# STATISTICAL SUMMARIES OF STREAMFLOW DATA IN OREGON

Volume 2. Western Oregon

United States Department of the Interior Geological Survey, 7 Open-File Report 84-454

Prepared in cooperation with the Oregon Water Resources Department

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By John Friday and Suzanne J. Miller

U.S. GEOLOGICAL SURVEY (
OPEN-FILE REPORT)84-454

Prepared in cooperation with Oregon Water Resources Department





#### UNITED STATES DEPARTMENT OF THE INTERIOR

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Cover photo: Dog Creek near IdleyId

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# ILLUSTRATIONS [Plate is in pocket]

Plate 1. Map showing location of streamflow gaging stations in western Oregon.

#### METRIC CONVERSION TABLE

To convert inch-pound units  $\lceil$  in this report $\rceil$  to metric units, multiply by the following factors:

Multiply inch-pound unit	<u>By</u>	To obtain metric unit
acre	0.4047	hectometer (hm)
acre-foot per year (acre-ft/yr)	0.001233	<pre>cubic hectometers per year   (hm³/yr)</pre>
cubic foot per second (ft³/s and CFS)	0.02832	cubic meter per second (m³/s)
foot (ft)	0.3048	meter (m)
inch per year (in/yr)	25.40	millimeter per year (mm/yr)
mile (mi)	1.609	kilometer (km)
square mile (mi²)	2.590	square kilometer (km²)

#### STATISTICAL SUMMARIES OF STREAMFLOW DATA IN OREGON

#### VOLUME 2. WESTERN OREGON

By John Friday and Suzanne J. Miller

#### **ABSTRACT**

Statistical summaries of streamflow data at 212 stream-gaging sites are presented in this report to aid in appraising the hydrology of river basins in Western Oregon. Records for 21 gaging stations were compiled into separate periods owing to changes in regulation during the period of data collection. The periods before and after regulation are presented for comparison.

A brief station description is given describing the physical and operational features for each gaging station. Following the station description are tables of monthly and annual flow statistics, flood frequency data, low-flow and high-flow frequency data, and flow-duration information.

#### INTRODUCTION

This is the second of two volumes of statistical summaries of streamflow data collected at gaging stations in Oregon. Volume 1 contains data from 123 gaging stations located in the area east of the divide of the Cascade Range. Volume 2 contains data from 212 gaging stations in the remainder of the State. It is anticipated these reports will be updated about every five years.

This report was prepared in cooperation with the Oregon Water Resouces Department (OWRD). The purpose is to provide water-resource managers with a knowledge of streamflow characteristics based on historical data. For the purpose of this report, gaging-station records had to satisfy one of two criteria. The data had to be hydrologically transferable (for use in estimating streamflow in ungaged basins), or it had to be a significant indicator of flow availability. For example, a gage at the outlet of a natural lake would have little hydrologic transferability (due to storage of water in the lake), but the data would be a good indication of low-flow availability as well as flood events.

Stations on canals, reservoirs, or combined-flow stations, were not used in this report. Data for combined-flow stations include diverted flow which may or may not reenter the stream downstream from the gage. A map showing the location of gaging stations used in this report is enclosed in a packet in the back of the book.

#### STREAMFLOW RECORDS

Both active and discontinued gaging stations having a minimum of 10 years of daily-mean discharge values were used in this report. For active stations, the period of record extends to the end of the 1982 water year (ending on September 30). A brief station description showing the physical and operational features of the gaging station precedes the statistical summaries for each station. Except for paragraphs describing revised records and extremes for a specific year, the station descriptions are identical to the last-published version in the annual release "Water Resources Data - Oregon" (U.S. Geological Survey, 1983). A detailed explanation of the manuscript data and a definition of terms is given in that report.

Sometimes the natural flow of a stream may be altered by the construction of a dam, an irrigation diversion, or by the augmentation of flow by transbasin diversions. If this occurs during the operation of a gaging station, the statistical summaries must reflect both natural and altered states of flow, providing there are at least 10 years of data for each state. There are 21 such stations in this report.

#### STATISTICAL SUMMARIES

The tables of statistical data include monthly and annual mean discharges, magnitude and probability of annual low flows, magnitude and probability of annual high flows, magnitude and probability of instantaneous peak flows, and a duration table of daily mean flows. The statistics were generated by using computer programs available from the U.S. Geological Survey's "National Water Data Storage and Retrieval System" (WATSTORE).

#### Monthly and Annual Mean Discharges

This statistical summary is from computer program W4422 by Price and Meeks (1977). The period of record shown in the heading is the first and last water year for which daily-mean discharge values are available, and does not necessarily indicate a continuous period of record (see the PERIOD OF RECORD paragraph in the station description for fragmentary records).

The standard deviation shown in the table is a measure of the variability of flows occurring during a given month during the period of record. The value represents the spread in discharges (from the mean value) that could be expected to occur two-thirds of the time based on the distribution of data during the sampling period. The coefficient of variation is the ratio of the standard deviation to the mean.

The annual mean shown in the table will sometimes vary from the average discharge shown in the manuscript because the annual mean is based only on years for which daily-mean discharge values are available, while the average discharge includes years having estimated monthly values.

#### Magnitude and Probability of Annual Low Flows

This summary is from computer program A969 by Meeks (1977). The computation period is based on a climatic year which ends on March 31 thus assuring the low-flow season will be complete within a twelve-month period. The recurrence interval was generally extended to twice the period of record for stations having less than 40 years of record. If 40 or more years of record were available, the recurrence interval was extended to 100 years (a flow having a 1 percent chance of not being exceeded in any given year).

The table shows the amount of flow that probably would not be exceeded, during specified periods, for the indicated recurrence intervals. The recurrence intervals are also shown as nonexceedance probabilities which are expressed as a percent chance of the event not being exceeded in any given year. For example, the low flow during a 30-day period might not be exceeded on the average of once every 50 years, and would have a 2 percent chance of not being exceeded in any given year.

#### Magnitude and Probability of Annual High Flows

This summary is also from computer program A969 (Meeks, 1977). The period of record is based on water years having daily-mean discharge data. The recurrence intervals are extended in the same manner as the low-flow frequency. The table shows maximum flows that could be equalled or exceeded, during specified periods, for the indicated recurrence intervals. Occasionally, the values shown for a 1-day period will exceed the instantaneous peaks shown for the same recurrence intervals in the adjacent table. The reason for this is that different periods of record are involved. Quite often peak data are documented outside the period of systematic data collection.

#### Magnitude and Probability of Instantaneous Peak Flow

This summary is from computer program J407 by Kirby (1981). The period of record shows the first and last water years for which annual peak flows were documented. The table shows the magnitude of instantaneous peak flows for selected recurrence intervals as computed from a log-Pearson Type III probability distribution of gaging-station data. For stations having less than 25 years of record, the frequency curve was based on a generalized skew coefficient taken from the U.S. Water Resources Council Bulletin 17B (1981). For stations having more than 25 years of data, the skew coefficient was determined by weighing the generalized skew against the actual station skew as recommended by the Council. The skew used for a particular station is shown at the bottom of the table.

Flood-frequency data were not determined at gaging stations immediately downstream from dams and reservoirs. At stations where low-flow statistics are divided into two periods due to the construction of a bypass structure, the flood-frequency data are computed for the entire period of record.

#### <u>Duration Table of Daily Mean Flow</u>

This summary is from computer program A969 by Meeks (1977). The period of record indicates the first and last water year where daily-mean values of discharge were available for analysis. The table shows the amount of flow that was equalled or exceeded for the indicated percent of the time.

#### **REFERENCES**

- Kirby, William, 1981, Annual flood frequency analysis using U.S. Water Resources Council guidelines (Program J407), chapter I, section C of WATSTORE user's guide: U.S. Geological Survey Open-File Report 76-435, v. 4, p. C-1 to C-57.
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- U.S. Geological Survey, 1983, Water resources data, Oregon, water year 1982, volume 2. Western Oregon; Portland, Oregon, U.S. Geological Survey Water-Data Report OR-82-2, 419 p.
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#### 14131000 LITTLE ZIGZAG RIVER AT TWIN BRIDGES, NEAR RHODODENDRON, OR

LOCATION.--Lat 45°18'50", long 121°48'30", in NW# sec.15, T.3 S., R.8 E., Clackamas County, Hydrologic Unit 17080001, 0.1 mi upstream from mouth and the upper of Twin Bridges on the Mount Hood Loop Highway and 5.5 mi east of Rhododendron.

DRAINAGE AREA.--3.7 mi², approximately.

PERIOD OF RECORD. -- April 1926 to September 1936.

GAGE.--Water-stage recorder. Datum of gage is 2,905.16 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--10 years (water years 1927-36), 25.3 ft<sup>3</sup>/s.

33 31 30

28

27

25

36

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 250 ft<sup>3</sup>/s Mar. 31, 1931, gage height not determined, from area-velocity study and comparison with discharge of nearby streams; maximum gage height, 3.5 ft Oct. 7, 1930 (probably backwater from debris); minimum, 15 ft<sup>3</sup>/s Feb. 1-13, 16-18, 1932.

#### STATISTICAL SUMMARIES

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монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	20	25	22	1.6	.07	7.3	1						
NOVEMBER	20	30	24	2.9	.12	7.8	3						
DECEMBER	19	44	26	7.1	.27	8.6	7						
IANUARY	20	42	26	6.5	.25	8.5	14						
EBRUARY	17	31	24	4.5	.18	8.1	30						
1ARCH	23	36	26	4.1	.16	8.7	60				~-		
APR I L	24	32	29	2.6	.09	9.4	90						
1A Y	24	37	31	4.5	.15	10.1	120					<b></b>	
IUNE	23	42	28	5.3	. 19	9.2	183						
JULY	21	30	24	2.6	.11	7.9							
UGUST	19	25	22	1.9	.09	7.2	NOTE: L	ESS THAI	N 10 YEAF	RS OF DAT	A AVAILA	BLE.	
	17	24	22	2.0	.09	7.2							
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MAGNIT ISCHARGE, YEARS, A 1.25 80%	22  FUDE AND BASE  IN CFS, NND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	DUS PEAK F 7-36 INTERVAL, IN PERCEN	FLOW IN NT	PERIOD (CON- SECU- TIVE DAYS) 1	DISCH.  2 50%	D ON PER ARGE, IN INTERVA EXCEEDANC 5 20% 82 61	CFS, FOR LL, IN YE E PROBAB 10 10%	CORD 19 R INDICAT ARS, AND HILITY, I 25 4%	27-36  ED RECUR ANNUAL N PERCEN 50 2%	RENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	22  FUDE AND BASE  IN CFS, NND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	DUS PEAK F 7-36 INTERVAL, IN PERCEN	FLOW IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH, 2 50%	D ON PER ARGE, IN INTERVA EXCEEDANC 5 20% 82 61 49	OD OF RECEPTION OF THE PROBLE PROBLE 10 10% 107 74 57	CORD 19 CORD 1	27-36  ED RECUR ANNUAL N PERCEN  50 2%	RENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	22  FUDE AND BASE  IN CFS, NND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	DUS PEAK F 7-36 INTERVAL, IN PERCEN	FLOW IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH.  2 50%  54 45 39 36	D ON PER  ARGE, IN INTERVA EXCEEDANC  5 20%  82 61 49 43	OD OF RECEPTION OF THE PROBABLE TO THE PROBABL	CORD 19 R INDICAT ARS, AND BILITY, I 25 45	27-36  ED RECUR ANNUAL N PERCEN 50 2%	RENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	22  FUDE AND BASE  IN CFS, NND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	DUS PEAK F 7-36 INTERVAL, IN PERCEN	FLOW IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH.  1 2 50%  54 45 39 36 34	ARGE, IN INTERVAEXCEEDANG  5 20%  82 61 49 43 40	CFS, FOR NL, IN YEE PROBAB 10 10%	CORD 19	27-36  ED RECUR ANNUAL N PERCEN 50 2%	RENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	22  FUDE AND BASE  IN CFS, NND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE ABILITY,	DUS PEAK F 7-36 INTERVAL, IN PERCEN 50 1 2%	FLOW IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH,  2 50%  54 45 39 36 34 32 30	ARGE, IN INTERVALENCED ON PER STATE OF	CFS, FORAL, IN YEE PROBAB  10 10 7 74 57 48 44 40 37	CORD 19	27-36  ED RECUR ANNUAL N PERCEN 50 2%	RENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	22  FUDE AND BASE  IN CFS, NND ANNUA  2  50%	PROBABILI D ON PERI- FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RECOME OF RECOME PROB	ISTANTANE CORD 192 CURRENCE SABILITY, 25 4%	DUS PEAK F 7-36 INTERVAL, IN PERCEN 50 1 2%	FLOW  IN  IN  IN  IN  IN  IN  IN  IN  IN  I	PERIOD (CON- SECU- TIVE DAYS)	DISCH,  2 50%  54 45 39 36 34 32 30  OF RECOR	82 61 49 43 40 36 37 82 82	CFS, FORL, IN YEE PROBAB.  10 10 57 48 44 40 37 37 366	R INDICAT	27-36  ED RECUR ANNUAL N PERCEN 50 2%	RENCE

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#### 14134000 SALMON RIVER NEAR GOVERNMENT CAMP, OR

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

DRAINAGE AREA .-- 8.00 mi2.

PERIOD OF RECORD.--May 1910 to May 1912, April 1926 to September 1982. Published as "near Rowe" 1910-12.

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

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--57 years (water years 1911, 1927-82), 44.4 ft<sup>3</sup>/s, 75.37 in/yr, 32,170 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1911-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1912-82

монтн	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR	RS, AND A	NNUAL NO	-NC
	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2%	100 1%
OCTOBER	14	52	25	8.5	.33	4.8	1	17	14	13	12	11	10
NOVEMBER	14	90	38	17	. 45	7.1	3	17	15	13	12	11	10
DECEMBER	15	135	50	26	.53	9.4	7	18	15	14	13	12	11
JANUARY	17	98	43	18	.41	8.2	14	19	16	14	13 -	12	1.1
FEBRUARY	15	109	42	18	.43	7.9	30	20	17	15	14	13	12
MARCH	21	89	39	13	.34	7.3	60	21	18	16	15	14	13
APRIL	27	82	52	13	.25	9.7	90	23	19	17	16 .	15	14
MAY	32	125	76	22	. 28	14.3	120	24	20	18	17	16	15
JUNE	24	164	71	30	.43	13.3	183	30	24	21	19	18	- 17
JULY	17	97	43	18	.41	8.2							
AUGUST	16	55	28	8.1	.29	5.3							
SEPTEMBER	15	37	24	5.0	.21	4.5							
ANNUAL	24	63	44	8.7	.19	100		•					

MAGNITUDE	AND	PROF	BABILI	TY (	)F	INSTANT	ANEOUS	PEAK	FLOW	
	RASI	ED OF	I PERI	on c	ЭF	RECORD	1911-82	,		

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1911-82

DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT							PERIOD (CON-		INTERV	CFS, FOI AL, IN YI CE PROBAI	EARS, AN	D ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
183	287	465	608	817	996	1190	4	****		707	E10	600	745
WEIGHTED	SKEW =	.269					1 3 7	192 145 121	297 213 165	383 270 198	510 356 245	620 432 282	745 520 323
							15	106	137	157	182	200	217
							30 60 90	95 84 75	119 102 89	132 111 96	147 119 103	157 124 107	165 128 110

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1911-82

 		DISCHA	RGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
102	82	71	63	55	50	42	36	31	27	25	24	22	20	18

#### 14134500 SALMON RIVER BELOW LINNEY CREEK, OR

LOCATION.--Lat 45°13'20", long 121°51'40", in SW¼ sec.17, T.4 S., R.8 E., Clackamas County, Hydrologic Unit 17080001, 200 ft downstream from Linney Creek, 8 mi southwest of Government Camp, and 9 mi southeast of Welches.

DRAINAGE AREA.--54 mi², approximately.

PERIOD OF RECORD. -- October 1927 to September 1950.

GAGE.--Water-stage recorder. Altitude of gage is 2,500 ft, from topographic map. Prior to Oct. 18, 1934, 25 ft downstream at same datum.

 $\label{lem:regulation} \textit{REMARKS.--No diversion or regulation above station.}$ 

AVERAGE DISCHARGE.--23 years (water years 1928-50), 205 ft3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft³/s Mar. 31, 1931, gage height, 5.81 ft, site then in use, from rating curve extended above 1,500 ft³/s by logarithmic plotting; minimum, 37 ft³/s Nov. 2, 1936, gage height, 0.22 ft.

МС	ONTHLY AN	D ANNUAL	MEAN DIS	CHARGES	1928-50		MAC				OF ANNUAL RECORD 19		)W
		MAX1MUM		STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	OR INDICAT ARS, AND A ABILITY, I	NNUAL NO	N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	53	243	90	47	.52	3.7	1	52	47	45	44		
OVEMBER	47	446	182	120	.66	7.4	3	52	47	46	44		
DECEMBER	79	676	250	162	.65	10.1	7	53	48	46	45		
ANUARY	73	528	212	114	.54	8.6	14	55	49	47	46		
EBRUARY	81	395	197	77	.39	8.0	30	57	52	50	48		
MARCH	129	483	248	83	.33	10.1	60	62	55	52	50		
APRIL	119	632	370	119	.32	15.0	90	66	57	54	52		
YAY	125	776	414	181	.44	16.8	120	72	61	57	54		
JUNE JULY	87 64	585	242	131 39	.54	9.8	183	98	77	69	64		
AUGUST	50	198 117	117 76	39 18	.33 .23	4.7							
SEPTEMBER	50 53	103	76 66	11		3.1							
PERTEMBER	22	100	00	1.1	.16	2.7							
ANNUAL  MAGNIT		286 PROBABILI D ON PERIO			.22  OUS PEAK F 8-50	100 	 MAG				OF ANNUAL		 ow
MAGNIT	TUDE AND BASE	PROBABILI D ON PERIO	TY OF INOD OF RE	ISTANTANE CORD 192	OUS PEAK F	FLOW	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FC	ECORD 19  R INDICAT EARS, AND	28-50 ED RECUR	 RENCE
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF INOD OF RE	ISTANTANE CORD 192	OUS PEAK F 8-50 INTERVAL IN PERCEI	FLOW		BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	CFS, FC	ECORD 19	28-50 ED RECUR ANNUAL N PERCEN	RENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80≴	IN CFS,	PROBABILI' D ON PERIO FOR INDIO L EXCEEDAL	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEI	FLOW , IN	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5	CFS, FC AL, IN Y CE PROBA	ECORD 19 OR INDICAT (EARS, AND OBILITY, I	28-50  ED RECUR ANNUAL N PERCEN	RENCE
MAGNIT DISCHARGE, YEARS, A	IN CFS,	PROBABILI' D ON PERIO FOR INDIO L EXCEEDAL	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	CFS, FC	ECORD 19 OR INDICAT (EARS, AND ABILITY, I	28-50 ED RECUR ANNUAL N PERCEN	RENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDAI	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5	CFS, FC AL, IN Y CE PROBA	ECORD 19 OR INDICAT (EARS, AND OBILITY, I	28-50  ED RECUR ANNUAL N PERCEN	RENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80≴	IN CFS,	PROBABILI D ON PERIO FOR INDIO L EXCEEDAI	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FCAL, IN YCE PROBA	EECORD 19  OR INDICAT EEARS, AND BILITY, I  25 4%	28-50  ED RECUR ANNUAL N PERCEN 50 2%	 RENCE IT  100 1%
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIA L EXCEEDAI 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50%	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%	CFS, FCAL, IN YCE PROBA	RECORD 19 REINDICAT FEARS, AND BILITY, I 25 4% 2710	28-50  ED RECUR ANNUAL N PERCEN	RENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIO L EXCEEDAI	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 1100 924	D ON PER ARGE, IN INTERV EXCEEDAN 20% 1680 1360	CFS, FCAL, IN YCE PROBA-10, 10%	EECORD 19 RE INDICAT FEARS, AND BILITY, I 25 4% 2710 2090	28-50 ED RECUR ANNUAL N PERCEN 50 2%	 RENCE IT  100 1%
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIA L EXCEEDAI 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1100 924 767	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 1680 1360 1060	CFS, FC AL, IN Y CE PROBA 10 10% 2110 1670 1260	RECORD 19 RECORD	28-50 ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIA L EXCEEDAI 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50%  1100 924 767 658	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 1680 1360 1060 842	CFS, FCAL, IN YCE PROBA-10 10 10 1670 1260 937	PR INDICAT FEARS, AND BILITY, I 25 4% 2710 2090 1520 1030	28-50  ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIA L EXCEEDAI 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2  50  1100  924  767  658  574	D ON PER	CFS, FCAL, IN YCE PROBA	RECORD 19	28-50  ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIA L EXCEEDAI 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK F 8-50 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  1100 924 767 658	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 1680 1360 1060 842	CFS, FCAL, IN YCE PROBA-10 10 10 1670 1260 937	PR INDICAT FEARS, AND BILITY, I 25 4% 2710 2090 1520 1030	28-50  ED RECUF ANNUAL N PERCEN 50 2%	T 100
MAGNIT ISCHARGE, YEARS, A 1.25 80\$	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIA L EXCEEDAI 5 20%	TY OF IN	ISTANTANE CORD 192 CURRENCE IABILITY, 25 4%	OUS PEAK I 8-50 INTERVAL IN PERCEI	FLOW  IN  100  18	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  1100 924 767 658 574 481 406	ARGE, IN INTERV EXCEEDAN 1360 1360 1360 1360 842 703 580 486	CFS, FCAL, IN YCE PROBA	2710 2090 1520 1030 797 645	28-50  ED RECUR ANNUAL N PERCEN 50 2%	100 1%
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INDO OF RECATED RENCE PROB	ISTANTANE CORD 192 COURRENCE ABILITY, 25 4% 3410	OUS PEAK F 8-50 INTERVAL IN PERCEI 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50\$  1100 924 767 658 574 481 406  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20 1680 1360 1060 842 703 580 486  RD 1928-	CFS, FCAL, IN YOLE PROBA	27 10 2090 1520 1030 797 645 543	28-50  ED RECUR ANNUAL N PERCEN 50 2%	100 1%

#### 14135000 SALMON RIVER AT WELCHES, OR

LOCATION.--Lat 45°19'10", long 121°57'10", in S-1/2 sec.9, T.3 S., R.7 E., Clackamas County, Hydrologic Unit 17080001, 1,200 ft downstream from Cheeney Creek and 0.8 mi southeast of Welches.

DRAINAGE AREA .-- 100 mi2.

PERIOD OF RECORD. -- September 1913 to September 1914, August 1920 to September 1921, April 1925 to September 1936.

GAGE.--Staff gage. Altitude of gage is 1,350 ft, from topographic map. Aug. 15, 1913, to Sept. 30, 1914, 0.8 mi downstream at different datum. July 26, 1920, to Sept. 15, 1921, Apr. 1, 1925, to May 2, 1931, about 500 ft downstream at various datums.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--13 years (water years 1914, 1921, 1926-36), 438  $ft^3/s$ .

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 13,000 ft $^3$ /s Mar. 31, 1931, gage height, 9.80 ft, site and datum then in use, from rating curve extended above 4,600 ft $^3$ /s; minimum, 65 ft $^3$ /s Dec. 3-6, 1929, Aug. 31 to Sept. 3, 1931.

#### STATISTICAL SUMMARIES

MONTH				51000115050	4044
MONTHLY	ANU	ANNUAL	MEAN	DISCHARGES	1914-36

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1926-36

	MINIMUM	MAXIMUM	145.441	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL NO	DN-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	80	519	222	140	.63	4.2	1	71	66	64	63		
NOVEMBER	<b>→</b> 73	1359	481	358	.74	9.2	3	71	66	64	63		
DECEMBER	219	1641	576	384	.67	11.0	7	72	67	65	64		
JANUARY	275	1066	619	263	.42	11.8	14	74	69	67	66		
FEBRUARY	183	1113	545	300	.55	10.4	30	78	71	69	68 -		
MARCH	468	1322	707	255	.36	13.5	60	86	76	73	71		
APRIL	298	955	697	189	.27	13.3	90	94	80	75	73		
MAY	231	1045	646	276	. 43	12.3	120	106	87	81	78		
JUNE	132	1071	377	236	.63	7.2	183	171	130	117	109		
JULY	86	277	159	49	.31	3.0					<del>-</del>		
AUGUST	75	142	102	18	- 18	1.9							
SEPTEMBER	. 76	296	123	64	.52	2.3							
ANNUAL	284	589	438	94	.21	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1914-36

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1914-36

				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10% 	25 4% 	50 2% 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
3950	5360	7520	9110	11300						<b>-</b>		<b></b>	
			<b>-</b>				1	4220	5700	6700	7980		
WEIGHTED	SKEW =	.374					3	2930	3960	4580	5310		
							7	2060	2850	3370	4040		
							15	1490	1970	2270	2640		
							30	1150	1410	1580	1800		
							60	915	1110	1240	1400		
							90	806	957	1050	1180		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-36

 	_	DISCH	ARGE, IN	CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1160	932	790	677	580	495	379	295	221	164	137	115	99	86	77

#### 14135500 SALMON RIVER ABOVE BOULDER CREEK, NEAR BRIGHTWOOD, OR

LOCATION.--Lat 45°21'40", long 122°00'40", in SW\SE\ sec.25, T.2 S., R.6 E., Clackamas County, Hydrologic Unit 17080001, on left bank 1.1 mi upstream from Boulder Creek, 1.2 mi south of Brightwood, and 2.0 mi upstream from mouth.

DRAINAGE AREA. -- 106 m12.

PERIOD OF RECORD. -- August 1936 to September 1952.

GAGE.--Water-stage recorder. Datum of gage is 1,089.2 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--16 years (water years 1937-52) 452 ft<sup>3</sup>/s, 327,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft $^3$ /s Dec. 14, 1946, gage height, 7.08 ft, from rating curve extended above 4,100 ft $^3$ /s by logarithmic plotting; minimum, 59 ft $^3$ /s Nov. 30, Dec. 1, 1936, Sept. 25, 26, 1940.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1937-52 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1938-52

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI~ CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	74	582	224	159	.71	4.1	1	81	70	65	61		
NOVEMBER	70	1058	527	318	.60	9.7	3	82	71	65	61		
DECEMBER	175	1666	713	374	.52	13.1	7	83	72	67	63		
JANUARY	143	1026	518	268	.52	9.5	14	86	75	70	66		
FEBRUARY	<b>25</b> 3	956	629	218	.35	11.6	30	91	79	74	69		
MARCH	228	900	572	163	.28	10.5	60	101	86	79	74		
APRIL	228	1064	738	225	.30	13.6	90	111	92	84	78		
MAY	270	1294	715	292	.41	13.2	120	134	105	92	83		
JUNE	142	907	399	187	.47	7.3	183	217	156	132	114		
JULY	94	313	184	59	.32	3.4							
AUGUST	71	161	112	24	.21	2.1							
SEPTEMBER	76	140	103	21	.20	1.9							
ANNUAL	246	613	452	112	.25	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1937-52

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1937-52

				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	'AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10 <b>%</b> 	25 4% 	50 2%	100 1% 	SECU- TIVE DAYS)			10 10%	•	50 2%	100 1 <b>%</b>
3270	4780	7260	9180	11900				<b></b>					
							1	3270	4760	5960	7760		
<b>VE</b> I GHTED	SKEW =	.343					3	2270	3440	4490	6240		
							7	1690	2490	3150	4170		
							15	1290	1780	2120	2560		
							30	1100	1420	1600	1800		
							60	916	1120	1210	1300		
							90	834	1010	1100	1170		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-52

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATE	PERCENT	F OF TIM	 Е		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1260	954	802	695	610	536	411	317	237	171	141	121	106	94	81

#### 14137000 SANDY RIVER NEAR MARMOT, OR

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

DRAINAGE AREA. -- 262 mi2.

PERIOD OF RECORD.--August 1911 to September 1982. Published as "at Marmot" October 1912 to September 1913. Records for January 1916 to June 1919, published as "below dam, near Marmot," obtained by combining records for Sandy River below dam, near Marmot, with records for Sandy River Canal near Marmot.

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

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--71 years, 1,368 ft<sup>3</sup>/s, 70.91 in/yr, 991,100 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1912-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1913-82

	MINIMUM	MAX 1 MUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL,	, IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	260	2168	665	400	.60	4.1	1	290	252	234	220 -	205	196
NOVEMBER	236	3699	1558	897	.58	9.5	3	295	255	237	222	207	197
DECEMBER	445	6278	2129	1189	.56	13.0	7	304	262	242	227	210	200
JANUARY	498	4752	2028	1016	.50	12.4	14	317	273	252	236	218	207
FEBRUARY	464	4686	1834	825	.45	11.2	30	337	289	267	249	231	219
MARCH	631	3983	1645	574	.35	10.0	60	373	314	288	267	247	234
APR†L	658	3134	1900	502	.26	11.6	90	409	340	310	287	263	249
MAY	744	3443	1878	628	.33	11.4	120	466	380	344	318	292	276
JUNE	496	3457	1257	580	.46	7.7	183	682	537	477	434	392	368
JULY	356	1385	654	192	. 29	4.0					<b></b>	<b>-</b>	
AUGUST	268	663	435	85	.20	2.7		•					
SEPTEMBER	265	1056	427	158	.37	2.6							
ANNUAL	766	1933	1363	273	.20	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1912-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1912-82

		S, FOR IN JAL EXCEE					PERIOD (CON-	DISC	INTER'	VAL, ÍN '	YEARS, A	ATED RECI ND ANNUAI IN PERCI	L
1.25 80%	2 50% - <b>-</b>	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
9120	14200	21900	27300	34400	39800	45300							
- <b></b>							1	10500	15600	19000	23500	26800	30200
NE I GHTEI	SKEW =	123					3	7750	11300	13900	17200	19800	2250
							. 7	5680	7900	9360	11200	12500	1380
							15	4260	5650	6510	7530	8260	895
							30	3370	4330	4920	5630	6130	661
							60	2720	3380	3780	4250	4570	487
							90	2440	2970	3270	3610	3840	405

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME		_	- <b></b>
5%	10%	15%	20%	25%	30%	40%	50%	60 <b>%</b>	70%	75 <b>%</b>	80%	85%	90%	95%
3570	2700	2250	1960	1740	1550	1240	997	793		520	<b>45</b> 6	404	358	310

14138800 BLAZED ALDER CREEK NEAR RHODODENDRON, OR LOCATION.--Lat 45°27'10", long 121°53'25", in NW±SE± sec.25, T.1 S., R.7 E., Clackamas County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 600 ft below the confluence of Bedrock and Hickman Creeks and 8.6 mi north of Rhododendron.

DRAINAGE AREA. -- 8.17 mi2.

PERIOD OF RECORD. -- October 1963 to September 1982.

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

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--19 years, 59.8 ft<sup>3</sup>/s, 99.40 in/yr, 43,330 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

				DARD DEVIA-	CIENT OF	PERCENT OF	PERIOD (CON-	H	NTERVAL,	CFS, FOR IN YEARS E PROBABI	AND AN	INUAL N	-MC
	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
CTOBER	2.4	83	30	23	.75	4.2	1	2.2	1.8	1.6	1.5		
IOVEMBER	15	177	79	46	. 58	10.9	3	2.3	1.8	1.6	1.6		
ECEMBER	23	288	122	71	.59	17.0	7	2.4	1.9	1.7	1.6		
ANUARY	23	207	113	57	.50	15.7	14	2.6	2.0	1.8	1.7		
EBRUARY	18	183	80	46	.57	11.2	30	3.1	2.3	2.0	1.9		
ARCH	29	167	60	31	.51	8.4	60	4.3	2.9	2.5	2.2		
PRIL	35	109	74	24	.32	10.2	90	6.9	4.3	3.4	2.8		
ΑY	38	165	85	37	.43	11.9	120	10	6.7	5.3	4.4		
UNE	13	115	45	30	.66	6.2	183	23	16	13	11		
ULY	4.0	24	11	5.5	<b>.</b> 49	1.6							
UGUST	2.4	28	6.7	6.2	.92	•9							
EPTEMBER	2.4	36	13	10	.81	1,8							
NNUAL	34	88	60	13	.22	100							
MAGNITU		PROBABILII O ON PERIC				LOW	MAG	NITUDE AN BASED		BILITY OF DD OF REC			_O <b>W</b>

DISCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, ÍN Y	R INDICAT EARS, AND BILITY. I	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4% 	50 2% 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2 <b>%</b>	100 <b>1%</b>
816	1150	1590	1860	2200									
							1	743	1060	1250	1460		
WEIGHTED	SKEW =	226					3	498	713	856	1030		
							7	359	499	582	676		
							15	245	329	379	438		
							30	183	238	273	317		
							60	140	177	201	231		
							90	121	152	172	197		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-82

 		DISCHA	RGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCE	NT OF TIME			
 5%	10%	15 <b>%</b>	20%	25%	30%	40%	50 <b>%</b>	60%	70 <b>%</b>	75 <b>%</b>	80%	85%	90%	95%
209	135	102	84	71	61	46	34	24	16	12	7.8	5.5	3.9	2.9

#### 14138850 BULL RUN RIVER NEAR MULTNOMAH FALLS, OR

LOCATION.--Lat 45°29'50", long 122°00'50", near center of sec.12, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, in Mount Hood National Forest, on right bank 1.2 mi upstream from North Fork, 7.0 mi southeast of Multnomah Falls, and at mile 14.8.

DRAINAGE AREA.--47.9 mi2.

PERIOD OF RECORD. -- August 1966 to September 1982.

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

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

AVERAGE DISCHARGE.--16 years, 424 ft<sup>3</sup>/s, 120.21 in/yr, 307,200 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1967-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1968-82
STAN-	DISCHARGE, IN CFS, FOR INDICATED RECURF

	MINIMUM	MAX1MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	53	535	249	155	.62	4.9	1	45	38	35	33		
NOVEMBER	147	1050	534	283	.53	10.5	3	46	39	35	33		
DECEMBER	193	1434	824	343	.42	16.2	7	47	39	36	33		
JANUARY	178	1238	755	376	.50	14.8	14	50	41	37	34		
FEBRUARY	185	1215	632	325	.51	12.4	30	58	46	41	37 -		
MARCH	236	1120	466	212	.45	9.1	60	72	53	45	40		
APRIL	242	743	483	141	. 29	9.5	90	98	71	59	50		
MAY	260	885	488	189	.39	9.6	120	119	90	76	66		
JUNE	114	699	309	172	.56	6.1	183	186	150	134	123		
JULY	54	243	116	48	.42	2.3							
AUGUST	44	231	98	54	.56	1.9							
SEPTEMBER	43	294	146	73	.50	2.9							
ANNUAL	249	643	424	99	.23	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1967-82

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1967-82

DISCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD		INTER	/AL, ÎN Y	OR INDICAT EARS, AND	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4% 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5130	6180	7400	8120	8950									
							1	4710	5690	6010	6220		
WEIGHTED	SKEW ≠	105					. 3	3390	3910	4030	4080		
							7	2440	2910	3050	3140		
							15	1620	2030	2230	2440		
							30	1220	1500	1640	1770		
							60	962	1180	1300	1440		
							90	832	1010	1120	1240		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1967-82

		DISC			WHICH WAS	<b>-</b>								
5%	10%		-	25%	30%	•		•	•	•	80%		90%	95%
1420	896	691	569	492	433.	344	264	207	149	124	100	81	63	51

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

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

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

239

161

124

104

89

79

63

50

39

29

24

21

18

16

14

PERIOD OF RECORD. -- August 1965 to September 1982.

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

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

AVERAGE DISCHARGE.--17 years, 77.3 ft3/s, 126.17 in/yr, 56,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft<sup>3</sup>/s, probably affected by surge from release of water temporarily impounded by landslide upstream from station, Jan. 20, 1972, gage height, 9.89 ft, from floodmark, from rating curve extended above 350 ft<sup>3</sup>/s on basis of estimate of peak flow from slope-area survey; minimum, 9.1 ft<sup>3</sup>/s Oct. 2-14, 1979.

#### STATISTICAL SUMMARIES

М	ONTHLY AN	ID ANNUAL	MEAN DI	SCHARGES	1966-82		MA		AND PROE		OF ANNUAL RECORD 19	. LOW FL( 167-82	W
				STAN- DARD DEVIA-	COEFFI-	F OF	PERIOD (CON-	DISCH	INTERVAL	., IN YEA	OR INDICAT RS, AND A	NNUAL NO	N-
МОМТН	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	16	93	46	26	.56	4.9	1	13	11	10	9.3		
NOVEMBER	28	199	97	52	.54	10.5	3	13	11	10	9.3		
DECEMBER	33	285	150	73	.49	16.2	7	13	11	10	9.4		
JANUARY	32	309	145	78	.54	15.6	14	14	12	11	9.8		
EBRUARY	40	216	111	54	.48	12.0	30	14	12	11	10		
MARCH	41	200	83	37	.44	9.0	60	17	14	13	12		
APRIL	50	127	85	23	.27	9.2	90	21	17	15	13		
MAY	46	137	84	32	.38	9.2	120	25	20	18	16		
JUNE				28				36		25	22		
	18	111	53		.52	5.7	183	ەد	29	20	22		
JULY	14	47	27	9.4		2.9							
AUGUST	12	35	19	6.1		2.1							
SEPTEMBER	12	54	28	13	.45	3.0							
ANNUAL	46	121	77	20	.26	100							
YEARS,	AND ANNUA	FOR INDI L EXCEEDA	NCE PRO	BABILITY,	IN PERCE	NT	PERIOD (CON-		INTERV	AL, IN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25	2	5 201	10	25	50	100	SECU-						100
80% 	50 <b>%</b> 	20% <del>-</del>	10%	4% 	2% 	1%	TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 <b>2%</b>	100 1%
693	1140	1850	2360	3040									
							1	834	1250	1520	1830		
WEIGHTE	SKEW ≈	141					3	569	799	932	1080		
	. JILH -	• • • • •					7	413	570	656	748		
							, 15	288	395	458	530		
							30	200 219	288	327	371		
							50 60			258	302		
							90	170 148	223 190	218	254		
			DURATI	ON TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	RD 1966-	 82			
		DISCHA	RGE, IN	CFS, WHI	CH WAS EQ	UALED OR E	EXCEEDED FOR	R INDICA	TED PERC	ENT OF T	  ME		
5 <b>%</b>	10%	 15%	20%	 25%	30%	40% 50	0% 60%	70%	75%	 80%	85%	<b></b> 90%	95% 95%

#### 14139500 BULL RUN RIVER BELOW LAKE BEN MORROW, OR

LOCATION.--Lat 45°29'00", long 122°04'50", in SE½ sec.16, T.1 S., R.6 E., Multnomah County, Hydrologic Unit 17080001, in gatehouse at Bear Creek Dam on Bull Run River, 500 ft downstream from Bear Creek, 1,000 ft upstream from Fivemile Creek, and 8.5 mi northeast of Bull Run.

DRAINAGE AREA. -- 74 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1929 to September 1954. Published as "below Bull Run Reservoir near Bull Run" in 1930 and as "below Bull Run Reservoir" 1931-37.

GAGE.--Water-stage recorder above crest of spillway and scales indicating number of turns outlet needle valves are open. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Portland Water Bureau). Prior to Oct. 1, 1934, at site 0.5 mi downstream at different datum.

REMARKS.--Discharge determined by combining discharge through valves near base of dam and discharge over crest of spillway (elevation, 1,036 ft). Leakage at dam is less than 1 ft<sup>3</sup>/s and is disregarded. Flow regulated by Bull Run Lake and Lake Ben Morrow (since 1928); flow from Bull Run Lake is not artificially regulated but reaches river through surface and underground channels.

AVERAGE DISCHARGE.--25 years (water years 1930-54), 582 ft<sup>3</sup>/s, 421,400 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge at dam, 16,100 ft<sup>3</sup>/s, Mar. 31, 1931, elevation, 1,047.40 ft (with 1 valve open 30 turns); no flow Oct. 27, 1939, Oct. 2, 1951, Dec. 11-13, 1952.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1930-54 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1931-54

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	RS, AND /	TED RECURI ANNUAL NOI IN PERCEN	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	76	1092	326	291	.89	4.7	1	70	31	18	10	5.0	
NOVEMBER	93	2005	817	513	.63	11.7	3	74	37	23	15	8.5	
DECEMBER	225	2629	1022	544	.53	14.6	7	80	55	44	36	29	
JANUARY	163	2581	877	541	.62	12.5	14	87	68	60	55	49	
FEBRUARY	290	1732	826	373	.45	11.8	30	94	77	70	65	60	
MARCH	233	1831	764	320	.42	10.9	60	105	87	80	75	70	
APRIL	211	1263	778	253	.33	11.1	90	113	94	87	82	78	
MAY	233	1284	686	287	.42	9.8	120	136	103	91	83	75	
JUNE	110	1305	443	273	.62	6.3	183	240	171	145	127	109	
JULY.	90	358	187	71	. 38	2.7							
AUGUST	88	184	132	27	.21	1.9							
SEPTEMBER	80	385	137	71	.52	2.0							
ANNUAL	349	784	582	119	.20	100							

MAĞNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1930-54 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1930-54

		•			ICE INTER	,	PERIOD (CON-		INTERV	'AL, ÍN ˈ	YEARS, AN	TED RECUI ID ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	 2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
5690	7650	10400	12200	14600	16400								
							1	5710	7860	9480	11800	13600	
IE I GHTED	SKEW =	.116					3	4050	5470	6480	7830	8900	
							7	2840	3760	4380	5160	5740	
							15	2080	2690	3050	3470	3760	
							30	1650	2140	2430	2760	2980	
							60	1270	1600	1780	1990	2130	-
							90	1140	1380	1500	1640	1720	_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-54

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1910	1280	1000	848	733	631		349		172	147	128	115	103	88

#### 14139700 CEDAR CREEK NEAR BRIGHTWOOD, OR

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

DRAINAGE AREA.--7.93 mi2.

221

143

112

94

82

71

55

42

33

24

21

PERIOD OF RECORD. -- July to November 1964, June 1965 to September 1982.

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

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--17 years, 68.1 ft3/s, 116.62 in/yr, 49,340 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

	M I N I MUM	MAXIMUM	WEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	ŀ	NTERVAL,	IN YEAR	INDICATI S, AND AI ILITY, II	NNUAL NO	ON−
нтиом	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	13	87	40	25	.61	4.9	1	9.5	8.2	7.6	7.2		
IOVEMBER	24	166	82	43	.53	10.1	3	9.6	8.3	7.7	7.2		
ECEMBER	<b>2</b> 9	232	125	56	.45	15.3	7	9.9	8.4	7.8	7.3		
ANUARY	32	218	124	62	.50	15.1	14	10	8.8	8.2	7.7		
EBRUARY	32	196	101	49	.48	12.3	30	12	9.9	9.1	8.5		
IARCH	39	181	82	34	.41	10.0	60	14	11	11	10		
PRIL	47	130	86	24	.28	10.5	90	17	14	13	12		
IAY	36	136	71	28	.39	8.6	120	21	17	15	14		
UNE	19	115	44	25	.58	5.4	183	31	25	22	20		
ULY	13	37	21	6.7	.31	2.6							
UGUST	8.7	38	18	7.8	.44	2.2							
EPTEMBER	12	51	26	13	. 49	3.1							
NNUAL	42	105	68	16	.24	100							
MAGNIT		PROBABILI D ON PERIO				-LOW	MAG				F ANNUAL CORD 196		-OW
OISCHARGE,	BASE IN CFS,		OD OF RE	CORD 1966	5-82  INTERVAL	. HN	MAG PERIOD (CON-	BASED  DISCHA	ON PERI	OD OF RECESSION OF SERVICES OF		56-82 ED RECUF ANNUAL	RENCI
) I SCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD 1966	INTERVAL	. HN	PERIOD	BASED  DISCHA	ON PERI	OD OF RECESSION OF SERVICES OF	CORD 196  INDICATE ARS, AND	56-82 ED RECUF ANNUAL	RENCE
SCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIC	OD OF RE CATED RE NCE PROB	CORD 1966  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASED DISCHA	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB	CORD 196  INDICATE ARS, AND ILITY, IN	56-82 ED RECUF ANNUAL N PERCEN	RRENCI
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	D ON PERIO	OD OF RE	CORD 1966  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50%	ON PERI	OD OF RECESS, FOR L, IN YE PROBAB	INDICATE ARS, AND ILITY, II  25 4%	56-82 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
ISCHARGE, YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%	ON PERI	OD OF RECES, FOR L, IN YEE PROBAB	INDICATE ARS, AND ILITY, II  25 4%	56-82  ED RECUP ANNUAL N PERCEN 50	RRENCI
ISCHARGE, YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  720 504	ON PERI  RGE, IN I INTERVAI XCEEDANCI  5 20%  912 610	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10%	1070 670	50 PERCENTANNUAL N PERCENTANNUAL N PERCENTANNUAL N PERCENTAN PERCE	RRENCI
ISCHARGE, YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  E 2 50%  720 504 358	ON PERI	OD OF RECEIVED OF	1070 670 503	56-82 ED RECUF ANNUAL N PERCEN 50 2%	RRENCI
ISCHARGE, YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	BASED  DISCHA  E 2 50%  720 504 358 246	ON PERI  RGE, IN I INTERVA  XCEEDANCI  5 20%  912 610 444 314	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10 996 645 477 352	ORD 196	56-82 ED RECUP ANNUAL N PERCEN 50 2%	RRENCI
ISCHARGE, YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  720 504 358 246 188	ON PERI  RGE, IN I  INTERVAL  XCEEDANCI  5  20%  912  610  444  314  239	OD OF RE OCFS, FOR IN YEE PROBAB 10 10% 996 645 477 352 267	INDICATE ARS, AND ILITY, IN  25 4%  1070 670 503 395 298	50 -82  ED RECUF ANNUAL N PERCEN  50 2%	RRENCI
1.25 YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD 1966 CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	BASED  DISCHA  E 2 50%  720 504 358 246	ON PERI  RGE, IN I INTERVA  XCEEDANCI  5 20%  912 610 444 314	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10 996 645 477 352	ORD 196	50 RECUF ANNUAL N PERCEN 50 2%	RRENC
1.25 YEARS, / 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RENCE PROB	CORD 1966  CURRENCE ABILITY,  25  4%  2030	5-82 INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCHA  E 2 50%  720 504 358 246 188 149 130	ON PERI ON PER	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10\$ 996 645 477 352 267 207 180	ORD 196  INDICATE ARS, AND ILITY, !!  25 4  1070 670 503 395 298 232	50 RECUF ANNUAL N PERCEN 50 2%	RRENC
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROB	CORD 1966  CURRENCE ABILITY,  25 4%  2030  N TABLE (	5-82 INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  720 504 358 246 188 149 130  0F RECORI	912 610 912 610 912 610 914 4314 239 186 161	OD OF RE  CFS, FOR  IN YE  PROBAB  10  10  996  645  477  352  267  207  180	1070 670 503 395 298 232 203	50 RECUF ANNUAL N PERCEN 50 2%	RRENCI

#### 14141500 LITTLE SANDY RIVER NEAR BULL RUN, OR

LOCATION.--Lat 45°24'55", long 122°10'20", in NW\(\frac{1}{2}\)NW\(\frac{1}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)NW\(\frac{1}{2}\)

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

443

307

249

212

187

166

129

98

73

38

29

19

16

PERIOD OF RECORD.--May to July 1911, October 1911 to March 1912, June 1912 to April 1913, July 1919 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

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

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--63 years (water years 1920-82), 146  $ft^3/s$ , 88.91 in/yr, 105,800 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

					:	STATISTICA	L SUMMARIES						
М	ONTHLY AN	ID ANNUAL	MEAN DI:	SCHARGES	1920-82		МА		AND PROB D ON PER			L LOW FL 921-82	OW
	MUNIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	DISCH		, IN YEA	R INDICA RS, AND BILITY,	ANNUAL N	0N-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER NOVEMBER DEMBER	88	271 588 585 589 452 407 325 328 268 93 96 184 223	90 206 253 241 208 186 198 170 105 39 24 41 ,146	62 124 113 130 94 69 56 64 58 17 13 36	.69 .60 .45 .54 .45 .37 .28 .37 .56 .42 .55 .88	5.1 11.7 14.4 13.7 11.8 10.6 11.3 9.7 6.0 2.2 1.4 2.3	1 3 7 14 30 60 90 120 183	14 14 15 15 17 20 26 34 61	12 12 12 13 14 16 19 24 45	11 11 11 11 12 14 16 20 39	9.8 9.8 10 11 11 13 14 17 34	9.0 9.1 9.6 10 11 11 12 15 29	8. 8. 9. 9. 10 11 11 13 27
OI SCHARGE	BASE , IN CFS,	D ON PERI FOR INDI	OD OF RE	ECORD 192	0-82  INTERVAL		PERIOD (CON-	BASE DISCH	D ON PER	OD OF R CFS, FO	ECORD 19 R INDICA EARS, AN	920-82  TED RECUID ANNUAL	RRENCE
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10% 	25 4%	50 2% 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
1560  WE I GHTE	2180 D SKEW =		3620 	4360 	4900 5 	460	1 3 7 15 30 60	1460 1010 710 513 394 312 277	2030 1380 931 665 501 388 340	2420 1640 1070 759 566 435 379	2930 1980 1230 872 641 491 426	3320 2250 1350 952 694 531 459	3720 2530 1460 1030 744 569 491
					- <b></b>		FOR PERIOD	<del>-</del>					
		DISCHA	DOE IN	OCC WILL	CH WAS ES	UALED OR I			TED DEDO				

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

LOCATION.--Lat 45°27'20", long 122°14'45", in SW½NW½ sec.30, T.1 S., R.5 E., Clackamas County, Hydrologic Unit 17080001, on left bank 0.9 mi downstream from Bull Run River, 2.0 mi northwest of Bull Run, and at mile 17.6.

DRAINAGE AREA .-- 440 mi2.

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

GAGE.--Water-stage recorder. Altitude of gage is 200 ft, from river-profile map. Apr. 27, 1910, to Sept. 30, 1914, staff gage at site 0.8 mi upstream at different datum. Oct. 31, 1929 to June 7, 1963, water-stage recorder at present site and datum.

REMARKS.--Water stored since 1915 in Bull Run Lake. Flow regulated since 1929 by Lake Ben Morrow and since 1961 by Bull Run Reservoir No. 2. Considerable fluctuation caused by Bull Run powerplant of Portland General Electric Co.

AVERAGE DISCHARGE.--41 years (water years 1911-14, 1930-66), 2,356  $ft^3/s$ , 1,706,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 84,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 22.3 ft; minimum, 45 ft<sup>3</sup>/s Sept. 26, 1962; minimum daily, 63 ft<sup>3</sup>/s Oct. 12, Nov. 9, 1952.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1931-61

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1932-61 23

	MIMIMIM	MANTHUM	uem	STAN- DARD DEVIA-	COEFFI- CIENT OF	0F	PERIOD (CON-		INTERVAL EXCEEDAN	, IN YEA CE PROBA	R INDICA RS, AND A BILITY,	ANNUAL N IN PERCE	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	326	4086	1296	1006	.78	4.5	1	161	107	87	74	62	
10VEMBER	294	6953	3137	1891	.60	10.9	3	297	221	183	154	124	
DECEMBER	992	9443	3923	2017	.51	13.7	7	360	301	273	252	229	
IANUARY	791	8955	3457	1846	.53	12.1	14	385	326	300	280	258	
EBRUARY	1255	7684	3343	1425	.43	11.7	30	409	351	326	308	291	
ARCH	997	6426	3171	1103	.35	11.1	60	457	380	347	322	297	
PR <b>IL</b>	980	5176	3443	905	.26	12.0	90	508	410	370	342	314	
AY	1053	5357	3044	1113	.37	10.6	120	620	470	411	370	330	
UNE	570	4887	1933	1034	.53	6.7	183	1060	764	647	565	486	
ULY	408	1756	841	294	.35	2.9							
UGUST	322	713	512	102	.20	1.8							
EPTEMBER	358	1947	564	314	.56	2.0							
NNUAL	1368	3359	2383	468	.20	100							
MAGN I		PROBABILI D ON PERIO			OUS PEAK I	FLOW	MA				OF ANNUAL		LOW

DISCHARGE, YEARS, A			DICATED F				PERIOD (CON-	DISC	INTER	VAL, IN	YEARS, A	ATED RECU ND ANNUAL IN PERCE	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10% 	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100 1%
- <del>-</del>			- <del>-</del>				1	20300	27600	32600	39100	44100	
WEIGHTED	SKEW =						3	14900	19700	22900	27000	30000	
							7	10500	13700	15700	18200	19900	
							15	7840	9920	11100	12300	13000	
							30	6220	7850	8750	9750	10400	
							60	5010	6110	6710	7360	7790	
							90	4540	5420	5870	6320	6600	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-61

5% 10% 15% 20% 25% 30% 40% 50% 60% 70% 75%	<b>6</b> 80 <b>%</b> 8!	5% 90% 95%
6940 5030 4150 3570 3160 2790 2150 1660 1230 838 701	597 510	0 432 360

#### 14144800 MIDDLE FORK WILLAMETTE RIVER NEAR OAKRIDGE, OR

LOCATION.--Lat 43°35'50", long 122°27'20", in NW\(\frac{1}{2}\) sec.9, T.23 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 0.2 mi upstream from Windfall Creek, 8.3 mi upstream from Hills Creek Dam, 10.2 mi south of Oakridge, and at mile 240.8.

DRAINAGE AREA. -- 258 mi.

2000

1510

1290

1130

989

PERIOD OF RECORD. -- October 1958 to September 1982.

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

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--24 years, 807  $ft^3/s$ , 42.48 in/yr, 584,700 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

DAYS) 50% 20% 10% 5% 2% 1  DAYS) 50% 20% 10% 5% 20% 1  DAYS) 50% 20% 10% 5% 20% 1  DAYS) 50% 20% 10% 5% 20% 1  DAYS) 50% 20% 10% 10% 1  DAYS) 50% 20% 10% 10% 1  DAYS) 50% 10% 10% 1  DAYS) 50% 10% 10% 10% 10% 1  DAYS) 50% 10% 10% 10% 10% 1  DAYS) 50% 10% 10% 10% 1  DAYS) 50% 10% 10% 10% 10% 1  DAYS) 50% 10% 10% 10% 10% 10% 10% 10% 1  DAYS) 50% 10% 10% 10% 10% 10% 10% 10% 10% 10% 1	1.25 80% 5210 WEIGHTED	2 50% 8750 D SKEW =	5 20% 15200 2: .245	10%	4% 9000 N TABLE	2%	1%	SECU- TIVE DAYS)	50% 6780 4890 3400 2400 1910 1540 1390 OF RECC	20% 11600 8160 5340 3510 2620 2050 1810  DRD 1959-	10%  14900 10500 6710 4250 3090 2380 2080	25 4% 18900 13500 8520 5200 3690 2810 2400	50 2%	100 100 100
STAN-	YEARS, 7	2 50 <b>%</b> 8750	5 20% 	10%	4% 9000 	2%	1%	SECU- TIVE DAYS)	50% 6780 4890 3400 2400 1910 1540 1390	20% 11600 8160 5340 3510 2620 2050 1810	10% 14900 10500 6710 4250 3090 2380 2080	25 4% 18900 13500 8520 5200 3690 2810	50 2%	100 100 100
STAN-	YEARS, 7 1.25 80% 	2 50 <b>%</b> 8750	5 20% 	10%	4% 			SECU- TIVE DAYS)	50%  6780 4890 3400 2400 1910 1540	20% 11600 8160 5340 3510 2620 2050	10% 14900 10500 6710 4250 3090 2380	25 4% 18900 13500 8520 5200 3690 2810	50 2%	100 100 100
STAN-DARD   COEFFI-   PERCENT   PERIOD   DEVIA- CIENT OF OR   OF SECRED   COEFFI-   PERCENT   PERIOD   DEVIA- CIENT OF OR   OF SECRED	1.25 80% 5210	2 50 <b>%</b> 8750	5 20% 	10%	4% 			SECU- TIVE DAYS)  1 3 7 15 30	50%  6780 4890 3400 2400 1910	20% 11600 8160 5340 3510 2620	10% 14900 10500 6710 4250 3090	25 4% 18900 13500 8520 5200 3690	50 2%	100 100 100
STAN- DARD    DEVIA   CLENT OF	1.25 80% 5210	2 50 <b>%</b> 8750	5 20% 	10%	4% 			SECU- TIVE DAYS)  1 3 7 15	50% 6780 4890 3400 2400	20%  11600 8160 5340 3510	10%  14900 10500 6710 4250	25 4% 18900 13500 8520 5200	50 2%	100 100 100
STAN-DARD   COEFFI-   PERCENT   OF   CON-DEVIA- CIENT OF OF   OF   CON-DEVIA- CIENT OF OF OF OF OTHER OF OF OTHER OF OTHER OF OTHER OF OTHER OF OTHER OF OTHER OTHER OF OTHER OF OTHER OTHER OF OTHER OTHER OF OTHER	1.25 80% 5210	2 50 <b>%</b> 8750	5 20% 	10%	4% 			SECU- TIVE DAYS)  1 3 7	50%  6780 4890 3400	20%  11600 8160 5340	10%  14900 10500 6710	25 4% 18900 13500 8520	50 2%	10 10
STAN-	1.25 80% 5210	2 50 <b>%</b> 8750	5 20% 	10%	4% 			SECU- TIVE DAYS)  1 3	50%  6780 4890	20%  11600 8160	10%  14900 10500	25 4% 18900 13500	50 2% 	10 10 1
STAN-	1.25 80% 5210	2 50 <b>%</b> 8750	5 20% 	10%	4% 			SECU- TIVE DAYS) 	50 <b>%</b>  6780	20 <b>%</b>  11600	10 <b>%</b>  14900	25 4% 18900	50 2%	IT 10 1
STAN-	YEARS, / 1.25 80%	2 50%	5 20%	10%	4% 			SECU- TIVE DAYS)	50% 	20%	10%	25 . 4%	IN PERCEN	IT 
STAN-	YEARS, /	2	5					SECU- TIVE		-		25	IN PERCEN	IT 
STAN	YEARS, /	2	5					SECU-			10	<del>-</del>	IN PERCEN	IT
STAN-	YEARS,	- <b></b>						10011				ABILIII,		
STAN-									DISCI	INTER	/AL, İN ˈ	YEARS, AND		
STAN-	MAGNI						FLÓW	MA(						.ow
STAN-	NNUAL .	360	1197	807	206	.26	100			<b>-</b>			- <b></b>	<b>_</b>
STAN-	EPTEMBER	226	377	282	43	. 15								
STAN-	JGUST													
STAN-	JLY							102	400	الادر 	ر ا ر 	∠yy		
STAN-														-
STAN-														-
STAN-	ARCH													-
STAN-	EBRUARY					-								-
STAN- DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON- MINIMUM MAXIMUM MEAN TION VARI- ANNUAL SECU- ONTH (CFS) (CFS) (CFS) (CFS) ATION RUNOFF TIVE 2 5 10 20 50 10 DAYS) 50% 20% 10% 5% 2% 1  STOBER 238 636 329 84 .26 3.4 1 233 211 201 194 ONTH COMBER 296 1805 796 414 .52 8.2 3 234 212 203 196	ANUARY	273			690			14				200		-
STAN-	ECEMBER													-
STAN- DISCHARGE, IN CFS, FOR INDICATED RECURRENC DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON- DEVIA- CIENT OF OF (CON- EXCEEDANCE PROBABILITY, IN PERCENT MINIMUM MAXIMUM MEAN TION VARI- ANNUAL SECU- DAYS) 50% 20% 10% 5% 2% 10%	OVEMBER													
STAN- DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON- DEVIA- CIENT OF (CON- EXCEEDANCE PROBABILITY, IN PERCENT MINIMUM MAXIMUM MEAN TION VARI- ANNUAL SECU	CTORED	270					7.4		<del>-</del>		<del>-</del>	- <b>-</b>	<del></del> -	
BASED ON PERIOD OF RECORD 1960-82  STAN-  DISCHARGE, IN CFS, FOR INDICATED RECURRENC  DARD COEFFI- PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL NON-  DEVIA- CIENT OF OF (CON- EXCEEDANCE PROBABILITY, IN PERCENT	ONTH							TIVE	_					
		MINIMUM	MAXIMUM	MEAN	DARD DEVIA-	CIENT OF	OF	(CON-	DISC	INTERVA	L, IN YE	ARS, AND	ANNUAL N	)N-
									DAS	LD ON FL				
												RECORD I	960-82	

322

299

278

259

236

#### 14144900 HILLS CREEK ABOVE HILLS CREEK LAKE, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°40'50", long 122°22'10", in NW±NW± sec.8, T.22 S., R.4 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 0.2 ml downstream from Tufti Creek, 0.7 ml upstream from Hills Creek Lake, 6.5 ml southeast of Oakridge, and at mile 4.1.

DRAINAGE AREA. -- 52.7 mi2.

PERIOD OF RECORD.--October 1958 to September 1981. Prior to October 1971, published as "Hills Creek above Hills Creek Reservoir".

GAGE.--Water-stage recorder. Datum of gage is 1,630.80 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--23 years, 150 ft $^3$ /s, 38.65 in/yr, 108,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.23 ft, from rating curve extended above 1,800 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 14 ft<sup>3</sup>/s Nov. 1, 1958.

#### STATISTICAL SUMMARIES

MONTH  COTOBER  OVEMBER  DECEMBER  DECEMBER  DECEMBER  JANUARY  FEBRUARY  AARCH  AAY  JUNE  JULY  AUGUST  ANNUAL  MAGNITU		MAXIMUM (CFS) 105 441 1001 574 425 633 308 367 341 93 61 89 254 PROBABILIT	MEAN (CFS) 44 153 247 264 200 198 204 236 145 53 32 31 150	STAN- DARD DEVIA- TION (CFS) 19 102 201 164 95 75 75 75 20 9.6 14	COEFFI- CIENT OF VAR!- ATION  .44 .67 .81 .62 .48 .59 .29 .32 .52 .38 .30 .44 .30	PERCENT OF ANNUAL RUNOFF  2.4 8.5 13.7 14.6 11.1 11.0 11.3 13.1 8.0 2.9 1.8 1.7	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 14 30 60 90 120 183	2 50% 20 20 21 22 26 28 34 60	INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I  20 5%	NNUAL NO	)N <b>−</b>
MONTH  COTOBER  OVEMBER  DECEMBER  DECEMBER  DECEMBER  JANUARY  FEBRUARY  AARCH  AAY  JUNE  JULY  AUGUST  ANNUAL  MAGNITU	(CFS)  24 28 23 27 24 69 99 108 54 28 21 21 60	(CFS)  105 441 1001 574 425 633 308 367 341 93 61 89 254	44 153 247 264 200 198 204 236 145 53 32 31	19 102 201 164 95 117 59 75 75 20 9.6 14	.44 .67 .81 .62 .48 .59 .29 .32 .52 .38 .30	RUNOFF  2.4 8.5 13.7 14.6 11.0 11.3 13.1 8.0 2.9 1.8 1.7	TIVE DAYS) 	50% 20 20 20 21 22 26 28 34	20%  18 18 18 19 20 23 25 28	10% 17 17 17 18 19 22 23 26	5% 16 16 16 17 19 21 23 24	2%     	1%    
NOVEMBER JECEMBER JECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL MAGNITU	28 23 27 24 69 99 108 54 21 21 60	441 1001 574 425 633 308 367 341 93 61 89 254	153 247 264 200 198 204 236 145 53 32 31	102 201 164 95 117 59 75 75 20 9.6 14	.67 .81 .62 .48 .59 .29 .32 .52 .38 .30	8.5 13.7 14.6 11.1 11.0 11.3 13.1 8.0 2.9 1.8 1.7	3 7 14 30 60 90 120	20 20 21 22 26 28 34	18 18 19 20 23 25 28	17 17 18 19 22 23 26	16 16 17 19 21 23 24	  	
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL MAGNITU	27 24 69 99 108 54 28 21 21 60	574 425 633 308 367 341 93 61 89 254	264 200 198 204 236 145 53 32 31	164 95 117 59 75 75 20 9.6 14	.62 .48 .59 .29 .32 .52 .38 .30	14.6 11.1 11.0 11.3 13.1 8.0 2.9 1.8 1.7	14 30 60 90 120	21 22 26 28 34	19 20 23 25 28	18 19 22 23 26	17 19 21 23 24	 	
FEBRUARY MARCH APRCH APRCH JUNE JULY SEPTEMBER ANNUAL MAGNITU	24 69 99 108 54 28 21 21 60	425 633 308 367 341 93 61 89 254	200 198 204 236 145 53 32 31	95 117 59 75 75 20 9.6 14	.48 .59 .29 .32 .52 .38 .30	11.1 11.0 11.3 13.1 8.0 2.9 1.8 1.7	30 60 90 120	22 26 28 34	20 23 25 28	19 22 23 26	19 21 23 24	 	
MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL MAGNITU	69 99 108 54 28 21 21 60	633 308 367 341 93 61 89 254	200 198 204 236 145 53 32 31	117 59 75 75 20 9.6 14	.48 .59 .29 .32 .52 .38 .30	11.1 11.0 11.3 13.1 8.0 2.9 1.8 1.7	60 90 120	26 28 34	23 25 28	22 23 26	21 23 24		
APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL MAGNITU	99 108 54 28 21 21 60	308 367 341 93 61 89 254 PROBABILII	198 204 236 145 53 32 31	59 75 75 20 9.6 14 46	.59 .29 .32 .52 .38 .30	11.0 11.3 13.1 8.0 2.9 1.8 1.7	60 90 120	26 28 34	25 28	22 23 26	23 24		
APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL MAGNITU	99 108 54 28 21 21 60	308 367 341 93 61 89 254 PROBABILII	204 236 145 53 32 31	59 75 75 20 9.6 14 46	.29 .32 .52 .38 .30	11.3 13.1 8.0 2.9 1.8 1.7	90 120	28 34	25 28	23 26	23 24		
MAY JUNE LULY AUGUST SEPTEMBER ANNUAL MAGNITU	108 54 28 21 21 60	367 341 93 61 89 254 	236 145 53 32 31	75 75 20 9.6 14 46	.32 .52 .38 .30	13.1 8.0 2.9 1.8 1.7	120	34	28	26	24	  	
JUNE JULY AUGUST SEPTEMBER ANNUAL MAGNITU	54 28 21 21 21 60	341 93 61 89 254 	145 53 32 31 150	75 20 9.6 14 46	.52 .38 .30 .44	8.0 2.9 1.8 1.7						 	
JULY AUGUST SEPTEMBER ANNUAL MAGNITU	28 21 21 60 	93 61 89 254 	53 32 31 150	20 9.6 14 46	.38 .30 .44	2.9 1.8 1.7		·			J2		
AUGUST SEPTEMBER ANNUAL MAGNITU	21 21 60 	61 89 254 	32 31 150	9.6 14 46	.30	1.8 1.7		·					
SEPTEMBER ANNUAL MAGNITU	21 60  UDE AND	89 254  PROBABILI1	31 150	14 46	.44	1.7		·					
ANNUAL  MAGNITU	60  UDE AND	254 	150	46				·					
MAGNITU	UDE AND	PROBABILI1	·		.30	100		·					
MAGNITU	UDE AND	PROBABILI1	·										
		FOR INDIC					PERIOD (CON-		INTERV	AL, İN Y	 R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	2%	100 1%	SECU- TIVE	2	5 5	10	25 25	50	100
							DAYS)	50% 	20% 	10%	4% 	2% 	1%
1100	1690	2810 3	3800	5380				4.440	0770	7470	4000		
METCHIES	CKEM						1	1410	2370	3130	4220		
WEIGHTED	2KFM =	.629					3	1020	1710	2290	3200		
							7	692	1120	1500	2100		
							15	475	712	917	1240		
							30	374	522	646	838		
							60	304	416	507	642		
							90	270	363	435	538		
			DURATION	N TABLE (	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	RD 1959-8	31			
							EXCEEDED FOR						
5%	10%	15%	20%	25%	30%	40% 50	0% 60%	70%	75%	80%	85%	90%	95

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

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

DRAINAGE AREA. -- 392 mi2.

3020

2290

1940

1680

1470

1300

1020

782

574

426

382

348

322

292

257

PERIOD OF RECORD.--October 1913 to September 1914, September 1935 to September 1982. Monthly discharge only September 1935, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,208.01 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Oct. 3, 1913, to Sept. 30, 1914, nonrecording gage and Sept. 1, 1935, to Aug. 18, 1960, water-stage recorder at sites 400 ft and 1,000 ft downstream, respectively, at different datum.

REMARKS.--Flow regulated since 1961 by Hills Creek Lake. No diversions above station.

AVERAGE DISCHARGE.--48 years, 1,147  $ft^3/s$ , 39.74 in/yr, 831,000 acre-ft/yr, adjusted for storage.

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

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF HILLS CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1914-60

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-60

MONTH  OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY SEPTEMBER	MINIMUM (CFS) 221 212 324 260 625 554 614 738 344	MAX I MUM (CFS) 1852 2832 4779 3904 3313 2700 2751	MEAN (CFS) 464 1097 1637 1734	TION (CFS)  331 736 1235	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20	50	100
NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST	212 324 260 625 554 614 738	2832 4779 3904 3313 2700	1097 1637 1734	736					_0,0	10,6	5%	2%	1%
DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST	324 260 625 554 614 738	4779 3904 3313 2700	1637 1734			3.4	1	276	242	224	209	193	
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST	260 625 554 614 738	3904 3313 2700	1734	1235	.67	8.0	3	278	243	225	210	194	
FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST	625 554 614 738	3313 2700		1277	.75	11.9	7	282	246	227	212	195	
MARCH APRIL MAY JUNE JULY AUGUST	554 614 738	2700	1777	989	.57	12.7	14	286	250	230	215	197	
APRIL MAY JUNE JULY AUGUST	614 738		1737	697	.40	12.7	30	295	257	236	220	201	
MAY JUNE JULY AUGUST	738	2751	1530	533	.35	11.2	60	313	270	247	229	208	
JUNE JULY AUGUST			1615	469	.29	11.8	90	332	282	257	237	215	
JULY NUGUST	344	2435	1558	490	.31	11.4	120	361	298	269	247	224	
AUGUST		2000	1146	466	.41	8.4	183	537	395	333	288	244	
	272	884	523	167	.32	3.8							
SEPTEMBER	233	441	343	60	.17	2.5							
	246	389	317	45	. 14	2.3							
ANNUAL	629	1735	1138	297	.26	100							
	ND ANNUA	L EXCEEDA	NCE PROE	ABILITY,	IN PERCE	NT	PERIOD (CON-	DISCH	INTERV	AL, ÍN Y	EARS, AN	TED RECUR ID ANNUAL IN PERCEN	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10#	25 4%	50 2 <b>%</b>	100 1 <b>%</b>
6780	11800	20900 2	8200 3	9200 4	8400								
	OKEW						1_	9350	16000	21300	29000	35500	
WEIGHTED	OVEM =	.082					3	7130	11300	14400	18800	22300	
							7	5020	7390	9020	11100	12700	
							15	3570	5040	6040	7330	8310	
							30	2900	3880	4470	5140	5610	
							60 90	2360 2140	3080 2720	3510 3040	4020 3380	4370 3600	
			DURATIO	N TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	)RD 1914-	60 			
		DISCHA	RGE, IN	CFS, WHI	CH WAS EO	UALED OR E	XCEEDED FO	S INDICA	TED PEDO	ENT OF T	'IME		

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

#### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF HILLS CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1962-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-82

	MINIMIM	MAYIMIM	MEAN	STAN- DARD DEVIA-	COEFF!-	PERCENT OF	PERIOD (CON- SECU-	Disch	INTERVAL	, IN YEA	R INDICA RS, AND BILITY,	ANNUAL N	ON~
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 <b>2</b> 0%	10 10%	20 5%	50 2%	100 1%
OCTOBER	1.1	1956	1190	437	.37	8.7	1	141	95	79	68		
NOVEMBER	9.4	2940	1614	670	.42	11.8	3	163	108	86	71		
DECEMBER	513	4580	2167	1152	.53	15.8	7	191	124	96	77		
JANUARY	370	5308	1871	1113	.59	13.7	14	233	151	115	90		
EBRUARY	11	4391	927	996	1.07	6.8	30	289	187	143	113		
4ARCH	139	1665	631	512	.81	4.6	60	427	266	197	149		
APRIL	93	1486	769	424	.55	5.6	90	592	356	250	178	<b>-</b>	
MAY	92	1985	963	490	.51	7.0	120	660	426	321	247		
JUNE	108	1983	903	456	.50	6.6	183	820	656	581	525		
JULY	371	1165	599	197	.33	4.4	102	020	0,0	JO 1	)Z)		
AUGUST	293	1430	863	317	.37								
						6.3							
SEPTEMBER	793	2283	1199	325	.27	8.8							
ANNUAL	578	1821	1144	331	.29	100							
	BASE	O ON PERIO	OD OF RE	CORD	OUS PEAK I		MAC	BASE	D ON PER	IOD OF R	OF ANNUAL ECORD 19  R INDICA	962 <del>-</del> 82 	
OISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	O ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL IN PERCEI	,  N NT	PERIOD (CON-	BASE DISCH	D ON PER ARGE, IN INTERV	IOD OF R  CFS, FO AL, IN Y	ECORD 19	962-82  TED RECUR D ANNUAL	RRENCE
ISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	INTERVAL IN PERCEI	 ,  N	PERIOD	BASE DISCH	D ON PER ARGE, IN INTERV	IOD OF R  CFS, FO AL, IN Y	ECORD 19 R INDICATEARS, AND	962-82  TED RECUR D ANNUAL	RENCE
YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIA EXCEEDAL	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	,  N NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDANG	OD OF R  CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICA EARS, AND BILITY, 25	962-82 TED RECUP O ANNUAL IN PERCEN 50	RRENCE
YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIA EXCEEDAL	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	,  N NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV. EXCEEDANG 5 20%	CFS, FO AL, IN Y CE PROBA 10 10%	ECORD 19 R INDICA' EARS, AND BILITY,  25 4%  9480	962-82 TED RECUP D ANNUAL IN PERCEN 50 2%	RRENCE
PISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIA EXCEEDAL	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	,  N NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDANC 5 20% 6540 6320	CFS, FO AL, IN Y CE PROBA 10 10% 7840 7650	ECORD 19 EARS, ANI EARS, ANI BILITY, 25 4% 9480 9380	962-82 TED RECUP O ANNUAL IN PERCEN 50	RRENCE
YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIA EXCEEDAL	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	,  N NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4590 4370 3990	D ON PER ARGE, IN INTERV EXCEEDANG 5 20% 6540 6320 5790	CFS, FO AL, IN Y CE PROBA 10 10% 7840 7650 6990	ECORD 19  R INDICA EARS, AND BILITY,  25 4%  9480 9380 8510	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIA EXCEEDAL	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	,  N NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4590 4370 3990 3340	D ON PER ARGE, IN INTERV. EXCEEDANG 5 20% 6540 6320 5790 4900	CFS, FO AL, IN Y CE PROBA  10 10%  7840 7650 6990 6000	ECORD 19 R INDICA: R INDICA: BILITY, 25 4% 9480 9380 8510 7480	962-82 TED RECUP D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIA EXCEEDAL	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	,  N NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4590 4370 3990 3340 2660	D ON PER ARGE, IN INTERV, EXCEEDANN 5 20% 6540 6320 5790 4900 3790	CFS, FO AL, IN Y CE PROBA 10 10 7840 7650 6990 6000 4630	ECORD 19 R INDICA EARS, AND BILITY, 25 4% 9480 9380 8510 7480 5790	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIA EXCEEDAL	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	,  N NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH 2 50% 4590 4370 3390 3340 2660 2140	D ON PER	CFS, FO AL, IN Y CE PROBA 10 10 10 10 10 10 10 10 10 10 10 10 10	ECORD 19 R INDICA: EARS, AND BILITY,  25 4%  9480 9380 8510 7480 5790 4510	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIA EXCEEDAL	OD OF RE CATED RE NCE PROB	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	,  N NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4590 4370 3990 3340 2660	D ON PER ARGE, IN INTERV, EXCEEDANN 5 20% 6540 6320 5790 4900 3790	CFS, FO AL, IN Y CE PROBA 10 10 7840 7650 6990 6000 4630	ECORD 19 R INDICA EARS, AND BILITY, 25 4% 9480 9380 8510 7480 5790	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIA EXCEEDAL	CATED RE	CURRENCE ABILITY, 25 43	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH  2 50%  4590 4370 3990 3340 2660 2140 1930	ARGE, IN INTERV, EXCEEDAN.  5 20%  6540 6320 5790 4900 3790 3000 2670	CFS, FO AL, IN Y CE PROBA  10 10 7840 7650 6990 6000 4630 3630 3200	ECORD 19 R INDICA: EARS, AND BILITY,  25 4%  9480 9380 8510 7480 5790 4510	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIG	OD OF RECOME	CURRENCE ABILITY, 25 43 N TABLE	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%   MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  4590 3390 3340 2660 2140 1930  OF RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20\$ 6520 5790 4900 3790 3000 2670  RD 1962-8	T840 7840 7650 6990 6000 4630 3630 3200	9480 9380 8510 7480 5790 4510 3890	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIG	OD OF RECOME	CURRENCE ABILITY, 25 43 N TABLE	INTERVAL IN PERCEI 50 2% OF DAILY N	, IN NT 100 1%   MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4590 3390 3340 2660 2140 1930  OF RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20\$ 6520 5790 4900 3790 3000 2670  RD 1962-8	T840 7840 7650 6990 6000 4630 3630 3200	9480 9380 8510 7480 5790 4510 3890	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE

#### 14146000 SALT CREEK NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'45", long 122°25'35", in SWt sec.23, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, on right bank 0.7 mi upstream from mouth and 2 mi southeast of Oakridge.

DRAINAGE AREA .-- 113 mi2.

PERIOD OF RECORD.--July 1913 to September 1914, October 1933 to September 1951.

GAGE.--Water-stage recorder. Datum of gage is 1,245.67 ft National Geodetic Vertical Datum of 1929. July 19, 1913, to Sept. 30, 1914, staff gage 0.5 mi downstream at different datum.

REMARKS.--No regulation. Since spring of 1948, there has been a small intermittent, unmeasured diversion around gage to millpond

AVERAGE DISCHARGE.--19 years (water years 1914, 1934-51), 293  ${\rm ft}^3/{\rm s}$ , 212,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft<sup>3</sup>/s Oct. 29, 1950, gage height, 8.00 ft, from rating curve extended above 2,600 ft<sup>3</sup>/s by logarithmic plotting; minimum, 55 ft<sup>3</sup>/s Jan. 8, 1937, result of freezeup; minimum daily, 66 ft<sup>3</sup>/s Jan. 8, 1937.

#### STATISTICAL SUMMARIES

MONTHLY AND	ANNUAL MEA	N DISCHARGES	1914-51	MAGN I TUI

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1935-51

	MINIMUM	- MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEAR CE PROBAB	RS, AND A	NNUAL NO	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	82	393	150	73	.48	4.3	1	100	83	 75	69		
NOVEMBER	94	635	289	159	.55	8.2	3	100	85	78	73		
DECEMBER	116	912	355	208	.59	10.1	7	102	88	81	75		
JANUARY	98	649	350	157	. 45	9.9	14	104	89	82	77 -		
FEBRUARY	169	640	343	115	. 34	9.7	30	106	91	84	79		
MARCH	149	486	350	94	. 27	9.9	60	110	95	88	82		
APRIL	186	541	423	99	.23	12.0	90	115	98	90	84		
MAY	173	729	483	148	.31	13.7	120	123	102	93	87		
JUNE	115	732	376	156	.41	10.7	183	165	124	108	97		
JULY	90	312	173	56	.32	4.9							
AUGUST	81	162	118	22	. 19	3.3							
SEPTEMBER	86	154	117	20	. 17	3.3							
ANNUAL	173	426	293	72	.25	100							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1914-51

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1914-51

				RECURRENC OBABILITY			PERIOD (CON-		INTERV	'AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10% 	25 4% 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
1020	1700	2850	3720	4940									
							1	1440	2270	2850	3610		
WEIGHTED	SKEW =	026					3	1170	1720	2100	2590		
							7	888	1240	1480	1800		
							15	700	922	1060	1240		
							30	612	764	844	928		
							60	538	666	733	803		
							90	490	592	641	689		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-51

 		DISCH	ARGE, II	N CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
676	554	490	441	395	356	288	227	181	147	135	124	114	105	95

#### 14146500 SALMON CREEK NEAR OAKRIDGE, OR

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

DRAINAGE AREA.--117  $\mathrm{mi}^2$ , at measuring cable 0.6  $\mathrm{mi}$  downstream from gage.

PERIOD OF RECORD.--October to November 1909 (gage heights and one discharge measurement only), February 1913 to October 1919, October 1933 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "Kelsey River near Hazeldell" and "Salmon Creek near Hazeldell", 1909.

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

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

AVERAGE DISCHARGE.--55 years (water years 1914-19, 1934-82), 426 ft<sup>3</sup>/s, 49.45 in/yr, 308,600 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1914-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1915-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	, IN YEAF	R INDICAT RS, AND A BILITY,	ANNUAL N	-NC
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- . TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	107	477	186	70	.37	3.6	1	123	106	98	92	85	81
NOVEMBER	101	955	410	231	.56	8.0	3	124	107	100	94	88	84
DECEMBER	139	1886	621	386	.62	12.1	7	125	109	102	96	91	87
JANUARY	<b>1</b> 1 1.	1297	604	305	.50	11.8	14	128	111	104	98	92	88
FEBRUARY	138	1282	583	237	.41	11.4	30	133	116	108	102	96	92
MARCH	180	1531	537	217	.40	10.5	60	141	123	115	109	102	98
APRIL	202	1090	601	185	.31	11.7	90	150	130	121	113	106	101
YAN	215	1068	601	193	.32	11.7	120	162	138	127	119	111	106
JUNE	138	1070	436	193	.44	8.5	183	220	174	155	141	127	118
JULY	112	636	230	88	. 38	4.5							
AUGUST	96	240	162	34	.21	3.2							
SEPTEMBER	108	201	149	23	. 16	2.9							
ANNUAL	217	681	426	107	.25	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1914-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1914-82

DISCHARGE, YEARS, A					NCE INTE		PERIOD (CON-		INTERV	'AL, ÎN Y	R INDICA EARS, AN	D ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10 <b>%</b> 	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
1910	3240	5460	7160	9530	11500	13500							0.4.5.0
WEIGHTED	SKFW =	043					1 3	2590 2050	4140 3160	5290 4000	6870 5200	8130 6170	9 <b>4</b> 60 7230
WE FOR TEL	JILI	•042					7	1550	2260	2780	3480	4030	4620
							15	1180	1610	1900	2260	2530	2800
							30	964	1270	1460	1690	1850	2000
							60	803	1040	1180	1340	1460	1570
				~=~~~~			90	731	929	1040	1170	1260	1340

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TI	 мЕ	<b></b>	
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85 <b>%</b>	90%	95%
1060	829	706	621	555	499	400	318	243	195	177	163	150	136	121

#### 14147000 WALDO LAKE OUTLET NEAR OAKRIDGE, OR

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

DRAINAGE AREA. -- 30.5 mi2, of which about 10.5 mi2 is Waldo Lake.

PERIOD OF RECORD.--October 1936 to September 1953, October 1969 to September 1982.

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

REMARKS.--At times seiches from Waldo Lake cause rapid changes in stage at gage many times each hour. No regulation. Diversion tunnel into head of Black Creek, near south end of lake, built about 1914, is sealed off, but there was leakage of 0.51 ft<sup>3</sup>/s past control gates, measured Oct. 1, 1981.

AVERAGE DISCHARGE. -- 30 years, 34.2 ft3/s, 24,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150 ft $^3$ /s Jan. 20, 1971, from rating curve extended above 77 ft $^3$ /s and adjusted for overbank flow; maximum gage height, 2.98 ft Jan. 2, 1943; no flow at times.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1937-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1938-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	1	RGE, IN C NTERVAL, XCEEDANCE	IN YEAR	S, AND AN	NUAL NO	<b>V-</b>
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	27	4.4	5.8	1.33	1.0	1						
NOVEMBER	0.0	65	12	14	1.16	2.8	3						
DECEMBER	0.0	90	31	27	.86	7.5	7						
ANUARY	1.3	118	47	33	.70	11.4	14						
EBRUARY	.5	99	57	29	.50	13.7	30						
4ARCH	6.9	129	58	27	.47	13.8	60	2.7	•6	.2	.1	0.0	
PRIL	2.4	100	50	21	.42	12.1	90	3.2	.8	. 4	.2	.1	
IAY	10	76	48	15	.31	11.5	120	6.1	2.0	1.0	.5	• 2	
UNE	13	81	50	18.	.35	12.1	183	14	6.0	3.4	1.5	1.0	
ULY	3.2	73	37	18	. 49	8.8							
NUGUST SEPTEMBER	0.0	38 19	15 6.1	11 6.1	.69 1.00	3.7 1.5	NOTE:	LOW-FLOW ZERO EVEN		S UNCER	TAIN DUE	TO EXCES	SIVE
ANNUAL	8.0	67	35	15	.42	100							

OISCHARGE, YEARS, A							PERIOD (CON-		INTERV	CFS, FOI AL, IN YI CE PROBAI	EARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
52	78	112	134	161	180								
WEIGHTED	CKEM -	207					1	78	110	129	150	163	
WEIGHIED	SVEM =	293					د	77	109	127	148	161	
							7	75	106	125	145	159	
							15	73	102	119	138	151	
							30	69	96	111	128	138	
							60	64	88	101	116	126	
							90	61	84	96	109	118	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-82

		DISCHA	RGE, IN	CFS, W	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
90	76	69	61	56	51	42	32	23	14	9.4	6.1	3.0	1.1	0.0

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

LOCATION.--Lat 43°45'25", long 122°30'15", in SW½ sec.7, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, on left bank 2.5 mi northwest of Oakridge and at mile 1.0.

DRAINAGE AREA.--246 mi<sup>2</sup>, at measuring section 0.5 mi downstream.

PERIOD OF RECORD.--October 1909 to March 1916, September 1935 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1912, published as "near Hazeldell."

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

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

AVERAGE DISCHARGE.--53 years (water years 1910-15, 1936-82), 789 ft<sup>3</sup>/s, 43.56 in/yr, 571,600 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MUNITALI AND ANNUAL MEAN DISCHARGES 1910-62	EAN DISCHARGES 1910-82	AN D	ANNUAL	AND	MONTHLY
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MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1911-82

	MINIMUM	MAX1 MUM	NEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	OF	PERIOD (CON- SECU-	1	INTERVAL EXCEEDAN	CFS, FOI , IN YEAR CE PROBAR	RS, AND A BILITY, I	ANNUAL N	- <b>и</b> с Ти
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	114	904	260	152	.58	2.7	1	125	108	100	94	88	85
IOVEMBER	119	2287	845	528	.62	8.9	3	127	113	107	103	99	97
DECEMBER	163	4242	1275	842	.66	13.4	7	130	115	109	105	101	99
JANUARY	182	2708	1266	713	.56	13.3	14	134	118	112	107	103	100
EBRUARY	163	2543	1230	528	.43	12.9	30	142	125	117	112	107	104
ARCH	330	2970	1115	473	.42	11.7	60	154	134	126	119	113	109
PRIL	373	2072	1151	365	.32	12.1	90	171	146	135	127	119	114
AY	431	1895	1050	372	.35	11.0	120	194	161	147	137	127	121
UNE	201	1394	668	315	.47	7.0	183	315	238	206	183	160	147
ULY	124	650	295	101	.34	3.1							
UGUST	98	298	182	42	.23	1.9							
EPTEMBER	116	307	167	35	.21	1.8							
NNUAL	350	1201	789	204	.26	100							
MAGNII		PROBABILIT D ON PERIC			OUS PEAK F 0-82	FLOW	MAG			ABILITY (			_OW

SCHARGE, YEARS, A		S, FOR IN UAL EXCEE					PERIOD	DISC	INTER	N CFS, FO VAL, IN N NCE PROB	YEARS, A	ND ANNUAL	L
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 <b>1%</b>
4830	7430	11500	14600	18700	22100	25600							
							1	6000	9570	11900	14800	16800	18700
WEIGHTED	SKEW :	= .074					3	4720	. 7380	9210	11600	13300	15100
							7	3460	5110	6230	7640	8700	9770
							15	2550	3550	4200	5000	5580	6150
							30	2070	2760	3200	3720	4090	4450
							60	1670	2170	2480	2850	3120	3370
							90	1500	1920	2160	2450	2640	2830

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1910-82

		DISC	HARGE, II	V CFS, V	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME	Ξ		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2170	<b>16</b> 50	14 <b>1</b> 0	1220	1060	929	730	558	386	262	223	192	171	152	133

#### 14148000 MIOOLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIOGE, OR

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

ORAINAGE AREA. -- 924 mi2.

PERIOO OF RECORO.--March 1911 to September 1912, July 1923 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "near Hazeldell" 1911-12 and as "at Eula" 1923-50.

GAGE.--Water-stage recorder. Oatum of gage is 934.76 ft National Geodetic Vertical Datum of 1929. Mar. 22, 1911, to Sept. 30, 1912, nonrecording gage at site 4.0 mi upstream, just below North Fork at different datum. July 1, 1923, to Aug, 11, 1935, nonrecording gage and Aug. 12, 1935, to Sept. 30, 1950, water-stage recorder at site 4.0 mi downstream at different datum.

REMARKS.--Flow regulated since 1961 by Hills Creek Lake; slight regulation at times by logponds above station. No diversion above station.

AVERAGE 01SCHARGE.--60 years, 2,767 ft3/s, 2,005,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORO.--Maximum discharge, 81,800 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 18.8 ft, from floodmark, site and datum then in use, from rating curve extended above 39,000 ft<sup>3</sup>/s; minimum, 322 ft<sup>3</sup>/s Aug. 30, 1961, caused by closing outlet gates at Hills Creek Oam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1861 and prior to beginning of record, 17.0 ft in February 1890 at site used 1923-50, from information by local resident, discharge, about 55,000 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF HILLS CREEK OAM)

MONTHLY AND ANNUAL MEAN DISCHARGES	1912-60	MAGNITUOE AND PROBABILITY OF ANNUAL LOW FLOW
		BASEO ON PERIOD OF RECORD 1925-60

	M I KI I MURA	444 V 148114	MEAN	STAN- OARO OEVIA-	COEFFI- CIENT OF	PERCENT OF ANNUAL	PERIOO (CON- SECU-		INTEŔVAL	, IN YEA	R INOICA RS, ANO 4 BILITY, I	ANNUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	RUNOFF	TIVE OAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	54 1	4185	1095	670	.61	3.3	1	619	531	488	455	420	
NOVEMBER	500	6703	2679	1806	.67	8.2	3	622	533	490	456	421	
DECEMBER	959	11640	3794	2524	.67	11.6	7	632	544	501	468	433	
JANUARY	771	8988	3999	2108	.53	12.2	14	645	553	509	475	438	
FEBRUARY	1352	7859	4264	1799	.42	13.0	30	666	570	525	490	452	
4ARCH	1293	8423	3774	1475	.39	11.5	60	709	600	549	510	468	
PRIL	1454	6785	3984	1202	.30	12.1	90	757	629	569	524	476	
4AY	1288	6408	3712	1346	.36	11.3	120	824	671	604	554	503	
JUNE	837	7098	2741	1375	.50	8.4	183	1190	891	770	686	604	
JULY	591	2139	1232	417	.34	3.8							
AUGUST	491	1095	798	163	.20	2.4							
SEPTEMBER	494	1125	752	1 49	.20	2.3							
ANNUAL	1520	4337	2724	717	.26	100							

# MAGNITUOE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASEO ON PERIOD OF RECORD 1912-60

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASEO ON PERIOD OF RECORD 1912-60

OISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT								OISCHARGE, IN CFS, FOR INOICATEO RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY. IN PERCENT						
1.25 80%	2 50%	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1%	(CON- SECU- TIVE OAYS)	2 50%	5 20 <b>%</b>	10	25 4%	50 2%	100	
16200	26700	44100	57400	76000	91000			22222	74500	47500		64000		
WELCHTE	WEIGHTEO SKEW = 0.000						7	22000 16500	34500 24300	43500 29800	55500 37000	64800 42500		
WEIGHIE	O SKEW -	0.000					7	11800	16400		23000	25600		
							, 15	8610	11500	19300 13300	15400	16900		
							30	6830	8830	10000	11400	12400		
							60	5580	7090	8020	9110	9890	==	
							90	5050	6300	7030	7850	8410		

#### OURATION TABLE OF OAILY MEAN FLOW FOR PERIOD OF RECORD 1912-60

		0180	HARGE,	IN CFS,	WHICH WAS	EQUALEO	OR EXC	EEOEO FOR	INOICATEO	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
7180	5600	4740	4100	3600	3190	2500	1910	1410	1040	915	826	751	679	592

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

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF HILLS CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1962-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-82

	M I N I MUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	ARS, AND	ATED RECU ANNUAL NO IN PERCEI	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
CTOBER	625	2929	1784	513	.29	5.2	1	808	648	 568	504		- <b></b>
NOV EMBER	1466	6263	3260	1374	.42	9.6	3	840	683	604	542		
DECEMBER	1073	13540	5205	3002	.58	15.3	7	884	721	636	568		
IANUARY	874	10120	4871	2343	. 48	14.3	14	924	753	663	590		
EBRUARY	710	8093	3264	1738	.53	9.6	30	1000	812	722	652		
MARCH	1292	7802	2812	1568	.56	8.2	60	1170	962	865	791		
APR I L	1464	4575	2993	958	.32	8.8	90	1300	1090	994	916		
1AY	1378	5036	3211	1070	.33	9.4	120	1400	1210	1110	1030		
IUNE	1037	4969	2400	1110	.46	7.0	183	1700	1440	1330	1240		
JULY	766	1901	1329	363	.27	3.9			177U		1240		
AUGUST	700	1753	1354	325	.24	4.0							
SEPTEMBER	1262	2639	1642	345	.21	4.8							
ANNUAL	1416	4301	2844	779	.27	100							
OISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	EOUS PEAK			BASE	ED ON PER	RIOD OF F	RECORD 1	TED RECUF	
ISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL	, IN NT	PERIOD (CON-	BASE	HARGE, IN	RIOD OF F	RECORD 1 DR INDICA (EARS, AN	962-82  .TED RECUF	RENCE
ISCHARGE, YEARS, A	BASE IN CFS,	FOR INDIC	OD OF RE	CORD	INTERVAL IN PERCEI		PERIOD	BASE	HARGE, IN	RIOD OF F	RECORD 1 DR INDICA (EARS, AN	962-82  .TED RECUR ID ANNUAL	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	HARGE, IN INTERN EXCEEDAN	RIOD OF F N CFS, FC /AL, IN ) NCE PROBA	RECORD 1  OR INDICA YEARS, AN ABILITY,  25	962-82 TED RECUFID ANNUAL IN PERCEN	RRENCE
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERN EXCEEDAN	RIOD OF F N CFS, FC /AL, IN ) NCE PROBA	RECORD 1  OR INDICA YEARS, AN ABILITY,  25	962-82 TED RECUFID ANNUAL IN PERCEN	 RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERVENCE SECOND	N CFS, FC /AL, IN N NCE PROBA 10 10%	RECORD 1 DR INDICA FEARS, AN ABILITY, 25 4%	962-82  TED RECUP D ANNUAL IN PERCEN 50 2%	RRENCE
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERVEXCEDAN 5 20\$	N CFS, FC VAL, IN N NCE PROBA	RECORD 1  OR INDICA (EARS, AN ABILITY,  25 4%  32400	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  32400 28700	962-82 TED RECUFI D ANNUAL IN PERCEN 50 2%	RRENCE  IT  100  18
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 14900 12000 9540	HARGE, IN INTERN EXCEEDAN 5 20% 22600 18500 14300	10 OF F	DR INDICA VEARS, AN ABILITY,  25 4%  32400 28700 21800	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE  IT  100  18
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 14900 12000 9540 7910	HARGE, IN INTERVENCE EXCEEDAN 5 20% 22600 18500 14300 11200	10 OF F	RECORD 1	962-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE  IT  100  18
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 14900 12000 9540 7910 6490	HARGE, IN INTERVEXCEEDAN  5 20%  22600 18500 14300 11200 9070	10 OF F	32400 28700 21800 12500	962-82  TED RECUPID ANNUAL IN PERCEN  50 2%	100
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC	CATED RE NCE PROB 10 10 10 DURATIO	CURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 14900 12000 9540 7910 6490 5250 4730  OF RECC	22600 14300 11200 9070 7370 0RD 1962-	N CFS, FC /AL, IN N NCE PROBA	DR INDICA (EARS, AN ABILITY, 25 4% 32400 28700 21800 15700 12500 10500 9030	962-82  TED RECUPID ANNUAL IN PERCEN  50 2%	 RRENCE VT 100 1%
ISCHARGE, YEARS, A 1.25 80% WEIGHTED	BASE IN CFS, IND ANNUA 2 50% SKEW =	FOR INDICL EXCEEDA	OD OF RECATED RENCE PROB	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEN 50 2% OF DAILY M	JALED OR E	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	DISCH 2 50% 14900 12000 9540 7910 6490 5250 4730 OF RECC	22600 18500 11200 11200 1200 1200 11	27200 23000 10% 27600 13200 17600 13200 7680 8760 7680	32400 28700 21800 15700 10500 9030	962-82  TED RECUFID ANNUAL IN PERCEN  50 2%	100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC	CATED RE NCE PROB 10 10 10 DURATIO	CURRENCE SABILITY, 25 4%	INTERVAL IN PERCEN 50 2% OF DAILY M	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	DISCH 2 50% 14900 12000 9540 7910 6490 5250 4730  OF RECC	22600 14300 11200 9070 7370 0RD 1962-	N CFS, FC /AL, IN N NCE PROBA	DR INDICA (EARS, AN ABILITY, 25 4% 32400 28700 21800 15700 12500 10500 9030	962-82  TED RECUPID ANNUAL IN PERCEN  50 2%	 RRENCE VT 100 1%

#### 14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR

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

DRAINAGE AREA.--1.001 mi<sup>2</sup>

9060

6200

4610

3980

3700

3410

2680

2080

1660

1410

1300

1260

1220

1150

1010

PERIOD OF RECORD.--October 1946 to September 1954 (published as "at Lowell"), June 1955 to September 1982. Monthly discharge only for October 1954 to June 1955, published in WSP 1738.

GAGE.--Water-stage recorder. Datum of gage is 592.30 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Prior to Aug. 23, 1950, nonrecording gage and Aug. 23, 1950, to Sept. 30, 1954, at site 4.0 mi upstream at different datum, and June 9, 1955, to Feb. 18, 1977, at datum 3.00 ft higher.

REMARKS.--Flow regulated since 1953 by Lookout Point Lake, since 1955 by Dexter Lake (re-regulating), and since 1961 by Hills Creek Lake.

AVERAGE DISCHARGE.--36 years, 3,158 ft3/s, 2,288,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 62,600 ft³/s Jan. 18, 1953, gage height, 12.46 ft, site and datum then in use, from rating curve extended above 33,000 ft³/s; minimum daily, 100 ft³/s Nov. 25, 1960.

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

#### STATISTICAL SUMMARIES (AFTER THE COMPLETION OF HILLS CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1962-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	OF	PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	OR INDICAT ARS, AND A ABILITY, I	NNUAL NO	)N-
НТИОМ	(CFS)	(CFS)	(CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	1847	5266	3237	688	.21	9.0	1	801	440	292	198		
NOVEMBER	2076	7748	4597	1487	.32	12.7	3	985	697	548	434		
DECEMBER	1231	11300	5785	2848	.49	16.0	7	1100	777	599	463		
JANUARY	1050	13510	5219	2787	.53	14.4	14	1120	794	612	472		
EBRUARY	668	7634	2713	2137	.79	7.5	30	1170	841	659	518		
4ARCH	525	7363	2082	1562	.75	5.8	60	1270	898	720	587		
APRIL	437	4070	1891	1044	.55	5.2	90	1440	1020	835	698		
4AY	526	5088	2366	1283	.54	6.5	120	1570	1130	947	815		
JUNE	816	4564	2197	1137	.52	6.1	183	1910	1480	1290	1160		
JULY	1088	1944	1556	271	. 17	4.3							
AUGUST	1083	2380	1827	335	.18	5.1							
SEPTEMBER	1405	3932	2671	762	.29	7.4							
NNUAL	1392	4586	3016	868	.29	100							
MAGNII		PROBABILI D ON PERI			OUS PEAK F	FLOW	 MA				OF ANNUAL RECORD 19		.ow
)ISCHARGE, YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD CURRENCE	INTERVAL	, IN NT %	PERIOD (CON-	BASE	ED ON PER HARGE, IN	CFS, FO		62-82 ED RECUF	RENCE
SCHARGE,	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD	INTERVAL	 , IN	PERIOD (CON- SECU- TIVE	BASE DISCH	HARGE, INTERVENCENCE	CFS, FO	RECORD 19 DR INDICAT (EARS, AND ABILITY, I	62-82 ED RECUF ANNUAL N PERCEN	RENCE
ISCHARGE, YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 5	PERIOD (CON- SECU-	BASE DISCE	HARGE, INTERVEN	CE PROBA	RECORD 19  OR INDICAT (EARS, AND ABILITY, I	62-82 ED RECUF ANNUAL N PERCEN	RRENCE
ISCHARGE, YEARS, A	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 5	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	IOD OF E	RECORD 19	62-82 ED RECUF ANNUAL N PERCEN	RENCE
YEARS, A	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 5	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, IN INTERVEXCEEDAN 5 20%	IOD OF F	RECORD 19  OR INDICAT (EARS, AND BILITY, I  25 4%  20600	ED RECUF ANNUAL N PERCEN 50 2%	RENCE
ISCHARGE, YEARS, A	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 5	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	17900	25 4% 20600 19300	62-82 FED RECUF ANNUAL N PERCEN 50 2%	RENCE
YEARS, A	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 5	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERVENCEDAN 5 20% 15600 15200 14500	10D OF F	20600 19300 18200	62-82 FED RECUF ANNUAL N PERCEN 50 2%	RENCE
YEARS, A	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 5	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 11600 11500 10900 9430	HARGE, IN INTERVEXCEEDAN 5 20% 15600 15200 14500 12500	100 OF F	DR INDICAT (EARS, AND BELLITY, I 25 4% 20600 19300 18200 15900	62-82 ED RECUF ANNUAL N PERCEN 50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 5	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH 2 50% 11600 11500 10900 9430 7370	HARGE, IN INTERVENCE EXCEED AN 5 20% 15600 15200 14500 10100	100 OF F	20600 19300 18200 14100	62-82  ED RECUF ANNUAL N PERCEN  50 2%	RENCE
ISCHARGE, YEARS, A 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 5	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 11600 11500 10900 9430	HARGE, IN INTERVEXCEEDAN 5 20% 15600 15200 14500 12500	100 OF F	DR INDICAT (EARS, AND BELLITY, I 25 4% 20600 19300 18200 15900	62-82 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
SCHARGE, YEARS, A 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	CATED RE	CORD COURTENCE CABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT ~	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH 2 50% 11600 11500 10900 9430 7370 6000 5390	HARGE, IN INTERVEXCEEDAN  15600 15200 14500 14500 10100 8180 7250	10 OF F 1 CFS, FC AL, IN N CE PROBA	20600 19300 18200 14100 11600	62-82  ED RECUF ANNUAL N PERCEN  50 2%	RRENCE
ISCHARGE, YEARS, A 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	CATED RENCE PROB	CORD CURRENCE ABILITY, 25 4% N TABLE	INTERVAL IN PERCEI 50 2%	, IN NT - 100 1%  4EAN FLOW	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	DISCI 2 50% 11600 11500 9430 7370 6000 95390	HARGE, IN INTERNEXCEEDAN 5 20% 15600 15200 14500 10100 8180 7250 PRD 1962-	10 OF F	20600 19300 18200 19300 14100 11600 9870	62-82  ED RECUF ANNUAL N PERCEN  50 2%	RRENC

## 14150300 FALL CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°58'15", long 122°38'15", in SW½ sec.25, T.18 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.1 ml downstream from North Fork, 8.0 ml northeast of Lowell, and at mile 14.4.

DRAINAGE AREA .-- 118 mi2.

PERIOD OF RECORD. -- August 1963 to September 1982.

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

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--19 years, 411  $\mathrm{ft^3/s}$ , 47.30 in/yr, 297,800 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-82

	MINIMON	MANTHUM	MEAN	STAN- DARD DEVIA-	CIENT OF	PERCENT OF	PERIOD (CON- SECU-		ARGE, IN INTERVAL EXCEEDANG	, IN YEAR	RS, AND A	NNUAL N	ON~
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1 <b>%</b>
OCTOBER	31	296	111	75	.68	2.2	1	24	20	18	17		
NOVEMBER	83	1389	519	374	.72	10.5	3	24	20	19	18		
DECEMBER	61	2282	895	540	.60	18.1	7	25	21	20	19		
JANUARY	102	1849	1002	509	.51	20.3	14	26	22	21	20		
FEBRUARY	92	1179	638	288	.45	12.9	30	29	24	22	21		
MARCH	194	1326	622	313	.50	12.6	60	37	29	27	25		
APRIL	233	862	503	175	.35	10.2	90	44	34	30	27		
MAY	99	589	306	118	.39	6.2	120	53	41	36	33		
JUNE	54	375	170	97	.57	3.4	183	104	78	66	57		
JULY AUGUST	46	144	67	24	.36	1.4							
SEPTEMBER	25 24	100 176	46 59	21 39	.46 .66	.9 1.2							
ANNUAL	183	644	411	124	.30	100							
DISCHARGE	BASE IN CFS,	D ON PERIO	OD OF RE	CORD 196	OUS PEAK F 4-82 INTERVAL, IN PERCEN		MAG  PERIOD (CON-	BASEI DI SCH/		OD OF RE	CORD 19 INDICAT ARS, AND	64-82  ED RECUR ANNUAL	RRENCE

YEARS, A				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4%	50 <b>2%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100
4000	6500	10200	12600	15800		-~							
			-~				1	4730	6930	8290	9890		
WEIGHTED	SKEW =	298					3	3430	5010	6040	7290		
							7	2440	3510	4190	5030		
							15	1760	2440	2850	3350		
							30	1350	1800	2050	2340		
							60	1030	1410	1640	1930		
							90	927	1240	1430	1650		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-82

5% 10% 15% 20% 25%	30% 40%	50% 60%	70% 75%	80% 85%	90%	95%
1480 962 737 604 503	423 304	206 127	76 60	49 41	34 2	28

## 14150800 WINBERRY CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°54'50", long 122°41'15", in NEtSEt sec.16, T.19 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.9 mi upstream from Nelson Creek, 4.6 mi east of Lowell, and at mile 4.4.

DRAINAGE AREA.--43.9 m12.

404

282

220

183

153

129

94

63

37

20

16

12

9.0

7.1

5.3

PERIOD OF RECORD.--August 1963 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 863.70 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--18 years, 118  $ft^3/s$ , 36.50 in/yr, 85,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 8.07 ft; minimum, 1.5 ft<sup>3</sup>/s Sept. 4, 5, 8-10, 1967.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-81

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-81

				STAN- DARD DEVIA-	COEFFI-		PERIOD (CON-		INTERVAL,	IN YEA	R INDICATI RS, AND AI BILITY, II	NNUAL NO	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	7.9	83	27	20	.74	1.9	1	4.3	3.1	2.6	2.2		
NOVEMBER	22	429	146	116	.79	10.2	3	4.4	3.2	2.7	2.3		
DECEMBER	16	668	235	148	.63	16.5	7	4.7	3.4	2.9	2.5		
JANUARY	32	512	277	140	.51	19.4	14	5.1	3.7	3.2	2.7		
FEBRUARY	20	311	162	73	.45	11.4	30	5.8	4.1	3.5	3.1		
MARCH	58	399	182	92	.51	12.8	60	7.7	5.6	4.8	4.3		
APRIL	80	362	166	66	.40	11.7	90	9.4	6.8	5.9	5.3		
MAY	36	258	122	51	.42	8.6	120	12	9.0	7.9	7.3		
JUNE	14	170	63	48	.76	4.4	183	29	20	16	14		,
JULY	8.6	47	18	9.3	.52	1.2							
AUGUST	3.8	33	11	8.5	.75	.8							
SEPTEMBER	4.3	73	15	16	1.07	1.1							
ANNUAL	61	182	118	36	.30	100							
) I SCHARGE	, IN CFS,	FOR INDI	CATED R	ECURRENCE			PERIOD (CON-		INTERVA	L, IN Y	R INDICATI EARS, AND BILITY, II	ANNUAL	
1.25	2	5	10	25	50	100	SECU-						
80 <b>%</b> 	50 <b>%</b>	20 <b>%</b> 	10%	4% 	2% 	1%	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
1090	1800	2890	3650	4650									
							1	1300	1980	2430	2990		
WEIGHTE	D SKEW =	223					3	990	1490	1830	2270		
							7	687	1010	1240	1550		
							15	483	669	792	947		
							30	373	493	566	651		
							60	286	383	445	522		
							90	258	338	385	440	 	
			DURATIO	ON TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	RD 1964-8	1			
		DISCHA	RGE, IN	CFS, WHI	CH WAS EQ	UALED OR	EXCEEDED FOR	R INDICA	TED PERCE	NT OF T	 I ME		

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

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

DRAINAGE AREA .-- 186 mi2.

PERIOD OF RECORD.--October to December 1911 (published as "Big Fall Creek near Fall Creek"; gage heights and discharge measurements only), September 1935 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 637.81 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Oct. 1 to Dec. 31, 1911, nonrecording gage at site 0.25 mi downstream at different datum. Sept. 9, 1935, to Aug. 3, 1950, nonrecording gage at present site and datum.

REMARKS.--Flow regulated since 1966 by Fall Creek Lake. No diversion above station.

AVERAGE DISCHARGE.--47 years, 582 ft<sup>3</sup>/s, 42.49 in/yr, 421,700 acre-ft/yr, adjusted for storage since January 1965.

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

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF FALL CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-65

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-65

		MANTMIN		STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	CFS, FOF , IN YEAF CE PROBAE	RS, AND A	NNUAL N	-ис
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	27 .	1001	207	228	1.10	2.9	1	32	25	23	20 .	18	
NOVEMBER	26	1588	751	487	.65	10.6	3	32	26	23	21	19	
DECEMBER	139	3180	1125	811	.72	15.9	7	33	27	24	22	19	
JANUARY	169	2265	1041	630	.61	14.7	14	35	28	25	22	20	
FEBRUARY	254	2330	1158	432	.37	16.3	30	39	31	27	25	22	
MARCH	149	1806	1020	432	.42	14.4	60	46	36	31	28	25	
APRIL	214	1729	765	350	.46	10.8	90	53	41	36	32	28	
MAY	151	1149	520	266	.51	7.3	120	71	51	42	36	30	
JUNE	68	667	294	160	.54	4.1	183	158	110	89	74	59	
JULY	38	169	100	38	.38	1.4							
AUGUST	23	79	52	14	.27	.7							
SEPTEMBER	31	121	55	23	.42	.8							
ANNUAL	306	924	588	136	.23	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-65

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-65

	•	•			NCE INTER		PERIOD (CON-	DISC	INTER	VAL, ÍN	YEARS, A	ATED RECU ND ANNUAL IN PERCE	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10%	25 4 <b>%</b>	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
6430	10000	15200	18500	22800	25900			<del>-</del>					
			~	<del>-</del>			1	7510	10700	12700	14900	16400	
WEIGHTEI	) SKEW =	279					3	5410	7550	8870	10400	11500	
							7	3530	4860	5700	6700	7420	
							15	2490	3240	3670	4160	4480	
							30	1940	2500	2820	3170	3410	
							60	1520	1930	2170	2450	2650	
							90	1330	1680	1880	2120	2280	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-65

_			D I SCH.	ARGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIME		_	
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
	2120	1440	1110	894	731	605	426	291	183	104	78	60	49	41	33

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

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF FALL CREEK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1967-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1968-82

	MINISMIN	MAVIMIM	MEAN	STAN- DARD DEVIA-	COEFF!- CIENT OF	PERCENT OF	PERIOD (CON-	DISCH	INTERVAL	., IN YEA	OR INDICATION ARS, AND A	ANNUAL NO	ON−
ONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	127	1396	649	340	.52	9.4	1	<b></b>	22	15	11	 . <b></b>	
NOVEMBER	312	1838	861	442	.51	12.4	3	36	22	15	11	·	
DECEMBER	183	2312	1272	672	.53	18.4	7	40.	26	19	14		
JANUARY	153	2093	1123	604	.54	16.2	14	46	29	- 21	15		
FEBRUARY	24	1391	470	409	.87	6.8	30	61	33	23	17		
MARCH	11	1618	424	487	1.15	6.1	60	95	49	34	24		
APRIL	43	1010	363	288	.79	5.2	90	155	96	74	60		
4AY	50	557	267	148	.55	3.9	120	220	129	94	71		
JUNE	92	512	240	138	.58	3.5	183	351	257	208	170		
JULY	47	970	300	292	.97	4.3							
AUGUST	78	934	387	291	.75	5.6							
SEPTEMBER	115	913	565	243	.43	8.2							
ANNUAL	236	936	578	198	.34	100							
OISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	OUS PEAK F	 , IN		BASE	D ON PER	IOD OF R	OF ANNUAL ECORD 19	967-82  FED RECUF	
DISCHARGE, YEARS, A	BASE IN CFS,	FOR INDIC	OD OF RE	CORD CURRENCE	INTERVAL,	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R	ECORD 19	967-82  TED RECUR ) ANNUAL	RENCE
 OISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	INTERVAL,	 , IN	PERIOD (CON- SECU- TIVE	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	IOD OF R  CFS, FO  AL, IN Y CE PROBA	ECORD 19  R INDICAT EARS, AND BILITY, I	967-82 FED RECUF O ANNUAL IN PERCEN 50	RRENCE IT
OISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAN	OD OF RECEIVED RESIDENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	IOD OF R  CFS, FO  AL, IN Y  CE PROBA	ECORD 19 R INDICATERS, AND	967-82 FED RECUF O ANNUAL IN PERCEN	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAN	OD OF RECEIVED RESIDENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	IOD OF R  CFS, FO  AL, IN Y CE PROBA	ECORD 19  R INDICAT EARS, AND BILITY, I	967-82 FED RECUF O ANNUAL IN PERCEN 50	RRENCE IT
DISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECEIVED RESIDENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%	IOD OF R	ECORD 19  R INDICAT EARS, AND BILITY, I  25 4%	P67-82  FED RECUF  ANNUAL  N PERCEN  50 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECEIVED RESIDENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  4310 4130	10D OF R 1 CFS, FO 1 CFS, FO 10 TO 10% 4620 4440	RECORD 19 REINDICATERRS, AND BILITY, I	FED RECUP O ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECEIVED RESIDENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  4310 4130 3800	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 4620 4440 4200	ECORD 19	P67-82  FED RECUF D ANNUAL IN PERCEN  50 2%	RRENCE IT 100 1%
1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECEIVED RESIDENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  3500 3350 2920 2250	D ON PER  ARGE, IN INTERV EXCEEDAN  20%  4310 4130 38800 2970	10D OF R 1 CFS, FO AL, IN Y 10E PROBA 10 10\$ 4620 4440 4200 3340	ECORD 19	P67-82  FED RECUF O ANNUAL IN PERCEN  50 2%	100
1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECEIVED RESIDENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER	10 OF R 10 CFS, FO AL, IN Y 10 10 10 10 10 10 10 10 10 10 10 10 10 1	R INDICATEARS, AND BILITY, I 25 4 \$	JED RECUF ANNUAL N PERCEN 50 2%	100
1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RECEIVED RESIDENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  3500 3350 2920 2250	D ON PER  ARGE, IN INTERV EXCEEDAN  20%  4310 4130 38800 2970	10D OF R 1 CFS, FO AL, IN Y 10E PROBA 10 10\$ 4620 4440 4200 3340	ECORD 19	P67-82  FED RECUF O ANNUAL IN PERCEN  50 2%	RRENCE IT 100 1%
1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	CATED RE	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH- 2 50% 3500 3350 2920 2250 1670 1340 1180	ARGE, IN INTERVEXCEEDAN  4310 4130 3800 2970 2210 1840 1590	100 OF R  CFS, FO AL, IN Y CE PROBA  10 10 4620 4440 4200 3340 2510 2100 1800	R INDICATERS, AND BILITY, II 25 4 \$ 4870 4690 4570 3710 2830 2370	JED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT 100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC	DOD OF RECEIVED RESIDENT RESID	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEN 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	BASE  DISCH  2 50%  3500 2920 2250 1670 1340 0F RECC	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  4310 4130 3800 2970 2210 1840 1590  RD 1967-	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 4620 4440 4200 3340 2510 2100 1800	R INDICATE ARS, AND BILITY, 1 25 4 \$ 4870 4690 4570 3710 2830 2370 2000	JED RECUF ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC	DOD OF RECEIVED RESIDENT RESID	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEN 50 2%  OF DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  3500 2920 2250 1670 1340 0F RECC	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  4310 4130 3800 2970 2210 1840 1590  RD 1967-	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 4620 4440 4200 3340 2510 2100 1800	R INDICATE ARS, AND BILITY, 1 25 4 \$ 4870 4690 4570 3710 2830 2370 2000	JED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT 100 1%

## 14151500 LITTLE FALL CREEK NEAR FALL CREEK, OR

LOCATION.--Lat 43°58'10", long 122°45'20", in S-1/2 sec.25, T.18 S., R.1 W., Lane County, Hydrologic Unit 17090001, 4 mi east of Fall Creek Post Office and 4.5 mi upstream from mouth.

DRAINAGE AREA. -- 52.5 mi2.

PERIOD OF RECORD. -- October 1935 to September 1948.

GAGE. -- Staff gage. Altitude of gage is 715 ft, by barometer.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--13 years (water years 1936-48), 179 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,110  $ft^3/s$  Dec. 28, 1945, gage height, 8.20 ft, from rating curve extended above 2,400  $ft^3/s$  on basis of velocity-area study; minimum observed, 10  $ft^3/s$  Dec. 1, 1936, Aug. 26, 27, 30, 31, Sept. 1, 1940.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1936-48	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		BASED ON PERIOD OF RECORD 1937-48

	MINIMUM	MAVIMIN	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEAF	R INDICATE RS, AND AN BILITY, IN	INUAL N	⊃N−
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	16	223	56	57	1.03	2.6	1	15	12	10	9.4	<del></del>	
NOVEMBER	13	477	231	166	.72	10.7	3	15	12	11	9.7		
DECEMBER	52	865	304	241	.79	14.0	7	15	12	11	9.7		
JANUARY	68	680	329	194	.59	15.2	14	16	13	11	11		
FEBRUARY	110	490	358	118	.33	16.5	30	18	14	13	12		
MARCH	77	627	319	163	.51	14.7	60	21	16	14	13 -		
APRIL	76	611	249	147	.59	11.5	90	23	18	16	15		
MAY	49	226	130	58	. 44	6.0	120	28	21	18	16		
JUNE	37	195	94	48	.51	4.3	183	49	35	<b>2</b> 9	25		
JULY	21	68	44	16	.36	2.0							
AUGUST	13	36	26	7.8	.31	1.2							
SEPTEMBER	15	44	25	9.3	.37	1.2							
ANNUAL	109	270	179	52	.29	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-48

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-48

DISCHARGE, YEARS, AI				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, IN Y	R INDICAT EARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10% 	25 4% 	50 <b>2%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10,%	25 4 <b>%</b>	50 2%	100
1490	2580	4300	5550	7210						7600	4770		
WE I GHTED	SKEW =	227					3	1980 1460	2980 2240	3600 2750	4330 3390		
							/ 15	1030 766	1510 1060	1800 1220	2140 1400		
							30 60	571 <b>45</b> 9	770 602	882 682	1010 770		
							90	408	534	607	691		

#### DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-48

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICAT	ED PERCE	NT OF TI	мE		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90 <b>%</b>	95 <b>%</b>
614	445	342	278	230	189	134	94	65	42	34	28	23	19	16

#### 14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR

LOCATION.--Lat 43°59'55", long 122°54'20", in SW4SW4 sec.14, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090001, on right bank 25 ft downstream from highway bridge at Jasper, 0.1 mi downstream from Hills Creek, and at mile 195.0.

DRAINAGE AREA .-- 1.340 mi2.

PERIOD OF RECORD.--September 1905 to February 1912, July 1913 to March 1917, October 1952 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

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

REMARKS.--Flow regulated since 1953 by Lookout Point Lake, since 1961 by Hills Creek Lake, and since 1966 by Fall Creek Lake.

AVERAGE DISCHARGE.--39 years (water years 1906-11, 1914-16, 1953-82), 4,089  $ft^3/s$ , 2,962,000 acre-ft/yr.

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

## STATISTICAL SUMMARIES (AFTER COMPLETION OF THREE UPSTREAM DAMS)

PIONTIFIET	AND A	MINONE	PILAN	DISCHARGES	1907-62				PERIOD		968-82	
MUNIHLT				DISCHARGES	1967-87		MAGNII					

		MAYIMM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-	DISCH	INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	2946	4685	4052	481	.12	8.2	1	1310	946	753	605		
NOVEMBER	2937	10510	5969	2219	.37	12.1	3	1330	957	762	612		
DECEMBER	1517	14630	8272	3817	.46	16.7	7	1370	969	770	619		
JANUARY	1327	11480	7223	3086	.43	14.6	14	1420	1000	805	654		
FEBRUARY	787	9460	4114	2757	.67	8.3	30	1520	1090	889	735		
MARCH	1111	10550	3481	2505	.72	7.0	60	1760	1290	1080	921	, <b></b>	
APRIL	729	5603	2902	1549	.53	5.9	90	1940	1410	1170	1000		
MAY	844	4875	2774	1235	. 45	5.6	120	2100	1520	1270	1100		
JUNE	1187	5016	2669	1194	.45	5.4	183	2490	1950	1710	1530		
JULY	1248	2562	2005	355	.18	4.1							
AUGUST	1818	3340	2427	371	. 15	4.9							
SEPTEMBER	1830	4703	3521	868	.25	7.1							
ANNUAL	1877	6215	4121	1266	.31	100							

MAGNITUDE	AND PROBABILITY	0F	INSTANTANEOUS	PEAK	FLOW
	BASED ON PERIOD	0F	RECORD		

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1967-82

SCHARGE, YEARS, A							PERIOD (CON-	DISC	INTER	VAL, İN '	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 <b>4%</b>	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1 <b>%</b>
							1	16200	19000	19800	20200		
WEIGHTED	SKEW =						3	15500	18600	19500	20100		
							7	14400	17900	19200	20200		
							15	12300	15900	17600	19100		
							30	10100	13400	15100	16900		
							60	8320	11100	12800	14500		
							90	7530	10000	11400	12800		

## DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1967-82

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EX	CEEDED FOR	INDICATE	D PERCE	NT OF TIM	IE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
11900	8460	6360	5420	4880	4490	3790	3070	2490	2110	1960	1810	1670	1530	1350

#### 14152500 COAST FORK WILLAMETTE RIVER AT LONDON, OR

LOCATION.--Lat 43°38'30", long 123°05'05", in SW½ sec.20, T.22 S., R.3 W., Lane County, Hydrologic Unit 17090002, on left bank 0.6 mi north of London, 11.0 mi south of Cottage Grove, and at mile 35.9.

DRAINAGE AREA. -- 72.1 mi2.

PERIOD OF RECORD. -- September 1935 to September 1982.

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

REMARKS.--No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--47 years, 201 ft<sup>3</sup>/s, 37.86 in/yr, 145,600 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	Minimum		MEAN	STAN- DARD DEVIA-	CIENT OF	PERCENT OF	PERIOD (CON- SECU-		INTERVAL EXCEEDAN	CFS, FOR , IN YEAR CE PROBAB	S, AND A	NNUAL NO	N-
монтн	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2%	100 1%
OCTOBER	 12	472	62	76	1.23	2.6	1	13	10	9.2	8.3	7.4	6.9
10VEMBER	12	847	235	174	.74	9.7	3	13	11	9.4	8.5	7.7	7.1
ECEMBER	26	1333	408	293	.72	16.8	7	13	11	9.7	8.8	7.9	7.4
JANUARY	34	852	<b>24</b> 32	255	.59	17.8	14	14	12	10	9.3	8.3	7.7
EBRUARY	46	827	391	163	.42	16.1	30	15	13	11	10	9.4	8.8
MARCH	84	700	353	160	.45	14.6	60	18	15	13	12	11	11
NPRIL .	86	611	246	115	.47	10.1	90	20	16	15	14	12	12
ΥΑΥ	44	416	146	77	.53	6.0	120	25	20	18	16	14	13
IUNE	26	240	77	42	.55	3.2	183	46	34	29	25	22	19
JULY	17	65	32	11	.34	1.3							
AUGUST	12	39	20	6.3	.31	.8							
SEPTEMBER	9.2	58	22	8.9	.40	.9							
ANNUAL 	65 	344	201	57	. 29	100			_=				
MAGNI	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1936 CURRENCE ABILITY,	DUS PEAK 1 5-82 INTERVAL	FLOW , IN	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV	ABILITY 0 HOD OF RE CFS, FOR AL, IN YE	CORD 19  INDICAT ARS, AND	36-82  ED RECUR ANNUAL	 RENCE
MAGNI IISCHARGE YEARS, /	FUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE	STANTANEC CORD 1936 CORD 1936 CURRENCE ABILITY,	DUS PEAK 1 5-82 INTERVAL	FLOW , IN	<b>-</b>	BASE DISCH	D ON PER ARGE, IN INTERV	OD OF RECEIVED	CORD 19 INDICAT ARS, AND	36-82  ED RECUR ANNUAL	 RENCE
MAGNI	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEO CORD 1936 CURRENCE ABILITY,	DUS PEAK 1 5-82 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%	CFS, FOR AL, IN YE CE PROBAB	INDICAT ARS, AND ILITY, I	36-82  ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
MAGNI	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEO CORD 1936 CURRENCE ABILITY,	DUS PEAK 1 5-82 INTERVAL IN PERCEI	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20%	CFS, FOR AL, IN YE CE PROBAB	INDICAT ARS, AND ILITY, I	36-82 ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
MAGNI	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEO CORD 1936 CURRENCE ABILITY,	DUS PEAK 1 5-82 INTERVAL IN PERCEI	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  2580 1950	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 4000 2860	CFS, FOR AL, IN YE CE PROBAB	INDICAT ARS, AND ILITY, I 25 4% 6160 4050	36-82  ED RECUR ANNUAL N PERCEN 50 2% 7040 4480	T 100 1% 7900 4880
MAGNI ISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEO CORD 1936 CURRENCE ABILITY,	DUS PEAK 1 5-82 INTERVAL IN PERCEI	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 2580 1950 1310	D ON PER ARGE, IN INTERV EXCEEDANG 5 20% 4000 2860 1890	OF RE CFS, FOR AL, IN YE CE PROBAB 10 10% 4960 3420 2230	INDICAT ARS, AND ILITY, I 25 4% 6160 4050 2640	36-82  ED RECUR ANNUAL N PERCEN 50 2% 7040 4480 2920	T 100 1% 7900 4880 3180
MAGNI ISCHARGE YEARS, 1.25 80%	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEO CORD 1936 CURRENCE ABILITY,	DUS PEAK 1 5-82 INTERVAL IN PERCEI	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2580 1950 1310 911	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20% 4000 2860 1890 1260	10D OF RE  CFS, FOR AL, IN YE CE PROBAB  10 10%  4960 3420 2230 1470	ORD 19 INDICAT ARS, AND ILITY, I 25 4% 6160 4050 2640 1710	36-82 ED RECUR ANNUAL N PERCEN 50 2% 7040 4480 2920 1880	T 100 1% 7900 4880 3180 2030
MAGNI	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEO CORD 1936 CURRENCE ABILITY,	DUS PEAK 1 5-82 INTERVAL IN PERCEI	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2580 1950 1310 911 697	D ON PER  ARGE, IN INTERV, EXCEEDAN  5 20%  4000 2860 1890 1260 926	CFS, FOR AL, IN YECE PROBAB  10 10\$ 4960 3420 2230 1470 1050	ORD 19  INDICAT ARS, AND ILITY, I  25 4% 6160 4050 2640 1710 1190	36-82 ED RECUR ANNUAL N PERCEN 50 2  7040 4480 2920 1880 1280	T 100 1% 7900 4880 3180 2030 1360
MAGNI	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEO CORD 1936 CURRENCE ABILITY,	DUS PEAK 1 5-82 INTERVAL IN PERCEI	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2580 1950 1310 911	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20% 4000 2860 1890 1260	10D OF RE  CFS, FOR AL, IN YE CE PROBAB  10 10%  4960 3420 2230 1470	ORD 19 INDICAT ARS, AND ILITY, I 25 4% 6160 4050 2640 1710	36-82 ED RECUR ANNUAL N PERCEN 50 2% 7040 4480 2920 1880	T 100 1% 7900 4880 3180 2030

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATE	D PERCE	NT OF TI	мE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
742	497	373	294	240	200	139	93	59	36	<b>2</b> 9	24	20	17	15

#### 14153500 COAST FORK WILLAMETTE RIVER BELOW COTTAGE GROVE DAM, OR

LOCATION.--Lat 43°43'15", long 123°02'55", in NE½ sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank at bridge 0.3 mi downstream from Cottage Grove Dam, 5.5 mi south of Cottage Grove, and at mile 29.4.

DRAINAGE AREA .-- 104 mi2.

PERIOD OF RECORD.--January 1939 to September 1982. Prior to October 1944, published as "near Cottage Grove."

GAGE.--Water-stage recorder. Datum of gage is 711.00 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Jan. 1 to Oct. 12, 1939, nonrecording gage and Oct. 13, 1939, to Sept. 30, 1944, water-stage recorder at several sites and datums

0.8 mi downstream.

REMARKS.--Flow regulated since 1942 by Cottage Grove Lake. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years, 275 ft<sup>3</sup>/s, 35.91 in/yr, 199,200 acre-ft/yr, adjusted for storage.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1943-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1944-82

	MINITERINA	MAVILDIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL,	IN YEAR	RS, AND A	ED RECURI NNUAL NOI N PERCEN	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	24	761	207	141	.68	6.2	1		<b></b>		<b>-</b>		
NOVEMBER	31	1000	341	241	.71	10.1	3	41	25	17	12	7.6	5.3
DECEMBER	34	1627	590	375	.64	17.5	- 7	43	28	21	15	9.9	7.2
JANUARY	48	1372	634	385	.61	18.8	14	45	31 🗐	24	19	14	11
FEBRUARY	30	1140	421	238	.57	12.5	30	48	36	30	25	20	17
MARCH	23	1060	347	246	.71	10.3	60	56	43	37	32	27	24
APRIL	30	684	208	145	.70	6.2	90	67	51	44	38	32	29
MAY	48	503	136	105	.77	4.0	120	78	59	51	45	38	35
JUNE	49	283	93	46	.50	2.8	183	117	97	87	80	73	68
JULY	24	89	56	13	.24	1.7						<del>-</del>	
AUGUST	26	399	117	95	.81	3.5							
SEPTEMBER	46	465	215	96	.45	6.4							
ANNUAL	77	468	280	82	.29	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1943-82

DISCHARGE, YEARS, A			DICATED F				PERIOD (CON-		INTERV	'AL, ÍN Y	R INDICA EARS, AN BILITY	D ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4% 	50 2% 	100 1%	SECU- TIVE DAYS)	<b>-</b> 2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
				- <b>-</b>			1	2690	3120	3200	3240	3250	3250
WEIGHTED	SKEW =						3	2470	2930	3030	3080	3090	3090
							7	1950	2560	2810	2990	3080	3130
							15	1320	1820	2080	2350	2520	2650
							30	987	1320	1490	1670	1770	1850
							60	754	1010	1120	1230	1280	1330
							90	650	860	950	1020	1060	1090

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1943-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1140	679	486	385	307	256	174	109	84	70	63	57	53	49	40

#### 14154500 ROW RIVER ABOVE PITCHER CREEK, NEAR DORENA, OR

LOCATION.--Lat 43°44'10", long 122°52'20", in NEt sec.24, T.21 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank 0.5 mi upstream from Pitcher Creek, 1.2 mi northwest of Dorena, and at mile 13.2.

DRAINAGE AREA .-- 211 mi2.

PERIOD OF RECORD.--September 1935 to September 1982. Prior to October 1949, published as "at Star."

GAGE.--Water-stage recorder. Datum of gage is 856.16 ft National Geodetic Vertical Datum of 1929. Sept. 16, 1935, to Oct. 17, 1938, nonrecording gage at site 450 ft upstream at datum 1.00 ft higher.

REMARKS.--Slight regulation caused by upsteam logponds. No diversion above station.

