, 1972.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1963	Dec. 2, 1962	10.65	244	23.7
1965	Dec. 22, 1964	16.30	766	74.4
1966	Jan. 7, 1966	9.10	29	2.8
1967	Jan. 29, 1967	9.65	102	9.9
1968	Feb. 23, 1968	9.39	65	6.3
1969	Feb. 11, 1969	9.45	75	7.3
1970	Jan. 27, 1970	10.86	267	25.9
1971	Jan. 18, 1971	9.77	118	11.5
1972	Jan. 21, 1972	9.23	45	4.4

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

217

14353000 WEST FORK ASHLAND CREEK NEAR ASHLAND, OREG. (Discontinued)

LOCATION.--Lat 42°09'00", long 122°42'55", in W $\frac{1}{2}$ NW $\frac{1}{4}$  sec.28, T.39 S., R.1 E., Jackson County, at Ashland water-supply dam above Reader Reservoir, 2.4 mi (3.9 km) south of Ashland. Prior to Oct. 14, 1953, at site 0.7 mi (1.1 km) upstream at different datum.

BASIN CHARACTERISTICS.--Drainage area, 10.5 mi<sup>2</sup> (27.2 km<sup>2</sup>); at site used 1924-32, 9.98 mi<sup>2</sup> (25.8 km<sup>2</sup>). Altitude of gage is 2,930 ft (893 m). Mean elevation of basin is 5,050 ft (1,539 m); channel slope, 617 ft/mi (116 m/km). Basin is watershed for city of Ashland and consists of timber and brush land.

DISCHARGE.--Peak discharges 1954-60 are from rating curve defined by current-meter measurements and computations of discharge over dam with crest elevation at 12.76 ft (3.889 m), gage datum. Prior to Oct. 14, 1953, from rating defined by current-meter measurements and extended above 70 ft<sup>3</sup>/s (1.98 m<sup>3</sup>/s) by logarithmic plotting.

REMARKS.--Station discontinued Sept. 30, 1960. Peak discharges include estimated diversion. No diversion at site used 1924-32.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1925	Oct. 31, 1924	2.85	158	15.8
1926	Feb. 4, 1926	1.89	66	6.6
1927	Feb. 20, 1927	3.15	281	28.2
1928	Mar. 26, 1928	2.2	110	11.0
1929	Mar. 21, 1929	1.28	28	2.8
1930	Dec. 14, 1929	2.10	96	9.6
1931	Nov. 16, 1930	1.02	15	1.5
1932	Mar. 19, 1932	1.47	38	3.8
1954	Jan. 23, 1954	13.95	86	8.2
1955	Oct. 10, 1954	13.36	39	3.7
1956	Dec. 21, 1955	14.85	208	19.8
1957	Dec. 11, 1956	13.82	73	7.0
1958	Jan. 30, 1958	14.39	142	13.5
1959	Jan. 12, 1959	13.68	60	5.7
1960	Feb. 8, 1960	13.32	36	3.4
1963	Dec. 2, 1962	15.51	330	31.4

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

218

14353500 EAST FORK ASHLAND CREEK NEAR ASHLAND, OREG. (Discontinued)

LOCATION.--Lat 42°09'10", long 122°42'30", in E $\frac{1}{2}$ NW $\frac{1}{4}$  sec.28, T.39 S., R.1 E., Jackson County, at Ashland water-supply dam above Reader Reservoir, 2.2 mi (3.5 km) south of Ashland. Prior to Oct. 19, 1953, at site 300 ft (91 m) upstream at different datum.

BASIN CHARACTERISTICS.--Drainage area, 8.14 mi<sup>2</sup> (21.08 km<sup>2</sup>); at site used 1924-32, 7.96 mi<sup>2</sup> (20.62 km<sup>2</sup>). Altitude of gage is 2,850 ft (868 m). Mean elevation of basin, 5,040 ft (1,536 m); channel slope, 535 ft/mi (101 m/km). Basin is watershed for city of Ashland and consists of timber and brush land.

DISCHARGE.--Peak discharges 1954-60 from rating curve defined by computations of discharge over dam with crest elevation at 3.20 ft (0.975 m), gage datum. Prior to Oct. 19, 1953, from rating curve defined by current-meter measurements and extended above 72 ft<sup>3</sup>/s (2.04 m<sup>3</sup>/s) by logarithmic plotting.

REMARKS.--Station discontinued Sept. 30, 1960. Peak discharges include diversion flow. No diversion at site used 1924-32.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1925	Oct. 31, 1924	2.30	130	16.3
1926	Feb. 4, 1926	1.68	48	6.0
1927	Feb. 20, 1927	3.50	292	36.7
1928	Mar. 26, 1928	2.23	96	12.1
1929	May 23, 1929	1.29	31	3.9
1930	Dec. 14, 1929	2.18	91	11.4
1931	Mar. 18, 1931	1.12	16	2.0
1932	June 14, 1932	1.47	35	4.4
1954	Jan. 23, 1954	4.04	75	9.2
1955	Oct. 4, 1954	3.78	48	5.9
1956	Dec. 21, 1955	5.22	292	35.9
1957	Oct. 30, 1956	3.92	62	7.6
1958	Feb. 24, 1958	4.53	149	18.3
1959	Jan. 12, 1959	3.56	33	4.1
1960	Feb. 8, 1960	3.75	40	4.9
1963	Dec. 2, 1962	5.42	335	41.2



## REGION 6

141

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

219

14354400 BUTLER CREEK NEAR ASHLAND, OREG.

LOCATION.--Lat 42°13'30", long 122°44'05", in NE¼ sec.31, T.38 S., R.1 E., Jackson County, at culvert on Interstate Highway 5, 0.3 mi (0.5 km) upstream from mouth, and 1.4 mi (2.3 km) northwest of Ashland.

BASIN CHARACTERISTICS.--Drainage area, 5.11 mi<sup>2</sup> (13.23 km<sup>2</sup>). Channel elevation at gage is 1,700 ft (518 m). Mean elevation of basin is 2,840 ft (866 m); channel slope, 425 ft/mi (80.5 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of flow through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 17.77 ft (5.416 m), gage datum.

REMARKS.--Station was established Aug. 21, 1963. East Lateral transbasin canal intersects Butler Creek about 2.0 mi (3.2 km) above station. No peak data reported during 1968 water year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1963	Dec. 2, 1962	29.17	322	63.0
1964	Jan. 19, 1964	21.50	88	17.2
1965	Dec. 21, 1964	32.11	387	75.7
1966	Jan. 3, 1966	19.92	30	5.9
1967	Jan. 28, 1967	19.44	18	3.5
1969	June 4, 1969	20.15	37	7.2
1970	Jan. 27, 1970	21.66	98	19.2
1971	Jan. 18, 1971	22.53	145	28.4
1972	Mar. 1, 1972	22.08	120	23.5
1973	Jan. 13, 1973	18.90	9.2	1.8
1974	Jan. 15, 1974	20.59	51	10

220

14358600 GRIFFIN CREEK NEAR MEDFORD, OREG. (Discontinued)

LOCATION.--Lat 42°16'00", long 122°54'50", in NE¼ sec.15, T.38 S., R.2 W., Jackson County, at culvert on Griffin Creek road, 0.5 mi (0.8 km) upstream from Murphy Creek, and 4 mi (6 km) southwest of Medford.