AVERAGE DISCHARGE.--47 years, 599  $ft^3/s$ , 38.55 in/yr, 434,000 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL,	CFS, FOR	RS, AND A	NNUAL N	-NC
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1 <b>%</b>
OCTOBER	20	1152	 164	198	1.21	2.3	1	18	14	13	12	10	9.8
NOVEMBER	19	2569	733	543	.74	10.2	3	19	15	13	12	11	10
DECEMBER	58	4114	1187	868	.73	16.4	7	20	16	14	13	12	11
JANUARY	86	2606	1207	735	.61	16.7	14	21	17	15	14	12	12
FEBRUARY	81	2159	1100	469	.43	15.2	30	24	19	17	15 ·	14	13
MARCH	189	2168	1025	478	.47	14.2	60	29	22	20	18	16	15
APRIL	290	2161	829	359	.43	11.5	90	36	27	24	21	19	18
MAY	133	1333	555	281	.51	7.7	120	51	36	31	27	23	21
JUNE	64	692	261	159	.61	3.6	183	134	90	72	59	47	40
JULY	26	157	74	33	.45	1.0							- <del>-</del>
AUGUST	15	106	38	20	.51	.5							
SEPTEMBER	16	259	47	40	.85	.7							
ANNUAL	233	1008	599	168	.28	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82

				RECURREI ROBABILI			PERIOD (CON-	DISC	INTER	N CFS, FOR INDICATED RECURRENCE WAL, IN YEARS, AND ANNUAL NCE PROBABILITY, IN PERCENT						
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1 <b>%</b>			
7590	11500	17000	20600	25200	28600	31900										
		<b>-</b>					1	8140	12200	14800	18000	20300	22500			
WEIGHTE	D SKEW =	207					3	5840	8520	10200	12300	13700	15200			
							7	3870	5500	6530	7760	8630	9470			
							15	2670	3650	4230	4900	5360	5790			
							30	2040	2680	3050	3480	3760	4020			
							60	1180	1590	2070	2360	2690	2920			
							90	1390	1790	2030	2300	2490	2660			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

5\$ 10\$ 15\$ 20\$ 25\$ 30\$ 40\$ 50\$ 60\$ 70\$ 75\$ 80\$	80% 85%	90% 9	
	00%	90% 9:	5%
2200 1470 1120 901 749 625 426 275 156 78 58 44	44 35	28 22	22

## 14155500 ROW RIVER NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'35", long 122°59'25", in NEt sec.36, T.20 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank 1.7 mi upstream from Mosby Creek, 2.1 mi downstream from Dorena Dam, 3.5 mi east of Cottage Grove, and at mile 5.5.

DRAINAGE AREA .-- 270 mi2.

PERIOD OF RECORD.--January 1939 to September 1982. Prior to October 1947, published as "near Dorena."

GAGE.--Water-stage recorder. Datum of gage is 685.24 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Jan. 5 to Oct. 12, 1939, nonrecording gage at site 180 ft upstream at datum 1.00 ft higher.

REMARKS.--Flow regulated since October 1949 by Dorena Lake. No diversion above station.

AVERAGE DISCHARGE.--43 years, 753  $ft^3/s$ , 37.87 in/yr, 545,500 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft $^3$ /s Dec. 28, 1945, gage height, 18.20 ft; minimum, 0.20 ft $^3$ /s Sept. 25 to 0ct. 7, 1958.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF DORENA DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES	1940-49	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		RASED ON REDIOD OF RECORD 1941-49

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	I CFS, FOF , IN YEAR ICE PROBAE	RS, AND A	NNUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	36	842	185	240	1.30	2.2	1						
NOVEMBER	40	1953	1053	687	.65	12.7	3						
DECEMBER	171	3481	1383	1034	.75	16.7	7						
JANUARY	438	2261	1128	696	.62	13.6	14						
FEBRUARY	370	1942	1372	509	. 37	16.5	30						
MARCH	222	1621	1050	431	.41	12.7	60						
APRIL	353	1717	925	456	.49	11.1	90						
4AY	169	1101	632	354	•56	7.6	120						
JUNE	80	833	364	236	.65	4.4	183						
JULY	37	174	99	48	- 48	1.2							
AUGUST	20	85	48	20	.42	-6	NOTE:	LESS TH	N 10 YEA	RS OF DAT	'A AVAILA	BLE.	
SEPTEMBER	34	148	61	35	.57	.7							
ANNUAL	424	1073	688	224	.33	100							
MAGNI		PROBABILI D ON PERI			OUS PEAK 0-49	FLOW	MA:			BABILITY O			.ow
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 194	0-49 INTERVAL IN PERCE	, IN NT	PERIOD (CON-	BASE	ED ON PER HARGE, IN		CORD 19 R INDICAT	40-49 ED RECUR	RENCE
OI SCHARGE	BASE , IN CFS,	D ON PERI	OD OF RE	CORD 194	0-49 INTERVAL IN PERCE	 , 1N	PERIOD (CON- SECU- TIVE	DISCH	ARGE, INTERNET EXCEEDAN	N CFS, FOF VAL, IN YE VAL PROBAE	CORD 19 R INDICATEARS, AND BILITY, I	40-49 ED RECUF ANNUAL N PERCEN	RRENCE
OI SCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 194 CORRENCE BABILITY,	0-49 INTERVAL IN PERCE 50	, 1N NT 	PERIOD (CON- SECU-	BASE DISCE	ID ON PER HARGE, IN INTERN	N CFS, FOF /AL, IN YE	CORD 19 R INDICATE CARS, AND BILITY, I	40-49 ED RECUF ANNUAL N PERCEN	RRENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 194 CORRENCE BABILITY,	0-49 INTERVAL IN PERCE 50	, 1N NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	NIOD OF RE	ECORD 19 R INDICATEARS, AND BILITY, I 25 4%	40-49 FED RECUP ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 194 CORRENCE BABILITY,	0-49 INTERVAL IN PERCE 50	, 1N NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	NIOD OF REAL PROPERTY O	CORD 19 R INDICAT EARS, AND BILITY, I 25 4%	40-49  ED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 194 CORRENCE BABILITY,	0-49 INTERVAL IN PERCE 50	, 1N NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH	HARGE, IN INTERN EXCEEDAN 5 20% 13300 9440 6140	10500 OF REIOD OF REI	R INDICATE ARS, AND BILITY, I	40-49  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 194 CORRENCE BABILITY,	0-49 INTERVAL IN PERCE 50	, 1N NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 8580 6150 4040 2810	HARGE, IN INTERV EXCEEDAN 5 20% 13300 9440 6140 4070	16500 11700 16500 11700 7580 4930	ECORD 19 R INDICATEARS, AND BILITY, I 25 4%	40-49 FED RECUP ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 194 CORRENCE BABILITY,	0-49 INTERVAL IN PERCE 50	, 1N NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	BASE DISCH 2 50% 8580 6150 4040 2810 2150	HARGE, IN INTER: EXCEEDAN 5 20% 13300 9440 4070 2940	10 10% 16500 11700 7580 4930 3420	R INDICATE ARS, AND BILITY, I	40-49  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
01 SCHARGE YEARS, 1. 25 80\$	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 194 CORRENCE BABILITY,	0-49 INTERVAL IN PERCE 50	, 1N NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASE DISCH 2 50% 8580 6150 4040 2810 2150 1670	13300 9440 6140 4070 2940 2280	10 OF REIOD	R INDICATE ARS, AND BILITY, I	40-49  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
1.25 80\$	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 194 CORRENCE BABILITY,	0-49 INTERVAL IN PERCE 50	, 1N NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	BASE DISCH 2 50% 8580 6150 4040 2810 2150	HARGE, IN INTER: EXCEEDAN 5 20% 13300 9440 4070 2940	10 10% 16500 11700 7580 4930 3420	R INDICATE ARS, AND BILITY, I	40-49  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
1.25 80\$	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	CORD 194	0-49 INTERVAL IN PERCE 50 2%	, IN NT  1% 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASE DISCH 2 50% 8580 6150 4040 2810 2150 1670	HARGE, IN INTERN EXCEEDAN 5 20%	10 10% 16500 17700 17700 17700 17700 17700 18930 3420 2680 2360	R INDICATE ARS, AND BILITY, I	40-49  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI LEXCEEDA 5 20%	OD OF RE CATED RE NCE PROE 10 10 3000  DURATIO	CORD 194 COURRENCE SABILITY, 25 4%	0-49 INTERVAL IN PERCE 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCI 2 50% 8580 6150 4040 2810 2150 1670 0F RECC	HARGE, IN INTERNEXCEEDAN  13300 9440 6140 4070 2940 2280 2020	10 OF RE 10 10% 16500 11700 7580 4930 3420 2680 2360	R INDICAT	40-49  TED RECUF  ANNUAL  N PERCEN  50 2%	RRENCE

2490 1740 1350 1070 865 709 489 317 195 101 74 57 45

36

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# 14155500 ROW RIVER NEAR COTTAGE GROVE, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF DORENA DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1950-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1951-82

				STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-	DISCH	INTERVAL	, IN YEA	RS, AND	ATED RECUR ANNUAL NO IN PERCEN	DN-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	<b>2</b> 9	1287	443	289	.65	4.8	1						
NOVEMBER	58	2957	907	714	.79	9.8	3						
DECEMBER	108	4277	1624	1029	.63	17.5	7						
JANUARY	100	3336	1631	919	.56	17.6	14						
FEBRUARY	69	2568	1186	644	.54	12.8	30	131	84	57	37	21	
MARCH	55	2739	992	667	.67	10.7	60	162	111	88	71	54	
APRIL	200	1588	740	397	.54	8.0	90	217	151	121	99	78	
MAY	186	1515	521	340	.65	5.6	120	266	190	150	120	90	
JUNE	120	777	309	160	.52	3.3	183	326	256	220	192	162	
JULY	96	569	205	111	.54	2.2							
AUGUST	50	899	382	235	.62	4.1							
SEPTEMBER	90	705	322	152	.47	3.5							
ANNUAL	288	1229	771	212	.27	100							
MAGNII	BASE	D ON PERI	OD OF RE	CORD	OUS PEAK F			BASE	D ON PER	CFS, FO	RECORD 1	ATED RECUR	
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL	, !N NT	PERIOD (CON-	BASE DISCH	ED ON PER HARGE, IN INTERV	CFS, FO	RECORD 1	1950-82 	RENCE
 DISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL	 , !N	PERIOD	BASE	ED ON PER HARGE, IN INTERV	CFS, FO	RECORD 1	1950-82 ATED RECURND ANNUAL	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	IARGE, IN INTERV EXCEEDAN	CFS, FO AL, IN Y CE PROBA	RECORD  RECORD	1950-82 ATED RECURND ANNUAL IN PERCENTAL	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y ICE PROBA 10%	RECORD  REARS, AN BILITY,  25 4%  9690	1950-82 ATED RECUF ND ANNUAL IN PERCEN 50 2%	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 4780 4560	IARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	RECORD REARS, AN BILITY, 25 4% 9690 8600	ATED RECUF ATED RECUF IN PERCEN 50 2%	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH 2 50% 4780 4560 4360	IARGE, IN INTERVENCEDAN  5 20% 6280 5980 5590	CFS, FO AL, IN Y CE PROBA 10 10%  7600 7060 6210	RECORD RELINDICA REARS, AN BILITY, 25 4% 9690 8600 6830	1950-82  ATED RECUP ND ANNUAL IN PERCEN 50 2%  11600 9880 7200	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4780 4560 4360 3310	ARGE, IN INTERVEXCEEDAN  5 20% 6280 5980 5590 4410	CFS, FO AL, IN Y ICE PROBA-10, 10%, 7600, 7060, 6210, 5050	RECORD 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1950-82 ATED RECUFIND ANNUAL IN PERCEN 50 2% 11600 9880 7200 6260	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH 2 50% 4780 4560 4360	IARGE, IN INTERVENCEDAN  5 20% 6280 5980 5590	CFS, FO AL, IN Y CE PROBA 10 10%  7600 7060 6210	RECORD RELINDICA REARS, AN BILITY, 25 4% 9690 8600 6830	1950-82  ATED RECUP ND ANNUAL IN PERCEN 50 2%  11600 9880 7200	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4780 4560 4360 3310	ARGE, IN INTERVEXCEEDAN  5 20% 6280 5980 5590 4410	CFS, FO AL, IN Y ICE PROBA-10, 10%, 7600, 7060, 6210, 5050	RECORD 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1950-82 ATED RECUFIND ANNUAL IN PERCEN 50 2% 11600 9880 7200 6260	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 4780 4560 4360 3310 2570	ARGE, IN INTERVEXCEEDAN 5 20% 6280 5980 5590 3360	CFS, FC AL, IN Y ICE PROBA-10, 10%	RECORD : REC	1950-82  ATED RECUP ND ANNUAL IN PERCEN 50 2% 11600 9880 7200 6260 4640	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	OD OF RE	CCURRENCE SABILITY, 25 43	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH 2 50% 4780 4560 4360 3310 2570 1950 1690	IARGE, IN INTERVEXCEEDAN  5 20%  6280 5980 5980 4410 3360 2600 2260	CFS, FC AL, IN Y CE PROBA  10 10%  7600 7600 76210 5050 3810 2970 2570	RECORD : RECORD : RECORD : REARS, AN BILITY,	1950-82  ATED RECUP ND ANNUAL IN PERCEN 50 2%  11600 9880 7200 6260 4640 3650	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROB	CCURRENCE SABILITY, 25 43	INTERVAL IN PERCEI 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4780 4560 4360 3310 2570 1950 1690  OF RECC	1ARGE, IN INTERVEXCEEDAN 520% 6280 5980 5980 5990 4410 3360 2600 2260	CFS, FO AL, IN Y CE PROBA  10 10%  7600 7060 6210 5050 3810 2970 2570	R INDICA EARS, AN BILITY, 25 4% 9690 8600 6830 5780 4310 3380 2910	1950-82  ATED RECUP ND ANNUAL IN PERCEN 50 2%  11600 9880 7200 6260 4640 3650	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROB	CCURRENCE SABILITY, 25 43	INTERVAL IN PERCEI 50 2%  OF DAILY N	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4780 4560 4360 3310 2570 1950 1690  OF RECC	1ARGE, IN INTERVEXCEEDAN 520% 6280 5980 5980 5990 4410 3360 2600 2260	CFS, FO AL, IN Y CE PROBA  10 10%  7600 7060 6210 5050 3810 2970 2570	R INDICA EARS, AN BILITY, 25 4% 9690 8600 6830 5780 4310 3380 2910	1950-82  ATED RECUP ND ANNUAL IN PERCEN 50 2%  11600 9880 7200 6260 4640 3650	RENCE

## 14156000 MOSBY CREEK NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°44'40", long 122°59'00", in NW± sec.18, T.21 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank 0.2 mi upstream from Kizer Creek and 5 mi southeast of Cottage Grove.

DRAINAGE AREA. -- 85 m12, approximately.

PERIOD OF RECORD. -- February 1936 to September 1946.

GAGE. -- Staff gage. Altitude of gage is 750 ft, from topographic map.

REMARKS. -- No diversion or regulation above station.

AVERAGE DISCHARGE.--10 years (water years 1937-46), 191 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,520 ft³/s Dec. 28, 1945, gage height, 10.4 ft from floodmark, from rating curve extended above 2,400 ft³/s; mlnimum, 3 ft³/s Aug. 15, to Sept. 2, 1940.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1937-46	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		PASED ON BEDIOD OF BECORD 1039-46

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	H	NTERVAL,	IN YEARS	INDICATE S, AND AN ILITY, IN	INUAL N	0N <b>-</b>
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	5.5	77	28	24	.88	1.2	1	5.8	4.2	3.5	3.0		
NOVEMBER	6.3	626	252	228	.90	10.9	. 3	5.9	4.3	3.6	3.1		
DECEMBER	46	1143	383	368	.96	16.6	7 .	6.2	4.5	3.7	3.1		
JANUARY	70	779	323	238	.74	14.0	14	6.8	4.8	3.9	3.2		
FEBRUARY	110	685	432	174	.40	18.7	30	7.6	5.4	4.5	3.8		
MARCH	61	689	366	211	. 58	15.9	60	8.9	6.5	5.6	5.1		
APRIL	66	644	253	188	.74	11.0	90	10	7.5	6.5	5.8		
MAY	29	264	130	81	.62	5.6	120	14	9.4	7.7	6.6		
JUNE	17	258	95	83	.87	4.1	183	42	24	17	- 13		
JULY	7.6	39	23	11	.50	1.0							
AUGUST	4.0	18	10	4.2	.41	.4							
SEPTEMBER	7.2	33	12	7.7	.64	.5							
ANNUAL	113	314	191	70	.37	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1937-46

# MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1937-46

ISCHARGE, YEARS, A							PERIOD (CON-	DISC	INTERV	I CFS, FOF /AL, IN YE	ARS, AND	ANNUAL	
1.25 80%	2 50%	5 20% 	10 10%	25 4%	50 2 <b>%</b> 	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	25 4%	50 2%	100 1%
2230	3540	5800	7600										
							1	2720	4340	5610			
WEIGHTED	SKEW ≃	. 237					3	1950	3030	3840			
							7	1290	1940	2420			
							15	898	1330	1660			
							30	677	948	1130			
							60	565	791	930			
							90	479	675	804			

## DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-46

-			DISCH	ARGE, IN	CFS, WH	ICH WAS	EQUALED	OR EXCEED	ED FOR	INDICATED	PERCENT	OF TIME			
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	778	507	364	270	210	169	107	63	37	21	16	12	9.1	7.5	6.3

# 14156500 MOSBY CREEK AT MOUTH, NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°46'35", long 122°59'55", in SE $^{\downarrow}_{\tau}$ NW $^{\downarrow}_{\tau}$  sec.1, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on left bank 3.5 mi southeast of Cottage Grove and at mile 1.0.

DRAINAGE AREA.--95.3 mi2.

PERIOD OF RECORD.--September 1946 to September 1981. Monthly discharge only September 1946, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 676.62 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--35 years, 241 ft<sup>3</sup>/s, 34.34 in/yr, 174,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.37 ft, from rating curve extended above 4,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 2.8 ft<sup>3</sup>/s Aug. 15, 1973, Sept. 24, 1974.

STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1947-81	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		BASED ON PERIOD OF RECORD 1948-81

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	9.4	550	77	103	1.33	2.7	1	6.1	4.4	3.7	3.3	2.8	
NOVEMBER	15	1069	303	226	.75	10.5	3	6.3	4.6	3.9	3.4	3.0	
DECEMBER	28	1650	518	343	.66	17.9	7	6.7	4.9	4.2	3.7	3.2	
JANUARY	38	1014	554	320	•58	19.1	14	7.3	5.4	4.6	4.0	3.4	
FEBRUARY	50	1012	459	216	.47	15.8	30	8.4	6.1	5.2	4.5	3.9	
MARCH	112	779	425	189	.44	14.7	60	10	7.7	6.6	5.8	5.0	
APRIL	99	596	271	122	.45	9.4	90	13	9.3	8.0	7.2	6.4	
MAY	41	486	167	102	.61	5.8	120	18	14	12	11	9.3	
JUNE	20	183	70	39	.55	2.4	183	43	31	26	23	20	
JULY	8.7	53	22	9.1	.41	.8							
AUGUST	5.1	34	13	6.5	.51	. 4							
SEPTEMBER	4.6	81	17	14	.82	.6							
ANNUAL	83	390	241	66	.27	100							

MAGNITUDE	AND PROBABILITY	OF	INSTANTANEOUS	PEAK	FLOW
	BASED ON PERIOD	ΛF	RECORD 1047-81	•	

## MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1947-81

					ICE INTER		PERIOD (CON-		INTERV	'AL, İN Y	EARS, AN	TED RECUI ID ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10 <b>%</b>	25 <b>4%</b>	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 19
3180	4830	7180	8770	10800	12300								
				<del>-</del>			1	3610	5300	6310	7450	8210	-
EIGHTED	SKEW =	166					3	2710	3790	4400	5070	5 <b>4</b> 90	-
							7	1790	2480	2870	3320	3620	-
							15	1190	1580	1800	2050	2220	-
							30	901	1150	1280	1410	1500	-
							60	684	887	997	1120	1190	-
							90	591	753	843	942	1010	-

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1947-81

			DISCHA	ARGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
	5 <b>%</b>	10%	15 <b>%</b>	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
96	59	612	443	342	276	225	148	92	53	29	21	17	13	9.9	7.4

## 14157000 COAST FORK WILLAMETTE RIVER AT SAGINAW, OR

LOCATION.--Lat 43°50'05", long 123°02'30", in NWt sec.15, T.20 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank at Saginaw, 1.0 mi downstream from Row River.

DRAINAGE AREA. -- 529 mi2.

PERIOD OF RECORD.--October 1923 to September 1951. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 595.76 ft National Geodetic Vertical Datum of 1929. Prior to May 10, 1930, chain gage at site 50 ft upstream at different datum and May 10, 1930, to Oct. 12, 1938, at present datum.

REMARKS.--Small diversions and regulation by log ponds above station; regulation by Cottage Grove Reservoir since Oct. 31, 1942, and Dorena Reservoir since Oct. 11, 1949.

AVERAGE DISCHARGE.--28 years (water years 1924-51), 1,236 ft<sup>3</sup>/s, 894,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s Dec. 28, 1945, gage height, 12.38 ft, from rating curve extended above 24,000 ft³/s; minimum observed, 15 ft³/s Aug. 1, Sept. 4, 1928.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1924-42

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1925-42

	Minima	MANABARA	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON- SECU-	DISC	INTERVAL	L, IN YE	OR INDICAT ARS, AND A ABILITY, I	NNUAL N	ON-
ионтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI-	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 15
CT0BER	43	1081	251	258	1.03	1.9	1	32	22	19	17		
OVEMBER	45	5677	1312	1449	1.10	10.0	3	33	24	20	18		-
ECEMBER	396	3845	1754	916	.52	13.4	7	35	26	22	20		-
ANUARY	516	5444	2101	1275	.61	16.0	14	38	29	26	24		-
EBRUARY	660	5385	2437	1341	.55	18.6	30	43	34	31	29		-
IARCH	459	4506	2004	1239	.62	15.3	60	51	39	. 36	34	. <del></del>	-
PRIL	509	4389	1588	976	.61	12.1	90	59	47	43	41		-
AY	247	1904	887	484	.55	6.8	120	74	58	53	51		-
UNE	115	1533	515	388	.75	3.9	183	173	122	105	95		-
ULY	53	348	137	80	. 58	1.0							
				26	.40	.5							
	33	114	65	26									
		114 242	76	49	.64	.6							
UGUST EPTEMBER NNUAL MAGNI	38 621	242 1716	76 1086	49 355		100	 MA	GNI TUDE	AND PRO	BABILITY	OF ANNUAL	. HIGH F	 LOW
MAGNITION TECHNICAL STREET	38 621 TUDE AND BASE , IN CFS,	242 1716 PROBABILI D ON PERI FOR INDI	76 1086 TY OF IN OD OF RE	49 355  ISTANTANE CORD 192  CURRENCE BABILITY,	.64 .33 EOUS PEAK 124-42 INTERVAL IN PERCE	.6 100 FLOW , IN	PERIOD (CON-	BASI	ED ON PER HARGE, II	RIOD OF I	OF ANNUAL RECORD 19 DR INDICAT YEARS, AND	24-42 ED RECU ANNUAL	 RRENC
MAGNITICAL ISCHARGE	38 621 TUDE AND BASE	242 1716 PROBABILI D ON PERI	76 1086 TY OF IN OD OF RE	49 355  ISTANTANE CORD 192  CURRENCE	.64 .33 EOUS PEAK 124-42 INTERVAL IN PERCE	.6 100  FLOW , IN	PERIOD	BASI	ED ON PER HARGE, II	RIOD OF I	RECORD 19 OR INDICAT YEARS, AND	24-42 ED RECU ANNUAL	 RRENC
MAGNI  I SCHARGE YEARS,	58 621 TUDE AND BASE , IN CFS, AND ANNUA	242 1716 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INO OD OF REALINGE PROBLEM	49 355 ASTANTANE CORD 192 ECURRENCE BABILITY,	.64 .33 EOUS PEAK 124-42 INTERVAL IN PERCE	.6 100 	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDAN 5 20%	N CFS, FI VAL, IN NCE PROB 10	RECORD 19  OR INDICAT YEARS, AND ABILITY, I  25 4%	ED RECU ANNUAL N PERCE	RRENC NT
MAGNITION IN THE PROPERTY IN T	38 621 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	242 1716 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INO OD OF REALINGE PROBLEM	355  ISTANTANE CORD 192  CURRENCE BABILITY, 25 4%	.64 .33 EOUS PEAK 124-42 INTERVAL IN PERCE	.6 100 	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDAN 5 20%	N CFS, FIVAL, IN NCE PROBLEM 10 10%	PRECORD 19  OR INDICAT YEARS, AND ABILITY, 1  25 4%	ED RECUI ANNUAL N PERCE 50 2%	RRENC NT
MAGNITION IN THE PROPERTY IN T	38 621 FUDE AND BASE , IN CFS, AND ANNUA	242 1716 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INO OD OF REALINGE PROBLEM	355  ISTANTANE CORD 192  CURRENCE BABILITY, 25 4%	.64 .33 EOUS PEAK 124-42 INTERVAL IN PERCE	.6 100 	PERIOD (CON- SECU- TIVE DAYS)	D1SCI	HARGE, II INTER' EXCEEDAN  5 20%  18200 14000	N CFS, FI VAL, IN NCE PROB. 10 10%	PRECORD 19 DR INDICAT YEARS, AND ABILITY, 1 25 4% 24600 19100	ED RECU O ANNUAL N PERCE 50 2%	RRENC NT
MAGNITION IN THE PROPERTY IN T	38 621 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	242 1716 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INO OD OF REALINGE PROBLEM	355  ISTANTANE CORD 192  CURRENCE BABILITY, 25 4%	.64 .33 EOUS PEAK 124-42 INTERVAL IN PERCE	.6 100 	PERIOD (CON- SECU- TIVE DAYS)	D1SCI	HARGE, II INTER EXCEEDAN 5 20%	N CFS, FIVAL, IN NCE PROBLEM 10 10%	PRECORD 19  OR INDICAT YEARS, AND ABILITY, 1  25 4%	ED RECU O ANNUAL N PERCE 50 2%	RRENC NT
MAGNITION TO THE PROPERTY OF T	38 621 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	242 1716 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INOD OF RE	355  ISTANTANE CORD 192  CURRENCE BABILITY, 25 4%	.64 .33 EOUS PEAK 124-42 INTERVAL IN PERCE	.6 100 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	D1SCI	HARGE, II INTER' EXCEEDAN 5 20% 18200 14000 9460	N CFS, FF VAL, IN NCE PROB. 10 10% 21000 16200 10700	DR INDICAT YEARS, AND ABILITY, I 25 4% 24600 19100 12000	ED RECU ANNUAL N PERCE	RRENC NT
MAGNITION TO THE PROPERTY OF T	38 621 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	242 1716 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INOD OF RE	355  ISTANTANE CORD 192  CURRENCE BABILITY, 25 4%	.64 .33 EOUS PEAK 124-42 INTERVAL IN PERCE	.6 100 	PERIOD (CON- SECU- TIVE DAYS)	D1SCI D1SCI 2 50% 13900 10500 7340 5120	HARGE, II INTER EXCEEDAN 5 20% 18200 14000 9460 6640	N CFS, F VAL, IN NCE PROB. 10 10% 21000 16200 10700 7560	24600 12000 8620	ED RECU ANNUAL N PERCE	RRENC NT

			DISCH	ARGE, IN	CFS, V	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIME		<b></b> -	
	5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4210	) 2	780 2	050	1650	1380	1140	765	471	267	134	103	79	63	51	40

## 14157500 COAST FORK WILLAMETTE RIVER NEAR GOSHEN, OR

LOCATION.--Lat 43°58'50", long 122°57'55", in NW4 sec.29, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank at downstream side of bridge on State Highway 58, 2.5 mi southeast of Goshen, and at mile 6.4.

DRAINAGE AREA .-- 642 mi2.

PERIOD OF RECORD.--August 1905 to February 1912, October 1950 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 473.80 ft National Geodetic Vertical Datum of 1929. Aug. 23, 1905, to Feb. 7, 1912, nonrecording gage at site 600 ft upstream at different datum.

REMARKS.--Flow regulated since 1942 by Cottage Grove Lake and since 1949 by Dorena Lake. Several small diversions for logponds and irrigation above station.

AVERAGE DISCHARGE.--38 years (water years 1906-11, 1951-82), 1,649  $ft^3/s$ , 1,195,000 acre-ft/yr.

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

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF COTTAGE GROVE AND DORENA DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1951-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1952-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON~ SECU-	DISC	INTERVAL	L, HN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	0 <b>N-</b>
нтиом	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	204	3119	779	563	.72	3.9	1	157	128	114	102	90	<b>-</b>
NOVEMBER	121	6305	1948	1545	.79	9.8	3	163	135	121	110	98	
DECEMBER	196	9820	3702	2357	.64	18.7	7	172	144	129	117		
JANUARY	200	7239	3797	2116	.56	19.1	14	181	150	135	123	110	
EBRUARY	203	6891	2787	1451	.52	14.1	30	205	168	152	140	128	
1ARCH	510	5716	2373	1416	.60	12.0	60	273	208	180	160	140	
APRIL	503	4020	1576	879	.56	7.9	90	352	265	226	197	169	_
MAY	341 218	3285	988	694	.70	5.0	120	416	328	284	250	212	
JUNE		1445	521	265	.51	2.6	183	520	427	386	356	326	
JULY	159	588	290	107	.37	1.5							
AUGUST	147	1115	530	290	.55	2.7							
SEPTEMBER	171	1057	545	212	.39	2.7							
ANNUAL	512	2701	1650	478	.29	100							
)1 SCHARGE ,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	EOUS PEAK I	 ,  N		BASI	ED ON PER  HARGE, IN	RIOD OF	RECORD  OR INDICA	ATED RECUI	
)1 SCHARGE ,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	INTERVAL IN PERCEI	 ,  N	PERIOD (CON- SECU-	BASI	ED ON PER 	RIOD OF I	RECORD OR INDICATE YEARS, A	1951-82	RRENCE
)ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	D ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL IN PERCEI	, IN NT	PERIOD (CON-	BASI	ED ON PER 	RIOD OF I	RECORD  OR INDICA YEARS, AN	1951-82  ATED RECUIND ANNUAL	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA	D ON PERIO FOR INDIO L EXCEEDAN	OD OF RECOMMENDED OF RESERVED PROBE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI	HARGE, IN INTERV EXCEEDAN 5 20%	N CFS, FE NAL, IN NCE PROB 10	RECORD OR INDICA YEARS, AI ABILITY, 25 4%	ATED RECUI ND ANNUAL IN PERCEI 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERIO FOR INDIO L EXCEEDAN	OD OF RECOMMENDED OF RESERVED PROBE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI 2 50%	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FO NAL, IN NCE PROB. 10%	RECORD OR INDICATE OR INDICATE YEARS, AI ABILITY, 25 4%	ATED RECUI ND ANNUAL IN PERCEI 50 2%	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	D ON PERIO FOR INDIO L EXCEEDAN	OD OF RECOMMENDED OF RESERVED PROBE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI	HARGE, IN INTEN EXCEEDAN 5 20%	N CFS, FO VAL, IN NCE PROB. 10 10%	RECORD  OR INDICA YEARS, AI ABILITY,  25 44  24400 18800	1951-82 ATED RECUI ND ANNUAL IN PERCEI 50 2% 26500 20300	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERIO FOR INDIO L EXCEEDAN	OD OF RECOMMENDED OF RESERVED PROBE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 13100 10700 9540	HARGE, IN INTERN EXCEEDAN 5 20% 18200 14400 12600	N CFS, FF/AL, IN NCE PROB.  10 10%  21100 16500 14100	RECORD  OR INDICA YEARS, AI ABILITY,  25 4%  24400 18800 15400	1951-82  ATED RECUI ND ANNUAL IN PERCEI  50 2%  26500 20300 16200	100 18
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERIO FOR INDIO L EXCEEDAN	OD OF RECOMMENDED OF RESERVED PROBE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH 2 50% 	HARGE, IN INTERVENCE EXCEEDAN  5 20%  18200 14400 12600 10000	N CFS, FI VAL, IN NCE PROB. 10 10% 21100 16500 14100 11200	RECORD  OR INDIC, YEARS, AI ABILITY,  25 4%  24400 18800 15400 12400	1951-82  ATED RECUI ND ANNUAL IN PERCEI  50 2%  26500 20300 16200 13100	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERIO FOR INDIO L EXCEEDAN	OD OF RECOMMENDED OF RESERVED PROBE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCI 2 50% 13100 10700 9540 7580 5950	18200 14400 10000 10000 1760	10500 11200 8640	OR INDICA YEARS, AI ABILITY, 25 4% 24400 18800 15400 12400 9490	ATED RECUI ND ANNUAL IN PERCEI 50 2% 26500 20300 16200 13100 9970	100 1%
1 SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERIO FOR INDIO L EXCEEDAN	OD OF RECOMMENDED OF RESERVED PROBE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30 60	DISCI 2 50%  13100 10700 9540 7580 4620	18200 14400 12600 10000 10000 10000 10000	N CFS, FI/AL, IN INCE PROB.  21100 16500 14100 8640 6710	25 4400 18800 15400 9490 7330	1951-82  ATED RECUIND ANNUAL IN PERCEI  50 2%  26500 20300 16200 13100 9970 7670	100 1%
1 SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERIO FOR INDIO L EXCEEDAN	OD OF RECOMMENDED OF RESERVED PROBE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCI 2 50% 13100 10700 9540 7580 5950	18200 14400 10000 10000 1760	10500 11200 8640	OR INDICA YEARS, AI ABILITY, 25 4% 24400 18800 15400 12400 9490	ATED RECUI ND ANNUAL IN PERCEI 50 2% 26500 20300 16200 13100 9970	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERIO FOR INDIO L EXCEEDAN	CATED RE	CCURRENCE CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30 60	DISCI 2 50% 	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FI/AL, IN 100 10% 10% 11200 8640 6710 5770	25 4400 18800 15400 9490 7330	1951-82  ATED RECUIND ANNUAL IN PERCEI  50 2%  26500 20300 16200 13100 9970 7670	100 18
1 SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROB	CCORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%  	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	DISCI 2 50% 13100 9540 7580 5950 4620 0F RECC	HARGE, IN INTEREXCEEDAN  18200 14400 142600 10000 7760 6050 5190	N CFS, FI NAL, IN NCE PROB. 10 10% 21100 16500 14100 11200 8640 6710 5770	OR INDICA YEARS, AI ABILITY, 25 4\$ 24400 15400 12400 9490 7330 6310	1951-82  ATED RECUIND ANNUAL IN PERCEI  50 2%  26500 20300 16200 13100 9970 7670	100 18
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RENCE PROB	CCORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2% OF DAILY N	, IN NT 100 1%  	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISCI 2 50% 13100 9540 7580 5950 4620 0F RECC	HARGE, IN INTEREXCEEDAN  18200 14400 142600 10000 7760 6050 5190	N CFS, FI NAL, IN NCE PROB. 10 10% 21100 16500 14100 11200 8640 6710 5770	OR INDICA YEARS, AI ABILITY, 25 4\$ 24400 15400 12400 9490 7330 6310	1951-82  ATED RECUIND ANNUAL IN PERCEI  50 2%  26500 20300 16200 13100 9970 7670	100 18

#### 14158000 WILLAMETTE RIVER AT SPRINGFIELD, OR

LOCATION.--Lat 44°02'45", long 123°01'40", in SE4 sec.34, T.17 S., R.3 W., Lane County, Hydrologic Unit 17090003, near center of span on downstream side of bridge on U.S. Highway 126 at Springfield, and at mile 185.6.

DRAINAGE AREA.--2,030 mi², approximately.

PERIOD OF RECORD.--October 1911 to December 1913, June 1919 to September 1957. Monthly discharge only for October 1911, published in WSP 1318. Published as "at Eugene" June 1919 to September 1928; gage-height records collected at site at Eugene since 1878 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 423.77 ft National Geodetic Vertical Datum of 1929. Nov. 27, 1911, to Dec. 31, 1913, chalm gage on bridge 0.2 mi upstream at different datum. June 1, 1919, to Nov. 24, 1928, staff gage at site 3.4 mi downstream at datum 23.92 ft lower than described gage.

REMARKS.--Flow regulated by Cottage Grove (since 1942), Dorena (since 1949), and Lookout Point Reservoirs (since 1954). Small diversions for irrigation above station.

AVERAGE DISCHARGE.--40 years (water years 1912-13, 1920-57), 5,453  $ft^3/s$ , 3,948,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 140,000 ft<sup>3</sup>/s Dec. 29, 1945, gage height, 20.9 ft, from rating curve extended above 93,000 ft<sup>3</sup>/s; minimum, 500 ft<sup>3</sup>/s Aug. 11, 1926.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage recorded by U.S. Weather Bureau, 22.0 ft Jan. 25, 1903, at Eugene. Floods of Dec. 4, 1861, and Feb. 3, 1890, reached about the same stage.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF UPSTREAM RESERVOIRS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1912-42

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1913-42

	Minimo	144.7/11/01/04	MEAN	DARD DEVIA-	COEFFI-		PERIOD (CON-	DISCH	IARGE, IN INTERVAL EXCEEDAN	, IN YEA	RS, AND	ANNUAL N	0N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	. 50 2 <b>%</b>	100
OCTOBER	659	4999	1411	906	.64	2.4	1	650	562	527	503	480	
NOVEMBER	629	15190	5216	3887	.75	8.8	3	661	574	540	515	492	
DECEMBER	1723	15250	7184	3476	.48	12.1	. 7	674	584	548	522	496	
JANUARY	1961	17240	8978	4871	- 54	15.2	14	691	599	562	536	511	
FEBRUARY	2733	18220	8891	4644	.52	15.0	30	734	628	583	550	518	
MARCH	2218	16890	7626	3506	. 46	12.9	60	795	666	616	581	549	
APRIL	2708	15340	7080	3050	.43	12.0	90	869	709	645	599	555	
MAY	2014	8976	5400	2230	.41	9.1	120	962	765	690	640	592	
JUNE	1121	9708	3926	2281	. 58	6.6	183	1530	1130	985	886	794	
JULY	726	4399	1598	811	.51	2.7							
AUGUST	547	1482	913	239	.26	1.5							
SEPTEMBER	614	2669	989	451	.46	1.7							
ANNUAL	2783	7247	4911	1392	. 28	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1912-42

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1912-42

DISCHARGE YEARS,					NCE INTER TY, IN PE		PER!OD - (CON-	DISC	INTER	VAL, ÎN '	YEARS, A	ATED RECUIND ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE - DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
38000	50900	68100	79100	92700	103000			44700	E0400		76600	07400	
WEIGHTE	D SKEW =	039					- 1 3 7	44300 35000 25300	58400 45400 32800	66800 51200 36800	76600 57600 40900	83400 61800 43500	
							15	19300	24600	27600	30700	32700	
							30 60	14600 11300	17800 13900	19500 15400	21100 17200	22100 18300	
							90	9870	12100	13400	14900	15800	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-42

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME	: :		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
14800	10900	8860	7550	6530	5670	4330	3130	2110	1360	1160	990	856	753	666

#### 14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR

LOCATION.--Lat 44°21'40", long 121°59'40", in SEt sec.8, T.14 S., R.7 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, on west bank of Clear Lake in narrow channel, 150 ft upstream from outlet and at mile 89.6.

DRAINAGE AREA.--92.4 mi², hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--June 1912 to September 1915, October 1947 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 3,015.32 ft National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). June 20, 1912, to July 31, 1915, nonrecording gage at site 1.0 mi north at different datum.

REMARKS.--Flow regulated by natural storage in lake. At high stages an undetermined flow enters numerous sinkholes in lava rock along south edge of lake above station.

AVERAGE DISCHARGE. -- 38 years, 469 ft<sup>3</sup>/s, 68.93 in/yr, 339,800 acre-ft/yr.

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

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1913-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1914-82

	MINIMUM	MANIMIN	MEAN	STAN- DARD DEVIA-	COEFFI~ CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	, IN YEA	R INDICA RS, AND / BILITY,	ANNUAL N	-NC
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	145	428	262	70	.27	4.7	1	210	173	156	143	130	
NOVEMBER	163	829	379	134	. 35	6.7	3	211	174	157	144	131	
DECEMBER	209	1209	558	249	.45	9.9	7	212	175	158	145	132	
JANUARY	191	999	531	214	.40	9.4	14	215	177	160	146	133	
FEBRUARY	180	986	531	214	.40	9.4	30	223	183	164	151	136	
MARCH	224	1205	482	179	. 37	8.6	60	237	192	172	157	141	
APRIL	341	815	574	134	.23	10.2	90	251	203	181	165	148	
MAY	370	1178	717	218	.30	12.7	120	268	215	192	174	156	
JUNE	303	1202	608	250	.41	10.8	183	315	255	230	213	195	
JULY	173	737	410	137	.33	7.3							
AUGUST	149	499	316	96	.31	5.6							
SEPTEMBER	143	392	263	67	. 25	4.7							
ANNUAL	241	683	469	102	.22	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1913-82

DISCHARGE, YEARS, A			DICATED F				PERIOD (CON-		INTERV	'AL, ÍN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
			<b></b>										
							1	1380	1890	2220	2630	2940	
WEIGHTED	SKEW =						3	1270	1690	1950	2260	2490	
							7	1150	1480	1690	1940	2110	
							15	1040	1270	1410	1550	1650	
							30	923	1110	1210	1310	1380	
							60	789	948	1030	1120	1180	
	· 						90	719	852	920	989	1030	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1913-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	D PERCEN	IT OF TI	ME		
5 <b>%</b>	10%	15 <b>%</b>	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
970	819	718	641	583	531	453	404	360	314	290	269	245	220	193

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

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

DRAINAGE AREA .-- 16.2 mi2.

PERIOD OF RECORD. -- October 1960 to September 1982.

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

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years, 91.2 ft<sup>3</sup>/s, 76.45 in/yr, 66,070 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

MONTHLY	AND ANNUAL	MEAN DISCHARGES	1961-82	MAGN I TUDE	AND	PROBA

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-82

	Minimus		MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	0N-
MONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	4.3	76	25	21		2.2	1	3.8	3.2	3.0	2.8		
NOVEMBER	13	213	112	68	.61	10.2	3	3.8	3.3	3.0	2.8	'	
DECEMBER	9.9	404	167	94	.56	15.2	7	3.9	3.3	3.1	2.9.		
JANUARY	14	293	136	71	.52	12.4	14	4.2	3.5	3.2	3.1	·	
FEBRUARY	13	309	134	84	.63	12.2	30	4.6	3.9	3.6	3.4		
MARCH	48	321	100	59	. 59	9.1	60	5.5	4.6	4.3	4.1		
APRIL	50	260	133	53	.40	12.1	90	7.0	5.5	4.9	4.5		
MAY	53	318	172	80	.47	15.7	120	10	7.3	6.3	5.5		
JUNE	22	260	85	64	.76	7.7	183	29	20	16	13		
JULY	7.4	52	18	12	.67	1.7							
AUGUST	4.2	12	7.1	2.4		.6							
SEPTEMBER	4.2	24	8.3	5.0	.61	-8							
ANNUAL	39	136	91	24	.26	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1961-82

				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4% 	50 2% 	100 1%	SECU- TIVE DAYS)	<u>-</u> 2 50%	5 20%	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1%
737	1040	1570	2010	2660									<b>-</b> -
							1	776	1130	1390	1750		
WEIGHTED	SKEW =	.614					3	631	879	1050	1260		·
							7	491	650	744	855		
							15	354	436	482	532		
							30	279	333	363	397		
							60	212	251	273	298		
							90	187	222	240	261		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATI	ED PERCE	NT OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
320	218	175	148	124	104	75	53	35	17	12	8.7	6.7	5.4	4.4

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

LOCATION.--Lat 44°16'05", long 122°02'55", in T.15 S., R.6 E., (unsurveyed), Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.4 mi downstream from Trail Bridge Dam, 0.5 mi upstream from Anderson Creek, 5 mi north of town of Belknap Springs, and at mile 81.5.

DRAINAGE AREA .-- 184 mi2.

PERIOD OF RECORD. -- October 1959 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,980.00 ft National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). Prior to Oct. 11, 1963, at datum 5.60 ft higher.

REMARKS.--Flow regulated since 1963 by Smith River Reservoir. Diurnal fluctuations by powerplants and by Trail Bridge reregulating reservoir upstream. Water is diverted from McKenzie River in SW4 sec.20, T.14 S., R.7 E., to Smith River Reservoir and returned to river above station.

AVERAGE DISCHARGE.--23 years, 1,029  $ft^3/s$ , 75.94 in/yr, 745,500 acre-ft/yr, adjusted for storage.

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

#### STATISTICAL SUMMARIES

	MINIMIN	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, 1	NNUAL N	-NC
MONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	520	858	677	87	.13	5.5	1	561	505	477	455		
NOVEMBER	614	1361	917	226	.25	7.4	3	574	522	499	482		
DECEMBER	634	2500	1299	473	.36	10.5	7	589	537	516	502		
JANUARY	601	1932	1280	362	. 28	10.4	14	608	55 <b>2</b>	530	514		
EBRUARY	580	1813	1188	333	.28	9.6	30	624	563	538	521		
<b>JARCH</b>	731	2332	1116	351	.31	9.1	60	640	576	548	5 <b>2</b> 9		
APRIL	. 8 <b>8</b> 5	1568	1115	196	.18	9.1	90	658	589	559	538		
4AY	834	1903	1308	339	.26	10.6	120	680	605	573	549		
IUNE	7 <b>2</b> 8	1888	1119	346	.31	9.1	183	764	670	631	602		~-
JULY	585	1267	8 59	203	.24	7.0							
AUGUST	552	1034	747	154	.21	6.1							
SEPTEMBER	535	913	691	120	. 17	5.6							
ANNUAL	700	1404	1026	184	.18	100							

DISCHARGE, YEARS, A			DICATED F				PERIOD		INTERV	'AL, ÎN Y	R INDICAT EARS, AND BILITY. I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20% 	10 10%	25 4% 	50 2% 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
							1	2830	4110	5020	6240		
WE I GHTED	SKEW =						3	2540	3640	4450	5580		
							7	2240	3050	3620	4400		
							15	1950	2480	2820	3240		
							30	1710	2080	2300	2550		
							60	1500	1790	1960	2160		
							90	1400	1650	1790	1960		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-82 DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME 20% 5% 10% 15% 25% 30% 40% 50% 60% 70% 75% 80% 90% 95% 1790 **1**570 1410 1300 1210 1130 1020 726 571 929 844 763 691 657 613

## 14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR

LOCATION.--Lat 44°10'45", long 122°07'45", on line between NEt and NWt sec.18, T.16 S., R.6 E., Lane County, Hydrologic Unit 17090004, Willamette National Forest, on left bank 1.0 mi upstream from Glen Creek, 1.7 mi east of town of McKenzie Bridge, and at mile 69.9.

DRAINAGE AREA.--348  $\mathrm{mi}^2$  at cableway 1.2  $\mathrm{mi}$  upstream, where all discharge measurements are made.

PERIOD OF RECORD.--August 1910 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "near McKenzie Bridge" August 1910 to September 1911 and October 1914 to September 1916.

GAGE.--Water-stage recorder. Datum of gage is 1,419.04 ft National Geodetic Vertical Datum of 1929. Prior to June 2, 1932, nonrecording gage at several sites within 2 mi of present site at various datums.

REMARKS.--Flow regulated since March 1963 by Smith River Reservoir (Carmen-Smith Project) 12 mi upstream. No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--72 years, 1,681 ft<sup>3</sup>/s, 1,218,000 acre-ft/yr.

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

## STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF SMITH RIVER AND TRAIL BRIDGE DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1911-62 MAGNITUDE AND PROBABILITY OF

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1912-62

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOI , IN YEAI CE PROBAI	RS, AND	ANNUAL N	)N-
10NTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	.5 20%	10 10%	20 5%	50 2 <b>%</b>	100 15
CT0BER	833	1904	1172	239	.20	5.9	1	1040	927	872	827	778	746
0VEMBER	882	2951	1569	473	.30	7.9	3	1040	929	873	828	779	74
ECEMBER	952	3970	1904	667	.35	9.5	7	1040	932	876	831	782	750
ANUARY	936	3557	1907	605	.32	9.6	14	1050	939	883	837	787	75
EBRUARY	1020	3443	1931	600	.31	9.7	30	1070	952	893	845	793	759
IARCH	1114	3023	1788	400	. 22	9.0	60	1100	970	907	857	803	769
PRIL	1072	2632	1972	387	.20	9.9	90	1130	993	926	873	816	78
۱Y	1203	3422	2065	487	. 24	10.3	120	1170	1020	952	897	838	8,0
JNE	1040	3809	1842	564	.31	9.2	183	1290	1110	1030	960	893	85
JLY	954	2333	1448	318	.22	7.3							
JGUST	871	1657	1225	196	.16	6.1		•					
EPTEMBER	864	1500	1138	164	- 14	5.7							
NNUAL	1098	2397	1662	264	.16	100							
MAGNIT		PROBABILI D ON PERIO			OUS PEAK F 1-62		MAC		D ON PER	ABILITY (			.ow
1 SCHARGE ,	IN CFS,	FOR INDI	CATED RE	CURRENCE	INTERVAL,	. IN		DISCH	ARGE. IN	CFS, FOR	R INDICAT	TED RECU	RENC
					IN PERCE		PERIOD (CON- SECU-		INTERV	CFS, FOR AL, IN YE CE PROBAE	EARS, AND	ANNUAL	

DISCHARGE, YEARS, AI							PERIOD (CON-	Disch		'AL, ÍN '	YEARS, A	ATED RECO ND ANNUAL IN PERCO	L	
1.25 80% 	2 50% 	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	-
4360	6390	9340	11400	14000	16100	18100			7770	8740	40500	11700	17000	-
WEIGHTED	CKEM =	- 020					7	5280 4520	7370 6150	7190	10500 8480	11700 9420	13000 10300	
WEIGHTED	SKEN -	•029					7	3830	4930	5580	6330	6850	7340	
							15	3240	3990	4410	4890	5200	5500	
							30	2790	3320	3610	3910	4110	4290	
							60	2460	2870	3100	3320	3460	3590	
							90	2280	2630	2810	3010	3130	3250	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1911-62

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EX	CEEDED FOR	INDICATED	PERCENT	OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2870	2490	2270	2090	1960	1830	1630	1490	1370	1270 1	210 1	160	1110	1030	950

# 14159000 MCKENZIE RIVER AT MCKENZIE BRIDGE, OR--Continued

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF SMITH RIVER AND TRAIL BRIDGE DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-82

	MINIMUM	MAX IMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	DISCI	INTERVAL	, IN YE	ARS, AND	TED RECUI	0 <b>N</b> -
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	928	1365	1127	124	.11	5.4	1	970	907	883	867		
NOVEMBER	1068	2425	1570	414	.26	7.5	3	985	917	892	875		
DECEMBER	1082	4367	2298	867	.38	11.0	7	998	928	902	885		
JANUARY	1052	3370	2303	670	.29	11.0	14	1020	946	918	899		
FEBRUARY	1027	3382	2084	616	.30	10.0	30	1040	965	934	913		
MARCH	1331	3973	1920	584	.30	9.2	60	1060	982	950	927		
APRIL	1403	2630	1887	356	.19	9.0	90	1090	1000	969	945		
MAY	1406	3041	2099	548	.26	10.1	120	1130	1030	994	969		
JUNE	1269	3033	1798	513	.29	8.6	183	1260	1140	1090	1060		
JULY	1058	2053	1426	297	.21	6.8	~~~~~						
AUGUST	988	1670	1231	216	.18	5.9							
SEPTEMBER	954	1449	1138	161	.14	5.4							
ANNUAL	1203	2377	1739	315	. 18	100							
DISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD  CURRENCE	OUS PEAK I	, IN		BASE	D ON PER	OD OF F	RECORD 1	TED RECU	
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD CURRENCE	INTERVAL IN PERCEI	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF F	RECORD 1	964-82  TED RECUF	RRENCE
DISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD  CURRENCE	INTERVAL IN PERCEI	, IN	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF F	RECORD 1	964-82  TED RECUR D ANNUAL	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN 5	CFS, FCAL, IN Y	RECORD 1 PR INDICA FEARS, AN BILITY, 25	964-82 TED RECUF D ANNUAL IN PERCEN	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 20% 8140	CFS, FCAL, IN YCE PROBA	RECORD 1 PR INDICA PEARS, AN BILITY, 25 4%	964-82  TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  8140 7150	CFS, FCAL, IN YCE PROBA	PRECORD 1 PRINDICA FEARS, AN BILITY, 25 4% 11400 10600	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH 2 50% 5730 4950 4190	D ON PER	CFS, FC AL, IN Y CE PROBA 10 10% 9640 8640 6730	PRECORD 1 PRINDICA FEARS, AN BILITY, 25 4% 11400 10600 7970	964-82  TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  8140 7150	CFS, FCAL, IN YCE PROBA	PRECORD 1 PRINDICA FEARS, AN BILITY, 25 4% 11400 10600	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH 2 50% 5730 4950 4190	D ON PER	CFS, FC AL, IN Y CE PROBA 10 10% 9640 8640 6730	PRECORD 1 PRINDICA FEARS, AN BILITY, 25 4% 11400 10600 7970	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  5730 4950 4190 3510	D ON PER  ARGE, IN INTERV EXCEEDAN  20%  7150 5730 4490	OF F CFS, FC AL, IN Y CE PROBA 10 10% 9640 8640 6730 5080	RECORD 1  OR INDICA FEARS, AN BILITY,  25 4%  11400 10600 7970 5770	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 5730 4950 4190 3510 2970	D ON PER	OF F. CFS, FC AL, IN Y CE PROBA  10 10 9640 8640 8640 6730 5080 4040	25 4 5 11400 10600 7970 4500	7964-82 TED RECUP D ANNUAL IN PERCEN 50 2%	RRENCE
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	DD OF RECATED RENCE PROB	CORD  CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCH  2 50%  5730 4950 4190 3510 2970 2580 2410  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20\$  8140 7150 5730 4490 3640 3100 2870  RD 1964-	100 OF F  CFS, FC AL, IN Y CE PROBA  10 10%  9640 8640 6730 5080 4040 3420 3150	PR INDICA (FARS, AN BILITY, 25 4% 11400 10600 7970 4500 3810 3470	7964-82 TED RECUP D ANNUAL IN PERCEN 50 2%	RRENCE IT
PISCHARGE, YEARS, A 1.25 80% ——— WEIGHTED	BASE IN CFS, AND ANNUA  2 50%   3 SKEW =	FOR INDIC EXCEEDAN 5 20%	DD OF RECORD OF	CORD CURRENCE ABILITY, 25 4% N TABLE CFS, WHI	INTERVAL IN PERCEI 50 2% OF DAILY N	, IN NT 100 1% MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD XCEEDED FOF	DISCH  2 50%  5730 4950 4190 3510 2970 2580 2410  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  7150 5730 4490 3640 3100 2870  RD 1964-  TED PERC	9640 8640 6730 5080 4040 3150 882	RECORD 1  RECORD	JED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC	DD OF RECATED RENCE PROB	CORD  CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI 50 2% OF DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCH  2 50%  5730 4950 4190 3510 2970 2580 2410  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20\$  8140 7150 5730 4490 3640 3100 2870  RD 1964-	100 OF F  CFS, FC AL, IN Y CE PROBA  10 10%  9640 8640 6730 5080 4040 3420 3150	PR INDICA (FARS, AN BILITY, 25 4% 11400 10600 7970 4500 3810 3470	7964-82 TED RECUP D ANNUAL IN PERCEN 50 2%	RRENCE IT

#### WILLAMETTE RIVER BASIN

## 14159200 SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR

LOCATION.--Lat 44°02'50", long 122°13'00", in T.17 S., R.5 E., (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 100 ft upstream from Tipsoo Creek, 8.0 mi south of Rainbow, 9.0 mi southeast of town of Blue River, and at mile 10.4.

DRAINAGE AREA.--160  $\mathrm{mi}^{2}$  at cableway 0.2  $\mathrm{mi}$  downstream, where all discharge measurements are made.

PERIOD OF RECORD.--October 1957 to September 1982. Prior to October 1971, published as "South Fork McKenzie River above Cougar Reservoir".

GAGE.--Water-stage recorder. Datum of gage is 1,709.51 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

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

AVERAGE DISCHARGE.--25 years, 637 ft<sup>3</sup>/s, 54.07 in/yr, 461,500 acre-ft/yr.

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

#### STATISTICAL SUMMARIES

	MINIMIM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	RS, AND	ATED RECUI ANNUAL NO IN PERCEN	DN-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	188	442	277	67	.24	3.6	1	204	190	184	178	172	
NOVEMBER	261	1121	606	281	. 46	7.9	3	204	191	184	179	173	
DECEMBER	231	2915	1001	588	.59	13.1	. 7	206	192	185	179	173	
JANUARY	234	1827	952	4 50	. 47	12.4	14	208	195	188	182	17.6	
FEBRUARY	232	1778	889	386	.43	11.6	30	214	199	192	187	181	
MARCH	410	2065	763	335	. 44	10.0	60	221	206	199	194	188	
APRIL	445	1391	833	225	. 27	10.9	90	231	215	207	201	195	
YAY	426	1383	929	277.	.30	12.1	120	242	224	217	213	209	
JUNE	298	1418	622	295	.47	8.1	183	327	283	266	255	244	
JULY	221	457	302	70	. 23	3.9							
AUGUST	196	338	242	34	. 14	3.2							
SEPTEMBER	197	304	236	27	.11	3.1							
ANNUAL  MAGNI		917 PROBABILI D ON PERI			.23 COUS PEAK 88-82	100 	<b>-</b>		AND PROB			L HIGH FL 1958-82	
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 195 ECURRENCE BABILITY,	OUS PEAK 8-82 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PERARGE, IN INTERV	IOD OF F  CFS, FO AL, IN Y	ECORD 1	958-82	RRENCE
MAGNI DI SCHARGE	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE CATED RE	NSTANTANE ECORD 195	OUS PEAK 8-82 INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	OD OF F CFS, FO AL, IN Y CE PROBA	RECORD 1  REARS, AN BILITY,  25	958-82  TED RECUF  ID ANNUAL  IN PERCEN  50	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 195 ECURRENCE BABILITY, 25 4%	OUS PEAK 18-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	OD OF F CFS, FO AL, IN Y CE PROBA	RECORD 1 RECORD 1 RECORD 1 REARS, AN BILITY,	958-82 TED RECUF ID ANNUAL IN PERCEN	RRENCE
MAGNI DI SCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 195 ECURRENCE BABILITY, 25 4%	OUS PEAK 18-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER	CFS, FO AL, IN Y CE PROBA	RECORD 1  RECORD 1  RINDICA EARS, AN BILITY,  25 4%	NTED RECUR NTED RECUR ID ANNUAL IN PERCEN 50 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80\$	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 195 ECURRENCE BABILITY, 25 4%	OUS PEAK 18-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 6240	CFS, FO AL, IN Y CE PROBA	RECORD 1  RECORD 1  REARS, AN BILITY, 25 4% 9730	NTED RECUFID ANNUAL IN PERCENSON 2%	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80\$	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 195 ECURRENCE BABILITY, 25 4%	OUS PEAK 18-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6240 4930	CFS, F0 AL, IN Y CE PROBA 10% 7760 6430	RECORD 1 RECORD 1 RE INDICA EARS, AN BILITY,  25 4%  9730 8680	1958-82 ATED RECUFI ID ANNUAL IN PERCEN 50 2% 11200 10700	RRENCE
MAGNI SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 195 ECURRENCE BABILITY, 25 4%	OUS PEAK 18-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH2 50% 4050 3100 2360	D ON PER	CFS, FO AL, IN Y CE PROBA	RECORD 1 RECORD 1 REARS, AN BILITY, 25 4% 9730 8680 5740	1958-82 INTED RECUR ID ANNUAL IN PERCEN 50 2% 11200 10700 6840	RRENCE
MAGNI DISCHARGE YEARS, 1.25 80\$	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 195 ECURRENCE BABILITY, 25 4%	OUS PEAK 18-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50  4050 3100 2360 1780	D ON PER IARGE, IN INTERV EXCEEDAN 5 20% 6240 4930 3530 2450	CFS, FO AL, IN Y CE PROBA 10 10%	RECORD 1  R INDICA EARS, AN BILITY,  25 4\$  9730 8680 5740 3590	1958-82 INTED RECUF ID ANNUAL IN PERCEN 50 2\$ 11200 10700 6840 4120	100 1%
MAGNI DISCHARGE YEARS, 1.25 80\$	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 195 ECURRENCE BABILITY, 25 4%	OUS PEAK 18-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH2 50 \$ 4050 3100 2360 1780 1430	D ON PER	TOD OF F  CFS, FO AL, IN Y CE PROBA  10 10%  7760 6430 4430 2930 2190	R INDICA EARS, AN BILITY, 25 4 5 9730 8680 5740 3590 2620	1958-82 ATED RECUFID ANNUAL IN PERCEN 50 2% 11200 10700 6840 4120 2960	100 1%
MAGNI DISCHARGE YEARS, 1.25 80\$	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 195 ECURRENCE BABILITY, 25 4%	OUS PEAK 18-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50  4050 3100 2360 1780	D ON PER IARGE, IN INTERV EXCEEDAN 5 20% 6240 4930 3530 2450	CFS, FO AL, IN Y CE PROBA 10 10%	RECORD 1  R INDICA EARS, AN BILITY,  25 4\$  9730 8680 5740 3590	1958-82 INTED RECUF ID ANNUAL IN PERCEN 50 2\$ 11200 10700 6840 4120	100 1%
MAGNI DISCHARGE YEARS, 1.25 80\$	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE	STANTANE CORD 195 CCURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2% 4800	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4050 3100 2360 1780 1430 1180 1080	D ON PER	TOD OF F  CFS, F0 AL, IN Y CE PROBA  10 10%  7760 6430 4430 2930 2190 1710 1520	R INDICA EARS, AN BILITY, -25 4% -25 8680 5740 3590 2620 2000	1958-82  ITED RECUFID ANNUAL IN PERCEN  50 2%  11200 10700 6840 4120 2960 2220	100 18
MAGNI DISCHARGE YEARS, 1.25 80\$	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI	TY OF IN OD OF RECATED RECEPROE	STANTANE CORD 195 CCURRENCE BABILITY, 25 4%	OUS PEAK 18-82 INTERVAL IN PERCEI 50 2% 4800 OF DAILY I	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50 3100 2360 1780 1430 1180 0F RECO	D ON PER	TOD OF F	R INDICA EARS, AN BILITY, 25 4%	1958-82  ITED RECUFID ANNUAL IN PERCEN  50 2%  11200 10700 6840 4120 2960 2220	100 1%

## 14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR

LOCATION.--Lat 44°08'10", long 122°14'50", in NE<sup>1</sup> sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 0.2 mi upstream from Cougar Creek, 0.6 mi downstream from Cougar Dam, 2.1 mi south of Rainbow, and at mile 3.9.

DRAINAGE AREA. -- 208 mi2.

PERIOD OF RECORD. -- October 1947 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,236.42 ft National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). Oct. 1 to Nov. 4, 1947, nonrecording gage at site 40 ft upstream at datum 0.80 ft higher.

REMARKS.--Flow regulated since 1963 by Cougar Lake, usable capacity, 165,000 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--35 years, 868 ft<sup>3</sup>/s, 56.67 in/yr, 628,900 acre-ft/yr, adjusted for storage.

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

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

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF COUGAR DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1948-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1949-62

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	242	1081	472	256	.54	4.2	1	233	214	206	199		
November	265	1804	967	495	.51	8.7	3	235	216	207	200		
DECEMBER	444	3484	1334	794	.60	11.9	7	238	218	209	201		
JANUARY	465	2809	1211	702	. 58	10.8	14	241	221	212	205		
FEBRUARY	759	2279	1426	518	.36	12.8	30	248	229	221	214		
MARCH	756	1921	1141	374	.33	10.2	60	261	242	234	227		~-
APRIL -	979	1827	1381	289	.21	12.4	90	277	254	244	237		
MAY	861	2175	1401	371	.26	12.5	120	<b>2</b> 98	267	255	246		
JUNE	457	1796	914	394	.43	8.2	183	447	364	333	313		
JULY	272	543	373	85	. 23	3.3							
AUGUST	228	323	280	27	.10	2.5							
SEPTEMBER	220	314	265	28	.10	2.4							
ANNUAL	749	1300	. 927	137	. 15	100							

DISCHARGE, YEARS, /				RECURRENC ROBABILITY		•	PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80 <b>%</b>	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
5830	9110	14000	17400	21900									
							1	6950	10500	13000	16100		
WEIGHTED	SKEW =	128					3	5380	7480	8830	10500		
							7	3790	4910	5630	6510		
							15	2740	3460	3940	4540		
							30	2240	2830	3240	3780		
							60	1830	2210	2460	2770		
							90	1660	1940	2120	2340		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1948-62

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCEI	NT OF TI	ME		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2390	1880	1590	1380	1220	1090	859	672	503	366	324	<b>2</b> 99	278	260	241

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

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF COUGAR DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICA RS, AND A BILITY,		ON-
ионтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
CTOBER	185	1947	- <b>-</b>	315	.34	9.5	1	159	116	97	84		
OVEMBER	276	2403	1191	487	.41	12.1	3	185	131	107	89		
ECEMBER	210	3221	1468	818	.56	15.0	7	217	148	117	94		
ANUARY	267	3246	1286	631	. 49	13.1	14	230	156	122	98		
EBRUARY	157	2030	723	592	.82	7.4	30	256	167	128	100		
IARCH	101	2571	532	542	1.02	5.4	60	304	200	158	128		
PRIL	90	885	461	233	.51	4.7	90	411	281	225	184		
MY	158	1494	728	450	.62	7.4	120	444	310	254	214		
UNE	250	1584	683	364	.53	7.0	183	553	443	396	361		
JULY	251	513	410	64	.16	4.2		<del>-</del>				- <b>-</b>	
NUGUST	397	823	587	127	.22	6.0							
SEPTEMBER		1084	806	113	. 14	8.2							
NNUAL	453	1243	818	225	.28	100							
OI SCHARGE	BASE , , IN CFS,	D ON PERIO	OD OF RE	CORD	OUS PEAK I	 , IN		BASE	D ON PER  ARGE, IN	10D OF R  CFS, FO	R INDICA	964-82  TED RECUF	<b>-</b>
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	D ON PERI	OD OF RE	CORD CURRENCE	INTERVAL	, IN NT	 PER I OD ( CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R  CFS, FO AL, IN Y	ECORD 19	964-82  TED RECUF D ANNUAL	RRENCE
OI SCHARGE	BASE , , IN CFS,	D ON PERIO	OD OF RE	CORD	INTERVAL	 , IN	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R  CFS, FO AL, IN Y	ECORD 19 R INDICA EARS, AND	964-82  TED RECUF D ANNUAL	RRENCE
OISCHARGE YEARS, /	BASE , IN CFS, AND ANNUA 2	D ON PERIOR  FOR INDI L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICA EARS, AND BILITY, 1 25 4%	964-82 TED RECUP D ANNUAL IN PERCEN	RENCE
PISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERIOR  FOR INDI L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50%	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20%	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 5930	ECORD 19 R INDICA EARS, AND BILITY, 25 4% 6150	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT 100 1%
SCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2 50%	D ON PERIOR  FOR INDI L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  4530 4100	D ON PER  ARGE, IN INTERV. EXCEEDANG  5 20%  5590 5350	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10%  5930 5860	ECORD 19 R INDICA EARS, AND BILITY, 25 4% 6150 6280	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
PISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERIOR  FOR INDI L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE  DISCH  2 50%  4530 4100 3340	D ON PER ARGE, IN INTERV. EXCEEDANG 5 20% 5590 5350 4640	CFS, FO AL, IN Y CE PROBA  10 10 5930 5860 5350	ECORD 19  R INDICA EARS, ANE BILITY,  25 4%  6150 6280 6090	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT 100 1%
PISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERIOR  FOR INDI L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  4530 4100	D ON PER  ARGE, IN INTERV. EXCEEDANG  5 20%  5590 5350	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10%  5930 5860	ECORD 19 R INDICA EARS, AND BILITY, 25 4% 6150 6280	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT 100 1%
PISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERIOR  FOR INDI L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50 4530 4100 3340 2550 1950	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  5590 5350 4640 3660 2680	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 5930 5860 5350 4410 3170	ECORD 15  R INDICA EARS, ANE BILITY,  25 4%  6150 6280 6090 5350 3800	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT 100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERIOR  FOR INDI L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	BASE  DISCH  2 50  4530 4100 3340 2550	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20% 5590 5350 4640 3660	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 5930 5860 5350 4410	ECORD 19	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT 100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERIOR  FOR INDI L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50 4530 4100 3340 2550 1950	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  5590 5350 4640 3660 2680	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 5930 5860 5350 4410 3170	ECORD 15  R INDICA EARS, ANE BILITY,  25 4%  6150 6280 6090 5350 3800	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
PISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERIOR  FOR INDI L EXCEEDA	OD OF RE	CORD COURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4530 4100 3340 2550 1950 1520 1360	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20  5 59 4640 3660 2680 2070 1840	10D OF R  CFS, F0 AL, IN Y CE PROBA  10 10 5930 5850 5350 4410 3170 2480 2170	ECORD 19  R INDICA EARS, AND BILITY,  25 4%  6150 6280 6090 5350 3800 3050	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT 100 1%
PISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RECOME	CORD CURRENCE ABILITY, 25 42	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50  4530 4100 3340 2550 1950 1520 1360  OF RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  5590 5350 4640 2680 2070 1840  RD 1964-I	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10\$ 5930 5860 5350 4410 3170 2480 2170	ECORD 15  R INDICA EARS, AND BILITY,  25 4%  6150 6280 6090 5350 3800 3050 2610	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE IT 100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA	OD OF RECOME	CORD CURRENCE ABILITY, 25 42	INTERVAL IN PERCEI 50 2% OF DAILY I	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50  4530 4100 3340 2550 1950 1520 1360  OF RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  5590 5350 4640 2680 2070 1840  RD 1964-I	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10\$ 5930 5860 5350 4410 3170 2480 2170	ECORD 15  R INDICA EARS, AND BILITY,  25 4%  6150 6280 6090 5350 3800 3050 2610	964-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%

## 14161100 BLUE RIVER BELOW TIDBITS CREEK, NEAR BLUE RIVER, OR

LOCATION.--Lat 44°13'05", long 122°15'50", in SE½NE½ sec.36, T.15 S., R.4 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.2 mi downstream from Tidbits Creek, 5.5 mi northeast of town of Blue River, and at mile 8.5.

DRAINAGE AREA .-- 45.8 mi2.

PERIOD OF RECORD.--September 1963 to September 1982.

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

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--19 years, 259  $ft^3/s$ , 76.80 in/yr, 187,600 acre-ft/yr.

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

#### STATISTICAL SUMMAR!ES

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-82

	MINIMUM	MAXIMUM	WEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		ARGE, IN INTERVAL, EXCEEDANC	IN YEARS	, AND AN	INUAL NO	)N
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	12	180	73	52	.72	2.3	1	12	10.0	9.2	8.7		
NOVEMBER	46	731	327	212	.65	10.4	3	12	10	9.4	8.8		
DECEMBER	33	1471	598	352	.59	19.0	7	13	10	9.6	9.1		
JANUARY	48	1033	540	293	.54	17.2	14	13	11	10	9.4		
FEBRUARY	65	914	430	235	.55	13.7	30	15	12	11	10		
MARCH	128	995	340	203	.60	10.8	60	18	14	13	12		
APRIL	147	529	330	110	.33	10.5	90	23	17	15	14		
MAY	100	521	281	127	.45	8.9	120	30	23	20	17		
JUNE	45	320	130	83	.64	4.1	183	68	49	41	35		
JULY	23	73	39	15	.37	1.2							
AUGUST	13	52	23	9.4	.41	.7							
SEPTEMBER	11	82	30	21	.69	1.0							
ANNUAL	106	404	261	76	.29	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-82

DISCHARGE, YEARS, A				RECURRENC ROBABILIT			PERIOD (CON-		INTERV	AL, IN Y	PR INDICAT EARS, AND	ANNUAL	
1.25 80 <b>%</b>	2 50% 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100
2830	4080	6180	7850	10300									
							1	3110	4770	5910	7390		
WE I GHTED	SKEW =	.471					3	2340	3550	4370	5410		
							7	1740	2450	2870	3330		
							15	1130	1540	1770	2030		
							30	860	1150	1310	1490		
							60	656	869	1000	1170		
							90	580	755	864	997		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-82

			DISCHA	RGE, IN	CFS, WH	ICH WAS	EQUALED	OR EXCEEDE	D FOR	INDICATED	PERCENT	OF TIME			
	5 <b>%</b>	10%	15%	20%	25%	30%	40%	50% 	60%	70%	75%	80%	85%	90%	95%
90	)5	587	450	377	317	270	200	140	85	46	35	27	22	18	14

## 14161500 LOOKOUT CREEK NEAR BLUE RIVER, OR

LOCATION.--Lat 44°12'35", long 122°15'20", in T.15 or 16 S., R.5 E. (unsurveyed), Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 6.0 mi northeast of town of Blue River, and at mile 0.5.

DRAINAGE AREA .-- 24.1 mi2.

5%

417

10%

285

15%

226

20%

189

25%

161

30%

140

PERIOD OF RECORD. -- August 1949 to September 1955, September 1963 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,377.76 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE. -- 25 years, 127 ft3/s, 71.56 in/yr, 92,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 8.88 ft, from rating curve extended above 1,300 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 4.8 ft<sup>3</sup>/s Sept. 16, 17, 1981.

## STATISTICAL SUMMARIES

М	IONTHLY : AN	ND ANNUAL	MEAN DES	SCHARGES	1950-82	•	, MAC		AND PROBA D ON PERI				W
	M I N1MUM	MAX1MUM	MEAN	STAN- DARD DEVIA- TION	COEFF1- C1ENT OF VAR1-	PERCENT OF ANNUAL	PER10D (CON- SECU-		ARGE, IN INTERVAL, EXCEEDANC	1N YEAI E PROBAI	RS, AND A	NNUAL NO	N <del>-</del>
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	8.9	179	41	43	1.04	2.7	1	9.3	7.5	6.6	5.9	5.2	
NOVEMBER	10	322	142	95	.67	9.3	. 3	9.4	7.6	6.7	6.0	5.2	
DECEMBER	20	794	252	166	.66	16.5	7	9.7	7.8	6.8	6.1	5.4	
JANUARY	25	591	259	141	.54	17.0	14	10	8.2	7.3	6.6	5.8	
FEBRUARY	27	435	216	105	.49	14.2	30	11	9.0	8.1	7.4	6.6	
MARCH	61.	420	164	84	.51	10.7	60	13	10	9.4	8.5	7.7	
APR1L	70	282	167	56	.33	10.9	90	15	12	11	9.9	9.0	
YAY	55	255	146	60	.41	9.6	120	18	15	13	12	12	
JUNE	30	212	81	50	.62	5.3	183	35	26	23	21	19	
JULY	16	46	27	9.1	.34	1.8							
AUGUST	9.6	22	16	3.6	.23	1.0							
SEPTEMBER	8.6	41	16	6.8		1.1							
ANNUAL	49	182	127	33	.26	100							
DISCHARGE	BASE , IN CFS,	D ON PER1	OD OF RE	CORD 195	OUS PEAK I 0-82 INTERVAL IN PERCEI	, 1N	PERIOD (CON-	BASEI DISCH	AND PROBA D ON PERI ARGE, IN INTERVA	OD OF RECEIVED	ECORD 19  R IND1CAT EARS, AND	50-82  ED RECUR ANNUAL	 RENCE
1.25	2	5	10	25		100	SECU-						
80%	50%	20%	10%	4%	2%	1%	TIVE	2	5	10	25	50	100
							DAYS)	50%	20%	10%	4%	2%	- 1%
1200	1750	2680	3440	4560	5520								
							1	1380	2110	2560	3090	3460	
WEICHTE	D SKEW =	.494					3	1030	1560	1910	2340	2650	
WEIGHTE							7	734	1070	1280	1530	1710	
WEIGHIE													
WEIGHTE							15	503	701	822	964	1060	
WEIGHTE							30	399	539	624	721	788	
WEIGHTE													

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1950-82

DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

50%

76

60%

49

70%

27

75%

22

80%

18

85%

16

90%

13

95%

11

40%

105

#### 14162000 BLUE RIVER NEAR BLUE RIVER, OR

LOCATION.--Lat 44°10'55", long 122°16'45", in NW½ sec.13, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, on right bank 2.5 mi downstream from Lookout Creek, 3.3 mi upstream from Quartz Creek, 3.5 mi northeast of town of Blue River, and at mile 5.1.

DRAINAGE AREA .-- 75.0 ml2.

PERIOD OF RECORD. -- September 1935 to September 1964. Monthly discharge only September 1935, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,231.62 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--29 years (water years 1936-64),  $393 \text{ ft}^3/\text{s}$ , 284,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 13,300 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 9.80 ft, from rating curve extended above 7,400 ft<sup>3</sup>/s; minimum, 11 ft<sup>3</sup>/s Aug. 21, 22, 1961.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-64 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-64

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	18	622	153	169	1.10	3.2	1	20	16	15	14	13	
NOVEMBER	18	1356	516	338	.66	10.9	3	20	17	15	14	13	
DECEMBER	139	1668	690	436	.63	14.6	7	21	17	16	15	14	
JANUARY	69	1821	641	399	.62	13.5	14	22	18	17	16	15	
FEBRUARY	238	1456	705	310	.44	14.9	30	25	20	18	17 ·	16	
MARCH	165	1062	580	221	.38	12.2	60	30	24	21	19	17	
APRIL	164	1089	623	207	.33	13.2	90	36	27	24	21	19	
MAY	123	819	461	212	.46	9.7	120	48	34	28	25	21	
JUNE	50	553	225	135	.60	4.8	183	113	76	62	53	44	
JULY	26	137	69	26	.37	1.5							
AUGUST	18	54	35	9.6		• 7							
SEPTEMBER	20	121	38	22	.58	.8							
ANNUAL	218	589	393	87	.22	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-64

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-64

)ISCHARGE, YEARS, AN							PERIOD (CON~		INTERV	AL, ÎN Y	EARS, A	ATED RECU ND ANNUAL IN PERCEI	
1.25 80 <b>%</b>	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1 <b>%</b>	SECU- TIVE DAYS)	<b></b> 2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100
4000	5740	8220	9910	12100	13700								
		<del>-</del>					1	4380	6360	7760	9630	11100	
WEIGHTED	SKEW =	026					3	3260	4520	5370	6450	7270	
							7	2220	2950	3390	3910	4260	
							15	1550	2050	2360	2740	3010	
							30	1200	1590	1810	2070	2250	
							60	938	1200	1350	1530	1640	
							90	855	1050	1160	1260	1330	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-64

 		DISCH	ARGE, I	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEI	NT OF TIM	E		
 5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1320	918	7 <b>2</b> 9	607	513	435	316	226	142	76	55	43	34	28	23

## 14162200 BLUE RIVER AT BLUE RIVER, OR

LOCATION.--Lat 44°09'45", long 122°19'55", in NW&SE& sec.21, T.16 S., R.4 E., Lane County, Hydrologic Unit 17090004, on right bank 0.3 mi upstream from Simmonds Creek, 0.7 mi north of town of Blue River, 0.8 mi downstream from Blue River Dam, and at mile 0.9.

DRAINAGE AREA .-- 87.7 mi2.

PERIOD OF RECORD.--February 1966 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,056.53 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Prior to Aug. 25, 1966, nonrecording gage at datum 0.80 ft higher.

REMARKS.--Flow regulated since October 1968 by Blue River Lake. No diversion above station. Discharge not adjusted for storage or release from Blue River Lake as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--16 years, 469 ft<sup>3</sup>/s, 339,800 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,270 ft $^3$ /s Feb. 23, 1968, gage height, 8.93 ft; minimum, 0.80 ft $^3$ /s Oct. 8, 10, 11, 1968; minimum daily, 3.7 ft $^3$ /s Oct. 8, 1968.

#### STATISTICAL SUMMARIES

				STAN- DARD DEVIA-	COEFFI- CIENT OF	0F	PERIOD (CON-	DISCH	INTERVAL	, IN YE	OR INDICATARS, AND A	ANNUAL NO	)N-
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
CT0BER	71	429	232	110	.47	4.0	1	25	15	12	9.1		
IOVEMBER	130	1459	580	357	.62	10.1	3	27	16	12	9.2		
ECEMBER	63	2189	1182	599	.51	20.5	7	29	16	12	8.9		
ANUARY	68	. 1371	893	4 25	. 48	15.5	14	37	21	15	11		
EBRUARY	33	1167	466	384	.82	8.1	30	56	27	17	12		
IARCH	12	1766	379	473	1.25	6.6	60	114	55	35	24		
PRIL	12	577	304	194	.64	5.3	90	195	97	61	40		
AY	35	676	370	213	.58	6.4	120	291	175	116	75		
UNE	64	516	241	131	.54	4.2	183	310	218	163	121		
ULY	99	626	375	168	.45	6.5							
UGUST	326	765	485	113	.23	8.4							
EPTEMBER	83	536	246	133	.54	4.3							
NNUAL	192	727	481	147	.31	100							
MAGNIT		PROBABILII D ON PERIC			OUS PEAK	FLOW .	мас				OF ANNUAL RECORD 19		.ow
ISCHARGE, YEARS, A	BASE IN CFS,	FOR INDIC	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	 , IN NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO		969-82  ED RECUR ) ANNUAL	RENCE
ISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL IN PERCE	, IN	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	RECORD 19 PR INDICAT YEARS, AND	969-82  ED RECUR ) ANNUAL	RENCE
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FO	RECORD 19  OR INDICAT (EARS, AND ABILITY, I	69-82  ED RECUF  ANNUAL  N PERCEN	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FCAL, IN Y	RECORD 19 OR INDICAT (EARS, AND ABILITY, I	ED RECUF ANNUAL N PERCEN	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FC AL, IN CE PROBA 10%	RECORD 19 OR INDICAT (EARS, ANC BILITY, 1 25 4%	TED RECUP O ANNUAL N PERCEN 50 2%	100 17
ISCHARGE, YEARS, /	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FC AL, IN CE PROBA 10%	RECORD 19 RECORD 19 RECORD 19 REARS, AND REARS, AND RECORD 19 RECO	ED RECUF ANNUAL N PERCEN	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE  DISCH  2 50%  2840	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 3310	CFS, FC AL, IN 10 CE PROBA 10 10%	RECORD 19 REINDICAT FEARS, AND BILITY, 1 25 4% 3410	TED RECUP O ANNUAL N PERCEN 50 2%	100 19
ISCHARGE, YEARS, /	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50%  2840 2130	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 3310 2540	10D OF F CFS, FC AL, IN CE PROBA 10 10%	RECORD 19 RECORD 19 REARS, AND RE	FED RECUF D ANNUAL N PERCEN 50 2%	100 19
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 3310 2540 2000	100 OF F  CFS, FC AL, IN 1 CE PROBA 10 10%  3390 2650 2170	RECORD 19  OR INDICAT (EARS, AND (BILITY, I)  25 4%  3410 2710 2310	TED RECUP O ANNUAL N PERCEN 50 2%	100 13
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECATED RENCE PROB	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH	D ON PER	CFS, FC AL, IN 10 CE PROBA	RECORD 19 REINDICAT (EARS, AND (EARS, EARS, AND (EARS, EARS, EARS (EARS, EARS, EARS (EARS, EARS, EARS (EARS, EARS (EARS, EARS, EARS (EARS, EARS	FED RECUF D ANNUAL N PERCEN 50 2%	100 1%
ISCHARGE, YEARS, /	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	CATED RE	CURRENCE CURRENCE ABBILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  2840 2130 1590 1190 1000	ARGE, IN INTERVEXCEEDAN 5 20% 3310 2540 2000 1550 1290	CFS, FC AL, IN CE PROBA	RECORD 19  OR INDICAT (EARS, AND (BILITY, I)  25 4%  3410 2710 2310	FED RECUF D ANNUAL N PERCEN 50 2%	100 19
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	CATED RE	CURRENCE CURRENCE ABBILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  2840 2130 1590 1190 1000	ARGE, IN INTERVEXCEEDAN 5 20% 3310 2540 2000 1550 1290	CFS, FC AL, IN CE PROBA	RECORD 19 REINDICAT (EARS, AND (EARS, EARS, AND (EARS, EARS, EARS (EARS, EARS, EARS (EARS, EARS, EARS (EARS, EARS (EARS, EARS, EARS (EARS, EARS	FED RECUF D ANNUAL N PERCEN 50 2%	100 17
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	FOR INDIC L EXCEEDAI	DO OF RECATED RESIDENCE PROBLEM	CURRENCE CURRENCE ABBILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	BASE  DISCH  2 50%  2840 2130 1590 1190 1000  OF RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  3310 2540 2000 1550 1290  RD 1969-	CFS, FC AL, IN CE PROBA	25 4% 3410 2710 2310 1930 1590	FED RECUF D ANNUAL N PERCEN 50 2%	100 1%

#### 14162500 MCKENZIE RIVER NEAR VIDA, OR

LOCATION.--Lat 44°07'30", long 122°28'10", in NE±NE± sec.5, T.17 S., R.3 E., Lane County, Hydrologic Unit 17090004, on right bank 0.4 mi downstream from Mason Creek, 5.4 mi east of Vida, and at mile 47.7.

DRAINAGE AREA.--930 mi $^2$  at cableway 0.4 mi downstream, where all discharge measurement are made.

PERIOD OF RECORD.--July 1910 to March 1911 (published as "at Martins Rapids, near Vida"), September 1924 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 855.71 ft National Geodetic Vertical Datum of 1929 (levels by Eugene Water and Electric Board). July 1, 1910, to Mar. 31, 1911, nonrecording gage at site 3 mi downstream at different datum. Sept. 1, 1924, to Nov. 16, 1928, nonrecording gage at site 20 ft upstream at datum 0.15 ft lower. Nov. 17, 1928, to Sept. 23, 1968, water-stage recorder at present site on left bank at datum 0.15 ft lower.

REMARKS.--Flow regulated since 1963 by Smith River Reservoir and Cougar Lake, and since 1968 by Blue River Lake. No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--58 years (water years 1925-82), 4,036 ft $^3$ /s, 2,924,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge,  $64,400 \text{ ft}^3/\text{s}$  Dec. 28, 1945, gage height, 17.70 ft, site and datum then in use, from rating curve extended above  $32,000 \text{ ft}^3/\text{s}$ ; minimum, 1,260 ft $^3/\text{s}$  Nov. 7, 1930, Sept. 17, Oct. 4, 8, 9, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1923 reached a stage of 17.2 ft, from floodmarks, discharge, 62,000 ft<sup>3</sup>/s.

## STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF SMITH RIVER, COUGAR, AND BLUE RIVER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1925-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1926-62

	MINIMIN	MAVIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	ARS, AND	ATED RECUI ANNUAL NO IN PERCEI	DN-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
CTOBER	1330	5062	2169	876	.40	4.5	1	1560	1390	1310	1250	<b>1</b> 190	
OVEMBER	1367	8573	4140	2106	.51	8.6	3	1570	1400	1320	1260	1190	
ECEMBER	1840	13770	5395	2742	.51	11.2	7	1580	1400	1320	1260	1200	
ANUARY	1658	11570	5327	2387	.45	11.1	14	1600	1420	1340	1270	1200	
EBRUARY	2343	10560	5659	2209	• 39	11.8	30	1640	1450	1360	1290	1210	
ARCH	2250	9749	5177	1542	.30	10.8	60	1700	1490	1390	1320	1240	
PRIL	2312	7496	5368	1316	. 25	11.2	90	1770	1530	1420	1340	1260	
łΥ	2528	8394	5018	1510	.30	10.4	120	1880	1610	1480	1390	1300	
INE	1750	8986	3853	1533	.40	8.0	183	2330	1900	1710	1580	1450	
JLY	1505	3589	2374	547	. 23	4.9						<del>-</del>	
JGUST	1361	2578	1889	317	.17	3.9							
EPTEMBER	1314	2371	1764	268	. 15	3.7							
NUAL	2476	6211	4001	843	.21	100							
MAGNI		PROBABILI D ON PERIC			OUS PEAK F 5–62	FLOW	MA			BABILITY RIOD OF F		AL HIGH FL 925-62	.ow
YEARS,	AND ANNUA	L EXCEEDAN	NCE PROB	ABILITY,	INTERVAL, IN PERCEN	NT 	PERIOD (CON-	DISC	INTER	/AL, İN Y	EARS, AN	TED RECUR D ANNUAL IN PERCEN	
YEARS,  1.25	AND ANNUA 2 2	L EXCEEDAN	NCE PROB	ABILITY,  25	IN PERCEN	NT  100	(CON- SECU-		(NTER) EXCEEDAN	AL, IN Y	EARS, AN BILITY,	ID ANNUAL IN PERCEN	IT 
YEARS,	AND ANNUA	L EXCEEDAN	NCE PROB	ABILITY,	IN PERCEN	NT 	(CON-		INTERN EXCEEDAN	/AL, ÎN Y NCE PROB <i>A</i>	EARS, AN BILITY,	ID ANNUAL IN PERCEN	
YEARS,  1.25	AND ANNUA 2 50%	L EXCEEDAN 5 20%	10 10%	ABILITY, 25 4%	IN PERCEN	NT  100	(CON- SECU- TIVE DAYS)	 2 50%	INTERVEXCEEDAN 5 20%	AL, IN Y NCE PROBA 10 10%	EARS, AN BILITY, 25 4%	ID ANNUAL IN PERCEN 50 2%	IT 
YEARS, 1.25 80% 	AND ANNUA 2 50%	5 20% 40300 47	10 10%	ABILITY, 25 4%	IN PERCEN 50 1 2%	NT  100	(CON- SECU- TIVE	 2	INTERNEXCEEDAN	AL, IN Y NCE PROBA	EARS, AN ABILITY, 25	ID ANNUAL IN PERCEN 50	IT 

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1925-62

 		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATI	D PERCEN	OF TIM	IE		
 5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
8980	7130	6220	5580	5040	4580	3800	3130	2600	2190	2040	890	1750	1630	1470

## 14162500 MCKENZIE RIVER NEAR VIDA, OR--Continued

STATISTICAL SUMMARIES (AFTER THE COMPLETION OF SMITH RIVER, COUGAR, AND BLUE RIVER DAMS)

MONTHLY A	ID AN	NUAL №	1EAN	D13	SCHARGES	1964-82
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MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-82

	14   N. ( N. ( N. ( N. ( N. ( N. ( N. ( N.	MAYIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	10N <b>-</b>
нтиом	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	1706	3676	2757	456	.17	5.6	1	1810	1590	1500	1430		
NOVEMBER	2413	7477	4408	1517	.34	8.9	3	1860	1630	1530	1460		
ECEMBER	1865	14430	6766	3321	. 49	13.7	7	1970	1690	1570	1480		
ANUARY	1752	11180	6554	2340	.36	13.3	14	2040	1760	1640	1550		
EBRUARY	1542	8772	4851	1896	. 39	9.8	30	2190	1880	1730	1620		
MARCH	2414	11210	4284	1993	.47	8.7	60	2300	1980	1850	1740	"	
PRIL	2671	<sub>2</sub> 5681	3951	956	.24	8.0	90	2400	2080	1940	1820		
1AY	2421	6567	4342	1363	.31	8.8	120	2470	2180	2050	1950		·
UNE	2180	6604	3608	1272	.35	7.3	183	2710	2410	2280	2190		
IULY	1813	3529	2654	447	.17	5.4							
UGUST	1824	3510	2631	506	.19	5.3							
SEPTEMBER	1874	3358	2575	388	.15	5.2							
NNUAL	2447	5823	4115	910	.22	100							
ISCHARGE,	BASE	D ON PERIO	OD OF RE	CORD  CURRENCE	OUS PEAK I	 , IN		BASI	ED ON PER	(10D OF F	RECORD 1	TED RECU	
ISCHARGE,	BASE	D ON PERIO	OD OF RE	CORD  CURRENCE	INTERVAL IN PERCEI	 , IN	PERIOD (CON- SECU-	BASI	HARGE, IN	CFS, FO	RECORD 1 DR INDICA (EARS, AN	964-82  TED RECU	 RRENCE
ISCHARGE, YEARS, A	BASE IN CFS,	D ON PERIO FOR INDIO L EXCEEDAI	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	 , IN NT	PERIOD (CON-	BASI	HARGE, IN	CFS, FO	RECORD 1 DR INDICA (EARS, AN	964-82  TED RECUI ID ANNUAL	 RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, IND ANNUA	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC AL, IN Y ICE PROBA	DR INDICA FEARS, AN ABILITY, 25 4%	964-82 TED RECUID ANNUAL IN PERCEI	RRENCE
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC (AL, IN ) ICE PROBA 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  29000	964-82 TED RECUID ANNUAL IN PERCEI 50 2%	RRENCE NT 100 1%
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAL	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, IN INTERVENCE EXCEEDAN 5 20% 21800 19000	10 OF F	29000 27500	964-82  TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERCEPT OF STATE O	10 OF F	29000 27500 21600	964-82 TED RECUID ANNUAL IN PERCEI	RRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH 2 50% 	ED ON PER HARGE, IN INTERV EXCEEDAN 5 20% 21800 19000 16400 13600	10 OF F	PRECORD 1  PRECORD 1	964-82  TED RECUID ANNUAL IN PERCEI  50 2%	RRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCI 2 50% 15700 13200 12000 10500 8550	HARGE, IN INTERVEXCEEDAN 5 20%	10 OF F	29000 27500 21600 16900 14300	964-82 TED RECUID ANNUAL IN PERCEI	RRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCI 2 50% 15700 13200 12000 10500 8550 7140	ARGE, IN INTERVENCED AN PER 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 OF F 1 CFS, F( AL, IN ) 10 10% 25200 22800 18900 15300 12600 10600	PRECORD 1  PRECORD 1  PRECORD 1  PRECORD 1  PRECORD 27  29000  27500  21600  16900  14300  12100	964-82  TED RECUID ANNUAL IN PERCEI  50 2%	RRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCI 2 50% 15700 13200 12000 10500 8550	HARGE, IN INTERVEXCEEDAN 5 20%	10 OF F	29000 27500 21600 16900 14300	964-82  TED RECUID ANNUAL IN PERCEI  50 2%	100 13
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC L EXCEEDAN	CATED RE	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCH 2 50% 15700 13200 12000 10500 8550 7140 6510	HARGE, IN INTERVEXCEEDAN  21800 19000 16400 11200 9300 8360	10 CEFS, FC (AL, IN ) CE PROB/ 10 10% 25200 22800 22800 18900 15300 12600 10600 9430	PRECORD 1  PRECORD 1  PRECORD 1  PRECORD 1  PRECORD 27  29000  27500  21600  16900  14300  12100	964-82  TED RECUID ANNUAL IN PERCEI  50 2%	RRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC	DOD OF RECORDED OF	CORD  CURRENCE ABILITY,  25 4%   N TABLE	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 15700 13200 10500 8550 7140 0F RECC	HARGE, IN INTERVEXCEEDAN  21800 19000 11200 9300 8360  DRD 1964-	10 OF F	25 4% 29000 16900 14300 12100 10600	964-82  TED RECUID ANNUAL IN PERCEI  50 2%	RRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC	DOD OF RECORDED OF	CORD  CURRENCE ABILITY,  25 4%   N TABLE	INTERVAL IN PERCEI 50 2%  OF DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCI 2 50% 15700 13200 10500 8550 7140 0F RECC	HARGE, IN INTERVEXCEEDAN  21800 19000 11200 9300 8360  DRD 1964-	10 OF F	25 4% 29000 16900 14300 12100 10600	964-82  TED RECUID ANNUAL IN PERCEI  50 2%	RRENCE NT 100 1%

#### 14163000 GATE CREEK AT VIDA, OR

LOCATION.--Lat 44°08'45", long 122°34'15", in SW $_{4}^{1}$  sec.28, T.16 S., R.2 E., Lane County, Hydrologic Unit 17090004, on right bank 300 ft downstream from bridge on State Highway 126, at Vida, and at mile 0.2.

DRAINAGE AREA. -- 47.6 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1951 to September 1957; annual maximums, water years 1958-65; August 1966 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 764.56 ft National Geodetic Vertical Datum of 1929. June 11, 1951, to Sept. 30, 1957, water-stage recorder, and Oct. 1, 1957, to Aug. 1, 1966, crest-stage gage at same site and datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years (water years 1952-57, 1967-82), 214 ft3/s, 61.05 in/yr, 155,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,140 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.18 ft, from slope-area measurement of peak flow; minimum, 12 ft<sup>3</sup>/s Nov. 26, 27, 1952.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES. 1952-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1953-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF IN YEAR CE PROBAE	RS, AND A	NNUAL N	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
CTOBER	17	253	72	57	•79	2.8	1	17	15	14	13		
OVEMBER	19	704	244	179	.73	9.5	3	18	15	14	13		
DECEMBER	33	9 <b>2</b> 7	461	223	.48	17.9	7	18	15	14	13		
ANUARY	53	<b>87</b> 9	455	230	.51	17.7	14	19	16	15	14 -		_
EBRUARY	60	7 <b>6</b> 9	380	170	.45	14.8	30	21	18	16	15		_
IARCH	110	644	348	154	.44	13.5	60	25	20	18	17		_
PRIL	124	5 <b>15</b>	267	87	.33	10.4	90	28	23	20	19		_
ΙΑΥ	74	274	154	59	.38	6.0	120	33	27	24	22		_
UNE	54	184	91	38	.42	3.5	183	59	45	39	35		
ULY	30	93	43	14	.32	1.7							
UGUST	19	62	29	9.4	.32	1.1							
SEPTEMBER	18	71	31	14	.46	1.2							
ANNUAL	92	318	214	59	.27	100							

		•		RECURRENC ROBABILIT			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%.</b> 	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4 <b>%</b>	50 2 <b>%</b>	100
1960	2940	4430	5500	6940									
			<del></del>				1	2080	2890	3340	3840		
WE I GHTE	D SKEW =	. 151					3	1650	2230	2520	2820		
							7	1230	1560	1710	1850		
							15	849	1100	1230	1370		
							30	686	880	983	1090		
							60	538	692	777	868		
							90	476	609	684	769		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60 <b>%</b>	70%	75%	80%	85%	90%	95%
768	506	390	322	271	229	168	116	74	48	39	32	27	23	20

#### 14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR

LOCATION.--Lat 44°05'34", long 122°57'20", in SE&NW& sec.17, T.17 S., R.2 W., Lane County, Hydrologic Unit 17090004, on left bank 50 ft downstream from bridge, 1.3 mi northeast of Springfield, and at mile 1.59.

DRAINAGE AREA .-- 177 mi2

PERIOD OF RECORD.--September 1935 to September 1952, October 1963 to September 1982. Prior to October 1935 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 442.47 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1935, to Sept. 30, 1952, nonrecording gage at same site and datum.

REMARKS.--Many diversions for irrigation above station.

AVERAGE DISCHARGE.--36 years, 535 ft<sup>3</sup>/s, 41.05 in/yr, 387,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 22.60 ft; minimum, 8.2 ft<sup>3</sup>/s Sept. 9, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached at stage of 22.9 ft, from floodmark, probably affected by backwater from McKenzie River, discharge, 9,200 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-82

	MANIANNA	MAXIMUM	MEAN	DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		NTERVAL,	, IN YEAR	RS, AND A	ED RECURI INNUAL NON N PERCENT	N-
MONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI~ ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	27	719	127	165	1.30	2.0	1	20	15	12	11	9.0	<del>-</del>
NOVEMBER	27	1653	597	462	.77	9.3	3	21	15	13	11	9.7	
DECEMBER	53	3197	1179	743	.63	18.3	7	22	16	14	12	10	
ANUARY	84	2464	1304	671	.51	20.2	14	23	17	15	13	.11	
FEBRUARY	126	2016	1106	454	.41	17.2	30	26	19	17	15	13	
4ARCH	281	1975	885	408	.46	13.7	60	32	24	20	18	15	
APRIL	242	1545	581	277	-48	9.0	90	38	28	24	21	19	
YAN	118	710	334	138	.41	5.2	120	47	35	30	27	24	
JUNE	54	581	183	104	.57	2.8	183	98	69	58	50	42	
IULY	34	186	72	34	.48	1.1							
AUGUST	15	91	37	18	.47	•6							
SEPTEMBER	19	112	42	23	.54	.6							
ANNUAL	164	847	535	157	.29	100							

ISCHARGE, YEARS, AI							PERIOD (CON-		INTERV	AL, IN	YEARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
4100	6020	8620	10300	12400	13900			_		··			
							1	5360	7640	8850	10100	10800	
WEIGHTED	SKEW =	238					3	4380	6200	7180	8180	8790	
							7	3390	4610	5250	5910	6320	
							15	2510	3290	3680	4070	4290	
							30	1950	2440	2650	2840	2930	
							60	1520	1940	2140	2330	2440	
							90	1350	1720	1910	2080	2190	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

			DISCHA	ARGE, IN	CFS, W	HICH WAS	EQUALED (	OR EXCEED	ED FOR I	NDICATED	PERCENT	OF TIME			
	8	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75%	80%	85%	90%	95%
2030	14	110 1	1060	825	672	563	383	247	143	79	60	46	37	30	24

#### 14165500 MCKENZIE RIVER NEAR COBURG, OR

LOCATION.--Lat 44°06'45", long 123°02'45", in NW±NE± sec.9, T.17 S., R.3 W., Lane County, Hydrologic Unit 17090004, on left bank at downstream side of Armitage Bridge, 2 mi southeast of Coburg, and at mile 7.1.

DRAINAGE AREA .-- 1,337 mi2.

PERIOD OF RECORD. -- October 1944 to September 1972.

1**49**00 1**1**200 9570 8510

7650

GAGE.--Water-stage recorder. Datum of gage is 392.32 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1944, nonrecording gage at same site at datum 4.00 ft higher. Nov. 25, 1944, to Feb. 28, 1965, water-stage recorder at same site at datum 4.00 ft higher.

REMARKS.--Flow regulated since 1963 by Smith River Reservoir and Cougar Lake, and since 1968 by Blue River Lake. Slight diurnal fluctuation caused by logonds and powerplants upstream. Water supply for city of Eugene is diverted 10 mi upstream; small diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years, 5,916 ft3/s, 60.09 in/yr, 4,286,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.---Maximum discharge, 88,200 ft<sup>3</sup>/s Dec. 29, 1945, gage height, 21.36 ft, from rating curve extended above 59,000 ft<sup>3</sup>/s; minimum, 1,080 ft<sup>3</sup>/s Aug. 19, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 22.2 ft was reached in December 1861, 21.8 ft in February 1890, and 20.1 ft in January 1943 (information from Corps of Engineers), all at present datum.

#### STATISTICAL SUMMARIES

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW MONTHLY AND ANNUAL MEAN DISCHARGES 1945-63

BASED ON PERIOD OF RECORD 1946-63

2760 2480 2280 2100 1950 1790

	MINIMUM	144 V 1 141 W 2	MEAN.	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	DISC	INTERVAL	., IN YE	OR INDICAT ARS, AND A ABILITY, I	ANNUAL NO	ON-
монтн	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	. 50 2%	100 1%
OCTOBER	1417	6684	3110	1503	.48	4.3	1	1780	1610	1530	1470		
NOVEMBER	1933	12180	6309	2945	.47	8.7	3	1820	1640	1560	1490		
DECEMBER	2061	20700	9198	4566	.50	12.7	7	1840	1660	1570	1500		
ANUARY	3308	18020	8763	4058	.46	12.1	14	1870	1690	1600	1530		
EBRUARY	5607	17200	10210	3135	.31	14.1	30	1930	1740	1640	1570		
1ARCH	5565	13290	8296	2166	.26	11.4	60	2010	1810	1720	1640		
PR!L	5787	9913	7862	1221	.16	10.8	90	2120	1900	1790	1710		
4AY	3599	10130	7053	1665	.24	9.7	120	2310	2040	1920	1820		
JUNE	3204	7377	4725	1332	.28	6.5	183	3070	2700	2550	2450		
JULY	2041	3773	2811	512	.18	3.9							
AUGUST	1657	2682	2146	280	.13	3.0							
SEPTEMBER	1605	2440	2022	221	.11	2.8							
NNUAL	4575	8275	6018	836	.14	100							
	BASE	D ON PERI	OD OF RE	CORD 194			MA	BASE	D ON PER	RIOD OF F	OF ANNUAL RECORD 19	945-63 	
)ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 194	15-63 INTERVAL, IN PERCEN	. IN NT	PERIOD (CON-	BASE	ED ON PER 	RIOD OF F		45-63  ED RECUR ANNUAL	RENCE
ISCHARGE	BASE IN CFS,	D ON PERI	OD OF RE	CORD 194	15-63 INTERVAL, IN PERCEN	. IN	PERIOD	BASE	ED ON PER 	RIOD OF F	RECORD 19  OR INDICAT (EARS, AND	45-63  ED RECUR ANNUAL	RENCE
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2	FOR INDI	CATED RE	CORD 194 CCURRENCE BABILITY,	1NTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU-	BASE DISCE	ED ON PER HARGE, IN INTERV EXCEEDAN	RIOD OF F CFS, FO AL, IN Y ICE PROBA	RECORD 19  OR INDICAT  (EARS, AND  ABILITY, I	045-63 ED RECUF O ANNUAL N PERCEN	RRENCE
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	CATED RE	CORD 194 CCURRENCE BABILITY,	1NTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCE	HARGE, IN INTERV EXCEEDAN 5 20%	N CFS, FC VAL, IN N ICE PROBA 10 10%	RECORD 19  OR INDICAT (EARS, AND ABILITY, 1  25  4%	P45-63  ED RECUF  ANNUAL  N PERCEN	RRENCE IT
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RE	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCE 2 50% 42000	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC VAL, IN N ICE PROBA 10%	RECORD 19	P45-63  ED RECUF  ANNUAL  N PERCEN	RRENCE IT
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RE	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	10 CFS, FC (AL, IN ) ICE PROBA	77200	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RE	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	HARGE, IN INTERV EXCEEDAN 5 20% 56900 43900 30100	10 OF F VAL, IN N ICE PROBA 10 10%	PRECORD 19 PRINDICAT (EARS, AND ABILITY, I  25 4%  77200 59900 38700	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RE	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7	DISCH  2 50%  42000 33100 23800 17600	HARGE, IN INTERVENCE EXCEEDAN 5 20% 56900 43900 30100 21900	1 CFS, FC VAL, IN N ICE PROBA 10 10% 66200 51000 34000 24400	DR INDICAT (EARS, AND BILITY, 1 25 4% 77200 59900 38700 27300	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RE	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 42000 33100 23800 14100	56900 43900 21900 17500	10 10% 10% 10% 10% 100%	77200 59900 38700 22500	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RE	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 42000 33100 23800 17600 14100 11400	5 20%	10 10% 66200 51000 34000 24400 19700	77200 59900 38700 22500 17500	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RE	ECORD 194 ECURRENCE BABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 42000 33100 23800 14100	56900 43900 21900 17500	10 10% 10% 10% 10% 100%	77200 59900 38700 22500	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI L EXCEEDA 5 20%	CATED RELINCE PROE	ECURRENCE SABILITY, 25 4 4 5	INTERVAL, IN PERCEN 50 2%	NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 42000 33100 23800 14100 11400 10600	HARGE, IN INTERVEXCEEDAN 520% 56900 43900 30100 17500 13800 12400	10 OF F 10 CFS, FC 10 IO% 10 IO% 66200 51000 34000 19700 15400 13500	77200 59900 38700 22500 17500	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	CATED RELACE PROE	ECURRENCE SABILITY, 25 4%	INTERVAL, IN PERCEN 50 2% OF DAILY M	15 IN NT 100 11%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90 90	DISCA  2 50%  42000 33100 23800 17600 111400 111400 00600	HARGE, IN INTEREXCEEDAN 500% 56900 43900 21900 17500 13800 12400 DRD 1945-	10 OF F	77200 59900 38700 22500 175000 15000	ED RECUF ANNUAL N PERCEN 50 2%	RENCE

6940 5780 4780 3650

## 14166000 WILLAMETTE RIVER AT HARRISBURG, OR

LOCATION.--Lat 44°16'14", long 123°10'21", in NW±NE± sec.16, T.15 S., R.4 W., Linn County, Hydrologic Unit 17090003, on right bank 75 ft north of intersection of First Street and Kesling Street in Harrisburg and at mile 161.0.

DRAINAGE AREA.--3,420 mi<sup>2</sup>, approximately.

36500 27900 20600

16200

13500

11800

9530

8180

7170

6240

5790

5430

5100

4750

4290

PERIOD OF RECORD.--October 1944 to September 1982. Gage-height records collected at same site in 1927-28, 1931, 1934, are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 288.39 ft National Geodetic Vertical Datum of 1929. Oct 1 to Nov. 14, 1944, nonrecording gage at bridge 1,110 ft upstream at different datum. Nov. 15, 1944, to Aug. 15, 1973, at site 1,100 ft upstream at datum 2.00 ft higher.

REMARKS.--Flow regulated by 8 reservoirs above station. Many small diversions above station for irrigation.

AVERAGE DISCHARGE.--38 years, 12,250 ft<sup>3</sup>/s, 8,875,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 210,000  $ft^3/s$  Dec. 29, 1945, gage height, 19.69 ft, from rating curve extended above 115,000  $ft^3/s$ ; minimum, 1,990  $ft^3/s$  Oct 30, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 20.5 ft was reached in December 1861, and 20.1 ft in February 1890 (information from Corps of Engineers). Flood of Jan. 1, 1943, reached a stage of 19.1 ft from National Weather Service.

#### STATISTICAL SUMMARIES

М	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1969-82		MA				OF ANNUA		)W
<b></b>	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	_, IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	6978	9745	8116	948	.12	5.6	1	4250	3530	3080	2700		
IOVEMBER	6584	28860	14180	7049	.50	9.7	3	4360	3600	3130	2730		
ECEMBER	3848	42980	24930	10750	.43	17.1	7	4480	3670	3190	2780		
ANUARY	3695	36750	23710	10160	.43	16.3	14	4570	3740	3270	2880		
EBRUARY	2859	26010	15260	7330	. 48	10.5	30	4680	3890	3450	3080		
MARCH	5897	36070	13850	8313	.60	9.5	60	4890	4110	3730	3430		
PRIL	4823	17520	10950	4021	.37	7.5	90	5220	4360	3940	3610		
1AY_	4207	12850	9430	2884	.31	6.5	120	5630	.4760	4340	4020		
JUNE	3809	12540	7493	2718	.36	5.1	183	6510	5540	5080	4720		
JULY	3883	6283	5051	774	.15	3.5							
NUGUST	4533	7117	5534	769	.14	3.8							
EPTEMBER	5020	8986	7131	1176	. 16	4.9							
NNUAL	5233	17800	12130	3512	.29	100							
MAGNI		PROBABIL! D ON PERI			OUS PEAK F	FLOW	МА	_			OF ANNUAL	-	.OW
ISCHARGE	BASE , IN CFS,	D ON PERI	OD OF RE	CORD CURRENCE	OUS PEAK ( INTERVAL, IN PERCE	. IN	PERIOD (CON-	BASI	ED ON PER  HARGE, IN INTERN	RIOD OF F	OF ANNUAL RECORD 19 OR INDICA (EARS, AND ABILITY,	969-82 TED RECUR O ANNUAL	RENCE
YEARS,	BASE , IN CFS, AND ANNUA 2	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL, IN PERCEI	. IN NT 	PERIOD (CON- SECU-	BASI DISCI	HARGE, INTERN	N CFS, FO	RECORD 19 OR INDICATE PEARS, AND ABILITY,	969-82 TED RECUR O ANNUAL IN PERCEN	RENCE
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF RE	CORD CURRENCE	INTERVAL,	. IN NT	PERIOD (CON-	BASI	ED ON PER  HARGE, IN INTERN	RIOD OF F	RECORD 19 DR INDICA YEARS, AND	969-82 TED RECUR O ANNUAL	RENCE
YEARS,	BASE , IN CFS, AND ANNUA 2	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL, IN PERCEI	. IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISC	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FC /AL, IN N NCE PROBA 10 10%	RECORD 19 OR INDICA (FEARS, ANI (BILITY, 25 4%	P69-82 TED RECUR O ANNUAL IN PERCEN 50 2%	T 100
1.25 80%	BASE  IN CFS, AND ANNUA  2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL, IN PERCEI	. IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	I CFS, FC VAL, IN ) NCE PROBA 10%	OR INDICATE ARS, AND ARS AND ARS AND ARS AND ARS ARS ARS ARS ARS ARS ARS ARS ARS ARS	FED RECURD ANNUAL IN PERCEN	RENCE
I SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL, IN PERCEI	. IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN  5 20%  68600 60900	10 10%	OR INDICA (EARS, ANI (BILITY, 25 4%	969-82  TED RECUR O ANNUAL IN PERCEN  50 2%	RENCE
I SCHARGE YEARS, 1.25 80%	BASE  IN CFS, AND ANNUA  2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL, IN PERCEI	. IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH 2 50% 56900 50700 46500	HARGE, IN INTERN EXCEEDAN 5 20% 68600 60900 55100	10 OF F	RECORD 19 RE INDICA (EARS, ANI (BILITY)  25  4%  72200 64000 57400	969-82  TED RECUR D ANNUAL IN PERCEN  50 2%	100 19
I SCHARGE YEARS, 1.25 80%	BASE  IN CFS, AND ANNUA  2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL, IN PERCEI	. IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH 2 50% 56900 50700 46500 40600	HARGE, IN INTERN EXCEEDAN 5 20% 68600 60900 55100 48900	10 OF F	RECORD 19 RINDICA REARS, ANG RELITY, 25 4% 72200 64000 57400 51500	FED RECUR O ANNUAL IN PERCEN 50 2%	100 19
I SCHARGE YEARS, 1.25 80%	BASE  IN CFS, AND ANNUA  2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL, IN PERCEI	. IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCI 2 50% 56900 50700 46500 34100	HARGE, INTERN EXCEEDAN 5 20% 68600 60900 55100 41500 41500	10 10% 10 63100 10% 71100 63100 56700 43400	72200 64000 57400 51500 44300	JED RECURD ANNUAL IN PERCEN 2%	T 100
I SCHARGE YEARS, 1.25 80%	BASE  IN CFS, AND ANNUA  2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL, IN PERCEI	. IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCI 2 50% 56900 50700 46500 40600 34100 27600	HARGE, INTERNEXCEEDAN  5 20 68600 60900 55100 44900 41500 35100	71100 63100 56700 43400 37800	72200 64000 57400 64300 39600	FED RECUR O ANNUAL IN PERCEN 50 2%	100 17
I SCHARGE YEARS, 1.25 80%	BASE  IN CFS, AND ANNUA  2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL, IN PERCEI	. IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCI 2 50% 56900 50700 46500 34100	HARGE, INTERVENCE EXCEEDAN 5 20% 68600 60900 55100 41500 41500	10 10% 10 63100 10% 71100 63100 56700 43400	72200 64000 57400 51500 44300	JED RECURD ANNUAL IN PERCEN 2%	100 19
ISCHARGE YEARS, 1.25 80%	BASE  IN CFS, AND ANNUA  2 50%	FOR INDIA L EXCEEDA	CATED RE	CURRENCE SABILITY,	INTERVAL, IN PERCEI	IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	DISCI 2 50% 56900 50700 46500 34100 27600 24200	ARGE, IN INTERN EXCEEDAN 5 20% 68600 60900 55100 41500 35100 31100	71100 63100 56700 43400 33500	72200 64000 57400 64300 39600	JED RECURD ANNUAL IN PERCEN 2%	100 19
I SCHARGE YEARS, 1.25 80%	BASE  IN CFS, AND ANNUA  2 50%	FOR INDIAL EXCEEDA	OD OF RE	CURRENCE SABILITY, 25 4%	INTERVAL, IN PERCEN 50 2%	IDO 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	56900 50700 46500 40600 34100 27600 24200 OF RECC	HARGE, INTERVENCED AND PER STATE OF THE	71100 63100 56700 50700 37800 33500	72200 64000 57400 51500 44300 39600 35200	JED RECURD ANNUAL IN PERCEN 2%	100 19

#### 14166500 LONG TOM RIVER NEAR NOTI, OR

LOCATION.--Lat 44°03'00", long 123°25'30", in sec.33, T.17 S., R.6 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi upstream from Southern Pacific Railroad bridge, 0.8 mi downstream from Noti Creek, 1.3 mi southeast of Noti, and at mile 37.4.

DRAINAGE AREA.--89.3 mi2.

PERIOD OF RECORD. -- October 1935 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 389.05 ft National Geodetic Vertical Datum of 1929 (levels by National Weather Service). Prior to Nov. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Slight regulation caused by logpond above Noti. No diversion above station.

AVERAGE DISCHARGE.--47 years, 234 ft<sup>3</sup>/s, 35.58 in/yr, 169,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,990 ft $^3$ /s Dec. 22, 1955, gage height, 20.17 ft; minimum, 0.04 ft $^3$ /s Aug. 13, 1977.

#### STATISTICAL SUMMARIES

M	ONTHLY AN	ID ANNUAL	MEAN DIS	CHARGES	1936-82		M.		AND PROB ED ON PER				W
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC		, IN YEA	RS, AND	TED RECUI ANNUAL NO IN PERCEI	DN-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	12	300	42	50	1.17	1.5	1		 				
NOVEMBER	17	708	200	172	.86	7.1	3						
DECEMBER	24	1425	472	337	.71	16.8	7						
JANUARY	25	1260	603	352	. 58	21.5	14					-	
FEBRUARY	63	1093	552	241	.44	19.7	30	15	9.6	6.5	4.3		1.6
MARCH	137	923	424	197	. 46	15.1	60	16	11	8.8	7.0		4.
APRIL	57	684	260	136	.52	9.3	90	18	13	11	9.0		6.
MAY	55	340	127	53	.42	4.5	120	21	16	13	11	9.4	8.2
JUNE	25	164	64	23	.37	2.3	183	38	28	24	21	18	16
JULY	6.2	65	30	10	. 35	1.1							
AUGUST SEPTEMBER	3.6 7.4	33 31	17 18	6.5 5.7	.38 .32	.6 .6	NOTE:	LOW-FLOW SKEW.	N STATIST	ICS UNCE	RTAIN DU	E TO EXC	ESSIVE
ANNUAL	46	424	233	78	.33	100							
	AND ANNUA	L EXCEEDA	NCE PROB	ABILITY,	IN PERCE	NT 	PERIOD (CON-	DISCH	HARGE, IN INTERV	AL, İN Y	EARS, AN	D ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10 <b>%</b>	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1 <b>%</b>
1990	3120	4690	5700	6940	7830 8	590							
							1	2830	4140	4900	5730	6270	6740
WEIGHTED	SKEW =	359					3	2270	3280	3860	4500	4910	5280
							7	1640	2330	2720	3150	3440	3690
							15	1180	1610	1840	2090	2240	2370
							30	900	1180	1320	1460	1540	1610
							60	701	916	1020	1120	1170	1220
							90	620	814	904	987	1030	1070
			DURATIO	N TABLE (	OF DAILY I	MEAN FLOW	FOR PERIOD		<b></b>				
	·	DI SCUA		CEC 1011	TH WAS EQ	IALED OP	EXCEEDED FO	D INDICA	TED DEDO				
	10%	15%	20%	25%	à			70%	75%	=NI OF I  80%	1ME  85%	90%	95%
		1 - 10			~ · ·		O/O	100	120	30,0	وررن	J∪ pr	<b>ランゆ</b>

## 14167000 COYOTE CREEK NEAR CROW, OR

LOCATION.--Lat 44°01'19", long 123°15'17", in SW&NE\* sec.11, T.18 S., R.5 W., Lane County, Hydrologic Unit 17090003, on right bank 1.0 mi downstream from Spencer Creek, 4.3 mi northeast of Crow, and at mile 3.8.

DRAINAGE AREA .-- 95.1 mi2.

PERIOD OF RECORD.--July 1940 to September 1982.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 374.0 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 31, 1940, nonrecording gage near same site at different datums.

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

AVERAGE DISCHARGE.--42 years, 178 ft<sup>3</sup>/s, 25.42 in/yr, 129,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft<sup>3</sup>/s Feb. 10, 1961, gage height, 14.43 ft, from rating curve extended above 4,700 ft<sup>3</sup>/s; no flow at times most years.

STATISTICAL SUMMARIES

					S	TATISTIC	AL SUMMARIES	5					
M	ONTHLY AN	ND ANNUAL	MEAN DIS	CHARGES	1941-82		M <i>F</i>		AND PROBA				)W
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	IARGE, IN INTERVAL, EXCEEDANG	IN YEA	RS, AND	ANNUAL NO	-MC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	378	21	66	3.20	1.0	1						
NOVEMBER	2.5	881	155	175	1.13	7.2	. 3						
DECEMBER	3.1	1926	474	392	.83	22.1	7						
JANUARY FEBRUARY	4.0	1067 1171	534	331	.62	24.9	14					·	
1ARCH	- 12 68	683	418 305	242 175	-58	19.5	30 - 60						
NPRIL	19	536	154	114	.57 .74	14.2 7.2	90	.9	.3	1	.1	0.0	0.
4AY	14	301	61	55	.90	2.9	120	1.7		.4	.3	.2	٠.
UNE	3.2	61	16	10	.61	.8	183	7.7		3.0	2.3		1.
ULY	.1	11	3.6	2.7		.2				J.U	د		
AUGUST	0.0	4.6	.9	1.1	1.29	0.0	NOTE:	SHORT-DU	RATION ST	ATISTICS	S UNCERT	AIN DUE 1	0
SEPTEMBER	0.0	5.3	1.1	1.2	1.08	.1		EXCESSIV	E ZERO EV	ENTS.			
ANNUAL	16	361	178	67	.38	100							
YEARS,	AND ANNUA	L EXCEEDA	NCE PROB	ABILITY,	INTERVAL IN PERCEI		PERIOD (CON-		ARGE, IN INTERVA	L, ÎN YE	EARS, AN	D ANNUAL	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE	2	5	10	25	50	100
							DAYS)	50% 	20%	10%	4% 	2% 	1%
2000	4080	7650 1	0300 1	3800 1	6500 192	200	1	3390	5600	6860	8190	9000	9680
WEIGHTER	SKEW =	- 443		-			3	2580	4040	4820	5600	6060	6430
	JILLI -	• 7 7 2					7	1760	2660	3140	3620	3910	4150
							15	1180	1710	1980	2240	2390	2510
							30	855	1170	1310	1420	1480	1520
							60	669	876	944	989	1010	1020
							90	566	735	790	824	836	843
			DURATION	TABLE	OF DAILY M	MEAN FLOW	FOR PERIOD	OF RECO	RD 1941-8	2			
		DISCHA	RGE, IN (	CFS, WHIC	CH WAS EQU	JALED OR	EXCEEDED FO	R INDICA	TED PERCE	NT OF TI	 МЕ		
5%	10%	15%	20%	25%	30% 4	10% 5	60% 60%	70%	75%	80%	85%	90%	95%
												<b></b>	

# WILLAMETTE RIVER BASIN 14169300 AMAZON CREEK AT EUGENE, OR

LOCATION.--Lat 44°00'45", long 123°04'35", in SW:SE: sec.8, T.18 S., R.3 W., Lane County, Hydrologic Unit 17090003, on right bank 145 ft south of intersection of 39th Street and E. Amazon Drive in Eugene, and at mile 20.3.

DRAINAGE AREA .-- 3.35 mi2.

25

14

8.4

5.7

4.2

3.2

1.8

.9

.4

.3

.2

PERIOD OF RECORD. -- October 1962 to September 1975.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 442.33 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--13 years, 5.24 ft<sup>3</sup>/s, 21.24 in/yr, 3,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 527 ft<sup>3</sup>/s Jan. 19, 1964, gage height, 7.29 ft; no flow at times.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1963-75 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1964-75 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-STAN-DARD COEFFI-PERCENT PERIOD DEVIA-CIENT OF 0F (CON-EXCEEDANCE PROBABILITY, IN PERCENT MINIMUM MAXIMUM ANNUAL SECU-MEAN TION VAR1-MONTH (CFS) (CFS) (CFS) (CFS) ATION RUNOFF TIVE 100 50% 20% 10% DAYS) 54 2% 1% OCTOBER 2.2 .6 . 24 1.1  $\cap$ 0.0 0.0 NOVEMBER 23 5.8 5.8 1.1 1.00 9.2 0.0 3 . 1 0.0 0.0 DECEMBER 4.5 33 7.9 .57 22.1 14 0.0 0.0 0.0 JANUARY 27 18 .43 28.2 0.0 0.0 0.0 **FEBRUARY** .65 13.3 30 0.0 0.0 MARCH 1.2 18 8.8 5.4 .61 14.0 60 .2 --APRIL .8 12 4.3 3.5 .83 6.8 90 . 2 MAY --. 3 8.7 1.9 2.3 1.21 3.0 120 JUNE .2 1.2 .5 . 3 .60 - 8 183 . 4 JULY .3 .6 .41 . 1 . 1 .5 AUGUST .9 .3 .72 .6 SEPTEMBER .3 .2 .8 .2 .62 .5 ANNUAL 2 3 5 2 1.7 8 8 . 33 100 MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1963-75 BASED ON PERIOD OF RECORD 1963-75 DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN DISCHARGE, IN CFS, FOR INDICATED RECURRENCE YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT (CON-100 SECU-80% 50% 20% 10% 4% 2% TIVE 100 DAYS) 50% 20% 10% 4% 2% 1% ----198 270 370 437 521 126 192 228 267 WEIGHTED SKEW = .011 86 130 154 181 58 83 96 15 35 59 69 30 23 31 36 41 \_\_ --60 18 23 26 28 --15 23 90 20 DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1963-75 DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME 5% 10% 15% 20% 25% 30% 60% 40% 50% 85% 95%

#### 14170000 LONG TOM RIVER AT MONROE, OR

LOCATION.--Lat 44°18'50", long 123°17'45", in NEŁ sec.33, T.14 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank in canalized river channel at Monroe, 110 ft upstream from bridge on State Highway 99W, 0.1 mi downstream from Shafer Creek, and at mile 6.8.

DRAINAGE AREA .-- 391 mi2.

10%

2130

5%

3360

15%

1470

20%

1060

25%

776

30%

567

40%

300

50%

60%

70%

45

75%

34

80%

27

85%

23

90%

19

95%

15

PERIOD OF RECORD.--November 1920 to July 1921, October 1921 to April 1926, November 1926 to May 1927, October 1927 to September 1982. Prior to October 1930, published as "near Monroe."

GAGE.--Water-stage recorder and concrete control. Datum of gage is 270.57 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1944, nonrecording gage at various sites ranging from present site to 1.5 mi downstream at different datums.

REMARKS.--Flow regulated since 1941 by Fern Ridge Lake. Several small diversions above station.

AVERAGE DISCHARGE.--59 years (water years 1922-25, 1928-82), 772 ft3/s, 559,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft<sup>3</sup>/s Jan. 2, 1943, gage height, 17.14 ft, site and datum then in use, from graph based on gage readings, includes some overflow from Willamette River near Junction City; no flow Oct. 20-22, 1944 (water filling pool at gage); minimum observed prior to regulation, 7 ft<sup>3</sup>/s Sept. 29, Oct. 1, 1939.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF FERN RIDGE DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1922-40

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1923-40

	MINIMUM	MAXIMUM	MEAN	DARD DEVIA- TION	COEFF!- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		EXCEEDAN	CE PROB	ARS, AND A ABILITY, I	N PERCE	NT 
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	16	150	41	31	.77	.5	1	13	9.6	8.	7.4		
NOVEMBER	20	4265	666	1094	1.64	7.9	3	14	10	8.8	3 7.8°		
DECEMBER	76	2720	1240	804	.65	14.7	7	15	11	9.6			
JANUARY	485	4656	1921	1266	.66	22.8	14	16	12	10	9.2		
FEBRUARY	535	4401	2087	1264	.61	24.8	30	17	13	12	10		
MARCH	359	3243	1204	731	.61	14.3	60	19	15	13	12		
APRIL	165	2326	797	622	.78	9.5	90	21	16	15	13		
4AY	90	535	240	116	.48	2.9	120	25	19	17	16		
JUNE	56	444	123	94	.76	1.5	183	48	36	32	29		
JULY AUGUST	23	127	51	24	.48	•6							
40603 I	12 12	45 40	24	8.7	.36	•3							
COTCHOCO			21	7.1	.34	.2							
SEPTEMBER	12	40											
NNUAL	308 TUDE AND	1228  PROBABILI D ON PERI	703  TY 0F IN			100 	 MA				OF ANNUAL RECORD 19		
OISCHARGE, YEARS, A	308 TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI	703 TY OF IN OD OF RE	ISTANTANE (CORD 1922	OUS PEAK I 2-40 INTERVAL	FLOW 	PERIOD (CON-	BASE	HARGE, IN	CFS, FO		22-40 ED RECUR ANNUAL	RRENCE
MAGNIT	308  UDE AND BASE	1228 PROBABILI D ON PERI	703 TY OF IN OD OF RE	ISTANTANE (CORD 1922	OUS PEAK I 2-40 INTERVAL IN PERCEI	FLOW 	PERIOD (CON- SECU- TIVE	BASE DISCH	HARGE, IN INTERV. EXCEEDAN	CFS, FC AL, IN ) CE PROBA	RECORD 19 OR INDICAT (EARS, AND ABILITY, I	22-40  ED RECUF ANNUAL N PERCEF	RRENCE
MAGNIT PISCHARGE, YEARS, A	308  TUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	703  TY OF IN DD OF RE  CATED RE NCE PROB	ISTANTANE CORD 1923 CURRENCE BABILITY,	OUS PEAK I 2-40 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV. EXCEEDAN 5 20%	CFS, FCAL, IN YCE PROBA	RECORD 19 OR INDICAT YEARS, AND ABILITY, I 25 4%	22-40 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT  MAGNIT  MAGNIT  MAGNIT  11SCHARGE, YEARS, A  1.25 80\$	308  FUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	703  TY OF IN DD OF RE  CATED RE NCE PROB	ISTANTANE(CORD 192)	OUS PEAK I 2-40 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV. EXCEEDAN. 5 20%	CFS, FCAL, IN ) CE PROBA 10 10%	RECORD 19 OR INDICAT (EARS, AND BILITY, I 25 4%	22-40  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	308  FUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	703  TY OF IN DD OF RE  CATED RE NCE PROB	ISTANTANE(CORD 192)	OUS PEAK I 2-40 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV. EXCEEDANGE 5 20% 11000 9570	10D OF F CFS, FC AL, IN 1 CE PROBA 10 10%	RECORD 19 OR INDICAT (EARS, AND BILITY, I 25 4% 17100 14500	22-40 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT
MAGNIT  MAGNIT  MAGNIT  MAGNIT  11SCHARGE, YEARS, A  1.25 80\$	308  FUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	703  TY OF IN DD OF RE  CATED RE NCE PROB	ISTANTANE(CORD 192)	OUS PEAK I 2-40 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH 2 50% 7500 6680 5450	HARGE, IN INTERV. EXCEEDAN 5 20% 11000 9570 7260	10D OF F CFS, FC AL, IN 1 CE PROBA	DRECORD 19 DR INDICAT FEARS, AND BILITY, I 25 4% 17100 14500 9850	22-40 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT  MAGNIT  MAGNIT  MAGNIT  11SCHARGE, YEARS, A  1.25 80\$	308  FUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	703  TY OF IN DD OF RE  CATED RE NCE PROB	ISTANTANE(CORD 192)	OUS PEAK I 2-40 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 7500 6680 5450 4240	HARGE, IN INTERV. EXCEEDAN  11000 9570 7260 5590	100 OF F  CFS, FC AL, IN N CE PROBA  10 10%  13600 11700 8420 6420	OR INDICAT (EARS, AND BILITY, I 25 4% 17100 14500 9850 7390	22-40  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT  MAGNIT  MAGNIT  MAGNIT  11SCHARGE, YEARS, A  1.25 80\$	308  FUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	703  TY OF IN DD OF RE  CATED RE NCE PROB	ISTANTANE(CORD 192)	OUS PEAK I 2-40 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	7500 6680 54240 3070	HARGE, IN INTERV. EXCEEDAN:  5 20%  11000 9570 7260 7260 4020	10D OF F CFS, FC AL, IN 1 CE PROBA	RECORD 19  IR INDICAT (EARS, AND BILITY, I  25 4\$  17100 14500 9850 7390 5150	22-40 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
MAGNIT  ISCHARGE, YEARS, A  1.25 80%	308  FUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	703  TY OF IN DD OF RE  CATED RE NCE PROB	ISTANTANE(CORD 192)	OUS PEAK I 2-40 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCH 2 50% 7500 6680 5450 4240	HARGE, IN INTERV. EXCEEDAN  11000 9570 7260 5590	100 OF F  CFS, FC AL, IN N CE PROBA  10 10%  13600 11700 8420 6420	OR INDICAT (EARS, AND BILITY, I 25 4% 17100 14500 9850 7390	22-40  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT

## 14170000 LONG TOM RIVER AT MONROE, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF FERN RIDGE DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1942-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1943-82

	MINIMUM		мсан	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	N CFS, FOF ., IN YEAR NCE PROBAE	RS, AND	ANNUAL N	10N-
монтн	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	 27	1895	746	381	.51	7.7	1						
NOVEMBER	92	3437	927	672	.72	9.5	3						
DECEMBER	56	5355	1891	1258	.67	19.4	7	32	22	17	13	9.9	7.
JANUARY	44	6222	2334	1427	.61	24.0	14	34	25	20	16	13	11
FEBRUARY	44	4032	1691	1023	•60	17.4	30	37	27	22	19	15	13
MARCH	136	2761	954	700	.73	9.8	60	40	29	25	22	19	17
APRIL	55	2277	493	496	1.01	5.1	90	45	33	29	27	24	23
MAY	50	1193	234	229	.98	2.4	120	54	40	35	32	29	28
JUNE	35	258	83	45	.54	.8	183	152	98	76	61	47	39
JULY	23	119	43	16	.36	.4	100	172	<del></del>	70			_
AUGUST	20	524	87	101	1.16		NOTE:	CHUDT DI	DATION	STATISTICS	LINCEDI	FAIN DUE	TA
SEPTEMBER	12	960	245	279	1.14	.9 2.5	NOTE:	EXCESSIV		5181151165	UNCER	AIN DUE	10
ANNUAL	177	1517	808	282	.35	100							
DISCHARGE,	BASE	D ON PERIO	OD OF RE	CORD	OUS PEAK F	 , IN		BASE	D ON PER  ARGE, IN	RABILITY OR RE	CORD 1	1942-82  ATED RECU	 RRENCE
DISCHARGE,	BASE	D ON PERIO	OD OF RE	CORD	INTERVAL	 , IN	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN	R10D OF RE	CORD 1	1942-82 ATED RECUND ANNUAL	 RRENCE
DISCHARGE, YEARS,	BASE	FOR INDIC	OD OF RE	CORD CURRENCE ABILITY,	INTERVAL	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER ARGE, IN	RIOD OF RE LCFS, FOR VAL, IN YE	CORD 1	1942-82 ATED RECUND ANNUAL	 RRENCE
DISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA	FOR INDIC EXCEEDAL	OD OF RECOMMENDED OF REPORTED REPORTED PROBLEMENT	CORD CURRENCE ABILITY,	INTERVAL : IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	RIOD OF RE I CFS, FOR VAL, IN YE ICE PROBAB	CORD 1 R INDICA FARS, AN	1942-82 ATED RECU ND ANNUAL IN PERCE	RRENCE NT
DISCHARGE YEARS, /	BASE	FOR INDIC EXCEEDAL	OD OF RECOMMENDED OF REPORTED REPORTED PROBLEMENT	CORD CURRENCE ABILITY,	INTERVAL : IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE	DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	RIOD OF RE I CFS, FOR VAL, IN YE ICE PROBAB	CORD 1 R INDICA FARS, AN	1942-82 ATED RECU ND ANNUAL IN PERCE	RRENCE NT
DISCHARGE, YEARS, /	BASE	FOR INDIC EXCEEDAL	OD OF RECOMMENDED OF REPORTED REPORTED PROBLEMENT	CORD CURRENCE ABILITY,	INTERVAL : IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3	DISCH  2 50%  5790 5240	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	RIOD OF RE	R INDICA ARS, AN ILLITY, 25 4%	1942-82 ATED RECU IN ANNUAL IN PERCE 50 2%	PRENCE NT 100 1%
DISCHARGE, YEARS, /	BASE	FOR INDIC EXCEEDAL	OD OF RECOMMENDED OF REPORTED REPORTED PROBLEMENT	CORD CURRENCE ABILITY,	INTERVAL : IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FOR AL, IN YE CE PROBAB	R INDICA RARS, AN ILLITY, 25 4%	ATED RECU ND ANNUAL IN PERCE 50 2%	RRENCE NT 100 1%
DISCHARGE, YEARS, /	BASE	FOR INDIC EXCEEDAL	OD OF RECOMMENDED OF REPORTED REPORTED PROBLEMENT	CORD CURRENCE ABILITY,	INTERVAL : IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3	DISCH  2 50%  5790 5240	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 7660 6890	I CFS, FOR AL, IN YE CE PROBAB	R INDICA ARS, AN ILLITY, 25 4% 9710 8670	1942-82 ATED RECU IN PERCE 50 2% 10400 9230	100 1% 10900 9720
DISCHARGE YEARS, /	BASE	FOR INDIC EXCEEDAL	OD OF RECOMMENDED OF REPORTED REPORTED PROBLEMENT	CORD CURRENCE ABILITY,	INTERVAL : IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  5790 5240 4670	D ON PER ARGE, IN INTERVEXCEEDAN 5 20% 7660 6890 6100	RIOD OF RE I CFS, FOR IAL, IN YE ICE PROBAB 10 10 10 8660 7760 6840	R INDICA ARS, AN ILITY, 25 4% 9710 8670 7610	1942-82 ATED RECU IN PERCE 50 2% 10400 9230 8080	RRENCE NT 100 1% 10900 9720 8480
DISCHARGE, YEARS, /	BASE	FOR INDIC EXCEEDAL	OD OF RECOMMENDED OF REPORTED REPORTED PROBLEMENT	CORD CURRENCE ABILITY,	INTERVAL : IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  5790 5240 4670 4010 3210	D ON PER ARGE, IN INTERV EXCEEDAN 5 20% 7660 6890 6100 5390 4420	RIOD OF RE I CFS, FOR AL, IN YE ICE PROBAB 10 10 10 7760 6840 6150 5170	R INDICA RARS, AN ILLITY, 25 4% 9710 8670 7610 6970 6040	1942-82 ATED RECU IN PERCE: 50 2% 10400 9230 8080 7500 6650	1000 1% 10900 9720 8480 7960 7220
DISCHARGE YEARS, /	BASE	FOR INDIC EXCEEDAL	OD OF RECOMMENDED OF REPORTED REPORTED PROBLEMENT	CORD CURRENCE ABILITY,	INTERVAL : IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  5790 5240 4670 4010	D ON PER- ARGE, IN INTERVEXCEEDAN 5 20% 7660 6890 6100 5390	RIOD OF RE I CFS, FOR IAL, IN YE ICE PROBAB 10 10 10 8660 7760 6840 6150	R INDICA RARS, AN ILLITY, 25 4% 9710 8670 7610 6970	1942-82 ATED RECU ID ANNUAL IN PERCE 50 2% 10400 9230 8080 7500	RRENCE NT 100 1% 10900 9720 8480 7960
DISCHARGE YEARS, /	BASE	FOR INDIG	CATED RENCE PROB	CORD  CURRENCE ABILITY,  25 4%   N TABLE	INTERVAL IN PERCEN 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS) 	5790 5240 4670 4010 3210 2470 2120	ARGE, IN INTERVEXCEEDAN  7660 6890 6100 5390 4420 3460 2960	8660 7760 6150 91760 10% 10% 10% 10% 10% 10% 10% 10% 10% 10	9710 8670 9710 8670 6970 6040 4690 3890	1942-82 ITED RECU IN PERCE 50 2% 10400 9230 8080 7500 6650 5130	RRENCE NT 100 1% 10900 9720 8480 7960 7220 5530
DISCHARGE, YEARS, / 1.25 80%	BASEI IN CFS, AND ANNUAL 2 50% 3 SKEW =	FOR INDIC	DURATIO	CURRENCE ABILITY, 25 4% N TABLE CFS, WHI	INTERVAL IN PERCEN 50 1 2% OF DAILY M	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	5790 5240 4670 4010 3210 2470 2120 O OF RECOI	7660 6890 6100 5390 4420 3460 2960 RD 1942–	8660 7760 6150 91760 10% 10% 10% 10% 10% 10% 10% 10% 10% 10	9710 8670 7610 6970 6040 4690 3890	1942-82 ITED RECU IN PERCE 50 2% 10400 9230 8080 7500 6650 5130	RRENCE NT 100 1% 10900 9720 8480 7960 7960 7220 5530
DISCHARGE YEARS, /	BASE	FOR INDIG	CATED RENCE PROB	CORD  CURRENCE ABILITY,  25 4%   N TABLE	INTERVAL IN PERCEN 50 1 2% OF DAILY M	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	5790 5240 4670 4010 3210 2470 2120	ARGE, IN INTERVEXCEEDAN  7660 6890 6100 5390 4420 3460 2960	8660 7760 6150 91760 10% 10% 10% 10% 10% 10% 10% 10% 10% 10	9710 8670 9710 8670 6970 6040 4690 3890	1942-82 ITED RECU IN PERCE 50 2% 10400 9230 8080 7500 6650 5130	RRENCE NT 100 1% 1% 10900 9720 8480 7960 7220 5530

#### 14170500 ROCK CREEK NEAR PHILOMATH, OR

LOCATION.--Lat 44°30'05", long 123°26'20, in SW\LNE\tau sec.29, T.12 S., R.6 W., Benton County, Hydrologic Unit 17090003, on left bank 600 ft upstream from bridge on State Highway 34, 4.5 mi southwest of Philomath, and at mile 0.4.

DRAINAGE AREA .-- 14.6 mi2.

206

139

105

83

67

33

18

PERIOD OF RECORD.--October 1945 to September 1952, water years 1953-60 (annual maximum), October 1974 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 349.08 ft National Geodetic Vertical Datum of 1929. Prior to October 1974, at site 0.2 mi downstream at datum 5.08 ft higher.

REMARKS.--Flow regulated by small storage reservoir operated by city of Corvallis, most low-water flow diverted to city of Corvallis water supply system.

AVERAGE DISCHARGE.--12 years, 51.2 ft<sup>3</sup>/s, 47.62 in/yr, 37,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,190 ft<sup>3</sup>/s Dec. 21, 1955, gage height, 6.82 ft, at site and datum then in use, from rating curve extended above 810 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 13.17 ft Dec. 15, 1977; minimum discharge, 0.2 ft<sup>3</sup>/s Aug 24, 1946, for several days in summers of 1949 and 1950, Sept. 1-3, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 24, 1964, reached a stage of 7.30 ft, discharge, 2,500 ft<sup>3</sup>/s, at site 0.2 mi downstream.

					S.	TATISTICAL	JOHNATES						
М	ONTHLY AN	ID ANNUAL	MEAN DIS	CHARGES	1946-79		MAG			BILITY OF OD OF REG			DW .
				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	1	NTERVAL,	CFS, FOR IN YEAR: E PROBAB	S, AND A	NNUAL N	)N-
ионтн	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	.9	80	17	24	1.40	2.8	1	.7	.3	.2	.1		
10VEMBER	3.7	148	62	44	.71	10.1	3	.7	.3	.2	.2		
DECEMBER	4.1	187	107	57	.53	17.3	7	.8	-4	.3	.2		
JANUARY	3.1	215	114	66	.58	18.4	14	-8	.4	.3	.2		
EBRUARY	15	256	137	61	.44	22.1	30	1.0	.5	. 4	.3		
MARCH	28	154	89	31	.34	14.4	60	1.4	.8	.6	.5		
APRIL	18	85	46	18	.39	7.4	90	2.0	1.3	1.1	.9		
<b>YAY</b>	12	57	27	14	.52	4.4	120	3.1	2.3	1.9	1.6		
JUNE	6.7	18	10	3.5	.34	1.7	183	7.7	5.3	4.2	3.3		
JULY	2.5	6.5	4.1	1.3	.33	.7							
AUGUST	.6	5.9	2.1	1.6	.77	.3							
SEPTEMBER	.5	6.3	2.3	1.9	.83	. 4							
NNUAL	14	72	51	16	.30	100							
MAGNI	TUDE AND	PROBABILI	TY OF IN	STANTANE	OUS PEAK F					BILITY OF			.ow
 I SCHARGE	TUDE AND BASE , IN CFS,		TY OF INS	STANTANEC CORD 1946	DUS PEAK F 5-79	 FLOW 	PERIOD	BASED DISCHA	ON PERIOR ON PER	OD OF REC  CFS, FOR L, IN YE/	CORD 194INDICATI	16-79  ED RECUF ANNUAL	RENCE
OISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INS	STANTANEC CORD 1946 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL IN PERCEN	FLOW  , IN NT 	PERIOD (CON- SECU-	BASED DISCHA	ON PERIOR  RGE, IN INTERVA  XCEEDANC	OD OF REC CFS, FOR L, IN YE E PROBAB	INDICATI	16-79 ED RECUF ANNUAL N PERCEN	RENCE
ISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF INS	STANTANEC CORD 1946 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL, IN PERCE	 FLOW  , IN NT	PERIOD (CON-	BASED DISCHA	ON PERIOR ON PER	OD OF REC  CFS, FOR L, IN YE/	CORD 194INDICATI	16-79  ED RECUF ANNUAL	RRENCE
OISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INS	STANTANEC CORD 1946 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL IN PERCEN	FLOW  , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERIO	OD OF REC	INDICATION ARS, AND ILITY, II	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE IT 100 1%
DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI	TY OF INSOD OF REC	STANTANEC CORD 1946 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL IN PERCEN	FLOW  , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%	ON PERIO	CFS, FOR L, IN YEA E PROBAB	INDICATION INDICATION	16-79 ED RECUF ANNUAL N PERCEN	RRENCE
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF REC	STANTANEC CORD 1946 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL IN PERCEN	FLOW  , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E 2 50%  609 460	ON PERIO	OD OF REC CFS, FOR L, IN YE/ E PROBAB 	INDICATION ARS, AND ILITY, II	ED RECUF ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI	TY OF INSOD OF REC	STANTANEC CORD 1946 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL IN PERCEN	FLOW  , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E 2 50%  609 460 326	ON PERIO	OD OF REC CFS, FOR L, IN YEA E PROBAB 10 10% 860 659 480	INDICATION ARS, AND ILITY, II	ED RECUF ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI	TY OF INSOD OF REC	STANTANEC CORD 1946 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL IN PERCEN	FLOW  , IN NT 	PERIOD (CON- SECU- TIVE DAYS) 	BASED  DISCHA  E 2 50%  609 460 326 248	ON PERIO RGE, IN INTERVA XCEEDANC  5 20%  772 587 420 309	OD OF REC CFS, FOR L, IN YE, E PROBAB 10 10% 860 659 480 343	INDICATION ARS, AND ILITY, II	ED RECUF ANNUAL N PERCEN 50 2%	100 1%
I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI	TY OF INSOD OF REC	STANTANEC CORD 1946 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL IN PERCEN	FLOW  , IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E 2 50%  609 460 326 248 192	ON PERIO RGE, IN INTERVA XCEEDANC 5 20% 772 587 420 309 227	CFS, FOR L, IN YE/E PROBAB  10 10 5 860 659 480 343 241	INDICATION ARS, AND ILITY, II	ED RECUF ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI	TY OF INSOD OF REC	STANTANEC CORD 1946 CURRENCE ABILITY,	DUS PEAK F 5-79 INTERVAL IN PERCEN	FLOW  , IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASED  DISCHA  E 2 50%  609 460 326 248	ON PERIO	OD OF REC CFS, FOR L, IN YE, E PROBAB 10 10% 860 659 480 343	INDICATION ARS, AND ILITY, II	ED RECUF ANNUAL N PERCEN 50 2%	100
I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI	TY OF INS	STANTANEC CORD 1946 CURRENCE BBILITY, 25 4%	DUS PEAK F 1-79 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCHA  E 2 50  609 460 326 248 192 153 142	RGE, IN INTERVA XCEEDANC  772 587 420 309 227 183 174	CFS, FOR L, IN YE/E PROBAB  10 10 860 659 480 343 241 193 184	INDICATION ARS, AND ILITY, II	ED RECUF ANNUAL N PERCEN 50 2%	100
ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF INSOD OF RECONCE PROBA	STANTANEC CORD 1946 CURRENCE ABILITY, 25 4%	DUS PEAK F i=79 INTERVAL IN PERCENT 50 2%	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	DISCHA  E 2 50%  609 460 326 248 192 153 142  OF RECOR	ON PERIOD  RGE, IN INTERVA  XCEEDANC  5 20%  772 587 420 309 227 183 174  D 1946-79	CFS, FOR L, IN YE/E PROBAB	INDICATI	ED RECUF ANNUAL N PERCEN 50 2%	IT 100

9.4

4.9

3.6

2.9

2.2

1.4

#### 14171000 MARYS RIVER NEAR PHILOMATH, OR

LOCATION.--Lat 44°31'35", long 123°20'00", in NE‡SE‡ sec.18, T.12 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank 50 ft downstream from bridge on Bellfountain Road, 0.6 mi downstream from Newton Creek, 2.0 mi southeast of Philomath, and at mile 9.4.

DRAINAGE AREA.--159 mi<sup>2</sup>, including drainage area of Evergreen Creek above Bellfountain Road, 1.4 mi south of station.

PERIOD OF RECORD. -- October 1940 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 224.01 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Prior to Oct. 1, 1961, nonrecording gage at bridge 50 ft upstream at same datum.

REMARKS.--Records include flow of Evergreen Creek at Bellfountain Road crossing. Slight regulation by small storage reservoir on Rock Creek from which municipal supply is diverted for city of Corvallis. Other small diversions above station for irrigation.

AVERAGE DISCHARGE.--42 years, 458 ft<sup>3</sup>/s, 39.12 in/yr, 331,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 20.72 ft; maximum gage height, 20.91 ft Jan. 15, 1974; minimum discharge, 0.60 ft<sup>3</sup>/s Aug. 23, 1967.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-82

	MUMINIM			STAN- DARD DEVIA-	COEFF!- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL NO!	4-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	8.2	568	 73	102	1.39	1.3	1	9.5	5.7	4.1	3.0	2.0	1.5
NOVEMBER	22	1897	455	398	.87	8.2	3	9.8	6.1	4.6	3.5	2.5	2.0
DECEMBER	30	2360	1059	622	.59	19.2	7	10	6.7	5.2	4.1	3.1	2.5
JANUARY	38	2455	1239	690	.56	22.4	14	11	7.3	5.8	4.7	3.6	3.0
FEBRUARY	83	2398	1066	486	.46	19.3	30	12	8.5	6.9	5.8	4.7	4.1
MARCH	190	1736	793	381	.48	14.4	60	15	10	8.7	7.4	6.2	5.5
APRIL	160	1133	462	242	.52	8.4	90	18	13	11	9.7	8.2	7.4
MAY	91	660	219	122	.56	4.0	120	24	18	15	13	11	9.5
JUNE	43	185	88	31	.35	1.6	183	54	38	32	27	23	20
JULY	16	59	34	11	.32	.6							
A <i>U</i> GUST	4.9	36	17	7.2	.42	.3							
SEPTEMBER	6.0	52	19	10	.53	.4							
ANNUAL	104	816	458	143	.31	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-82

DISCHARGE, YEARS, A							PERIOD - (CON-		IARGE, IN INTERV	AL, IN Y	EARS, A	ND ANNUA	L
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1≴ 	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
4080	6140	8920	10700	12900	14400	15900			7700				
WE ! GHTED	SKEW =	312					3 7 15 30 60 90	5230 4400 3270 2360 1810 1420 1260	7300 6060 4410 3130 2320 1840 1640	8480 7010 5040 3550 2550 2040 1810	9790 8060 5730 3990 2750 2240 1970	10600 8750 6170 4260 2860 2350 2060	11400 9360 6570 4490 2950 2440 2130

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-82

5\$ 10\$ 15\$ 20\$ 25\$ 30\$ 40\$ 50\$ 60\$ 70\$ 75\$ 80\$ 85\$ 90\$ 95\$			DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCE	NT OF TH	ME		_
1910 1290 916 695 547 432 266 157 81 42 31 24 19 15 11	5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	1910	1290	916	695	547	432	266	157	81	42	31	24	19	15	11

#### 14172000 CALAPOOIA RIVER AT HOLLEY, OR

LOCATION.--Lat 44°21'05", long 122°47'10", in SEt sec.15, T.14 S., R.1 W., Linn County, Hydrologic Unit 17090003, on right bank 200 ft downstream from bridge on State Highway 228, 0.3 mi southwest of Holley, 5.0 mi upstream from Brush Creek, and at mile

DRAINAGE AREA .-- 105 mi2.

PERIOD OF RECORD. -- September 1935 to September 1982. Prior to October 1963, published as "Calapooya River at Holley".

GAGE.--Water-stage recorder. Datum of gage is 527.58 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1963, nonrecording gage at present site and datum.

REMARKS.--Slight regulation at times during low-water periods by small dam upstream. Diversions for irrigation above station.

AVERAGE DISCHARGE.--47 years, 440 ft<sup>3</sup>/s, 56.91 in/yr, 318,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.60 ft; maximum gage height, 15.30 ft Dec. 22, 1964 (backwater from debris); minimum discharge observed, 13 ft<sup>3</sup>/s Sept. 8, 1940.

#### STATISTICAL SUMMARIES

	MONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1936-82		MAG			ABILITY (		. LOW FL( 37-82	W
				STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-		INTERVAL	CFS, FOF , IN YEAF CE PROBAE	RS, AND A	NNUAL NO	)N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	22	607	144	157	1 06	2 7		25	21	18	17	15	14

				DEVIA-	CIENT OF	0F	(CON-		EXCEEDANG	CE PROBAE	BILITY, 1	IN PERCEN	IT.
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	22	697	144	153	1.06	2.7	1	25	21	18	. 17	15	14
NOVEMBER	19	1417	544	368	.68	10.3	3	25	21	19	18	17	16
DECEMBER	60	2408	905	538	.59	17.1	7	26	22	20	19 -	17	17
JANUARY	78	1934	895	481	.54	16.9	14	27	23	21	19	18	17
FEBRUARY	102	1895	831	350	.42	15.7	30	30	25	22	21	19	18
MARCH	190	1363	711	295	.41	13.4	60	36	28	25	23	20	19
APRIL	194	1276	565	213	.38	10.7	90	42	32	28	25	23	21
MAY	121	727	361	156	.43	6.8	120	53	39	33	30	26	23
JUNE	66	534	184	93	.50	3.5	183	110	80	67	58	49	44
JULY	35	153	73	27	. 37	1.4							
AUGUST	21	106	42	14	.34	.8							
SEPTEMBER	22	133	47	27	.57	.9							
ANNUAL	189	671	440	107	. 24	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82

## MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82

YEARS, A							PERIOD (CON-		INTERV	CFS, FOYAL, IN Y	EARS, A	ND ANNUAL	L
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
3790	5620	8200	9910	12100	13700	15200	4					40000	45000
WEIGHTED	SKEW =	169					-3	4500 3550	6520 5010	7850 5930	9530 7040	10800 7820	12000 8580
							· 7 15	2580 1860	3490 2410	4030 2720	4640 3060	5050 3280	5430 3470
							30 60	1450 1140	1830 1440	2020 1610	2210 1780	2320 1900	2420 2000
							90	1010	1260	1400	1560	1670	1760

## DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN	T OF TI	ИE		
5%	10%	15%	20%	25%	30%	40%	50%	60 <b>%</b>	70%	75%	80%	85%	90%	95 <b>%</b>
1540	1070	825	676	564	480	350	241	147	84	63	49	40	33	27

#### 14173500 CALAPOOIA RIVER AT ALBANY, OR

LOCATION.--Lat 44°37'15", long 123°07'40", in NW½ sec.13, T.11 S., R.4 W., Linn County, Hydrologic Unit 17090003, near right bank on downstream side of bridge on Riverside Drive at Albany, 0.6 mi downstream from Oak Creek, and at mile 3.0.

DRAINAGE AREA .-- 372 mi2.

PERIOD OF RECORD. -- October 1940 to September 1981. Prior to October 1963, published as "Calapooya River at Albany".

GAGE.--Water-stage recorder. Datum of gage is 180.85 ft National Geodetic Vertical Datum of 1929. Prior to May 11, 1962, nonrecording gage at same site and datum.

REMARKS.--Higher flows are affected by backwater from Willamette River at times. Diurna! fluctuation caused by ponds at flour mills near Shedd. Diversions for irrigation above station.

AVERAGE DISCHARGE.--41 years,  $895 \text{ ft}^3/\text{s}$ , 32.67 in/yr, 648,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—-Maximum discharge observed, 32,700 ft<sup>3</sup>/s Dec. 22, 1955, gage helght, 22.12 ft; maximum gage height, 25.5 ft Jan. 2, 1943, from graph based on gage readings (backwater from Willamette River); minimum discharge, 3.5 ft<sup>3</sup>/s Sept. 7,

#### STATISTICAL SUMMARIES

M		ID ANNUAL	<b></b>	STAN- DARD DEVIA-	1941-81  COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	BASEI DISCH	AND PROBAL O ON PERI ARGE, IN O INTERVAL, EXCEEDANCE	OD OF REC  CFS, FOR IN YEARS	ORD 194 INDICATE AND AN	2-81  D RECURI	RENCE
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	20	1293	201	282	1.40	1.9	1	13	8.6	6.6	5.2	3.9	3.1
NOVEMBER	34	3408	1042	830	-80	9.7	3	19	14	11	9.1-	7.2	6.0
DECEMBER	69	5688	2123	1337	.63	19.7	7	23	17	14	12	10	9.1
JANUARY	102	4214	2276	1233	•54	21.1	14	24	18	16	14	12	10
FEBRUARY	108	4872	1845	917	•50	17.1	30	28	21	18	15	13	11
MARCH	358	3020	1447	730	•50	13.4	60	35	26	22	19	17	15
APRIL	280	2137	914	438	.48	8.5	90	42	30	26	23	20	19
MAY	174	1598	537	299	•56	5.0	120	56	41	34	30	26	24
JUNE	84	586	228	107	•47	2.1	183	133	94	78	66	55	49
JULY	38	227	84	38	.45	.8					- <b></b>		
AUGUST	16	103	40	17	.42	.4							
SEPTEMBER	. 18	157	49	33	•68	•5							
ANNUAL	244	1512	896	263	•29	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-81

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-81

				RECURREN ROBABILI			PERIOD (CON-	DISC	INTER	N CFS, FO VAL, IN '	YEARS, A	ND ANNUA	L
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> - <b></b>	10 10 <b>%</b>	25 4%	50 2%	100 1% 	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100
7370	12300	1980 <b>0</b>	25000	31700	36700	41800							<b>-</b>
- <b>-</b>	<b>-</b>						1	11300	17200	20900	25200	28100	30900.
WEIGHTE	D SKEW =	278					3	9350	13400	15700	18100	19600	20900
							7	6770	9340	10700	12200	13100	13800
							15	4710	6240	7010	7760	8200	8570
							30	3570	4510	4910	5250	5420	5550
							60	2740	3550	3940	4300	4510	4670
							90	2370	3050	3380	3690	3870	4010

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-81

		D1 <b>S</b> (	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5 <b>%</b>	10%	15 <b>%</b>	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90 <b>%</b>	95%
38 <b>0</b> 0	2380	1700	1270	1000	808	552	347	195	10 <b>1</b>	74	55	41	32	24

#### 14174000 WILLAMETTE RIVER AT ALBANY, OR

LOCATION.--Lat 44°38'20", long 123°06'20", in SW\ sec.6, T.11 S., R.3 W., Linn County, Hydrologic Unit 17090003, on right bank 5 ft upstream from bridge on U.S. Highway 20 (Ellsworth Street) in Albany, 0.2 mi downstream from Calapooia River, and at mile 119.31.

DRAINAGE AREA. -- 4.840 mi<sup>2</sup>. approximately.

5%

40200

10%

28800

15%

23500

20%

19800

25%

17300

30%

15200

40%

12000

50%

9250

60%

6630

70%

4490

75%

3870

80%

3510

PERIOD OF RECORD.--November 1878 to April 1888 (fragmentary), January to June 1892, November 1892 to September 1894, December 1894 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 167.18 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1906, nonrecording gage at site 0.2 mi upstream at datum 5.00 ft higher. Sept. 27, 1906, to Nov. 12, 1934, nonrecording gage at site 300 ft upstream at datum 5.00 ft higher. Nov. 14, 1934, to Sept. 30, 1962, at datum 5.00 ft higher.

REMARKS.--Flow regulated by nine reservoirs above station. Albany power canal diverts water from South Santiam River at Lebanon and discharges into Calapooia River near mouth; small diversions for irrigation and municipal water supply.

AVERAGE DISCHARGE.--88 years (water years 1894, 1896-82), 14,470 ft<sup>3</sup>/s, 40.60 in/yr, 10,480,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266,000 ft<sup>3</sup>/s Jan. 14, 1881, gage height, 37.8 ft, present datum; minimum, 1,840 ft<sup>3</sup>/s Sept. 1, 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached a stage of 41.0 ft, discharge, 340,000 ft<sup>3</sup>/s, from rating curve extended above 220,000 ft<sup>3</sup>/s. Flood of Feb. 4, 1890, reached a stage of 38.9 ft, discharge, 291,000 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF NINE RESERVOIRS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1894-41

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1896-41

85%

3190

90%

2890

95%

2540

	MINIMA	MAN IMINA	MEAN	STAN- DARD DEVIA-	COEFF!- CIENT OF	PERCENT OF	PERIOD (CON-	DISC	INTERVA	L, IN YE	OR INDIC ARS, AND ABILITY,	ANNUAL	NON-
MONTH	(CFS)	MAX!MUM (CFS)	MEAN (CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1 <b>%</b>
CTOBER	2313	16410	4419	2671	.60	2.7	1	2590	2260	2110	1990	1870	1790
OVEMBER	2242	42920	13500	9776	.72	8.2	3.	2610	2270	2120	2000	1880	1810
ECEMBER	4999	40990	20790	9531	.46	12.6	7	2630	2290	2140	2020	1900	1820
ANUARY	6613	54370	27190	12430	.46	16.5	14	2670	2330	2180	2080	1970	1910
EBRUARY	8541	50050	25020	11330	. 45	15.2	30	2780	2430	2270	2160	2040	1970
ARCH	6855	51030	21700	9764	.45	13.1	60	2940	2540	2370	2260	2140	2070
PRIL	7067	38020	18000	7122	.40	10.9	90	3170	2690	2480	2330	2180	2090
AY	5971	28950	13110	4713	.36	7.9	120	3450	2860	2620	2450	2290	2190
UNE	3316	22680	9581	4349	.45	5.8	183	5070	3950	3490	3160	2830	2640
ULY	2497	10780	5205	2019	.39	3.2							
UGUST	2034	5771	3312	776	.23	2.0							
	04	6604	3308	898	.27	2.0							
EPTEMBER	2153	0004	2200	0,70									
NNUAL	7983 	18870	13530  TY OF IN	3128 	.23 EOUS PEAK F	100	 MA				OF ANNU		FLOW
MAGNI	7983  FUDE AND BASE  IN CFS,	18870 PROBABIL! D ON PERI FOR INDI	13530 TY OF INOD OF RECATED RENCE PROE	3128  NSTANTANE ECORD 189  ECURRENCE BABILITY,	.23 EOUS PEAK F 16-41 INTERVAL, IN PERCE	100 FLOW , IN	PERIOD (CON-	BAS	ED ON PE  HARGE, I INTER	RIOD OF  N CFS, F		1896-41  ATED REC ND ANNUA	URRENCE
MAGN1	7983 FUDE AND BASE	18870 PROBABIL! D ON PERI FOR INDI	13530 TY OF INOD OF RECATED RE	3128  NSTANTANE ECORD 189  ECURRENCE	.23 EOUS PEAK F 16-41 INTERVAL, IN PERCE	100  FLOW , IN	 PERIOD	BAS DISC	ED ON PE  HARGE, I INTER	RIOD OF  N CFS, F	RECORD  OR INDIC YEARS, A	1896-41  ATED REC ND ANNUA	URRENCE
MAGNI	7983  TUDE AND BASE  IN CFS, AND ANNUA	PROBABIL! D ON PERI FOR INDI L EXCEEDA	13530 TY OF INOD OF RECATED RENCE PROB	3128  STANTANE ECORD 189  ECURRENCE BABILITY,	.23 EOUS PEAK F 66-41 INTERVAL, IN PERCER	100 FLOW , IN	PERIOD (CON- SECU-	BAS	ED ON PE HARGE, I INTER EXCEEDA	RIOD OF  N CFS, F VAL, IN NCE PROB	RECORD OR INDIC YEARS, A	1896-41 ATED REC ND ANNUA IN PERC	URRENCE L ENT
MAGNI	7983  TUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20\$	13530 TY OF IN OD OF RE CATED RE NCE PROE	3128  STANTANE CORD 189  CURRENCE BABILITY,  25 4\$	.23 EOUS PEAK F 66-41 INTERVAL, IN PERCER	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC	ED ON PE  HARGE, I INTER EXCEEDA  5 20\$	RIOD OF  N CFS, F VAL, IN NCE PROB	RECORD OR INDIC YEARS, A ABILITY, 25 4%	1896-41  ATED REC ND ANNUA IN PERC 50 2%	URRENCE L ENT 100
1.25 80%	7983  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20\$ 53000 18	13530 TY OF IN OD OF RE CATED RE NCE PROE	3128  STANTANE CORD 189  CURRENCE BABILITY,  25 4\$	. 23 EOUS PEAK F 6-41 INTERVAL, IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISC2 50%98300	ED ON PE  HARGE, I INTER EXCEEDA  5 20\$	RIOD OF N CFS, F VAL, IN NCE PROB	RECORD OR INDIC YEARS, A ABILITY,	1896-41  ATED REC ND ANNUA IN PERC	URRENCE L ENT 100 1%
MAGNI	7983  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20\$	13530 TY OF IN OD OF RE CATED RE NCE PROE	3128  STANTANE CORD 189  CURRENCE BABILITY,  25 4\$	. 23 EOUS PEAK F 6-41 INTERVAL, IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BAS DISC2 50%98300 87100	ED ON PE  HARGE, I INTER EXCEEDA  5 20\$ 143000 123000	RIOD OF  N CFS, F VAL, IN NCE PROB  10 10 174000 146000	RECORD OR INDIC YEARS, A ABILITY, 25 45 215000 175000	1896-41  ATED REC ND ANNUA IN PERC 250 25  246000 197000	URRENCE L ENT 100 15 278000 217000
MAGNITION MAGNITION MAGNITION MAGNITION MAGNITION MAGNITION MAGNITION MAGNITION MAGNITUM MAGN	7983  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20\$ 53000 18	13530 TY OF IN OD OF RE CATED RE NCE PROE	3128  STANTANE CORD 189  CURRENCE BABILITY,  25 4\$	. 23 EOUS PEAK F 6-41 INTERVAL, IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BAS  DISC  2 50%  98300 87100 68700	ED ON PE  HARGE, I INTER EXCEEDA  5 20\$  143000 123000 92000	RIOD OF N CFS, F VAL, IN NCE PROB 10 10 174000 146000 106000	RECORD  OR INDIC YEARS, A ABILITY,  25 4\$  215000 175000 122000	1896-41  ATED REC ND ANNUA IN PERC  50 2\$  246000 197000 133000	URRENCE L ENT 100 1½ 278000 217000
MAGNITION MAGNIT	7983  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20\$ 53000 18	13530 TY OF IN OD OF RE CATED RE NCE PROE	3128  STANTANE CORD 189  CURRENCE BABILITY,  25 4\$	. 23 EOUS PEAK F 6-41 INTERVAL, IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BAS  DISC  2 50%  98300 87100 68700 51400	ED ON PE HARGE, I INTER EXCEEDA 5 20\$ 143000 123000 92000 66200	RIOD OF  N CFS, F VAL, IN  NCE PROB  10  174000 146000 74500	RECORD  OR INDIC YEARS, A ABILITY,  25 45  215000 175000 122000 83800	1896-41  ATED REC ND ANNUA IN PERC 50 2\$  246000 197000 133000 89900	URRENCE L ENT 100 1% 278000 217000 143000 95500
MAGNITION MAGNITION MAGNITION MAGNITION MAGNITION MAGNITION MAGNITION MAGNITION MAGNITUM MAGN	7983  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20\$ 53000 18	13530 TY OF IN OD OF RE CATED RE NCE PROE	3128  STANTANE CORD 189  CURRENCE BABILITY,  25 4\$	. 23 EOUS PEAK F 6-41 INTERVAL, IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) t 3 7 15 30	98300 87100 68700 51400 39400	HARGE, I INTER EXCEEDA 5 20 \$ 143000 123000 92000 49000	N CFS, F VAL, IN NCE PROB 10 10 146000 106000 54000	RECORD OR INDIC YEARS, A ABILITY, 25 4\$ 175000 122000 83800 59400	1896-41  ATED REC ND ANNUA IN PERC 50 2\$  246000 197000 133000 89900 62800	278000 217000 143000 65700
MAGNITURAL MAGNITURA MAGNITURA	7983  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20\$ 53000 18	13530 TY OF IN OD OF RE CATED RE NCE PROE	3128  STANTANE CORD 189  CURRENCE BABILITY,  25 4\$	. 23 EOUS PEAK F 6-41 INTERVAL, IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	98300 87100 68700 51400 39400 31400	HARGE, I INTER EXCEEDA 5 20 \$ 143000 123000 92000 66200 49000 38600	N CFS, FVAL, IN NCE PROB	RECORD  OR INDIC YEARS, A ABILITY,  215000 175000 122000 83800 59400 46800	1896-41  ATED REC ND ANNUA IN PERC 50 2\$  246000 197000 133000 89900 62800 49500	278000 217000 143000 217000 143000 95500 52000
MAGNITION MAGNIT	7983  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20\$ 53000 18	13530  TY OF IN OD OF RE  CATED RE NCE PROE  10 10\$  7000 23	3128  ISTANTANE CORD 189  CURRENCE SABILITY,  25 4\$  34000 27	.23 EOUS PEAK 6 66-41 INTERVAL, IN PERCEI	100 FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	98300 87100 68700 51400 39400 31400 27500	HARGE, I INTER EXCEEDA 5 20%	N CFS, F VAL, IN NCE PROB 10 10\$ 174000 146000 74500 54000 42600 36800	RECORD OR INDIC YEARS, A ABILITY, 25 4\$ 175000 122000 83800 59400	1896-41  ATED REC ND ANNUA IN PERC 50 2\$  246000 197000 133000 89900 62800	URRENCE L ENT 100 1% 278000 217000 143000 95500

## 14174000 WILLAMETTE RIVER AT ALBANY, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF NINE RESERVOIRS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1969-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1970-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT .	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICA ARS, AND BABILITY,	ANNUAL N	ON-
МОМТН	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	7454	11430	9144	1191	.13	5.1	1	4580	3800	3340	2940		
NOVEMBER	7131	39540	16600	9035	.54	9.2	3	4680	3880	3390	2980		
DECEMBER	4150	55390	32600	14980	.46	18.1	7	4770	3940	3460	3050		
JANUARY	3901	45070	31320	13550	.43	17.4	14	4860	4030	3560	3160		
FEBRUARY	3208	34190	20810	9616	.46	11.6	30	4950	4170	3730	3350		
MARCH	6807	43270	18100	10470	.58	10.1	60	5160	4380	3990	3690		
APRIL	5630	23520	13960	5671	-41	7.8	90	5520	4640	4210	3870		
MAY	4733	14810	10610	3174	.30	5.9	120	6030	5130	4700	4380		
JUNE	4281	13360	8168	2878	.35	4.5	183	7100	6050	5550	5170		
JULY	4084	7333	5385	963	.18	3.0	<del>-</del> -				- <b></b>		
AUGUST	4778	7313	5672	747	.13	3.2							
SEPTEMBER	5245	8985	7272	1107	.15	4.0							
ANNUAL	5831	22550	14960	4656	.31	100							
DISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	OUS PEAK I			BASE	ED ON PER	RIOD OF	OF ANNUA RECORD 1  OR INDICA	969-82  TED RECU	
OISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	INTERVAL IN PERCEI		PERIOD (CON- SECU-	BASE	HARGE, II	RIOD OF  N CFS, F VAL, IN	RECORD 1	969-82  TED RECU D ANNUAL	 RRENCE
OISCHARGE, YEARS, A	BASE IN CFS,	D ON PERI  FOR INDI  L EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCEI	, in nt	PERIOD (CON-	BASE	HARGE, II	RIOD OF  N CFS, F VAL, IN	RECORD 1  OR INDICA YEARS, AN	969-82  TED RECU D ANNUAL	 RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	D ON PERI  FOR INDI L EXCEEDA	OD OF RE	ECORD ECURRENCE BABILITY, 25	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	BASE DISCH	HARGE, II INTERI EXCEEDAI	RIOD OF N CFS, F VAL, IN NCE PROB	RECORD 1 OR INDICA YEARS, AN ABILITY,	969-82 TED RECU D ANNUAL IN PERCEI	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA	D ON PERI  FOR INDI L EXCEEDA	OD OF RE	ECORD ECURRENCE BABILITY, 25	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	BASE DISCH	HARGE, II INTERI EXCEEDAI	RIOD OF N CFS, F VAL, IN NCE PROB	RECORD 1 OR INDICA YEARS, AN ABILITY,	969-82 TED RECU D ANNUAL IN PERCEI	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI  FOR INDI L EXCEEDA	OD OF RE	ECORD ECURRENCE BABILITY, 25	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II INTER EXCEEDA	RIOD OF  N CFS, F VAL, IN NCE PROB	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%	969-82 TED RECU D ANNUAL IN PERCEI 50 2%	RRENCE NT
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECORD ECURRENCE BABILITY, 25	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50%	HARGE, II INTER EXCEEDAI  5 20%	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  105000	969-82 TED RECU D ANNUAL IN PERCEI 50 2%	RRENCE NT
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECORD ECURRENCE BABILITY, 25	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3	DISCH	HARGE, II INTER EXCEEDAI 5 20%	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  105000 95400	969-82 TED RECU D ANNUAL IN PERCEI 50 2%	RRENCE NT
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECORD ECURRENCE BABILITY, 25	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 74800 70900 63700	HARGE, II INTER' EXCEEDAI 5 20% 94800 88100 75700	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1 OR INDICA YEARS, AN ABILITY,	969-82  TED RECU D ANNUAL IN PERCEI  50 2%	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECORD ECURRENCE BABILITY, 25	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	74800 70900 63700 54100 36300	HARGE, II INTER' EXCEEDAI 94800 88100 75700 64900 46500	N CFS, F VAL, IN NCE PROB 10103 1039 101000 92800 78200 67200 55700 49800	RECORD 1 OR INDICA YEARS, AN ABILITY, 25 4% 105000 95400 79200 68100 56500 51900	969-82  TED RECU D ANNUAL IN PERCEI  50 2%	RRENCE NT
DISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECORD ECURRENCE BABILITY, 25	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 	74800 70900 63700 54100	HARGE, II INTER EXCEEDAI 5 20% 94800 88100 75700 64900 53900	N CFS, F VAL, IN NCE PROB 10 10 10 92800 78200 55700	RECORD 1	969-82  TED RECU D ANNUAL IN PERCEI  50 2%	RRENCE NT
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 	74800 70900 63700 45100 36300 31400	94800 88100 75700 64900 45500 41100	N CFS, F WAL, IN NCE PROB 10 10%	RECORD 1 OR INDICA YEARS, AN ABILITY, 25 4% 105000 95400 79200 68100 56500 51900	969-82  TED RECU D ANNUAL IN PERCEI  50 2%	RRENCE NT
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, in NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 OR PERIOD	74800 70900 54100 45100 36300 5100 50 F RECC	HARGE, III INTER: EXCEEDAI  94800 88100 75700 64900 53900 46500 41100	N CFS, F VAL, IN NCE PROB 10 10%	OR INDICA YEARS, AN ABILITY,  25 4%  105000 95400 79200 68100 56500 51900 47100	969-82  TED RECU D ANNUAL IN PERCEI  50 2%	RRENCE NT
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2% OF DAILY I	, in NT 100 1%  MEAN FLOW F	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 COR PERIOD	74800 70900 54100 45100 36300 5100 50 F RECC	HARGE, III INTER: EXCEEDAI  94800 88100 75700 64900 53900 46500 41100	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  105000 95400 79200 68100 56500 51900 47100	969-82  TED RECU D ANNUAL IN PERCEI  50 2%	RRENCE NT

## 14178000 NORTH SANTIAM RIVER BELOW BOULDER CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°42'25", long 122°06'00", in SE\N\tau\tau\tau sec.17, T.10 S., R.6 E., Marion County, Hydrologic Unit 17090005, on right bank 0.5 mi downstream from Boulder Creek, 3.0 mi southeast of Detroit, and at mile 70.7.

DRAINAGE AREA .-- 216 mi2.

PERIOD OF RECORD.--January 1907 to October 1909, October 1928 to September 1982. Monthly discharge only January 1907, published in WSP 1318. Prior to October 1952, published as "at Detroit."

GAGE.--Water-stage recorder. Datum of gage is 1,590.07 ft National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--56 years, 1,005 ft<sup>3</sup>/s, 63.18 in/yr, 728,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.76 ft, temporary backwater from debris, from rating curve extended above 6,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 250 ft<sup>3</sup>/s Sept. 13, 1909.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1908-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	MINIMIM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VAR!-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	., IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL I	NON-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100
CT0BER	312	1215	515	184	•36	4.3	1	381	338	319	304	288	279
IOVEMBER	336	2167	956	465	.49	7.9	3	383	339	320	304	289	27
ECEMBER	432	3840	1408	734	.52	11.6	7	386	342	322	306	290	28
ANUARY	383	2991	1306	602	.46	10.8	14	393	348	327	310	294	28
EBRUARY	404	2816	1257	542	.43	10.4	30	405	357	335	319	301	29
IARCH	616	2865	1143	396	- 35	9.5	60	422	371	348	330	311	30
PRIL	610	2137	1338	350	-26	11.1	90	442	385	359	339	319.	30
IAY	701	2762	1468	474	.32	12.1	120	470	405	377	356	336	32
UNE	441	2759	1139	503	. 44	9.4	183	599	491	446	414	383	36
ULY UGUST	375	1101	640	178	. 28	5.3							
106031	326	663	477	84	.18	3.9							
COTEMBED	700												
EPTEMBER	309	595	441	68	.15	3.6							
SEPTEMBER  NNUAL  MAGNI	569	1506 	1006 TY OF IN	203	.20 COUS PEAK I	100	 MA(				OF ANNUA		 FLOW
MAGNI  ISCHARGE, YEARS,	569  TUDE AND BASE  IN CFS,	PROBABILI D ON PERI FOR INDIC L EXCEEDA	1006 TY OF IN OD OF RE CATED RE	203 ISTANTANE CORD 190 CURRENCE	.20 OUS PEAK I 8-82 INTERVAL, IN PERCE	100 FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PER ARGE, IN	RIOD OF F	OF ANNUA RECORD 1 DR INDICA YEARS, AN	1908-82 TED RECUID ANNUAL	JRRENC
MAGN1	569  TUDE AND BASE	PROBABILI D ON PERIO	1006 TY OF IN OD OF RE	203 ISTANTANE CORD 190 CURRENCE	.20 OUS PEAK I 8-82 INTERVAL, IN PERCE	100  FLOW , IN	PERIOD	BASE DISCH	D ON PER ARGE, IN	RIOD OF F	RECORD 1	1908-82 TED RECUID ANNUAL	JRRENC
MAGNITAL MAG	569  TUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIA EXCEEDAN 5 20%	1006 TY OF IN OD OF RE CATED RE NCE PROB	203 ISTANTANE CORD 190 CURRENCE ABILITY, 25 4%	.20 OUS PEAK I 8-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	I CFS, FC	RECORD 1  OR INDICA (EARS, AN ABILITY,  25	1908-82 LITED RECUID ANNUAL IN PERCE	JRRENC - ENT 10
MAGNI  OI SCHARGE, YEARS, / 1.25 80\$	569  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAI 5 20%	1006 TY OF IN OD OF RE CATED RE NCE PROB	203 ISTANTANE CORD 190 CURRENCE ABILITY, 25 4%	.20 OUS PEAK I 8-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERVEXCEEDAN	I CFS, FC AL, IN Y ICE PROBA	RECORD 1  OR INDICA (EARS, AN ABILITY,  25 4%	NTED RECUID ANNUAL IN PERCE	JRRENC - ENT 10 1
MAGNI  SCHARGE, YEARS,  1.25 80%	569  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIA EXCEEDAN	1006 TY OF IN OD OF RE CATED RE NCE PROB	203 ISTANTANE CORD 190 CURRENCE ABILITY, 25 4%	.20 OUS PEAK I 8-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 6100 4860	ARGE, IN INTERV EXCEEDAN 20% 9060 7130	I CFS, FC AL, IN Y CE PROBA 10%	RECORD 1  OR INDICA (EARS, AN ABILITY, 25 4%  13500 10700	15300 12200	JRRENC 
MAGNI I SCHARGE, YEARS, // 1.25 80%	569  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAI 5 20%	1006 TY OF IN OD OF RE CATED RE NCE PROB	203 ISTANTANE CORD 190 CURRENCE ABILITY, 25 4%	.20 OUS PEAK I 8-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE  DISCH  2 50%  6100 4860 3710	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%  9060 7130 5110	1000 OF F	RECORD 1  OR INDICA (EARS, AN ABILITY,  25 4%  13500 10700 7040	1908-82 ITED RECL ID ANNUAL IN PERCE 50 2% 15300 12200 7780	JRRENC - ENT 10 1700 1370 850
MAGNI  I SCHARGE, YEARS,  1.25 80%	569  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAI 5 20%	1006 TY OF IN OD OF RE CATED RE NCE PROB	203 ISTANTANE CORD 190 CURRENCE ABILITY, 25 4%	.20 OUS PEAK I 8-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  6100 4860 3710 2820	D ON PER ARGE, IN INTERVEXCEEDAN 5 20%	1000 OF F	DR INDICA FEARS, AN ABILITY, 25 4% 13500 10700 7040 4630	15300 12200 7780 4980	JRRENC - ENT 10 1700 1370 850 530
MAGNI  OI SCHARGE, YEARS, / 1.25 80\$	569  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAI 5 20%	1006 TY OF IN OD OF RE CATED RE NCE PROB	203 ISTANTANE CORD 190 CURRENCE ABILITY, 25 4%	.20 OUS PEAK I 8-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 	BASE  DISCH  2 50  6100 4860 3710 2820 2260	9060 7130 5110 3630 2800	1000 OF F	DR INDICA (EARS, AN ABILITY, 25 4% 13500 10700 7040 4630 3400	1908-82  INTED RECUID ANNUAL IN PERCE  50 25  15300 12200 7780 4980 3600	JRRENC
MAGNI  OI SCHARGE, YEARS, / 1.25 80\$	569  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDAI 5 20%	1006 TY OF IN OD OF RE CATED RE NCE PROB	203 ISTANTANE CORD 190 CURRENCE ABILITY, 25 4%	.20 OUS PEAK I 8-82 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  6100 4860 3710 2820	D ON PER ARGE, IN INTERVEXCEEDAN 5 20%	1000 OF F	DR INDICA FEARS, AN ABILITY, 25 4% 13500 10700 7040 4630	15300 12200 7780 4980	JRRENC - ENT 10

			DISC	HARGE,	JN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	PERCEN	T OF TIM	E		
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
٠	2320	1820	1580	1390	1240	1120	939	784	654	547	509	473	440	406	369

### 14179000 BREITENBUSH RIVER ABOVE CANYON CREEK, NEAR DETROIT, OR

LOCATION.--Lat 44°45'10", long 122°07'40", in SE‡NE‡ sec.36, T.9 S., R.5 E., Marion County, Hydrologic Unit 17090005, in Willamette National Forest, on left bank 600 ft upstream from Canyon Creek, 1.5 mi northeast of Detroit, and at mile 2.0.

DRAINAGE AREA .-- 106 mi2.

PERIOD OF RECORD.--June 1932 to September 1982. Monthly discharge only June 1932, published in WSP 1318. Prior to October 1952, published as "above French Creek, near Detroit."

GAGE.--Water-stage recorder. Datum of gage is 1,573.95 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1952, at site 0.2 mi downstream at datum 13.46 ft lower.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE. -- 50 years, 577 ft<sup>3</sup>/s, 73.92 in/yr, 418,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900  $ft^3/s$  Dec. 22, 1964, gage height, 14.55 ft; minimum, 87  $ft^3/s$  Sept. 2, 1940.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1933-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	MINIMIN		мелы	STAN- DARD DEVIA-	COEFF!- CIENT OF	0F	PERIOD (CON-		INTERVAL EXCEEDAN	, IN YEAR CE PROBAR	R INDICAT RS, AND A BILITY,	ANNUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	104	827	261	164	.63	3.8	1	119	104	97	92	87	84
NOVEMBER	106	1504	648	374	.58	9.3	3	120	105	98	93	87	84
DECEMBER	163	2385	942	519	.55	13.6	7	122	106	99	94	88	85
JANUARY	142	2135	848	460	.54	12.2	14	126	109	102	96	90	87
EBRUARY	176	1867	788	393	.50	11.4	30	132	114	106	100	94	91
1ARCH	289	1874	666	263	. 39	9.6	60	143	122	113	106	99	95
PRIL	295	1280	790	252	.32	11.4	90	159	132	120	111	103	98
IAY	344	1627	800	282	. 35	11.5	120	184	146	131	120	109	102
IUNE	202	1565	581	279	- 48	8.4	183	279	214	187	167	148	137
JULY	129	532	286	107	. 37	4.1							
AUGUST	98	264	172	42	.25	2.5							
SEPTEMBER	104	267	158	38	. 24	2.3							
ANNUAL	276	892	577	129	.22	100							
DISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD 193	OUS PEAK I 3-82 INTERVAL IN PERCEI	, , 1N	 PERIOD	BASEI D I SCHA	ON PER	CFS, FOR	DF ANNUAL ECORD 19 R INDICAT EARS, AND	33-82 ED RECUR ANNUAL	 RRENCE
1.25				25		400	(CON-				BILITY, I		1T
	2	5	10	25	50		SECU-						
80%	50%	20%	10%	48	2%	1%	TIVE	2	5	10	25	50	100

DISCHARGE, YEARS, AI							PERIOD (CON-		INTERV	'AL, ÎN Y	EARS, A	ATED RECI ND ANNUAL IN PERCI	-
1.25 80% 	2 50 <b>%</b> 	5 20% 	10 10%	25 4%	50 <b>2</b> %	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4450	6320	9040	10900	13400	15400	17300			7000		0640	10500	11400
WE I GHTED	SKEM =	-072					ा उ	4980 3690	7020 5240	8230 6240	9610 7450	10500 8320	11400 9170
HE TOTT ED	3KEN -	•072					7	2660	3650	4240	4930	5400	5840
							15	1940	2550	2880	3240	3480	3680
							30	1510	1930	2150	2380	2530	2660
							60	1200	1490	1640	1790	1890	1980
							90	1080	1310	1420	1530	1600	1660

DURATION TABLE	OF DAILY ME	AN FLOW FOR	PERIOD OF	RECORD 1	933-82

 		DISCH	IARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCE	NT OF TI	мE		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1560	1160	956	822	725	644	512	408	322	241	205	177	155	138	122

## 14181500 NORTH SANTIAM RIVER AT NIAGARA, OR

LOCATION.--Lat 44°45'10", long 122°17'50", in NEtNEt sec.34, T.9 S., R.4 E., Linn County, Hydrologic Unit 17090005, on left bank 0.1 mi downstream from Little Sardine Creek, 0.8 mi downstream from Big Cliff Dam, 2.1 mi east of Niagara, and at mile 57.3.

DRAINAGE AREA .-- 453 mi2.

5%

5830

10%

4580

15%

3770

20%

3270

PERIOD OF RECORD.--December 1908 to January 1920, October 1921 to March 1922, October 1938 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "North Fork of Santiam River near Niagara" prior to October 1913, and as "above Mayflower Creek, near Detroit" October 1938 to September 1952.

GAGE.--Water-stage recorder. Datum of gage is 1,093.78 ft National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). See WSP 1738 for history of changes prior to Oct. 1, 1952.

REMARKS.--Flow regulated since 1953 by Detroit Lake and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft. No diversion above station.

AVERAGE DISCHARGE.--54 years (water years 1910-19, 1939-82), 2,335 ft<sup>3</sup>/s, 70.00 in/yr, 1,692,000 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,200 ft<sup>3</sup>/s Nov. 22, 1909, gage height, 16.4 ft, from floodmark, site and datum then in use, from rating curve extended above 35,000 ft<sup>3</sup>/s; minimum, 19 ft<sup>3</sup>/s Aug. 21, 1963; minimum daily, 395 ft<sup>3</sup>/s Mar. 25, 26, 1977

#### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF DETROIT AND BIG CLIFF DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1912-52

25%

2890

30%

2560

40%

2070

50%

1680

60%

1360

70%

1060

75%

907

80%

791

85%

706

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1913-52

95%

543

90%

622

				STAN- DARD DEVIA-	COEFFI- CIENT OF	0F	PERIOD (CON-	DISC	INTERVA	L, IN YE	OR INDICAT ARS, AND A ABILITY, !	ANNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 <b>1%</b>
OCTOBER	491	2920	1153	717	.62	4.2	1	557	479	443	415		
IOVEMBER	511	5225	2654	1331	.50	9.8	3	560	483	446	417		
ECEMBER	955	9568	3238	2031	.63	11.9	7	567	488	452	424		
ANUARY	1057	6577	2950	1424	. 48	10.9	14	581	501	463	434		
EBRUARY	1455	6078	3186	1171	.37	11.7	30	606	518	478	448		
IARCH	1225	5348	2657	925	. 35	9.8	60	648	542	499	469		
PR!L	1180	5257	3181	1056	.33	11.7	90	723	582	522	477		
IAY	1394	5694	3127	1230	.39	11.5	120	827	640	559	500		
UNE	721	6101	2283	1238	.54	8.4	183	1210	905	772	676		
ULY	547	3177	1238	657	.53	4.6							
UGUST	461	1281	761	211	.28	2.8							
		1278	737	219	.30	2.7							
EPTEMBER	502	12/0	, , , ,										
NNUAL	1336 	3458 	2258  TY 0F II		.24  OUS PEAK F 2-52	100 	 MA				OF ANNUAL RECORD 19		 LOW
MAGNI ISCHARGE YEARS,	1336  TUDE AND BASE  , IN CFS, AND ANNUA	3458 PROBABIL! D ON PERI	2258 TY OF II OD OF RE	NSTANTANE ECORD 191 ECURRENCE BABILITY,	OUS PEAK F 2-52 INTERVAL IN PERCEI	 FLOW  , IN NT	PERIOD (CON-	BASE	HARGE, H	N CFS, FO		912-52  TED RECUI D ANNUAL	 RRENCE
MAGNI	1336 TUDE AND BASE	3458 PROBABIL! D ON PERI	2258 TY OF IN	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	OUS PEAK F 2-52 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE	DISCI	HARGE, HI INTER EXCEEDA	N CFS, FO VAL, IN NCE PROB	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	912-52 TED RECUI O ANNUAL IN PERCEI	RRENCE
MAGNI	1336 TUDE AND BASE , IN CFS, AND ANNUA	3458 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	2258 TY OF III OD OF RE CATED RI NCE PROI	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	OUS PEAK F 2-52 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, HI INTER EXCEEDAN 5 20%	N CFS, FO VAL, IN NCE PROB.	RECORD 19 DR INDICAT YEARS, AND ABILITY, 1 25 4%	P12-52  TED RECUI  O ANNUAL  IN PERCEI  50 2%	RRENCE
MAGNI  ISCHARGE YEARS,  1.25 80\$	1336 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3458 PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	2258 TY OF III OD OF RE CATED RI NCE PROI	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	OUS PEAK F 2-52 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER EXCEEDAI 5 20%	N CFS, FO VAL, IN N NCE PROB. 10%	RECORD 19  OR INDICAT YEARS, AND ABILITY, 125 4% 35800	912-52 FED RECUI O ANNUAL IN PERCEI 50 2%	RRENCE
MAGNI  ISCHARGE YEARS,  1.25 80\$	1336 TUDE AND BASE , IN CFS, AND ANNUA	3458 PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	2258 TY OF III OD OF RE CATED RI NCE PROI	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	OUS PEAK F 2-52 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER' EXCEEDAI 5 20%	N CFS, FG VAL, IN NCE PROB. 10 10%	RECORD 19 DR INDICAT YEARS, AND ABILITY, 12 25 4% 35800 27900	912-52 IED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE
MAGNI  ISCHARGE YEARS,  1.25 80\$	1336 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3458 PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	2258 TY OF III OD OF RE CATED RI NCE PROI	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	OUS PEAK F 2-52 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 14900 11400 8790	HARGE, II INTER EXCEEDAN 5 20% 22900 17500 12600	N CFS, FG VAL, IN NCE PROB. 10 10% 28500 21900 15000	DR INDICAT YEARS, AND ABILITY, U 25 4% 35800 27900 17900	912-52 FED RECUI O ANNUAL IN PERCEI 50 2%	RRENCE
MAGNI  ISCHARGE YEARS,  1.25 80\$	1336 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3458 PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	2258 TY OF III OD OF RE CATED RI NCE PROI	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	OUS PEAK F 2-52 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 14900 11400 8790 6560	HARGE, II INTER EXCEEDAL 5 20% 22900 17500 12600 8990	N CFS, F6 VAL, IN NCE PROB 10 10\$ 28500 21900 15000 10500	DR INDICAT YEARS, AND ABILITY, I 25 4% 35800 27900 17900 12200	912-52 FED RECUID ANNUAL IN PERCEI  50 2%	RRENCE
MAGNI  ISCHARGE YEARS,  1.25 80\$	1336 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3458 PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	2258 TY OF III OD OF RE CATED RI NCE PROI	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	OUS PEAK F 2-52 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON-SECU-TIVE DAYS)	DISCI 2 50% 14900 11400 8790 6560 5180	HARGE, II INTER EXCEEDAL 5 20% 22900 17500 12600 8990 6850	N CFS, FV VAL, IN NCE PROB. 10 10\$ 28500 21900 15000 7820	35800 27900 17200 8920	912-52  IFED RECUI O ANNUAL IN PERCEI  50 2%	 RRENCE
MAGNI  ISCHARGE YEARS,  1.25 80\$	1336 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	3458 PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	2258 TY OF III OD OF RE CATED RI NCE PROI	NSTANTANE ECORD 191 ECURRENCE BABILITY, 25 4%	OUS PEAK F 2-52 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 14900 11400 8790 6560	HARGE, II INTER EXCEEDAL 5 20% 22900 17500 12600 8990	N CFS, F6 VAL, IN NCE PROB 10 10\$ 28500 21900 15000 10500	DR INDICAT YEARS, AND ABILITY, I 25 4% 35800 27900 17900 12200	P12-52  FED RECUI  ANNUAL  IN PERCEI  50  2	RRENCE

## 14181500 NORTH SANTIAM RIVER AT NIAGARA, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF DETROIT AND BIG CLIFF DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1954-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1955-82

MONTH (CFS)		M CALL MINE	MANIMIN	MEAN	STAN- DARD DEVIA-	COEFF1- CIENT OF VAR1-		PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	on-
NOVEMBER 2200 6075 3665 1126 31 12.8 3 909 731 619 523 419 DECEMBER 932 9208 4247 1964 .46 14.9 7 937 756 645 551 448 DANUARY 880 7888 3579 1697 .47 12.5 14 966 780 669 575 472 FEBRUARY 665 5843 2252 1433 .64 7.9 30 1010 805 688 590 484 ARCH 508 6990 1737 1228 .71 6.1 60 1090 882 773 685 591 APRIL 465 3692 1836 808 .44 6.4 90 1240 995 874 778 676 ARY 651 4035 2460 993 .40 8.6 120 1360 1080 944 838 727 DINE 681 4263 1944 895 .46 6.8 183 1660 1350 1200 1080 954 UNLY 848 1868 1218 243 .20 4.3 FETEMBER 1437 2394 1858 284 .15 6.5  ANNUAL 1206 3490 2379 498 .21 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW FEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT PEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT 1.25 2 5 10 25 50 100  MEIGHTED SKEW =		(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)			TIVE						100 1%
NOVEMBER 2200 6075 3665 1126 31 12.8 3 909 731 619 523 419  DECEMBER 932 9208 4247 1964 .46 14.9 7 937 756 645 551 448  JANUARY 880 7888 3579 1697 .47 12.5 14 966 780 669 575 472  FEBRUARY 665 5843 2252 1433 .64 7.9 30 1010 805 688 590 484  MARCH 508 6990 1737 1228 .71 6.1 60 1090 882 773 685 591  MARCH 508 6990 1737 1228 .71 6.1 60 1090 882 773 685 591  MAY 651 4033 2460 993 .40 8.6 120 1360 1080 944 838 727  IUNE 681 4263 1944 895 .46 6.8 183 1660 1350 1200 1080 954  MAGNITUDE 848 1868 1218 243 .20 4.3  MUGUST 837 1719 1225 232 .19 4.3  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW  MAGNITUDE AND PROBABILITY OF RECORD  MAGNITUDE AND PROBABILITY OF RECORD  MAGNITUDE AND PROBABILITY OF RECORD  MAGNITUDE AND PROBABILITY OF RECORD  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH F  BASED ON PERIOD OF RECORD  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH F  BASED ON PERIOD OF RECORD  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH F  BASED ON PERIOD OF RECORD  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN  YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  PERIOD  INTERVAL, IN YEARS, AND ANNUAL  CON-  EXCEEDANCE PROBABILITY, IN PERCENT  PERIOD  INTERVAL, IN YEARS, AND ANNUAL  PERIOD  MEIGHTED SKEW = —  1 11700 13900 14600 15100 15200  MEIGHTED SKEW = —  1 11700 13900 14600 15100 15200  MEIGHTED SKEW = —  2 1 11700 13900 14600 15100 15200  MEIGHTED SKEW = —  3 11200 13200 13900 14500 13900 14900  7 9690 11900 12800 13900 13900 14900  7 9690 11900 12800 13900 13900 14900  15 7400 9540 16700 12900  30 5670 7270 8190 9230 9930  90 4120 5180 5780 6440 6870   DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82	CTOBER	1837	3828	 2517	540	.21	8.8	1	832	665	569	489	403	
DECEMBER 932 9208 4247 1964 46 14.9 7 937 756 645 551 448 140 1400 7 937 756 645 551 448 1400 7 937 756 645 551 448 1400 7 930 1010 805 688 590 484 1400 1400 1400 1400 1400 1400 1400	OVEMBER													
MANUARY   880   7888   3579   1697   .47   12.5   14   966   780   669   575   472														
TERRUARY 665 5843 2252 1433														
ARCH   508   6990   1737   1228   .71   6.1   60   1090   882   773   685   591														
PRIL 465 3692 1836 808 .44 6.4 90 1240 995 874 778 676 INT 651 4033 2460 993 .40 8.6 120 1360 1080 944 838 727 UNE 681 4263 1944 895 .46 6.8 183 1660 1350 1200 1080 954 ULY 848 1868 1218 243 .20 4.3 ULY 848 1868 1218 243 .20 4.3 EPTEMBER 1437 2394 1858 284 .15 6.5  NNUAL 1206 3490 2379 498 .21 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1954-82  ISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT (CON-EXCEEDANCE PROBABILITY, IN PERCENT (CON-EXCEEDANCE PROBABILITY, IN PERCENT)  80\$ 50\$ 20\$ 10\$ 4\$ 2\$ 1\$ 100  WEIGHTED SKEW = - 1 11700 13900 14600 15100 15200 15800 159 7400 9540 10700 12000 12900 15800 15900 13800 15900 13800 15900 13800 15900 13800 15900 13800 15800 6530 7390 7980 90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
AY 651														
UNE 681 4263 1944 895 .46 6.8 183 1660 1350 1200 1080 954  ULY 848 1868 1218 243 .20 4.3  IDUGUST 87 1719 1225 232 .19 4.3  EPTEMBER 1437 2394 1858 284 .15 6.5  NNUAL 1206 3490 2379 498 .21 100  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 954-82  ISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT (CON-EXCEEDANCE PROBABILITY, IN PERCENT (CON-EXCEEDANCE PROBABILITY, IN PERCENT)  80\$ 50\$ 20\$ 10\$ 4\$ 2\$ 1\$ 17 TIVE 2 5 10 25 50  BAYS) 50\$ 20\$ 10\$ 4\$ 2\$ 2\$  ULY EARS, AND ANNUAL EXCEDANCE PROBABILITY, IN PERCENT (CON-EXCEEDANCE PROBABILITY, IN PERCENT)  WEIGHTED SKEW =														
ULY														
NAGNITUDE   AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD   SECU- BOS   50%   20%   10%   4%   2%   1%   1100   1100   1500								183	1660	1350	1200	1080	954	
### PEPTEMBER 1437 2394 1858 284 .15 6.5  ### AGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD  ### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1954-82  ### PERIOD INTERVAL, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT (CON- EXCEEDANCE PROBABILITY, IN PERCENT (CON- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDANCE PROBABILITY, IN PERCENT (PRIOD SECU- EXCEEDED SECU- EXCEEDED SECU- EXCEEDED SECU- EXCEEDED SECU- EXCEEDED SECU- EXCEEDED SECU- EXCEEDED SECU- EXCEEDED SECU- EXCEEDED SECU- EXCEEDED SECU- EXCEEDED SECURITY (PRIOD SEC														
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD  INSCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  1.25 2 5 10 25 50 100 SECU- 80% 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 DAYS) 50% 20% 10% 4% 2%  WEIGHTED SKEW =  1 11700 13900 14600 15100 15200 7 9690 11900 12800 13500 13600 15 7400 9540 10700 12900 30 5670 7270 8190 9230 9330 60 4570 5800 6530 7390 7980 90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	UGUST	837	17 <b>1</b> 9	1225	232	. 19	4.3							
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW  BASED ON PERIOD OF RECORD  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH F BASED ON PERIOD OF RECORD 1954-82  ISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCON (CON-EXCEEDANCE PROBABIL	EPTEMBER	1437	2394	1858	284	.15	6.5							
MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD  INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT  1.25 2 5 10 25 50 100 SECU- 80% 50% 20% 10% 4% 2% 1% TIVE 2 5 10 25 50 DAYS) 50% 20% 10% 4% 2%  WEIGHTED SKEW =  1 11700 13900 14600 15100 15200  WEIGHTED SKEW =  1 11700 13900 14600 15100 15200 15 7400 9540 10700 12800 13500 13800 15 7400 9540 10700 12000 12900 30 5670 7270 8190 9230 9930 60 4570 5800 6550 7390 7980 90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82	NNUAL	1206	3490	2379	498	.21	100							
DAYS) 50% 20% 10% 4% 2%		IN CFS,	FOR INDI	CATED RE	CURRENCE			PERIOD		 HARGE, IN	 I CFS, F(	RECORD 1	ATED RECUI	 RRENCE
#EIGHTED SKEW = 1 11700 13900 14600 15100 15200  WEIGHTED SKEW = 3 11200 13200 13900 14300 14400  7 9690 11900 12800 13500 13800  15 7400 9540 10700 12000 12900  30 5670 7270 8190 9230 9930  60 4570 5800 6530 7390 7980  90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	YEARS, A	IN CFS, ND ANNUA	FOR INDIO	CATED RE	CURRENCE BABILITY,	IN PERCE	ŃT	(CON-		HARGE, IN INTERV	I CFS, F(	RECORD 1  DR INDICA (EARS, AN	ATED RECUI	
WEIGHTED SKEW = 3 11200 13200 13900 14300 14400 7 9690 11900 12800 15500 13800 15 7400 9540 10700 12000 12900 30 5670 7270 8190 9230 9930 60 4570 5800 6530 7390 7980 90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	YEARS, A	IN CFS, ND ANNUA	FOR INDIC L EXCEEDAL	CATED RENCE PROB	CURRENCE BABILITY,	IN PERCE	ŃT  100	(CON- SECU- TIVE	DISCH	HARGE, IN INTERV EXCEEDAN	I CFS, FO	RECORD 1  OR INDICA (EARS, AN ABILITY,  25	ATED RECUI ND ANNUAL IN PERCEI	NT 
7 9690 11900 12800 13500 13800 15 7400 9540 10700 12000 12900 30 5670 7270 8190 9230 9930 60 4570 5800 6530 7390 7980 90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	YEARS, A	IN CFS, ND ANNUA	FOR INDIO	CATED RENCE PROB	CURRENCE BABILITY,	IN PERCE	ŃT  100	(CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC AL, IN N ICE PROBA	RECORD 1  DR INDICA (EARS, AN ABILITY,  25 4%	ATED RECUI ND ANNUAL IN PERCEI 50 2%	
15 7400 9540 10700 12000 12900 30 5670 7270 8190 9230 9930 60 4570 5800 6530 7390 7980 90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIO	CATED RENCE PROB	CURRENCE BABILITY,	IN PERCE	ŃT  100	(CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	1 CFS, FC PAL, IN N ICE PROBA 10 10%	RECORD 1  OR INDICA (EARS, AN ABILITY,  25 4%	ATED RECUI ND ANNUAL IN PERCEI 50 2%	NT 
30 5670 7270 8190 9230 9930 60 4570 5800 6530 7390 7980 90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIO	CATED RENCE PROB	CURRENCE BABILITY,	IN PERCE	ŃT  100	(CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	10 CFS, F(AL, IN ) ICE PROB/ 10 10%	RECORD 1  OR INDICA YEARS, AN ABILITY, 25 4% 15100 14300	ATED RECUI ND ANNUAL LN PERCEI 50 2% 15200 14400	NT 
60 4570 5800 6530 7390 7980 90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIO	CATED RENCE PROB	CURRENCE BABILITY,	IN PERCE	ŃT  100	(CON- SECU- TIVE DAYS) 	DISCH	13900 13200 11900	10 CFS, FC AL, IN 10 IOE PROB/ 10 10 10 10 10 10 10 10 10 10 10 10 10 1	DR INDICA YEARS, AN ABILITY, 25 4% 15100 14300 13500	ATED RECUI ND ANNUAL IN PERCEI 50 2% 15200 14400 13800	NT 
90 4120 5180 5780 6440 6870  DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIO	CATED RENCE PROB	CURRENCE BABILITY,	IN PERCE	ŃT  100	(CON- SECU- TIVE DAYS) 	DISCH 2 50% 11700 11200 9690 7400	13900 13200 11900 9540	10 10% 14600 13900 12800	DR INDICA (EARS, AN ABILITY, 25 4% 15100 14300 13500 12000	ATED RECUI ND ANNUAL IN PERCEI 50 2% 15200 14400 13800 12900	NT 
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-82  DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIO	CATED RENCE PROB	CURRENCE BABILITY,	IN PERCE	ŃT  100	(CON- SECU- TIVE DAYS) 	DISCH 2 50% 11700 11200 9690 7400 5670	HARGE, IN INTERV EXCEEDAN 5 20% 13900 13200 11900 9540 7270	10 CFS, FC(AL, IN ) ICE PROBA	DR INDICA YEARS, AN ABILITY, 25 4% 15100 14300 13500 12000 9230	15200 14400 13800 19930	NT 
DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME	1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIO	CATED RENCE PROB	CURRENCE BABILITY,	IN PERCE	ŃT  100	(CON- SECU- TIVE DAYS) 	DISCH 2 50% 11700 11200 9690 7400 5670	HARGE, IN INTERV EXCEEDAN 5 20% 13900 13200 11900 9540 7270	10 CFS, FC(AL, IN ) ICE PROBA	DR INDICA YEARS, AN ABILITY, 25 4% 15100 14300 13500 12000 9230	15200 14400 13800 19930	NT 
	1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIO	CATED RENCE PROB	CURRENCE BABILITY,	IN PERCE	ŃT  100	CON- SECU- TIVE DAYS) 	DISCH 2 50% 11700 11200 9690 7400 7670 4570	13900 13200 11900 13200 17270 5800	10 CFS, FG (AL, IN ) (ICE PROB/ 10, 10% 14600 13900 12800 10700 8190 6530	PRECORD 1  PRECORD 1	15200 14400 13800 12900 9930 7980	NT 
5% 10% 15% 20% 25% 30% 40% 50% 60% 70% 75% 80% 85% 90%	1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIO	CATED RE NCE PROB	CURRENCE ABILITY, 25 4%	1N PERCE	NT	(CON- SECU- TIVE DAYS) 	2 50% 11700 11200 9690 7400 5670 4570 4120	13900 13200 11900 9540 7270 5800 5180	10FS, FC AL, IN 1 10 10% 14600 13900 12800 10700 8190 6530 5780	PRECORD 1  PRECORD 1	15200 14400 13800 12900 9930 7980	NT 
	1.25 80%	IN CFS, ND ANNUA 2 50%	FOR INDIC	CATED RE NCE PROB	CURRENCE ABILITY, 25 4%	IN PERCE	100 1%   MEAN FLOW I	(CON- SECU- TIVE DAYS) 	2 50% 11700 11200 9690 7400 5670 4570 4120	13900 13200 13200 13200 15800 5180 1954–	10 CFS, FC (AL, IN ) (ICE PROBA) 10 10% 14600 13900 12800 10700 8190 6530 5780	DR INDICA YEARS, AN ABILITY, 25 4% 15100 14300 12000 9230 7390 6440	15200 14400 13800 12900 9930 7980	NT 
5820 4790 3800 3090 2850 2600 2140 1760 1390 1180 1100 1060 1020 973	YEARS, A 1.25 80% WEIGHTED	IN CFS, ND ANNUA 2 50%	FOR INDIC EXCEEDAL 5 20%	CATED RE NCE PROB 10 10/8 DURATIO	CURRENCE ABILITY, 25 4% N TABLE CFS, WHI	OF DAILY :	MEAN FLOW I	(CON- SECU- TIVE DAYS) 	2 50% 11700 11200 9690 7400 4570 4120 OF RECC	13900 13200 13200 13200 15800 5180 15800 1	10 10% 10 10% 10 10% 13900 12800 10700 5780 82	DR INDICA YEARS, AN ABILITY, 25 4% 15100 14500 12000 9230 7390 6440	15200 14400 13800 12900 9930 7980 6870	NT 

## 14182500 LITTLE NORTH SANTIAM RIVER NEAR MEHAMA, OR

LOCATION.--Lat 44°47'30", long 122°34'40", in NW¼ sec.16, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on left bank 2.0 mi east of Mehama and at mile 2.0.

DRAINAGE AREA.--112 mi $^2$  at cableway 1.2 mi downstream where all discharge measurements are made.

PERIOD OF RECORD.--October 1931 to September 1982. Records for July to September 1924 and July to September 1931 at site 4 mi upstream not equivalent owing to difference in drainage areas.

GAGE.--Water-stage recorder. Datum of gage is 655.41 ft National Geodetic Vertical Datum of 1929. Prior to June 12, 1948, nonrecording gage at about same site and datum.

REMARKS.--No regulation or diversion above station. Records herein are for measuring site.

AVERAGE DISCHARGE.--51 years, 769  $ft^3/s$ , 93.24 in/yr, 557,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.73 ft, from rating curve extended above 17,000 ft<sup>3</sup>/s; minimum, 13 ft<sup>3</sup>/s Aug. 30, 1961.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1932-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

		MAN I SAN IN	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND / BILITY, I	ANNUAL NO	DN-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1 <b>%</b>
OCTOBER	26	1594	417	369	.88	4.5	1	29	23	20	19	17	16
NOVEMBER	26	3121	1129	686	.61	12.2	3	29	23	21	19	18	17
DECEMBER	193	3680	1520	772	.51	16.4	7	30	24	22	20	19	18
JANUARY	218	3615	1366	727	.53	14.8	14	32	25	23	21	20	19
FEBRUARY	260	2581	1195	546	.46	12.9	30	37	28	25	23	21	20
MARCH	302	2645	1033	451	- 44	11.2	60	49	35	30	27	24	22
APRIL	268	1712	993	303	.31	10.7	90	67	45	37	32	. 27	25
YAY	241	1439	825	303	. 37	8.9	120	104	66	52	43	34	30
JUNE	80	1684	468	299	.64	5.1	183	256	179	148	125	104	92
JULY	45	344	130	68	.52	1.4							
AUGUST	19	432	66	60	.90	.7							
SEPTEMBER	29	490	115	119	1.03	1.2							
ANNUAL	400	1146	769	165	.21	100							

DISCHARGE YEARS,				RECURREI ROBABILI			PERIOD (CON-	DISC		N CFS, FO VAL, IN N NCE PROBA	YEARS, A	IAUNNA DI	L
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100
9550	13400	18800	22600	27400	31200	35000		0700	12000	14000	16400	18100	19800
WE I GHTE	D SKEW =	.072					1 3 7 15 30 60 90	8790 6220 4280 2980 2260 1780 1610	8330 5580 3830 2920 2270 2000	9610 6340 4320 3330 2570 2230	11100 7210 4900 3820 2920 2500	12200 7800 5300 4160 3180 2680	13200 8350 5670 4480 3420 2860

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75 <b>%</b>	80%	85%	90%	95%
2530	1760	1370	1150	971	838	638	470	319	175	120	83	59	44	34

### 14183000 NORTH SANTIAM RIVER AT MEHAMA, OR

LOCATION.--Lat 44°47'20", long 122°37'00", in NW½ sec.18, T.9 S., R.2 E., Marion County, Hydrologic Unit 17090005, on right bank 300 ft downstream from highway bridge at Mehama, 0.5 mi downstream from Little North Santiam River, and at mile 38.71.

DRAINAGE AREA.--655 mi², at cableway 0.8 mi downstream, where all discharge measurements are made.

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to September 1914, September 1921 to September 1982. Monthly discharge only September 1921, published in WSP 1318. Prior to October 1913, published as North Fork of Santiam River at Mehama.

GAGE.--Water-stage recorder. Datum of gage is 602.49 ft National Geodetic Vertical Datum of 1929. Prior to June 15, 1933, nonrecording gage at site 100 ft upstream at same datum.

REMARKS.--Flow regulated since 1953 by Detroit Lake and Big Cliff Reservoir, usable capacity for reregulating purposes, 2,930 acre-ft. No diversion above station. All records given herein are for measuring site.

AVERAGE DISCHARGE.--66 years (water years 1906, 1911-14, 1922-82), 3,367 ft $^3/s$ , 2,439,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,600 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 15.37 ft, from rating curve extended above 36,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 17.5 ft Nov. 20, 1921, from graph based on gage readings, and Jan. 6, 1923, from floodmark, at site then in use; minimum discharge, 254 ft<sup>3</sup>/s Aug. 3, 1970; minimum daily, 420 ft<sup>3</sup>/s Sept. 18, 1924.

## STATISTICAL SUMMARIES (BEFORE CONSTRUCTION OF DETROIT AND BIG CLIFF DAMS)

#### MONTHLY AND ANNUAL MEAN DISCHARGES 1906-52

#### MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1907-52

	MINIMUM	MANIMIN	MEAN	DARD DEVIA-	COEFFI- CIENT OF VARI-		PERIOD (CON-		IARGE, IN INTERVAL EXCEEDAN	, IN YEA	RS, AND A	ANNUAL NO	0 <b>N</b> –
монтн	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2%	100 <b>1%</b>
CT0BER	526	5040	1664	1143	.69	4.2	1	589	508	<b>47</b> 0	440	410	
IOVEMBER	495	10330	4425	2784	.63	11.2	3	595	513	475	446	415	
ECEMBER	1482	9999	4829	2049	.42	12.2	7	601	517	479	449	419	
ANUARY	1029	11230	4873	2447	.50	12.3	14	616	529	488	457	424	
EBRUARY	1884	11410	4986	2456	.49	12.6	30	647	547	501	467	431	
ARCH	1686	9465	4273	1458	. 34	10.8	60	693	573	526	492	461	
PRIL	1600	7559	4541	1449	.32	11.5	90	774	622	559	514	470	
AY	1750	7949	4208	1631	.39	10.6	120	899	687	605	549	495	
UNE	852	7802	2830	1479	.52	7.2	183	1450	1080	934	831	732	
ULY	626	2259	1242	438	. 35	3.1	<b></b>		<b></b>			- <b>-</b>	
UGUST	507	1520	781	196	.25	2.0							
EPTEMBER	508	1910	861	352	.41	2.2							
NNUAL	2061	4325	3251	702	.22	100							

## MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1906-52

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1906-52

					ICE INTER		PERIOD (CON-	DISC	INTER	VAL, ÍN '	YEARS, A	ATED RECUIND ANNUAL	
1.25 80 <b>%</b>	2 50 <b>%</b>	5 20 <b>%</b> 	10 10 <b>%</b>	25 4%	50 <b>2%</b> <b>-</b> -	100 1 <b>%</b>	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
23900	34200	48700	58300	70600	79800								
				<del></del>			1	27300	38400	45700	54900	61800	
WEIGHTE	D SKEW :	069					3	20100	28300	34000	41300	46800	
							7	15000	19900	22700	25800	27900	
							15	10900	14300	16400	18900	20700	
							30	8530	10700	11900	13200	14100	
							60	6770	8180	8920	9710	10200	
							90	6100	7170	7690	8200	8500	

## DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906-52

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICAT	ED PERCEN	T OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
8 <b>9</b> 90	66 <b>6</b> 0	5540	4 <b>7</b> 90	4250	3780	2990	2350	1780	1240	1020	872	757	668	576

## 14183000 NORTH SANTIAM RIVER AT MEHAMA, OR--Continued

## STATISTICAL SUMMARIES (AFTER COMPLETION OF DETROIT AND BIG CLIFF DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1954-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1955-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
IONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
CTOBER	1949	5109	2960	897	.30	7.0	1	1050	934	872	821	765	
IOVEMBER	2502	9857	5218	1987	.38	12.4	3	1080	956	888	833	772	
ECEMBER	1183	14300	6717	3195	-48	15.9	7	1110	979	906	847	780	
ANUARY	1212	11430	5745	2630	.46	13.6	14	1140	997	922	861	793	
EBRUARY	1048	9197	4057	2136	.53	9.6	30	1170	1030	959	903	842	
ARCH	1579	10890	3280	1847	.56	7.8	60	1260	1110	1050	994	940	
PRIL	1624	5714	3287	1146	.35	7.8	90	1420	1230	1140	1070	1000	
AY	1136	5897	3600	1248	.35	8.5	120	1600	1380	1280	1200	1120	
UNE	1023	5521	2570	1186	.46	6.1	183	2070	1750	1590	1480	1350	
ULY	1032	2318	1412	309	.22	3.3							
UGUST	918	1833	1335	245	.18	3.2	-						
EPTEMBER	1485	2800	2001	339	-18	4.7							
EFIEMDER	1489	2800	2001	229	• 17	4.7							
NNUAL	1743	5255	3513	774	-22	100							
ISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	OUS PEAK	 , IN		BASE	ED ON PER	RIOD OF F	RECORD 1	AL HIGH F 1954-82 ATED RECU	
ISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	INTERVAL IN PERCE	 , IN	PERIOD (CON- SECU-	BASE	ED ON PER HARGE, IN	RIOD OF F	RECORD 1	1954 <b>-</b> 82	 RRENCE
1SCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	CORD CCURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT	PERIOD (CON-	BASE	ED ON PER HARGE, IN	RIOD OF F	RECORD 1	1954-82  ATED RECU ND ANNUAL	RRENCE
1SCHARGE, YEARS, A	BASE IN CFS, ND ANNUA	D ON PERIOR FOR INDIVIDUAL EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE	DISCH	HARGE, IN INTERN EXCEEDAN	RIOD OF F N CFS, FC /AL, IN N NCE PROB/	RECORD 1  OR INDICA YEARS, AN ABILITY,  25	J954-82  ATED RECU ND ANNUAL IN PERCE 50 2%	RRENCE
1SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	D ON PERIOR FOR INDIVIDUAL EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FO /AL, IN N NCE PROB/ 10%	OR INDICATE AND A STATE AND A	1954-82 ATED RECU ND ANNUAL IN PERCE 50 2%	 RRENCE
1SCHARGE, YEARS, A	BASE IN CFS, ND ANNUA 2 50%	D ON PERIOR FOR INDIVIDUAL EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3	DISCH	HARGE, IN INTER EXCEEDAN 5 20% 21000 16600	N CFS, F( /AL, IN \ NCE PROB/ 10 \$ 22700 17200	DR INDICA YEARS, AN ABILITY, 25 4% 24100 17500	1954-82 ATED RECU ND ANNUAL IN PERCE 50 2% 24800 17600	PRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	D ON PERIOR FOR INDIVIDUAL EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FO /AL, IN N NCE PROB/ 10%	OR INDICATE AND A STATE AND A	1954-82 ATED RECU ND ANNUAL IN PERCE 50 2%	PRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	D ON PERIOR FOR INDIVIDUAL EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3	DISCH	HARGE, IN INTER EXCEEDAN 5 20% 21000 16600	N CFS, F( /AL, IN \ NCE PROB/ 10 \$ 22700 17200	DR INDICA YEARS, AN ABILITY, 25 4% 24100 17500	1954-82 ATED RECU ND ANNUAL IN PERCE 50 2% 24800 17600	RRENCE NT 100
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	D ON PERIOR FOR INDIVIDUAL EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	HARGE, IN INTENDED	10 10%	25 4% 24100 16200	1954-82 ATED RECUND ANNUAL IN PERCE 50 2% 24800 17600 16400	RRENCE NT 100
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	D ON PERIOR FOR INDIVIDUAL EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 	DISCH	HARGE, IN INTERVENCE EXCEEDAN 5 20% 21000 15500 13400	10 10% 10% 22700 17200 14300	24100 17500 14900	1954-82 ATED RECU ND ANNUAL IN PERCE 50 2\$ 24800 17600 16400 15100	RRENCE NT 100
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	D ON PERIOR FOR INDIVIDUAL EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	D1SCF 2 50% 16700 12800 11100 8880	AARGE, IN INTERVENCEDAN  5 20%  21000 16600 15100 13400 11200	N CFS, F (N CFS)	DR INDICA YEARS, AN ABILITY, 25 4% 24100 17500 16200 14900 13300	24800 17600 17600 17900 13900	RRENCI NT 100
1SCHARGE, YEARS, A 1.25 80%  WEIGHTED	BASE IN CFS, IND ANNUA 2 50% SKEW =	FOR INDI- L EXCEEDA 5 20%	CATED RENCE PROE	CORD CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2% OF DAILY I	JALED OR EX	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISCH 2 50% 16700 14400 11100 8880 7160 6510 0 OF RECC	21000 16600 15100 9240 8300 PRD 1954-	22700 17200 17200 17200 17200 17300 17300 10300 9190	24100 17500 16200 14900 11400 10100	24800 17600 15100 15100 15100 15100	100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDI	CATED RENCE PROE	CORD CURRENCE SABILITY, 25 4\$	INTERVAL IN PERCE 50 2% OF DAILY I	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISCH 2 50% 16700 14400 12800 11100 8880 7160 6510	HARGE, IN INTERN EXCEEDAN 1500 16600 15100 11200 9240 8300 1954-	N CFS, F(AL, IN N CE PROBATION 10%  22700 17200 17800 14300 12300 10300 9190	25 45 100 17500 14900 11400 10100	24800 17600 16400 15100 12100	RRENCE NT 100

#### 14185000 SOUTH SANTIAM RIVER BELOW CASCADIA, OR

LOCATION.--44°23'35", long 122°30'35", in SE¼ sec.36, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, on left bank 100 ft downstream from bridge at Cascadla ranger station, 0.5 mi downstream from Mouse Creek, 0.5 mi upstream from Deer Creek, 1.5 mi southwest of Cascadla, and at mile 48.5.

DRAINAGE AREA. -- 174 mi<sup>2</sup>, at gaging cable 0.7 mi upstream.

PERIOD OF RECORD.--September 1935 to September 1982. Monthly discharge only September 1935, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 759.88 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1935, nonrecording gage.

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

AVERAGE DISCHARGE.--47 years, 821 ft<sup>3</sup>/s, 64.08 in/yr, 594,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.68 ft, from rating curve extended above 14,000 ft<sup>3</sup>/s; minimum, 23 ft<sup>3</sup>/s Dec. 1, 2, 1936.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-82

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI~ ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	34	1296	312	297	.95	3.2	1	48	39	34	31	27	25
NOVEMBER	28	2442	1062	683	.64	10.7	3	48	39	35	32	28	26
DECEMBER	82	4319	1568	932	.59	15.9	7	50	41	36	33	29	26
JANUARY	107	3278	1464	823	.56	14.8	14	53	43	38	34	30	28
FEBRUARY	130	3260	1371	625	.46	13.9	30	59	47	41	37	33	30
MARCH	324	2913	1150	483	.42	11.6	60	70	54	47	42	37	34
APRIL	356	2053	1133	342	.30	11.5	90	83	61	53	47	42	39
YAY	296	1639	951	365	.38	9.6	120	114	79	65	56	47	42
JUNE	104	1261	527	298	.57	5.3	183	263	178	143	119	95	82
JULY	54	407	170	79	.46	1.7							
AUGUST	39	222	81	30	.37	.8							
SEPTEMBER	45	318	100	68	.68	1.0							
ANNUAL	359	1280	821	200	.24	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1936-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1936-82

) SCHARGE YEARS,				RECURREN ROBABILI			PERIOD (CON-	DISC		N CFS, FO VAL, IN Y	rears, Al	ND ANNUA	L
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10 <b>%</b>	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
<b>8</b> 020	1 <b>1</b> 900	17300	21000	25700	29200	32800							
			·				1	8940	12900	15400	18300	20400	22300
WE IGHTE	D SKEW =	= <b></b> 1 <b>1</b> 7					3	6530	9290	11000	13100	14600	16000
							7	4610	6270	7240	8340	9070	9730
							15	3190	4170	4720	5330	5720	6080
							30	2460	3170	3580	4030	4320	4590
							60	1920	2440	2760	3130	3390	3640
							90	1740	2180	2430	2710	2900	3070

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN	IT OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2660	1840	1480	1260	1070	927	687	499	337	182	132	98	78	64	52

## 14185800 MIDDLE SANTIAM RIVER NEAR CASCADIA, OR

LOCATION.--Lat 44°30'55", long 122°22'15", in NE<sup>1</sup>/<sub>4</sub> sec.19, T.12 S., R.4 E., Linn County, Hydrologic Unit 17090006, on right bank 5.6 mi downstream from Bear Creek, 10 mi northeast of Cascadia, and at mile 17.5.

DRAINAGE AREA .-- 104 mi2.

PERIOD OF RECORD. -- August 1963 to September 1981.

GAGE.--Water-stage recorder. Altitude of gage is 1,040 ft, from topographic map.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--18 years, 630 ft<sup>3</sup>/s, 82.26 in/yr, 456,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 15.75 ft, from floodmark, from rating curve extended above 7,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 28 ft<sup>3</sup>/s Oct. 17, 26, 27, 1974.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1964-81	MAGNITUDE AND PROBABILITY OF ANNUAL	LOW FLOW
		BASED ON PERIOD OF RECORD 19	5 <b>5-81</b>

	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	40	575	208	164	.79	2.8	1	45	36	33	30		
NOVEMBER	167	1739	801	500	.62	10.6	3	45	37	33	30		
DECEMBER	121	3356	1274	795	.62	16.8	7	46	38	34	31	·	
JANUARY	169	2244	1260	599	. 48	16.7	14	50	40	36	33		
FEBRUARY	178	1851	883	435	. 49	11.7	-30	56	45	40	36		
MARCH	354	2218	796	431	.54	10.5	60	67	52	46	42		
APRIL	409	1273	807	272	.34	10.7	90	80	61	53	48		
MAY	342	1296	781	310	.40	10.3	120	99	75	65	58		
JUNE	152	986	426	260	.61	5.6	183	198	148	127	113		
JULY	79	242	141	54	. 39	1.9							
AUGUST	46	166	84	31	.37	1.1							
SEPTEMBER	43	218	102	63	•61	1.3							
ANNUAL	286	976	630	176	.28	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-81

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-81

YEARS, A	ND ANNU	JAL EXCEE	DANCE PE	RECURRENC ROBABILITY	, IN PE	RCENT	PERIOD (CON-		INTER	VAL, İN '	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	50% 	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5710	7920	11500	14200	18000	·								
							1	6280	9360	11100	13000		
wE∣GHTED	SKEW =	.430					3	4750	7070	8500	10200		
							7	3450	4870	5670	6540		
							15	2420	3240	3700	4190		
							30	1830	2470	2860	3320		
							60	1450	1930	2240	2630		
							90	1280	1670	1930	2260		

## DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-81

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCE	NT OF TI	мE 		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1970	1370	1120	945	807	701	534	406	272	157	122	96	76	63	51

## 14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR

LOCATION.--Lat 44°32'25", long 122°26'05", in NW½ sec.10, T.12 S., R.3 E., Linn County, Hydrologic Unit 17090006, on Bureau of Land Management land, on right bank 80 ft downstream from Panther Creek, 10 mi north of Cascadia, and at mile 6.6.

DRAINAGE AREA .-- 99.2 mi2.

2420

1570

1200

975

820

700

521

373

239

134

96

54

42

33

PERIOD OF RECORD.--August 1963 to November 1964 (destroyed by flood of December 1964); October 1965 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,050 ft, from topographic map. Aug. 13, 1963, to Dec. 22, 1964, water-stage recorder on left bank at present datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--18 years (water years 1964, 1966-82),  $676 \text{ ft}^3/\text{s}$ , 92.54 in/yr, 489,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 16.38 ft; minimum, 14 ft<sup>3</sup>/s Aug. 19-23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 36,500 ft<sup>3</sup>/s Dec. 22, 1964, from slope-area measurement of peak flow.

МО	NTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1964-82		мА				OF ANNUAL RECORD 19		OW
<b></b>	M I M I M I M	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICAT ARS, AND A ABILITY,	ANNUAL N	0 <b>N</b> -
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 <b>2%</b>	100 1%
OCTOBER	30	753	268	233	<b>.</b> 87	3.3	1	27	20	18	16		
NOVEMBER	155	2224	971	611	.63	12.0	3	27	21	18	16 -		
DECEMBER	110	2897	1426	780	.55	17.6	7	28	21	18	16		
JANUARY	157	2450	1381	662	.48	17.0	14	30	22	19	17		
FEBRUARY	208	2441	1079	597	.55	13.3	30	34	26	23	21		
MARCH	329	2018	901	422	-47	11.1	60	46	33	29	26		
APRIL	382	1245	840	251	•30	10.3	90	61	42	35	31		~-
MAY	243	1114	660	247	•37	8.1	120	85	56	46	39		
JUNE	97	711	327	205	.63	4.0	183	190	131	107	90		
JULY	54	187	97	41	.42	1.2							
AUGUST	26	240	65	49	•76	•8							
SEPTEMBER	29	268	105	86	-82	1.3							
ANNUAL	311	1113	676	197	.29 	100		 GN I TUDE	AND PRO		OF ANNUAL	. <b></b>	
MAGNIT	311 TUDE AND BASE	PROBABILITO ON PERIO	676 TY OF IN	197 ISTANTANE CORD 196	.29 	100  FLOW	PERIOD	BASE	ED ON PER HARGE, IN	RIOD OF I	RECORD 19  OR INDICAT YEARS, AND	64-82 ED RECUI	 RRENCE
MAGNIT	311 TUDE AND BASE	PROBABILITO ON PERIO	676 TY OF IN	197 ISTANTANE CORD 196	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100  FLOW	<u></u>	BASE	ED ON PER HARGE, IN	RIOD OF I	RECORD 19	64-82 ED RECUI	RENCE
MAGNIT MAGNIT DISCHARGE, YEARS, A	311 TUDE AND BASE IN CFS,	PROBABILITO ON PERIO	676  TY OF IN DD OF RE	197 ASTANTANE CORD 196 CURRENCE BABILITY,	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100 	PERIOD (CON-	BASE	ED ON PER HARGE, IN	RIOD OF I	RECORD 19  OR INDICAT YEARS, AND	64-82 ED RECUI	 RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	311  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILITO NO PERIO	676  TY OF INDD OF RECATED REPROBLEMENT	197 ASTANTANE ECORD 196 ECURRENCE BABILITY,	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE	DISCH	HARGE, INTERNEXCEEDAN	N CFS, FO N CFS, FO NAL, IN NACE PROB	RECORD 19 OR INDICAT YEARS, AND ABILITY, 1	ED RECUI ANNUAL N PERCEI	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	311  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	PROBABILITO ON PERIO	676  TY OF INDD OF RECATED REPROBLEMENT	197 ASTANTANE CORD 196 COURRENCE BABILITY, 25 4%	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE	DISCH	HARGE, INTERNEXCEEDAN	N CFS, FO N CFS, FO NAL, IN NACE PROB	RECORD 19 OR INDICAT YEARS, AND ABILITY, 1	ED RECUI ANNUAL N PERCEI	RRENCE
MAGNIT DISCHARGE, YEARS, A 1.25 80%	January States of the states o	PROBABILITO ON PERIO	676  TY OF INDD OF RECATED REPROBLEMENT	197 ASTANTANE CORD 196 COURRENCE BABILITY, 25 4%	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, INTERVENCE SERVE	N CFS, FI VAL, IN N NCE PROBA	RECORD 19 OR INDICAT YEARS, AND ABILITY, 1  25 4%	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT MAGNIT DISCHARGE, YEARS, A 1.25 80%	January States of the states o	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	676  TY OF INDD OF RECATED REPROBLEMENT	197 ASTANTANE CORD 196 COURRENCE BABILITY, 25 4%	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FI VAL, IN N NCE PROB 10 10%	RECORD 19  OR INDICAT YEARS, AND ABILITY, 1  25 4%	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT	January States of the states o	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	676  TY OF INDD OF RECATED REPROBLEMENT	197 ASTANTANE CORD 196 COURRENCE BABILITY, 25 4%	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, INTERNEXCEEDAN  5 20%  11000 7860	12500 8850	PRECORD 19  OR INDICAT YEARS, AND ABILITY, 1  25 4%  14200 9880	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT MAGNIT	January States of the states o	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	676  TY OF INDD OF RECATED REPROBLEMENT	197 ASTANTANE CORD 196 COURRENCE BABILITY, 25 4%	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  8220 5990 4350 2890	HARGE, IN INTERN EXCEEDAN 5 20% 11000 7860 5610	N CFS, FI NAL, IN N NCE PROB, 10 10%	OR INDICAT YEARS, AND ABILITY, I 25 4% 14200 9880 6810	ED RECUI ANNUAL N PERCEN	RRENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	January States of the states o	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	676  TY OF INDD OF RECATED REPROBLEMENT	197 ASTANTANE CORD 196 COURRENCE BABILITY, 25 4%	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 8220 5990 4350 2890 2130	HARGE, IN INTERIECT STATE STAT	10 105 10 105 105 105 105 105 105 105 10	OR INDICAT YEARS, AND ABILITY, I 25 4% 14200 9880 6810 4520 3340	ED RECUI ANNUAL N PERCEN	RRENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	January States of the states o	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	676  TY OF INDD OF RECATED REPROBLEMENT	197 ASTANTANE CORD 196 COURRENCE BABILITY, 25 4%	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  8220 5990 4350 2890	HARGE, IN INTERNEXCEEDAN 5 20% 11000 7860 5610 3690	N CFS, FI /AL, IN N NCE PROB 10 10% 12500 8850 6230 4100	OR INDICAT YEARS, AND ABILITY, 1 25 4% 	164-82  ED RECUI  ANNUAL  N PERCEI  50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	January States of the states o	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	676  TY OF INDD OF RECATED REVOCE PROBLEM 10 10%	197 ISTANTANE CORD 196 CCURRENCE ABILITY, 25 4\$	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN 50 1	100 FLOW	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30 60	BASE DISCH 2 50% 8220 5990 4350 2890 2130 1670 1480	MARGE, IN INTERNEXCEEDAN 5 20% 11000 7860 5610 3690 2710 2140 1880	12500 8850 6230 2140	19200 9880 6810 4520 3340 2780	164-82  ED RECUI  ANNUAL  N PERCEI  50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	January States of the states o	PROBABILITO ON PERIO	17 OF INDD OF RECATED REVICE PROB	197  ISTANTANE CORD 196  CURRENCE DABILITY,  25 4%  16500	.29 OUS PEAK F 4-82 INTERVAL, IN PERCEN 50 1	100 FLOW IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	BASE DISCH 2 50% 8220 5990 4350 2890 2130 1670 1480 OF RECC	11000 7860 7610 3690 2710 2140 1880	N CFS, FI NAL, IN N NCE PROB 10 10% 12500 6230 4100 3020 2430 2140	DR INDICAT YEARS, AND ABILITY, I 25 4% 	164-82  ED RECUI  ANNUAL  N PERCEI  50 2%	RRENCE

## 14186000 MIDDLE SANTIAM RIVER NEAR FOSTER, OR

LOCATION.--Lat 44°27'35", long 122°31'25", in SEt sec.2, T.13 S., R.2 E., Linn County, Hydrologic Unit 17090006, 0.5 mi upstream from Green Peter Creek and 8 mi northeast of Foster.

DRAINAGE AREA. -- 271 mi2.

PERIOD OF RECORD.--August 1931 to September 1947.

GAGE.--Staff gage. Datum of gage is 733.44 ft National Geodetic Vertical Datum of 1929 (Northern Pacific Railway benchmark). Prior to Sept. 14, 1931, staff gage and Sept. 14, 1931, to Dec. 17, 1946, water-stage recorder, at same site and datum.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--16 years (water years 1932-47), 1,449  $ft^3/s$ .

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft<sup>3</sup>/s Dec. 28, 1945, gage height, 21.6 ft, from rating curve extended above 24,000 ft<sup>3</sup>/s by logarithmic plotting; minimum, 54 ft<sup>3</sup>/s Dec. 1, 1936, gage height, 1.25 ft.

## STATISTICAL SUMMARIES

MONTHLY	AND ANNUAL MEAN DISCH	HARGES 1932-47	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
			BASED ON PERIOD OF RECORD 1933-47

		MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	74	975	421	305	.72	2.4	1	77	65	60	56		
NOVEMBER	65	5397	1988	1454	.73	11.4	3	78	66	61	57		
DECEMBER	582	5741	2792	1650	.59	16.0	7	80	67	62	58		
JANUARY	491	5351	2471	1196	.48	14.2	14	84	69	63	59		
FEBRUARY	780	4041	2156	947	.44	12.4	30	92	76	69	65		
MARCH	648	5998	2383	1168	.49	13.7	60	107	85	76	70		
APRIL	547	4042	2140	909	.42	12.3	90	124	97	88	83		
MAY	487	3059	1509	802	.53	8.7	120	174	121	102	89		
JUNE	220	3530	984	830	.84	5.6	183	420	282	230	194		
JULY	126	614	294	130	.44	1.7							
AUGUST	80	199	134	38	.28	.8							
SEPTEMBER	83	581	163	133	.82	.9							
ANNUAL	913	2178	1449	352	.24	100							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1932-47

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1932-47

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, ÍN '	OR INDICAT YEARS, AND ABILITY. I	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
15500	20900	28400	33500	40000									
							1	15500	22100	26800	33300	'	
NE I GHTEI	D SKEW =	.108					3	11200	16500	20400	25600		
							7	8110	11400	13500	15800		
							15	5760	7840	9110	10600		
							30	4470	5870	6630	7430	·	
							60	3580	4570	5110	5690		
							90	3160	3900	4290	4690		

## DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-47

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATED	PERCEN	T OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4690	3350	2740	2280	1950	1640	1180	846	555	301	211	161	126	104	83

## 14186500 MIDDLE SANTIAM RIVER AT MOUTH, NEAR FOSTER, OR

LOCATION.--Lat 44°25'25", long 122°37'25", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.24, T.13 S., R.1 E., Linn County, Hydrologic Unit 17090006, on right bank 2.7 mi northeast of Foster, and at mile 0.7.

DRAINAGE AREA .-- 287 mi<sup>2</sup>.

PERIOD OF RECORD. -- October 1950 to September 1966. Prior to January 1951 monthly discharge only, published in WSP 1738.

GAGE.--Water-stage recorder. Datum of gage is 562.14 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Prior to Oct. 25, 1952, staff gage at same site and datum.

REMARKS.--Slight regulation from construction of Green Peter Dam above station.

AVERAGE DISCHARGE.--16 years, 1,775 ft<sup>3</sup>/s, 1,285,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge,  $67,800 \text{ ft}^3/\text{s}$  Dec. 22, 1964, gage height, 25.80 ft, from rating curve extended above 34,000 ft $^3/\text{s}$  on the basis of slope—area measurement of peak flow; minimum,  $66 \text{ ft}^3/\text{s}$  Sept. 10, 1966.

## STATISTICAL SUMMARIES

М	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1951-66		МА				OF ANNUAL RECORD 19		)W
		MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VAR!-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	., IN YE	OR INDICATARS, AND ABILITY,	ANNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100
OCTOBER	85	2590	- <b>-</b> 899	802	.89	4.2	1	101	84	77	72		
NOVEMBER	126	4660	2524	1411	• 56	11.8	3	102	85	78	73		
DECEMBER	1066	9077	3493	2221	.64	16.3	7	105	87	79	74		
ANUARY	758	7270	3189	1864	.58	14.9	14	110	90	82	77		
EBRUARY	1290	6405	3017	1368	.45	14.1	30	124	100	90	83		
MARCH	1039	4015	2360	865	.37	11.0	60	155	121	105	94		
APRIL	1520	3427	2473	559	.23	11.6	90	178	138	122	111		
MAY	850	3017	1822	694	.38	8.5	120	232	171	149	135		
JUNE	365	2162	907	516	.57	4.2	183	549	394	332	289		
JULY	177	714	325	143	.44	1.5							
AUGUST	106	235	168	42	.25	.8							
SEPTEMBER		749	203	162	.80	.9							
			203	102	•00	• • •							
ANNUAL	1257	2445	1775	265	.15	100							
MAGNI		PROBABILI D ON PERI				FLOW	MA		AND PROB ED ON PER		OF ANNUAL	_ HIGH FL 951-66	.OW
) I SCHARGE	BASE , IN CFS,		OD OF RE	CORD 195	1-66 INTERVAL	 , IN	PERIOD (CON-	BAS	ED ON PER HARGE, IN	RIOD OF I		951-66  TED RECUR O ANNUAL	RENCE
) I SCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD 195	1-66 INTERVAL IN PERCE	 , IN	PERIOD (CON- SECU- TIVE	DISCH	HARGE, IN INTERN EXCEEDAN	RIOD OF I	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	951-66 FED RECUF O ANNUAL IN PERCEN	RENCE
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF RE	CORD 195 CURRENCE BABILITY,	1-66 INTERVAL IN PERCE	, ln NT	PERIOD (CON- SECU-	BASE DISCE	HARGE, INTERN	RIOD OF I	RECORD 19 OR INDICAT YEARS, AND	951-66 FED RECUF O ANNUAL IN PERCEN	RENCE
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	1-66 INTERVAL IN PERCE	, ln NT	PERIOD (CON- SECU- TIVE	DISCH	HARGE, IN INTERN EXCEEDAN	RIOD OF I	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	951-66 FED RECUF O ANNUAL IN PERCEN	RENCE
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	1-66 INTERVAL IN PERCE	, ln NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCE 2 50%	HARGE, IN INTERV EXCEEDAN 5	N CFS, FG /AL, IN NCE PROB/ 10	RECORD 19  OR INDICAT YEARS, AND ABILITY, 1  25 4%	951-66 FED RECUF O ANNUAL IN PERCEN 50 2%	RENCE
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA  5 20%	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	1-66 INTERVAL IN PERCE	, ln NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FO VAL, IN N NCE PROBA 10%	RECORD 19 OR INDICAT YEARS, AND ABILITY, 1 25 4%	P51-66  TED RECUF  ANNUAL  IN PERCEN  50  2%	100 19
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA  5 20%	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	1-66 INTERVAL IN PERCE	, ln NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTER EXCEEDAN 5 20% 29500 21000	N CFS, FO /AL, IN N NCE PROB/ 10%	ASION ASSESSED ASSESS	951-66 FED RECUF O ANNUAL IN PERCEN 50 2%	100 19
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA  5 20%	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	1-66 INTERVAL IN PERCE	, ln NT	PERIOD (CON-SECU-TIVE DAYS)	DISCH 2 50% 20200 14600 9470	HARGE, IN INTERN EXCEEDAN 5 20% 29500 21000 13300	N CFS, FG/AL, IN NCE PROB/ 10 10%	ASION ASSOCIATION	951-66 FED RECUF O ANNUAL IN PERCEN 50 2%	100 19
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA  5 20%	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	1-66 INTERVAL IN PERCE	, ln NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 20200 14600 9470 6790	HARGE, IN INTERN 5 20% 29500 21000 13300 9000	N CFS, FG/AL, IN NCE PROB/ 10 10% 36100 26000 16400 10600	DR INDICAT YEARS, AND ABILITY, I 25 4% 45100 33300 20900 12700	P51-66  FED RECUF  O ANNUAL  N PERCEN  50  2%	100 19
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA  5 20%	OD OF RE	CORD 195 CURRENCE BABILITY, 25 4%	1-66 INTERVAL IN PERCE	, ln NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 20200 14600 9470 6790 5160	HARGE, IN INTER* EXCEEDAN 5 20% 29500 21000 13300 9000 6970	10 10% 36100 26000 10600 8280	A5100 33300 20900 12700 10100	P51-66  ANNUAL N PERCEN  50 2%	100 19
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA  5 20%	CATED RECALLED RESIDENCE PROBLEM 10 10%	CURRENCE SABILITY, 25 4%	1-66 INTERVAL IN PERCE 50 2%	, ln NT  1% 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCH 2 2 50% 20200 14600 9470 6790 5160 4040 3660	HARGE, IN INTERIEXCEEDAH  29500 21000 13300 6970 5290 4620	36100 26000 16400 8280 6160 5270	A5100 33300 20900 10100 7300	P51-66  ANNUAL N PERCEN  50 2%	100 15
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR IND10  FOR IND10  STATE OF THE PROPERTY OF	CATED RE CATED RE NCE PROB 10 10% 59900 5	CURRENCE SABILITY,  25 4%  77500	1-66 INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 2 50% 20200 14600 9470 6790 5160 4040 3660 OF RECO	HARGE, IN INTER EXCEEDAN 29500 21000 13300 9900 6970 5290 4620 DRD 1951-	36100 26000 10600 8280 6160 5270	A5100 33300 20900 12700 10100 7300 6130	P51-66  ANNUAL N PERCEN  50 2%	100 19
01SCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR IND10  FOR IND10  STATE OF THE PROPERTY OF	CATED RE CATED RE NCE PROB 10 10% 59900 5	CURRENCE SABILITY,  25 4%  77500	1-66 INTERVAL IN PERCE 50 2% OF DAILY CH WAS EQ	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	DISCH 2 2 50% 20200 14600 9470 6790 5160 4040 3660 OF RECO	HARGE, IN INTER EXCEEDAN 29500 21000 13300 9900 6970 5290 4620 DRD 1951-	36100 26000 10600 8280 6160 5270	A5100 33300 20900 12700 10100 7300 6130	P51-66  ANNUAL N PERCEN  50 2%	RENCE

## 14187000 WILEY CREEK NEAR FOSTER, OR

DRAINAGE AREA .-- 51.8 mi2.

WEIGHTED SKEW =

PERIOD OF RECORD. -- October 1947 to July 1973.

GAGE.--Water-stage recorder. Datum of gage is 716.08 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Prior to Apr. 6, 1965, water-stage recorder at present site at datum 2.00 ft higher. Apr. 6 to Aug. 17, 1965, nonrecording gage at present site and datum.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--25 years (water years 1948-72), 224 ft<sup>3</sup>/s, 58.72 in/yr, 162,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,640 ft<sup>3</sup>/s Jan. 21, 1972, gage height, 9.28 ft, from rating curve extended above 3,700 ft<sup>3</sup>/s; maximum gage height, 11.80 ft, present datum, Dec. 21, 1964 (backwater from debris); minimum discharge, 5.6 ft<sup>3</sup>/s Nov. 26, 1952.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1948-72

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1949-72

	MINIMUM	MAXIMUM	1151	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	- 1	NTERVAL, XCEEDANC	CFS, FOR IN YEARS E PROBABI	S, AND AN LITY, IN	INUAL NO	<b>N</b> -
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	9.7	397	103	97	.94	3.8	1	9.8	7.9	7.0	6.5	5.9	
IOVEMBER	16	620	286	154	.54	10.6	3	10	8.1	7.2	6.6	6.0	
ECEMBER	109	1107	431	250	.58	16.0	7	10	8.5	7.6	7.0	6.4	
ANUARY	82	842	482	246	.51	17.8	14	11	9.0	8.1	7.4	6.7	
EBRUARY	195	944	416	177	.43	15.4	30	13	10	9.0	8.2	7.5	
MARCH	116	625	354	134	.38	13.1	60	16	12	11	9.6	8.6	
PRIL	133	490	273	87	.32	10.1	90	19	14	12	11	10.0	
ΑY	64	353	196	79	.40	7.3	120	26	19	16	14	12	
UNE	28	165	86	38	.45	3.2	183	60	43	35	30	24	
ULY	17	76	35	18	.52	1.3							
UGUST	9.3	53	19	9.0	-48	.7							
EPTEMBER	9.5	68	22	14	.65	.8							
NNUAL	170	318	224	39	. 17	100							
MAGN I		PROBABIL! D ON PERIO				FLOW	MAG			BILITY OF OD OF REC			O₩
		FOR INDIC					PERIOD (CON-		INTERVA	CFS, FOR L, IN YEA E PROBABI	RS, AND	ANNUAL	
1.25	2	5	10	25	50 1	100	SECU-						

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1948-72

		DISCH	IARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
767	520	409	337	285	242	180	128	80	45	33	24	19	15	12

#### 14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR

LOCATION.--Lat 44°29'55", long 122°49'20", in SW\\ NV\\ sec.28, T.12 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.1 mi downstream from highway bridge at Waterloo, 2.1 mi upstream from Hamilton Creek, and at mile 23.3.

DRAINAGE AREA. -- 640 mi2.

9570

6650

5370

4510

3840

3300

2460

1770

1150

613

438

328

254

202

160

PERIOD OF RECORD.--July 1905 to March 1907, October 1910 to December 1911 (gage heights only January to December 1911), July 1923 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "South Fork of Santiam River at Waterloo" 1905-07, 1910-11.

GAGE.--Water-stage recorder. Datum of gage is 370.39 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1911, nonrecording gage at site 0.5 mi downstream at datum about 5.0 ft lower. July 1, 1923, to Nov. 12, 1934, nonrecording gage, at present site and datum.

REMARKS.--Flow requiated since October 1966 by Green Peter Lake and since December 1966 by Foster Lake. No diversion above station.

AVERAGE DISCHARGE.--60 years (water years 1906, 1924-82), 2,935  $ft^3/s$ , 2,126,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 24.50 ft; minimum, 61 ft<sup>3</sup>/s Oct. 12, 1966.

STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF GREEN PETER AND FOSTER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1906-65

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1907-65

		MANIMUM		STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON-	DISC	INTERVA	., IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL I	NON-
IONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100
CTOBER	143	4898	1192	1146	.96	3.4	1	150	123	111	103	95	9(
10 VEMBER	111	10340	4081	2772	.68	11.5	3	152	124	112	104	96	90
ECEMBER	1068	15470	5314	3088	-58	15.0	7	156	126	114	105	96	90
ANUARY	898	12220	5110	2729	.53	14.4	14	164	132	118	109	99	9
EBRUARY	1525	12070	5436	2526	. 46	15.3	30	184	146	130	118	107	100
IARCH	1212	10530	4386	1815	.41	12.4	60	225	171	148	131	114	10
PRIL	1056	7935	4049	1419	•35	11.4	90	268	196	168	148	129	1.18
ΑΥ	862	5875	3002	1379	. 46	8.5	120	372	249	204	174	146	13
UNE	437	5906	1721	1111	.65	4.9	183	850	579	474	402	334	29
ULY	176	1214	550	250	.45	1.6							
UGUST	126	385	261	72	.28	.7							
EPTEMBER		1118	321	235	.73	•9							
EF TEMBER	144	1110	221	239	• 13	• 9							
NNUAL	1704	4552	2910	680	.23	100							
MAGNI			TY OF IN	NSTANTANE		100  FLOW	MA				OF ANNUA		
ISCHARGE YEARS,	BASE , IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	NSTANTANE ECORD 190 ECURRENCE BABILITY,	OUS PEAK 6-65 INTERVAL	FLOW , !N NT	PERIOD (CON-	BASE	ED ON PEI  HARGE, II INTER	RIOD OF F		1906-65  ATED RECU ND ANNUAL	 JRRENC -
 I SCHARGE	BASE , IN CFS,	PROBABILI D ON PERI	TY OF IN OD OF RE CATED RE	STANTANE CORD 190	OUS PEAK 6-65 INTERVAL	FLOW , !N	PERIOD (CON- SECU- TIVE	BASE DISCE	ED ON PEI  HARGE, II INTER EXCEEDAI	RIOD OF F N CFS, FC VAL, IN N NCE PROBA	RECORD 1  OR INDICA YEARS, AN ABILITY,  25	1906-65 ATED RECUND ANNUAL IN PERCU	JRRENC - ENT 10
ISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 190 ECURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100 1%	PERIOD (CON- SECU-	BASE DISCE	ED ON PEI HARGE, II INTER' EXCEEDAI	RIOD OF F N CFS, FO VAL, IN N	RECORD 1	1906-65 ATED RECUND ANNUAL	JRRENC - ENT 10
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 190 ECURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, III INTER EXCEEDAN 5 20%	N CFS, FC VAL, IN N NCE PROBA	RECORD 1	ATED RECU ND ANNUAL IN PERCE 50 2%	JRRENC ENT 10
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 190 ECURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II INTER EXCEEDAI	N CFS, FOWAL, IN NOTE PROBA	OR INDICA YEARS, AN ABILITY, 25 4%	ATED RECUND ANNUAL IN PERCU	JRRENC 
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 190 ECURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, III INTER EXCEEDAI	N CFS, FC VAL, IN NCE PROB/ 10 10%	RECORD 1 DR INDICA YEARS, AN ABILITY, 25 4% 62100 47000	1906-65 ATED RECU IND ANNUAL IN PERCU 50 2% 70700 54000	JRRENC - ENT 10 1 7960 6130
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 190 ECURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 29400 22000 15700	HARGE, III INTER EXCEEDAN  5 20%  42000 31400 21300	N CFS, FC VAL, IN N NCE PROB/ 10 10% 50700 38000 24900	PRECORD 1  OR INDICA YEARS, AN ABILITY,  25 4%  62100 47000 29200	1906-65 ATED RECU ND ANNUAL IN PERCU 50 2% 70700 54000 32400	JRRENC
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 190 ECURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 29400 22000 15700 11400	HARGE, III INTER EXCEEDAN 5 20% 42000 31400 21300 14600	N CFS, FG VAL, IN N NCE PROB/ 10 10% 50700 38000 24900 16600	PRECORD 1 PRECOR	70700 54000 324000 20500	7960 6130 3560 2200
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 190 ECURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2250% 29400 22000 15700 11400 8730	HARGE, III INTER: EXCEEDAI 5 20% 42000 31400 21300 114600 11200	N CFS, FN N CFS, FN N CFS, FN N N CFS, FN N N N N N N N N N N N N N N N N N N	OR INDICA YEARS, AN ABILITY, 25 4% 62100 47000 29200 18900 14300	1906-65  ATED RECUID ANNUAL IN PERCUID 2%  70700 54000 32400 20500 154000	7960 6130 3560 2200
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 190 ECURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCH 2 50% 29400 22000 15700 11400 8730 6860	HARGE, II INTER EXCEEDAI 5 20% 42000 31400 21300 14600 11200 8670	N CFS, F( VAL, IN N NCE PROB/ 10 10% 50700 38000 24900 16600 12600 9820	PRECORD 1  PRECORD 1	70700 54000 32400 20500 15400 15200	7960 6130 3560 2200 1650
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	NSTANTANE ECORD 190 ECURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2250% 29400 22000 15700 11400 8730	HARGE, III INTER: EXCEEDAI 5 20% 42000 31400 21300 114600 11200	N CFS, FN N CFS, FN N CFS, FN N N CFS, FN N N N N N N N N N N N N N N N N N N	OR INDICA YEARS, AN ABILITY, 25 4% 62100 47000 29200 18900 14300	1906-65  ATED RECUID ANNUAL IN PERCUID 2%  70700 54000 32400 20500 154000	JRRENC
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN ODD OF RE	STANTANE CCORD 190 CCURRENCE BABILITY, 25 4%	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW  , IN NT  100 1%  000	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	29400 22000 15700 11400 8730 6860 6150	42000 31400 21300 8670 7660	N CFS, F(VAL, IN NCE PROB)  10 10\$ 50700 38000 24900 12600 9820 8590	PRECORD 1  PRECORD 1	70700 54000 32400 20500 15400 15200	7960 6130 3560 2200 1320
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERII FOR INDI L EXCEEDA 5 20% 54600 6	TY OF INDO OF RECONTROL OF RECO	STANTANE CORD 190 CURRENCE SABILITY, 25 4% S0900 9	OUS PEAK 6-65 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1% 000	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	DISCH 250% 29400 22000 15700 11400 8730 6860 6150	42000 31400 11200 8670 2080 1000 11200 8670 2000 1000 1000 1000 1000 1000 1000 10	N CFS, F(VAL, IN NOE PROB)  50700 38000 24900 16600 12600 9820 8590	DR INDICA YEARS, AN ABILITY, 25 4% 62100 47000 29200 18900 14300 11200 9700	70700 54000 32400 20500 15400 15200	7960 6130 3560 2200 1650

## 14187500 SOUTH SANTIAM RIVER AT WATERLOO, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF GREEN PETER AND FOSTER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1967-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1968-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON SECU-	DISC	INTERVAL	., IN YEA	OR INDICAT ARS, AND A ABILITY,	ANNUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
CTOBER	666	5530	2161	1103	.51	5.9	1	574	478	435	401		
OVEMBER	1807	9195	4431	2024	-46	12.1	3	581	484	440	406		·
ECEMBER	1126	12910	6963	3010	.43	19.1	7	603	499	450	413		
ANUARY	713	9194	6216	2547	.41	17.0	14	613	507	458	420		
EBRUARY	597	8078	3923	2115	.54	10.7	30	641	537	488	450		
MARCH	1115	9649	3184	2245	.71	8.7	60	711	602	555	522		
NPRIL	1059	4850	2708	1197	.44	7.4	90	847	689	615	559		
1AY	852	3671	2375	1060	.45	6.5	120	1000	799	701	625		
UNE	678	3464	1507	873	.58	4.1	183	1370	1080	948	843		
IULY	470	1234	742	178	.24	2.0	102		1000	240	U47 		
UGUST	475	1234	855	218	.24	2.0							
EPTEMBER	473	1239 2769	1469	583		4.0							
OLI ILMDEK	413	2/09	1409	رەر	.40	4.0							
NNUAL	1407	4666	3043	895	.29	100							
) I SCHARGE ,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	EOUS PEAK	 , IN		BASE	ED ON PER	110D OF F	OF ANNUAL RECORD 19 OR INDICAT	67-82  ED RECUF	
) I SCHARGE ,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	INTERVAL IN PERCE	 , IN	PERIOD (CON- SECU-	BASE	ED ON PER HARGE, IN INTERV	CFS, FO	RECORD 19	967-82  FED RECUR ) ANNUAL	RRENCE
)ISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	CORD COURRENCE	INTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PER HARGE, IN INTERV EXCEEDAN	CFS, FOYAL, IN YOUR PROBA	RECORD 19 DR INDICAT (EARS, AND ABILITY, 1	067-82 TED RECUF O ANNUAL IN PERCEN	RRENCE
PISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIA L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU-	BASE DISCH	ON PER	CFS, FO	RECORD 19  OR INDICAT (EARS, AND ABILITY, 1	967-82 FED RECUP O ANNUAL IN PERCEN	RRENCE
OISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIA L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC VAL, IN Y ICE PROBA	RECORD 19	FED RECUF O ANNUAL IN PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERVEXCEEDAN	I CFS, FC VAL, IN Y ICE PROBA 10 10 17700	RECORD 19 PRINDICATION AND CARS, AND	P67-82  FED RECUF  ANNUAL  N PERCEN  50 2%	100 1%
OISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	10 OF F	RECORD 19 OR INDICAT (EARS, AND BILITY, 19 25 4% 18000 15800	P67-82  TED RECUF  O ANNUAL  N PERCEN  50  2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE CATED RE NCE PROE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERVENCE EXCEEDAN 5 20%	10 OF F	DR INDICAT (EARS, AND (EBILITY, 1) 25 4% 18000 15800 14600	PET RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2  50%  15000 13900 12900 11000	HARGE, IN INTERVEXCEEDAN  5 20%  17100 15400 14300 13000	10 OF F	RECORD 19 RENDICAT (FEARS, AND (BILITY, 1) 25 4% 18000 15800 14600 14100	PED RECUP D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH	HARGE, IN INTERVEXCEEDAN  17100 15400 14300 13000 11200	10 OF F	DRECORD 19 DR INDICAT (EARS, ANE BILITY, 19 25 4%	PED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 15000 13900 12900 111000 8900 7350	HARGE, IN INTERVEXCEEDAN 17100 15400 14300 11200 9360	105 OF F	DR INDICAT (EARS, AND (BILITY, 1) 	PED RECUP D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH	HARGE, IN INTERVEXCEEDAN  17100 15400 14300 13000 11200	10 OF F	DRECORD 19 DR INDICAT (EARS, ANE BILITY, 19 25 4%	PED RECUF D ANNUAL IN PERCEN 50 2%	100 13
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	CATED RE NCE PROE	CORD CURRENCE SABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%  MEAN FLOW F	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCH  2 50%  15000 13900 12900 11000 8900 7350 6600  OF RECC	HARGE, IN INTERVEXCEDAN  17100 15400 14300 11200 9360 8340 DRD 1967-	10 OF F	RECORD 19  OR INDICAT (EARS, AND (BILITY, 1)  25  4%  18000 15800 14600 14100 13200 11100 9720	PED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80% WEIGHTED	BASE IN CFS, IND ANNUA 2 50% 3 SKEW =	FOR INDI- L EXCEEDA 5 20%	CATED RE NCE PROE 10 10% DURATIC	CCURRENCE BABILITY, 25 4% ON TABLE CFS, WHI	E INTERVAL IN PERCE 50 2% OF DAILY	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCH 2 50\$ 15000 13900 12900 11000 8900 7350 6600  OF RECC	HARGE, IN INTERVEXCEEDAN  17100 15400 13300 11200 9360 8340  ORD 1967-  ATED PERC	10 CFS, FC (AL, IN ) (CE PROBA-10) 10 10 15 1700 15 1700 10 13700 10 10 10 10 10 10 10 10 10 10 10 10 1	18000 15800 14600 14100 13200 11100 9720	FED RECUF ANNUAL N PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	CATED RE NCE PROE	CORD CURRENCE SABILITY, 25 4%	FINTERVAL IN PERCE 50 2% OF DAILY	, IN NT 100 1%  MEAN FLOW F	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCH  2 50%  15000 13900 12900 11000 8900 7350 6600  OF RECC	HARGE, IN INTERVEXCEDAN  17100 15400 14300 11200 9360 8340 DRD 1967-	10 OF F	RECORD 19  OR INDICAT (EARS, AND (BILITY, 1)  25  4%  18000 15800 14600 14100 13200 11100 9720	PED RECUF D ANNUAL IN PERCEN 50 2%	100 1%

#### 14188800 THOMAS CREEK NEAR SCIO, OR

LOCATION.--Lat 44°42'42", long 122°45'55", in SE±SE± sec.11, T.10 S., R.1 W., Linn County, Hydrologic Unit 17090006, on left bank 0.3 mi upstream from bridge on State Highway 226, 1.6 mi upstream from Mill Creek, 4.2 mi east of Scio, and at mile 14.6.

DRAINAGE AREA. -- 109 mi2.

PERIOD OF RECORD.--October 1962 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 380.84 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--20 years, 497 ft<sup>3</sup>/s, 61.92 in/yr, 360,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,400 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.44 ft, from rating curve extended above 7,200 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 19.58 ft Jan. 21, 1972, backwater from debris; minimum discharge, 7.8 ft<sup>3</sup>/s Aug. 20, 1967.