BASIN CHARACTERISTICS.--Drainage area, 5.41 mi<sup>2</sup> (14.01 km<sup>2</sup>). Channel elevation at gage is 1,800 ft (549 m). Mean elevation of basin is 3,070 ft (936 m); channel slope, 364 ft/mi (68.9 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 4.0-ft (1.22 m) diameter culvert with upstream invert at 8.42 ft (2.566 m), gage datum.

REMARKS.--Station established Oct. 19, 1953. Station discontinued Sept. 30, 1957.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	12.81	81	15.0
1954	Jan. 27, 1954	13.92	117	21.6
1956	Dec. 21, 1955	12.25	74	13.7
1963	Dec. 2, 1962	17.55	125	23.1

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

221

14361300 JONES CREEK NEAR GRANTS PASS, OREG.

LOCATION.--Lat 42°26'10", long 123°17'10", in SE¼ sec.16, T.36 S., R.5 W., Josephine County, at culvert on Interstate Highway 5, near traffic interchange for Foothill Boulevard, 2 mi (3 km) east of Grants Pass. Prior to 1963, at site at diversion dam, 400 ft (122 m) downstream, at different datum.

BASIN CHARACTERISTICS.--Drainage area, 7.41 mi<sup>2</sup> (19.19 km<sup>2</sup>). Channel elevation at gage is 1,040 ft (317 m). Mean elevation of basin is 1,930 ft (588 m); channel slope, 338 ft/mi (64.0 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of flow through one 8.0-ft (2.44 m) concrete-box culvert with upstream invert at 9.74 ft (2.969 m), gage datum.

REMARKS.--Station was established Nov. 27, 1951. Peak of Feb. 22, 1956, determined at slope-area site 900 ft (274 m) downstream. Irrigation diversions above and at station are considered negligible during peak flow.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1952	Dec. 26, 1951	12.24	194	26.2
1953	Jan. 18, 1953	13.80	250	33.7
1954	Jan. 27, 1954	14.70	502	67.7
1955	Dec. 6, 1954	12.98	175	23.6
1956	Feb. 22, 1956	16.50	1,350	182
1957	Mar. 12, 1957	13.60	230	31.0
1958	Jan. 29, 1958	14.37	443	59.8
1959	Jan. 10, 1959	11.85	159	21.5
1960	Mar. 7, 1960	12.11	182	24.6
1961	Jan. 31, 1961	15.30	520	70.2
1962	Dec. 20, 1961	12.12	115	15.5
1963	Dec. 2, 1962	15.88	370	49.9
1964	Jan. 19, 1964	14.50	247	33.3
1965	Dec. 21, 1964	17.05	485	65.5
1966	Jan. 3, 1966	18.88	675	91.1
1967	Jan. 28, 1967	14.17	221	29.8
1968	Feb. 23, 1968	14.40	240	32.4
1969	Jan. 13, 1969	14.74	275	37.1
1970	Jan. 27, 1970	16.35	412	55.6
1971	Jan. 17, 1971	18.90	675	91.1
1972	Mar. 2, 1972	14.80	275	37.1
1973	Jan. 13, 1973	14.67	264	35.6
1974	Jan. 21, 1974	19.57	740	99.9

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

222

14362050 KINNEY CREEK NEAR MCKEE BRIDGE, OREG.

LOCATION.--Lat 42°05'35", long 123°07'40", in NW¼ sec.13, T.40 S., R.4 W., Jackson County, at culvert on Forest Service road 405 in Rogue River National Forest, 1.3 mi (2.1 km) upstream from mouth, and 4 mi (6 km) southwest of McKee Bridge.

BASIN CHARACTERISTICS.--Drainage area, 2.83 mi<sup>2</sup> (7.33 km<sup>2</sup>). Channel elevation at gage is about 2,180 ft (664 m). Mean elevation of basin is 3,420 ft (1,042 m); channel slope, 641 ft/mi (121 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 6.70 ft (2.042 m), gage datum.

REMARKS.--Station was established Aug. 15, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Road overflow will occur at 19.2 ft (5.85 m), gage datum. Peak of Jan. 15, 1974, determined at site 1.0 mi (1.6 km) downstream; drainage area, 3.60 mi<sup>2</sup> (9.32 km<sup>2</sup>).

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	12.33	177	62.5
1966	Jan. 6, 1966	9.85	71	25.1
1967	Dec. 13, 1966	8.72	31	11.0
1968	Jan. 16, 1968	8.46	22	7.8
1969	Jan. 5, 1969	9.31	51	18.0
1970	Jan. 23, 1970	9.92	74	26.1
1971	Jan. 17, 1971	11.31	132	46.6
1972	Mar. 2, 1972	10.20	108	38.2
1973	Jan. 13, 1973	8.14	15	5.3
1974	Jan. 15, 1974	-	489	136

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

223

14369800 BUTCHERKNIFE CREEK NEAR WONDER, OREG (Discontinued)

LOCATION.--Lat 42°20'40", long 123°34'00", in NE¼ sec.19, T.37 S., R.7 W., Josephine County, at culvert on county road, 0.1 mi (0.2 km) west of U.S. Highway 199, 0.7 mi (1.1 km) upstream from mouth, and 2.3 mi (3.7 km) southwest of Wonder.

BASIN CHARACTERISTICS.--Drainage area, 3.07 mi<sup>2</sup> (7.95 km<sup>2</sup>). Channel elevation at gage is 1,220 ft (372 m). Mean elevation of basin is 1,760 ft (536 m); channel slope, 376 ft/mi (71.2 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 9.0-ft (2.74 m) x 6.0-ft (1.83 m) pipe-arch culvert with upstream invert at 10.47 ft (3.191 m), gage datum.

REMARKS.--Station was established Oct. 20, 1953. Road overflow occurs above 17.0 ft (5.18 m), gage datum. Records for period 1953 to 1966 are revised on basis of additional rating definition. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	16.40	283	92.2
1954	Jan. 27, 1954	16.82	306	99.7
1955	Dec. 30, 1954	12.93	56	18.2
1956	Dec. 21, 1955	16.84	310	101
1957	Feb. 26, 1957	16.36	280	91.2
1958	Jan. 29, 1958	16.65	295	96.1
1959	Jan. 11, 1959	16.84	310	101
1960	Feb. 8, 1960	14.99	198	64.5
1961	Feb. 11, 1961	15.54	232	75.6
1962	Feb. 9, 1962	14.30	153	49.8
1963	Dec. 2, 1962	15.04	195	63.5
1964	Jan. 20, 1964	16.54	280	91.2
1965	Dec. 22, 1964	17.24	390	127
1966	Jan. 3, 1966	17.38	432	141
1967	Jan. 28, 1967	13.50	130	42.3
1968	Feb. 20, 1968	13.50	130	42.3

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

224

14370000 SLATE CREEK AT WONDER, OREG. (Discontinued)

LOCATION.--Lat 42°21'40", long 123°31'10", in SW¼ sec.10, T.37 S., R.7 W., Josephine County, on left bank, 0.6 mi (1.0 km) upstream from Elliot Creek, and 0.7 mi (1.1 km) east of Wonder. Prior to Nov. 21, 1946, at several sites within 630 ft (192 m) of present site at various datums.

BASIN CHARACTERISTICS.--Drainage area, 31.4 mi<sup>2</sup> (81.3 km<sup>2</sup>). Datum of gage is 1,034.85 ft (315.422 m) above mean sea level, datum of 1929, supplementary adjustment of 1947. Mean elevation of basin is 2,160 ft (658 m); channel slope, 180 ft/mi (34.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements below 2,100 ft<sup>3</sup>/s (59.5 m<sup>3</sup>/s) and extended on basis of slope-area measurements at 2,940 ft<sup>3</sup>/s (83.8 m<sup>3</sup>/s) and 4,020 ft<sup>3</sup>/s (114 m<sup>3</sup>/s).

REMARKS.--Records for 1944-45 furnished by State engineer of Oregon. Station was discontinued Sept. 30, 1960. Notable peaks occurring after 1960 will be included in table of annual peak data.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1944	Oct. 24, 1943	2.40	865	27.5
1945	Feb. 8, 1945	3.20	1,530	48.7
1946	Dec. 28, 1945	9.0	4,000	127
1947	Nov. 22, 1946	6.75	2,080	66.2
1948	Jan. 6, 1948	8.29	2,940	93.6
1949	Feb. 22, 1949	6.43	1,810	57.6
1950	Jan. 21, 1950	6.56	1,810	57.6
1951	Oct. 29, 1950	9.72	4,020	128
1952	Feb. 1, 1952	7.48	2,230	71.0
1953	Jan. 18, 1953	9.48	3,820	122
1954	Jan. 27, 1954	9.15	3,580	114
1955	Dec. 31, 1954	4.36	714	22.7
1956	Dec. 31, 1955	9.60	3,920	125
1957	Feb. 26, 1957	8.64	3,200	102
1958	Jan. 29, 1958	8.92	3,410	109
1959	Jan. 12, 1959	9.62	3,940	125
1960	Feb. 8, 1960	6.54	1,800	57.3
1965	Dec. 22, 1964	10.64	4,650	148
1966	Jan. 3, 1966	10.26	4,450	142



## REGION 6

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

225

14370200 ROUND PRAIRIE CREEK NEAR WILDERVILLE, OREG. (Discontinued)

LOCATION.--Lat 42°22'40", long 123°29'45", in SW¼ sec.2, T.37 S., R.7 W., Josephine County, at culvert on U.S. Highway 199, 0.1 mi (0.2 km) upstream from mouth, and 1.5 mi (2.4 km) west of Wilderville.

BASIN CHARACTERISTICS.--Drainage area, 3.16 mi<sup>2</sup> (8.18 km<sup>2</sup>). Datum of gage is 971.56 ft (296.131 m) above mean sea level, datum of 1929, supplementary adjustment of 1956. Mean elevation of basin is 1,630 ft (497 m); channel slope, 332 ft/mi (62.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 12.0-ft (3.66 m) x 4.0-ft (1.22 m) concrete-box culvert with upstream invert at 2.46 ft (0.750 m), gage datum.

REMARKS.--Station was established Oct. 20, 1953. Flood-hydrograph recorder operated during 1963 and 1964. Road overflow occurs at 7.3 ft (2.23 m), gage height. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 18, 1953	6.66	298	94.3
1954	Jan. 27, 1954	6.73	305	96.5
1955	Apr. 22, 1955	3.43	26	8.2
1956	Dec. 21, 1955	6.30	262	82.9
1957	Feb. 26, 1957	5.94	226	71.5
1958	Jan. 29, 1958	6.65	297	94.0
1959	Jan. 11, 1959	6.00	232	73.4
1960	Feb. 8, 1960	4.14	70	22.2
1961	Feb. 11, 1961	5.53	189	59.8
1962	Feb. 9, 1962	4.35	86	27.2
1963	Feb. 1, 1963	4.79	135	42.7
1964	Jan. 20, 1964	5.20	177	56.0
1965	Dec. 21, 1964	6.43	290	91.8
1966	Jan. 3, 1966	7.33	373	119
1967	Jan. 28, 1967	5.80	239	75.6
1968	Feb. 22, 1968	4.84	143	45.3

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

226

14373900 WINDY CREEK NEAR HOLLAND, OREG. (Discontinued)

LOCATION.--Lat 42°07'50", long 123°21'45", in SW¼ sec.36, T.39 S., R.6 W., Josephine County, at culvert on Forest Service road 3941 in Siskiyou National Forest, 0.1 mi (0.2 km) upstream from mouth, 2.5 mi (4.0 km) northeast of Oregon Caves National Monument, and 10 mi (16 km) east of Holland.

BASIN CHARACTERISTICS.--Drainage area, 2.02 mi<sup>2</sup> (5.23 km<sup>2</sup>). Channel elevation at gage is 3,320 ft (1,012 m). Mean elevation of basin is 5,110 ft (1,558 m); channel slope, 878 ft/mi (166 m/km).

DISCHARGE.--Peak discharge are from rating curve defined by computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 7.24 ft (2.207 m), gage datum.

REMARKS.--Station was established Aug. 17, 1965. Road overflow will occur at 16.0 ft (4.88 m), gage datum. Station discontinued in 1974 because of debris rack installed at culvert entrance.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1966	Jan. 6, 1966	13.38	185	91.6
1967	Dec. 2, 1966	10.62	71	35.1
1968	Feb. 20, 1968	10.11	53	26.2
1969	Feb. 9, 1969	10.18	55	27.2
1970	Jan. 26, 1970	11.06	88	43.6
1971	June 10, 1971	11.14	92	45.5
1972	Mar. 2, 1972	12.70	156	77.2
1973	Jan. 12, 1973	9.78	43	21.3

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

227

14377800 SNAILBACK CREEK NEAR SELMA, OREG. (Discontinued)

LOCATION.--Lat 42°17'05", long 123°41'40", in NW¼ sec.7, T.38 S., R.8 W., Josephine County, at culvert on county road, 0.5 mi (0.8 km) upstream from mouth, and 4.2 mi (6.8 km) west of Selma.

BASIN CHARACTERISTICS.--Drainage area, 1.62 mi<sup>2</sup> (4.20 km<sup>2</sup>). Datum of gage is 1,268.18 ft (386.541 m) above mean sea level, datum of 1929, supplementary adjustment of 1956. Mean elevation of basin is 3,050 ft (930 m); channel slope, 1,240 ft/mi (235 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 87.69 ft (26.728 m), gage datum.