## STATISTICAL SUMMARIES

<b></b>	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YE	OR INDICAT ARS, AND A ABILITY, I	NNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	26	633	179	163	.91	3.0	1	18	13	11	9.8		
NOVEMBER	128	1898	684	426	.62	11.4	3	18	14	12	10		_
DECEMBER	104	2310	1160	572	.49	19.4	7	20	15	13	11		
ANUARY	144	1836	1136	527	.46	19.4	14	21	15	13	12		_
EBRUARY	176	1532	812	367	.45	13.6	30	25	18	15	13		
MARCH	245	1504	698	306	.44	11.7	50 60	32	22	19	16		_
PRIL	298	888	568	172	.30	9.5	90	41	22 27	23	19		
MAY	168	000 744	378	172 1 <b>5</b> 0			120	54	36	30	26		
UNE	74	744 <b>55</b> 6	378 187	118	•40 •63	6.3	183	-	36 8 <b>5</b>	71	26 62		
JÜLY						3.1	رها	119	89	/ 1	02		
AUGUST	30	155	66	33	.51	1.1							
	14	203	43	41	.96	.7							
SEPTEMBER	19	251	68	60	.88	1.1							
MAGNI		760  PROBABILI D ON PERI			.25  OUS PEAK 3-82	100 	<b>-</b>				OF ANNUAL RECORD 19		.OW
MAGNI	FUDE AND BASE	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 196	OUS PEAK	FLOW	MAC	BASE DISCH	D ON PER	CFS, F		63-82  ED RECUR ANNUAL	 RRENC
MAGNI	FUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 196	OUS PEAK 3-82 INTERVAL	FLOW	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PER  IARGE, IN  INTERV  EXCEEDAN	CE PROB	RECORD 19 OR INDICAT YEARS, AND ABILITY, 1	63-82  ED RECUP ANNUAL N PERCEN	RRENCI
MAGNI	FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK 3-82 INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU-	BASE DISCH	ID ON PER HARGE, IN INTERV EXCEEDAN	CFS, F	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	63-82 ED RECUF ANNUAL N PERCEN	RENC
MAGNI	FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 196 CURRENCE BABILITY,	OUS PEAK 3-82 INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERV EXCEEDAN	CFS, FAL, IN CE PROB.	RECORD 19 OR INDICAT YEARS, AND ABILITY, 1 25 4%	63-82 ED RECUF ANNUAL N PERCEN 50 2%	100 11
MAGNI SCHARGE YEARS, 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE SABILITY, 25 4%	OUS PEAK 3-82 INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERVEXCEEDAN 20%	CFS, FAL, IN CE PROB. 10 10%	RECORD 19  OR INDICAT YEARS, AND ABILITY, 1  25 4%  10300	63-82 ED RECUF ANNUAL N PERCEN 50 2%	RRENC
MAGNI SCHARGE YEARS, 1.25 80%	FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE SABILITY, 25 4%	OUS PEAK 3-82 INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1	DISCH	ID ON PER IARGE, IN INTERV EXCEEDAN 5 20% 7320 5390	CFS, F, AL, IN CE PROB. 10 10% 8660 6470	RECORD 19  OR INDICAT YEARS, AND ABILITY, I  25 4%  10300 7900	63-82  ED RECUF ANNUAL N PERCEN 50 2%	RRENC
MAGNI SCHARGE YEARS, 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE SABILITY, 25 4%	OUS PEAK 3-82 INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH 2 50% 5200 3840 3000	ID ON PER HARGE, IN INTERV EXCEEDAN  5 20%  7320 5390 4010	10D OF ICFS, FF AL, IN CE PROB. 10 10% 8660 6470 4630	RECORD 19  OR INDICAT YEARS, AND ABILITY, I  25 4%  10300 7900 5370	63-82 ED RECUF ANNUAL N PERCEN 50 2%	RRENC
MAGNI SCHARGE YEARS, 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE SABILITY, 25 4%	OUS PEAK 3-82 INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH  2 50%  5200 3840 3000 2190	ARGE, IN INTERVEXCEEDAN  5 20%  7320 5390 4010 2760	100 OF 10	OR INDICAT YEARS, AND ABILITY, I 25 4% 	ED RECUF ANNUAL N PERCEN 50 2%	RRENC
MAGNI SCHARGE YEARS, 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE SABILITY, 25 4%	OUS PEAK 3-82 INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30	DISCH 2 50% 5200 3840 3000 2190 1680	ARGE, IN INTERVEXCEEDAN 5 20% 5390 4010 2760 2070	100 OF III CFS, FAL, IN CE PROB. 10 10% 8660 6470 4630 3070 2250	OR INDICAT YEARS, AND ABILITY, 1 25 4% 10300 7900 5370 3410 2440	63-82 ED RECUF ANNUAL N PERCEN 50 2%	RRENC
MAGNI I SCHARGE YEARS, 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE SABILITY, 25 4%	OUS PEAK 3-82 INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH	10 ON PER 14ARGE, IN 1NTERV EXCEEDAN 5 20% 7320 5390 4010 2760 2070 1640	100 OF IIICFS, F. AL, IN. CE PROB. 10 10% 8660 6470 4630 3070 2250 1820	19 NRECORD 19 NRECORD	ED RECUF ANNUAL N PERCEN 50 2%	100 11
MAGNI SCHARGE YEARS, 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	STANTANE CORD 196 CURRENCE SABILITY, 25 4%	OUS PEAK 3-82 INTERVAL IN PERCE	FLOW, IN NT	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30	DISCH 2 50% 5200 3840 3000 2190 1680	ARGE, IN INTERVEXCEEDAN 5 20% 5390 4010 2760 2070	100 OF III CFS, FAL, IN CE PROB. 10 10% 8660 6470 4630 3070 2250	OR INDICAT YEARS, AND ABILITY, 1 25 4% 10300 7900 5370 3410 2440	ED RECUF ANNUAL N PERCEN 50 2%	RRENC
MAGNI I SCHARGE YEARS, 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI- FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RECOME OF THE NAME OF THE N	ISTANTANE CORD 196 CCURRENCE SABILITY, 25 4%	OUS PEAK 3-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS) 	DISCH-250% 5200 3840 2190 1680 1300 07140 OF RECC	ARRO 1963-	CFS, F, AL, IN CE PROB.  10 10%  8660 6470 4630 3070 2250 1820 1620	OR INDICAT YEARS, AND ABILITY, I 25 4% 	ED RECUF ANNUAL N PERCEN 50 2%	100 11
MAGNI SCHARGE YEARS, 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI- FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RECOME OF THE NAME OF THE N	ISTANTANE CORD 196 CCURRENCE SABILITY, 25 4%	OUS PEAK 3-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%  MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH-250% 5200 3840 2190 1680 1300 07140 OF RECC	ARRO 1963-	CFS, F, AL, IN CE PROB.  10 10%  8660 6470 4630 3070 2250 1820 1620	OR INDICAT YEARS, AND ABILITY, I 25 4% 	ED RECUF ANNUAL N PERCEN 50 2%	100 11

#### 14189000 SANTIAM RIVER AT JEFFERSON, OR

LOCATION.--Lat 44°42'55", long 122°00'40", in SE± sec.11, T.10 S., R.3 W., Marion County, Hydrologic Unit 17090005, on right bank 350 ft upstream from Southern Pacific railroad bridge at Jefferson, 2.1 mi downstream from confluence of North and South Santiam Rivers, and at mile 9.62.

DRAINAGE AREA.--1,790 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1905 to June 1906 (gage heights and discharge measurements only), October 1907 to September 1916, October 1939 to September 1982. Gage-height records collected at same site since 1907 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 199.63 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1940, nonrecording gages at sites within 350 ft downstream at datum 3.00 ft higher.

REMARKS.--Flow regulated since 1953 by Detroit Lake, since 1966 by Green Peter Lake and by Foster Lake. Salem Canal diverts from North Santiam River at Stayton for irrigation and power; most of this water reaches Willamette River by way of Mill Creek at Salem. Stayton Canal diverts from North Santiam River at Stayton for irrigation of lands near West Stayton; some return flow reaches North Santiam River above station. Albany power canal diverts from South Santiam River at Lebanon; return flow reaches Willamette River at Albany.

AVERAGE DISCHARGE.--52 years (water years 1908-16, 1940-82), 7,789 ft3/s, 5,643,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 24.22 ft; minimum observed, 260 ft<sup>3</sup>/s Aug. 15-22, Aug. 24 to Sept. 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 25.0 ft was reached in December 1861, and 23.4 ft in February 1890 (information from Corps of Engineers). On Nov. 21, 1921, the stage reached 19.5 ft at gage on railroad bridge 350 ft downstream, corresponding gage height at present site and datum, 24.4 ft, from curve of relation, discharge, 202,000 ft<sup>3</sup>/s.

## STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF DETROIT, GREEN PETER, AND FOSTER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1908-53

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1909-53

				STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	)N-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	432	12290	3289	3364	1.02	3.6	1	500	369	316	278		
NOVEMBER	622	26620	11020	6637	.60	12.0	3	503	371	318	281		
DECEMBER	2915	24450	12350	6450	.52	13.5	7	508	376	323	285		
JANUARY	4048	30310	13590	6709	.49	14.8	14	531	394	338	299		
EBRUARY	4325	24980	14200	5656	.40	15.5	30	563	416	360	322		
1ARCH	3229	21640	10880	4464	.41	11.9	60	645	481	425	390		
APRIL	2956	16880	9345	3446	. 37	10.2	90	813	565	475	417		
YAN	2946	14720	8275	3248	. 39	9.0	120	1190	763	604	497		
JUNE	1033	9233	4789	2205	.46	5.2	183	2580	1830	1520	1290		
JULY	482	7123	1989	1404	71	2.2							
AUGUST	309	1842	811	373	.46	.9							
SEPTEMBER	416	4086	1071	876	.82	1.2							
ANNUAL	4246	11630	7598	1858	.24	100							

DISCHARGE, YEARS,				RECURREN ROBABILIT			PERIOD (CON-	DISC	INTER	VAL, ÍN	OR INDICA YEARS, AN	D ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100
50800	77600	120000	152000	195000									
							1	66200	97400	118000	143000		
WE I GHTE	SKEW:	= .101					3	51100	71900	84900	100000		
							7	40300	53900	60700	67400		
							15	29100	36800	40400	43700		
							30	22200	28400	31300	34100		
							60	17500	22000	24200	26400		
							90	15800	19200	20800	22300		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1908-53

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATE	D PERCEN	T OF TIME	:		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
25000	17000	13500	11400	9940	8690	6730	5160	3640	2010	1370	1020	776	626	483

## 14189000 SANTIAM RIVER AT JEFFERSON, OR--Continued

STATISTICAL SUMMARIES (AFTER THE COMPLETION OF DETROIT, GREEN PETER, AND FOSTER DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1967-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1968-82

	MINIMUM	MAYAMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	DISC	INTERVAL	., IN YE	OR INDICA ARS, AND ABILITY,		ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10 <b>%</b>	20 5%	50 2%	100
OCTOBER	2909	11890	5056	2170	.43	5.4	1	1300	1170	1110	1050		
NOVEMBER	4431	18390	10420	4351	.42	11.1	3	1330	1190	1120	1060		
DECEMBER	2420	31700	17530	7463	.43	18.7	7	1360	1220	1150	1090		
JANUARY	2178	24520	16070	6555	.41	17.2	14	1410	1260	1180	1110	~=	
EBRUARY	1897	21250	10770	5308	.49	11.5	30	1510	1330	1230	1150		
1ARCH	3474	25700	8749	5487	.63	9.4	60	1740	1460	1330	1230		
APRIL	3874	11930	7045	2626	.37	7.5	90	2080	1700	1520	1370		
MAY													
JUNE	2115	10430	6523	2565	.39	7.0	120	2500	2020	1780	1600		
	1733	8558	4230	2233	.53	4.5	183	3370	2760	2490	2290		
JULY	1197	2970	1853	470	.25	2.0							
NUGUST	1100	2883	1907	446	.23	2.0							
SEPTEMBER	1553	5325	3373	917	. 27	3.6							
NNUAL	3512	11690	7788	2226	• 29	100							
OISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE  CATED RE	CORD  CURRENCE	OUS PEAK F	 . IN		BASE	ED ON PER HARGE, IN	RIOD OF F	OF ANNUA RECORD 1	967-82  TED RECU	
ISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE  CATED RE	CORD CURRENCE ABILITY,	INTERVAL,	, IN NT	PERIOD (CON-	BASE	ED ON PER  HARGE, IN INTERV	RIOD OF F	RECORD 1	967-82  TED RECUI D ANNUAL	RRENCE
OISCHARGE, YEARS, A	BASE IN CFS,	D ON PERIOR	OD OF RE  CATED RE  NCE PROB	CORD  CURRENCE	INTERVAL,	 . IN	PERIOD (CON- SECU- TIVE	BASE DISCE	HARGE, IN INTERV EXCEEDAN	I CFS, FG AL, IN Y ICE PROBA	DR INDICA (EARS, AN ABILITY,	967-82 TED RECUID ANNUAL IN PERCEITS	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIA  EXCEEDA	OD OF RE  CATED RE  NCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	. IN NT	PERIOD (CON- SECU-	BASE DISCH	ED ON PER HARGE, IN INTERV EXCEEDAN	I CFS, FO	RECORD 1  OR INDICA (EARS, AN ABILITY,	967-82 TED RECUI D ANNUAL	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIA  EXCEEDA	OD OF RE  CATED RE  NCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	. IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FC VAL, IN Y ICE PROB/ 10 10%	RECORD 1  DR INDICA (EARS, AN ABILITY,  25 4%	967-82 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA	OD OF RE  CATED RE  NCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	. IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERV EXCEEDAN 5 20%	I CFS, FO VAL, IN Y ICE PROBA 10%	RECORD 1 DR INDICA FEARS, AN ABILITY, 25 4% 63000	967-82 TED RECUID ANNUAL IN PERCEID 2%	100 1%
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA	OD OF RE  CATED RE  NCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	. IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3	DISCH	HARGE, IN INTERVENCEDAN 5 20%	1 CFS, F( VAL, IN ) 10 10 10 10 10 10 10 10 10 10 10 10 10 1	RECORD 1  DR INDICA (EARS, AN ABILITY,  25 4%  63000 45500	967-82 TED RECUID ANNUAL IN PERCEIT 50 2%	RRENCE
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA	OD OF RE  CATED RE  NCE PROB	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	. IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERVENCE EDAN 5 20% 56200 43900 37600	10 OF FOR A CENTRAL PROBATE TO 10 10%	PRECORD 1  PRINDICA (FARS, AN ABILITY,  25 4%  63000 45500 38300	967-82 TED RECUI D ANNUAL IN PERCEI 50 2%	100 1%
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA	OD OF RE  CATED RE  NCE PROB  10	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	. IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH  2 50%  44700 38200 33700 28500	HARGE, IN INTERV EXCEEDAN 5 20% 56200 43900 37600 33200	10 CFS, F(AL, IN Y) 10 E PROB/ 10 10	RECORD 1	967-82  TED RECUI D ANNUAL IN PERCEI 50 2%	100 1%
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA	OD OF RE  CATED RE  NCE PROB  10	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	. IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 250% 44700 38200 33700 28500 23300	### ARGE, IN INTERVEXCEEDAN  5 20%  56200 43900 37600 33200 28600	10 CFS, F0 (AL, IN ) ICE PROB/ 10 10% 60200 45000 38100 30500	DR INDICA (FEARS, AN ABILITY,  25 4%  63000 45500 38300 34700 31800	967-82  TED RECUI D ANNUAL IN PERCEI  50 2%	100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA	OD OF RE  CATED RE  NCE PROB  10	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	. IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH  2 50%  44700 38200 33700 28500	HARGE, IN INTERV EXCEEDAN 5 20% 56200 43900 37600 33200	10 CFS, F(AL, IN Y) 10 E PROB/ 10 10	RECORD 1	967-82  TED RECUI D ANNUAL IN PERCEI 50 2%	100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA  EXCEEDA	OD OF RE  CATED RE  NCE PROB  10	CORD  CURRENCE ABILITY,  25	INTERVAL IN PERCEI	. IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 250% 44700 38200 33700 28500 23300	### ARGE, IN INTERVEXCEEDAN  5 20%  56200 43900 37600 33200 28600	10 CFS, F0 (AL, IN ) ICE PROB/ 10 10% 60200 45000 38100 30500	DR INDICA (FEARS, AN ABILITY,  25 4%  63000 45500 38300 34700 31800	967-82  TED RECUI D ANNUAL IN PERCEI  50 2%	100 15
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA	OD OF RE CATED RE NCE PROB 10 10% DURATIO	CORD  CURRENCE ABILITY,  25 4%   N TABLE	INTERVAL, IN PERCEN 50 2%	. IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCH 2 50% 44700 38200 33700 28500 23300 0F RECC	5 20% 56200 43900 37600 33200 28600 21000 2RD 1967-	10 10% 10% 10% 10% 10% 60200 45000 38100 34200 30500 22700	ASSISTANCE OF THE PROPERTY OF	967-82  TED RECUI D ANNUAL IN PERCEI  50 2%	100 1%
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIA	OD OF RE CATED RE NCE PROB 10 10% DURATIO	CORD  CURRENCE ABILITY,  25 4%   N TABLE	INTERVAL IN PERCEN 50 2%  OF DAILY N	IN NT OO 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 44700 38200 33700 28500 23300 0F RECC	5 20% 56200 43900 37600 33200 28600 21000 2RD 1967-	10 10% 10% 10% 10% 10% 60200 45000 38100 34200 30500 22700	ASSISTANCE OF THE PROPERTY OF	967-82  TED RECUI D ANNUAL IN PERCEI  50 2%	100 1%

#### 14189500 LUCKIAMUTE RIVER NEAR HOSKINS, OR

LOCATION.--Lat 44°43'10", long 123°30'10", in NEt sec.11, T.10 S., R.7 W., Benton County, Hydrologic Unit 17090003, on right bank 0.2 mi downstream from Benton County Line, 3.5 mi northwest of Hoskins, and at mile 43.2.

DRAINAGE AREA. -- 34.3 mi2.

PERIOD OF RECORD. -- May 1934 to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 378.7 ft National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Logponds upstream cause diurnal fluctuation at times. Minor diversion above station by pumping for irrigation.

AVERAGE DISCHARGE.--44 years, 209 ft<sup>3</sup>/s, 82.75 in/yr, 151,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,560 ft $^3$ /s Dec. 14, 1946, Feb. 17, 1949; maximum gage height, 13.22 ft Dec. 14, 1946; minimum discharge, 4.0 ft $^3$ /s Sept. 5-8, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 6, 1933, reached a stage of about 13.8 ft, from information by local residents.

STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1935-78

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1936-78

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS PROBABI	, AND AN	INUAL NO	۱–
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	7.7	402	70	78	1.11	2.8	1	9.3	7.3	6.4	5.8	5.1	4.7
NOVEMBER	10	811	294	203	.69	11.7	3	9.5	7.6	6.7	6.1	5.4	5.0
DECEMBER	46	980	475	222	.47	18.9	7	9.7	7.8	7.0	6.4	5.7	5.4
JANUARY	65	1112	487	242	.50	19.4	14	10	8.3	7.4	6.8	6.1	5.8
FEBRUARY	109	856	432	177	.41	17.2	30	11	9.1	8.3	7.7	7.0	6.7
MARCH	84	624	341	138	.40	13.6	60	13	11	9.5	8.7	7.9	7.4
APRIL	67	492	200	93	.47	7.9	90	15	12	11	9.7	8.7	8.2
MAY	33	220	107	49	.46	4.3	120	19	15	13	11 -	10	9.3
JUNE	27	168	51	25	.48	2.0	183	37	27	23	20	17	15
JULY	15	56	25	8.1	.33	1.0					<del></del>		
AUGUST	8.1	31	15	4.6	.30	•6							
SEPTEMBER	8.2	87	19	15	.77	.8							
ANNUAL	80	334	209	. 50	. 24	100							

## MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1935-78

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1935-78

				RECURREN OBABILIT			PERIOD (CON-	DISCH		I CFS, FO 'AL, IN Y ICE PROBA	EARS, AN	D ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
2260	3010	4000	4630	5410	5980	6540					7000	4440	40.40
WE I GHTED	CKEM -	070					1 7	2280	2970	3420 2570	3990 3010	4410	4840 3710
WEIGHIEL	2VEM =	038					7	1750	2230 1630			·3360 2270	
							/ 15	1300 967	1190	1840 1320	2090 1460	1560	2450 1640
							30	735	906	995	1090	1140.	1190
							60	581	717	789	862	908	948
							90	526	645	701	753	783	807

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-78

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
816	542	407	323	260	214	144	89	54	31	25	20	16	- 13	11

#### 14190000 LUCKIAMUTE RIVER AT PEDEE, OR

LOCATION.--Lat 44°44'35", long 123°25'25", in SE½ sec.33, T.9 S., R.6 W., Polk County, Hydrologic Unit 17090003, on left bank 0.5 mi downstream from Pedee Creek, 1.0 mi southwest of Pedee, and at mile 29.7.

DRAINAGE AREA.--115 mi2.

1810

1220

885

692

557

306

192

112

27

22

17

PERIOD OF RECORD.--October 1940 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is 245.47 ft National Geodetic Vertical Datum of 1929. Prior to July 1, 1949, nonrecording gage at site 1,700 ft downstream at datum 1.85 ft lower.

REMARKS.--Some diurnal fluctuation at low flow caused by logponds above station. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.--30 years, 458 ft<sup>3</sup>/s, 331,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 20.09 ft, from rating curve extended above 8,000 ft<sup>3</sup>/s; minimum, 7.0 ft<sup>3</sup>/s Sept. 12, 1944, Aug. 25, 30, 1967.

#### STATISTICAL SUMMARIES

										ARILITY	OF ANNUA		٦W
М	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1941-70		MAG			10D OF R		L LOW FLO 942-70	<b>,,,</b>
		MAX{MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	RS, AND	TED RECUI ANNUAL NO IN PERCEI	)N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	VARI- ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 15
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE	14 32 233 265 304 189 162 103 50	729 1332 2415 2280 2397 1377 1021 504	131 571 1037 1143 1057 735 424 233 100	152 388 540 582 452 315 205 113 34	1.16 .68 .52 .51 .43 .43 .48 .48	2.4 10.3 18.8 20.7 19.1 13.3 7.7 4.2 1.8	1 3 7 14 30 60 90 120 183	13 14 16 17 19 23 28 36 76	10 11 12 13 15 17 20 26 54	8.8 9.7 11 11 12 15 17 22 45	7.9 8.7 9.4 10 11 13 14 19	7.6	
JULY AUGUST	23 11	66 43	44 25 30	12 8.4 22	.27 .34 .73	.8 .5 .5							
SEPTEMBER	11	105	50	22	• , , ,	• • •							
ANNUAL	238 <b>--</b> TUDE AND	714 	458 TY OF IN	103 	.22 	100	- <b>-</b>						 .o <b>w</b>
MAGNI	238 TUDE AND BASE , IN CFS,	714 PROBABIL! D ON PERI	458 TY OF IN OD OF RE CATED RE	103 ISTANTANE CORD 194 CURRENCE BABILITY,	.22 OUS PEAK 1 1-70 INTERVAL IN PERCE	100 FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	ECORD 1 R INDICA EARS, AN	941-70  TED RECUF	RENCE
MAGNIT	238 TUDE AND BASE	714 PROBABIL! D ON PERI	458 TY OF IN	103 ISTANTANE CORD 194 CURRENCE	.22 OUS PEAK 1 1-70 INTERVAL IN PERCE	100  FLOW , IN	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV	CFS, FO	ECORD 1 R INDICA EARS, AN	941-70  TED RECUR ID ANNUAL	RENCI
MAGNITAL MAG	238 TUDE AND BASE , IN CFS,	714 PROBABIL! D ON PERI	458  TY OF IN OD OF RE CATED RE NCE PROE	103 ISTANTANE CORD 194 CURRENCE BABILITY, 25 4%	.22 OUS PEAK 1 1-70 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%	CFS, FOI AL, IN YI CE PROBAI	R INDICA EARS, AN BILITY, 25 4%	941-70 TED RECUP D ANNUAL IN PERCEN 50 2%	RRENCE
MAGNITONISCHARGE, YEARS, 1.25, 80%	238 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	714 PROBABIL! D ON PERI	458  TY OF IN OD OF RE CATED RE NCE PROE	103 ISTANTANE CORD 194 CURRENCE BABILITY, 25 4%	.22 OUS PEAK 1 1-70 INTERVAL IN PERCEI	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FOR AL, IN YICE PROBAL	ECORD 1 R INDICA EARS, AN BILITY,	941-70 TED RECUPID ANNUAL IN PERCEN	100 11 100 11
MAGNITONISCHARGE, YEARS, 1.25, 80%	238 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	714 PROBABILI D ON PERI	458  TY OF IN OD OF RE  CATED RE NCE PROE  10 10 10 0400 1	103 ISTANTANE CORD 194 CURRENCE SABILITY, 25 4% 2700 1	. 22 OUS PEAK 1 1-70 INTERVAL IN PERCEI 50 2%	100 FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  4770 3820 2930 2190 1680 1300 1180	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20\$ 6400 5040 3830 2830 2130 1660 1490	10D OF RECEIVED OF	9730 7520 5280 3670 2590 2080	941-70  TED RECUF D ANNUAL IN PERCEN  50 2%  11500 8800 5930 3990 2730 2230	100 15
MAGNITON MAG	238 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDIG L EXCEEDA 5 20%	458  TY OF IN OD OF RE  CATED RE NCE PROE  10 10%  0400 1	103 ISTANTANE CORD 194 CURRENCE SABILITY, 25 4% 2700 1	OUS PEAK 11-70 INTERVAL IN PERCEI 50 2% 4600	100 FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	DISCH  2 50%  4770 3820 2930 2190 1680 1300 0F RECO	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20\$  6400 5040 5040 2830 2130 1660 1490  RD 1941-	7740 6040 3220 2360 1860	9730 7520 9730 7520 2590 2080 1830	941-70  TED RECUF D ANNUAL IN PERCEN  50 2%  11500 8800 5930 3990 2730 2230	RENCE

## 14190500 LUCKIAMUTE RIVER NEAR SUVER, OR

LOCATION.--Lat 44°47'00", long 123°14'00", in SWLSWL sec.18, T.9 S., R.4 W., Polk County, Hydrologic Unit 17090003, on right bank 10 ft upstream from highway bridge at Helmick State Park, 3.0 mi northwest of Suver, 4.7 mi downstream from Little Luckiamute River, and at mile 13.5

DRAINAGE AREA .-- 240 mi2.

ANNUAL

230

1464

PERIOD OF RECORD.--August 1905 to October 1911, July 1940 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 171.92 ft National Geodetic Vertical Datum of 1929. Aug. 18, 1905, to Oct. 31, 1911, nonrecording gage at present site at different datum, Aug. 20 to Oct. 15, 1940, nonrecording gage at present site and datum.

REMARKS.--Some diurnal fluctuation during periods of low flow caused by millpond above station. A few small diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years, 910 ft<sup>3</sup>/s, 51.49 in/yr, 659,300 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1906-82

EXTREMES FOR PERIOD OF RECORD. -- Maximum discharge, 32,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 34.52 ft; minimum, 0.65 ft<sup>3</sup>/s Aug. 13,

#### STATISTICAL SUMMARIES

	MINIMUM	MA VILIDINA	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEAF	R INDICATE RS, AND AN BILITY, IN	INUAL NO	N-
MONTH	(CFS)	MAXIMUM (CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	20	1241	197	218	1.11	1.8	1	26	16	11	7.5	4.6	3.1
NOVEMBER	57	4574	1094	906	.83	10.0	3 .	27	17	12	8.5	5.5	4.0
DECEMBER	106	5112	2171	1148	.53	19.8	7	28	18	13	9.8-	6.7	5.0
JANUARY	151	4727	2345	1156	.49	21.4	14	30	20	15	12	8.7	6.9
FEBRUARY	253	4769	2065	926	.45	18.8	30	33	22	17	14	10	8.6
MARCH	391	3002	1458	684	.47	13.3	60	40	28	23	19	15	13
APRIL	312	1847	858	414	.48	7.8	90	47	34	28	24	20	17
MAY	190	1026	421	191	.45	3.8	120	61	43	36	31	26	23
JUNE	79	492	190	83	.44	1.7	183	129	93	77	65	54	47
JULY	30	184	77	31	.40	. 7							
AUGUST	9.5	85	42	. 18	.42	.4							
SEPTEMBER	17	191	56	34	.61	.5							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1906-82

910

249

.27

100

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1906-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1907-82

DISCHARGE YEARS,		, FOR IN					PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICA YEARS, AI	ND ANNUA	L '
1.25 80 <b>%</b>	2 50% 	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
7970	11800	17500	21600	27000	31300	35700			45000				
WE∤GHTE	D SKEW =	.052		<i>:</i>			1 3 7 15 30 60 90	10400 8360 6470 4690 3500 2760 2460	15000 11600 8560 5990 4410 3480 3070	18000 13700 9770 6680 4850 3830 3330	21900 16500 11100 7400 5280 4150 3550	24800 18500 12000 7850 5530 4340 3660	27700 20600 12900 8240 5730 4490 3740

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF T	IME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3750	2460	1790	1380	1080	875	577	350	195	107	80	61	47	37	28

#### 14190700 RICKREALL CREEK NEAR DALLAS, OR

LOCATION.--Lat 44°54'55", long 123°23'02", in SW±SE± sec.35, T.7 S., R.6 W., Polk County, Hydrologic Unit 17090007, on left bank 1.8 mi downstream from Canyon Creek, 3.5 mi west of Dallas, 5.1 mi downstream from Aaron Mercer Reservoir, and at mile 19.1.

DRAINAGE AREA .-- 27.4 m12.

PERIOD OF RECORD. -- August 1957 to September 1978.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 460 ft, from topographic map.

REMARKS.--Low flow regulated since June 1960 by Aaron Mercer Reservoir, usable capacity, 2,010 acre-ff. Diversion for city of Dallas municipal supply from four tributaries and Rickreall Creek above station.

COOPERATION. -- Records of diversion, monthend elevations of reservoir, and reservoir capacity curve furnished by city of Dallas.

AVERAGE DISCHARGE.--21 years (water years 1958-78),  $148 \text{ ft}^3/\text{s}$ , 73.35 in/yr, 107,200 acre-ft/yr, adjusted for diversion and storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,160 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 8.78 ft; no flow at times.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1961-78

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-78

	MINIMUM		MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VAR!-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		DISCHARGE, IN CFS, FOR INDICATED RECURRENC INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 <b>2</b> 0%	10 10%	20 5%	50 <b>2%</b>	100 1%		
OCTOBER	3 <b>.</b> 2	81	29	26	.90	1.6	1	1.9	.6	.2	.1				
NOVEMBER	20	638	210	155	.74	12.0	3	2.2	.9	.5	.3				
DECEMBER	9.6	773	378	190	.50	21.5	7	2.4	1.4	1.0	.8				
IANUARY	13	685	397	197	.50	22.6	14	2.7	1.6	1.2	.9				
EBRUARY	60	590	273	150	.55	15.5	30	3.2	2.0	1.5	1.2				
IARCH	72	432	249	121	.49	14.2	60	4.2	2.6	2.0	1.6				
NPR!L	52	252	119	60	.50	6.8	90	4.9	3.3	2.6	2.2				
1A Y	25	139	61	32	.53	3.5	120	6.4	4.4	3.5	3.0				
IUNE .	8.5	64	22	12	.54	1.2	183	16	11	8.6	7.3				
IULY	3.5	<b>1</b> 5	7.5	2.9	.39	.4									
NUGUST	1.0	11	4.8	2.6	.54	.3									
SEPTEMBER	1.8	15	6.6	3.9	.59	.4									
NNUAL	39	255	146	43	.30	100									
	, IN CFS,	FOR INDIC	CATED REC	CURRENCE					RGE, IN	CFS, FOR	ECORD 196	ED RECUR	RENCE		
	, IN CFS,		CATED REC	CURRENCE	IN PERCE		PERIOD (CON- SECU-	DISCHA	ARGE, IN	CFS, FOR		ED RECUR			
YEARS,	, IN CFS, AND ANNUA	FOR INDIC	CATED REC	CURRENCE ABILITY,	IN PERCE	NT 	(CON-	DISCHA	ARGE, IN	CFS, FOR	R INDICATI	ED RECUR			
YEARS, 1.25	, IN CFS, AND ANNUA	FOR INDIC	CATED REC	CURRENCE ABILITY,	IN PERCEI	NT 	(CON- SECU- TIVE DAYS)	DISCH/ 8 2 50%	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FOR L, IN YE E PROBAR 10 10%	R INDICATI EARS, AND BILITY, II 25	ED RECUR ANNUAL N PERCEN 50 2%	T 		
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED REC	CURRENCE ABILITY,	IN PERCEI	NT 	(CON- SECU- TIVE DAYS)	DISCH/ E 2 50%	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FOR L, IN YE E PROBAB 10 10%	R INDICATI EARS, AND BILITY, II 25 4%	ED RECUR ANNUAL N PERCEN 50 2%	T 		
1.25 80%	, IN CFS, AND ANNUA	FOR INDIC	CATED REC	CURRENCE ABILITY,	IN PERCEI	NT 	(CON- SECU- TIVE DAYS)	DISCH/ 2 50% 2380 1690	ARGE, IN INTERVA EXCEEDANC 5 20% 3420 2340	CFS, FOR L, IN YI EE PROBAR 10 10% 4040 2750	R INDICATI EARS, AND BILITY, II 25 4%	ED RECUR ANNUAL N PERCEN 50 2%	T 		
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED REC	CURRENCE ABILITY,	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	DISCH/ 2 50% 2380 1690 1180	1NTERVA 1NTERVA 2XCEEDANC 5 20% 3420 2340 1560	CFS, FOR L, IN YI E PROBAR 10 10% 4040 2750 1770	25 4760 3230 2000	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%		
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED REC	CURRENCE ABILITY,	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	D1SCH/ 2 50% 2380 1690 1180 822	5 20% 3420 2340 1560 1020	CFS, FOR LL, IN YE E PROBAR 10 10% 4040 2750 1770 1120	R INDICATI EARS, AND BILITY, II 25 4% 4760 3230 2000 1220	ED RECUR ANNUAL N PERCEN 50 2%	T 		
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED REC	CURRENCE ABILITY,	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	2 50% 2380 1690 1180 822 605	3420 2340 1560 1020 717	CFS, FOR L, IN YI E PROBAL 10 10% 4040 2750 1770 1120 759	25 4760 3230 2000 1220 792	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%		
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED REC	CURRENCE ABILITY,	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	250% 2380 1690 1180 822 605 475	3420 2340 1560 1020 717 575	CFS, FOF NL, IN YI LE PROBAR 10 10% 4040 2750 1170 1120 759 610	25 4760 3230 2000 1220 792 635	ED RECUR ANNUAL N PERCEN 50 2%	100		
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED REC	CURRENCE ABILITY,	IN PERCEI	NT 	(CON- SECU- TIVE DAYS) 	2 50% 2380 1690 1180 822 605	3420 2340 1560 1020 717	CFS, FOR L, IN YI E PROBAL 10 10% 4040 2750 1770 1120 759	25 4760 3230 2000 1220 792	ED RECUR ANNUAL N PERCEN 50 2%	100 1%		
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED REC NCE PROB 10 10%	CURRENCE ABILITY, 25 4%	50 2%	NT	(CON- SECU- TIVE DAYS) 	2380 1690 1180 822 605 475 411	1020 717 5499	CFS, F0F LL, IN YI E PROBAB 10 10% 4040 2750 1170 1120 759 610 528	25 4760 3230 2000 1220 792 635	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%		
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED REC NCE PROB, 10 10%	CURRENCE ABILITY, 25 4%	IN PERCEI	100 1% 	(CON- SECU- TIVE DAYS) 	2 50% 2380 1690 1180 822 605 475 411  OF RECOF	3420 2340 1020 717 499	CFS, FOR LL, IN YI E PROBAB 10 10% 4040 2750 1770 1120 759 610 528	4760 3230 2000 1220 792 635 548	ED RECUR ANNUAL N PERCEN 50 2%	100		
1.25 80%	, IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED REC NCE PROB, 10 10%	CURRENCE ABILITY, 25 4%	IN PERCEI 50 2%  DF DAILY M	100 1% 	(CON- SECU- TIVE DAYS) 	2 50% 2380 1690 1180 822 605 475 411  OF RECOF	3420 2340 1020 717 499	CFS, FOR LL, IN YI E PROBAB 10 10% 4040 2750 1770 1120 759 610 528	4760 3230 2000 1220 792 635 548	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%		

## 14191000 WILLAMETTE RIVER AT SALEM, OR

LOCATION.--Lat 44°56'40", long 123°02'30", in SEtSWt sec. 22, T.7 S., R.3 W., Marion County, Hydrologic Unit 17090007, on right bank 300 ft upstream from Center Street Bridge in Salem, and at mile 84.16.

DRAINAGE AREA. -- 7,280 mi<sup>2</sup>, approximatley.

PERIOD OF RECORD.--October 1909 to December 1916, January 1923 to September 1982. Monthly discharge only January 1923 to September 1927, published in WSP 1318. Gage-height records collected at about the same site since 1892 are contained in reports of National Weather Service.

GACE.--Water-stage recorder. Datum of gage is 106.14 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1909, to Dec. 31, 1916, nonrecording gage at site 0.5 mi upstream at datum 8.00 ft higher. Jan. 1, 1923, to Nov. 26, 1934, nonrecording gage at Center Street Bridge at datum 8.00 ft higher. Nov. 27, 1934, to Sept. 30, 1962, water-stage recorder at present site at datum 8.00 ft higher.

REMARKS.--Flow regulated by 12 reservoirs above station. Many small diversions for irrigation above station; part of flow of Salem Canal, which diverts water from North Santiam River, returns to Willamette River below station, through Mill Creek at Salem.

AVERAGE DISCHARGE.~-66 years, 23.560 ft<sup>3</sup>/s, 43.95 in/yr, 17,070,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348,000 ft<sup>3</sup>/s Jan. 8, 1923, gage height, 38.3 ft, present datum; minimum, 2,470 ft<sup>3</sup>/s Aug. 27, 1940, gage height, 3.55 ft, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 500,000 ft<sup>3</sup>/s Dec. 4, 1861, gage height, about 47 ft present datum, from rating curve extended above 250,000 ft<sup>3</sup>/s in 1916. Floods of Jan. 16, 1881, and Feb. 5, 1890, reached stages of 44.3 ft, discharge, 428,000 ft<sup>3</sup>/s, and 45.1 ft, discharge, 448,000 ft<sup>3</sup>/s, respectively, from floodmarks and Information by Corps of Engineers.

## STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF 12 UPSTREAM DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1910-41

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1911-41

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	., IN YEA	RS, AND	TED RECUI	ON-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	3214	14650	6236	3025	.49	2.4	1	3260	2870	2700	2560	2420	
NOVEMBER	3140	68550	24280	18580	.77	9.4	3	3280	2900	2720	2580	2430	
DECEMBER	10020	63550	31580	14790	.47	12.2	7	3310	2920	2740	2600	2460	
JANUARY	10820	97720	43070	21480	.50	16.7	14	3360	2950	2770	2630	2480	
FEBRUARY	14580	87540	40860	20150	.49	15.8	30	3460	3010	2820	2680	2530	
MARCH	11110	71490	33840	15600	.46	13.1	60	3630	3080	2880	2760	2640	
APRIL	10790	63410	28360	13040	.46	11.0	90	3980	3280	3010	2820	2650	
MAY	9708	33460	20280	7259	.36	7.9	120	4410	3530	3210	2990	2790	
JUNE	5065	37360	13990	7655	.55	5.4	183	6920	5250	4620	4190	3790	
JULY	3286	19870	6985	3745	.54	2.7							
AUGUST	2653	7766	4131	1116	.27	1.6							
SEPTEMBER	2682	9371	4455	1613	.36	1.7							
ANNUAL	13670	35220	21290	5668	. 27	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1910-41 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1910-41

					NCE INTER		PERIOD (CON-	DISC	INTER	VAL, IN	YEARS, A	ATED RECU ND ANNUAL IN PERCE	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10%	25 4 <b>%</b> 	50 2 <b>%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10%	25 4%	50 2%	100
109000	153000	216000	258000	314000	356000								
							1	145000	202000	239000	286000	320000	
WEIGHTE	D SKEW	= .038					3	135000	182000	211000	247000	272000	
							7	110000	143000	161000	182000	197000	
							15	81700	104000	117000	132000	142000	
							30	62600	77300	85200	93500	98800	
							60	49100	60400	67000	74700	79900	·
							90	43500	52700	57900	63600	67400	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1910-41

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	IT OF TI	4E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
67500	47800	37400	31800	27700	24400				6160	5110	4360	3850	3500	3140

## 14191000 WILLAMETTE RIVER AT SALEM, OR--Continued

## STATISTICAL SUMMARIES (AFTER THE COMPLETION OF 12 UPSTREAM DAMS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1969-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1970-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC		L, IN YE	OR INDICA ARS, AND BABILITY,	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	10950	24390	14470	3464	.24	4.9	1	6280	5490	5000	4580		
NOV EMBER	12240	70400	29040	16440	.57	9.8	3	6340	5540	5050	4620		
DECEMBER	6780	91810	55450	24340	.44	18.7	7	6430	5630	5160	4740		
JANUARY	6377	78420	52460	22620	.43	17.7	14	6530	5730	5260	4850		
FEBRUARY	5313	60290	34660	16320	.47	11.7	30	6650	5890	5470	5120		
MARCH	11550	73670	29940	17330	. 58	10.1	60	7060	6260	5910	5660		
APRIL	10260	38740	23250	8934	.38	7.8	90	7770	6750	6290	5940		
YAY	770.1	25220	18240	5390	.30	6.2	120	8800	7620	7080	6670		
JUNE	6539	21990	13100	5048	. 39	4.4	183	10800	9230	8490	7930		
JULY	6018	10610	7619	1423	.19	2.6							
AUGUST	6445	9540	7630	944	. 12	2.6							
SEPTEMBER	8047	13340	10670	1523	.14	3.6							
ANNUAL	9792	37960	24690	7669	.31	100							
 DISCHARGE	BASE , IN CFS,	D ON PERI	OD OF RE	ECORD ECURRENCE	OUS PEAK F			BASE	ED ON PER	RIOD OF	OF ANNUA RECORD 1	969-82  TED RECUI	
 DISCHARGE	BASE , IN CFS,	D ON PERI	OD OF RE	ECORD ECURRENCE	INTERVAL		PERIOD (CON- SECU-	BASE	ED ON PER HARGE, 11	RIOD OF  N CFS, F VAL, IN	RECORD 1	969-82  TED RECUI D ANNUAL	 RRENCE
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	ECORD ECURRENCE BABILITY,	INTERVAL	, IN NT	PERIOD (CON-	BASE	ED ON PER HARGE, 11	RIOD OF  N CFS, F VAL, IN	RECORD 1	969-82  TED RECUI D ANNUAL	 RRENCE
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RECEIVED OF RECEIVED ANCE PROFE	ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, 11 INTER EXCEEDA	RIOD OF N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1: OR INDICA YEARS, AN ABILITY, 25 4%	969-82 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED ANCE PROFE	ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II INTER EXCEEDAI  5 20%	RIOD OF N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1: OR INDICA YEARS, AN ABILITY, 25 4%	969-82 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RECEIVED OF RECEIVED ANCE PROFE	ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II	RIOD OF N CFS, F VAL, IN NCE PROB 10 10% 172000 157000	RECORD 1:  OR INDICA YEARS, AN ABILITY,  25 4%  182000 163000	969-82 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED ANCE PROFE	ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	HARGE, II INTER* EXCEEDAI 5 20% 159000 148000 128000	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1:	969-82 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED AND PROBLEM	ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH	HARGE, II INTER EXCEEDAL 5 20\$ 159000 148000 128000 108000	RIOD OF  N CFS, F VAL, IN NCE PROB 10 10% 	RECORD 1:	969-82 TED RECUI D ANNUAL IN PERCEI 50 2%	RRENCE NT
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED AND PROBLEM	ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCH	HARGE, II INTER* EXCEEDAI 5 20% 159000 148000 128000	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 1:	969-82 TED RECUID ANNUAL IN PERCEI 50 2\$	RRENCE NT
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED AND PROBLEM	ECORD ECURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 2 50% 123000 118000 91500 76300	159000 148000 108000 89800	N CFS, F VAL, IN NCE PROB  10 10 157000 157000 1132000 92400	RECORD 1:	969-82 TED RECUID ANNUAL IN PERCEI 50 2%	RRENCE NT
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECURRENCE BABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  123000 118000 91500 76300 62000 53000	HARGE, III INTER EXCEEDAI  159000 148000 128000 108000 89800 77700 68800	172000 157000 132000 112000 12000 12000 12000 12000 12000 12000 12000 12000	RECORD 1:  OR INDICA YEARS, AN ABILITY,  25 4%  182000 163000 134000 113000 93500 84800	TED RECUID ANNUAL IN PERCEI	RRENCE NT
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECOME OF THE OF RECOME OF THE OF RECOME OF THE OF	ECORD  ECURRENCE BABILITY,  25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 OR PERIOD	2 50% 123000 118000 107000 91500 763000 53000	159000 148000 128000 128000 108000 89800 077700 68800	N CFS, F VAL, IN NCE PROB	RECORD 1:	TED RECUID ANNUAL IN PERCEI	RRENCE NT
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECOME OF THE OF RECOME OF THE OF RECOME OF THE OF	ECORD  ECURRENCE BABILITY,  25 4%	INTERVAL IN PERCEI 50 2% OF DAILY M	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  OR PERIOD	2 50% 123000 118000 107000 91500 763000 53000	159000 148000 128000 128000 108000 89800 077700 68800	N CFS, F VAL, IN NCE PROB	RECORD 1:	TED RECUID ANNUAL IN PERCEI	RRENCE NT

## 14192500 SOUTH YAMHILL RIVER NEAR WILLAMINA, OR

LOCATION.--Lat 45°02'50", long 123°30'10", in NE±SE± sec.14, T.6 S., R.7 W., Polk County, Hydrologic Unit 17090008, on left bank 2.3 mi southwest of Willamina, 2.8 mi upstream from Willamina Creek, and at mile 45.5.

DRAINAGE AREA. -- 133 mi 2.

PERIOD OF RECORD. -- May 1934 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 235.55 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Slight regulation occasionally at low flows by millipond upstream. No diversion above station.

AVERAGE DISCHARGE.--48 years, 623 ft<sup>3</sup>/s, 63.61 in/yr, 451,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 17.07 ft; minimum, 2.6 ft<sup>3</sup>/s Oct. 11, 1952.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1935-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1936-82

				STAN- DARD DEVIA-	COEFF!- CIENT OF	OF	PERIOD (CON-		ARGE, IN INTERVAL, EXCEEDANG	, IN YEA	RS, AND	ANNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	12	846	188	184	.98	2.5	1	12	8.4	6.8	5.6	4.5	3.9
NOVEMBER	22	2650	873	602	.69	11.6	. 3	13	9.0	7.3	6.1	5.0	4.3
DECEMBER	104	2917	1501	679	.45	20.0	7	14	9.7	7.9	6.7	5.4	
JANUARY	132	3172	1509	743	.49	20.1	14	15	11	8.8			
FEBRUARY	278	2869	1344	554	.41	17.9	30	18	12	10	8.7	7.2	6.3
MARCH	270	1981	998	415	.42	13.3	60	23	16	13	11	- 9.1	
APRIL	180	1365	586	276	.47	7.8	90	28	19	16	13	11	9.7
MAY	69	613	276	131	.47	3.7	120	39	26	21	18	15	13
JUNE	55	405	125	75	.60	1.7	183	91	62	50	41	33	29
JULY	19	85	48	20	.42	•6							
AUGUST	6.7	82	25	13	.52	.3							
SEPTEMBER	9.7	282	42	46	1.08	.6							
ANNUAL	215	1028	623	152	.24	100							
MAGNII DISCHARGE, YEARS, A	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 193 COURRENCE BABILITY,	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASE DISCH	AND PROBA D ON PERI ARGE, IN INTERVA	CFS, FO	RECORD 1	935-82 TED RECUID ANNUAL IN PERCE	RRENCE
DISCHARGE,	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE	ISTANTANE CORD 193	OUS PEAK 5-82 INTERVAL IN PERCE	FLOW	PERIOD	BASE DISCH	D ON PERI ARGE, IN INTERVA	CFS, FO	RECORD 1	935-82 TED RECUID ANNUAL IN PERCE	RRENCE
MAGNIT DISCHARGE, YEARS, A	IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK 15-82 INTERVAL IN PERCE 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PERI ARGE, IN INTERV/ EXCEEDANC 5 20%	CFS, FCAL, IN YOUR PROBA	RECORD 1  OR INDICA  YEARS, AN BILITY,  25 4%	935-82 TED RECU ID ANNUAL IN PERCE 50 2%	RRENCE NT 100 1%
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK 15-82 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FCAL, IN YOE PROBA	PRECORD 1 POR INDICATE POR INDI	935-82 TED RECU ID ANNUAL IN PERCE 50 2%	100 13
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK 15-82 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  7420 5710	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FC AL, IN Y CE PROBA 10 10%	PRECORD 1 PRECORD 1 PRECORD 1 PRECORD 2 PRECORD 2 PRECORD 2 PRECORD 3 PRECOR	935-82 TED RECU ID ANNUAL IN PERCE 50 2% 12900 10100	13800 10900
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK 15-82 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  7420 5710 4250	ARGE, IN INTERVA EXCEEDANC 5 20% 9460 7230 5230	CFS, FC CFS, FC CFS, FC CE PROBA 10 10%	PRECORD 1 PRECORD 1 PRECORD 1 PRECORD 1 PRECORD 25 PREC	935-82 ITED RECU ID ANNUAL IN PERCE 50 2% 12900 10100 6690	RRENCE NT 100 1 13800 10900 7010
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK 15-82 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  7420 5710 4250 3120	D ON PERI ARGE, IN INTERV/ EXCEEDANC 5 20% 9460 7230 5230 3810	CFS, FCAL, IN YCE PROBA  10 10700 8180 5760 4150	RECORD 1  OR INDICA FEARS, AN BILITY,  25 4%  12000 9310 6320 4500	935-82 ITED RECUID ANNUAL IN PERCE 50 2\$ 12900 10100 6690 4710	RRENCE NT  100 1%  13800 10900 7010 4890
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK 15-82 INTERVAL IN PERCE 50 2%	FLOW , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  7420 5710 4250	ARGE, IN INTERVA EXCEEDANC 5 20% 9460 7230 5230	CFS, FC CFS, FC CFS, FC CE PROBA 10 10%	PRECORD 1 PRECORD 1 PRECORD 1 PRECORD 1 PRECORD 25 PREC	935-82 ITED RECU ID ANNUAL IN PERCE 50 2% 12900 10100 6690	RRENCE NT 100 1 13800 10900 7010

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-82

90

1630

1980

2150

2300

2380

2450

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TH	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2500	1710	1250	960	761	609	400	248	136	70	50	36	27	21	16

# 14193000 WILLAMINA CREEK NEAR WILLAMINA, OR

LOCATION.--Lat 45°08'35", long 123°29'35", in NEt NWt sec.13, T.5 S., R.7 W., Yamhill County, Hydrologic Unit 17090008, on right bank 4.5 mi north of Willamina and at mile 6.2.

DRAINAGE AREA .-- 64.7 m12.

PERIOD OF RECORD. -- June 1934 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 315 ft National Geodetic Vertical Datum of 1929 (plane-table survey). Prior to Oct. 1, 1939, water-stage recorder at site on left bank at datum 1.00 ft higher. Oct. 1, 1939, to Aug. 5, 1968, water-stage recorder at site on left bank at present datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--48 years, 261 ft $^3$ /s, 54.78 in/yr, 189,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft<sup>3</sup>/s Dec. 22, 1964, gage helght, 13.54 ft, from rating curve extended above 3,400 ft<sup>3</sup>/s on basis of slope-area measurement at gage helght 11.65 ft; minimum, 5.4 ft<sup>3</sup>/s July 15, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1931, reached a stage of about 12 ft from information by local resident, discharge, 8,200 ft<sup>3</sup>/s from rating curve extended above 3,400 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 11.65 ft.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1935-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1936-82

	MINIMUM	MAXIMUM		STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON SECU-		INTERVAL	CFS, FOR , IN YEARS CE PROBABI	, AND A	NUAL NO	4-
монтн	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	12	276	64	59	.93	2.0	1	12	10	9.5	8.9	8.4	8.1
NOVEMBER	15	1084	310	238	.77	9.8	3	12	1.1	9.8	9.3	8.7	8.4
DECEMBER	35	1220	597	303	.51	19.0	7	13	11	10	9.5	8.9	8.5
JANUARY	43	1216	617	319	.52	19.6	14	14	12	11	10	9.5	9.1
FEBRUARY	86	1121	564	228	.40	17.9	30	15	13	12	11	10	10
MARCH	105	9 <b>2</b> 9	449	186	.41	14.3	60	17	14	13	12	11	11
APRIL	95	544	272	112	.41	8.6	90	20	16	15	13	12	12
MAY	54	296	135	52	.38	4.3	120	25	19	17	16	14	13
JUNE	39	160	66	25	.38	2.1	183	46	34	<b>2</b> 9	25	21	19
JULY	20	54	32	7.9	.25	1.0							
AUGUST	12	38	20	5.3	.27	.6							
SEPTEMBER	11	69	22	11	.51	•7							
ANNUAL	83	461	261	69	.27	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1935-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1935-82

SCHARGE, YEARS, AN							PERIOD (CON-		INTERV	AL, ÍN Y	R INDICA EARS, AN BILITY.	D ANNUAL	
1.25 80 <b>%</b>	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2% 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
2850	3710	5020	5960	7250	8270	9360							
							1	2870	3830	4460	5230	5800	6370
WEIGHTED	SKEW =	.447					3	2200	2860	3300	3880	4310	4750
							7	1670	2100	2350	2630	2810	2990
							15	1270	1550	1690	1820	1890	1950
							30	957	1150	1230	1290	1330	1350
							60	741	923	1010	1110	1160	1210
							90	661	820	895	966	1010	1040

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-82

 		DISCH	ARGE, IN	CFS, WH	HICH WAS	EQUALED (	R EXCEED	D FOR	NDICATED	PERCENT	OF TIME			
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90 <b>%</b>	95 <b>%</b>
 	- <b>-</b>													
 986 	666 <del>-</del>	513 	407 	332	274	183	114	67	39	30	24	21 	17 <b></b>	14

# 14193300 MILL CREEK NEAR WILLAMINA, OR

LOCATION.--Lat 44°58'15", long 123°26'55", in NE‡NW‡ sec.17, T.7 S., R.6 W., Polk County, Hydrologic Unit 17090008, on left bank 0.2 mi upstream from bridge, 0.7 mi downstream from South Branch, 7.5 mi south of Willamina, and at mile 11.5.

DRAINAGE AREA .-- 27.4 mi2.

PERIOD OF RECORD. -- July 1958 to September 1973.

3.9

3.4

90

SEPTEMBER

ANNUAL

17

43

183

GAGE.--Water-stage recorder. Datum of gage is 562.02 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years (water years 1959-73), 140 ft<sup>3</sup>/s, 69.39 in/yr, 101,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,170 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.47 ft; minimum, 2.6 ft<sup>3</sup>/s Sept. 8, 1958.

STATISTICAL SUMMARIES

MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI-							PERCEN	··
				(CFS)	ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	 6.7	94	40	30	.76	2.4		3.9	3.4	3.1	2.9		
NOVEMBER	80	385	194	103	.53	11.6	3	4.0	3.4	3.1	2.9		
DECEMBER	139	658	330	155	.47	19.7	7	4.1	3.5	3.3	3.1	'	
JANUARY	76	631	376	179	.48	22.4	14	4.3	3.7	3.4	3.2		
FEBRUARY	83	572	269	145	.54	16.0	30	4.7	3.8	3.5	3.2.		
MARCH	67	418	241	104	.43	14.4	60	5.4	4.2	3.8	3.5		
APRIL	55	250	120	61	.51	7.2	90	6.6	4.9	4.3	4.0		
MAY	24	129	58	31	•52	3.5	120	8.6	6.3	5.4	4.9		
JUNE	12	69	24	14	.58	1.4	183	21	15	12	10		
JULY AUGUST	6.6 3.9	13 17	9.3 6.2		.22	.6 .4							

.53

. 16

100

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1959-73

140

23

MONTHLY AND ANNUAL MEAN DISCHARGES 1959-73

# MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1959-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1960-73

				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50% 	20 <b>%</b> 	10 10%	25 <b>4%</b> <b></b>	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 <b>4%</b>	50 2 <b>%</b>	100
2310	3060	4090	4790	5690									<b>-</b> -
							1	2130	2920	3510	4310		-
EIGHTED	SKEW =	.159					3 .	1540	2010	2380	2920		-
							7	1060	1320	1520	1790		-
							15	774	933	1020	1130		-
							30	561	640	678	714		_
							60	429	509	549	590		_
							90	369	427	455	482		_

# DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-73

			DISCH	ARGE, I	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
_	5 <b>%</b>	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75 <b>%</b>	80%	85 <b>%</b>	90%	95%
	566	<b>3</b> 55	252	195	155	125	80	50	29	16	11	8.0	6.3	5.2	4.3

# 14194000 SOUTH YAMHILL RIVER NEAR WHITESON, OR

LOCATION.--Lat 45°10'08", long 123°12'25", in NELNWL sec.5, T.5 S., R.4 W., Yamhill County, Hydrologic Unit 17090008, near left bank on downstream side of Whiteson Bridge on State Highway 99W, 1.3 mi northwest of Whiteson, 1.4 mi downstream from Salt Creek, and at mile 16.71.

DRAINAGE AREA. -- 502 mi2.

PERIOD OF RECORD.--July 1940 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 82.30 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1940, nonrecording gage at present site and datum.

REMARKS.--Slight regulation during low-water periods by logpond upstream. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years, 1,768 ft<sup>3</sup>/s, 47.83 in/yr, 1,281,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 47.20 ft; minimum, 3.2 ft<sup>3</sup>/s Aug. 24, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 46.9 ft, from Oregon State Highway Department bridge plans.

# STATISTICAL SUMMARIES

M	ONTHLY AN	D ANNUAL	MEAN DIS	CHARGES	1941-82		M.		AND PRO ED ON PE			AL LOW FI 1942-82	_OW
	 MINIMUM	MAXIMUM	ME AN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC		L, IN YE	OR INDICARS, AND	ANNUAL I	-N0N
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JUNE JULY AUGUST SEPTEMBER ANNUAL MAGNIT		1819 8085 8493 8884 8890 6238 3623 1736 910 200 153 450 3119 PROBABILI D ON PERI			1.02 .79 .50 .53 .46 .48 .51 .51 .54 .41 .51 .95 .29	1.8 9.7 20.4 21.7 18.9 13.7 7.9 3.4 1.4 .5 .2 .4	1 3 7 14 30 60 90 120 183		15 16 17 20 24 31 39 56 145 AND PROI			8 6.2 9 7. 8. 11 16 21 31 75	2 4. 1 5. 4 6. 9. 14 18 27 64
YEARS, A	ANNA ANNUA	L EXCEEDA	NCE PROB		INTERVAL IN PERCEI		PERIOD (CON-	DISC		/AL, ÍN	OR INDICA YEARS, AN	ND ANNUAL	
1.25 80 <b>%</b> 	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10 <b>%</b> 	25 4% 	50 2% 	100 1% 	SECU TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
16800  WEIGHTED	22400 ) SKEW =	<del>-</del>	3300 3	8100 4	1300 444	400	1 3 7 15 30 60 90	20100 16900 12900 9480 7070 5450 4820	26300 21200 16200 11800 8690 6940 6100	29600 23400 17800 12800 9360 7640 6660	33200 25600 19300 13700 9920 8310 7140	35400 26900 20200 14200 10200 8680 7400	37300 28000 20900 14500 10400 8980 7590
		<b>-</b>	DURAT 10	N TABLE	OF DAILY I	MEAN FLOW	FOR PERIO	OF REC	ORD 1941-	-82			
	·	DISCHA	RGE, IN	CFS, WHI	CH WAS EQI	JALED OR	EXCEEDED FO	R INDIC	ATED PER	CENT OF	T   ME	<del>-</del>	<b>-</b>
5 <b>%</b> 	10%	15 <b>%</b> 	20 <b>%</b> 	25% 	30% -	40% 5	60% 60%	70%	75 <b>%</b>	80% 	85 <b>%</b>	90 <b>%</b>	95 <b>%</b>
7620	4960	3580 2	710 2	080 1	650 105	50 61	7 321	161	112	77	56	42	30

# 14194300 NORTH YAMHILL RIVER NEAR FAIRDALE, OR

LOCATION.--Lat 45°21'55", long 123°22'40", in SW\ sec.25, T.2 S., R.6 W., Yamhill County, Hydrologic Unit 17090008, on right bank 0.4 mi downstream from small tributary, 1.3 mi upstream from Kutch Creek, 2.1 mi west of Fairdale, 9.5 ml west of Yamhill and at mile 28.4.

DRAINAGE AREA. -- 9.03 mi2.

PERIOD OF RECORD.--October 1958 to March 1966, October 1967 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 560 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years (water years 1959-65, 1968-82),  $48.1~{\rm ft^3/s}$ ,  $72.34~{\rm in/yr}$ ,  $34,850~{\rm acre-ft/yr}$ .

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 6.88 ft, from rating curve extended above 1,000 ft<sup>3</sup>/s; maximum gage height, 9.7 ft Dec. 23, 1964 (backwater from debris); minimum discharge, 2.3 ft<sup>3</sup>/s Sept. 23-26, 1965.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1959-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1960-82

		MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	- 11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	3.5	32	13	8.2	-65	2.2	1	3.1	2.7	2.5	2.4		
NOVEMBER	5.7	177	59	37	.62	10.3	3	3.2	2.7	2.6	2.4		
DECEMBER	7.8	202	106	52	.49	18.4	7	3.3	2.8	2.6	2.5		
JANUARY	10	228	110	59	.54	19.1	14	3.5	3.0	2.8	2.6	·	
FEBRUARY	20	<b>†</b> 79	92	36	.40	15.9	30	3.8	3.2	3.0	2.8		
MARCH	36	151	81	32	.40	14.0	60	4.5	3.7	3.4	3.1		
APRIL	25	91	54	19	.36	9.4	90	5.0	4.1	3.7	3.4		
MAY	16	46	29	8.3	. 28	5.1	120	5.9	4.8	4.3	4 - 1		
JUNE	9.3	35	15	6.1	.40	2.6	183	11	8.2	7.2	6.5		
JULY	5.3	12	7.4	1.6	.21	1.3							
AUGUST	3.5	7.5	4.9	1.0	.21	.8							
SEPTEMBER	2.7	16	5.8	3.1	.53	1.0							
ANNUAL	. 17	81	48	14	. 28	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1959-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1959-82

YEARS, A			DANCE PR	RECURRENC OBABILITY	, IN PE		PERIOD (CON-		INTERV	AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80% 	2 50% 	5 20 <b>%</b>	10 10%	25 4% 	50 2% 	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
398	612	993	1310	1790									
							1	461	718	923	1230		
WEIGHTED	SKEW =	.418					3	363	521	637	797		
							7	277	363	413	471		
							15	209	267	301	341		
							30	164	197	212	226	· , ,	
							60	129	163	181	200		
							90	113	144	160	175		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERÇEN	T OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
172	119	94	75	61	52	38	25	16	8.9	7.1	5.9	5.1	4.3	3.6

#### 14195000 HASKINS CREEK NEAR MCMINNVILLE. OR

LOCATION.--Lat 45°18'50", long 123°21'55", in NE<sup>+</sup><sub>4</sub> sec.13, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17090008, on left bank 150 ft downstream from Idlewild Creek, 0.5 mi upstream from Haskins Creek Dam, and 11 mi northwest of McMinnville.

DRAINAGE AREA.--6.48 m12.

98

70

53

42

34

29

18

11

PERIOD OF RECORD.--October 1928 to September 1951.

GAGE.--Water-stage recorder. Wooden control since September 1936. Altitude of gage is 815 ft, by barometer. Prior to Oct. 1, 1930, at datum 1.00 ft higher.

REMARKS.--No regulation. Since Sept. 2, 1937, a small amount of water (average, 1.4 ft³/s) has been diverted at a point 800 ft upstream for municipal supply of McMinneville.

AVERAGE DISCHARGE.--23 years (water years 1929-51), 26.4 ft<sup>3</sup>/s, 19,110 acre-ft/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 610 ft $^3$ /s Mar. 31, 1931, gage height, 4.00 ft (before control was built); minimum prior to diversion above station, 1.0 ft $^3$ /s Oct. 8, 1932.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1929-51

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1930-51

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	1	NTERVAL,	IN YEAR	INDICAT S, AND A ULITY, H	NNUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100
OCTOBER	1.4	26	5.6	5.7	1.02	1.8	1	.9	.4	.3	.2		
NOVEMBER	1.6	80	27	22	.81	8.7	3	1.0	.5	.3	.2		
DECEMBER	<b>1</b> 1	141	53	33	.63	17.1	7	1.1	.6	. 4	.2		
JANUARY	13	118	55	28	.50	17.8	14	1.2	.6	.4	.2		
FEBRUARY	22	108	58	25	.42	18.8	30	1.4	.7	.5	.3-		
4ARCH	12	92	49	22	.45	16.0	60	1.8	1.0	.7	.5		
NPRIL .	9.1	70	31	16	.51	10.1	90	2.0	1.2	.8	.6		
4A Y	4.9	38	15	7.5	.50	4.9	120	2.4	1.6	1.2	1.0		
UNE	2.8	20	7.2	3.5	.49	2.3	183	4.6	3.2	2.6	2.2		
JULY	.8	6.8	3.3	1.5	.44	1.1							
AUGUST	.3	3.8	2.0	.9	.47	.6							
SEPTEMBER		4.2	2.0	1.0	.51	.7							
	• • •	7.2	2.0	1.0	• • •	• /							
ANNUAL	13	38	26	7.4	.29	100							
	BASE	PROBABILI D ON PERIO	OD OF REC	ORD 1929	9-51		MAG		ON PERI	OD OF RE	CORD 192	29-51	
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF REC	URRENCE	9-51 INTERVAL	 ,  N NT	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RE CFS, FOR L, IN YE		29-51 ED RECUF ANNUAL	RRENCE
 ISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF REC	ORD 1929	9-51 INTERVAL	 ,  N	PERIOD	BASED DISCHA	ON PERI	OD OF RE CFS, FOR L, IN YE	CORD 192 INDICATE ARS, AND	29-51 ED RECUF ANNUAL	RRENCE
SCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC L EXCEEDAL	DD OF REC	URRENCE BILITY,	9-51 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	DISCHALE:	ON PERI RGE, IN INTERVA XCEEDANCE	OD OF RE  CFS, FOR L, IN YE E PROBAB	INDICATE ARS, AND ILITY, IN	29-51 ED RECUF ANNUAL PERCEN 50	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	DD OF REC	CORD 1929 CURRENCE BILITY, 25 4%	9-51 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	DISCHALE:	ON PERI RGE, IN INTERVA XCEEDANCE	OD OF RE  CFS, FOR L, IN YE E PROBAB	INDICATE ARS, AND ILITY, IN	29-51 ED RECUF ANNUAL PERCEN 50	RRENCE
PISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAN	DD OF REC	CORD 1929 CURRENCE BILITY, 25 4%	9-51 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAI	ON PERI	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%	INDICATE ARS, AND ILITY, IN 25 4%	29-51 ED RECUF ANNUAL PERCEN 50 2%	RRENCE
PISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL 5 20%	DD OF REC	CORD 1929 CURRENCE BILITY, 25 4%	9-51 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI	ON PERI	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%	INDICATE ARS, AND ILITY, IN  25 4%	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
PISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL 5 20%	DD OF REC	CORD 1929 CURRENCE BILITY, 25 4%	9-51 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	D1 SCHAI  E: 2 50%  234 188	ON PERI	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10% 382 302	INDICATE ARS, AND ILITY, IN 25 4% 466 368	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
PISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL 5 20%	DD OF REC	CORD 1929 CURRENCE BILITY, 25 4%	9-51 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHAI  2 50%  234 188 146 114	ON PERI  RGE, IN INTERVAL  XCEEDANCE  5 20%  320 253 197 150	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10 382 302 231 171	INDICATE ARS, AND ILITY, IN  25 4%  466 368 277	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
PISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL 5 20%	DD OF REC	CORD 1929 CURRENCE BILITY, 25 4%	9-51 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	D1 SCHAI  2 50%  234 188 146	ON PERI RGE, IN 1 INTERVA XCEEDANCI 5 20% 320 253 197 150 115	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10% 382 302 231	INDICATE ARS, AND ILITY, IN  25 4%  466 368 277 195	29-51 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
ISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAL 5 20%	DD OF REC	CORD 1929 CURRENCE BILITY, 25 4%	9-51 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASED  D1 SCHAI  E: 2 50%  234 188 146 114 89	ON PERI  RGE, IN INTERVAL  XCEEDANCE  5 20%  320 253 197 150	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10 382 302 231 171 130	INDICATE ARS, AND ILITY, IN  25 4%  466 368 277 195 146	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	DD OF RECONCE PROBA- 10 10% 474 DURATION	URRENCE BILITY, 25 4%	9-51 INTERVAL IN PERCEI 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	DISCHAI  2 50%  234 188 146 114 89 70 64  OF RECORI	ON PERI  RGE, IN  INTERVA  KCEEDANCI  5  20%  320  253  197  150  115  89  80  D 1929-5	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%  382 302 231 171 130 99 88	192 INDICATI ARS, AND ILITY, IN 25 4% 466 368 277 195 146 110 96	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
PISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIG	DD OF RECONCE PROBA- 10 10% 474 DURATION	URRENCE BILITY, 25 4%	9-51 INTERVAL IN PERCEI 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS) 	DISCHAI  2 50%  234 188 146 114 89 70 64  OF RECORI	ON PERI  RGE, IN  INTERVA  KCEEDANCI  5  20%  320  253  197  150  115  89  80  D 1929-5	OD OF RE  CFS, FOR L, IN YE E PROBAB  10 10%  382 302 231 171 130 99 88	192 INDICATI ARS, AND ILITY, IN 25 4% 466 368 277 195 146 110 96	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE

6.5

3.9

3.1

2.5

2.1

1.7

1.1

# 14196500 NORTH YAMHILL RIVER NEAR PIKE, OR

LOCATION.--Lat 45°22'15", long 123°17'10", in NEt sec.27, T.2 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on left bank 1.3 mi west of Pike, 2.3 mi downstream from Haskins Creek, and 5.2 mi northwest of Yamhill.

DRAINAGE AREA .-- 47.8 mi2.

PERIOD OF RECORD. -- October 1940 to September 1951.

GAGE.--Water-stage recorder. Datum of gage is 249.22 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

Prior to Oct. 23, 1940, staff gage at same site and datum.

REMARKS.--Occasional diurnal fluctuations caused by small dams upstream; no seasonal regulation. Water supply for city of McMinnville is diverted from Haskins Creek above station.

AVERAGE DISCHARGE.--11 years (water years 1941-51), 184 ft<sup>3</sup>/s, 133,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,780 ft<sup>3</sup>/s Feb. 10, 1949, gage height, 9.28 ft, from rating curve extended above 2,500 ft<sup>3</sup>/s by logarithmic plotting; minimum, 4.2 ft<sup>3</sup>/s Sept. 11, 1944; minimum daily, 6.0 ft<sup>3</sup>/s Sept. 10, 1944.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-51

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942~51

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	`` II	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	13	206	<del></del> 54	59	1.10	2.4	1	8.4	7.2	6.6	6.1		
NOVEMBER	81	474	245	138	.56	11.0	3	8.6	7.4	6.8	6.4		
DECEMBER	93	729	418	204	. 49	18.7	7	9.1	7.8	7.1	6.6		
JANUARY	132	765	384	177	. 46	17.2	14	9.4	8.1	7.6	7.1		
FEBRUARY	162	850	477	201	.42	21.4	30	10	8.9	8.4	8.0		
MARCH	92	609	297	153	.52	13.3	60	12	11	9.9	9.5		
APRIL	69	287	172	73	.43	7.7	90	14	12	11	11		
4A Y	48	227	92	51	.55	4.1	120	17	15	14	13		
JUNE	30	65	45	11	.26	2.0	183	33	29	26	25	·	
JULY	- 15	29	21	4.5	.21	1.0							
AUGUST	11	18	13	2.2	. 17	•6							
SEPTEMBER	9.3	28	14	5.9	.43	.6							
ANNUAL	104	239	184	50	.27	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-51

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-51

			DICATED F DANCE PRO				PERIOD (CON-		INTERV	I CFS, FOF 'AL, IN YE ICE PROBAE	ARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 19
2190	2780	3560	4060										
							1	2010	2480	2740			_
EIGHTED	SKEW =	.107					3	1490	1770	1920			
							7	1110	1390	1550		·	-
							- 15	865	1090	1200		·	
							30	649	830	913			-
							60	521	652	712			_
							90	474	602	665			_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-51

	D	I SCHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5% 1	0% 159	<b>6</b> 20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
717 49	5 369	287	231	187	121	75	49	29	22	18	14	12	9.9

# 14197000 NORTH YAMHILL RIVER AT PIKE, OR

LOCATION.--Lat 45°22'10", long 123°15'15", in NW\ sec.25, T.2 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on right bank 500 ft downstream from Turner Creek, 0.5 mi southeast of Pike, 4.0 mi northwest of Yamhill, and at mile 20.5.

DRAINAGE AREA. -- 66.8 mi2.

PERIOD OF RECORD. -- October 1948 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 192.66 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 21, 1950, water-stage recorder at datum 1.02 ft higher.

REMARKS.--Seasonal regulation by Haskins Creek Reservoir; occasional diurnal fluctuation caused by Haskins Creek Dam and smaller dams upstream. Water supply for city of McMinville is diverted from Haskins Creek above station and that for city of Yamhill is diverted from Turner Creek above station. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--25 years, 242 ft<sup>3</sup>/s, 49.20 in/yr, 175,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,530  $ft^3/s$  Dec. 21, 1955, gage height, 12.42 ft, from rating curve extended above 2,600  $ft^3/s$ , on basis of slope-area measurement of peak flow; minimum, 1.7  $ft^3/s$  Sept. 3, 1972.

# STATISTICAL SUMMARIES

	M I M I M I M	MAXIMUM	ME AM	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	i E	NTERVAL, XCEEDANCI	CFS, FOR IN YEARS PROBABI	S, AND AN LITY, IN	NNUAL NOI N PERCEN	N-
IONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 <b>2%</b>	100
CTOBER	8.5	162	48	43	.89	1.6	1	7.7	5.6		3.4	2.4	
IOVEMBER	17	683	260	166	.64	8.9	3	7.9	5.8	4.6	3.6	2.6	
ECEMBER	187	1023	545	242	.44	18.7	7	8.2	6.1	4.8	3.9	2.9	
ANUARY	162	1122	636	312	.49	21.8	14	8.6	6.5	5.4	4.6	3.7	
EBRUARY	171	1 <b>1</b> 63	556	257	.46	19.1	30	9.3	7.2	6.3	5.7	5.0	
ARCH	144	807	441	180	.41	15.1	60	11	8.3	7.2	6.4	5.6	
PRIL	78	411	227	87	.38	7.8	90	13	9.8	8.6	7.7	6.8	
AY	58	214	111	46	.41	3.8		16	12	11	9.2	8.0	
JNE	26	85	48	17	. 35	1.7	183	34	25	21	18	15	
ULY	10	34	20	5.9	.29	.7				- <b>-</b>			
UGUST	5.6	21	12	3.6	.30	. 4							
EPTEMBER	6.9	39	14	6.8	.50	.5							
NNUAL	159	366	242	47	. 19	100							
I SCHARGE	BASE , IN CFS,	PROBABILI D ON PERIO	OD OF RE	CORD 1949	9-73 INTERVAL		MAG		ON PERIO	OD OF REC	CORD 194	19 <b>-</b> 73  D RECURF	<b>.</b>
YEARS,	<del>-</del>	L EXCEEDA 5	NCE PROE 	3ABILITY, 		NT 	PERIOD (CON- SECU-		KCEEDANCE	, IN YEA PROBABI	LITY, IN		T
1.25	2												

DISCHARGE, YEARS, A					CE INTER Y, IN PE		PERIOD (CON-		INTERV	AL, IN Y	EARS, AN	TED RECUR ID ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10%	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
2970	3990	5590	6790	8460	9830								
							1	2700	3680	4410	5420	6250	
WEIGHTED	SKEW =	.472					3	2030	2620	3080	3740	4280	
							7	1570	1940	2170	2450	2640	
							15	1250	1510	1630	1750	1820	
							30	936	1110	1200	1280	1330	
							60	724	880	963	1050	1110	
							90	638	762	822	882	919	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1949-73

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATI	D PERCEI	NT OF TI	иE		
5%	10%	15%	20%	25%	30%	40%		60%			/-	85%	90%	95%
938	638	479	384		256	166	97	53	28	20	16	13	11	8.4

# 14198000 WILLAMETTE RIVER AT WILSONVILLE, OR

LOCATION.--Lat 45°17'57", long 122°45'00", in SEtNEt sec.24, T.3 S., R.1 W., Clackamas County, Hydrologic Unit 17090007, on left bank, 0.2 mi downstream from Boeckman Creek, 1.1 mi downstream from bridge on Interstate Highway 5 at Wilsonville, and at mile 37.4.

DRAINAGE AREA.--8,400 mi², approximately.

94600 69700

53600

43100

35700

30400

24100

18700

13900

10400

8940

7780

6960

6370

5670

PERIOD OF RECORD. -- October 1948 to July 1973.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1954, nonrecording gage at Butteville, 5.9 mi upstream at same datum. Oct. 1, 1954, to Nov. 2, 1970, at site 1.1 mi upstream at same datum.

REMARKS.--Flow regulated by 12 reservoirs above station since 1968. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--24 years (water years 1949-72), 28,900 ft<sup>3</sup>/s, 21,000,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 339,000 ft<sup>3</sup>/s Dec. 25, 1964, elevation, 94.74 ft; minimum daily, 3,600 ft<sup>3</sup>/s Nov. 29, 30, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached an elevation of about 105 ft at Wilsonville (discharge not determined).

# STATISTICAL SUMMARIES

					5	TATISTICA	L SUMMARIE	S					
М	ONTHLY A	ND ANNUAL	MEAN DIS	SCHARGES	1949-72		M		AND PRO		OF ANNUAL	L LOW FLO 950-72	W
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICA ARS, AND BABILITY,	ANNUAL NO	N-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4548	25010	13730	5390	.39	3.9	1	5750	4830	4300	3860		
NOVEMBER	4217	80980	31700	16730	.53	9.1	3	5780	4850	4330	3880		
DECEMBER	17180	123100	54510	29110	.53	15.6	7	5860	4920	4390	3950		
ANUARY	14300	114100	61280	28670	.47	17.6	14	5930	5000	4490	4070		
FEBRUARY	22800	100700	54180	20080	.37	15.5	30	6090	5170	4670	4270		
MARCH	15890	83510	41260	18810	.46	11.8	60	6380	5400	4930	4550		
\PRIL	13630	54450	30520	11430	.37	8.7	90	6920	5870	5360	4970		
4AY	12870	41430	24400	8309	.34	7.0	120	7840	6550	5940	5470		
UNE	7200	26330	15090	5571	.37	4.3	183	11000	9140	8290	7660		
JULY NUGUST	5542 4413	11660 8938	8092 6571	1911 1242	.24 .19	2.3 1.9							
SEPTEMBER		12250	7840	2061	.26	2.2							
NNUAL	20890	43870	28990	5403	. 19	100							
YEARS,	, IN CFS	AL EXCEEDA	CATED RE	ECURRENCE BABILITY,	INTERVAL	ŃT 	PERIOD (CON-		HARGE, I	N CFS, F	RECORD 1	TED RECUR	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE	2	5	10	25	50	100
							DAYS)	50 <b>%</b> 	20%	10%	4% 	2% 	19
	 	 		 		 	1	146000	189000	223000	274000	· ·	
WEIGHTED	SKEW =						3	140000	180000	212000	259000		
							7	126000	161000	186000	222000		
							15	103000	130000	148000	170000		
							30	84100	105000	119000	136000		
							60	67300	84900	96900	113000		
			DURATIO	N TARIF	OF DAILY		90  FOR PERIO	60400	74900	84100 	95400		
		DISCHA	RGE, IN	CFS, WH1	CH WAS EQ	UALED OR I	EXCEEDED FO	OR INDIC	ATED PER	CENT OF	TIME		
5%	10%	15%	20%	25%	30%	40% 50	0% 60%	70%	75%	80%	85%	90%	9

# 14198500 MOLALLA RIVER ABOVE PINE CREEK, NEAR WILHOIT, OR

LOCATION.--Lat 45°00'35", long 122°28'45", in NE¼NE¼ sec.31, T.6 S., R.3 E., Clackamas County, Hydrologic Unit 17090009, on right bank 0.5 mi upstream from Pine Creek, 5 mi southeast of Wilholt, and at mile 32.5.

DRAINAGE AREA. -- 97.0 mi<sup>2</sup>, at cableway 0.2 mi downstream.

PERIOD OF RECORD. -- October 1935 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 791.35 ft National Geodetic Vertical Datum of 1929 (Bureau of Public Roads bench mark). Oct. 1, 1935, to Sept. 30, 1945, and Oct. 1, 1945, to Feb. 9, 1961, water-stage recorder at site 0.3 mi downstream at datums 8.42 ft and 10.44 ft lower, respectively. Feb. 10, 1961, to July 21, 1966, water-stage recorder at site 0.2 mi downstream at datum 5.99 ft lower.

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

AVERAGE DISCHARGE.--47 years, 544 ft<sup>3</sup>/s, 76.16 in/yr, 394,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.3 ft, from floodmark, site and datum then in use, from rating curve extended above 5,200 ft<sup>3</sup>/s; minimum, 18 ft<sup>3</sup>/s Oct. 3, 1965.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1936-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-82

	MINIMUM	MAN IMINA	WE AM	STAN- DARD DEVIA-	COEFF!- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAF CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1 <b>%</b>
OCTOBER	29	1020	243	227	.93	3.7	1	30	24	22	20	19	18
NOVEMBER	24	1799	731	482	.66	11.2	3	31	25	22	21	19	18
DECEMBER	106	2604	1056	543	.51	16.1	7	32	25	23	21	20	19
JANUARY	119	2574	1032	577	• 56	15.8	14	34	27	24	22	20	19
EBRUARY	131	2411	933	447	.48	14.2	30	38	29	26	24	22	20
MARCH	258	1705	745	314	.42	11.4	60	46	35	30	27	25	23
PRIL	198	1366	720	238	.33	11.0	90	57	42	36	32	28	26
1AY	147	1062	569	224	.39	8.7	120	79	55	45	39	33	29
UNE	74	726	291	152	.52	4.4	183	168	122	104	91	78	71
JULY	37	211	101	41	.41	1.5							
AUGUST	23	193	54	28	.52	.8							
SEPTEMBER	25	240	76	56	.73	1.2							
NNUAL	241	921	544	133	.24	100							

SCHARGE, YEARS, A							PERIOD (CON-		INTERV	'AL, ÍN '	YEARS, AI	ATED RECI ND ANNUAI IN PERCI	L
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10% 	25 4%	50 2%	100 1 <b>%</b>	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100
5600	7670	10800	13100	16300	18800	21500		~					
	<del></del> -						1	5850	7880	8970	10100	10800	11500
WEIGHTED	SKEW =	.325					3	4400	5860	6660	7530	8080	8560
							7	3190	4170	4660	5160	5450	5690
							15	2220	2830	3140	3440	3620	3770
							30	1700	2150	2370	2580	2710	2810
							60	1330	1670	1860	2050	2180	2290
							90	1190	1480	1640	1800	1910	1990

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-82

_			DISCH	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	1850	1240	966	801	689	592	434	319	219	125	91	69	54 .	43	34

# 14200000 MOLALLA RIVER NEAR CANBY, OR

LOCATION.--Lat 45°14'40", long 122°41'10", in NW\\ NE\\ sec.9, T.4 S., R.1 E., Clackamas County, Hydrologic Unit 17090009, on left bank at upstream side of Goods bridge, 1.5 mi south of Canby, and at mile 6.0.

DRAINAGE AREA .-- 323 mi2.

PERIOD OF RECORD. -- August 1928 to September 1959, October 1963 to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 104.00 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1933, nonrecording gage and Oct. 24, 1933, to Sept. 26, 1955, water-stage recorder at present site and at datum 1.00 ft higher. Sept. 27, 1955, to June 3, 1956, water-stage recorder at site 145 ft downstream at present datum. June 4, 1956, to Sept. 30, 1959, water-stage recorder at site 0.3 mi downstream at datum 1.98 ft lower. Oct. 1, 1963, to May 4, 1964, nonrecording gage at present site and datum.

REMARKS.--No regulation. Numerous small diversions for irrigation above station.

AVERAGE DISCHARGE.--46 years (water years 1929-59, 1964-78), 1,163 ft<sup>3</sup>/s, 48.90 In/yr, 842,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.76 ft; minimum, 20 ft<sup>3</sup>/s Aug. 27, 1959.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1929-78 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1930-78

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN INTERVAL EXCEEDAN	, IN YEAR	RS, AND	ANNUAL N	0N-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	60	2201	447	471	1.05	3.2	1	57	44	39	36	33	31
NOVEMBER	53	3864	1525	1083	.71	10.9	3	59	46	41	38 -	34	. 33
DECEMBER	211	5835	2292	1268	.55	16.4	7	61	48	43	39	35	33
JANUARY	303	5124	2433	1221	.50	17.4	14	65	51	45	41	37	35
FEBRUARY	270	4265	1916	876	.46	13.7	30	73	56	49	44	39	37
MARCH	505	3559	1711	692	.40	12.2	60	89	66	58	52	46	42
APRIL	383	2954	1472	520	. 35	10.5	90	109	79	67	59	52	47
MAY	275	2376	1110	445	.40	7.9	120	147	101	85	73	62	56
JUNE	164	1687	624	334	.54	4.5	183	317	223	187	162	138	125
JULY	77	491	207	94	.46	1.5							
AUGUST	42	378	106	58	.54	-8							
SEPTEMBER	46	555	144	108	.75	1.0							
ANNUAL	524	1822	1162	313	.27	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1929-78

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1929-78

DISCHARGE YEARS,		S, FOR IN					PERIOD (CON-	DISC	INTER	VAL, ÎN	OR INDICA YEARS, AN	ND ANNUAL	-
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
9170	13600	20200	25000	31300	36300	41400		10000	45000	10000	27100	26100	20000
WEIGHTE	D SKEW :	045					3 7	10900 8590 6510	15800 12300 8830	19000 14600 10100	23100 17600 11500	26100 19700 12500	29000 21700 13300
							15 30 60 90	4770 3710 2880 2580	6210 4720 3710 3280	6920 5200 4180 3670	7600 5640 4680 4090	7990 5880 5010 4370	8320 6070 5300 4610

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1929-78

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIM	IE .		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3930	2710	2110	1770	1510	1300	974	699	445	244	177	136	106	83	66

# 14200300 SILVER CREEK AT SILVERTON, OR

LOCATION.--Lat 45°00'34", long 122°47'15", in NE<sup>±</sup> sec.34, T.6 S., R.1 W., Marion County, Hydrologic Unit 17090009, on right bank 300 ft downstream from railroad bridge in Silverton, 2.5 mi upstream from Brush Creek, and at mile 3.4.

DRAINAGE AREA .-- 47.9 mi2.

PERIOD OF RECORD.--October 1963 to September 1968, October 1970 to September 1979.

GAGE.--Water-stage recorder. Datum of gage is 218.5 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Several small diversions for irrigation and municipal use above station.

AVERAGE DISCHARGE.--14 years, 208  $ft^3/s$ , 58.97 in/yr, 150,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.15 ft; minimum, 2.0 ft<sup>3</sup>/s Aug. 20, 21, 1967.

# STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM		STAN- DARD DEVIA- TION	COEFFI- CIENT OF		PERIOD (CON- SECU-		NTERVAL,	IN YEAR	R INDICATE RS, AND AI BILITY, II	NNUAL NO	) <b>N-</b>
ионтн	(CFS)	(CFS)	MEAN (CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1 <b>%</b>
OCTOBER	9.5	135	46	37	.80	1.9	1	5.8	3.9	3.1	2,6		
OVEMBER	40	937	274	234	.85	10.9	3	6.1	4.1	3.3	2.8		
ECEMBER	37	973	498	276	.55	19.9	7	6.6	4.4	3.6	3.0		
ANUARY	57	785	526	233	.44	21.0	14	7.6	5.0	4.0	3.3		
EBRUARY	85	614	336	157	.47	13.4	30	9.3	6.0	4.7	3.8		
1ARCH	105	584	324	150	.46	12.9	60	12	7.4	5.8	4.7		
PRIL	106	411	226	86	.38	9.0	90	15	9.5	7.4	6.1		
4AY	62	221	136	51	.37	5.4	120	20	14	11	9.6		
UNE	26	115	64	29	. 45	2.6	183	39	28	24	21		
JULY	10	45	25	9.9	.40	1.0							
AUGUST	4.0	59	17	14	.86	.7							
SEPTEMBER	5.4	82	31	26	.85	1.2							
NNUAL	97	368	208	68	.33	100							
	BASE	PROBABILI D ON PERIO	OD OF RE	CORD 196	4-79 		MAC	BASED	ON PERI	OD OF RE	<del>-</del> -	5 <b>4-</b> 79 	
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD 196	4-79 INTERVAL IN PERCE	,  N NT	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RECEIVED		54-79 ED RECUR ANNUAL	RRENCI
 ) SCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE  CATED RE	CORD 196	4-79 INTERVAL IN PERCE	,  N	PERIOD	BASED DISCHA	ON PERI	OD OF RECEIVED	ECORD 196  R INDICATE EARS, AND	54-79 ED RECUR ANNUAL	RRENCI
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	ECURRENCE BABILITY,	4-79 INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA	O ON PERI	OD OF RECOMMENDED	ECORD 196 R INDICATE EARS, AND BILITY, II  25 4%	54-79 ED RECUF ANNUAL N PERCEN	RRENCI
PISCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD 196	4-79 INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHA  E  2  50%	O ON PERI	OD OF RECEIVED	ECORD 196 R INDICATE EARS, AND BILITY, IN 25 4%	54-79 ED RECUF ANNUAL N PERCEN	RRENCI
PISCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD 196	4-79 INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DI SCHA  E  50%  1960 1560	O ON PERI	OD OF RECEIVED	R INDICATE EARS, AND BILITY, IN 25 4% 4000 3190	54-79 ED RECUE ANNUAL N PERCEN 50 2%	RRENCI
PISCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD 196	4-79 INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DI SCHA  E  2  50%  1960 1560 1210	O ON PERI	OD OF RECEIVED OF	R INDICATE R INDICATE REARS, AND BILITY, II  25 4%  4000 3190 2140	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENCI
PISCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD 196	4-79 INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50% 1960 1560 1210 937	2830 2210 1180	OD OF RECEIVED OF	25 4 4000 3190 2140 1450	54-79 ED RECUE ANNUAL N PERCEN 50 2%	RRENC
PISCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD 196	4-79 INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DI SCHA  E 2 50%  1960 1560 1210 937 739	2830 2210 1180 906	OD OF RECOMMEND OF	R INDICATE EARS, AND BILITY, II  25  48  4000 3190 2140 1450 1080	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENC
TSCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	OD OF RE	CORD 196	4-79 INTERVAL IN PERCE	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E 2 50% 1960 1560 1210 937	2830 2210 1180	OD OF RECEIVED OF	25 4 4000 3190 2140 1450	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENC
PISCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDI	CATED RE NCE PROE 10 10\$	CORD 196 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1960 1560 1210 937 739 562 488	2830 2210 1180 906 731 637	OD OF RECEIVED OF	R INDICATE EARS, AND BILITY, IR  25 4%  4000 3190 2140 1450 1080 956	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENC
DISCHARGE YEARS, 1.25 80%	BASE  , IN CFS, AND ANNUA  2 50%	FOR INDIVIDUAL EXCEEDA  5 20  4000 .188	CATED RENCE PROE	CORD 196 CURRENCE BABILITY, 25 4% 6180 ON TABLE	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%  1960 1560 1210 937 739 562 488  OF RECOR	2830 2210 1610 1180 906 731 8D 1964-7	OD OF RECEIVED OF	R INDICATE EARS, AND BILLITY, IP 4% 4000 3190 2140 1450 1080 956 851	54-79 ED RECUF ANNUAL N PERCEN 50 2%	RRENCI

# 14201000 PUDDING RIVER NEAR MOUNT ANGEL, OR

LOCATION.--Lat 45°03'47", long 122°49'45", in SEL sec.8, T.6 S., R.1 W., Marion County, Hydrologic Unit 17090009, on left bank on downstream side of Cline Bridge, 1.5 mi west of Mount Angel, 3.5 mi upstream from Little Pudding River, and at mile 40.4.

DRAINAGE AREA. -- 204 mi2.

2590

1860

1430

1150

971

814

588

401

232

113

75

50

- 36

27

19.

PERIOD OF RECORD. --October 1939 to March 1966. Monthly discharge only January to September 1945, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 119.76 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 22, 1945, staff or wire-weight gages at same site and datum.

REMARKS.--No regulation. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--26 years (water years 1940-65), 711 ft3/s, 514,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 31.50 ft; maximum gage height, 31.63 ft Dec. 22, 1964; minimum discharge observed, 2.4 ft<sup>3</sup>/s Aug. 9, 1965.

# STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		INTERVAL,	IN YEA	RS, AND	TED RECUR ANNUAL NO IN PERCEN	N-
MONTH	(CFS)	(CFS)	(CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	21	1121	254	274	1.08	3.0	1	15	9.9	8.0	6.6	5.4	
NOVEMBER	41	2483	937	620	.66	10.9	3	16	10	8.4	7.1	5.8	
DECEMBER	297	3401	1456	766	.53	17.0	7	17	11	9.3	7.9	6.6	
JANUARY	461	3011	1531	805	.53	17.8	14	18	13	10	9.1	7.9	
FEBRUARY	469	2961	1501	630	.42	17.5	30	21	14	12	10	8.6	
MARCH	331	2192	1127	472	.42	13.1	60	29	22	18	16	- 14	
PRIL	283	1750	845	372	.44	9.9	90	37	27	22	20	17	
1AY	173	1135	538	263	.49	6.3	120	58	40	33	28	23	
UNE	78	514	237	107	. 45	2.8	183	157	113	95	82	69	
JULY	24	194	76	42	.54	.9							
NUGUST	10	57	31	14	.44	-4							
SEPTEMBER	12	150	44	31	.71	.5							
NNUAL	411	1041	711	150	.21	100							
MA GN I T		PROBABILI D ON PERI			OUS PEAK I		 MAC		AND PROBA			 L HIGH FL 940-65	 OW
OISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	ISTANTANE CORD 194	OUS PEAK I	FLOW	PERIOD	BASE DISCH	D ON PERI  ARGE, IN INTERVA	OD OF R CFS, FO	ECORD 1  R INDICA EARS, AN	940-65  TED RECUR ID ANNUAL	RENCE
OISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RECAMED REANCE PROB	ISTANTANE ECORD 194 ECURRENCE BABILITY,	OUS PEAK I 0-65 INTERVAL IN PERCE	FLOW		BASE DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC	OD OF R CFS, FO	ECORD 1 R INDICA EARS, AN BILITY,	940-65 TED RECUR D ANNUAL IN PERCEN	RENCE
OISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	ISTANTANE ECORD 194 ECURRENCE BABILITY,	OUS PEAK I 0-65 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC	OD OF R  CFS, FO L, IN Y E PROBA	ECORD 1  R INDICA EARS, AN BILITY,  25	940-65 TED RECUR ID ANNUAL IN PERCEN	RENCE
) SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	STANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC	OD OF R CFS, FO L, IN Y	ECORD 1 R INDICA EARS, AN BILITY,	940-65 TED RECUR D ANNUAL IN PERCEN	RENCE
OISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE	STANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF R  CFS, FO L, IN Y E PROBA  10 10%	ECORD 1  R INDICA EARS, AN BILITY,  25 4%	940-65TED RECUR D ANNUAL IN PERCEN	RENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	STANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF R  CFS, FO L, IN Y E PROBA  10 10%  9400	R INDICA EARS, AN BILITY, 25 4%	940-65  TED RECUR D ANNUAL IN PERCEN 50 2%	RENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	STANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	OD OF R  CFS, FO L, IN Y E PROBA  10 10 9400 7650	R INDICA EARS, AN BILITY, 25 4% 111100 8760	940-65  TED RECUR D ANNUAL IN PERCEN 50 2%  12300 9480	RENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	STANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE  DISCH  2  50%  5580  4860 3920	D ON PERI  ARGE, IN INTERVA EXCEEDANC  5 20%  7950 6640 5210	OD OF R  CFS, F0 L, IN Y E PROBA  10 10%  9400 7650 5890	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  11100 8760 6580	940-65  TED RECUR D ANNUAL IN PERCEN 50 2% 12300 9480 7010	RENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	STANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  5580 4860 3920 3060	D ON PERI	OD OF R  CFS, FO L, IN Y E PROBA  10 10%  9400 7650 5890 4220	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  11100 8760 6580 4530	940-65  TED RECUR D ANNUAL IN PERCEN 50 2% 12300 9480 7010 4700	RENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	STANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASE  DISCH  2  5580 4860 3920 3060 2390	7950 6640 5210 3860 2970	OD OF R  CFS, FO L, IN Y E PROBA 10 10 7650 5890 4220 3240	ECORD 1  R INDICA EARS, AN BILITY, 25 4%  11100 8760 6580 4530 3490	940-65  TED RECURD ANNUAL IN PERCEN 50 2%  12300 9480 7010 4700 3630	RENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	STANTANE ECORD 194 ECURRENCE BABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCEI 50 2%	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  5580 4860 3920 3060	D ON PERI	OD OF R  CFS, FO L, IN Y E PROBA  10 10%  9400 7650 5890 4220	ECORD 1  R INDICA EARS, AN BILITY,  25 4%  11100 8760 6580 4530	940-65  TED RECUR D ANNUAL IN PERCEN 50 2% 12300 9480 7010 4700	RENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ISTANTANE CORD 194 CURRENCE BABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCE 50 2%	FLOW  , IN NT  100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  5580 4860 3920 3060 2390 1890 1690	7950 6640 5210 3860 2970 2380 2110	OD OF R  CFS, FO L, IN Y E PROBA  10 10 7650 5890 4220 3240 2650 2330	R INDICA EARS, AN BILITY, 25 4% 11100 8760 6580 4530 2930	940-65  TED RECURID ANNUAL IN PERCEN 50 2%  12300 9480 7010 4700 3630 3120	RENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDI FOR INDI LEXCEEDA 5 20% 9560 1 059	OD OF RELACE PROE	ISTANTANE CORD 194 CURRENCE SABILITY, 25 4%	OUS PEAK I 0-65 INTERVAL IN PERCEI 50 2% 7800	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  5580 4860 3920 3060 2390 1890 1690  OF RECO	7950 6640 5210 3860 2970 2380 2110	OD OF R  CFS, FO L, IN Y E PROBA  10 10 7650 7650 4220 3240 2650 2330 5	R INDICA EARS, AN BILITY, 25 4% 11100 8760 6580 4530 3490 2930 2570	940-65  TED RECURID ANNUAL IN PERCEN 50 2%  12300 9480 7010 4700 3630 3120	RENCE

# 14201500 BUTTE CREEK AT MONITOR, OR

LOCATION.--Lat 45°06'06", long 122°44'42", in SE½SE½ sec.25, T.5 S., R.1 W., Marion County, Hydrologic Unit 17090009, on left bank at downstream side of highway bridge at Monitor and at mile 7.7.

DRAINAGE AREA. -- 58.7 mi2.

PERIOD OF RECORD.--January to December 1936, October 1940 to September 1952, October 1966 to September 1982. Monthly discharge only for January to December 1936, published is WSP 1318.

GAGE.--Water-stage recorder. Altitude of gage is 155 ft, from topographic map. Jan. 20 to Oct. 22, 1936, nonrecording gage at present site at different datum. Oct. 23 to Dec. 19, 1936, nonrecording gage at site 70 ft downstream at different datum. Oct. 1, 1940, to Sept. 30, 1952, nonrecording gage at present site at 151.35 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Diversions for irrigation by pumping above station.

AVERAGE DISCHARGE.--28 years (water years 1941-52, 1967-82), 221  $ft^3/s$ , 51.13 in/yr, 160,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,310 ft $^3$ /s Jan. 21, 1972, gage height, 15.26 ft, from floodmark; minimum, 0.04 ft $^3$ /s July 23, 24, Aug. 26, 1982.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-82

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	13	NTERVAL,	CFS, FOR IN YEARS E PROBABI	AND AN	NUAL NO	N <b>-</b>
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	9.3	485	90	106	1.18	3.4	1	4.1	2.1	1.4	.9	.6	
NOVEMBER	28	779	298	201	.67	11.2	3	4.8	2.5	1.7	1.2	.7	
ECEMBER	30	942	488	219	. 45	18.3	7	5.7	3.1	2.1	1.5	.9	
ANUARY	42	870	477	239	.50	17.9	14	6.5	3.8	2.7	2.0	1.3	
EBRUARY	49	977	431	206	.48	16.2	30	8.0	4.8	3.5	2.6	1.8	
MARCH	97	593	320	131	.41	12.0	60	11	6.3	4.6	3.4	2.4	
PRIL .	76	430	252	88	.35	9.5	90	15	8.7	6.5	5.0	3.6	
1AY	56	376	170	70	.41	6.4	120	21	13	10	8.1	6.2	
UNE	25	182	79	37	.46	3.0	183	51	37	31	26	21	
IULY	5.1	73	26	15	.60	1.0							
UGUST	2.1	49	13	9.5	.75	.5							
SEPTEMBER	3.3	72	21	18	.86	.8							
NNUAL	82	353	221	60	.27	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-82

					CE INTER		PERIOD (CON-		INTERV	AL, IN Y	EARS, AN	TED RECU D ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4% 	50 2% 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2 <b>%</b>	100
2060	3190	4760	5780	7050	7970								
							1	2460	3330	3800	4290	4590	
WEIGHTED	SKEW =	305					3	1850	2560	2960	3410	3700	
							7	1420	1880	2100	2320	2440	
							15	992	1270	1400	1520	1590	
							30	761	941	1010	1070	1100	
							60	591	733	797	854	885	
							90	529	658	717	772	803	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-82

 		DISCH	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIM	E		
 5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 821	541	412	335	<b>2</b> 79	238	172	119	74	39	26	19	14	9.3	6.2

# 14202000 PUDDING RIVER AT AURORA, OR

LOCATION.--Lat 45°14'00", long 122°44'56", in SEt sec.12, T.4 S., R.1 W., Marion County, Hydrologic Unit 17090009, on upstream side of bridge on U.S. Highway 99E at Aurora, 0.9 mi upstream from Mill Creek, and at mile 8.1.

DRAINAGE AREA .-- 479 mi2.

PERIOD OF RECORD. -- October 1928 to September 1964.

GAGE.--Wire-weight gage read once daily. Datum of gage is 72.23 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1934, and June 1 to Sept. 30, 1961, staff or wire-weight gage at same site at datum 5.00 ft higher.

REMARKS.--Slight regulation at high stages by pumping plant at mouth of Little Pudding River and at times in summer, by mills on tributaries. Small diversions above station.

COOPERATION.--Gage-height record collected in cooperation with U.S. Weather Bureau.

AVERAGE DISCHARGE. -- 36 years, 1,217 ft3/s, 881,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,400 ft³/s Dec. 30, 1937, gage height, 29.5 ft, present datum, from graph based on gage readings, from rating curve extended above 16,000 ft³/s; minimum, 26 ft³/s Aug. 13, 14, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 30.0 ft, present datum, Jan. 7, 1923, discharge 27,900 ft³/s, from rating curve extended above 16,000 ft³/s.

#### STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVAL	, IN YE	ARS, AND	TED RECUI	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	64	1774	340	360	1.06	2.3	1	49	38	33	29	25	
NOVEMBER	79	4643	1387	1056	.76	9.4	3	50	38	33	29	25	·
DECEMBER	436	5704	2355	1365	.58	16.0	7	51	40	35	31	28	
JANUARY	766	5722	2693	1428	.53	18.3	14	54	42	37	34	30	
FEBRUARY	832	5600	2642	1225	.46	18.0	30	58	46	41	37	33	
MARCH	599	4235	2094	879	.42	14.3	60	70	57	51	47	44	
APRIL	456	3355	1563	745	.48	10.6	90	81	65	58	54	50	
MAY	242	2192	881	435	.49	6.0	120	110	83	72	64	57	
JUNE	158	1101	419	203	.48	2.9	183	249	179	150	129	109	
JULY	67	364	151	67	.44	1.0							
AUGUST	34	120	72	21	.29	.5							
SEPTEMBER	41	213	91	41	.45	.6							
	695	1980	1217	321	.26	100							
ANNUAL													
MAGN/1	TUDE AND BASE IN CFS,	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	OD OF RE	CORD 192	OUS PEAK 1 9-64 INTERVAL IN PERCEI	, IN	PERIOD (CON-	BASE	D ON PER ARGE, IN	CFS, FO	ECORD 1	L HIGH FI 929-64 TED RECUR D ANNUAL IN PERCER	RENCE
MAGNII	TUDE AND BASE	PROBABILI D ON PERIO	OD OF RE	CORD 192	OUS PEAK 1 9-64 INTERVAL IN PERCEI	, IN	PERIOD	BASE	D ON PER ARGE, IN	CFS, FO	ECORD 1	929-64 TED RECUR	RENCE

DURATION 1	TABLE 0	F DAILY	MEAN	FLOW	F0R	PERIOD	0F	RECORD	1929-64
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		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
4670	3410	2550	1980	1610	1350	943	630	373	185	131	102	82	69	56

# 14202500 TUALATIN RIVER NEAR GASTON, OR

LOCATION.--Lat 45°26'11", long 123°10'07", in SE‡SW‡ sec.34, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on right bank 1.5 mi west of Gaston, and at mile 63.9.

DRAINAGE AREA .-- 48.5 mi2.

711

349

280

186

124

83

**5**3

33

26

21

18

15

13

PERIOD OF RECORD.--October 1940 to September 1956, October 1972 to September 1976, October 1978 to September 1978 in reports of Oregon Water Resources Department. Prior to October 1973 published as "at Gaston."

GAGE.--Water-stage recorder. Altitude of gage is 170 ft, by barometer. Prior to May 20, 1942, water-stage recorder at site 1.5 mi downstream at datum 164.18 ft National Geodetic Vertical Datum of 1929. May 20, 1942, to Sept. 30, 1956, nonrecording gage at present site at different datum.

REMARKS.--Slight diurnal fluctuation caused by logponds upstream. Small diversions for irrigation above station. In 1949, city of Hillsboro began diverting about 5 ft<sup>3</sup>/s for municipal supply. Some water is diverted from Roaring Creek upstream for Forest Grove municipal supply.

AVERAGE DISCHARGE.--24 years (water years 1941-56, 1973-76, 1979-82), 197 ft<sup>3</sup>/s, 55.16 in/yr, 142,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft<sup>3</sup>/s Dec. 21, 1955, gage height, 13.18 ft, site and datum then in use; minimum, 0.20 ft<sup>3</sup>/s Sept. 22, 23, 1951, Aug. 14, 15, Sept. 25, Oct. 8, 1952.

# STATISTICAL SUMMARIES (BEFORE MUNICIPAL DIVERSIONS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-50

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-50

				STAN- DARD	COEFF1-	PERCENT	PERIOD	DISCH		CFS, FOF			
	MINIMUM	MAXIMUM	MEAN	DEVIA- TION	CIENT OF	OF ANNUAL	(CON- SECU-			, IN TEAP CE PROBAE			
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 <b>5%</b>	50 2%	100 1 <b>%</b>
OCTOBER	18	244	56	68	1.22	2.5	1						
NOVEMBER	96	528	254	140	. 55	11.2	3				'		
DECEMBER	102	672	425	202	.48	18.8	7						
JANUARY	138	542	351	131	<b>.</b> 37	15.5	14						
EBRUARY	193	827	485	212	- 44	21.4	30						
/ARCH	107	<b>5</b> 94	300	1 <b>5</b> 3	.51	13.3	60						
\PRIL	82	300	184	80	- 44	8.1	90						
ИΑΥ	48	239	102	54	<b>. 5</b> 3	4.5	120						
JUNE	33	64	49	11	• 23	2.2	183						
JULY	15	3 <b>5</b>	25	6.5	- 26	1.1							
AUGUST	8.9	21	16	4.0	. 26	•7	NOTE:	LESS THA	N 10 YEA	RS OF DAT	A AVAILA	BLE.	
SEPTEMBER	4.7	41	18	11	.61	.8							
ANNUAL	119	239	187	46	- 25	100							
	TUDE AND BASE	D ON PERI	OD OF RE	CORD 194			мA	BASE	D ON PER	ABILITY O	CORD 19	41-50	
OISCHARGE YEARS,	TUDE AND BASE , IN CFS,	FOR INDIA	OD OF RE	CORD 194	1-82 INTERVAL	, IN NT	PERIOD (CON-	BASE DISCH	D ON PER		CORD 19	41-50 ED RECUF	 RRENCE
DISCHARGE	TUDE AND BASE	D ON PERI	OD OF RE	CORD 194	1-82 INTERVAL		<b>-</b>	BASE DISCH	D ON PER	IOD OF RE CFS, FOR AL, IN YE	CORD 19	41-50 ED RECUF	RRENCE
DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	FOR INDII L EXCEEDA	OD OF RE	CORD 194 CURRENCE BABILITY,	1-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDANG	CFS, FOR AL, IN YECE PROBAE	CORD 19 LINDICAT ARS, AND BILITY, I	41-50 ED RECUF ANNUAL N PERCEN	RRENCE
DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA	OD OF RE	CORD 194 CURRENCE BABILITY, 25 4%	1-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDANG	CFS, FOR AL, IN YECE PROBAE	CORD 19 LINDICAT ARS, AND BILITY, I	41-50 ED RECUF ANNUAL N PERCEN	 RRENCE
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA	OD OF RE	CORD 194 CURRENCE BABILITY, 25 4%	1-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERV. EXCEEDAN:	CFS, FOR AL, IN YE CE PROBAE	CORD 19 LINDICAT ARS, AND BILITY, I	41-50 ED RECUF ANNUAL N PERCEN	RRENCE
1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE BABILITY, 25 4%	1-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERVEXCEEDANG	CFS, FOR AL, IN YE CE PROBAE 10 10%	CORD 19 LINDICAT ARS, AND BILITY, I	41-50 ED RECUF ANNUAL N PERCEN	RRENCE
1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE BABILITY, 25 4%	1-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1	BASE  DISCH  2 50%  2100 1570	D ON PER  ARGE, IN INTERV EXCEEDANG  5 20%  2660 1960	CFS, FOR AL, IN YE CE PROBABE 10 10%	CORD 19 LINDICAT ARS, AND BILITY, I	41-50  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE BABILITY, 25 4%	1-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE  DISCH  2 50%  2100 1570 1200	ARGE, IN INTERVEXCEEDANG  2660 1960 1510	CFS, FOR AL, IN YECE PROBABETO 10 10%	CORD 19 LINDICAT ARS, AND BILITY, I	41-50  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE BABILITY, 25 4%	1-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH  2 50%  2100 1570 1200 893	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  2660 1960 1510 1120	10D OF RE CFS, FOR AL, IN YE CE PROBAE 10 10% 3080 2210 1680 1230	CORD 19 LINDICAT ARS, AND BILITY, I	41-50  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF RE	CORD 194 CURRENCE BABILITY, 25 4%	1-82 INTERVAL IN PERCEI	, IN NT	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30	DISCH  2 50\$  2100 1570 1200 893 655	D ON PER  ARGE, IN INTERV EXCEEDANG  5 20%  2660 1960 1510 1120 840	CFS, FOR AL, IN YECE PROBAE  10 10\$  3080 2210 1680 1230 927	CORD 19 LINDICAT ARS, AND BILITY, I	41-50  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF RECOME	CORRE 194 COURRENCE HABILITY, 25 4%	INTERVAL IN PERCEI	, IN NT 100 18	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2100 1570 1200 893 655 519 468	ARGE, IN INTERV. EXCEEDAN.  5 20%  2660 1960 1510 1120 840 641 581	CFS, FOR AL, IN YECE PROBAE  10 10%  3080 2210 1680 1230 927 698 637	CORD 19 LINDICAT ARS, AND BILITY, I	41-50  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	TUDE AND BASE  , IN CFS, AND ANNUA  2 50%	FOR INDIO	OD OF RECOME	CURRENCE ABILITY, 25 4% 5560	1-82 INTERVAL IN PERCEI 50 2%	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50\$  2100 1570 1200 893 655 519 468  OF RECO	ARGE, IN INTERV. EXCEEDAN.  2660 1960 1510 1120 840 641 581	100 OF RE  CFS, FOR AL, IN YECE PROBAE  10 10%  3080 2210 1680 1230 927 698 637	ECORD 19	41-50  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE

# 14202500 TUALATIN RIVER NEAR GASTON, OR--Continued

# STATISTICAL SUMMARIES (AFTER MUNICIPAL DIVERSIONS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1951-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1952-82

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT	PERIOD (CON- SECU-	. 1	NTERVAL,	IN YEAF	R INDICATI RS, AND AI BILITY, II	NNUAL NO	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	2.2	146	 55	47	.85	2.2	1	4.0	<b></b> 9	.4	.2		
NOVEMBER	8.5	642	236	194	.82	9.6	3	4.2	1.1	. 5	.2		
DECEMBER	168	843	488	211	.43	19.9	7	5.0	1.6	.8	.4		
JANUARY	115	871	518	248	.48	21.1	14	6.5	2.6	1.4	.8		
FEBRUARY	140	842	436	166	.38	17.7	30	8.8	3.9	2.2	1.2		
MARCH	134	677	336	133	.40	13.7	60	12	5.7	3.5	2.2		
APRIL	110	374	217	81	.37	8.8	90	14	7.2	4.5	2.9		
MAY	42	154	86	35	.40	3.5	120	19	10	6.8	4.5		
JUNE	18	87	39	18	.45	1.6	183	35	22	16	11		
JULY	9.5	32	29 18	5.9	.33	.7	دەر	J)		10		- <b>-</b>	
AUGUST	2.5	32 37	18	8.9	.62	• / • 6							
SEPTEMBER	-	31											
SEPTEMBER	2.1	21	14	8.0	. 56	•6							
ANNUAL	117	315	204	62	.30	100							
DISCHARGE,	BASE , IN CFS,	PROBABILI D ON PERI	OD OF RE	CORD 195	1-82 INTERVAL	 , IN		BASED	ON PERI	OD OF RE	DF ANNUAL ECORD 195 R INDICATE	51-82  ED RECUR	
DISCHARGE,	BASE , IN CFS,	D ON PERI	OD OF RE	CORD 195	I-82 INTERVAL IN PERCEI	 , IN	PERIOD (CON- SECU-	BASED DISCHA	ON PERI  RGE, IN INTERVA	OD OF RECEIVED	ECORD 195	51-82 ED RECUR ANNUAL	 RENCE
DISCHARGE, YEARS,	BASE IN CFS,	FOR INDIAL EXCEEDA	OD OF RE	CORD 195	I-82 INTERVAL IN PERCEI	 , IN NT	PERIOD (CON-	BASED DISCHA	ON PERI  RGE, IN INTERVA	OD OF RECEIVED	ECORD 195	51-82 ED RECUR ANNUAL	 RENCE
DISCHARGE, YEARS, /	BASE , IN CFS, AND ANNUA 2	FOR INDIAL EXCEEDA	OD OF RE	CORD 195 CURRENCE BABILITY,	I-82 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAI  E  2  50%	ON PERI	OD OF RE	ECORD 199 R INDICATE EARS, AND BILITY, II	51-82 ED RECUR ANNUAL N PERCEN	RENCE T
YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2	FOR INDIAL EXCEEDA	OD OF RE	CORD 195 CURRENCE BABILITY,	I-82 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI E 2 50%	ON PERI PRGE, IN INTERVA XCEEDANC 5 20%	OD OF RECEPTOR	ECORD 19! R INDICATE EARS, AND BILITY, II 25 4%	51-82 ED RECUR ANNUAL N PERCEN	RENCE T
YEARS, A	BASE , IN CFS, AND ANNUA 2	FOR INDIAL EXCEEDA	OD OF RE	CORD 195 CURRENCE BABILITY,	I-82 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI  E 2 50%  2010 1610	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%  2570 2050	OD OF RECEIVED OF	R INDICATE EARS, AND BILITY, II	ED RECUR ANNUAL V PERCEN 50 2%	RENCE T
YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2	FOR INDIAL EXCEEDA	OD OF RE	CORD 195 CURRENCE BABILITY,	I-82 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHAI E 2 50% 2010 1610 1250	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%  2570 2050 1510	OD OF RECEIVED TO THE PROBABLE TO TO TO THE PROBABLE TO TO THE PROBABLE TO THE PROBABLE TO THE PROBABLE TO THE PROBABLE TO THE PROBABLE TO THE PROBABLE TO THE PROBABLE TO THE PROBABLE TO THE PROBABLE TO THE PROBABLE TO T	R INDICATE AND AND AND AND AND AND AND AND AND AND	ED RECUR ANNUAL N PERCEN 50 2%	RENCE T
YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2	FOR INDIAL EXCEEDA	OD OF RE	CORD 195 CURRENCE BABILITY,	I-82 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI E	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 2570 2050 1510 1130	OD OF RE	R INDICATE EARS, AND BILITY, II 25 4% 3510 2680 1750 1340	ED RECUR ANNUAL N PERCEN 50 2%	RENCE T
YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2	FOR INDIAL EXCEEDA	OD OF RE	CORD 195 CURRENCE BABILITY,	I-82 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCHAI E 2 50% 2010 1610 1250 925 692	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 2570 2050 1510 1130 864	OD OF RE	R INDICATE EARS, AND BILITY, II 25 4% 3510 2680 1750 1340 1110	ED RECUR ANNUAL N PERCEN 50 2%	RENCE T
YEARS, A	BASE , IN CFS, AND ANNUA 2	FOR INDIAL EXCEEDA	OD OF RE	CORD 195 CURRENCE BABILITY,	I-82 INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI E	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 2570 2050 1510 1130	OD OF RE	R INDICATE EARS, AND BILITY, II 25 4% 3510 2680 1750 1340	51-82  DRECUR ANNUAL PERCEN  50 2%	RENCE T
YEARS, A	BASE , IN CFS, AND ANNUA 2	FOR INDIAL EXCEEDA	CATED RE	CORD 195 CURRENCE BABILITY, 25 4%	I-82 INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCHAI E 2 50% 2010 1610 1250 925 692 549 498	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%  2570 2050 1510 1130 864 718 652	OD OF RECOMPANY OF	R INDICATE AND BILITY, 11 25 4% 3510 2680 1750 1340 1110 959	51-82  DRECUR ANNUAL PERCEN  50 2%	RENCE T
YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2	FOR INDI	OD OF RECOME	CORD 195 CURRENCE SABILITY, 25 4%	ITERVAL IN PERCEI 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI E	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%  2570 2050 1510 1130 864 718 652  D 1951-8	OD OF RE	3510 2680 1750 1110 959 855	51-82  DRECUR ANNUAL PERCEN  50 2%	RENCE T
YEARS, A	BASE , IN CFS, AND ANNUA 2	FOR INDI	OD OF RECOME	CORD 195 CURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD  XCEEDED FOR	DISCHAI E	ON PERI  RGE, IN INTERVA XCEEDANC  5 20%  2570 2050 1510 1130 864 718 652  D 1951-8	OD OF RE	3510 2680 1750 1110 959 855	51-82  DRECUR ANNUAL PERCEN  50 2%	RENCE T

# 14203000 SCOGGINS CREEK NEAR GASTON, OR

LOCATION.--Lat 45°27'32", long 123°09'16", on line between secs. 26 and 27, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 100 ft upstream from bridge on State Highway 47, 1.7 mi northwest of Gaston, and at mile 1.7.

DRAINAGE AREA. -- 43.3 mi<sup>2</sup>.

PERIOD OF RECORD. --October 1940 to September 1974. Prior to October 1973, published as "Scoggin Creek near Gaston."

GAGE.--Water-stage recorder. Datum of gage is 168.92 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1947, water-stage recorder at site 300 ft upstream at same datum. Oct. 1, 1947, to June 7, 1950, nonrecording gage at site 150 ft upstream at same datum.

REMARKS.--Some diurnal fluctuation caused by logponds above station. Diversions by pumping for irrigation above station. Part of domestic water supply for Hillsboro is diverted from Sain Creek above station.

AVERAGE DISCHARGE.--34 years, 143 ft3/s, 44.85 in/yr, 103,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,320 ft<sup>3</sup>/s Dec. 21, 1955, gage height, 15.94 ft; minimum, 0.10 ft<sup>3</sup>/s Aug. 28, Sept. 30, Oct. 1, 3, 1958, Aug. 23, 24, 1961.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1941-74 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-74

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	<b>2</b> 50%	5 <b>20%</b>	10 10%	20 5%	50 <b>2%</b>	100 1 <b>%</b>
OCTOBER	5.2	139	27	27	1.00	1.6	1	1.5	.5	.3	.2	.1	
NOVEMBER	11	432	155	111	.72	9.0	3	2.1	.9	.6	. 4	.2	
DECEMBER	51	655	322	157	. 49	18.6	7	3.1	1.6	1.1	.8	.5	
JANUARY	90	675	364	177	.49	21.1	14	3.8	2.2	1.5	1.1	.7	
FEBRUARY	1 <b>1</b> 5	660	333	140	-42	19.3	30	4.6	2.7	2.0	1.5	1.1	
MARCH	74	499	259	118	-46	15.0	60	5.7	3.6	2.8	2.3	1.8	
APRIL	54	269	144	59	-41	8.3	90	7.1	4.8	3.8	3.2	2.5	
MAY	35	167	68	31	.46	3.9	120	9.5	6.7	5.5	4.6	3.8	
JUNE	14	54	30	10	.34	1.7	183	20	15	13	11	9.3	
JULY	4 - 1	23	13	4.7	- 38	.7							
AUGUST	1.0	15	6.4	3.3	.50	. 4							
SEPTEMBER	2.1	16	7.5	3.8	<b>.</b> 50	. 4							
ANNUAL	72	225	143	36	.25	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-74 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-74

DISCHARGE, YEARS,					CE INTER		PERIOD (CON-		INTERV	AL, IN Y	EARS, AN	TED RECUR D ANNUAL IN PERCEN	
1.25	2	5 <b>20%</b>	10	25	50	100	SECU-						
80%	5 <b>0%</b>	20%	10%	4% 	2%	1%	TIVE Days)	2 50%	5 <b>20%</b>	10 10%	25 4%	50 <b>2%</b>	100 1 <b>%</b>
<b>129</b> 0	1770	2580	3220	4170	4980								
							1	1460	1940	2290	2770	3150	
WEIGHTED	SKEW =	.641					3	1140	1490	1740	2100	2390	
							7	904	1130	1250	1400	1490	
							15	721	875	939	994	1020	
							30	539	654	706	753	778	
							60	425	530	583	636	668	
							90	375	464	508	551	577	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-74

		DISCH	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN	OF TIM	Ε		
5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75%	80 <b>%</b>	85 <b>%</b>	90%	95%
576	394	288	223	180	148	95	58	32	18	13	9.8	7.6	5.3	3.5

# 14203500 TUALATIN RIVER NEAR DILLEY, OR

LOCATION.--Lat 45°28'30", long 123°07'23", in NEtNWt sec.24, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 5 ft upstream from highway bridge, 1.0 mi south of Dilley, 1.2 mi downstream from Scoggins Creek, and at mile 58.81.

DRAINAGE AREA .-- 125 m12.

PERIOD OF RECORD. --October 1939 to September 1982. Prior to October 1940 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 147.57 ft National Geodetic Vertical Datum of 1929. Prior to June 16, 1950, nonrecording gage at several sites within 200 ft of present site at datum 4.00 ft higher. June 16, 1950, to Aug. 10, 1966, water-stage recorder at present site at datum 4.00 ft higher.

REMARKS.--Diurnal fluctuation caused by operation of millpond on Scoggins Creek above station and regulation by Henry Hagg Lake since January 1975. Diversions above station of approximately 3,000 acre-ft from J.W. Barney Reservoir on the Middle Fork of North Fork Trask River for municipal water supply and irrigation in Wapato Lake area.

AVERAGE DISCHARGE.--43 years, 401 ft<sup>3</sup>/s, 290,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 ft³/s Dec. 22, 1964, gage height, 19.34 ft, from rating curve extended above 6,000 ft³/s; minimum, 0.08 ft³/s Sept. 3, 1967.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1940-74 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1941-74

				DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	- 11	NTERVAL,	CFS, FOR IN YEARS PROBABI	, AND AN	INUAL NO	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	5.5	353	80	75	.93	1.6	1	3.6	1.0	.5	.2	.1	
NOVEMBER	19	1709	441	355	.80	8.8	3	5.0	1.7	-8	.5	.2	
DECEMBER	156	2228	962	512	.53	19.2	. 7	6.4	2.7	1.5	.9	.5	
ANUARY	277	2497	1069	564	.53	21.3	14	8.0	3.5	2.0	1.2	.7	
FEBRUARY	284	1922	989	404	.41	19.7	30	10	4.6	2.7	1.6	.9	
MARCH	219	1406	733	339	.46	14.6	60	14	7.0	4.4	2.9	1.7	
\PR1L	143	769	412	179	.43	8.2	90	17	9.7	6.8	4.9	3.2	
YAY	88	437	185	88	.48	3.7	120	24	15	11	9.0	6.7	
JUNE	39	132	76	25	.33	1.5	183	56	39	31 .	25	20	
JULY	6.1	49	28	12	.44	`.5							
<b>NUGUST</b>	.9	40	16	9.3	. 59	.3							
SEPTEMBER	1.8	60	21	13	.63	. 4							
ANNUAL	216	839	417	117	.28	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-74

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-74

					ICE INTER		PERIOD (CON-		INTERV	'AL, ÎN Y	EARS, A	TED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20%	10 10%	25 4%	50 <b>2%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3530	5000	7540	9600	12700	15400								
							1	4270	6050	7460	9500	11200	
<b>VEIGHTED</b>	SKEW =	.599					3	3340	4700	5830	7540	9060	
							7	2600	3580	4270	5200	5930	
							15	2090	2720	3040	3380	3580	
							30	1570	2010	2240	2480	2630	
							60	1230	1580	1790	2020	2170	
							90	1080	1390	1570	1770	1900	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-74

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	.90%	95%
1740	1140	852	659	536	428	275	157	86	46	33	24	18	13	6.9

# 14204000 GALES CREEK NEAR GALES CREEK, OR

LOCATION.--Lat 45°38'30", long 123°15'55", in NW\SE\ sec.23, T.2 N., R.5 W., Washington County, Hydrologic Unit 17090010, on right bank 0.5 mi downstream from Beaver Creek, 4.6 mi northwest of town of Gales Creek, and at mile 17.5.

DRAINAGE AREA. -- 33.2 mi2.

448

295

221

173

136

111

70

46

28

PERIOD OF RECORD. -- October 1935 to September 1945, October 1963 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is 449.31 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 3, 1964, nonrecording gage at same site and datum.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--17 years, 115 ft<sup>3</sup>/s, 47.04 in/yr, 83,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,970 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 8.63 ft; minimum, 1.7 ft<sup>3</sup>/s Sept. 28, 1967.

W	ONTHI V. AN	ID ANNUAL	MEAN DIS	CHARCES	1076 70		144	NITUDE :	ND BDABA	DILLTY	OF ANNUAL	LOW EL	<b>7</b> M
Mi	UNITALL AN	ID ANNUAL	MEAN DIS	CHARGES	1936-70		MA				ECORD 19		) <b>H</b>
	 MINIMUM	MAX†MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	!	NTERVAL,	IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL N	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 <b>5%</b>	50 2%	100 1%
OCTO <b>B</b> ER	8.0	54	19	12	.66	1.3	1	4.6	3.1	2.5	2.1		
NOVEMBER	8.2	298	98	92	.94	7.1	3	5.6	3.9	3.1	2.6		
DECEMBER	<b>4</b> 3	551	251	158	.63 .52	18.1	7	6.2	4.4	3.5 3.9	2.9 3.2		
JANUARY FEBRUARY	59 105	614 49 <b>6</b>	312 271	161 105	.32 .39	22.5 19.5	1 <b>4</b> 30	6.6 7.1	4.8 5.2	3.9 4.3	3.6	<del>-</del> -	
MARCH	70	<b>35</b> 9	207	9 <b>5</b>	• <b>4</b> 6	14.9	60	8.0	6.0	5.1	4.4		
APRIL	48	275	113	61	.54	8.1	90	8.9	6.9	6.0	5.4		
MAY	23	107	55	20	.36	3.9	120	10	8.2	7.3	6.8		
JUNE	16	52	29	11	.37	2.1	183	18	14	12	10		
JULY	9.4	27	15	5.1	.34	1.1						<del>-</del>	
AUGUST	4.5	15	9.2	3.1	.33	.7							
SEPTEMBER	3.4	25	9.5	5.6	<b>.5</b> 9	.7							
00, 10,100,11	2.4	27	,,,	2.6	. 79	• /							
ANNUAL	71 	167 PROBABILI	115 	25 	.22 DUS PEAK I	100	 MA(				OF ANNUAL		.O <b>w</b>
MAGNI  MAGNI  DISCHARGE,  YEARS,	71 TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR IND!	TY OF IN OD OF RE CATED RE	25 STANTANEG CORD 1936 CURRENCE	.22 DUS PEAK I 5-70 INTERVAL IN PERCE	100 FLOW , IN	PERIOD (CON-	BASEI DISCHA	O ON PERI	OD OF RI	DF ANNUAL ECORD 19 R INDICATI EARS, AND	36-70  ED RECUI ANNUAL	RRENCE
MAGNIT	71 TUDE AND BASE	167 PROBABILI D ON PERI FOR IND!	115 TY OF IN OD OF RE	25 STANTANE CORD 1936	.22 DUS PEAK I 5-70 INTERVAL IN PERCE	100  FLOW , IN	PERIOD	BASEI DISCHA	O ON PERI	OD OF RI	ECORD 19	36-70  ED RECUI ANNUAL	RRENCE
MAGNITAL MAG	71 TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	115 TY OF IN OD OF RE CATED RE NCE PROB	25 STANTANE CORD 1936 CURRENCE	.22 OUS PEAK I 5-70 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/	O ON PERI	CFS, FOR	ECORD 19 R INDICATE EARS, AND BILITY, II  25 4%	36-70 ED RECUF ANNUAL N PERCEI 50 2%	RRENCE
MAGNITONIAN MAGNITAN MAGNITONIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANI	71 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	115 TY OF IN OD OF RE CATED RE NCE PROB	25 CORD 1930 CURRENCE ABILITY,	.22 OUS PEAK I 5-70 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ E 2 50%	O ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FORL, IN YISE PROBAL	ECORD 19 R INDICATI EARS, AND BILITY, II	36-70 ED RECUF ANNUAL N PERCET 50 2%	RRENCI
MAGNITONIAN MAGNITAN MAGNITONIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANI	71 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	115 TY OF IN OD OF RE CATED RE NCE PROB	25 CORD 1930 CURRENCE ABILITY,	.22 OUS PEAK I 5-70 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ E 2 50% 1580 1210	ON PERI	CFS, FOR L, IN YI E PROBAL 10% 2560 1920	2970 2240	36-70 ED RECUF ANNUAL N PERCEF 50 2%	RRENCI
MAGNITONIAN MAGNITAN MAGNITONIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANI	71 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	115 TY OF IN OD OF RE CATED RE NCE PROB	25 CORD 1930 CURRENCE ABILITY,	.22 OUS PEAK I 5-70 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS) 	DISCH/ E 2 50% 1580 1210 869	O ON PERI	OD OF RI CFS, FOR IL, IN YI EE PROBAB 10 10% 2560 1920 1270	2970 2240 1410	36-70 ED RECUF ANNUAL N PERCET 50 2%	RRENCI
MAGNITONIAN MAGNITAN MAGNITONIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANI	71 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	115 TY OF IN OD OF RE CATED RE NCE PROB	25 CORD 1930 CURRENCE ABILITY,	.22 OUS PEAK I 5-70 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ E 2 50% 1580 1210 869 650	2190 1650 1140 820	OD OF RI CFS, FOI LL, IN YI E PROBAB 10 10% 2560 1920 1270 890	2970 2240 1410 947	ED RECUF ANNUAL N PERCEI 50 2%	RRENCE
MAGNITONION MAGNITONI MAGNITA MAGNITONI MAGNITONI MAGNITA MAGNITA MAGNITA MAGNITA MAGNITA MA	71 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	115 TY OF IN OD OF RE CATED RE NCE PROB	25 CORD 1930 CURRENCE ABILITY,	.22 OUS PEAK I 5-70 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCH/  E 2 50%  1580 1210 869 650 467	0 ON PERI INTERVA EXCEEDANC 5 20% 2190 1650 1140 820 569	OD OF RICE PROBABLE 10 10% 2560 1920 1270 890 613	25 4% 2970 2240 1410 947 653	36-70 ED RECUF ANNUAL N PERCEF 50 2%	RRENCE
MAGNITONIAN MAGNITAN MAGNITONIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANIAN MAGNITANI	71 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	115 TY OF IN OD OF RE CATED RE NCE PROB	25 CORD 1930 CURRENCE ABILITY,	.22 OUS PEAK I 5-70 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ E 2 50% 1580 1210 869 650	2190 1650 1140 820	OD OF RI CFS, FOI LL, IN YI E PROBAB 10 10% 2560 1920 1270 890	2970 2240 1410 947	50 2%	RRENCE
MAGNITONION MAGNITONI MAGNITA MAGNITONI MAGNITONI MAGNITA MAGNITA MAGNITA MAGNITA MAGNITA MA	71 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	115 TY OF IN OD OF RE CATED RE NCE PROB	25 STANTANEI CORD 1936 CURRENCE ABBILITY, 25 4%	DUS PEAK I 5-70 INTERVAL IN PERCE	100 FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ E 2 50%  1580 1210 869 650 467 373 325	2190 1650 1140 820 569 437 379	CFS, FOR IL, IN YIE PROBAL  10 10%  2560 1920 1270 890 613 460 397	2970 2240 1410 947 653 47	50 2%	RRENCE
MAGNITONION MAGNITONI MAGNITA MAGNITONI MAGNITONI MAGNITA MAGNITA MAGNITA MAGNITA MAGNITA MA	71  TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	115  TY OF IN OD OF RE  CATED RE NCE PROB  10 10%  3400  DURATIO	25 STANTANEC CORD 1936 CURRENCE ABILITY, 25 4% 4210	DUS PEAK IS-70 INTERVAL IN PERCEISO 2%	100 FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH/  E 2 50%  1580 1210 869 650 467 373 325  OF RECOR	2190 1650 1140 820 569 437 379	OD OF RICE OF	25 4% 2970 2240 1410 947 653 477 411	50 2%	RENCE

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# 14204500 GALES CREEK NEAR FOREST GROVE, OR

LOCATION.--Lat 45°33'20", long 123°11'10", in SE‡ sec.21, T.1 N., R.4 W., Washington County, Hydrologic Unit 17090010, on left bank 50 ft downstream from Roderick road bridge, 0.1 mi below Kelly Creek, 2.5 mi southeast of town of Gales Creek, 4.5 mi northwest of Forest Grove. and at mile 8.7.

DRAINAGE AREA .-- 66.1 mi 2.

PERIOD OF RECORD.--October 1940 to September 1956, October 1970 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 201.81 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1941, at site 1.4 mi downstream at datum 14.33 ft lower. Sept. 13, 1941, to June 19, 1952, at downstream side of bridge at datum 1.44 ft higher. June 20, 1952, to Jan. 3, 1956, at datum 1.00 ft higher.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years, 225 ft<sup>3</sup>/s, 46.23 in/yr, 163,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,410 ft³/s Feb. 17, 1949, gage height, 10.90 ft, from floodmark, site and datum then in use; maximum gage height, 12.95 ft, from floodmark, Jan. 21, 1972; minimum discharge, 1 ft³/s Aug. 19, 1947.