REMARKS.--Station was established Feb. 16, 1957. Peak of Jan. 11, 1959, not determined because of backwater from debris. Peak of Dec. 21, 1964, does not include road overflow. Road overflow occurs at 95.9 ft (29.23 m), gage datum. No data reported in 1969. Peaks of 1973 and 1974 estimated at site 300 ft (91 m) downstream. Station discontinued Sept. 30, 1974.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1956	Dec. 21, 1955	95.50	278	172
1957	Mar. 7, 1957	92.22	156	96.3
1958	Jan. 29, 1958	92.30	160	98.8
1959	Jan. 11, 1959	93.68	-	-
1960	Feb. 8, 1960	91.02	91	56.2
1961	Feb. 11, 1961	91.73	132	81.5
1962	Dec. 20, 1961	90.98	88	54.3
1963	Feb. 1, 1963	91.84	136	84.0
1964	Jan. 20, 1964	92.24	157	96.9
1965	Dec. 21, 1964	97.43	329	203
1966	Jan. 3, 1966	92.90	186	115
1967	Mar. 1, 1967	91.89	140	86.4
1968	Jan. 15, 1968	91.99	144	88.9
1970	Jan. 26, 1970	92.35	163	101
1971	Jan. 18, 1971	93.87	225	139
1972	Mar. 2, 1972	92.81	184	114
1973	Jan. 16, 1973	90.40	48	29.6
1974	Jan. 15, 1974	-	242	149

## PACIFIC SLOPE BASINS (Continued)

## ROGUE RIVER BASIN

228

14377900 SECRET CREEK NEAR WONDER, OREG. (Discontinued)

LOCATION.--Lat 42°25'20", long 123°41'20", in S½ sec.19, T.36 S., R.8 W., Josephine county, at culvert on Forest Service road 355 in Siskiyou National Forest, 0.5 mi (0.8 km) upstream from mouth, and 9 mi (14 km) northwest of Wonder.

BASIN CHARACTERISTICS.--Drainage area, 6.11 mi<sup>2</sup> (15.82 km<sup>2</sup>). Channel elevation at gage is 1,950 ft (594 m). Mean elevation of basin is 3,120 ft (951 m); channel slope, 304 ft/mi (57.6 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 15.0-ft (4.57 m) diameter culvert (out-of-round) with upstream invert at 5.62 ft (1.713 m), gage datum. Channel fill-material extends length of culvert invert.

REMARKS.--Station was established Aug. 17, 1965. Culvert was assumed to be unobstructed during peak of Dec. 22, 1964. Peaks represent flow occurring with fill material on invert. Station discontinued Sept. 30, 1969.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Dec. 22, 1964	18.92	1,080	177
1966	Jan. 5, 1966	12.94	470	76.9
1967	Jan. 28, 1967	11.90	360	58.9
1968	Feb. 23, 1968	11.36	310	50.7
1969	Jan. 5, 1969	11.57	330	54.0

229

14378400 ROGUE RIVER TRIBUTARY NEAR WEDDERBURN, OREG. (Discontinued)

LOCATION.--Lat 42°26'40", long 124°23'25", in SW¼ sec.20, T.36 S., R.14 W., Josephine County, at culvert on U.S. Highway 101, 0.8 mi (1.3 km) upstream from mouth, and 1.6 mi (2.6 km) northeast of Wedderburn.

BASIN CHARACTERISTICS.--Drainage area, 1.53 mi<sup>2</sup> (3.96 km<sup>2</sup>). Channel elevation at gage is 40 ft (12.2 m). Mean elevation of basin is 420 ft (128 m); channel slope, 161 ft/mi (30.5 m/km).

DISCHARGE.--Peak discharges are from computations of discharge through one 6.0-ft (1.83 m) diameter culvert with upstream invert at 9.17 ft (2.795 m), gage datum.

REMARKS.--Station was established Nov. 4, 1953; discontinued Sept. 30, 1956.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 17, 1953	16.88	260	170
1954	Nov. 22, 1953	16.74	255	167
1955	Dec. 30, 1954	16.53	247	161

## REGION 6

## PACIFIC SLOPE BASINS (Continued)

## HUNTER CREEK BASIN

230

14378550 HUNTER CREEK NEAR GOLD BEACH, OREG.

LOCATION.--Lat 42°24'25", long 124°15'05", probably in NW¼ sec.4 (unsurveyed), T.37 S., R.13 W., Curry County, at culvert on Forest Service road 368 in Siskiyou National Forest, 8.5 mi (13.7 km) east of Gold Beach.

BASIN CHARACTERISTICS.--Drainage area, 0.98 mi<sup>2</sup> (2.54 km<sup>2</sup>). Channel elevation at gage is 2,320 ft (707 m). Mean elevation of basin is 2,820 ft (860 m); channel slope, 327 ft/mi (61.9 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 13.5-ft (4.11 m) x 8.5-ft (2.59 m) pipe-arch culvert with upstream invert at 6.34 ft (1.932 m), gage datum.

REMARKS.--Station was established Aug. 18, 1965. Peak of Jan. 30, 1965, may be affected by back-water from debris. Peak of 1970, is maximum observed during year.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1965	Jan. 30, 1965	16.30	870	888
1966	Jan. 5, 1966	10.56	297	303
1967	Jan. 28, 1967	10.08	248	253
1968	Feb. 23, 1968	9.72	210	214
1969	Jan. 5, 1969	9.87	222	227
1970	Dec. 11, 1969	9.06	145	148
1971	Jan. 18, 1971	9.80	217	221
1972	Mar. 2, 1972	11.57	404	412
1973	Jan. 12, 1973	9.46	180	184
1974	Jan. 15, 1974	11.01	348	355



## PACIFIC SLOPE BASINS (Continued)

## HARRIS CREEK BASIN

231

14378800 HARRIS CREEK NEAR BROOKINGS, OREG.(Discontinued)

LOCATION.--Lat 42°04'25", long 124°18'30", in NE¼ sec.36, T.40 s., R.14 W., Curry County, at culvert on U.S. Highway 101, 0.4 mi (0.6 km) above mouth, and 1.9 mi (3.1 km) northwest of Brookings. Prior to 1959, at site 500 ft (152 m) downstream at different datum.

BASIN CHARACTERISTICS.--Drainage area, 1.05 mi<sup>2</sup> (2.72 km<sup>2</sup>). Channel elevation at gage is 80 ft (24.4 m). Mean elevation of basin is 600 ft (183 m); channel slope, 423 ft/mi (80.1 m/km).

DISCHARGE.--Peak discharges are from rating curve defined by computations of discharge through one 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 12.03 ft (3.667 m), gage datum. Prior to 1959, by computations of discharge through a 6.0-ft (1.83 m) concrete-box culvert with upstream invert at 16.16 ft (4.926 m), datum then in use.

REMARKS.--Station was established Nov. 4, 1953. Peak discharges for water years 1956 and 1958 are not determined because of backwater from debris. Station was discontinued Sept. 30, 1968.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 17, 1953	25.91	436	415
1954	Nov. 22, 1953	22.67	297	283
1955	Dec. 30, 1954	25.98	439	418
1957	Dec. 11, 1956	21.78	251	239
1959	Jan. 12, 1959	15.44	109	104
1960	May 26, 1960	15.92	136	130
1961	Feb. 10, 1961	15.60	118	112
1962	Nov. 22, 1961	16.98	205	195
1963	May 6, 1963	16.18	186	177
1964	Nov. 8, 1963	14.94	84	80.0
1965	Apr. 19, 1965	15.33	104	99.0
1966	Dec. 28, 1965	15.80	128	122
1967	Nov. 19, 1966	16.17	149	142
1968	Feb. 20, 1968	18.38	269	256

## PACIFIC SLOPE BASINS (Continued)

## RANSOM CREEK BASIN

232

14378900 RANSOM CREEK NEAR BROOKINGS, OREG.

LOCATION.--Lat 42°03'45", long 124°18'00", in NE¼ sec.1, T.41 S., R.14 W., Curry County, at culvert on U.S. Highway 101, 0.1 mi (0.2 km) upstream from mouth, and 1.2 mi (1.9 km) northwest of Brookings.

BASIN CHARACTERISTICS.--Drainage area, 0.74 mi<sup>2</sup> (1.92 km<sup>2</sup>). Channel elevation at gage is 40 ft (12.2 m). Mean elevation of basin is 427 ft (130 m); channel slope, 222 ft/mi (42.0 m/km). Small auxiliary water-supply reservoir for city of Brookings is located in basin.

DISCHARGE.--Peak discharges are from rating curve defined by current-meter measurements and computations of discharge through one 5.0-ft (1.52 m) concrete-box culvert with upstream invert at 21.52 ft (6.559 m), gage datum. Prior to 1957, invert at 17.29 ft (5.270 m), gage datum.

REMARKS.--Station was established Nov. 5, 1953. Culvert was extended upstream in 1956. Peak discharge for 1957 not determined because of backwater from debris. Peak data for the period 1968 to 1970 revised on basis of additional rating definition. Peak of Mar. 2, 1972, computed by slope-conveyance method at site 0.1 mi (0.2 km) upstream.

## Annual Peak Data

Water Year	Date	Gage Height (ft)	Discharge (ft <sup>3</sup> /s)	Basin Runoff (ft <sup>3</sup> /s/mi <sup>2</sup> )
1953	Jan. 17, 1953	24.80	300	405
1954	Nov. 22, 1953	22.17	172	232
1955	Dec. 30, 1954	24.46	280	378
1956	Dec. 21, 1955	23.06	211	285
1957	Dec. 11, 1956	26.52	-	-
1958	Feb. 15, 1958	25.41	110	149
1959	Jan. 12, 1959	24.54	78	105
1960	May 26, 1960	25.06	99	134
1961	Feb. 10, 1961	24.86	91	123
1962	Nov. 22, 1961	25.54	119	161
1963	May 6, 1963	26.12	147	199
1964	Jan. 19, 1964	23.76	46	62.2
1965	Apr. 19, 1965	24.24	66	89.2
1966	Dec. 28, 1965	25.30	109	147
1967	Nov. 19, 1966	24.01	55	74.3
1968	Feb. 20, 1968	27.22	210	284
1969	Jan. 5, 1969	25.00	117	158
1970	Jan. 22, 1970	25.29	130	176
1971	Nov. 24, 1970	24.82	109	147
1972	Mar. 2, 1972	28.92	378	511
1973	Dec. 18, 1972	23.89	73	98.6
1974	Mar. 20, 1974	27.26	210	284

## PEAK DISCHARGE AT MISCELLANEOUS SITES IN OREGON

Measurements of peak flow at points other than crest-stage stations are given in the following table.

Map No.	Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
Burnt River basin						
1	Durkee Creek	Burnt River	SW $\frac{1}{4}$ sec.16, T.11 S., R.43 E., 2 miles north of Durkee	24.0	5-20-55	2,380
2	Prichard Creek tributary	Prichard Creek	NE $\frac{1}{4}$ sec.18, T.11 S., R.43 E., at culvert on U.S. Highway 30, 2.6 miles northwest of Durkee.	0.02	5-20-55	27
Cold Springs basin						
3	DeSpain Gulch	Cold Springs	NW $\frac{1}{4}$ sec.30, T.4 N., R.31 E., 0.8 mile downstream from Missouri Gulch, 5.5 miles south of Holdman.	<sup>a</sup> 36.4	6-01-64	2,480
4	Missouri Gulch	DeSpain Gulch	NE $\frac{1}{4}$ sec.30, T.4 N., R.31 E., 500 feet upstream from mouth, 5.7 miles south of Holdman.	<sup>b</sup> 13.5	6-01-64	1,910
Umatilla River basin						
5	Jack Canyon	Birch Creek	Sec.19, T.1 S., R.32 E., 0.5 mile above mouth, 2 miles southwest of Pilot Rock.	(+)	2-03-63	245
6	Lane Canyon	Umatilla River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5 T.2 N., R.30 E., 1 mile east of Nolin and 5 mile southeast of Echo.	5.04	7-26-65	28,500
7	Speare Canyon	Umatilla River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1 T.2 N., R.29 E., $\frac{1}{2}$ mile west of Nolin and $\frac{1}{2}$ mile upstream from the Umatilla River.	23.0	7-26-65	14,400
8	Stage Gulch	Umatilla River	NW $\frac{1}{4}$ sec.6, T.3 N., R.31 E., 7.8 miles south of Holdman.	<sup>c</sup> 34.1	6-01-64	60
9	Butter Creek tributary	Butter Creek	NW $\frac{1}{4}$ sec.23, T.2 N., R.27 E., 400 ft downstream from State Highway 207, 2.4 miles northeast of Butter Creek bridge, and 13 miles southwest of Echo.	<sup>d</sup> 33	6-09-48	1,180
Willow Creek basin						
10	Balm Canyon	Willow Creek	SE $\frac{1}{4}$ sec.15, T.4 S., R.26 E., 0.8 mile upstream from mouth, 0.9 mile south of Heppner.	<sup>d</sup> 28	6-17-50	2,700
11	Shobe Canyon	Willow Creek	NE $\frac{1}{4}$ sec.3, T.3 S., R.26 E., 0.2 mile upstream from Highway 207, 0.3 mile south of Heppner.	6.22	6-09-69 5-25-71	2,660 6,050
12	Hinton Canyon	Willow Creek	SE $\frac{1}{4}$ sec.26, T.2 S., R.26 E., between Main Street and Highway 207, in Heppner.	<sup>*</sup> 42.5	6-09-69	495
13	Blackhorse Canyon	Willow Creek	SE $\frac{1}{4}$ sec.26, T.1 S., R.25 E., at bridge on Blackhorse Canyon road, 0.5 mile upstream from Lexington.	<sup>d</sup> 23	6-09-48 2-22-49 8-28-53	<sup>e</sup> 900 1,310 1,740
14	Clark Canyon	Willow Creek	NW $\frac{1}{4}$ sec.15, T.2 S., R.25 E., 0.7 mile downstream from Fuller Canyon, 4 miles south of Lexington.	(+)	8-28-53	3,240
15	Rhea Creek	Willow Creek	SE $\frac{1}{4}$ sec.13, T.1 S., R.24 E., 1.5 miles upstream from mouth, 3.5 miles southeast of Ione.	(+)	8-15-61	1,700
16	Reitmann Canyon	Willow Creek	SW $\frac{1}{4}$ sec.3, T.1 S., R.24 E., 50 feet upstream from State Highway 74, in Ione.	<sup>d</sup> 3.4	8-15-61	436
17	Loraine Canyon	Willow Creek	SE $\frac{1}{4}$ sec.4, T.1 S., R.24 E., 200 feet upstream from State Highway 74, in Ione.	<sup>d</sup> 28	8-15-61	501
18	Eightmile Canyon	Willow Creek	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.32, T.2 S., R.24 E., 3.4 miles upstream from bridge at State Highway 206, 10 miles south of Ione.	(+)	8-10-52 8-28-53	2,100 <sup>f</sup> 2,110
19	Eightmile Canyon tributary	Eightmile Canyon	SE $\frac{1}{4}$ sec.26, T.2 S., R.23 E., at bridge on State Highway 206, 0.7 mile upstream from mouth, and 10 miles south of Ione.	(+)	8-28-53	427
China Creek basin						
20	China Creek	Columbia River	NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34 T.3 N., R.21 E., 2 miles south of Arlington, 2.5 miles south of U.S. Highway 30.	49	12-22-64	1,020

\* Of which only a small portion contributed to flood.