# STATISTICAL SUMMARIES

			and the second second		
MONTHLY AND	D ANNUAL	MEAN	DISCHARGES	1941-81	MAC

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-81

			MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	ITERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL NO	<b>1</b> –
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	7.3	198	44	43	.97	1.6	1	7.7	4.8	3.6	2.8	2.1	
NOVEMBER	18	7 18	245	186	.76	9.0	. 3	8.2	5.3	4.1	3.3	2.5	
DECEMBER	27	1080	531	275	.52	19.5	7	8.8	5.8	4.5	3.7	2.8	
ANUARY	27	1152	560	310	.55	20.6	14	9.5	6.5	5.2	4.2	3.4	
EBRUARY	62	1106	531	241	.45	19.5	30	11	7.4	6.0	5.1.	4.1	
4ARCH	124	904	396	201	.51	14.6	60	13	9.1	7.5	6.3	5.2	
\PR I L	73	398	213	91	.43	7.8	90	14	11	9.2	8.0	6.9	
4A Y	45	252	99	43	.43	3.6	120	18	13	11	9.9	8.3	
UNE	29	82	47	13	• 29	1.7	183	33	24	21 .	18	15	:
JULY	7.5	33	22	6.8	.31	-8							
\UGUST	4.9	22	14	4.4	.31	.5							
SEPTEMBER	6.8	31	16	6.1	.39	.6							
ANNUAL	52	383	225	76	.34	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-81

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-81

DISCHARGE, YEARS,					CE INTER		PERIOD (CON-		INTERV	AL, ÎN Y	EARS, AN	TED RECUR D ANNUAL IN PERCER	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
2110	3170	4680	5700	6990	7950								
	04514						1	2500	3470	4040	4710	5170	
WEIGHIEL	SKEW =	165					3	1970	2720	3160	3670	4030	
							7	1510	1990	2240	2480	2620	
							15	1150	1460	1590	1700	1760	
							30	846	1080	1180	1280	1330	- <b>-</b>
							60	674	872	963	1050	1090	
							90	605	775	843	896	922	·

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-81

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
892	609	449	351	279	220	136	83	47	28	23	19	16	12	8.9

# 14205500 EAST FORK DAIRY CREEK AT MOUNTAINDALE, OR

LOCATION.--Lat 45°38'05", long 123°02'35", in NE‡NW‡ sec.27, T.2 N., R.3 W., Washington County, Hydrologic Unit 17090010, on left bank at dam site 0.7 mi northwest of village of Mountaindale.

DRAINAGE AREA.--43.0 m1², including two small streams on left bank which enter creek below station.

PERIOD OF RECORD. -- October 1940 to September 1951.

GAGE.--Water-stage recorder. Datum of gage is 183.55 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records include measured or estimated discharge of two small streams which flow through dam site at station and enter creek from left bank about a mile below station. Diurnal fluctuation at low stages caused by logpond upstream. Probably some pumping for irrigation above station.

AVERAGE DISCHARGE.--11 years (water years 1941-51),  $107 \text{ ft}^3/\text{s}$ , 77,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,420 ft<sup>3</sup>/s Feb. 17, 1949, gage height, 12.54 ft; minimum, 7 ft<sup>3</sup>/s Sept. 10-12, 1944.

#### STATISTICAL SUMMARIES

MONTHLY	AND	ANNIIAI	MEAN	DISCHARGES	10/1-51

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-51

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CLENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN O INTERVAL, EXCEEDANCE	IN YEARS	, AND AN	INUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2 <b>%</b>	100 1 <b>%</b>
OCTOBER	10	67	23	17	.71	1.8	1	10	9.1	8.2	7.5		
NOVEMBER	26	179	103	61	.59	7.9	3	10	9.1	8.3	7.7		
DECEMBER	33	325	206	104	.50	15.8	7	11	9.2	8.5	8.0		
JANUARY	102	414	218	103	.47	16.7	14	11	9.7	9.1	8.6		
FEBRUARY	94	584	306	140	.46	23.5	30	11	10	10.0	9.6		
MARCH	63	436	191	108	.57	14.7	60	12	11	11	10		
APRIL	51	198	110	51	.46	8.5	90	14	12	12	11		
MAY	<b>3</b> 7	153	63	31	.49	4.8	120	16	14	13	12		
JUNE	26	54	<b>3</b> 5	8.8	.25	2.7	183	24	20	18	17		
JULY	15	27	20	4.1	.21	1.5		<del>-</del>			·- <del>-</del>		
AUGUST	9.8	18	13	2.2	. 16	1.0							
SEPTEMBER	10.0	18	13	2.1	. 17	1.0							
ANNUAL	59	151	107	30	.28	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1941-51

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1941-51

ISCHARGE, YEARS, A			DICATED F				PERIOD (CON-		INTERV	I CFS, FOF AL, IN YE CE PROBAE	ARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4% <del>-</del>	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100
969	1130	1310	1410			- <b>-</b>		<del>-</del>	<b></b>				
							1	1070	1260	1310			
WEIGHTED	SKEW =	141					3	865	1070	1150			
							7	679	840	896			
							15	507	672	748			
							30	362	501	585			
							60	303	395	443			
							90	270	349	389			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-51

 		DISCH	ARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCE	NT OF TH	ME		
 5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60 <b>%</b>	70%	75%	80%	85 <b>%</b>	90%	95 <b>%</b>
 408	<b>2</b> 77	207	160	128	107	74	51	34	22	19	<del>-</del> - 15	14	<del></del>	11

# 14206000 MCKAY CREEK NEAR NORTH PLAINS, OR

LOCATION.--Lat 45°37'32", long 122°58'32", in SE<sup>‡</sup> sec.30, T.2 N., R.2 W., Washington County, Hydrologic Unit 17090010, on downstream end of left timber bent of bridge on Shadybrook Road, 2.0 mi upstream from Jackson Creek, and 2.3 mi northeast of North Plains.

DRAINAGE AREA.--27.6 mi2.

319

208

143

103

77

58

35

20

12

6.6

5.2

4.3

3.5

2.9

2.3

PERIOD OF RECORD. -- October 1940 to September 1943, October 1948 to September 1956.

GAGE.--Water-stage recorder. Datum of gage is 172.57 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1940, to Sept. 30, 1943, at datum 0.25 ft higher.

REMARKS.--Some diurnal fluctuation in summer caused by pumping for irrigation above station.

AVERAGE DISCHARGE.--11 years (water years 1941-43, 1949-56), 70.7 ft<sup>3</sup>/s, 51,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft $^3$ /s Feb. 17, 1949, gage height, 11.23 ft; maximum gage height, 11.35 ft Dec. 21, 1955; minimum discharge, 0.4 ft $^3$ /s Aug. 17, 18, 22, 1951.

# STATISTICAL SUMMARIES

	MINIMUM	MAX1MUM	MEAN	STAN- DARD DEV1A- T10N	COEFF1- C1ENT OF VAR1-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		1NTERVAL	CFS, FOR , IN YEAR CE PROBAR	RS, AND A	NNUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	2.3	29	10	8.5	.82	1.2	1						
IOVEMBER	5.0	221	76	63	.83	8.9	3						
ECEMBER	27	307	177	82	.46	20.7	. 7						٠
ANUARY	56	318	176	85	.48	20.6	14			·			
EBRUARY	50	398	198	104	.53	23.1	30						
IARCH	29	248	114	69	.60	13.3	60						
PR1L	21	115	58	35	.61	6.7	90						
IAY	12	43	24	9.5	.40	2.8	120						
UNE	6.3	23	12	5.6	.47	1.4	183						
ULY	2.6	8.2	5.0	1.8	.36	.6	رەו				·		
UGUST	1.6	4.5	3.2	.9	.28	.4	NOTE . I	ECC TUA	N 10 VEA	RS OF DAT	TA AVA11A	DIE	
EPTEMBER		5.5	3.3	1.0	.20	.4	NOIL: L	.ESS IMA	N TO TEX	KS OF DA	IN NAVIEW	DLL.	
LITEMBLIN	2.4	,,,	ر.ر	1.0	• 29	• •							
NNUAL	36	110	71	19	.27	100							
MAGNIT	TUDE AND	PROBABILI D ON PERI	TY OF INS	STANTANEC	OUS PEAK (		MAG			ABILITY (			 -OW <sub>.</sub>
)1SCHARGE	TUDE AND BASE , 1N CFS,	PROBABILI	TY OF INS	STANTANEC CORD 1941 CURRENCE	OUS PEAK   -56	FLOW 	PERIOD	BASE DISCH	D ON PER  ARGE, IN  INTERV	OD OF RECEIVED	CORD 19 R INDICAT	41-56 ED RECUR	RRENCE
)1SCHARGE	TUDE AND BASE , 1N CFS,	PROBABILI D ON PERI	TY OF INS	STANTANEC CORD 1941 CURRENCE	DUS PEAK    -56     INTERVAL   1N PERCE	FLOW 		BASE DISCH	D ON PER  ARGE, IN  INTERV	OD OF RE	CORD 19 R INDICAT	41-56 ED RECUR	RRENCE
1SCHARGE YEARS,	TUDE AND BASE , 1N CFS, AND ANNUA	PROBABILI D ON PERIO FOR 1ND10	TY OF INS	STANTANEC CORD 1941 CURRENCE ABILITY,	DUS PEAK    -56    INTERVAL  IN PERCE	FLOW , IN NT	PERIOD (CON-	BASE DISCH	D ON PER ARGE, IN 1NTERV EXCEEDAN	CFS, FOR AL, 1N YE CE PROBAE	CORD 19 R INDICAT EARS, AND BILITY, 1	41-56 ED RECUF ANNUAL N PERCEN	RRENCE
1SCHARGE, YEARS,	TUDE AND BASE , 1N CFS, AND ANNUA	PROBABILI D ON PERIO FOR 1ND10 AL EXCEEDA	TY OF INS	STANTANEC CORD 1941 CURRENCE AB1L1TY,	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW  , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN	CFS, FOR AL, 1N YECE PROBAE	CORD 19 R INDICAT EARS, AND BILITY, 1	41-56 ED RECUF ANNUAL N PERCEN	RRENCI
1SCHARGE, YEARS,	TUDE AND BASE , 1N CFS, AND ANNUA	PROBABILI D ON PERIO FOR 1ND10 AL EXCEEDA	TY OF INS	STANTANEC CORD 1941 CURRENCE AB1L1TY,	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20%	CFS, FOF AL, 1N YE CE PROBAE	CORD 19 R INDICAT EARS, AND BILITY, 1	41-56  ED RECUF ANNUAL N PERCEN 50 2%	RRENCI
1SCHARGE YEARS, / 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INS OD OF REC CATED REC NCE PROB/	STANTANEC CORD 1941 CURRENCE AB1L1TY,	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW  , IN NT	PER1 OD (CON- SECU- T1VE DAYS)	DISCH	D ON PER ARGE, IN INTERV EXCEEDANN 5 20%	CFS, FORAL, IN YECE PROBAE	CORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	41-56  ED RECUF ANNUAL N PERCEN 50 2%	RRENCI
1SCHARGE YEARS, / 1.25 80%	TUDE AND BASE , 1N CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR 1ND10 AL EXCEEDA	TY OF INS OD OF REC CATED REC NCE PROB/	STANTANEC CORD 1941 CURRENCE AB1L1TY,	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW  , IN NT	PER1 OD (CON- SECU- T1VE DAYS) 1	BASE DISCH 2 50% 796 700	D ON PER ARGE, IN INTERV EXCEEDANG 5 20% 1040 826	CFS, FOF AL, 1N YE CE PROBAE 10 10%	CORD 19 R INDICAT EARS, AND BILITY, 1	41-56  ED RECUF ANNUAL N PERCEN 50 2%	RRENCI
1SCHARGE YEARS, / 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INS OD OF REC CATED REC NCE PROB/	STANTANEC CORD 1941 CURRENCE AB1L1TY,	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW , IN NT	PER1 OD (CON- SECU- T1VE DAYS) 1 3 7	BASE DISCH 2 50% 796 700 531	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  1040 826 645	CFS, FOFAL, 1N YECE PROBAE	CORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	41-56  ED RECUF ANNUAL N PERCEN  50 2%	RRENC
1SCHARGE YEARS, / 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INS OD OF REC CATED REC NCE PROB/	STANTANEC CORD 1941 CURRENCE AB1L1TY,	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW , IN NT	PER10D (CON- SECU- T1VE DAYS) 	BASE DISCH 2 50% 796 700	D ON PER ARGE, IN INTERV EXCEEDANG 5 20% 1040 826	10D OF RECEIVED OF	CORD 19 R INDICAT EARS, AND BILITY, 1 25 4%	41-56  ED RECUF ANNUAL N PERCEN 50 2%	RRENC
1SCHARGE YEARS, / 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INS OD OF REC CATED REC NCE PROB/	STANTANEC CORD 1941 CURRENCE AB1L1TY,	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW , IN NT	PER1 OD (CON- SECU- T1 VE DAYS)	BASE  DISCH  2 50  796 700 531 387 286	D ON PER  ARGE, IN  1NTERV  EXCEEDANG  5  20%  1040  826  645  496  365	CFS, FOR AL, 1N YE CE PROBAE 10 10\$ 1220 886 697 550 409	R INDICATE ARS, AND BILITY, 1	41-56  ED RECUF ANNUAL N PERCEN  50 2%	RRENCI
1.25 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INS OD OF REC CATED REC NCE PROB/	STANTANEC CORD 1941 CURRENCE AB1L1TY,	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW , IN NT	PER10D (CON- SECU- T1VE DAYS) 	DISCH  2 50  796 700 531 387	D ON PER	10D OF RECEIVED OF	R INDICATE ARS, AND BILITY, 1	41-56  ED RECUF ANNUAL N PERCEN 50 2%	RRENC
1.25 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INS OD OF REC CATED REC NCE PROB/	STANTANEC CORD 1941 CURRENCE AB1L1TY,	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW , IN NT	PER1 OD (CON- SECU- T1 VE DAYS)	BASE  DISCH  2 50  796 700 531 387 286	D ON PER  ARGE, IN  1NTERV  EXCEEDANG  5  20%  1040  826  645  496  365	CFS, FOR AL, 1N YE CE PROBAE 10 10\$ 1220 886 697 550 409	R INDICAT EARS, AND BILITY, 1	41-56  ED RECUF ANNUAL N PERCEN 50 2%	RRENC
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF IN: OD OF REC  CATED REC NCE PROB  10 10 1450	STANTANEC CORD 1941 CURRENCE BBILITY, 25 4%	DUS PEAK 1 -56 INTERVAL 1N PERCE	FLOW  , IN NT  100  1%	PER1 OD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  796 700 531 387 286 217 200	ARGE, IN 1NTERV. EXCEEDAN.  1040 826 645 496 365 273 247	CFS, FOFAL, 1N YECE PROBAE  10 10 10 1220 886 697 550 409 307 268	R INDICAT EARS, AND BILITY, 1	41-56  ED RECUF ANNUAL N PERCEN 50 2%	RREN
1.25 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INS	STANTANECCORD 1941 CURRENCE ABILITY, 25 4%	DUS PEAK I -56 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PER1 OD (CON- SECU- T1VE DAYS)	DISCH  2 50%  796 700 531 387 286 217 202  OF RECO	D ON PER  ARGE, IN 1NTERV. EXCEEDAN  1040 826 645 496 365 273 247  RD 1941-	100 OF RECORD OF	R INDICAT	41-56  ED RECUF ANNUAL N PERCEN 50 2%	RRENG

# 14206500 TUALATIN RIVER AT FARMINGTON, OR

LOCATION.--Lat 45°26'50", long 122°56'58", in SE\SE\ sec.29, T.1 S., R.2 W., Washington County, Hydrologic Unit 17090010, on left bank at Harris bridge at Farmington, 5.0 mi south of Hillsboro, and at mile 33.3.

DRAINAGE AREA .-- 568 mi2.

5760

4090

3040

2340

1830

1410

796

433

240

138

101

79

64

51

32

PERIOD OF RECORD. --October 1939 to September 1958. October 1972 to September 1976 (October, May to September only, each year).

GAGE.--Water-stage recorder. Datum of gage is 100.42 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1940, nonrecording gage at same site at datum 2.00 ft higher. Oct. 1, 1940, to Sept. 30, 1958, nonrecording gage at present site and

REMARKS.--Flow regulated by Henry Hagg Lake since January 1975.

AVERAGE DISCHARGE.--19 years (water years 1940-58), 1,355 ft3/s, 981,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge during period October 1939 to September 1958, 24,200 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 36.03 ft, from floodmark; no flow Aug. 4-7, Aug. 10 to Sept. 6, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.—-Maximum stage since 1932, about 37 ft Dec. 22 or 23, 1933.

М	ONTHLY AN	ND ANNUAL	MEAN DIS	SCHARGES	1940-58		MA			BABILITY	E0000 10		
·				STAN- DARD DEVIA-	COEFFI- CIENT OF		 PERIOD (CON-		HARGE, II	 N CFS, FC -, 1N YEA	RECORD 19 OR INDICAT ORS, AND A	ED RECUR	)N-
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR1- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	<b></b> 35	79 <b>1</b>	212	194	.92	1.3	1	 28	14	8.9	5.8		
VOVEMBER	85	3177	1074	902	.84	6.5	3	30	15	9.4	6.1		-
DECEMBER	337	7425	2929	1876	.64	17.9	7	32	16	11	7.0		_
JANUARY	945	7017	3401	1866	.55	20.7	14	35	20	13	9.5		_
FEBRUARY	1453	6603	3944	1571	.40	24.0	30	40	24	18	13		_
MARCH	730	5172	2474	1244	•50	15.1	60	52	35	27	21		_
APRIL	478	3135	1357	673	•50	8.3	90	64	43	34	27		_
MAY	247	1544	565	299	.53	3.4	120	85	60	48	38		-
JUNE	134	422	243	299 75	.31	1.5	183	168	122	100	84		_
JULY	39	160	24 <i>3</i> 98	79 39	.40	•6	102	100	122	100	04		
AUGUST	.8	99		39 24	.40								
SEPTEMBER	25	118	50 62	24 28		.3 .4							
DEF LEMBER	20	110	62	20	.45	. 4							
ANNUAL MAGNIT		2327  PROBABILI D ON PERI			.31 	100 	 MA				OF ANNUAL RECORD 19		<b></b>
MAGNIT	TUDE AND BASE	PROBABILI D ON PERI	ITY OF IN	ISTANTANE CORD 194	OUS PEAK	FLOW	MA PERIOD (CON-	BASI	IARGE, IN	RIOD OF F		40-58  ED RECUR ANNUAL	RENC
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR IND! L EXCEEDA	ITY OF IN OD OF RE CATED RE	STANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW	 PERIOD	BASI	IARGE, INTERN	RIOD OF F	RECORD 19 R INDICATION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	40-58  ED RECUR ANNUAL	RENC
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI	ITY OF IN IOD OF RE CATED RE	ISTANTANE CORD 194 CURRENCE	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASI DISCH	IARGE, IN INTER EXCEEDAN	RIOD OF F I CFS, FO /AL, IN Y NCE PROBA	RECORD 19 REINDICATI EARS, AND BILITY, II	40-58  ED RECUR ANNUAL N PERCEN	RENC
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR IND! L EXCEEDA	ITY OF IN OD OF RE CATED RE	STANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU-	BASI DISCE	IARGE, INTERN	RIOD OF F LCFS, FO /AL, IN Y NCE PROBA	RECORD 19 R INDICATION EARS, AND BILITY, I	40-58  ED RECUR ANNUAL N PERCEN	RENC
MAGNIT DISCHARGE, YEARS, A 1.25 80%	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR IND! L EXCEEDA	CATED RE	STANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASI DISCH	IARGE, IN INTER EXCEEDAN	RIOD OF F I CFS, FO /AL, IN Y NCE PROBA	RECORD 19 REINDICATI EARS, AND BILITY, II	40-58  ED RECUR ANNUAL N PERCEN	RENC
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERI FOR IND! L EXCEEDA	CATED RE	STANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCF	INTERNATION PER INTERNATION IN	I CFS, FO VAL, IN Y VICE PROBA	RECORD 19 R INDICATEARS, AND BILITY, II 25 4%	40-58  ED RECUR ANNUAL N PERCEN	RENC
MAGNITON MAG	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	CATED RE	STANTANE CORD 194 CURRENCE BABILITY, 25 4%	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 20%	I CFS, FO VAL, IN Y VICE PROBA	RECORD 19 REINDICATE EARS, AND BILITY, II 25 4%	40-58 ED RECUF ANNUAL N PERCEN 50 2%	RENC
MAGNITO	TUDE AND BASE IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	CATED RE	STANTANE CORD 194 CURRENCE BABILITY, 25 4%	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	IARGE, IN INTERNATION INTERNATION INTERNATION IATON 14100 12600	1 CFS, FO /AL, IN Y ICE PROBA 10 10% 16000 14000	RECORD 19 R INDICATI EARS, AND BILITY, II 25 4% 18000 15300	40-58  ED RECUR ANNUAL N PERCEN 50 2%	RENC
MAGNIT	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	CATED RE	STANTANE CORD 194 CURRENCE BABILITY, 25 4%	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON-SECU-TIVE DAYS)	DISCH	14100 12600 10500	10 OF F 1 CFS, FO 7AL, IN Y 10 10% 1000 14000 11500	RECORD 19 R INDICAT EARS, AND BILITY, II 25 4% 18000 15300 12300	40-58  ED RECUR ANNUAL N PERCEN 50 2%	RENC
MAGNIT	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	CATED RE	STANTANE CORD 194 CURRENCE BABILITY, 25 4%	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH  2 50%  10300 9610 8280 6800	######################################	1 CFS, FO I CFS, FO I CFS, FO I CFS, FO I CFS, FO I CFS, FO I CFS	RECORD 19 R INDICAT: EARS, AND BILITY, II 25 4%	40-58  ED RECUF ANNUAL N PERCEN  50 2%	RENC
MAGNIT ISCHARGE, YEARS, A 1.25 80\$	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	CATED RE	STANTANE CORD 194 CURRENCE BABILITY, 25 4%	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCH 2 2 50% 10300 9610 8280 6800 5260	MARGE, IN INTER: EXCEEDAN 5 20% 14100 12600 10500 6830	1 CFS, FO /AL, IN Y /CE PROBA 10 10\$ 16000 14000 11500 9280 7640	RECORD 19 R INDICAT EARS, AND BILITY, II 25 4% 18000 15300 12300 9890 8460	40-58  ED RECUF ANNUAL N PERCEN 50 2%	RENC
MAGNIT	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	CATED RE	STANTANE CORD 194 CURRENCE BABILITY, 25 4%	OUS PEAK 0-58 INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH  2 50%  10300 9610 8280 6800	######################################	1 CFS, FO I CFS, FO I CFS, FO I CFS, FO I CFS, FO I CFS, FO I CFS	RECORD 19 R INDICAT: EARS, AND BILITY, II 25 4%	40-58  ED RECUF ANNUAL N PERCEN 50 2%	RENC
MAGNIT ISCHARGE, YEARS, A 1.25 80\$	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	ITY OF IN OD OF RE CATED RE UNCE PROB 10 10\$	ISTANTANE ISTANTANE ICURRENCE SABILITY, 25 4%	INTERVAL IN PERCE	FLOW  , IN NT 100 11%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCF 2 50% 10300 9610 8280 6800 5260 4160 3730	MARGE, IN INTERN EXCEEDAN 120% 12600 10500 6830 5440 4860	10 CFS, FO ALL, IN Y WCE PROBA  10 10%  16000 14000 14000 1500 9280 7640 6150 5450	RECORD 19  R INDICAT EARS, AND BILITY, I  25 4%  18000 15300 12300 9890 8460 6930	40-58  ED RECUF ANNUAL N PERCEN 50 2%	RENC
MAGNIT	TUDE AND BASE  IN CFS, AND ANNUA  2  50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	ITY OF IN OD OF RECATED RELACE PROB	ISTANTANE ISTANTANE ICORD 194 ICOURRENCE IABILITY, 25 4% ISTANTANE	INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	DISCH  2 50%  10300 9610 8280 6800 5260 4160 3730  OF RECC	IARGE, IN INTER EXCEEDAN 12600 12600 6830 5440 4860 1940-	10 CFS, FO ALL, IN Y CCE PROBA  10 10%  16000 14000 11500 9280 7640 6150 5450	RECORD 19  R INDICAT: EARS, AND BILITY, II  25 4%  18000 15300 12300 9890 8460 6930 6050	40-58  ED RECUF ANNUAL N PERCEN 50 2%	RENC

#### 14207500 TUALATIN RIVER AT WEST LINN, OR

LOCATION.--Lat 45°21'03", long 122°40'30", in SW $_{4}^{\dagger}$  sec.34, T.2 S., R.1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 300 ft upstream from bridge on State Highway 212, 0.4 mi west of West Linn city limits, and at mile 1.8.

DRAINAGE AREA. -- 706 mi2.

PERIOD OF RECORD.--July 1928 to September 1982. Prior to October 1960, published as "near Willamette."

GAGE.--Water-stage recorder. Datum of gage is 85.61 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Prior to June 12, 1941, nonrecording gage at datum 1.02 ft higher.

REMARKS.--October 1951 to September 1970, all records published for this station included the daily flow of Oswego Canal. October 1971 to September 1982, maximum and average discharge only include flow in Oswego Canal. Oswego Canal diverts at point 5.0 mi above station for development of power between outlet of Lake Oswego and Willamette River. Some regulation in low-water season by flashboards on crest of diversion dam for Oswego Canal and regulation by Henry Hagg Lake since January 1975. Several diversions above station for irrigation.

AVERAGE DISCHARGE.--54 years, 1,530  $ft^3/s$ , 29.43 in/yr, 1,108,000 acre-ft/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,300 ft $^3$ /s Dec. 23, 1933, gage height, 17.72 ft; minimum daily, 0.20 ft $^3$ /s July 30 to Aug. 2, 1966.

# STATISTICAL SUMMARIES NOT ADJUSTED FOR DIVERSION

MONTHLY AND ANNUAL MEAN DISCHARGES 1929-51

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1930-51

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		NTERVAL,	CFS, FOR IN YEARS PROBABI	, AND AN	NUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	24	859	140	181	1.29	.9	1	8.9	5.3	4.1	3.3		·
NOVEMBER	40	4121	1074	1076	1.00	6.5	3	9.1	5.6	4.4	3.7		
DECEMBER	272	7685	2843	2080	.73	17.3	7	10	6.5	5.2	4.4		
JANUARY	669	6459	3524	1898	.54	21.5	14	12	7.6	6.2	5.4		
FEBRUARY	1080	7092	3574	1558	.44	21.8	30	15	9.5	7.9	6.9		
MARCH	740	5382	2622	1276	.49	16.0	60	22	15	13	11		
\PRIL	506	3642	1593	917	. 58	9.7	90	29	21	18	16		
1AY	175	1868	627	342	.55	3.8	120	45	33	28	25		
JUNE	100	587	259	114	.44	1.6	183	137	94	76	62		
JULY	23	214	84	48	.58	.5							
\UGUST	7.7	63	26	15	.58	.2							
SEPTEMBER	8.5	92	33	26	.79	.2							
ANNUAL	671	2046	1356	453	.33	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1929-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1929-51

EARS,	AND ANNU		DANCE PE	RECURRENC ROBABILITY	, IN PE	RCENT	PERIOD (CON-	DISC	INTER	/AL, ÍN ˈ	OR INDICAT (EARS, AND ABILITY, I	ANNUAL	
1.25 80% 	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 <b>4%</b>	50 2%	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
7000	10000	14700	18000	22600		·							
							1	9100	13400	16400	20500		
VE I GHTEI	SKEW =	.176					3	8830	12800	15500	19100		
							7	8160	11300	13300	15800		
							15	6910	9100	10300	11600		
							30	5410	6930	7720	8540		
							60	4230	5440	6060	6690		
							90	3780	4910	5480	6040		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1929-51

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
5750	4200	3200	2410	1810	1380	803	433	219	98	63	43	32	21	-13

# 14207500 TUALATIN RIVER AT WEST LINN, OR--Continued

# STATISTICAL SUMMARIES ADJUSTED FOR DIVERSION

MONTHLY AND ANNUAL MEAN DISCHARGES 1952-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1953-70

	MIMIMU	MAVIMINA	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEA	OR INDICAT ARS, AND A ABILITY, I	NNUAL NO	N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI~ ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100
OCTOBER	9.2		178	169	.95	1.0	1	2.9	1.2	<del>-</del>	.4		
NOVEMBER	87	3229	1064	880	.83	5.8	3	3.1	1.3	•7	.5		
DECEMBER	629	8476	3199	2033	.64	17.3	7	3.4	1.5	.9	.6		
JANUARY	1067	7802	4354	2180	.50	23.5	14	3.9	1.9	1.3			
FEBRUARY	1942	7410	4239	1587	.37	22.9	30	5.2	2.8	2.1	-		
MARCH	990	6400	2812	1348	.48	15.2	60	8.6	4.7	3.6			
APRIL	450	3968	1619	818	.51	8.8	90	15	7.3	5.1			
MAY	276	1565	691	383	.55	3.7	120	31	16	11	8.7		
JUNE	63	497	247	132	.53	1.3	183	134	83	64	51		
JULY	4.6	137	52	40	.78	.3					<del>-</del>		
AUGUST	2.0	98	14	22	1.57	- 1							
SEPTEMBER	3.9	155	30	36	1.19	.2							
ANNUAL	1045	2538	1530	348	.23	100							
DISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	OUS PEAK I	 , †N		BASE	O ON PER	OD OF R	OF ANNUAL RECORD 19 DR INDICAT	52-70 ED RECUR	
DISCHARGE, YEARS, A	BASE IN CFS,	FOR INDI	OD OF RE CATED RE NCE PROB	CORD CURRENCE	INTERVAL IN PERCE	, i <b>N</b> NT	PERIOD (CON-	BASEC  DISCH/	ON PER ARGE, IN INTERV	OD OF R CFS, FO	RECORD 19	ED RECUR	 RENCE
DISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD	INTERVAL IN PERCE	 , †N	PERIOD	BASEC  DISCH/	ON PER ARGE, IN INTERV	OD OF R CFS, FO	RECORD 19 PR INDICAT EARS, AND	ED RECUR	 RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIAL EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, in NT	PERIOD (CON- SECU- TIVE	BASEC DISCHA	O ON PER  ARGE, IN  INTERV  EXCEEDANCE  5	CFS, FO AL, IN Y CE PROBA	RECORD 19 OR INDICAT (EARS, AND BILITY, I	52-70 ED RECUR ANNUAL N PERCEN	RENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIAL EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, in NT	PERIOD (CON- SECU- TIVE	BASEC DISCHA	O ON PER  ARGE, IN  INTERV  EXCEEDANCE  5	CFS, FO AL, IN Y CE PROBA	RECORD 19 OR INDICAT (EARS, AND BILITY, I	52-70 ED RECUR ANNUAL N PERCEN	RENCE T
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, in NT	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCH/	O ON PER ARGE, IN INTERV EXCEEDANG 5 20%	CFS, FO AL, IN Y CE PROBA	OR INDICAT (EARS, AND BILITY, I	ED RECUR ANNUAL N PERCEN 50 2%	T 100
DISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, in NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ E 2 50%	O ON PER  ARGE, IN INTERV EXCEEDANC  5 20%	CFS, FO AL, IN Y CE PROBA	DR INDICAT FEARS, AND BILITY, I 25 4%	ED RECUR O ANNUAL N PERCEN 50 2%	T 100
DISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, in NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCH/  E  2 50%  10100 9810	O ON PER ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FO AL, IN Y CE PROBA 10 10%	DR INDICAT (EARS, AND BILITY, I 25 4%	ED RECUR O ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, in NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	BASEL DISCH/ E 2 50% 10100 9810 9060 7790	D ON PER ARGE, IN INTERV EXCEEDANC 5 20% 13400 13000 11500 9700	10D OF R  CFS, F0  AL, IN Y  CE PROBA  10  10%  15600 14900 12900 10600	RECORD 19 RE INDICAT FEARS, AND BILITY, I 25 4% 18100 17200 14400 11600	ED RECUR ANNUAL N PERCEN' 50 2%	100 1%
DISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, in NT	PERIOD (CON-SECU-TIVE DAYS) 1 3 7 7 15 30	BASEL DISCH/ E 2 50% 10100 9810 9060 7790 6380	O ON PER ARGE, IN INTERV. EXCEEDANC  5 20%  13400 13000 11500 9700 7890	CFS, FO AL, IN Y CE PROBA 10 10% 15600 14900 12900 10600 8630	RECORD 19  OR INDICAT (EARS, AND BILITY,    25 4%  18100 17200 14400 11600 9370	152-70  TED RECUR ANNUAL N PERCEN  50 2%	T 100
DISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCE	, in NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	BASEL DISCH/ E 2 50% 10100 9810 9060 7790	D ON PER ARGE, IN INTERV EXCEEDANC 5 20% 13400 13000 11500 9700	10D OF R  CFS, F0  AL, IN Y  CE PROBA  10  10%  15600 14900 12900 10600	RECORD 19 RE INDICAT FEARS, AND BILITY, I 25 4% 18100 17200 14400 11600	ED RECUR ANNUAL N PERCEN 50 2%	T 100
1.25 80% WEIGHTED	BASE IN CFS, AND ANNUA 2 50% 3 SKEW =	FOR INDI- L EXCEEDA	CATED RE NCE PROB 10 10 10 DURATIO	CORD CURRENCE ABJLITY, 25 4% N TABLE CFS, WHI	INTERVAL IN PERCES 50 2% OF DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	DISCH/  2 50%  10100 9810 9060 7790 6380 4940 4300  OF RECOF	20 ON PER ARGE, IN INTERV, EXCEEDANG 5 20% 13400 13000 11500 9700 6320 5350 RD 1952-7	15600 14900 12900 10600 14900 12900 10600 10600 10600 7080 5930	18100 17200 14400 11600 9370 7920 6550	ED RECUR ANNUAL N PERCEN 50 2%	100 1%
DISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA 2 50%	FOR INDI- L EXCEEDA	CATED RE NCE PROB 10 10% DURATIO	CURRENCE MABILITY,  25 4%  N TABLE	INTERVAL IN PERCES 50 2% OF DAILY N	, in NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90  FOR PERIOD	DISCH/ E 2 50%  10100 9810 9060 7790 6380 4940 4300  OF RECOF	20 ON PER ARGE, IN INTERV. EXCEEDANC  13400 13000 11500 9700 7890 6320 5350  RD 1952-7	100 OF R  CFS, F0 AL, IN Y  DE PROBA  10 10 14900 12900 10600 8630 7080 5930	18100 17200 14400 11600 9370 7920 6550	152-70  ED RECUR ANNUAL N PERCEN  50 2%	100 1%

# 14208000 CLACKAMAS RIVER AT BIG BOTTOM, OR

LOCATION.--Lat 45°01'00", long 121°55'10", in NW±SE± sec.26, T.6 S., R.7 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank at lower end of Big Bottom, 0.5 mi downstream from Pot Creek, 28 mi southeast of Estacada, and at mile 65.1.

DRAINAGE AREA. -- 136 mi2.

PERIOD OF RECORD.--April 1920 to September 1970. Monthly discharge only April 1920 published in WSP 1318.

GAGE.--Water-stage recorder. Altitude of gage is 2,040 ft, from topographic map. Prior to Dec. 27, 1962, at site 0.2 mi upstream at different datum.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--50 years, 477 ft<sup>3</sup>/s, 47.63 in/yr, 345,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 10.55 ft, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 184 ft<sup>3</sup>/s Sept. 12, 1942.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1921-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1922-70

	NA A SA SA SA SA SA SA SA SA SA SA SA SA	MAY 144114	MEAN	STAN- DARD DEVIA-	CIENT OF	PERCENT OF	PERIOD (CON-		ARGE, IN INTERVAL EXCEEDAN	, IN YEA	RS, AND	ANNUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR1- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	208	578	296	83	.28	5.2	1	239	216	204	195	185	178
NOVEMBER	208	976	465	200	.43	8.1	3	240	217	205	196	186	179
DECEMBER	225	1509	591	282	. 48	10.3	. 7	242	218	206	197	187	180
JANUARY	245	1445	601	294	.49	10.5	14	244	220	208	198	187	180
FEBRUARY	250	1241	587	241	.41	10.2	30	248	223	211	201	190	182
MARCH	331	896	516	143	. 28	9.0	60	252	226	214	203	192	185
NPRIL .	316	1111	628	168	.27	11.0	90	256	229	216	205	194	187
IAY	298	1353	708	2 <b>2</b> 9	.32	12.4	120	263	233	220	210	199	192
UNE	243	1175	518	226	.44	9.0	183	306	260	242	229	217	210
IULY	207	488	303	61	.20	5.3							
UGUST	192	334	260	34	.13	4.5							
SEPTEMBER	190	315	254	30	.12	4.4							
NNUAL	302	699	477	91	.19	100							
ANNUAL	302  TUDE AND	699	477 	91 	.19 	100	 MAG		 AND PROBA				

ISCHARGE, YEARS, AI							PERIOD (CON-	DISCH	INTERV	/AL, ÎN Y	R INDICA EARS, AN	ID ANNUAL	
1.25 80 <b>%</b>	2 50 <b>%</b> 	5 20 <b>%</b>	10 10% 	25 4% 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
1910	3010	4750	6030	7780	9180	10600							
WEIGHTED	CKEM -	-004					1	2430	3690	4590	5780	6710	7670 6160
WEIGHIED	2KEM =	.004					2	1950	2920	3630	4590	5350	3960
×							45	1550	2180	2610	3150	3550	2480
							15	1250	1640	1870	2130	2310	
							30	1040	1270	1390	1510	1590	1650
							60	854	1020	1100	1190	1240	1290
							90	759	895	962	1030	1070	1100

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1921-70

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATED	PERCENT	OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1040	841	728	641	573	517	433	371	322		275	262	250	237	221

#### 14208500 OAK GROVE FORK AT TIMOTHY MEADOWS. OR

LOCATION.--Lat 45°07'00", long 121°48'00", in SW\u00e4 sec.23, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, 0.8 mi upstream from Anvil Creek, 10 mi upstream from Oak Grove intake dam, and 26.5 mi southeast of Cazadero.

DRAINAGE AREA.--54 mi², approximately.

PERIOD OF RECORD.--March 1913 to September 1929. Published as "Oak Grove Fork of Clackamas River at Timothy Meadows, near Cazedero", prior to 1922.

GAGE.--Water-stage recorder. Datum of gage is 3,140 ft National Geodetic Vertical Datum of 1929 (from levels to approximate gage datum).

REMARKS.--No diversion above station. No regulation except natural storage in Clackamas Lake and in meadows above station.

AVERAGE DISCHARGE.--16 years (water years 1914-29), 188 ft3/s.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 970 ft $^3$ /s Jan. 7, 1923, gage height, 3.20 ft, from rating curve extended above 460 ft $^3$ /s; minimum, 90 ft $^3$ /s Oct. 18-26, 28-31, Nov. 1-5, 1926.

STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1914-28 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1917-28

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	94	160	133	20	•15	5.7	1	122	107	99	93		
NOVEMBER	120	239	158	38	.24	6.8	3	123	108	100	93		
DECEMBER	121	350	190	67	.35	8.2	7	124	108	100	93		
JANUARY	123	329	200	66	.33	8.6	14	125	109	101	94 -	~-	
FEBRUARY	158	330	200	48	.24	8.6	30	128	112	103	96		
MARCH	147	291	196	37	.19	8.4	60	133	116	106	99		
APRIL	171	335	241	50	.21	10.4	90	137	119	109	101		
MAY	143	388	289	79	•27	12.4	120	140	122	112	103		
JUNE	121	540	256	118	.46	11.0	183	152	129	<b>1</b> 18	109		
JULY	110	281	173	46	•27	7.4							
AUGUST	103	185	147	23	.15	6.3							
SEPTEMBER	100	170	141	21	.15	6.1							
ANNUAL	137	232	193	28	.15	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1914-28

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1914-28

OISCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80 <b>%</b>	2 50 <b>%</b> 	5 20 <b>%</b>	10 10% 	25 4% 	50 2% 	100 †% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1 <b>%</b>
352	505	722	870	1060								· <b>==</b>	
							1	483	684	819	990		
WEIGHTED	SKEW =	033					3	451	630	749	899		
							7	412	545	625	718		
							15	368	471	533	605		
							30	332	416	466	524		
							60	302	369	406	449		
							90	277	332	363	399		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-28

		DISCH.	ARGE, IN	CFS, V	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TI	ME		
5 <b>%</b>	10%				30%						80%	85%	90%	95%
356	299	267		222	207			159			139	132	124	113

#### 14208700 OAK GROVE FORK NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'50", in NE4 sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 ml upstream from Anvil Creek, 0.3 ml downstream from Timothy Lake, 14 ml south of Government Camp, and at mile 15.5.

DRAINAGE AREA .-- 54.4 mi2.

PERIOD OF RECORD.--July 1956 to September 1982.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 3,041.83 ft National Geodetic Vertical Datum of 1929 (Portland General Electric Co. bench mark).

REMARKS.--Flow regulated since 1956 by Timothy Lake. No diversion above station.

AVERAGE DISCHARGE.--26 years, 130 ft<sup>3</sup>/s, 32.45 in/yr, 94,180 acre-ft/yr, adjusted for storage,

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s Dec. 24, 1964, gage height, 3.93 ft, from rating curve extended above 290 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.7 ft³/s Sept. 23, 1968.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL	MEAN DISCHARGES	1957-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW	
			BASED ON PERIOD OF RECORD 1958-82	

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	42	274	154	68	.44	10.0	1						
NOVEMBER	87	337	179	64	. 36	11.6	3						
DECEMBER	68	274	152	49	.32	9.8	7	40	33	29	25	22	
JANUARY	45	343	164	73	.45	10.6	14	39	34	32	30 -	29	
FEBRUARY	43	333	150	79	.53	9.7	30	41	34	32	30	29	
MARCH	31	452	158	96	.60	10.2	60	48	36	32	29	27	
APRIL	35	275	111	77	.70	7.2	90	54	39	33	30	27	
MAY	33	364	127	95	.75	8.2	120	60	41	34	29	25	
JUNE	32	301	108	79	.73	7.0	183	78	52	42	36	29	
JULY	31	168	71	40	.56	4.6							
AUGUST	33	134	67	32	.48	4.3							
SEPTEMBER	33	237	107	64	.60	6.9							
ANNIIAI	70	222	120	37	28	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1957-82

# MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1957-82

					CE INTER' Y, IN PEI		PERIOD (CON-		INTERV	AL, ÎN YE	EARS, AN	TED RECU D ANNUAL IN PERCE!	
1.25 80% 	2 50% 	5 20 <b>%</b>	10 10% 	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
341	467	676	840	1080	1290								
							1	357	501	638	872	1100	,
WE I GHTED	SKEW =	.599					3	347	463	559	704	833	
							7	328	415	479	568	640	
							15	306	369	413	471	517	
							30	271	329	369	422	462	
							60	230	283	316	358	389	
							90	204	251	283	324	356	

# DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEEDE	D FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
324	281	249	223	196	174	132	93	61	49	46	43	40	37	35

# 14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR

LOCATION.--Lat 45°04'20", long 121°57'00", on line between secs.3 and 4, T.6 S., R.7 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.2 mi upstream from Spring Creek, 0.7 mi upstream from Kink Creek, 1.0 mi upstream from Portland General Electric Co. diversion dam, 24 mi southeast of Estacada, and at mile 6.1.

DRAINAGE AREA .-- 126 mi 2.

PERIOD OF RECORD.--May 1909 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as both "Oak Grove Fork of Clackamas River at proposed intake, near Cazadero", and "Oak Grove Fork of Clackamas River at intake, near Cazadero", May 1909 to September 1910, as "Oak Grove Fork of Clackamas River at intake, near Cazadero", October 1910 to September 1921, and as "Oak Grove Fork at Portland General Electric Power Co. intake", October 1921 to September 1929.

GAGE.--Water-stage recorder. Datum of gage is 2,052.31 ft National Geodetic Vertical Datum of 1929. May 21, 1909, to Nov. 17, 1911, nonrecording gage and Mar. 26, 1912, to Sept. 30, 1923, water-stage recorder, at various sites 0.7 mi downstream, below Kink Creek, at different datum.

REMARKS.--Flow regulated since 1956 by Timothy Lake. No diversion above station.

AVERAGE DISCHARGE. -- 73 years, 500 ft3/s, 362,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft<sup>3</sup>/s Jan. 7, 1923, gage height, 5.45 ft, site and datum then in use, from rating curve extended above 2,300 ft<sup>3</sup>/s on basis of peak discharge for other stations in Clackamas River basin; minimum, 208 ft<sup>3</sup>/s Aug. 28-31. 1979.

# STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF TIMOTHY LAKE OUTLET STRUCTURE)

MONTHLY AND ANNUAL MEAN DISCHARGES 1910-55

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1911-55

	MINIMUM	MAX1 MUM	MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VAR!-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND / BILITY,	ANNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	252	478	343	57	.17	5.8	1	305	273	257	244	230	220
NOVEMBER	263	811	431	132	.31	7.2	3	306	274	258	245	230	221
DECEMBER	268	1047	514	187	.36	8.6	7	308	276	260	246	232	222
JANUARY	271	1199	533	211	.40	8.9	14	310	278	261	248	233	224
FEBRUARY	281	981	526	168	.32	8.8	30	315	282	266	252	238	228
MARCH	357	1048	541	143	.26	9.1	60	321	287	271	257	243	234
APRIL	348	1020	659	146	.22	11.0	90	327	292	274	260	245	236
MAY	389	1331	760	222	.29	12.7	120	334	296	278	264	249	240
JUNE	316	1109	578	195	.34	9.7	183	360	314	294	280	265	256
JULY	263	557	395	68	.17	6.6							
AUGUST	252	432	349	47	.13	5.9							
SEPTEMBER	259	460	335	44	.13	5.6							
ANNUAL	325	672	495	83	.17	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1910-55

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1910-55

DISCHARGE, YEARS, A							PERIOD (CON-		INTERV	'AL, ÍN Y	OR INDICA EARS, AN	D ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4% 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
1160	1640	2410	<b>29</b> 70	3760	4400	5090			<b></b>			- <del>-</del>	
							1	1480	2150	2660	3380	3960	4600
WEIGHTED	SKEW =	.297					3	1320	1890	2300	2880	3360	3860
							7	1160	1550	1820	2150	2400	2660
							15	1030	1280	1420	1570	1670	1760
							30	933	1100	1180	1250	1290	1320
							60	821	950	1000	1050	1070	1090
							90	736	848	898	943	968	988

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1910-55

•			DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	CEEDED FOR	INDICATED	PERCEN	T OF TI	лЕ		
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
	950	804	714	635	573	527	466	417	385	360	347	332	317	302	280

# 14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR--Continued

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF TIMOTHY LAKE OUTLET STRUCTURE)

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	RS, AND	TED RECUI	0N-
ONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	. 5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
CTOBER	236	517	 399	76	.19	6.9	1	256	233	224	217	210	
OVEMBER	359	613	493	71	.14	8.5	. 3	260	237	227	219	211	
ECEMBER	325	1047	585	142	.24	10.1	7	262	239	229	222	215	
ANUARY	255	1036	599	154	.26	10.3	. 14	266	240	230	224	218	
EBRUARY	250	959	584	149	.26	10.1	30	272	245	234	227	221	
ARCH	327	1377	550	194	.35	9.5	60	281	253	242	235	229	
PRIL	311	825	548	122	.22	9.5	90	296	263	251	242	234	
AY .	292	1104		224			120	312	275	260	250	241	
			603		.37	10.4							
UNE	265	1126	459	191	.42	7.9	183	356	316	298	286	274	
ULY	241	517	329	71	.22	5.7							
UGUST	225	429	303	52	.17	5.2							
EPTEMBER	247	517	340	75	.22	5.9							
NNUAL	335	709	482	88	.18	100							
I SCHARGE,	BASE IN CFS,		OD OF RE	CORD	INTERVAL,	. IN		BASE	D ON PER	OD OF R	R_INDICA	957-82  TED RECUR	
I SCHARGE,	BASE IN CFS,	ON PERIO	OD OF RE	CORD	INTERVAL, IN PERCE	. IN	PERIOD (CON- SECU-	BASE!	ON PER	CFS, FO	ECORD 19R INDICA EARS, AN	957-82  TED RECUR	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS,	FOR INDIC	OD OF RE	CORD COURRENCE	INTERVAL, IN PERCE	, IN NT	PERIOD	BASE!	ON PER	CFS, FO	ECORD 19R INDICA EARS, AN	957-82  TED RECUI D ANNUAL	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, IND ANNUA	FOR INDIO L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICA EARS, ANI BILITY, 25 4%	957-82 TED RECURD ANNUAL IN PERCEN 50 2%	RRENCE NT 100 1%
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIO L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH.	ARGE, IN INTERVENTE STATE OF S	CFS, FOAL, IN YCE PROBAL	ECORD 19 R INDICA EARS, AND BILITY, 25 4% 3090	957-82 TED RECUF D ANNUAL IN PERCEF 50 2% 3580	RRENCE NT 100 1%
ISCHARGE, YEARS, A	BASE IN CFS, ND ANNUA 2 50%	FOR INDIO L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  1350 1170	ARGE, IN INTERVALENCE DAMAGE STATE OF THE PROPERTY OF THE PROP	CFS, FO AL, IN Y CE PROBA 10 10%	R INDICA R INDICA EARS, ANI BILITY, 25 4%	957-82	RRENCE NT 100 1%
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIO L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON-SECU-TIVE DAYS)	DISCH.  2 50%  1350 1170 996	D ON PERI ARGE, IN INTERV/ EXCEEDANG 5 20% 1990 1710 1400	CFS, FO AL, IN Y CE PROBA 10 10% 2460 2130 1710	ECORD 19  R INDICA EARS, AN BILITY,  25 4%  3090 2720 2140	957-82  TED RECUF  D ANNUAL  IN PERCEN  50 2%  3580 3200 2490	RRENCE NT 100 1%
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIO L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  1350 1170	ARGE, IN INTERVALENCE DAMAGE STATE OF THE PROPERTY OF THE PROP	CFS, FO AL, IN Y CE PROBA 10 10%	R INDICA R INDICA EARS, ANI BILITY, 25 4%	957-82	RRENCE NT 100 1%
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIO L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON-SECU-TIVE DAYS)	DISCH.  2 50%  1350 1170 996	D ON PERI ARGE, IN INTERV/ EXCEEDANG 5 20% 1990 1710 1400	CFS, FO AL, IN Y CE PROBA 10 10% 2460 2130 1710	ECORD 19  R INDICA EARS, AN BILITY,  25 4%  3090 2720 2140	957-82  TED RECUF  D ANNUAL  IN PERCEN  50 2%  3580 3200 2490	RRENCE NT 100 1%
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIO L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCH.	D ON PERI ARGE, IN INTERV/ EXCEEDANG 5 20% 	CFS, F0 AL, IN Y CE PROBA 10 10\$ 2460 2130 1710 1320 1080	R INDICA EARS, ANI BILITY, 25 4\$ 3090 2720 2140 1580 1280	957-82 TED RECUE D ANNUAL IN PERCEE  50 2%  3580 3200 2490 1790 1430	RRENCE NT 100 1%
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIO L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  1350 1170 996 851	D ON PERIOR OF THE PERIOR OF T	CFS, FO AL, IN Y CE PROBAL 10 10% 2460 2130 1710 1320	R INDICA EARS, ANI BILITY, 25 4% 3090 2720 2140 1580	957-82  TED RECUF D ANNUAL IN PERCET  50 2%  3580 3200 2490 1790	100
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC	CATED RE  CATED RE  10 10 10  DURATIO	CORD CURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  1350 1170 996 851 739 662 621  OF RECO	ARGE, IN INTERV/ EXCEEDANC  1990 1710 1400 1120 934 814 749	CFS, FO AL, IN Y E PROBA  10 10 10 17 10 17 10 18 2460 2130 1710 1710 180 926 842	R INDICA EARS, AN BILITY, 25 4% 3090 2720 2140 1580 1280 1080 971	957-82  TED RECUID ANNUAL IN PERCEI  50 2\$  3580 3200 2490 1790 1430 1210	RRENCE NT 100 1%
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, ND ANNUA 2 50%	FOR INDIC	CATED RE  CATED RE  10 10 10  DURATIO	CORD CURRENCE SABILITY, 25 4%	INTERVAL IN PERCEN 50 2%  OF DAILY N	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISCH.  2 50%  1350 1170 996 851 739 662 621  OF RECO	ARGE, IN INTERV/ EXCEEDANC  1990 1710 1400 1120 934 814 749	CFS, FO AL, IN Y E PROBA  10 10 10 17 10 17 10 18 2460 2130 1710 1710 180 926 842	R INDICA EARS, AN BILITY, 25 4% 3090 2720 2140 1580 1280 1080 971	957-82  TED RECUID ANNUAL IN PERCEI  50 2\$  3580 3200 2490 1790 1430 1210	RRENCE NT 100 1%
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, IND ANNUA 2 50% 3 SKEW =	FOR INDIAL EXCEEDA	DURATIO	CORD CURRENCES ABILITY, 25 4%	INTERVAL IN PERCEN 50 2%  OF DAILY N	JALED OR E	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISCH.  2 50\$  1350 1170 996 851 739 662 621  OF RECO	D ON PER:  ARGE, IN INTERV/ EXCEEDANC  5 20  1990 1710 1400 1120 934 814 749  RD 1957-8  TED PERCE	CFS, FO AL, IN Y CE PROBA  10 10 2130 1710 1320 1080 926 842 32	R INDICA EARS, AN BILITY, 25 4\$ 3090 2720 2140 1580 1080 971	3580 3200 2490 1430 1210 1080	100 1%

# 14209500 CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OR

LOCATION.--Lat 45°07'30", long 122°04'20", in NE<sup>1</sup>/<sub>4</sub> sec.21, T.5 S., R.6 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi upstream from Three Lynx Creek, 0.25 mi downstream from powerplant, 17 mi southeast of Estacada, and at mile 47.8.

DRAINAGE AREA. -- 479 mi2.

PERIOD OF RECORD.--April 1909 to December 1913, October 1921 to September 1982. Prior to October 1911 (monthly discharge only), published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,091.69 ft National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). Apr. 23, 1909, to Jan. 4, 1914, nonrecording gage at about same site and datum. Nov. 1, 1921, to Dec. 27, 1924, water-stage recorder at present site at datum 0.91 ft higher.

REMARKS. -- Minor regulation since May 1956 by Timothy Lake.

AVERAGE DISCHARGE.--65 years, 1,988 ft3/s, 56.36 in/yr, 1,440,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 21.7 ft, from floodmark, from rating curve extended above 34,100 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 15.06 ft; minimum recorded, 292 ft<sup>3</sup>/s Sept. 25, 1980; minimum daily, 427 ft<sup>3</sup>/s Oct. 5, 1958.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1912-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1913-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICA RS, AND A BILITY,	ANNUAL N	ON-
монтн	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 <b>5%</b>	50 2 <b>%</b>	100 1%
OCTOBER	60 <b>5</b>	251†	1028	407	.40	4.3	1	628	<b>55</b> 6	<b>5</b> 19	490	457	 435
NOVEMBER	<b>57</b> 3	4347	2118	10 <b>5</b> 9	<b>.5</b> 0	8.8	3	654	<b>5</b> 96	<b>5</b> 69	548	525	511
DECEMBER	786	8271	2924	1510	.52	12.2	7	667	607	<b>57</b> 9	557	<b>5</b> 34	520
JANUARY	739	7157	2897	1482	.51	12.1	14	679	617	588	566	543	528
EBRUARY	734	620 <b>5</b>	2748	1224	.45	11.5	30	69 <b>5</b>	630	600	577	<b>55</b> 3	<b>5</b> 38
4ARCH	1313	6 <b>55</b> 9	2373	842	.35	9.9	60	723	651	619	<b>5</b> 9 <b>5</b>	<b>57</b> 0	554
\PRIL	1180	4477	2644	739	.28	11.0	90	755	675	639	612	585	<b>5</b> 69
1AY	1065	5548	2797	981	.35	11.7	120	803	706	668	640	614	600
JUNE	725	4879	1896	923	.49	7.9	183	1050	869	801	<b>75</b> 3	709	684
JULY	603	1778	980	256	.26	4.1							
AUGUST	600	987	768	103	.13	3.2							
SEPTEMBER	577	1242	775	125	.16	3.2							
ANNUAL	1062	3128	1992	427	.21	100							

ISCHARGE YEARS,				RECURREI ROBABILI		,	PER10D (CON-	DISC	INTER	N CFS, F VAL, IN NCE PROB	YEARS, A	ND ANNUA	L
1.25 80 <b>%</b>	2 50 <b>%</b> <b>-</b>	5 20 <b>%</b> 	10 10 <b>%</b>	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	<b>5</b> 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
11500	17400	<b>25</b> 300	30400	36600	41000	<b>45</b> 300							
							1	14100	20700	24800	29700	33200	36 <b>5</b> 00
WEIGHTE	SKEW =	310					3	10700	1 <b>5</b> 800	19200	23700	27100	30600
							7	7940	11100	13200	15800	17600	19400
							15	<b>5</b> 9 <b>7</b> 0	<b>7</b> 9 <b>5</b> 0	9170	10600	11600	12600
							30	4790	6060	6770	<b>755</b> 0	8070	8 <b>5</b> 30
							60	38 <b>5</b> 0	4740	<b>524</b> 0	<b>57</b> 90	6150	6480
							90	34 <b>5</b> 0	4170	<b>45</b> 60	4980	<b>525</b> 0	<b>54</b> 90

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-82

_		DISC	CHARGE,	in CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATE	D PERCE	NT OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4830	3760	3200	2820	2 <b>5</b> 10	2240	1810	1490	1200	9 <b>5</b> 3	866	809	752	702	652

# 14210000 CLACKAMAS RIVER AT ESTACADA, OR

LOCATION.--Lat 45°18'00", long 122°21'10", in NEt sec.19, T.3 S., R.4 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.2 mi downstream from River Mill Dam, 1.5 mi northwest of Estacada, and at mile 23.1.

DRAINAGE AREA .~- 671 mi2.

PERIOD OF RECORD.—April 1908 to September 1982. Monthly discharge only April 1908, published in WSP 1318. Published as "near Cazadero" January 1909 to September 1957.

GAGE.--Water-stage recorder. Datum of gage is 296.93 ft National Geodetic Vertical Datum of 1929 (levels by Portland General Electric Co.). See WSP 1738 for history of changes prior to Oct. 1, 1957. Oct. 1, 1957, to Feb. 16, 1965, water-stage recorder at same site at datum 2.00 ft higher.

REMARKS.--Large diurnal fluctuations and some regulation caused by powerplants at River Mill Dam and, since 1958, North Fork Dam.

Minor regulation since 1956 by Timothy Lake. Two small diversions above station for Oregon City and Estacada municipal water

AVERAGE DISCHARGE.--74 years, 2,747 ft3/s, 55.59 in/yr, 1,990,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.36 ft; minimum, 50 ft<sup>3</sup>/s Mar. 10, 1961, from rating curve extended below 260 ft<sup>3</sup>/s; minimum daily, 285 ft<sup>3</sup>/s Oct. 4, 5, 1958, caused by filling of North Fork dam forebay.

# STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF NORTH FORK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1909-57

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1910-57

		LANGE LANGE	WEAR)	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		IARGE, IN INTERVAL EXCEEDAN	, IN YEAR	RS, AND /	NNUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	(CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 <b>2%</b>	100 1%
OCTOBER	701	3776	1348	690	.51	4.2	1	773	686	642	607	568	543
NOVEMBER	702	8708	3086	1805	.58	9.6	3	785	701	659	625	588	564
DECEMBER	1083	10450	3812	2093	.55	11.8	7	794	707	664	630	592	568
JANUARY	999	9656	3868	2019	.52	12.0	14	809	719	674	637	598	572
FEBRUARY	1363	6709	3633	1525	.42	11.2	30	834	738	691	653	613	586
MARCH	1656	6 <b>2</b> 57	3417	1205	. 35	10.6	60	873	766	715	675	632	605
APR1L	1539	6028	37 <b>2</b> 6	1005	.27	11.5	90	922	798	741	697	651	623
4AY	1363	7486	3674	1255	.34	11.4	120	999	841	775	7 <b>2</b> 6	679	650
JUNE	927	6103	2560	1275	.50	7.9	183	1390	1100	977	891	807	757
JULY	720	3301	1313	488	.37	4.1						<del>-</del>	
AUGUST	694	1457	935	160	.17	2.9							
SEPTEMBER	669	1993	939	232	.25	2.9							
ANNUAL	1662	3916	2687	576	.21	100							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1909-57

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1909-57

		, FOR IN					PERIOD (CON-	DISC	INTER	N CFS, FO VAL, IN N NCE PROB	YEARS, A	ND ANNUAI	L '
1.25 80%	2 50% 	5 20% 	10 10% 	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 <b>2%</b>	100
15700	24600	37700	46600	57900	66400	74900		<del>-</del>					
				<del>-</del>			1	19600	29200	35500	43300	48900	54300
WEIGHTE	D SKEW =	~.213					3	14800	22000	26900	33200	38000	42900
							7	11000	15400	18200	21500	24000	26300
							15	8200	11100	13000	15300	17000	18600
							30	6550	8480	9610	10900	11800	12600
							60	5260	6550	7290	8130	8690	9200
							90	4720	5770	6350	6980	7400	7780

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1909-57

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATE	D PERCENT	OF TIM	E		
5%	10%	15%	. 20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
6680	5170	4440	3910	3450	3080	2450	1980	1560	1190	1070	989	911	839	755

# 14210000 CLACKAMAS RIVER AT ESTACADA, OR--Continued

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF NORTH FORK DAM)

MONTHLY AND ANNUAL MEAN DISCHARGES 1959-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1960-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	D13C	INTERVA	L, IN YE	ARS, AND		O <b>N-</b>
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 <b>2%</b>	100 <b>1</b> %
OCTOBER	767	2712	1391	537	.39	4.0	1	550	393	325	275		<b></b>
NOVEMBER	1268	6263	3163	1488	.47	9.2	3	654	535	477	432		
DECEMBER	1030	11170	4894	2398	.49	14.2	7	728	643	605	575		
SANUARY	1036	8821	4766	2205	.46	13.8	14	765	687	654	630		
EBRUARY	977	8938	4207	1972	.47	12.2	30	805	725	691	665		
MARCH	2210	8921	3524	1429	.41	10.2	60	865	774	733	702		
APRIL	1867	5177	3515	941	.27	10.2	90	930	831	783	746		
YAN	1796	6396	3660	1198	.33	10.6	120	1010	900	850	812		
JUNE	1222	5143	2293	952	.42	6.7	183	1410	1210	1120	1060		
JULY	820	2018	1157	301	.26	3.4							
AUGUST	701	1208	899	142	.16	2.6							
SEPTEMBER	714	1602	994	198	.20	2.9							
ANNUAL	1454	4407	2866	646	.23	100							
DISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	EOUS PEAK F	 , IN		BASI	ED ON PER	RIOD OF I	OF ANNUA RECORD 1	959-82  TED RECUR	
OISCHARGE,	BASE IN CFS,	D ON PERI	OD OF RE	CORD	INTERVAL	 , IN	PERIOD (CON- SECU-	BASI	ED ON PER HARGE, IN	RIOD OF I	RECORD 1	959-82  TED RECUR D ANNUAL	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS,	D ON PERI FOR INDI L EXCEEDA	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL	,  N NT	PERIOD (CON-	BASI	ED ON PER HARGE, IN	RIOD OF I	RECORD 1	959-82  TED RECUR D ANNUAL	RRENCE
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	D ON PERI FOR IND! L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	BASI DISCH	HARGE, IN INTERN EXCEEDAN	N CFS, FO N CFS, FO N CFS, FO NCE PROB	RECORD 1 OR INDICA YEARS, AN ABILITY,	959-82 TED RECUP D ANNUAL IN PERCEN	RRENCE NT
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR IND! L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCH	HARGE, IN INTERN EXCEEDAN	N CFS, FO N CFS, FO N CFS, FO NCE PROB	RECORD 1 OR INDICA YEARS, AN ABILITY,	959-82 TED RECUP D ANNUAL IN PERCEN	RRENCE NT
DISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR IND! L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FO /AL, IN N NCE PROB. 10 10%	RECORD 1 OR INDICA YEARS, AN ABILITY, 25 4%	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE NT
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR IND! L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 23200 17800 13200	HARGE, IN INTERN EXCEEDAN 5 20% 34200 26300 18500	N CFS, FO VAL, IN N NCE PROB. 10 10%	OR INDICA YEARS, AN ABILITY,  25 4%  46600 37700 25000	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR IND! L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 23200 17800 13200 9420	HARGE, IN INTERN EXCEEDAN 5 20% 34200 26300 18500 12400	N CFS, F6/AL, IN NICE PROB.  10 10 10 31600 21600 14000	OR INDICA YEARS, AN ABILITY,  25 45  46600 37700 25000 15700	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR IND! L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	DISCH 250% 23200 17800 13200 9420 7240	34200 26300 18200 12400 26300 12400 9120	10 CFS, FI N CFS, FI N AL, IN N NCE PROB. 10 10 3 40300 21600 14000 10100	OR INDICA YEARS, AN ABILITY,  25 4%  46600 37700 25000 15700 11200	TED RECUP D ANNUAL IN PERCEN 50 2%	100 1%
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR IND! L EXCEEDA	OD OF RE	CORD CURRENCE BABILITY,	INTERVAL IN PERCEI	, IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 	DISCI 2 50% 23200 17800 13200 9420 7240 5750	HARGE, IN INTERN EXCEEDAN 5 20% 34200 26300 18500 112400 9120 7200	10 10% 40300 31600 21600 10100 8050	25 4% 46600 37700 25000 15700 11200 9030	959-82 TED RECUF D ANNUAL IN PERCEN 50 2%	100 1%
YEARS, A	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR IND! L EXCEEDA	OD OF RE	CCURRENCE SABILITY,	INTERVAL IN PERCEI 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60 90	23200 17800 13200 9420 7240 5750 5170	AARGE, INTERNET STATE S	40300 31600 21600 10100 8050 7090	OR INDICA YEARS, AN ABILITY,  25 4%  46600 37700 25000 15700 11200	TED RECUP D ANNUAL IN PERCEN 50 2%	100 1%
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1.25 80%	BASE IN CFS, AND ANNUA 2 50%	D ON PERI FOR IND! L EXCEEDA 5 20%	CATED RE NCE PROE	CCURRENCE SABILITY, 25 4%	INTERVAL IN PERCEI 50 2% OF DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	23200 17800 13200 13200 7240 5750 0 0F RECC	HARGE, INTERNEXCEEDAN  34200 26300 18500 18200 9120 7200 6380 DRD 1959-	40300 31600 1000 1000 1000 1000 10100 8050 7090	A6600 37700 25000 11200 9030 7900	TED RECUP D ANNUAL IN PERCEN 50 2%	100 1%

# 14211000 CLACKAMAS RIVER NEAR CLACKAMAS, OR

LOCATION.--Lat 45°23'36", long 122°31'54", in NE‡SW‡ sec.14, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090011, on left bank 0.8 mi upstream from Johnson Creek, 2.1 mi southeast of Clackamas, and at mile 4.8.

DRAINAGE AREA.--930 mi<sup>2</sup> at gage, 936 mi<sup>2</sup> at Gladstone Bridge 3.6 mi downstream, where high-flow discharge measurements are made.

PERIOD OF RECORD.--September 1911 to April 1912 (published as "at Park Place"), October 1962 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 50.68 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
Sept. 15, 1911, to Apr. 22, 1912, nonrecording gage at site 3.6 mi downstream at different datum. Oct. 1, 1962, to Sept. 10, 1969, water-stage recorder at site 300 ft downstream at present datum.

REMARKS.--Diurnal fluctuations and some regulation by powerplants and several storage dams upstream, operated by Portland General Electric Co. Small diversions above station for Estacada municipal water supply. All records given herein are for gage site.

AVERAGE DISCHARGE.--20 years, 3,636  $ft^3/s$ , 53.09 in/yr, 2,634,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 27.0 ft, from floodmarks; minimum, 336 ft<sup>3</sup>/s Sept. 1, 11, 1969.

# STATISTICAL SUMMARIES

М	ONTHLY AN	ID ANNUAL I	MEAN DIS	SCHARGES	1963-82		МА				OF ANNUAL RECORD 19		)W
	 M!NIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICA ARS, AND ABILITY,	ANNUAL N	)N-
10NTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
CT0BER	820	3501	1580	704	. 45	3.6	1	669	550	494	451		
10VEMBER	1349	8410	3890	2068	.53	8.9	3	741	637	584	542		
ECEMBER	1113	15290	6867	3329	.48	15.7	7 .	777	683	639	604		
ANUARY	1187	12230	6957	3147	. 45	15.9	14	817	724	678	642		
EBRUARY	1118	11250	5390	2366	.44	12.3	30	865	765	716	677		
IARCH	2566	11410	4502	1984	.44	10.3	60	936	829	777	736		
PRIL	2137	6493	4283	1148	.27	9.8	90	1000	888	832	788		
1AY	2219	6785	4246	1403	.33	9.7	120	1100	976	924	885		
UNE	1446	5716	2680	1179	.44	6.1	183	1580	1340	1230	1160		
ULY	854	2187	1304	345	. 26	3.0							
UGUST	711	1285	989	181	.18	2.3							
EPTEMBER	689	1378	1060	193	.18	2.4							
NNUAL	1715	5718	3640	912	.25	100							
MAGNI		PROBABILI D ON PERI			OUS PEAK F	-LOW					OF ANNUAL		.ow
SCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL	, IN NT	 PERIOD (CON-	BASI	ED ON PER HARGE, II	RIOD OF I		963-82  TED RECUR D ANNUAL	RENCE
SCHARGE YEARS, /	BASE , IN CFS, AND ANNUA 2	FOR INDI	OD OF RECEIVED OF RECEIVED REC	CORD COURRENCE BABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON-	BASI DISCI	HARGE, II	RIOD OF I	RECORD 19 OR INDICA YEARS, AND ABILITY,	963-82 TED RECUI D ANNUAL IN PERCEN	RRENCE
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDI	OD OF RE	CORD COURRENCE BABILITY,	INTERVAL	, IN NT	 PERIOD (CON-	BASI	ED ON PER HARGE, II	RIOD OF I	RECORD 19  OR INDICA YEARS, AND	963-82  TED RECUR D ANNUAL	RRENCE
I SCHARGE YEARS, /	BASE , IN CFS, AND ANNUA 2	FOR INDI	OD OF RECEIVED OF RECEIVED REC	CORD COURRENCE BABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE	BASI DISCI	HARGE, II INTER EXCEEDAN	RIOD OF I	RECORD 19 OR INDICA YEARS, AND ABILITY,	963-82 TED RECUI D ANNUAL IN PERCEN 50	RRENCE
I SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED REC	CORD COURRENCE BABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II INTER EXCEEDAN 5 20%	N CFS, FOYAL, IN NICE PROBA	PRECORD 19 OR INDICA YEARS, AND ABILITY, 25 4%	963-82 TED RECUE D ANNUAL IN PERCEN 50 2%	RRENCE
SCHARGE YEARS, /	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED REC	CORD COURRENCE BABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II INTERN EXCEEDAN 5 20% 45200 36700	N CFS, FC /AL, IN N NCE PROBA 10 10%	PRECORD 19 OR INDICA YEARS, AND ABILITY, 25 4% 58400 51600	963-82 TED RECUR D ANNUAL IN PERCEN 50 2%	RRENCE
I SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED REC	CORD COURRENCE BABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, II INTERN EXCEEDAN 5 20% 45200 36700 26200	N CFS, FG /AL, IN N NCE PROB/ 10 10% 51900 43700 29700	DR INDICA YEARS, ANI ABILITY, 25 4% 58400 51600 33100	963-82 TED RECUE D ANNUAL IN PERCEN 50 2%	RRENCE
I SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED REC	CORD COURRENCE BABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	D1SCr D1SCr 2 50% 32000 25100 19100 13700	HARGE, II INTER EXCEEDAN 5 20% 45200 36700 26200 17400	N CFS, F6 /AL, IN N NCE PROB/ 10 10 5 51900 43700 29700 19000	DR INDICA YEARS, ANI ABILITY, 25 4% 58400 51600 33100 20400	963-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
I SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED REC	CORD COURRENCE BABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCH 2 50% 32000 25100 19100 13700 10300	HARGE, II INTER EXCEEDAI 5 20% 45200 36700 26200 17400 12600	N CFS, FO (AL, IN ) N CFS, FO (AL, IN ) N (CFS PROBA)  10	DR INDICA YEARS, AND ABILITY, 25 4% 58400 51600 33100 20400 14300	963-82 TED RECUE D ANNUAL IN PERCEN 50 2%	RRENCE
I SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED REC	CORD COURRENCE BABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON-SECU-TIVE DAYS)	DISCI 2 50% 32000 25100 19100 13700 10300 7860	HARGE, II INTER' EXCEEDAI 5 20% 45200 36700 26200 17400 12600 9940	N CFS, F(AL, IN N) NCE PROB/ 10 10% 51900 43700 29700 19000 13600 111100	DR INDICA: YEARS, ANI ABILITY, 25 4% 58400 51600 33100 20400 14300 12300	963-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RENCE
I SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECEIVED OF RECEIVED REC	CORD COURRENCE BABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30	DISCH 2 50% 32000 25100 19100 13700 10300	HARGE, II INTER EXCEEDAI 5 20% 45200 36700 26200 17400 12600	N CFS, FO (AL, IN ) N CFS, FO (AL, IN ) N (CFS PROBA)  10	DR INDICA YEARS, AND ABILITY, 25 4% 58400 51600 33100 20400 14300	963-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
I SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RE	ECURRENCE SABILITY, 25 4%	INTERVAL IN PERCEN	, IN NT	PERIOD (CON-SECU-TIVE DAYS)	DISCH 2 50% 32000 25100 19100 10300 7860 6980	45200 36700 26200 17400 12600 9940 8740	N CFS, FI/AL, IN NCE PROB/ 10 10% 51900 43700 29700 19000 13600 11100 9730	DR INDICA: YEARS, ANI ABILITY, 25 4% 58400 51600 33100 20400 14300 12300	963-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE
I SCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIOL EXCEEDA	OD OF RE	ECURRENCE SABILITY,  25 4%	INTERVAL IN PERCEN 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	2 50% 32000 25100 13700 10300 7860 6980 OF RECO	45200 36700 17400 12600 9940 8740	N CFS, FG/AL, IN NCE PROB/ 10 10% 51900 43700 19000 13600 11100 9730	DR INDICA YEARS, AND ABILITY, 25 4% 58400 51600 33100 20400 14300 12300 10800	963-82 TED RECUF D ANNUAL IN PERCEN 50 2%	RRENCE

1980 1390

1230

1100

991

906

804

5170 4550 4060 3250 2620

10000 7130 5910

# 14211500 JOHNSON CREEK AT SYCAMORE, OR

LOCATION.--Lat 45°28'40", long 122°30'24", in lot 2, SW½ sec.13, T.1 S., R.2 E., Multnomah County, Hydrologic Unit 17090012, on right bank 0.3 mi southwest of Sycamore station, 2.5 mi east of city limits of Portland, and at mile 10.2.

DRAINAGE AREA.--26.5 mi2.

247

151

107

79

60

45

26

14

6.0

3.2

1.9

1.5

1.1

PERIOD OF RECORD.--July 1940 to September 1982.

GAGE.--Water-stage recorder and V-notch weir. Datum of gage is 228.47 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Slight diurnal fluctuation at low flow caused by recreational ponds upstream. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--42 years, 54.6 ft<sup>3</sup>/s, 26.29 in/yr, 39,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,620 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.68 ft; minimum, 0.08 ft<sup>3</sup>/s Aug. 21, 1966.

,													
M	ONTHLY AN	ID ANNUAL	MEAN DIS	CHARGES	1941-82		MAG	BASED	ND PROBA ON PERI				OW
	 MINIMUM			STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	t	NTERVAL,	IN YEAR	RS, AND	TED RECU ANNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	1.3	65	10	15	1.48	1.6	1	.6	.3	.2	.2		•
NOVEMBER	1.6	239	71	63	-88	10.8	3	•6	.4	.3	•2		
DECEMBER	4.3	302	135	73	-54	20.5	7	.7	. 4	.3	.2		
JANUARY	9.0	308	148	84	.57	22.5	14	-8	.5	.3	•3		
FEBRUARY	16	320	119	62	•52	18.1	30	.9	•6	.4	.4		
MARCH	20	196	87	44	-50	13.2	60	1.2	-8	•6	.5		
APRIL	9.5	130	48	30	.63	7.2	90	1.5	1.0	.8	.7		
MAY	3.3	90	25	23	.93	3.7	120	2.1	1.4	1.1	.9	.8	
JUNE	1.5	53	9.3	9.9	1.06	1.4	183	5.1	3.1	2.3	1.9	1.4	1.
JULY	•6	7.1	2.3	1.3	.57	•3							
AUGUST	. 4	8.0	1.8	1.5	.82	•3							
	.6	11	2.8	2.8	1.01	. 4							
SEPTEMBER													
ANNUAL	16 TUDE AND	91 PROBABILI D ON PERIO				100 	 MAG	NITUDE AI	ND PROBA				
MAGNIT	TUDE AND BASE IN CFS,	PROBABILI D ON PERIO FOR INDIC L EXCEEDA	TY OF INS	STANTANE CORD 194 CURRENCE ABILITY,	DUS PEAK I 1-82 INTERVAL IN PERCEI	 FLOW 	PERIOD (CON-	BASED  DISCHA	ON PERI	OD OF RE CFS, FOR L, IN YE	CORD 1		RRENCE
MAGNIT DISCHARGE, YEARS, A	16 FUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIC L EXCEEDAI	TY OF INS	STANTANEC CORD 194 CURRENCE ABILITY,	OUS PEAK I 1-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU-	BASED DISCHAF	ON PERI	OD OF RECEIVED	CORD 1	941-82 TED RECU D ANNUAL IN PERCEI	RRENCE
MAGNIT	TUDE AND BASE IN CFS,	PROBABILI D ON PERIO FOR INDIC L EXCEEDA	TY OF INS	STANTANE CORD 194 CURRENCE ABILITY,	DUS PEAK I 1-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON-	BASED  DISCHA	ON PERI	OD OF RE CFS, FOR L, IN YE	CORD 1	941-82  TED RECU D ANNUAL	RRENCE
MAGNIT DISCHARGE, YEARS, A	16 FUDE AND BASE IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIC L EXCEEDAI	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 194 CURRENCE ABILITY,	DUS PEAK I 1-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE	BASED  DISCHAF	ON PERI RGE, IN INTERVA XCEEDANC	OD OF RECEIVED	CORD 1 R INDICA ARS, AN BILITY,	941-82 TED RECU D ANNUAL IN PERCE	RRENCE NT
MAGNIT DISCHARGE, YEARS, A	16  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDIC L EXCEEDAI	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 194 CURRENCE ABILITY,	DUS PEAK I 1-82 INTERVAL IN PERCEI	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE	BASED  DISCHAF	ON PERI RGE, IN INTERVA XCEEDANC	OD OF RECEIVED	CORD 1 R INDICA ARS, AN BILITY,	941-82 TED RECU D ANNUAL IN PERCE	RRENCE NT
MAGNIT	16  FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILII D ON PERIO FOR INDIC L EXCEEDA  5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 194 CURRENCE ABILITY,	DUS PEAK I 1-82 INTERVAL IN PERCEI	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAF	ON PERIOR ON PER	OD OF RE	CORD 1	941-82 TED RECU D ANNUAL IN PERCEI	100 1%
MAGNIT	16 TUDE AND BASE IN CFS, IND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIC L EXCEEDA  5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 194 CURRENCE ABILITY,	DUS PEAK I 1-82 INTERVAL IN PERCEI	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAF	ON PERIOR ON PER	OD OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	CORD 1: R INDICA EARS, AN BILITY, 25 4%	941-82 TED RECU D ANNUAL IN PERCEI 50 2%	100 1%
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MAGNIT	16 TUDE AND BASE IN CFS, IND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIC L EXCEEDA  5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 194 CURRENCE ABILITY,	DUS PEAK I 1-82 INTERVAL IN PERCEI	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHAR 2 50% 919 640 443	ON PERIOR ON PER	OD OF RECEIVED OF	R INDICA (ARS, AN BILITY, 25 4% 1780 1090 730 511	941-82 TED RECU D ANNUAL IN PERCE 50 2% 1930 1160 768	100 1% 2050 1210 799 566
MAGNITA  DISCHARGE, YEARS, F  1.25 80%	16 TUDE AND BASE IN CFS, IND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIC L EXCEEDA  5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 194 CURRENCE ABILITY,	DUS PEAK I 1-82 INTERVAL IN PERCEI	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASED  DISCHAF  2  50%  919  640  443 308	ON PERIOR ON PER	OD OF RECEIVED OF	25 4% 1780 1090 730	941-82  TED RECU D ANNUAL IN PERCEI  50 2%  1930 1160 768 541	100 1% 2050 1210 799
MAGNITA  DISCHARGE, YEARS, F  1.25 80%	16 TUDE AND BASE IN CFS, IND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIC L EXCEEDA  5 20%	TY OF INS DD OF REC CATED REC NCE PROBA	STANTANEC CORD 194 CURRENCE ABILITY,	DUS PEAK I 1-82 INTERVAL IN PERCEI	FLOW , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCHAI E: 2 50% 919 640 443 308 233	ON PERI- RGE, IN INTERVA XCEEDANC 5 20% 1330 870 591 409 296	OD OF RE CFS, FOR L, IN YE E PROBAB 10 10% 1550 984 662 460 324	R INDICA R INDICA RARS, AN BILITY, 25 4% 1780 1090 730 511 349	941-82 TED RECU D ANNUAL IN PERCEI  50 2%  1930 1160 768 541 362	100 1% 2050 1210 799 566 372
MAGNIT	16 TUDE AND BASE IN CFS, IND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIC L EXCEEDA  5 20%	TY OF INS	STANTANECORD 194  CURRENCE ABILITY,  25 4%	DUS PEAK II-82 INTERVAL IN PERCEI 50 2%	- LOW IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI  2  50  919  640  443  308  233  176  154	ON PERIOR ON PER	CFS, FOR L, IN YEE PROBAB  10 10 10 1550 984 662 460 324 250 214	R INDICA ARS, AN BILITY,  25 4\$  1780 1090 730 511 349 271	941-82 TED RECUD ANNUAL IN PERCE 50 2	100 1% 2050 1210 799 566 372 292
MAGNIT	16 TUDE AND BASE IN CFS, IND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INS DD OF REC CATED REC 10 10 10 2250 2	STANTANECCORD 194  CURRENCE ABILITY,  25 4%  2720	INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS) 	919 640 443 308 233 176 154	ON PERIOR ON PER	CFS, FORL, IN YEE PROBAB-10 10 10 984 662 460 324 250 214	R INDICA RARS, AN SILITY, 25 4% 1780 1090 730 511 349 271 231	941-82 TED RECUD ANNUAL IN PERCE 50 2	100 1% 2050 1210 799 566 372 292

# 14211720 WILLAMETTE RIVER AT PORTLAND, OR

LOCATION.--Lat 45°31'07", long 122°40'00", in NW±NE± sec.3, T.1 S., R.1 E., Multnomah County, Hydrologic Unit 17090012, in pier at east end of drawspan on upstream side of Morrison Bridge in Portland and at mile 12.8.

DRAINAGE AREA. -- 11, 100 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1972 to September 1982. Gage-height records collected in this vicinity since 1879 are in reports of the National Weather Service.

GAGE.--Acoustic velocity meter (AVM) with water-stage and velocity-index recorder. Datum of gage is 1.55 ft National Geodetic Vertical Datum of 1929 (levels by National Weather Service).

REMARKS.--Flow regulated by many resevoirs upstream. Many diversions for irrigation above station.

AVERAGE DISCHARGE. -- 10 years, 32,760 ft<sup>3</sup>/s, 23,730,000 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1973-82

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 283,000 ft<sup>3</sup>/s Jan. 18, 1974, gage height, 23.84 ft; minimum daily discharge, 4,200 ft<sup>3</sup>/s July 10, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 7, 1894, and June 1, 1948, reached stages of 33.0 ft and 30.0 ft, respectively, from information by National Weather Service.

# STATISTICAL SUMMARIES

								BASE	D ON PER	IUD UF RE	CURD 19	74-82	
	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN INTERVAL EXCEEDANG	, IN YEAR	S, AND A	NNUAL N	-NC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	11810	22150	15900	3297	.21	4.0	1						
NOVEMBER	14550	98410	37100	24990	.67	9.4	3						
DECEMBER	8894	129200	78690	39560	.50	20.0	7						
JANUARY	8795	119200	67810	35180	.52	17.2	14						
FEBRUARY	8050	94040	48800	26000	.53	12.4	30						
MARCH	17980	77790	41340	18450	.45	10.5	60						
APRIL	17630	58760	34400	13320	.39	8.7	90						
MAY	11150	34740	24050	7529	.31	6.1	120						
JUNE	8351	29300	16360	6748	.41	4.2	183						
JULY	6541	11810	8982	1614	.18	2.3							
AUGUST	6136	9478	8251	1021	.12	2.1	NOTE: L	ESS THA	N 10 YEAR	RS OF DAT	A AVAILA	BLE.	
SEPTEMBER	8580	17350	11920	2395	.20	3.0							
ANNUAL	13710	54490	32760	11480	.35	100							

MAGN I TUDE	AND PROBABILITY	0F	INSTANTANEOUS PEAK FLOW	
	BASED ON PERIOD	0F	RECORD	

# MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1973-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

DISCHARGE, IN CFS, YEARS, AND ANNUAL					•	PERIOD (CON-	DISC	INTER	N CFS, FOR VAL, IN YE	EARS, AND	ANNUAL	
1.25 2 80% 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
	<b></b>											
						1	170000	229000	256000			
WEIGHTED SKEW =						3	165000	222000	248000			
						7	153000	196000	212000			
						15	127000	154000	162000			
				•		30	105000	127000	133000			
						60	81700	108000	119000			
						90	69900	96700	110000			

# DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1973-82

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EX	CEEDED FOR	RINDICAT	TED PERC	ENT OF T	IME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
112000	81900	60400	46900	38700	32700	25100	19300	15500	12700	11500	10200	9160	8270	7260

# 14248700 BEAR CREEK NEAR SVENSEN, OR

LOCATION.--Lat 46°06'48", long 123°37'55", in NE4NE4 sec.11, T.7 N., R.8 W., Clatsop County, Hydrologic Unit 17080006, on right bank 0.5 mi upstream from the Astoria Reservoir Dam, 3.8 mi southeast of Svensen, and at mile 5.4.

DRAINAGE AREA .-- 3.33 m12.

PERIOD OF RECORD. -- August 1965 to September 1975.

GAGE.--Water-stage recorder. Altitude of gage is 700 ft, from topographic map.

REMARKS.--Flow regulated by Wickiup Lake and Middle Lake. No diversions above station.

AVERAGE DISCHARGE.--10 years (water years 1966-75), 17.9  $ft^3/s$ , 73.00 in/yr, 12,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 342 ft<sup>3</sup>/s Jan. 11, 1972, gage height, 3.42 ft; minimum, 1.2 ft<sup>3</sup>/s Sept. 8, 9,

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1966-75

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL NO	) <b>N</b> -
МОМТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.0	12	7.5	2.2	.29	3.5	1						
IOVEMBER	7.9	34	16	8.5	.53	7.5	3						
DECEMBER	16	49	34	12	. 34	15.8	7						
JANUARY	26	69	45	14	.31	20.7	14						
EBRUARY	17	39	30	6.2	.20	14.2	30						
ARCH	14	47	27	10.0	.37	12.6	60						
PRIL	11	29	19	5.6	.30	8.7	90						
AY	8.8	17	12	2.7	.23	5.4	120						
UNE	6.3	<b>1</b> 5	8.9	3.1	.34	4.2	183						
ULY	3.6	8.7	5.9	1.5	.25	2.7							
UGUST	4.0	6.8	4.9	.9	.18	2.3	NOTE: L	ESS THAI	N 10 YEAR	RS OF DAT	A AVAILA	BLE.	
EPTEMBER	1.6	9.1	5.3	1.8	.34	2.5							
NNUAL	12	24	18	4.2	.23	100							
MAGNI		PROBABILI ON PERIO				FLOW	MAG			ABILITY O			wo.
		FOR INDIC					PERIOD (CON-		INTERV	CFS, FOR	ARS, AND	ANNUAL	

			NDICATED EDANCE PR				PERIOD (CON-		INTERV	CFS, FOF AL, IN YE CE PROBAE	EARS, AND	ANNUAL	
1.25 80 <b>%</b>	2 50 <b>%</b>	5 20 <b>%</b> 	10 10 <b>%</b>	25 4 <b>%</b> <b>-</b>	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1%
106	145	206	250		~-								
						- <b></b>	1	107	152	187			
<b>WEIGHTE</b>	D SKEW =	0.378					3	86	116	137			
							7	70	91	105			
							15	59	76	87			
							30	48	60	67			
							60	41	51	57			
							90	37	46	51			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-75

	DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	1E		
5% 10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90 <b>%</b>	95 <b>%</b>
53 40	34	29	25	21	16	12	8.9	6.8	6.2	5.6	5.0	4.5	3.8

# YOUNGS RIVER BASIN

# 14251500 YOUNGS RIVER NEAR ASTORIA, OR

LOCATION.--Lat 46°04'02", long 123°47'20", in NW<sup>1</sup>/<sub>4</sub> sec.27, T.7 N., R.9 W., Clatsop County, Hydrologic Unit 17080006, on left bank 50 ft upstream from crest of Youngs River Falls, 2.7 mi southwest of Olney, and 9 mi south of Astoria.

ORAINAGE AREA. -- 40.1 mi2.

PERIOD OF RECORO. -- August 1927 to September 1958.

GAGE.--Water-stage recorder. Oatum of gage is 63.27 ft National Geodetic Vertical Oatum of 1929. Prior to Mar. 12, 1934, at site 1.2 mi upstream at different datum.

REMARKS.--No regulation. Youngs River-Lewis and Clark Water District has diverted water 4 mi above station for domestic use below station since 1941.

AVERAGE OISCHARGE.--31 years (water years 1928-58), 178 ft3/s, 128,900 acre-ft/yr.

EXTREMES FOR PERIOO OF RECORO.--Maximum discharge, 4,750 ft³/s Feb. 10, 1949, gage height, 13.66 ft, from rating curve extended above 2,300 ft³/s; minimum, 3.3 ft³/s Sept. 22, 1951.

# STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF THE OLVERSION STRUCTURE)

MONTHLY AND ANNUAL MEAN DISCHARGES	1928-41	MAGNITUOE AND PROBABILITY OF ANNUAL LOW FLOW
		BASEO ON PERIOD OF RECORD 1929-41

	M I N I MUM	MAXIMUM	MEAN	STAN- OARO OEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOO (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, ANO AN	NUAL N	DN-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE OAYS)	2 50%	5 20 <b>%</b> .	10 10%	20 5%	50 2%	100 1%
OCTOBER	8.2	234	81	80	.99	4.0	1	5.3	4.4	3.9	3.6		
NOVEMBER	7.9	638	258	212	.82	12.8	3	5.4	4.4	4.0	3.7		
0ECEMBER	168	1159	381	260	.68	19.0	7	5.5	4.6	4.2	3.9.		
JANUARY	148	611	356	145	.41	17.7	14	5.9	4.9	4.4	4.1		
FEBRUARY	100	588	305	162	.53	15.2	30	6.5	5.5	5.1	4.9		
MARCH	88	430	279	111	.40	13.9	60	8.2	6.6	5.9	5.3		
APRIL	44	348	177	105	. 59	8.8	90	10	7.9	6.9	6.2		
MAY	22	153	83	41	.49	4.1	120	13	9.4	8.2	7.5		
JUNE	18	95	46	28	.61	2.3	183	27	21	19	18		
JULY	8.7	35	18	7.2	.40	.9							
AUGUST	5.7	14	9.0	2.6		.4							
SEPTEMBER	4.9	63	17	17	.99	.9							
ANNUAL	102	233	167	43	. 26	100							

#### MAGNITUOE ANO PROBABILITY OF INSTANTANEOUS PEAK FLOW BASEO ON PERIOO OF RECORO 1928-58

#### MAGNITUOE ANO PROBABILITY OF ANNUAL HIGH FLOW BASEO ON PERIOO OF RECORO 1928-41

OISCHARGE, YEARS, A				RECURRENC ROBABILITY			PERIOO (CON-	01 SC	INTERV	AL, ÍN Y	R INOICAT EARS, ANO BILITY. I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE OAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
2430	2950	3600	4000	4470									
							1	2180	3040	3470	3900		
WE I GHTEO	SKEW =	.035					3	1530	2020	2260	2470		
							7	1000	1330	1510	1690		
							15	751	998	1140	1290		
							30	553	751	881	1050		
							60	437	582	675	790		
							90	399	507	565	626		

# OURATION TABLE OF OAILY MEAN FLOW FOR PERIOD OF RECORD 1928-41

 		01 SCH	ARGE, IN	CFS,	WHICH WAS	<b>EQUALE</b> 0	OR EXCEE	OEO FOR	INOICATE	PERCE	NT OF TIM	ΙE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 660	<b>43</b> 7	330	253	199	156	108	73	43	23	17	12	9.7	8.0	6.5

# YOUNGS RIVER BASIN

# 14251500 YOUNGS RIVER NEAR ASTORIA, OR--Continued

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF THE DIVERSION STRUCTURE)

MONTHLY AND ANNUAL MEAN DISCHARGES 1942-58

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1943-58

	MINIMUM	MAXIMUM	мгли	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		NTERVAL,	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL NO	N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.8	280	109	89	.82	4.8	1	5.9	4.5	4.0	3.6		
NOVEMBER	21	598	291	141	.48	12.8	3	6.0	4.6	4.1	3.7		
DECEMBER	115	746	433	154	.36	19.1	7	6.2	4.8	4.2	3.8		
JANUARY	130	879	405	207	.51	17.9	14	6.6	5.1	4.5	4.1		
FEBRUARY	187	716	412	132	.32	18.2	30	7.5	5.7	5.0			
MARCH	143	605	276	125	.45	12.2	60	9.5	7.0	6.0	5.3		
APRIL	71	332	178	80	.45	7.9	90	12	8.4	7.1			
MAY	27	184	73	40	.55	3.2	120	17	11	9.2			
JUNE	16	96	44	20	.46	1.9	183	35	25	20	17		
JULY	8.1	50	22	13	.58	1.0							
AUGUST	5.0	21	11	4.5	.41	• 5							
SEPTEMBER	5.9	31	13	7.7	.57	.6							
ANNUAL	116	293	188	40	.21	100							
DISCHARGE	BASE , IN CFS,	PROBABILI' D ON PERIO	OD OF RE	CURRENCE		,	DED LOD	~	 .RGE, IN	CFS, FO	ECORD 19	ED RECUR	 RENCE
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	D ON PERIO	OD OF RE	CURRENCE BABILITY,	IN PERCEN	ήТ 	PERIOD (CON-	DISCHA	RGE, IN	CFS, FO		ED RECUR	
DISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CURRENCE	IN PERCEN	,		DISCHA	RGE, IN	CFS, FO	R INDICATI	ED RECUR	
DISCHARGE YEARS, 1.25	BASE , IN CFS, AND ANNUA	FOR INDIC EXCEEDAN	OD OF RECORDED OF	ECURRENCE BABILITY,	IN PERCEN	NT 	(CON- SECU- TIVE	DISCHA E	RGE, IN INTERVA XCEEDANC	CFS, FOIL, IN YI	R INDICATE EARS, AND BILITY, II	ED RECUR ANNUAL N PERCEN	T 100
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN	OD OF RECORDED OF	ECURRENCE BABILITY,	IN PERCEN	NT 	(CON- SECU- TIVE	DISCHA E	RGE, IN INTERVA XCEEDANC	CFS, FOIL, IN YI	R INDICATE EARS, AND BILITY, II	ED RECUR ANNUAL N PERCEN	T 100
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA	FOR INDIC EXCEEDAN	OD OF RECORDED OF	ECURRENCE BABILITY,	IN PERCEN	NT 	(CON- SECU- TIVE DAYS)	DISCHA E 2 50%	RGE, IN INTERVA EXCEEDANC 5 20%	CFS, FO L, IN Y E PROBA 10 10%	R INDICATI EARS, AND BILITY, II 25 4%	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN	OD OF RECORDED OF	ECURRENCE BABILITY,	IN PERCEN	NT 	(CON- SECU- TIVE DAYS)	DISCHA E 2 50%	RGE, IN INTERVA EXCEEDANC 5 20%	CFS, FO L, IN YI E PROBA 10 10%	R INDICATI EARS, AND BILITY, II 25 4%	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN	OD OF RECORDED OF	ECURRENCE BABILITY,	IN PERCEN	NT 	(CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  1900 1400	RGE, IN INTERVA EXCEEDANC 5 20% 2340 1720	CFS, FO L, IN Y E PROBA 10 10% 2620 1930	R INDICATI EARS, AND BILITY, II 25 4% 2960 2180	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN	OD OF RECORDED OF	ECURRENCE BABILITY,	IN PERCEN	NT 	(CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  1900 1400 1050	1720 1280	CFS, FO NL, IN Y E PROBA 10 10% 2620 1930 1410	R INDICATE EARS, AND BILITY, II 25 4% 2960 2180 1560	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN	OD OF RECORDED OF	ECURRENCE BABILITY,	IN PERCEN	NT 	(CON- SECU- TIVE DAYS) 	DISCHA  2 50%  1900 1400 1050 777	5 20% 2340 1720 1280 960	CFS, FO L, IN YI E PROBAL 10 10% 2620 1930 1410 1060	R INDICATE EARS, AND BILITY, II  25  4%  2960 2180 1560 1170	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN	OD OF RECORDED OF	ECURRENCE BABILITY,	IN PERCEN	NT 	(CON- SECU- TIVE DAYS) 	DISCHA  2 50%  1900 1400 1050 777 611	2340 1720 1280 960 766	CFS, FO L, IN YI E PROBA 10 10% 2620 1930 1410 1060 844	25 4% 2960 2180 1170 922	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN	CATED RENCE PROB	CCURRENCE SABILITY, 25 4%	50 2%	100 18 	(CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  1900 1400 1050 777 611 477 460	2340 1720 1280 960 766 602 561	CFS, FO LL, IN Y E PROBA 10 10% 2620 1930 1410 1060 844 677 612	2960 2180 1560 1170 922 764	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RENCE PROB	CCURRENCE SABILITY, 25 4%	IN PERCENTS 50 2% OF DAILY N	100 1% 	(CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  1900 1400 1050 777 611 477 460  OF RECOR	2340 1720 1280 960 766 602 561	CFS, FO LL, IN Y E PROBA 10 10% 2620 1930 1410 1060 844 677 612	R INDICATE EARS, AND BILITY, II  25  4%  2960 2180 1560 1170 922 764 666	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC	CATED RENCE PROB	CCURRENCE SABILITY, 25 4%	IN PERCENTED TO THE PER	100 1% 	(CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD  XCEEDED FOR	DISCHA  E 2 50%  1900 1400 1050 777 611 477 460  OF RECOR	2340 1720 1280 960 766 602 561	CFS, FO LL, IN Y E PROBA 10 10% 2620 1930 1410 1060 844 677 612	R INDICATE EARS, AND BILITY, II  25  4%  2960 2180 1560 1170 922 764 666	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%

#### NEHALEM RIVER BASIN

#### 14301000 NEHALEM RIVER NEAR FOSS, OR

LOCATION.--Lat 45°42'15", long 123°45'15", in NWt sec.35, T.3 N., R.9 W., Tillamook County, Hydrologic Unit 17100202, on right bank 0.2 ml upstream from Cook Creek, 2.2 ml northeast of Foss, and at mile 13.5.

DRAINAGE AREA. -- 667 mi2.

5%

10900

10%

7510

15%

5610

20%

4380

PERIOD OF RECORD. -- October 1939 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 32.60 ft National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to Nov. 11, 1939, nonrecording gage.

REMARKS.--No regulation. Several small diversions for irrigation and domestic use above station.

AVERAGE OISCHARGE.--43 years, 2,727  $ft^3/s$ , 55.52 in/yr, 1,976,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,900 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 23.11 ft; minimum, 34 ft<sup>3</sup>/s Aug. 29-31, 1967.

#### STATISTICAL SUMMARIES

	ONTHLY AN	ID ANNUAL	MEAN DIS	SCHARGES	1940-82		MA		AND PRO				_OW
	MINIMIN	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISC		N CFS, FO L, IN YEA	ARS, AND	ANNUAL N	NON-
МОПТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	70	2948	858	719	.84	2.6	1	88	67	57	49	42	37
NOVEMBER	197	9256	36 <b>50</b>	2268	.62	11.1	3	89	68	58	50	42	38
DECEMBER	599	11390	6434	<b>2</b> 666	.41	19.6	7	92	70	60		- 45	40
JANUARY	<b>59</b> 6	12450	6436	3235	.50	19.6	14	98	75	65	57	49	44
FEBRUARY	1066	12490	5959	2507	.42	18.1	30	111	85	73	65	56	50
MARCH	1518	86 <b>9</b> 6	4401	1940	.44	13.4	60	136	102	87	77	66	60
PRIL	1149	4889	2709	1124	.41	8.2	90	165	121	103	91	79	72
YAY	535	<b>302</b> 8	1250	555	.44	3.8	120	212	153	130	115	100	91
JUNE	304	1591	567	258	.46	1.7	183	449	323	270	231	193	170
JULY	137	436	253	83	.33	.8							
AUGUST	63	314	146	48	.33	. 4							
SEPTEMBER	64	877	224	192	.86	.7							
ANNUAL	1063	4235	2727	667	.24	100							
MAGNI	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN	ISTANTANE CORD 194	OUS PEAK I	FLOW	PER IOD	BASE		RIOD OF F	RECORD 1	940-82 TED RECUID ANNUAL	JRRENCE
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS,	PROBABILI D ON PERI FOR INDI	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 194 CURRENCE	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW	PERIOD (CON-	BASE	ED ON PER HARGE, IN	RIOD OF F	RECORD 1	940-82 TED RECUID ANNUAL	IRRENCE
MAGNI	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN	ISTANTANE CORD 194	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE	BASE DISCE	HARGE, IN INTERN EXCEEDAN	N CFS, FO VAL, IN N NCE PROBA	RECORD 1	940-82  ATED RECUID ANNUAL IN PERCE	JRRENCE NT
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE	ISTANTANE CORD 194 COURRENCE MABILITY,	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW	PER I OD (CON- SECU-	BASE DISCE	HARGE, INTERV	N CFS, FO	RECORD 1	940-82 TED RECUID ANNUAL IN PERCE	JRRENCI
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	HARGE, IN INTERN EXCEEDAN 5	N CFS, FC VAL, IN N NCE PROBA	RECORD 1	940-82 ATED RECUID ANNUAL IN PERCE	JRRENCI NT 100
MAGNI ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FO VAL, IN N NCE PROBA 10%	OR INDICATE ARS, AN ABILITY, 25 4%	940-82  ATED RECUID ANNUAL IN PERCE 50 2%	JRRENC NT 10 11
MAGNI  SCHARGE YEARS,  1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW  , IN  NT  00  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FC /AL, IN N NCE PROBA	OR INDICA (EARS, AN BILLITY, 25 4% 39000 34100	940-82 ATED RECUID ANNUAL IN PERCE 50 2% 41700 36700	JRRENC 
MAGNI ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 194 CURRENCE BABILITY,	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW  , IN  NT  00  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20% 31400 27200 20400	10 10% 34900 30400 22300	RECORD 1  OR INDICA (EARS, AN ABILITY,  25 4%  39000 34100 24300	940-82  ATED RECUID ANNUAL IN PERCE  50 2%  41700 36700 25600	JRRENC INT 10 11 4420 3910 2670
MAGNI  SCHARGE YEARS,  1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW  , IN  NT  00  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 25300 21800 16700 13000	HARGE, INTERNATION TO SERVICE DAMPE	10 OF F N CFS, FC VAL, IN N NCE PROBA 10 10% 34900 30400 22300 17200	DR INDICA FEARS, AN ABILITY, 25 4% 39000 34100 24300 18500	940-82  ATED RECUID ANNUAL IN PERCE 50 2%  41700 36700 25600 19300	JRRENC 10 11 4420 3910 2670 1990
MAGNI DISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW  , IN  NT  00  1%	PERIOD (CON- SECU- TIVE DAYS) 	DISCH 25300 25300 21800 16700 13000 9810	HARGE, IN INTERICEXCEDAN 5 20% 31400 27200 20400 11800	N CFS, FC (AL, IN ) NCE PROBA- 10, 10% 34900 30400 22300 17200 12800	RECORD 1  RECORD 1  REARS, AN  BILITY,  25  4%  39000 34100 24300 13700	940-82  ITED RECUID ANNUAL IN PERCE 50 2%  41700 36700 25600 119300 114200	100 17 100 17 44200 39100 26700 19900
MAGNI ISCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	STANTANE CORD 194 CURRENCE ABILITY,	OUS PEAK F 0-82 INTERVAL IN PERCEN	FLOW  , IN  NT  00  1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 25300 21800 16700 13000	HARGE, INTERNATION TO SERVICE DAMPE	10 OF F N CFS, FC VAL, IN N NCE PROBA 10 10% 34900 30400 22300 17200	DR INDICA FEARS, AN ABILITY, 25 4% 39000 34100 24300 18500	940-82  ATED RECUID ANNUAL IN PERCE 50 2%  41700 36700 25600 19300	JRRENCI NT

DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

50%

60%

651

70%

75%

80%

85%

90%

95%

100

40%

25%

3440

30%

2770

# 14301500 WILSON RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°29'05", long 123°41'20", in SW±SE± sec.8, T.1 S., R.8 W., Tillamook County, Hydrologic Unit 17100203, on right bank 0.2 mi upstream from Negro Jack Creek, 8.0 mi east of Tillamook, and at mile 11.4.

DRAINAGE AREA.--161 mi<sup>2</sup>, at cableway, 2.0 mi downstream, where all discharge measurements are made.

PERIOD OF RECORD.--October 1914 to September 1915, August to November 1916, July 1931 to September 1982. Prior to January 1915 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 71.89 ft National Geodetic Vertical Datum of 1929. Dec. 18, 1914, to Nov. 4, 1916, nonrecording gage at site 2.8 mi downstream at different datum. July 30, 1931, to Sept. 30, 1938, nonrecording gage at site 2.82 mi downstream at datum 28.83 ft lower. Oct. 1, 1938, to Oct. 17, 1968, water-stage recorder at site 2.1 mi downstream at datum 29.76 ft lower.

REMARKS.--No regulation. Small diversions for domestic use above station.

AVERAGE DISCHARGE.--52 years (water years 1915, 1932-82), 1,203 ft<sup>3</sup>/s, 101.47 in/yr, 871,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft<sup>3</sup>/s Jan. 20, 1972, gage height, 16.91 ft; maximum gage height, 20.26 ft Dec. 22, 1964 (site and datum then in use); minimum discharge, 32 ft<sup>3</sup>/s Sept. 5, 1973, but may have been less for short period following a landslide Jan. 31, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1916 reached a stage of 20.8 ft, from floodmark, site and datum them in use.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1915-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1933-82

				STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON-		INTERVAL	, IN YEAR	R INDICA RS, AND A BILITY,	ANNUAL N	ON-
MONTH	MINIMUM (CFS)	MAX1MUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	58	2230	621	527	.85	4.3	1	68	55	49	44	38	35
NOVEMBER	87	3975	1881	1025	.54	13.0	3	69	56	49	44	39	36
DECEMBER	378	7988	2768	1265	.46	19.1	7	71	58	51	46	41	38
JANUARY	344	5776	2572	1225	.48	17.8	14	75	61	54	49	43	40
EBRUARY	642	46 19	2251	886	. 39	15.5	30	82	66	58	<b>5</b> 3	47	43
IARCH	595	3637	1813	734	.40	12.5	60	97	75	65	58	51	47
PRIL	426	2550	1184	457	.39	8.2	90	115	86	74	66	57	53
ΙΑΥ	202	1391	622	267	.43	4.3	120	144	104	89	79	70	64
UNE	164	876	327	166	.51	2.3	183	267	196	167	147	126	115
IULY	79	304	166	59	.36	1.1							
UGUST	44	240	108	3 <b>5</b>	.33	.7							
SEPTEMBER	40	780	168	157	.93	1.2							
NNUAL	524	1698	1203	256	.21	100							
*	TUDE AND	PROBABILI D ON PERIO	 TY OF IN	ISTANTANE	OUS PEAK		MAG				DF ANNUAL		 LOW

	-	FOR IN					PERIOD (CON-	DISC	INTER	VAL, ÍN	YEARS, A	ATED REC ND ANNUA IN PERC	L
1.25 80 <b>%</b>	2 50% 	5 20 <b>%</b> 	10 <b>1</b> 0%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	25 4%	50 2%	100 1 <b>%</b>
13400	17500	22900	26300	30600	33600	36700							
							1	13200	17200	19700	22900	25200	27400
WE I GHTE	D SKEW =	.010					3	9770	12600	14600	17100	19 100	21200
							7	7080	9040	10300	12000	13200	14400
							15	5190	6590	7460	8520	9270	10000
							30	3970	4960	<b>55</b> 40	6200	6660	7080
							60	3150	3900	4330	4810	<b>51</b> 30	<b>5</b> 430
							90	2870	3470	3760	4050	4220	4360

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1915-82

 		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN	T OF TIM	E		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 4550	3030	2270	1790	1460	1220	852	591	37 <b>5</b>	223	174	137	110	92	75

#### TRASK RIVER BASIN

#### 14302500 TRASK RIVER NEAR TILLAMOOK, OR

LOCATION.--Lat 45°26'25", long 123°43'00", in NW\\ sec.31, T.1 S., R.8 W., Tillamook County, Hydrologic Unit 17100203, on right bank 0.6 mi upstream from Gold Creek, 6.2 mi east of Tillamook, and at mile 10.4.

ORAINAGE AREA .-- 145 mi2.

PERIOD OF RECORD.--July 1931 to September 1955, October 1961 to June 1972.

GAGE.--Water-stage recorder. Oatum of gage is 58 ft National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--No regulation. Water diverted from the J. W. Barney Reservoir since July 1, 1972.

AVERAGE 01SCHARGE.--34 years (water years 1932-55, 1962-72), 966 ft<sup>3</sup>/s, 90.47 ln/yr, 699,900 acre-ft/yr.

EXTREMES FOR PERIOO OF RECORO.--Maximum discharge, 23,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 13.34 ft; minimum, 42 ft<sup>3</sup>/s Oct. 15-18, 1952, Sept. 28, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage about 17 ft, probably Nov. 20, 1921, discharge, 30,000 ft³/s, from rating curve extended above 12,000 ft³/s. Flood of Dec. 21, 1955, reached a stage of 13.09 ft, from floodmark, discharge, 20,200 ft³/s.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1932-71 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1933-71

	MINIMO	MAYINDIN		STAN- OARO OEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOO (CON- SECU-		INTERVAL	, IN YEA	R INOICA RS, ANO / BILITY,	ANNUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE OAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	50	1556	449	376	.84	3.9	1	71	58	52	47	42	
NOVEMBER	78	3289	1401	769	.55	12.0	3	72	59	53	48	42	
0ECEMBER	714	5491	2172	988	.45	18.7	7	74	6 <b>1</b>	54	49 -	44	
JANUARY	644	4377	2135	962	.45	18.4	14	78	64	57	52	46	
FEBRUARY	577	3452	1805	657	.36	15.5	30	85	69	62	56	50	
MARCH	464	2695	1493	547	.37	12.8	60	97	77	69	62	55	
APRIL	383	1951	944	382	.40	8.1	90	110	87	77	69	61	
MAY	196	1113	531	210	.40	4.6	120	134	102	89	80	71	
JUNE	161	636	303	127	.42	2.6	183	229	174	150	132	113	
JULY	90	273	165	48	.29	1.4							
AUGUST	59	183	108	27	.25	.9							
SEPTEMBER	55	492	127	84	.66	1.1							
ANNUAL	563	1273	966	167	.17	100				~			

MAGNITUOE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASEO ON PERIOO OF RECORD 1932-71

MAGNITUOE AND PROBABILITY OF ANNUAL HIGH FLOW BASEO ON PERIOO OF RECORO 1932-71

OISCHARGE YEARS,					NCE INTER		PERIOO (CON-	01 SC	INTER	VAL, ÍN	YEARS, A	ATEO RECUI NO ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 <b>4%</b>	50 2 <b>%</b>	100 1%	SECU- TIVE OAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
9900	12300	15600	17700	20500	22500			0550	10000		16500	10400	
WEIGHTE	O SKEW •	.263					1 3 7	9550 7280 5450	12200 9290 6950	14000 10800 7990	16500 12800 9340	18400 14500 10400	
							15	4170	5250	5880	6590	7080	
							30 60 90	3170 2510 2300	3970 3070 2720	4420 3370 2920	4910 3700 3100	5230 3910 3210	 

OURATION TABLE OF OAILY MEAN FLOW FOR PERIOD OF RECORD 1932-71

		0150	CHARGE,	IN CFS,	WHICH WAS	EQUALEO	OR EXCE	E0E0 F0R	INOICATEO	PERCENT	OF TIME	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3550	2390	1810	1440	1180	990	719	502	330	205	163	133	112	93	78

#### 14302900 NESTUCCA RIVER NEAR FAIRDALE, OR

LOCATION.--Lat 45°18'40", long 123°25'05", in SW\u00e4N\u00fc sec.15, T.3 S., R.6 W., Yamhill County, Hydrologic Unit 17100203, on right bank 100 ft upstream from former Meadow Lake, 0.4 mi downstream from Walker Creek, 5.3 mi southwest of Fairdale, and at mile 49.3.

DRAINAGE AREA.--6.18 mi2.

PERIOD OF RECORD. -- June 1960 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,778.99 ft National Geodetic Vertical Datum of 1929 (levels by city of McMinnville).

REMARKS.--Flow regulated since March 1969 by McGuire Lake about 0.6 mi above station. Flow diverted from lake to Haskins Creek basin via trans-basin aqueduct.

AVERAGE DISCHARGE.--22 years, 32.2 ft<sup>3</sup>/s, 70.76 in/yr, 23,330 acre-ft/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 876 ft3/s Dec. 22, 1964, gage height, 10.43 ft; minimum, 0.76 ft3/s Aug. 9, 1976.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1970-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1971-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL N	DN-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	3.8	<b>3</b> 1	16	8.4	•52	4.4	1	2.2	1.5	1.2	1.0		
NOVEMBER	13	118	55	29	.53	15.0	3	2.4	1.6	1.3	1.1		
DECEMBER	18	153	76	42	.56	20.6	7	2.5	1.7	1.3	1.1		
ANUARY	4.4	132	59	38	.64	16.1	14	2.9	1.8	1.4	1.1		
EBRUARY	8.4	111	46	29	.63	12.4	30	3.1	2.0	1.6	1.4		
1ARCH	13	80	43	24	.55	11.7	60	3.6	2.3	1.8	1.5		
\PR I L	7.2	63	32	16	.49	8.7	90	4.5	2.9	2.3	1.9		
1A Y	6.7	28	15	6.2	.41	4.1	120	5.6	3.8	3.0	2.4		
IUNE	4.5	19	8.0	4.0	.50	2.2	183	8.8	6.3	5.1	4.3		
IULY	2.2	9.5	5.0	2.4	.49	1.4							
NUGUST	2.1	9.1	4.5	2.6	. 59	1.2							
SEPTEMBER	1.2	-16	8.1	5.1	.62	2.2							
ANNUAL	10	45	31	10	.33	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1970-82

				RECURRENC DBABILITY			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80% 	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4%	50 <b>2%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1 <b>%</b>
263	393	582	712	880							<b></b>		
							1	272	380	440	503		
IE I GHTED	SKEW =	082					3	217	291	330	370		-
							7	165	226	260	<b>2</b> 97		_
							15	136	191	222	254		_
							30	105	149	174	202		_
							60	83	113	126	138		
							90	71	95	105	113		_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1970-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	1E		
5 <b>%</b> 	10%	15% <b>-</b>	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
122	81	59	46	37	30	21	15	9.6	7.4	6.0	4.7	3.8	3.2	2.5

# NESTUCCA RIVER BASIN

# 14303000 NESTUCCA RIVER NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°19'30", long 123°27'00", in E-1/2 sec.8, T.3 S., R.6 W., Yamhili County, Hydrologic Unit 17100203, 0.2 mi downstream from Meadow Lake and 14 mi northwest of McMinnville.

DRAINAGE AREA.--12 mi², approximately.

PERIOD OF RECORD. -- October 1928 to September 1944.

GAGE.--Water-stage recorder. Altitude of gage is 1,900 ft, from topographic map.

REMARKS.--No diversion above station. Flow slightly regulated by dam at outlet of Meadow Lake.

AVERAGE DISCHARGE.--16 years (water years 1929-44), 43.6 ft<sup>3</sup>/s, 31,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,480 ft $^3$ /s Dec. 22, 1933, and Dec. 27, 1937, gage height, 5.1 ft, from rating curve extended above 800 ft $^3$ /s; minimum, 1.0 ft $^3$ /s Oct. 11, 1929.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1929-44

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1930-44

4	MINIMUM	MAXIMUM	ИГАН	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON- SECU-	11	NTEŔVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	N-
MonTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	1.2	33	9.3	9.1	.97	1.8	1	1.9	1.5	1.3	1.1		
NOVEMBER	2.0	188	52	52	1.01	9.8	3	1.9	1.5	1.3	1.2		
DECEMBER	21	310	105	77	.73	20.0	7	1.9	1.5	1.3	1.2		
JANUARY	26	224	91	49	.53	17.4	14	2.0	1.6	1.4	1.2		
FEBRUARY	35	164	82	36	.44	15.7	30	2.1	1.7	1.5	1.3		
MARCH	24	139	79	38	.48	15.0	60	2.4	1.8	1.6	1.5		
APRIL	19	132	56	33	.59	10.6	90	2.8	2.1	1.8	1.7	~~	
MAY	10	71	26	14	.55	5.0	120	3.4	2.5	2.1	1.9		
JUNE	5.6	34	13	7.2	.56	2.5	183	6.9	5.0	4.3	3.8		
JULY	3.2	10	5.5	2.2	.40	1.1							
AUGUST	1.5	4.6	3.0	1.0	.33	•6							
SEPTEMBER	1.4	12	3.3	2.6	.77	.6							
ANNUAL	25	67	44	13	.31	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1929-44

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1929-44

				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
478	744	1143	1423	1790									
							1	613	934	1140	1390		
WEIGHTED	SKEW =	109					3	449	685	849	1060		
							7	300	453	570	738		
							15	205	296	362	452		
							30	155	217	259	311		
							60	121	162	189	222		
							90	106	137	155	176		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1929-44

		DISCHA	RGE, IN	CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIM			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 160		81			46									

#### 14303600 NESTUCCA RIVER NEAR BEAVER, OR

LOCATION.--Lat 45°16'00", long 123°50'45", in SE½NE½ sec.36, T.3 S., R.10 W., Tillamook County, Hydrologic Unit 17100203, on right bank 150 ft upstream from Saling Creek, 1.2 ml southwest of Beaver, and at mile 13.5.

DRAINAGE AREA. -- 180 mi2.

PERIOD OF RECORD. -- October 1964 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 43 ft, from river profile map.

 $\label{eq:REMARKS.--No regulation.} \textbf{Small diversions for irrigation above station.}$ 

AVERAGE DISCHARGE.--18 years, 1,090  $ft^3/s$ , 82.23 in/yr, 789,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft $^3$ /s Jan. 11, 1972, gage height, 22.0 ft, from floodmark; minimum, 32 ft $^3$ /s Sept. 14, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1962, reached a stage of 23.4 ft, discharge, 32,500 ft<sup>3</sup>/s caused by failure of Meadow Lake Dam.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1965-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1966-82

	MINIMUM	MAX1MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	-NC
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	91	842	376	252	.67	2.9	1	68		48	43		
NOVEMBER	209	3982	1390	872	.63	10.6	3	69	55	49	44		
DECEMBER	257	4440	2796	1109	.40	21.3	7	70	56	50	45 .		
JANUARY	273	4890	2611	1297	.50	19.9	14	74	59	52	47		
FEBRUARY	453	2981	1898	706	.37	14.5	30	82	65	5 <b>7</b>	51		
MARCH	634	2833	1664	708	.43	12.7	60	100	74	64	56		
APRIL	469	1638	1030	350	.34	7.9	90	123	87	73	63		
MAY	285	917	538	165	.31	4.1	120	151	106	89	77		
JUNE	183	917 .	351	206	.59	2.7	183	251	187	160	141		
JULY	96	31 <b>1</b>	173 .	70	.40	1.3							
AUGUST	49	251	108	47	.43	.8							
SEPTEMBER	54	412	175	120	.69	1.3							
ANNUAL	467	1643	1090	296	. 27	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1965-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1965-82

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, ÎN	OR INDICAT YEARS, AND ABILITY. I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> <b></b>	10 10 <b>%</b>	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
9280	12900	18300	22000	27000						:			<b>-</b>
			<del></del> -	<b>-</b>	<del>-</del>	- <b></b>	1	11000	15100	17400	19900		-
IE I GHTEI	) SKEW =	148					3	8820	11900	13800	<b>159</b> 00		-
							7	6450	8270	9310	10500		-
							15	4950	6210	6930	7740		-
							30	3770	4530	4940	5380	<b>-</b> -	-
							60	3030	3720	4070	4410		-
							90	2660	3320	3630	3930		-

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1965-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95 <b>%</b>
3 <b>9</b> 60	2730	2090	1670	1370	1140	788	543	350	224	181	143	113	92	74

# SILETZ RIVER BASIN

#### 14305500 SILETZ RIVER AT SILETZ, OR

LOCATION.--Lat 44°42'55", long 123°53'10", in NW‡SW‡ sec.11, T.10 S., R.10 W., Lincoln County, Hydrologic Unit 17100204, on right bank, 1.8 mi downstream from Baker Creek, 1.5 mi east of Siletz, and at mile 42.6.

DRAINAGE AREA.--202 mi<sup>2</sup>. At sites prior to October 1938, 204 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1905 to November 1911, January to May 1912, January to June 1924, November 1924 to September 1982. Prior to December 1905, monthly discharge only published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 102.32 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1905, to Sept 30, 1938, nonrecording gage at various sites within 2.5 ml downstream at different datums.

REMARKS.--Slight regulation from logponds. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--63 years (water years 1906-11, 1926-82), 1,561 ft<sup>3</sup>/s, 104.94 in/yr, 1,131,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1905-12, 1924-82).--Maximum discharge, 34,600 ft<sup>3</sup>/s Nov. 22, 1909, gage height, 24.6 ft, site and datum then in use; minimum observed, 48 ft<sup>3</sup>/s Sept. 25, 26, Oct. 4, 1965, Sept. 28, 29, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1921, reached a stage of 31.6 ft, at site 2.5 mi downstream at different datum, from floodmark, discharge, 40,800 ft<sup>3</sup>/s, from rating curve extended above 17,000 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1906-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1907-82

	MANIMOM	MAVIMIM	MCAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL,	CFS, FOR IN YEAR CE PROBAR	RS, AND A	NNUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	74	3412	780	768	.98	4.2	1	76	62	56	52 ·	48	46
NOVEMBER	72	6207	2464	1566	.64	13.2	3	78	64	58	55	51	49
DECEMBER	401	7828	3448	1466	.43	18.5	7	80	66	61	57	54	52
JANUARY	518	7664	3350	1556	.46	17.9	14	85	70	64	60	. 56	54
FEBRUARY	752	6055	2974	1223	.41	15.9	30	95	77	70	64	59	56
MARCH	557	4560	2260	983	.43	12.1	60	115	89	79	71	64	60
APRIL	387	3560	1511	706	.47	8.1	90	140	103	88	79	70	64
MAY	233	2579	838	447	.53	4.5	120	176	122	102	89	77	70
JUNE	144	1602	483	336	.70	2.6	183	327	231	194	169	145	131
JULY	105	602	222	102	.46	1.2							
AUGUST	65	419	133	53	.40	.7							
SEPTEMBER	59	1138	212	195	.92	1.1							
ANNUAL	660	2337	1545	352	.23	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1906-82

# MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1906-82

DISCHARGE YEARS,				RECURREN ROBABILIT			PERIOD (CON-	DISC		N CFS, FO	rears, At	ND ANNUAL	-
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
16200	20700	25900	28900	32400	34700	36900							
WELCHTE	D CKCH -						1 -	16900	21900	25000	28600	31200	33800
WEIGHIE	D SKEW =	279					3	13000	16300	18200	20500	22200	23800
							7	9350	11500	12800	14300	15400	16400
							15	6840	8320	9160	10100	10700	11300
							30	5230	6320	6860	7420	7760	8050
							60	4060	4990	5510	6070	6440	6780
							90	3690	4460	4840	5220	5440	5630

### DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906-82

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5810	3950	2950	2320	1900	1570	1090	750	467	279	213	168	133	108	87

# 14306030 YAQUINA RIVER NEAR CHITWOOD, OR

LOCATION.--Lat 44°39'29", long 123°50'15", în  $NE_{\pm}^{+}SW_{\pm}^{+}$  sec.31, T.10 S., R.9 W., Lincoln County, Hydrologic Unit 17100204, on left bank 200 ft below Thornton Creek and 1.1 mi west of Chitwood.

DRAINAGE AREA.--71.0 mi2.

1080

707

502

375

290

232

PERIOD OF RECORD.--October 1972 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 28.43 ft National Geodetic Vertical Datum of 1929.

 $\label{lem:regulation} \textit{REMARKS.--No regulation} \ \ \textit{or diversion above station.}$ 

AVERAGE DISCHARGE.--10 years, 251  $ft^3/s$ , 48.01 in/yr, 181,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,150 ft<sup>3</sup>/s Nov. 16, 1973, gage height, 14.43 ft; minimum, 2.8 ft<sup>3</sup>/s Sept. 27, 1974.

STATISTICAL SUMMARIES

		NAAV (MINA	*	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	DISCH	INTERVAL	CFS, FOR , IN YEAR CE PROBAR	RS, AND A	ANNUAL NO	ON-
итн	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
CT0BER	7.8	83	33	25	.77	1.1	1						
0VEMBER	20	1140	292	344	1.18	9.7	3						
DECEMBER	23	1089	707	336	.48	23.4	7						
ANUARY	34	979	571	331	.58	18.9	14						
EBRUARY	90	826	474	270	.57	15.7	30						
1ARCH	102	807	399	194	.49	13.2	-60						
PRIL	112	515	283	130	.46	9.4	90						
1AY	65	197	131	48	.36	4.3	120						
JUNE	33	242	73	62	.85	2.4	183						
JULY	14	65	26	14	.55	.9	102						
NUGUST	8.0	20	12	3.6	.29	.4	MOTE: I	ESS THA	N 10 YEA	RS OF DAT	Α Δ./ΔΙΙΔ	RIF	
EPTEMBER	6.1	31	15	7.9	.52	.5	14012.		10 12.1	110 01 0711		occ.	
NNUAL	85	445	251	100	.40	100							
MAGNI		PROBABILI D ON PERI		STANTANE			MAG			ABILITY O			.OW
YEARS,	BASE IN CFS,	FOR INDI	OD OF RE CATED RE NCE PROB	STANTANEC CORD 197: 	3-82 INTERVAL, IN PERCEN	FLOW	PERIOD (CON-	BASE DISCH	D ON PER		CORD 19  R INDICAT CARS, AND	73-82 ED RECUF	RENCE
OISCHARGE	BASE IN CFS,	D ON PERI	OD OF RE	STANTANEO CORD 1971	3-82 INTERVAL, IN PERCEN	LOW	PERIOD	BASE DISCH	D ON PER	OD OF RECEIVED	CORD 19  R INDICAT CARS, AND	73-82 ED RECUF	RENCE
TSCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	D ON PERI FOR INDI L EXCEEDA	OD OF RE  CATED RE  NCE PROB  10	STANTANEC CORD 197: 	INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	CFS, FOR	CORD 19 R INDICAT CARS, AND	73-82 ED RECUF ANNUAL N PERCEN	RRENCE
TSCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	D ON PERI	OD OF RE  CATED RE  NCE PROB  10	STANTANEC CORD 197: 	INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  LARGE, IN  INTERV.  EXCEEDAN  5  20%	CFS, FOF AL, IN YE CE PROBABE	CORD 19 R INDICAT CARS, AND BILITY, I	73-82 ED RECUF ANNUAL N PERCEN	RRENCE
I SCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE CATED RE NCE PROB 10 10%	STANTANE CORD 197: CURRENCE ABILITY,	INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV. EXCEEDAN.  5 20%	CFS, FOF AL, IN YE CE PROBAE	R INDICAT RARS, AND BILITY, I	PED RECUP ANNUAL N PERCEN 50 2%	RRENCE
YEARS, 7	BASE IN CFS, AND ANNUA 2 50%	D ON PERI	OD OF RE CATED RE NCE PROB 10 10%	STANTANE CORD 197: CURRENCE ABILITY,	INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER  IARGE, IN INTERV EXCEEDAN  5 20%  3770 2950	CFS, FOR AL, IN YECE PROBABLE 10 10% 4030 3210	CORD 19 R INDICAT CARS, AND BILITY, I	73-82 ED RECUF ANNUAL N PERCEN	RRENCE
YEARS, 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE CATED RE NCE PROB 10 10%	STANTANE CORD 197: CURRENCE ABILITY,	INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV. EXCEEDAN.  5 20%	CFS, FOF AL, IN YE CE PROBAE	R INDICAT RARS, AND BILITY, I	PED RECUP ANNUAL N PERCEN 50 2%	RRENCE
YEARS, 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE CATED RE NCE PROB 10 10%	STANTANE CORD 197: CURRENCE ABILITY,	INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ID ON PER  IARGE, IN INTERV EXCEEDAN  5 20%  3770 2950	CFS, FOR AL, IN YECE PROBABLE 10 10% 4030 3210	CORD 19 R INDICAT ARS, AND HILITY, I 25 4%	PED RECUP ANNUAL N PERCEN 50 2%	RRENCE
YEARS, 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE CATED RE NCE PROB 10 10%	STANTANE CORD 197: CURRENCE ABILITY,	INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 3060 2360 1820	ID ON PER  INTERV. EXCEEDAN  5 20%  3770 2950 2170	CFS, FOR AL, IN YECE PROBABLE 10 10% 4030 3210 2290	CORD 19 R INDICAT ARS, AND HILITY, I 25 4%	PED RECUP ANNUAL N PERCEN 50 2%	RRENCE
I SCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE CATED RE NCE PROB 10 10%	STANTANE CORD 197: CURRENCE ABILITY,	INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  3060 2360 1820 1280	D ON PER  INTERV. EXCEEDAN  5 20%  3770 2950 2170 1470	CFS, FOR AL, IN YECE PROBABLE 10 10% 4030 3210 2290 1550	CORD 19 R INDICAT CARS, AND HLITY, I 25 4%	PED RECUP ANNUAL N PERCEN 50 2%	RRENCE
I SCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIAL EXCEEDA	OD OF RE CATED RE NCE PROB 10 10%	STANTANE CORD 197: CURRENCE ABILITY,	INTERVAL, IN PERCEN	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 3060 2360 1820 1280 1020	D ON PER    NTERV.     STATE     STA	CFS, FOR AL, IN YECE PROBAE  10 10 10 4030 3210 2290 1550 1240	CORD 19 R INDICAT CARS, AND HLITY, I 25 4%	PED RECUP ANNUAL N PERCEN 50 2%	RRENCI
I SCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA 5 20%	OD OF RE CATED RE NCE PROB 10 10\$ 5040	STANTANEC CORD 197:	INTERVAL, IN PERCEN 50 2%	FLOW  IN  IN  IT  IT  IT  IT  IT  IT  IT  IT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD	DISCH  2 50%  3060 2360 1820 1280 1020 759 637  OF RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  3770 2950 2170 1470 1480 971 870  RD 1973-8	10D OF RECEPTOR AL, IN YEAR AL	R INDICAT	PED RECUP ANNUAL N PERCEN 50 2%	RRENCE
YEARS, 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDA 5 20%	OD OF RE CATED RE NCE PROB 10 10\$ 5040	STANTANEC CORD 197:	INTERVAL, IN PERCEN 50 2%	FLOW  IN  IN  IT  IT  IT  IT  IT  IT  IT  IT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90	DISCH  2 50%  3060 2360 1820 1280 1020 759 637  OF RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  3770 2950 2170 1470 1480 971 870  RD 1973-8	10D OF RECEPTION O	R INDICAT	PED RECUP ANNUAL N PERCEN 50 2%	RRENCE

147

47

27

13

9.9

7.7

91

# 14306036 MILL CREEK NEAR TOLEDO, OR

LOCATION.--Lat 44°34'35", long 123°54'25", in NW±NE± sec.33, T.11 S., R.10 W., Lincoln County, Hydrologic Unit 17100204, on left bank 1,200 ft downstream from diversion dam, and 3.5 mi southeast of Toledo.

DRAINAGE AREA. -- 4.18 mi<sup>2</sup>.

PERIOD OF RECORD. -- October 1959 to September 1973.

GAGE.--Water-stage recorder. Altitude of gage is 80 ft, from topographic map. Prior to July 13, 1968, at site 1,200 ft upstream at different datum.

REMARKS.--Except for average discharge, figures not adjusted for diversion for city of Toledo municipal supply. Occasional fluctuation caused by city of Toledo diversion dam, capacity, 250 acre-ft.

COOPERATION. -- Record of monthly diversion furnished by city of Toledo.

AVERAGE DISCHARGE.--14 years, 21.2 ft³/s, 68.87 In/yr, 15,360 acre-ft/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 609 ft<sup>3</sup>/s Jan. 27, 1965, gage height, 5.83 ft, site and datum then in use, from rating curve extended above 65 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow Sept. 27, Oct. 3, 4, 1961, Sept. 26, 1962.