+ Not determined.

a About 20.6 sq mi contributed to flood peak.

b About 8.49 sq mi contributed to flood peak.

c About 9.16 sq mi contributed to flood peak.

d Approximately.

e Also 750 cfs at site 2.7 miles upstream; drainage area, 17 sq mi, approximately.

f At site 2.2 miles downstream; drainage area not determined.

## PEAK DISCHARGE AT MISCELLANEOUS SITES IN OREGON

Measurements of peak flow at points other than crest-stage stations are given in the following table.

Map No.	Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
John Day River basin						
21	Dog Creek	John Day River	SW $\frac{1}{4}$ sec.29, T.13 S., R.32 E., 0.9 mile upstream from mouth, 4 miles east of John Day.	4.38	6-09-69	374
22	Beech Creek	John Day River	NW $\frac{1}{4}$ sec.28, T.13 S., R.30 E., 0.2 mile downstream from Mt. Vernon, 0.3 mile upstream from mouth	8113	7-10-56	929
23	Warm Springs Creek	Beech Creek	SE $\frac{1}{4}$ sec.9, T.13 S., R.30 E., 0.2 mile upstream from Mt. Vernon Hot Springs, 1.5 miles upstream from mouth, and 2.5 miles north of Mt. Vernon.	2.73	7-10-56	393
24	Bridge Creek	John Day River	Sec.27, T.11 S., R.21 E., 1.6 miles west of junction of U.S. Highway 26 and State Highway 207, and 2 miles west of Mitchell.	58.5	7-13-56	14,400
25	Meyers Canyon	Bridge Creek	NW $\frac{1}{4}$ sec.15, T.11 S., R.21 E., 0.5 mile upstream from mouth, 4 miles northwest of Mitchell.	12.7	7-13-56	54,500
26	Bridge Creek	John Day River	Sec.11, T.10 S., R.20 E., 1.5 miles above mouth, 3.0 miles downstream from Bear Creek, and 13 miles northwest of Mitchell.	266	7-13-56	16,300
27	Condon Canyon	Thirtymile Creek	NW $\frac{1}{4}$ sec.4, T.5 S., R.21 E., at bridge on State Highway 19, at mouth, 5 miles south of Condon.	16.5	6-08-72	1,590
28	Juniper Canyon	Rock Creek	NE $\frac{1}{4}$ sec.16, T.1 S., R.21 E., at site 1.3 miles south of Olex.	10.1	6-08-72	3,570
29	Scott Canyon	Rock Creek	NE $\frac{1}{4}$ sec.23, T.1 S., R.20 E., at site 0.2 mile upstream from Mikkalo road crossing, and 2.0 miles west of Mikkalo.	27.7	6-08-72	2,660
Deschutes River basin						
30	Butler Canyon	White River	SW $\frac{1}{4}$ sec.33, T.3 S., R.13 E., at culvert on U.S. Highway 197, 1.0 mile upstream from mouth, and 1.1 miles northwest of Tygh Valley.	11.5	1-18-53	294
31	Butler Canyon tributary	Butler Canyon	SW $\frac{1}{4}$ sec.22, T.3 S., R.13 E., at culvert on U.S. Highway 197, 3.2 miles north of Tygh Valley.	1.0	1-18-53	44
Columbia River basin between Deschutes and Willamette Rivers						
32	Dry Creek tributary	Fifteenmile Creek	SW $\frac{1}{4}$ sec.34, T.2 S., R.13 E., at culvert on U.S. Highway 197, 7 miles south of Dufur.	4.94	1-18-53	228
33	Whiskey Creek	Hood River	SE $\frac{1}{4}$ sec.1, T.2 N., R.10 E., at culvert on State Highway 35, 0.2 mile upstream from mouth, and 1.7 miles south of town of Hood River.	4.49	1-18-53	112
34	Phelps Creek	Columbia River	SW $\frac{1}{4}$ sec.27, T.3 N., R.10 E., at culvert 200 feet upstream from U.S. Highway 30, 1.2 miles west of town of Hood River.	6.22	1-18-53	160
35	Gorton Creek <sup>1/</sup>	Columbia River	NW $\frac{1}{4}$ sec.1, T.2 N., R.8 E., at culvert on U.S. Highway 30, 0.3 mile west of Wyeth.	2.54	1-18-53	293
36	Tanner Creek	Columbia River	NW $\frac{1}{4}$ sec.28, T.2 N., R.7 E., at dam 0.2 mile upstream from U.S. Highway 30, 0.2 mile south of Bonneville.	14.0	1-18-53	1,500
37	Badger Creek	Sandy River	SE $\frac{1}{4}$ sec.25, T.2 S., R.5 E., at culvert on U.S. Highway 26, 0.2 mile west of Cherryville.	1.65	1-18-53	55

g About 12.5 sq mi contributed to flood peak.

h About 15 sq mi contributed to flood peak.

j About 45 sq mi contributed to flood peak.

<sup>1/</sup>Former gaging station 14-1260, 0.7 mile upstream, drainage area, 2.27 sq mi.

## PEAK DISCHARGE AT MISCELLANEOUS SITES IN OREGON

Measurements of peak flow at points other than crest-stage stations are given in the following table.