#### STATISTICAL SUMMARIES

MONTHLY	AND	ANNUAL	MEAN	DISCHARGES	1961-73
PIONITIE	AND	VINIOUVE	PILAN	DISCHARGES	1901-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-73

		MAN I MUIN	мган	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON- SECU-	1	NTEŔVAL,	CFS, FOR IN YEARS E PROBABI	S, AND AN	INUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	20 5 <b>%</b>	50 2 <b>%</b>	100
OCTOBER	1.0	15	4.8	4.1	.85	1.9	1	.4	.1	.1	.1		
NOVEMBER	5.7	63	28	16	.56	11.1	3	-4	.1	.1	. 1-		
DECEMBER	18	80	49	21	.42	19.2	7	.5	.3	.2	.1		
JANUARY	14	93	58	28	.48	22.9	14	-6	.4	.3	.2		
FEBRUARY	9.8	91	39	22	.55	15.4	30	.9	.5	. 4	.3		
MARCH	10.0	72	35	18	-52	13.7	60	1.2	.7	.6	.5		
APRIL	8.7	38	19	9.9	.52	7.5	90	1.4	.9	.7	•6		
MAY	4.5	19	9.7	4.3	.45	3.8	120	1.8	1.2	.9	.8		
JUNE	1.8	18	5.4	4.2	.78	2.1	183	3.4	2.6	2.2	2.0		
JULY	.9	5.9	2.7	1.4	. 54	1.0	<del>-</del>		- <b>-</b>				
AUGUST	.5	3.4	1.6	.9	.55	•6							
SEPTEMBER	.4	4.8	1.9	1.4	.72	.7							
ANNUAL	13	28	21	4.4	.21	100							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-73

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1961-73

SCHARGE, YEARS, A							PERIOD (CON-		INTERV	AL, ÎN YE	R INDICAT EARS, AND BILITY. I	ANNUÁL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10%	25 4 <b>%</b>	50 2%	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10	25 4%	50 2%	100
287	363	464	529	610		- <b>-</b>							
							1	246	314	370	452		
WEIGHTED	SKEW =	.129					3	192	233	266	315		
							7	148	174	191	212		
							15	111	133	146	159		
							30	81	97	105	114		
							60	62	78	87	96		
							90	54	67	74	80		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-73

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCEN	T OF TIM	E		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
86	56	41	31	24	20	14	8.7	5.0	3.2	2.5	2.0	1.5	1.1	.7

# 14306100 NORTH FORK ALSEA RIVER AT ALSEA, OR

LOCATION.--Lat 44°22'45", long 123°35'40", in SE¼ sec.1, T.14 S., R.8 W., Benton County, Hydrologic Unit 17100205, on left bank at Alsea, 0.2 mi upstream from bridge on Lobster Valley Road, 0.7 mi upstream from confluence with South Fork, and at mile 49.4.

DRAINAGE AREA. -- 63.0 mi2.

PERIOD OF RECORD. -- October 1957 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 272.31 ft National Geodetic Vertical Datum of 1929.

 $\label{eq:REMARKS.--No regulation.} \textbf{REMARKS.--No regulation.} \textbf{ Some diversions by pumping above station.}$ 

AVERAGE DISCHARGE.--25 years, 281  $ft^3/s$ , 60.57 in/yr, 203,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 14,100 ft $^3$ /s Dec. 22, 1964, gage height, 14.57 ft, from rating curve extended above 2,900 ft $^3$ /s on basis of slope-area measurement at gage height 11.80 ft; minimum, 8.3 ft $^3$ /s June 8, Sept. 19, 1979.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1958-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1959-82
STAN- DARD	COEFFI- PERCENT	DISCHARGE, IN CFS, FOR INDICATED RECURREN PERIOD INTERVAL, IN YEARS, AND ANNUAL NON-

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEAR CE PROBAB	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	20	148	60	40	•66	1.8	1	16	14	 13	12	12	
NOVEMBER	33	1137	315	248	•79	9.3	3	17	14	13	13	12	
DECEMBER	34	1647	649	381	•59	19.2	7	17	15	14	13	13	
JANUARY	40	1327	700	386	.55	20.7	14	18	16	15	14	14	
FEBRUARY	107	1208	580	263	.45	17.2	30	20	17	16	16	15	
MARCH	152	947	471	220	.47	13.9	60	23	19	18	17	16	
APRIL	98	566	293	132	.45	8.7	90	25	21	19	18	17	
MAY	67	360	151	69	.46	4.5	120	30	25	23	21	20	
JUNE	39	137	71	23	.33	2.1	183	52	41	36	32	28	
JULY	26	52	36	7.5	.21	1.1							
AUGUST	17	46	25	6.0	. 24	•7							
SEPTEMBER	.15	66	29	13	.44	.9							
ANNUAL	79	483	28 1	84	.30	100							

MAGNITUDE	AND PRO	DBABILITY	OF	INSTANT	FANEOUS	PEAK	FLOW
	BASED (	ON PERIOD	OF	RECORD	1958-82	,	

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1958-82

					Y, IN PE		PERIOD (CON-		INTERV	AL, ÎN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10 <b>%</b>	25 4%	50 2% 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
3510	4880	7000	8580	10800	12500								
							1	3640	5240	6280	7570	8500	
<b>WE</b> I GHTED	SKEW =	.340					3	2750	3900	4670	5640	6350	
							7	1990	2690	3120	3630	3990	
							15	1370	1790	2050	2380	2610	
							30	1050	1300	1420	1550	1620	
							60	818	1050	1160	1280	1350	
							90	718	915	1000	1080	1130	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-82

		DISCH	ARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85% 	90%	95%
1080					267		115	69	43	35	30	26	22	19

# 14306400 FIVE RIVERS NEAR FISHER, OR

LOCATION.--Lat 44°20'15", long 123°49'35", W-1/2 sec.19, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, in Siuslaw National Forest, on left bank at downstream side of abandoned highway bridge, 500 ft downstream from Lobster Creek, 3.2 mi north of Fisher, and at mile 3.3.

DRAINAGE AREA .-- 114 mi2.

PERIOD OF RECORD.--August 1958 to September 1963, October 1967 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 130 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--20 years, 556  $ft^3/s$ , 66.23 in/yr, 402,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD. -- Maximum discharge, 17,200 ft3/s Jan. 21, 1972, gage height, 21.08 ft; minimum, 16 ft3/s Oct. 1, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 22.3 ft, from floodmarks, discharge, 19,000 ft<sup>3</sup>/s from rating curve extended above 10,000 ft<sup>3</sup>/s.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1961-82	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		RASED ON DEDICE OF DECORD 1062-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL NO	-NC
монтн	(CFS)	(CFS)	(CFS)	(CFS)	AT10N	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	28	322	140	99	-71	2.1	1	26	22	21	20		
NOVEMBER	61	2308	717	554	.77	10.6	3	26	23	22	21		
DECEMBER	73	2393	1402	694	- 50	20.7	7	27	24	23	22		
JANUARY	80	2671	1241	733	. 59	18.3	14	28	25	24	23		
FEBRUARY	283	2363	1181	538	-46	17.5	30	31	27	26	25		
MARCH	298	1854	936	440	.47	13.8	60	36	30	28	26		
APRIL	218	1117	574	274	.48	8.5	90	43	35	31	29		
MAY	137	631	283	139	. 49	4.2	120	53	42	38	35		
JUNE	85	273	131	50	.38	1.9	183	95	72	62	55		
JULY	45	88	64	13	. 20	.9							·
AUGUST	28	87	42	13	.32	.6							
SEPTEMBER	30	95	53	22	- 41	.8							
ANNUAL	174	939	561	179	.32	100							

MAGNITUDE	AND PROBABILITY	0F	INSTANTANEOUS PEAK FLOW
	BASED ON PERIOD	0F	RECORD 1961-82

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1961-82

YEARS, A	ND ANNU	JAL EXCEE	DANCE PI	RECURRENC ROBABILITY	, IN PE	RCENT	PERIOD (CON-		INTER	VAL, ÎN '	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4% 	50 2%	100	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5960	8570	12400	15100	18600									
							1	6510	9300	11200	13600		
WEIGHTED	SKEW =	067					3	5090	7090	8420	10100		
							7	3770	4910	5590	6390		
							15	2560	3290	3750	4310		
							30	2040	2520	2770	3030		
							60	1610	2060	2300	2540		
							90	1400	1820	2020	2210		

### DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2230	1500	1090	836	650	532	356	223	129	79	63	52	43	36	29

# 14306500 ALSEA RIVER NEAR TIDEWATER, OR

LOCATION.--Lat 44°23'10", long 123°49'50", in NW\\N\\\ sec.6, T.14 S., R.9 W., Lincoln County, Hydrologic Unit 17100205, on right bank 0.9 mi downstream from Grass Creek, 2.5 mi upstream from Scott Creek, 3.8 mi southeast of Tidewater, and at mile 21.0.

DRAINAGE AREA. -- 334 mi2.

PERIOD OF RECORD. -- October 1939 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 48.16 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 16, 1939, nonrecording gage at present site and datum.

REMARKS. -- No regulation. Diversion for irrigation above station.

AVERAGE DISCHARGE.--43 years, 1,522 ft<sup>3</sup>/s, 61.88 in/yr, 1,103,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 27.44 ft; minimum, 45 ft<sup>3</sup>/s Sept. 26, 27, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on or about Feb. 3, 1890, reached a stage of 29.5 ft, from floodmark (discharge not determined).

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1940-82 MAGNITUDE

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1941-82

	MINIMUM	·	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		ARGE, IN INTERVAL EXCEEDANG	, IN YEAR	RS, AND A	ANNUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	74	2521	417	472	1.13	2.3	1	75	62	<u>-</u> 57	53	48	45
NOVEMBER	115	6058	1771	1289	.73	9.7	3	76	63	58	54	49	46
DECEMBER	182	7419	3446	1770	.51	18.8	7	78	66	60	56	5 <b>1</b>	49
JANUARY	211	7874	3721	1941	.52	20.3	14	82	69	63	59	54	52
FEBRUARY	607	6586	3324	1365	.41	18.1	30	89	75	68	63	59	56
MARCH	604	5144	2532	1083	.43	13.8	60	105	85	77	71	64	61
\PRIL	550	3203	1529	700	.46	8.3	90	121	97	87	79	72	68
YΑN	331	1848	801	377	.47	4.4	120	147	117	104	95	87	82
JUNE	178	724	373	132	.35	2.0	183	274	208	178	156	134	120
JULY	117	269	183	40	.22	1.0				<del>-</del>			
AUGUST	66	234	117	31	.27	.6							
SEPTEMBER	60	452	135	76	.56	.7							
ANNUAL	431	2541	1522	410	.27	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1940-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1940-82

				RECURREN ROBABILI			PERIOD (CON-	DISC	INTER	N CFS, F VAL, IN NCE PROB	YEARS, A	AD ANNUA	Ĺ
1.25 80% 	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
15300	20600	27400	31500	36500	39900	43200							
							1	17000	22200	25300	28700	31000	33200
WEIGHTE	D SKEW =	221					3	13500	17800	20300	23200	25300	27200
							7	10000	13000	14700	16500	17800	18900
							15	7240	9180	10200	11300	12000	12600
							30	5670	6960	7510	7990	8240	8420
							60	4380	5500	6050	6580	6890	7150
							90	3910	4910	5370	5800	6030	6210

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1940-82

<b>-</b>			DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATED	PERCENT	OF TIME			
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
59	930	3990	2930	2300	1840	1510	1010	638	374	224	176	141	119	100	83

# 14306600 DRIFT CREEK NEAR SALADO, OR

LOCATION.--Lat 44°30'50", long 123°50'50", in NE± sec.24, T.12 S., R.10 W., Lincoln County, Hydrologic Unit 17100205, on right bank 0.2 mi downstream from Cape Horn Creek, 4.1 mi southwest of Salado, 8.5 mi southeast of Toledo, and at mile 21.8.

DRAINAGE AREA. -- 20.5 mi2.

447

299

225

179

146

122

88

60

37

22

17

8.6

6.7

PERIOD OF RECORD.--September 1958 to September 1963, June 1965 to September 1970.

GAGE.--Water-stage recorder. Altitude of gage is 460 ft, from topographic map.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--10 years (water years 1959-63, 1966-70), 120 ft<sup>3</sup>/s, 79.49 in/yr, 86,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft<sup>3</sup>/s Nov. 25, 1962, gage height, 8.34 ft, from rating curve extended above 1,300 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 8.11 ft; maximum gage height, 8.79 ft Dec. 4, 1966 (backwater from debris); minimum discharge, 3.8 ft<sup>3</sup>/s Sept. 7, 8, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1964 or January 1965, reached a stage of 9.86 ft, from floodmark in well, discharge, 4,050 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

	Minimon	MAN PROPERTY.	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEAR CE PROBAE	RS, AND A	NNUAL N	0N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	9.7	89	45	30	.66	3.1	1						
OVEMBER	73	317	171	88	.52	11.8	3				<b></b>		
ECEMBER	108	400	224	95	.43	15.5	7						
ANUARY	76	488	262	143	.55	18.1	14						
EBRUARY	154	510	274	109	.40	18.9	30						
MARCH	89	390	209	91	.43	14.5	60						
PRIL	61	232	116	53	.46	8.0	90						
4A Y	25	135	74	37	.50	5.1	120						
JUNE	14	70	31	15	.48	2.1	183						
JULY	9.2	23	15	4.2	. 29	1.0							
NUGUST	5.8	19	9.7		. 39	.7	NOTE: L	LESS THA	N 10 YEA	RS OF DAT	A AVAILA	BLE.	
SEPTEMBER	5.4	62	15	16	1.08	1.0							
		†45 PROBABILI D ON PERIO				100 	<b></b>			ABILITY O			 LOW
OI SCHARGE	TUDE AND BASE	PROBABILI	TY OF IN OD OF RE	STANTANEC CORD 1959	DUS PEAK F 9-70 INTERVAL	FLOW	PERIOD	BASE DISCH	D ON PER ARGE, IN INTERV		CORD 19 R INDICAT	59-70 ED RECUI	RRENCE
MAGNI DISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIC L EXCEEDA	TY OF INDOD OF RECATED RESIDENCE PROBLEMENT	STANTANEC CORD 1959 	DUS PEAK F 70-70 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN	CFS, FOR L, IN YECE PROBAE	CORD 19 R INDICAT EARS, AND	59-70 ED RECUI ANNUAL N PERCEI	RRENCE
MAGNI I SCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO	TY OF IN DD OF RE CATED RE	STANTANEC CORD 1959  CURRENCE ABILITY,	DUS PEAK F 9-70 INTERVAL IN PERCEI	FLOW , , IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN	IOD OF RE  CFS, FOF AL, IN YE	CORD 19 R INDICAT	59-70 ED RECUI	RRENCE
MAGNI II SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIG L EXCEEDAI	TY OF IN DD OF RE CATED RE NCE PROB	STANTANEC CORD 1959 	DUS PEAK F 70-70 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN	CFS, FOR AL, IN YECE PROBAE	CORD 19 R INDICAT EARS, AND BILITY, I	ED RECUI ANNUAL N PERCEI	RRENCE
MAGNI ISCHARGE YEARS, 1.25	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILII D ON PERIO FOR INDIG L EXCEEDAI	TY OF INDOD OF RECATED RESIDENCE PROBLEMENT	STANTANEC CORD 1959 	DUS PEAK F 70-70 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20%	CFS, FOR AL, IN YE CE PROBAE	CORD 19 R INDICAT EARS, AND BILITY, I 25 4%	ED RECUI ANNUAL N PERCEI	RRENCE
MAGNI II SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIC L EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	STANTANEC CORD 1959 	DUS PEAK F 70-70 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV. EXCEEDANN 5 20%	CFS, FOR AL, IN YE CE PROBAE 10 10%	CORD 19 R INDICAT EARS, AND BILITY, I	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNI I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILII D ON PERIO FOR INDIG L EXCEEDAI	TY OF IN DD OF RE CATED RE NCE PROB	STANTANEC CORD 1959 	DUS PEAK F 70-70 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2  50%  1360 1070	D ON PER ARGE, IN INTERV. EXCEEDANN 5 20%	CFS, FOR AL, IN YE C PROBAE 10 10 10 1250	CORD 19 R INDICAT EARS, AND BILLITY, I 25 4%	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNI I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIC L EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	STANTANEC CORD 1959 	DUS PEAK F 70-70 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH 2 50% 1360 1070 780	D ON PER ARGE, IN INTERV EXCEEDANG 5 20% 1600 1200 914	CFS, FOR AL, IN YE CE PROBAE 10 10%	CORD 19 R INDICAT ARS, AND BILITY, I 25 4%	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNI I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIC L EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	STANTANEC CORD 1959 	DUS PEAK F 70-70 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2  50%  1360 1070	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  1600 1200 914 692	100 OF RE CFS, FOR AL, IN YE CE PROBAE 10 10%	R INDICAT RARS, AND BILITY, I 25 4%	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNI I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIC L EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	STANTANEC CORD 1959 	DUS PEAK F 70-70 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50  1360 1070 780 562	D ON PER ARGE, IN INTERV EXCEEDANG 5 20% 1600 1200 914	10D OF RE CFS, FOR AL, IN YE CE PROBAE 10 10\$ 1750 1250 997 774	CORD 19 R INDICAT FARS, AND BILITY, I 25 4%	ED RECUI ANNUAL N PERCEI 50 2%	RRENCE
MAGNI I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIC L EXCEEDA 5 20%	TY OF IN DD OF RE CATED RE NCE PROB	STANTANEC CORD 1959 	DUS PEAK F 70-70 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50 50 1360 1070 780 562 413	D ON PER  ARGE, IN INTERV. EXCEEDANG  5 20%  1600 1200 914 692 496	10 OF RECEPTOD OF	R INDICAT	59-70 ED RECUI ANNUAL N PERCEI 50 2%	RRENCI

#### 14306700 NEEDLE BRANCH NEAR SALADO, OR

LOCATION.--Lat 44°30'55", 123°51'20", in SW¼ sec.24, T.12 S., R.10 W., Lincoln County, Hydrologic Unit 17100205, on right bank 500 ft upstream from mouth, 4.6 mi west of Salado, and 8.5 mi southeast of Toledo.

DRAINAGE AREA.--0.27 mi<sup>2</sup>, computed as 174.64 acres on basis of field survey by Oregon State University.

PERIOD OF RECORD. -- October 1958 to September 1973.

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

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years, 1.64  $ft^3/s$ , 82.49 in/yr, 1,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64 ft³/s Jan. 11, 1972, gage height, 3.75 ft; minimum, 0.01 ft³/s Sept. 8, 9, 1962, Sept. 18 to Oct. 3, 1965, Aug. 17, Sept. 14, 23-28, 1967, many days in August and September 1970, Aug. 26, 1971, many days in August and September 1972, several days in August and September 1973.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1959-73 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1960-73

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	- 11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 <b>2%</b>	100 1%
OCTOBER	.1	1.9	.6	.6	1.07	2.9	1	0.0	0.0	0.0	0.0		
NOVEMBER	.8	4.6	2.6	1.2	.48	13.3	3	0.0	0.0	0.0	0.0		
DECEMBER :	1.2	7.8	3.9	2.0	.52	19.8	7	0.0	0.0	0.0	0.0		
JANUARY	.8	7.1	4.3	2.1	.49	21.9	14	0.0	0.0	0.0	0.0		
FEBRUARY	.7	6.2	2.9	1.4	.47	14.9	30	0.0	0.0	0.0	0.0		
MARCH	.7	4.5	2.6	1.1	.43	13.0	60	- 1	0.0	0.0	0.0		
APRIL	.6	2.7	1.4	.7	.53	7.1	90	.1	0.0	0.0	0.0		
MAY	.2	1.8	.8	.4	.56	3.9	120	. 1	.1	0.0	0.0		
JUNE	•1	1.1	.3	•2	.70	1.7	183	.3	•2	.1	. 1		
JULY	.1	.4	.1	.1	.69	•7						<del>-</del>	
AUGUST	0.0	•2	. 1	0.0	.67	.3							
SEPTEMBER	0.0	•7	-1	• 2	1.38	•7							
ANNUAL	1.1	2.5	1.6	.4	.23	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1959-73

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1959-73

SCHARGE, YEARS, A							PERIOD (CON-		RGE, IN O INTERVAL KCEEDANCE	., ÎN YEA	RS, AND	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10 <b>%</b> 	25 4% 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1%
23	30	39	45	54								<del>-</del>	·
· <b>-</b>							1	21	27	33	43		
WEIGHTED	SKEW =	.394					3	15	19	22	26		
							7	11	14	15	17		
							15	8.2	10	11	13		
							30	6.1	7.5	8.3	9.2		
		*					60	4.6	6.0	6.9	8.0		
							90	4.1	5.1	5.8	6.5		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-73

		DISCH	HARGE, II	N CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATE	D PERCE	NT OF TIM	1E		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
6.6	4.3	3.1	2.5	1.9	1.6	1.0	.7	.4	•2	. 1	.1	.1	.1	0.0

# 14306800 FLYNN CREEK NEAR SALADO, OR

LOCATION.--Lat 44°32'20", long 123°51'05", in SW‡ sec.12, T.12 S., R.10 W., Lincoln County, Hydrologic Unit 17100205, on right bank 1,000 ft upstream from mouth, 3.4 mi west of Salado, and 6.9 mi southeast of Toledo.

DRAINAGE AREA.--0.78 mi², computed as 501.96 acres on basis of field survey by Oregon State University.

PERIOD OF RECORD. -- September 1958 to September 1973.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 685 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years (water years 1959-73),  $4.37 \text{ ft}^3/\text{s}$ , 76.08 in/yr, 3,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 139 ft<sup>3</sup>/s Jan. 11, 1972, gage height, 4.73 ft; minimum, 0.07 ft<sup>3</sup>/s Sept. 27, 1967.

# STATISTICAL SUMMARIES

MONTHLY	AND	ANNUAL	MEAN	DISCHARGES	1959-73	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
						PASED ON DEDICE OF DECORE 1060-73

		1443/114184	4541	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	ON-
монтн	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
CT0BER	.2	3.2	1.0	.9	.90	1.8	1	.2	.1	.1	.1		
IOV EMBER	1.0	11	5.7	3.3	- 58	10.7	3	.2	.1	.1	- 1		
ECEMBER	4.4	21	9.6	4.7	. 49	18.1	7	.2	.1	.1	- 1		
ANUARY	3.2	18	12	5.5	. 46	22.4	14	.2	.1	.1	. 1		
EBRUARY	2.0	19	8.7	4.1	. 47	16.4	30	.2	.2	.1	- 1		
ARCH	2.7	15	7.3	3.6	.50	13.7	60	.3	.2	.1	- 1		
PRIL	1.8	8.3	4.2	2.0	.48	8.0	90	.3	.2	.2	.2		
AY	.9	5.3	2.4	1.3	.52	4.6	120	. 4	.3	.2	-2		
UNE	.5	3.2	1.1	.7	.58	2.1	183	-8	.5	. 4	.4		
ULY	.3	1.2	.5	.2	. 42	1.0							
UGUST	.1	.5	.3	.1	. 39	.5							
EPTEMBER	.1	1.4	.4	.3	.86	.7							
NNUAL	2.7	6.3	4.4	.8	. 19	100							

ISCHARGE, YEARS, A							PERIOD (CON-		INTERV	CFS, FOR AL, IN YE CE PROBAE	ARS, AND	ANNUAL	
1.25 80%	2 50% 	5 20% 	10 10%	25 4%	50 2% 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
46	62	86	103	126									
WEIGHTED	SKFW =	.400					1 3	45 36	60 46	74 54	97 67		
#L TOTTLO	SKEW -	.400					, 7	29	34	38	44		
							15	22	27	30	33		
							30	16	19	21	23		
							60	12	15	17	20		
							90	11	13	15	17		

# DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-73

			DISCH	ARGE, IN	N CFS, N	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATE	D PERCEN	IT OF TIM	1E		
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
-	18	12	8.7	6.7	5.3	4.3	3.1	2.0	1.2	.7	.5	.4	.3	.2	.2

# 14306810 DEER CREEK NEAR SALADO, OR

LOCATION.--Lat 44°32'05", long 123°52'35", in SWt sec.11, T.12 S., R.10 W., Lincoln County, Hydrologic Unit 17100205, Siuslaw National Forest, on right bank 1,000 ft upstream from mouth, 4.6 mi west of Salado, and 6.5 mi southeast of Toledo.

DRAINAGE AREA.--1.17 mi<sup>2</sup>, computed as 749.5 acres on basis of field survey by Oregon State University.

PERIOD OF RECORD.--September 1958 to September 1973.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 600 ft, from topographic map.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years (water years 1959-73), 6.49 ft $^3$ /s, 75.33 in/yr, 4,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201 ft<sup>3</sup>/s Jan. 28, 1965, gage height, 4.21 ft; maximum gage height, 4.39 ft Jan. 20, 1972 (backwater from log); minimum discharge, 0.15 ft<sup>3</sup>/s Sept. 2, 14-16, 1972.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1959-73	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		BASED ON PERIOD OF RECORD 1960-73

	MINIMIN	MAVIMINA	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL N	ON-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	.3	5.0	1.9	1.5	.79	2.4	1	.3	.2	•2	.2		
NOVEMBER	2.5	17	9.0	4.7	.52	11.5	3	.3	•2	.2	.2		
DECEMBER	5.9	30	14	6.7	.48	17.9	7	.3	.2	.2	.2		
JANUARY	4.5	28	17	8.3	. 48	22.2	14	.3	.3	•2	.2		
FEBRUARY	2.9	28	12	5.9	.49	15.6	30	.4	.3	.2	•2.		
MARCH	3.5	21	10	5.2	.50	13.3	60	.4	.3	.3	.2		
APRIL	2.7	11	6.0	2.8	.47	7.7	90	.5	- 4	.3	.3		
MAY	1.2	7.0	3.5	1.7	.50	4.4	120	.6	-4	.4	.3		
JUNE	.7	5.1	1.8	1.1	.60	2.3	183	1.3	.9	-8	.7		
JULY -	.5	1.9	.8	. 4	. 46	1.1							
AUGUST	.3	1.2	.5	.2	.46	.6							
SEPTEMBER	.3	2.7	.7	•7	.89	.9							
ANNUAL .	4.2	9.1	6.5	1.2	.18	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1959-73

### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1959-73

DISCHARGE, YEARS, A							PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> <b></b>	10 <b>1</b> 0%	25 <b>4%</b> 	50 2 <b>%</b>	100 · 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100
78	101	134	158	188				70		417	154		
WE I GHTED	SKEW =	.343	<b>-</b>				1 3 7	70 5 <b>4</b> <b>42</b>	95 69 51	117 83 58	154 104 68		
							15 30	32 24	40 29	44 31	49 35		
							60 <b>9</b> 0	18 16	23 19	26 22	29 25		

# DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-73

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATE	D PERCEN	T OF TIM	1E		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75 <b>%</b>	80 <b>%</b>	85%	90%	95%
25	17	13	9.6	7.8	6.4	4.5	2.9	1.9	1.1	.8	.6	.5	.4	.3

# BIG CREEK BASIN

# 14306900 BIG CREEK NEAR ROOSEVELT BEACH, OR

LOCATION.--Lat 44°10'05", long 124°03'55", in SE±SE± sec.13, T.16 S., R.12 W., Lane County, Hydrologic Unit 17100205, on right bank 1.0 mi downstream from Frying Pan Creek, 2.5 mi east of Roosevelt Beach.

DRAINAGE AREA .-- 11.9 mi2.

353

241

183

144

115

92

61

42

29

19

15

13

10

8.3

6.7

PERIOD OF RECORD.--October 1972 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 141 ft, by barometer.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--10 years, 92.9 ft<sup>3</sup>/s, 106.02 in/yr, 67,310 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft<sup>3</sup>/s Nov. 30, 1975, gage height, 6.90 ft; minimum, 3.8 ft<sup>3</sup>/s Oct. 15, 1979.

#### STATISTICAL SUMMARIES

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	CFS, FOF , IN YEAF CE PROBAE	RS, AND A	NNUAL NO	)N-
монтн	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	5.7	67	29	24	.82	2.6	1						
NOVEMBER	20	386	137	116	.85	12.2	3						
DECEMBER	20	398	244	109	.45	21.8	7						
JANUARY	27	287	182	97	.53	16.3	14						
FEBRUARY	56	308	174	90	.52	15.5	30						
MARCH	49	269	140	62	. 44	12.5	60						
APRIL	50	153	92	31	.34	8.2	90				<b></b>		
MAY	27	86	49	21	.43	4.4	120						
JUNE	13	56	30	13	.43	2.7	183						
JULY	8.6	46	18	11	.59	1.6							
AUGUST	6.0	18	11	3.5	.39	.9	NOTE: L	ESS THA	N 10 YEA	RS OF DAT	A AVAILA	BLE.	
SEPTEMBER	7.7	29	14	8.4	.60	1.3							
ANNUAL	40	158	93	33	.35	100							
		PROBABILI D ON PERIO	 TY OF IN	STANTANE	OUS PEAK F		MAG			ABILITY O			.ow
MAGNI	BASE , IN CFS,	PROBABILI	TY OF IN	ISTANTANE (CORD 1973	DUS PEAK F 3-82	FLOW	PERIOD	BASE DISCH	D ON PER  ARGE, IN INTERV		CORD 19 R INDICAT	73-82 ED RECUR	RENCE
MAGN1	BASE , IN CFS, AND ANNUA 2	PROBABILI D ON PERIO FOR INDIO L EXCEEDAD	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1973 CURRENCE IABILITY,	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV	CFS, FOR	CORD 19 R INDICAT EARS, AND BILITY, I	73-82 ED RECUR ANNUAL N PERCEN	RENCE
MAGNI DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO	TY OF IN DD OF RE CATED RE	STANTANEC CORD 1973 CURRENCE	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW  , IN	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF RECEIVED	CORD 19 R INDICAT	73-82 ED RECUR	RENCE
MAGN1	BASE , IN CFS, AND ANNUA 2	PROBABILI D ON PERIO FOR INDIO L EXCEEDAN 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1973 CURRENCE IABILITY,	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN	CFS, FOR AL, IN YECE PROBAE	CORD 19 R INDICAT EARS, AND BILITY, I	73-82 ED RECUR ANNUAL N PERCEN	RENCE
MAGN1 DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIA EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1973 CURRENCE IABILITY,	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN	CFS, FOR AL, IN YECE PROBAE	CORD 19 R INDICAT EARS, AND BILITY, I	73-82 ED RECUR ANNUAL N PERCEN	RENCE
MAGN1 DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIA EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1973 CURRENCE IABILITY,	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20%	CFS, FOR AL, IN YE CE PROBAE	CORD 19 R INDICATERS, AND BILITY, I	73-82 ED RECUR ANNUAL N PERCEN 50 2%	100 118
MAGN1 DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIG L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1973 CURRENCE IABILITY,	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH	D ON PER  ARGE, IN INTERV. EXCEEDAN  20%	CFS, FOF AL, IN YE CE PROBAE 10 10%	CORD 19 R INDICAT EARS, AND BILLITY, I 25 4%	73-82 ED RECUR ANNUAL N PERCEN 50 2%	100 112
MAGN1 DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIG L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1973 CURRENCE IABILITY,	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  872 690 533 403	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20% 1170 900 670 493	CFS, FOF AL, IN YE CE PROBAE 10 10%	R INDICAT RARS, AND BILITY, I	73-82 ED RECUR ANNUAL N PERCEN 50 2%	100 112
MAGN1 DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIG L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1973 CURRENCE IABILITY,	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASE  DISCH  2 50%  872 690 533 403 324	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20% 1170 900 670	10 OF RE  CFS, FOF AL, IN YE  10 10%  1340 1010 738	R INDICAT RARS, AND BILITY, I	73-82 ED RECUR ANNUAL N PERCEN 50 2%	100 112
MAGN1 DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIG L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1973 CURRENCE IABILITY,	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  872 690 533 403	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20% 1170 900 670 493	10 OF RECEPTOR	R INDICAT R INDICAT RARS, AND BILITY, I 25 4%	73-82 ED RECUR ANNUAL N PERCEN 50 2%	100 118
MAGN1 DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIG L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANEC CORD 1973 CURRENCE IABILITY,	DUS PEAK F 3-82 INTERVAL IN PERCEI	FLOW	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASE  DISCH  2 50%  872 690 533 403 324	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  1170 900 670 493 396	100 OF RE CFS, FOR AL, IN YE CE PROBAE 10 10% 1340 1010 738 539 432	R INDICAT R INDICAT RARS, AND BILITY, I 25 4%	73-82 ED RECUR ANNUAL N PERCEN 50 2%	100 112
MAGN1 DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILIT D ON PERIO FOR INDIG L EXCEEDA 5 20%	TY OF IN	STANTANEC CORD 1973 CURRENCE ABILITY,	DUS PEAK I 3-82 INTERVAL IN PERCEI 50 2%	FLOW  , IN  NT  100  1%	PERIOD (CON- SECU- TIVE DAYS) 	BASE  DI SCH  2  50%  872  690  533  403  324  249  215	D ON PER ARGE, IN INTERV. EXCEEDAN  1170 900 670 493 396 321 292	1340 1010 738 1340 1010 738 1359 432 363 336	R INDICAT R INDICAT RARS, AND BILITY, I 25 4%	73-82 ED RECUR ANNUAL N PERCEN 50 2%	RENCE
MAGN1 DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIOD ON P	TY OF INDO OF RECATED RENCE PROB	STANTANEC CORD 1973 CURRENCE ABILITY, 25 4%	DUS PEAK F 3-82 INTERVAL IN PERCEI 50 2%	FLOW  TOO  TRANFLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  872 690 533 403 324 249 215  OF RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  1170 900 670 493 396 321 292 RD 1973-	1340 1010 738 1340 1010 738 1340 1340 1340 1340 1340 1340 1340 1340	R INDICAT	73-82 ED RECUR ANNUAL N PERCEN 50 2%	100 118

# 14307500 LAKE CREEK AT TRIANGLE LAKE, OR

LOCATION.--Lat 44°09'40", long 123°34'10", in SW± sec.20, T.16 S., R.7 W., Lane County, Hydrologic Unit 17100206, on right bank 500 ft downstream from outlet of Triangle Lake and 3.0 mi southwest of Blachly.

DRAINAGE AREA. -- 52.5 mi2.

PERIOD OF RECORD. -- August 1931 to September 1955.

GAGE.--Water-stage recorder. Datum of gage is 672.75 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by natural storage in Triangle Lake. No diversion above station.

AVERAGE DISCHARGE.--24 years (water years 1932-55), 210 ft<sup>3</sup>/s, 152,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,180 ft³/s Feb. 18, 1949, gage-height, 8.33 ft, from rating curve extended above 2,400 ft³/s by logarithmic plotting; maximum gage height, 8.68 ft Feb. 18, 1949 (backwater from debris); minimum discharge, 2.7 ft³/s Aug. 1, 1944; minimum daily, 4.2 ft³/s Oct. 18, 19, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of 7.7 ft, from floodmark, discharge, 3,600 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1932-55

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1933-55

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS PROBABI	, AND AN	NUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	20 5%	50 2%	100 1%
OCTOBER	5.5	360	52	76	1.46	2.1	1	9.6	7.1	6.1	5.4		
NOVEMBER	9.7	573	226	174	.77	8.9	3	9.6	7.2	6.2	5.5		
DECEMBER	79	927	426	247	.58	16.8	7	9.9	7.4	6.3	5.6		
JANUARY	162	912	508	222	.44	20.1	14	10	7.7	6.7	5.9		
FEBRUARY	160	939	500	201	.40	19.8	30	11	8.4	7.3	6.5		
MARCH	98	794	362	162	.45	14.3	60	13	9.6	8.4	7.6		
APRIL	78	551	224	117	.52	8.9	90	14	11	9.4	8.5		
MAY	37	276	117	62	.53	4.6	120	18	13	11	9.6		
JUNE	27	149	58	32	.56	2.3	183	35	24	20	16		
JULY	15	61	27	11	.41	1.1							
AUGUST	6.9	30	15	5.7	.38	.6							
SEPTEMBER	8.5	55	16	9.9	.62	.6							
ANNUAL	120	303	210	50	. 24	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1932-55

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1932-55

		<b></b>											
DISCHARGE, YEARS, A				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	'AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25	2	5	10	25	50	100	SECU~						
80 <b>%</b>	50 <b>%</b>	20%	10%	4%	2%	1%	TIVE	2	5	10	25	50	100
							DAYS)	50%	20%	10%	4%	2%	1%
1440	2220	3300	4010	4900									
							1	2140	3110	3680	4330		
WE I GHTED	SKEW =	286					3	1760	2460	2860	3320		
							7	1330	1820	2090	2390		
							15	1030	1300	1420	1520		
							30	804	951	998	1030		
							60	620	737	782	816		
							90	553	672	724	769		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-55

	_	DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
807	555	413	333	275	227	144	89	52	30	23	19	15	13	10 

#### SIUSLAW RIVER BASIN

# 14307580 LAKE CREEK NEAR DEADWOOD, OR

LOCATION.--Lat 44°04'58", long 123°47'05", in NW±NW± sec.21, T.17 S., R.9 W., Lane County, Hydrologic Unit 17100206, on right bank 0.2 mi upstream from Indian Creek, 1.5 mi southwest of Deadwood, and at mile 2.6.

DRAINAGE AREA. -- 174 mi2.

PERIOD OF RECORD. -- October 1967 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 178.86 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow slightly regulated by natural storage in Triangle Lake. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 726 ft<sup>3</sup>/s, 56.66 in/yr, 526,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft<sup>3</sup>/s Dec. 25, 1980, gage height, 15.86 ft; minimum, 12 ft<sup>3</sup>/s Aug. 14, 15, 17, 18, 1977.

#### STATISTICAL SUMMARIES

10%	15%	20%	25%	30%	40% 5	0% 60%	70%	75%	80%	85%	90%	9:
	DISCHA	RGE, IN	CFS, WHI	CH WAS EQ	UALED OR	EXCEEDED FOR	RINDICA	TED PERC	ENT OF 1	TIME		
		DURATIO	N TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	ORD 1968-	82	<b></b>		<b></b>
						60 90	1880	2770 2480	2770	3420 3050		-
												-
						15	3480	4420	4980	5630		-
						7	4870	6440	7400	8530		-
SKEW =	014					3	6300	9060	10900	13400		-
						1	7520	11100	13700	17200		-
9840	14700 1	8200 2	2700						<del></del>			
50 <b>%</b>	20 <b>%</b> 	10%	4% 	2%	1%	TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	10
. 2	 5	10	25	50	100	CON- SECU-		EXCEEDAN	CE PROBA	ABILITY, I	N PERCEN	(   
						PERIOD		INTERV	AL, ÍN	rears, and	ANNUAL	
					FLOW	MA(						.ow
215 	1239 	726 	263	.36	100							
26	122	61	29	.48	.7							
23	99	42	18	.44	.5							
35	97	68										
101							-		70	62		
								-				
										44		-
												•
												-
												-
87	2654	766	676	.88	8.8	3	25	19	17	14		-
26	391	147	111	.76	1.7	1	25	19	16	14		-
(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	10
MINIMUM	MAXIMUM	MEAN	DARD DEV1A- TION			PERIOD (CON- SECU-		INTERVAL EXCEEDAN	, IN YE	ARS, AND A	NNUAL NO	)N- ∮T
			STAN-				DISCF			OR INDICAT		
	26 87 77 92 338 396 285 181 101 35 23 26 215 UDE AND BASE	26 391 87 2654 77 3272 92 3343 338 2260 396 2235 285 1501 181 585 101 304 35 97 23 99 26 122 215 1239  UDE AND PROBABILI BASED ON PERI  IN CFS, FOR INDI ND ANNUAL EXCEEDA  2 5 50\$ 20\$  9840 14700 1  SKEW =014	CFS) (CFS) (CFS)  26	DARD DEVIA- MINIMUM MAXIMUM MEAN TION (CFS) (CFS) (CFS)  26 391 147 111 87 2654 766 676 77 3272 1901 972 92 3343 1820 965 338 2260 1515 641 396 2235 1196 598 285 1501 751 348 181 585 327 126 101 304 154 55 35 97 68 17 23 99 42 18 26 122 61 29  215 1239 726 263  UDE AND PROBABILITY OF INSTANTANE BASED ON PERIOD OF RECORD 196  IN CFS, FOR INDICATED RECURRENCE ND ANNUAL EXCEEDANCE PROBABILITY,  2 5 10 25 50% 20% 10% 4%  DURATION TABLE  DISCHARGE, IN CFS, WHI	DARD   COEFFI-DEVIA-   CIENT OF     MINIMUM   MAXIMUM   MEAN   TION   VARI-     (CFS)   (CFS)   (CFS)   (CFS)   ATION     26	DARD   COEFFI   PERCENT   DEVIA   CIENT OF OF OF OF OF OF OF OF OF OF OF OF OF	DARD   COEFFI	DARD	DARD   COEFFI - PERCENT   PERIOD   INTERVAL	DARD   COEFFI   PERCENT   PERIOD   INTERVAL   IN YEAR	DARD   COEFFI   PERCENT   PERIOD   INTÉRVAL, IN YEARS, AND	DARD   COEFFI   PERCENT   PERIOD   INTERVAL, IN YEARS, AND ANNUAL NO

# SIUSLAW RIVER BASIN

#### 14307620 SIUSLAW RIVER NEAR MAPLETON, OR

LOCATION.--Lat 44°03'45", long 123°52'55", in SW±NW± sec.27, T.17 S., R.10 W., Lane County, Hydrologic Unit 17100206, on right bank 250 ft above Shoemaker Creek, 2.5 mi northwest of Mapleton, and at mile 23.7.

DRAINAGE AREA .-- 588 mi2.

ANNUAL

576

3711

PERIOD OF RECORD.--October 1967 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 41 ft, from topographic map.

REMARKS.--No regulation or diversions above station.

AVERAGE DISCHARGE.--15 years, 2,159 ft<sup>3</sup>/s, 49.86 in/yr, 1,564,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,400 ft<sup>3</sup>/s Jan. 21, 1972, gage height, 28.45 ft; minimum, 45 ft<sup>3</sup>/s Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.---Flood of December 1964 reached a stage of about 28 ft, from information by local residents (discharge not determined).

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1968-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1969-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		IARGE, IN INTERVAL EXCEEDAN	, IN YEA	RS, AND A	ANNUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	94	1219	464	364	.78	1.8	1	86	65	56	49		
NOVEMBER	281	7819	2237	1980	.89	8.6	3	88	66	57	50		
DECEMBER	261	9787	5646	2912	.52	21.7	7	91	69	60	53 -		
JANUARY	300	10060	5526	2941	.53	21.3	14	97	73	63	56		
FEBRUARY	876	6577	4302	1818	.42	16.6	30	108	83	73	66		
MARCH	1287	6819	3496	1795	.51	13.5	60	130	99	87	78		
APRIL	686	4445	2226	1076	.48	8.6	90	156	119	105	94		
MAY	568	1753	1000	361	.36	3.8	120	194	152	135	124		
JUNE	320	930	504	158	.31	1.9	183	349	269	234	209		
JULY	127	323	244	59	.24	.9							
AUGUST	78	321	151	61	.40	.6							
SEPTEMBER	97	356	196	90	.46	.8							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1968-82

2160

802

. 37

100

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1968-82

				RECURRENC ROBABILITI			PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICAT YEARS, AND ABILITY, 1	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20% 	10 10 <b>%</b>	25 4% 	50 2 <b>%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 2%	100
18500	27500	39800	47700	57500									
							1	23300	34000	40900	49100		
WEIGHTE	D SKEW =	255					3	19300	27700	32900	39000		
							7	14700	19800	22700	26000		
							15	10300	13400	15300	17400		
							30	8160	10100	10900	11700		
							60	6400	8380	9320	10200		
							90	5620	7440	8250	8970		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATED	PERCENT	OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
8950	5920	4170	3170	2490	2010	1330	826	497	296	236	193	160	132	97

# SIUSLAW RIVER BASIN

# 14307645 NORTH FORK SIUSLAW RIVER NEAR MINERVA, OR

LOCATION.--Lat 44°02'50", long 124°00'10", in NW±SW± sec.34, T.17 S., R.11 W., Lane County, Hydrologic Unit 17100206, on left bank 10 ft downstream from county road bridge, 0.3 mi upstream from Condon Creek, 2.7 mi southwest of Minerva, and at mile 13.09.

DRAINAGE AREA .-- 41.2 mi2.

PERIOD OF RECORD.--October 1967 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 40 ft, from topographic map.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 290  $ft^3/s$ , 95.59 in/yr, 210,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,400 ft<sup>3</sup>/s Dec. 25, 1980, gage height, 24.36 ft; minimum, 11 ft<sup>3</sup>/s Sept. 9-11, 17, 18, 1980.

#### STATISTICAL SUMMARIES

		DISCHA	RGE, IN	CFS, WHI	CH WAS EQ	UALED OR	EXCEEDED FOR	R INDICA	TED PERC	ENT OF T	IME		· <b></b>
			DURATIO	N TABLE	OF DAILY	MEAN FLOW	FOR PERIOD			82			
							90	713	907	1010	1110		-
							30 60	1040 820	1220 1020	1310 1130	1400 1250		_
							15 30	1280	1530	1670	1820	 	-
							7	1700	2020	2170	2310		-
WE I GHTE	) SKEW =	.295					3	2040	2530	2830	3180		-
							1	2350	2950	3360	3910		-
2150	2700	3460	3970	4620				<del></del>					
							DAYS)	50%	20%	10%	4%	2%	1
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE	2	<b></b> 5	10	 25	50	10
					IN PERCE		PERIOD (CON-				EARS, AND BILITY, I		IT
					INTERVAL		222102	DISCH			R INDICAT		RENC
MAGNI		PROBABILI D ON PERI			OUS PEAK 8-82	FLOW	MAC				OF ANNUAL ECORD 19		.OW
NNUAL	118	443	290	88	.30	100							
SEPTEMBER	16	99	41	25	.60	1.2							
UGUST	16	78	29	15	.53	.8							
ULY	26	82	42	15	.36	1.2	100		<b>4</b> 0				
MAY JUNE	84 42	256 167	133 83	51 36	.38 .43	3.8 2.4	120 183	37 62	27 48	23 41	20 36		
NPRIL	134	560	273	117	.43	7.8	90	29	21	19	17		-
MARCH	150	809	430	199	.46	12.3	60	23	19	17	16		-
EBRUARY	171	875	564	224	.40	16.1	30	19	15	14	14		•
ANUARY	73	1082	659	315	.48	18.8	14	17	14	13	12		-
DECEMBER	56	1303	759	336	.44	21.7	7	16	13	12	12		-
OVEMBER	67	1078	383	285	.74	11.0	3	15	13	12	11		
CTOBER	16	279	101	79	.78	2.9	1	15	12	11	10		
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	10
	MINIMUM	MAXIMUM	MEAN	DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	RS, AND A BILITY, I	NNUAL NO	ON-
				STAN-				DISCH	ARGE. IN	CFS. FO	R INDICAT	ED RECUF	REN

### 14307700 JACKSON CREEK NEAR TILLER, OR

LOCATION.--Lat 42°57'15", long 122°49'40", in SW¼NE½ sec.21 T.30 S., R.1 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.5 mi upstream from Chapman Creek, 0.8 mi downstream from Beaver Creek, 6.5 mi northeast of Tiller, and at mile 3.0. Records include flow of Chapman Creek.

DRAINAGE AREA.--152 mi², at cableway 0.6 mi downstream where all discharge measurements are made.

PERIOD OF RECORD. -- October 1955 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,240.25 ft National Geodetic Vertical Datum of 1929 (levels by Douglas County Water Resources Survey).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--27 years, 313 ft3/s, 27.96 ln/yr, 226,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.0 ft, from floodmark, from rating curve extended above 5,100 ft<sup>3</sup>/s and basin runoff comparison; minimum, 11 ft<sup>3</sup>/s Jan. 6, 1977, Nov. 13, 1978, result of freezeup.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1956-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1957-82

	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI~ CIENT OF VARI~	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR IN YEAR DE PROBAE	RS, AND A	NNUAL N	ON-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 <b>2</b> 0%	10 10 <b>%</b>	<b>2</b> 0 5%	50 <b>2%</b>	100 1%
OCTOBER	19	242	55	48	.87	1.5	1	17	- <b>-</b>	14	13	12	
NOVEMBER	23	1203	293	256	.87	7.8	3	17	15	14	13	12	
DECEMBER	19	2006	605	490	.81	16.1	7	18	15	14	13	13	
JANUARY	25	1410	648	403	.62	17.2	14	18	16	15	14 -	13	
FEBRUARY	<b>2</b> 6	1153	5 <b>2</b> 7	222	.42	14.0	30	19	17	16	15	15	
MARCH	122	1363	5 <b>2</b> 9	284	.54	14.1	60	22	19	18	17	16	
APR1L	158	705	449	153	.34	11.9	90	24	21	20	19	18	
MAY	120	75 <b>2</b>	389	159	.41	10.3	120	30	<b>2</b> 5	22	21	19	
JUNE	52	371	163	95	.58	4.3	183	68	47	38	32	25	
JULY	22	81	48	17	.35	1.3							
AUGUST	17	70	27	10	.37	.7							
SEPTEMBER	16	89	27	14	.51	.7							
ANNUAL	85	566	313	109	. 35	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1956-82

DISCHARGE, YEARS, A							PERIOD (CON-		INTERV	AL, ÎN Y	EARS, A	ATED RECU ND ANNUAL IN PERCEI	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100
3410	549 <b>0</b>	8990	11700	15600	18800					<del>-</del>			
		<del></del>		<b>-</b>			1	3850	6190	7670	9400	10600	
<b>W</b> E I GHTED	SKEW =	.118					3	2650	4310	5510	7100	8330	
							7	1750	2750	3490	4510	5330	
							15	1230	1810	2210	2740	3150	
							30	966	1350	1590	1890	2110	
							60	763	1070	1270	1520	<b>1</b> 710	
							90	683	935	1080	1260	1370	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TIM	лЕ ЛЕ		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
1040	739	588	497	420	355	<b>2</b> 51	158	85	44	34	<b>2</b> 9	<b>2</b> 5	21	19

### 14308000 SOUTH UMPOUA RIVER AT TILLER, OR

LOCATION.--Lat 42°55'50", long 122°56'50", in NE4 sec.33, T.30 S., R.2 W., Douglas County, Hydrologic Unit 17100302, Umpqua National Forest, on left bank 0.3 mi upstream from bridge on State Highway 227 at Tiller, 0.3 mi upstream from Elk Creek, and at mile 187.31

DRAINAGE AREA .-- 449 mi 2.

PERIOD OF RECORD.--October 1910 to December 1911, October 1939 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Prior to December 1911, published as "South Fork of Umpqua River at Tiller".

GAGE.--Water-stage recorder. Datum of gage is 991.8 ft National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Oct. 1, 1939, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--44 years, 1,034 ft<sup>3</sup>/s, 31.27 in/yr, 749,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 25.72 ft; minimum observed, 20 ft<sup>3</sup>/s Sept. 3, 4, 1911.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1911-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1941-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL N	0N-
MONTH .	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	44	1791	210	292	1.39	1.7	1	44	37	34	31	28	26
NOVEMBER	48	3977	1061	860	.81	8.5	3	45	37	34	31	28	26
DECEMBER	67	7480	2015	1586	.79	16.2	7	46	38	35	32 -	29	27
JANUARY	90	4513	2153	1342	.62	17.3	14	48	40	37	34	31	29
FEBRUARY	95	3757	1977	824	.42	15.9	30	53	44	40	37	34	32
MARCH	442	4776	1727	909	.53	13.9	60	61	50	45	41	38	35
APRIL	433	2314	1391	477	.34	11.2	90	71	58	53	49	45	43
MAY	309	2093	1081	475	-44	8.7	120	91	74	67	62	57	54
JUNE	121	1643	512	293	.57	4.1	183	220	151	123	105	- 87	76
JULY	50	301	154	60	. 39	1.2							
AUGUST	30	206	77	29	.37	.6							
SEPTEMBER	40	228	73	31	.42	.6							
ANNUAL	267	1762	1034	343	.33	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1911-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1911-82

YEARS,		S, FOR IN JAL EXCEE					PERIOD (CON-	DISC	INTER	VAL, ÍN	YEARS, A	ATED REC ND ANNUAL IN PERCI	L
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
11300	17800	28200	36000	46700	55300	64400	4	47500	24422	05700	70000	74700	77700
WEIGHTE	D SKFW =	.034					1	13500 9390	21100 14700	25700 18000	30900 22100	34300 24900	37300 27500
WE 10/112	011211	•051					7	6320	9480	11500	13900	15600	17200
							15	4320	6170	7340	8760	9770	10700
							30	3320	4600	5400	6360	7040	7690
							60	2640	3660	4300	5050	5590	6100
							90	2340	3200	3720	4330	4740	5140

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1911-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3630	2470	1940	1580	1320	1100	779	511	283	138	105	84	70	58	48

### 14308500 ELK CREEK NEAR DREW, OR

LOCATION.--Lat 42°53'25", long 122°55'00", in SW¼ sec.11, T.31 S., R.2 W., Douglas County, Hydrologic Unit 17100302, on right bank 100 ft downstream from Dixon Creek, 0.1 mi upstream from Drew Creek, 1.3 mi northwest of Drew, 3.3 mi southeast of Tiller, and at mile 4.1.

DRAINAGE AREA .-- 54.4 mi2.

PERIOD OF RECORD.--September 1954 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,279.25 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years (water years 1955-82), 84.3 ft<sup>3</sup>/s, 61,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s Dec. 22, 1964, gage height, 10.61 ft, from rating curve extended above 2,900 ft³/s on basis of slope-area measurement at gage height 10.34 ft; maximum gage height, 10.80 ft Jan. 15, 1974; no flow at times in September 1974, Aug. 16-22, 1977, and Aug. 17-24, Sept. 16-19, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 11.8 ft, from floodmarks, probably for flood in January or November 1953, discharge, about 11,000 ft<sup>3</sup>/s.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1955-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1956-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VAR!-	0F	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL NO	N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
CT0BER	1.5	63	8.7	13	1.47	.9	1	.6	.2	.1	0.0	0.0	
IOVEMBER	3.3	449	74	91	1.22	7.3	3	.6	.2	. 1	0.0	0.0	
ECEMBER	3.1	651	188	169	.90	18.5	7	.7	.2	. 1	. 1	0.0	
ANUARY	4.9	644	224	162	.72	22.1	14	.7	.2	.1	. 1	0.0	
EBRUARY	5.1	382	173	89	.52	17.0	30	.8	.3	.2	.1	0.0	
ARCH	42	356	164	93	. 56	16.2	60	1.2	.6	. 4	.3	.2	
PRIL	27	193	107	51	.48	10.5	90	1.5	1.0	.8	.7	.5	
ΑY	11	164	53	37	.69	5.3	120	2.4	1.6	1.3	1.1	1.0	
UNE	3.8	. 51	15	11	.72	1.5	183	7.3	4.7	3.7	3.1	2.5	
ULY	.7	11	4.1	2.6	.65	.4							
UGUST	.1	10	1.7	1.9	1.09	.2							
EPTEMBER	.1	19	2.2	3.3	1.53	.2							
NNUAL	16	180	84	36	.43	100							
MAGNI		PROBABILI D ON PERIO				FLOW	MAG	NITUDE AN BASED		BILITY OF OD OF REC			OW.

DISCHARGE, YEARS, AI							PERIOD (CON-		INTERV	'AL, ÎN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10%	25 4% 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
1660	2900	4990	6610	8870	10700								
							1	1730	2880	3550	4280	4730	
WEIGHTED	SKEW ≃	081					3	1120	1860	2320	2870	3240	
							7	721	1160	1440	1780	2010	
							15	462	706	857	1030	1160	
							30	334	491	588	702	781	
							60	263	376	437	501	540	
							90	222	315	366	420	455	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1955-82

5% 10% 15% 20% 25% 30% 40% 50% 60% 70% 75% 80% 85% 90% 9				DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	1E		
346 210 159 121 92 72 40 21 9.7 4.5 3.2 2.4 1.7 1.2	- <b>-</b> .	5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85 <b>%</b>	90%	95%
		346	210	<b>1</b> 59	121	92	72	40	21	9.7	4.5	3.2	2.4	1.7	1.2	• <del>-</del>

# 14308700 DAYS CREEK AT DAYS CREEK, OR

LOCATION.--Lat 42°58'55", long 123°08'55", in NE4 sec.10, T.30 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on left bank 150 ft downstream from Wood Creek, 1.0 mi northeast of town of Days Creek, and at mile 1.3.

DRAINAGE AREA.--55.3 mi2.

PERIOD OF RECORD. -- October 1955 to July 1972.

GAGE.--Nonrecording gage and crest-stage gage. Altitude of gage is 810 ft, from topographic map. Prior to Oct. 1, 1962, at site 170 ft upstream at datum 3.06 ft higher.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--16 years (water years 1956-71), 44.4 ft3/s, 32,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,450 ft³/s Feb. 21, 1956, gage height, 11.24 ft, site and datum then in use, from rating curve extended above 1,100 ft³/s on basis of slope-area measurement of peak flow; no flow for many days in July and August 1961.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1956-71	MAGNITUDE AND PROBABILITY OF ANNUAL LOW
		BASED ON PERIOD OF RECORD 1957-71

	MINIMO	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND A	INUAL N	ON-
MONTH	MINIMUM (CFS)	(CFS)	(CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	1.5	32	7.2	8.3	1.15	1.4	1	.3	.2	.1	.1		
NOVEMBER	3.7	120	39	34	.88	7.2	3	. 4	.2	.1	-1		
DECEMBER	11	424	115	107	.93	21.5	7	.5	.2	.1	• 1.		
JANUARY	13	232	120	78	.65	22.5	14	.5	.2	.1	-1		
FEBRUARY	42	213	99	48	.49	18.5	30	.6	.3	.2	.1		
MARCH	20	166	82	49	.59	15.3	60	-8	.5	-4	.3		
APRIL	11	112	35	25	.70	6.6	90	1.1	.7	.6	.6		
YAP	4.2	117	25	27	1.08	4.7	120	1.5	1.1	.9	.8		
JUNE	2.0	26	7.8	6.2	.79	1.5	183	3.8	2.5	2.1	1.9		
JULY	.5	4.4	2.0	1.4	.68	. 4							
AUGUST	.1	2.2	1.0	.7	.65	.2							
SEPTEMBER	.7	3.0	1.5	•6	.44	.3							
ANNUAL	19	92	44	16	.37	100							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-71

#### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1956-71

ANNUAL LOW FLOW

ISCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD (CON-		INTERV	'AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80 <b>%</b>	2 50 <b>%</b>	5 20 <b>%</b>	10 10 <b>%</b>	25 4 <b>%</b>	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100
1040	1580	2380	2930	3630									
							1	934	1360	1650	2020		
WEIGHTED	SKEW =	143					3	657	922	1090	1290		
							7	406	593	732	926		
							15	264	378	455	555		
							30	197	272	320	381		·
							60	142	194	233	287		
							90	118	164	198	244		

#### DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-71

	D	I SCHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	ИE		
5%	10% 15	<b>3</b> 20 <b>%</b>	25%	30%	40%	50%	60 <b>%</b>	70%	75 <b>%</b>	80%	85%	90%	95%
181 .11	14 79	55	43	34	20	11	6.0	3.1	2.3	1.8	1.3	.8	.5

#### 14309000 COW CREEK NEAR AZALEA, OR

LOCATION.--Lat 42°49'30", long 123°10'40", in N-1/2 sec.4, T.32 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.8 mi upstream from Whitehorse Creek, 4.5 mi northeast of Azalea, and at mile 58.2.

DRAINAGE AREA .-- 78.0 mi2.

PERIOD OF RECORD. --April 1926 to September 1928 (no winter records), April 1929 to December 1931, April 1932 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,694.32 ft National Geodetic Vertical Datum of 1929 (Douglas County Road Department bench mark). Prior to July 19, 1949, nonrecording gage at same site and datum.

REMARKS.--No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE.--52 years (water years 1930-31, 1933-82), 110 ft<sup>3</sup>/s, 19.15 in/yr, 79,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 16.40 ft, from high-water mark in well; minimum, 1.1 ft<sup>3</sup>/s Aug. 12, 1981, but may have been less during period of no gage-height record Sept. 4-30, 1970.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1930-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1931-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VAR!-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	S, AND AN	NUAL NO!	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100
OCTOBER	8.1	294	 25	40	1.58	1.9	1	8.4	6.0	4.8	3.9	3.0	2.4
NOVEMBER	9.1	542	83	90	1.08	6.3	3	8.6	6.2	4.9	4.0	3.0	2.5
DECEMBER	14	765	201	181	.90	15.1	7	8.8	6.6	5.4	4.5	3.6	3.1
JANUARY	15	926	265	208	.78	20.0	14	9.2	6.9	5.8	4.9	4.0	3.5
FEBRUARY	18	598	242	128	.53	18.2	30	9.7	7.4	6.3	5.4	4.5	3.9
MARCH	35	521	206	116	.56	15.5	60	11	8.5	7.4	6.6	5.8	5.3
APRIL	36	328	147	75	.51	11.1	90	11	9.4	8.5	7.9	7.2	6.8
MAY	15	268	80	47	.59	6.0	120	13	11	9.9	9.1	8.2	7.7
JUNE	18	129	38	20	.51	2.9	183	21	16	14	12	11	10
JULY	6.7	36	18	6.2	.35	1.3						- <b>-</b>	
AUGUST	4.9	23	12	3.8	.33	.9							
SEPTEMBER	5.8	30	12	3.7	.32	.9							
ANNUAL	23	269	110	49	.45	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1930-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1930-82

SCHARGE, YEARS, AN							PERIOD (CON-	DISCH	INTERV	AL, ÍN Y	EARS, A	ATED RECU ND ANNUAL IN PERCE	-
1.25 80%	2 5 <b>0%</b> 	5 20 <b>%</b>	10 10 <b>%</b>	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
1390	2670	4670	6050	7760	9000	10200							
- <b></b>				- <b>-</b>			1	1830	3110	3880	4730	5270	5750
WEIGHTED	SKEW =	544					3	1220	2050	2550	3100	3450	3750
							7	818	1330	1630	1970	2190	2380
							15	548	855	1040	1250	1380	1500
							30	393	604	735	886	989	1080
							60	318	467	547	630	681	724
							90	271	394	462	532	575	612

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN	T OF TIM	1E		
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80 <b>%</b>	85%	90%	95%
40 <b>4</b>	264 <sup>-</sup>	198	156	123	100	64	41	26	18	16	14	12	10	8.4

# 14309500 WEST FORK COW CREEK NEAR GLENDALE, OR

LOCATION.--Lat 42°48'15", long 123°36'35", in SW&NE£ sec.11, T.32 S., R.8 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.6 ml downstream from Bear Creek, 11 ml northwest of Glendale, and at mile 0.8.

DRAINAGE AREA .-- 86.9 m12.

1230

722

505

373

276

212

127

68

39

22

17

14

12

9.7

8.1

PERIOD OF RECORD. -- August 1955 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,018.48 ft National Geodetic Vertical Datum of 1929. Prior to June 8, 1964, at site 0.6 mi upstream at different datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--27 years (water years 1956-82), 273 ft<sup>3</sup>/s, 42.66 in/yr, 197,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.59 ft, from floodmark, from rating curve extended above 2,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; mlnimum, 3.7 ft<sup>3</sup>/s Aug. 17, 19, 1977.

# STATISTICAL SUMMARIES

	MINIMA	MAYIMIN	MEAN	STAN- DARD DEVIA-	COEFFI~		PERIOD (CON- SECU-		INTERVAL,	IN YEAR	RS, AND	TED RECUR ANNUAL NO IN PERCEN	N-
нтиом	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR1- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH	8.5 15 13 24 66 116	254 1470 1669 1496 1660 920	48 298 648 724 576 502	55 294 460 457 316 240	1.14 .99 .71 .63 .55	1.5 9.1 19.7 22.0 17.5 15.3	1 3 7 14 30 60	7.3 7.5 7.6 8.0 8.4 9.5	6.1 6.3 6.5 6.7 7.2 8.2	5.5 5.7 5.8 6.0 6.7 7.6	5.0 5.2 5.3 5.5 6.3 7.2	4.6 4.7 4.9 5.8	
APRIL MAY JUNE JULY	79 44 23 11	840 476 79 25	290 120 38 18	180 94 11 3.6	.62 .78 .29	8.8 3.7 1.2 .5	90 120 183	11 14 30	9.6 12 21	9.1 11 18	8.7 10 16	8.5 9.6 14	  
AUGUST SEPTEMBER ANNUAL	7.3	16 54 499	11 14 273	2.3 9.7 96	.21	.3 .4							
YEARS,	AND ANNUA	FOR INDI	NCE PRO	BABILITY,	IN PERCE	ŃT 	PERIOD (CON- SECU-		INTERVA	L, IN YE	EARS, AN	TED RECUR D ANNUAL IN PERCEN	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b> 	100 1% 	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
4600 WEIGHTE	6820 D SKEW =		1700	14000 19	5600 	 	1 3 7 15 30 60 90	4580 3260 2220 1500 1110 887 750	6630 4770 3230 2070 1510 1190 992	7830 5710 3880 2420 1740 1340 1110	9160 6830 4700 2820 2000 1480	10000 7620 5300 3090 2170 1570	
			DURATIO	N TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECOR	RD 1956-8	2			
		DISCHA	RGE IN	CFS. WHIC	CH WAS FO	UALED OR F	XCEEDED FO	R INDICAT	TED PERCE		ME		

#### 14310000 COW CREEK NEAR RIDDLE, OR

LOCATION.--Lat 42°55'25", long 123°25'40", in NE¼ sec.32, T.30 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.4 mi upstream from Council Creek, 3.8 mi southwest of Riddle, and at mile 6.7.

DRAINAGE AREA. -- 456 mi2.

PERIOD OF RECORD. -- September 1954 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 682.60 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years (water years 1955-82), 888  $ft^3/s$ , 634,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 38,400 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 28.17 ft; minimum, 7.4 ft<sup>3</sup>/s Aug. 17-19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD. -- Flood of Oct. 29, 1950, reached a stage of about 28.5 ft, discharge, 41,100 ft<sup>3</sup>/s, from slope-area measurement.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1955-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1956-82

	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	IN YEAR	RS, AND A	ED RECURI INNUAL NOI N PERCEN	N-
MONTH	(CFS)	(CFS)	(CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	41	633	126	125	.99	1.2	1	25	19	15	13	9.8	
NOVEMBER	59	4712	797	923	1.16	7.5	3	26	19	16	13	9.9	
DECEMBER	58	6574	1971	1608	.82	18.4	7	27	. 20	16	13	10	
JANUARY	85	5889	2466	1743	.71	23.1	14	28	21	17	14	11	
FEBRUARY	161	59 <b>0</b> 2	1915	1119	.58	17.9	30	29	22	19	16	13	
MARCH	506	3398	1689	912	.54	15.8	60	34	26	22	19	16	
APRIL	199	2719	1000	610	.61	9.4	9 <b>0</b>	39	32	28	26	23	
YAP	172	1943	435	337	.77	4.1	120	50	42	38	36	33	
JUNE	75	264	150	50	.33	1.4	183	99	75	66	60	54	
JULY	25	128	65	22	.33	.6							
\UGUST	15	70	36	12	.33	.3							
SEPTEMBER	26	156	44	25	. 56	.4							
ANNUAL	147	1809	888	384	.43	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1955-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1955-82

					ICE INTER' TY, IN PE		PERIOD (CON-	DISC	INTER	VAL, IN	YEARS, A	ATED RECU ND ANNUAL IN PERCEI	
1.25 80%	2 5 <b>0%</b> 	5 2 <b>0%</b>	10 10 <b>%</b>	25 4 <b>%</b>	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1%
12700	19600	29000	35000	42300	47500			<b>-</b>					
							1	15900	23900	27700	31000	32800	-
NE I GHTE	D SKEW =	<b></b> 375					3	10800	16900	20400	24200	26500	_
							7	7250	11600	14300	17500	19600	-
							15	4850	7370	8860	10500	11600	-
							30	3610	5370	6360	7420	8090	_
							60	2880	4130	4750	5330	5660	-
							90	2420	3440	3940	4410	4670	_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1955-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70 <b>%</b>	75 <b>%</b>	80%	85%	90%	95%
3880	2260	1580	1160	901	708				77	61	51	42	34	27

# 14310700 SOUTH MYRTLE CREEK NEAR MYRTLE CREEK, OR

LOCATION.--Lat 43°01'55", long 123°11'30", in SEŁ sec.20, T.29 S., R.4 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.6 mi downstream from School Hollow, 5.5 mi east of town of Myrtle Creek, and at mile 7.3.

DRAINAGE ARFA .-- 43.9 mi2.

PERIOD OF RECORD. -- October 1955 to July 1972.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 775.25 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--16 years (water years 1956-71), 65.9  $ft^3/s$ , 57,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,050 ft<sup>3</sup>/s Dec. 11, 1956, gage height, 7.72 ft, from rating curve extended above 1,100 ft<sup>3</sup>/s; minimum observed, 0.20 ft<sup>3</sup>/s Aug. 2, 1961.

# STATISTICAL SUMMARIES

MONTHLY	AND	AMMILLAT	MEAN	DISCHARGES	1056-71
MUNIALI	AND	ANNUAL	MEVN	DISCHARGES	1920-/1

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1957-71

	MINIMUM	MANIMUM	MEAN	STAN- DARD DEVIA-	COEFF!- C1ENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	S, AND AN	INUAL N	0N-
MONTH	(CFS)	MAXIMUM (CFS)	(CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 <b>2%</b>	100 1%
OCTOBER	6.2	44	15	11	.74	1.8	1	.8	.4	.3	.2		
NOVEMBER	8.3	146	59	40	.67	7.5	3	1.1	•6	. 4	.3		
DECEMBER	18	434	145	122	-84	18.3	7	1.5	1.0	.8	-6		
JANUARY	22	345	170	114	.67	21.4	14	1.8	1.1	.9	.8		
FEBRUARY	64	230	135	54	-40	17.0	30	2.1	1.4	1.2	1.0		
MARCH	39	274	127	75	. 59	16.0	60	2.8	2.0	1.7	1.4		
APRIL	25	149	65	31	.47	8.2	90	3.6	2.8	2.5	2.3		
MAY	13	159	47	35	.74	5.9	120	4.9	3.8	3.3	3.0		
JUNE	5.6	33	17	8.2	. 49	2.1	183	9.6	7.1	6.2	5.6		
JULY	1.2	13	5.7	3.3	.57	.7							
AUGUST	1.3	5.6	3.2	1.4	- 44	.4							
SEPTEMBER	2.8	8.1	5.0	1.5	-31	.6							
ANNUAL	28	120	66	22	.33	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-71

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1956-71

DISCHARGE, YEARS, A				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	AL, IN Y	R INDICAT EARS, AND	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 <b>2%</b>	100 1 <b>%</b>	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
1320	1830	2490	2910	3400									
WE I GHTED	CKEM -	- 212					1 7	1100	1520	1790	2130		,
WEIGHIED	2VEM =	212					3	808	1070	1210	1370		
							45	521	722	854	1020		
							15	357	480	551	629		
							30	266	358	414	478		
							60	196	267	316	380		
							90	168	227	<b>2</b> 65	313		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-71

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	IE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
258	165	117	89	72	59	40	26	16	8.6	6.8	5.4	4.2	3.1	2.0

### 14311000 NORTH MYRTLE CREEK NEAR MYRTLE CREEK, OR

LOCATION.--Lat 43°02'30", long 123°15'30", in SW¼ sec.14, T.29 S., R.5 W., Douglas County, Hydrologic Unit 17100302, on left bank 300 ft downstream from Bilger Creek, 1.5 mi northeast of town of Myrtle Creek, and at mile 2.2.

DRAINAGE AREA .-- 54.2 mi2.

PERIOD OF RECORD. -- October 1955 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 642.81 ft National Geodetic Vertical Datum of 1929 (levels by City Engineer of Myrtle Creek). Oct. 1, 1955, to Aug. 31, 1977, at site 340 ft downstream on right bank. Oct. 1, 1955, to Sept. 30, 1975, at datum 1.63 ft lower and Oct. 1, 1975, to Aug. 31, 1977, at datum 1.33 ft lower.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years, 72.8 ft3/s, 52,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,700 ft³/s Dec. 6, 1981, gage height, 10.08 ft, from floodmark, from rating curve extended above 1,300 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 11.58 ft Dec. 26, 1955 (backwater from debris), site and datum then in use; no flow at times in July 1973 and August 1977.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1956-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1957-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-	11	RGE, IN ( NTERVAL, XCEEDANCI	IN YEARS	, AND AN	NUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	20 5%	50 2%	100
CTOBER	4.6	38	12	7.4	.64	1.3	1						
OVEMBER	9.1	376	68	73	1.07	7.8	3						
ECEMBER	9.5	482	169	130	.77	19.3	7						
ANUARY	11	384	19 <b>5</b>	119	.61	22.3	14	2.4	1.2	•6	.3	.1	
EBRUARY	9.1	363	152	81	.53	17.4	30	2.5	1.6	1.2	.9	.7	
IARCH	38	<b>2</b> 94	135	84	.62	15.4	60	3.2	2.1	1.7	1.4	1.1	
PRIL	18	207	77	47	.60	8.8	90	3.8	2.8	2.3	2.0	1.7	
ΙΑΥ	12	188	40	34	.86	4.5	120	5.0	3.9	3.4	3.0	2.6	~-
IUNE	5.2	34	15	6.3	.44	1.7	183	9.2	7.1	6.3	5.7	5.2	
ULY	1.6	11	5.5	2.3	.43	•6			·				
UGUST	1.1	9.9	3.4	1.8	<b>. 5</b> 3	. 4							
EPTEMBER	2.6	11	4.7	1.8	.38	.5							
NNUAL	13	133	73	<b>2</b> 7	.37	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1956-82

SCHARGE, YEARS, A							PERIOD (CON-		INTERV	/AL, ÎN Y	EARS, AN	TED RECUR D ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20% 	10 10 <b>%</b>	25 4% <b>-</b>	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1050	1780	2780	3410	4150	4650					<del></del> -			- <b>-</b>
	<del>-</del>						1	1350	1890	2080	2210	2250	
WEIGHTED	SKEW =	574					3	937	1300	1430	1520	1550	
							7	630	866	948	1000	1020	
							15	418	<b>5</b> 76	639	688	711	
							30	31 <b>5</b>	423	463	493	505	
							60	248	324	350	366	373	
							90	208	<b>2</b> 78	306	326	335	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-82

			DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCE	NT OF TIM	IE		
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	9 <b>5%</b>
	308	189				62			14		6.6	5.1	4.0	3.1	2.2

# 14311200 OLALLA CREEK NEAR TENMILE, OR

LOCATION.--Lat 43°02'20", long 123°32'35", in NW½ sec.21, T.29 S., R.7 W., Douglas County, Hydrologic Unit 17100302, on left bank 0.5 mi downstream from Berry Creek, 4.4 ml south of Tenmile, and at mile 11.7.

DRAINAGE AREA. -- 61.3 mi2.

PERIOD OF RECORD. -- October 1956 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 749.53 ft National Geodetic Vertical Datum of 1929. Prior to June 21, 1957, nonrecording gage at site 0.3 mi downstream at datum 7.83 ft lower.

REMARKS.--No regulation. Some diversions for irrigation above station.

AVERAGE DISCHARGE.--17 years, 102  $ft^3/s$ , 73,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,160 ft<sup>3</sup>/s Jan. 3, 1966, gage height, 11.98 ft, from floodmark; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1920, 13.6 ft Dec. 26, 1955, from floodmarks, present site and datum, discharge, 12,300 ft<sup>3</sup>/s, from rating curve extended above 6,000 ft<sup>3</sup>/s.

# STATISTICAL SUMMARIES

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-73

		MANIARINA	W. T. N.	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	0N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR1- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	•••••••	51	8.9	15	1.64	 .7	1						
NOVEMBER	3.4	253	80	71	.89	6.5	3						
DECEMBER	11	660	239	175	.73	19.4	7						
JANUARY	25	613	328	214	.65	26.7	14						
FEBRUARY	56	754	242	177	.73	19.7	30	.2	.1	0.0	0.0		
MARCH	45	463	205	126	.61	16.7	60	. 4	.2	. 1	.1		
APRIL	20	283	79	69	.87	6.4	90	.7	. 4	.3	.2		
MAY	6.9	246	37	57	1.56	3.0	120	1.2	-8	•6	.5		
JUNE	2.8	28	8.6	6.5	.76	.7	183	4.5	2.6	2.0	1.6		
JULY	.4	5.8	2.0	1.6	.82	.2							
AUGUST	0.0	1.5	.5	.4	. 79	0.0							
SEPTEMBER	-1	1.8	.8	.5	.64	.1							
ANNUAL	42	167	102	31	.30	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1957-73

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1957-73

				RECURRENC OBABILITY			PERIOD (CON-		INTERV	'AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
2750	4140	6230	7710	9680			4	25.40	7570	4060	4400		
	OKEN -						1	2540	3570	4060	4490		
E I GHT ED	SKEW =	0.000					2	1820	2490	2800	3080		
							7	1110	1580	1870	2200		_
							15	709	984	1160	1360		-
							30	513	682	775	877		_
							60	385	500	563	628		_
							90	317	414	465	518		_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-73

	·	DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	4E		
5%	10%	15%	20%	25%	30%	40%	50%	6 <b>0%</b>	70%	75%	80%	85%	90%	95%
512	267	170	115	81	59	31	16	7.2	2.8	1.8	1.1	<b>.</b> 7	•4	.2

#### 14311500 LOOKINGGLASS CREEK AT BROCKWAY, OR

LOCATION.--Lat 43°07'50", long 123°27'50", in SE $^{+}_{\alpha}$ SE $^{+}_{\alpha}$  sec.13, T.28 S., R.7 W., Douglas County, Hydrologic Unit 17100302, on left bank 1.7 mi northwest of Brockway and at mile 2.85.

DRAINAGE AREA. -- 158 mi2.

1400

PERIOD OF RECORD. -- October 1955 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 540 ft, from topographic map. Prior to Oct. 5, 1967, water-stage recorder at site 2.3 mi downstream at different datum.

REMARKS.—Some regulation by Ben Irving Reservoir 17 mi upstream on Berry Creek, capacity, 11,200 acre-ft since January 1980. Many diversions by pumping for irrigation above station. Discharge not adjusted for storage or release from Ben Irving Reservoir as losses from reservoir at times exceed natural flow.

AVERAGE DISCHARGE.--24 years (water years 1956-79), 282 ft3/s, 204,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 35,000 ft<sup>3</sup>/s Dec. 26, 1955, gage height, 24.93 ft, site and datum then in use, from rating curve extended above 7,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; maximum gage height, 25.28 ft Dec. 23, 1964 (backwater from South Umpqua River, site and datum then in use); no flow at times each year prior to January 1980.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1956-79 MAGNITUD

168

83

35

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1957-79

0.0

0.0

0.0

5 <b>%</b>	10%	15%	20%	25%	30%	40% 50	<b>%</b> 60%	70%	75%	80 <b>%</b>	85%	90%	95
		DISCHAR	RGE, IN C	FS, WHIC	CH WAS EQ	UALED OR E	XCEEDED FO	R INDICA	TED PERC	ENT OF T	IME		
<b></b>			DURATION	TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	RD 1956-	79			
							60 90	1120 929	1500 1250	1630 1360	1710 1 <b>42</b> 0		
							30	1400	2030	2330	2590		
							15	1940	2990	3560	4140		
							7	3090	4930	5940	6950		
WE I GHTED	SKEW =	456					3	4860	7590	8890	10000		
							1	7260	12100	14700	17200		_
5780	10500	17700 22	2600 28	900									
80 <b>%</b> 	50 <b>%</b>	20 <b>%</b> 	10% 	4%	2% 	1% 	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 <b>2%</b>	10 1
1.25	2	5	10	25	50	100	SECU-						
		FOR INDIC L EXCEEDAN					PERIOD (CON-	DISCH	INTERV	AL, IN	OR INDICAT EARS, AND BILITY, I	ANNUAL	
MAGNIT		PROBABILI D ON PERIO				FLOW	M/				OF ANNUAL RECORD 19		_OW
NNUAL	27	628	282	125	.44	100							
EPTEMBER	0.0	9.1	.9	2.1	2.27	0.0		ZERO EVE					
UGUST	0.0	2.6	.1	.5		0.0		LOW-FLOW	· STATISI	TICS UNCE	RTAIN DUE	TO EXCE	ESSIVE
ULY	0.0	10	1.8	2.4	1.34	.1	102						
AY JNE	19 3.9	631 57	87 16	126 13	1.44 .81	2.6 .5	120 183						
PRIL AY	33	751	207	163	.79	6.1	90						
ARCH	110	1105	519	320	.62	15.3	60						-
EBRUARY	29	1954	674	444	.66	19.9	30						-
ANUARY	11	1811	873	585	.67	25.7	14						-
ECEMBER	4.9	3323	741	726	.98	21.9	7						-
OVEMBER	5.3	1444	256	330	1.29	7.6	3						_
CTOBER	0.0	98	14	25	1.78	.4	1						
IONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5 <b>%</b>	50 2 <b>%</b>	10 <sup>1</sup>
	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	DISCHARGE, IN CFS, FOR INDICATED RECURR INTERVAL, IN YEARS, AND ANNUAL NON EXCEEDANCE PROBABILITY, IN PERCENT					

# 14312000 SOUTH UMPQUA RIVER NEAR BROCKWAY, OR

LOCATION.--Lat 43°08'00", long 123°23'50", in SW: sec.15, T.28 S., R.6 W., Douglas County, Hydrologic Unit 17100302, on right bank 10 ft upstream from Winston Bridge on State Highway 99, 2.5 ml northeast of Brockway, 4.2 ml downstream from Lookingglass Creek, and at mile 132.8.

DRAINAGE AREA .-- 1,670 mi2.

PERIOD OF RECORD.--December 1905 to June 1912, October 1923 to September 1926, January 1942 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 462.52 ft National Geodetic Vertical Datum of 1929 (State Highway Department bench mark). Prior to June 24, 1949, nonrecording gage at several sites within 400 ft of present site at various datums. June 24, 1949, to Oct. 1, 1970, at datum 461.84 ft National Geodetic Vertical Datum of 1929 (State Highway Department bench mark).

REMARKS. -- No regulation. Many small diversions for irrigation above station.

AVERAGE DISCHARGE.--48 years (water years 1907-11, 1924-26, 1943-82), 2,873 ft<sup>3</sup>/s, 23.36 in/yr, 2,081,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 125,000 ft $^3$ /s Dec. 23, 1964, gage height, 34.28 ft; minimum, 16 ft $^3$ /s Aug. 23, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 21, 1927, reached a stage of about 31.2 ft, present site and datum, discharge, 89,500 ft<sup>3</sup>/s. Discharge for flood of February 1890, which reached a stage 1.9 ft higher, according to local resident who lived nearby at time of both floods, has been found to be in error and should not be used.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1907-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1908-82

	MINIMUM (CFS)		WC 441	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON- SECU-	DISC	CHARGE, IN CFS, FOR INDICATED RECURRENC INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
		(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION		TIVE DAYS)	. 2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	. 50 2%	100		
CT0BER	103	6045	508	888	1.75	1.5	1	80	53	41	33	25	21		
OVEMBER	190	13590	2814	2666	.95	8.2	3	81	54	42	33	25	21		
ECEMBER	184	19540	5877	4621	.79	17.0	7	84	56	44	36	27	22		
ANUARY	262	16010	7368	4529	-61	21.4	14	88	60	48	39	30	2		
EBRUARY	341	15370	6445	2693	-42	18.7	30	96	67	55	46	37	31		
IARCH	1372	10950	4887	2570	.53	14.2	60	114	83	70	60	50	4!		
PRIL	589	7378	3241	1547	- 48	9.4	90	132	100	87	78	69	6		
AY	446	6909	1972	1213	.62	5.7	120	172	133	117	106	95	81		
UNE	142	3312	854	531	-62	2.5	183	404	282	236	205	175	158		
ULY UGUST	53	576	255	117	-46	.7									
EPTEMBER	40 69	332 478	128 136	57 63	.44 .46	. 4 . 4									
NNUAL  MAGNIT		5567  PROBABILI D ON PERI			.36  OUS PEAK	100 	 MA		AND PROE				LOW		
YEARS, A	ND ANNUÁ	L EXCEEDA	NCE PROE	ABILITY,	INTERVAL IN PERCE	NT 	PERIOD (CON-	DISC		/AL, ÎN Y	EARS, AN	ATED RECU ND ANNUAL IN PERCE			
				ABILITY,	IN PERCE	ŃТ		DISCH	INTER	/AL, ÎN Y	EARS, AN	ID ANNUAL			
YEARS, A 1.25 80%	2 50%	5 20%	10 10%	ABILITY,  25 4%	IN PERCE	NT  100 1%	(CON- SECU- TIVE DAYS)	2 50%	INTERVEXCEEDAN 5 20%	/AL, IN NICE PROBA	YEARS, AN ABILITY, 25 4%	ND ANNUAL IN PERCE 50 2%	100 15		
YEARS, A 1.25 80% 30800	2 50% 49100	5 20% 74300 9	10 10%	ABILITY,  25 4%	50 2%	NT  100 1%	(CON- SECU- TIVE DAYS)	2 50% 	INTERVEXCEEDAN 5 20% 63500	7AL, IN NICE PROBA 10 10% 72400	YEARS, AN ABILITY, 25 4% 80200	ND ANNUAL IN PERCE 50 2%	100 100 11		
YEARS, A 1.25 80%	2 50% 49100	5 20% 74300 9	10 10%	ABILITY,  25 4%	50 2%	NT  100 1%	(CON- SECU- TIVE DAYS)	2 50% 43800 31700	1NTER\ EXCEEDAN  5 20%  63500 45800	10 10% 72400 52200	ZEARS, AN ABILITY, 25 4% 80200 58000	ND ANNUAL IN PERCE 50 2% 84100 61000	100 15 86900 63100		
YEARS, A 1.25 80% 30800	2 50% 49100	5 20% 74300 9	10 10%	ABILITY,  25 4%	50 2%	NT  100 1%	(CON- SECU- TIVE DAYS) 	2 50% 43800 31700 22000	5 20% 63500 45800 31900	10 10 10 10 52200 36800	80200 58000 41400	ND ANNUAL IN PERCE 50 2% 84100 61000 43900	86900 63100		
YEARS, A 1.25 80% 30800	2 50% 49100	5 20% 74300 9	10 10%	ABILITY,  25 4%	50 2%	NT  100 1%	(CON- SECU- TIVE DAYS)  1 3 7	2 50 <b>%</b> 43800 31700 22000 15100	5 20% 63500 45800 31900 21300	10 10 10 52200 36800 24400	80200 58000 41400 27200	N PERCE 50 2% 84100 61000 43900 28800	8690 6310 4600 3000		
YEARS, A 1.25 80% 30800	2 50% 49100	5 20% 74300 9	10 10%	ABILITY,  25 4%	50 2%	NT  100 1%	(CON- SECU- TIVE DAYS) 	2 50% 43800 31700 22000	5 20% 63500 45800 31900	10 10 10 10 52200 36800	80200 58000 41400	ND ANNUAL IN PERCE 50 2% 84100 61000 43900	8690 6310		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1907-82

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATE	D PERCE	NT OF TI	<b>м</b> Е	·	
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
11800	7150	5240	4130	3300	2680	1790	1070	547	271	209	169	137	110	85

#### 14312200 DEER CREEK NEAR ROSEBURG, OR

LOCATION.--Lat 43°13'10", long 123°16'35", in NE±SW± sec.15, T.27 S., R.5 W., Douglas County, Hydrologic Unit 17100302, on right bank 0.6 mi upstream from Shick Creek, 3.3 mi east of Roseburg, and at mile 4.0.

DRAINAGE AREA .-- 53.2 mi2.

PERIOD OF RECORD. -- October 1955 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 498.95 ft National Geodetic Vertical Datum of 1929 (Douglas County Highway Department). Prior to July 3, 1969, nonrecording gage at site 0.5 mi downstream at datum 12.85 ft lower.

REMARKS.--No regulation. Diversions above station for logponds and many small diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--18 years, 77.4 ft<sup>3</sup>/s, 56,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,910 ft<sup>3</sup>/s Dec. 28, 1965, gage height, 14.76 ft, from floodmark, from rating curve extended above 2,200 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 13.38 and 13.67 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Oct. 29, 1950, reached a stage of 13.38 ft, from floodmarks, discharge, 6,460 ft $^3$ /s, from rating curve extended above 2,200 ft $^3$ /s as explained above.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1956-73 MAGNITUDE AND PROBABILITY

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1957-73

	MINIM	MAN THE IN	мет	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	⊃ <b>N</b> -
MONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1 <b>%</b>
OCTOBER	2.8	<b>3</b> 1	7.6	7.9	1.04	.8	1	.2	.1	.1	0.0		
NOVEMBER	4.0	238	65	58	.90	7.0	3	.3	. 1	. 1	0.0		
DECEMBER	11	706	212	182	.86	22.8	7	.5	.2	. 1	. 1		
JANUARY	20	459	222	138	.62	23.8	14	.5	•2	.2	. 1		
FEBRUARY	43	359	167	96	.57	17.9	30	.8	.4	.3	.2		
MARCH	31	320	141	84	.60	15.1	60	1.3	.7	.6	. 4		
APRIL	19	224	61	48	.78	6.6	90	1.6	1.1	.9	.7		
MAY	5.3	220	38	50	1.33	4.0	120	2.3	1.6	1.4	1.2		
JUNE	3.3	51	11	11	.98	1.2	183	5.5	3.4	2.7	2.2		
JULY	.6	7.2	2.8	2.0	•71	.3							
AUGUST	.3	2.5	1.3	.7	.57	. 1							
SEPTEMBER		17	2.9	3.7	1.28	.3							
ANNUAL	33	151	77	26	.34	100							

## MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1956-73

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1956-73

) SCHARGE, YEARS, A				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, IN Y	R INDICAT EARS, AND	ANNUAL	
1.25 80 <b>%</b> 	2 50 <b>%</b> <b>-</b>	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 <b>2%</b>	100 1,%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10	25 4%	50 2 <b>%</b>	100
2260	3680	5630	6870	8350	- <b>-</b>				<b>-</b>	<b></b>		<b></b>	
			<b></b>	<b>-</b>			1	2190	3160	3570	3900		
WEIGHTED	SKEW =	<b>48</b> 9					3	1400	1890	2080	2230		
							7	836	1200	1400	1590		
							15	502	741	889	1060		
							30	379	518	591	666		
							60	286	378	422	464		
							90	228	306	349	396		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-73

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATE	PERCEN	T OF TIM	E	<b>-</b>	
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
349	200	130		70	53	30	16	7.8	3.8	3.0	2.3	1.8	1.2	.6

## 14312500 LAKE CREEK NEAR DIAMOND LAKE, OR

LOCATION.--Lat 43°11'10", long 122°09'55", in NW\SW\ sec.30, T.27 S., R.6 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on right bank 260 ft downstream from outlet of Diamond Lake, 1.6 mi northwest of town of Diamond Lake, and at mile 10.7.

DRAINAGE AREA .-- 54.9 mi2.

117

100

84

78

73

64

55

46

37

33

30

26

21

15

92

PERIOD OF RECORD.--May 1922 to September 1925 (no winter records), October 1926 to September 1929, April, July, August 1930, October 1930 to September 1953, October 1971 to October 1977, February 1978 to September 1982. Prior to October 1971 published as "at Diamond Lake, near Fort Klamath."

GAGE.--Water-stage recorder. Altitude of gage is 5,180 ft, from river-profile map. Prior to May 26, 1931, nonrecording gage at site 300 ft downstream at different datum. May 26, 1931, to Oct. 6, 1933, nonrecording gage at present site and datum.

REMARKS.--Flow regulated by gates and fish racks at lake outlet. No diversion above station.

AVERAGE DISCHARGE.--36 years (water years 1927-29, 1931-53, 1972-77, 1979-82),  $56.2~ft^3/s$ , 40,720~acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 336 ft<sup>3</sup>/s Jan. 1, 1943, gage height, 2.8 ft, from rating curve extended above 120 ft<sup>3</sup>/s; no flow Aug. 25-27, 1931, Sept. 19, 1977.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1927-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1935-82

	MINIMIM	MAX I MUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON-	11	NTERVAL,	IN YEAR	INDICAT S, AND A ILITY, I	NNUAL NO	N-
монтн	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 5%	50 2%	100
CTOBER	12	94	41	24	.57	6.0	1	6.0	2.5	1.5	1.0-	•6	
IOV EMBER	15	133	60	29	.48	8.7	3	7.5	3.3	2.0	1.4	.8	
ECEMBER	33	139	77	27	. 35	11.2	7	9.1	4.4	2.9	2.0	1.3	
ANUARY	34	142	82	25	.30	11.9	14	13	6.5	4.4	3.0	1.9	
EBRUARY	34	140	76	22	.29	11.0	30	16	10.0	7.5	5.8	4.3	
IARCH	29	134	70	22	.31	10.1	60	23	15	12	9.6	7.1	
PRIL	5.0	106	59	20	.34	8.5	90	26	18	15	12	9.4	
ΙΑΥ	. 30	107	60	19	.32	8.7	120	30	22	18	15	13	
UNE	23	149	67	34	.50	9.7	183	37	28	24	22	19	
ULY	9.5	81	41	19	.47	6.0							
NUGUST	6.2	60	28	12	.44	4.1							
SEPTEMBER	7.4	58	28	13	.47	4.0							
NNUAL													
		91  PROBABILI D ON PERIO			.29 COUS PEAK	100  FLOW	MAG	GNITUDE AN BASED			F ANNUAL CORD 192		 OW
MAGNI ISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIC L EXCEEDA	TY OF IN DD OF RE CATED RE	STANTANE CORD CURRENCE	OUS PEAK INTERVAL IN PERCE	FLOW , IN NT	PERIOD (CON-	BASED DISCHAF	ON PERIORS RGE, IN O	OD OF REC		27-82  ED RECURI ANNUAL	RENCE
MAGN1	TUDE AND BASE	PROBABILI D ON PERIO	TY OF IN OD OF RE	ISTANTANE CORD CURRENCE	OUS PEAK	FLOW	PERIOD (CON- SECU- TIVE	DISCHAR EX	ON PERIOR ON PER	OD OF REC CFS, FOR , IN YEA E PROBAB	INDICATE ARS, AND ILITY, II	27-82 ED RECURI ANNUAL N PERCEN	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU-	BASED DISCHAR EX	ON PERIO	OD OF REC	OORD 192	27-82 ED RECURI ANNUAL N PERCEN	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAP  E)  2  50%	ON PERIO	DD OF REC	INDICATE ARS, AND ILITY, II 25 4%	27-82 ED RECURI ANNUAL N PERCEN 50 2%	RENCE
MAGNI ISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAF  E)  2  50%	ON PERIO	DD OF RECORD OF	INDICATE ARS, AND ILITY, II  25 4%	27-82 ED RECURI ANNUAL N PERCEN 50 2%	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAR  E)  2  50%  120 116	ON PERIO	DD OF REC CFS, FOR _, IN YE, E PROBAB 10 10%	19: INDICATE ARS, AND ILITY, II 25 4%	27-82 ED RECURI ANNUAL N PERCEN  50 2%  257 242	RENCE T
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASED  DISCHAF  E)  2  50%  120 116 112	ON PERIO	DD OF REC CFS, FOR , IN YE, E PROBAB 10 10%	INDICATE ARS, AND ILITY, II 25 4% 225 214 198	27-82 ED RECURI ANNUAL N PERCEN  50 2\$  257 242 221	RENCE T
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAF  E)  2  50%  120 116 112 102	ON PERIO RGE, IN ( INTERVAL (CEEDANCE) 5 20% 158 153 144 130	DD OF REC CFS, FOR , IN YEA E PROBAB 10 10% 187 179 167 150	indicate ARS, AND ILITY, II  25 4%  225 214 198 175	27-82 ED RECURI ANNUAL N PERCEN 50 2 57 242 221 195	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASED  DISCHAR  E)  2  50%  120 116 112 102 93	ON PERIO GRE, IN C INTERVAL CCEEDANCE  5  20%  158 153 144 130 118	DD OF REG	225 225 214 198 175 155	27-82  DRECURI ANNUAL N PERCEN  50 2%  257 242 221 195 171	RENCE
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	ISTANTANE CORD CURRENCE ABILITY,	INTERVAL IN PERCE	FLOW  , IN NT 100	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASED  DISCHAR  E)  2  50%  120 116 112 102 93 85	ON PERIO GGE, IN C INTERVAL (CEEDANCE  5  20%  158  153  144  130  118  107	DD OF RECEPTION OF	225 214 198 175 141	27-82 ED RECURIANUAL N PERCEN' 50 2\$ 257 242 221 195 171 156	RENCE T
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIG L EXCEEDA	TY OF INDO OF RE	ISTANTANE CORD ————————————————————————————————————	INTERVAL IN PERCE	FLOW	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASED  DISCHAF  E)  2  50%  120 116 112 102 93 85 80	ON PERIOD ON PER	DD OF REC CFS, FOR , IN YEA E PROBAB 10 10% 	225 225 214 198 175 155	27-82  DRECURI ANNUAL N PERCEN  50 2%  257 242 221 195 171	RENCE T
MAGNI	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERIO FOR INDIO L EXCEEDAN 5 20%	TY OF INDD OF RE	STANTANE CORD  CURRENCE ABILITY,  25 4%	INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	BASED  DISCHAF  2  50%  120 116 112 102 93 85 80  OF RECORD	ON PERIO RGE, IN C INTERVAL CCEEDANCE  5 20%  158 153 144 130 118 107 100  1927-82	DD OF RECEPTION OF	225 214 198 175 141 133	27-82 ED RECURIANUAL N PERCEN' 50 2\$ 257 242 221 195 171 156	RENCE

## UMPQUA RIVER BASIN

#### 14315500 NORTH UMPQUA RIVER AT TOKETEE FALLS, OR

LOCATION.--Lat 43°15'50", long 122°25'20", in E-1/2 sec.35, T.26 S., R.3 E., Douglas County, Hydrologic Unit 17100301, 0.1 mi downstream from Clearwater River and 0.5 mi upstream from Toketee Falls.

DRAINAGE AREA .-- 339 mi2.

PERIOD OF RECORD.--July 1925 to September 1945, April 1946 to September 1948.

GAGE.--Water-stage recorder. Datum of gage is 2,373 ft National Geodetic Vertical Datum of 1929 (levels by California-Oregon Power Co.). Feb. 26, 1908, to July 20, 1909, staff gage, and Dec. 19, 1914, to Sept. 30, 1917, water-stage recorder, at datum 0.50 ft lower.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--22 years (water years 1926-45, 1947-48), 875 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,080 ft³/s Dec. 31, 1942, gage height, 5.90 ft, from rating curve extended above 1,900 ft³/s by logarithmic plotting; minimum, 475 ft³/s Nov. 27-29, Dec. 12, 14, 1931.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1926-48 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1927-48

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	512	820	632	78	.12	6.0	1	574	532	514	501		
NOVEMBER	494	1095	736	164	.22	7.0	3	577	534	515	501		
DECEMBER	518	1685	842	260	.31	8.0	7	581	537	517	503		
JANUARY	570	1513	876	240	.27	8.3	14	587	542	522	507		
FEBRUARY	584	1350	920	217	.24	8.8	30	594	547	527	512 ·		
MARCH	675	1307	965	180	.19	9.2	60	603	555	535	520		
APRIL	665	1741	1129	245	.22	10.7	90	613	561	538	521		
MAY	749	1741	1248	329	. 26	11.9	120	625	568	542	523		
JUNE	5 <b>9</b> 9	2028	1072	362	.34	10.2	183	670	598	564	538		
JULY	545	1131	776	154	.20	7.4							
AUGUST	510	877	675	97	.14	6.4							
SEPTEMBER	504	807	636	81	.13	6.1							
ANNUAL	635	1246	875	143	.16	100							

#### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1926-48

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1926-48

ISCHARGE, YEARS, AI				RECURRENC OBABILITY			PERIOD (CON-	DISCH	INTERV	AL, IN Y	OR INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
1860	2580	3550	4190	4980									
							1	2220	2940	3390	3930		
WEIGHTED	SKEW =	084					3	1960	2520	2860	3260		
							7	1680	2090	2350	2660		
							15	1500	1830	2030	2260		
							30	1400	1670	1820	1990		
							60	1300	1540	1660	1790		
							90	1210	1420	1540	1670		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1926-48

5% 10% 15% 20% 25% 30% 40% 50% 60% 70% 75% 80% 85% 90% 95% 	 		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATED	PERCE	NT OF TI	ME		
1540 1340 1200 1090 1000 938 846 780 720 670 647 622 599 580 553	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	 1540	1340	1200	1090	1000	938	846	780	720	670	647	622	599	580	553

#### 14316500 NORTH UMPQUA RIVER ABOVE COPELAND CREEK, NEAR TOKETEE FALLS, OR

LOCATION.--Lat 43°17'45", long 122°32'10", in NW½ sec.24, T.26 S., R.2 E., Douglas County, Hydrologic Unit 17100301, Umpqua National Forest, on left bank 0.6 mi upstream from Copeland Creek, 4.7 mi west of town of Toketee Falls, and at mile 67.2.

DRAINAGE AREA .-- 475 mi2

PERIOD OF RECORD.--September 1949 to September 1982. Monthly discharge only September 1949, published in WSP 1318. Prior to October 1952, published as "above Copeland Creek."

GAGE.--Water-stage recorder. Altitude of gage is 1,580 ft, from river-profile map. Prior to Aug. 1, 1976, on right bank at same datum.

REMARKS.--Considerable fluctuation caused by powerplants upstream; flow slightly regulated by Diamond Lake and by Lemolo Lake. No diversion above station.

AVERAGE DISCHARGE.--33 years, 1,503  $ft^3/s$ , 1,089,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.1 ft, from floodmark, from rating curve extended above 7,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 370 ft<sup>3</sup>/s Sept. 30, 1981; minimum daily, 565 ft<sup>3</sup>/s Sept. 13, 1959.

#### STATISTICAL SUMMARIES

М						TATISTICAL							
	ONTHLY AN	ID ANNUAL	MEAN DIS	CHARGES	1950-82		МА	_			OF ANNU RECORD	AL LOW FL 1951-82	OW .
	MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 19
OCTOBER	758	1568	949	172	.18	5.3	1	659	604	582	567	554°	
10VEMBER	805	2298	1310	396	.30	7.3	3	703	628	597	575	553	
DECEMBER	803	5163	1845	957	.52	10.2	7	738	649	612	585	558	
JANUARY	788	3418	1863	7 27	. 39	10.3	14	763	675	637	609	581	
FEBRUARY	670	3254	1846	575	.31	10.2	30	787	697	658	629	600	
MARCH	873	4221	1725	591	.34	9.5	60	816	730	693	666	638	
APRIL	1065	2876	1857	442	-24	10.3	90	844	755	715	685	655	
4AY	1066	3191	2077	547	.26	11.5	120	879	782	740	708	676	
JUNE	904	2933	1726	601	.35	9.6	183	1010	880	827	790	754	
JULY	689	1652	1102	264	-24	6.1							
AUGUST	684	1178	904	159	.18	5.0							
SEPTEMBER	653	1107	860	122	- 14	4.8							
ANNUAL	897	2080	1503	307	.20	100							
								BASE	D ON PER	RIOD OF F		AL HIGH FI 1950-82	LOW
YEARS, A	AND ANNUÁ	FOR INDIC	NCE PROBA	CURRENCE ABILITY,	IN PERCE	NT	PERIOD (CON-	DISCH	HARGE, IN	CFS, FO	RECORD OR INDICATE		RRENCE
				CURRENCE	INTERVAL IN PERCE	,		DISCH	HARGE, IN	CFS, FO	RECORD OR INDICATE	1950-82  ATED RECUIND ANNUAL IN PERCEN	RRENCE
YEARS, #	AND ANNUA 2	L EXCEEDAI	NCE PROBA	CURRENCE ABILITY,	INTERVAL IN PERCE	NT  100	(CON- SECU-	DISCH	IARGE, INTERN	CFS, FO	RECORD OR INDICATE	1950-82  ATED RECUIND ANNUAL  IN PERCEN	RRENCI
YEARS, #	AND ANNUA 2 50%	L EXCEEDAI 5 20%	10 10%	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE	NT  100	(CON- SECU- TIVE DAYS)	D1SCH  2 50%	HARGE, IN INTER\ EXCEEDAN 5 20%	N CFS, FC /AL, IN N ICE PROB/ 10 10%	RECORD OR INDIC/ YEARS, AN ABILITY, 25 4%	ATED RECUI ND ANNUAL IN PERCEI 50 2%	RRENCI
YEARS, # 1.25 80% 	2 50% 7650	L EXCEEDAI 5 20% 	10 10%	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	(CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTER\ EXCEEDAN 5 20%	10 10%	DR INDIC/YEARS, AN ABILITY, 25 4%	1950-82  ATED RECUIND ANNUAL IN PERCEI	RRENCI
YEARS, A	2 50% 7650	L EXCEEDAI 5 20%	10 10%	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	(CON- SECU- TIVE DAYS)	DISCH	HARGE, IN INTERN EXCEEDAN 5 20% 9900 7640	10 CFS, F(AL, IN CE PROB/	RECORD OR INDICA YEARS, AN ABILITY, 25 4%	1950-82  ATED RECUIND ANNUAL IN PERCEI  50 2%  23000 16900	RRENCI
YEARS, # 1.25 80% 	2 50% 7650	L EXCEEDAI 5 20% 	10 10%	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	(CON- SECU- TIVE DAYS)	D1 SCH 2 50% 5870 4780 3890	HARGE, IN INTER\ EXCEEDAN 5 20% 9900 7640 5700	10 CFS, F(AL, IN NICE PROB/	RECORD OR INDICA YEARS, AN ABILITY, 25 4%	1950-82  ATED RECUIND ANNUAL IN PERCEI  50 2%  23000 16900 10800	RRENCI
YEARS, # 1.25 80% 	2 50% 7650	5 20% 	10 10%	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	(CON- SECU- TIVE DAYS) 	DISCH 2 50% 5870 4780 3890 3180	HARGE, IN INTER\ EXCEEDAN 5 20% 9900 7640 5700 4290	10 10 10 10 13300 10000 7100 5060	RECORD OR INDIC/ YEARS, AN ABILITY, 25 4% 18400 13700 9130 6070	1950-82  ATED RECUI ND ANNUAL IN PERCEI  50 2%  23000 16900 10800 6840	RRENCI
1.25 80% 	2 50% 7650	5 20% 	10 10%	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	(CON- SECU- TIVE DAYS) 	DISCH 2 50% 5870 4780 3890 3180 2770	HARGE, IN INTERN EXCEEDAN 5 20% 9900 7640 5700 4290 3540	10 10% 13300 10000 7100 5060 4030	DR INDIC/ YEARS, AN ABILITY, 25 4% 	1950-82  ATED RECUIND ANNUAL IN PERCEIT  50 2%  23000 16900 10800 6840 5040	RRENCI
1.25 80% 	2 50% 7650	5 20% 	10 10%	CURRENCE ABILITY, 25 4%	INTERVAL IN PERCE 50 2%	NT  100	(CON- SECU- TIVE DAYS) 	DISCH 2 50% 5870 4780 3890 3180	HARGE, IN INTER\ EXCEEDAN 5 20% 9900 7640 5700 4290	10 10 10 10 13300 10000 7100 5060	RECORD OR INDIC/ YEARS, AN ABILITY, 25 4% 18400 13700 9130 6070	1950-82  ATED RECUI ND ANNUAL IN PERCEI  50 2%  23000 16900 10800 6840	RRENC
1.25 80% 	2 50% 7650	5 20% 	10 10% 9200 28	25 4%	INTERVAL IN PERCE 50 2% 6300	NT	CON- SECU- TIVE DAYS)	DISCH 2 50% 5870 4780 3890 3180 2770 2360 2200	9900 7640 5700 4290 3540 2940 2680	13300 1000 1000 1000 1000 1000 1000 100	DR INDIC/ YEARS, AN ABILITY, 25 4% 18400 13700 9130 6070 4620 3700	1950-82  ATED RECUIND ANNUAL IN PERCEITS  23000 16900 10800 6840 5040 4000	RRENC
1.25 80% 	2 50% 7650	5 20% 13700 19 .453	10 10 10\$ 9200 26	CURRENCE ABILITY, 25 4% 3000 3	INTERVAL IN PERCE 50 2% 6300	100 1% 	(CON- SECU- TIVE DAYS) 	D1SCH 2 50% 4780 3890 3180 2770 2360 2200	9900 7640 5700 4290 3540 2680	10 10% 10% 10% 10% 10000 7100 5060 4030 3290 2960	DR INDIC/ YEARS, AN ABILITY, 25 4% 18400 13700 9130 6070 4620 3700 3270	1950-82  ATED RECUIND ANNUAL IN PERCEITS  23000 16900 10800 6840 5040 4000	RRENC

## UMPQUA RIVER BASIN

## 14316700 STEAMBOAT CREEK NEAR GLIDE, OR

LOCATION.--Lat 43°21'00", long 122°43'40", in N-1/2 sec.32, T.25-1/2 S., R.1 E., Douglas County, Hydrologic Unit 17100301, in Umpqua National Forest, on right bank in Canton Creek Forest Service Park, 200 ft downstream from Canton Creek, 19 mi northeast of Glide, and at mile 0.5.

DRAINAGE AREA. -- 227 mi2.

PERIOD OF RECORD.--Water year 1956 (annual maximum only), June 1956 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,128.55 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Public Roads). Oct. 7, 1955, to June 13, 1956, nonrecording gage at site 100 ft upstream at same datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--26 years, 735 ft<sup>3</sup>/s, 43.97 in/yr, 532,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 51,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 25.6 ft, from floodmark, from rating curve extended above 13,000 ft<sup>3</sup>/s on basis of slope-area measurement at 17.96 ft; minimum, 30 ft<sup>3</sup>/s Sept. 15-17, 1973.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

MINIMUM MONTH (CFS)	2 5 3 2 2 2 1 1 1			110N (CFS) 120 656 1146 978 664 661 304 270 119 26 24 33 222		ANNUAL RUNOFF  1.9 9.8 17.6 17.7 15.4 14.2 10.9 7.1 2.8 1.0 .7 .8	SECU- TIVE DAYS) 		5 20% 32 33 34 35 38 42 48 59 116 AND PROED ON PEF			50 2% 30 30 30 32 34 36 41 48 77	100 1%    
NOVEMBER 77 DECEMBER 63 JANUARY 108 FEBRUARY 141 MARCH 383 APRIL 287 MAY 285 JUNE 105 JULY 57 AUGUST 39 SEPTEMBER 39  MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU  1.25 2 80% 50%	2 5 3 2 2 1 1 1	2887 3391 5415 5861 12774 1406 1337 544 149 158 187 1253	869 1562 1564 1367 1260 964 626 248 91 61 67 735	656 1146 978 664 661 304 270 119 26 24 33 222	.75 .73 .63 .49 .52 .32 .43 .48 .28 .40 .50	9.8 17.6 17.7 15.4 14.2 10.9 7.1 2.8 1.0 .7 .8	3 7 14 30 60 90 120 183	36 37 39 42 49 56 71 152	33 34 35 38 42 48 59 116	31 32 33 36 40 45 54 100	31 31 33 35 38 43 51 89	30 30 32 34 36 41 48 77	
NOVEMBER 77 DECEMBER 63 JANUARY 108 FEBRUARY 141 MARCH 383 APRIL 287 MAY 285 JUNE 105 JULY 57 AUGUST 39 SEPTEMBER 39  MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU  1.25 2 80% 50%	2 5 3 2 2 1 1 1	2887 3391 5415 5861 12774 1406 1337 544 149 158 187 1253	869 1562 1564 1367 1260 964 626 248 91 61 67 735	656 1146 978 664 661 304 270 119 26 24 33 222	.75 .73 .63 .49 .52 .32 .43 .48 .28 .40 .50	9.8 17.6 17.7 15.4 14.2 10.9 7.1 2.8 1.0 .7 .8	3 7 14 30 60 90 120 183	36 37 39 42 49 56 71 152	33 34 35 38 42 48 59 116	31 32 33 36 40 45 54 100	31 31 33 35 38 43 51 89	30 30 32 34 36 41 48 77	
JANUARY 108 FEBRUARY 141 MARCH 383 APRIL 287 MAY 285 JUNE 105 JULY 57 AUGUST 39 SEPTEMBER 39 MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU  1.25 2 80% 50%	5 3 2 2 1 1 1 1	5391 5415 5861 5774 1406 1337 544 149 158 187 1253	1562 1564 1367 1260 964 626 248 91 61 67 735	1146 978 664 661 304 270 119 26 24 33 222	.73 .63 .49 .52 .32 .43 .48 .28 .40 .50	17.6 17.7 15.4 14.2 10.9 7.1 2.8 1.0 .7 .8	7 14 30 60 90 120 183	37 39 42 49 56 71 152	34 35 38 42 48 59 116	32 33 36 40 45 54 100	33 35 38 43 51 89	32 34 36 41 48 77	
ANUARY	3 26 2 1 1 1 1 2 2 1 2 1 2 1 1 2 1 2 1 2	3415 2861 2774 1406 15337 544 149 158 187	1564 1367 1260 964 626 248 91 61 67 735	978 664 661 304 270 119 26 24 33 222	.63 .49 .52 .32 .43 .48 .28 .40 .50	17.7 15.4 14.2 10.9 7.1 2.8 1.0 .7 .8	14 30 60 90 120 183	39 42 49 56 71 152	35 38 42 48 59 116	33 36 40 45 54 100	33 35 38 43 51 89	32 34 36 41 48 77	
EBRUARY 141  MARCH 383  APRIL 27  MAY 285  JUNE 105  JULY 57  MUGUST 39  SEPTEMBER 39  MAGNITUDE AND  BAS  DISCHARGE, IN CFS  YEARS, AND ANNU  1.25 2  80% 50%  10000 14400	29 22 14 11 12 12 12 12 12 12 12 14 15 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	2861 2774 1406 1337 544 149 158 187	1367 1260 964 626 248 91 61 67 735	664 661 304 270 119 26 24 33 222	.49 .52 .32 .43 .48 .28 .40 .50	15.4 14.2 10.9 7.1 2.8 1.0 .7 .8	30 60 90 120 183	42 49 56 71 152	38 42 48 59 116	36 40 45 54 100	35 38 43 51 89 OF ANNU/	34 36 41 48 77	
MARCH 383 APRIL 287 MAY 285 MAY 105 JUNE 105 JULY 57 AUGUST 39 SEPTEMBER 39 MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU  1.25 2 80% 50%  10000 14400	2 1 1 1 2 2 2 2 2 3	2774 1406 1337 544 149 158 187 1253	1260 964 626 248 91 61 67 735	661 304 270 119 26 24 33 222	.52 .32 .43 .48 .28 .40 .50	14.2 10.9 7.1 2.8 1.0 .7 .8	60 90 120 183	49 56 71 152	42 48 59 116	40 45 54 100	38 43 51 89 OF ANNU/	36 41 48 77 	
APRIL 287  AAY 285  JUNE 105  JULY 57  AUGUST 39  SEPTEMBER 39  MAGNITUDE AND BAS  DISCHARGE, IN CFS  YEARS, AND ANNU  1.25 2  80% 50%	1/ 11 12 12 D PROI	1406 1337 544 149 158 187 1253	964 626 248 91 61 67 735	304 270 119 26 24 33 222	.32 .43 .48 .28 .40 .50 .30	10.9 7.1 2.8 1.0 .7 .8	90 120 183	56 71 152	48 59 116	45 54 100 	43 51 89 OF ANNU/	41 48 77 	
MAY 285 JUNE 105 JUNE	11 12 D PROI	1337 544 149 158 187 253	626 248 91 61 67 735	270 119 26 24 33 222	.43 .48 .28 .40 .50 .30	7.1 2.8 1.0 .7 .8	120	71 152 	59 116 	54 100 	51 89  OF ANNU/	48 77 	
JUNE 105 JULY 57 AUGUST 39 SEPTEMBER 39 ANNUAL 239  MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU 1.25 2 80% 50%	1: 	544 149 158 187 253 	248 91 61 67 735	119 26 24 33 222	.48 .28 .40 .50 .30	2.8 1.0 .7 .8	183	152 	116	100 	89 OF ANNU/	77 	 
JULY 57 AUGUST 39 SEPTEMBER 39 INNUAL 239  MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU  1.25 2 80% 50%  10000 14400	1: 	149 158 187 253 	91 61 67 735 TY OF IN	26 24 33 222	.28 .40 .50 .30	1.0 .7 .8		GNITUDE	AND PROE		OF ANNUA	 	
MAGNITUDE AND BAS 1.25 2 80% 50% 1.0000 14400	1: 	158 187 1253 	61 67 7 <b>35</b> 	24 33 222 	.40 .50 .30	.7 .8	  MA						
MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU  1.25 2 80% 50%	1: 	187 1253  DBABILIT	67 735 	33 222 	.50 .30 	100	 MA						 -0 <b>W</b>
MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU  1.25 2 80% 50%	1: 	1253  DBABILIT	735 ´	222	.30 	100	 MA						 -0 <b>W</b>
MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU 1.25 2 80% 50%		BABILIT	TY OF IN	NSTANTANI	EOUS PEAK		 MA						
MAGNITUDE AND BAS DISCHARGE, IN CFS YEARS, AND ANNU 1.25 2 80% 50%		BABILIT	TY OF IN	NSTANTANI	EOUS PEAK		 MA						
10000 14400	·	<b></b>	ICE PROB	3ABILITY,  25		NT  100	PERIOD (CON- SECU-					ID ANNUAL	۱T
			10%	4%	2%	1%	TIVE DAYS)	2 <b>5</b> 0%	<b>5</b> 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
WEIGHTED SKEW =	2130	00 26	500 3	3900 4	10000					<b></b>			
MEIGHIED SKEW =		710					1	11100	16200	18800	21500	23000	
	•	310					<b>3</b> 7	7390	10900	13000	15400	17000	
								4900	7190	8 <b>5</b> 70	10200	11200	
							15	3270	4620	5410	6320	6920	
							30	2510	3410	3930	4520	4920	
							60	1990	2700	3120	3600	<b>3</b> 9 <b>4</b> 0	
							90	1690	2270	2630	3050	3360	
			DURATIO	N TABLE	OF DAILY	MEAN FLOW	FOR PERIOD	OF RECO	RD 1957-	82			
		DISCHAR	GE, IN	CFS, WHI	CH WAS EQ	JALED OR E	XCEEDED FOR	R INDICA	TED PERC	ENT OF T	IME		
5% 10%	·	 5%	20%	25%	30%	40% <b>5</b> 0	<b>%</b> 60%	70%	7 <b>5%</b>	80%	85%	90%	959

#### 14317500 NORTH UMPQUA RIVER ABOVE ROCK CREEK, NEAR GLIDE, OR

LOCATION.--Lat 43°19'40", long 123°00'00", in NW4 sec.12, T.26 S., R.3 W., Douglas County, Hydrologic Unit 17100301, 0.5 mi upstream from Rock Creek and 5 mi northeast of Glide.

DRAINAGE AREA .-- 886 mi2.

PERIOD OF RECORD.--July 1924 to September 1945.

GAGE.--Water-stage recorder. Altitude of gage is 770 ft, from river-profile map.

REMARKS. -- No diversion or regulation above station.

AVERAGE DISCHARGE.--21 years (water years 1925-45), 2,274 ft<sup>3</sup>/s, 1,648,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,000 ft<sup>3</sup>/s Feb. 20, 1927, gage height, 20.18 ft, from rating curve extended above 18,000 ft<sup>3</sup>/s by logarithmic plotting; minimum, 521 ft<sup>3</sup>/s Oct. 16, 1931, gage height, 1.86 ft.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1925-45

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1926-45

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT 0F	PERIOD (CON-		INTEŔVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	0N-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	649	1588	889	252	-28	3.3	1	675	608	577	553 ·		
NOVEMBER	651	6205	2208	1615	.73	8.1	3	678	614	584	561		
DECEMBER	943	10250	2928	2070	.71	10.7	7	684	620	590	566		,
JANUARY	818	7197	3377	1738	.51	12.4	14	694	630	599	576		
FEBRUARY	1338	7162	3684	1754	.48	13.5	30	706	643	614	592		
MARCH	1399	7259	3402	1469	.43	12.5	60	731	661	630	606		
APRIL	1321	6063	3430	1283	.37	12.6	90	751	677	644	619		
4AY	1183	4503	2778	1079	.39	10.2	120	779	702	674	655		
JUNE	833	4958	1980	1001	.51	7.2	183	985	827	765	723		
JULY	696	1631	1049	249	. 24	3.8							
AUGUST	588	1098	813	123	.15	3.0							
SEPTEMBER	588	997	774	106	.14	2.8							
NNUAL	1384	3942	2257	672	.30	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1925-45 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1925-45

EARS,				RECURRENC ROBABILITY			PERIOD (CON-	5,55	INTER	VAL, ÍN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
6000	22300	31800	38700	48100							_		
							1	17000	24700	30700	39500	, <del></del>	-
EIGHTE	D SKEW :	.255					3	12700	18400	22900	29500		-
							7	9420	13200	16000	19900		-
							15	7070	9630	11500	14100		-
							30	5520	7180	8310	9760		_
							60	4450	5840	6870	8310		-
							90	4040	5290	6180	7370		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1925-45

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EDED FOR	INDICATED	PERCENT	OF TIME	Ξ		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
6010	4660	3870	3290	2840	2460	1920	1480	1170	934	860	807	756	710	656

#### 14317600 ROCK CREEK NEAR GLIDE, OR

LOCATION.--Lat 43°20'45", long 122°59'30", in SELSEL sec.36, T.25 S., R.3 W., Douglas County, Hydrologic Unit 17100301, on left bank 0.3 mi downstream from McComas Creek, 5.8 mi northeast of Glide, and at mile 1.2.

DRAINAGE AREA. -- 97.4 mi2.

PERIOD OF RECORD.--Water years 1956-57 (annual maximums only), June 1957 to June 1973.

GAGE.--Water-stage recorder. Altitude of gage is 940 ft, from topographic map. Nov. 8, 1955, to June 16, 1957, nonrecording gage and June 17, 1957, to Sept. 30, 1965, water-stage recorder at site 800 ft downstream at different datum.

REMARKS. -- No diversion or regulation above station.

AVERAGE DISCHARGE.--15 years (water years 1958-72), 373  $ft^3/s$ , 52.01 in/yr, 270,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,800 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 20.3 ft, from floodmark, site and datum then in use, from rating curve extended above 5,400 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 14.83 ft; minimum, 14 ft<sup>3</sup>/s Sept. 5-11, 1966.

#### STATISTICAL SUMMARIES

MONTHLY	AND	ANNUAL	MEAN	DISCHARGES	1058-72

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1959-72

	M { N I MUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAF CE PROBAE	RS, AND A	NNUAL NO	)N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	24	198	94	51	.54	2.1	1	20	17	16	15		
NOVEMBER	105	833	469	251	.54	10.4	3	20	17	16	15		
DECEMBER	151	2564	757	601	.79	16.9	7	21	18	16	15		
JANUARY	118	1609	876	499	•57	19.5	14	22	19	17	16		
EBRUARY	317	1254	686	<b>2</b> 99	.44	15.3	30	24	20	18	17		
MARCH	221	1338	669	340	.51	14.9	60	28	23	21	20		
APRIL	164	716	438	157	.36	9.8	90	31	26	23	22		
4AY	102	679	280	152	.54	6.2	120	39	31	28	26		
JUNE	47	174	108	39	.36	2.4	183	80	62	53	46		
JULY	34	87	50	15	.30	1.1							
AUGUST	19	45	30	6.6	.22	•7							
SEPTEMBER	18	62	33	13	. 39	.7							
ANNUAL	219	567	373	90	.24	100							

DISCHARGE, YEARS, A				RECURRENC ROBABILIT			PERIOD (CON-	DISCH	INTERV	AL, IN	OR INDICAT YEARS, AND ABILITY.	ANNUAL	
1.25 8 <b>0%</b>	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1 <b>%</b>
<b>429</b> 0	6520.	10400	13600	18400									
WEIGHTED	CKEM -	.410					1	4410	6950	9240	13000	,	
WEIGHTED	SVEW -	.410						3260 2300	5060 3 <b>4</b> 60	6610 <b>443</b> 0	90 <b>4</b> 0 5910		
							15	1640	2350	2850	3520		
							30	1220	1690	2040	2530		
							60	995	1350	1610	1970		
							90	855	1110	1300	1560		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-72

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	PERCENT	OF TI	4E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85 <b>%</b>	90%	95%
1300	877	680	557	<b>4</b> 60	382	271	174	102	62	47	38	31	27	23

## UMPQUA RIVER BASIN

## 14318000 LITTLE RIVER AT PEEL, OR

LOCATION.--Lat 43°15'10", long 123°01'30", in NW± sec.2, T.27 S., R.3 W., Douglas County, Hydrologic Unit 17100301, on left bank 0.6 mi southeast of Peel, 0.9 ml from Cavitt Creek, and at mile 6.3.

DRAINAGE AREA .-- 177 m12.

5%

1680

10%

1110

15%

862

20%

702

25%

581

30%

490

PERIOD OF RECORD. -- August 1954 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 828.33 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Small diversions for rural domestic use and irrigation above station.

AVERAGE DISCHARGE.--28 years, 468 ft<sup>3</sup>/s, 35.91 in/yr, 339,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,100 ft<sup>3</sup>/s Dec. 11, 1956, gage height, 19.63 ft, from rating curve extended above 5,900 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 16.55 ft; minimum, 14 ft<sup>3</sup>/s Sept. 2, 9, 10, 28, 29, 1967, Sept. 25-27, 1974, Aug. 18, 19, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Nov. 22, 23, 1953, reached a stage of 20.6 ft, from floodmark, discharge, 22,700 ft³/s, from rating curve extended above 5,900 ft³/s on basis of slope-area measurement at gage height 16.55 ft.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1955-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1956-82

				STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-		INTERVAL	_, IN YE	ARS, AND	ATED RECU ANNUAL N IN PERCE	ON-
ONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI~ ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2 <b>%</b>	100
CTOBER	24	366	106	87	.82	1.9	1	19	16	 15	14	. 13	
IOVEMBER	41	2162	563	471	.84	10.0	3	19	16	15	14	13	
ECEMBER	35	3090	1004	719	.72	17.9	7	20	17	16	15	14	
ANUARY	53	2122	1008	609	.60	17.9	- 14	20	18	17	16	15	
EBRUARY	70	1571	775	338	.44	13.8	30	23	19	18	17	16	
MARCH	249	1757	802	393	.49	14.3	60	27	22	20	19	18	
PRIL	237	1065	637	207	.32	11.3	90	32	26	24	23	21	
AY	153	956	438	201	.46	7.8	120	42	34	30	28	26	
	58	371	162	86	.53	2.9	183	97	69	57	48	40	
	20	-	55	19			163	97	69	57	40	40	
UNE	70				.35	1.0							
ULY	32	105			40	_							
ULY UGUST	20	89	33	14	.42	.6							
JLY JGUST					.42 .60	.6 .6							
ULY UGUST EPTEMBER NNUAL	20 17 158 	89 132 805 	33 36 467 TY OF IN	14 22 145 	.60 .31 	.6 100 		 GN I TUDE	AND PROB		OF ANNUA	AL HIGH F	
ULY UGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	20 17 158 UDE AND BASE IN CFS,	89 132 805 PROBABILI D ON PERIO	33 36 467 TY OF IN DD OF RE	14 22 145  STANTANE CORD 195  CURRENCE ABILITY,	.60 .31 	.6 100 FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PER ARGE, IN INTERN	RIOD OF F	RECORD 1		RRENCE
ULY UGUST EPTEMBER NNUAL MAGNIT	20 17 158 UDE AND BASE	89 132 805 PROBABILIT D ON PERIO	33 36 467 TY OF IN DD OF RE	14 22 145 	.60 .31 OUS PEAK 15-82 INTERVAL IN PERCE	.6 100 FLOW , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER ARGE, IN INTERV	CFS, FO	RECORD 1	1955-82 TED RECUIND ANNUAL	RRENCI
ULY UGUST EPTEMBER  NNUAL  MAGNIT  I SCHARGE, YEARS, A	20 17 158 TUDE AND BASE IN CFS,	89 132 805 PROBABILI D ON PERIO FOR INDIC EXCEEDAN	33 36 467 TY OF IN DD OF RE CATED RE NCE PROB	14 22 145 145 15 145 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16	.60 .31 	.6 100 FLOW , IN	PERIOD (CON-	BASE DISCH	D ON PER ARGE, IN INTERN	RIOD OF F	RECORD 1	1955-82 ATED RECUI ND ANNUAL IN PERCEI	RRENCE
ULY UGUST EPTEMBER  NNUAL  MAGNIT  I SCHARGE, YEARS, A	20 17 158 TUDE AND BASE IN CFS, ND ANNUA	89 132 805 PROBABILIT D ON PERIO FOR INDIC L EXCEEDAN	33 36 467 TY OF IN DD OF RE CATED RE NCE PROB	14 22 145 145 15 145 15 15 15 15 15 15 15 15 15 15 15 15 15	.60 .31 OUS PEAK 15-82 INTERVAL IN PERCE	.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER	I CFS, FC /AL, IN Y ICE PROBA 10%	RECORD 1	ATED RECUI ND ANNUAL IN PERCEI	RRENCE
MAGNIT  ISCHARGE, YEARS, A  1.25 80%	20 17 158 TUDE AND BASE IN CFS, ND ANNUA 2 50%	89 132 805 PROBABILITO ON PERIO FOR INDIG EXCEEDAN 5 20%	33 36 467 TY OF IN DD OF RE CATED RE NCE PROB	14 22 145 145 15 15 15 15 15 15 15 15 15 15 15 15 15	.60 .31 .00S PEAK 15-82 INTERVAL IN PERCE	.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERVEXCEEDAN 5 20%	I CFS, FC /AL, IN Y ICE PROBA 10 10%	RECORD 1 PR INDICATE FOR INDICA	NTED RECUI ID ANNUAL IN PERCEI 50 2%	RRENCE
JLY JGUST EPTEMBER NNUAL MAGNIT ISCHARGE, YEARS, A	20 17 158 TUDE AND BASE IN CFS, ND ANNUA 2 50%	89 132 805 PROBABILITO ON PERIO FOR INDIG EXCEEDAN 5 20%	33 36 467 TY OF IN DD OF RE CATED RE NCE PROB	14 22 145 145 15 15 15 15 15 15 15 15 15 15 15 15 15	.60 .31 .00S PEAK 15-82 INTERVAL IN PERCE	.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERVEXCEEDAN 5 20% 9760 6740	10 OF F	RECORD 1 REARS, AN BILITY, 25 4% 13800 9680	1955-82 ATED RECUI ID ANNUAL IN PERCEI 50 2% 15200 10800	RRENCE
JLY JGUST PTEMBER INUAL MAGNIT SCHARGE, YEARS, A 1.25 80%	20 17 158 TUDE AND BASE IN CFS, ND ANNUA 2 50%	89 132 805 PROBABILITO ON PERIO FOR INDIG EXCEEDAN 5 20%	33 36 467 TY OF IN DD OF RE CATED RE NCE PROB	14 22 145 145 15 15 15 15 15 15 15 15 15 15 15 15 15	.60 .31 .00S PEAK 15-82 INTERVAL IN PERCE	.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCH 2 50% 6570 4600 2980	D ON PER ARGE, IN INTERVEXCEEDAN 5 20% 9760 6740 4370	10 OF F	RECORD 1 PR INDICATEARS, AN BILLITY, 25 4% 13800 9680 6430	1955-82 ATED RECUI ID ANNUAL IN PERCEI 50 2% 15200 10800 7280	RRENCE
JLY JGUST EPTEMBER NNUAL  MAGNIT  SCHARGE, YEARS, A  1.25 80%	20 17 158 TUDE AND BASE IN CFS, ND ANNUA 2 50%	89 132 805 PROBABILITO ON PERIO FOR INDIG EXCEEDAN 5 20%	33 36 467 TY OF IN DD OF RE CATED RE NCE PROB	14 22 145 145 15 15 15 15 15 15 15 15 15 15 15 15 15	.60 .31 .00S PEAK 15-82 INTERVAL IN PERCE	.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50  6570 4600 2980 2020	D ON PER ARGE, IN INTERVEXCEEDAN 5 20% 9760 6740 4370 2850	1 CFS, FC (AL, IN Y NICE PROBA 10 10% 11600 8080 5280 3380	RECORD 1 RECORD 1 REARS, AN BILITY, 25 4% 13800 9680 6430 4010	1955-82  ATED RECUI ND ANNUAL IN PERCEI  50 2  15200 10800 7280 4460	RRENCE
JLY JGUST EPTEMBER NNUAL  MAGNIT  SCHARGE, YEARS, A  1.25 80%	20 17 158 TUDE AND BASE IN CFS, ND ANNUA 2 50%	89 132 805 PROBABILITO ON PERIO FOR INDIG EXCEEDAN 5 20%	33 36 467 TY OF IN DD OF RE CATED RE NCE PROB	14 22 145 145 15 15 15 15 15 15 15 15 15 15 15 15 15	.60 .31 .00S PEAK 15-82 INTERVAL IN PERCE	.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASE  DISCH  2 50%  6570 4600 2980 2020 1570	D ON PEF	10 OF F	RECORD 1 R INDIC/EARS, AN BILITY, 25 4% 13800 9680 6430 4010 2850	1955-82  ATED RECUI ID ANNUAL IN PERCEI  50 2\$  15200 10800 7280 4460 3130	RRENCE
MAGNIT  ISCHARGE, YEARS, A  1.25 80%	20 17 158 TUDE AND BASE IN CFS, ND ANNUA 2 50%	89 132 805 PROBABILITO ON PERIO FOR INDIG EXCEEDAN 5 20%	33 36 467 TY OF IN DD OF RE CATED RE NCE PROB	14 22 145 145 15 15 15 15 15 15 15 15 15 15 15 15 15	.60 .31 .00S PEAK 15-82 INTERVAL IN PERCE	.6 100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50  6570 4600 2980 2020	D ON PER ARGE, IN INTERVEXCEEDAN 5 20% 9760 6740 4370 2850	1 CFS, FC (AL, IN Y NICE PROBA 10 10% 11600 8080 5280 3380	RECORD 1 RECORD 1 REARS, AN BILITY, 25 4% 13800 9680 6430 4010	1955-82  ATED RECUI ND ANNUAL IN PERCEI  50 2  15200 10800 7280 4460	RRENCE

DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

50%

215

60%

116

70%

60

75%

46

80%

37

85%

31

90%

26

95%

22

40%

342

## 14318500 NORTH UMPQUA RIVER NEAR GLIDE, OR

LOCATION.--Lat 43°18'20", long 123°07'00", in SW¼ sec.13, T.26 S., R.4 W., Douglas County, Hydrologic Unit 17100301, about 1.0 mi downstream from Little River and 1.0 mi west of Glide.

DRAINAGE AREA.--1,210 mi2.

PERIOD OF RECORD.--September 1915 to March 1919, October 1928 to September 1938.

GAGE.--Staff gage. Altitude of gage is 645 ft, river-profile survey. Sept. 1, 1915, to Oct. 17, 1922, staff gage 150 ft downstream at datum 0.60 ft higher.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--14 years (water years 1916-18, 1929-38), 3,115  $ft^3/s$ , 2,257,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,500 ft<sup>3</sup>/s Mar. 19, 1932, gage height, 17.3 ft; from graph based on gage readings; minimum, 552 ft<sup>3</sup>/s Aug. 27-30, Sept. 27, 1931, gage height, 0.84 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 22.6 ft Nov. 22, 1909, discharge, 94,000 ft³/s, from rating curve extended above 40,000 ft³/s by logarithmic plotting.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1916-38

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1917-38

	мтыгыны	илутини	MEAN	STAN- DARD DEVIA-	COEFFI-	PERCENT	PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	OR INDICATION AND A	ANNUAL N	0 <b>N-</b>
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
CTOBER	712	1502	957	229	.24	2.6	1	716	630	592	564		
OVEMBER	664	5826	2590	1824	.70	6.9	3	723	635	595	565		
ECEMBER	1159	6869	3703	1715	.46	9.9	7	730	642	603	573		
ANUARY	992	10290	4807	2496	.52	12.8	14	742	653	612	581		
EBRUARY	1772	10260	4708	2485	.53	12.6	30	760	671	629	596		
IARCH	25 25	11730	5692	2377	.42	15.2	60	787	689	644	610		
PRIL	1976	9309	5409	2099	.39	14.4	90	818	708	657	618		
ΑY	1346	7629	3888	1763	.45	10.4	120	860	742	689	649		
UNE	1049	6406	2650	1608	.61	7.1	183	1180	919	819	750		
ULY	743	2497	1324	548	.41	3.5							
UGUST	613	1270	915	192	.21	2.4							
EPTEMBER	624	1087	835	141	. 17	2.2							
NNUAL	1879 	4283 	3114 	799 	.26	100						<b>.</b>	- <b></b> -
MAGNIT ISCHARGE YEARS, A	TUDE AND BASE , IN CFS,	PROBABILI D ON PERIO FOR INDI- L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 191	OUS PEAK F 6-38 INTERVAL, IN PERCEN	100 FLOW	PERIOD (CON-	BASI DISCI	HARGE, II	RIOD OF I	OF ANNUAL RECORD 19 OR INDICAT YEARS, AND ABILITY, I	16-38 FED RECUR	RRENCE
MAGNII	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE CATED RE	STANTANE CORD 191	OUS PEAK F 6-38 INTERVAL, IN PERCEN	100 	PERIOD	BASI DISCI	ED ON PER HARGE, II INTER	RIOD OF I	RECORD 19  OR INDICAT YEARS, AND	16-38 FED RECUR	RRENCE
MAGNIT	FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 1911  CURRENCE ABILITY,	OUS PEAK F 6-38 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE	DISCI	HARGE, INTERIOR	N CFS, F VAL, IN NCE PROB	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	FED RECUF O ANNUAL N PERCEN	RRENCE
MAGNIT SCHARGE YEARS, A 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 1910 CURRENCE ABILITY,	OUS PEAK F 6-38 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE	DISCI	HARGE, INTERIOR	N CFS, F VAL, IN NCE PROB	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	FED RECUF O ANNUAL N PERCEN	RRENCE
MAGNIT SCHARGE YEARS, A 1.25 80%	FUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 1910 CURRENCE ABILITY,	OUS PEAK F 6-38 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCI	HARGE, II INTER' EXCEEDAN 5 20%	N CFS, F VAL, IN NCE PROB. 10	RECORD 19 OR INDICAT YEARS, AND ABILITY, I  25 4%	FED RECUP O ANNUAL N PERCEN 50 2%	100
MAGNIT SCHARGE YEARS, A 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 1910 CURRENCE ABILITY,	OUS PEAK F 6-38 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS)	DISC:	HARGE, II INTER EXCEEDAN 5 20%	N CFS, F VAL, IN NCE PROB 10 10 42800	RECORD 19 OR INDICAT YEARS, AND ABILITY, I 25 4% 51700	FED RECUP D ANNUAL N PERCEN 50 2%	100
MAGNIT ISCHARGE YEARS, A 1.25 80%	FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 1910 CURRENCE ABILITY,	OUS PEAK F 6-38 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS)	DISC 	HARGE, II INTER EXCEEDAN 5 20%	N CFS, F VAL, IN NCE PROB 10 10%	RECORD 19 OR INDICAT YEARS, AND ABILITY, I  25 4% 51700 41000	FED RECUP D ANNUAL N PERCEN 50 2%	100
MAGNITI	FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 1910 CURRENCE ABILITY,	OUS PEAK F 6-38 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCI 2 50% 27500 19200 14700	HARGE, II INTER EXCEEDAN 5 20% 36400 26300 19100	N CFS, F VAL, IN NCE PROB 10 10% 42800 32200 22200	RECORD 19 OR INDICAT YEARS, AND ABILITY, I  25 4% 51700 41000 26100	D16-38  FED RECUF  D ANNUAL  N PERCEN  50 2%	100
MAGNITI	FUDE AND BASE  IN CFS, AND ANNUA  2 50%	PROBABILI D ON PERIO FOR INDI- L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 1910 CURRENCE ABILITY,	OUS PEAK F 6-38 INTERVAL, IN PERCEN	100 	PERIOD (CON-SECU-TIVE DAYS) 1 3 7 15	DISCI 2 50% 27500 19200 14700 10900	HARGE, II INTER EXCEEDAN 5 20% 36400 26300 19100 13700	N CFS, F VAL, IN NCE PROB. 10 10\$ 42800 32200 22200 15600	OR INDICAT YEARS, AND ABILITY, I 25 4% 51700 41000 26100 18100	FED RECUF D ANNUAL N PERCEN 50 2%	100

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1916-38

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCE	NT OF TI	ME 		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85 <b>%</b>	90%	95%
8 <b>6 1</b> 0	6680	5700	4940	4230	3640	2750	1950	1380	1060	964	892	826	765	697

#### 14319200 SUTHERLIN CREEK AT SUTHERLIN, OR

LOCATION.--Lat 43°23'20", long 123°18'10", in SW‡ sec.16, T.25 S., R.5 W., Douglas County, Hydrologic Unit 17100301, on right bank at downstream side of Walte Street bridge in Sutherlin, 1.5 mi upstream from Cooper Creek, and at mile 8.4.

DRAINAGE AREA.--16.4 mi2.

PERIOD OF RECORD.--October 1955 to September 1967.

GAGE.--Staff gage read once or twice daily and crest-stage gage. Datum of gage is 511.46 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1963, at datum 1.00 ft higher.

REMARKS.--No regulation. A few small diversions by pumping for irrigation above station.

AVERAGE DISCHARGE.--12 years, 25.9 ft<sup>3</sup>/s, 18,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,250 ft<sup>3</sup>/s Feb. 10, 1961, gage height, 7.64 ft, datum then in use, from rating curve extended above 750 ft<sup>3</sup>/s by logarithmic plotting; maximum gage height, 8.24 ft Dec. 21, 1957, datum then in use; no flow for several months each year.

#### STATISTICAL SUMMARIES

MONTH 	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEAR: CE PROBAB	S, AND A	NUAL NO	N-
	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100
OCTOBER	0.0	18	2.3	5.1	2.22	.7	1						
NOVEMBER	. 4	107	26	30	1.14	8.3	3						
DECEMBER	2.6	236	73	71	.97	23.2	7						
JANUARY	6.4	134	67	47	.71	21.5	14						
FEBRUARY	13	154	65	43	.67	20.8	30				'		
MARCH	5.9	96	48	29	. 59	15.3	60					<b></b>	
APRIL	3.1	64	17	17	1.01	5.5	90						
MAY	.5	50	13	17	1.31	4.1	120						
JUNE	0.0	7.8	1.3	2.1	1.65	- 4	183	-8	.2	- 1	0.0		
JULY	0.0	.2	0.0	.1	2.00	0.0							
AUGUST	0.0	0.0	0.0	0.0		0.0	NOTE:	LOW-FLOW	DATA UNO	ERTAIN D	JE TO EXC	CESSIVE	ZER0
SEPTEMBER	0.0	5.7	.5	1.7	3.46	.2		EVENTS.					
ANNUAL	17	51	26	8.7	.34	100							
YEARS, A	AND ANNUA	FOR INDIC	NCE PROBA	BILITY,	IN PERCE	NT	PERIOD (CON-		INTERVA	CFS, FOR L, IN YEA CE PROBABI	ARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4 <b>%</b>	50 2 <b>%</b>	100 1 <b>%</b>	SECU- TIVE	2	5	10	25	50	100
							DAYS)	50 <b>%</b> 	20 <b>%</b> 	10%	4% - <b></b>	2 <b>%</b> 	1%
	1340 	1920 :	2300 	- <b>-</b>	- <b>-</b>		1	864	1240	1490			
907 <b>-</b>	SKEW -	249					3	570	737	816			
907 	) JKEN -						7 ·	336	441	498			
	J JKEW -						,				_		
	JALW -						15	198	267	312	~		 
	J SKLW -												 
	J JKEW -						15	198	267	312			
	JACH -						15 30	198 135	267 180	312 210			
			DURATION	TABLE C	PF DAILY I	 MEAN FLOW	15 30 60	198 135 94 73	267 180 124 96	312 210 148 115			
		DI SCHAF					15 30 60 90	198 135 94 73 OF RECOR	267 180 124 96 	312 210 148 115 7	~-  		

### 14319500 NORTH UMPQUA RIVER AT WINCHESTER, OR

LOCATION.--Lat 43°16'20", long 123°24'40", in  $NW_4^1NE_4^1$  sec.33, T.26 S., R.6 W., Douglas County, Hydrologic Unit 17100301, on left bank 400 ft downstream from county bridge, 3.0 mi west of Winchester, and at mile 1.8.

DRAINAGE AREA .-- 1.344 mi2.

PERIOD OF RECORD. --October 1908 to December 1913, October 1923 to September 1929, August 1954 to September 1982. Prior to December 1908, monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 372.97 ft National Geodetic Vertical Datum of 1929 (Douglas County Road Department bench mark). Oct. 1, 1908, to Dec. 31, 1913, and Oct. 1, 1923, to Sept. 30, 1929, nonrecording gage at site 4.8 mi upstream at different datums. Aug. 27, 1954, to Aug. 12, 1965, water-stage recorder on right bank at same datum.

REMARKS.--Diurnal fluctuation caused by upstream powerplants; slight regulation by Lemolo Lake and Diamond Lake. Several small diversions for irrigation above station.

AVERAGE DISCHARGE.- $_{\overline{\bullet}}$ 39 years, 3,730 ft<sup>3</sup>/s, 37.69 in/yr, 2,702,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 34.2 ft, from floodmark; minimum, 383 ft<sup>3</sup>/s Sept. 25, 1960; minimum daily, 578 ft<sup>3</sup>/s Sept. 14, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.——Flood of Oct. 29, 1950, reach a stage of 23.2 ft, from floodmark, at site 4.8 mi upstream at different datum, discharge, 88,000 ft<sup>3</sup>/s. Flood of Nov. 23, 1953, reach a stage of 28.4 ft, from floodmarks, present site and datum, discharge, 93,300 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1909-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1910-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	I CFS, FO ., IN YEA	RS, AND	ANNUAL N	ON-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	855	2752	1375	436	.32	3.1	1	739	664	631	606	580	
NOVEMBER	1070	12550	4193	2800	.67	9.3	3	777	694	658	630	603	
DECEMBER	1005	23640	6367	4587	.72	14.2	7	813	723	681	650	618	
JANUARY	1125	15220	6983	3824	.55	15.6	14	840	749	707	675	641	
FEBRUARY	1019	12130	6167	2546	.41	13.7	30	872	776	732	697	661	
MARCH	2245	12880	5555	2476	. 45	12.4	60	927	822	772	734	693	
APRIL	1605	7246	4718	1433	.30	10.5	90	984	867	811	766	719	
MAY	1401	7147	3801	1258	.33	8.5	120	1070	934	871	821	768	
JUNE	913	4249	2407	900	. 37	5.4	183	1470	1200	1080	982	885	
JULY	7 17	2824	1336	387	.29	3.0				<b></b>			<b>-</b> -
AUGUST	698	1578	1002	196	.20	2.2							
SEPTEMBER	708	1398	984	168	. 17	2.2							
ANNUAL	1639	6116	3729	1021	•27	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1909-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1909-82

					NCE INTER		PERIOD (CON-	DISC	INTER'	/AL, IN	YEARS, AI	ATED RECU ND ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4% 	50 2 <b>%</b> 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4 <b>%</b>	50 2 <b>%</b>	100 1 <b>%</b>
2100	47900	71600	88400	111000	128000			-~					
							1	38400	57200	68300	81000	89400	
E I GHTEI	) SKEW =	.016					3	27500	41500	50600	62000	70200	
							7	18800	27800	33800	41400	47200	_
							15	13200	18600	22300	26900	30300	_
							30	10300	13900	16200	19100	21300	_
							60	8190	11100	13000	15400	17200	-
							90	7190	9510	11000	12900	14300	_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1909-82

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	IT OF TIM	E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90 <b>%</b>	95%
11100	75 10	6000	5110	4430	3930	3140	2430	1730	1310	1170	1070	981	891	797

#### UMPQUA RIVER BASIN

## 14320700 CALAPOOYA CREEK NEAR OAKLAND, OR

LOCATION.--Lat 43°24'10", long 123°21'45", in NW¼ sec.13, T.25 S., R.6 W., Douglas County, Hydrologic Unit 17100303, near center of span on downstream side of highway bridge, 0.9 ml downstream from Williams Creek, 2.5 ml northwest of Sutherlin, 3.5 ml southwest of Oakland, and at mile 10.1.

DRAINAGE AREA .-- 210 mi2.

PERIOD OF RECORD. -- October 1955 to September 1973.

10%

1330

2090

15%

952

20%

706

25%

542

30%

424

40%

267

50%

150

60%

79

70%

40

75%

28

80%

20

85%

15

11

95%

7.1

GAGE.--Water-stage recorder. Datum of gage is 371.26 ft National Geodetic Vertical Datum of 1929. Prior to June 22, 1968, nonrecording gage at same site and datum.

REMARKS.--No regulation. Diversion above station for municipal supply of cities of Sutherlin and Oakland. Small diversions by pumping for Irrigation above station.

AVERAGE DISCHARGE.--18 years, 495 ft<sup>3</sup>/s, 32.01 in/yr, 358,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft<sup>3</sup>/s Nov. 23, 1961, gage height, 21.55 ft; no flow Sep#. 9-11, 1966.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1956-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YE	OR INDICATARS, AND A	NNUAL N	0 <b>N-</b>
ONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100
CT0BER	18	329	76	73	.96	1.3	1						
OVEMBER	62	1240	510	349	.68	8.6	3						
ECEMBER	108	3856	1243	977	.79	20.9	7	6.4	3.3	2.	1 1.4		
ANUARY	120	2296	1261	. 727	.58	21.2	14	7.2	4.3	3.	2.3		
EBRUARY	290	2229	1004	520	.52	16.9	30	8.4	5.2	3.9	2.9		
ARCH	208	1912	943	508	.54	15.8	60	12	7.2	5.3	4.0		
PRIL	211	1342	478	278	.58	8.0	90	14	9.8	7.8	6.3		
AY	58	912	288	230	.80	4.8	120	22	15	12	10		
UNE	25	233	95	53	.56	1.6	183	58	39	31	26		
ULY	9.1	60	27	16	.57	.5							
UGUST	2.6	29	12	6.7	.56	.2							
	4.3	35	16	8.4	.52	.3							
EPTEMBER NNUAL	250 	905  PROBABILI	495  TY OF IN	146	.29 	100	 MA				OF ANNUAL		 LOW
MAGNIT	250 TUDE AND BASE	905 PROBABILI D ON PERI	495 TY OF IN	146 ISTANTANE CORD 1956	.29 	100  FLOW 	PERIOD	BASEI DISCH	ON PERI	CFS, FO	OF ANNUAL RECORD 19 OR INDICAT (EARS, AND	56-73 ED RECUI	RRENCE
MAGNIT  ISCHARGE, YEARS, A	250 TUDE AND BASE IN CFS,	905 PROBABILI D ON PERI FOR INDI L EXCEEDA	495 TY OF IN OD OF RE CATED RE NCE PROB	146 ISTANTANE CORD 1956 CURRENCE IABILITY,	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN NT	PERIOD (CON- SECU-	BASEI DISCHA	O ON PERI	CFS, FO	RECORD 19 OR INDICAT (EARS, AND OBILITY, I	56-73 ED RECUI ANNUAL N PERCEI	RRENCE
MAGNIT	250 TUDE AND BASE IN CFS,	905 PROBABILI D ON PERI FOR INDI	495 TY OF IN OD OF RE	146 ISTANTANE CORD 1956 CURRENCE	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN	PERIOD (CON-	BASEI DISCH	ON PERI	CFS, FO	RECORD 19 DR INDICAT (EARS, AND	56-73 ED RECUI	RRENCE NT
MAGNIT ISCHARGE, YEARS, A	250 TUDE AND BASE IN CFS, AND ANNUA 2 50%	905 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	495 TY OF INDO OF RECATED RENCE PROB	146 ISTANTANE CORD 1956 CURRENCE IABILITY,	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASEI DISCHA	O ON PERI ARGE, IN INTERVA EXCEEDANCE	CFS, FCAL, IN YEE PROBA	RECORD 19 DR INDICAT (EARS, AND BILITY, I	ED RECUI ANNUAL N PERCEI	RRENCE NT
MAGNIT ISCHARGE, YEARS, A 1.25 80%	250  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	905 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	495 TY OF INDO OF RECATED RENCE PROB	146 ISTANTANE CORD 1956 CURRENCE BABILITY, 25 4%	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH, 2 50\$	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FCAL, IN YOSE PROBA	RECORD 19 OR INDICAT (EARS, AND BILITY, 1 25 4%	FED RECUI ANNUAL N PERCEI 50 2%	100 17
MAGNIT  ISCHARGE,  YEARS, A	250  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	905 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	495 TY OF INDO OF RECATED RENCE PROB	146 ISTANTANE CORD 1956 CURRENCE BABILITY, 25 4%	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FCAL, IN YOSE PROBA	DR INDICAT (EARS, ANE BILITY, I	ED RECUI ANNUAL N PERCEI 50 2%	100 17
MAGNIT ISCHARGE, YEARS, A 1.25 80%	250  TUDE AND BASE  IN CFS, ND ANNUA  2 50%	905 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	495 TY OF INDO OF RECATED RENCE PROB	146 ISTANTANE CORD 1956 CURRENCE BABILITY, 25 4%	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASEI DISCHA 2 50% 8540 6170 4070	ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FCAL, IN YOSE PROBA	PRECORD 19 PRECORD 19	FED RECUI ANNUAL N PERCEI 50 2%	100 17
MAGNIT  SCHARGE, YEARS, A  1.25 80\$	250  UDE AND BASE  IN CFS, ND ANNUA  2 50%	905 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	495 TY OF INDO OF RECATED RENCE PROB	146 ISTANTANE CORD 1956 CURRENCE BABILITY, 25 4%	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASEI DISCH 2 50% 8540 6170 4070 2730	ARGE, IN INTERVAEXCEEDANG  5 20%  12300 8550	CFS, FCAL, IN YOSE PROBA-10, 10%	DR INDICAT (EARS, ANE BILITY, I	FED RECUI ANNUAL N PERCEI 50 2%	100 17
MAGNIT ISCHARGE, YEARS, A 1.25 80%	250  UDE AND BASE  IN CFS, ND ANNUA  2 50%	905 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	495 TY OF INDO OF RECATED RENCE PROB	146 ISTANTANE CORD 1956 CURRENCE BABILITY, 25 4%	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASEI DISCHA 2 50% 8540 6170 4070	D ON PERI ARGE, IN INTERVA EXCEEDANC 5 20% 12300 8550 5770	CFS, F(AL, IN ) E PROBA  10 10 9720 6790	PRECORD 19 PRECORD 19	ED RECUI ANNUAL N PERCEI 50 2%	100 1%
MAGNIT ISCHARGE, YEARS, A 1.25 80%	250  UDE AND BASE  IN CFS, ND ANNUA  2 50%	905 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	495 TY OF INDO OF RECATED RENCE PROB	146 ISTANTANE CORD 1956 CURRENCE BABILITY, 25 4%	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60	BASEI  DISCH/  2  50\$  8540 6170 4070 2730 2010 1570	2300 8550 5770 3800 2680 2080	CFS, FC CFS, FC CFS, FC TO TO 10 10% 	16400 10800 7960 2500 2500 2500 2800	ED RECUI N PERCEI 50 ANNUAL N PERCEI 50 2%	RRENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	250  UDE AND BASE  IN CFS, ND ANNUA  2 50%	905 PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	495 TY OF INDO OF RECATED RENCE PROB	146 ISTANTANE CORD 1956 CURRENCE BABILITY, 25 4%	.29 DUS PEAK F 6-73 INTERVAL, IN PERCEN	100 FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASEI  DISCHA  2  50  8540  6170  4070  2730 2010	ARGE, IN INTERVAEXCEEDANC 5 20% 12300 8550 5770 3800 2680	CFS, FC LL, IN N E PROBA- 10 10%- 14400 9720 6790 4440 3090	DR INDICAT (EARS, ANE (BILITY, I 25 4% 16400 10800 7960 5200 3580	156-73  TED RECUI  ANNUAL  N PERCEP  50  2%	100 17

## 14321000 UMPQUA RIVER NEAR ELKTON, OR

LOCATION.--Lat 43°35'10", long 123°33'15", in NW½ sec.8, T.23 \$., R.7 W., Douglas County, Hydrologic Unit 17100303, on left bank 3.5 mi south of Elkton, 8.3 mi upstream from Elk Creek, and at mile 56.9.

DRAINAGE AREA. -- 3,683 mi2.

PERIOD OF RECORD. -- October 1905 to September 1982.

25000 17600 13700 11100

9270

7860

5720

4000

2490

1580

1410

1270

1160

1060

936

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 90.42 ft National Geodetic Vertical Datum of 1929. Prior to June 29, 1972, at site 2,400 ft downstream at same datum. See WSP 1931 or 2135 for history of changes prior to June 29, 1972.

REMARKS.—Regulation by powerplants on North Umpqua River ordinarily does not affect discharge at this station. Diversions for irrigation above station.

AVERAGE DISCHARGE.--77 years, 7,480 ft<sup>3</sup>/s, 27.58 in/yr, 5,419,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 265,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 51.95 ft, from floodmarks, minimum observed, 640 ft<sup>3</sup>/s July 18, 1926.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least December 1861, that of Dec. 23, 1964.

#### STATISTICAL SUMMARIES

				STAN- DARD	COEFF1-	PERCENT	PERIOD	DISC	INTERVA	NL, IN YE	OR INDIC	ANNUAL	NON-
	MINIMUM	MAXIMUM	MEAN	DEVIA- TION	CIENT OF VARI-	OF ANNUAL	(CON- SECU-		EXCEEDA	NCE PROE	BABILITY,	IN PERC	CENT
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	857	14200	1914	1701	.89	2.1	1	964	839	776	727	674	639
<b>IOVEMBER</b>	832	29500	7042	5653	.80	7.8	3	978	850	786	735	. 679	643
DECEMBER	1238	51220	13390	9648	.72	14.8	7	994	863	797	745	687	650
JANUARY	1440	34900	16300	8854	.54	18.1	14	1010	876	810	757	700	663
EBRUARY	1365	32800	15150	6710	.44	16.8	30	1040	899	829	773	713	675
<b>/ARCH</b>	3462	27100	12360	5563	.45	13.7	60	1100	946	870	809	743	701
APRIL	2432	20480	9633	4012	.42	10.7	90	1170	996	910	841	767	720
4ΑΥ	1934	15800	6516	2901	. 45	7.2	120	1280	1070	970	893	814	764
JUNE	1053	9526	3767	1841	.49	4.2	183	2030	1530	1320	1160	1000	907
JULY	742	5063	1740	733	.42	1.9							
AUGUST	703	1867	1173	238	.20	1.3							
SEPTEMBER	740	3475	1188	339	. 29	1.3							
ANNUAL	2321	13360	7480	2279	.30	100							
MAGN I		PROBABILI D ON PERIO			OUS PEAK F 5-82	LOW	MA				OF ANNU		FLOW
DISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RE	CORD 190 CURRENCE		, IN	MA PERIOD (CON-	BAS	ED ON PE  HARGE, I INTER	RIOD OF  N CFS, F		1906-82  ATED REC	URRENCE
DISCHARGE	BASE , IN CFS,	D ON PERIO	OD OF RECONSTRUCTION OF PROB	CORD 190 CURRENCE ABILITY, 25	INTERVAL, IN PERCEN	, IN NT	PERIOD (CON- SECU~	BAS DISC	ED ON PE HARGE, I INTER EXCEEDA	RIOD OF  N CFS, F VAL, IN NCE PROB	RECORD  OR INDIC YEARS, A ABILITY,	1906-82  ATED REC ND ANNUA IN PERC	CURRENCE
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDII L EXCEEDAL	OD OF RE	CORD 190 CURRENCE ABILITY,	1NTERVAL,	, IN NT	PERIOD (CON-	BAS	ED ON PE  HARGE, I INTER	RIOD OF  N CFS, F	RECORD  OR INDIC YEARS, A	1906-82  ATED REC	URRENCE
DISCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIO	OD OF REI	CORD 190 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISC	ED ON PE  HARGE, I INTER EXCEEDA  5 20%	RIOD OF  N CFS, F VAL, IN NCE PROB	RECORD  OR INDIC YEARS, A ABILITY, 25 4%	1906-82  ATED REC ND ANNUA IN PERC 50 2%	CURRENCE LL EENT 100
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF REI	CORD 190 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISC2 50%82200	HARGE, I INTER EXCEEDA 5 20%	N CFS, F VAL, IN NCE PROB 10 10%	RECORD OR INDIC YEARS, A ABILITY,	1906-82  ATED REC ND ANNUA IN PERC 25 194000	CURRENCE LL EENT 100 1%
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF REI	CORD 190 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BAS DISC 2 50% 82200 62600	ED ON PE  HARGE, I INTER EXCEEDA  5 20%  122000 91600	N CFS, F VAL, IN NCE PROB 10 10%	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  174000 131000	1906-82  ATED REC ND ANNUA IN PERC 2%  194000 145000	CURRENCE IL ENT 100 1% 212000 159000
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF REI	CORD 190 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BAS DISC 2 50% 82200 62600 45100	ED ON PE HARGE, I INTER EXCEEDA 5 20% 122000 91600 63600	N CFS, F VAL, IN NCE PROB 10 10%	RECORD  OR INDIC YEARS, A ABILITY, 25 4% 174000 131000 86900	1906-82  ATED REC ND ANNUA IN PERC 50 2%  194000 145000 95300	212000 159000
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF REI	CORD 190 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BAS DISC 2 50% 82200 62600 45100 31900	ED ON PE  HARGE, I INTER EXCEEDA  5 20%  122000 91600 63600 43300	N CFS, F VAL, IN NCE PROB 10 10% 146000 110000 74500 49800	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  174000 131000 86900 56900	1906-82  ATED REC ND ANNUA IN PERC 50 2% 194000 145000 95300 61600	212000 159000 103000 65800
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF REI	CORD 190 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	BAS DISC 250% 82200 62600 45100 31900 24400	HARGE, I INTER EXCEEDA 5 20% 122000 91600 63600 43300 32400	N CFS, F VAL, IN NCE PROB  10 10 110000 74500 36700	RECORD  OR INDIC YEARS, A ABILITY,  25 4  174000 131000 86900 41300	1906-82  ATED REC ND ANNUA IN PERC 50 2\$  194000 145000 95300 61600 44200	212000 159000 103000 46800
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDAL 5 20%	OD OF REI	CORD 190 CURRENCE ABILITY, 25 4%	INTERVAL, IN PERCEN	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	BAS DISC 2 50% 82200 62600 45100 31900	ED ON PE  HARGE, I INTER EXCEEDA  5 20%  122000 91600 63600 43300	N CFS, F VAL, IN NCE PROB 10 10% 146000 110000 74500 49800	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  174000 131000 86900 56900	1906-82  ATED REC ND ANNUA IN PERC 50 2% 194000 145000 95300 61600	212000 159000 103000 65800
DISCHARGE YEARS, 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDAL 5 20%	CATED RE- NCE PROB 10 10 2000 21	CURRENCE ABILITY, 25 4% 33000 24	50 1 2%	100 15 200	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	BAS DISC 2 50% 82200 62600 45100 24400 19300 16800	HARGE, I INTER EXCEEDA 5 20%	N CFS, F VAL, IN NCE PROB 10 10% 	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  174000 131000 86900 56900 41300 32700	1906-82  ATED REC ND ANNUA IN PERC 50 2% 194000 145000 95300 61600 44200 35100	212000 159000 103000 65800 37200
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDII L EXCEEDAL 5 20% 40000 177	CATED RE- NCE PROB 10 10% 2000 21:	CURRENCE ABILITY, 25 4% 33000 24	5-82  INTERVAL, IN PERCEN  50 1 2%  4000 2760	100 1% 000	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90	BAS  DISC  2 50%  82200 62600 45100 31900 24400 19300 0F RECC	HARGE, I INTER EXCEEDA 5 20%	N CFS, F VAL, IN NCE PROB 10 10% 146000 110000 74500 36700 29000 2520082	RECORD  OR INDIC YEARS, A ABILITY,  25 4%  174000 131000 86900 41300 32700 286000	1906-82  ATED REC ND ANNUA IN PERC 50 2% 194000 145000 95300 61600 44200 35100	212000 159000 103000 65800 37200

#### UMPQUA RIVER BASIN

## 14322000 ELK CREEK NEAR DRAIN, OR

LOCATION.--Lat 43°38'30", long 123°17'50", in NE&SW& sec.21, T.22 S., R.5 W., Douglas County, Hydrologic Unit 17100303, on right bank at downstream side of highway bridge, 0.2 mi downstream from Yoncalla Creek, 1.7 mi southeast of Drain, and at mile 26.2.

DRAINAGE AREA. -- 104 mi2.

PERIOD OF RECORD. -- October 1955 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is 305.96 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Small diversions by pumping for irrigation above station. Municipal supply for town of Yoncalla is diverted from Wilson Creek above station.

AVERAGE DISCHARGE.--18 years, 222 ft<sup>3</sup>/s, 29.90 in/yr, 165,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s Feb. 10, 1961, gage height, 23.7 ft, from floodmark, from rating curve extended above 7,500 ft³/s; no flow at times.

## STATISTICAL SUMMARIES

MONTHLY	AND	ANNUAL	MEAN	DISCHARGES	1956-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1957-73

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON-	1	RGE, IN ON TERVAL, XCEEDANC	IN YEARS	, AND AN	INUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 . 10 <b>%</b>	20 5 <b>%</b>	50 2%	100
OCTOBER	5.5	99	21	24	1.11	.8	1	.2	0.0	0.0	0.0		
OVEMBER	8.6	611	217	177	.82	8.1	3	.3	.1	0.0	0.0		
ECEMBER	33	1869	582	476	.82	21.8	7	.5	.2	.1	0.0		
ANUARY	67	1212	619	377	.61	23.2	14	.7	.3	.2	.1		
EBRUARY	126	1375	498	325	.65	18.6	30	1.3	.6	.3	.1-		
1ARCH	83	807	408	236	.58	15.3	60	2.0	1.0	.7	.5		
(PR1L	63	649	182	142	.78	6.8	90	3.0	1.7	1.3	1.0		
ΙΑΥ	19	361	102	91	.89	3.8	120	5.2	3.2	2.4	1.9		
UNE	6.7	63	30	15	.51	1.1	183	16	9.7	7.4	6.0		
ULY	.9	18	7.2	5.3	.74	•3							
UGUST	-1	12	2.4	2.7	1.12	.1							
EPTEMBER	.9	10	3.5	2.7	.76	.1							
NNUAL	106	404	222	69	.31	100							
	BASE	D ON PERI	OD OF REC	CORD 1956	OUS PEAK F 5-73 		MAG	BASED	ND PROBAE	D OF REC	ORD 195	6-73	
YEARS, /	AND ANNUA	L EXCEEDA 5	NCE PROBA	ABILITY,  25	IN PERCEI	IT  00	PERIOD (CON- SECU-			., ÎN YEA	RS, AND	ANNUAL	
80%	50% 	20%	10%	4% 	2%	1%	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
3620	6310	10600 1	3700 13	7900									

YEARS, A		•		ROBABILITY			PERIOD (CON-		INTERV	/AL, ĺn ˈ	YEARS, AND	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b> 	10 10%	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
3620	6310	10600	13700	17900				~~					
							1	4630	7100	8620	10400		
WEIGHTED	SKEW =	243					3	3250	4820	5730	6710		
						•	7	2170	3160	3760	4440		
							. 15	1410	2000	2370	2790		
							30	996	1360	1590	1870		
							60	762	1020	1190	1390		
							90	628	829	953	1100		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-73

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN	T OF TIM	E		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1010	580	393	270	204	157	85	52	26	11	6.9	4.7	3.1	1.8	.8,

## 14323200 TENMILE CREEK NEAR LAKESIDE, OR

LOCATION.--Lat 43°34'40", long 124°11'30", near center of sec.13, T.23 S., R.13 W., Coos County, Hydrologic Unit 17100304, in Siuslaw National Forest, near left bank on downstream side of highway bridge, 200 ft upstream from Eel Creek, 0.8 mi upstream from Saunders Creek, and 1.0 mi west of Lakeside. Records include flow of Eel and Saunders Creeks.

DRAINAGE AREA. -- About 87 mi<sup>2</sup> at measuring section 1.2 mi downstream.

PERIOD OF RECORD.--August 1957 to September 1976.

GAGE.--Water-stage recorder. Auxiliary nonrecording gage 1.4 mi upstream from base gage, read twice daily. Datum of both gages is National Geodetic Vertical Datum of 1929.

REMARKS.--Flow affected by natural storage in Tenmile Lake and other lakes tributary to Eel and Saunders Creeks. No diversion above station. Records given herein are for measuring site.

AVERAGE DISCHARGE.--19 years (water years 1958-76), 338 ft<sup>3</sup>/s, 244,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,330 ft<sup>3</sup>/s Dec. 26, 1964, elevation 16.46 ft at base gage, 18.78 ft at auxiliary gage; minimum, 2.0 ft<sup>3</sup>/s Aug. 29, Sept. 2, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known stage at auxiliary gage, 19.83 ft in January 1953, from floodmarks.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1958-76

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1959-76

	MINIMUM	MANIMIM	MEAN	STAN- DARD DEVIA-	CIENT OF	PERCENT OF	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS PROBABI	S, AND AN	NUAL N	ON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100
OCTOBER	5.6	177	45	46	1.02	1.1	1	8.0	4.6	3.3	2.5		~-
NOVEMBER	50	1159	312	280	.90	7.7	3	8.2	4.6	3.4	2.6		
DECEMBER	161	1503	724	376	.52	17.8	7	8.5	4.9	3.6	2.8		
JANUARY	178	1393	875	377	.43	21.5	14	9.1	5.2	3.9	3.0		
EBRUARY	270	1325	738	268	.36	18.1	30	11	6.5	4.8	3.8		
1ARCH	246	<b>1</b> 149	603	264	.44	14.8	60	13	8.0	6.4	5.3		
APR I L	191	958	401	197	.49	9.8	90	16	10	8.1	6.8		
1AY	91	51 <b>1</b>	212	109	.51	5.2	120	22	15	12	9.7		
JUNE	41	219	90	40	.44	2.2	183	53	36	30	25		
JULY	20	85	40	17	.42	1.0		<del>-</del>					
AUGUST	5.3	42	20	9.1	.47	.5							
SEPTEMBER	4.3	78	18	18	.98	.5							
ANNUAL	189	568	338	80	.24	100							

## BASED ON PERIOD OF RECORD 1958-76

BASED ON PERIOD OF RECORD 1958-76

DISCHARGE, YEARS,				RECURRENC ROBABILITY			PERIOD (CON-		INTER	/AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4% 	50 2%	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
1620	2220	2910	3300	3730									
NE LOUTE							1	2210	2830	3140	3450		
WEIGHTED	SKEW =	511					3	2120	2710	3010	3310		
							7	1870	2380	2650	2930		
							15	1480	1870	2080	2310		
							30	1150	1420	1580	1760		
							60	954	1190	1330	1490		
		. <u></u>					90	841	1050	1170	1300		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-76