Map No.	Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
Willamette River basin						
38	Tidbits Creek	McKenzie River	SW $\frac{1}{2}$ SE $\frac{1}{4}$ sec.25, T.15 S., R.4 E., $\frac{1}{2}$ mile above mouth, 6 miles northeast of Blue River.	9.80	12-21-64	4,710
39	West Fork Long Tom River	Long Tom River	NW $\frac{1}{4}$ sec.7, T.16 S., R.6 W., at culvert on State Highway 36, 3.3 miles east of Blachly.	0.78	1-18-53	66
40	Gellatly Creek	Marys River	SW $\frac{1}{4}$ sec.18, T.11 S., R.6 W., at culverts on U.S. Highway 20, 2.7 miles northeast of Blodgett.	.87	1-18-53	86
41	Rickreall Creek	Willamette River	SW $\frac{1}{4}$ sec.35, T.7 S., R.5 W., at bridge on county road, 1.8 miles east of Dallas.	43.4	12-21-55	7,120
42	Panther Creek tributary	Panther Creek	Center sec.21, T.3 S., R.5 W., at culvert on Panther Creek road, 6.6 miles west of Carlton.	1.20	1-19-53	70
43	Cedar Creek	Tualatin River	NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.3 S., R.2 W., at weir on U.S. Highway 99, 1 mile northeast of Rex.	.73	1-18-53	42
44	Noyer Creek	Clackamas River	On line between secs. 2 and 11, T.2 S., R.3 E., at culvert on State Highway 212, 2 miles southwest of Boring.	1.33	1-18-53	94
45	Rock Creek	Clackamas River	Center sec.12, T.2 S., R.2 E., 1 mile northwest of Carver on State Highway 212.	8.27	12-23-64	1,240
46	West Fork Tryon Creek	Tryon Creek	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.1 S., R.1 E., at culvert on S.W. Arnold Street, in Portland.	1.22	1-18-53	104
47	Kelley Creek	Johnson Creek	SE $\frac{1}{4}$ sec.19, T.1 S., R.3 E., at culvert on S.E. Foster Road, 0.1 mile northeast of Pleasant Valley School, and 1.2 miles southeast of Sycamore.	0.58	1-18-53	58
Columbia River basin between Willamette River and Pacific Ocean						
48	Gnat Creek	Columbia River	NW $\frac{1}{4}$ sec.14, T.8 N., R.7 W., 0.1 mile upstream from Rock Creek, 3 miles east of Knappa.	(+)	12-09-53	1,000
Alsea River basin						
49	North Fork Weiss Creek	Weiss Creek	SE $\frac{1}{4}$ sec.33, T.13 S., R.11 W., at dam about 0.2 mile upstream from mouth, 3 miles southeast of Waldport.	.12	1-17-53	34
Umpqua River basin						
50	O'Shea Creek	South Umpqua River	NW $\frac{1}{4}$ sec.36, T.30 S., R.5 W., at dam near private road, 1.5 miles east of Canyonville, and 2.3 miles upstream from mouth.	7.80	1-18-53	361
51	Canyon Creek	South Umpqua River	SE $\frac{1}{4}$ sec.12, T.31 S., R.5 W., at dam 0.4 mile upstream from Bear Gulch, 4.1 miles south of Canyonville.	10.4	1-06-48 10-29-50	1,270 715
52	Shoestring Creek	Cow Creek	SE $\frac{1}{4}$ sec.25, T.30 S., R.6 W., at culvert on Shoestring road, 1.0 mile upstream from mouth, and 1.4 miles south of Riddle.	2.31	1-18-53	162
53	Sutherlin Creek	North Umpqua River	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.7, T.26 S., R.5 W., at bridge on county road in north Wilber.	22.6	12-22-55	3,830
54	Calapooya Creek	Umpqua River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.31, T.24 S., R.3 W., 1,000 ft upstream from Hinckel Creek, 5.2 mi/northeast of Nonpareil.	49.6	12-21-55	4,980
55	Elk Creek	Umpqua River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.30, T.22 S., R.4 W., 0.4 mile upstream from Bennet Creek, 4 miles northeast of Yoncalla.	37.6	12-21-55	2,700
56	Yoncalla Creek	Elk Creek	Sec.10, T.23 S., R.5 W., at railroad bridge 0.2 mile upstream from Huntington Creek, 1.1 miles south of Yoncalla.	(+)	9-28-50	1,250
57	Pass Creek	Elk Creek	SE $\frac{1}{4}$ sec.11, T.21 S., R.4 W., at culvert on U.S. Highway 99, 4.3 miles northeast of Curtin.	1.40	1-18-53	86
58	Hancock Creek	Elk Creek	NE $\frac{1}{4}$ sec.21, T.22 S., R.7 W., at culvert on State Highway 38, 0.1 mile upstream from mouth, and 1.9 miles east of Elkton.	3.50	1-18-53	85

+ Not determined.



## PEAK DISCHARGE AT MISCELLANEOUS SITES IN OREGON

Measurements of peak flow at points other than crest-stage stations are given in the following table.

Map No.	Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
Coquille River basin						
59	Ferry Creek	Coquille River	SE $\frac{1}{4}$ sec.29, T.28 S., R.14 W., at dam above mouth of Geiger Creek, 0.5 mile east of Bandon.	1.91	1-18-53	277
Pacific Slope basins between Coquille and Rogue Rivers						
60	Floras Lake tributary	Floras Lake	NW $\frac{1}{4}$ sec.22, T.31 S., R.15 W., at culvert on U.S. Highway 101, 1.0 mile south of Denmark, and 1.7 miles upstream from Floras Lake.	2.06	1-17-53	172
61	Pacific Ocean tributary	Pacific Ocean	NW $\frac{1}{4}$ sec.15, T.33 S., R.15 W., at culvert on U.S. Highway 101, 0.8 mile north of Humbug State Park, 2.2 miles southeast of Port Orford.	.80	1-17-53	120
Rogue River basin						
62	Trail Creek tributary	Trail Creek	NE $\frac{1}{4}$ sec.17, T.33 S., R.1 W., at culvert on State Highway 42, 4 miles north of Trail.	0.91	1-18-53	64
63	Dry Creek	Antelope Creek	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.23, T.36 S., R.1 W., 3 miles southeast of Eagle Point.	13.4	5-18-55 12-22-55	2,430 1,020
64	Hill Creek	Emigrant Creek	NW $\frac{1}{4}$ sec.32, T.39 S., R.2 E., on State Highway 66, at flow line of Emigrant Reservoir 5 miles southeast of Ashland.	8.33	12-02-62	943
65	Wagner Creek <sup>2/</sup>	Bear Creek	NE $\frac{1}{4}$ sec.11, T.39 S., R.1 W., at Cippoletti weir 0.5 mile upstream from Talent Irrigation District intake, and 3 miles south of Talent.	13.6	1-18-53	217
66	Anderson Creek	Bear Creek	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.33, T.38 S., R.1 W., at culvert on Anderson Creek road, 0.5 mile downstream from North and South Forks, and 3 miles southwest of Talent.	7.24	1-18-53	60
67	Crooked Creek	Bear Creek	SW $\frac{1}{4}$ sec.12, T.38 S., R.2 W., on Pioneer road, 2.0 miles south of Medford.	1.65	12-02-62	232
68	Walker Creek	Jackson Creek	NE $\frac{1}{4}$ sec.29, T.37 S., R.2 W., on Old Stage Road, 0.7 mile north of Jacksonville.	2.33	12-02-62	117
69	Willow and Lane Creeks	Bear Creek	NE $\frac{1}{4}$ sec.6, T.37 S., R.2 W., at two culverts on Old Stage Road, 340 feet west of intersection with Scenic Drive, 3 miles west of Central Point.	3.85	12-02-62	118
70	Love Creek	Butcherknife Creek	NE $\frac{1}{4}$ sec.19, T.37 S., R.7 W., at culvert on U.S. Highway 199, 200 ft upstream from mouth and 2.3 miles southwest of Wonder.	.69	1-18-53	70
71	Jack Creek	Jumpoff Joe Creek	NW $\frac{1}{4}$ sec.32, T.34 S., R.5 W., at dam 0.1 mile downstream from Horse Creek, 0.5 mile upstream from mouth, and 6.4 miles northeast of Merlin.	7.24	1-18-53	500
72	East Fork Illinois River	Illinois River	SE $\frac{1}{4}$ sec.22, T.39 S., R.8 W., at culvert on State Highway 46, 0.5 mile upstream from mouth, and 1.1 miles southeast of Cave Junction.	.95	1-18-53	76
Pacific Slope basins south of Rogue River						
73	Pacific Ocean tributary	Pacific Ocean	NE $\frac{1}{4}$ sec.18, T.38 S., R.14 W., at culvert on U.S. Highway 101, at mouth, 1.1 miles north of town of Pistol River.	1.00	1-17-53	96

<sup>2/</sup> Former gaging station 14-3550.