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCE	NT OF TH	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1240	915	716	590	490	409	 277	153	87	47	34	24	17	13	9.4
~~~~~														

1060

669

478

355

269

212

134

#### COOS RIVER BASTN

## 14324500 WEST FORK MILLICOMA RIVER NEAR ALLEGANY, OR

LOCATION.--Lat 43°28'35", long 124°03'20", in SW±NW½ sec.19, T.24 S., R.11 W., Coos County, Hydrologic Unit 17100304, on left bank at highway bridge, 40 ft upstream from Oaggett Creek, 3.8 mi north of Allegany, and at mile 6.82.

ORAINAGE AREA.--46.9 mi<sup>2</sup>, at cableway 300 ft downstream.

PERIOD OF RECORO. -- September 1954 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 76.95 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Only minor diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years (water years 1955-81), 249 ft<sup>3</sup>/s, 72.10 in/yr, 180,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft<sup>3</sup>/s Nov. 24, 1960, gage height, 15.86 ft; minimum, 1.8 ft<sup>3</sup>/s Sept. 5, 9, 1965, Sept. 8-10, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January or November 1953 reached a stage of about 17.9 ft, from information by local resident. Flood in Occember 1981 reached a stage of 15.45 ft.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1955-81

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1956-81

	Minimo			STAN- OARO OEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOO (CON-	1	NTERVAL,	IN YEAR	RS, AND /	TEO RECUR ANNUAL NO IN PERCEN	N-
MONTH	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE OAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100
OCTOBER	4.2	290	80	75	.94	2.7	1	3.6	2.4	2.0	1.7	1.5	
NOVEMBER	40	1065	369	252	.68	12.3	3	3.6	2.5	2.1	1.8	1.5	,
DECEMBER	34	1357	630	331	.53	21.0	7	3.9	2.7	2.2	1.9-	1.6	
JANUARY	53	1066	581	319	.55	19.4	14	4.1	2.9	2.4	2.1	1.8	
FEBRUARY	137	1152	485	237	.49	16.2	30	4.9	3.4	2.9	2.5	2.1	
MARCH	117	809	417	192	.46	13.9	60	6.6	4.4	3.6	3.1	2.6	
APRIL	83	571	239	125	.52	8.0	90	8.9	5.8	4.9	4.3	3.8	
YAY	27	358	111	78	.70	3.7	120	12	8.3	7.0	6.1	5.4	
JUNE	16	146	44	29	.65	1.5	183	35	23	18	15	12	
JULY	7.6	36	15	7.0		.5							
AUGUST	3.4	57	9.9	10	1.04	.3							
SEPTEMBER		98	21	24	1.17	.7							
ANNUAL	84	385	249	63	.25	100							
	BASE	PROBABILI O ON PERIC	00 OF REC	CORO 195	5-81 		MA		ON PERI	00 OF RE	CORO 19	955-81	
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## 14324600 SOUTH FORK COQUILLE RIVER ABOVE PANTHER CREEK, NEAR ILLAHE, OR

LOCATION.--Lat 42°45'30", long 123°59'10", in SE½ sec.28, T.32 S., R.11 W., Coos County, Hydrologic Unit 17100304, on left bank 0.7 mi upstream from Panther Creek, 10.0 mi northeast of Illahe, and at mile 88.5.

DRAINAGE AREA.--31.2 mi2.

PERIOD OF RECORD. -- October 1956 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is 2,117.30 ft National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 144  $ft^3/s$ , 62.68 in/yr, 104,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,840 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 17.07 ft, from floodmarks, from rating curve extended above 1,100 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 12.75 ft; minimum, 0.94 ft<sup>3</sup>/s Sept. 28, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of about 15.7 ft, discharge, about 6,300 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-70 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-70

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	- 11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	2.5	162	34	44	1.31	1.9	1	1.5	1.2	1.1	1.1		
NOVEMBER	13	270	150	92	.61	8.6	3	1.5	1.2	1.2	1.1		
DECEMBER	45	846	303	221	.73	17.5	7	1.6	1.4	1.3	1.2		
JANUARY	48	740	359	226	.63	20.7	14	1.7	1.4	1.3	1.3		
FEBRUARY	163	734	335	163	.49	19.3	30	2.0	1.6	1.5	1.5		
MARCH	78	470	267	112	.42	15.4	60	2.7	2.1	1.9	1.8		
APRIL	57	381	161	84	.52	9.3	90	3.7	3.0	2.6	2.4		
MAY	. 20	275	90	74	.82	5.2	120	5.6	4.3	3.7	3.3		
JUNE	7.8	40	21	8.3	.39	1.2	183	16	10	8.0	6.7		
JULY	5.2	12	7.6	2.4	.32	. 4							
AUGUST	1.7	6.3	3.4	1.4	.40	.2							
SEPTEMBER	1.5	8.7	3.5	2.2	.62	.2							
ANNUAL	109	185	144	21	.14	100							

## MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1957-70

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1957-70

DISCHARGE, YEARS, A				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTERV	AL, IN Y	OR INDICAT EARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> <del>-</del>	10 10 <b>%</b>	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	 2 50%	5 20%	10 10%	25 4%	50 2%	100
2820	3670	4860	5670	6720									
			<del></del>				1	2350	3100	3870	5210		
WEIGHTED	SKEW =	. 234					3	1760	2370	2930	3830		
							7	1220	1650	1990	2470		
							15	812	1.030	1180	1370		
							30	581	706	793	908		
							60	445	545	613	702		
							90	375	456	509	575		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-70

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	1E		
5% 	10% 	15 <b>%</b>	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
567	366	269	208	163	129	80	43	23	11	7.1	5.1	3.7	2.6	1.9

#### COQUILLE RIVER BASIN

## 14324700 SOUTH FORK COQUILLE RIVER NEAR ILLAHE, OR

LOCATION.--Lat 42°43'30", long 124°00'40", in NW½ sec.16, T.33 S., R.11 W., Coos County, Hydrologic Unit 17100305, in Siskiyou National Forest, on left bank 1.0 mi downstream from Lockhart Creek, 7.0 mi north of Illahe, and at mile 85.1.

DRAINAGE AREA.--40.6 mi<sup>2</sup>, at measuring site 1.2 mi upstream from gage.

PERIOD OF RECORD.--October 1956 to September 1974.

GAGE.--Water-stage recorder. Datum of gage is 1,871.04 ft National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

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

AVERAGE DISCHARGE.--18 years, 199  $ft^3/s$ , 66.56 in/yr, 144,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.80 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 9.54 ft; minimum, 1.2 ft<sup>3</sup>/s Sept. 27-29, 1967, Sept. 28-30, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of about 10.8 ft, discharge, about 8,600 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-74

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-74

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-	! E	NTERVAL, XCEEDANC	CFS, FOR IN YEARS E PROBABI	S, AND AN LITY, IN	NUAL N	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	3.5	204	38	50	1.30	1.6	1	2.1	1.6	1.5	1.4		
NOVEMBER	15	951	255	215	.84	10.6	3	2.1	1.7	1.5	1.4		
DECEMBER	55	1164	438	277	.63	18.2	7	2.3	1.8	1.6	1.5		
JANUARY	72	992	498	271	.54	20.7	14	2.5	1.9	1.7	1.6		
FEBRUARY	181	997	413	215	.52	17.2	30	2.8	2.3	2.0	1.9		
IARCH	95	708	377	154	.41	15.7	60	3.8	3.0	2.7	2.5		
PRIL	73	480	226	110	. 49	9.4	90	5.1	4.0	3.5	3.2		
AY	25	364	109	92	.85	4.5	120	7.3	5.5	4.8	4.2		
UNE	10	54	27	11	.42	1.1	183	20	13	11	9.1		
ULY	5.7	16	10	3.2	.32	.4							
NUGUST	2.6	8.1	4.7	1.7	. 35	.2							
SEPTEMBER	1.7	12	5.3	3.1	.59	.2							
ANNUAL	133	308	199	43	.22	100							
MAGNI		PROBABILII D ON PERIO				LOW	MAG	NITUDE AN BASED		BILITY OF			

DISCHARGE, YEARS, A				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	/AL, İN Y	OR INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
3750	4870	6440	7510	8890									
							1	3260	4540	5580	7120		
WEIGHTED	SKEW =	.244					3	2430	3340	4050	5100		
							7	1670	2210	2600	3130		
							15	1090	1360	1530	1740		
							30	775	947	1060	1210		
							60	607	749	842	958		
							90	508	626	704	802		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-74

				IN CFS,		EQUALED	OR EXCE	DED FOR	INDICATED					
5%				25%	30%	40%	50%	60%	70%		80%	,-	90%	95%
861	515	366	287	226	180	107	57	30	14	9.3	7.0	5.2	3.8	2.8

## 14324900 SOUTH FORK COQUILLE RIVER NEAR POWERS, OR

LOCATION.--Lat 42°47'05", long 124°02'25", in SW±SW± sec.18, T.32 S., R.11 W., Coos County, Hydrologic Unit 17100305, Siskiyou National Forest, on right bank 0.8 ml upstream from Hall Creek, 7.0 ml southeast of Powers, and at mile 76.1.

DRAINAGE AREA .-- 93.2 mi2.

PERIOD OF RECORD.--October 1956 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is 585.32 ft National Geodetic Vertical Datum of 1929 (levels by Pacific Power & Light Co.).

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--14 years, 514 ft<sup>3</sup>/s, 74.89 in/yr, 372,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 29,600 ft³/s Dec. 22, 1964, gage height, 23.00 ft, from floodmarks, from rating curve extended above 9,300 ft³/s on basis of slope-area measurement of peak flow; minimum, 6.5 ft³/s Oct. 3-5, 1960.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1957-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1958-70

				STAN- DARD DEVIA-	COEFFI- CIENT OF	0F	PERIOD (CON-		ARGE, IN INTERVAL, EXCEEDANC	IN YEARS	S, AND AN	NUAL N	ON-
ONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100
CTOBER	†9	585	150	159	1.06	2.4	1	13	9.7	8.2	7.2		
OVEMBER	60	1181	611	342	.56	9.8	3	13	9.9	8.5	7.4		
ECEMBER	192	3246	1115	819	.73	18.0	7	13	10	8.9	7.9		
ANUARY	206	2695	1260	786	.62	20.3	14	14	11	9.3	8.3		
EBRUARY	517	2560	1172	595	.51	18.9	30	15	12	11	10 -		
ARCH	217	1711	898	410	.46	14.5	60	17	15	14	14		
PRIL	201	1294	522	280	.54	8.4	- 90	22	18	17	16		
AY.	76	901	316	243	.77	5.1	120	30	24	22	20		
JNE	36	152	83	29	. 35	1.3	183	71	48	39	33		
ULY	26	53	36	7.9	.22	•6					- <b>-</b>		
UGUST	12	42	21	7.5	.36	.3							
EPTEMBER	11	43	23	10	. 44	.4							
NNUAL	420	675	514	77	.15	100			_				
I SCHARGE	BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIO	OD OF RE	CORD 195° 	7-70  INTERVAL,	IN .	MAG	BASEI D1SCHA	AND PROBAB O ON PERIO ARGE, IN O INTERVAL	OD OF REC	ORD 195	7-70  D RECUF ANNUAL	RENCE
1.25	2	<b>-</b> 5	10	25	50 1	00	SECU-		ACEEDANCE	FRUDADI			'' 
80%	50 <b>%</b>	20%	10%	4%		1%	TIVE	2	5	10	25	50	100

				RECURRENC ROBABILITY			PERIOD (CON-	D13C	INTER	VAL, IN	YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4%	50 <b>2%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100
9850	12700	16700	19300	22800									
<b>-</b>							1	7900	10900	14100	20000		
WE I GHTE	D SKEW =	.227					3	5960	8060	10200	13900		
							7	4240	5800	7080	9010		
							15	2870	3740	4350	5180		
							30	2030	2520	2890	3400		
							60	1560	1950	2230	2610		
							90	1320	1620	1830	2090		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-70

		DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCE	NT OF TI	мE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2150	1290	916	706	560	447	285	164	94	50	36	29	22	18	15

#### COQUILLE RIVER BASIN

#### 14325000 SOUTH FORK COQUILLE RIVER AT POWERS, OR

LOCATION.--Lat 42°53'30", long 124°04'10", in SEt sec.12, T.31 S., R.12 W., Coos County, Hydrologic Unit 17100305, on left bank 0.6 mi downstream from highway bridge at Powers, 0.9 mi upstream from Woodward Creek, and at mile 64.5.

DRAINAGE AREA .-- 169 mi 2.

5%

3250

10%

2050

15%

1480

20%

1160

25%

928

30%

745

40%

465

50%

260

60%

134

70%

67

75%

50

80%

40

85%

32

90%

27

95%

21

PERIOD OF RECORD. -- September 1916 to September 1926, December 1928 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 197.42 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1938, nonrecording gage at various sites within 1 mi of present site at different datums.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--63 years (water years 1917-26, 1930-82), 789  $ft^3/s$ , 63.40 in/yr, 571,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,900 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 26.51 ft, from floodmarks, from rating curve extended above 19,000 ft<sup>3</sup>/s on basis of contracted-opening measurement at gage height 18.14 ft and slope-area measurement of peak ffow; minimum, 12 ft<sup>3</sup>/s Sept. 22-25, 27-30, 1939, Oct. 5, 1961, Oct. 16-20, 1974.

## STATISTICAL SUMMARIES

	MINIMIM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VARI-		PERIOD (CON- SECU-	DISC	INTERVA	L, IN YE	ARS, AND	ATED REC ANNUAL IN PERC	NON-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	16	1945	220	338	1.54	2.3	-1	19	15	14	13	11	1
10VEMBER	16	4232	1018	847	.83	10.7	3	19	15	14	13	12	1
ECEMBER	44	5361	1739	1078	.62	18.3	7	20	16	14	13	12	1
ANUARY	97	4244	1843	1053	-57	19.4	14	21	17	15	14	. 13	1:
FEBRUARY	209	4151	1639	795	. 49	17.3	30	23	18	17	15	14	14
IARCH	330	3818	1322	666	.50	13.9	60	27	21	19	17	16	15
PRIL	216	2451	943	525	.56	9.9	90	32	25	22	20	18	1
IAY	78	1568	456	345	.76	4.8	120	43	31	27	24	21	2
UNE	51	699	162	113	.70	1.7	183	105	68	53	44	35	3
IULY	28	186	61	28	.46	<b>.</b> 6							
UGUST	17	101	34	13	. 39	.4							
	16	385	46	54	1.20	.5							
EPTEMBER	237 	1374 	789  TY OF IN	238	.30 OUS PEAK F	100	 MA					AL HIGH	 FLOW
EPTEMBER NNUAL MAGNI  ISCHARGE YEARS,	Z37  TUDE AND BASE  , IN CFS,	PROBABILITO ON PERIO	789  TY OF IN DD OF RE  CATED RE	238 STANTANE CORD 191 CURRENCE ABILITY,	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN	100 	PERIOD (CON-	BASE	ED ON PER HARGE, IN	RIOD OF I	RECORD OR INDICA YEARS, AN		JRRENC
EPTEMBER NNUAL MAGNI  ISCHARGE	237 TUDE AND BASE	1374 PROBABILI D ON PERIO	789  TY OF IN DD OF RE	238 STANTANE CORD 191 CURRENCE	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN	100  FLOW 	 PER10D	BASE	HARGE, INTERNEXCEEDAN	N CFS, FEYAL, IN YORK PROB	RECORD OR INDIC/ YEARS, AI ABILITY,	1917-82  ATED RECIND ANNUAL	JRRENC
MAGNI  I SCHARGE  YEARS, A	237 TUDE AND BASE , IN CFS, AND ANNUA	1374 PROBABILIT D ON PERIO FOR INDIO	789  TY OF IN DD OF RE  CATED RE NCE PROB	238 STANTANE CORD 191 CURRENCE ABILITY,	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN	100 	PERIOD (CON- SECU-	BASE DISCE	ARGE, INTERN	CFS, FO	RECORD OR INDIC/ YEARS, AN	1917-82 ATED RECI ND ANNUAL IN PERCI	JRRENC - ENT
MAGNI  ISCHARGE YEARS, A	237 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO NO PERIO	789  TY OF IN DD OF RE  CATED RE HICE PROB	238 STANTANE CORD 191 CURRENCE ABILITY, 25 4%	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN	100 FLOW FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCE	HARGE, IN INTERV EXCEEDAN 5 20%	N CFS, FE VAL, IN N NCE PROBA	RECORD OR INDIC/ YEARS, AN ABILITY, 25 4%	1917-82 ATED RECI ND ANNUAL IN PERCI 50 2%	JRRENC ENT 10
MAGNITION IN THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	237 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	789  TY OF IN DD OF RE  CATED RE HICE PROB	238 STANTANE CORD 191 CURRENCE ABILITY, 25 4%	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN 50 2%	100 FLOW FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCE 2 50%	HARGE, IN INTERN EXCEEDAN 5 20%	N CFS, FOYAL, IN NICE PROBA	OR INDICA YEARS, AN ABILITY, 25 4%	ATED RECOND ANNUAL IN PERCOND 2%	JRRENC - ENT 10 1
MAGNITION IN THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	237 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	789  TY OF IN DD OF RE  CATED RE HICE PROB	238 STANTANE CORD 191 CURRENCE ABILITY, 25 4%	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN 50 2%	100 FLOW FLOW	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCE 2 50% 11100 7970	HARGE, IN INTERN EXCEEDAN 5 20%	19000 14200	RECORD OR INDIC/ YEARS, AN ABILITY, 25 4% 23200 17700	1917-82 ATED RECI ND ANNUAL IN PERCI 50 2% 26400 20500	JRRENC - ENT 10 1
MAGNITION IN THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	237 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	789  TY OF IN DD OF RE  CATED RE HICE PROB	238 STANTANE CORD 191 CURRENCE ABILITY, 25 4%	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN 50 2%	100 FLOW FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE DISCE 2 50% 	HARGE, IN	10 OF I	25 4 % 23200 11600	1917-82  ATED RECI ND ANNUAL IN PERCI  50 2%  26400 20500 13200	JRRENC - ENT 10 1 2980 2350 1490
MAGNITION IN THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	237 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	789  TY OF IN DD OF RE  CATED RE HICE PROB	238 STANTANE CORD 191 CURRENCE ABILITY, 25 4%	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN 50 2%	100 FLOW FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN	100 OF I	OR INDIC/ YEARS, AI ABILITY, 25 4% 23200 17700 11600 7360	1917-82 ATED RECI ND ANNUAL IN PERCI 50 2% 26400 20500 13200 8170	JRRENC - ENT 10 1 2980 2350 1490 897
MAGNI  I SCHARGE YEARS, // 1.25 80%	237 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	789  TY OF IN DD OF RE  CATED RE HICE PROB	238 STANTANE CORD 191 CURRENCE ABILITY, 25 4%	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN 50 2%	100 FLOW FLOW	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCH	HARGE, IN- INTERN EXCEEDAN 5 20% 15700 11600 7960 5350 3870	19000 14200 9560 6250 4440	23200 17700 11600 7360 5100	1917-82  ATED RECI ND ANNUAL IN PERCI 50 2%  26400 20500 13200 8170 5560	JRRENC - ENT 10 1 2980 2350 1490 897 599
MAGNITION IN THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	237 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILITO ON PERIODE FOR INDICAL EXCEEDAN 5 20%	789  TY OF IN DD OF RE  CATED RE HICE PROB	238 STANTANE CORD 191 CURRENCE ABILITY, 25 4%	.30 OUS PEAK F 7-82 INTERVAL, IN PERCEN 50 2%	100 FLOW FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH	HARGE, IN	100 OF I	OR INDIC/ YEARS, AI ABILITY, 25 4% 23200 17700 11600 7360	1917-82 ATED RECI ND ANNUAL IN PERCI 50 2% 26400 20500 13200 8170	JRRENC - ENT 10 1 2980 2350 1490 897

#### 14326500 MIDDLE FORK COQUILLE RIVER NEAR MYRTLE POINT, OR

LOCATION.--Lat 43°01'30", long 124°05'20", in NW±SE± sec.26, T.29 S., R.12 W., Coos County, Hydrologic Unit 17100305, 0.3 mi downstream from Indian Creek, 2 mi upstream from South Fork, and 3.8 mi southeast of Myrtle Point.

DRAINAGE AREA. -- 305 mi2.

PERIOD OF RECORD. -- October 1930 to September 1946.

GAGE.--Water-stage recorder. Datum of gage is 41.20 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 4, 1930, staff gage at same site and datum.

REMARKS.--No diversion above station. Flow regulated during winter and spring months by operation of log ponds.

AVERAGE DISCHARGE.--16 years, 743 ft3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,600 ft³/s Jan. 2, 1933, gage height, 22.5 ft, from rating curve extended above 9,000 ft³/s; minimum daily, 1.0 ft³/s July 16, 17, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about Oct. 31, 1924, reached a stage of 25.8 ft, discharge, 31,800 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1931-46 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1932-46

	MINIMUM	MAVIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		ARGE, IN INTERVAL, EXCEEDANCI	IN YEARS	, AND AN	INUAL N	ON-
монтн	(CFS)	MAXIMUM (CFS)	(CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	9.1	225	67	65	.98	•7	1	12	5.9	3.5	2.1		
NOVEMBER	11	2552	824	749	.91	9.2	3	13	6.7	4.2	2.6		
DECEMBER	81	3960	1607	1199	.75	17.9	7	12	7.3	5.2	3.9		
JANUARY	600	4218	1801	968	.54	20.1	14	13	8.0	6.1	4.8		
FEBRUARY	419	3922	1837	979	.53	20.5	30	14	11	9.2	8.3		
MARCH	215	4088	1452	930	.64	16.2	60	17	12	11	10		
APRIL	198	1919	755	428	.57	8.4	90	20	15	13	11		
MAY	73	1386	371	321	.87	4.1	120	29	20	17	14		
JUNE	59	341	158	97	.62	1.8	183	79	48	36	28		
JULY	28	124	55	28	.51	.6							
AUGUST	12	41	24	9.2	. 39	.3							
SEPTEMBER	11	86	25	19	.78	.3							
ANNUAL	356	1250	743	244	.33	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1931-46

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1931-46

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICAT YEARS, AND ABILITY.	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b>	10 10%	25 4% <b></b>	50 <b>2%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
9920	14000	19400	22900	27100				40500	44400	16000	40000		
WELCUTE							1	10500	14400	16900	19800		
WEIGHTE	D SKEW =	183					2	7530	10300	12100	14200		
							15	5700	7760	8890	10100		
							15	4350	5880	6640	7380		
							30	3090	3950	4380	4790		
							60	2470	3160	3500	3850		
							90	2100	2740	3080	3430		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-46

		DISC	CHARGE, 1	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIM	Ε		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3330	2010	1450	1080	809	624	366	208	97	<b>4</b> 7	33	25	19	15	12

#### COQUILLE RIVER BASIN

## 14326800 NORTH FORK COQUILLE RIVER NEAR FAIRVIEW, OR

LOCATION.--Lat 43°11'03", long 124°04'33", in SW±SE± sec.35, T.27 S., R.12 W., Coos County, Hydrologic Unit 17100305, on right bank 0.2 mi downstream from Lost Creek, 2.2 mi south of Fairview, and at mile 22.2.

DRAINAGE AREA .-- 73.9 m12.

PERIOD OF RECORD.--October 1963 to September 1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 79.72 ft National Geodetic Vertical Datum of 1929 (from stadia survey). Prior to Aug. 17, 1978, at site 0.5 mi downstream at datum 16.38 ft lower with supplementary water-stage recorder and crest-stage gage at present site used during periods of backwater.

REMARKS.--No regulation. Several diversions for irrigation above station.

AVERAGE DISCHARGE.--18 years, 281 ft<sup>3</sup>/s, 51.57 in/yr, 203,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft<sup>3</sup>/s Mar. 2, 1972; maximum gage height, 18.80 ft, previous site and datum, Jan. 8, 1976, backwater from ponding in valley below; maximum gage height unaffected by backwater, 18.03 ft, previous site and datum, Jan. 8, 1976; minimum discharge, 2.0 ft<sup>3</sup>/s Sept. 9, 10, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1981 reached a stage of 14.86 ft from flood mark, discharge, 8,350 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1964-81 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-81

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS PROBABI	, AND AN	INUAL N	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.9	109	43	35	.81	1.3	1	4.1	2.9	2.4	2.1.		
NOVEMBER	29	1121	358	299	.84	10.6	3	4.2	3.0	2.5	2.2		
DECEMBER	21	1530	729	371	.51	21.6	7	4.5	3.3	2.8	2.6		
JANUARY	47	1331	771	364	.47	22.8	14	5.0	3.6	3.1	2.8		
FEBRUARY	105	894	499	240	.48	14.8	30	5.6	4.1	3.6	3.3		
MARCH	155	987	467	245	.52	13.8	60	7.8	5.4	4.6	4.1		
APRIL	121	573	281	124	.44	8.3	90	9.9	6.9	5.9	5.3		
MAY	42	310	132	70	.53	3.9	120	14	9.7	8.4	7.5		
JUNE	20	130	53	25	.47	1.6	183	34	25	21	18		
JULY	11	33	19	7.4	.39	•6							
AUGUST	3.8	24	11	5.3	.51	.3							
SEPTEMBER	3.9	60	19	18	.94	.6							
ANNUAL	89	460	281	88	.31	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1964-81

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-81

				RECURRENC OBABILITY			PERIOD (CON-		INTERV	AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 <b>2%</b>	100 1%
3240	4680	6520	7650	8980									
							1	3340	4720	5530	6440	, <del>-</del> -	
WEIGHTED	SKEW =	361					3	2700	3620	4120	4630		
							7	2030	2720	3130	3590		
							15	1390	1830	2110	2420		
							30	1080	1370	1530	1690		
							60	850	1120	1260	1400		
							90	746	974	1090	1190		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-81

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TI	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1170	763	554	418	325	260	166	98	52	26	19	14	11	7.3	5.1

#### COQUILLE RIVER BASIN

#### 14327000 NORTH FORK COQUILLE RIVER NEAR MYRTLE POINT, OR

LOCATION.--Lat 43°04'15", long 124°06'20", in SE' sec.10, T.29 S., R.12 W., Coos County, Hydrologic Unit 17100305, near center of span on downstream side of highway bridge 1.6 mi northeast of Myrtle Point, and at mile 4.1.

DRAINAGE AREA.--282 mi<sup>2</sup>

PERIOD OF RECORD.--December 1928 to September 1946, October 1963 to September 1968.

GAGE.--Wire-weight gage read once daily and crest-stage gage. Datum of gage is 2.79 ft National Geodetic Vertical Datum of 1929.

Prior to Oct. 1, 1930, chain gage at present site and different datum. Oct. 1, 1930, to Sept. 30, 1946, water-stage recorder at site 4.5 mi upstream at datum 8.15 ft higher.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--22 years (water years 1930-46, 1964-68), 945 ft<sup>3</sup>/s, 684,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,400 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 37.67 ft; minimum observed, 1.2 ft<sup>3</sup>/s Aug. 12, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum stage known, 41.2 ft sometime during winter of 1909-10. Flood of Dec. 26, 1955, reached a stage of 37.0 ft, discharge, 20,000 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1930-68 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1931-68

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR , IN YEARS CE PROBABI	S, AND AN	INUAL N	0 <b>N-</b>
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	22	500	134	121	.90	1.2	1	22	13	9.0	6.6		
NOVEMBER	24	3247	1124	925	.82	9.9	3	23	13	9.7	7.3		
DECEMBER	342	6110	2096	1469	.70	18.4	7	24	14	11	8.2		
JANUÄRY	854	4762	2479	1150	.46	21.8	14	25	15	12	9.0		
FEBRUARY	530	3781	2056	949	.46	18.1	30	28	18	14	11		
MARCH	427	3949	1670	905	.54	14.7	60	32	22	18	16		
APRIL	276	2404	912	500	.55	8.0	90	39	28	24	22		
MAY	125	1687	470	323	.69	4.1	120	53	38	33	30		
JUNE	83	986	259	216	.83	2.3	183	126	87	72	62		
JULY	48	183	92	43	.47	.8							
AUGUST	11	80	45	21	.47	.4							
SEPTEMBER	15	219	50	45	.90	.4							
ANNUAL	517	1383	945	261	.28	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1930-68

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1930-68

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	VAL, ÍN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10 <b>%</b>	25 4 <b>%</b>	50 2 <b>%</b> 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100
8540	13300	21200	27500	36500									
			<del>-</del>				1	8920	13800	18600	26800		
WE I GHTE	D SKEW =	.237					3	7530	10900	13900	18700		
							7	6220	8620	10400	12900		
							15	4930	6620	7590	8660		
							30	3600	4680	5300	5990		
							60	2890	3690	4120	4600	'	
							90	2560	3270	3650	4060		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-68

 		DISC	HARGE, II	CFS, W	HICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50 <b>%</b>	60%	70%	75%	80%	85%	90%	95 <b>%</b>
 4190	2650	1860	1430	1120	891	558	342	184	95	69	53	41	31	24

#### ROGUE RIVER BASIN

## 14327500 ROGUE RIVER ABOVE BYBEE CREEK, NEAR UNION CREEK, OR

LOCATION.--Lat 42°56'05", long 122°25'15", in NEt sec.26, T.30 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on left bank 700 ft upstream from Bybee Creek, 2.3 mi northeast of village of Union Creek, and at mile 186.1 (river-profile survey).

DRAINAGE AREA. -- 156 mi2.

PERIOD OF RECORD. -- January 1930 to September 1952.

GAGE.--Water-stage recorder. Altitude of gage is 3,465 ft, from river-profile map. Prior to Nov. 23, 1934, water-stage recorder at site 200 ft downstream at different datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--22 years (water years 1931-52), 498 ft<sup>3</sup>/s, 360,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,430 ft<sup>3</sup>/s Nov. 29, 1942 and Dec. 28, 1945, gage height, 7.84 ft, from rating curve extended above 1,600 ft<sup>3</sup>/s by logarithmic plotting; minimum daily, 180 ft<sup>3</sup>/s Jan. 7, 1937.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1931-52	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		BASED ON PERIOD OF RECORD 1932-52

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	227	564	317	85	.27	5.3	1	257	219	201	188		
NOVEMBER	234	803	414	151	.36	6.9	3	263	227	210	198		
DECEMBER	254	1041	481	203	. 42	8.0	7	267	233	217	205		
JANUARY	238	729	448	144	.32	7.5	14	272	237	221	209		
FEBRUARY	248	820	445	141	.32	7.4	30	277	242	226	213 -		
MARCH	317	758	500	124	.25	8.4	60	285	247	230	216		
PRIL	481	1022	735	156	.21	12.3	90	293	253	234	220		
YAY	373	1389	916	291	.32	15.3	120	301	259	241	227		
IUNE	271	1663	718	335	.47	12.0	183	334	282	261	246		
JULY	222	666	391	107	.27	6.5							
NUGUST	204	467	315	63	.20	5.3							
SEPTEMBER	204	426	300	54	.18	5.0							
ANNUAL	313	692	498	97	.20	100							

MAGNITUDE	AND PR	ORABILITY	ΛF	INSTANI	ANFOUS	PFAK	FIOW
		ON PERIOD					LON

### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1931-52

YEARS, A				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	'AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80% 	2 50% 	5 20% 	10 10%	25 4% 	50 2% 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1670	2230	3060	3660	4450									
							1	1850	2560	3030	3640		
WEIGHTED	SKEW =	.324					3 .	1540	2050	2380	2770		
							7	1300	1680	1920	2230		
							15	1160	1480	1670	1900		
							30	1050	1320	1470	1650		
							60	934	1140	1240	1350	~-	
							90	824	988	1080	1170		

## DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-52

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCE	NT OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1140	918	765	657	578	521	446	395	355	322	307	290	275	262	242

#### 201 ROGUE RIVER BASIN 14328000 ROGUE RIVER ABOVE PROSPECT. OR

LOCATION.—Lat 42°46'30", long 122°29'55", in SE¦NE¦ sec.19, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, Rogue River National Forest, on left bank 1.4 mi upstream from Pacific Power and Light Co. diversion dam, 1.8 mi northwest of Prospect, and at mile 173.4.

DRAINAGE AREA . -- 312 mi2.

PERIOD OF RECORD.--January 1908 to February 1912, October 1923 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Prior to October 1925, published as "near Prospect."

GAGE.--Water-stage recorder. Altitude of gage is 2,620 ft, from river-profile map. Prior to Feb. 17, 1912, nonrecording gage at several sites within a few hundred feet upstream at various datums.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--62 years (water years 1909-11, 1924-82), 820 ft<sup>3</sup>/s, 35.69 in/yr, 594,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s Dec. 22, 1964, gage height, 11.55 ft, from floodmark, from rating curve extended above 9,000 ft³/s on basis of slope-area measurement at 16,600 ft³/s; minimum observed, 200 ft³/s Nov. 20, 1931.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1909-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1910-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICA RS, AND A	ANNUAL N	ON-
монтн	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	283	957	453	118	.26	4.6	1	357	297	269	248	226	213
NOVEMBER	292	2062	707	334	.47	7.2	3	367	306	278	256	233	219
DECEMBER	313	3368	929	555	.60	9.4	7	371	311	284	263	241	227
JANUARY	292	2158	920	444	.48	9.3	14	377	316	288	267	245	231
FEBRUARY	325	2093	949	385	.41	9.6	30	386	323	294	272	250	235
MARCH	480	2820	946	356	.38	9.6	60	396	332	303	281	257	243
APRIL	649	1888	1177	322	.27	12.0	90	408	341	309	286	260	245
MAY	491	2263	1372	484	.35	13.9	120	422	351	319	294	269	253
JUNE	335	2564	992	455	.46	10.1	183	498	402	360	329	297	278
JULY	253	1010	545	164	.30	5.5							
AUGUST	222	659	439	102	.23	4.5							
SEPTEMBER	230	602	419	88	.21	4.3							
ANNUAL	411	1268	821	199	.24	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1909-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1909-82

ISCHARGE, YEARS, AI							PERIOD (CON-		HARGE, IN INTERN EXCEEDAN	AL, IN	YEARS, A	ND ANNUA	L
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10% 	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
3060	4770	7660	9930	13200	16000	19100							
<del>-</del>							1	4130	6470	8180	10500	12300	14200
WEIGHTED	SKEW =	.239					3	3310	5090	6410	8250	9740	11300
							7	2590	3730	4520	5580	6390	7240
							15	2080	2790	3240	3790	4180	4570
							30	1760	2270	2560	2900	3130	3340
							60	1480	1870	2080	2320	2480	262
							90	1330	1640	1810	1990	2110	222

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1909-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME		<del>-</del> -	
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70 <b>%</b>	75% 	80%	85%	90%	95 <b>%</b>
1920	1520	1290	1120	991	891	739	636	550	477	444	418	389	358	323

#### ROGUE RIVER BASIN

#### 14330000 ROGUE RIVER BELOW PROSPECT, OR

LOCATION.--Lat 42°43'50", long 122°30'55", in SEŁNWŁ sec.6, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 600 ft downstream from Prospect No. 1 powerplant, 1.4 mi downstream from Mill Creek, 2.0 mi southwest of Prospect, 2.1 mi upstream from South Fork Rogue River, and at mile 169.4.

DRAINAGE AREA .-- 379 mi2.

PERIOD OF RECORD.--August 1913 to September 1930, October 1968 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,964.56 ft National Geodetic Vertical Datum of 1929 (Pacific Power and Light Co. bench mark). Prior to September 1927 nonrecording gage at site 1,000 ft upstream, above powerplants, at different datum, also concurrent nonrecording gage on headrace to obtain equivalent combined flow.

REMARKS.--Small fluctuations caused by powerplant 600 ft above station. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--14 years (water years 1969-82), 1,508 ft<sup>3</sup>/s, 1,092,546 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft<sup>3</sup>/s Jan. 18, 1971, gage height, 7.62 ft, from high-water mark; minimum, 205 ft<sup>3</sup>/s Sept. 17, 22, 24, 1980, caused by regulation of diversion gates upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum stage since at least 1890, 12.4 ft Dec. 22, 1964, from floodmarks, discharge, 25,000 ft<sup>3</sup>/s, from records for station above Prospect and for station below South Fork Rogue River near Prospect after adjusting for estimated intervening tributary inflow.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1969-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1970-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	DN-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	795	1230	978	160	.16	5.4	1	820	708	659	624		
NOVEMBER	868	2100	1308	333	.25	7.2	3	839	725	674	637		
DECEMBER	979	2736	1668	555	.33	9.2	7	852	735	684	645		
JANUARY	946	2894	1833	583	.32	10.1	14	870	749	696	656		
FEBRUARY	946	2651	1650	408	.25	9.1	30	893	771	718	679		
MARCH	1045	3627	1764	618	.35	9.7	60	918	800	750	713		
APRIL	1272	2463	1770	340	.19	9.8	90	942	825	775	738		
MAY	1276	3282	2143	626	. 29	11.8	120	969	852	802	766		
JUNE	1119	2923	1733	617	.36	9.6	183	1070	949	898	862		
JULY	873	1660	1233	288	.23	6.8							
AUGUST	770	1337	1050	210	.20	5.8							
SEPTEMBER	761	1236	983	174	.18	5.4							
ANNUAL	1022	2053	1509	305	.20	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1969-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1969-82

				RECURRENC ROBABILITY			PERIOD (CON-		INTER	/AL, ÍN '	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4480	6500	9300	11200	13500									
							1	5330	7940	9470	11200		_
EIGHTED	SKEW =	129					3	4600	6610	7750	8970		-
							7	3740	5050	5740	6450		_
							15	3090	3930	4340	4740		_
							30	2620	3250	3580	3900		_
							60	2240	2720	2980	3250		_
							90	2090	2520	2750	3000		_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1969-82

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EX	CEEDED FOR	INDICATE	D PERCEN	T OF T	IME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2780	2320	2050	1890	1750	1640	1470	1340	1230	1120	1060	992	927	868	808

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## 14330500 SOUTH FORK ROGUE RIVER ABOVE IMNAHA CREEK, NEAR PROSPECT, OR

LOCATION.--Lat 42°42'25", long 122°23'20", in NEt sec.18, T.33 S., R.4 E., Jackson County, Hydrologic Unit 17100307, on left bank 900 ft upstream from Imnaha Creek, 1,200 ft upstream from South Fork diversion dam, and 6 mi southeast of Prospect.

DRAINAGE AREA .-- 52 mi2.

PERIOD OF RECORD. -- October 1931 to September 1949.

GAGE.--Water-stage recorder. Altitude of gage is 3,390 ft, from river-profile map.

REMARKS. -- No diversion or regulation above station.

AVERAGE DISCHARGE.--18 years, 127  $ft^3/s$ , 92,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,170 ft<sup>3</sup>/s Dec. 1, 1942, gage height, 6.21 ft, from rating curve extended above 250 ft<sup>3</sup>/s on basis of former curve defined to 1,000 ft<sup>3</sup>/s; minimum, 27 ft<sup>3</sup>/s Oct. 1-21, 1931.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1932-49

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1933-49

	MINIMA	MAX I MUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON- SECU-		INTERVAL	CFS, FOF IN YEAR CE PROBAE	RS, AND A	NNUAL NO	⊃ <b>N</b> −
монтн	MINIMUM (CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	†0 10%	20 5%	50 2 <b>%</b>	100 1 <b>%</b>
OCTOBER	34	77	53	11	.21	3.5	1	45	39	36	34		
10VEMBER	34	192	80	37	.47	5.2	3	46	39	37	34		
ECEMBER	34	325	109	70	.64	7.2	7	46	40	37	35		
ANUARY	41	319	118	70	. 59	7.8	14	47	41	38	36		
EBRUARY	37	241	109	51	.47	7.2	30	49	42	39	36		
IARCH	60	220	127	46	.36	8.3	60	51	43	40	37 -		
PRIL	93	303	205	66	.32	13.5	90	54	45	41	38		
1AY	77	490	279	106	.38	18.3	120	57	48	43	40		
IUNE	58	490	215	109	.51	14.1	183	68	56	51	47		
IULY	44	162	10 <b>1</b>	31	.30	6.6							
UGUST	36	. 100	69	17	.25	4.6							
SEPTEMBER	. 34	80	58	12	.21	3.8							
NNUAL	76	202	127	31	.24	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1932-49

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1932-49

				RECURRENC			PERIOD (CON-		INTERV	AL, ÎN Y	EARS, AN	ATED RECU ND ANNUAL IN PERCE	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4 <b>%</b>	50 2%	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
496	731	1110	1390	1780									
							1	574	880	1130	1500		
WE I GHTED	SKEW =	.225					3	476	701	880	1140		
							7	404	564	679	836		
							15	353	478	558	658		
							30	320	424	483	551		
							60	280	366	413	462		
							90	242	311	349	389		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-49

		DISC	HARGE,		WHICH WAS	•			INDICATE	D PERCE	NT OF TI	ME		
5%	10%		,	25%	30%	40%	50%	60%	,.		,	/-	90%	95%
346	27 1	219	179	149	133	107	89	76	66	61	55	51	47	42

## ROGUE RIVER BASIN

## 14331000 IMNAHA CREEK NEAR PROSPECT, OR

LOCATION.--Lat 42°41'20", long 122°23'00", in NEt sec.18, T.33 S., R.4 E., Jackson County, Hydrologic Unit 17100307, on left bank 1,200 ft upstream from mouth and 6 mi southeast of Prospect.

DRAINAGE AREA.--26 mi<sup>2</sup>, approximately.

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PERIOD OF RECORD. -- September 1931 to October 1949.

GAGE.--Staff gage. Altitude of gage is 3,400 ft, from river-profile map.

REMARKS.--No diversion or regulation above station.

AVERAGE DISCHARGE.--18 years (water years 1932-49), 42.8 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 500 ft<sup>3</sup>/s Feb. 13, 1945, gage not read, computed on basis of records for South and Middle Forks Rogue River near Prospect; minimum observed, 11 ft<sup>3</sup>/s Dec. 14, 1931, gage height, 0.46 ft.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1934-49

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MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

21

22

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		MAYLMIN	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL NO	)N-
нтиом	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	17	31	 22	4.0	.18	4.3	1	19	 16	15	15		
IOVEMBER	19	67	29	12	.40	5.6	3	19	17	16	15		
ECEMBER	21	107	41	22	.54	7.9	7	19	17	16	15		
ANUARY	19	126	48	28	.58	9.4	14	20	17	16	16		
EBRUARY	21	84	47	17	.37	9.1	30	20	18	17	16		
IARCH	22	81	49	17	.34	9.5	60	20	18	17	16	~-	
PRIL	28	115	71	26	.37	13.6	90	21	18	17	17		
AY	27 27	148	78	34	.44		120	22	19	18	17		
				_		15.1							
UNE	23	112	56	24	.43	10.8	183	25	21	19	18		
ULY	19	53	32	8.9	. 28	6.1							
UGUST	16	35	23	4.8	.21	4.5							
EPTEMBER	16	32	22	4.1	- 19	4.2							
NNUAL	26	70	43	12	. 27	100							
MAGNIT		PROBABILI D ON PERIO				FLOW	MAG				OF ANNUAL ECORD 19		.ow
ISCHARGE, YEARS, A	BASE IN CFS,	FOR INDIC	OD OF RE	CORD 1934	4-49  INTERVAL	, IN	PERIOD (CON-	BASEI D1SCH/	ON PERI	CFS, FOR		34-49  ED RECUF ANNUAL	RENCE
ISCHARGE,	BASE IN CFS,	D ON PERIO	OD OF RE	CORD 1934	1-49 INTERVAL IN PERCE	, IN	PERIOD (CON- SECU- TIVE	BASEI DISCHA L	O ON PERI ARGE, IN INTERVA EXCEEDANCE	CFS, FOR L, IN YECE PROBAL	ECORD 19 R INDICAT EARS, AND BILITY, I	34-49 ED RECUF ANNUAL N PERCEN	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	DD OF RE	CORD 1934 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT	PERIOD (CON- SECU-	BASEI D1SCH/	O ON PERI	CES, FOR	ECORD 19 R INDICAT EARS, AND BILITY, I	34-49 ED RECUF ANNUAL N PERCEN	RENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA	FOR INDIC L EXCEEDAL	OD OF RECATED RENCE PROB	CORD 1934 CURRENCE BABILITY,	1NTERVAL IN PERCE	, IN NT	PERIOD (CON- SECU- TIVE	BASEI DISCHA L	O ON PERI ARGE, IN INTERVA EXCEEDANCE	CFS, FOR L, IN YECE PROBAL	ECORD 19 R INDICAT EARS, AND BILITY, I	34-49 ED RECUF ANNUAL N PERCEN	RRENCE
ISCHARGE, YEARS, A	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	DD OF RE	CORD 1934 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASEI DISCH/ I 2 50%	O ON PERI ARGE, IN INTERVA EXCEEDANC 5 20%	CFS, FOR AL, IN YE CE PROBAE 10 10%	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4%	34-49  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	DD OF RE	CORD 1934 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASEI DISCH/ 1 2 50%	O ON PERI	100 OF RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVE THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO THE RECEIVED TO	ECORD 19 R INDICAT EARS, AND BILITY, I	34-49 ED RECUF ANNUAL N PERCEN 50 2%	NT 100
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	DD OF RE	CORD 1934 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT	PERIOD (CON-SECU-TIVE DAYS)	D1SCH/ 2 50% 163 141 118	ARGE, IN INTERVA EXCEEDANC 5 20% 277 222 175	CFS, FOR CE PROBAB 10 10% 368 281	25 4% 501 361 264	34-49 ED RECUF ANNUAL N PERCEN 50 2%	100
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	DD OF RE	CORD 1934 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE(I)  DISCH/  2  50%  163 141 118 104	277 222 175 147	100 OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF	ECORD 19  R INDICAT EARS, AND BILITY, I  25 4%  501 361 264 208	34-49 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROB	CORD 1934 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCH/ 102 50% 163 141 118 104 93	ARGE, IN INTERVAEXCEEDANC  277 222 175 147 128	CFS, FOR LL, IN YEE PROBAE  10 10 10 368 281 214 175 150	R INDICAT EARS, AND BILITY, I 25 4% 501 361 264 208 175	34-49  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100 1%
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RENCE PROB	CORD 1934 CURRENCE BABILITY, 25 4%	INTERVAL IN PERCE 50 2%	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE(I)  DISCH/  2  50%  163 141 118 104	277 222 175 147	100 OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF RECEIVED OF	ECORD 19  R INDICAT EARS, AND BILITY, I  25 4%  501 361 264 208	34-49 ED RECUF ANNUAL N PERCEN 50 2%	NT 100
SCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDAL 5 20%	CATED RE	CORD 1934 CURRENCE BABILITY, 25 4%	1NTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 2 50% 163 141 118 104 93 81 72	277 222 177 128 110 95	CFS, FORAL, IN YEE PROBAE  10 10\$  368 281 214 175 150 126 108	R INDICAT EARS, AND BILITY, I 	34-49  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100 1%
ISCHARGE, YEARS, A 1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIG	CATED RE CATED RE NCE PROB 10 10 384  DURATIO	CURRENCE (ABILITY, 25 4% 519 N TABLE (	INTERVAL IN PERCE 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH/  2 50%  163 141 118 104 93 81 72  OF RECOF	277 222 175 147 128 110 95	CFS, FORAL, IN YEE PROBACTION 10%  368 281 214 175 150 126 108	25 4% 501 361 264 208 175 145 123	34-49  ED RECUF ANNUAL N PERCEN 50 2%	RRENCE NT 100 1%

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#### ROGUE RIVER BASIN

#### 14333000 MIDDLE FORK ROGUE RIVER NEAR PROSPECT, OR

LOCATION.--Lat 42°44'05", long 122°24'05", in NE\NE\ sec.1, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 850 ft downstream from diversion dam and intake of Middle Fork power canal, and 4.5 mi southeast of Prospect.

DRAINAGE AREA.--56.5 mi2.

PERIOD OF RECORD.--May 1925 to September 1955 (includes flow of Middle Fork power canal since completion Nov. 19, 1931).

GAGE.--Water-stage recorder. Datum of gage is 2,619 ft National Geodetic Vertical Datum of 1929 (levels by the California-Oregon Power Co.). Prior to Nov. 10, 1949, water-stage recorder and staff gage at various sites and datums within 150 ft of present gage.

REMARKS.--All records given herein include flow in Middle Fork power canal which diverts 850 ft above station for hydroelectric power and returns water to the Rogue River above South Fork Rogue River; practically no storage above diversion dam.

AVERAGE DISCHARGE.--30 years (water years 1926-55), 184 ft3/s, 133,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,120 ft³/s Nov. 23, 1953, from rating curve extended above 250 ft on basis of shape of previous rating curves; minimum daily, 72 ft³/s Aug. 24, to Sept. 5, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 5.65 ft, discharge, 3,230 ft<sup>3</sup>/s, by measurement of peak flow over dam.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1933-55

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1934-55

	MINIMUM	MAX1MUM	МЕАМ	STAN- DARD DEVIA-	COEFFI- CIENT OF		PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, I	NNUAL N	0N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5% .	50 2 <b>%</b>	100 1%
OCTOBER	100	192	129	26	.20	5.6	1	111	98	92	88		
NOVEMBER	107	270	158	47	.30	6.8	3	112	99	94	90		
DECEMBER	112	359	189	73	.39	8.2	7	113	101	95	92		
JANUARY	104	352	194	65	.33	8.4	14	114	102	96	92		
FEBRUARY	104	451	205	86	.42	8.9	30	116	103	98	94		
MARCH	134	259	189	37	.19	8.2	60	119	106	100	95		
APRIL	145	357	254	54	.21	11.0	90	122	108	102	97		
MAY	139	444	296	64	.22	12.8	120	125	110	104	99		
JUNE	114	460	270	82	.30	11.7	183	137	119	112	108		
JULY	102	263	168	39	.23	7.3							
AUGUST	95	184	135	22	.16	5.8							
SEPTEMBER	90	168	126	20	.16	5.4							
ANNUAL	137	250	193	33	- 17	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1933-55 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1933-55

Olscharge, YEARS, A				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10% 	25 4% <b></b>	50 2 <b>%</b> 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
548	869	1470	1980	2790									
		~					1	666	1020	1310	1730		
WEIGHTED	SKEW =	.461					3	557	779	940	1160		
							7	458	597	692	816		
							15	385	475	532	602		
							30	345	419	462	513		
							60	314	366	390	413		
							90	289	334	356	378		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1933-55

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	F OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	* 50 <b>%</b>	60%	70%	75%	80%	85%	90%	95%
367	316	282	254	<b>2</b> 30	211	181	161	146	134	129	124	119	112	105

## 14333500 REO BLANKET CREEK NEAR PROSPECT, OR

LOCATION.--Lat 42°46'40", long 122°25'35", in NW±NE± sec.23, T.32 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 1.8 mi downstream from Lick Creek, 3.7 mi northeast of Prospect, and at mile 4.8.

ORAINAGE AREA .-- 45.5 mi2.

PERIOD OF RECORD. -- May 1925 to September 1981.

GAGE.--Water-stage recorder. Altitude of gage is 2,780 ft, from river-profile map. Prior to Sept. 7, 1949, nonrecording gage at several sites within 2.5 mi of present site at various datums.

REMARKS.--No regulation. Small diversions for irrigation above station.

AVERAGE OISCHARGE.--56 years (water years 1926-81), 115 ft<sup>3</sup>/s, 83,320 acre-ft/yr.

EXTREMES FOR PERIOO OF RECORO.--Maximum discharge, 3,190 ft $^3$ /s Dec. 22, 1964, gage height, 7.85 ft, from rating curve extended above 1,500 ft $^3$ /s; minimum observed, 34 ft $^3$ /s Sept. 3, 4, 25, 0ct. 9, 16, 1931.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1926-81 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1935-81

	MINIMUM	MAXIMUM	MEAN	STAN- OARO OEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOO (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, ANO A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE OAYS)	2 50%	5 20%	10 10%	20 5%	50 <b>2%</b>	100 1%
OCTOBER	48	118	70	17	.24	4.9	1	56	<b>4</b> 7	43	40	37	 35
NOVEMBER	51	207	102	39	.39	7.2	3	57	48	43	40	37	35
0ECEMBER	54	482	132	78	.59	9.3	7	58	49	45	41	38	36
JANUARY	49	279	133	57	.43	9.4	14	59	50	46	42	39	37
FEBRUARY	54	265	130	45	.34	9.1	30	61	51	47	44	40	38
MARCH	73	354	127	48	.38	8.9	60	63	53	49	45	42	40
APRIL	75	227	146	39	.27	10.3	90	66	55	51	47	44	42
MAY	76	285	178	50	. 28	12.5	120	69	58	53	49	46	44
JUNE	59	274	164	60	.37	11.5	183	80	66	60	56	52	49
JULY	49	198	99	34	.34	6.9							
AUGUST	42	117	74	19	. 26	5.2							
SEPTEMBER	40	97	66	15	.22	4.7							
ANNUAL	71	177	118	29	. 24	100							

MAGNITUOE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASEO ON PERIOD OF RECORD 1934-81

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASEO ON PERIOO OF RECORD 1934-81

OISCHARGE, YEARS, A							PERIOO (CON→		INTERV	'AL, ÎN Y	R INOICA ŒARS, AN BILITY,	IO ANNUAL	-
1.25 80%	2 50% 	5 20% 	10 10%	25 4%	50 2% 	100 1%	SECU- TIVE OAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
327	560	993	1360	1910	2400	2960							
WE I GHTEO		.215					· 1	465 376	784 608	1050 808	1470 1120	1840 1410	2260 1740
***************************************	511EH -	.217					7	299	447	568	752	913	1100
							15	249	344	413	507	583	664
							30	220	288	33 f	384	423	461
							60	192	247	281	321	349	377
							90	175	220	247	279	300	320

DURATION TABLE OF OAILY MEAN FLOW FOR PERIOD OF RECORD 1934-81

		oisc	HARGE,	IN CFS,	WHICH WAS	EQUALEO	OR EXCE	EOEO FOR	INOICATE	0 PERCE	NT OF TIM	ле ИЕ		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
245	204	179	160	145	131	113	98	87	77	73	68	64	59	53

#### 14334700 SOUTH FORK ROGUE RIVER, SOUTH OF PROSPECT, OR

LOCATION.--Lat 42°42'45", long 122°30'20", in NW‡SE‡ sec.7, T.33 S., R.3 E., Jackson County, Hydrologic Unit 17100307, on right bank 200 ft upstream from unnamed tributary, 0.6 mi upstream from Smith Creek, 1.2 mi downstream from Beaver Creek, 2.8 mi southwest of Prospect, and at mile 2.4.

DRAINAGE AREA .-- 246 mi2.

1110

840

706

609

526

447

326

234

166

126

112

100

88

65

PERIOD OF RECORD. -- October 1968 to September 1982.

GAGE. -- Water-stage recorder. Altitude of gage is 2,030 ft, from topographic map.

REMARKS.--Some regulation by South Fork canal dam upstream. Power diversions above station from South Fork Rogue River, Middle Fork Rogue River, and Red Blanket Creek divert water to Rogue River via Main Canal. During summer base flow all of streamflow is diverted for power except that for fish life. Base flow at station is principally from springs downstream from power diversions.

AVERAGE DISCHARGE.--14 years, 382  $ft^3/s$ , 276,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,880 ft<sup>3</sup>/s Mar. 3, 1972, gage height, 12.71 ft, from floodmark; minimum, 54 ft<sup>3</sup>/s Aug. 16-19, 1977; minimum daily, 54 ft<sup>3</sup>/s Sept. 24-30, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, 20.1 ft, Dec. 22, 1964, from floodmarks at gage, discharge, 28,500 ft<sup>3</sup>/s.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1969-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1970-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	OF	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	OR INDICAT ARS, AND A ABILITY, I	ANNUAL N	0N-
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	 65	175	105	32	.30	2.3	1	 75	60	54	49		
NOVEMBER	69	761	264	191	.72	5.7	3	76	61	54	50		
DECEMBER	86	1327	475	390	.82	10.3	7	77	61	55	50		
JANUARY	85	1143	628	344	.55	13.6	14	78	62	56	51		
EBRUARY	81	1246	473	292	.62	10.3	30	82	65	58	53		
IARCH	99	2240	572	531	.93	12.4	60	88	70	62	<b>5</b> 7		
PRIL	134	878	486	226	.47	10.5	90	92	72	64	58		
1AY	253	1049	655	284	.43	14.2	120	97	76	68	62		
UNE	150	962	506	310	.61	11.0	183	141	110	99	92		
IULY	71	429	211	133	.63	4.6		141	110	99	92		
UGUST	61	243	124	57	.46	2.7							
SEPTEMBER	<b>5</b> 9	174	112	40	.36	2.4							
DEF TEMBER	29	1/4	112	40	• 30	2.4							
NNUAL	114	672	384	171	.45	100							
	BASE	D ON PERIO	DD OF RE	CORD 196		.=	MA(	BASE	D ON PER	10D OF R	OF ANNUAL	69-82	
YEARS,	BASE IN CFS, AND ANNUA	D ON PERIO	OD OF RE	CORD 196 CURRENCE	9-82 INTERVAL, IN PERCEN	IN IT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF R CFS, FO		69-82 ED RECUF	RRENCE
) I SCHARGE ,	BASE . IN CFS,	D ON PERIO	DD OF RE	CORD 196	9-82 INTERVAL, IN PERCEN	 1N	PERIOD (CON- SECU- TIVE	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	OD OF R CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICAT EARS, AND BILITY, I	69-82 ED RECUF ANNUAL N PERCEN	RRENCE
ISCHARGE; YEARS, /	BASE IN CFS, AND ANNUA	FOR INDIC EXCEEDAN	OD OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF RECORDED OF	CORD 196 CURRENCE ABILITY,	9-82 INTERVAL, IN PERCEN	IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN	OD OF R CFS, FO AL, IN Y CE PROBA	ECORD 19 R INDICAT EARS, AND BILITY, I	69-82 ED RECUF ANNUAL N PERCEN	RRENCE
ISCHARGE YEARS, /	BASE IN CFS, AND ANNUA	FOR INDIC EXCEEDAN 5 20%	CATED RENCE PROB	CORD 196 CURRENCE ABILITY,	9-82 INTERVAL, IN PERCEN	IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	RECORD 19 R INDICAT EARS, AND BILITY, I 25 4%	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN 5 20%	CATED RENCE PROB	CORD 196 CURRENCE ABILITY, 25 4%	9-82 INTERVAL, IN PERCEN	IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV EXCEEDAN 5 20%	CFS, FO AL, IN Y CE PROBA	RECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 8370	69-82 ED RECUF ANNUAL N PERCEN	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN 5 20%	CATED RENCE PROB	CORD 196 CURRENCE ABILITY, 25 4%	9-82 INTERVAL, IN PERCEN	IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  4660 3780	CFS, F0 AL, IN Y CE PROBA 10 10% 6260 4900	RECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 8370 6270	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN 5 20%	CATED RENCE PROB	CORD 196 CURRENCE ABILITY, 25 4%	9-82 INTERVAL, IN PERCEN	IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  2490 2150 1740	D ON PER	CFS, FO AL, IN Y CE PROBA 10 10% 6260 4900 3510	RECORD 19 R INDICAT EARS, AND BILITY, I 25 4\$ 8370 6270 4280	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN 5 20%	CATED RENCE PROB	CORD 196 CURRENCE ABILITY, 25 4%	9-82 INTERVAL, IN PERCEN	IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2490 2150 1740 1290	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  4660 3780 2840 2020	CFS, FO AL, IN Y CE PROBA  10 10% 6260 4900 3510 2480	RECORD 19 R INDICAT EARS, AND BILITY, 1 25 4% 8370 6270 4280 3000	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN 5 20%	CATED RENCE PROB	CORD 196 CURRENCE ABILITY, 25 4%	9-82 INTERVAL, IN PERCEN	IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 2490 2150 1740 1290 981	D ON PER ARGE, IN INTERV EXCEEDAN: 5 20% 4660 3780 2840 2020 1520	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 26 6260 4900 3510 2480 1850	RECORD 19 R INDICAT EARS, AND BILITY, 1 25 4% 8370 6270 4280 3000 2220	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN 5 20%	CATED RENCE PROB	CORD 196 CURRENCE ABILITY, 25 4%	9-82 INTERVAL, IN PERCEN	IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH  2 50%  2490 2150 1740 1290	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  4660 3780 2840 2020	CFS, FO AL, IN Y CE PROBA  10 10% 6260 4900 3510 2480	RECORD 19 R INDICAT EARS, AND BILITY, 1 25 4% 8370 6270 4280 3000	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN 5 20%	CATED RENCE PROB	CORD 196 CURRENCE ABILITY, 25 4%	9-82 INTERVAL, IN PERCEN	IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 2490 2150 1740 1290 981	D ON PER ARGE, IN INTERV EXCEEDAN: 5 20% 4660 3780 2840 2020 1520	10D OF R  CFS, FO AL, IN Y CE PROBA  10 10 26 6260 4900 3510 2480 1850	RECORD 19 R INDICAT EARS, AND BILITY, 1 25 4% 8370 6270 4280 3000 2220	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN 5 20%	CATED RECEPTOR	CURRENCE ABBILITY, 25 4%	9-82 INTERVAL, IN PERCEN 50 1 2%	IN IT	PERIOD (CON- SECU- TIVE DAYS) 	DISCH  2 50%  2490 2150 1740 1290 981 755 677	ARGE, IN INTERV EXCEEDAN-5 20%	CFS, FO AL, IN Y CE PROBA 10 10%	RECORD 19 R INDICAT EARS, AND BILITY, I 25 4% 8370 6270 4280 3000 2220 1570	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE IN CFS, AND ANNUA 2 50%	FOR INDIC EXCEEDAN 5 20%	DD OF RECATED RESIDENCE PROBLEM	CURRENCE ABILITY, 25 4% 0500	9-82 INTERVAL, IN PERCEN 50 1 2%	1N NT 00 1% 	PERIOD (CON- SECU- TIVE DAYS)	2490 2150 1740 1290 981 755 677	AGGE, IN INTERV EXCEEDAN- 5 20%	CFS, FO AAL, IN Y CE PROBA  10 10%  6260 4900 3510 2480 1850 1340 1220	R INDICAT EARS, AND BILITY, I 25 4% 	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE

#### ROGUE RIVER BASIN

## 14335000 ROGUE RIVER BELOW SOUTH FORK ROGUE RIVER, NEAR PROSPECT, OR

LOCATION.--Lat 42°42'00", long 122°35'40", in SW\u00e4N\u00fc sec.16, T.33 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on left bank 130 ft upstream from highway bridge, 0.5 mi downstream from Cascade Gorge, 3.1 mi downstream from South Fork Rogue River, 6.6 mi southwest of Prospect, and at mile 160.4 (river-profile survey).

DRAINAGE AREA .-- 650 mi2.

PERIOD OF RECORD. --October 1928 to September 1965. Prior to May 1929 monthly discharge only, published in WSP 1318.

GAGE.--Staff gage. Datum of gage is 1,707.57 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to June 23, 1961, water-stage recorder at sites 195 ft downstream; prior to Aug. 31, 1957, water-stage recorder at datum 0.69 ft higher and Aug. 31, 1957 to June 22, 1961, water-stage recorder at datum 0.31 ft lower.

REMARKS.--Considerable diurnal fluctuation caused by powerplant 5.5 mi above station. Small diversions for irrigation above station.

AVERAGE DISCHARGE. -- 37 years, 1,799 ft3/s, 1,302,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 55,000 ft³/s Dec. 22, 1964, gage height, 23.0 ft, from floodmark, from rating curve extended above 18,000 ft³/s by logarithmic plotting; minimum since intake was lowered Aug. 18, 1934, 493 ft³/s Sept. 1, 1934 (prior to Aug. 18, 1934, minimum not determined).

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1929-65

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1930-65

			4511	DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	DISC	INTERVAL	L, IN YE	ARS, AND	ATED RECUI ANNUAL N IN PERCEI	0N-
	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
CT0BER	680	1897	1055	255	.24	4.9	1	878	749	689	643	- 595	
OVEMBER	717	2719	1398	509	.36	6.5	3	902	768	704	654	601	
ECEMBER	782	7361	2008	1320	.66	9.3	7	913	780	715	665	611	-
ANUARY	809	4448	1921	938	.49	8.9	14	927	792	726	674	618	
BRUARY	854	4788	2111	907	.43	9.8	30	946	808	740	686	629	_
	1303	3949	2046	565	. 28	9.5	60	971	828	757	700 7 <b>1</b> 0	640 646	_
	1373 1126	3831	2552	583	.23	11.8 13.1	90	997 1030	845 872	770 793	733	668	
JNE	838	4290 4799	2820 2258	826 841	. 29 . 37	10.5	120 183	1180	963	864	790	713	_
ULY	692	2287	1346	347	.26	6.2	100	1100	907			, , , , , , , , , , , , , , , , , , ,	
JGUST	590	1532	1077	212	.20	5.0							
EPTEMBER	610	1387	1000	177	.18	4.6							
NNUAL  MAGNITU					.23 OUS PEAK F	100 							
MAGNITU SCHARGE, YEARS, AN	UDE AND BASE IN CFS,	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE	ISTANTANE ICORD 193 ICURRENCE	OUS PEAK F 2-55 INTERVAL, IN PERCE		PERIOD (CON-	BASE DISCH	ID ON PER	RIOD OF F CFS, FC VAL, IN N	RECORD 1		RRENC
MAGNITU	UDE AND BASE	PROBABILI D ON PERI	TY OF IN OD OF RE	ISTANTANE CORD 193	OUS PEAK F 2-55 INTERVAL, IN PERCE		PERIOD	BASE DISCH	ID ON PER	RIOD OF F CFS, FC VAL, IN N	RECORD 1	1929-65  ATED RECUIND ANNUAL	 RRENC
MAGNITU SCHARGE, YEARS, AN	UDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK F 2-55 INTERVAL, IN PERCEI	 FLOW  IN NT	PERIOD (CON- SECU- TIVE	BASE DISCH	ID ON PER IARGE, IN INTERN EXCEEDAN	RIOD OF F CFS, FC VAL, IN N NCE PROBA	RECORD 1	1929-65 ATED RECUIND ANNUAL IN PERCEI	RRENC
MAGNITU SCHARGE, YEARS, AN 1.25 80%	UDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK F 2-55 INTERVAL, IN PERCEI	 FLOW  IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	IARGE, IN INTERI EXCEEDAN 5 20%	N CFS, FC VAL, IN N NCE PROBA 10%	DR INDICA YEARS, AN ABILITY, 25 4%	1929-65 ATED RECUI	RRENC
MAGNITU SCHARGE, YEARS, AN 1.25 80%	UDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK F 2-55 INTERVAL, IN PERCEI	 FLOW  IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	IARGE, IN INTERVEXCEDAN 5 20%	N CFS, FC VAL, IN NCE PROB/ 10 10%	OR INDICA YEARS, AN ABILITY, 25 4%	1929-65 ATED RECUI ND ANNUAL IN PERCEI 50 2% 30500 21500	RRENC NT 10
MAGNITU SCHARGE, YEARS, AN 1.25 80%	UDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK F 2-55 INTERVAL, IN PERCEI	 FLOW  IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2  50%  6720  5590  4490	11300 8920 6670	N CFS, FC VAL, IN NCE PROB/ 10 10%	25 4% 23100 16800 11600	1929-65  ATED RECUI ND ANNUAL IN PERCEI 50 2%  30500 21500 14500	RRENC
MAGNITU SCHARGE, YEARS, AN	UDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK F 2-55 INTERVAL, IN PERCEI	 FLOW  IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH 2 50% 6720 5590 4490 3780	ID ON PER IARGE, IN INTER EXCEEDAN 5 20% 	N CFS, FC VAL, IN N NCE PROB/ 10 10% 	25 4% 23100 11600 7870	1929-65  ATED RECUI ND ANNUAL IN PERCEI 50 2% 30500 21500 14500 9190	RRENC NT 10
MAGNITU SCHARGE, YEARS, AN 1.25 80%	UDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 193 CURRENCE BABILITY,	OUS PEAK F 2-55 INTERVAL, IN PERCEI	 FLOW  IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2  50%  6720  5590  4490	11300 8920 6670	N CFS, FC VAL, IN NCE PROB/ 10 10%	25 4% 23100 16800 11600	1929-65  ATED RECUI ND ANNUAL IN PERCEI 50 2%  30500 21500 14500	RRENC

			DISCH	HARGE, II	V CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCEN'	F OF TIME	:		
	5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
375	0 3	3160	2800	2500	2250	2040	1690	1430	1260	1130	1060	1000	942	877	801

#### 14335500 SOUTH FORK BIG BUTTE CREEK NEAR BUTTE FALLS. OR

LOCATION.--Lat 42°32°25", long 122°33'15", in NE½SW½ sec.11, T.35 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 10 ft downstream from Ginger Creek, 0.6 ml east of town of Butte Falls, and at mile 14.0.

DRAINAGE AREA. -- 138 mi2.

PERIOD OF RECORD.--September 1910 to October 1911 (published as "at Butte Falls"), August to October 1915, October 1917 to September 1922, March 1925 to September 1982. Monthly discharge only August, September 1915, published in WSP 1318.

GAGE.--Water-stage recorder. Concrete control since Oct. 1, 1968. Altitude of gage is 2,360 ft, from river-profile map. Sept. 21, 1910, to Sept. 30, 1922, nonrecording gage at site 300 ft upstream at different datums.

REMARKS.--Flow slightly regulated since 1952 by Willow Creek Reservoir, capacity, 7,320 acre-ft. Diversions for irrigation above station and for municipal water supply for Medford (since 1927) and Butte Falls.

AVERAGE DISCHARGE.--63 years (water years 1911, 1918-22, 1926-82), 155  $ft^3/s$ , 112,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 7.65 ft, from rating curve extended above 1,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 29 ft<sup>3</sup>/s Sept. 26, 1981.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1928-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL NO	0 <b>N</b>
НТИОМ	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	44	127	 78	19	.24	4.3	1	65	52	45	40	34	 31
IOVEMBER :	49	218	100	34	.34	5.5	3	66	52	45	40	35	31
DECEMBER	60	1073	182	165	.91	10.0	7	67	53	47	41	36	33
JANUARY	54	785	214	149	.70	11.8	14	68	55	48	43	38	34
EBRUARY	59	532	221	118	.53	12.2	30	70	57	51	46	41	38
IARCH	67	740	240	126	.53	13.2	60	72	60	54	49	44	41
PR!L	73	435	229	89	.39	12.6	90	74	62	56	52	47	45
ΑY	71	333	184	69	.38	10.1	120	76	64	58	54	49	47
UNE	53	287	125	48	.38	6.9	183	84	69	63	58	53	50
ULY	52	134	89	19	.22	4.9						- <b></b>	
UGUST	46	127	80	16	.20	4.4							
SEPTEMBER	45	106	77	14	.18	4.2							
NNUAL	64	297	<b>1</b> 51	52	.35	100							
 DISCHARGE	BASE , IN CFS,	D ON PERIO	DD OF RECATED RE	CORD 191	OUS PEAK F 1-82 INTERVAL, IN PERCER	, IN	PERIOD	BASEI DISCHA	O ON PER ARGE, IN INTERV	ABILITY COLOR OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF RECORD OF	CORD 19  INDICAT ARS, AND	28-82  ED RECUR ANNUAL	RENCE
		<del>-</del>		<del>-</del>			(CON-	E	EXCEEDANG	CE PROBAB	ILITY, I	N PERCEN	1T
1.25	2 50 <b>%</b>		10 10%	25 4%		100	SECU-						
80%					2%	1%	TIVE	2	5	10	25	50	10

ISCHARGE, YEARS, A							PERIOD		INTERV	AL, ÎN Y	R INDICA EARS, AN BILITY.	D ANNUAL	
1.25 80 <b>%</b> 	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10 10\$	25 4%	50 2%	100
415	757	1510	2250	3530	4800	6400							
		<del>-</del>	<del>-</del>	<del>-</del>			1	624	1190	1720	2600	3430	4450
WEIGHTED	SKEW ≕	.480					3	533	974	1380	2040	2660	3410
							7	446	769	1040	1470	1850	2290
							15	373	601	777	1030	1230	1460
							30	319	492	616	78 <b>1</b>	910	1040
							60	271	408	504	628	723	820
							90	249	367	447	547	621	695

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1928-82

 · <b>-</b>		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	ED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95 <b>%</b>
 367	291	243	209	182	158	124	105	93	83	78	74	70	65	59

#### ROGUE RIVER BASIN

#### 14337500 BIG BUTTE CREEK NEAR MCLEOD, OR

LOCATION.--Lat 42°39'05", long 122°41'25", in NE±NW± sec.3, T.34 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 225 ft upstream from county road bridge, 0.9 mi south of McLeod, and at mile 0.64.

DRAINAGE AREA .-- 245 mi2.

PERIOD OF RECORD.--October 1945 to September 1957. October 1967 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,525.95 ft National Geodetic Vertical Datum of 1929. Oct. 9, 1945, to Sept. 30, 1957, nonrecording gage at site 260 ft downstream at datum 0.53 ft higher.

REMARKS.--Slight regulation by fish hatchery 600 ft above station. Several diversions in the vicinity of Butte Falls, the two largest being the city of Medford diversion and Eagle Point Irrigation District Canal.

AVERAGE DISCHARGE.--27 years, 283  $ft^3/s$ , 205,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft³/s Dec. 22, 1955, gage height, 12.75 ft, site and datum then in use, from rating curve extended above 3,300 ft³/s on basis of slope-area measurement of peak flow; minimum, 6.4 ft³/s June 23, 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 18.6 ft, present site, from floodmark by local resident, discharge, 16,800 ft<sup>3</sup>/s, from rating curve, at former site, extended above 9,000 ft<sup>3</sup>/s and field estimate of overflow.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1946-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1947-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL NO	)N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER		330	133	55	.41	3.9	1	60	41	- <b></b>	25	18	
NOVEMBER	66	535	217	126	. 58	6.4	3	59	43	36	31	25	
DECEMBER	58	1334	440	325	.74	12.9	7	60	45	39	34	29	·
JANUARY	64	1325	552	342	.62	16.2	14	61	47	40	35	31	
FEBRUARY	92	1121	512	274	.54	15.0	30	63	48	42	37	32	
MARCH	126	1362	535	311	.58	15.7	60	66	51	45	40	35	
APRIL	74	723	396	175	.44	11.6	90	71	55	47	42	37	
MAY	57	492	249	122	. 49	7.3	120	80	61	52	46	39	
JUNE	44	450	145	85	.59	4.3	183	99	74	64	57	50	
JULY	37	148	85	30	.35	2.5					<del>-</del>		
AUGUST	43	121	71	22	.31	2.1							
SEPTEMBER	44	106	72	17	. 24	2.1							
ANNUAL	80	501	283	115	.41	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1946-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1946-82

YEARS, AN					NCE INTER' IY, IN PER		PERIOD (CON-		INTERV	AL, ÍN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80% 	2 50% 	5 20 <b>%</b>	10 10%	25 4% 	50 2 <b>%</b> 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
1780	3150	5300	6830	8800	10300	<del></del>							
							1	2250	3890	4950	6200	7060	-
<b>VEIGHTED</b>	SKEW =	→.334					3	1770	2960	3660	4440	4930	_
							7	1360	2160	2610	3070	3350	_
							15	1000	1550	1850	2160	2350	-
							30	781	1190	1410	1660	1810	-
							60	634	962	1150	1340	1460	-
							90	584	878	1040	1200	1290	_

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-82

5% 10% 15% 20% 25% 30% 40% 50% 60% 70% 75% 80% 85% 90%	5 95%	
	אַכפּ	5%
867 632 510 427 359 296 207 158 123 93 83 75 67 59	49	9

## 14337600 ROGUE RIVER NEAR MCLEOD, OR

LOCATION.--Lat 42°39'20", long 122°42'50", in SW¼ sec.33, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on left bank at Obstinate J Ranch, 1.3 mi downstream from Big Butte Creek, 1.6 mi southwest of McLeod, and at mile 154.0.

DRAINAGE AREA .-- 938 mi2.

SEPTEMBER

ANNUAL

843

1377

1473

3340

PERIOD OF RECORD. -- October 1965 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,489.08 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake. Diversions for Irrigation above station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--17 years, 2,100 ft3/s, 1,521,000 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1966-76

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft<sup>3</sup>/s Mar. 3, 1972, gage height, 12.24 ft; minimum, 468 ft<sup>3</sup>/s Feb. 18, 1977, result of closure of Lost Creek Dam, minimum prior to that time, 604 ft<sup>3</sup>/s Sept. 5, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1928, 20.35 ft Dec. 22, 1964, from floodmarks, discharge, 74,300 ft<sup>3</sup>/s from slope-area measurement of peak flow.

#### STATISTICAL SUMMARIES

DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-STAN-COEFFI- PERCENT PERIOD DARD CIENT OF EXCEEDANCE PROBABILITY, IN PERCENT (CON-DEVIA-0F MINIMUM MAXIMUM MEAN TION VAR1-ANNUAL SECU-TIVE 100 (CFS) (CFS) (CFS) (CFS) ATION RUNOFF 2 DAYS) 50% 20% 10% 5% 2% 1%

MONTH OCTOBER 917 1508 1229 179 .15 4.5 1 1030 893 830 781 NOVEMBER 1038 . 45 903 838 788 3932 1848 836 6.7 3 1040 DECEMBER 1127 4293 2333 953 .41 8.5 1060 914 847 795 JANUARY 1434 5290 3429 1472 .43 12.5 14 1080 930 859 805 **FEBRUARY** 1523 4586 2720 833 .31 9.9 30 1100 943 822 MARCH 194**1** 8565 3301 1926 .58 12.0 60 1130 973 902 848 APRIL 1603 4240 2861 884 .31 10.4 q٨ 1150 993 918 860 MAY 1574 4503 3270 946 . 29 11.9 120 1180 1010 935 878 JUNE 1164 4025 2555 1037 1000 .41 9.3 183 1380 1160 1070 5.7 JULY 903 2196 1577 445 . 28 AUGUST 887 1618 1255 274 .22 4.6

4.2

100

.19

. 28

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1966~76

1162

2294

652

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1966-76

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

BASED ON PERIOD OF RECORD 1967-76

			IDICATED F				PERIOD (CON-	DISC	INTER	N CFS, FOR VAL, IN YE NCE PROBAE	ARS, AND	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10 <b>%</b> 	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
7300	1 <b>1</b> 700	19100	24900										
							1	9450	16000	21600			
WEIGHTE	D SKEW =	• <b>.1</b> 71					3	8060	13400	18200		<b>-</b> -	
							7	6670	10300	13300			
							15	5370	7760	9580			
							30	4370	5990	7190			
							60	3670	4900	5810			
							90	3360	4480	5280			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-76

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATE	D PERCEN	T OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4760	4010	<b>3</b> 520	3140	2850	2590	2160	1820	1570	1390	1320	1220	1120	1050	977

#### ROGUE RIVER BASIN

## 14338000 ELK CREEK NEAR TRAIL, OR

LOCATION.--Lat 42°39'50", long 122°44'50", in SW\u03c4 sec.30, T.33 S., R.1 E., Jackson County, Hydrologic Unit 17100307, on right bank 3.3 mi northeast of Trail and at mlle 0.4.

DRAINAGE AREA .-- 133 mi2.

PERIOD OF RECORD.--October 1945 to September 1982. Prior to March 1946 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,456.56 ft National Geodetic Vertical Datum of 1929. Prior to July 5, 1946, nonrecording gage at various sites within 1.0 mi of present site at different datums. July 5, 1946, to June 22, 1950, nonrecording gage, and June 23, 1950, to May 23, 1954, water-stage recorder, at site 0.3 mi upstream at datum 12.14 ft higher.

REMARKS.--No regulation. Diversions for irrigation above station.

AVERAGE DISCHARGE. -- 37 years, 230 ft<sup>3</sup>/s, 166,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 18.84 ft, from rating curve extended above 4,700 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 0.40 ft<sup>3</sup>/s Aug. 16, 1965.

## STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1947-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1948-82

	MINIMUM (CFS)	MAXIMUM (CFS)	MC AV	STAN- DARD DEVIA- TION (CFS)	COEFFI- CIENT OF VARI- ATION		PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
MONTH			MEAN (CFS)					2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	3.2	404	38	69	1.83	1.4	1	2.4	1.5	1.2	1.0	•9	
OVEMBER	9.1	1008	193	196	1.02	7.0	3	2.7	1.7	1.4	1.1		
DECEMBER	13	1851	457	408	.89	16.5	7	2.9	1.9	1.5	1.3		
JANUARY	20	1283	567	391	.69	20.5	14	3.3	2.1	1.7	1.4		
EBRUARY	23	1131	519	255	.49	18.8	30	3.9	2.5	2.0	1.7		
MARCH	121	1074	439	248	.56	15.9	60	5.1	3.4	2.8	2.3		
APRIL	66	565	297	125	.42	10.7	90	6.4	4.6	4.0	3.5		
MAY	_										5.2		
JUNE	38 15	358 254	169 57	91 43	. 54	6.1	120	9.2	6.8	5.9			
JULY					.75	2.1	183	25	17	14	12	11	
AUGUST	3.7	36 25	15	7.7		•5							
	1.4	25	6.7			.2							
	4 5												
	1.5	25	7.1	4.2	•00	ر.							
SEPTEMBER	42 TUDE AND	438 	229 TY 0F IN	92  STANTANE	.40 	100	 MA(	GNITUDE A	ND PROBA				 Ow
MAGNIT	42 TUDE AND BASE	438 PROBABILI D ON PERIO	229 TY OF INDOOR REC	92 STANTANE CORD 194 CURRENCE	.40 	100  FLOW 	PERIOD (CON-	BASED D1SCHA	ON PERI	OD OF RECEIVED	R INDICATEARS, AND	947-82  TED RECUR	 RENCE
MAGNIT	42 TUDE AND BASE	438 PROBABILI D ON PERIO	229 TY OF INDOOR REC	92 STANTANE CORD 194 CURRENCE	.40 OUS PEAK F 7-82 INTERVAL, IN PERCEI	100  FLOW 	PERIOD	BASED D1SCHA	ON PERI	OD OF RECEIVED	R INDICATEARS, AND	947-82  TED RECUR D ANNUAL	 RENCE
MAGNIT	TUDE AND BASE , IN CFS, AND ANNUA	438  PROBABILI' D ON PERIO  FOR INDIC	229 TY OF IN: OD OF REC CATED REC NCE PROB.	92 STANTANE CORD 194 CURRENCE ABILITY,	.40 OUS PEAK F 7-82 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU-	BASED DISCHA	ON PERI	OD OF RECEIVED	R INDICATE ARS, AND	947-82 TED RECUR D ANNUAL IN PERCEN	RENCE
MAGNIT	TUDE AND BASE , IN CFS, AND ANNUA	438 PROBABILI D ON PERIO FOR INDIC L EXCEEDA 5 20%	229 TY OF IN: DD OF REC CATED REC NCE PROB. 10 10%	92 STANTANE CORD 194 CURRENCE ABILITY,	.40 OUS PEAK F 7-82 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI	OD OF RE	R INDICA EARS, ANI BILITY,	947-82 TED RECURD ANNUAL IN PERCEN 50 2%	RENCE T
MAGNITUSCHARGE, YEARS, /	42  TUDE AND BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA 5 20%	229 TY OF IN: DD OF REC CATED REC NCE PROB. 10 10%	92 STANTANE CORD 194 CURRENCE ABILITY,	.40 OUS PEAK F 7-82 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%	ON PERI	OD OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMENDED OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEND OF RECOMMEN	R INDICA R INDICA EARS, ANI BILITY, 25 4%	TED RECURD ANNUAL IN PERCEN 50 2%	T 100 1%
MAGNITUSCHARGE, YEARS, /	42 TUDE AND BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA 5 20%	229 TY OF IN: DD OF REC CATED REC NCE PROB. 10 10%	92 STANTANE CORD 194 CURRENCE ABILITY,	.40 OUS PEAK F 7-82 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	D1 SCHA  E 2 50%  3880 2630	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 6060 4240	OD OF RE CFS, FOR L, IN YE E PROBAE 10 10% 7160 5180	R INDICA EARS, ANI BILITY, 25 4%	947-82 TED RECUR D ANNUAL IN PERCEN 50 2% 8780 6850	RENCE
MAGNITUSCHARGE, YEARS, /	42  TUDE AND BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA 5 20%	229 TY OF IN: DD OF REC CATED REC NCE PROB. 10 10%	92 STANTANE CORD 194 CURRENCE ABILITY,	.40 OUS PEAK F 7-82 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	D1 SCHA  E 2 50%  3880 2630 1720	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 6060 4240 2710	OD OF RECEPTION OF REPROBARE 10 10%	R INDICA EARS, ANI BILITY, 25 4% 8210 6200 3940	947-82 TED RECUR D ANNUAL IN PERCEN 50 2% 8780 6850 4370	T 100 1%
MAGNITUSCHARGE, YEARS, // 1.25 80%	42  TUDE AND BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA 5 20%	229 TY OF IN: DD OF REC CATED REC NCE PROB. 10 10%	92 STANTANE CORD 194 CURRENCE ABILITY,	.40 OUS PEAK F 7-82 INTERVAL IN PERCEI	100 	PERIOD (CON- SECU- TIVE DAYS)	D1 SCHA  E 2 50%  3880 2630 1720 1180	ON PERI RGE, IN INTERVA XCEEDANC 5 20% 6060 4240 2710 1730	OD OF RECOME A STATE OF THE PROBABLE   10	R INDICA EARS, ANI BILITY, 25 4%	947-82  TED RECUR D ANNUAL IN PERCEN 50 2%  8780 6850 4370 2480	T 100 1%
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 		DISCH	ARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	6 <b>0%</b>	70%	75%	80%	85%	90%	95%
 910	581	432	340	270	215	132	70	34	17	13	9.4	6.8	5.0	3.5

213

# 14339000 ROGUE RIVER AT DODGE BRIDGE, NEAR EAGLE POINT, OR

LOCATION.--Lat 42°31'30", long 122°50'30", in SE‡ sec.17, T.35 S., R.1 W., Jackson County, Hydrologic Unit 17100307, on right bank 50 ft upstream from Dodge Bridge, 0.7 mi downstream from Reese Creek, 4.3 mi northwest of Eagle Point, and at mile 138.61.

DRAINAGE AREA .-- 1,215 mi2.

PERIOD OF RECORD.--October 1938 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,271.39 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1938, nonrecording gage, Dec. 21, 1938, to Aug. 15, 1968, water-stage recorder, at datum 2.27 ft higher, Aug. 16, 1968, to Sept. 30, 1976, water-stage recorder, at datum 1.00 ft higher.

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake. Diversions for irrigation above station; most of low flow of Big Butte Creek is diverted near Butte Falls.

AVERAGE DISCHARGE.--44 years, 2,597  $ft^3/s$ , 1,882,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 87,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.78 ft, datum then in use, from rating curve extended above 23,000 ft<sup>3</sup>/s; minimum, 567 ft<sup>3</sup>/s Feb. 18, 1977, result of closure of Lost Creek dam, minimum prior to that time 611 ft<sup>3</sup>/s Aug. 6, 14, 29, Sept. 9, 1940.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1939-76 MAG

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

	MIMIMIM	MAYLUIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	OF	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	RS, AND	TED RECUI ANNUAL NO IN PERCEI	ON-
момтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	934	3099	1354	399	.29	4.2	1	1070	937	875	827	. 777	
NOVEMBER	1012	5719	2151	1007	. 47	6.7	3	1080	949	886	838	787	
DECEMBER	1164	11290	3479	2228	.64	10.8	7	1090	957	894	845	793	
JANUARY	1489	8151	4021	2124	.53	12.5	14	1100	968	905	856	805	
FEBRUARY	1798	8382	3922	1383	. 35	12.2	30	1120	983	919	869	818	
MARCH	1784	9610	3676	1523	.41	11.4	60	1150	1010	945	896	844	
APRIL	1689	5220	3476	833	.24	10.8	90	1190	1040	969	916	860	
ΛAY .	1595	5287	3484	921	.26	10.8	120	1230	1070	1000	943	885	
JUNE	1201	4534	2629	881	.34	8.2	183	1490	1260	1150	1080	1000	
JULY	928	2431	1557	382	.25	4.8							
AUGUST	888	1711	1254	244	.19	3.9							
SEPTEMBER	853	1535	1177	189	.16	3.7							
ANNUAL	1568	4117	2676	684	.26	100							
	BASE	D ON PERI	OD OF RE	CORD 193			MA(	BASE	D ON PER	10D 0F R	ECORD 1		- <b></b>
YEARS, /	AND ANNUA	L EXCEEDA			INTERVAL IN PERCEI		PERIOD (CON- SECU-		INTERV	AL, ÎN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20% 	10%	4%	2% 	1%	TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100

YEARS,	AND ANN	UAL EXCE	DANCE P	ROBABILI	TY, IN PE	RCENT	PERIOD (CON-					ND ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20%	10 10%	25 4% 	50 2% 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
12700	20800	35300	47100	64900	80300								
						~~~	1	16000	26700	35200	47500	57900	
WEIGHTE	D SKEW =	247					3	12400	20400	26800	36300	44400	
							7	9050	14200	18300	24200	29300	
							15	6820	10000	12400	15700	18400	
							30	5470	7580	9150	11300	13100	
							60	4620	6180	7310	8850	10100	
							90	4270	5600	6500	7680	8590	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1939-76

			DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALE	OR EXC	EEDED FOR	INDICA	TED PERCE	NT OF T	IME		
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
-	E020	4700	4420	7740	7760	7050	0500	2010	1660	4.470	4750	1260	4470	1000	1010
	5920	4700	4120	3/10	3360	3050	2500	2010	1660	1430	1350	1260	1170	1090	1010

# 14339500 SOUTH FORK LITTLE BUTTE CREEK AT BIG ELK RANGER STATION, OR-

LOCATION.--Lat 42°20'40", long 122°21'30", in NW¼ sec.21, T.37 S., R.4 E., Jackson County, Hydrologic Unit 17100307, 1.0 mi south of Big Elk ranger station, 2.5 mi upstream from Big Draw Creek, and 15 mi southeast of Lake Creek Post Office.

DRAINAGE AREA. -- About 17 mi2.

PERIOD OF RECORD. -- October 1926 to September 1950.

GAGE.--Water-stage recorder. Altitude of gage is 4,660 ft, by barometer. Prior to Oct. 28, 1942, water-stage recorder 600 ft downstream at same datum.

REMARKS.--No diversion or regulation above station.

COOPERATION. -- Records for 1932-50, furnished by the Oregon Water Resources Department.

AVERAGE DISCHARGE.--24 years, 17.9 ft3/s, 12,970 acre-ft/yr.

MONTHLY AND ANNUAL MEAN DISCHARGES 1927-50

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 145 ft<sup>3</sup>/s May 25, 1942, gage height, 2.80 ft, from rating curve extended above 25 ft<sup>3</sup>/s; minimum recorded, 4 ft<sup>3</sup>/s July 8-15, 1931.

# STATISTICAL SUMMARIES

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

89

68

63

49

40

99

74

107

79

62

	MINIMEN	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	I E	NTERVAL, XCEEDANC	CFS, FOR IN YEAR: E PROBAB	S, AND AN ILITY, IN	NUAL NO	ON→
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	AT!ON	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	5.9	13	9.7	1.8	.18	4.6	1	7.4	5.8	5.0	4.4		
NOVEMBER	6.2	14	9.9	2.1	.21	4.6	3	7.5	5.8	5.1	4.5		
DECEMBER	6.3	16	10	2.6	.25	4.7	7	7.6	6.0	5.2	4.6-		
JANUARY	6.0	. 17	9.8	2.9	.30	4.6	14	7.7	6.1	5.4	4.9		
FEBRUARY	6.0	21	11	3.3	.30	5.1	30	8.0	6.5	5.8	5.2		
MARCH	7.6	34	15	6.2		7.1	60	8.5	6.9	6.2	5.6		
APRIL	11	63	31	14	.44	14.5	90	8.8	7.2	6.4	5.8		
YAY	8.1	88	53	25	.47	24.8	120	9.2	7.4	6.5	5.8		
JUNE	5.3	78	28	17	.61	13.1	183	9.7	8.0	7.2	6.5		
JULY	4.7	21	14	4.2	.30	6.6							
AUGUST	5.5	17	12	3.0	.26	5.5							
SEPTEMBER	5.0	15	11	2.4	.22	5.0							
ANNUAL	6.6	26	18	5.0	.28	100							
DI SCHARGE	BASE , IN CFS,	PROBABILI D ON PERIO FOR INDIO	OD OF REC	ORD 1927	7-50 INTERVAL	 , IN	PERIOD (CON-	BASED  DISCHA	ON PERI  RGE, IN INTERVA	BILITY OF OD OF REC  CFS, FOR L, IN YEA E PROBABI	CORD 192  INDICATE ARS, AND	7-50 D RECUR	RENCI
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE		 5		 25	 50	100
			· U /0 			1,6	DAYS)	50 <b>%</b>	20%	10%	4%	2 <b>%</b>	19
70	95	124	141	160									
							1	80	116	131	144	'	-
WE I GHTE	D SKEW =	418					3	77	113	127	139		-
							7	75	107	120	130		-
							15	71	101	112	121		
							17	, ,	101	112	141		-

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1927-50

30

60

90

		DISCHAR	GE, IN	CFS, WHI	CH WAS	EQUALED	OR EXCEED	ED FOR	INDICATED	PERCENT	OF TIME			
5% 1	0% 1	5%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
63 3	s7 2	7	19	17	15	14	12	11	10	9.0	8.5	8.0	7.4	6.0

# 14341500 SOUTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR

LOCATION.--Lat 42°24'30", long 122°36'00", in SEt sec.29, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on left bank 0.5 mi upstream from intake of Rogue River Valley Canal, 1.4 mi southeast of Lakecreek, and at mile 18.1.

DRAINAGE AREA. -- 138 mi2.

385

294

231

186

152

120

74

44

30

23

21

19

18

16

13

PERIOD OF RECORD. -- April 1921 to September 1932.

GAGE.--Water-stage recorder. Altitude of gage is 1,725 ft, by barometer. Supplementary nonrecording gage at site 25 ft upstream used Jan. 12 to Sept. 6, 1965. Apr. 15 to June 17, 1921, nonrecording gage, and June 18, 1921, to Sept. 6, 1965, water-stage recorder at site 75 ft upstream at datum 4.97 ft higher.

REMARKS.--No regulation. Diversions for irrigation above station; also, in December 1958 Dead Indian collection canal began diverting above station from Code Creek and Dead Indian Creek and in December 1959 South Fork Little Butte collection canal began diverting above station from South Fork Little Butte Creek, Daley Creek, and Beaver Dam Creek. These are transbasin divarsions to Howard Prairie Reservoir in Klamath River basin, but eventually this water is diverted back to Rogue River basin for irrigation of lands in the Ashland-Medford area and power development enroute.

AVERAGE DISCHARGE.--61 years (water years 1922-82), 104 ft<sup>3</sup>/s, 75,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,660 ft<sup>3</sup>/s Dec. 2, 1962, gage height, 8.35 ft, site and datum then in use; minimum, 2.0 ft<sup>3</sup>/s Aug. 10, 1931.

### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF THE TWO COLLECTION CANALS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1922-57

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1923-57

	M I N I MUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		ARGE, IN INTERVAL, EXCEEDANC	IN YEAR	RS, AND	ANNUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 - 2%	100
OCTOBER	14	85	25	15	.59	1.9	1	13	9.0	6.9	5.4	4.0	
NOVEMBER	14	177	54	41	.77	4.1	3	14	9.5	7.3	5.7	4.1	
DECEMBER	19	405	117	111	.95	9.0	7	15	10.0	7.7	5.9	4.3	
JANUARY	19	380	127	99	.78	9.8	14	15	11	8.3	6.5	4.8	
FEBRUARY	27	345	157	95	.61	12.1	30	16	11	8.8	6.9	5.1	
MARCH	51	479	180	99	.55	13.9	60	17	12	9.5	7.6	5.7	
APRIL	47	509	256	110	.43	19.7	90	18	13	11	8.7	6.8	
4ΑΥ	18	434	228	132	.58	17.6	120	19	14	12	9.8	7.8	
JUNE	9.7	292	95	67	.71	7.3	183	27	18	15	12	10	
JULY	4.8	50	26	11	.42	2.0							
AUGUST	4.7	28	17	5.5	.33	1.3							
SEPTEMBER	8.5	26	17	4.4	. 25	1.3							
ANNUAL	21	181	108	44	.41	100							
	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN	ISTANTANE CORD 192	OUS PEAK F 2-82	LOW	MAG		AND PROBAL				
) SCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 192 CORRENCE BABILITY,	OUS PEAK F 2-82 INTERVAL, IN PERCEN	LOW	PERIOD (CON-	BASE(	ON PERIO	OD OF RECEIVED	CORD 19	22-57  ED RECUR ANNUAL	 RENCE
) I SCHARGE	TUDE AND BASE	PROBABILI D ON PERI	TY OF IN	ISTANTANE CORD 192	OUS PEAK F 2-82 INTERVAL, IN PERCEN	LOW	PERIOD	BASE(	ON PERIO	OD OF RECEIVED	CORD 19	22-57  ED RECUR ANNUAL	RENCE
OISCHARGE YEARS,	TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE CORD 192 CURRENCE BABILITY, 25 4%	OUS PEAK F 2-82 INTERVAL, IN PERCEN 50	LOW IN	PERIOD (CON- SECU- TIVE DAYS)	DISCH	ON PERIO	OD OF RECEIVED	CORD 19 R INDICAT EARS, AND EARLITY, 1 25 4%	ED RECUR O ANNUAL N PERCEN 50 2%	T 100
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 192 CURRENCE BABILITY, 25 4%	OUS PEAK F 2-82 INTERVAL, IN PERCEN 50	FLOW  TN  TO  OO  1 \$	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%	ON PERIO ARGE, IN O INTERVAL EXCEEDANCE 5 20%	CFS, FOF L, IN YE E PROBAE 10 10%	CORD 19 R INDICAT EARS, AND BILLITY, 1  25 4%  2170	ED RECUR ANNUAL N PERCEN 50 2%	T 100 1%
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 192 CURRENCE BABILITY, 25 4%	OUS PEAK F 2-82 INTERVAL, IN PERCEN 50	FLOW  TN  TO  OO  1 \$	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  760 615	ARGE, IN O INTERVAL EXCEEDANCE 5 20%	OD OF RECESSION OF	CORD 19 R INDICAT CARS, AND ILLITY, 1 25 4% 2170 1500	22-57  TED RECUR  ANNUAL  N PERCEN  50  2%  2520 1670	T 100 1%
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 192 CURRENCE BABILITY, 25 4%	OUS PEAK F 2-82 INTERVAL, IN PERCEN 50	FLOW  TN  TO  OO  1 \$	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  760 615 497	O ON PERIO	OD OF RECEIVED OF	25 4% 2170 1500 1010	222-57  ED RECUR  ANNUAL  N PERCEN  50 25  1670 1080	T 100 1%
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 192 CURRENCE BABILITY, 25 4%	OUS PEAK F 2-82 INTERVAL, IN PERCEN 50	FLOW  TN  TO  OO  1 \$	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  760 615 497 416	0 ON PERIO INTERVAL EXCEEDANCE 5 20% 1310 995 747 581	OD OF RECOMPANY OF	2170 1500 1610 25 4% 2170 1500 1010 711	222-57  TED RECUR O ANNUAL N PERCEN  50 2%  2520 1670 1080 739	T 100 1%
I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 192 CURRENCE BABILITY, 25 4%	OUS PEAK F 2-82 INTERVAL, IN PERCEN 50	FLOW  TN  TO  OO  1 \$	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCH.  2 50%  760 615 497 416 351	20% PERIO	OD OF RECOME A STATE OF THE PROBABLE OF THE PR	25 2170 1500 1010 711 566	222-57  PED RECUR ANNUAL N PERCEN 50 2% 2520 1670 1080 739 583	T 100 1%
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE	ISTANTANE CORD 192 CURRENCE BABILITY, 25 4%	OUS PEAK F 2-82 INTERVAL, IN PERCEN 50	FLOW  TN  TO  OO  1 \$	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  760 615 497 416	0 ON PERIO INTERVAL EXCEEDANCE 5 20% 1310 995 747 581	OD OF RECOMPANY OF	2170 1500 1610 25 4% 2170 1500 1010 711	222-57  TED RECUR O ANNUAL N PERCEN  50 2%  2520 1670 1080 739	T 100 1%
1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE NCE PROE 10 10%	ISTANTANE CORD 192 CURRENCE SABILITY, 25 4%	OUS PEAK F 2-82 INTERVAL IN PERCEN 50 1 2%	I N N N N N N N N N N N N N N N N N N N	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60	DISCH.  2 50%  760 615 497 416 351 292 255	20%	CFS, FOFL, IN YEE PROBAE  10 10 10 1230 878 651 527 448 384	25 4% 2170 1500 1010 711 566 484	222-57  TED RECUR ANNUAL N PERCEN  50 2%  2520 1670 1080 739 583 500	T 100 1%
I SCHARGE YEARS, 1.25 80%	TUDE AND BASE , IN CFS, AND ANNUA 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20% 2250	TY OF IN OD OF RE-	ISTANTANE ICORD 192 ICCURRENCE SABILITY, 25 4% 4610	OUS PEAK F 2-82 INTERVAL, IN PERCEN 50 2%		PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  760 615 497 416 351 295 255  OF RECOR	20%	10 10% 10% 10% 10% 10% 10% 10% 10% 10% 1	2170 1500 1010 25 48 2170 1500 1010 711 566 484 413	222-57  TED RECUR ANNUAL N PERCEN  50 2%  2520 1670 1080 739 583 500	T 100 1%

# 14341500 SOUTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR--Continued

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF THE TWO COLLECTION CANALS)

MONTHLY AND ANNUAL MEAN DISCHARGES 1961-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL,	IN YEAR	R INDICATE RS, AND AM BILITY, IM	NNUAL NO	N−
МОМТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2%	100 1%
OCTOBER	12	110	21	20	.96	1.8	1	11	8.5	7.5	6.8		
NOVEMBER	16	140	50	38	.75	4.2	3	11	8.8	7.8	7.1		
DECEMBER	16	818	148	174	1.18	12.6	7	11	9.2	8.3	7.6		
JANUARY	17	446	160	124	.78	13.6	14	12	10	9.4	8.8		
EBRUARY	16	302	129	73	.57	10.9	30	14	12	11	10		
MARCH	29	556	165					15	13	12			
PRIL				111	.67	14.0	60				11		
	48	451	202	104	.51	17.1	90	17	14	12	12		
4AY	32	511	172	118	.69	14.6	120	18	15	13	12		
JUNE	16	183	66	42	.64	5.6	183	26	20	18	17		
JULY	10	45	27	9.0	.34	2.3							
NUGUST	10	35	20	6.7	.33	1.7							
SEPTEMBER	11	35	19	5.9	.31	1.6							
ANNUAL	29	187	98	46	.47	100							
) I SCHARGE	IN CFS,	ON PERIO	OD OF RE	CORD	INTERVAL	, IN		BASEI	ON PERIO	OD OF RE	ECORD 196	1-82 D RECUR	
) I SCHARGE	BASE	ON PERIO	OD OF RE	CORD CURRENCE	INTERVAL,	, IN	PERIOD (CON-	BASEI DISCH	ON PERIO	OD OF RECEIVED	CORD 196	1-82 D RECUR	RENCE
) SCHARGE YEARS,	BASE	FOR INDIC	OD OF RE	CORD	INTERVAL,	, IN NT	PERIOD	BASEI DISCH	ON PERIO	OD OF RECEIVED	CORD 196 R INDICATE	1-82 D RECUR	RENCE
PISCHARGE YEARS,	BASEI IN CFS, AND ANNUA	FOR INDIC EXCEEDAN	OD OF RECORDED OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE	BASEI DISCH/ 2 50%	O ON PERIO ARGE, IN O INTERVAL EXCEEDANCE	OD OF RECEIVED	CORD 196 R INDICATE EARS, AND BILITY, IN  25 4%	1-82 D RECUR ANNUAL I PERCEN	RENCE
PISCHARGE YEARS, 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECORDED OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASEI  DISCH,  2  50%	O ON PERIO	OD OF RECES, FOR L, IN YEE PROBAE	R INDICATE RARS, AND BILITY, IN  25  4%	1-82 D RECUR ANNUAL I PERCEN	RENCE
1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECORDED OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH, 2 50% 751 571	O ON PERIO	OD OF RECOMMENDED	CORD 196 R INDICATE EARS, AND BILITY, IN  25 4%	D RECUR ANNUAL PERCEN 50 2%	RENCE
PISCHARGE YEARS, 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECORDED OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASEI  DISCH,  2  50%	O ON PERIO	OD OF RECES, FOR L, IN YEE PROBAE	R INDICATE RARS, AND BILITY, IN  25  4%	D RECUR ANNUAL PERCEN 50 2%	100 1%
PISCHARGE YEARS, 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECORDED OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH, 2 50% 751 571	O ON PERIO	OD OF RECES, FOR L, IN YEE PROBAE 10, 10, 2480 1830	R INDICATE ARS, AND BILLITY, IN  25  4%  3990 2950	D RECURANNUAL PERCEN	100 1%
PISCHARGE YEARS, 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECORDED OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASEI DISCH	O ON PERIO	OD OF RECEIVED OF	R INDICATE EARS, AND BILITY, IN  25  4%  3990 2950 1860	II-82 ID RECUFANNUAL I PERCEN 50 2%	100 1%
SCHARGE YEARS, 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECORDED OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH.  2 50%  751 435 348 282	ARGE, IN (INTERVALE)  5 20%  1620 1200 832 587 452	OD OF RECOME A STATE OF THE PROBABLE OF THE PR	R INDICATE CARS, AND SILITY, IN  25  4%  3990 2950 1860 1070 734	ID RECUF ANNUAL I PERCEN 50 2%	100 1%
PISCHARGE YEARS, 1.25 80%	BASE	FOR INDIC EXCEEDAN	OD OF RECORDED OF	CORD CURRENCE ABILITY,	INTERVAL IN PERCEN	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCH,  2 50%  751 571 435 348	O ON PERIO INTERVAL EXCEEDANCE 5 20% 1620 1200 832 587	OD OF RECEIVED OF	25 A 1990 2950 1860 1070	ID RECUF ANNUAL I PERCEN 50 2%	RENCE
SCHARGE YEARS, 1.25 80%	BASE	FOR INDIC	DD OF RE	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEN 50 2%	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30 60 90 FOR PERIOD	DISCH,  2 50\$  751 435 348 282 227 196  OF RECOR	5 20%	OD OF RECOMPANY OF	3990 2950 1860 1070 734 573 480	ID RECUF ANNUAL I PERCEN 50 2%	IT100
PISCHARGE YEARS, 1.25 80%	BASE	FOR INDIC	DD OF RE	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEN 50 2%  F DAILY N	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH,  2 50\$  751 435 348 282 227 196  OF RECOR	5 20%	OD OF RECOMPANY OF	3990 2950 1860 1070 734 573 480	ID RECUF ANNUAL I PERCEN 50 2%	100 1%
1.25 80% WEIGHTEI	BASEI IN CFS, AND ANNUA 2 50% 3 SKEW =	FOR INDIC EXCEEDAN 5 20%	DD OF RECEASED OF	CORD CURRENCE ABILITY, 25 4% N TABLE C CFS, WHIC	INTERVAL IN PERCEN 50 2% 	JALED OR E	PERIOD (CON- SECU- TIVE DAYS)	DISCH,  2 50\$  751 571 435 348 282 227 196  OF RECOF	1620 1200 832 547 452 359 307	CFS, FOFL, IN YEE PROBABE 10 10%	R INDICATE RARS, AND BILITY, IN  25  4%  3990 2950 1860 1070 734 573 480	ID RECUFANNUAL I PERCEN 50 2 **	100 1%

# 14342500 NORTH FORK LITTLE BUTTE CREEK AT FISH LAKE, NEAR LAKECREEK, OR

LOCATION.--Lat 42°22'35", long 122°21'20", in SE‡SW± sec.4, T.37 S., R.4 E., Jackson County, Hydrologic Unit 17100307, on right bank 0.5 mi downstream from Fish Lake dam, 14 mi east of Lakecreek, and at mile 15.2.

DRAINAGE AREA .-- 20.8 mi2.

PERIOD OF RECORD.--October 1914 to July 1915, June 1916 to September 1982. Monthly discharge only November 1916 to May 1917, published in WSP 1318.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,571.41 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1914, to July 31, 1915, nonrecording gage at site 0.5 mi upstream at different datum. June 1, 1916, to July 9, 1918, nonrecording gage and July 10, 1918, to Oct. 28, 1932, water-stage recorder at site 0.25 mi upstream at different datums.

REMARKS.--Since 1915, Fish Lake has stored water for irrigation by Medford Irrigation District. Cascade Canal diverts from Fourmile Lake in Klamath River basin and discharges into lava bed 1.0 mi above Fish Lake; diversion began August 1923. No diversion from creek above station.

AVERAGE DISCHARGE.--66 years (water years 1917-82), 35.6  $ft^3/s$ , 25,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, about 940 ft<sup>3</sup>/s June 5, 1917, computed from rate of change in contents of reservoir after break in dam occurred; no flow at times.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1918-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1919-82

	MINIMUM		MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	11	NTERVAL,	OFS, FOR IN YEARS E PROBABI	, AND AN	INUAL NO	N-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	20 5%	50 <b>2%</b>	100 1%
OCTOBER	.2	50	14	11	.84	3.2	1						
NOVEMBER	0.0	46	14	11	.81	3.2	3						
DECEMBER	1.6	42	16	10	.63	3.7	7						
JANUARY	1.3	67	18	11	.60	4.3	14	3.7	-8	•3	•2	.1	0.0
FEBRUARY	4.3	67	19	11	•57	4.4	30	4.7	1.1	. 4	.2	.1	0.0
MARCH	5.1	100	20	13	.65	4.7	60	7.2	2.3	1.1	•6	.2	. 1
APR1L	4.2	80	24	12	• 49	5.7	90	9.3	4.3	2.7	1.8	1.1	.8
MAY	16	78	38	15	-41	8.8	120	11	6.0	4.2	3.0	2.1	1.6
JUNE	17	118	55	24	. 43	13.0	183	15	8.9	6.8	5.4	4.1	3.4
JULY	22	145	86	28	.33	20.2							
AUGUST	14	129	80	26	.33	18.8	NOTE: S	SHORT-DURA	ATION DA	TA UNCERT	AIN DUE	TO EXCE	SSIVE
SEPTEMBER	6.2	76	42	16	• 38	10.0	;	ZERO EVEN	rs.				
ANNUAL	15	66	36	9.9	. 28	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1918-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1918-82

DISCHARGE, YEARS, A						VAL, IN RCENT	PERIOD (CON-		INTERV	CFS, FOR AL, IN YE CE PROBAE	EARS, AND	ANNUAL	
1.25 80%	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	25 4%	50 <b>2%</b>	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
99	119	140	151	163	171	178	1	117	477	147	155	160	165
WE IGHTED	SKEW =	409					3	117 115 113	137 135 133	147 144 141	155 152 147	160 156 151	165 159 153
							15 30	109 102	130 124	138 133	145 141	149 145	151 148
							60 90	90 79	110 97	120 105	128 113	133 117	137 121

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1918-82

	_		DISCHAF	RGE, IN C	CFS, WHI	CH WAS E	QUALED O	REXCEEDE	D FOR I	NDICATED	PERCENT	OF TIME			
	5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1	08	88	73	61	50	41	31	25	20	16	14	13	10	6.5	2.9

# 14343000 NORTH FORK LITTLE BUTTE CREEK NEAR LAKECREEK, OR

LOCATION.--Lat 42°24'10", long 122°32'10", in NW\ sec.36, T.36 S., R.2 E., Jackson County, Hydrologic Unit 17100307, on right bank 1.2 mi upstream from Wasson Canyon, 4.9 mi east of Lakecreek, and at mile 4.8.

ORAINAGE AREA .-- 43.8 mi2.

PERIOO OF RECORO.--September 1911 to March 1913, July to September 1917, May 1922 to December 1964, September 1965 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Published as "above Medford intake, near Lakecreek" 1922-28, 1931-40. Records for April to September 1916, May 1917 to September 1919, April to September 1921, and October 1923 to September 1924 at site 3 mi upstream not equivalent owing to diversion and difference in drainage areas.

GAGE.--Water-stage recorder. Concrete control since Oct. 9, 1968. Altitude of gage is 2,160 ft, from topographic map. Sept. 10, 1911, to Mar. 31, 1913, and July 1 to Sept. 30, 1917, nonrecording gage at site 1,000 ft dowstream at different datums. May 26, 1922, to Dec. 31, 1964, water-stage recorder at site 1,000 ft downstream at datum 2,125.01 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Flow partly regulated since 1915 by Fish Lake. Diversions for irrigation above station; some water diverted into Fish Lake from Fourmile Lake, in Klamath River basin, since 1923.

AVERAGE 01SCHARGE.--60 years (water years 1912, 1923-64, 1966-82), 71.1 ft<sup>3</sup>/s, 51,510 acre-ft/yr.

EXTREMES FOR PERIOO OF RECORO.--Maximum discharge, 1,750 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 6.06 ft, present site and datum; minimum, 11 ft<sup>3</sup>/s Oct. 29 to Nov. 8, 1931.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1912-82

MAGNITUOE ANO PROBABILITY OF ANNUAL LOW FLOW BASEO ON PERIOD OF RECORD 1913-82

	MINIMUM	MAXIMUM	MEAN	STAN- OARO OEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOO (CON-	1	INTERVAL	CFS, FOR , IN YEAR CE PROBAB	RS, ANO A	NNUAL NO	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	SECU- TIVE OAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2%	100
OCTOBER	14	79	36	15	.42	4.2	1	26	19	16	13	11	10
NOVEMBER	16	81	41	14	.35	4.8	3	26	19	16	13	11	10
ECEMBER	19	122	55	23	.41	6.4	7	27	19	16	13	11	10
JANUARY	25	145	59	22	.38	6.9	14	27	19	16	14	12	11
EBRUARY	28	126	64	22	.34	7.4	30	29	21	17	15	13	12
MARCH	30	253	71	31	.43	8.3	60	33	24	21	18	16	14
PRIL	33	144	74	22	.29	8.7	90	38	28	24	21	18	16
MAY :	43	140	82	23	.28	9.6	120	42	32	27	24	21	19
UNE	44	149	89	24	.27	10.4	183	49	38	33	29	25	23
ULY	49	164	113	27	.24	13.2							
NUGUST	32	155	106	27	.25	12.4							
SEPTEMBER	22	119	67	19	. 28	7.8							
ANNUAL	34	118	72	16	.22	100							

MAGNITUOE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASEO ON PERIOD OF RECORD 1912-82 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASEO ON PERIOO OF RECORD 1912-82

OISCHARGE, YEARS, A							PERIOO		INTERV	CFS, FOI AL, IN YI CE PROBAI	EARS, AN	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE OAYS)	2 50%	5 20%	10	25 4%	50 2%	100
153	238	408	565	825	1070	1380					407		
WEIGHTEO	SKEW =	.701					1 3	162 149	238 205	308 256	427 338	542 414	684 505
							7	140	180	211	257	295	338
							15	136	166	186	211	229	247
							30	131	156	171	187	198	207
							60	119	141	152	165	173	181
							90	108	128	139	151	159	166

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-82

		0180	HARGE, I	IN CFS,	WHICH WAS	EQUALEO	OR EXCE	EOEO FOR	INOICATEO	PERCENT	OF TIME	:		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
143	123	111	101	93	86	75	65	57	49	45	41	37	32	25

### 14350000 EMIGRANT CREEK NEAR ASHLAND, OR

LOCATION.--Lat 43°09'50", long 122°36'15", in SE¼NE¼ sec.20, T.39 S., R.2 E., Jackson County, Hydrologic Unit 17100309, on left bank 0.1 mi downstream from Emigrant Dam, 6 mi southeast of Ashland, and at mile 29.2.

DRAINAGE AREA. -- 64.3 mi<sup>2</sup>

114

70

48

38

31

25

14

4.7

1.3

.5

.3

.2

.2

. 1

PERIOD OF RECORD.--January to June 1920, October to July 1922, February 1923 to May 1924 (incomplete), October 1924 to November 1925, February to August 1926, October 1926 to September 1928, April 1929 to September 1930, April 1931 to October 1932 (incomplete), April 1933 to September 1935, April 1936 to September 1939 (incomplete), April 1940 to September 1947, January 1948 to October 1952 (incomplete), December 1952 to September 1982. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 2,042.80 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Oct. 1, 1926, water-stage recorder or nonrecording gage at several nearby sites at various datums. Oct. 1, 1926, to Feb. 24, 1959, water-stage recorder near present site at datum 10.93 ft higher. Feb. 25, 1959, to May 7, 1961, water-stage recorder at site 1.0 mi downstream at different datum.

REMARKS.--Flow regulated since 1924 by Emigrant Lake. Several diversions above station for irrigation, the principal diversion canals are Ashland lateral and East lateral. From June 1923 to August 1960, water diverted by Keene Creek Canal from Klamath River basin into Emigrant Creek above station. Beginning May 1960, water from Klamath River basin diverted to Emigrant Creek above station via Green Springs powerplant diversion.

AVERAGE DISCHARGE.--42 years (water years 1925, 1927-30, 1934-35, 1941-47, 1954-82), 31.8  $ft^3/s$ , 23,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,260 ft<sup>3</sup>/s Feb. 20, 1927, by computation of peak flow over dam; no flow at times.

### STATISTICAL SUMMARIES (BEFORE THE CONSTRUCTION OF GREEN SPRINGS DIVERSION)

MONTHLY AND ANNUAL MEAN DISCHARGES 1925-60

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1942-60 219

				STAN- DARD DEVIA-	COEFFI- CIENT OF	OF	PERIOD (CON-	ŀ	NTERVAL,	IN YEA	RS, AND / BILITY,		)N-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	0.0	9.6	2.2	3.2	1.45	.6	1						
NOVEMBER	0.0	47	4.0	13	3.16	1.1	3						
DECEMBER	.1	158	29	49	1.69	8.2	7						
JANUARY	.1	230	58	67	1.16	16.1	14						
EBRUARY	.1	243	82	78	.95	22.7	30						
1ARCH	.1	167	49	45	.91	13.8	60	.2	.1	.1	0.0	0.0	
PR!L	.2	163	52	43	.82	14.5	90	.5	.2	.2		.1	
4AY	.5	91	19						.6				
IUNE		33		21	1.10	5.2	120	1.5		.4		-1	
	.7		12	8.6	.74	3.2	183	5.1	1.4	•6	.3	•1	
IULY	12	43	27	7.5	. 27	7.6						. <b>.</b>	
AUGUST	4.3	33	20	6.9	. 34	5.6		SHORT-DUR		ATA UNCER	RTAIN DUE	TO EXCE	SSIVE
SEPTEMBER	0.0	14	4.9	3.4	.70	1.4		ZERO EVEN	ITS.				
ANNUAL	6.1	46	27	15	.55	100							
	BASE	D ON PERI	OD OF REG	CORD 192	OUS PEAK 1 5-82 		MA		ON PER	OD OF R	ECORD 19	25 <b>-</b> 60	
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	D ON PERI	OD OF REC	CORD 1925 CURRENCE ABILITY,	INTERVAL	, IN NT	PERIOD (CON-	BASED DISCHA	ON PERI	OD OF RECEIVED		25-60  ED RECUR ) ANNUAL	 RRENCE
	BASE , , IN CFS,	D ON PERI	OD OF REC	CORD 1925 CURRENCE	INTERVAL	 ,  N	PERIOD (CON- SECU- TIVE	BASED DISCHA E2	ON PERI	OD OF RI	ECORD 19 R INDICATE ARS, AND BILITY, I	25-60 ED RECUR ANNUAL N PERCEN	RENCE
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	D ON PERI  FOR INDI L EXCEEDA	OD OF REC CATED REC NCE PROB/	CORD 1925 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU-	BASED DISCHA	ON PERI	OD OF RI	ECORD 19 R INDICATE ARS, AND BILITY, I	25-60 ED RECUR ANNUAL N PERCEN	RENCE
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	D ON PERI  FOR INDI L EXCEEDA	OD OF REC CATED REC NCE PROB/	CORD 1925 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE	BASED DISCHA E 2 50%	ON PERI	OD OF RECEIVED OF	ECORD 19 R INDICAT EARS, AND BILITY, I 25 4%	ED RECURD ANNUAL N PERCEN	RENCE
ISCHARGE YEARS,	BASE , IN CFS, AND ANNUA 2 50%	D ON PERI  FOR INDI L EXCEEDA	OD OF REC CATED REC NCE PROB/	CORD 1925 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASED DISCHA E2	ON PERI	OD OF RI	ECORD 19 R INDICATE ARS, AND BILITY, I 25 4%	25-60  TED RECUR O ANNUAL N PERCEN 2%	100
ISCHARGE YEARS, , 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERI  FOR INDI L EXCEEDA	OD OF REC CATED REC NCE PROB/	CORD 1925 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%  295  261	ON PERI	CFS, FORL, IN YEE PROBAR	R INDICATE ARS, AND BILLITY, I	25-60  TED RECUR O ANNUAL N PERCEN 50 2% 1720 1290	100
ISCHARGE YEARS, , 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERI  FOR INDI L EXCEEDA	OD OF REC CATED REC NCE PROB/	CORD 1925 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHA  E 2 50%  295 261 209	ON PERI	OD OF RI CFS, FOR IL, IN YE E PROBAR 10 10%	25 4% 1430 1100 792	25-60  ED RECUR  ANNUAL  N PERCEN  50 2%  1720 1290 925	100 17 100
1SCHARGE YEARS, , 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERI  FOR INDI L EXCEEDA	OD OF REC CATED REC NCE PROB/	CORD 1925 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  295 261 209 147	ON PERI	OD OF RI CFS, FOI LL, IN YIE PROBAL 10 10%	25 1430 1100 792 513	25-60  TED RECUR O ANNUAL N PERCEN  50 25  1720 1290 925 599	100 17 100
1SCHARGE YEARS, , 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERI  FOR INDI L EXCEEDA	OD OF REC CATED REC NCE PROB/	CORD 1925 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASED DISCHA  E 2 50%  295 261 209 147 106	ON PERIOR ON PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF T	OD OF RI CFS, FOI LL, IN YI E PROBAE 10 10 10 81 598 390 278	25 1430 1100 792 513 378	1720 1290 9 454	17 100 17
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERI  FOR INDI L EXCEEDA	OD OF REC CATED REC NCE PROB/	CORD 1925 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30 60	DISCHA  E 2 50%  295 261 209 147 106 84	ON PERIOR ON PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF T	OD OF RICCOMP.  CFS, FOIL, IN YEE PROBAGE  10 10 814 598 390 278 196	R INDICATE ARS, AND BILITY, I 25 4%	1720 1720 1720 1720 1720 1720 1720 1720	17 100 17
1scharge YEARS, , 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERI  FOR INDI L EXCEEDA	OD OF REC CATED REC NCE PROB/	CORD 1925 CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	BASED DISCHA  E 2 50%  295 261 209 147 106	ON PERIOR ON PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF THE PERIOR OF T	OD OF RI CFS, FOI LL, IN YI E PROBAE 10 10 10 81 598 390 278	25 1430 1100 792 513 378	1720 1290 9 454	100 19
1SCHARGE YEARS, , 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	D ON PERI  FOR INDI L EXCEEDA	OD OF REC	CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI	, IN NT 100 1%	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30 60	DISCHA  E 2 50%  295 261 209 147 106 84 68	ON PERIOR ON PER	OD OF RICCES, FORL, IN YULE PROBAR	R INDICATE ARS, AND BILITY, I 25 4%	1720 1720 1720 1720 1720 1720 1720 1720	100 1%
1SCHARGE YEARS, , 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF REC	CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI 50 2%	, IN NT 100 1% 	PERIOD (CON- SECU- TIVE DAYS) 	DISCHA  E 2 50%  295 261 209 147 106 84 68  OF RECOR	ON PERIOR ON PER	OD OF RICCES, FOIL, IN YIEE PROBABLE 10 10 10 \$ 1020 814 598 390 278 196 156	R INDICATE ARS, ANCE ARS,	1720 1720 1720 1720 1720 1720 1720 1720	17 100 1%

# 14350000 EMIGRANT CREEK NEAR ASHLAND, OR--Continued

# STATISTICAL SUMMARIES (AFTER THE COMPLETION OF GREEN SPRINGS DIVERSION)

MONTHLY AND ANNUAL MEAN DISCHARGES 1962-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1963-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		NTERVAL,	CFS, FOR IN YEAR: E PROBAB	S, AND A	NNUAL NO	ON-
10NTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	46	3.9	10	2.63	.8	1						
NOVEMBER	0.0	70	7.2	19	2.61	1.5	3						
DECEMBER	0.0	262	49	79	1.59	10.6	7						
JANUARY	0.0	288	65	87	1.34	13.9	14	>					
EBRUARY	0.0	98	26	34	1.32	5.5	30						
1ARCH	0.0	158	36	49	1.36	7.7	60						
APRIL	.3	201	80	63	.80	17.2	90						
AAY		139	45	42	.94								
	.4					9.6	120						
JUNE	2.7	61	26	13	.49	5.6	183	7.9	1.0	.3	.1		
JULY	31	84	51	14	.28	10.9		OU 51 6::					
AUGUST	23	72	51	12	. 24	11.8			DATA UNC	ERTAIN D	JE TO EX	CESSIVE	∠ER0
SEPTEMBER	. 1	47	25	11	.44	5.4	6	EVENTS.					
ANNUAL	11	83	39	23	.60	100		*					
OI SCHARGE	BASE , IN CFS,	ON PERIO	OD OF REC	CORD	INTERVAL	, IN		BASEC	ON PERI	BILITY OF REC	CORD 19	62-82  ED RECUF	<b></b> _
OISCHARGE YEARS, /	BASE , IN CFS, AND ANNUA 2	FOR INDIC L EXCEEDA	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU-	BASEC DISCHA	ON PERI	OD OF REC	INDICATI	62-82 ED RECUF ANNUAL N PERCEN	RENCE
OISCHARGE YEARS,	BASE , IN CFS, AND ANNUA	FOR INDIC	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	 , IN NT	PERIOD (CON-	BASEC DISCHA	ON PER!	OD OF REC	CORD 196 INDICATION ARS, AND	62-82  ED RECUF ANNUAL	RENCE
OISCHARGE YEARS, /	BASE , IN CFS, AND ANNUA 2	FOR INDIC L EXCEEDA	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50%	ON PERI	OD OF REC	INDICATION INDICATION	62-82 ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E  2  50%	O ON PERI	OD OF REC	INDICATI ARS, AND ILITY, II 25 4%	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
OISCHARGE YEARS, /	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50% 247 233	O ON PERI	OD OF REC CFS, FOR IL, IN YE, EE PROBAB 10 10%	1NDICATI ARS, AND ILITY, II 25 4%	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA E 2 50% 247 233 211	O ON PERI	OD OF REC CFS, FOR LL, IN YEA E PROBAB 10 10% 690 670 609	1NDICATI ARS, AND ILITY, II 25 4% 973 959 887	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHA  E 2 50%  247 233 211 161	0 ON PERI	OD OF REC CFS, FOR LL, IN YEA E PROBAB 10 10% 690 670 609 465	100 196 100 100 110 110 110 110 110 110 110 110	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15 30	DISCHA 2 50% 247 233 211 161 116	0 ON PERI	OD OF REC CFS, FOR L, IN YEA E PROBAB 10 10% 690 670 609 465 287	190 INDICATI ARS, AND ILITY, II 25 4% 973 959 887 702 407	ED RECUP ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	OD OF REC	CORD CURRENCE ABILITY,	INTERVAL IN PERCEI	, IN NT	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30 60	DISCHA  E  2  50%  247  233  211  116  89	ON PERI INTERVA XCEEDANC 5 20% 492 472 426 320 208 149	OD OF REC CFS, FOR L, IN YEA E PROBAB 10 10% 690 670 609 465 287 200	1900 1900 1900 1900 1900 1900 1900 1900	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	CATED REC	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT	PERIOD (CON- SECU- TIVE DAYS)	DI SCH/ E 2 50% 247 233 211 161 116 89 72	AP2 472 426 320 208 149 117	OD OF REC CFS, FOR L, IN YEA E PROBAB 10 10% 690 670 609 465 287 200 153	190 INDICATI ARS, AND ILITY, II 25 4% 973 959 887 702 407	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDIC L EXCEEDA	CATED REC	CORD CURRENCE ABILITY, 25 4%	INTERVAL IN PERCEI 50 2%	, IN NT	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30 60	DI SCH/ E 2 50% 247 233 211 161 116 89 72	AP2 472 426 320 208 149 117	OD OF REC CFS, FOR L, IN YEA E PROBAB 10 10% 690 670 609 465 287 200 153	1900 1900 1900 1900 1900 1900 1900 1900	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
DISCHARGE YEARS, / 1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	CATED RECONCE PROBA	CORD  CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI 50 2%	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH/  E  2  50  247  231  161  116  89  72  OF RECOR	ON PERI	OD OF REC CFS, FOR L, IN YEA E PROBAB 10 10% 690 670 670 465 287 200 153	1900 1900 1900 1900 1900 1900 1900 1900	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDICAL EXCEEDA	CATED RECONCE PROBA	CORD  CURRENCE ABILITY,  25 4%	INTERVAL IN PERCEI 50 2%  OF DAILY N	IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30 60 90  FOR PERIOD  XCEEDED FOR	DISCH/  E  2  50  247  231  161  116  89  72  OF RECOR	ON PERI	OD OF REC CFS, FOR L, IN YEA E PROBAB 10 10% 690 670 670 465 287 200 153	1900 1900 1900 1900 1900 1900 1900 1900	ED RECUF ANNUAL N PERCEN 50 2%	RRENCE

# 14353000 WEST FORK ASHLAND CREEK NEAR ASHLAND, OR

LOCATION.--Lat 42°08'55", long 122°42'55", near line between NW4 and SW4 sec.28, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, in Rogue River National Forest, on left bank 0.3 mi above city diversion, 2.5 mi south of Ashland, and at mile 0.4.

DRAINAGE AREA.--10.5 mi<sup>2</sup>, at diversion dam 0.3 mi downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60, 1963, annual maximum; December 1974 to September 1982. Monthly discharge only for some periods published in WSP 1318.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,962.75 ft National Geodetic Vertical Datum of 1929. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 0.2 mi upstream at different datum. Oct. 14, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.3 mi downstream at different datum.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--15 years (water years 1925-32, 1976-82), 8.92 ft<sup>3</sup>/s, 11.54 in/yr, 6,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 330 ft<sup>3</sup>/s Dec. 2, 1962, gage height, 15.51 ft, site and datum then in use, from rating curve defined by computation of peak flow over dam; minimum, 1.3 ft<sup>3</sup>/s Aug. 29, 1931, Sept. 8, 9, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1900. Discharge, 4,780 ft<sup>3</sup>/s by slope-area measurement of peak flow, gage height, 9.5 ft, from floodmarks. Peak believed to be affected by release from debris dams breaking upstream.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1925-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1926-82

	h415141441414		MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	-NC
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	20 - 5%	50 2%	100 1%
OCTOBER	2.4	8.4	3.6	1.6	.43	3.3	1	2.1	1.7	1.5	1.4		
NOVEMBER	2.4	15	6.1	3.5	.57	5.6	3	2.1	1.7	1.5	1.4		
DECEMBER	2.9	39	8.8	8.6	.98	8.0	7	2.2	1.7	1.5	1.4		
JANUARY	2.8	21	8.5	5.8	.68	7.8	14	2.3	1.8	1.6	1.5		
FEBRUARY	2.5	26	11	7.7	.69	10.2	30	2.4	1.9	1.6	1.5		
MARCH	2.8	24	12	5.6	.49	10.5	60	2.7	2.1	1.8	1.6		
APRIL	4.5	24	13	6.1	. 47	11.8	90	2.9	2.2	2.0	1.8		
YAP	4.5	32	18	9.5	.52	16.7	120	3.1	2.4	2.1	1.9		
JUNE	3.2	35	15	9.8	.65	13.8	183	3.9	3.0	2.6	2.4		
JULY	2.1	13	6.5	3.5	.54	5.9				- <b></b>			
AUGUST	1.6	6.4	3.7	1.6	.42	3.4							
SEPTEMBER	1.8	7.5	3.4	1.4	.41	3.1							
ANNUAL	3.3	18	8.9	4.4	.49	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1925-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1925-82

SCHARGE, YEARS, AN							PERIOD (CON-		INTERV	AL, ÎN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50%	5 .20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100
30	72	205	378	768									
- <b>-</b>							1	40	74	99	132	<del>-</del> -	
WEIGHTED	SKEW =	.587					3	33	58	76	100		
							7	27	43	54	66		
							15	22	34	42	51		
							30	18	29	36	44		
							60	16	26	32	40		
							90	15	23	28	35		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1925-82

DISCHARGE, IN CFS, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME  5% 10% 15% 20% 25% 30% 40% 50% 60% 70% 75% 80% 85% 90% 95%  27 21 17 15 12 9.8 7.3 5.6 4.5 3.7 3.4 3.1 2.7 2.5 2.1													
		DISCHARG	, IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATE	D PERCEN	IT OF TH	ME		
27 21 17 15 12 9.8 7.3 5.6 4.5 3.7 3.4 3.1 2.7 2.5 2.1	5% 10%	15% 20	) <b>%</b> 25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
	27 21	17 1	12	9.8	7.3	5.6	4.5	3.7	3.4	3.1	2.7	2.5	2.1

# 14353500 EAST FORK ASHLAND CREEK NEAR ASHLAND, OR

LOCATION.--Lat 42°09'10", long 122°42'30", near line between NE4 and NW4 sec.28, T.39 S., R.1 E., Jackson County, Hydrologic Unit 17100308, Rogue River National Forest, on left bank 0.1 mi above city diversion dam, 2.5 mi south of Ashland, and at mile 0.2.

DRAINAGE AREA.--8.14 mi<sup>2</sup>, at diversion dam 0.1 mi downstream.

PERIOD OF RECORD.--September 1924 to January 1933, water years 1954-60, 1963, annual maximum, December 1974 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,903.70 ft National Geodetic Vertical Datum of 1929. Sept. 10, 1924, to Jan. 31, 1933, water-stage recorder at site about 200 ft downstream at different datum. Oct. 19, 1953, to Sept. 30, 1963, crest-stage gage at diversion dam 0.1 mi downstream at different datum.

REMARKS. -- No regulation or diversion.

5%

27

10%

21

15%

18

20%

15

25%

13

30%

11

7.6

5.9

AVERAGE DISCHARGE.--15 years (water years 1925-32, 1976-82), 9.37 ft<sup>3</sup>/s, 15.63 in/yr, 6,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335 ft³/s Dec. 2, 1962, gage height, 5.42 ft, site and datum then In use, from rating curve defined by computations of peak flow over dam; minimum, 0.47 ft³/s Mar. 14, 1977, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 15, 1974, is the highest since at least 1925. Discharge, 5,630 ft³/s by slope-area measurement of peak flow, gage height, 10.2 ft from floodmarks. Peak believed to be affected by release from debris dams breaking upstream.

M	ONTHLY AN	ID ANNUAL	MEAN DISC	CHARGES	1925-82		MAG				F ANNUAL CORD 192		)W
	MINIMIM	MAX1MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	<b> </b>	NTERVAL,	IN YEAR	INDICATE S, AND AN ILITY, IN	NUAL N	DN
10NTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 15
OCTOBER	2.1	6.8	3.4	1.2	.35	2.9	1	2.1	1.6	1.3	1.1		
IOVEMBER	2.7	16	6.2	4.3	.70	5.4	3	2.2	1.6	1.3	1.1		_
ECEMBER	2.7	43	9.5	9.9	1.04	8.3	7	2.2	1.6	1.4	1.2		
ANUARY	2.7	20	8.2	5.8	.71	7.1	14	2.3	1.8	1.6	1.4		_
EBRUARY	2.5	31	11	8.4	.75	9.9	30	2.5	1.9	1.7	1.5		_
IARCH	2.8	25	11	5.9	.52	9.8	60	2.7	2.1	1.8	1.6		_
PRIL	3.7	23	12	5.8	.48	10.4	90	2.9	2.2	1.9	1.6		
ΙΑΥ	5.4	34	19	9.8	.51	16.7	120	3.1	2.4	2.0	1.8		_
UNE	4.0	51	18	13	.73	16.0	183	3.9	3.0	2.5	2.2		
ULY	2.1	18	8.3	5.0	.60	7.2							
	4 6	6.7	3.9	1.8	.45	3.4							
UGUST	1.5	0.7											
UGUST EPTEMBER		6.6	3.2	1.3	. 39	2.8							
MAGNIT	1.7 3.2  TUDE AND BASE , IN CFS,	6.6 19 PROBABILI D ON PERI FOR INDII	3.2 9.4 TY OF INS	5.0 STANTANEC CORD 1925 CURRENCE	.39 .53 DUS PEAK 5-82 INTERVAL IN PERCE	2.8 100 FLOW	PERIOD (CON-	BASED DISCHA	ON PERIORISE ON PE	OD OF REC	F ANNUAL CORD 192 INDICATE ARS, AND	5-82 D RECUF	RENCI
EPTEMBER NNUAL MAGNIT	1.7 3.2 TUDE AND BASE , IN CFS,	6.6 19 PROBABILI D ON PERI FOR INDI	3.2  9.4  TY OF INS OD OF REC	1.3 5.0 STANTANEC CORD 1925 CURRENCE	.39 .53 OUS PEAK 5-82 INTERVAL IN PERCE	2.8 100  FLOW , IN NT	PERIOD (CON- SECU- TIVE	BASED DISCHA	ON PERIORS RGE, IN CONTROL INTERVAL XCEEDANCE 5	OD OF REC CFS, FOR L, IN YEA E PROBABI	INDICATE ARS, AND ILITY, IN	D RECUF ANNUAL I PERCEN	RRENCE
MAGNIT	1.7 3.2 TUDE AND BASE , IN CFS,	6.6  19  PROBABILI D ON PERI  FOR INDI L EXCEEDA	3.2 9.4 TY OF INS	5.0 STANTANEC CORD 1929 CURRENCE BBILITY,	.39 .53 OUS PEAK 5-82 INTERVAL IN PERCE	2.8 100 FLOW	PERIOD (CON- SECU-	BASED DISCHAI	ON PERIORS  RGE, IN ORIGINATE OF THE PERIORS  KCEEDANCE	OD OF REC CFS, FOR L, IN YEA	INDICATE ARS, AND	5-82 D RECUF ANNUAL I PERCEN	RRENCI
MAGNIT	1.7 3.2 TUDE AND BASE , IN CFS,	6.6  19  PROBABILI D ON PERI  FOR INDI L EXCEEDA	3.2 9.4 TY OF INS	5.0 STANTANEC CORD 1929 CURRENCE BBILITY,	.39 .53 OUS PEAK 5-82 INTERVAL IN PERCE	2.8 100  FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASED  DISCHAI  E: 2 50%	ON PERIOR ON PER	OD OF REC	INDICATE ARS, AND ILITY, IN 25 4%	D RECUF ANNUAL I PERCEN	RRENC
MAGNIT ISCHARGE, YEARS, A	1.7 3.2 TUDE AND BASE , IN CFS, AND ANNUA	PROBABILII D ON PERI FOR INDIC EXCEEDA  5 20\$	3.2 9.4 TY OF INSOD OF RECONCE PROBA	5.0  STANTANEC CORD 1925  CURRENCE ABILITY,  25 4%	.39 .53 OUS PEAK 5-82 INTERVAL IN PERCE	2.8 100  FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI E: 2 50%	ON PERIOR ON PER	CFS, FOR L, IN YEA E PROBABI 10 10%	INDICATE ARS, AND ILITY, IN 25 4%	D RECUF ANNUAL I PERCEN 50 2%	RRENC
MAGNITURAL  ISCHARGE, YEARS, A  1.25 80\$	1.7 3.2 TUDE AND BASE , IN CFS, AND ANNUA	PROBABILI D ON PERI FOR INDI L EXCEEDA	3.2 9.4 TY OF INSOD OF RECONCE PROBA	5.0  STANTANEC CORD 1925  CURRENCE ABILITY,  25 4%	.39 .53 OUS PEAK 5-82 INTERVAL IN PERCE	2.8 100  FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI E 2 50%	ON PERIOR OF THE	OD OF REC	INDICATE ARS, AND ILITY, IN 25 4%	D RECUF ANNUAL I PERCEN 50 2%	RRENC
MAGNITURAL  ISCHARGE, YEARS, A  1.25 80\$	1.7 3.2 TUDE AND BASE , IN CFS, AND ANNUA	PROBABILII D ON PERI FOR INDIC EXCEEDA  5 20\$	3.2 9.4 TY OF INSOD OF RECONCE PROBA	5.0  STANTANEC CORD 1925  CURRENCE ABILITY,  25 4%	.39 .53 OUS PEAK 5-82 INTERVAL IN PERCE	2.8 100  FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCHAI E: 2 50%	ON PERIOR ON PER	0D OF REC CFS, FOR L, IN YEA E PROBAB! 10 10%	INDICATE ARS, AND ILITY, IN 25 4%	D RECUF ANNUAL I PERCEN 50 2%	RRENC
MAGNIT	1.7 3.2 TUDE AND BASE , IN CFS, AND ANNUA	PROBABILII D ON PERI FOR INDIC EXCEEDA  5 20\$	3.2 9.4 TY OF INSOD OF RECONCE PROBA	5.0  STANTANEC CORD 1925  CURRENCE ABILITY,  25 4%	.39 .53 OUS PEAK 5-82 INTERVAL IN PERCE	2.8 100  FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	DISCHAI  2 50%  43 34 28	ON PERIOR OF PER	0D OF REC CFS, FOR L, IN YEA E PROBABI 10 10% 105 83 59	INDICATE ARS, AND ILITY, IN  25 4%  139 112 74	D RECUF ANNUAL I PERCEN 50 2%	RRENC
MAGNITURAL  ISCHARGE, YEARS, A  1.25 80\$	1.7 3.2 TUDE AND BASE , IN CFS, AND ANNUA	PROBABILII D ON PERI FOR INDIC EXCEEDA  5 20\$	3.2 9.4 TY OF INSOD OF RECONCE PROBA	5.0  STANTANEC CORD 1925  CURRENCE ABILITY,  25 4%	.39 .53 OUS PEAK 5-82 INTERVAL IN PERCE	2.8 100  FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 15	DISCHAI  2 50%  43 34 28 23	ON PERIOR ON PER	0D OF REC CFS, FOR L, IN YEA E PROBAB 10 10%	INDICATE ARS, AND ILITY, IN  25 4%  139 112 74 60	D RECUF ANNUAL I PERCEN 50 2%	RRENC
MAGNITURAL  ISCHARGE, YEARS, A  1.25 80\$	1.7 3.2 TUDE AND BASE , IN CFS, AND ANNUA	PROBABILII D ON PERI FOR INDIC EXCEEDA  5 20\$	3.2 9.4 TY OF INSOD OF RECONCE PROBA	5.0  STANTANEC CORD 1925  CURRENCE ABILITY,  25 4%	.39 .53 OUS PEAK 5-82 INTERVAL IN PERCE	2.8 100  FLOW , IN NT	PERIOD (CON- SECU- TIVE DAYS)  1 3 7 15 30	DISCHAI  E: 2 50%  43 34 28 23 19	ON PERIOD ON PER	CFS, FOR L, IN YE/E E PROBAB! 10 10\$ 105 83 59 48	139 112 74 60 50	D RECUFANNUAL I PERCEN  50 2%	RRENC

60%

4.6

70%

3.6

3.2

80%

3.0

85%

2.7

90%

2.5

95%

2.0

BASIN 223

### 14357500 BEAR CREEK AT MEDFORD, OR

LOCATION.--Lat 42°19'40", long 122°52'10", in NW± sec.30, T.37 S., R.1 W., Jackson County, Hydrologic Unit 17100308, on left bank 40 ft upstream from Main Street Bridge in Medford and at mile 9.91.

DRAINAGE AREA.--289 mi².

PERIOD OF RECORD.--March 1915 to June 1920 (no low-flow records), October 1920 to September 1981. Monthly discharge only for some periods, published in WSP 1318.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,343.98 ft National Geodetic Vertical Datum of 1929. See WSP 1738 for history of changes prior to Dec. 31, 1947.

REMARKS.--Flow partly regulated since 1924 by Emigrant Lake. Numerous diversions for irrigation above station.

AVERAGE DISCHARGE.--61 years (water years 1921-81), 114  $ft^3/s$ , 82,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 14,500 ft<sup>3</sup>/s Dec. 2, 1962, gage height, 8.04 ft; maximum gage height, about 11.0 ft Feb. 20, 1927, from floodmarks, present datum, site then in use; no flow at times.

### STAT!STICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1921-81 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1922-81

	MINIMIN	MAYIMIM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON- SECU-	1.	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL NO	N~
MONTH	MINIMUM (CFS)	MAX1MUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.7	216	33	32	.98	2.4	1	9.4	3.2	1.5	.7	.3	.2
NOVEMBER	8.2	246	59	50	.85	4.3	3	10	3.4	1.7	.8	.3	.2
DECEMBER	17	1137	147	195	1.33	10.7	7	11	3.9	1.9	.9.	. 4	•2
JANUARY	13	1080	221	238	1.08	16.0	14	13	4.3	2.1	1.1	. 4	.2
FEBRUARY	12	873	223	194	.87	16.2	30	15	5.2	2.6	1.3	.6	.3
MARCH	14	787	202	163	.81	14.7	60	17	6.4	3.3	1.8	.8	.5
APRIL	4.9	686	197	133	.68	14.3	90	19	7.5	4.1	2.4	1.2	.7
MAY	1.5	391	134	99	.74	9.7	120	22	9.3	5.5	3.3	1.8	1.2
JUNE	2.1	232	73	55	.75	5.3	183	32	15	8.7	5.4	3.0	1.9
JULY	.5	95	<b>2</b> 9	23	.78	2.1				<del>-</del>			
AUGUST	. 4	115	29	27	.93	2.1							
SEPTEMBER	.7	92	31	27	.85	2.3							
ANNUAL	8.4	304	114	75	.66	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1916-81

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1921-81

ISCHARGE, YEARS, AN							PERIOD (CON-		INTERV	I CFS, FC 'AL, IN Y ICE PROBA	EARS, AN	D ANNUAL	
1.25 80% 	2 50 <b>%</b>	5 20 <b>%</b> 	10 10 <b>%</b>	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10%	25 4%	50 2%	100 1%
58 <b>9</b>	1500	3760	6000	9830	13500	17800							
							1	957	2330	3600	5590	7330	9270
WE I GHTED	SKEW =	091					3	718	1650	2450	3620	4590	5630
							7	532	1150	1640	2330	2880	3440
							15	402	820	1140	1560	1880	2200
							30	305	616	852	1170	1410	1660
							60	240	465	632	852	1020	1180
							90	209	401	541	726	864	1000

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1921-81

		DISC	HARGE, I	IN CFS,	WHICH WAS	EQUALED	OR EXCE	DED FOR	INDICATE	D PERCE	NT OF TIM	1E		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
<b>4</b> 17	270	205	162	131	106	73	52	38	27	22	18	14	10	5.8

# 14359000 ROGUE RIVER AT RAYGOLD, NEAR CENTRAL POINT, OR

LOCATION.--Lat 42°26'15", long 122°59'10", in SW\ sec.18, T.36 S., R.2 W., Jackson County, Hydrologic Unit 17100308, on right bank at Raygold, 0.1 mi downstream from Gold Ray Dam, 1.0 mi downstream from Bear Creek, 5.6 mi northwest of Central Point, and at mile 125.8.

DRAINAGE AREA .-- 2,053 m12.

PERIOD OF RECORD.--August 1905 to September 1982. Prior to October 1921, published as "near Tolo."

GAGE.--Water-stage recorder. Datum of gage is 1,121.78 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1914, nonrecording gage and Sept. 19, 1914, to Sept. 30, 1956, water-stage recorder, at site 300 ft upstream at same datum.

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake. Slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation above station.

AVERAGE DISCHARGE.--77 years (water years 1906-82), 2,963 ft<sup>3</sup>/s, 2,147,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 131,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 23.43 ft, from rating curve extended above 63,000 ft<sup>3</sup>/s on basis of slope-area measurement of 113,000 ft<sup>3</sup>/s; minimum not determined; minimum daily, 616 ft<sup>3</sup>/s Sept. 6, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 32 ft, discharge not determined, and flood in February 1890 reached a stage of about 27.5 ft, discharge not determined, from information by Corps of Engineers.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1906-76 MAGNITUDE AND P

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1907-76

	Minima			STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-		INTERVAL	, IN YEA	R INDICA RS, AND A BILITY,	ANNUAL N	ON-
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	846	3799	1403	437	.31	3.9	1	1100	926	841	774	702	656
NOVEMBER	924	8409	2341	1349	.58	6.5	3	1120	946	861	793	720	673
DECEMBER	1073	18830	3675	2790	.76	10.2	7	1130	957	870	801	726	677
JANUARY	1112	11960	4605	2740	.60	12.8	14	1150	969	879	807	730	680
FEBRUARY	1208	12540	4713	2211	.47	13.1	30	1170	985	892	817	738	686
MARCH	1974	12520	4286	1895	.44	11.9	60	1210	1010	918	841	758	704
APR1L	1649	7805	4207	1280	.30	11.7	90	1240	1040	944	864	777	721
MAY	1279	6702	3908	1297	.33	10.8	120	1290	1080	974	890	800	742
JUNE	920	5749	2839	1119	.39	7.9	183	1550	1250	1110	1000	894	826
JULY	747	2701	1607	453	.28	4.5							
AUGUST	642	2042	1266	277	.22	3.5							
SEPTEMBER	679	1763	1233	227	.18	3.4							
ANNUAL	1159	5132	2998	892	•30	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1906-76

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1906-76

DISCHARGE, YEARS, AI							PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICA YEARS, AI ABILITY,	ND ANNUAI	L
1.25 80%	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	- <b></b> 2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 : 1%
15200 :	26100 SKEW =	.201	63500	89600	112000	139000	1 3 7 15 30 60 90	19400 14500 10800 8180 6500 5480 5040	34100 24900 17500 12400 9360 7610 6860	46100 33600 22900 15600 11500 9090 8050	64000 46700 30900 20100 14400 11000 9540	79400 58300 37800 23700 16800 12500 10600	96600 71500 45400 27700 19300 14000

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906-76

		DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICATED	PERCENT	OF TII	мE		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
7020	5560	4790	4200	3750	3380	2720	2120	1720	1470 1	370 <b>1</b>	280	1200	1120	993

### 14361500 ROGUE RIVER AT GRANTS PASS, OR

LOCATION.--Lat 42°25'50", long 123°19'00", in NW\ sec.20, T.36 S., R.5 W., Josephine County, Hydrologic Unit 17100308, on right bank at city of Grants Pass filter plant, 0.6 mi upstream from bridge on State Highway 99 at Grants Pass, and at mile 101.8.

DRAINAGE ARFA. -- 2.459 mi2

PERIOD OF RECORD.--October 1938 to September 1982. Prior to January 1939 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 885.28 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 8, 1957, at datum 3.00 ft higher.

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake, slight regulation by Fish Lake and Emigrant Lake. Large fluctuations at times caused by Savage Rapids Dam 5.5 mi above station. Many diversions from Rogue River and tributaries above station, the largest of which is at Savage Rapids Dam of Grants Pass Irrigation District.

AVERAGE DISCHARGE.--44 years, 3,475 ft<sup>3</sup>/s, 2,518,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 152,000 ft $^3$ /s Dec. 23, 1964, gage height, 34.15 ft, from rating curve extended above 93,000 ft $^3$ /s; minimum, 195 ft $^3$ /s Jan. 30, 1961; minimum dally, 606 ft $^3$ /s Sept. 10, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1861 reached a stage of about 42 ft, present datum (information furnished by Corps of Engineers). Flood in February 1890 reached a stage of about 35 ft, present datum, and that of Feb. 21, 1927, about 31 ft, present datum, according to local resident.

#### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1940-76

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1941-76

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YEA	RS, AND	TED RECU ANNUAL N IN PERCE	0 <b>N</b> -
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	,	100 1%
OCTOBER	987	4934	1627	686	.42	3.8	1	990	823	744	684	621	
NOVEMBER	1132	9086	2841	1605	. 56	6.6	3	1000	847	775	721	664	
DECEMBER	1450	23380	5403	4352	.81	12.5	7	1020	863	794	742	687	
ANUARY	1797	15170	6741	4178	.62	15.5	14	1030	881	813	762	709	
EBRUARY	2469	14600	6087	2467	.41	14.0	30	1060	905	836	786	734	
MARCH	2118	15320	5423	2746	.51	12.5	60	1110	949	881	831	779	
PRIL	1874	8395	4546	1357	.30	10.5	90	1170	998	923	866	807	
IAY	1714	6368	4056	1262	.31	9.4	120	1260	1080	993	927	857	
UNE	1131	5647	2829	1076	.38	6.5	183	1610	1360	1250	1170	1090	
ULY	817	2335	1473	408	.28	3.4							
NUGUST	805	1919	1168	263	.23	2.7							
SEPTEMBER	791	1594	1177	211	.18	2.7							
ANNUAL	2015	6269	3604	1161	.32	100							
MAGNI		PROBABILI D ON PERIO			OUS PEAK 1	LOW	MAC		AND PROB			 L HIGH FI 940-76	_OW

EARS,	AND ANNU	JAL EXCE	DANCE P	ROBABILI	NCE INTER'	RCENT	PERIOD (CON-	DISC	INTER	VAL, İN	YEARS, A	ATED RECUI ND ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> <b>-</b>	10 10% 	25 4% 	50 2% 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	25 4%	50 2 <b>%</b>	100 1%
2200	41200	73500	97900	132000	158000								
							1	31400	56200	75200	102000	123000	
EIGHTE	D SKEW =	236					3	23000	40400	54100	74000	90400	
							7	16000	27000	35700	48500	59200	
							15	11600	18300	23400	30500	36200	
							30	8770	13300	16800	21700	25800	
							60	7080	10300	12700	16200	19000	
							90	6410	9070	11000	13600	15800	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1940-76

	<del>-</del> -	DIS	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EX	CEEDED FOR	INDICAT	TED PERCEN	T OF T	I ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
9390	6710	5580	<b>4</b> 910	4380	3910	3090	2400	1850	1540	1430	1310	1200	1080	961

#### 14362000 APPLEGATE RIVER NEAR COPPER. OR

LOCATION.--Lat 42°03'50", long 123°06'37", in SW\u00e4NW\u00e4 sec.30, T.40 S., R.3 W., Jackson County, Hydrologic Unit 17100309, U.S. Corps of Engineers land, on left bank 0.1 mi downstream from Brushy Gulch, 0.6 mi downstream from Applegate Dam, 3.1 mi northeast of former town of Copper, and at mile 45.7.

DRAINAGE AREA .-- 225 mi2.

PERIOD OF RECORD.--October 1938 to September 1982. Prior to January 1939 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,747.51 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977, at site 0.6 mi upstream at datum 12.15 ft higher.

REMARKS.--Flow regulated since December 1980 by Applegate Lake. Some storage during winter in Squaw Lakes Reservoir, capacity, 1,100 acre-ft on Squaw Creek above station. Diversions above station from Carberry Creek for irrigation in Thompson Creek basin.

AVERAGE DISCHARGE.--44 years, 447 ft<sup>3</sup>/s, 323,900 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 25.38 ft, site and datum then in use, from high-water mark in well, from rating curve extended above 12,000 ft<sup>3</sup>/s on basis of four slope-area measurements of peak flows made in 1950, 1955, 1964, and 1974; minimum, 1.5 ft<sup>3</sup>/s Dec. 20, 1980, result of regulation at Applegate dam, 0.6 mi upstream.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1939-80

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW

MINIMUM	MAX I MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-		INTERVAL,	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	ON-
(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
29	803	99	129	1.30	1.9	1	35	28	24	21	18	17
29	1549	286	288	1.01	5.3	3	36	28	25	22	19	17
45	2617	598	585	. 98	11.2	7	37	29	26	23	20	18
50	3761	846	772	.91	15.8	14	39	30				19
53	2942	773	509	.66	14.5	30	41	33				22
93		672	365	- 54	12.6	60	46	37				24
179	1347	727	287	•39	13.6	90	52	42	37	34	30	27
189	1418	749	325	.43	14.0	120	62	48	43	38	34	32
	898	371	217	.58	6.9	183	114	79	65	55	46	40
	342	117	59	.50	2.2							
				-31								
24	91	49	13	.26	.9							
80	1077	444 ′	195	.44	100							
BASE , IN CFS,	D ON PERIO	OD OF RE	CORD 193	9-80 INTERVAL,	. IN	PERIOD	BASEI DISCH/	ON PERI	CFS, FOR	CORD 19 INDICAT ARS, AND	39-80 ED RECUR ANNUAL	RRENCE
	29 45 50 53 93 179 189 112 45 27 24 80 TUDE AND BASE	29 1549 45 2617 50 3761 53 2942 93 1966 179 1347 189 1418 112 898 45 342 27 118 24 91 80 1077  TUDE AND PROBABILL' BASED ON PERIO	29 1549 286 45 2617 598 50 3761 846 53 2942 773 93 1966 672 179 1347 727 189 1418 749 112 898 371 45 342 117 27 118 59 24 91 49 80 1077 444  TUDE AND PROBABILITY OF IN BASED ON PERIOD OF RE	29 1549 286 288 45 2617 598 585 50 3761 846 772 53 2942 773 509 93 1966 672 365 179 1347 727 287 189 1418 749 325 112 898 371 217 45 342 117 59 27 118 59 19 24 91 49 13 80 1077 444 195  TUDE AND PROBABILITY OF INSTANTANE BASED ON PERIOD OF RECORD 193  TUDE AND PROBABILITY OF RECORD 193  TUDE AND PROBABILITY OF RECORD 193  TUDE AND PROBABILITY OF RECORD 193	29 1549 286 288 1.01 45 2617 598 585 .98 50 3761 846 772 .91 53 2942 773 509 .66 93 1966 672 365 .54 179 1347 727 287 .39 189 1418 749 325 .43 112 898 371 217 .58 45 342 117 59 .50 27 118 59 19 .31 24 91 49 13 .26  80 1077 444 195 .44  TUDE AND PROBABILITY OF INSTANTANEOUS PEAK 6 BASED ON PERIOD OF RECORD 1939-80  TUDE AND PROBABILITY OF INSTANTANEOUS PEAK 6 BASED ON PERIOD OF RECORD 1939-80	29	29 803 99 129 1.30 1.9 1 29 1549 286 288 1.01 5.3 3 45 2617 598 585 .98 11.2 7 50 3761 846 772 .91 15.8 14 53 2942 773 509 .66 14.5 30 93 1966 672 365 .54 12.6 60 179 1347 727 287 .39 13.6 90 189 1418 749 325 .43 14.0 120 112 898 371 217 .58 6.9 183 45 342 117 59 .50 2.2 27 118 59 19 .31 1.1 24 91 49 13 .26 .9  80 1077 444 195 .44 100  TUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-80  MAG  TUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-80  MAG  THOSE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW CONSTANT OF THE PERIOD OF RECORD 1939-80  MAG  TUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW CONSTANT OF THE PERIOD OF RECORD 1939-80	29 803 99 129 1.30 1.9 1 35 29 1549 286 288 1.01 5.3 3 36 45 2617 598 585 .98 11.2 7 37 50 3761 846 772 .91 15.8 14 39 53 2942 773 509 .66 14.5 30 41 93 1966 672 365 .54 12.6 60 46 179 1347 727 287 .39 13.6 90 52 189 1418 749 325 .43 14.0 120 62 112 898 371 217 .58 6.9 183 114 45 342 117 59 .50 2.2 27 118 59 19 .31 1.1 24 91 49 13 .26 .9  80 1077 444 195 .44 100  TUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-80  MAGNITUDE // BASED ON PERIOD OF RECORD 1939-80	29 803 99 129 1.30 1.9 1 35 28 29 1549 286 288 1.01 5.3 3 36 28 45 2617 598 585 .98 11.2 7 37 29 50 3761 846 772 .91 15.8 14 39 30 53 2942 773 509 .66 14.5 30 41 33 93 1966 672 365 .54 12.6 60 46 37 179 1347 727 287 .39 13.6 90 52 42 189 1418 749 325 .43 14.0 120 62 48 112 898 371 217 .58 6.9 183 114 79 45 342 117 59 .50 2.2 27 118 59 19 .31 1.1 24 91 49 13 .26 .9  80 1077 444 195 .44 100  TUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-80  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-80  MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1939-80  MAGNITUDE AND 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PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  MAGNITUDE AND PROBABILITY OF ANNUAL BASED ON PERIOD OF RECORD 19  EXCEEDANCE PROBABILITY, IN YEARS, AND EXCEEDANCE PROBABILITY, IN YEARS, AND EXCEEDANCE PROBABILITY, IN YEARS, AND EXCEEDANCE PROBABILITY, IN YEARS, AND EXCEEDANCE PROBABILITY, IN YEARS, AND EXCEEDANCE PROBABILITY, IN YEARS, AND EXCEEDANCE PROBABILITY, IN YEARS, AND EXCEEDANCE 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PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1939-80  MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1939-80  DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT PERIOD INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT EXCEEDANCE PROBABILITY, IN PERCENT EXCEPTION EXCE

DISCHARGE, YEARS, A							PERIOD (CON-	DISCH	INTER	N CFS, FO VAL, IN N NCE PROB	YEARS, A	ND ANNUA	L
1.25 80%	2 50% 	5 20% 	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
3090	6560	12900	17700	24300	29500	34800							
							1	4540	9100	12800	18100	22400	26900
WEIGHTED	SKEW =	411					3	3290	6560	9280	13300	16600	20300
							7	2350	4390	5930	8030	9680	11400
							15	1700	2900	3740	4830	5650	6450
							30	1310	2060	2550	3130	3540	3920
							60	1060	1580	1900	2260	2490	2710
							90	937	1350	1580	1820	1970	2090

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1939-80

		DISCH	HARGE, 11	cfs,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1390	1020	829	694	592	506	364	229	136	84	70	60	52	45	`38

### 14363000 APPLEGATE RIVER NEAR RUCH, OR

LOCATION.--Lat 42°10'40", long 123°02'40", in E-1/2 sec.15, T.39°S., R.3 W., Jackson County, Hydrologic Unit 17100309, on downstream side of left pier of Cameron Bridge, 1.6 mi upstream from Little Applegate River and 4.2 mi south of Ruch.

DRAINAGE AREA. -- 302 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1911 to September 1914, September 1925 to September 1953. Published as "near Buncom" 1911-14. Monthly discharge only February to September 1927, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,475.64 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

June 18, 1911, to Sept. 30, 1914, staff gage at datum 0.88 ft lower.

REMARKS.--Diversions for irrigation of about 700 acres above station. Cameron (Comstock) ditch diverts as much as 14 ft<sup>3</sup>/s around station on left bank. An average of about 8 ft³/s is diverted above station for irrigation in Thompson Creek basin. Several hundred acre-feet stored in Squaw Lake (capacity, 1,100 acre-ft) each spring for irrigation the following summer.

AVERAGE DISCHARGE.--31 years (water years 1912-14, 1926-53), 389 ft<sup>3</sup>/s, 281,600 acre-ft/yr.

617

1270

939

758

525

444

296

181

112

69

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 20,000 ft $^3$ /s Feb. 20, 1927, gage height, 16.0 ft, from rating curve extended above 8,000 ft $^3$ /s; minimum, 7 ft $^3$ /s Sept. 2, 1929.

EXTREMES OUTSIDE PERIOD OF RECORD. -- Flood of Dec. 21, 1955, reached a stage of 16.7 ft. from floodmarks

					S	TATISTICAL	SUMMARIES						
М	ONTHLY AN	D ANNUAL	MEAN DIS	SCHARGES	1926-53		МА				OF ANNUA	AL LOW FLO 1927-53	W
	 MINIMUM	MAX1MUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	DISCH	INTERVAL	, IN YE	ARS, AND	ATED RECUR ANNUAL NO IN PERCEN	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2 <b>%</b>	100 1 <b>%</b>
OCTOBER	20	<b>84</b> 9	86	153	1.77	1.9	1	23	14	11	8.3	6.1	
NOVEMBER	29	979	253	278	1.10	5.5	3	23	14	11	8.6	6.4	
DECEMBER	44	1592	468	444	•95	10.1	7	24	15	12	9.1		
JANUARY	37	2287	599	531	.89	12.9	14	26	16	13	10	7.8	
EBRUARY	93	2270	702	542	.77	15.2	30	28	18	14	11	8.9	
MARCH	301	1548	607	315	.52	13.1	60	32	21	16	13	10	
APRIL	232	1539	706	307	.43	15.3	90	37	25	19	16	12	
MAY	118	1873	669	394	.59	14.5	120	45	30	24	20	15	
UNE	35	1189	354	295	.83	7.7	183	85	53	42	34	27	
ULY	18	324	103	73	-71	2.2							
UGUST	12	119	45	24	.54	1.0							
SEPTEMBER	11	77	34	16	.47	•7							
ANNUAL 	143 	892 	384 	183	.48	100							<b></b>
MAGN/1	TUDE AND I BASEI	PROBABIL! D ON PERI	TY OF IN	ISTANTANE CORD 192	OUS PEAK 16-53	FLOW	MA:	BASE	D ON PER	IOD OF F	RECORD 1		
MAGNII DISCHARGE, YEARS, A	TUDE AND BASEL	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 192 CURRENCE	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF F	RECORD 1	926-53  TED RECUR	 RENCE
MAGNIT	TUDE AND BASEI	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW  , IN NT	PERIOD (CON- SECU-	BASE DISCH	D ON PER  ARGE, IN  INTERV.  EXCEEDAN	CFS, FC	RECORD 1  OR INDICA  (EARS, AN  ABILITY,	926-53 TED RECUR ID ANNUAL IN PERCEN	RENCE
MAGNII	TUDE AND BASEL	PROBABILI D ON PERI FOR INDI L EXCEEDA	TY OF IN OD OF RE CATED RE	ISTANTANE CORD 192 CURRENCE	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW , IN NT	PERIOD (CON-	BASE DISCH	D ON PER  ARGE, IN INTERV	OD OF F	RECORD 1	926-53  TED RECUR ID ANNUAL	 RENCE
MAGNIT	TUDE AND I BASEI , IN CFS, AND ANNUAL 2 50%	PROBABILI D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20%	CFS, FCAL, IN YCE PROBA	RECORD 1  OR INDICA (FEARS, AN ABILITY,  25 4%	926-53 TED RECUR ID ANNUAL IN PERCEN 50 2%	RENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	TUDE AND I BASEI IN CFS, AND ANNUAL 2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	DISCH	D ON PER ARGE, IN INTERV. EXCEEDAN 5 20% 6520	CFS, FCAL, IN YCE PROBA	DR INDICA PEARS, AN ABILITY, 25 4%	926-53 TED RECUR ID ANNUAL IN PERCEN 50 2%	T 100
MAGNIT ISCHARGE, YEARS, A 1.25 80%	TUDE AND I BASEI , IN CFS, AND ANNUAL 2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50%  3380 2570	D ON PER  ARGE, 1N INTERV. EXCEEDAN  5 20%  6520 4690	CFS, FCAL, IN YCE PROBA	RECORD 1  OR INDICA VEARS, AN ABILITY,  25 4%  13200 9080	926-53  TED RECUR ID ANNUAL IN PERCEN 50 2% 16600 11300	T 100
MAGNIT ISCHARGE, YEARS, A 1.25 80%	TUDE AND I BASEI IN CFS, AND ANNUAL 2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS) 1 3 7	BASE  DISCH  2 50%  3380 2570 1920	D ON PER  ARGE, IN INTERV EXCEEDAN  5 20%  6520 4690 3170	CFS, FC AL, IN Y CE PROBA  10 10 10 6450 4090	RECORD 1  OR INDICA (EARS, AN ABILITY, 25 4%  13200 9080 5350	926-53 TED RECUR D ANNUAL IN PERCEN 50 2% 16600 11300 6360	T 100
MAGNIT ISCHARGE, YEARS, A 1.25 80%	TUDE AND I BASEI IN CFS, AND ANNUAL 2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 3380 2570 1920 1410	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  6520 4690 3170 2170	10D OF F CFS, FC AL, IN Y CE PROBA 10 10% 9170 6450 4090 2720	DR INDICA MEARS, AN ABILITY, 25 4% 13200 9080 5350 3450	926-53  TED RECURID ANNUAL IN PERCEN 50 2%	T 100
MAGNIT ISCHARGE, YEARS, A 1.25 80%	TUDE AND I BASEI IN CFS, AND ANNUAL 2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE  DISCH  2 50 3380 2570 1920 1410 1120	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  6520 4690 3170 2170 1650	OF FOR THE PROPERTY OF THE PRO	13200 9080 5350 3450 2480	926-53  TED RECUR ID ANNUAL IN PERCEN 50 2\$  16600 11300 6360 4020 2840	RENCE
MAGNIT ISCHARGE, YEARS, A 1.25 80%	TUDE AND I BASEI IN CFS, AND ANNUAL 2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE CATED RE INCE PROB	ISTANTANE CORD 192 CURRENCE BABILITY,	OUS PEAK I 6-53 INTERVAL IN PERCEI	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASE DISCH 2 50% 3380 2570 1920 1410	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20%  6520 4690 3170 2170	10D OF F CFS, FC AL, IN Y CE PROBA 10 10% 9170 6450 4090 2720	DR INDICA MEARS, AN ABILITY, 25 4% 13200 9080 5350 3450	926-53  TED RECURID ANNUAL IN PERCEN 50 2%	T 100
MAGNIT TISCHARGE, YEARS, A 1.25 80%	TUDE AND I BASEI IN CFS, AND ANNUAL 2 50%	PROBABIL! D ON PERI FOR INDI L EXCEEDA 5 20%	TY OF IN OD OF RE	ISTANTANE CORD 192 CURRENCE MABILITY, 25 4%	OUS PEAK I 6-53 INTERVAL IN PERCEI 50 2%	FLOW	PERIOD (CON-SECU-TIVE DAYS)  1 3 7 15 30 60	BASE  DISCH  2 50%  3380 2570 1920 1410 1120 909 791	D ON PER ARGE, IN INTERV. EXCEEDAN  5 20%  6520 4690 2170 1650 1310 1130	10D OF F  CFS, FC  AL, IN N  CE PROBA  10  10  4090  4090  2720  2010  1570  1360	RECORD 1  RECORD 1  RINDICA (EARS, AN BILITY,  25  4%  13200 9080 5350 3450 2480 1890	926-53  TED RECURID ANNUAL IN PERCEN 50 2\$  16600 11300 6360 4020 2840 2130	T 100 1%
MAGNIT ISCHARGE, YEARS, A 1.25 80%	TUDE AND I BASEI IN CFS, AND ANNUAL 2 50%	PROBABIL! D ON PERI  FOR INDI L EXCEEDA  5 20%  10200 1 279	TY OF IN OD OF RE CATED RE NNCE PROB 10 10% 4400 2	ISTANTANE CORD 192 CURRENCE ISABILITY, 25 4% COMMON 2	OUS PEAK I 6-53 INTERVAL IN PERCEI 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 	BASE  DISCH  2 50%  3380 2570 1920 1410 1120 909 791  OF RECO	D ON PER  ARGE, IN INTERV. EXCEEDAN  5 20\$ 6520 4690 3170 2170 1650 1310 1130  RD 1926-	100 OF F  CFS, FC  AL, IN 10  CE PROBA  10  10  4090  2720  2010  1570  1360  53	DR INDICA OR INDICA OREARS, AN MBILITY, 25 4% 	926-53  TED RECURID ANNUAL IN PERCEN 50 2\$  16600 11300 6360 4020 2840 2130	100 15

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23

# 14366000 APPLEGATE RIVER NEAR APPLEGATE, OR

LOCATION.--Lat 42°14'30", long 123°08'20", in NEt sec.26, T.38 S., R.4 W., Jackson County, Hydrologic Unit 17100309, on left bank 0.9 mi downstream from Keeler Creek, 1.8 mi southeast of Applegate, and at mile 26.7.

DRAINAGE AREA .-- 483 mi2.

5%

1780

10%

1290

15%

1040

20%

862

25%

720

30%

620

40%

435

PERIOD OF RECORD. -- October 1938 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,285.33 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 23, 1938, nonrecording gage at same site and datum.

REMARKS.--Flow regulated since December 1980 by Applegate Lake. Many diversions for irrigation above station. McDonald Creek Canal diverts from McDonald Creek above station for irrigation in Bear Creek basin. Thompson Creek Irrigation Association ditch diverts above station for Irrigation in Thompson Creek basin. Fowler-Keeler and Berryman ditches divert above station for irrigation below.

AVERAGE DISCHARGE.--44 years, 551 ft3/s, 399,200 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 20.41 ft, from rating curve extended above 18,000 ft<sup>3</sup>/s on basis of slope-area measurements of flow at gage heights 18.00 ft and 19.57 ft; minimum, 4.6 ft<sup>3</sup>/s Sept. 22-25, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 20, 1927, reached a stage of 18.7 ft, from floodmarks.

# STATISTICAL SUMMARIES

	Minima	Maylana		STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	DISC	INTERVA	L, IN YE	OR INDIC ARS, AND ABILITY,	ANNUAL	NON-
MONTH	(CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER ANNUAL		1118 1853 3570 4601 3915 2590 1791 1745 1156 348 96 116 1391 PROBABILI			1.52 1.01 1.04 .90 .67 .59 .41 .46 .64 .71 .56 .54 .48	1.8 5.0 11.4 17.0 15.4 13.2 13.3 13.3 6.7 1.6 .6 .5	1 3 7 14 30 60 90 120 183				8 7.	1 5. 2 6. 4 7. 9. 10 14 21 41	7 4. 5 5. 3 6. 0 7. 8. 12 19 35
		L EXCEEDA	NCE PROB	ABILITY,	IN PERCEI	NT	PERIOD (CON-		.INTER	AL, IN Y	OR INDIC YEARS, AN	ND ANNUAL	_
		5	10 10%	25 4%	50 1 2 <b>%</b>	100 1%	SECU- TIVE	2	5	10	25	50	100
	2 50 <b>%</b>	20%					DAYS)	50%	20%	10%	4%	2%	1%

50%

269

60%

155

70%

86

75%

65

80%

53

85%

41

90%

31

95%

20

# 14368500 POWELL CREEK NEAR WILLIAMS, OR

LOCATION.--Lat 42°16'00", long 123°17'40", near center of sec.16, T.38 S., R.5 W., Josephine County, Hydrologic Unit 17100309, on left bank 0.1 mi upstream from Blodgett ditch intake and 2 mi northwest of Williams.

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

PERIOD OF RECORD. -- September 1946 to September 1958.

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft, by barometer.

REMARKS.--No regulation or diversion above station.

AVERAGE DISCHARGE.--12 years (water years 1947-58), 16.2 ft<sup>3</sup>/s, 11,730 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s Jan. 18, 1953, gage height, 5.36 ft, from rating curve´extended above 550 ft³/s on basis of slope-area measurement at gage height 4.92 ft; minimum, 0.8 ft³/s Sept. 25, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 28, 1945, reached a stage of about 7.0 ft, from floodmarks.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1947-58 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1948-58

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-		PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	0 <b>N</b> -
монтн	(CFS)	(CFS)	(CFS)	(CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10 <b>%</b>	20 5%	50 2%	100 1%
OCTOBER	1.3	39	6.0	11	1.79	3.1	1	1.3	1.0	.9	.8		
NOVEMBER	1.7	37	10	11	1.07	5.2	3	1.3	1.0	.9	.8		
DECEMBER	2.7	83	25	25	1.00	12.9	7	1.4	1.1	1.0	.9		
JANUARY	6.0	90	48	33	.69	24.5	14	1.4	1.1	1.0	•9		
FEBRUARY	9.5	76	39	19	.50	19.7	30	1.5	1.2	1.1	1.0		
MARCH	12	57	28	15	.53	14.4	60	1.6	1.3	1.2	1.1		
APRIL	8.1	38	19	9.2	.48	9.9	90	1.8	1.5	1.4	1.3		
MAY	3.7	19	9.1	5.1	.57	4.6	120	2.0	1.6	1.5	1.4		
JUNE	2.3	14	5.0	3.2	.65	2.5	183	2.8	2.1	1.8	1.6		
JULY	1.9	4.9	2.7	1.0	.35	1.4							
AUGUST	1.4	3.1	2.0	.6	.28	1.0							
SEPTEMBER	1.2	2.6	1.7	.4	.25	.9							
ANNUAL	6.1	28	16	6.7	.41	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1947-58 MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1947-58

DISCHARGE, YEARS, A							PERIOD (CON-		INTERV.	CFS, FOR AL, IN YE CE PROBAE	ARS, AND	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b> 	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
249	475	860	1150										
<del></del>							1	322	523	611	- <b>-</b>		
WEIGHTED	SKEW ≈	301					3	239	364	414			- <b>-</b>
							7	153	225	254		~	
							15	98	145	166			
							30	73	107	123			
							60	51	73	84			
							90	42	62	72			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1947-58

		DISC	HARGE, I	N CFS, W	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATE	D PERCEN	IT OF TIM	1E		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
63	38	<u>-</u> 28	21	16	13	8.2	5.2	3.6	2.6	2.2	2.0	1.8	1.6	1.4

### 14369500 APPLEGATE RIVER NEAR WILDERVILLE, OR

LOCATION.--Lat 45°21'15", long 123°24'20", in SE‡NE‡ sec.16, T.37 S., R.6 W., Josephine County, Hydrologic Unit 17100309, on left bank 0.3 mi downstream from Jackson Creek, 3.6 mi southeast of Wilderville, and at mile 7.6.

DRAINAGE AREA .-- 698 mi2.

2410

1620

1330

1120

959

814

564

358

208

113

79

**5**3

34

21

9.2

PERIOD OF RECORD.--October 1938 to September 1955, September 1978 to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 947.18 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Sept. 1, 1978, nonrecording gage at site 1,100 ft upstream at datum 2.36 ft higher.

REMARKS.--Flow regulated since December 1980 by Applegate Lake. Many diversions for irrigation above station. Wilderville ditch diverts up to 16 ft<sup>3</sup>/s 0.3 mi upstream and at the mouth of Jackson Creek.

AVERAGE DISCHARGE.--21 years (water years 1939-55, 1979-82), 733 ft<sup>3</sup>/s, 531,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,500 ft<sup>3</sup>/s Jan. 18, 1953, gage height, 18.3 ft from floodmark, site and datum then in use, from rating curve extended above 12,000 ft<sup>3</sup>/s as explained below; minimum, 0.78 ft<sup>3</sup>/s Aug. 22-24, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 20.3 ft from floodmark, former site and datum, discharge, 66,500 ft<sup>3</sup>/s, from rating curve extended above 12,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

Flood of February 1927 reached a stage of 22 ft at former site, from local resident. Floods of Dec. 22, 1964, and Jan. 15, 1974, are known to have exceeded the December 1955 flood.

No flow was observed at present site during the late summer of 1977.

### STATISTICAL SUMMARIES

		MANIMUM		STAN- DARD DEVIA-	COEFFI-		PERIOD (CON- SECU-	DISC	INTERVAL	, IN YE	OR INDICAT ARS, AND A ABILITY, I	ANNUAL N	DN-
MONTH	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20%	10 10 <b>%</b>	20 5 <b>%</b>	50 2%	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH	34 55 167 297 394 415	1840 1920 3117 4743 3179 2430	213 482 1013 1636 1527 1094	401 467 895 1309 920 481	1.88 .97 .88 .80 .60	2.5 5.6 11.7 18.9 17.7	1 3 7 14 30 60	8.5 9.2 10 11 13 21		2.4 2.8 3.2	1.6 3 2.0 2 2.3 2 3.1	   	   
APRIL MAY JUNE JULY	448 294 99 22	2085 1893 1456 399	1078 953 487 98	428 414 345 94	.40 .43 .71	12.5 11.0 5.6 1.1	90 120 183	30 52 165	17 32 94	13 25 67	10 20 50	  	 
AUGUST SEPTEMBER ANNUAL	5.2 3.5 264	116 156 1311	26 40 716	27 37 320	1.05 .92	.3 .5							
 DISCHARGE	BASE , IN CFS,	PROBABIL! D ON PERI FOR INDI	OD OF RE	CORD 193	9-80 INTERVAL IN PERCE	 ,  N	PERIOD (CON- SECU-	BASE	D ON PER	CFS, FO	OF ANNUAL RECORD 19 DR INDICAT YEARS, AND ABILITY, I	39-80 ED RECUR ANNUAL	RENCE
80%	50% 	20 <b>%</b>	10%	4%	2 <b>%</b> 	1%	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
4860 WEIGHTE	12500 D SKEW =		8000 7	'6500 	 	<b></b> 	1 3 7 15 30 60 90	7470 5740 4170 2960 2210 1750 1540	15500 11400 7490 4940 3580 2710 2310	22500 15900 9830 6280 4520 3350 2800	33200 22400 12800 7940 5710 4130 3380		   
		DISCHA					FOR PERIOD				TIME		

### 14370000 SLATE CREEK AT WONDER, OR

LOCATION.--Lat 42°21'40", long 123°31'10", in SW4 sec.10, T.37 S., R.7 W., Josephine County, Hydrologic Unit 17100309, on left bank 0.6 mi upstream from Elliot Creek and 0.7 mi east of Wonder.

DRAINAGE AREA. -- 31.4 mi2.

364

212

109

PERIOD OF RECORD.--July to November 1913, October 1943 to September 1957, water years 1958-60 (annual maximum). October 1943 to September 1945 monthly discharge only, published in WSP 1318.

GAGE.--Crest-stage gage. Datum of gage is 1,034.85 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1946, staff gage at several sites within 0.5 mi of described site at various datums. Nov. 21, 1946, to Sept. 30, 1957, water~stage recorder at present site and datum.

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

AVERAGE DISCHARGE.--14 years (water years 1944-57), 80.9 ft<sup>3</sup>/s, 58,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,020 ft<sup>3</sup>/s Oct. 29, 1950, gage height, 9.72 ft, from rating curve extended above 2,100 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 8.29 and 9.72 ft; minimum discharge, 0.2 ft<sup>3</sup>/s Aug. 25, 1957.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCUADORS 1046 ET

MACHITUDE AND DOODADILITY OF ANNUAL LOW FLOW

	 MINIMUM	MAX I MUM	MEAN!	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	OF	PERIOD (CON-		INTERVAL,	CFS, FOR IN YEARS E PROBAB	S, AND AN	NNUAL NO	)N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER 10 VEMBER 10 VEMBER 10 VEMBER 12 NANUARY 13 NANUARY 14 NACH 14 NACH 14 NACH 16	2.2 6.5 28 30 67 81 27 12 5.9 2.1 1.0	213 195 581 546 316 247 202 91 39 10 4.7 3.9	30 78 181 266 199 143 76 35 13 4.9 2.3 2.2	61 68 165 179 75 56 48 24 8.9 2.5 1.1	2.02 .87 .91 .67 .38 .39 .63 .68 .67 .51 .49 .43	2.9 7.6 17.6 25.8 19.3 13.9 7.4 3.4 1.3 .5 .2 .2	1 3 7 14 30 60 90 120 183	.9 1.0 1.2 1.3 1.5 1.8 2.3 3.2 7.0	.8 .9 1.0 1.1 1.4 1.7 2.3	.6 .7 .8 .9 1.2 1.4 2.0 3.9	.6 .6 .7 .7 .8 1.0 1.3 1.7 3.4	      	
MAGNI			TY OF INS			FLOW	MA(			BILITY OF			.OW
Olscharge,	BASE	D ON PERI	TY OF INS OD OF REC CATED REC	CORD 1944 CURRENCE	1–60  INTERVAL		PERIOD (CON-	BASEI DISCHA	ON PERI	BILITY OF OD OF REC	ORD 194  INDICATE ARS, AND	16-57  ED RECUR ANNUAL	RENCE
Olscharge,	BASE	D ON PERI	OD OF REC	CORD 1944 CURRENCE	1-60 INTERVAL IN PERCE		 PERIOD	BASEI DISCHA	ON PERI	OD OF REC	ORD 194  INDICATE ARS, AND	16-57  ED RECUR ANNUAL	RENCE
OISCHARGE, YEARS, /	BASE IN CFS, AND ANNUA	FOR INDI	OD OF REC	CORD 1944 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE DAYS)	BASEI DISCHI 2 50%	ON PERI	OD OF REC	INDICATE ARS, AND LITY, IN 25 4%	A6-57 ED RECUF ANNUAL PERCEN 50 2%	RENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF REC	CORD 1944 CURRENCE ABILITY,	INTERVAL IN PERCE	, IN NT 	PERIOD (CON- SECU- TIVE	BASEI DISCHA L	O ON PERI ARGE, IN INTERVA EXCEEDANC	OD OF REC	INDICATE ARS, AND LITY, IN	16~57  TO RECUF  ANNUAL  PERCEN  50	RENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECONCE PROBA	CURRENCE BILITY,	INTERVAL IN PERCE	, IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCH/ 2 50% 1900 1270 796 521 364 269 228	2730 1740 2756 2756 394 335	OD OF REC CFS, FOR IL, IN YEA E PROBABI 	INDICATE ARS, AND LITY, IN 25 4%	ED RECUF ANNUAL 1 PERCEN 50 2%	RENCE
1.25 80%	BASE , IN CFS, AND ANNUA 2 50%	FOR INDI	OD OF RECONCE PROBA	CURRENCE BILITY,  25 4%	INTERVAL IN PERCE 50 2%	, IN NT 100 1%   MEAN FLOW	PERIOD (CON- SECU- TIVE DAYS)	DISCH/  2 50%  1900 1270 796 521 364 269 228  OF RECOR	2730 1790 1140 768 55 203 2730 1790 1140 768 556 394 335	OD OF REC CFS, FOR LL, IN YEA E PROBABI 10 10% 3110 2020 1300 907 681 474 403	INDICATE ARS, AND LITY, IN 25	ED RECUF ANNUAL 1 PERCEN 50 2%	RENCE

86 68 40 22 11 5.8 4.3 3.2 2.5 1.9 1.4

# 14371500 GRAVE CREEK AT PEASE BRIDGE, NEAR PLACER, OR

LOCATION.--Lat 42°38'30", long 123°12'40", in SE4 sec.6, T.34 S., R.4 W., Jackson County, Hydrologic Unit 17100310, on right bank 0.5 mi downstream from Pease Bridge, 0.5 mi upstream from Boulder Creek, 5.4 mi east of Placer, and at mile 27.1.

DRAINAGE AREA.--22.1 mi<sup>2</sup> at measuring site 0.5 mi upstream.

PERIOD OF RECORD.--October 1940 to September 1982. Prior to October 1945 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 2,354.2 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Aug. 4, 1955, at sites 0.5 mi upstream at datum 29.9 ft higher.

REMARKS.--No regulation. One small diversion above station. Prior to 1945, Columbia upper ditch diverted water about 2 mi above station, bypassing station. Records herein are for measuring site.

AVERAGE DISCHARGE.--37 years, 59.1 ft<sup>3</sup>/s, 36.32 in/yr, 42,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 11.20 ft, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 9.66 ft; minimum, 0.12 ft<sup>3</sup>/s July 15, 1970.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1946-82				
	MONTHLY	AND ANNUA	I MEAN DISCHARGES	1946-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1947-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	NUAL NO	N-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	1.2	163	13	28	2.16	1.8	1 .	.7	.5	.4	.3	.3	
NOVEMBER	3.0	307	62	61	1.00	8.6	3	.7	.5	.4	.3	.3	
DECEMBER	3.2	415	120	105	.88	16.8	7	.8	.5	. 4	. 4	.3	
JANUARY	5.6	427	144	104	.72	20.2	14	-8	.5	- 4	. 4	.3	
FEBRUARY	8.3	293	129	66	.51	18.1	30	.9	•6	.5	.5	. 4	
MARCH	37	216	109	52	.48	15.3	60	1.2	.8	.7	.6	.5	
APR1L	25	215	80	44	.54	11.3	90	1.6	1.1	1.0	.9	.8	
4AY	8.7	100	37	22	. 59	5.2	120	2.4	1.8	1.5	1.4	1.2	
JUNE	4.5	52	12	7.9	.68	1.6	183	6.3	4.4	3.7	3.2	2.7	
JULY	1.1	9.3	3.7	1.8	- 49	-5							
AUGUST	.5	5.1	1.7	1.1	.66	.2							
SEPTEMBER	.5	7.6	1.8	1.3	.73	.3							
ANNUAL	11	122	59	23	.38	100							

# BASED ON PERIOD OF RECORD 1941-82

BASED ON PERIOD OF RECORD 1946-82

DISCHARGE, YEARS, A							PER!OD		INTERV	/AL, İN Y	EARS, AN	TED RECUI D ANNUAL IN PERCEI	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%
949	1650	2810	3680	4890	5860								
							1	1100	1840	2260	2720	3000	
WEIGHTED	SKEW =	121					3	733	1200	1480	1790	1990	
							7	476	742	898	1070	1180	
							15	313	464	550	643	702	
							30	237	332	381	431	460	
							60	181	253	289	326	347	
							90	155	211	239	266	282	<del>-</del> -

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-82

			DISCH	ARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	T OF TIM	1E		
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
_	231	150	111	86	67	54	34	18	9.0	4.4	3.2	2.3	1.7	1.3	.9

# 14372300 ROGUE RIVER NEAR AGNESS, OR

LOCATION.--Lat 42°34'50", long 124°03'30", in NE±NW± sec.6, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100310, on left bank 0.8 mi upstream from Shasta Costa Creek, 1.5 mi north of Agness, 2.6 mi upstream from Illinois River, and at mile 29.7.

DRAINAGE AREA. -- 3,939 mi2.

PERIOD OF RECORD. -- October 1960 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 113.81 ft National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Public

REMARKS.--Flow regulated since February 1977 by Lost Creek Lake, since December 1980 by Applegate Lake. Slight regulation by Fish Lake and Emigrant Lake. Many diversions for irrigation and mining.

AVERAGE DISCHARGE. --22 years, 6,149 ft<sup>3</sup>/s, 4,455,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290,000 ft3/s Dec. 23, 1964, from slope-area measurement; maximum gage height, 68.03 ft Dec. 23, 1964, from floodmark (backwater from Illinois River); minimum discharge, 608 ft3/s July 9, 10, 1968.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1961-76

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-76

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-		PERIOD (CON-	DISCH	INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	- <b>N</b> C
MONTH	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	1320	5070	1909	894	.47	2.4	1	1100	901	811	742		
NOVEMBER	1721	20240	5502	4424	.80	6.9	3	1110	919	829	759		
DECEMBER	4186	43980	11530	9717	.84	14.5	7	1130	938	847	776		
JANUARY	3286	32610	16200	10280	.63	20.3	14	1160	958	863	791		
FEBRUARY	4774	19070	11240	4042	.36	14.1	30	1190	982	886	812		
MARCH	5289	25590	11500	6472	• 56	14.4	60	1250	1050	956	884		
APRIL	3341	14020	7737	3164	.41	9.7	90	1320	1110	1010	933		
MAY	2548	11310	6024	2324	.39	7.6	120	1440	1210	1100	1010		
JUNE	1485	6128	3543	1413	.40	4.5	183	2020	1670	1530	1420		
JULY	864	2738	1741	526	.30	2.2							
AUGUST	877	2149	1347	346	.26	1.7							
SEPTEMBER	935	1799	1336	243	.18	1.7							
ANNUAL	3454	11990	6623	2241	.34	100							

BASED ON PERIOD OF RECORD 1961-76

BASED ON PERIOD OF RECORD 1961-76

YEARS,	AND ANN	UAL EXCE	EDANCE P	RECURRENC ROBABILITY	', IN PE	RCENT	PERIOD (CON-	0.00	INTER	VAL, IN	OR INDICAT YEARS, AND ABILITY, I	ANNUAL	
1.25 80 <b>%</b>	2 50% 	5 20 <b>%</b> 	10 10%	25 4% 	50 2% 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
59600	107000	182000	234000	301000									
							1	87500	148000	191000	246000		
IE I GHTEI	D SKEW	=387					3	63600	112000	151000	207000		
							7	43400	75500	102000	140000		
							15	28800	46800	60600	80300		
							30	19800	30200	38200	49600		
							60	15900	23200	28500	35900		
							90	13700	19300	23300	28500		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-76

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR E	XCEEDED FOR	INDICATED	PERCENT	OF TIM	E		
5 <b>%</b>	10%	15%	20%	25%	30%	40%	50	8 60%	70%	75%	80%	85%	90%	95%
20900	13700	10500	8750	7470	6440	5140	3860	2600	1860 1	660 1	520	1370	1210	1060

### 14372500 EAST FORK ILLINOIS RIVER NEAR TAKILMA, OR

LOCATION.--Lat 42°00'10", long 123°37'30", in SE¼NE¼ sec.15, T.41 S., R.8 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on right bank 0.3 mi downstream from Dunn Creek (California-Oregon State line), 3.4 mi south of Takilma, and at mile 71.2.

DRAINAGE AREA .-- 42.3 mi2.

PERIOD OF RECORD.--April to September 1926, April 1927 to April 1932, October 1940 to September 1982. Monthly discharge only for some periods, published in WSP 1318. Records prior to 1942 water year not equivalent owing to large diversions.

GAGE.--Water-stage recorder. Altitude of gage is 1,780 ft, from topographic map. Prior to Oct. 31, 1946, nonrecording gage at sites 0.6 mi downstream at different datums. Oct. 31, 1946, to May 13, 1949, nonrecording gage and May 14, 1949, to Aug. 23, 1965, water-stage recorder at site 0.6 mi downstream at datum 1,746.6 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Two small diversions for irrigation above station.

AVERAGE DISCHARGE.--41 years (water years 1942-82), 178 ft<sup>3</sup>/s, 57.15 in/yr, 129,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 14.90 ft, present site and datum, from floodmark, from rating curve extended above 4,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 4.6 ft<sup>3</sup>/s Nov. 3, 1960.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1942-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1943-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA-	COEFFI- CIENT OF VARI-	PERCENT OF	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBAB	S, AND AN	INUAL NO	N-
монтн	(CFS)	(CFS)	MEAN (CFS)	TION (CFS)	ATION	ANNUAL RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	20 5 <b>%</b>	50 2%	100 1%
OCTOBER	8.3	469	52	86	1.67	2.4	1	8.1	6.9	6.4	6.1	5.8	5.6
NOVEMBER	12	873	209	180	-86	9.7	3	8.2	7.0	6.5	6.1	5.8	5.6
DECEMBER	12	1511	359	309	.86	16.7	7.	8.5	. 7.3	6.8	6.4	6.1	5.9
JANUARY	22	1036	388	248	.64	18.1	14	8.8	7.5	7.0	6.7	6.3	6.1
FEBRUARY	37	969	332	181	.55	15.5	. 30	9.5	8.1	7.6	7.3	6.9	6.7
MARCH	85	606	264	137	.52	12.3	60	11	9.2	8.6	8.2	7.8	7.6
APR!L	74	437	236	96	.41	11.0	90	12	11	9.9	9.4	9.0	8.7
MAY	44	382	185	88	.48	8.6	120	15	13	12	11	10	9.6
JUNE	31	228	72	39	.55	3.4	183	38	26	22	18	15	13
JULY	13	55	23	8.6	.37	1.1.							
AUGUST	7.8	21	13	3.0	.23	.6							
SEPTEMBER	7.1	41	13	6.2	.50	•6							
ANNUAL	40	315	178	60	.34	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1942-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1942-82

DISCHARGE, YEARS, A							PERIOD (CON-		INTERV	'AL, İN Y	EARS, AN	TED RECU	
1.25	2	5	10	25	50	100	SECU-		EXCEEDAN	ICE PROBA	BILIII,	IN PERCE	.N I
80%	50% 	20%	10%	4%	2%	1%	TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2 <b>%</b>	100 1%
2870	4310	6380	7800	9630	11000	12400							
							1	3010	4720	5780	7010	7850	8620
WE I GHTED	SKEW =	110					3	2090	3220	3880	4600	5060	5470
							7	1360	2080	2490	2940	3220	3470
							15	867	1310	1560	1840	2020	2180
							30	609	892	1050	1220	1330	1430
							60	482	690	806	928	1000	1070
							90	417	579	664	753	806	851

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1942-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME	:		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
642	396	295	239	199	169	122	80	44	22	18	15	13	11	9.2

### 14375000 SUCKER CREEK NEAR HOLLAND, OR

LOCATION.--Lat 42°09'00", long 123°27'50", in NE<sup>+</sup><sub>4</sub> sec.25, T.39 S., R.7 W., Josephine County, Hydrologic Unit 17100311, on right bank 1.3 mi downstream from Grayback Creek and 4 mi northeast of Holland.

PERIOD OF RECORD. -- April to August 1940, September 1941 to September 1965. Prior to October 1945 monthly discharge only, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,777.22 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Sept. 16, 1947, staff gage at several sites within 0.5 mi of present site at various datums. Sept. 16, 1947, to Sept. 19, 1952, staff gage at site 280 ft upstream at datum 0.62 ft higher.

REMARKS.--No regulation. Grayback Canal and 3 small diversions from Grayback and Cave Creeks divert water for domestic use and irrigation above station. Most of return flow from these diversions enters creek above station.

AVERAGE DISCHARGE.--24 years (water years 1942-65), 212 ft<sup>3</sup>/s. 153,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 9.28 ft, from floodmark, from estimate of peak based on slope-area survey; minimum observed, 17 ft<sup>3</sup>/s Sept. 29 to Oct. 3, 1941.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1946-65 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1947-65

	MUM1N1 M	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOF , IN YEAR CE PROBAE	RS, AND A	NNUAL N	ON-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10 <b>%</b>	20 5%	50 2%	100 1%
OCTOBER	26	312	66	73	1.10	2.5	1	25	22	21	20		
NOVEMBER	_ 25	391	138	95	• 69	5.3	3	26	22	21	20 -		
DECEMBER	30	1016	298	272	.91	11.4	7	26	23	22	21		
JANUARY	77	921	365	275	.75	14.0	14	27	24	22	21		
FEBRUARY	117	1248	409	247	.60	15.7	30	28	25	23	22		
MARCH	95	610	311	120	.39	11.9	60	31	27	25	24		
APRIL	69	594	364	125	. 34	14.0	90	34	30	28	27		
MAY	105	691	340	145	.43	13.1	120	39	33	30	28		
JUNE	88	361	176	80	.45	6.8	183	69	50	42	36	·	
JULY	41	136	66	24	.36	2.5							
AUGUST	28	57	39	8.5	.22	1.5							
SEPTEMBER	23	40	31	5.1	-16	1.2							
ANNUAL	86	339	216	70	.33	100							

### MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1942-65

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1946-65

				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b> 	10 10%	25 4%	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
1610	3220	6160	8500	11800									
							1	2290	3950	5100	6560		
WE I GHTED	SKEW =	231					3	1650	2690	3390	4240		
							7	1110	1780	2250	2860		
							15	796	1190	1460	1810		
							30	608	891	1090	1350		
							60	512	715	835	970		
							90	454	604	680	753		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-65

		DISCH	ARGE, II	CFS, W	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME			
 5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
 647	488	399	338	290	250	185	120	78	52	44	38	34	31	27

### 14375100 SUCKER CREEK BELOW LITTLE GRAYBACK CREEK, NEAR HOLLAND, OR

LOCATION.--Lat 42°09'35", long 123°28'40", in NE±SW± sec.24, T.39 S., R.7 W., Josephine County, Hydrologic Unit 17100311, on right bank 500 ft downstream from Little Grayback Creek, 2.0 mi downstream from Grayback Creek, 3.7 mi northeast of Holland, and at mile

DRAINAGE AREA .-- 83.9 mi2.

PERIOD OF RECORD. -- October 1965 to September 1982.

GAGE, -- Water-stage recorder. Datum of gage is 1,713.92 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Grayback Canal and 3 small diversions from Grayback and Cave Creeks divert water for domestic use and irrigation above station. Return flow from these diversions enters creek above station.

AVERAGE DISCHARGE.--17 years, 240 ft<sup>3</sup>/s, 38.85 in/yr, 173,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,550 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 8.20 ft; minimum, 12 ft<sup>3</sup>/s Oct. 20, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1940, 10.8 ft on Dec. 22, 1964, from floodmark, discharge, 19,300 ft³/s, from estimate based on slope-area measurement of peak flow at site 0.7 ml upstream.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1966-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1967-82

	M I N I MUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFF!- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTEŔVAL	CFS, FOR , IN YEAR CE PROBAE	RS, AND A	NNUAL NO	ON-
нтиом	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100
OCTOBER	22	89	44	17	.40	1.5	1	23	18	16	14 -		
NOVEMBER	31	911	195	221	1.13	6.8	3	24	18	. 16	14		
DECEMBER	31	1191	353	303	.86	12.3	7	24	18	16	14		
JANUARY	36	1153	504	333	.66	17.5	14	25	19	16	14		
FEBRUARY	43	918	388	207	.53	13.5	30	27	21	19	17		
MARCH	93	953	408	219	.54	14.2	60	30	25	22	20		
APRIL	101	700	349	177	.51	12.1	90	33	28	25	24		
MAY	105	617	329	171	.52	11.4	120	37	32	30	28		
JUNE	63	345	167	99	.59	5.8	183	60	46	41	38		
JULY	29	128	67	28	.42	2.3							
AUGUST	18	58	40	11	. 28	1.4							
SEPTEMBER	21	61	34	9.9	• 29	1.2							
ANNUAL	54	463	239	112	.47	100							

# BASED ON PERIOD OF RECORD 1966-82

BASED ON PERIOD OF RECORD 1966-82

				RECURRENC ROBABILITY			PERIOD (CON-		INTERV	'AL, ÍN Y	R INDICAT EARS, AND BILITY, I	ANNUAL	
1.25 80%	2 50% 	5 20 <b>%</b>	10 10%	25 4% 	50 2 <b>%</b>	100 1%	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100 1%
1900	3370	5610	7150	9120									
							1 .	2510	4440	5620	6930		
WEIGHTED	SKEW =	399					3	1930	3440	4320	5230		
							7	1360	2340	2890	3460		
							15	931	1530	1850	2190		
							30	677	1050	1250	1450		
							60	556	832	977	1120		
							90	497	739	868	999		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1966-82

		DISC	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCEE	DED FOR	INDICATED	PERCENT	OF TIME	 : 		
5%	10%	15%	20%	25%	. 30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
754	547	438	370	309	265	188	127	78	51	43	38	33	30	26

# 14375500 WEST FORK ILLINOIS RIVER BELOW ROCK CREEK, NEAR O'BRIEN, OR

▶ LOCATION.--Lat 42°02'20", long 123°44'50", in SW£SE£ sec.34, T.40 S., R.9 W., Josephine County, Hydrologic Unit 17100311, Siskiyou National Forest, on left bank 0.2 mi downstream from Rock Creek, 3.0 mi southwest of O'Brien, and at mile 12.8.

DRAINAGE AREA .-- 42.4 mi2.

PERIOD OF RECORD. -- September 1954 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,516.14 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Three small diversions from Elk Creek for irrigation above station.

AVERAGE DISCHARGE.--28 years (water years 1955-82), 216  $ft^3/s$ , 69.18 in/yr, 156,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 16.05 ft, from rating curve extended above 6,200 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 14.79 ft; minimum, 1.5 ft<sup>3</sup>/s Sept. 2-4, 1974.

STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1955-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1956-82

				STAN- DARD DEVIA-	COEFFI- CIENT OF	PERCENT OF	PERIOD (CON-	11	NTERVAL,	CFS, FOR IN YEARS PROBABI	, AND AN	NUAL NO	N-
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VAR!- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.7	300	51	66	1.29	2.0	1	4.1	3.1	2.6	2.3	1.9	
NOVEMBER	17	1315	294	273	.93	11.3	3	4.3	3.3	2.7	2.4	1.9	
ECEMBER	12	16 <b>1</b> 6	511	386	.76	19.6	7	4.5	3.4	2.9	2.5	2.1	
ANUARY	49	1176	518	296	•57	19.9	14	4.7	3.6	3.1	2.7	2.3	
EBRUARY	86	1112	450	239	.53	17.3	30	5.1	4.0	3.5	3.1	2.7	
IARCH	86	801	394	203	.52	15.1	60	6.1	4.6	4.0	3.5	3.0	
PRIL	47	767	230	155	.67	8.8	90	7.3	5.6	4.9	4.5	4.0	
IAY .	32	302	99	79	.80	3.8	120	9.5	7.4	6.6	6.1	5.6	
UNE	15	66	28	9.8	.35	1.1	183	22	15	12	10	8.8	
ULY	6.6	18	12	3.3	.28	.5							
UGUST	3.3	17	7.0	2.9	.41	.3							
SEPTEMBER	3.0	64	11	12	1.14	.4							
ANNUAL	49	407	216	79	. 37	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1955-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1955-82

YEARS, A							PERIOD (CON-		INTERV	AL, ÎN Y	EARS, AN	TED RECUI ID ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1% 	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100 1%
3860	5360	7630	9280	11500	13300								
- <b>-</b>	<del></del>			<del></del>			1	3590	5310	6510	8060	9260	
WEIGHTED	SKEW =	.280					3	2650	3800	4550	5470	6140	
							7	1750	2510	2990	3570	3990	
							15	1160	1650	1950	2310	2560	
							30	851	1170	1370	1580	1730	
							60	680	942	1080	1230	1320	
							90	579	783	884	981	1040	- <b>-</b>

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1955-82

	DISCHAF	RGE, IN CFS	, WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCE	NT OF TIM	1E		
5% 10%	15%	20% 259	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
976 558	379 2	281 218	172	102	55	30	16	12	9.2	7.4	6.0	4.8

### 14377000 ILLINOIS RIVER AT KERBY, OR

LOCATION.--Lat 42°11'50", long 123°39'30", in NW¼ sec.9, T.39 S., R.8 W., Josephine County, Hydrologic Unit 17100311, on upstream side of Finch Bridge and 0.5 mi west of Kerby.

DRAINAGE AREA. -- 364 mi2.

PERIOD OF RECORD.--March 1926 to September 1961. Monthly discharge only March 1926, published in WSP 1318.

GAGE.--Wire-weight gage read once or twice daily. Datum of gage is 1,232.00 ft National Geodetic Vertical Datum of 1929. Prior to May 9, 1928, staff gage at site 0.5 mi upstream at different datums. May 9, 1928, to Nov. 2, 1934, staff gage at present site at different datums. Nov. 3, 1934, to Sept. 30, 1950, water-stage recorder at site 1 mi downstream at datum 16.76 ft lower. Oct. 1, 1950 to Dec. 28, 1958, staff gage at present site at datum 2.00 ft higher.

REMARKS.--No regulation. Diversions for irrigation of 5,500 acres above station. Some diversions for mining during winter months.

AVERAGE DISCHARGE.--35 years (water years 1927-61), 1,209  $ft^3/s$ , 875,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 56,800 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 16.4 ft, present datum, from floodmark, from rating curve extended above 9,600 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 15.7 ft, present datum; minimum observed, 9.6 ft<sup>3</sup>/s Aug. 16, 1959.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1927-6
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MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1928-61

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	CFS, FOR IN YEAR CE PROBAB	S, AND A	NNUAL N	DN-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
	29	3363	287	589	2.05	2.0	1	27	19	15	13 .	10	
NOVEMBER	40	3041	1188	948	.80	8.1	3	28	20	16	13	11	
DECEMBER	183	7305	2246	1653	.74	15.4	7	29	20	17	14	12	
JANUARY	293	7375	2778	1783	.64	19.0	14	30	22	18	16	13	
FEBRUARY	703	7833	2797	1622	-58	19.2	30	32	23	20	17	15	
4ARCH	711	5499	2101	1053	.50	14.4	60	36	26	22	20	17	
\PR   L	455	3753	1580	698	.44	10.8	90	42	31	26	23	21	
1AY	199	2136	1001	521	.52	6.9	120	58	41	34	30	25	
JUNE	98	1274	425	272	.64	2.9	183	190	111	81	61	44	
JULY	38	296	107	62	.58	.7							
AUGUST	16	127	45	23	.51	.3							
SEPTEMBER	17	77	40	15	. 38	.3							
ANNUAL	576	2088	1209	419	.35	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1927-61

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1927-61

					NCE INTER		PERIOD (CON-	DISC	INTER	VAL, IN	YEARS, A	ATED RECU ND ANNUAL IN PERCEI	
1.25 80%	2 50 <b>%</b> 	5 20 <b>%</b> 	10 10%	25 4%	50 2% 	100 1% 	SECU- TIVE DAYS)	2 50%	5 20 <b>%</b>	10 10%	25 4%	50 2 <b>%</b>	100
15600	25000	38100	46600	56900	64200							<del>-</del>	
				<del>-</del>	<del>-</del>		1	18000	27800	34200	42300	48100	~-
WEIGHIE	D SKEW =	403					2	12900	19600	23700	28600	31800	
							7	8860	13100	15500	18300	20100	
							15	6050	8610	10100	11700	12800	
							30	4230	6120	7370	8910	10000	
							60	3380	4770	5620	6620	7310	
							90	2910	4060	4780	5640	6240	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1927-61

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME			
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4570	2870	2160	1740	1440	1220	845	540	261	101	72	56	44	37	29

### 14377100 ILLINOIS RIVER NEAR KERBY, OR

LOCATION.--Lat 42°13'55", long 123°39'45", in SE‡SE‡ sec.29, T.38 S., R.8 W., Josephine County, Hydrologic Unit 17100311 , Siskiyou National Forest, on right bank 1.6 mi upstream from Josephine Creek, 2.5 mi northwest of Kerby, and at mile 50.3.

DRAINAGE AREA.--380 mi2.

PERIOD OF RECORD. -- October 1961 to September 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,198.8 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 28, 1965, water-stage recorder, and Jan. 28 to Sept. 30, 1965, nonrecording gage 700 ft downstream at datum 2.99 ft lower.

 $\label{eq:REMARKS.--No regulation.} REMARKS.--No \ regulation. \ Diversions \ for \ irrigation \ above \ station.$ 

AVERAGE DISCHARGE.--21 years, 1,312 ft $^3$ /s, 46.89 in/yr, 950,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,200 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 45.28 ft, from fioodmark, site and datum then in use, from rating curve extended above 30,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 14 ft<sup>3</sup>/s Aug. 11, 13, 14, 1977.

### STATISTICAL SUMMARIES

				STAN-		DEDCENT	DED 100	DISC			OR INDICA		
				DARD DEVIA~	COEFFI CIENT OF	PERCENT OF	PERIOD (CON-				ARS, AND / ABILITY,		
монтн	MINIMUM (CFS)	MAXIMUM (CFS)	MEAN (CFS)	TION (CFS)	VARI- ATION	ANNUAL RUNOFF	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MURE JUNE JULY	42 128 115 236 358 863 433 321 134	1771 6344 9242 7184 4419 4757 4518 2439 646 206	287 1641 2952 3154 2402 2247 1649 932 317 91	382 1521 2189 1861 1092 1158 1003 546 152 40	1.33 .93 .74 .59 .45 .52 .61 .59 .48	1.8 10.4 18.7 20.0 15.2 14.2 10.4 5.9 2.0	1 3 7 14 30 60 90 120 183	30 31 32 33 35 41 48 67 181	23 24 25 26 27 31 36 53 135	19 20 21 22 24 26 32 48 119	17 18 19 20 21 23 29 45 108	     	
AUGUST SEPTEMBER	2 <b>1</b> 27	116 358	48 69	22 73	.45 1.07	.3							
ANNUAL  MAGN I I		2372  PROBABILI D ON PERIO				100 	 MA				OF ANNUAL		.ow
MAGNIT DISCHARGE, YEARS, A	TUDE AND BASE IN CFS,	PROBABILI D ON PERIO FOR INDIO L EXCEEDA	TY OF IN OD OF RE CATED RE	STANTANE CORD 196 CURRENCE ABILITY,	OUS PEAK 2-82 INTERVAL IN PERCE	FLOW , IN	PERIOD (CON-	BASI	ED ON PER HARGE, IN	RIOD OF I		062-82 TED RECUR O ANNUAL	RENCE
MAGNII	TUDE AND BASE	PROBABILI D ON PERIO	TY OF IN OD OF RE	STANTANE CORD 196	OUS PEAK 2-82 INTERVAL IN PERCE	FLOW , IN	PERIOD	BASI	ED ON PER HARGE, IN	RIOD OF I	RECORD 19  OR INDICAT YEARS, AND	062-82 TED RECUR O ANNUAL	RENCE
MAGNII DISCHARGE, YEARS, /	TUDE AND BASE IN CFS, NND ANNUA 2 50%	PROBABILI D ON PERI FOR INDIG L EXCEEDAI	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 196 	OUS PEAK 2-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE DAYS)	BASI DISCI	HARGE, IN INTERN EXCEEDAN	N CFS, FF /AL, IN N NCE PROB/	RECORD 19 DR INDICAT YEARS, AND ABILITY, I  25 4%	FED RECUF O ANNUAL N PERCEN 50 2%	RENCE T
MAGNIT	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILI D ON PERI FOR INDIG L EXCEEDAI	TY OF IN OD OF RE CATED RE NCE PROB	STANTANE CORD 196 CURRENCE ABILITY,	OUS PEAK 2-82 INTERVAL IN PERCE	FLOW  , IN NT	PERIOD (CON- SECU- TIVE	DISCI	ED ON PER HARGE, IN INTERN EXCEEDAN	N CFS, FO VAL, IN NCE PROBA	RECORD 19 OR INDICAT YEARS, AND ABILITY, I	962-82 FED RECUF O ANNUAL N PERCEN	RENCE
MAGNII DISCHARGE, YEARS, / 1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILII D ON PERII FOR INDIG	TY OF INDOD OF RE	STANTANE CORD 196 CURRENCE ABILITY, 25 4%	OUS PEAK 2-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS) 1 3 7 7 15 30 60	DISCI 2 50%  20500 14500 9770 6450 4820 3870 3350	HARGE, IN INTERNEXCEEDAN  31400 22600 15200 6740 5390 4530	N CFS, FI/AL, IN 10CE PROB.  10 10%  37700 27600 18600 11800 7740 6140 5050	DR INDICAT YEARS, AND ABILITY, I 25 4% 44700 33600 22500 14200 8750 6840	FED RECUF D ANNUAL N PERCEN 50 2%	RENCE T
MAGNII  DISCHARGE, YEARS, /  1.25 80%	TUDE AND BASE IN CFS, ND ANNUA 2 50%	PROBABILITO ON PERIOD ON PERIOD ON PERIOD OF STATE OF STA	TY OF IN DD OF RE CATED RE NCE PROB	STANTANE CORD 196 CURRENCE ABILITY, 25 4% 2500	OUS PEAK 2-82 INTERVAL IN PERCE 50 2%	FLOW  , IN NT 100 1%	PERIOD (CON- SECU- TIVE DAYS)	DISCI 2 50% 20500 14500 9770 6450 4820 3870 00 F RECC	HARGE, IN INTER: EXCEEDAN 5 20% 31400 22600 15200 9750 6740 5390 4530 DRD 1962-	N CFS, FI /AL, IN 10/2 10/3 37700 27600 18600 18600 7740 6140 5050	PRECORD 19 PRECORD 19	FED RECUF D ANNUAL N PERCEN 50 2%	RENCE T

# 14377500 DEER CREEK NEAR DRYDEN, OR

LOCATION.--Lat 42°15'50", long 123°27'00", near center of sec.18, T.38 S., R.6 W., Josephine County, Hydrologic Unit 17100311, on left bank 500 ft downstream from confluence of North and South Forks and 5 mi east of Dryden.

DRAINAGE AREA .-- 22.0 mi2.

PERIOD OF RECORD. --December 1941 to September 1956. Monthly discharge only for December 1941 to September 1945, published in WSP 1318.

GAGE.--Water-stage recorder. Datum of gage is 1,650.10 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Sept. 12, 1946, staff gage at same site at datum 1.26 ft higher.

REMARKS.--No regulation. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--14 years (water years 1943-56), 74.1 ft3/s, 53,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 5,000 ft³/s Jan. 18, 1953, gage height, 7.61 ft, backwater from logs; maximum gage height, 7.92 ft Oct. 29, 1950; minimum discharge, 0.9 ft³/s Sept. 20-24, 1951, Sept. 6-10, 1955.

# STATISTICAL SUMMARIES

MONTHLY	AND ANNUAL	MEAN DISCHARGES	1946-56	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
				BASED ON PERIOD OF RECORD 1947-56

	 Minimum	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-	11	NTERVAL,	CFS, FOR IN YEARS E PROBABI	, AND AN	INUAL N	ON-
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	20 5%	50 2 <b>%</b>	100 1%
OCTOBER	1.6	226	30	66	2.25	3.2	1	1.4	1.1	.9	.9		
NOVEMBER	3.4	195	82	69	.84	8.8	: 3	1.4	1.1	.9	.9		
DECEMBER	21	488	156	145	.93	16.8	7	1.5	1.1	1.0	.9		
JANUARY	29	510	212	153	.72	22.9	14	1.6	1.2	1.1	1.0		
FEBRUARY	56	315	146	72	.49	15.7	30	1.9	1.4	1.2	1.1		
MARCH	69	192	106	37	.35	11.4	60	2.3	1.7	1.4	1.3		
APRIL	52	162	100	40	.40	10.8	90	2.8	2.0	1.7	1.5		
MAY	11	111	62	35	. 57	6.7	120	3.9	2.7	2.3	2.0		
JUNE	7.8	68	23	17	-77	2.4	183	9.4	5.9	4.8	4.1		
JULY .	3.2	12	7.0	3.5	.50	.8							
AUGUST	1.6	6.1	3.3	1.6	. 49	. 4							
SEPTEMBER	1.4	3.7	2.3	.7	.32	.2							
ANNUAL	38	128	77	29	.37	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1946-56

### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1946-56

SCHARGE, YEARS, A							PERIOD (CON-		INTERV	I CFS, FOF 'AL, IN YE ICE PROBAE	ARS, AND	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4%	50 2% 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
1240	2140	3610	4720										
							1	1480	2460	3120			
WEIGHTED	SKEW =	113					3	1030	1680	2090			
							7	668	1050	1270			
							15	428	673	821			
							30	287	456	575			
							60	221	332	405			
							90	188	274	327			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-56

_			D1 SCI	HARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATE	D PERCEN	IT OF TIM	1E		
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
_	289	168	124	102	0.4	70	40	20	1.4	6.4	4 7	7 6	2.0	2 7	1 7
_	209	100	124	102	04	70	40		14	0.4	4./	).2 	2.9	2.3	1./

### 14378000 ILLINOIS RIVER NEAR SELMA, OR

LOCATION.--Lat 42°22'45", long 123°48'40", in SW± sec.6, T.37 S., R.9 W., Josephine County, Hydrologic Unit 17100311, on right bank 0.1 mi upstream from Panther Creek, 0.2 mi downstream from Briggs Creek, 12 mi northwest of Selma, and at mile 32.3.

DRAINAGE AREA. -- 665 mi<sup>2</sup>, includes that of Panther Creek.

PERIOD OF RECORD. -- October 1956 to January 1968.

GAGE.--Water-stage recorder. Datum of gage is 829.18 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 13, 1967, water-stage recorder at same site and datum.

REMARKS.--No regulation. Many diversions above station for irrigation, mining, and logpond operation. Records include flow of

AVERAGE DISCHARGE.--11 years, 2,335  $ft^3/s$ , 1,690,000 acre- $ft/\gamma r$ .

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 34.0 ft, from floodmark, from rating curve extended above 33,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 25.64 ft, and comparison of peak flows at station near Kerby and Rogue River near Agness; minimum, 61 ft<sup>3</sup>/s Aug. 28, Sept. 2, 1959.

### STATISTICAL SUMMARIES

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	-NC
МОМТН	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 <b>20%</b>	10 10%	20 5 <b>%</b>	50 2 <b>%</b>	100 1%
OCTOBER	86	2732	584	809	1.39	2.1	1	73	67	64	62		
NOVEMBER	161	4490	2171	1206	.56	7.7	3	75	68	65	62		
ECEMBER	432	16430	4308	4404	1.02	15.3	7	76	68	65	62		
IANUARY	1115	9953	5264	3597	-68	18.7	14	77	70	66	63		
EBRUARY	2516	15010	5704	3599	-63	20.2	30	83	72	67	63		
MARCH	1340	7566	4272	1917	- 45	15.1	60	96	82	75	69		<b>-</b> -
PRIL	1448	6776	3145	1532	. 49	11.1	90	108	94	88	83		- <del>-</del>
MAY	764	4517	1820	1139	.63	6.4	120	132	110	101	96		
UNE	328	915	561	191	.34	2.0	183	358	233	183	149		
IULY	120	267	188	47	. 25	.7					<del>-</del>		
NUGUST	65	130	105	20	.19	. 4							
SEPTEMBER	74	124	98	17	.17	.3							
NNUAL	1709	3735	2335	637	•27	100							

DISCHARGE YEARS,			NDICATED I				PERIOD (CON-	DISC	INTER	N CFS, FOR VAL, IN YE NCE PROBAE	EARS, AND	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 4%	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10	25 4%	50 2%	100
38400	55100	<b>8</b> 0800	99600										
WEIGHTE	D SKEW =	.226					3	36600 26600	54500 39700	73200 52400			
							7 15	18800 12500	27900 17900	35600 22300			
							30 60	8810 6720	12500 9020	15500 10900	<del></del>		<u></u>
							90	5690	7560	9030			

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-67

			DISC	HARGE, I	N CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICATED	PERCENT	OF TIME	Ī		
_	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75 <b>%</b>	80%	85%	90%	95%
	9670	5910	4050	3060	2430	2010	1350	903	471	209	160	133	112	94	81

# 14378200 ILLINOIS RIVER NEAR AGNESS, OR

LOCATION.--Lat 42°31'15", long 124°02'35", in SW\(\frac{1}{2}\)NW\(\frac{1}{4}\) sec.29, T.35 S., R.11 W., Curry County, Hydrologic Unit 17100311, on right bank 0.6 mi downstream from Lawson Creek, 1.4 mi upstream from Fox Creek, 2.8 mi southeast of Agness, and at mile 3.0.

DRAINAGE AREA.--988 mi², at cable section 2.1 mi downstream where all measurements are made.

PERIOD OF RECORD. -- October 1960 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 125.86 ft National Geodetic Vertical Datum of 1929.

REMARKS.--No regulation. Many diversions above station for irrigation, mining, and logpond operation. Records include flow of Fox Creek. All records given herein are for measuring site.

AVERAGE DISCHARGE.--21 years, 4,094 ft<sup>3</sup>/s, 56.27 in/yr, 2,966,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 225,000 ft<sup>3</sup>/s Dec. 22, 1964, estimated on basis of runoff ratio with station near Selma; maximum gage height, 56.91 ft Dec. 22, 1964, from floodmark (backwater from Rogue River); minimum discharge, 125 ft<sup>3</sup>/s Sept. 14-16, 1977.

# STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES	1961-81	MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
		BASED ON BEDLOD OF BECORD 1062-01

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEA	R INDICAT RS, AND A BILITY, I	NNUAL N	0N-
MONTH	(CFS)	(CFS)	MEAN (CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	167	4696	816	999	1.22	1.7	1	161	138	127	120		
NOVEMBER	339	23060	4953	4875	.98	10.1	3	162	139	128	120		
DECEMBER	262	26830	8833	5953	.67	17.9	7	165	140	129	121		
JANUARY	5 <b>91</b>	25660	10370	6730	.65	21.0	14	169	144	133	124		
FEBRUARY	818	15420	7893	3680	. 47	16.0	30	178	153	142	135		
MARCH	2187	14550	7369	4076	.55	15.0	60	200	168	154	145		
APRIL	1315	11750	4558	2326	.51	9.2	90	229	196	185	178		
MAY	1116	8195	2684	1808	.67	5.4	120	287	240	222	210		
JUNE	510	1690	903	309	.34	1.8	183	611	451	388	344		
JULY	221	574	377	82	.22	.8							
AUGUST	131	384	237	58	.25	.5							
SEPTEMBER	149	1334	288	257	.89	. 6							
ANNUAL	800	7799	4094	1453	.35	100							

# MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1961-81

### MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1961-81

				RECURRENC ROBABILITY			PERIOD (CON-	DISC	INTER	WAL, ÎN	OR ÍNDICA YEARS, ANI ABILITY,	ANNUAL	
1.25 80%	2 50% 	5 20%	10 10%	25 4% 	50 2%	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
53500	78000	114000	138000	170000									
							1	62100	95100	114000	134000		-
WE (GHTE	D SKEW	012					3	46700	72000	87300	104000		-
							7	31900	49500	60400	73000	'	-
							15	20700	31000	37200	44300		
							30	15700	21700	24600	27300		-
							60	12800	17400	19400	21100		-
							90	10900	14500	16000	17200		_

# DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-81

 		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXC	EEDED FOR	INDICAT	ED PERCE	NT OF TI	ME		<b>_</b>
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
  6500	9770	7160		4500	7010		1500	077						477
 <b>-</b>	9770 	7160	5570 	4580 	3810 	2480 	1520 	833 <del>-</del>	437	331 	280 	237 	202 - <b></b>	173

# 14400000 CHETCO RIVER NEAR BROOKINGS, OR

LOCATION.--Lat 42°07'25", long 124°11'10", in SE± sec.12, T.40 S., R.13 W., Curry County, Hydrologic Unit 17100312, on right bank 16 ft upstream from bridge, 0.5 mi upstream from Elk Creek, 6.8 mi northeast of Brookings, and at mile 10.7.

DRAINAGE AREA .-- 271 mi2.

PERIOD OF RECORD.--October 1969 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 50 ft, from topographic map.

REMARKS. -- No regulation or diversion above station.

AVERAGE DISCHARGE.--13 years, 2,320 ft<sup>3</sup>/s, 116.26 in/yr, 1,681,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.—-Maximum discharge, 65,800 ft<sup>3</sup>/s Jan. 16, 1971, gage height, 27.45 ft; minimum, 45 ft<sup>3</sup>/s Oct. 21-23, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 32.25 ft, from high-water mark on bridge pier, discharge, 85,400 ft<sup>3</sup>/s, from rating curve extended above 45,000 ft<sup>3</sup>/s.

### STATISTICAL SUMMARIES

MONTHLY AND ANNUAL MEAN DISCHARGES 1970-82 MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1971-82

	MINIMUM	MAXIMUM	MEAN	STAN- DARD DEVIA- TION	COEFFI- CIENT OF VARI-	PERCENT OF ANNUAL	PERIOD (CON- SECU-		INTERVAL	, IN YEAR	R INDICAT RS, AND A BILITY, !	NNUAL N	0 <b>N</b> -
MONTH	(CFS)	(CFS)	(CFS)	(CFS)	ATION	RUNOFF	TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	61	2540	706	723	1.02	2.5	1	66	54	49	46		
NOVEMBER	229	10230	3656	3031	.83	13.1	3	67	54	50	47		
DECEMBER	121	12770	5615	3330	. 59	20.1	7	68	55	50	47		
JANUARY	479	13150	5467	3161	.58	19.6	14	70	57	52	48		
FEBRUARY	619	8292	4215	2319	.55	15.1	30	75	61	55	51		
MARCH	1768	6830	3842	1955	.51	13.8	60	88	67	60	55		
APRIL	674	6956	2478	1649	.67	8.9	90	110	81	71	65		
MAY	430	2508	1040	599	.58	3.7	120	147	102	88	80		
JUNE	229	728	363	130	.36	1.3	183	327	211	165	133		
JULY	121	268	167	39	.23	.6							
AUGUST	75	231	115	53	. 46	. 4							
SEPTEMBER	61	1532	269	400	1.49	1.0							
ANNUAL	549	3911	2320	908	.39	100							

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW BASED ON PERIOD OF RECORD 1970-82

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1970-82

DISCHARGE, IN CFS, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT							PERIOD (CON-	DISC	INTER	VAL, IN	OR INDICAT YEARS, AND ABILITY. I	ANNUAL	
1.25 80%	2 50 <b>%</b>	5 20 <b>%</b>	10 10%	25 <sup>.</sup> 4%	50 2% 	100 1%	SECU- TIVE DAYS)	2 50%	5 20%	10 10%	25 4%	50 2%	100
23900	37300	54700	65300	77500									
							1	30200	41400	47000	52400		
WE I GHTE	D SKEW =	528					3	22900	32400	37900	43800		
							7	16700	23200	26600	30100		
							15	11200	15700	18300	21300		
							30	8870	11800	13200	14400		
							60	7410	9940	11000	11800		
							90	6140	8140	8910	9500		

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1970-82

		DISC	CHARGE,	IN CFS,	WHICH WAS	EQUALED	OR EXCE	EDED FOR	INDICAT	ED PERCE	NT OF TI	ME		
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
10100	6140	4290	3240	2530	2060.	1330	757	397	218	168	1 <b>2</b> 9	104	85	70

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# INDEX

STATION NO	• STATION NAME	PAG
14306500 14169300	Alsea River near Tidewater	155 7
14366000	Applegate River near Applegate	228
14362000	Applegate River near Copper	226
14363000	Applegate River near Ruch	227
14369500	Applegate River near Wilderville	230
14309300	Appregate Miver Mear wilderville	2)(
14357500	Bear Creek at Medford	223
14248700	Bear Creek near Svensen	141
14337500	Big Butte Creek near McLeod	210
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