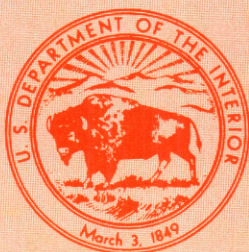
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14303700	Alder Brook near Rose Lodge.....	113
14158900	Anderson Creek near McKenzie Bridge.....	80
14094200	Antelope Creek at Antelope.....	69
13177895	Antelope Creek tributary near McDermitt.....	19
13281800	Antone Creek near North Powder.....	28
14299500	Asbury Creek near Cannon Beach.....	109
14204100	Bateman Creek near Glenwood.....	99
14169700	Bear Creek near Cheshire.....	83
14322700	Bear Creek near Drain.....	128
14080100	Bear Creek tributary near Brothers.....	64
14080300	Bear Creek tributary near Millican.....	65
14080150	Bear Creek tributary No. 2 near Brothers.....	64
14308950	Beaver Creek near Drew.....	121
14203800	Beaver Creek near Glenwood.....	98
14038750	Beech Creek near Fox.....	46
14046300	Big Service Creek near Service Creek.....	53
10352200	Blue Mountain Creek tributary near McDermitt.....	7
14102300	Box Elder Canyon near Grass Valley.....	71
14043800	Bridge Creek near Prairie City.....	50
10390400	Bridge Creek near Thompson Reservoir.....	8
11494800	Brownsworth Creek near Bly.....	13
14040900	Bruin Creek near Dale.....	49
14048050	Buck Canyon near Klondike.....	59
14323020	Buck Creek tributary near Scottsburg.....	129
13333050	Buford Creek near Flora.....	36
14199700	Bull Creek near Colton.....	97
13274600	Burnt River tributary at Durkee.....	27
14369800	Butcherknife Creek near Wonder.....	144
14354400	Butler Creek near Ashland.....	141
14172300	Butte Creek near Plainview.....	85
14032100	Butter Creek tributary near Pine City.....	42
14320600	Cabin Creek tributary near Oakland.....	127
13275400	California Gulch near Baker.....	27
14308900	Canyon Creek at Canyonville.....	120
13231700	Canyon Creek tributary near Brogan.....	24
14158750	Carmen Creek near McKenzie Bridge.....	80
14046650	Carrol Creek near Mitchell.....	54
14034830	Cason Canyon at Ruggs.....	44
14078300	Cemetery Creek near Paulina.....	62
14208200	Collawash River tributary near Breitenbush Hot Springs.....	100
14047300	Condon Canyon tributary near Clarno.....	55
14339200	Constance Creek near Sams Valley.....	138
14043850	Cottonwood Creek near Galena.....	50
14094300	Cow Canyon near Antelope.....	70
14174100	Cox Creek at Albany.....	86
11341200	Crane Creek near Lakeview.....	12
13181300	Crooked Creek near Burns Junction.....	20
13181400	Crooked Creek tributary at Burns Junction.....	20
14079750	Crooked River tributary near Post.....	63
10392800	Crowsfoot Creek near Burns.....	9
11501300	Crystal Creek near Chiloquin.....	14
11497800	Currier Creek near Paisley.....	14
14324520	Dagget Creek near Allegany.....	130
13182100	Dago Gulch near Rockville.....	21
14307550	Deadwood Creek tributary at Alpha.....	116
13291400	Deer Creek near Imnaha.....	30
10393900	DeVine Canyon near Burns.....	10
13333100	Doe Creek near Imnaha.....	37
14316600	Dog Creek near Idleld Park.....	124
14046400	Donnelly Creek tributary near Service Creek.....	53
13322300	Dry Creek near Bingham Springs.....	34
14128740	Dry Creek at Cascade Locks.....	72
14080600	Dry Creek near Prineville.....	66
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14247020	Fall Creek near Clatskanie.....	106
14148700	Fern Creek near Lowell.....	77
14038900	Fields Creek near Mt. Vernon.....	46
14335080	Fireline Creek near Butte Creek.....	137
14300400	Fishhawk Creek near Jewel.....	110
14316650	Fugawee Creek near Disston.....	125
14048350	Fulton Canyon tributary at Wasco.....	60
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14326600	Gettys Creek near Myrtle Point.....	131
14192200	Gibson Creek near Salem.....	94
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13289100	Immigrant Gulch near Richland.....	29
13177980	Indian Creek near Jordan Valley.....	19
14046250	Ives Canyon near Spray.....	52
14039400	Jackass Creek near Dayville.....	47
10352300	Jackson Creek tributary near McDermitt.....	7
13272300	Job Creek tributary near Unity.....	26
14036800	John Day River near Prairie City.....	44
14046900	John Day River tributary near Clarno.....	55
14361300	Jones Creek near Grants Pass.....	142
14100800	Jordan Creek near Tygh Valley.....	71
14047470	Juniper Canyon tributary near Mikkalo.....	57
14046600	Keyes Creek tributary near Mitchell.....	54
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14131200	Lady Creek near Rhododendron.....	74
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14185850	Little Meadow Creek near Detroit.....	91
14078200	Lizard Creek tributary near Hampton.....	61
14087100	Lone Pine Creek tributary near Prineville.....	68
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14078400	Lookout Creek near Post.....	63
14161600	Lookout Creek tributary near Blue River.....	82
14161200	Lookout Creek tributary No. 3 near Blue River.....	81
14040800	Lost Creek near Granite.....	48
11505550	Lost Creek near Rocky Point.....	15
13229400	Lost Valley Creek tributary near Ironside.....	23
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13219300	Malheur River tributary near Harper.....	22
14312300	Marks Creek near Roseburg.....	123
13318100	McIntyre Creek near Starkey.....	31
14222905	Merrill Creek at Deer Island.....	106
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13269900	Middle Fork Burnt River near Unity.....	26
14078280	Middle Fork Camp Creek near Paulina.....	62
14144870	Middle Fork Willamette River tributary near Oakridge.....	75
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13319200	Mill Creek at La Grande.....	31
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13269200	Moores Hollow tributary near Weiser.....	24
11491800	Mosquito Creek tributary near Shevlin.....	13
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14197300	Panther Creek near Carlton.....	96
14312100	Parrott Creek at Roseburg.....	122
14301400	Patterson Creek at Bay City.....	111
14044100	Paul Creek near Long Creek.....	51
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14153900	Prather Creek near Disston.....	78
14104100	Ramsey Creek near Dufur.....	72
14378900	Ransom Creek near Brookings.....	152
14210800	Rock Creek near Boring.....	104
14170500	Rock Creek near Philomath.....	84
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14306010	Rocky Creek near Depoe Bay.....	113
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14080180	Sage Hollow near Millican.....	65
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14307640	Sam Creek near Minerva.....	118
11341100	Salt Creek near Lakeview.....	11
14211800	Saltzman Creek at Portland.....	105
14322850	Sawyer Creek near Elkton.....	129
14377900	Secret Creek near Wonder.....	149
14184900	Sheek Creek near Cascadia.....	90
14178600	Short Creek at Breitenbush Hot Springs.....	87
10392300	Silvies River near Seneca.....	9
14307610	Siuslaw River tributary near Rainrock.....	117
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14048300	Spanish Hollow at Wasco.....	59
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13172930	Spring Creek tributary near Rockville.....	16
14303650	Squaw Creek near Neskowin.....	112
10406400	Sunrise Valley tributary near Follyfarm.....	11
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14145690	Swamp Creek near McCredie Springs.....	75
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U. S. DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
PORTLAND, OREGON